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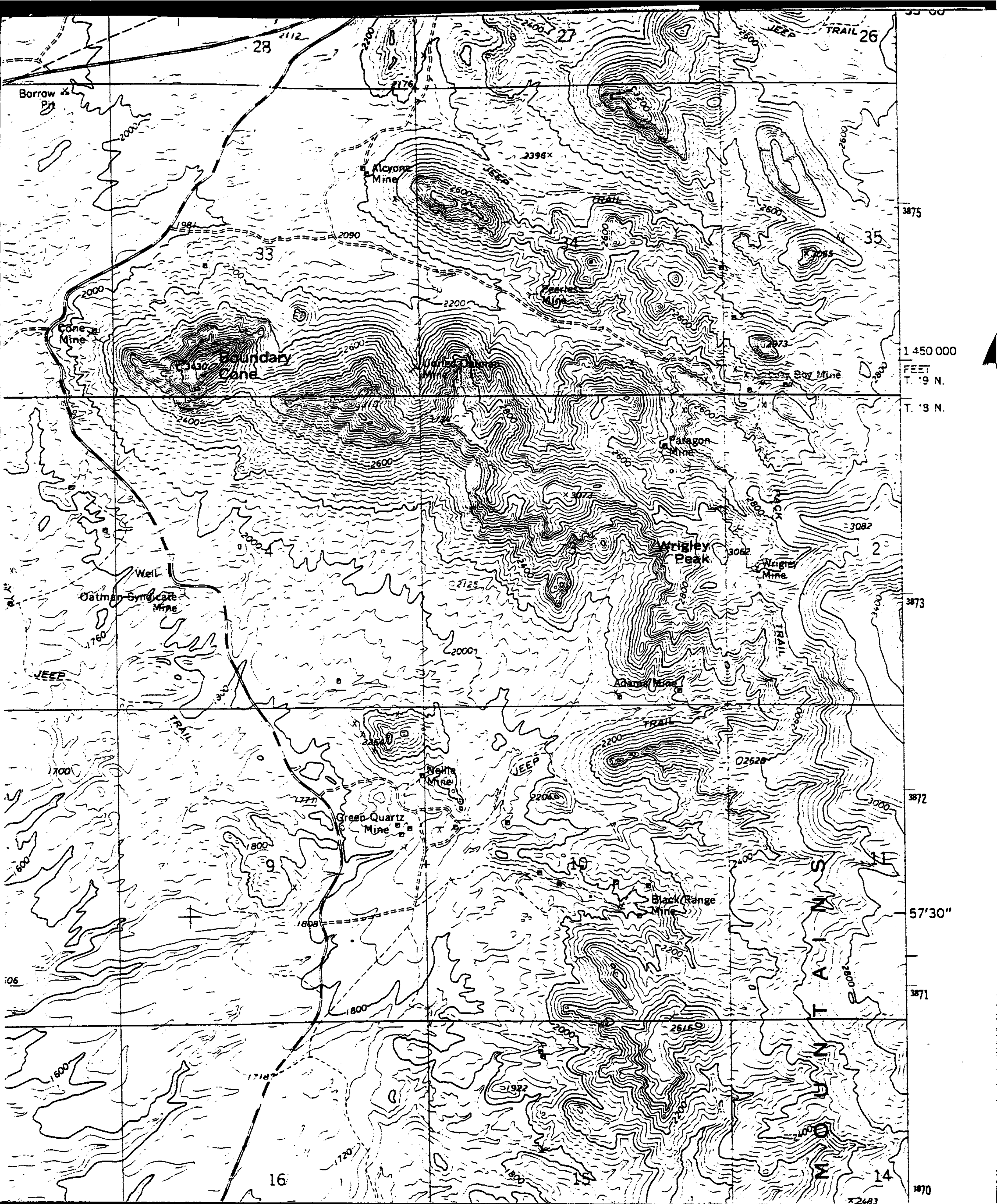
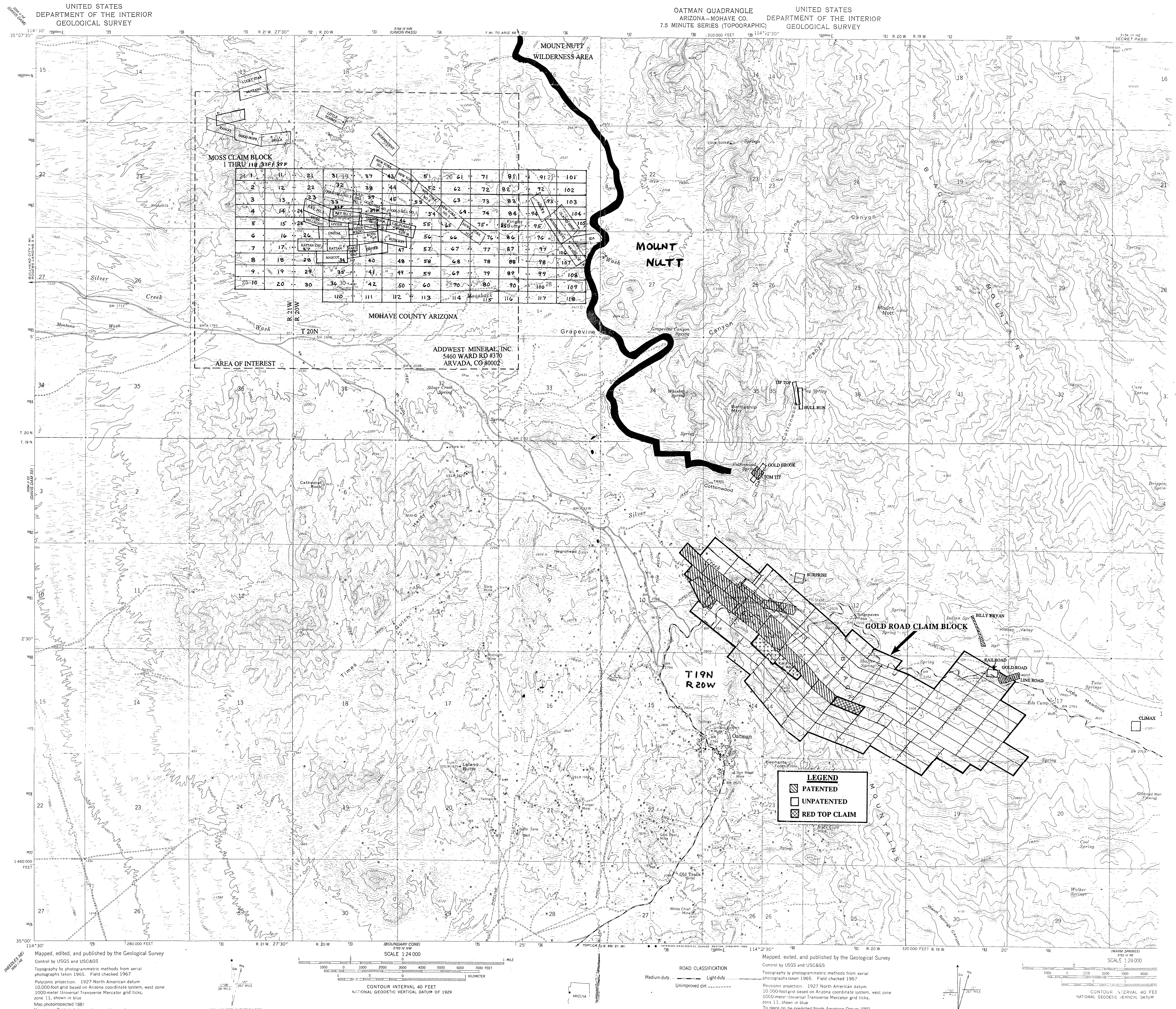


Borrow Pit
Alcyone Mine
JEEP TRAIL
Peerless Mine
Cone Mine
Boundary Cone
United Oatman Mine
Paragon Mine
Wrigley Peak
Wrigley Mine
Well
Oatman Syndicate Mine
Adams Mine
Nellie Mine
Green Quartz Mine
Black Range Mine
PACK TRAIL
MOUNTAINS
1 450 000 FEET
T. 19 N.
T. 18 N.
57'30"
3875
3873
3872
3871
3870


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OATMAN QUADRANGLE
ARIZONA—MOHAVE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
MOUNT NUTT
WILDERNESS AREA
MOSS CLAIM BLOCK
1 THRU 118 33F / 39F
MOHAVE COUNTY ARIZONA
ADDWEST MINERAL, INC.
5460 WARD RD #370
ARVADA, CO 80002
AREA OF INTEREST
R 21W
R 20W
T 20N
MOUNT NUTT
T19N
R20W
GOLD ROAD CLAIM BLOCK
TIP TOP
BULL RUN
GOLD BROOK
TOM TIT
SURPRISE
BILLY BRYAN
RAILROAD
GOLD ROAD
LINE ROAD
CLIMAX
LEGEND
PATENTED
UNPATENTED
RED TOP CLAIM
Oatman
Silver Creek
Grapevine
Mapped, edited, and published by the Geological Survey
SCALE 1:24 000
CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION

MOSS PROJECT SUMMARY

MOHAVE COUNTY, ARIZONA

ADDWEST MINERALS, INC.
MOSS PROJECT

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MOSS PROJECT SUMMARY

MOHAVE COUNTY, ARIZONA

MOSS PROJECT SUMMARY
MOHAVE COUNTY, ARIZONA

INTRODUCTION

The Moss Mine Property, acquired by Addwest Minerals in late 1994, is located in the San Francisco Mining District in Mohave County, Arizona approximately 10 miles east of Bullhead City (Figure 1). Addwest Minerals' Gold Road Mine is located approximately 6 miles to the southeast of the Moss Property. The Moss Property contains potential for minable gold reserves that may be exploitable by open pit and heap leach methods.

RESOURCE ESTIMATE

A total of 26,480 feet of drilling has been completed on the Moss Property by various companies between 1981 and 1993. This drilling, which is by no means definitive, has delineated an in-situ resource of 7,414,000 tons at a grade of 0.038 opt gold containing 281,732 ounces. A preliminary open pit resource of 2,996,000 tons averaging 0.044 opt Au with a 1.96:1 stripping ratio can be estimated from the existing data. This resource estimate was calculated by Mintec Inc. for Magma Copper in 1992.

The mineralized zone is open along strike and at depth (Figures 2 & 3). The existing drilling is wide spaced away from the area where the open pit resource was estimated. Addwest's own preliminary estimates of potential resources, based on cross-sectional polygons and manual cross-sections, also indicates that a potential for 6.5 to 7.2 million tons at average grades ranging from 0.037 to 0.044 opt Au exists along strike of the area that has been drilled.

The deposit is open-ended along strike and at depth. Additional drilling internally and along strike has a good chance to increase resources and delineate minable reserves of gold. There are also other good targets on Addwest's large property holdings that have excellent exploration potential.

LOCATION AND ACCESS

The Moss Mine Property is located in Mohave County, Arizona, approximately 8 miles east of Bullhead City, Arizona and Laughlin, Nevada and 28 miles southwest of Kingman, Arizona. The village of Oatman, Arizona is approximately 5 miles to the southeast of the property. The Moss Mine is approximately 8 road miles from Addwest Minerals' Gold Road Mine. Access to the property is by a well-maintained two-lane graded county road to within less than a mile to the property, and then by one-lane graded road. The project area is characterized by arid hills between 2,000 and 2,700 feet above sea level.

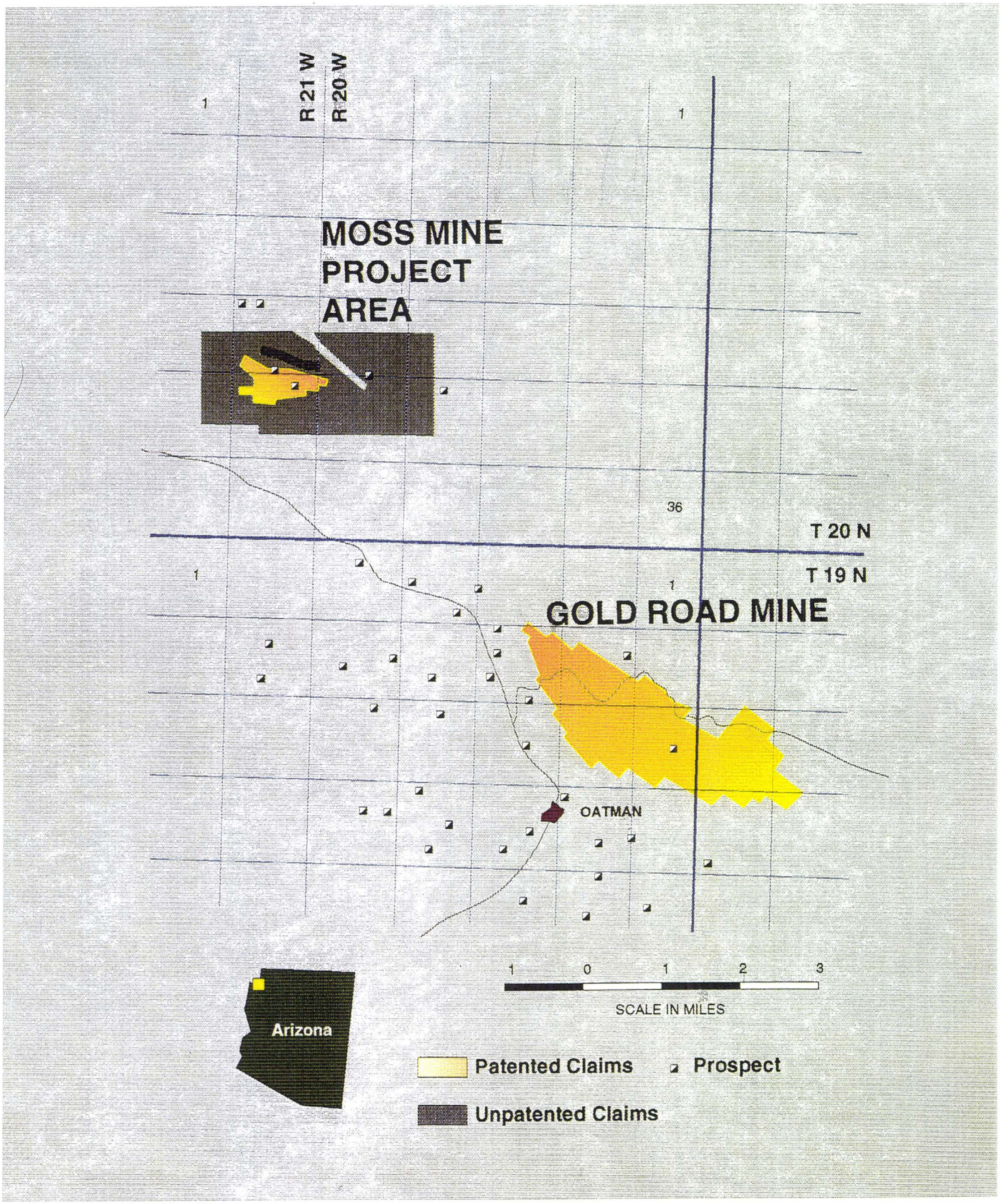

R 21 W
R 20 W
1
1
MOSS MINE
PROJECT
AREA
36
T 20 N
1
1
T 19 N
GOLD ROAD MINE
OATMAN
1 0 1 2 3
SCALE IN MILES
Arizona
Patented Claims
Prospect
Unpatented Claims

FIGURE 1

PROPERTY DESCRIPTION

The Moss Mine property is centered around 11 patented lode mining claims totaling approximately 200 contiguous acres optionee from Greg Gintoff. Addwest Minerals is in the process of negotiating for several additional patented claims nearby within the prospective area of interest. Offers have been made on some of these parcels and their acquisition appears eminent. Addwest has staked the surrounding area with 120 additional lode mining claims for a total property package of approximately 2,200 continuous acres currently staked or under option to purchase agreement.

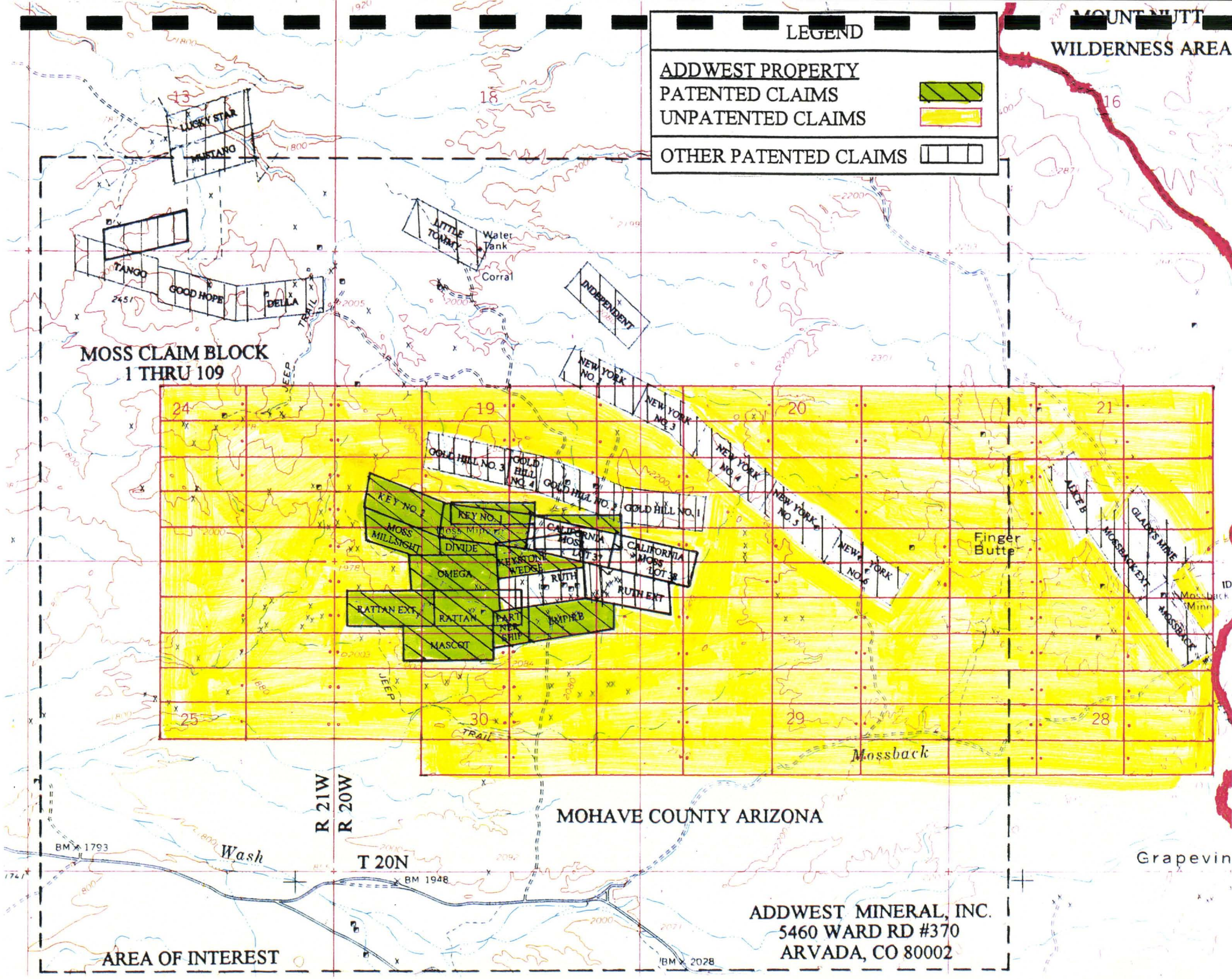
The Terms of the option to purchase the Moss Property patented claims acquired to date calls for a work commitment of $150,000 in 1995. These patented claims are covered by a total Net Smelter Royalty (NSR) of 3.5% to 4%. In July, an advanced royalty payment of $50,000 is due and in August another purchase payment of $50,000 against the final purchase price of one of the claims is due. In addition, monthly payments totaling $8,000 for 1995 ($6,000 remaining) will need to be paid.

PROJECT HISTORY

The Moss Mine was the first mine discovered in the San Francisco Mining District. Colonel John Moss, stationed at nearby Camp Mohave, made the initial discovery and conducted the first mining in the district. Approximately 12,000 ounces of gold were reported to have been produced from near the surface in those early days of operations. Since that time, considerable intermittent exploration and development has been carried on, little ore has been mined. Most of the activity in the district since the turn of the century has centered around Oatman and Gold Road where up to 2,000,000 ounces have been produced since 1900, when the Gold Road Vein was discovered.

In more recent years, the property has been leased by Billiton Minerals from 1989 through 1992. Between 1990 and 1991, Billiton drilled 79 shallow air-track rotary holes totaling 13,115 feet. Samples from this drilling was of low quality as were the assaying methods, which only went to two decimal places of accuracy. However, this drilling gave good indications of the presence of gold mineralization.

Magma Copper subleased the property from Billiton in 1991-1992 and drilled 22 reverse circulation holes totaling 10,207 feet. Magma also did surface geologic and alteration mapping and surface sampling at the property. Magma also had Mintec, Inc. prepare computer-generated resource estimated based on the available drilling. This estimate indicated an in-situ resource of 7,414,000 tons at 0.038 opt Au using a 0.02 opt cutoff. An estimated pit resource using 0.02 opt cutoff resulted in 2,996,000 tons at 0.044 opt Au with a 1.96:1 strip ratio or 131,824 ounces. Magma also drilled a fan of three holes to test an area of surface silicification approximately 1,200 feet west of the Moss Mine deposit. These three holes encountered low grade



MOUNT NUTT
WILDERNESS AREA
LEGEND
ADDWEST PROPERTY
PATENTED CLAIMS
UNPATENTED CLAIMS
OTHER PATENTED CLAIMS
MOSS CLAIM BLOCK
1 THRU 109
LUCKY STAR
MUSTANG
TANGO
GOOD HOPE
DELLA
LITTLE TOMMY
Water Tank
Corral
INDEPENDENT
NEW YORK NO. 1
NEW YORK NO. 3
NEW YORK NO. 4
NEW YORK NO. 5
NEW YORK NO. 6
GOLD HILL NO. 3
GOLD HILL NO. 4
GOLD HILL NO. 2
GOLD HILL NO. 1
KEY NO. 2
KEY NO. 1
MOSS MILLSIGHT
DIVIDE
OMEGA
KEYSTONE WEDGE
CALIFORNIA MOSS LOT 37
CALIFORNIA MOSS LOT 38
RUTH
RUTH EXT
RATTAN EXT
RATTAN
PART NER SHIP
EMPIRE
MASCOT
ALICE B
GLADYS MINE
MOSSBACK EXT
MOSSBACK
Finger Butte
Mossback
TRAIL
JEEP
Wash
Grapevin
MOHAVE COUNTY ARIZONA
R 21W
R 20W
T 20N
BM 1793
BM 1948
BM 2028
13
18
16
24
19
20
21
25
30
29
28
ADDWEST MINERAL, INC.
5460 WARD RD #370
ARVADA, CO 80002
AREA OF INTEREST

mineralization throughout the first 300-400 feet. Magma elected to terminate the project in 1992 because their limited drilling did not delineate a minable reserve large enough to satisfy their corporate policy.

Golconda Resources acquired an option on the property and drilled 19 shallow reverse circulation holes for a total of 3,058 feet in 1993. Most of these holes were located within known mineralized areas and they contained good ore intercepts. However, several of these holes were too shallow and ended in mineralized zones. Golconda was unable to make property payments and lost the property late in 1994.

Addwest Minerals' personnel had recognized the potential at the Moss Mine for several years but the property was unavailable or had too many tiers of ownership. When the property became available in late 1994, and a decent acquisition deal was negotiated, Addwest optioned the property and staked additional claims.

GEOLOGY AND MINERALIZATION

The area of the Moss Mine is underlain by Tertiary volcanic rocks of rhyolitic, latitic and basaltic composition. These volcanic rocks are intruded by at least two granitic to dioritic intrusions. The most important intrusion, because it is host to most of the known mineralization, is called the Moss Porphyry. The Moss Porphyry is concentrically zoned, consisting of a granodiorite core enclosed by quartz monzonite with an outer monzodiorite contact margin. The Moss Porphyry is considered to be closely equivalent to the Gold Road Latite, one of the major host rocks at Gold Road, based on its composition and similar age.

The Moss Porphyry is generally characterized by varying degrees of chloritic alteration which imparts a greenish tint to outcrops though limonite development and bleaching occur locally particularly in the southern part of the prospect area. Pervasive silicification is dominant along the Moss Vein and to the area to the west of it. Stockwork quartz veining is present particularly just south of the vein, on its hanging wall side.

Throughout the district, numerous quartz and quartz-carbonate-pyrite veins have been the focus of exploration. The Moss Vein is the most significant expression of mineralization and is traceable on the surface for over 3,500 feet. The vein is hosted mostly by the Moss Porphyry and has been emplaced on a relatively steep (50 to 80 degrees) south dipping structure. The vein system consists of a quartz vein up to 15 feet thick on the footwall of the structure with, locally, a calcite vein of similar dimensions present at the hanging wall contact of the quartz or as a separate vein several feet into the hanging wall. Stockwork quartz veinlets occur for up to several hundred feet into the hanging wall. The mineralization and geochemistry is consistent with a epithermal origin for the deposit.

Gold mineralization occurs within the vein structures. The highest grades mineralization

MOSS PROJECT

Generalized Geologic and Drill Hole Map

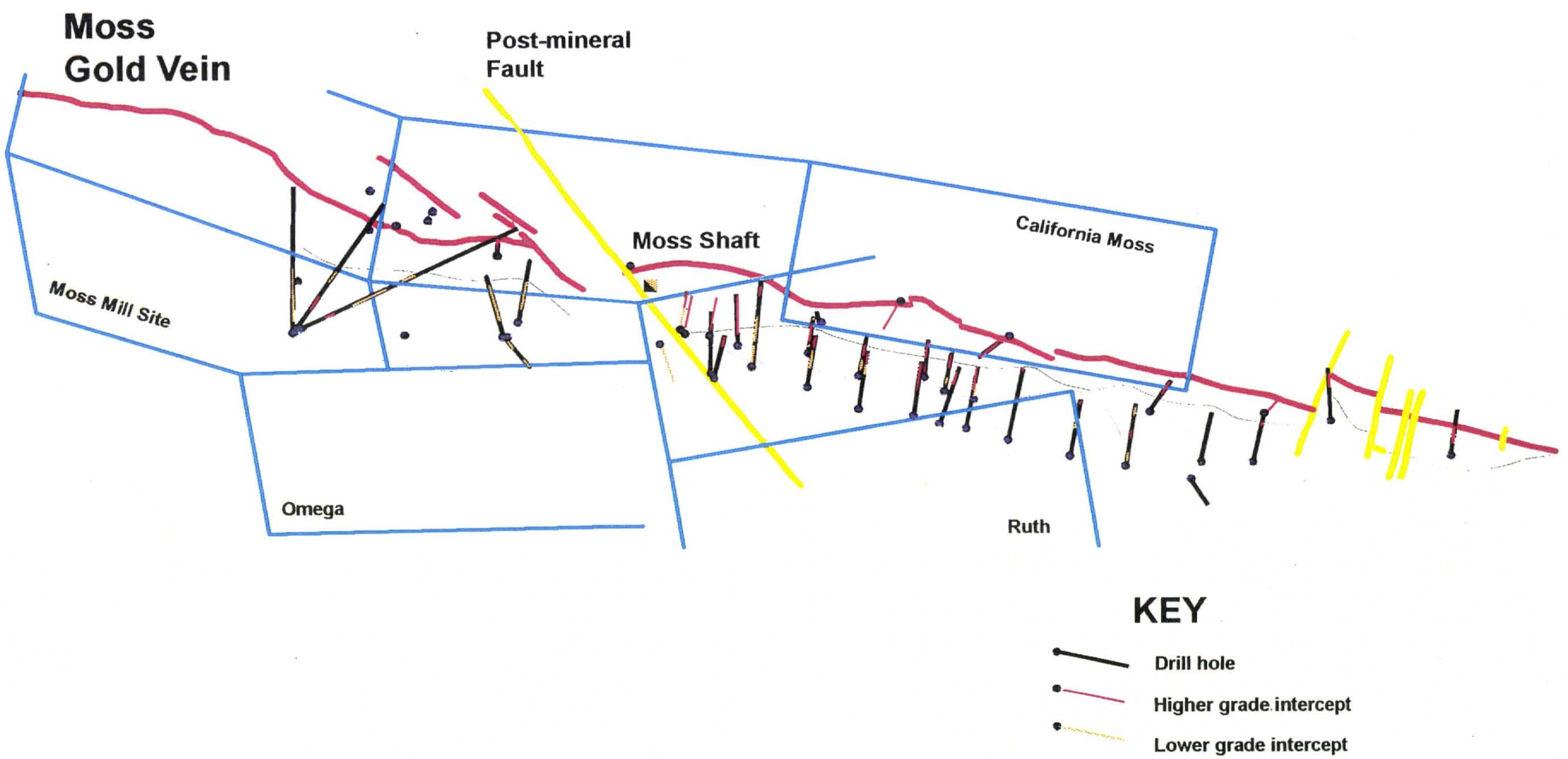


FIGURE 2

MOSS PROJECT
Section 291900e
M-1-30
90 ft.
@ .038 oz/Ton Au
Holes Ended in
Ore - Grade Rock
M-1-60
105 ft.
@ .033 oz
/Ton Au
MM-2
120 ft.
@ .045 oz/Ton Au
Not Assayed
MM-1
250 ft.
@ .051 oz/Ton Au
300 Level
@ .186 oz/Ton Au
Hole Ended in
Ore - Grade Rock
M-27-68
95 ft.
@ .152 oz/Ton Au
Not Assayed

FIGURE 3

appear to be associated with the carbonate phase of vein growth. Stockwork zones commonly contain ore grade mineralization as well.

METALLURGY

Two groups of metallurgical tests have been conducted for the Moss Property prior to Addwest acquiring the project. The first was on cuttings from Billiton's drill holes and from bulk ore samples collected from an adit on the California Moss No. 1 claim. The second group consisted of bottle roll tests on material taken from some of Magma's drill holes.

Gold recoveries from Billiton's bottle roll tests of bulk ore was 42% after 96 hours. Recoveries from cuttings from Billiton's drilling ranged from 53% to 78% and those from Magma's holes ranged from 78% to 88%.

In 1995, Addwest Minerals conducted cyanide shake and bottle roll tests on drill cuttings collected by Magma and Billiton's drilling programs. The 6 cyanide shake tests averaged 87% recovery of gold and the bottle roll tests averaged 61% gold recovery.

SUMMARY AND CONCLUSIONS

Preliminary estimates indicate that a resource of over 7 million tons may exist on the Moss Property in near surface deposits. Drilling could delineate a minable reserve on the property with a total potential of 500,000 to 1,000,000 in-situ ounces of gold. An attractive possibility of reserves at the Moss property is that higher grade portions of the deposit could be trucked to the Gold Road Mill and be processed more efficiently than by heap-leach methods.

An exploration drilling program is required to determine the true economic potential of the Moss property. An exploration program totaling approximately $560,000, including property payments, should give the information necessary to determine if the Moss property has economic potential.

MOSS PROJECT
AFE & BUDGET

MOSS PROJECT

1996 BUDGET, AUTHORIZATION FOR EXPENDITURES, AND DRILL PLAN

AUTHORIZATION FOR EXPENDITURE

January 11, 1996

RE: Moss Gold Project

The Moss Gold Property is located in Mohave County, Arizona approximately 7 miles from the Gold Road Mine. The property, held by Addwest through leases and claims, is in an advanced exploration stage and requires additional work to determine whether the project area contains an economically viable deposit.

GOAL: The Moss Project requires additional geologic evaluation including drilling, trenching, metallurgical studies, geochemical exploration, and mapping to determine if a minable ore body exists on the Addwest property package. A work commitment of $150,000.00 is still outstanding from 1995 on the leased portion of the property. The Lessors have agreed to postpone this work commitment until March 31 of 1996. A work Commitment of an additional $150,000.00 is required by December 31, 1996 to retain the property.

The Proposed 1996 work program has been designed to obtain a maximum amount of information while satisfying the work commitments. An appropriate portion of this program can be completed before the March 31 deadline for the 1995 work commitment. This will give Addwest an opportunity to examine some of the new data before property payments are due in July of 1996 and before completion of the work commitment that is necessary to retain the property after 1996.

The additional work proposed for 1996, after the initial required work commitment expenditures, will be necessary to more completely determine the economic viability of the Moss deposit as well as explore other portions of the Addwest property package. Enough exploration and evaluation work has been designed into this program so that a decision to retain the property should be possible upon completion of the program

WORK PROGRAM: The planned 1996 work program for the Moss Property consists of approximately 12,000 feet of reverse circulation drilling, 4,000 feet of core drilling, surface trenching, assaying, surveying, geologic mapping ,and metallurgical studies around the area of the known mineralization on the Moss property. In addition, surface geochemistry, geophysics, and mapping are planned for the entire Addwest Moss property area. The data collected will help determine the probability of delineating minable gold reserves at the known deposit. This program will also determine if Addwest should plan additional work and make the required property payments (if the work is complete and evaluated by July of 1996 when the first large property payment is due). The proposal also covers evaluation of other properties in the area of interest that Addwest may wish to acquire.

BUDGET: A total budget of $556,560.00 is proposed for the Moss Project in 1996. A detailed outline of this budget is attached. This budget covers drilling, trenching, assaying, supplies, contractors, and personnel costs and expenses to operate the exploration program, as well as covering all the necessary property payments and work commitments to retain the property into 1997. The budget also contains $25,000.00 to acquire the California Moss Claim, which may contain the southeast extension of the Moss deposit.

CONCLUSION: A $150,000.00 work expenditure by March 31, 1996 is required to hold the Moss Property . The requested budget of $566,560.00 satisfies that work commitment as well as the additional work commitment required in 1996 to hold the property. Expenditure of the total requested budget and completion to the planned exploration and evaluation programs should provide the information necessary to help determine if the Moss deposit can be economic and what work is required to develop the property.

The plan and expendatures can be implimented in such a way that after the satisfaction of the outstanding work commitment of $150,000.00 due by April of 1996 (by spending approximately $169,000.00 in a preliminary evaluation program), a decision can be made as to whether there is justification to proceed with the remainder of the $566,560.00 program, Which includes land payments and additional exploration expendatures.

It is recommended that the budget be approved and the planned work started as soon as possible.

Recommended: ____________________________
Alan Founie - Projects Manager

Approved: ____________________________
Charles S. Williams - President
Addwest Minerals, Inc.

Approved: ____________________________
James R. Houston - Chairman of the Board
Addwest Minerals, Inc.

MOSS PROJECT 1\8\96

1996 EXPLORATION BUDGET -Optimum

ITEM		COST	January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	TOTALS
															$0.00
RVC DRILLING	(12,000 Feet @$6.00/Ft)	$72,000.00		$36,000.00	$36,000.00										$72,000.00
	(500 Feet @$7.00/Ft)	$3,500.00		$1,750.00	$1,750.00										$3,500.00
Misc.	(Mob. Standby,Bits,Etc.)	$7,500.00		$3,750.00	$3,750.00										$7,500.00
Per Diem	(105/day*60days)	$6,300.00		$3,150.00	$3,150.00										$6,300.00
Total RVC		**$89,300.00**													$0.00
															$0.00
CORE DRILLING															$0.00
Coring	(4,000 Feet @ $25.00)	**$100,000.00**		$33,000.00	$50,000.00	$17,000.00									$100,000.00
Mob. & Standby		**$3,000.00**		$1,200.00	$1,200.00	$600.00									$3,000.00
Rig Supplies;etc.		**$5,000.00**		$1,500.00	$2,500.00	$1,000.00									$5,000.00
Total Core		**$108,000.00**													$0.00
SITE PREP		**$6,000.00**		$3,000.00	$3,000.00										$6,000.00
And TRENCHING	(1,200' of Trenching)														$0.00
RECLAMATION	Cementing Drill Hiles	**$5,000.00**		$2,000.00	$3,000.00										$5,000.00
	Site	**$1,500.00**				$1,500.00									$1,500.00
ASSAYS	(3,600 @$12.00)	**$43,200.00**		$14,400.00	$14,400.00	$14,400.00									$43,200.00
(Drilling)															$0.00
METALLURGY		**$7,500.00**			$2,000.00	$3,000.00	$2,500.00								$7,500.00
															$0.00
CONSULTANT	(80 days @ $250/day)	**$20,000.00**	$2,400.00	$6,400.00	$6,400.00	$4,800.00									$20,000.00
EXPENSES	(80 days @$50/day)	**$4,000.00**	$500.00	$1,250.00	$1,250.00	$1,000.00									$4,000.00
TRAVEL		**$1,800.00**	$600.00		$600.00	$600.00									$1,800.00
SOIL GEOCHEM.															$0.00
Geo. & Expenses		**$3,500.00**				$3,500.00									$3,500.00
Supplies		**$500.00**				$500.00									$500.00
Assays		**$6,000.00**				$6,000.00									$6,000.00
GEOPHYSICS		**$20,000.00**				$20,000.00									$20,000.00
ADDWEST	Salaries	**$25,000.00**	$5,000.00	$5,000.00	$5,000.00	$5,000.00	$5,000.00								$25,000.00
PERSONNEL	Travel & Expenses	**$7,000.00**	$1,000.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00								$7,000.00
															$0.00
SUPPLIES		**$7,000.00**	$1,000.00	$2,000.00	$2,000.00	$2,000.00									$7,000.00
															$0.00
VEHICLE EXPENSE		**$4,800.00**		$800.00	$800.00	$800.00	$800.00	$800.00	$800.00						$4,800.00
Fuel & Exp.		**$1,500.00**		$250.00	$250.00	$250.00	$250.00	$250.00	$250.00						$1,500.00
															$0.00
PERMIT		**$10,000.00**				$5,000.00	$5,000.00								$10,000.00
															$0.00
LEGAL		**$3,000.00**			$1,000.00	$1,000.00	$1,000.00								$3,000.00
															$0.00
SURVEYING		**$5,000.00**			$2,000.00	$2,000.00	$1,000.00								$5,000.00
															$0.00
	Total Drilling Expenses	**$379,600.00**	$10,500.00	$116,950.00	$141,550.00	$91,450.00	$17,050.00	$1,050.00	$1,050.00	$0.00	$0.00	$0.00	$0.00	$0.00	$379,600.00
CONTINGENCY	(10%)	**$37,960.00**	$1,050.00	$11,695.00	$14,155.00	$9,145.00	$1,705.00	$105.00	$105.00						$37,960.00
	TOTAL:	**$417,560.00**	$11,550.00	$128,645.00	$155,705.00	$100,595.00	$18,755.00	$1,155.00	$1,155.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$417,560.00**
LAND PAYMENTS															$0.00
Gintoff-(7/95)	$50,000								$50,000.00						$50,000.00
Williams(8/95)	$50,000									$50,000.00					$50,000.00
Martinez(thru 9/95)	$12,000		$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$12,000.00
California Moss	$25,000	**$137,000.00**				$25,000.00									$25,000.00
Claim Fees	$12,000	**$149,000.00**								$12,000.00					$12,000.00
		$566,560.00	$12,550.00	$129,645.00	$156,705.00	$126,595.00	$19,755.00	$2,155.00	$52,155.00	$63,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	**$566,560.00**

1996 Work Budget: $417,560.00

1995 Work Committment	**(Still outstanding)**	$150,000.00
1996 Work Committment		$150,000.00
		$300,000.00
	Spent to Date	$20,000.00
	Outstanding	$280,000.00

1996 PROPOSED DRILLING PROGRAM
MOSS PROJECT, ARIZONA

Addwest Minerals, Inc.

Temp. Hole No.	Depth	Bearing	Angle	Northing	Easting	Legal Description
MP-1	200		VERT	1,492,400	291,500	SW,SW,SE, SEC. 19, T20N, R20W
MP-2	400	360	-60	1,492,010	291,550	same as above
MP-3	200	360	-75	1,492,282	291,550	same as above
MP-4	200		VERT	1,492,320	291,600	same as above
MP-5	200		VERT	1,492,270	291,600	same as above
MP-6	300	360	-60	1,492,100	291,600	same as above
MP-7	160	360	-60	1,492,285	291,650	same as above
MP-8 (CORE)	450		VERT	1,492,273	291,650	same as above
MP-9 (CORE)	420		VERT	1,492,187	291,650	same as above
MP-10	440		VERT	1,492,100	291,650	same as above
MP-11 (CORE)	400		VERT	1,492,250	291,700	same as above
MP-12	140	360	-45	1,492,250	291,700	same as above
MP-13	400		VERT	1,492,150	291,700	same as above
MP-14	400		VERT	1,492,250	291,700	same as above
MP-15	220	360	-60	1,492,190	291,800	same as above
MP-16	440	360	-65	1,492,040	291,800	same as above
MP-17 (CORE)	100	360	-60	1,492,320	291,850	same as above
MP-18	480	360	-65	1,492,020	291,850	same as above
MP-19	380	360	-65	1,492,127	291,250	SE,SE,SW, SEC. 19, T20N, R20W
MP-20 (CORE)	550	360	-65	1,491,935	291,900	SW,SW,SE, SEC. 19, T20N, R20W
MP-21	200	360	-60	1,492,193	291,900	SW,SW,SE, SEC. 19, T20N, R20W
MP-22				CANCELLED		
MP-23				CANCELLED		
MP-24				CANCELLED		
MP-25	240	360	-60	1,492,144	292,000	SW,SW,SE, SEC. 19, T20N, R20W
MP-26	160	360	-60	1,492,238	292,000	SW,SW,SE, SEC. 19, T20N, R20W
MP-27 (CORE)	500	360	-60	1,491,913	292,000	SW,SW,SE, SEC. 19, T20N, R20W
MP-28				CANCELLED		
MP-29	200	360	-70	1,492,132	292,100	SE,SW,SE, SEC, 19, T20N, R20W
MP-30	130	360	-70	1,492,215	292,100	same as above
MP-31	160	360	-60	1,492,128	292,300	same as above
MP-32	280	360	-60	1,492,025	292,300	same as above
MP-33	400	360	-60	1,491,918	292,300	same as above
MP-34 (CORE)	180	360	-60	1,492,058	292,400	same as above
MP-35	250	360	-60	1,492,058	292,500	same as above
MP-36	380	360	-60	1,491,960	292,500	same as above
MP-37	520	360	-60	1,491,853	292,500	same as above
MP-38	220	360	-60	1,492,006	292,600	same as above
MP-39	180	360	-60	1,491,990	292,700	same as above
MP-40 (CORE)	100	360	-60	1,492,079	292,700	same as above
MP-41	170	360	-60	1,491,960	292,800	SW, SE, SE, SEC. 19, T20N, R20W
MP-42	130		VERT	1,492,085	292,800	same as above
MP-43	130	360	-60	1,491,985	292,900	same as above
MP-44	220	360	-60	1,491,885	292,900	same as above

MP-45	220	360	-60	1,491,915	293,000	same as above
MP-46	420	360	-70	1,492,200	291,450	SW,SW,SE, SEC. 19, T20N, R20W
MP-47 (CORE)	350	360	-70	1,492,143	291,350	SE,SE,SW, SEC. 19, T20N, R20W
MP-48	520	360	-70	1,492,033	291,250	same as above
MP-49 (CORE)	220	360	-60	1,492,400	291,150	same as above
MP-50	320		VERT	1,492,276	291,150	same as above
MP-51	200	360	-50	1,492,276	291,150	same as above
MP-52 (CORE)	360	360	-60	1,492,387	291,039	same as above
MP-53	260	360	-60	1,492,292	291,050	same as above
MP-54	500	360	-60	1,492,300	290,950	same as above
MP-55	300	360	-60	1,491,800	293,100	SW, SE, SE, SEC. 19, T20N, R20W
MP-56	260	360	-60	1,491,787	293,300	SW, SE, SE, SEC. 19, T20N, R20W
MP-57 (CORE)	340	360	-60	1,491,700	293,460	NE, NE, NE, SEC. 30, T20N, R20E
MP-58	280	360	-60	1,491,715	293,990	NE, NE, NE, SEC. 30, T20N, R20E
MP-59	320	360	-60	1,491,695	293,810	NE, NE, NE, SEC. 30, T20N, R20E
MP-60	300	360	-60	1,491,827	294,190	SW, SW, SW, SEC. 20, T20N, R20E

RVC Footage: 12,430
Core Footage: 3,970
Total Footage: 16,400

Avg. Depth: 292.9

MOSS PROJECT

1992 REPORT FOR MAGMA COPPER COMPANY

MOSS PROJECT
MAGMA COPPER REPORT

FINAL REPORT
ON EXPLORATION
OF THE
MOSS PROPERTY
SAN FRANCISCO MINING DISTRICT
MOHAVE COUNTY, ARIZONA

for

MAGMA COPPER COMPANY
7400 North Oracle Road, Suite 200
Tucson, Arizona 85704

by

Richard A. Jeanne
Consulting Geologist
888 Keele Drive
Reno, Nevada 89509-2338

February, 1992

EXECUTIVE SUMMARY

The exploration program consisting of geologic and alteration mapping, surface sampling and drilling of the Moss Project has been completed. A total of 10,207 feet in 22 holes was drilled to evaluate potential gold and silver mineralization along 3500 feet of strike length of the mineralized Moss vein.

A drill indicated resource estimate of 89,117 ounces gold at a grade of 0.053 opt was compiled for a 600 foot segment of this vein from data generated by Billiton Minerals USA. Extrapolation of tonnage and grade in this segment onto an undrilled, adjacent claim indicated potential for 213,000 to 382,000 contained ounces gold. Anomalous gold mineralization in surface samples suggested additional potential may exist below a large area of strong silicification at the west end of the Moss vein.

An exploration drilling program consisting of two parallel lines of 17 holes, designed to penetrate the vein at depths of 200-300 feet and 400-500 feet, was conducted on the (one) previously undrilled claim. Phase - II of this program consisted af a horizontal fan of three shallow-angle holes, 700 to 1040 feet in depth, which tested an 800 foot segment of the vein in the silicified area. A fourth hole in this phase was lost at 317 feet and a fifth tested an area of strong acid leaching on Billiton's unpatented lode claims.

Computer-generated resource estimates based on Phase - I drilling data yield a geologic resource of 7.414 million tons at 0.038 opt, or 281,732 contained ounces gold and a pit resource of 2.996 million tons at 0.044 opt, or 131,824 mineable ounces gold.

Phase - II drilling in the silicified area unexpectedly encountered mineralized intervals only in the upper 400 ft of the three holes and not adjacent to the Moss vein as anticipated. Average grade of these intervals is 0.015 opt gold. The maximum probable resource in this area is abut 64,000 ounces gold, but the low grade and unfavorable topography make economically profitable recovery unlikely.

The mineable resource estimate of 131,824 ounces is well below the 250,000 to 300,000 ounce range necessary for Magma to profitably develop and exploit this deposit. Targets which may have contributed to this resource have been tested unsuccessfully and no additional targets are recognized at this time. Based on the results of this evaluation it is recommended that Magma Copper Company terminate the Moss Project.

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PLATES

INTRODUCTION

The Moss property is located in the San Francisco Mining District near Oatman in Mohave County, Arizona (Figure 1). The property was leased by Magma Copper Company from Billiton Minerals USA in 1991, however, final agreement on the sublease of some patented claims was not finalized with the owners until the Fall of 1991. Preliminary evaluation, including mapping and surface sampling had begun prior to the final agreement and drilling commenced subsequent to it.

EXPLORATION PROGRAM

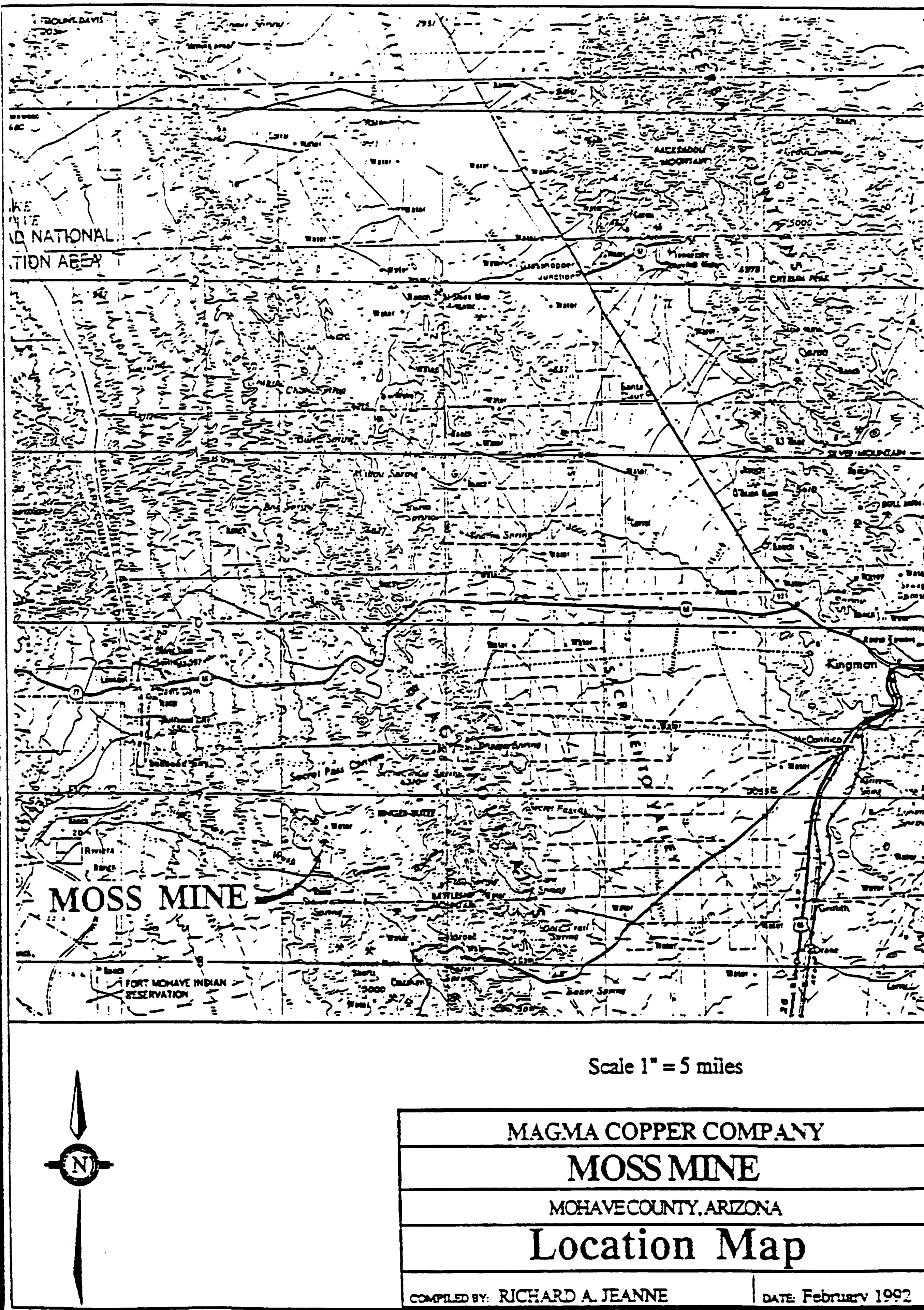
A preliminary data review and sampling program was conducted in April 1991 (Jeanne, 1991) prior to acquisition of the property by Magma Copper Co. As an agreement with Billiton was being negotiated, a more detailed program including mapping and additional sampling was begun.

Geologic mapping was conducted at a scale of 1" = 400' on a portion of the topographic base prepared by IntraSearch for Billiton Minerals. The area mapped in detail comprises about 2.4 square miles in the immediate vicinity of the Moss vein (Plate I).

Outside the area mapped in detail but overlapping the southeastern corner of Billiton's unpatented BMX claims, are widespread exposures of strongly acid-leached Moss Porphyry. I felt this area worthy of some attention, and conducted some cursory limonite and alteration mapping and sampling. No formal maps were prepared pending the outcome of a drill hole planned at the site of a multiple trace element anomaly and exceptionally strong alteration.

Based on data from Billiton and the initial exploration, a drilling program was planned and conducted for portions of the Moss vein on the Key No. 1 and California Moss claims (Plate 4). A second phase of drilling was conducted on the silicified peaks at the west end of the Moss vein and for the strongly altered area in Mossback wash on Billiton's unpatented BMX claims. A total of 10,207 feet was drilled in 22 holes. All holes were drilled at angles of -65° to -30° except the one hole in Mossback wash which was vertical.

Surface samples from the vein on the California Moss claim indicate potential for mineralization similar to that on the Key No. 1 claim. Three parallel lines of drill sites were prepared on the California Moss to test the continuity of mineralization eastward from the Key No. 1 at deep, shallow and intermediate depths. The intermediate depth holes extended the line of Billiton's holes MM-1, 2, 4, 7 and 8 targeting the vein at depths of 250 to 350 ft. The deeper holes, targeting the vein at depths of 400 to 500 ft, were located along a line 100 feet south. Pads for the shallow holes, intended for air track drilling at depths 100 to 200 ft, were located 100 feet north of the intermediate holes along an extension of the line of air track holes drilled by BF Minerals, but were not drilled.



Scale 1" = 5 miles

MAGMA COPPER COMPANY
MOSS MINE
MOHAVE COUNTY, ARIZONA
Location Map
COMPILED BY: RICHARD A. JEANNE — DATE: February 1992

Figure 1.

Drilling was initiated on the deeper line at every other site to obtain a broad view of continuity of mineralization with the intent of infill drilling if continuity was established. This program was modified in the vicinity of the adit on the California Moss claim by drilling three adjacent holes to determine if a theorized ore shoot existed there. Intermediate depth holes were drilled adjacent to the deep holes to provide data with which to develop cross sections.

Drilling in the silicified peaks area consisted of a horizontal fan of three angle holes which penetrated the Moss vein over a strike length of about 800 ft. A detailed discussion of this phase of work is contained in my interim report (Jeanne, 1992).

GEOLOGY

EXTRUSIVE ROCKS

Alcyone Formation

The oldest rocks exposed in the district are tuffs, flows, volcaniclastic sediments, sedimentary tuff breccias, welded tuffs and landslide breccias and basalt flows of the Alcyone Formation, exposed in the eastern and western portions of the mapped area (Plate I). The most common representative of this unit is a siliceous, fine-grained, granular-looking, locally porphyritic, rhyolitic flow rock. It is locally present throughout the mapped area and forms much of the higher elevations of the silicified peaks at the west end of the Moss vein.

In the southwest area lenses of black, silty, hornfelsed sediments can be traced for several hundreds of feet. South-southeast of hill 2056, these sediments are exposed in the access road to the property, and carbonized plant fragments were noted in them on the southeast flank of hill 2144. Also near hill 2144 are exposures of welded tuff containing pumice fiamme typically 2-3 inches and up to 9 inches in length with aspect ratios of about 8:1; a gneissic-appearing welded tuff or flow banded rhyolite containing pinkish K-spar; a breccia consisting of a mosaic of welded clasts of flow banded rhyolite; and amygdaloidal basalt. Rocks of basaltic composition are atypical of the Alcyone, and this small exposure may be a block of older, unnamed flows and volcaniclastic rocks which underlie the Alcyone. DeWitt, et al (1991) included older basalts with the Alcyone because of their limited exposure in the Oatman District.

No attempt was made to compile a stratigraphy of the Alcyone due to the complexity of exposures of the various lithologies which commonly can be traced for no more than a few outcrops before changing. Compounding the difficulty in correlating these subunits is the fact that practically all exposures of the Alcyone could be identified as roof pendants suspended in the intrusive Moss Porphyry. At many localities in the southwest area, Moss porphyry is exposed and can be traced to gradational contacts in which blocks of Moss appear to be enclosed within the Alcyone. The boundaries of these blocks are themselves gradational and at such exposures, the intrusive relationship is brought into question. At other localities the contrary is evident. For example, just north of hill 2009 on the north side of the wash, a small apophysis of the Moss Porphyry; extremely rich in phenocrysts up to 1 inch in length; has been injected between layers of the carbonaceous sediments in a manner more typical of highly fluid basalts. The intruded body is no more than 8 feet in length and 3 feet in thickness, narrowing to a knife edge at the extremities.

To map each exposure of Moss and Alcyone in the west area would be unproductive. The Alcyone-Moss contact in the western portion of the map therefore, is a boundary, west of which exposures of the Alcyone are commonplace, but Moss may also be exposed. East of this boundary, only Moss is exposed except for isolated scab-like pendants which are mapped.

Other Extrusive Rocks

Two series of extrusive rocks unconformably overlie the Alcyone Formation in the region (Figure 2), but are not exposed in the mapped area. The oldest, the "middle volcanics" consists, from bottom to top, of the Esperanza Quartz Latite, the Oatman Andesite and the Gold Road Latite (DeWitt, et al, 1991). Unconformably overlying the "middle volcanics" are the "upper volcanics" which consist from oldest to youngest of the Antelope Rhyolite, Cottonwood Formation, Flag Spring Quartz Latite and the Meadow Creek Quartz Latite. The volcaniclastic Sitgreaves Tuff is temporally equivalent to all the upper volcanic units (DeWitt, et al, 1991).

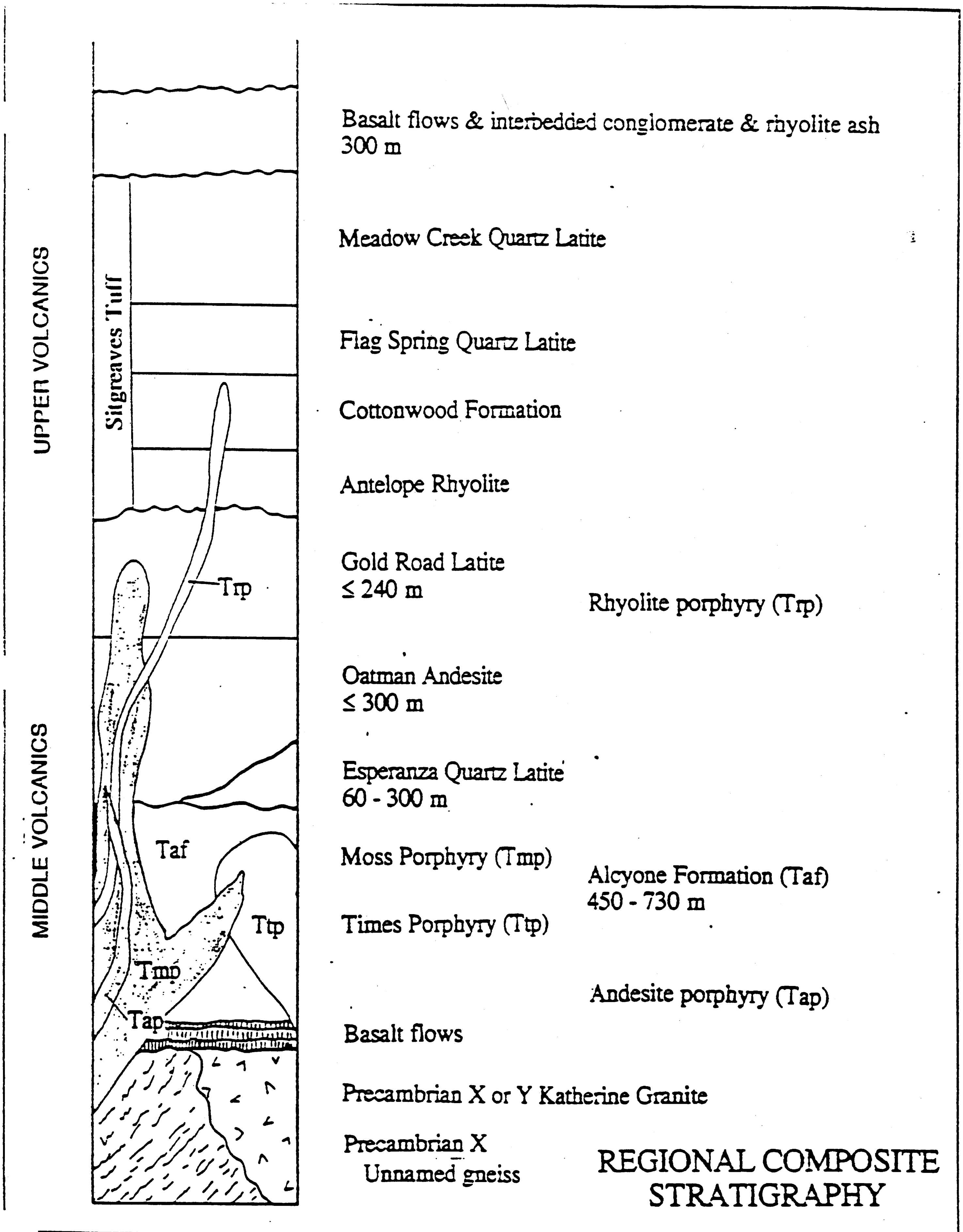
INTRUSIVE ROCKS

Times Porphyry

The Times Porphyry is the oldest of two small stocks which intrude the stratified rocks in the district. It intrudes the Alcyone Formation and is exposed south of Silver Creek Wash, outside the mapped area. DeWitt and others (1991) classify the Times as a syenogranite and have determined its major and minor element chemistry most closely resembles that of the Cottonwood Formation.

Moss Porphyry

The Moss Porphyry intrudes the Alcyone Formation in the mapped area, and the Times Porphyry, the Oatman Andesite and the Gold Road Quartz Latite at other localities in the region. It is concentrically zoned, consisting of a granodiorite core enclosed by an inner quartz monzonite and an outer monzodiorite contact margin (DeWitt, et al, 1991). They consider the Moss most closely equivalent to the Gold Road Latite, based on its composition and similar ages of 18.5 ± 2.5 Ma and 18.6 ± 0.9 Ma, respectively. Large (≤ 1.2 cm) anhedral to subhedral phenocrysts of medium gray plagioclase are commonly intergrown with clots of biotite and are enclosed in a finer grained matrix of salmon pink potassium feldspar, quartz, biotite and minor pyroxene. Where altered or weathered, the plagioclase is typically chalky white, imparting a distinctly porphyritic texture to the Moss.



UPPER VOLCANICS
MIDDLE VOLCANICS
Sitgreaves Tuff
Trp
Taf
Ttp
Tmp
Tap
Basalt flows & interbedded conglomerate & rhyolite ash
300 m
Meadow Creek Quartz Latite
Flag Spring Quartz Latite
Cottonwood Formation
Antelope Rhyolite
Gold Road Latite
≤ 240 m
Rhyolite porphyry (Trp)
Oatman Andesite
≤ 300 m
Esperanza Quartz Latite
60 - 300 m
Moss Porphyry (Tmp)
Alcyone Formation (Taf)
450 - 730 m
Times Porphyry (Ttp)
Andesite porphyry (Tap)
Basalt flows
Precambrian X or Y Katherine Granite
Precambrian X
Unnamed gneiss
REGIONAL COMPOSITE STRATIGRAPHY

Figure 2.

Younger Intrusives

A series of north to northeast trending dikes of rhyolite porphyry intrude the Alcyone Fm. and Moss Porphyry. The dikes contain subhedral to well rounded phenocrysts of potassium feldspar which locally impart a characteristic "birdseye" texture to the rock. The phenocrysts are supported by a fine-grained groundmass of potassium and plagioclase feldspar, quartz and minor biotite.

Minor dikes and small pods of andesite and andesite porphyry intrude the Moss. One such dike averages about 1 foot in width but is traceable over a distance of 2,800 feet (Plate I). This particular dike, on the Gold Hill claims, occupies a structure which, in places, was previously invaded by a quartz-carbonate-pyrite vein.

ALTERATION

Few localities on the property afford the opportunity to examine unaltered Moss porphyry. One such locality is north of the Moss vein on the northeast slope of hill 2371, where salmon-pink K-spar is visible in outcrop. The muck piles around the headframe also contain unaltered K-spar and it is common in drill hole cuttings from the footwall of the Moss vein.

The porphyry generally is characterized by varying degrees of chloritic alteration which imparts a pale- to dark-green color to outcrops. In the southeast part of the mapped area, limonite development and bleaching predominate, respectively producing light to medium brownish and pale yellow to white colors. In the silicified peaks, pervasive silicification is dominant and along the Moss vein, stockwork quartz veins and weak pervasive silicification are present (Plate II).

For mapping purposes, two degrees of chloritic alteration were noted. The weakest produces a bronzy to green color in biotite with minor chlorite development in the groundmass immediately adjacent to the phenocryst. Other mafic minerals typically are found in clots and irregular masses which are completely chloritized. K-feldspars have lost their salmon-pink color. Plagioclase phenocrysts, which may be up to half an inch in length, typically are cloudy to white, imparting a distinctly porphyritic texture to the rock. Although incipiently altered, the feldspars typically are still quite hard and cleavable with twinning evident. The groundmass typically is light to medium gray and in outcrop, the rock is pale to medium gray green. Limonite is common on fracture surfaces, particularly in areas of silicification. Weak to moderate pervasive silicification may be present with this grade of chloritization as in the stockwork zones in the hanging wall of the Moss vein.

The second type of chloritic alteration is stronger than that described above. The groundmass, in addition to biotite and other mafics, is completely chloritized giving outcrops a dark green color. Clay alteration of plagioclase is more intense and phenocrysts can be gouged with a pin. On weathered surfaces they commonly have been completely removed leaving large casts. Greenish grus is a characteristic weathering product of this alteration type.

The second type is more abundant on the hanging wall side of the vein, and the first on the footwall side, however, both are gradational and may be intermixed.

In the southeast part of the mapped area, the influence of a large area of acid leaching becomes apparent. This area contains abundant pyrite and in the more strongly pyritized areas, weathering has produced enough acid to mobilize the iron and bleach and leach the rock to white or pale-yellow hues. Peripheral to these areas, the iron has undergone little or no transport and from a distance, soil and outcrops have a brownish color as opposed to the pale to dark green of the chloritized areas. In hand specimen biotite and other mafic minerals, as well as much of the groundmass, are replaced by limonite. Plagioclase phenocrysts are commonly altered to white clay. Some can be scratched only with a pin and others can be gouged out with a fingernail. Limonite development overlaps areas of chloritic alteration and patches of chloritized rock among the limonitic can be seen locally. Hand specimens from these areas are greenish-brown on freshly broken surfaces. Weathering of limonite flooded rock typically produces a blockier form of grus that that of the chloritized rock.

The leached and bleached areas typically have fewer outcrops owing to the abundance of clay. Locally, silicification is present and freshly broken surfaces reveal a thoroughly bleached interior in which biotite and other mafic minerals are clay altered and at some localities, sericitized. Feldspars commonly are bleached but only weakly altered; taking metal from the scratch of a pin and showing cleavage and twinning. Hematite and limonite are common on fracture surfaces and more abundant in silicified rock. Weathering generally produces a light to medium brown grus.

Strong pervasive silicification has invaded the Moss Porphyry and the Alcyone Formation forming the peaks at the west end of the Moss vein. Less intense silicification is locally present in the hanging wall for several thousand feet east of the headframe. In both areas, stockworks of white, clear and/or drusy quartz veinlets are common. The pervasive silicification carries anomalous but not typically ore grade gold mineralization. The stockworks are also auriferous and commonly higher in grade. At the east end of the Moss vein and at scattered localities in the mapped area, gray to reddish-brown jasperoid-like silicification is present. It is very dissimilar to the quartz of the main part of the vein and is barren of mineralization.

MINERALIZATION

Throughout the district, numerous quartz and quartz-carbonate-pyrite veins occur which have been the focus of attention since the discovery of gold there by John Moss in 1863. The Moss vein is the most significant and is traceable for about 3500 feet. The vein is hosted primarily by the Moss Porphyry, but it is also present in the overlying Alcyone

Formation. Development of other, similar veins on the Ruth, Gold Hill, New York and Rattan claims has also been undertaken.

The Moss vein consists, in places, of two parallel veins. A quartz vein up to 15 feet in thickness typically occupies the footwall contact and locally a carbonate vein of similar dimensions may be present at the hanging wall contact of the quartz vein or as a separate vein several feet into the hanging wall. Typically the quartz is white, locally drusy or sugary, but may be fine grained and appear merely to be silicified gouge. In places, carbonate minerals have intergrown with the quartz and where exposed to weathering, the carbonate has been removed leaving a vuggy latticework of silica. In numerous veins varying from fractions of an inch to several inches in thickness, vein filling consists of an outer envelope of quartz, or bands of quartz, enclosing a carbonate core. The carbonate/quartz relationship seen in these and in the Moss vein indicates the carbonate was a later phase in the mineralizing event. Widely disseminated blebs of pyrite are associated with both phases and veins of this association are identified as quartz-carbonate-pyrite or q-c-p veins. Fluorite has been noted at a number of localities in the Moss vein; it was mentioned by Godbe (1982) in his report on the property and was noted among cuttings in several of the Magma drill holes. No clear relationship of fluorite to higher or lower grades of precious metal mineralization is evident, however.

Surface samples of silica-rich portions were collected separately from carbonate-rich portions of the Moss vein. Select samples were also taken of stockwork zones, hanging wall and footwall rock, and from exposures where particular features are evident which may assist in understanding the deposit. Highest grades of gold mineralization are associated with the carbonate phase of vein growth. Stockwork zones commonly contain ore grade gold as well. Most of these zones, although appearing to consist mainly of small quartz veinlets, also contain significant amounts of carbonate.

Quartz veins without a noticeable carbonate content are present at numerous localities on the property, however, primary carbonate veins are always associated with quartz veins. A few isolated veins of gray calcite do occur, but they are not significantly mineralized and are thought to be secondary fracture fillings of transported material.

In the drilling, the intervals containing the highest grades of gold also contain varying proportions of q-c-p veins. None of the Magma holes, however, encountered the abundance of these veins as was encountered by the Billiton drilling on the Key #1 claim.

METALLURGY

Two groups of metallurgical tests were completed. The first, on cuttings from Billiton's drill holes and bulk ore samples collected from the adit on the California Moss No. 1 claim was discussed in more detail in my earlier report. The second group consisted of bottle roll tests of sulfide ore from Magma's drill holes. Lab reports from both groups of tests are included in Appendix F.

Gold recoveries in bottle roll tests of -1" mesh bulk ore materials were 42% after 96 hours. Recoveries from cuttings from Billiton's drill holes ranged from 53 to 78% and on those from Magma's holes 78 to 88%.

RESOURCE ESTIMATES

After the initial phase of drilling a hand calculated drill-indicated resource was completed based on data from the California Moss claim (Table I). This estimate yielded a resource of 100,409 ounces gold at a grade of about 0.024 opt Au. A similar estimate for the area drilled by Billiton had been prepared in an earlier report (Jeanne, 1991) which yielded an estimate of 89,117 ounces at a grade of 0.053 opt Au, for a total of about 190,000 ounces.

Mintec Inc. prepared two resource estimates using all available drilling data. An in situ or geologic resource estimate using an 0.02 opt cutoff and a 300 ft search radius yielded 7,414,000 tons at 0.038 opt or a total contained resource of 281,732 ounces gold. An estimated pit resource using a 0.02 opt cutoff and a 100 ft search radius yielded 2,996,000 tons at 0.044 opt and a 1.96:1 strip ratio or 131,824 mineable ounces. Both Mintec's and my estimates assumed continuity of mineralization through those drill sites which had been skipped in Magma's program by projecting average grades from adjacent drill holes. Since none of the data suggested otherwise, it was assumed that infill drilling on these skipped sites would not encounter any significantly higher grades nor longer intervals of mineralization and therefore could not improve the resource estimate. Copies of data printouts, cross sections, plan maps and pit plans prepared by Mintec have been provided to Magma and are not included in this report.

✓ After the second phase of drilling, a very rough estimate of the potential resource of the silicified peaks area was prepared (Jeanne, 1992) yielding an absolute maximum potential of 185,000 contained ounces and a more probable 48,000 contained ounces gold. The grade on which this estimate is based, however, is very low; 0.012 ounces per ton, which is the average grade of the upper 300 to 400 ft. of the three drill holes. The average grade of the mineralized intervals in these three holes is 0.016 opt Au. Applying this grade to to the calculations yields only 64,000 ounces.

In addition to the disappointing tonnage and grade figures from the silicified peaks, stripping ratios are likely to be high. Topography is steep in the area and continues to climb on the footwall side of the Moss vein. A 45° pit slope superimposed on cross sections of the two westerly holes shows significant footwall material would have to be removed before the pit would reach the levels of the longer mineralized intercepts. It does not appear that this area could contribute to the economics of a mining operation at Moss.

TABLE 1. DRILL INDICATED RESOURCE - MAGMA HOLES

CROSS SECTION	HOLE	DIP LENGTH	STRIKE LENGTH	TRUE WIDTH	VOLUME (cu. ft.)	TONS @ 12.5 cu. ft/t	GRADE (opt Au)	CONTAINED OUNCES
292180 E	MC-7	145	100	7	98890	7911	0.018	142
292180 E	MC-7	145	100	10	148335	11867	0.012	142
292180 E	MC-7	145	100	7	98890	7911	0.011	87
292180 E	MC-7	145	100	7	98890	7911	0.011	87
292180 E	MC-7	145	100	7	98890	7911	0.010	79
292180 E	MC-7	145	100	38	543895	43512	0.018	783
292180 E	MC-7	145	100	44	642785	51423	0.021	1080
292180 E	MC-11	170	100	10	173910	13913	0.013	181
292180 E	MC-11	285	100	51	1457775	116622	0.037	4315
292180 E	MC-11	325	100	10	332475	26598	0.019	505
Extrapolation of one half sum of sections 292180 E and 292360 E into undrilled gap								9124
292360 E	MC-6	145	100	27	395560	31645	0.017	538
292360 E	MC-6	145	100	27	395560	31645	0.018	570
292360 E	MC-6	145	100	7	98890	7911	0.010	79
292360 E	MC-6	145	100	20	296670	23734	0.019	451
292360 E	MC-6	145	100	68	988900	79112	0.028	2215
292360 E	MC-12	125	100	10	127875	10230	0.013	133
292360 E	MC-12	180	100	7	122760	9821	0.026	255
292360 E	MC-12	280	100	10	286440	22915	0.012	275
292360 E	MC-12	370	100	38	1387870	111030	0.057	6329
Extrapolation of one half sum of sections 292360 E and 292590 E into undrilled gap								12470
292590 E	MC-5	135	100	14	184140	14731	0.020	295
292590 E	MC-5	135	100	65	874665	69973	0.044	3079
292590 E	MC14	375	100	27	1023000	81840	0.053	4338
292590 E	MC14	200	100	102	2046000	163680	0.039	6384
292680 E	MC-3	140	100	55	763840	61107	0.020	1222
292680 E	MC-15	230	100	7	156860	12549	0.014	176
292680 E	MC-15	260	100	10	265980	21278	0.023	489
292680 E	MC-15	410	100	34	1398100	111848	0.060	6711
292775 E	MC-4	145	100	24	346115	27689	0.067	1855
292775 E	MC-4	145	100	7	98890	7911	0.014	111
292775 E	MC-4	145	100	7	98890	7911	0.022	174
292775 E	MC-13	145	100	7	98890	7911	0.010	79
292775 E	MC-13	200	100	17	341000	27280	0.018	491
292775 E	MC-13	260	100	24	620620	49650	0.018	894
292775 E	MC-13	330	100	14	450120	36010	0.015	540
292775 E	MC-13	395	100	20	808170	64654	0.036	2328
Extrapolation of one half sum of sections 292775 E and 292940 E into undrilled gap								5800
292940 E	MC-8	115	100	7	78430	6274	0.034	213
292940 E	MC-16	315	100	7	214830	17186	0.011	189
292940 E	MC-16	380	100	41	1554960	124397	0.038	4727
Extrapolation of one half sum of sections 292940 E and 293130 E into undrilled gap								4380
293130 E	MC-9	285	100	7	194370	15550	0.018	280
293130 E	MC-9	335	100	38	1256585	100527	0.019	1910
293130 E	MC-9	550	100	14	750200	60016	0.024	1440
Extrapolation of one half sum of sections 293130 E and 293350 E into undrilled gap								5365
293350 E	MC-10	75	100	20	153450	12276	0.023	282
293350 E	MC-10	115	100	10	117645	9412	0.019	179
293350 E	MC-10	410	100	20	838860	67109	0.031	2080
293350 E	MC-10	470	100	7	320540	25643	0.011	282
293350 E	MC-10	550	100	51	2813250	225060	0.019	4276
					TOTALS	2,053,093	0.0237	100,409

SUMMARY AND RECOMMENDATIONS

Results of Magma Copper Company's exploration program on the Moss property indicate an estimated total geologic resource of 7,414,000 tons at a grade of 0.038 opt or 281,732 contained ounces gold. An estimate of the pit resource yields 131,824 mineable ounces contained in 2,996,000 tons ore at a grade of 0.044 opt gold. All areas with potential for mineralization have been drill tested without additional success, and no other targets are evident at this time.

The mineable resource estimated from data available to date is well below the 250,000 to 300,000 ounces deemed necessary for Magma to profitably exploit this deposit. It is, therefore, recommended that Magma Copper Company terminate the project.

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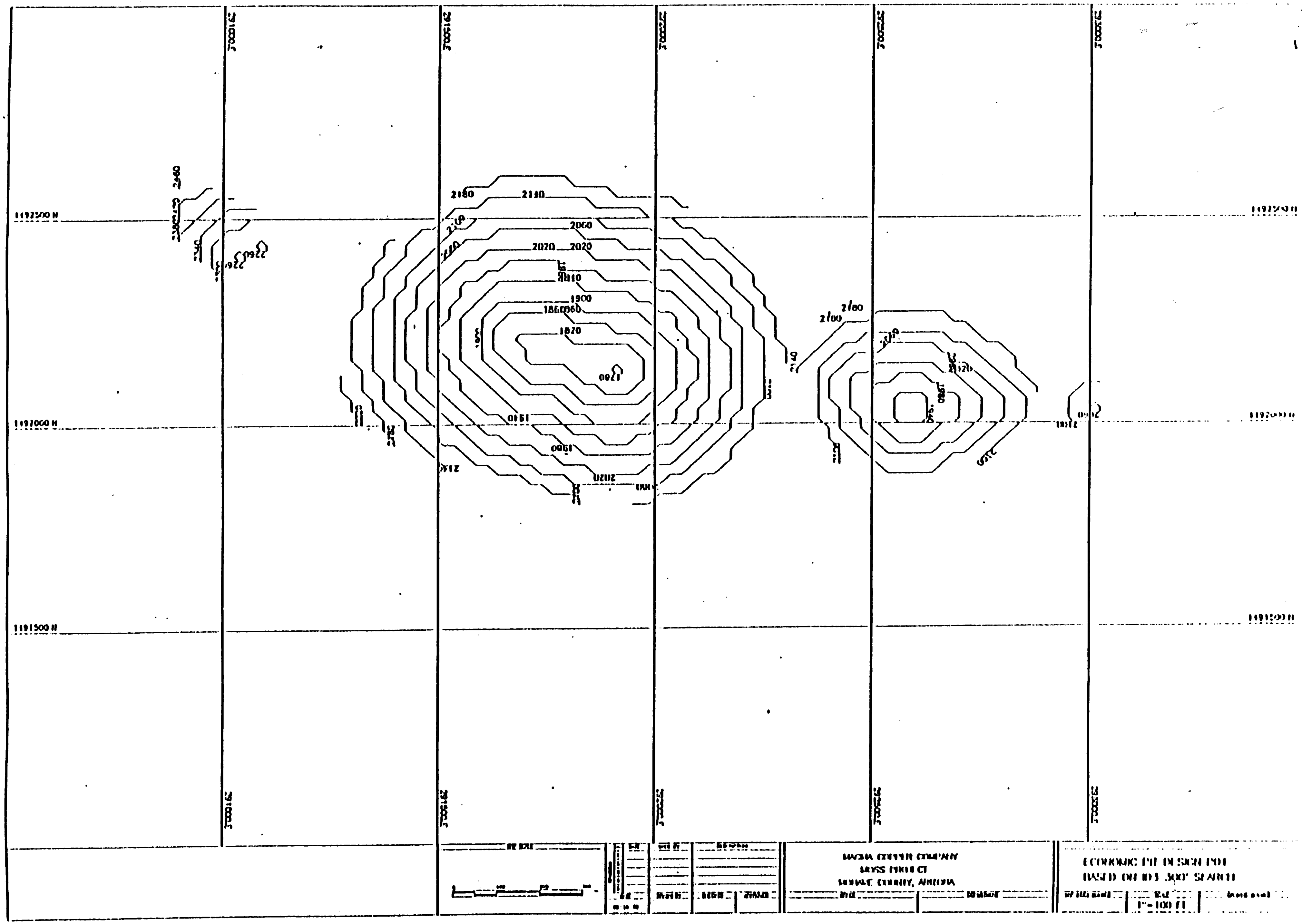

Figure 23. Economic Pit Design Using Floating Cone

MOSS PROJECT
MINTEC RESERVES

MOSS PROJECT

1992 MINTEC RESERVE REPORT FOR MAGMA COPPER COMPANY

Moss Project Report

Submitted to: Mr. Mark Sander
Magma Copper Company
7400 North Oracle Road
Suite 200
Tucson, Arizona 85704

Submitted by: Mr. Abdullah Arik
Mintec, Inc.
P.O. Box 31420
Tucson, Arizona 85751

Respectfully Submitted:

Abdullah Arik
MINTEC, INC.
Tucson, Arizona
February 10, 1992

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EXECUTIVE SUMMARY

The Moss Deposit located in Mohave County, Arizona is a vein-type deposit which strikes west-northwest. Gold and silver mineralization occurs in quartz-carbonate vein and in stockwork veins in the hanging wall and footwall which steeply dips due south-southeast. There are 96 drillholes in the area, which have been drilled at angles approximately due north to intersect the mineralized veins.

Using the assay information from the drillholes, a 3-D block model of the Moss Deposit has been developed to calculate the preliminary geologic and minable reserves. The block size used was 25' x 25' with a bench height of 20'. The model had the following limits:

Easting	290,500	to	294,000
Northing	1,491,500	to	1,493,000
Elevation	1,500	to	2,600

The 5-foot assays were composited into 20-foot benches for use in variogram study and in interpolation of block grades. North-south drillhole cross-section maps were generated at 100'-200' intervals to check the data and to see the continuity of the mineralization down dip and along strike.

Preliminary statistical analyses and variogram study were performed to help decide the parameters of the variogram and search strategy to use during interpolation. Block grades were then interpolated using both kriging and inverse distance weighting methods. Three cases were tried with the strike and dip of the deposit to be N78W and -68° SW, respectively:

1. Inverse distance weighting method of power three (ID3). Search distances along the strike and down dip are 100-

feet. Search distance vertical to the plane is 20-feet.

2. ID3. Search distances along the strike and down dip are 300-feet. Search distance vertical to the plane is 20-feet.

3. Kriging using the search strategy of Case #2.

Based upon these interpolations, the following geologic reserves were obtained down to 1,600' elevation at 0.02 opt gold cutoff:

	Case #1	Case #2	Case #3
	ID3 (100' Search)	ID3 (300' Search)	Kriging (300' Search)
Ore Tons	3,545,000	7,414,000	7,851,000
Grade opt	0.044	0.038	0.035

Based upon the block grades generated with Case #2, an economic pit design of the deposit was developed using the floating cone algorithm.

The parameters used for this design were:

Mining cost/ton waste	=	$0.83
Total operating cost/ton ore	=	$4.89
Pit Slope	=	45°
Gold price/oz	=	$350
Recovery	=	60%

At 0.02 and 0.03 opt cutoffs, the reserves from the economic pit were as follows:

	0.02 opt	0.03 opt
Ore tons	2,996,000	1,932,000
Grade opt	0.044	0.055
Waste tons	5,868,000	6,932,000
S.R.	1.96	3.59

INTRODUCTION

The Moss Project area located in Mohave County, Arizona is approximately 4000' long and 2000' wide. The gold mineralization in the area is mostly confined to quartz-carbonate vein and stockwork veins in the hanging wall and footwall. These veins strike west-northwest and steeply dip due south-southeast. There are 96 drillholes in the area with depths ranging from 30' to 550'. The drillhole spacing is 50' to 200' along strike. The holes have been drilled at angles approximately due north to intersect the mineralized veins.

The objective of this study was to develop a 3-D block model of the deposit using the available drillhole data, and to design a preliminary floating cone economic pit. The geological and minable reserves from this study is to aid Magma-Moss personnel in decision making for further drilling in the area.

STUDY AREA

The Moss Project area is approximately 4000' long and 2000' wide. The coordinates of this area is from 290,500E to 294,500E and from 1,491,000N to 1,493,000N. There are 96 drillholes in the area with over 16,000 feet of drilling. Most holes are inclined with depths ranging from 30' to 550'. The spacing of the drillholes along the strike of the deposit is 50' to 200'. Figure 1 shows the locations of the drillholes and the topography contours in this area.

The gold mineralization is low grade and mostly confined to quartz-carbonate vein and stockwork veins in the hanging wall and footwall. These veins strike approximately west-northwest and steeply dip due south-southeast. Figures 2 through 16 are N-S cross-section plots at about 200' intervals showing 20' bench composite assays that are equal or greater than 0.008 oz/ton gold.

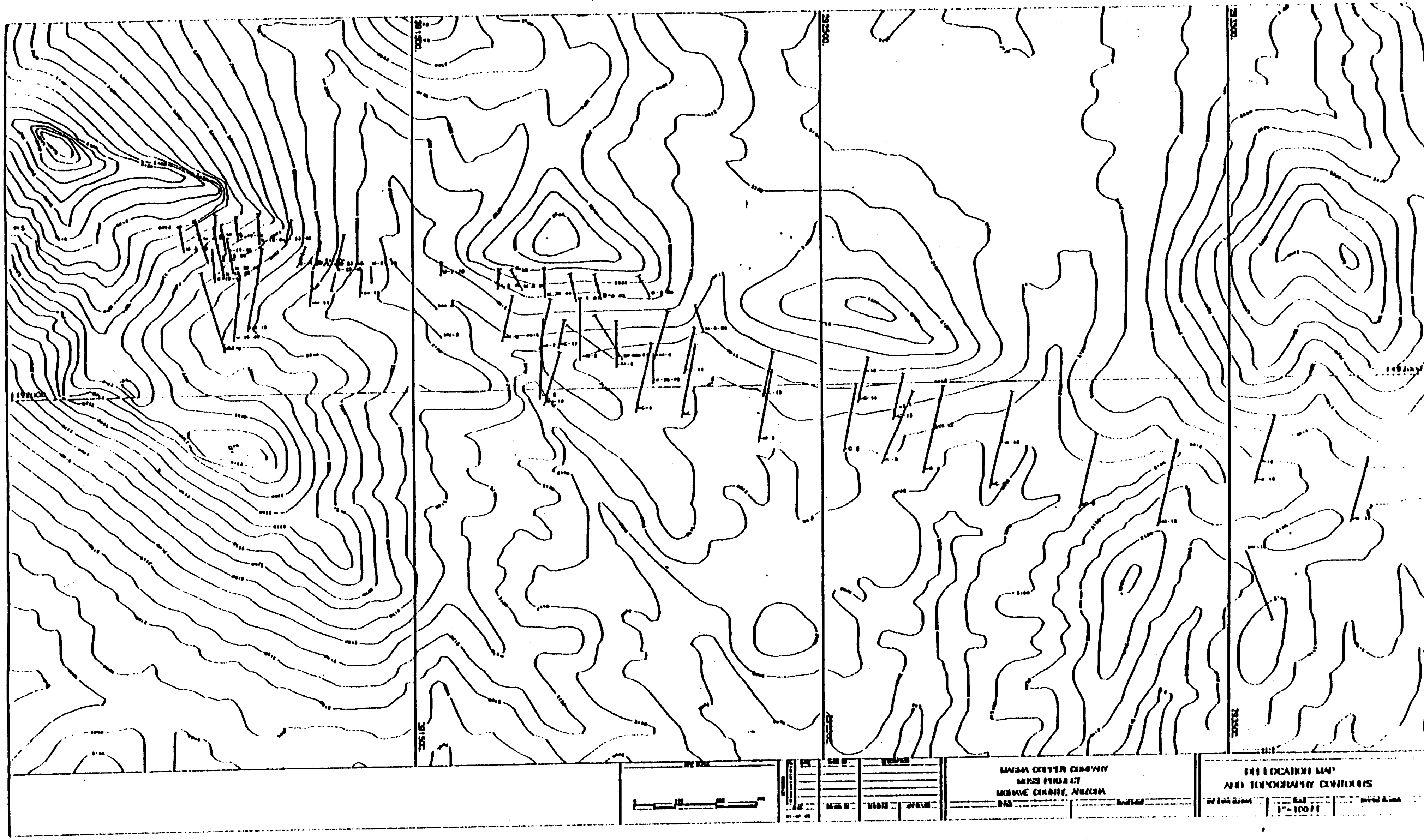


Figure 1. Topography Contours and Drillhole Locations

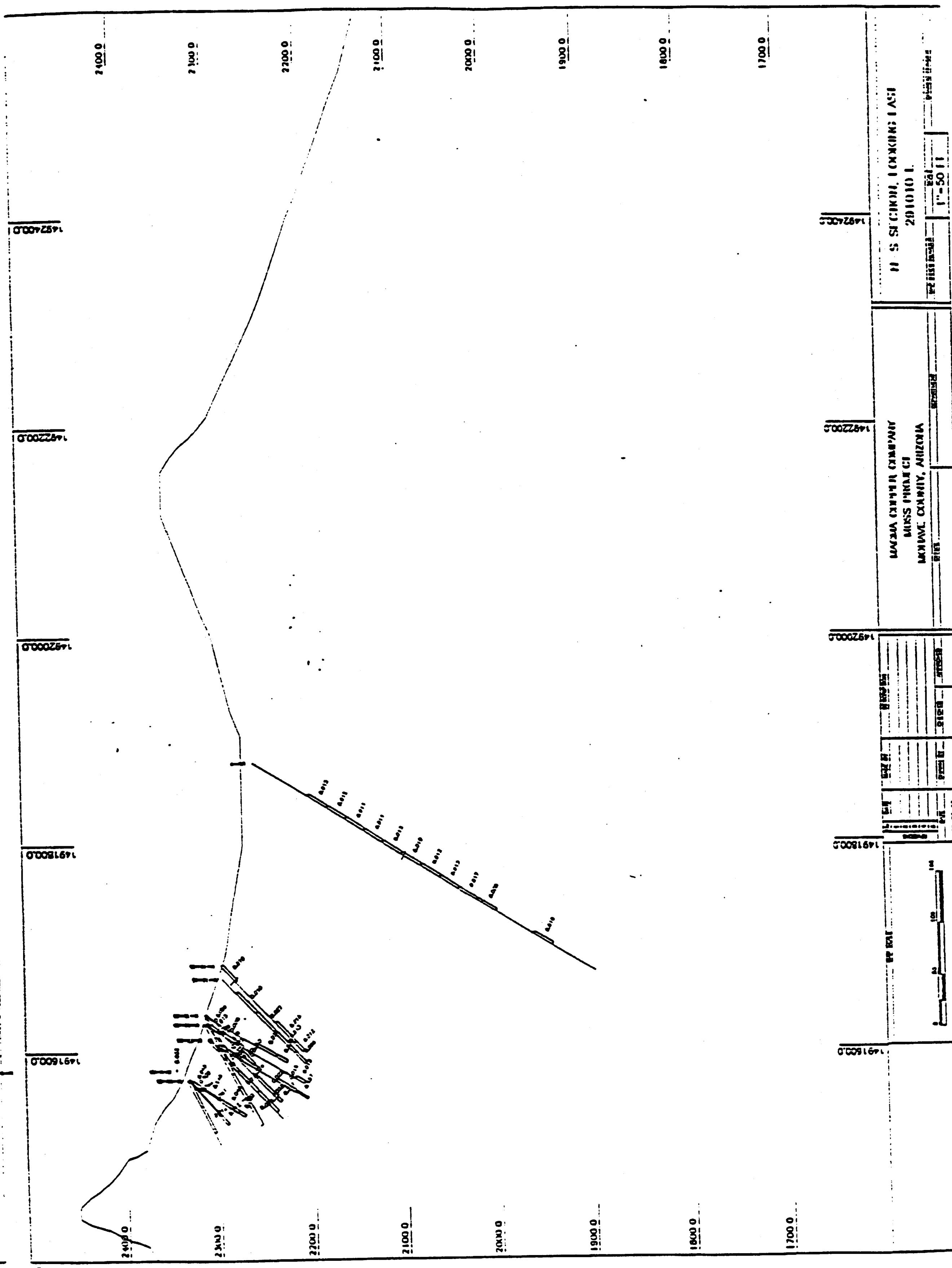


Figure 2. N-S Drillhole Section Showing 20' Bench Composites---291,010E

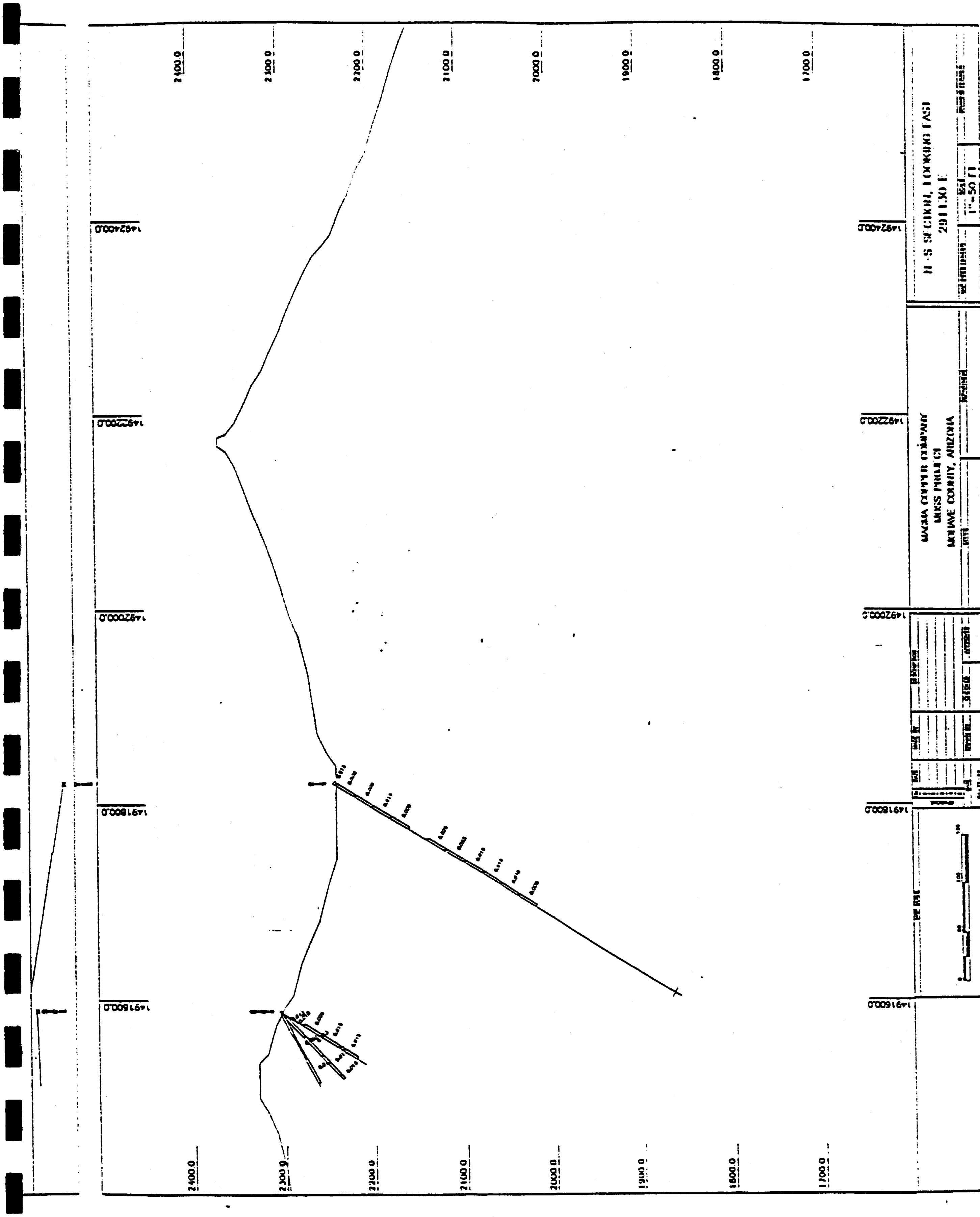


Figure 3. N-S Drillhole Section Showing 20' Bench Composites---291,130E

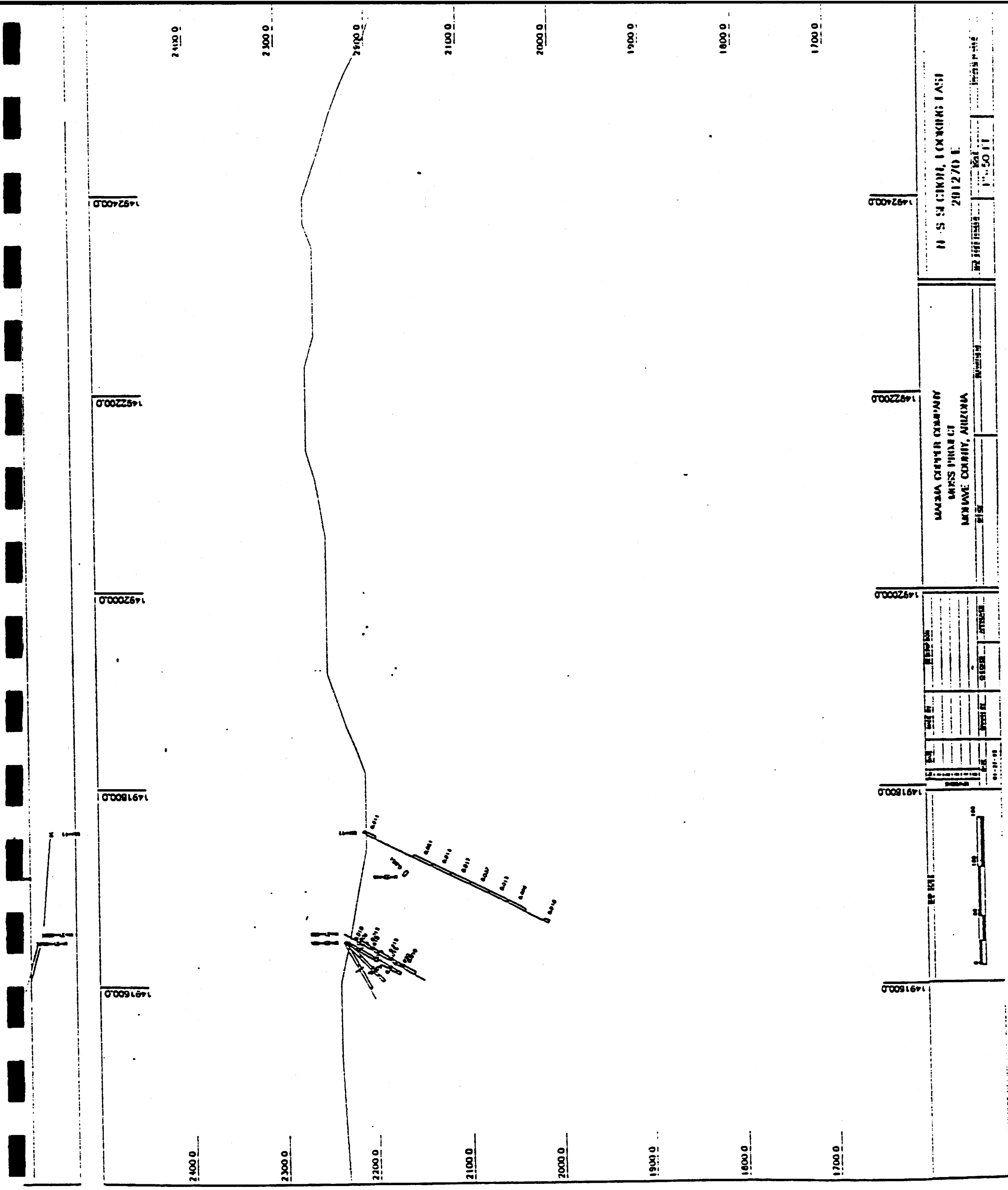


Figure 4. N-8 Drillhole Section Showing 20' Bench Composites---291,270E

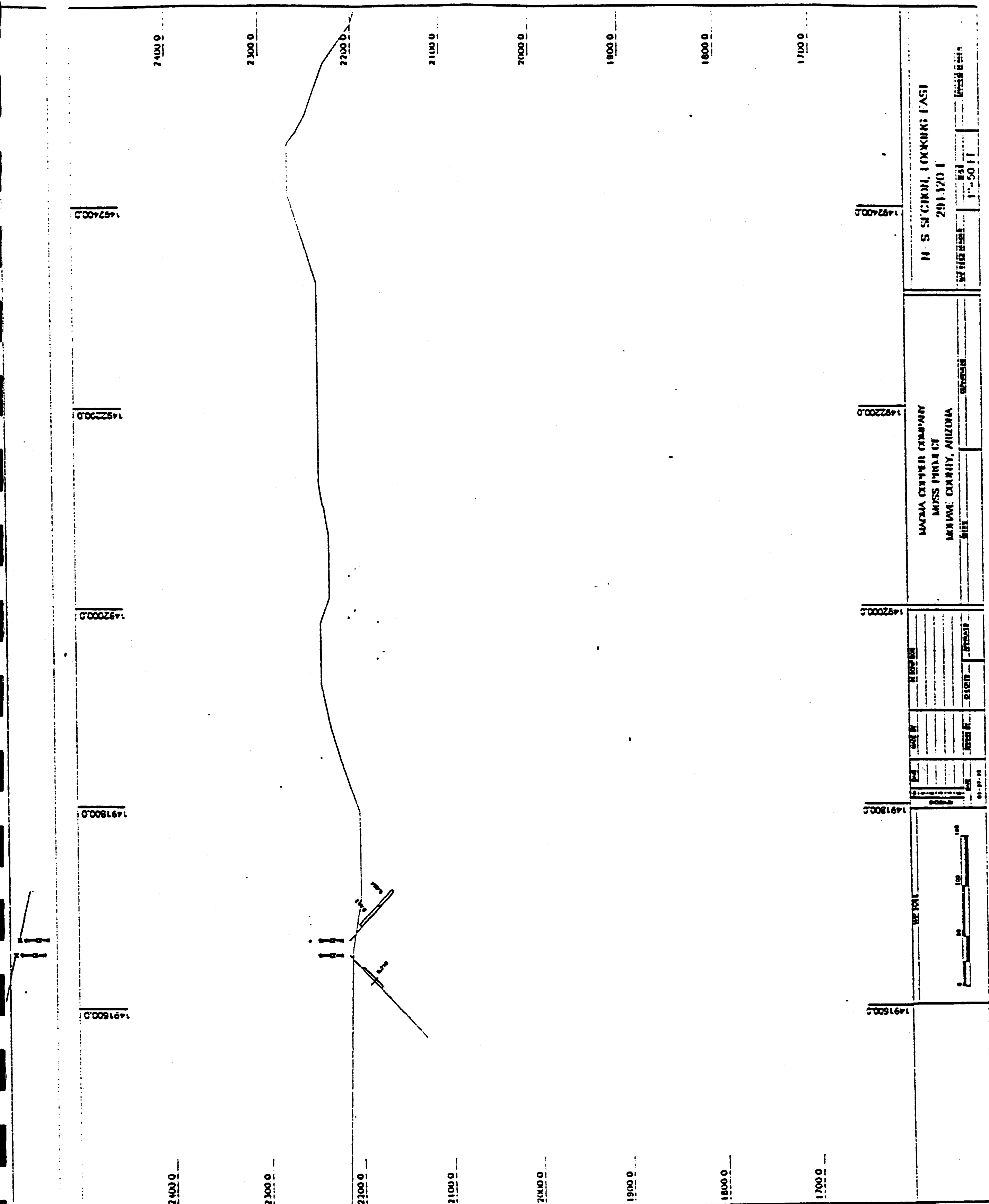


Figure 6. N-S Drillhole Section Showing 20' Bench Composites---291,320E

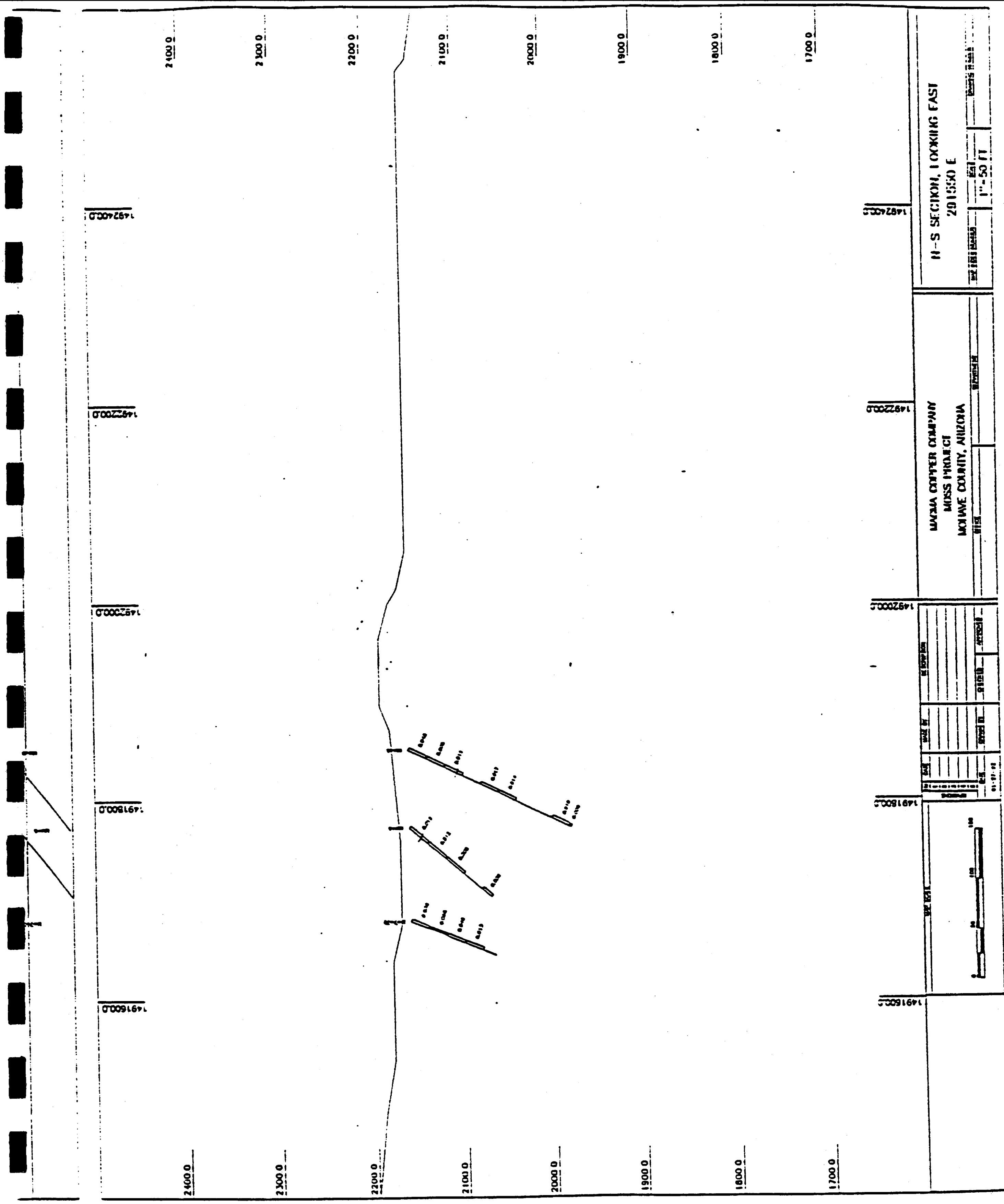
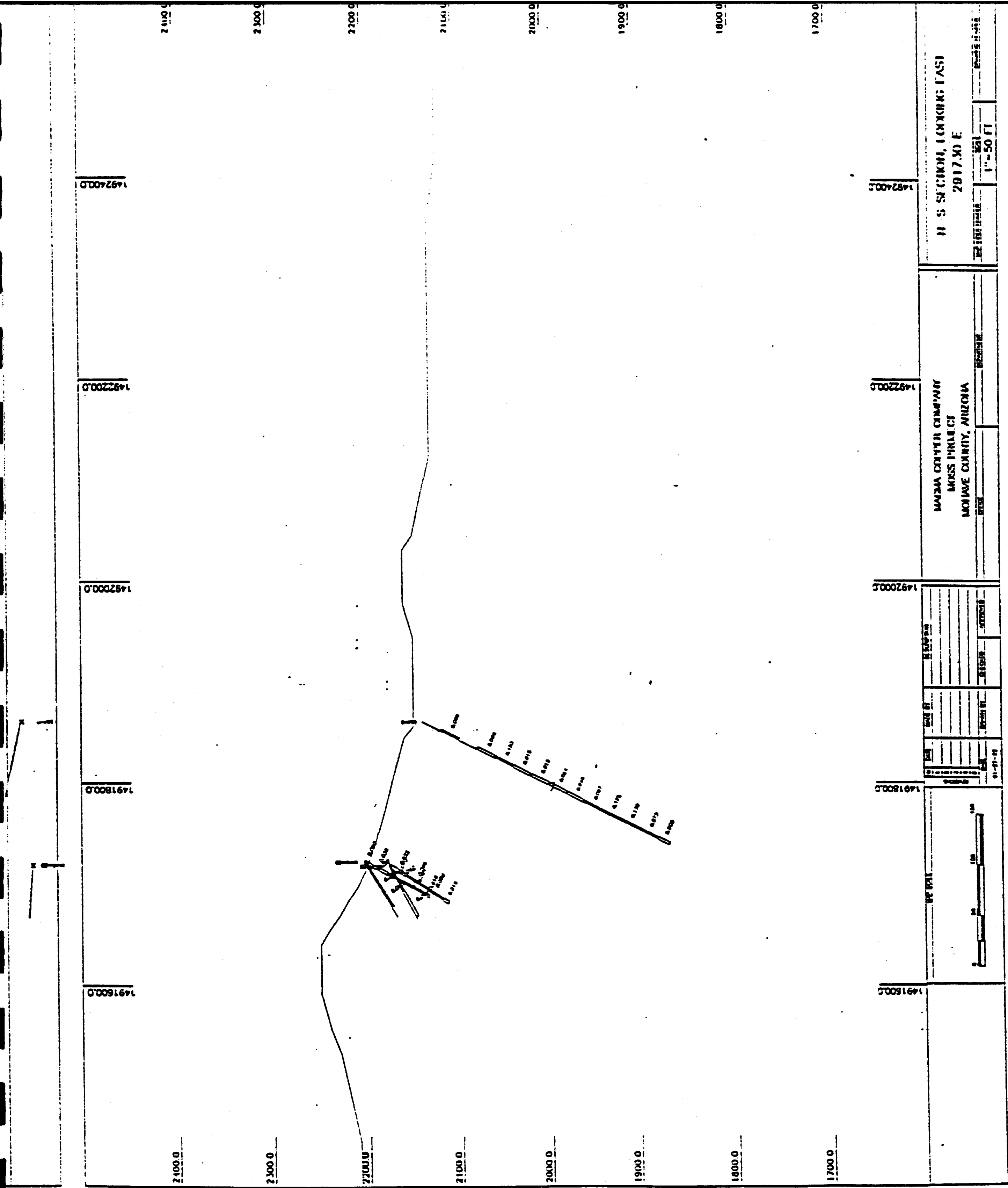


Figure 6. N-S Drillhole Section Showing 20' Bench Composites---291,550E


N S SECTION, LOOKING EAST
2917.30 E
1"=50 FT
MAGMA COPPER COMPANY
MOSS PROJECT
MOHAVE COUNTY, ARIZONA
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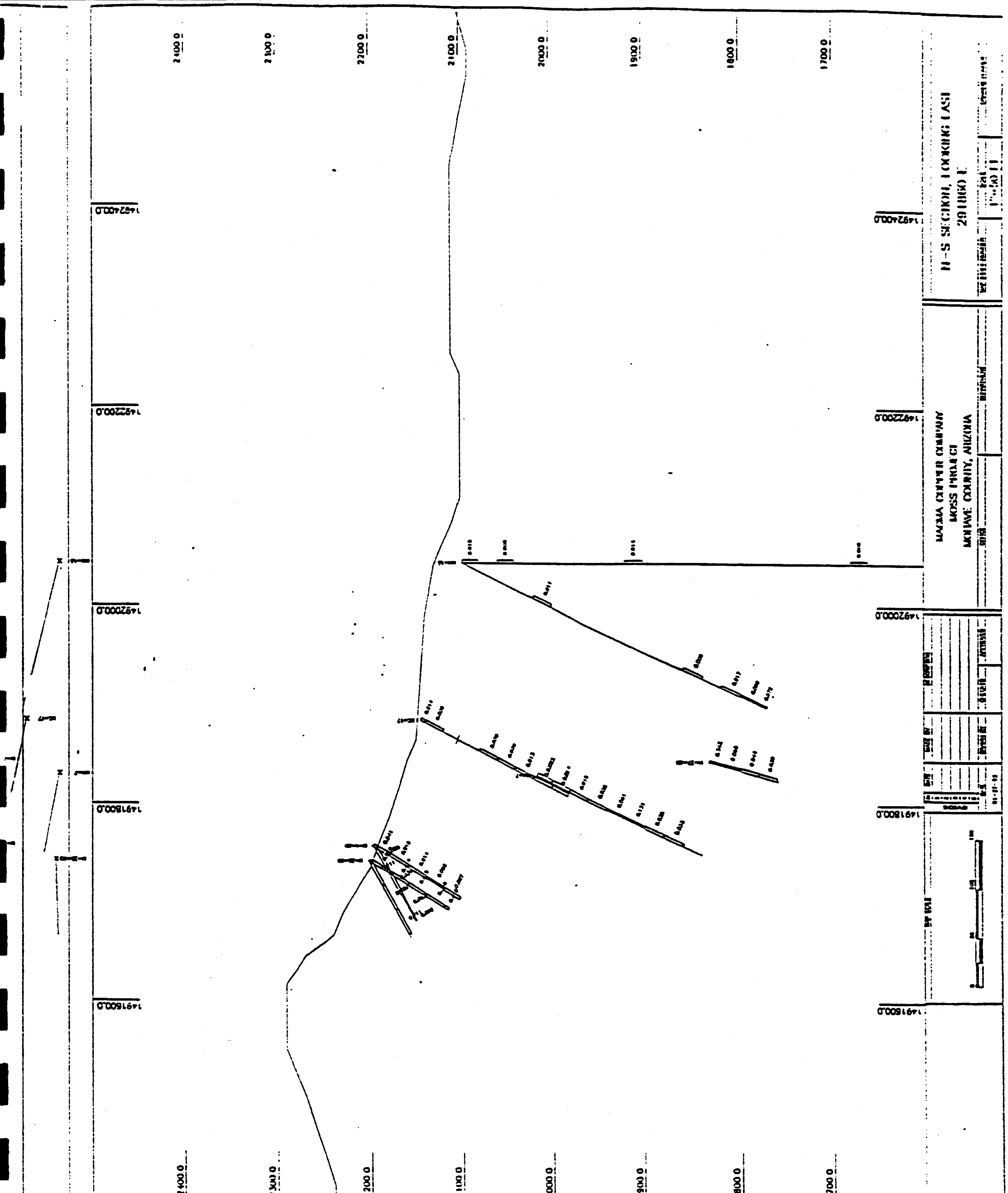
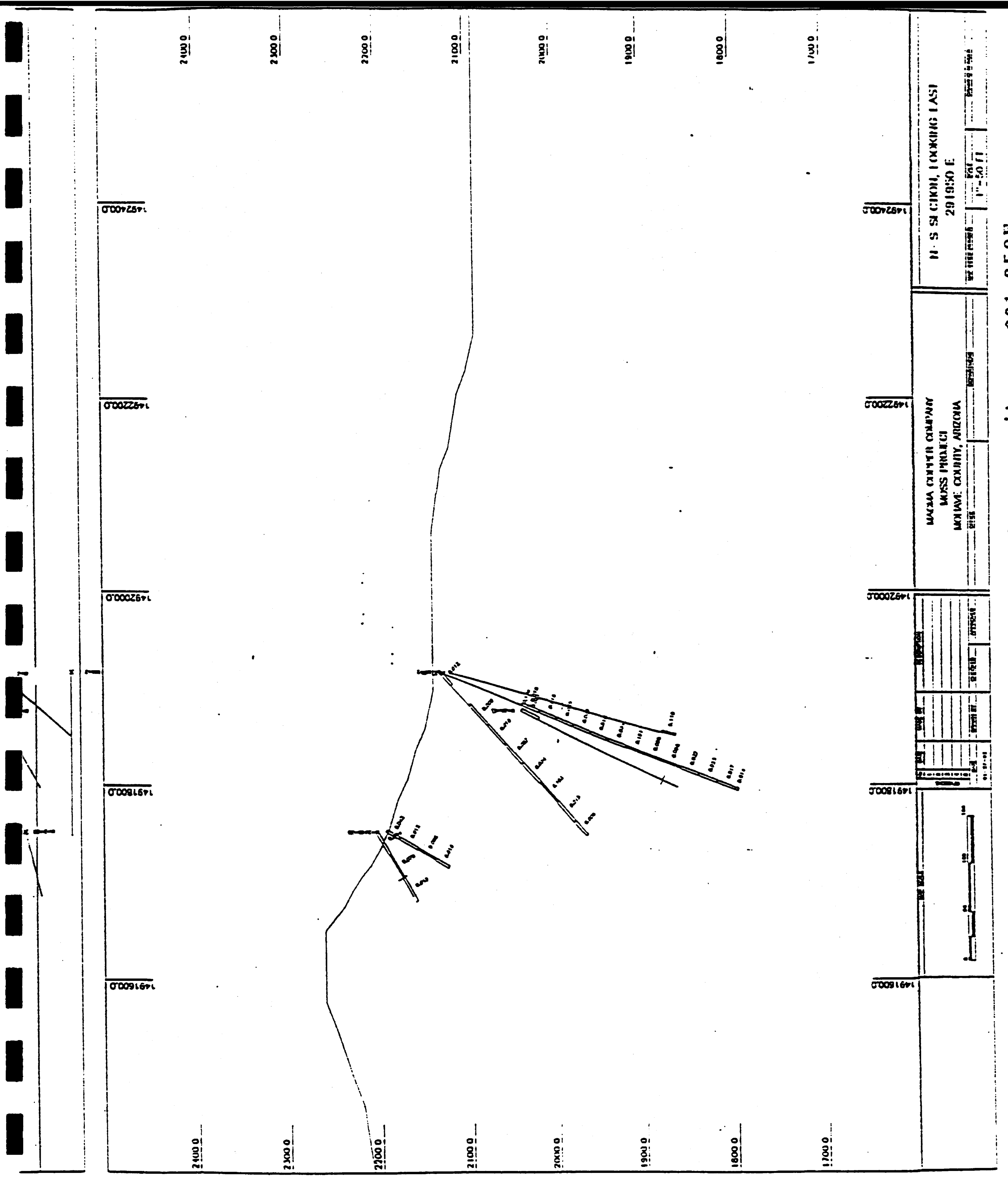
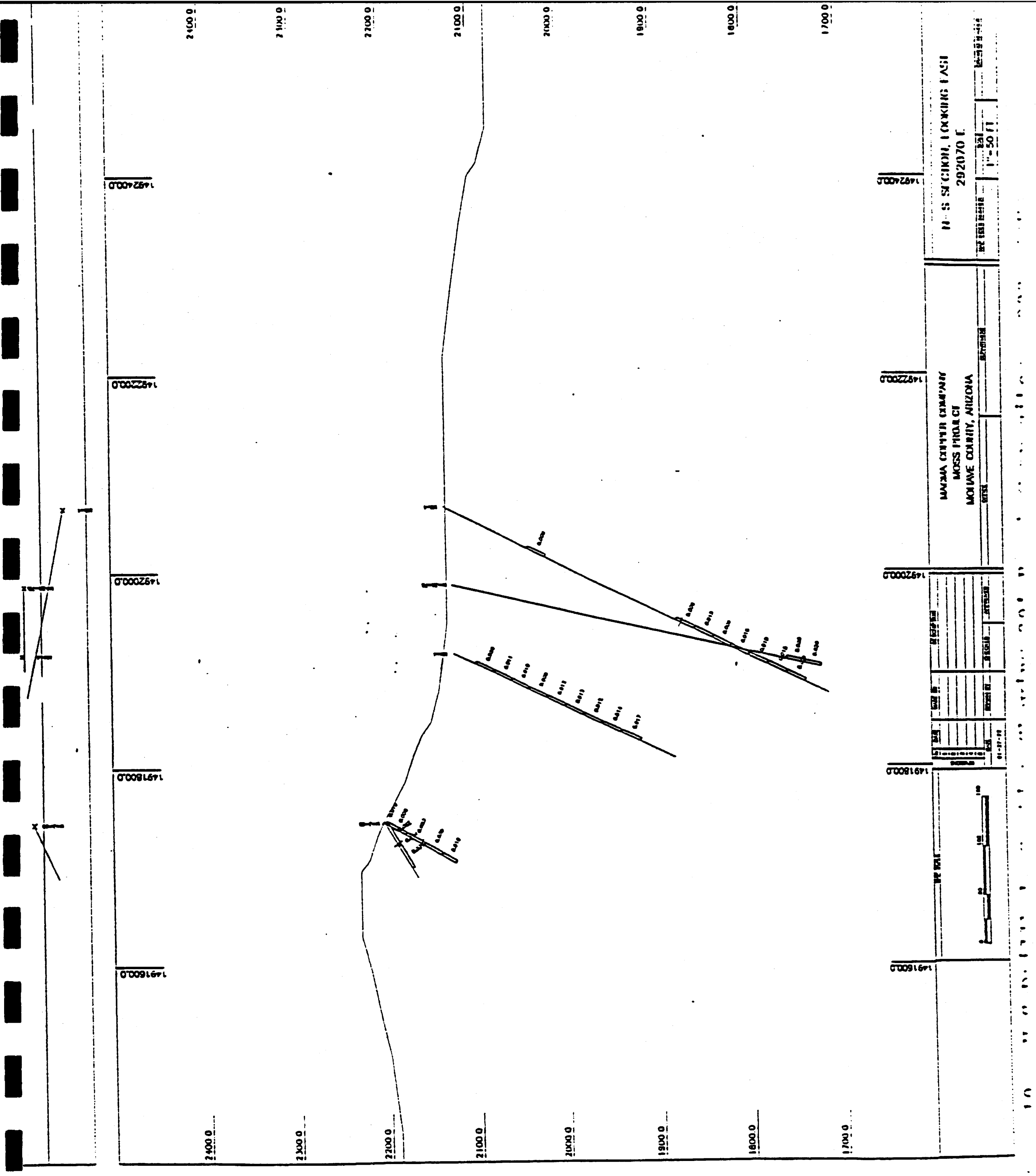


Figure 8. N-S Drillhole Section Showing 20' Bench Composites


MAGMA COPPER COMPANY
MOSS PROJECT
MOHAVE COUNTY, ARIZONA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MOSS PROJECT
MOHAVE COUNTY, ARIZONA
292070 E

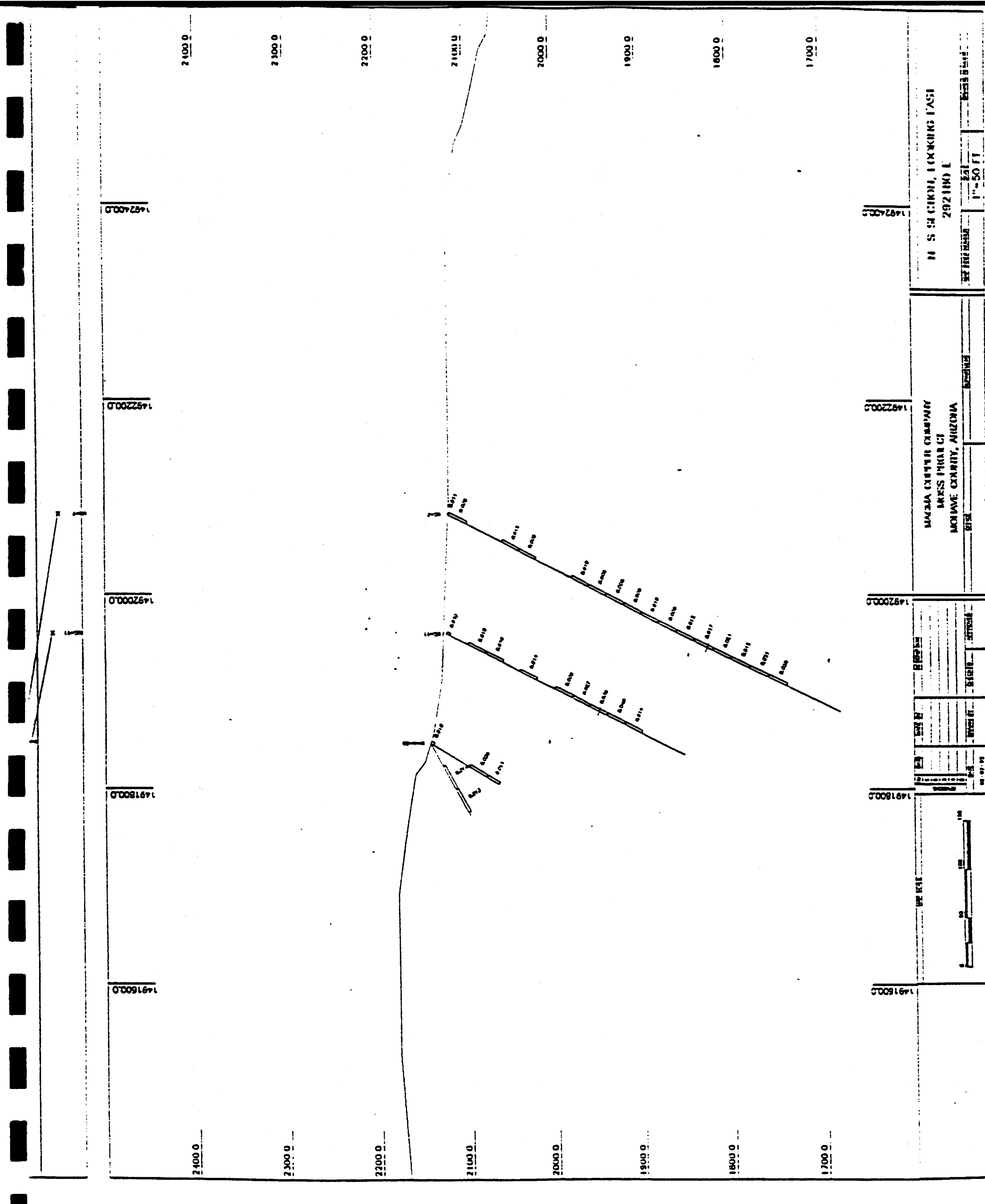


Figure 11. N-S Drillhole Section Showing 20' Bench Composites---292 100E

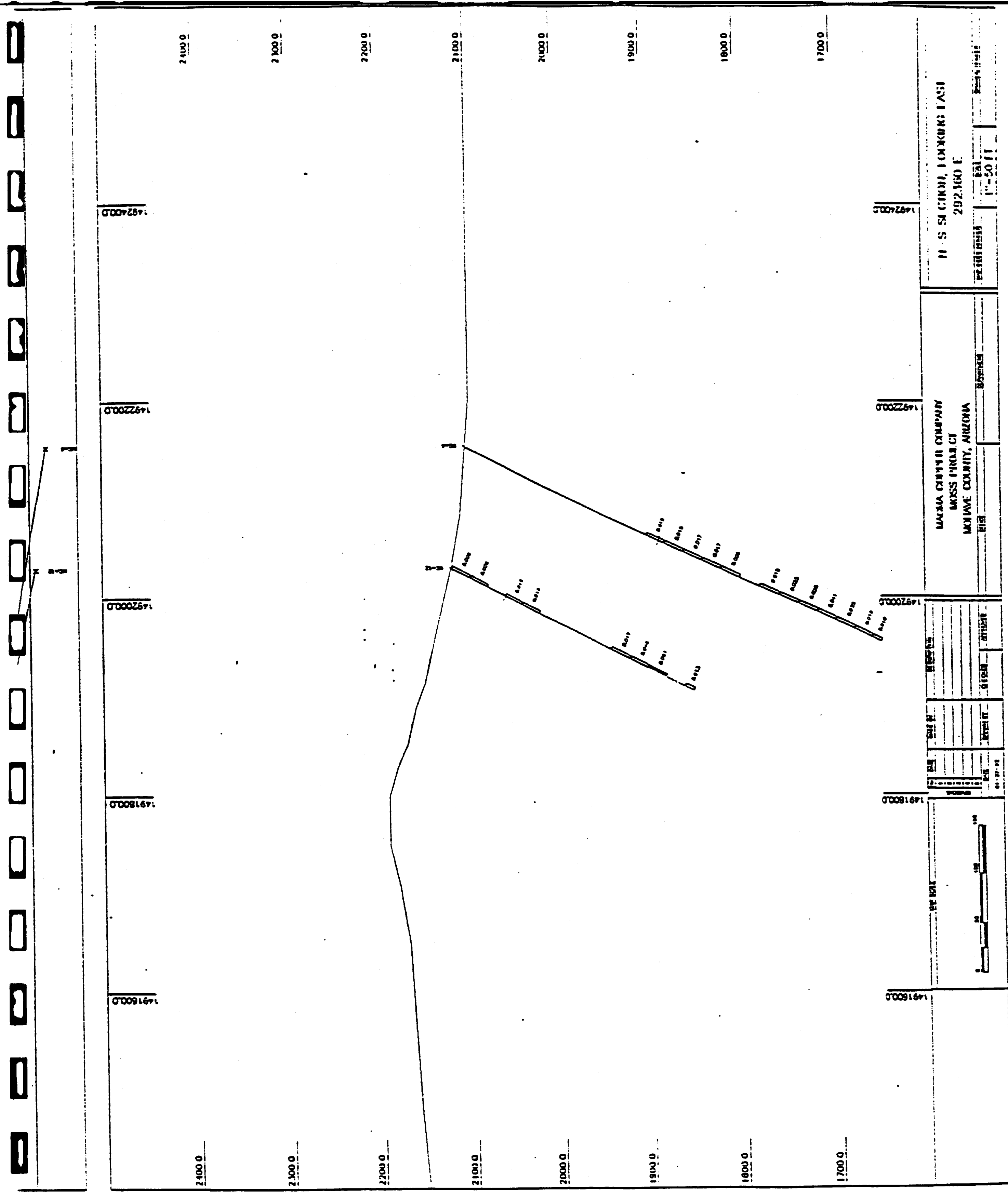


Figure 12. N-S Drillhole Section Showing 20' Bench Composites—292,360E

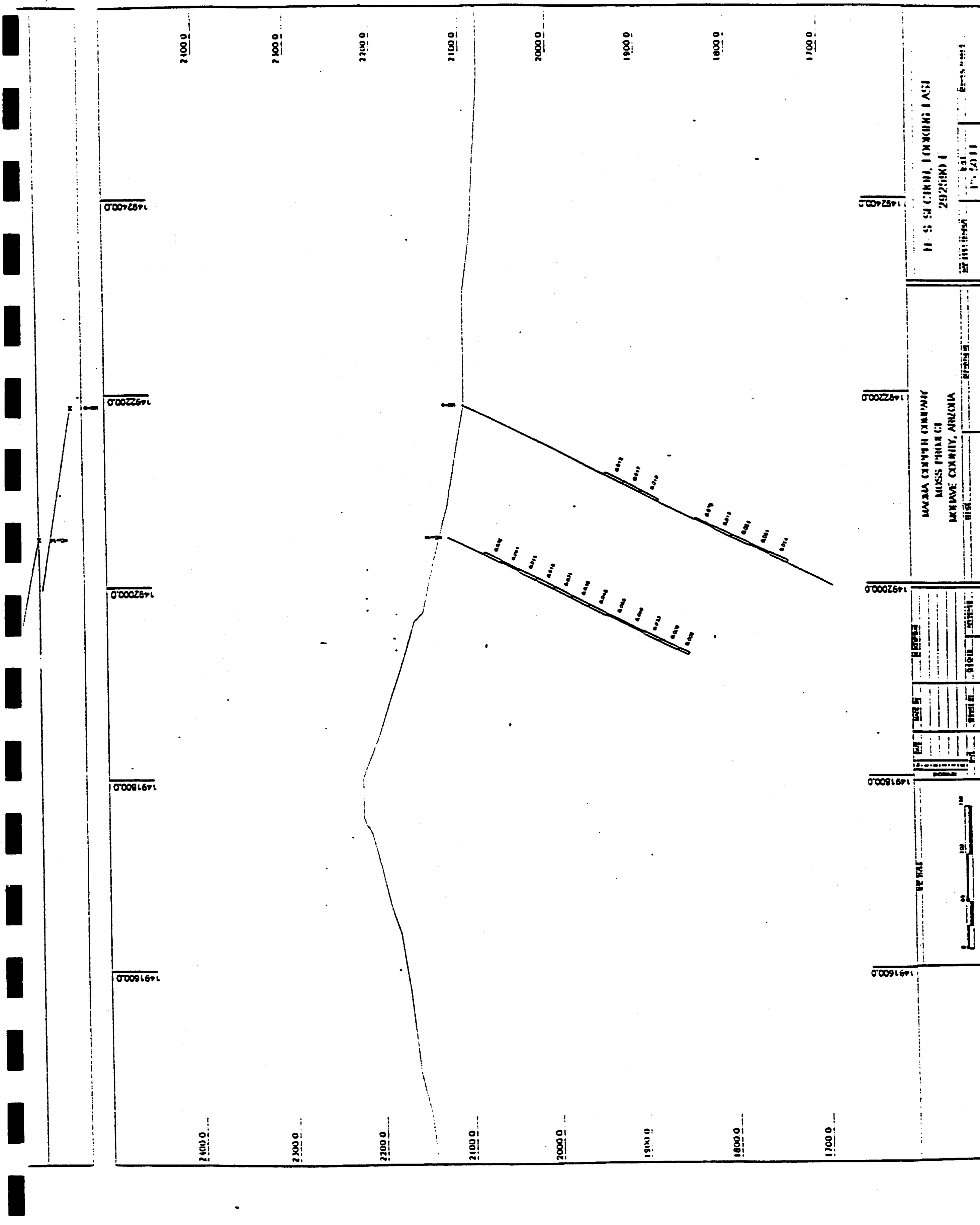
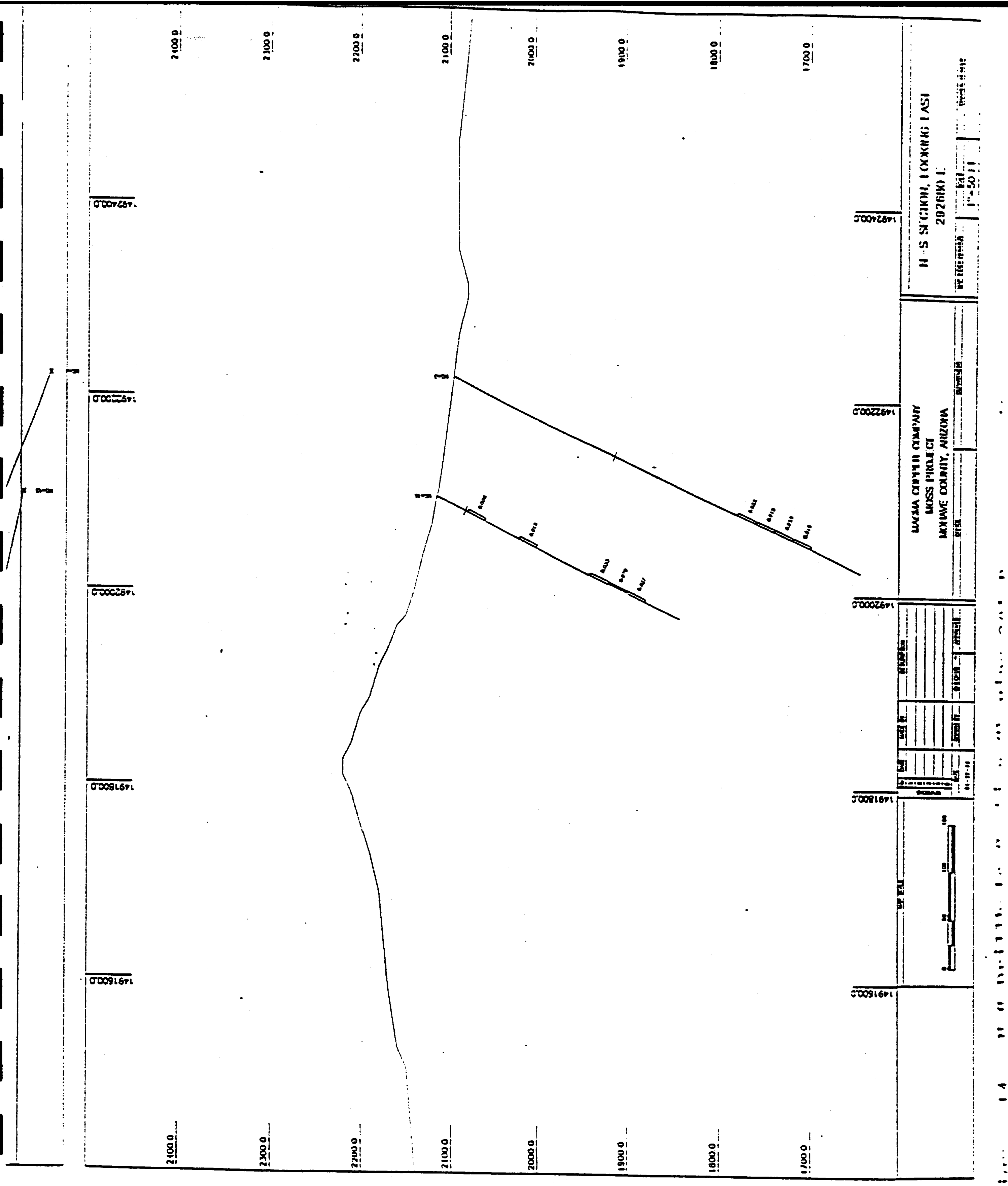


Figure 13. B-B Drillhole Section Showing 20' Bench Composites--202 600E


N-S SECTION, LOOKING EAST
292600 E
MAGMA COPPER COMPANY
MOSS PROJECT
MOHAVE COUNTY, ARIZONA
2400.0
2300.0
2200.0
2100.0
2000.0
1900.0
1800.0
1700.0
1492400.0
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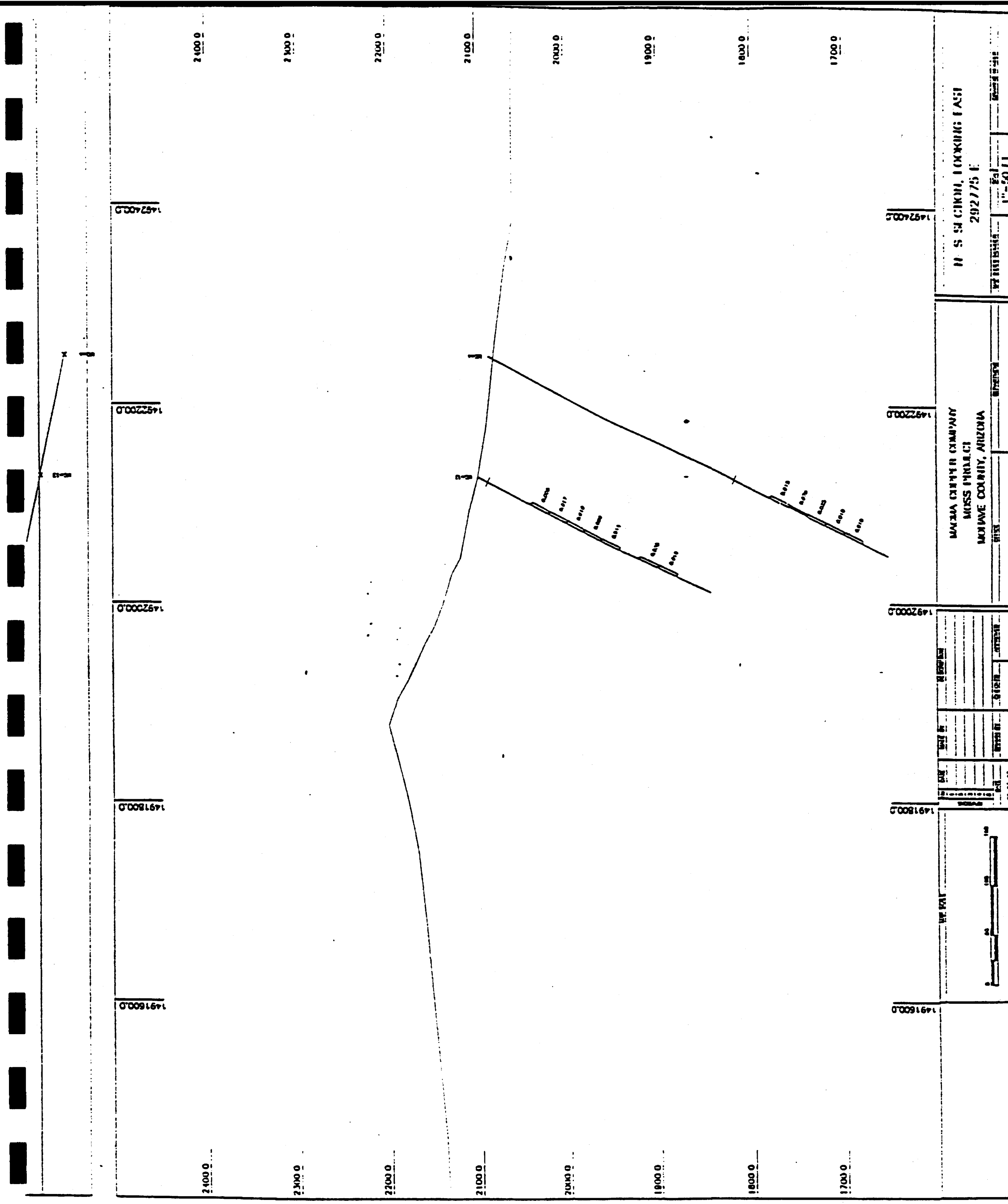


Figure 15. N-8 Drillhole Section Showing 20' Bench Composites

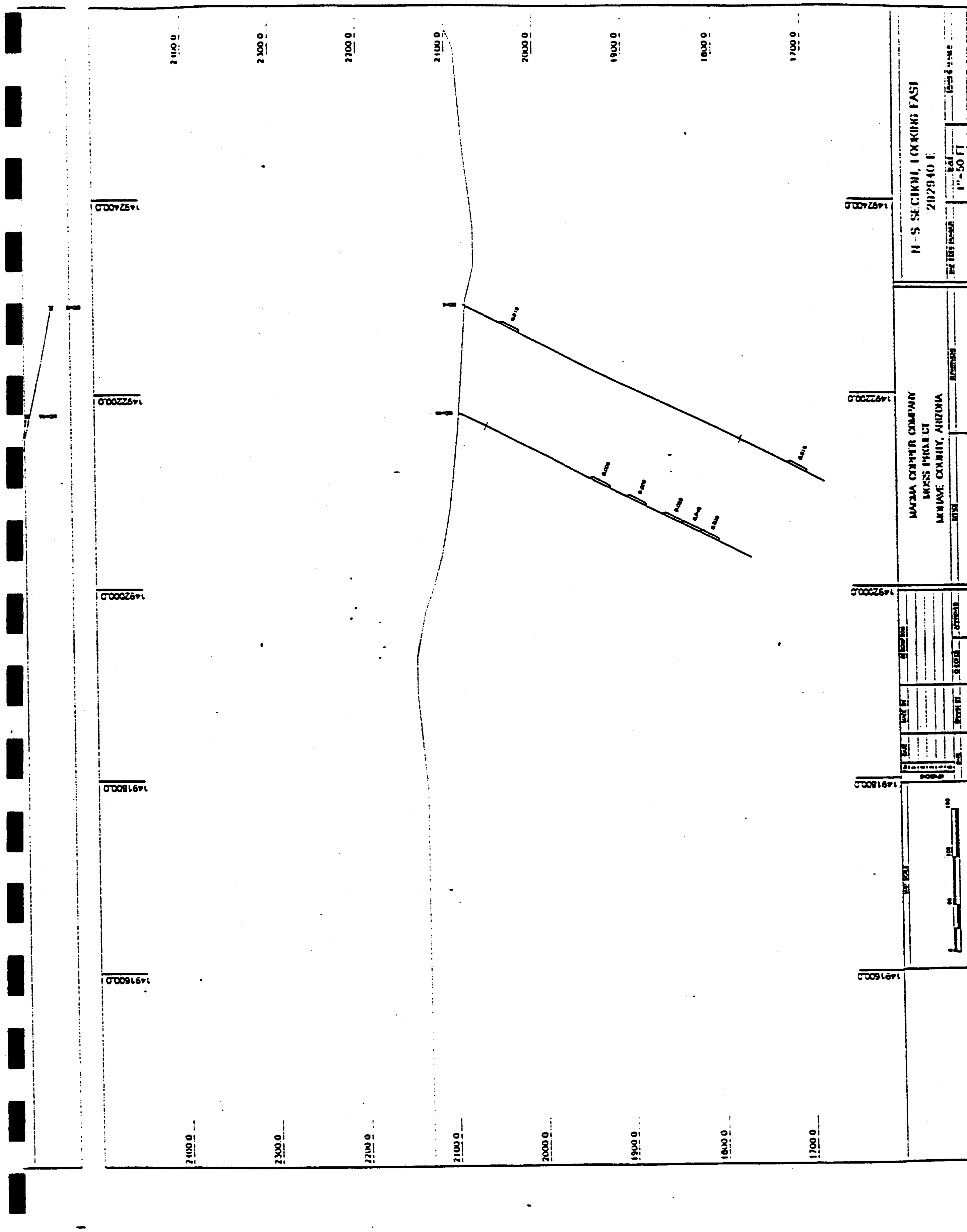


Figure 16. N-S Drillhole Section Showing 20' Bench Composites---292,940E

DATA STATISTICS AND VARIOGRAM STUDY

Mintec received the copies of drillhole logs for 96 holes from Magma. These holes were assayed for gold at 5-foot intervals. Some holes were also assayed for silver. Mintec entered the gold values for each drillhole in to the MEDSYSTEM data base. Silver values were not entered, but space was allocated for silver in the case of future need.

The average grade of all assays at 0.020 opt cutoff is 0.050 opt. Table 1 gives the statistics of all assay values at 0.005 intervals. Figure 17 shows a histogram of these assays.

The assay grades were composited to 20' bench height for use in interpolation of block grades and variogram study. Table 2 gives the statistics of all composite data at 0.005 intervals. Figure 18 shows a histogram of these composites.

A preliminary variogram study was conducted using the composite data that are less than 0.25 opt. Two directional variograms were developed, one along strike direction (N78W or N102E), and the other perpendicular to the plane of dip. These variograms with the theoretical models used are shown in Figures 19 and 20, respectively. Because of the spacing of the drillholes, the variogram in strike direction cannot reveal the short-scale continuity.

Table 1. Statistics of all gold assays at different cutoff grades

Cutoff Grade	Samples Above	Percent Above	Mean Above	C.V.
0.000	3309.0	100.0	0.017	2.097
0.005	2087.0	63.1	0.026	1.622
0.010	1503.0	45.4	0.033	1.421
0.015	961.0	29.0	0.046	1.202
0.020	836.0	25.3	0.050	1.152
0.025	553.0	16.7	0.065	1.014
0.030	500.0	15.1	0.069	0.985
0.035	372.0	11.2	0.083	0.904
0.040	338.0	10.2	0.087	0.881
0.045	265.0	8.0	0.100	0.823
0.050	247.0	7.5	0.104	0.809
0.055	203.0	6.1	0.116	0.767
0.060	190.0	5.7	0.120	0.755
0.065	157.0	4.7	0.132	0.719
0.070	145.0	4.4	0.137	0.705
0.075	127.0	3.8	0.147	0.681
0.080	122.0	3.7	0.150	0.675
0.085	104.0	3.1	0.161	0.649
0.090	99.0	3.0	0.165	0.641
0.095	86.0	2.6	0.177	0.620
0.100	83.0	2.5	0.179	0.615
0.105	75.0	2.3	0.188	0.601
0.110	73.0	2.2	0.190	0.598
0.115	61.0	1.8	0.206	0.575
0.120	61.0	1.8	0.206	0.575
0.125	50.0	1.5	0.224	0.548
0.130	47.0	1.4	0.231	0.539
0.135	44.0	1.3	0.238	0.529
0.140	43.0	1.3	0.240	0.525
0.145	38.0	1.1	0.253	0.508
0.150	38.0	1.1	0.253	0.508
0.155	34.0	1.0	0.265	0.494
0.160	34.0	1.0	0.265	0.494
0.165	33.0	1.0	0.268	0.491
0.170	31.0	0.9	0.275	0.485
0.175	28.0	0.8	0.286	0.474
0.180	28.0	0.8	0.286	0.474
0.185	26.0	0.8	0.294	0.467
0.190	23.0	0.7	0.308	0.455
0.195	22.0	0.7	0.313	0.450

Min. Data Value = 0.000
Max. Data Value = 0.650

C.V. = Coef. of Variation = Standard Deviation/Mean

Figure 17. Histogram of All Gold Assays

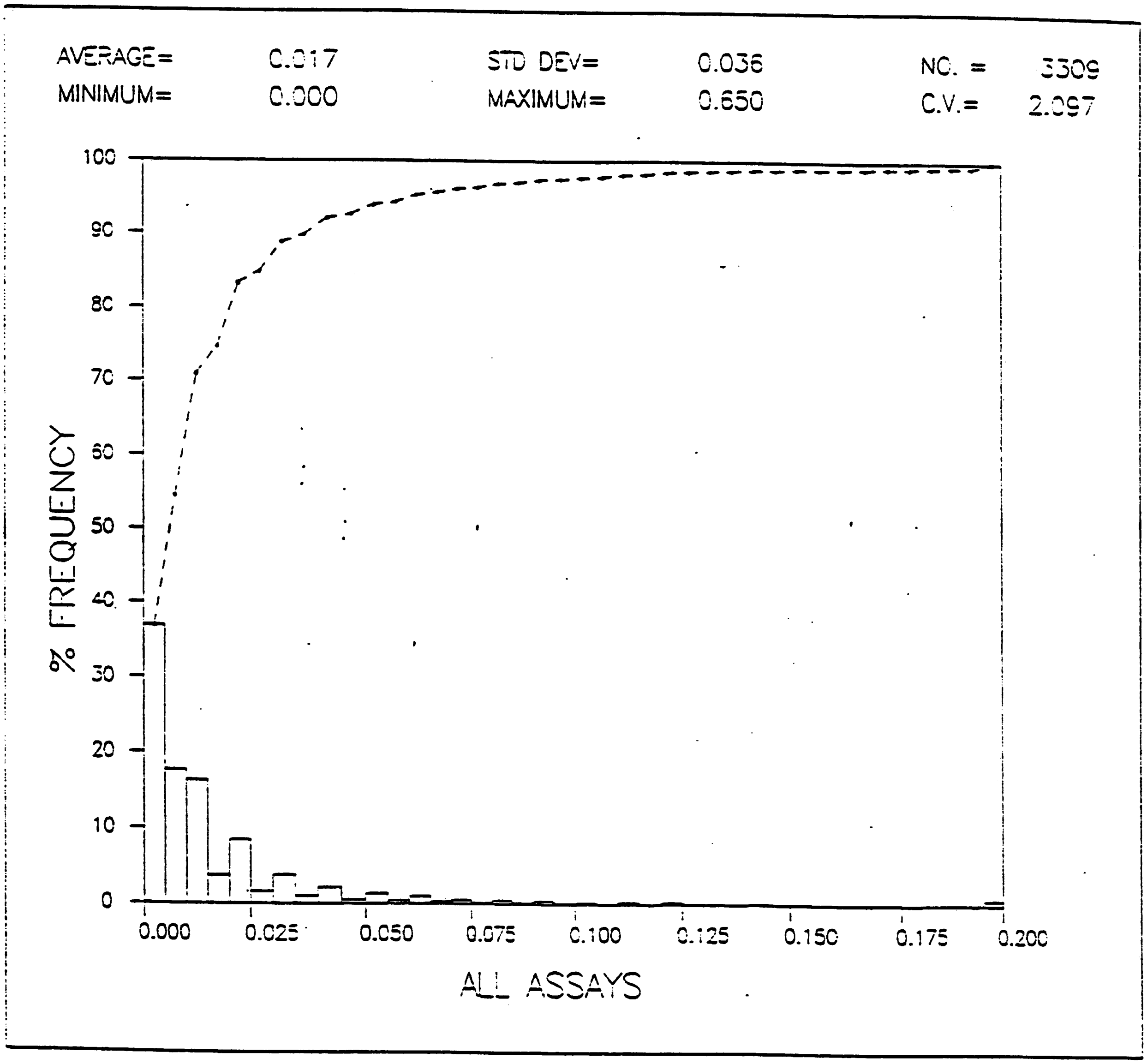


Table 2. Statistics of all gold composite assays at different cutoff grades

Cutoff Grade	Feet Above	Percent Above	Mean Above	C.V.
0.000	14525.4	100.0	0.017	1.590
0.005	10118.5	69.7	0.023	1.283
0.010	6853.7	47.2	0.031	1.080
0.015	4827.3	33.2	0.039	0.949
0.020	3363.0	23.2	0.049	0.837
0.025	2567.6	17.7	0.057	0.761
0.030	2007.5	13.8	0.065	0.698
0.035	1722.5	11.9	0.071	0.665
0.040	1378.3	9.5	0.079	0.619
0.045	1198.3	8.2	0.085	0.594
0.050	979.3	6.7	0.093	0.558
0.055	897.4	6.2	0.097	0.543
0.060	786.8	5.4	0.102	0.527
0.065	665.3	4.6	0.110	0.506
0.070	565.3	3.9	0.117	0.485
0.075	517.0	3.6	0.122	0.476
0.080	432.0	3.0	0.130	0.457
0.085	392.0	2.7	0.135	0.446
0.090	312.0	2.1	0.147	0.421
0.095	287.0	2.0	0.152	0.411
0.100	227.0	1.6	0.167	0.375
0.105	193.0	1.3	0.178	0.342
0.110	193.0	1.3	0.178	0.342
0.115	192.9	1.3	0.178	0.342
0.120	192.9	1.3	0.178	0.342
0.125	192.9	1.3	0.178	0.342
0.130	192.9	1.3	0.178	0.342
0.135	152.9	1.1	0.191	0.329
0.140	132.9	0.9	0.199	0.318
0.145	132.9	0.9	0.199	0.318
0.150	112.9	0.8	0.208	0.311
0.155	92.9	0.6	0.220	0.298
0.160	80.0	0.6	0.230	0.283
0.165	80.0	0.6	0.230	0.283
0.170	80.0	0.6	0.230	0.283
0.175	80.0	0.6	0.230	0.283
0.180	80.0	0.6	0.230	0.283
0.185	80.0	0.6	0.230	0.283
0.190	80.0	0.6	0.230	0.283
0.195	40.0	0.3	0.269	0.277

Min. Data Value = 0.000
Max. Data Value = 0.342

C.V. = Coeff. of Variation = Standard Deviation/Mean

Figure 18. Histogram of All Composite Gold Assays

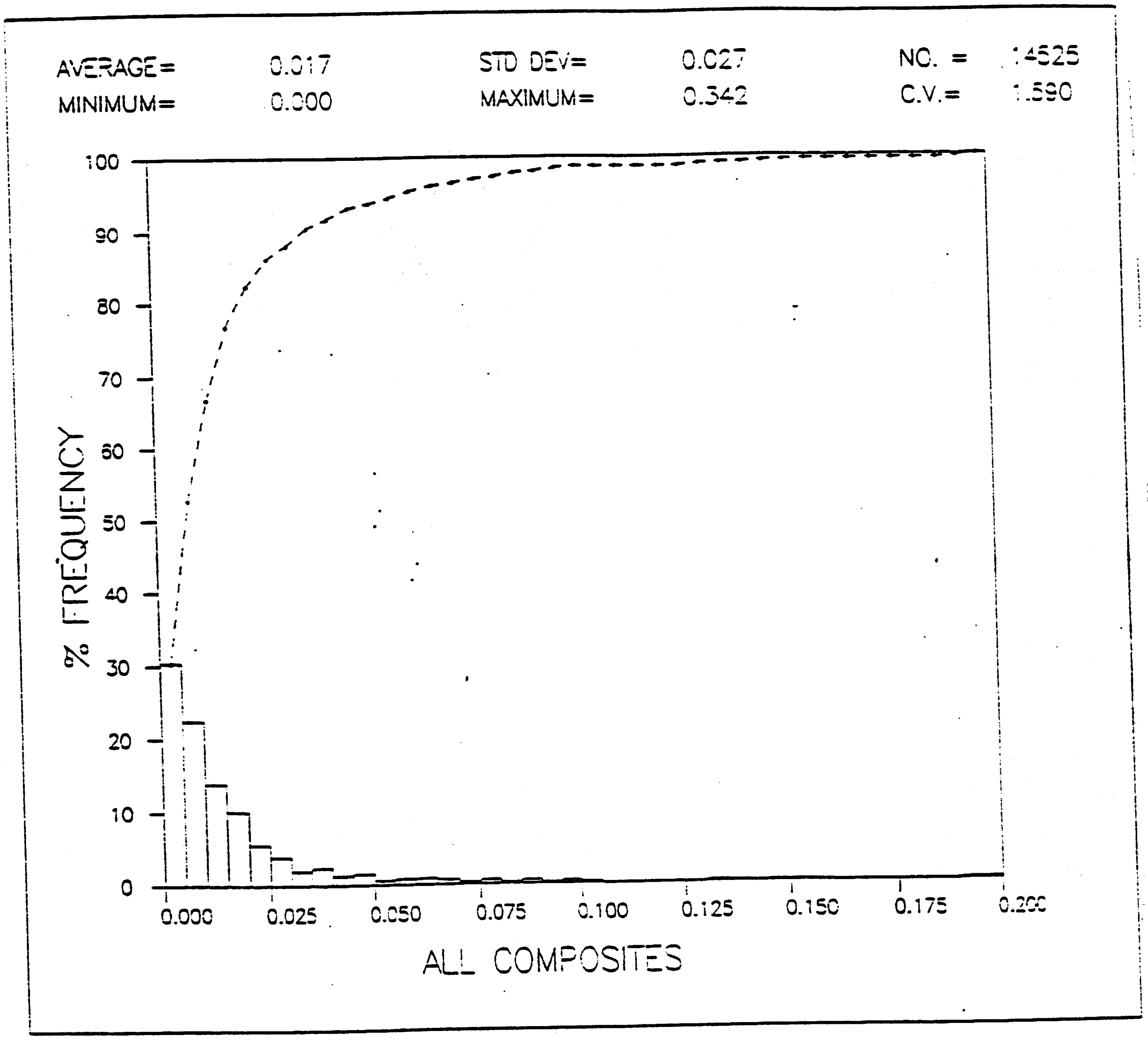


Figure 19. Variogram and Theoretical Model
Fit Along Strike Direction.

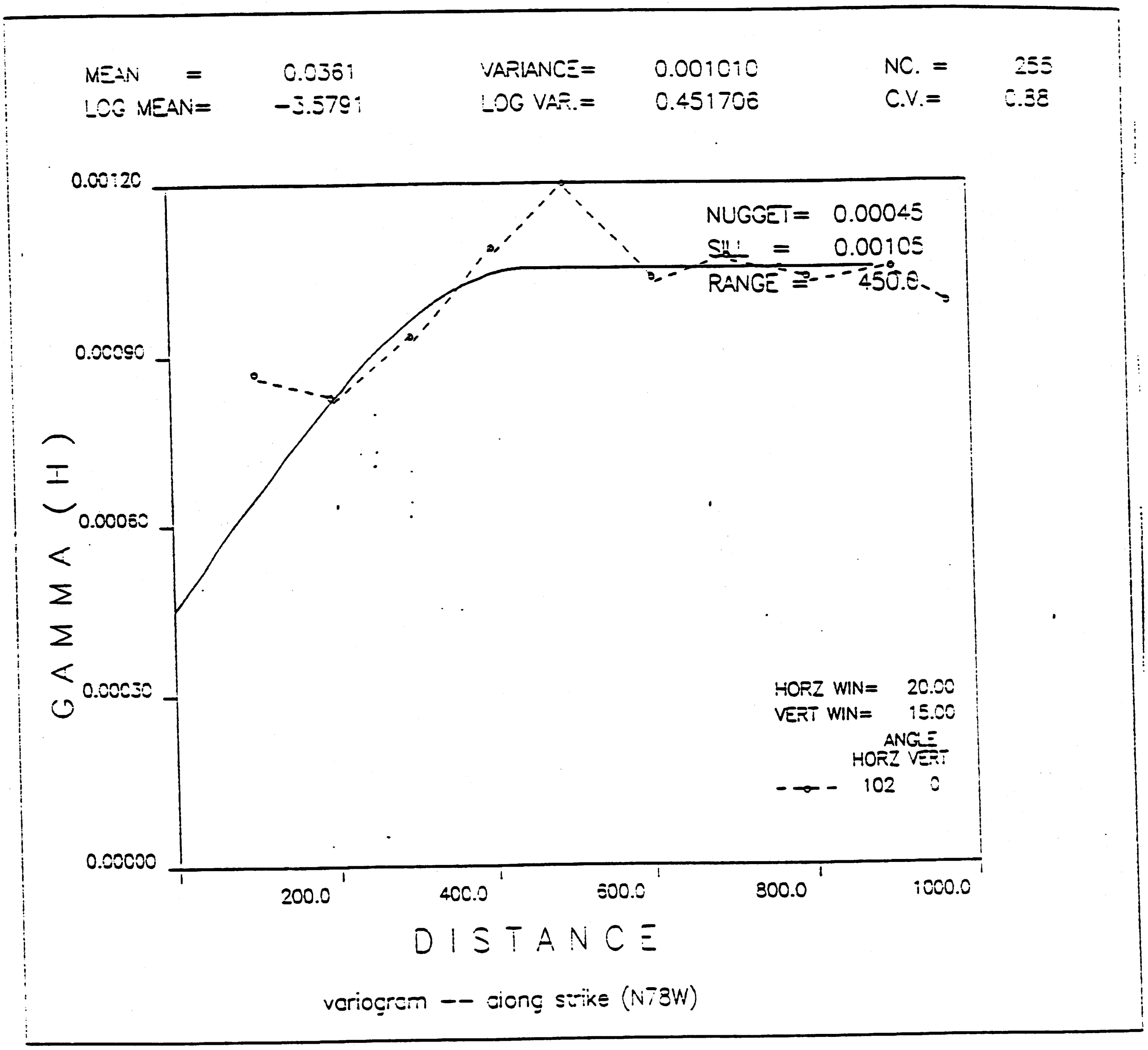
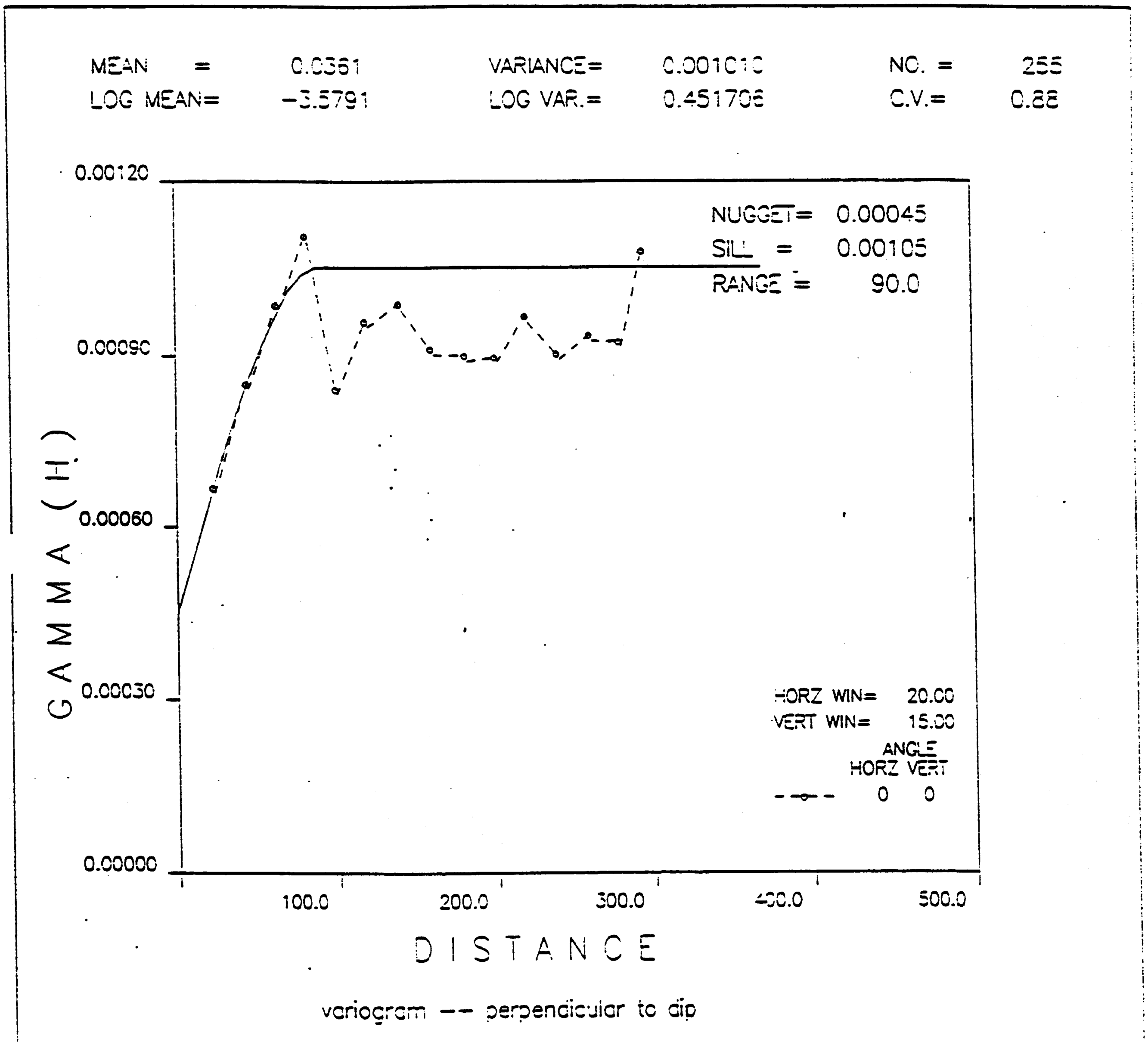


Figure 20. Variogram and Theoretical Model
Fit Perpendicular to the Plane of Dip



3-D BLOCK MODELING

A 3-D model of the Moss Deposit was built to assess the preliminary geologic and minable reserves using the following limits:

Easting	290,500	to	294,000
Northing	1,491,500	to	1,493,000
Elevation	1,500	to	2,600

The blocks in the model are 25' square blocks. The bench height is 20'. Therefore, there are 140 columns, 60 rows, and 55 benches in this model. The total number of blocks in the model is 462,000.

Each block in the model has been assigned a value between 0 and 100 to indicate the percentage of the block below the topography. Several other items have been reserved in each block to store the grades and other pertinent information from different interpolations. Table 3 gives the description of the items stored in each block of the model.

Gold grades were assigned to the blocks using both kriging and inverse distance weighting interpolation methods. Using a strike direction of N78W (or N102E), and dip angle of -68° SW, three different cases were tried:

1. Inverse distance weighting method of power three (ID3). Search distances along the strike and down dip are 100-feet. Search distance vertical to the plane is 20-feet.

2. ID3. Search distances along the strike and down dip are 300-feet. Search distance vertical to the plane is 20-feet.

3. Kriging using the search strategy of Case #2.

Tables 4, 5, and 6 give the geologic reserves from these three cases, respectively. They were computed using a tonnage factor of 12.5 cubic feet per ton, down to 1600' elevation.

Figures 21 and 22 are the sample N-S sections through the block model at 291,950E and 292,590E showing gold grades that are greater than or equal to 0.008 opt. The bench composite gold values are also shown on these sections.

Table 3. Description of the Items Stored in the 3-D Block Model

TOPO	-	% of the block below topography
GOLDI	-	Estimated gold grade from inverse distance weighting method (ID3) -- 300' search
GOLDK	-	Estimated gold grade from kriging -- 300' search
RECAU	-	Estimated gold grade from ID3 -- 100' search
KRGVR	-	Kriging estimation error
DIST	-	Distance to the closest composite value
SILVR	-	Reserved for future use
KODE	-	Reserved for future use
ROCK	-	Reserved for future use
ORTYP	-	Reserved for future use
PRCNT	-	Reserved for future use
PROP	-	Reserved for future use

Table 4. Geologic reserves from ID3 to 1600' elevation at different cutoff grades -- 100' search

Cutoff Grade	Ore Tons x 1000	Percent Above.	Mean Above	C.V.
0.000	18875.0	100.0	0.014	1.46
0.005	12555.2	66.5	0.020	1.14
0.010	8185.3	43.4	0.027	0.95
0.015	5287.6	28.0	0.035	0.81
0.020	3544.9	18.8	0.044	0.71
0.025	2665.8	14.1	0.051	0.64
0.030	2112.5	11.2	0.058	0.59
0.035	1736.4	9.2	0.063	0.55
0.040	1390.3	7.4	0.070	0.52
0.045	1113.1	5.9	0.077	0.49
0.050	901.5	4.8	0.084	0.46
0.055	747.1	4.0	0.090	0.43
0.060	596.6	3.2	0.098	0.40
0.065	502.3	2.7	0.105	0.38
0.070	440.7	2.3	0.111	0.35
0.075	377.2	2.0	0.117	0.33
0.080	335.3	1.8	0.122	0.31
0.085	295.2	1.6	0.128	0.29
0.090	262.6	1.4	0.132	0.28
0.095	238.0	1.3	0.137	0.27
0.100	212.0	1.1	0.142	0.25
0.105	186.0	1.0	0.147	0.23
0.110	171.0	0.9	0.151	0.22
0.115	154.0	0.8	0.155	0.21
0.120	145.0	0.8	0.157	0.21
0.125	132.0	0.7	0.161	0.20
0.130	122.0	0.6	0.163	0.19
0.135	104.0	0.6	0.169	0.18
0.140	95.0	0.5	0.172	0.18
0.145	86.0	0.5	0.175	0.17
0.150	79.0	0.4	0.178	0.17
0.155	65.0	0.3	0.183	0.17
0.160	51.0	0.3	0.190	0.17
0.165	41.0	0.2	0.197	0.16
0.170	34.0	0.2	0.204	0.15
0.175	30.0	0.2	0.208	0.15
0.180	30.0	0.2	0.208	0.15
0.185	29.0	0.2	0.209	0.15
0.190	27.0	0.1	0.211	0.15
0.195	14.0	0.1	0.228	0.16

Min. Data Value = 0.000
Max. Data Value = 0.284

C.V. = Coeff. of Variation = Standard Deviation/Mean

Table 5. Geologic reserves from ID3 to 1600' elevation at different cutoff grades -- 300' search

Cutoff Grade	Ore Tons x 1000	Percent Above	Mean Above	C.V.
0.000	51876.8	100.0	0.011	1.28
0.005	33892.3	65.3	0.016	0.98
0.010	20178.4	38.9	0.022	0.80
0.015	11686.7	22.5	0.030	0.68
0.020	7414.2	14.3	0.038	0.58
0.025	5537.3	10.7	0.043	0.53
0.030	4049.5	7.8	0.049	0.50
0.035	3013.7	5.8	0.055	0.47
0.040	2258.7	4.4	0.061	0.44
0.045	1729.8	3.3	0.067	0.42
0.050	1249.0	2.4	0.075	0.40
0.055	955.6	1.8	0.082	0.37
0.060	724.8	1.4	0.090	0.34
0.065	607.6	1.2	0.096	0.32
0.070	512.4	1.0	0.101	0.30
0.075	427.0	0.8	0.107	0.29
0.080	373.0	0.7	0.112	0.27
0.085	326.0	0.6	0.116	0.26
0.090	277.0	0.5	0.121	0.25
0.095	243.0	0.5	0.125	0.24
0.100	212.0	0.4	0.129	0.23
0.105	179.0	0.3	0.134	0.22
0.110	157.0	0.3	0.138	0.21
0.115	135.0	0.3	0.143	0.21
0.120	116.0	0.2	0.147	0.20
0.125	101.0	0.2	0.151	0.20
0.130	79.0	0.2	0.157	0.20
0.135	67.0	0.1	0.162	0.20
0.140	53.0	0.1	0.168	0.20
0.145	42.0	0.1	0.175	0.19
0.150	36.0	0.1	0.180	0.19
0.155	27.0	0.1	0.189	0.19
0.160	23.0	0.0	0.195	0.18
0.165	19.0	0.0	0.201	0.17
0.170	15.0	0.0	0.211	0.16
0.175	14.0	0.0	0.213	0.16
0.180	14.0	0.0	0.213	0.16
0.185	12.0	0.0	0.219	0.15
0.190	12.0	0.0	0.219	0.15
0.195	8.0	0.0	0.232	0.15

Min. Data Value = 0.000
Max. Data Value = 0.277

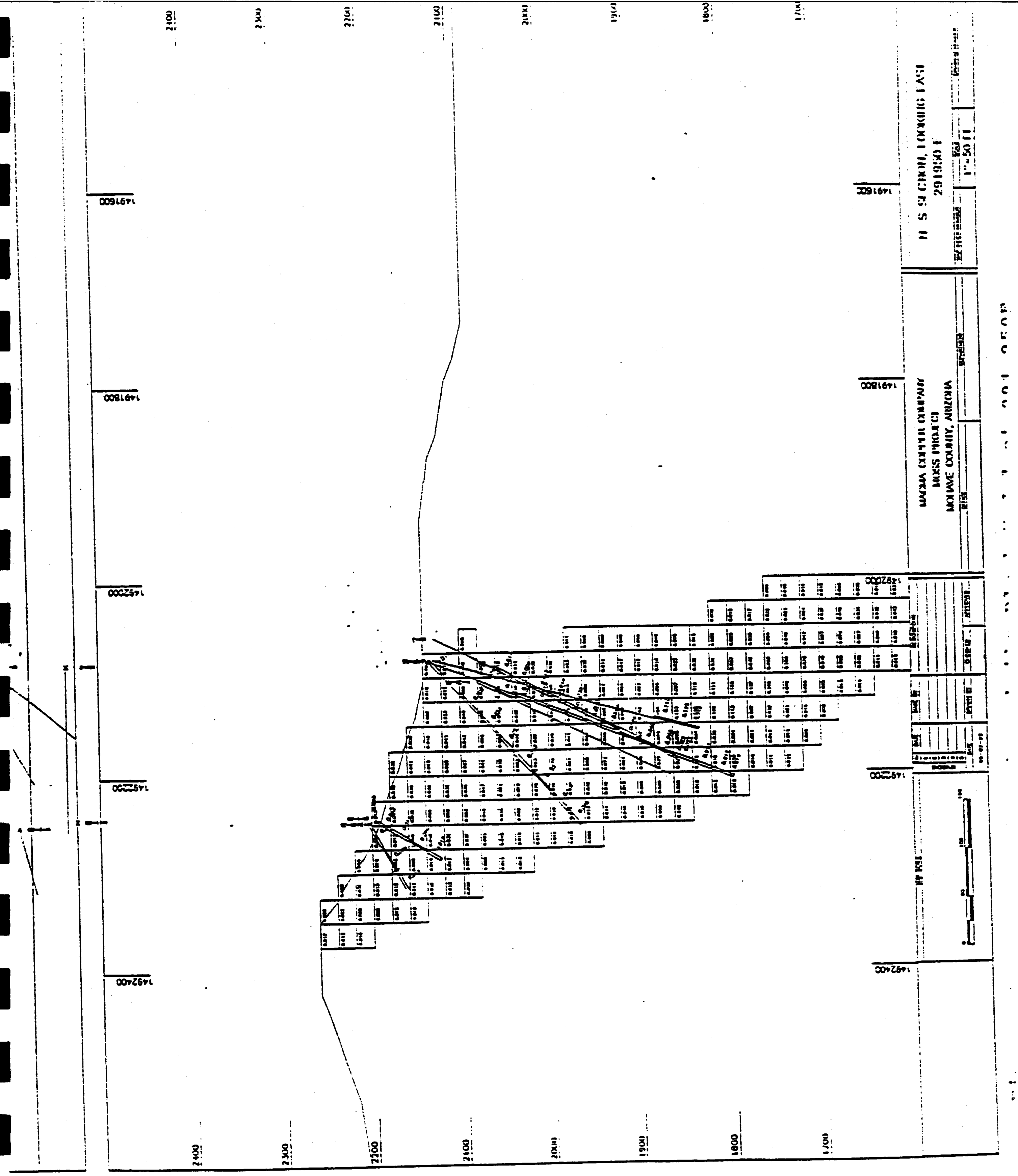
C.V. = Coeff. of Variation = Standard Deviation/Mean

Table 6. Geologic reserves from kriging to 1600' elevation at different cutoff grades -- 300' search

Cutoff Grade	Ore Tons x 1000	Percent Above	Mean Above	C.V.
0.000	51876.7	100.0	0.011	1.16
0.005	35179.1	67.8	0.016	0.90
0.010	21041.6	40.6	0.022	0.72
0.015	12034.4	23.2	0.029	0.59
0.020	7851.4	15.1	0.035	0.51
0.025	5473.8	10.6	0.041	0.46
0.030	3836.7	7.4	0.047	0.41
0.035	2855.9	5.5	0.053	0.38
0.040	2148.7	4.1	0.058	0.35
0.045	1640.1	3.2	0.063	0.33
0.050	1109.6	2.1	0.071	0.30
0.055	849.8	1.6	0.077	0.27
0.060	678.8	1.3	0.082	0.25
0.065	544.1	1.0	0.087	0.23
0.070	451.5	0.9	0.091	0.21
0.075	363.0	0.7	0.096	0.20
0.080	283.0	0.5	0.101	0.18
0.085	236.0	0.5	0.104	0.17
0.090	196.0	0.4	0.108	0.16
0.095	154.0	0.3	0.112	0.15
0.100	118.0	0.2	0.117	0.14
0.105	86.0	0.2	0.123	0.13
0.110	64.0	0.1	0.128	0.12
0.115	53.0	0.1	0.132	0.12
0.120	41.0	0.1	0.136	0.11
0.125	30.0	0.1	0.141	0.10
0.130	24.0	0.0	0.144	0.10
0.135	16.0	0.0	0.150	0.09
0.140	13.0	0.0	0.153	0.09
0.145	9.0	0.0	0.159	0.09
0.150	6.0	0.0	0.164	0.09
0.155	4.0	0.0	0.170	0.09
0.160	3.0	0.0	0.174	0.09
0.165	2.0	0.0	0.180	0.10
0.170	1.0	0.0	0.192	0.00
0.175	1.0	0.0	0.192	0.00
0.180	1.0	0.0	0.192	0.00
0.185	1.0	0.0	0.192	0.00
0.190	1.0	0.0	0.192	0.00

Min. Data Value = 0.000
Max. Data Value = 0.192

C.V. = Coeff. of Variation = Standard Deviation/Mean



MAGMA COPPER COMPANY
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MOHAVE COUNTY, ARIZONA
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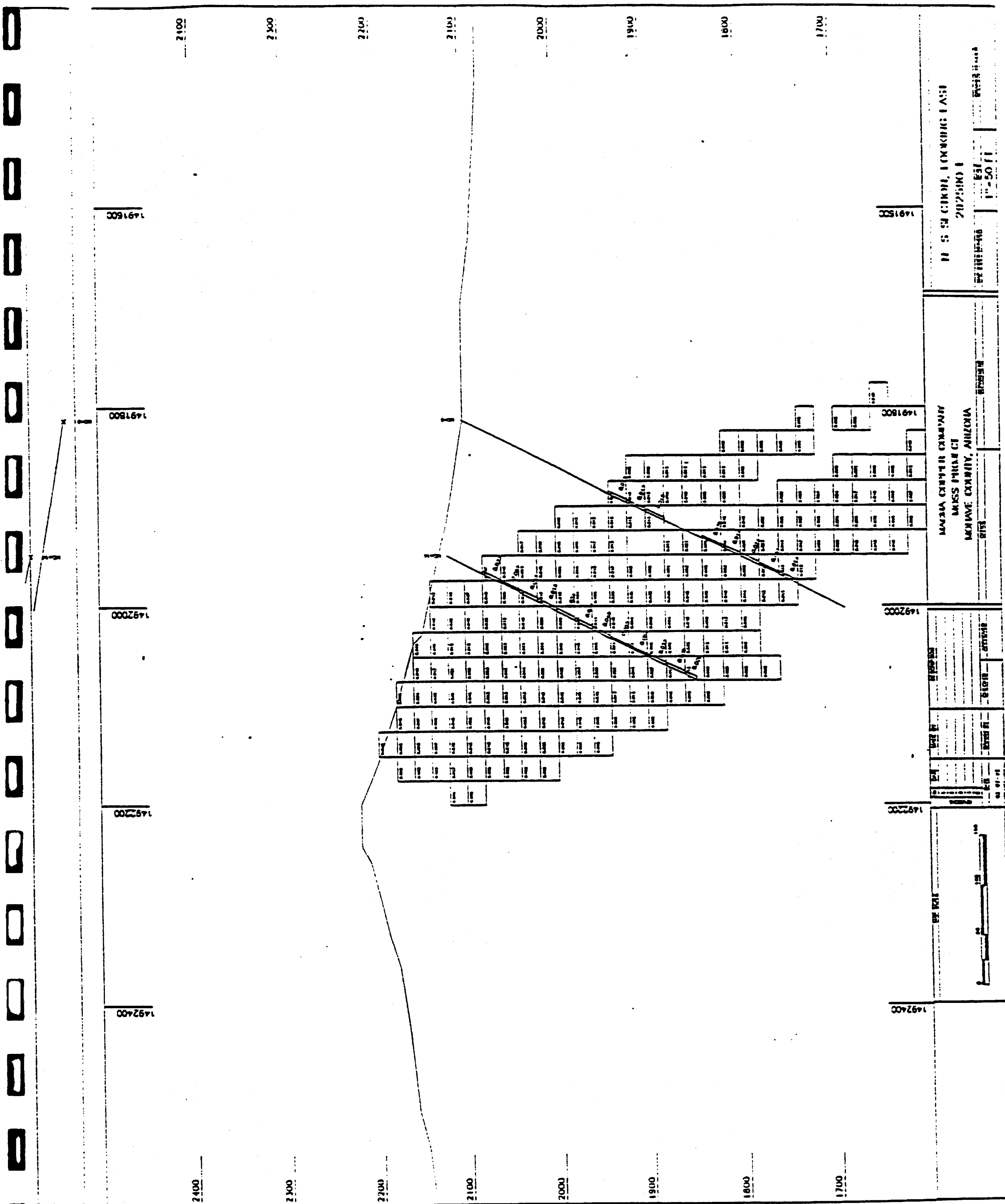


Figure 22. N-S Section Through the Block Model at 292,590E

PIT DESIGN

An economic pit design of the deposit was developed using floating cone algorithm based on the block grades generated from Case #2. The parameters used for this design were as follows:

Mining cost/ton waste	=	$0.83
Total operating cost/ton ore	=	$4.89
Pit Slope	=	45°
Gold price/oz	=	$350
Recovery	=	60%

Table 7 summarizes the reserves in this pit design. Again, the tonnage factor used was 12.5 cubic feet per ton for both ore and waste. The blocks included in this pit are whole blocks based on whether the center of the block falls inside or outside the pit. Therefore, the pit walls are not smooth. Furthermore, no haul roads were incorporated into the pit because of the preliminary nature of the pit design. Figure 23 shows a plan view of this pit.

Table 7. Reserves at different cutoff grades in economic pit design P04 from floating cone

Cutoff Grade	0.000	0.010	0.020	0.030	0.040
Ore x 1000	5855.	4776.	2996.	1932.	1300.
Grade	0.028	0.033	0.044	0.055	0.065
Waste x 1000	3009.	4088.	5868.	6932.	7564.
S.R.	0.514	0.856	1.959	3.588	5.818

Notes: 1. Pit bottom is at 1800' elevation
2. Tonnage factor used is 12.5 cu.ft/ton
3. Block grades are based on ID3 with 300' search

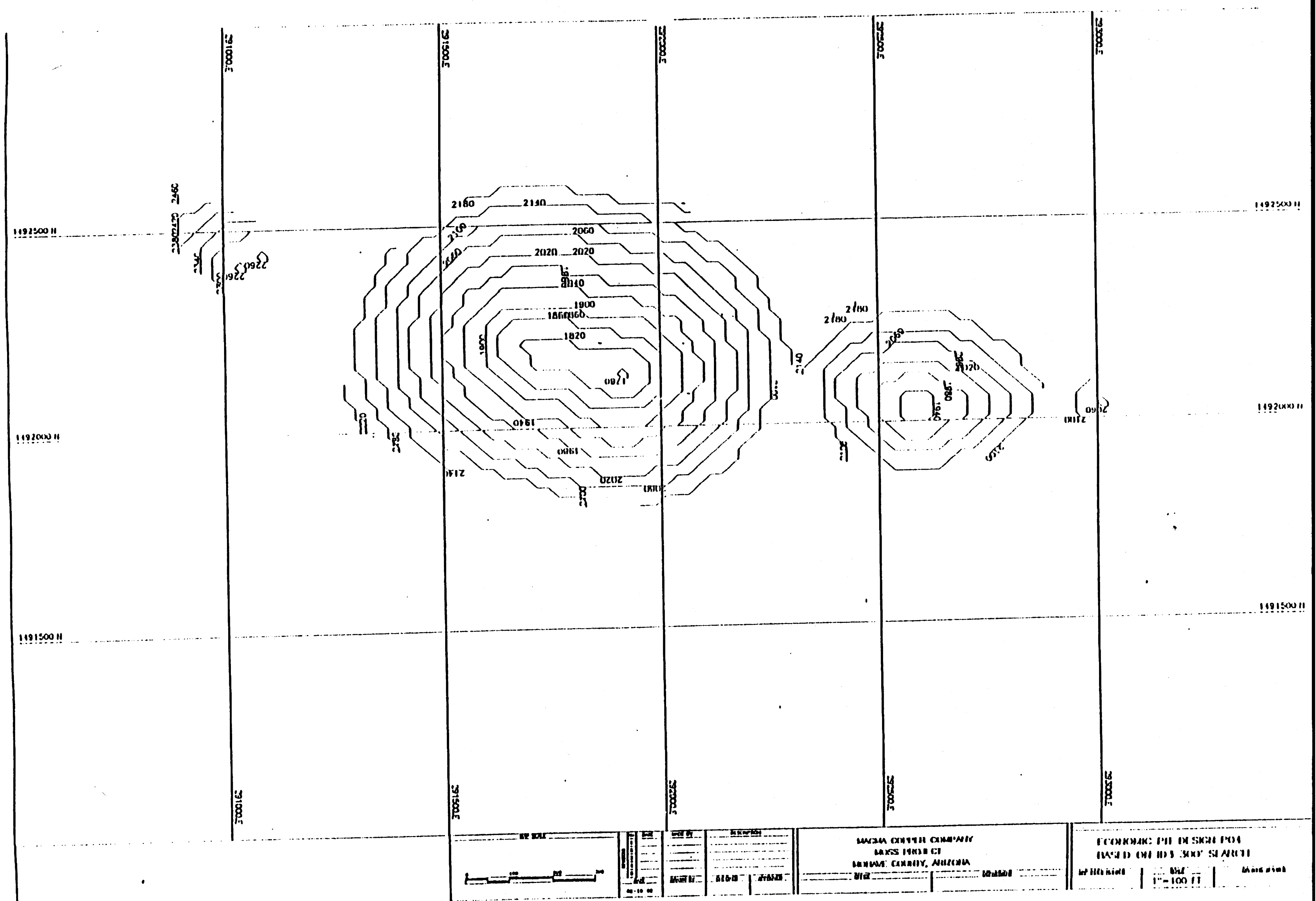


Figure 23. Economic Pit Design Using Floating Cone

292600E	100	2,047.5	MC-14	30	0.070	18,340	1,284	
292600E	100	1,975.0	MC-14	30	0.026	18,001	468	
292600E	100	1,956.9	MC-14	30	0.060	12,728	764	
					Totals	**386,568**	**15,353**	0.040
292700E	100	1,910.1	MC-15	20	0.081	20,397	1,652	
292700E	100	1,733.5	MC-3	20	0.026	16,334	425	
292700E	100	1,896.5	MC-15	20	0.060	15,724	943	
292700E	100	1,719.9	MC-3	20	0.030	4,770	143	
292700E	100	2,014.3	MC-15	30	0.015	42,762	641	
292700E	100	1,925.9	MC-15	30	0.030	31,287	939	
292700E	100	1,778.8	MC-3	30	0.022	28,246	621	
292700E	100	1,941.8	MC-15	30	0.018	13,196	238	
					Totals	**172,714**	**5,602**	0.032
292800E	100	1,904.1	MC-13	20	0.043	22,475	966	
292800E	100	2,052.5	MR-10	20	0.111	22,030	2,445	
292800E	100	1,756.2	MC-4	20	0.039	19,681	768	
292800E	100	2,014.0	MR-10	20	0.034	11,498	391	
292800E	100	1,740.3	MC-4	20	0.104	5,663	589	
292800E	100	2,038.4	MR-10	20	0.056	3,008	168	
292800E	100	2,024.3	MR-10	20	0.045	2,535	114	
292800E	100	2,017.4	MC-13	30	0.018	46,146	831	
292800E	100	1,915.5	MC-13	30	0.027	27,658	747	
292800E	100	1,963.1	MC-13	30	0.019	16,320	310	
292800E	100	1,944.9	MC-13	30	0.015	14,148	212	
					Totals	**191,162**	**7,541**	0.039
292900E	100	2,066.7	MR-10	20	0.097	17,554	1,703	
292900E	100	1,711.4	MC-8	20	0.021	4,209	88	
292900E	100	2,080.8	MR-10	20	0.034	759	26	
					Totals	**22,522**	**1,817**	0.081
293000E	100	1,821.6	MC-16	20	0.064	32,800	2,099	
293000E	100	1,857.9	MC-16	20	0.019	32,292	614	
293000E	100	1,839.8	MC-16	20	0.032	9,037	289	
					Totals	**74,129**	**3,002**	0.040
293100E	200	1,669.0	MC-9	20	0.024	46,346	1,112	
293100E	200	1,859.4	MC-9	30	0.016	50,825	813	
293100E	200	1,877.5	MC-9	30	0.019	47,971	912	
293100E	200	1,843.5	MC-9	30	0.025	47,211	1,180	
					Totals	**192,353**	**4,017**	0.021
293300E	200	1,732.6	MC-10	20	0.022	68,111	1,498	
293300E	200	1,685.0	MC-10	20	0.024	31,931	766	
293300E	200	1,714.4	MC-10	20	0.019	18,782	357	
293300E	200	1,850.4	MC-10	35	0.015	95,492	1,432	
293300E	200	1,814.1	MC-10	35	0.020	43,984	880	
293300E	200	1,832.3	MC-10	35	0.028	42,755	1,197	
293300E	200	2,061.1	MC-10	60	0.037	123,288	4,562	

293300E	200	2,126.8	MC-10	60	0.023	38,951	896	
293300E	200	2,108.7	MC-10	60	0.016	37,440	599	
293500E	200	2,004.9	MR-13	20	0.024	51,270	1,231	
293500E	200	2,019.0	MR-13	20	0.051	13,092	668	
					Totals	**565,094**	**14,086**	0.025
293900E	200	1,857.6	MM-17	20	0.036	45,110	1,624	
293900E	200	1,846.7	MM-17	20	0.065	44,881	2,917	
293900E	200	2,099.3	MR-14	20	0.045	43,801	1,971	
293900E	200	2,086.9	MR-14	20	0.184	28,803	5,300	
293900E	200	1,887.9	MM-17	30	0.022	68,299	1,503	
293900E	200	2,148.8	MR-14	30	0.015	39,818	597	
293900E	200	2,134.6	MR-14	30	0.015	36,700	551	
					Totals	**307,412**	**14,462**	0.047
294100E	200	1,886.1	MM-18	20	0.015	59,956	899	
294100E	200	1,914.7	MM-18	20	0.022	52,536	1,156	
294100E	200	1,898.4	MM-18	20	0.067	17,504	1,173	
					Totals	**129,996**	**3,228**	0.025

CROSS SECTIONAL POLYGONAL RESERVE (200 ft. radius of influence)
MOSS PROJECT, ARIZONA

CROSS SECTIONAL POLYGONAL RESERVE (200 ft. radius of influence)
MOSS PROJECT, ARIZONA

Addwest Minerals, Inc.
February, 1995

Radius of influence = 200 ft.
Thickness determined by section width (50, 100, or 200 ft.)
Cut-off grade = .015 opt Au
Utilized 20 ft. composites, bounded by rock type

SUMMARY

Rock Type	Tons	Grade	Oz. Au
Moss Vein (20)	2,790,226	0.049	135,759
Hi-grade Hanging Wall (30)	2,581,978	0.028	73,322
Low-grade Hanging Wall (35)	463,858	0.021	9,863
Footwall (10)	244,578	0.022	5,255
Other Quartz Veins (25)	43,521	0.027	1,160
Rhyolite Dike (60)	441,653	0.034	14,905
Fault (50)	411	0.02	8
TOTAL	6,566,225	0.037	240,272

POLYGON INFORMATION

Section	Hole	Elev.	Thickness	Rock Type	Grade Au	Tons	Oz. Au	av. grade of section
290250E	MC-18A	1967.39	100	10	0.023	66,831	1,537	
290250E	MC-18A	2003.66	100	20	0.026	58,395	1,518	
290250E	MC-18A	1989.15	100	20	0.016	52,393	838	
290250E	MC-18A	2018.16	100	30	0.018	74,117	1,334	
290250E	MC-18A	2134.22	100	30	0.016	28,115	450	
290250E	MC-18A	2105.21	100	30	0.016	41,829	669	
					TOTALS	321,680	6,347	0.020
290350E	MC-19	2018.48	100	20	0.026	154,331	4,013	
290350E	MC-19	2108.75	100	30	0.034	32,414	1,102	
290350E	MC-20	2120	100	30	0.027	14,108	381	
290350E	MC-20	2130	100	30	0.016	6,058	97	
290350E	MC-19	2120.79	100	30	0.016	31,228	500	
290350E	MC-19	2096.72	100	30	0.016	36,448	583	
					TOTALS	274,586	6,675	0.024
290450E	MC-20	2060	100	30	0.020	26,864	537	0.020
290550E	MC-20	1995	100	10	0.018	11,228	202	
290550E	MC-20	2025	100	20	0.018	24,501	441	

290550E	MC-20	2035	100	20	0.018	95,438	1,718	
290550E	MC-20	2008.75	100	20	0.015	50,999	765	
					TOTALS	182,166	3,126	0.017
290950E	M-8-45	2317.18	50	20	0.032	770	25	
290950E	M-9-60	2307.03	50	20	0.030	567	17	
290950E	M-8-45	2303.04	50	20	0.030	739	22	
290950E	M-8-60	2305.7	50	20	0.030	2,794	84	
290950E	M-9-45	2324.79	50	20	0.027	387	10	
290950E	M-8-60	2290.54	50	20	0.017	19,818	337	
290950E	M-8-30	2334	50	30	0.035	10,533	369	
290950E	M-8-45	2329.55	50	30	0.017	417	7	
					TOTALS	36,024	871	0.024
291000E	M-10-60	2309.02	50	20	0.162	885	143	
291000E	M-10-60	2296.03	50	20	0.070	1,100	77	
291000E	M-10-45	2310.25	50	20	0.050	609	31	
291000E	M-15-45	2254.9	50	20	0.040	556	22	
291000E	M-15-60	2245.72	50	20	0.038	987	38	
291000E	M-16-45	2247.82	50	20	0.030	977	29	
291000E	M-15-60	2232.73	50	20	0.030	852	26	
291000E	M-18-45	2214.45	50	20	0.027	1,804	49	
291000E	M-10-60	2283.04	50	20	0.023	541	12	
291000E	M-19-45	2228.82	50	20	0.020	2,250	45	
291000E	M-10-30	2317.5	50	20	0.018	20,425	368	
291000E	M-10-45	2299.64	50	20	0.018	762	14	
291000E	M-16-30	2280	50	20	0.018	1,736	31	
291000E	M-16-30	2272.5	50	20	0.015	1,201	18	
291000E	M-15-45	2265.5	50	20	0.015	307	5	
291000E	M-10-45	2320.86	50	30	0.130	361	47	
291000E	M-10-30	2327.5	50	30	0.055	4,253	234	
291000E	M-10-60	2326.34	50	30	0.047	222	10	
291000E	M-9-30	2341	50	30	0.043	1,215	52	
291000E	M-10-45	2331.46	50	30	0.035	220	8	
291000E	M-18-45	2240.97	50	30	0.030	713	21	
291000E	M-9-60	2322.18	50	30	0.030	1,793	54	
291000E	M-15-30	2282.5	50	30	0.025	547	14	
291000E	M-10-30	2333.75	50	30	0.020	345	7	
291000E	M-15-30	2291.25	50	30	0.020	560	11	
291000E	MM-9	2042.83	50	30	0.018	14,420	260	
291000E	M-9-60	2337.34	50	30	0.018	1,532	28	
291000E	MM-9	2112.12	50	30	0.016	21,969	352	
291000E	M-16-45	2307.93	50	30	0.015	87	1	
291000E	MM-9	2190.06	50	35	0.019	25,758	489	
					TOTALS	108,987	2,494	0.023
291050E	M-17-60	2212.41	50	20	0.220	1,540	339	
291050E	M-11-45	2289.64	50	20	0.068	1,062	72	
291050E	M-11-30	2302.5	50	20	0.047	7,052	331	
291050E	M-17-45	2258.97	50	20	0.035	1,726	60	
291050E	M-17-45	2246.59	50	20	0.027	1,443	39	

291050E	M-17-60	2225.4	50	20	0.025	1,842	46	
291050E	M-11-60	2281.7	50	20	0.015	1,219	18	
291050E	M-11-45	2277.27	50	20	0.015	1,454	22	
291050E	M-20-45	2210.68	50	20	0.015	15,373	231	
291050E	M-29-60	1981.2	50	20	0.015	4,617	69	
291050E	BX-6	2234.41	50	25	0.027	9,070	245	
291050E	M-11-45	2303.79	50	30	0.055	691	38	
291050E	M-17-45	2304.93	50	30	0.035	1,217	43	
291050E	M-17-60	2268.7	50	30	0.030	1,932	58	
291050E	M-17-45	2290.79	50	30	0.027	1,576	43	
291050E	M-20-45	2270.79	50	30	0.023	2,086	48	
291050E	M-11-30	2311.25	50	30	0.020	3,526	71	
291050E	M-11-30	2320	50	30	0.020	2,118	42	
291050E	M-17-60	2286.02	50	30	0.020	1,948	39	
291050E	M-11-60	2299.02	50	30	0.020	1,624	33	
291050E	M-17-45	2267.81	50	30	0.020	775	16	
291050E	M-11-60	2316.34	50	30	0.018	1,707	31	
291050E	M-18-45	2258.64	50	30	0.018	7,018	126	
291050E	M-11-45	2317.93	50	30	0.015	204	3	
291050E	M-20-45	2256.64	50	30	0.015	1,807	27	
					TOTALS	**74,624**	**2,089**	0.028
291100E	M-12-30	2279.5	50	20	0.060	4,515	271	
291100E	M-12-45	2264.57	50	20	0.047	1,113	52	
291100E	MM-10	2075.13	50	20	0.027	17,598	475	
291100E	M-12-60	2233.39	50	20	0.025	15,294	382	
291100E	M-12-60	2246.38	50	20	0.018	2,779	50	
291100E	M-12-30	2272	50	20	0.015	4,754	71	
291100E	M-12-45	2253.97	50	20	0.015	1,022	15	
291100E	BX-6	2207.9	50	25	0.025	11,132	278	
291100E	MM-10	2127.09	50	30	0.032	24,554	786	
291100E	M-12-30	2285.75	50	30	0.030	3,432	103	
291100E	MM-10	2109.77	50	30	0.024	13,685	328	
291100E	M-12-30	2292	50	30	0.020	3,558	71	
291100E	M-12-45	2285.79	50	30	0.018	524	9	
291100E	M-12-45	2275.18	50	30	0.015	754	11	
291100E	BX-6	2199.06	50	35	0.023	8,409	193	
291100E	MM-10	2189.87	50	35	0.018	6,601	119	
					TOTALS	**119,721**	**3,217**	0.027
291150E	BX-6	2137.19	50	25	**0.029**	**10,082**	**292**	0.029
291200E	M-13-60	2238.37	50	20	0.027	2,939	79	
291200E	M-13-60	2255.69	50	20	0.025	1,392	35	
291200E	M-13-30	2262.25	50	20	0.020	1,997	40	
291200E	M-13-60	2227.54	50	20	0.020	28,417	568	
291200E	M-13-30	2271	50	20	0.018	957	17	
					TOTALS	**35,702**	**740**	0.021
291250E	MM-11	2059.93	50	10	0.022	6,461	142	

291250E	MM-11	2046.33	50	10	0.015	19,696	295	
291250E	MM-11	2082.59	50	20	0.040	5,634	225	
291250E	MM-11	2118.84	50	20	0.023	7,268	167	
291250E	M-21-60	2197.03	50	20	0.020	295	6	
291250E	M-21-60	2184.04	50	20	0.020	355	7	
291250E	M-21-60A	2197.03	50	20	0.020	2,831	57	
291250E	MM-11	2100.71	50	20	0.019	7,311	139	
291250E	M-21-45	2198.88	50	20	0.017	1,062	18	
291250E	M-21-30	2211	50	20	0.015	2,683	40	
291250E	M-21-45	2211.25	50	20	0.015	512	8	
291250E	MM-11	2150.56	50	30	0.022	10,533	232	
					TOTALS	**64,640**	**1,336**	**0.021**
291300E	M-22-45	2178.64	50	30	0.023	6,407	147	
291300E	M-22-45	2168.04	50	30	0.020	73,259	1,465	
					TOTALS	**79,667**	**1,613**	**0.020**
291350E	MM-12	2177.94	50	30	**0.024**	**9,111**	**219**	**0.024**
291550E	M-7-70	2127.11	50	20	0.072	768	55	
291550E	MR-11	2144.64	50	20	0.048	2,700	130	
291550E	UG65-1	2110	50	20	0.040	357	14	
291550E	M-7-70	2108.32	50	20	0.040	1,182	47	
291550E	MR-11	2130.5	50	20	0.037	716	27	
291550E	M-7-70	2145.9	50	20	0.032	1,733	56	
291550E	MR-11	2121.66	50	20	0.020	474	10	
291550E	MM-5	2124.64	50	20	0.019	17,328	329	
291550E	M-7-70	2157.65	50	30	0.040	2,746	110	
291550E	MM-5	2152.93	50	30	0.022	9,553	210	
291550E	MM-6	2060.41	50	30	0.019	6,637	126	
291550E	MM-6	2077.73	50	30	0.016	5,621	90	
291550E	MM-6	2151.34	50	35	0.049	54,046	2,648	
					TOTALS	**103,861**	**3,852**	**0.037**
291600E	UG65-4	2110	50	20	0.140	1,559	218	
291600E	UG65-2	2110	50	20	0.100	4,854	485	
291600E	UG65-5	2110	50	20	0.080	1,811	145	
					TOTALS	**8,224**	**849**	**0.103**
291650E	TR-1	2185.62	50	20	0.091	2,835	258	
291650E	UG65-9	2110	50	20	0.080	25,747	2,060	
291650E	UG65-8	2110	50	20	0.080	5,114	409	
291650E	TR-1	2179.48	50	20	0.058	3,392	197	
291650E	UG65-7	2110	50	20	0.040	1,278	51	
291650E	UG65-6	2110	50	20	0.040	1,244	50	
291650E	BX-5	2041.56	50	25	0.026	13,237	344	
291650E	BX-5	2052.17	50	35	0.015	10,923	164	
					TOTALS	**63,769**	**3,532**	**0.055**
291700E	MR-7	2048.55	50	10	0.028	24,831	695	

291700E	TR-3	2207.62	50	20	0.760	4,234	3,218	
291700E	UG65-14	2110	50	20	0.300	194	58	
291700E	UG65-11	2110	50	20	0.300	333	100	
291700E	MR-7	2104.41	50	20	0.116	931	108	
291700E	TR-3	2198.85	50	20	0.105	1,604	168	
291700E	M-6-60	2134.7	50	20	0.095	1,893	180	
291700E	M-6-60	2152.02	50	20	0.095	2,238	213	
291700E	UG65-12	2110	50	20	0.080	910	73	
291700E	MR-7	2121.73	50	20	0.078	1,886	147	
291700E	M-6-30	2163	50	20	0.072	2,151	155	
291700E	UG65-13	2110	50	20	0.070	769	54	
291700E	MR-5	2050.12	50	20	0.065	6,395	416	
291700E	M-6-30	2173	50	20	0.060	1,131	68	
291700E	TR-3	2194.03	50	20	0.060	941	57	
291700E	MR-7	2069.77	50	20	0.056	1,599	90	
291700E	UG220-1	1955	50	20	0.056	2,200	123	
291700E	UG220-1	1955	50	20	0.047	19,541	918	
291700E	UG65-10	2110	50	20	0.040	277	11	
291700E	UG65-15	2110	50	20	0.040	1,883	75	
291700E	MR-7	2056.78	50	20	0.034	634	22	
291700E	MR-5	2032.79	50	20	0.033	9,394	310	
291700E	M-6-30	2154.25	50	20	0.033	2,409	80	
291700E	M-6-60	2119.54	50	20	0.033	1,493	49	
291700E	MR-7	2087.09	50	20	0.027	2,958	80	
291700E	M-6-60	2169.34	50	20	0.020	915	18	
291700E	MM-8	2058.43	50	30	0.154	28,396	4,373	
291700E	MM-8	2112.81	50	30	0.097	1,277	124	
291700E	MM-8	2076.56	50	30	0.029	3,557	103	
					TOTALS	126,972	12,085	0.095
291750E	MR-12	1998.58	50	10	0.033	5,256	174	
291750E	MM-8	1883.97	50	10	0.024	5,104	123	
291750E	MM-8	1931.55	50	20	0.192	3,910	751	
291750E	UG220-3	1955	50	20	0.154	1,446	223	
291750E	UG220-4	1955	50	20	0.154	106	16	
291750E	MR-5	2067.44	50	20	0.141	5,176	730	
291750E	TR-6	2235.62	50	20	0.141	667	94	
291750E	MM-8	1913.42	50	20	0.140	5,422	759	
291750E	MM-8	1897.56	50	20	0.126	9,808	1,236	
291750E	TR-8	2239.62	50	20	0.120	693	83	
291750E	M-5-30	2179	50	20	0.116	2,662	309	
291750E	MM-8	1949.68	50	20	0.097	988	96	
291750E	M-5-30	2172.75	50	20	0.090	1,442	130	
291750E	MR-5	2084.76	50	20	0.090	1,817	164	
291750E	UG220-6	1955	50	20	0.089	452	40	
291750E	MR-6	2156.37	50	20	0.082	855	70	
291750E	TR-7	2229.16	50	20	0.080	1,288	103	
291750E	TR-7	2236.62	50	20	0.080	489	39	
291750E	UG220-5	1955	50	20	0.077	926	71	
291750E	MR-12	2023.33	50	20	0.076	3,806	289	
291750E	M-5-60	2152.04	50	20	0.075	1,028	77	

291750E	UG220-2	1955	50	20	0.068	2,803	191	
291750E	MR-12	2009.19	50	20	0.065	5,129	333	
291750E	UG220-2	1955	50	20	0.063	1,860	117	
291750E	MR-4	2104.31	50	20	0.063	3,594	226	
291750E	UG220-5	1955	50	20	0.062	187	12	
291750E	TR-6	2226.85	50	20	0.053	1,566	83	
291750E	TR-8	2230.85	50	20	0.052	147	8	
291750E	TR-6	2222.25	50	30	0.080	961	77	
291750E	UG65-20	2110	50	30	0.060	8,016	481	
291750E	UG65-19	2110	50	30	0.060	346	21	
291750E	MR-6	2165.03	50	30	0.058	255	15	
291750E	M-5-30	2189	50	30	0.054	1,622	88	
291750E	MM-8	1967.8	50	30	0.049	14,301	701	
291750E	MR-7	2160.7	50	30	0.049	1,454	71	
291750E	M-5-30	2199	50	30	0.045	952	43	
291750E	M-5-60	2165.03	50	30	0.045	358	16	
291750E	TR-8	2225.81	50	30	0.040	54	2	
291750E	MR-7	2143.38	50	30	0.036	771	28	
291750E	MR-6	2178.02	50	30	0.034	609	21	
291750E	MM-8	1985.93	50	30	0.030	8,453	254	
291750E	MM-8	2040.31	50	30	0.029	7,907	229	
291750E	MR-6	2195.34	50	30	0.028	335	9	
291750E	MR-7	2178.02	50	30	0.026	2,977	77	
291750E	MR-5	2110.74	50	30	0.023	754	17	
291750E	MM-8	2004.05	50	30	0.022	8,575	189	
291750E	MR-12	2041.01	50	30	0.021	4,038	85	
291750E	UG65-17	2110	50	30	0.020	458	9	
291750E	MR-5	2128.06	50	30	0.020	1,743	35	
291750E	MR-12	2083.43	50	30	0.020	12,553	251	
291750E	MR-12	2032.17	50	30	0.018	2,780	50	
291750E	MR-12	2055.15	50	30	0.016	4,612	74	
291750E	MR-5	2145.38	50	30	0.016	11,285	181	
					TOTALS	**164,799**	**9,568**	0.058
291800E	UG220-3	1955	50	20	0.271	23,848	6,463	
291800E	UG300-1	1875	50	20	0.171	22,015	3,765	
291800E	UG300-1	1875	50	20	0.160	11,473	1,836	
291800E	MR-4	2116.68	50	20	0.082	1,010	83	
291800E	UG65-26	2110	50	20	0.060	7,487	449	
291800E	M-25-60	2130.55	50	20	0.060	525	32	
291800E	UG65-25	2110	50	20	0.060	3,002	180	
291800E	MR-1	2132.72	50	20	0.052	1,011	53	
291800E	M-25-30	2169.5	50	20	0.020	9,288	186	
291800E	UG65-22	2110	50	30	0.140	2,340	328	
291800E	UG300-1	1875	50	30	0.126	21,112	2,660	
291800E	MM-7	2103.75	50	30	0.105	8,577	901	
291800E	MM-7	2049.37	50	30	0.091	9,270	844	
291800E	UG65-27	2110	50	30	0.080	517	41	
291800E	UG65-24	2110	50	30	0.080	21,012	1,681	
291800E	UG65-23	2110	50	30	0.080	217	17	
291800E	UG220-4	1955	50	30	0.061	8,967	547	

291800E	MR-4	2162.64	50	30	0.050	9,041	452	
291800E	MM-7	2067.5	50	30	0.041	8,009	328	
291800E	MR-5	2197.34	50	30	0.038	209	8	
291800E	MR-1	2145.71	50	30	0.033	820	27	
291800E	MR-1	2193.34	50	30	0.032	2,366	76	
291800E	M-25-60	2143.54	50	30	0.030	436	13	
291800E	MR-1	2158.7	50	30	0.029	924	27	
291800E	MR-4	2134.36	50	30	0.027	1,270	34	
291800E	M-25-30	2187	50	30	0.025	4,477	112	
291800E	M-25-30	2177	50	30	0.025	4,216	105	
291800E	MR-4	2148.5	50	30	0.023	2,228	51	
291800E	MR-1	2176.02	50	30	0.023	256	6	
291800E	MM-7	1994.99	50	30	0.021	13,025	274	
291800E	MM-7	2031.24	50	30	0.020	10,807	216	
291800E	MM-7	2013.12	50	30	0.019	12,615	240	
291800E	MR-4	2125.52	50	30	0.019	587	11	
291800E	MR-5	2180.02	50	30	0.016	1,458	23	
291800E	MM-7	1976.86	50	30	0.016	13,450	215	
291800E	MM-7	2130.94	50	35	0.021	14,610	307	
					TOTALS	**252,473**	**22,589**	0.089
291850E	MM-7	1863.58	50	10	0.022	11,887	262	
291850E	UG300-1	1875	50	20	0.180	4,799	864	
291850E	MM-7	1913.42	50	20	0.162	5,865	950	
291850E	UG65-40	2110	50	20	0.160	24,040	3,846	
291850E	UG65-34	2110	50	20	0.160	560	90	
291850E	UG65-30	2110	50	20	0.120	400	48	
291850E	MM-14	1778.53	50	20	0.114	11,333	1,292	
291850E	UG65-39	2110	50	20	0.100	1,302	130	
291850E	UG65-35	2110	50	20	0.090	237	21	
291850E	UG65-28	2110	50	20	0.080	1,012	81	
291850E	UG300-2	1875	50	20	0.079	3,637	287	
291850E	UG65-41	2110	50	20	0.060	1,126	68	
291850E	UG65-31	2110	50	20	0.060	105	6	
291850E	UG65-29	2110	50	20	0.060	333	20	
291850E	UG300-2	1875	50	20	0.051	16,927	863	
291850E	MM-7	1931.55	50	20	0.045	7,699	347	
291850E	MR-3	2095.93	50	20	0.042	10,640	447	
291850E	UG65-32	2110	50	20	0.040	5,441	218	
291850E	MM-7	1949.68	50	20	0.033	18,248	602	
291850E	MM-7	1879.44	50	20	0.033	9,842	325	
291850E	MM-7	1895.3	50	20	0.028	4,167	117	
291850E	MR-4	2176.79	50	30	0.045	26,288	1,183	
291850E	MC-17	2063.43	50	30	0.044	15,508	682	
291850E	MC-17	2009.05	50	30	0.028	8,725	244	
291850E	MC-17	2045.31	50	30	0.025	9,355	234	
291850E	MC-17	1990.93	50	30	0.023	8,075	186	
291850E	MM-14	1794.39	50	30	0.021	1,701	36	
					TOTALS	**209,249**	**13,448**	0.064
291900E	MM-1	1801.41	50	10	0.016	7,703	123	

291900E	M-27-68	1832.3	50	20	0.380	2,683	1,020	
291900E	UG300-2	1875	50	20	0.223	192	43	
291900E	MM-1	1900.08	50	20	0.207	4,157	860	
291900E	UG300-2	1875	50	20	0.207	1,529	317	
291900E	M-27-68	1850.84	50	20	0.190	1,486	282	
291900E	MM-2	2007.72	50	20	0.121	9,222	1,116	
291900E	MM-1	1881.28	50	20	0.118	3,510	414	
291900E	UG300-3	1875	50	20	0.107	379	41	
291900E	M-27-68	1795.21	50	20	0.083	4,586	381	
291900E	M-1-60	2123.39	50	20	0.072	1,963	141	
291900E	MM-1	1862.49	50	20	0.066	3,228	213	
291900E	M-1-30	2167	50	20	0.066	8,079	533	
291900E	MM-2	2021.86	50	20	0.063	8,201	517	
291900E	MR-3	2124.22	50	20	0.047	5,623	264	
291900E	M-27-68	1813.76	50	20	0.043	3,339	144	
291900E	M-1-30	2157	50	20	0.040	12,372	495	
291900E	MM-1	1843.7	50	20	0.039	2,305	90	
291900E	MM-1	1911.82	50	20	0.031	7,838	243	
291900E	M-1-60	2108.23	50	20	0.027	7,867	212	
291900E	MR-3	2138.36	50	20	0.025	1,187	30	
291900E	MM-2	1993.58	50	20	0.021	10,461	220	
291900E	M-27-68	1776.67	50	20	0.020	4,216	84	
291900E	MM-1	1829.6	50	20	0.015	2,168	33	
291900E	UG300-3	1875	50	30	0.297	353	105	
291900E	UG300-3	1875	50	30	0.116	1,315	153	
291900E	UG300-3	1875	50	30	0.070	31,159	2,181	
291900E	MM-1	1923.57	50	30	0.047	2,402	113	
291900E	MM-1	1979.95	50	30	0.045	6,751	304	
291900E	M-1-60	2188.34	50	30	0.043	6,620	285	
291900E	MR-3	2166.64	50	30	0.036	3,912	141	
291900E	M-1-30	2174.5	50	30	0.035	5,313	186	
291900E	MM-2	2064.29	50	30	0.028	7,805	219	
291900E	MR-3	2152.5	50	30	0.027	10,023	271	
291900E	M-1-30	2192	50	30	0.024	545	13	
291900E	M-1-60	2155.86	50	30	0.022	779	17	
291900E	MM-2	2050.15	50	30	0.022	8,073	178	
291900E	M-1-30	2182	50	30	0.022	2,930	65	
291900E	MM-1	1998.74	50	30	0.021	5,138	108	
291900E	MM-1	1961.16	50	30	0.019	7,057	134	
291900E	MM-1	2036.33	50	30	0.019	2,968	56	
291900E	MM-1	1942.36	50	30	0.017	4,965	84	
291900E	MM-2	2036.01	50	30	0.015	8,010	120	
					TOTALS	230,410	12,546	0.054
291950E	MR-2	2118.4	50	10	0.025	9,225	231	
291950E	MR-2	2157.37	50	20	0.142	1,004	143	
291950E	M-2-30	2185	50	20	0.100	4,295	430	
291950E	M-2-60	2157.37	50	20	0.087	1,041	91	
291950E	M-2-30	2177.5	50	20	0.028	5,625	158	
291950E	MR-2	2144.38	50	20	0.017	15,581	265	
291950E	M-2-60	2144.38	50	20	0.015	603	9	

291950E	MR-3	2180.79	50	30	0.054	19,942	1,077	
291950E	M-2-60	2168.19	50	30	0.050	104	5	
291950E	M-2-30	2192.5	50	30	0.035	1,210	42	
291950E	MR-2	2168.19	50	30	0.022	10,702	236	
291950E	MR-2	2179.02	50	30	0.017	412	7	
					TOTALS	69,744	2,692	0.039
292000E	MM-3	1860.64	50	10	0.026	13,645	355	
292000E	MM-3	1892.36	50	20	0.072	39,115	2,816	
292000E	MM-3	1928.61	50	20	0.071	7,579	538	
292000E	MM-3	1910.49	50	20	0.047	6,642	312	
292000E	MM-3	1946.74	50	20	0.038	38,411	1,460	
292000E	M-26-63	2049.81	50	30	0.150	12,267	1,840	
292000E	M-26-63	2067.63	50	30	0.045	15,141	681	
292000E	M-26-63	2103.27	50	30	0.030	28,762	863	
292000E	MM-3	1960.33	50	30	0.028	62,653	1,754	
292000E	M-26-63	2085.45	50	30	0.027	16,437	444	
292000E	M-26-63	2031.99	50	30	0.020	9,597	192	
292000E	M-26-63	2121.09	50	50	0.020	411	8	
					TOTALS	250,658	11,263	0.045
292050E	M-3-60	2145.71	50	20	0.060	1,640	98	
292050E	M-3-30	2168.25	50	20	0.018	3,218	58	
292050E	M-3-30	2184.5	50	30	0.047	4,621	217	
292050E	M-3-30	2190.75	50	30	0.020	4,075	82	
292050E	M-3-60	2158.7	50	30	0.019	55,623	1,057	
292050E	MC-1	1851.04	50	30	0.015	58,789	882	
					TOTALS	127,966	2,394	0.019
292100E	M-28-78	1742.52	50	20	0.023	4,464	103	
292100E	MC-1	1764.95	50	20	0.023	792	18	
292100E	MM-4	1896.63	50	20	0.019	6,238	119	
292100E	MM-4	2048.43	50	30	0.030	46,782	1,404	
292100E	MM-4	1957.8	50	30	0.016	6,341	102	
					TOTALS	64,617	1,744	0.027
292150E	MC-11	2028.84	50	30	0.015	31,506	473	0.015
292200E	MC-11	1920.08	50	10	0.020	10,222	204	
292200E	MC-11	1931.41	50	20	0.060	8,044	483	
292200E	MC-11	1960.86	50	20	0.047	9,089	427	
292200E	MC-11	1942.74	50	20	0.038	2,533	96	
292200E	MC-7	1750.41	50	20	0.029	5,239	152	
292200E	M-4-60	2092.04	50	20	0.027	2,086	56	
292200E	M-4-30	2116.5	50	20	0.020	4,120	82	
292200E	MC-7	1766.27	50	20	0.020	2,039	41	
292200E	MC-7	1782.13	50	20	0.019	7,964	151	
292200E	M-4-60	2079.05	50	20	0.018	7,770	140	
292200E	MC-7	1813.86	50	30	0.018	6,957	125	
292200E	MC-7	1797.99	50	30	0.015	26,104	392	

292200E	MC-7	1831.98	50	30	0.015	7,810	117	
					TOTALS	**99,976**	**2,467**	**0.025**
292400E	MC-6	1658.36	100	10	0.015	4,595	69	
292400E	MC-6	1672.07	100	10	0.015	16,589	249	
292400E	MC-12	1895.42	100	20	0.086	5,009	431	
292400E	MC-12	1913.55	100	20	0.058	48,985	2,841	
292400E	MC-6	1722.31	100	20	0.047	24,312	1,143	
292400E	MC-6	1704.04	100	20	0.026	6,763	176	
292400E	MC-6	1688.05	100	20	0.024	17,347	416	
292400E	MC-6	1749.72	100	30	0.025	25,636	641	
292400E	MC-6	1767.99	100	30	0.022	28,979	638	
292400E	MC-6	1841.07	100	30	0.019	22,798	433	
292400E	MC-6	1736.01	100	30	0.016	90,102	1,442	
292400E	MC-6	1859.34	100	30	0.016	18,726	300	
292400E	MC-6	1877.61	100	30	0.015	15,453	232	
292400E	MC-12	2031.37	100	30	0.015	25,922	389	
					TOTALS	**351,216**	**9,398**	**0.027**
292500E	MR-8	2120.31	100	20	0.102	29,919	3,052	
292500E	MR-8	2132.68	100	20	0.064	6,481	415	
292500E	MR-8	2175.11	100	20	0.055	6,516	358	
292500E	MR-8	2146.82	100	20	0.022	6,866	151	
292500E	MR-8	2160.97	100	20	0.021	6,816	143	
292500E	MR-8	2189.25	100	20	0.015	3,652	55	
					TOTALS	**60,251**	**4,174**	**0.069**
292600E	MC-14	1893.42	100	10	0.019	31,306	595	
292600E	MC-14	1911.55	100	20	0.066	22,908	1,512	
292600E	MC-14	1929.68	100	20	0.058	22,010	1,277	
292600E	MR-9	2080.65	100	20	0.053	25,406	1,347	
292600E	MC-5	1775.73	100	20	0.053	10,441	553	
292600E	MR-9	2186.72	100	20	0.046	4,351	200	
292600E	MC-5	1759.87	100	20	0.044	23,974	1,055	
292600E	MC-5	1793.86	100	20	0.024	24,187	581	
292600E	MR-9	2200.86	100	20	0.023	7,079	163	
292600E	MR-9	2172.57	100	20	0.015	16,886	253	
292600E	MC-5	1825.58	100	30	0.085	20,534	1,745	
292600E	MC-14	2047.5	100	30	0.070	18,320	1,282	
292600E	MC-14	1956.86	100	30	0.060	12,728	764	
292600E	MC-14	2065.62	100	30	0.036	37,734	1,358	
292600E	MC-14	1993.12	100	30	0.032	22,169	709	
292600E	MC-5	1898.08	100	30	0.027	26,305	710	
292600E	MC-14	1974.99	100	30	0.026	18,001	468	
292600E	MC-14	1943.27	100	30	0.022	19,047	419	
292600E	MC-14	2011.24	100	30	0.016	24,935	399	
					TOTALS	**388,321**	**15,390**	**0.040**
292700E	MC-15	1910.08	100	20	0.081	40,568	3,286	
292700E	MC-15	1896.49	100	20	0.060	15,724	943	
292700E	MC-3	1719.88	100	20	0.030	4,770	143	

292700E	MC-3	1733.48	100	20	0.026	16,334	425	
292700E	MC-15	1925.94	100	30	0.030	31,287	939	
292700E	MC-3	1778.79	100	30	0.022	28,246	621	
292700E	MC-15	1941.8	100	30	0.018	13,196	238	
292700E	MC-15	2014.31	100	30	0.015	102,557	1,538	
					TOTALS	**252,681**	**8,133**	0.032
292800E	MR-10	2052.54	100	20	0.111	32,581	3,616	
292800E	MC-4	1740.34	100	20	0.104	5,663	589	
292800E	MR-10	2038.4	100	20	0.056	3,008	168	
292800E	MR-10	2024.26	100	20	0.045	2,535	114	
292800E	MC-13	1904.14	100	20	0.043	22,475	966	
292800E	MC-4	1756.2	100	20	0.039	19,681	768	
292800E	MR-10	2014	100	20	0.034	11,498	391	
292800E	MC-13	1915.47	100	30	0.027	34,843	941	
292800E	MC-13	1963.05	100	30	0.019	16,320	310	
292800E	MC-13	2017.43	100	30	0.018	101,307	1,824	
292800E	MC-13	1944.93	100	30	0.015	14,148	212	
					TOTALS	**264,059**	**9,899**	0.037
292900E	MR-10	2066.68	100	20	0.097	43,444	4,214	
292900E	MR-10	2080.82	100	20	0.034	759	26	
292900E	MC-8	1711.41	100	20	0.021	4,209	88	
					TOTALS	**48,412**	**4,328**	0.089
293000E	MC-16	1821.64	100	20	0.064	43,328	2,773	
293000E	MC-16	1839.77	100	20	0.032	9,037	289	
293000E	MC-16	1857.89	100	20	0.019	61,348	1,166	
					TOTALS	**113,712**	**4,228**	0.037
293100E	MC-9	1669.04	200	20	0.024	86,949	2,087	
293100E	MC-9	1843.5	200	30	0.025	50,439	1,261	
293100E	MC-9	1877.49	200	30	0.019	79,502	1,511	
293100E	MC-9	1859.36	200	30	0.016	75,271	1,204	
					TOTALS	**292,161**	**6,063**	0.021
293300E	MC-10	1684.99	200	20	0.024	31,931	766	
293300E	MC-10	1732.57	200	20	0.022	131,320	2,889	
293300E	MC-10	1714.44	200	20	0.019	18,782	357	
293300E	MC-10	1832.26	200	35	0.028	43,849	1,228	
293300E	MC-10	1814.13	200	35	0.020	43,984	880	
293300E	MC-10	1850.39	200	35	0.015	255,680	3,835	
293300E	MC-10	2061.1	200	60	0.037	359,615	13,306	
293300E	MC-10	2126.81	200	60	0.023	41,003	943	
293300E	MC-10	2108.68	200	60	0.016	41,036	657	
					TOTALS	**967,198**	**24,860**	0.026
293500E	MR-13	2019.01	200	20	0.051	13,092	668	
293500E	MR-13	2004.86	200	20	0.024	102,516	2,460	
					TOTALS	**115,608**	**3,128**	0.027

293900E	MR-14	2086.91	200	20	0.184	28,803	5,300	
293900E	MM-17	1846.73	200	20	0.065	73,332	4,767	
293900E	MR-14	2099.29	200	20	0.045	52,412	2,359	
293900E	MM-17	1857.55	200	20	0.036	54,977	1,979	
293900E	MM-17	1887.86	200	30	0.022	86,947	1,913	
293900E	MR-14	2134.64	200	30	0.015	36,700	551	
293900E	MR-14	2148.79	200	30	0.015	35,654	535	
					TOTALS	368,824	17,402	0.047
294100E	MM-18	1898.35	200	20	0.067	17,504	1,173	
294100E	MM-18	1914.73	200	20	0.022	52,536	1,156	
294100E	MM-18	1886.06	200	20	0.015	125,666	1,885	
					TOTALS	195,706	4,214	0.022

MOSS PROJECT
ADDWEST RESOURCES

MOSS PROJECT

ADDWEST MINERALS' RESOURCE CALCULATIONS

MOSS PROJECT
MOHAVE CO., ARIZONA
CROSS - SECTIONAL POLYGONAL RESERVE
SUMMARY SHEET

Addwest Minerals, Inc. 1995

Thickness determined by section width (independent of radii of influence)
Cut-off grade = .015 opt Au
Utilized 20 ft. composites, bounded by rock type

50 ft. Radius of Influence

Rock Type	Tons	Grade	Oz. Au
Moss Vein (20)	1,359,912	0.057	76,800
Hi-grade Hanging Wall (30)	1,217,548	0.031	37,823
Low-grade Hanging Wall (35)	138,691	0.023	3,205
Footwall (10)	106,662	0.021	2,259
Other Quartz Veins (25)	20,334	0.027	539
Rhyolite Dike (60)	77,378	0.027	2,111
Fault (50)	411	0.02	8
TOTAL	**2,920,936**	**0.042**	**122,745**

100 ft. Radius of Influence

Rock Type	Tons	Grade	OZ. Au
Moss Vein (20)	2,069,880	0.052	108,396
Hi-grade Hanging Wall (30)	1,968,580	0.030	59,933
Low-grade Hanging Wall (35)	270,068	0.023	6,113
Footwall (10)	182,590	0.021	3,855
Rhyolite Dike (60)	199,677	0.030	6,057
Other Quartz Veins (25)	36,701	0.026	970
Faults (50)	411	0.020	8
TOTAL	**4,727,907**	**0.039**	**185,332**

200 ft. Radius of Influence

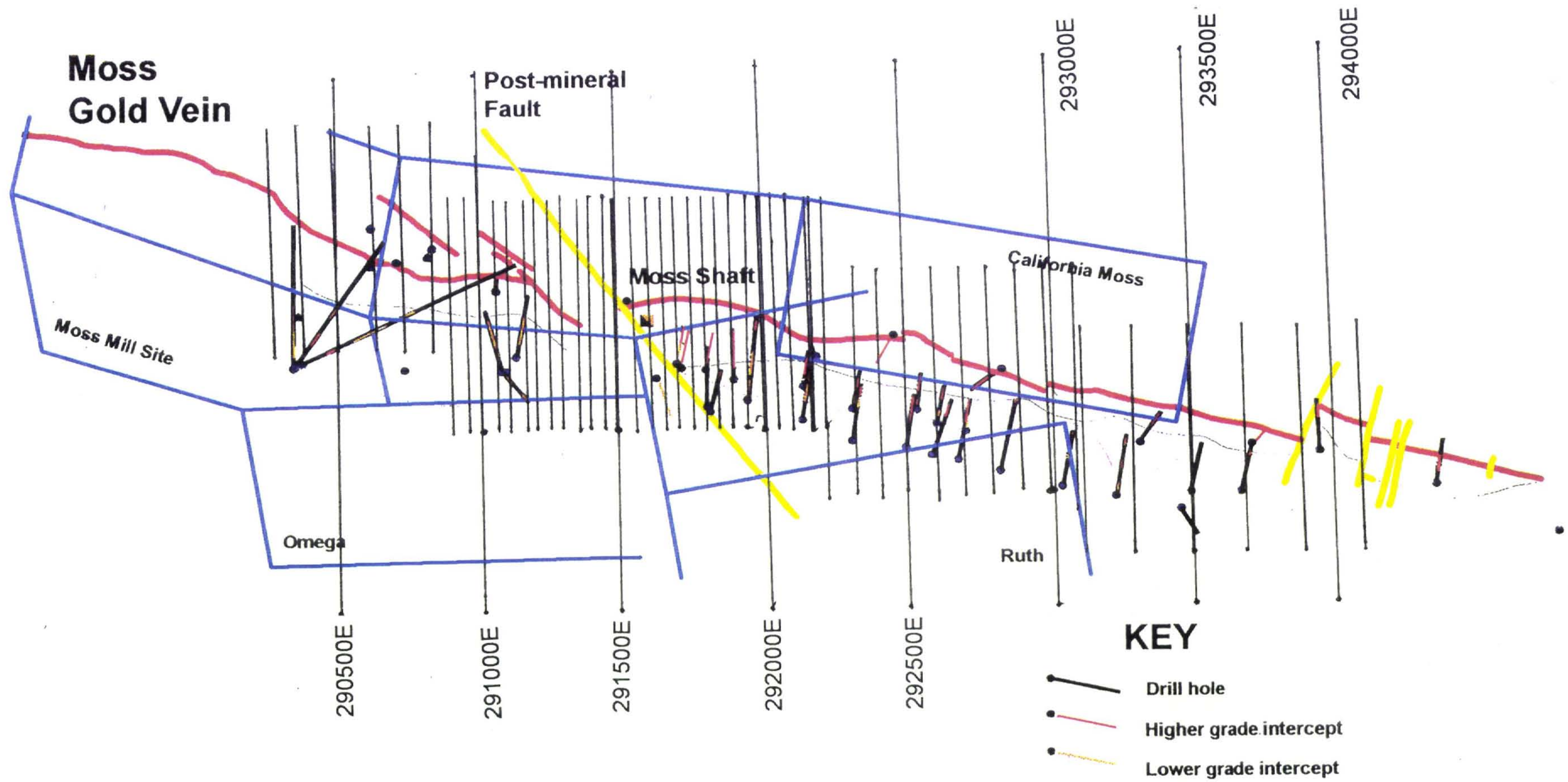
Rock Type	Tons	Grade	Oz. Au
Moss Vein (20)	2,790,226	0.049	135,759
Hi-grade Hanging Wall (30)	2,581,978	0.028	73,322
Low-grade Hanging Wall (35)	463,858	0.021	9,863
Footwall (10)	244,578	0.022	5,255
Other Quartz Veins (25)	43,521	0.027	1,160
Rhyolite Dike (60)	441,653	0.034	14,905
Fault (50)	411	0.02	8
TOTAL	**6,566,225**	**0.037**	**240,272**

MOSS PROJECT- ADDWEST MINERALS, INC.

CROSS SECTION LOCATION MAP

Showing Generalized Geology and General Drill Hole Locations

(Addwest Minerals' Resources Calculations Are Based On These Cross Sections)



CROSS SECTIONAL POLYGONAL RESERVE (50 ft. radius of influence)
MOSS PROJECT, ARIZONA

CROSS SECTIONAL POLYGONAL RESERVE (50 ft. radius of influence)
MOSS PROJECT, ARIZONA

Addwest Minerals, Inc.
February, 1995

Radius of influence = 50 ft.
Thickness determined by section width (50, 100, or 200 ft.)
Cut-off grade = .015 opt Au
Utilized 20 ft. composites, bounded by rock type

SUMMARY

Rock Type	Tons	Grade	Oz. Au
Moss Vein (20)	1,359,912	0.057	76,800
Hi-grade Hanging Wall (30)	1,217,548	0.031	37,823
Low-grade Hanging Wall (35)	138,691	0.023	3,205
Footwall (10)	106,662	0.021	2,259
Other Quartz Veins (25)	20,334	0.027	539
Rhyolite Dike (60)	77,378	0.027	2,111
Fault (50)	411	0.02	8
TOTAL	**2,920,936**	**0.042**	**122,745**

POLYGON INFORMATION

Section	Hole	Elev.	Thickness	Rock Type	Grade Au	Tons	Oz. Au	av. grade of section
290250E	MC-18A	1,967.4	100	10	0.023	16,521	380	
290250E	MC-18A	2,003.7	100	20	0.026	15,380	400	
290250E	MC-18A	1,989.2	100	20	0.016	14,404	231	
290250E	MC-18A	2,018.2	100	30	0.018	17,433	314	
290250E	MC-18A	2,105.2	100	30	0.016	16,231	260	
290250E	MC-18A	2,134.2	100	30	0.016	9,983	160	
					TOTALS	**89,953**	**1,744**	**0.019**
290350E	MC-19	2,018.5	100	20	0.026	35,844	932	
290350E	MC-19	2,108.8	100	30	0.034	10,658	362	
290350E	MC-20	2,120.0	100	30	0.027	5,891	159	
290350E	MC-19	2,096.7	100	30	0.016	13,922	223	
290350E	MC-19	2,120.8	100	30	0.016	8,825	141	
290350E	MC-20	2,130.0	100	30	0.016	4,934	79	
					TOTALS	**80,073**	**1,896**	**0.024**
290450E	MC-20	2,060.0	100	30	**0.020**	**9,947**	**199**	**0.020**

290550E	MC-20	1,995.0	100	10	0.018	7,379	133	
290550E	MC-20	2,025.0	100	20	0.018	9,961	179	
290550E	MC-20	2,035.0	100	20	0.018	24,152	435	
290550E	MC-20	2,008.8	100	20	0.015	5,460	82	
					TOTALS	46,952	829	0.018
290950E	M-8-45	2,317.2	50	20	0.032	854	27	
290950E	M-8-45	2,303.0	50	20	0.030	749	23	
290950E	M-8-60	2,305.7	50	20	0.030	2,701	81	
290950E	M-9-60	2,307.0	50	20	0.030	586	18	
290950E	M-9-45	2,324.8	50	20	0.027	352	10	
290950E	M-8-60	2,290.5	50	20	0.017	5,879	100	
290950E	M-8-30	2,334.0	50	30	0.035	4,582	160	
290950E	M-8-45	2,329.6	50	30	0.017	607	10	
					TOTALS	16,309	429	0.026
291000E	M-10-60	2,309.0	50	20	0.162	885	143	
291000E	M-10-60	2,296.0	50	20	0.070	1,131	79	
291000E	M-10-45	2,310.3	50	20	0.050	609	31	
291000E	M-15-45	2,254.9	50	20	0.040	714	29	
291000E	M-15-60	2,245.7	50	20	0.038	987	38	
291000E	M-16-45	2,247.8	50	20	0.030	1,017	31	
291000E	M-15-60	2,232.7	50	20	0.030	852	26	
291000E	M-18-45	2,214.5	50	20	0.027	2,151	58	
291000E	M-10-60	2,283.0	50	20	0.023	541	12	
291000E	M-19-45	2,228.8	50	20	0.020	2,250	45	
291000E	M-16-30	2,280.0	50	20	0.018	1,654	30	
291000E	M-10-30	2,317.5	50	20	0.018	6,688	120	
291000E	M-10-45	2,299.6	50	20	0.018	762	14	
291000E	M-16-30	2,272.5	50	20	0.015	1,273	19	
291000E	M-15-45	2,265.5	50	20	0.015	379	6	
291000E	M-10-45	2,320.9	50	30	0.130	361	47	
291000E	M-10-30	2,327.5	50	30	0.055	2,491	137	
291000E	M-10-60	2,326.3	50	30	0.047	200	9	
291000E	M-9-30	2,341.0	50	30	0.043	1,184	51	
291000E	M-9-45	2,338.9	50	30	0.038	78	3	
291000E	M-10-45	2,331.5	50	30	0.035	258	9	
291000E	M-9-60	2,322.2	50	30	0.030	1,805	54	
291000E	M-18-45	2,241.0	50	30	0.030	713	21	
291000E	M-15-30	2,282.5	50	30	0.025	359	9	
291000E	M-10-30	2,333.8	50	30	0.020	337	7	
291000E	M-15-30	2,291.3	50	30	0.020	560	11	
291000E	MM-9	2,042.8	50	30	0.018	8,152	147	
291000E	M-9-60	2,337.3	50	30	0.018	1,434	26	
291000E	MM-9	2,112.1	50	30	0.016	7,467	120	
291000E	M-16-45	2,307.9	50	30	0.015	121	2	
291000E	MM-9	2,190.1	50	35	0.019	8,152	155	
					TOTALS	55,562	1,487	0.027
291050E	M-17-60	2,212.4	50	20	0.220	1,540	339	
291050E	M-11-45	2,289.6	50	20	0.068	1,062	72	

291050E	M-11-30	2,302.5	50	20	0.047	4,675	220	
291050E	M-17-45	2,259.0	50	20	0.035	1,726	60	
291050E	M-17-45	2,246.6	50	20	0.027	1,443	39	
291050E	M-17-60	2,225.4	50	20	0.025	1,842	46	
291050E	M-11-60	2,281.7	50	20	0.015	1,258	19	
291050E	M-11-45	2,277.3	50	20	0.015	1,543	23	
291050E	M-20-45	2,210.7	50	20	0.015	5,940	89	
291050E	M-29-60	1,981.2	50	20	0.015	4,617	69	
291050E	BX-6	2,234.4	50	25	0.027	5,556	150	
291050E	M-11-45	2,303.8	50	30	0.055	478	26	
291050E	M-17-45	2,304.9	50	30	0.035	1,217	43	
291050E	M-17-60	2,268.7	50	30	0.030	1,932	58	
291050E	M-17-45	2,290.8	50	30	0.027	1,576	43	
291050E	M-20-45	2,270.8	50	30	0.023	2,086	48	
291050E	M-11-30	2,320.0	50	30	0.020	2,118	42	
291050E	M-11-30	2,311.3	50	30	0.020	3,297	66	
291050E	M-17-60	2,286.0	50	30	0.020	1,948	39	
291050E	M-17-45	2,267.8	50	30	0.020	775	16	
291050E	M-11-60	2,299.0	50	30	0.020	1,624	33	
291050E	M-18-45	2,258.6	50	30	0.018	3,657	66	
291050E	M-11-60	2,316.3	50	30	0.018	1,707	31	
291050E	M-20-45	2,256.6	50	30	0.015	1,807	27	
291050E	M-11-45	2,317.9	50	30	0.015	209	3	
					TOTALS	55,629	1,666	0.030
291100E	M-12-30	2,279.5	50	20	0.060	3,537	212	
291100E	M-12-45	2,264.6	50	20	0.047	1,113	52	
291100E	MM-10	2,075.1	50	20	0.027	6,470	175	
291100E	M-12-60	2,233.4	50	20	0.025	4,929	123	
291100E	M-12-60	2,246.4	50	20	0.018	2,695	49	
291100E	M-12-30	2,272.0	50	20	0.015	3,277	49	
291100E	M-12-45	2,254.0	50	20	0.015	1,022	15	
291100E	BX-6	2,207.9	50	25	0.025	5,793	145	
291100E	MM-10	2,127.1	50	30	0.032	7,791	249	
291100E	M-12-30	2,285.8	50	30	0.030	2,649	80	
291100E	MM-10	2,109.8	50	30	0.024	8,059	193	
291100E	M-12-30	2,292.0	50	30	0.020	3,358	67	
291100E	M-12-45	2,285.8	50	30	0.018	546	10	
291100E	M-12-45	2,275.2	50	30	0.015	666	10	
291100E	BX-6	2,199.1	50	35	0.023	4,563	105	
291100E	MM-10	2,189.9	50	35	0.018	4,498	81	
					TOTALS	60,963	1,615	0.026
291150E	BX-6	2,137.2	50	25	0.029	3,520	102	0.029
291200E	M-13-60	2,238.4	50	20	0.027	2,939	79	
291200E	M-13-60	2,255.7	50	20	0.025	1,392	35	
291200E	M-13-30	2,262.3	50	20	0.020	2,087	42	
291200E	M-13-60	2,227.5	50	20	0.020	5,291	106	
291200E	M-13-30	2,271.0	50	20	0.018	957	17	

					TOTALS	12,666	279	0.022
291250E	MM-11	2,059.9	50	10	0.022	5,275	116	
291250E	MM-11	2,046.3	50	10	0.015	5,139	77	
291250E	MM-11	2,082.6	50	20	0.040	5,274	211	
291250E	MM-11	2,118.8	50	20	0.023	6,483	149	
291250E	M-21-60A	2,197.0	50	20	0.020	2,709	54	
291250E	M-21-60	2,184.0	50	20	0.020	355	7	
291250E	M-21-60	2,197.0	50	20	0.020	333	7	
291250E	MM-11	2,100.7	50	20	0.019	6,849	130	
291250E	M-21-45	2,198.9	50	20	0.017	833	14	
291250E	M-21-45	2,211.3	50	20	0.015	579	9	
291250E	M-21-30	2,211.0	50	20	0.015	2,808	42	
291250E	MM-11	2,150.6	50	30	0.022	7,705	170	
					TOTALS	44,340	986	0.022
291300E	M-22-45	2,178.6	50	30	0.023	6,096	140	
291300E	M-22-45	2,168.0	50	30	0.020	17,671	353	
					TOTALS	23,767	494	0.021
291350E	MM-12	2,177.9	50	30	0.024	8,507	204	0.024
291550E	M-7-70	2,127.1	50	20	0.072	800	58	
291550E	MR-11	2,144.6	50	20	0.048	2,700	130	
291550E	UG65-1	2,110.0	50	20	0.040	396	16	
291550E	M-7-70	2,108.3	50	20	0.040	1,182	47	
291550E	MR-11	2,130.5	50	20	0.037	716	27	
291550E	M-7-70	2,145.9	50	20	0.032	1,733	56	
291550E	MR-11	2,121.7	50	20	0.020	402	8	
291550E	MM-5	2,124.6	50	20	0.019	6,119	116	
291550E	M-7-70	2,157.7	50	30	0.040	2,746	110	
291550E	MM-5	2,152.9	50	30	0.022	9,553	210	
291550E	MM-6	2,060.4	50	30	0.019	6,626	126	
291550E	MM-6	2,077.7	50	30	0.016	5,618	90	
291550E	MM-6	2,151.3	50	35	0.049	14,060	689	
					TOTALS	52,652	1,682	0.032
291600E	UG65-3	2,110.0	50	20	0.290	316	92	
291600E	UG65-4	2,110.0	50	20	0.140	1,096	153	
291600E	UG65-2	2,110.0	50	20	0.100	2,993	299	
291600E	UG65-5	2,110.0	50	20	0.080	1,811	145	
					TOTALS	6,216	689	0.111
291650E	TR-1	2,185.6	50	20	0.091	2,835	258	
291650E	UG65-8	2,110.0	50	20	0.080	4,301	344	
291650E	UG65-9	2,110.0	50	20	0.080	6,342	507	
291650E	TR-1	2,179.5	50	20	0.058	3,392	197	
291650E	UG65-6	2,110.0	50	20	0.040	1,315	53	
291650E	UG65-7	2,110.0	50	20	0.040	1,317	53	
291650E	BX-5	2,041.6	50	25	0.026	5,465	142	

291650E	BX-5	2,052.2	50	35	0.015	5,995	90	
					TOTALS	**30,962**	**1,643**	0.053
291700E	MR-7	2,048.6	50	10	0.028	10,245	287	
291700E	TR-3	2,207.6	50	20	0.760	4,220	3,207	
291700E	UG65-11	2,110.0	50	20	0.300	410	123	
291700E	UG65-14	2,110.0	50	20	0.300	194	58	
291700E	MR-7	2,104.4	50	20	0.116	990	115	
291700E	TR-3	2,198.9	50	20	0.105	1,617	170	
291700E	M-6-60	2,152.0	50	20	0.095	2,298	218	
291700E	M-6-60	2,134.7	50	20	0.095	1,791	170	
291700E	UG65-12	2,110.0	50	20	0.080	831	66	
291700E	MR-7	2,121.7	50	20	0.078	1,886	147	
291700E	M-6-30	2,163.0	50	20	0.072	2,151	155	
291700E	UG65-13	2,110.0	50	20	0.070	690	48	
291700E	MR-5	2,050.1	50	20	0.065	6,395	416	
291700E	TR-3	2,194.0	50	20	0.060	941	57	
291700E	M-6-30	2,173.0	50	20	0.060	1,131	68	
291700E	UG220-1	1,955.0	50	20	0.056	2,106	118	
291700E	MR-7	2,069.8	50	20	0.056	1,599	90	
291700E	UG220-1	1,955.0	50	20	0.047	15,662	736	
291700E	UG65-15	2,110.0	50	20	0.040	1,883	75	
291700E	UG65-10	2,110.0	50	20	0.040	277	11	
291700E	MR-7	2,056.8	50	20	0.034	634	22	
291700E	M-6-60	2,119.5	50	20	0.033	1,512	50	
291700E	MR-5	2,032.8	50	20	0.033	8,534	282	
291700E	M-6-30	2,154.3	50	20	0.033	2,453	81	
291700E	MR-7	2,087.1	50	20	0.027	2,961	80	
291700E	M-6-60	2,169.3	50	20	0.020	915	18	
291700E	MM-8	2,058.4	50	30	0.154	14,633	2,254	
291700E	MM-8	2,112.8	50	30	0.097	1,277	124	
291700E	MM-8	2,076.6	50	30	0.029	3,557	103	
					TOTALS	**93,790**	**9,347**	0.100
291750E	MR-12	1,998.6	50	10	0.033	3,533	117	
291750E	MM-8	1,884.0	50	10	0.024	3,915	94	
291750E	MM-8	1,931.6	50	20	0.192	3,915	752	
291750E	UG220-4	1,955.0	50	20	0.154	106	16	
291750E	UG220-3	1,955.0	50	20	0.154	1,308	201	
291750E	TR-6	2,235.6	50	20	0.141	713	101	
291750E	MR-5	2,067.4	50	20	0.141	5,176	730	
291750E	MM-8	1,913.4	50	20	0.140	5,175	725	
291750E	MM-8	1,897.6	50	20	0.126	7,659	965	
291750E	TR-8	2,239.6	50	20	0.120	693	83	
291750E	M-5-30	2,179.0	50	20	0.116	2,671	310	
291750E	MM-8	1,949.7	50	20	0.097	988	96	
291750E	MR-5	2,084.8	50	20	0.090	1,817	164	
291750E	M-5-30	2,172.8	50	20	0.090	1,442	130	
291750E	UG220-6	1,955.0	50	20	0.089	452	40	
291750E	MR-6	2,156.4	50	20	0.082	855	70	
291750E	TR-7	2,229.2	50	20	0.080	1,297	104	

291750E	TR-7	2,236.6	50	20	0.080	489	39	
291750E	UG220-5	1,955.0	50	20	0.077	1,059	82	
291750E	MR-12	2,023.3	50	20	0.076	3,806	289	
291750E	M-5-60	2,152.0	50	20	0.075	1,028	77	
291750E	UG220-2	1,955.0	50	20	0.068	2,803	191	
291750E	MR-12	2,009.2	50	20	0.065	5,129	333	
291750E	UG220-2	1,955.0	50	20	0.063	1,860	117	
291750E	MR-4	2,104.3	50	20	0.063	3,594	226	
291750E	UG220-5	1,955.0	50	20	0.062	187	12	
291750E	TR-6	2,226.9	50	20	0.053	1,502	80	
291750E	TR-8	2,230.9	50	20	0.052	147	8	
291750E	UG65-18	2,110.0	50	30	0.100	139	14	
291750E	M-5-60	2,178.0	50	30	0.083	322	27	
291750E	TR-6	2,222.3	50	30	0.080	961	77	
291750E	UG65-20	2,110.0	50	30	0.060	7,788	467	
291750E	UG65-19	2,110.0	50	30	0.060	206	12	
291750E	UG65-16	2,110.0	50	30	0.060	313	19	
291750E	MR-6	2,165.0	50	30	0.058	255	15	
291750E	M-5-30	2,189.0	50	30	0.054	1,625	88	
291750E	MR-7	2,160.7	50	30	0.049	1,398	69	
291750E	MM-8	1,967.8	50	30	0.049	8,275	406	
291750E	M-5-60	2,165.0	50	30	0.045	426	19	
291750E	M-5-30	2,199.0	50	30	0.045	961	43	
291750E	TR-8	2,225.8	50	30	0.040	54	2	
291750E	MR-7	2,143.4	50	30	0.036	885	32	
291750E	MR-6	2,178.0	50	30	0.034	496	17	
291750E	M-5-60	2,195.3	50	30	0.032	73	2	
291750E	MM-8	1,985.9	50	30	0.030	6,461	194	
291750E	MM-8	2,040.3	50	30	0.029	7,871	228	
291750E	MR-6	2,195.3	50	30	0.028	300	8	
291750E	MR-7	2,178.0	50	30	0.026	2,842	74	
291750E	MR-5	2,110.7	50	30	0.023	754	17	
291750E	MM-8	2,004.1	50	30	0.022	6,302	139	
291750E	MR-12	2,041.0	50	30	0.021	4,038	85	
291750E	MR-12	2,083.4	50	30	0.020	11,002	220	
291750E	UG65-17	2,110.0	50	30	0.020	141	3	
291750E	MR-5	2,128.1	50	30	0.020	1,781	36	
291750E	MR-12	2,032.2	50	30	0.018	2,780	50	
291750E	MR-5	2,145.4	50	30	0.016	7,818	125	
291750E	MR-12	2,055.2	50	30	0.016	4,612	74	
					TOTALS	144,198	8,710	0.060
291800E	UG220-3	1,955.0	50	20	0.271	18,226	4,939	
291800E	UG300-1	1,875.0	50	20	0.171	15,592	2,666	
291800E	UG300-1	1,875.0	50	20	0.160	6,709	1,073	
291800E	MR-4	2,116.7	50	20	0.082	1,010	83	
291800E	UG65-25	2,110.0	50	20	0.060	2,621	157	
291800E	M-25-60	2,130.6	50	20	0.060	525	32	
291800E	UG65-26	2,110.0	50	20	0.060	3,111	187	
291800E	MR-1	2,132.7	50	20	0.052	1,011	53	
291800E	M-25-30	2,169.5	50	20	0.020	4,194	84	

291800E	UG65-22	2,110.0	50	30	0.140	297	42	
291800E	UG300-1	1,875.0	50	30	0.126	17,378	2,190	
291800E	MM-7	2,103.8	50	30	0.105	5,659	594	
291800E	MM-7	2,049.4	50	30	0.091	8,126	740	
291800E	UG65-23	2,110.0	50	30	0.080	217	17	
291800E	UG65-24	2,110.0	50	30	0.080	13,734	1,099	
291800E	UG65-27	2,110.0	50	30	0.080	933	75	
291800E	UG220-4	1,955.0	50	30	0.061	8,551	522	
291800E	MR-4	2,162.6	50	30	0.050	6,401	320	
291800E	MM-7	2,067.5	50	30	0.041	7,167	294	
291800E	MR-5	2,197.3	50	30	0.038	210	8	
291800E	MR-1	2,145.7	50	30	0.033	820	27	
291800E	MR-1	2,193.3	50	30	0.032	184	6	
291800E	M-25-60	2,143.5	50	30	0.030	436	13	
291800E	MR-1	2,158.7	50	30	0.029	924	27	
291800E	MR-4	2,134.4	50	30	0.027	1,308	35	
291800E	M-25-30	2,187.0	50	30	0.025	4,258	107	
291800E	M-25-30	2,177.0	50	30	0.025	3,849	96	
291800E	MR-1	2,176.0	50	30	0.023	589	14	
291800E	MR-4	2,148.5	50	30	0.023	2,228	51	
291800E	MM-7	1,995.0	50	30	0.021	8,191	172	
291800E	UG65-21	2,110.0	50	30	0.020	1,646	33	
291800E	MM-7	2,031.2	50	30	0.020	8,191	164	
291800E	MR-4	2,125.5	50	30	0.019	587	11	
291800E	MM-7	2,013.1	50	30	0.019	8,191	156	
291800E	MR-5	2,180.0	50	30	0.016	1,468	24	
291800E	MM-7	1,976.9	50	30	0.016	9,180	147	
291800E	M-25-60	2,176.0	50	30	0.015	210	3	
291800E	MM-7	2,130.9	50	35	0.021	8,775	184	
					TOTALS	182,701	16,441	0.090
291850E	MM-7	1,863.6	50	10	0.022	5,593	123	
291850E	UG300-1	1,875.0	50	20	0.180	4,023	724	
291850E	MM-7	1,913.4	50	20	0.162	5,865	950	
291850E	UG65-34	2,110.0	50	20	0.160	505	81	
291850E	UG65-40	2,110.0	50	20	0.160	519	83	
291850E	UG65-30	2,110.0	50	20	0.120	223	27	
291850E	MM-14	1,778.5	50	20	0.114	8,005	913	
291850E	UG300-1	1,875.0	50	20	0.105	2,012	211	
291850E	UG65-39	2,110.0	50	20	0.100	1,302	130	
291850E	UG65-35	2,110.0	50	20	0.090	189	17	
291850E	UG65-28	2,110.0	50	20	0.080	1,049	84	
291850E	UG300-2	1,875.0	50	20	0.079	1,015	80	
291850E	UG65-41	2,110.0	50	20	0.060	648	39	
291850E	UG65-29	2,110.0	50	20	0.060	332	20	
291850E	UG65-36	2,110.0	50	20	0.060	558	34	
291850E	UG65-31	2,110.0	50	20	0.060	194	12	
291850E	UG300-2	1,875.0	50	20	0.051	10,930	557	
291850E	MM-7	1,931.6	50	20	0.045	7,289	328	
291850E	MR-3	2,095.9	50	20	0.042	5,617	236	
291850E	UG65-32	2,110.0	50	20	0.040	2,271	91	

291850E	UG65-33	2,110.0	50	20	0.040	5,121	205	
291850E	MM-7	1,879.4	50	20	0.033	6,456	213	
291850E	MM-7	1,949.7	50	20	0.033	8,761	289	
291850E	MM-7	1,895.3	50	20	0.028	4,167	117	
291850E	MR-4	2,176.8	50	30	0.045	15,672	705	
291850E	MC-17	2,063.4	50	30	0.044	7,814	344	
291850E	MC-17	2,009.1	50	30	0.028	7,900	221	
291850E	MC-17	2,045.3	50	30	0.025	6,401	160	
291850E	MC-17	1,990.9	50	30	0.023	6,865	158	
291850E	MM-14	1,794.4	50	30	0.021	1,701	36	
					TOTALS	128,998	7,187	0.056
291900E	MM-1	1,801.4	50	10	0.016	4,174	67	
291900E	M-27-68	1,832.3	50	20	0.380	2,441	927	
291900E	UG300-2	1,875.0	50	20	0.223	192	43	
291900E	MM-1	1,900.1	50	20	0.207	4,018	832	
291900E	UG300-2	1,875.0	50	20	0.207	1,529	317	
291900E	M-27-68	1,850.8	50	20	0.190	1,690	321	
291900E	MM-2	2,007.7	50	20	0.121	7,790	943	
291900E	MM-1	1,881.3	50	20	0.118	3,510	414	
291900E	UG300-3	1,875.0	50	20	0.107	379	41	
291900E	M-27-68	1,795.2	50	20	0.083	4,586	381	
291900E	M-1-60	2,123.4	50	20	0.072	1,963	141	
291900E	MM-1	1,862.5	50	20	0.066	3,228	213	
291900E	M-1-30	2,167.0	50	20	0.066	4,613	304	
291900E	MM-2	2,021.9	50	20	0.063	6,228	392	
291900E	MR-3	2,124.2	50	20	0.047	4,593	216	
291900E	M-27-68	1,813.8	50	20	0.043	3,339	144	
291900E	M-1-30	2,157.0	50	20	0.040	6,095	244	
291900E	MM-1	1,843.7	50	20	0.039	2,343	91	
291900E	MM-1	1,911.8	50	20	0.031	6,858	213	
291900E	M-1-60	2,108.2	50	20	0.027	5,559	150	
291900E	MR-3	2,138.4	50	20	0.025	960	24	
291900E	MM-2	1,993.6	50	20	0.021	9,552	201	
291900E	M-27-68	1,776.7	50	20	0.020	4,216	84	
291900E	M-1-60	2,140.7	50	20	0.018	1,552	28	
291900E	MM-1	1,829.6	50	20	0.015	2,168	33	
291900E	UG300-3	1,875.0	50	30	0.297	353	105	
291900E	UG300-3	1,875.0	50	30	0.116	1,315	153	
291900E	UG300-3	1,875.0	50	30	0.070	13,177	922	
291900E	MM-1	1,923.6	50	30	0.047	2,402	113	
291900E	MM-1	1,980.0	50	30	0.045	6,751	304	
291900E	M-1-60	2,188.3	50	30	0.043	3,729	160	
291900E	MR-3	2,166.6	50	30	0.036	2,601	94	
291900E	M-1-30	2,174.5	50	30	0.035	3,909	137	
291900E	MM-2	2,064.3	50	30	0.028	5,974	167	
291900E	MR-3	2,152.5	50	30	0.027	5,751	155	
291900E	M-1-30	2,192.0	50	30	0.024	545	13	
291900E	M-1-30	2,182.0	50	30	0.022	2,922	64	
291900E	M-1-60	2,155.9	50	30	0.022	779	17	
291900E	MM-2	2,050.2	50	30	0.022	6,319	139	

291900E	MM-1	1,998.7	50	30	0.021	5,138	108	
291900E	MM-1	1,961.2	50	30	0.019	6,756	128	
291900E	MM-1	2,036.3	50	30	0.019	2,968	56	
291900E	MM-1	1,942.4	50	30	0.017	4,918	84	
291900E	MM-2	2,036.0	50	30	0.015	7,208	108	
					TOTALS	177,088	9,790	0.055
291950E	MR-2	2,118.4	50	10	0.025	5,029	126	
291950E	MR-2	2,157.4	50	20	0.142	1,004	143	
291950E	M-2-30	2,185.0	50	20	0.100	4,002	400	
291950E	M-2-60	2,157.4	50	20	0.087	1,041	91	
291950E	M-2-30	2,177.5	50	20	0.028	3,555	100	
291950E	MR-2	2,144.4	50	20	0.017	5,552	94	
291950E	M-2-60	2,144.4	50	20	0.015	591	9	
291950E	MR-3	2,180.8	50	30	0.054	7,616	411	
291950E	M-2-60	2,168.2	50	30	0.050	102	5	
291950E	M-2-30	2,192.5	50	30	0.035	1,210	42	
291950E	MR-2	2,168.2	50	30	0.022	3,722	82	
291950E	MR-2	2,179.0	50	30	0.017	412	7	
					TOTALS	33,835	1,509	0.045
292000E	MM-3	1,860.6	50	10	0.026	4,326	113	
292000E	MM-3	1,892.4	50	20	0.072	9,384	676	
292000E	MM-3	1,928.6	50	20	0.071	5,970	424	
292000E	MM-3	1,910.5	50	20	0.047	6,577	309	
292000E	MM-3	1,946.7	50	20	0.038	6,956	264	
292000E	M-26-63	2,049.8	50	30	0.150	4,833	725	
292000E	M-26-63	2,067.6	50	30	0.045	5,051	227	
292000E	M-26-63	2,103.3	50	30	0.030	8,971	269	
292000E	MM-3	1,960.3	50	30	0.028	7,575	212	
292000E	M-26-63	2,085.5	50	30	0.027	4,399	119	
292000E	M-26-63	2,032.0	50	30	0.020	4,820	96	
292000E	M-26-63	2,121.1	50	50	0.020	411	8	
					TOTALS	69,272	3,442	0.050
292050E	M-3-60	2,145.7	50	20	0.060	1,640	98	
292050E	M-3-30	2,168.3	50	20	0.018	2,751	50	
292050E	M-3-30	2,184.5	50	30	0.047	4,134	194	
292050E	M-3-30	2,190.8	50	30	0.020	4,075	82	
292050E	M-3-60	2,158.7	50	30	0.019	7,503	143	
292050E	MC-1	1,851.0	50	30	0.015	8,368	126	
					TOTALS	28,471	692	0.024
292100E	MC-1	1,765.0	50	20	0.023	792	18	
292100E	M-28-78	1,742.5	50	20	0.023	4,464	103	
292100E	MM-4	1,896.6	50	20	0.019	5,126	97	
292100E	MM-4	2,048.4	50	30	0.030	7,403	222	
292100E	MM-4	1,957.8	50	30	0.016	6,182	99	
					TOTALS	23,966	539	0.023
292150E	MC-11	2,028.8	50	30	0.015	7,836	118	0.015

292200E	MC-11	1,920.1	50	10	0.020	6,470	129	
292200E	MC-11	1,931.4	50	20	0.060	4,939	296	
292200E	MC-11	1,960.9	50	20	0.047	6,584	309	
292200E	MC-11	1,942.7	50	20	0.038	2,533	96	
292200E	MC-7	1,750.4	50	20	0.029	4,780	139	
292200E	M-4-60	2,092.0	50	20	0.027	2,086	56	
292200E	M-4-30	2,116.5	50	20	0.020	4,031	81	
292200E	MC-7	1,766.3	50	20	0.020	2,039	41	
292200E	MC-7	1,782.1	50	20	0.019	4,937	94	
292200E	M-4-60	2,079.1	50	20	0.018	5,396	97	
292200E	MC-7	1,813.9	50	30	0.018	5,769	104	
292200E	MC-7	1,798.0	50	30	0.015	9,320	140	
292200E	MC-7	1,832.0	50	30	0.015	7,302	110	
					TOTALS	66,187	1,692	0.026
292400E	MC-6	1,658.4	100	10	0.015	4,595	69	
292400E	MC-6	1,672.1	100	10	0.015	8,831	133	
292400E	MC-12	1,895.4	100	20	0.086	5,009	431	
292400E	MC-12	1,913.6	100	20	0.058	12,936	750	
292400E	MC-6	1,722.3	100	20	0.047	14,273	671	
292400E	MC-6	1,704.0	100	20	0.026	6,763	176	
292400E	MC-6	1,688.1	100	20	0.024	14,171	340	
292400E	MC-6	1,749.7	100	30	0.025	9,660	242	
292400E	MC-6	1,768.0	100	30	0.022	13,514	297	
292400E	MC-6	1,841.1	100	30	0.019	16,403	312	
292400E	MC-6	1,859.3	100	30	0.016	16,063	257	
292400E	MC-6	1,736.0	100	30	0.016	14,022	224	
292400E	MC-12	2,031.4	100	30	0.015	15,720	236	
292400E	MC-6	1,877.6	100	30	0.015	13,495	202	
					TOTALS	165,455	4,339	0.026
292500E	MR-8	2,120.3	100	20	0.102	15,621	1,593	
292500E	MR-8	2,132.7	100	20	0.064	6,481	415	
292500E	MR-8	2,175.1	100	20	0.055	6,516	358	
292500E	MR-8	2,146.8	100	20	0.022	6,866	151	
292500E	MR-8	2,161.0	100	20	0.021	6,816	143	
292500E	MR-8	2,189.3	100	20	0.015	3,652	55	
					TOTALS	45,953	2,716	0.059
292600E	MC-14	1,893.4	100	10	0.019	15,636	297	
292600E	MC-14	1,911.6	100	20	0.066	14,828	979	
292600E	MC-14	1,929.7	100	20	0.058	13,589	788	
292600E	MC-5	1,775.7	100	20	0.053	10,441	553	
292600E	MR-9	2,080.7	100	20	0.053	16,877	895	
292600E	MR-9	2,186.7	100	20	0.046	4,351	200	
292600E	MC-5	1,759.9	100	20	0.044	15,165	667	
292600E	MC-5	1,793.9	100	20	0.024	15,291	367	
292600E	MR-9	2,200.9	100	20	0.023	7,079	163	
292600E	MR-9	2,172.6	100	20	0.015	11,816	177	

292600E	MC-5	1,825.6	100	30	0.085	13,577	1,154	
292600E	MC-14	2,047.5	100	30	0.070	13,198	924	
292600E	MC-14	1,956.9	100	30	0.060	10,370	622	
292600E	MC-14	2,065.6	100	30	0.036	15,361	553	
292600E	MC-14	1,993.1	100	30	0.032	16,381	524	
292600E	MC-5	1,898.1	100	30	0.027	16,183	437	
292600E	MC-14	1,975.0	100	30	0.026	14,924	388	
292600E	MC-14	1,943.3	100	30	0.022	11,895	262	
292600E	MC-14	2,011.2	100	30	0.016	16,381	262	
					TOTALS	**253,344**	**10,213**	0.040
292700E	MC-15	1,910.1	100	20	0.081	10,543	854	
292700E	MC-15	1,896.5	100	20	0.060	9,145	549	
292700E	MC-3	1,719.9	100	20	0.030	4,770	143	
292700E	MC-3	1,733.5	100	20	0.026	9,731	253	
292700E	MC-15	1,925.9	100	30	0.030	15,233	457	
292700E	MC-3	1,778.8	100	30	0.022	15,864	349	
292700E	MC-15	1,941.8	100	30	0.018	12,277	221	
292700E	MC-15	2,014.3	100	30	0.015	14,973	225	
					TOTALS	**92,535**	**3,050**	0.033
292800E	MR-10	2,052.5	100	20	0.111	11,558	1,283	
292800E	MC-4	1,740.3	100	20	0.104	5,663	589	
292800E	MR-10	2,038.4	100	20	0.056	3,008	168	
292800E	MR-10	2,024.3	100	20	0.045	2,535	114	
292800E	MC-13	1,904.1	100	20	0.043	14,894	640	
292800E	MC-4	1,756.2	100	20	0.039	12,921	504	
292800E	MR-10	2,014.0	100	20	0.034	9,555	325	
292800E	MC-13	1,915.5	100	30	0.027	11,745	317	
292800E	MC-13	1,963.1	100	30	0.019	13,937	265	
292800E	MC-13	2,017.4	100	30	0.018	15,500	279	
292800E	MC-13	1,944.9	100	30	0.015	14,104	212	
					TOTALS	**115,418**	**4,696**	0.041
292900E	MR-10	2,066.7	100	20	0.097	6,587	639	
292900E	MR-10	2,080.8	100	20	0.034	759	26	
292900E	MC-8	1,711.4	100	20	0.021	4,209	88	
					TOTALS	**11,555**	**753**	0.065
293000E	MC-16	1,821.6	100	20	0.064	16,021	1,025	
293000E	MC-16	1,839.8	100	20	0.032	9,037	289	
293000E	MC-16	1,857.9	100	20	0.019	15,887	302	
					TOTALS	**40,945**	**1,616**	0.039
293100E	MC-9	1,669.0	200	20	0.024	25,751	618	
293100E	MC-9	1,843.5	200	30	0.025	24,337	608	
293100E	MC-9	1,877.5	200	30	0.019	31,131	592	
293100E	MC-9	1,859.4	200	30	0.016	30,730	492	
					TOTALS	**111,949**	**2,310**	0.021
293300E	MC-10	1,685.0	200	20	0.024	23,733	570	

293300E	MC-10	1,732.6	200	20	0.022	32,284	710	
293300E	MC-10	1,714.4	200	20	0.019	18,782	357	
293300E	MC-10	1,832.3	200	35	0.028	26,867	752	
293300E	MC-10	1,814.1	200	35	0.020	32,330	647	
293300E	MC-10	1,850.4	200	35	0.015	33,453	502	
293300E	MC-10	2,061.1	200	60	0.037	34,092	1,261	
293300E	MC-10	2,126.8	200	60	0.023	22,398	515	
293300E	MC-10	2,108.7	200	60	0.016	20,887	334	
					TOTALS	**244,826**	**5,648**	0.023
293500E	MR-13	2,019.0	200	20	0.051	13,092	668	
293500E	MR-13	2,004.9	200	20	0.024	25,075	602	
					TOTALS	**38,167**	**1,270**	0.033
293900E	MR-14	2,086.9	200	20	0.184	20,017	3,683	
293900E	MM-17	1,846.7	200	20	0.065	22,779	1,481	
293900E	MR-14	2,099.3	200	20	0.045	22,814	1,027	
293900E	MM-17	1,857.6	200	20	0.036	23,267	838	
293900E	MM-17	1,887.9	200	30	0.022	28,299	623	
293900E	MR-14	2,148.8	200	30	0.015	27,359	410	
293900E	MR-14	2,134.6	200	30	0.015	26,617	399	
					TOTALS	**171,151**	**8,460**	0.049
294100E	MM-18	1,898.4	200	20	0.067	17,504	1,173	
294100E	MM-18	1,914.7	200	20	0.022	32,310	711	
294100E	MM-18	1,886.1	200	20	0.015	25,465	382	
					TOTALS	**75,279**	**2,266**	0.030

CROSS SECTIONAL POLYGONAL RESERVE (100 FT. radius of influence)
MOSS PROJECT, ARIZONA

CROSS SECTIONAL POLYGONAL RESERVE (100 FT. radius of influence)
MOSS PROJECT, ARIZONA

Addwest Minerals, Inc.
February, 1995

100 ft. radius of influence
Thickness determined by section width (50, 100, or 200 FT.)
Cut-off grade = .015 opt Au
Utilized 20 ft. composites, bounded by rock type

Summary

Rock Type	Tons	Grade	Contained OZ. Au
Moss Vein (20)	2,069,880	0.052	108,396
Hi-grade Hanging Wall (30)	1,968,580	0.030	59,933
Low-grade Hanging Wall (35)	270,068	0.023	6,113
Footwall (10)	182,590	0.021	3,855
Rhyolite Dike (60)	199,677	0.030	6,057
Other Quartz Veins (25)	36,701	0.026	970
Faults (50)	411	0.020	8
TOTALS:	**4,727,907**	**0.039**	**185,332**

Polygon Information

SECTION	Thickness	Elev.	Hole	Rock Type	Oz./Ton Au	Tons	Oz. Au	Av. grade for section
290250E	100	1,967.4	MC-18A	10	0.023	33,209	764	
290250E	100	2,003.7	MC-18A	20	0.026	30,354	789	
290250E	100	1,989.2	MC-18A	20	0.016	28,903	462	
290250E	100	2,018.2	MC-18A	30	0.018	35,583	641	
290250E	100	2,105.2	MC-18A	30	0.016	27,465	439	
290250E	100	2,134.2	MC-18A	30	0.016	19,157	307	
					TOTALS	**174,670**	**3,402**	**0.019**
290350E	100	2,018.5	MC-19	20	0.026	77,207	2,007	
290350E	100	2,096.7	MC-19	30	0.016	21,971	352	
290350E	100	2,108.8	MC-19	30	0.034	17,937	610	
290350E	100	2,120.8	MC-19	30	0.016	16,462	263	
290350E	100	2,120.0	MC-20	30	0.027	10,876	294	
290350E	100	2,130.0	MC-20	30	0.016	6,058	97	
					TOTALS	**150,511**	**3,623**	**0.024**
290450E	100	2,060.0	MC-20	30	**0.020**	**16,879**	338	0.020
290550E	100	1,995.0	MC-20	10	0.018	11,135	200	

290550E	100	2,035.0	MC-20	20		0.018	49,558	892	
290550E	100	2,025.0	MC-20	20		0.018	18,426	332	
290550E	100	2,008.8	MC-20	20		0.015	15,510	233	
					TOTALS		**94,629**	**1,657**	**0.018**
290950E	50	2,290.5	M-8-60	20		0.017	11,574	197	
290950E	50	2,305.7	M-8-60	20		0.030	2,791	84	
290950E	50	2,317.2	M-8-45	20		0.032	773	25	
290950E	50	2,303.0	M-8-45	20		0.030	739	22	
290950E	50	2,307.0	M-9-60	20		0.030	586	18	
290950E	50	2,324.8	M-9-45	20		0.027	352	10	
290950E	50	2,334.0	M-8-30	30		0.035	8,502	298	
290950E	50	2,329.6	M-8-45	30		0.017	607	10	
					TOTALS		**25,925**	**662**	**0.026**
291000E	50	2,317.5	M-10-30	20		0.018	12,707	229	
291000E	50	2,228.8	M-19-45	20		0.020	2,250	45	
291000E	50	2,214.5	M-18-45	20		0.027	2,165	58	
291000E	50	2,280.0	M-16-30	20		0.018	1,633	29	
291000E	50	2,272.5	M-16-30	20		0.015	1,273	19	
291000E	50	2,296.0	M-10-60	20		0.070	1,131	79	
291000E	50	2,247.8	M-16-45	20		0.030	1,017	31	
291000E	50	2,245.7	M-15-60	20		0.038	987	38	
291000E	50	2,309.0	M-10-60	20		0.162	885	143	
291000E	50	2,232.7	M-15-60	20		0.030	852	26	
291000E	50	2,299.6	M-10-45	20		0.018	762	14	
291000E	50	2,254.9	M-15-45	20		0.040	714	29	
291000E	50	2,310.3	M-10-45	20		0.050	609	31	
291000E	50	2,283.0	M-10-60	20		0.023	541	12	
291000E	50	2,265.5	M-15-45	20		0.015	379	6	
291000E	50	2,112.1	MM-9	30		0.016	20,588	329	
291000E	50	2,042.8	MM-9	30		0.018	14,420	260	
291000E	50	2,327.5	M-10-30	30		0.055	3,806	209	
291000E	50	2,322.2	M-9-60	30		0.030	1,805	54	
291000E	50	2,337.3	M-9-60	30		0.018	1,429	26	
291000E	50	2,341.0	M-9-30	30		0.043	1,215	52	
291000E	50	2,241.0	M-18-45	30		0.030	713	21	
291000E	50	2,291.3	M-15-30	30		0.020	560	11	
291000E	50	2,333.8	M-10-30	30		0.020	370	7	
291000E	50	2,320.9	M-10-45	30		0.130	361	47	
291000E	50	2,282.5	M-15-30	30		0.025	359	9	
291000E	50	2,331.5	M-10-45	30		0.035	230	8	
291000E	50	2,326.3	M-10-60	30		0.047	200	9	
291000E	50	2,307.9	M-16-45	30		0.015	121	2	
291000E	50	2,338.9	M-9-45	30		0.038	78	3	
291000E	50	2,190.1	MM-9	35		0.019	16,389	311	
					TOTALS		**90,546**	**2,148**	**0.024**
291050E	50	2,210.7	M-20-45	20		0.015	12,252	184	
291050E	50	2,302.5	M-11-30	20		0.047	7,052	331	
291050E	50	1,981.2	M-29-60	20		0.015	4,617	69	

291050E	50	2,225.4	M-17-60	20	0.025	1,842	46	
291050E	50	2,259.0	M-17-45	20	0.035	1,726	60	
291050E	50	2,277.3	M-11-45	20	0.015	1,543	23	
291050E	50	2,212.4	M-17-60	20	0.220	1,540	339	
291050E	50	2,246.6	M-17-45	20	0.027	1,443	39	
291050E	50	2,281.7	M-11-60	20	0.015	1,258	19	
291050E	50	2,289.6	M-11-45	20	0.068	1,062	72	
291050E	50	2,234.4	BX-6	25	0.027	9,088	245	
291050E	50	2,258.6	M-18-45	30	0.018	6,873	124	
291050E	50	2,311.3	M-11-30	30	0.020	3,734	75	
291050E	50	2,320.0	M-11-30	30	0.020	2,118	42	
291050E	50	2,270.8	M-20-45	30	0.023	2,086	48	
291050E	50	2,286.0	M-17-60	30	0.020	1,948	39	
291050E	50	2,268.7	M-17-60	30	0.030	1,932	58	
291050E	50	2,256.6	M-20-45	30	0.015	1,807	27	
291050E	50	2,316.3	M-11-60	30	0.018	1,796	32	
291050E	50	2,299.0	M-11-60	30	0.020	1,618	32	
291050E	50	2,290.8	M-17-45	30	0.027	1,576	43	
291050E	50	2,304.9	M-17-45	30	0.035	1,217	43	
291050E	50	2,267.8	M-17-45	30	0.020	775	16	
291050E	50	2,303.8	M-11-45	30	0.055	482	27	
291050E	50	2,317.9	M-11-45	30	0.015	121	2	
					TOTALS	71,503	2,035	0.028
291100E	50	2,075.1	MM-10	20	0.027	14,248	385	
291100E	50	2,233.4	M-12-60	20	0.025	12,115	303	
291100E	50	2,272.0	M-12-30	20	0.015	4,754	71	
291100E	50	2,279.5	M-12-30	20	0.060	4,515	271	
291100E	50	2,246.4	M-12-60	20	0.018	2,779	50	
291100E	50	2,264.6	M-12-45	20	0.047	1,113	52	
291100E	50	2,254.0	M-12-45	20	0.015	1,022	15	
291100E	50	2,207.9	BX-6	25	0.025	10,729	268	
291100E	50	2,127.1	MM-10	30	0.032	18,794	601	
291100E	50	2,109.8	MM-10	30	0.024	12,737	306	
291100E	50	2,292.0	M-12-30	30	0.020	3,558	71	
291100E	50	2,285.8	M-12-30	30	0.030	3,497	105	
291100E	50	2,275.2	M-12-45	30	0.015	666	10	
291100E	50	2,285.8	M-12-45	30	0.018	546	10	
291100E	50	2,199.1	BX-6	35	0.023	8,395	193	
291100E	50	2,189.9	MM-10	35	0.018	7,153	129	
					TOTALS	106,620	2,840	0.027
291150E	50	2,137.2	BX-6	25	**0.029**	**5,924**	**172**	0.029
291200E	50	2,227.5	M-13-60	20	0.020	13,140	263	
291200E	50	2,238.4	M-13-60	20	0.027	2,939	79	
291200E	50	2,262.3	M-13-30	20	0.020	2,087	42	
291200E	50	2,255.7	M-13-60	20	0.025	1,392	35	
291200E	50	2,271.0	M-13-30	20	0.018	957	17	
					TOTALS	20,515	436	0.021

291250E	50	2,046.3	MM-11	10	0.015	10,049	151	
291250E	50	2,059.9	MM-11	10	0.022	6,461	142	
291250E	50	2,100.7	MM-11	20	0.019	7,311	139	
291250E	50	2,118.8	MM-11	20	0.023	7,268	167	
291250E	50	2,082.6	MM-11	20	0.040	5,634	225	
291250E	50	2,197.0	M-21-60A	20	0.020	2,831	57	
291250E	50	2,211.0	M-21-30	20	0.015	2,808	42	
291250E	50	2,198.9	M-21-45	20	0.017	833	14	
291250E	50	2,211.3	M-21-45	20	0.015	579	9	
291250E	50	2,184.0	M-21-60	20	0.020	355	7	
291250E	50	2,197.0	M-21-60	20	0.020	333	7	
291250E	50	2,150.6	MM-11	30	0.022	10,533	232	
					TOTALS	54,994	1,191	0.022
291300E	50	2,168.0	M-22-45	30	0.020	38,684	774	
291300E	50	2,178.6	M-22-45	30	0.023	6,407	147	
					TOTALS	45,092	921	0.020
291350E	50	2,177.9	MM-12	30	0.024	9,111	219	0.024
291550E	50	2,124.6	MM-5	20	0.019	9,619	183	
291550E	50	2,144.6	MR-11	20	0.048	2,700	130	
291550E	50	2,145.9	M-7-70	20	0.032	1,733	56	
291550E	50	2,108.3	M-7-70	20	0.040	1,182	47	
291550E	50	2,127.1	M-7-70	20	0.072	800	58	
291550E	50	2,130.5	MR-11	20	0.037	716	27	
291550E	50	2,121.7	MR-11	20	0.020	402	8	
291550E	50	2,110.0	UG65-1	20	0.040	396	16	
291550E	50	2,152.9	MM-5	30	0.022	9,553	210	
291550E	50	2,060.4	MM-6	30	0.019	6,637	126	
291550E	50	2,077.7	MM-6	30	0.016	5,621	90	
291550E	50	2,157.7	M-7-70	30	0.040	2,746	110	
291550E	50	2,151.3	MM-6	35	0.049	30,785	1,508	
					TOTALS	72,891	2,568	0.035
291600E	50	2,110.0	UG65-2	20	0.100	4,865	487	
291600E	50	2,110.0	UG65-5	20	0.080	1,811	145	
291600E	50	2,110.0	UG65-4	20	0.140	1,272	178	
					TOTALS	7,947	809	0.102
291650E	50	2,110.0	UG65-9	20	0.080	14,015	1,121	
291650E	50	2,110.0	UG65-8	20	0.080	5,004	400	
291650E	50	2,179.5	TR-1	20	0.058	3,392	197	
291650E	50	2,185.6	TR-1	20	0.091	2,835	258	
291650E	50	2,110.0	UG65-7	20	0.040	1,317	53	
291650E	50	2,110.0	UG65-6	20	0.040	1,315	53	
291650E	50	2,041.6	BX-5	25	0.026	10,961	285	
291650E	50	2,052.2	BX-5	35	0.015	10,857	163	
					TOTALS	49,694	2,529	0.051

291700E	50	2,048.6	MR-7	10	0.028	15,957	447	
291700E	50	1,955.0	UG220-1	20	0.047	19,653	924	
291700E	50	2,032.8	MR-5	20	0.033	9,394	310	
291700E	50	2,050.1	MR-5	20	0.065	6,395	416	
291700E	50	2,207.6	TR-3	20	0.760	4,228	3,213	
291700E	50	2,087.1	MR-7	20	0.027	2,958	80	
291700E	50	2,154.3	M-6-30	20	0.033	2,409	80	
291700E	50	2,152.0	M-6-60	20	0.095	2,238	213	
291700E	50	2,163.0	M-6-30	20	0.072	2,151	155	
291700E	50	1,955.0	UG220-1	20	0.056	2,089	117	
291700E	50	2,134.7	M-6-60	20	0.095	1,893	180	
291700E	50	2,121.7	MR-7	20	0.078	1,886	147	
291700E	50	2,110.0	UG65-15	20	0.040	1,883	75	
291700E	50	2,198.9	TR-3	20	0.105	1,609	169	
291700E	50	2,069.8	MR-7	20	0.056	1,599	90	
291700E	50	2,119.5	M-6-60	20	0.033	1,512	50	
291700E	50	2,173.0	M-6-30	20	0.060	1,131	68	
291700E	50	2,104.4	MR-7	20	0.116	990	115	
291700E	50	2,194.0	TR-3	20	0.060	941	57	
291700E	50	2,169.3	M-6-60	20	0.020	915	18	
291700E	50	2,110.0	UG65-12	20	0.080	910	73	
291700E	50	2,110.0	UG65-13	20	0.070	690	48	
291700E	50	2,056.8	MR-7	20	0.034	634	22	
291700E	50	2,110.0	UG65-11	20	0.300	333	100	
291700E	50	2,110.0	UG65-10	20	0.040	277	11	
291700E	50	2,110.0	UG65-14	20	0.300	194	58	
291700E	50	2,058.4	MM-8	30	0.154	27,981	4,309	
291700E	50	2,076.6	MM-8	30	0.029	3,557	103	
291700E	50	2,112.8	MM-8	30	0.097	1,277	124	
					TOTALS	**117,684**	**11,770**	0.100
291750E	50	1,998.6	MR-12	10	0.033	5,256	174	
291750E	50	1,884.0	MM-8	10	0.024	5,104	123	
291750E	50	1,897.6	MM-8	20	0.126	9,808	1,236	
291750E	50	1,913.4	MM-8	20	0.140	5,422	759	
291750E	50	2,067.4	MR-5	20	0.141	5,176	730	
291750E	50	2,009.2	MR-12	20	0.065	5,129	333	
291750E	50	1,931.6	MM-8	20	0.192	3,910	751	
291750E	50	2,023.3	MR-12	20	0.076	3,806	289	
291750E	50	2,104.3	MR-4	20	0.063	3,594	226	
291750E	50	1,955.0	UG220-2	20	0.068	2,803	191	
291750E	50	2,179.0	M-5-30	20	0.116	2,662	309	
291750E	50	1,955.0	UG220-2	20	0.063	1,860	117	
291750E	50	2,084.8	MR-5	20	0.090	1,817	164	
291750E	50	2,226.9	TR-6	20	0.053	1,566	83	
291750E	50	1,955.0	UG220-3	20	0.154	1,446	223	
291750E	50	2,172.8	M-5-30	20	0.090	1,442	130	
291750E	50	2,229.2	TR-7	20	0.080	1,242	99	
291750E	50	2,152.0	M-5-60	20	0.075	1,028	77	
291750E	50	1,949.7	MM-8	20	0.097	988	96	

291750E	50	1,955.0	UG220-5	20	0.077	926	71	
291750E	50	2,156.4	MR-6	20	0.082	855	70	
291750E	50	2,235.6	TR-6	20	0.141	713	101	
291750E	50	2,239.6	TR-8	20	0.120	693	83	
291750E	50	2,236.6	TR-7	20	0.080	489	39	
291750E	50	1,955.0	UG220-6	20	0.089	452	40	
291750E	50	1,955.0	UG220-5	20	0.062	187	12	
291750E	50	2,230.9	TR-8	20	0.052	147	8	
291750E	50	1,955.0	UG220-4	20	0.154	106	16	
291750E	50	1,967.8	MM-8	30	0.049	14,301	701	
291750E	50	2,083.4	MR-12	30	0.020	12,553	251	
291750E	50	2,145.4	MR-5	30	0.016	11,285	181	
291750E	50	2,004.1	MM-8	30	0.022	8,575	189	
291750E	50	1,985.9	MM-8	30	0.030	8,453	254	
291750E	50	2,110.0	UG65-20	30	0.060	8,016	481	
291750E	50	2,040.3	MM-8	30	0.029	7,907	229	
291750E	50	2,055.2	MR-12	30	0.016	4,612	74	
291750E	50	2,041.0	MR-12	30	0.021	4,038	85	
291750E	50	2,178.0	MR-7	30	0.026	2,845	74	
291750E	50	2,032.2	MR-12	30	0.018	2,780	50	
291750E	50	2,128.1	MR-5	30	0.020	1,781	36	
291750E	50	2,189.0	M-5-30	30	0.054	1,622	88	
291750E	50	2,160.7	MR-7	30	0.049	1,398	69	
291750E	50	2,222.3	TR-6	30	0.080	961	77	
291750E	50	2,199.0	M-5-30	30	0.045	952	43	
291750E	50	2,143.4	MR-7	30	0.036	885	32	
291750E	50	2,110.7	MR-5	30	0.023	754	17	
291750E	50	2,178.0	MR-6	30	0.034	534	18	
291750E	50	2,165.0	M-5-60	30	0.045	426	19	
291750E	50	2,195.3	MR-6	30	0.028	335	9	
291750E	50	2,110.0	UG65-16	30	0.060	313	19	
291750E	50	2,178.0	M-5-60	30	0.083	287	24	
291750E	50	2,110.0	UG65-18	30	0.100	281	28	
291750E	50	2,165.0	MR-6	30	0.058	255	15	
291750E	50	2,110.0	UG65-19	30	0.060	206	12	
291750E	50	2,225.8	TR-8	30	0.040	54	2	
					TOTALS	**165,037**	**9,624**	0.058
291800E	50	1,955.0	UG220-3	20	0.271	23,848	6,463	
291800E	50	1,875.0	UG300-1	20	0.171	20,996	3,590	
291800E	50	1,875.0	UG300-1	20	0.160	11,434	1,830	
291800E	50	2,169.5	M-25-30	20	0.020	8,363	167	
291800E	50	2,110.0	UG65-26	20	0.060	7,487	449	
291800E	50	2,110.0	UG65-25	20	0.060	3,002	180	
291800E	50	2,132.7	MR-1	20	0.052	1,011	53	
291800E	50	2,116.7	MR-4	20	0.082	1,010	83	
291800E	50	2,130.6	M-25-60	20	0.060	525	32	
291800E	50	1,875.0	UG300-1	30	0.126	21,112	2,660	
291800E	50	2,110.0	UG65-24	30	0.080	20,896	1,672	
291800E	50	1,976.9	MM-7	30	0.016	13,450	215	
291800E	50	1,995.0	MM-7	30	0.021	13,025	274	

291800E	50	2,013.1	MM-7	30	0.019	12,615	240	
291800E	50	2,031.2	MM-7	30	0.020	10,807	216	
291800E	50	2,049.4	MM-7	30	0.091	9,270	844	
291800E	50	2,162.6	MR-4	30	0.050	9,112	456	
291800E	50	1,955.0	UG220-4	30	0.061	8,967	547	
291800E	50	2,103.8	MM-7	30	0.105	8,577	901	
291800E	50	2,067.5	MM-7	30	0.041	8,009	328	
291800E	50	2,187.0	M-25-30	30	0.025	4,477	112	
291800E	50	2,177.0	M-25-30	30	0.025	4,216	105	
291800E	50	2,148.5	MR-4	30	0.023	2,228	51	
291800E	50	2,110.0	UG65-22	30	0.140	2,005	281	
291800E	50	2,180.0	MR-5	30	0.016	1,468	24	
291800E	50	2,134.4	MR-4	30	0.027	1,306	35	
291800E	50	2,110.0	UG65-27	30	0.080	933	75	
291800E	50	2,158.7	MR-1	30	0.029	924	27	
291800E	50	2,145.7	MR-1	30	0.033	820	27	
291800E	50	2,176.0	MR-1	30	0.023	589	14	
291800E	50	2,125.5	MR-4	30	0.019	587	11	
291800E	50	2,143.5	M-25-60	30	0.030	436	13	
291800E	50	2,110.0	UG65-23	30	0.080	217	17	
291800E	50	2,197.3	MR-5	30	0.038	210	8	
291800E	50	2,176.0	M-25-60	30	0.015	210	3	
291800E	50	2,193.3	MR-1	30	0.032	184	6	
291800E	50	2,130.9	MM-7	35	0.021	14,258	299	
					Totals	248,580	22,306	0.090
291850E	50	1,863.6	MM-7	10	0.022	10,552	232	
291850E	50	1,949.7	MM-7	20	0.033	18,248	602	
291850E	50	1,875.0	UG300-2	20	0.051	16,892	862	
291850E	50	2,110.0	UG65-33	20	0.040	12,856	514	
291850E	50	1,778.5	MM-14	20	0.114	11,333	1,292	
291850E	50	2,095.9	MR-3	20	0.042	10,673	448	
291850E	50	1,879.4	MM-7	20	0.033	9,703	320	
291850E	50	1,931.6	MM-7	20	0.045	7,699	347	
291850E	50	1,913.4	MM-7	20	0.162	5,865	950	
291850E	50	2,110.0	UG65-32	20	0.040	5,441	218	
291850E	50	1,875.0	UG300-1	20	0.180	4,799	864	
291850E	50	1,895.3	MM-7	20	0.028	4,167	117	
291850E	50	1,875.0	UG300-1	20	0.105	2,407	253	
291850E	50	2,110.0	UG65-39	20	0.100	1,302	130	
291850E	50	1,875.0	UG300-2	20	0.079	1,229	97	
291850E	50	2,110.0	UG65-28	20	0.080	1,012	81	
291850E	50	2,110.0	UG65-40	20	0.160	680	109	
291850E	50	2,110.0	UG65-41	20	0.060	642	39	
291850E	50	2,110.0	UG65-36	20	0.060	564	34	
291850E	50	2,110.0	UG65-34	20	0.160	512	82	
291850E	50	2,110.0	UG65-29	20	0.060	378	23	
291850E	50	2,110.0	UG65-31	20	0.060	266	16	
291850E	50	2,110.0	UG65-35	20	0.090	189	17	
291850E	50	2,176.8	MR-4	30	0.045	26,288	1,183	
291850E	50	2,063.4	MC-17	30	0.044	15,508	682	

291850E	50	2,045.3	MC-17	30	0.025	9,355	234	
291850E	50	2,009.1	MC-17	30	0.028	8,725	244	
291850E	50	1,990.9	MC-17	30	0.023	8,075	186	
291850E	50	1,794.4	MM-14	30	0.021	1,701	36	
					Totals	**197,058**	**10,210**	0.052
291900E	50	1,801.4	MM-1	10	0.016	7,389	118	
291900E	50	1,993.6	MM-2	20	0.021	10,461	220	
291900E	50	2,157.0	M-1-30	20	0.040	9,840	394	
291900E	50	2,007.7	MM-2	20	0.121	9,222	1,116	
291900E	50	2,021.9	MM-2	20	0.063	8,201	517	
291900E	50	2,108.2	M-1-60	20	0.027	7,867	212	
291900E	50	1,911.8	MM-1	20	0.031	7,838	243	
291900E	50	2,167.0	M-1-30	20	0.066	7,262	479	
291900E	50	2,124.2	MR-3	20	0.047	5,677	267	
291900E	50	1,795.2	M-27-68	20	0.083	4,586	381	
291900E	50	1,776.7	M-27-68	20	0.020	4,216	84	
291900E	50	1,900.1	MM-1	20	0.207	4,157	860	
291900E	50	1,881.3	MM-1	20	0.118	3,507	414	
291900E	50	1,813.8	M-27-68	20	0.043	3,339	144	
291900E	50	1,862.5	MM-1	20	0.066	3,231	213	
291900E	50	1,832.3	M-27-68	20	0.380	2,441	927	
291900E	50	1,843.7	MM-1	20	0.039	2,343	91	
291900E	50	1,829.6	MM-1	20	0.015	2,168	33	
291900E	50	2,123.4	M-1-60	20	0.072	1,963	141	
291900E	50	1,850.8	M-27-68	20	0.190	1,690	321	
291900E	50	2,140.7	M-1-60	20	0.018	1,552	28	
291900E	50	1,875.0	UG300-2	20	0.207	1,529	317	
291900E	50	2,138.4	MR-3	20	0.025	960	24	
291900E	50	1,875.0	UG300-3	20	0.107	379	41	
291900E	50	1,875.0	UG300-2	20	0.223	192	43	
291900E	50	1,875.0	UG300-3	30	0.070	21,723	1,521	
291900E	50	2,152.5	MR-3	30	0.027	10,023	271	
291900E	50	2,050.2	MM-2	30	0.022	8,073	178	
291900E	50	2,036.0	MM-2	30	0.015	8,010	120	
291900E	50	2,064.3	MM-2	30	0.028	7,805	219	
291900E	50	1,961.2	MM-1	30	0.019	7,057	134	
291900E	50	1,980.0	MM-1	30	0.045	6,751	304	
291900E	50	2,188.3	M-1-60	30	0.043	6,620	285	
291900E	50	2,174.5	M-1-30	30	0.035	5,313	186	
291900E	50	1,998.7	MM-1	30	0.021	5,138	108	
291900E	50	1,942.4	MM-1	30	0.017	4,965	84	
291900E	50	2,166.6	MR-3	30	0.036	3,912	141	
291900E	50	2,036.3	MM-1	30	0.019	2,968	56	
291900E	50	2,182.0	M-1-30	30	0.022	2,930	65	
291900E	50	1,923.6	MM-1	30	0.047	2,402	113	
291900E	50	1,875.0	UG300-3	30	0.116	1,315	153	
291900E	50	2,155.9	M-1-60	30	0.022	779	17	
291900E	50	2,192.0	M-1-30	30	0.024	545	13	
291900E	50	1,875.0	UG300-3	30	0.297	353	105	
					Totals	**218,688**	**11,698**	0.053

291950E	50	2,118.4	MR-2	10	0.025	8,218	206	
291950E	50	2,144.4	MR-2	20	0.017	12,998	221	
291950E	50	2,177.5	M-2-30	20	0.028	5,618	157	
291950E	50	2,185.0	M-2-30	20	0.100	4,295	430	
291950E	50	2,157.4	M-2-60	20	0.087	1,041	91	
291950E	50	2,157.4	MR-2	20	0.142	1,004	143	
291950E	50	2,144.4	M-2-60	20	0.015	597	9	
291950E	50	2,180.8	MR-3	30	0.054	19,766	1,067	
291950E	50	2,168.2	MR-2	30	0.022	9,555	210	
291950E	50	2,192.5	M-2-30	30	0.035	1,210	42	
291950E	50	2,179.0	MR-2	30	0.017	412	7	
291950E	50	2,168.2	M-2-60	30	0.050	103	5	
					Totals	**64,817**	**2,587**	0.040
292000E	50	1,860.6	MM-3	10	0.026	8,239	214	
292000E	50	1,892.4	MM-3	20	0.072	19,938	1,436	
292000E	50	1,946.7	MM-3	20	0.038	18,319	696	
292000E	50	1,928.6	MM-3	20	0.071	7,579	538	
292000E	50	1,910.5	MM-3	20	0.047	6,642	312	
292000E	50	1,960.3	MM-3	30	0.028	24,072	674	
292000E	50	2,103.3	M-26-63	30	0.030	16,029	481	
292000E	50	2,067.6	M-26-63	30	0.045	9,098	409	
292000E	50	2,049.8	M-26-63	30	0.150	8,880	1,332	
292000E	50	2,032.0	M-26-63	30	0.020	8,798	176	
292000E	50	2,085.5	M-26-63	30	0.027	8,446	228	
292000E	50	2,121.1	M-26-63	50	0.020	411	8	
					Totals	**136,448**	**6,505**	0.048
292050E	50	2,168.3	M-3-30	20	0.018	3,218	58	
292050E	50	2,145.7	M-3-60	20	0.060	1,640	98	
292050E	50	1,851.0	MC-1	30	0.015	24,093	361	
292050E	50	2,158.7	M-3-60	30	0.019	21,111	401	
292050E	50	2,184.5	M-3-30	30	0.047	4,621	217	
292050E	50	2,190.8	M-3-30	30	0.020	4,075	82	
					Totals	**58,758**	**1,218**	0.021
292100E	50	1,896.6	MM-4	20	0.019	6,238	119	
292100E	50	1,742.5	M-28-78	20	0.023	4,464	103	
292100E	50	1,765.0	MC-1	20	0.023	793	18	
292100E	50	2,048.4	MM-4	30	0.030	20,574	617	
292100E	50	1,957.8	MM-4	30	0.016	6,361	102	
					Totals	**38,430**	**958**	0.025
292150E	50	2,028.8	MC-11	30	**0.015**	**18,848**	283	0.015
292200E	50	1,920.1	MC-11	10	0.020	10,222	204	
292200E	50	1,960.9	MC-11	20	0.047	9,089	427	
292200E	50	1,931.4	MC-11	20	0.060	8,044	483	
292200E	50	1,782.1	MC-7	20	0.019	7,964	151	

292200E	50	2,079.1	M-4-60	20	0.018	7,770	140	
292200E	50	1,750.4	MC-7	20	0.029	5,239	152	
292200E	50	2,116.5	M-4-30	20	0.020	4,120	82	
292200E	50	1,942.7	MC-11	20	0.038	2,533	96	
292200E	50	2,092.0	M-4-60	20	0.027	2,086	56	
292200E	50	1,766.3	MC-7	20	0.020	2,039	41	
292200E	50	1,798.0	MC-7	30	0.015	24,278	364	
292200E	50	1,832.0	MC-7	30	0.015	7,810	117	
292200E	50	1,813.9	MC-7	30	0.018	6,957	125	
					Totals	**98,149**	**2,440**	**0.025**
292400E	100	1,672.1	MC-6	10	0.015	16,589	249	
292400E	100	1,658.4	MC-6	10	0.015	4,595	69	
292400E	100	1,913.6	MC-12	20	0.058	25,115	1,457	
292400E	100	1,722.3	MC-6	20	0.047	24,312	1,143	
292400E	100	1,688.1	MC-6	20	0.024	17,347	416	
292400E	100	1,704.0	MC-6	20	0.026	6,763	176	
292400E	100	1,895.4	MC-12	20	0.086	5,009	431	
292400E	100	1,736.0	MC-6	30	0.016	45,844	734	
292400E	100	2,031.4	MC-12	30	0.015	24,499	368	
292400E	100	1,841.1	MC-6	30	0.019	22,798	433	
292400E	100	1,768.0	MC-6	30	0.022	21,807	480	
292400E	100	1,859.3	MC-6	30	0.016	18,726	300	
292400E	100	1,749.7	MC-6	30	0.025	16,910	423	
292400E	100	1,877.6	MC-6	30	0.015	15,481	232	
					Totals	**265,795**	**6,909**	**0.026**
292500E	100	2,120.3	MR-8	20	0.102	29,885	3,048	
292500E	100	2,146.8	MR-8	20	0.022	6,866	151	
292500E	100	2,161.0	MR-8	20	0.021	6,816	143	
292500E	100	2,175.1	MR-8	20	0.055	6,516	358	
292500E	100	2,132.7	MR-8	20	0.064	6,481	415	
292500E	100	2,189.3	MR-8	20	0.015	3,652	55	
					Totals	**60,216**	**4,170**	**0.069**
292600E	100	1,893.4	MC-14	10	0.019	29,616	563	
292600E	100	2,080.7	MR-9	20	0.053	25,406	1,347	
292600E	100	1,793.9	MC-5	20	0.024	24,187	581	
292600E	100	1,759.9	MC-5	20	0.044	23,974	1,055	
292600E	100	1,911.6	MC-14	20	0.066	22,908	1,512	
292600E	100	1,929.7	MC-14	20	0.058	22,010	1,277	
292600E	100	2,172.6	MR-9	20	0.015	16,886	253	
292600E	100	1,775.7	MC-5	20	0.053	10,441	553	
292600E	100	2,200.9	MR-9	20	0.023	7,079	163	
292600E	100	2,186.7	MR-9	20	0.046	4,351	200	
292600E	100	2,065.6	MC-14	30	0.036	37,733	1,358	
292600E	100	1,898.1	MC-5	30	0.027	26,305	710	
292600E	100	2,011.2	MC-14	30	0.016	24,935	399	
292600E	100	1,993.1	MC-14	30	0.032	22,169	709	
292600E	100	1,825.6	MC-5	30	0.085	20,453	1,739	
292600E	100	1,943.3	MC-14	30	0.022	19,047	419	

MEMO

To: Alan Founie
From: John W. Keller
Subject: Moss Project Polygonal Reserves and 1996 Drilling Summary
Date: May 22, 1996

Drilling was completed on the Moss Project in Mohave County, Arizona on March 27, 1996. A total of 30 reverse circulation holes succeeded in accomplishing the objectives of the program, which were to confirm the presence of cohesive ore-grade gold mineralization, fill gaps in previous drilling, extend the limits of the known higher grade zones down-dip, and defining the geometry of a major fault which defines the western boundary of the main known orebody. Additionally, several holes outside of the main zone give strong encouragement for significantly expanding the resource.

Following the completion of the drilling, a computer account with Chemex Labs was set up. This enabled downloading of all final assay data for Moss into the PC-XPLOR database immediately upon completion at the lab. I have included an instruction page for use of this computer service.

All lithology data was entered by into the database. Rock codes for use in PC-XPLOR are based partly on intensity and continuity of gold mineralization, so rock codes were modified based upon receipt of final assays.

Moss Project Rock Codes for use in GEMCOM applications:

20 **Moss Vein**: >50% quartz/calcite vein material. Also commonly includes densely silicified porphyry commonly found in place of open-space filling vein material, especially west of the Blind Boy Fault (just west of the shaft). The Moss Vein always has a clearly defined footwall in RC cuttings. The footwall is conspicuously less altered than rock even hundreds of feet into the hanging wall of the Moss vein. Only by penetrating the footwall is it possible to be certain that the vein is the actual Moss structure, and not a vein in the hanging wall.

30 **Hanging Wall Vein Zone**: This unit is characterized by numerous high-angle veins and veinlets sub-parallel to the Moss Vein within the host Moss Porphyry. In cuttings, the zone is characterized by 5 - 50% vein material (locally to 80% when larger veins are intercepted obliquely). The porphyry is variably silicified and iron-oxide stained. To apply this rock code, there must also be cohesive grades of >.01 opt Au over approximately 30 ft or more, or several smaller cohesive zones.

10 **Footwall:** Much less alteration of the Moss Porphyry than in the hanging wall.

Mineralogical texture easily discernible. Chloritic alteration only, with occasional semi-fresh biotite. Although weakly altered, quartz veinlets are locally common and contain ore-grade gold for a distance of up to 40 feet from the base of the Moss Vein. Vein material in cuttings is usually less than 5 %.

35 **Distal Hanging Wall:** Weakly to moderately altered Moss Porphyry with veinlet material generally 1 - 5% in cuttings. Occasional wide-spaced veins are present which contain ore grade gold, but grade is not cohesive for more than 10 - 20 feet along the drill hole. Some holes, especially to the west of the Blind Boy Fault had more abundant quartz vein material (5 to locally 40 % or more) with no significant ore intercepts and are included as this rock type.

90 **Moss Porphry:** Weakly altered with less than 1% quartz or calcite vein material and gold grades less than .004 opt over a long distance. Chloritized more pervasively in hanging wall rock than in footwall rock.

50 **Faults**: Cuttings usually contain some blue-grey or tan-orange clay gouge, and occasional slick surfaces on large fragments.

60 **Rhyolite Dike**: None seen in cuttings in the 1996 drill program. Seen on surface to be very hard, dense, light tan to light pink fine-grained matrix with glassy quartz phenocrysts up to 3 mm wide. Appears to shatter easily under tectonic stress and contains numerous qz-FeOx veinlets near its junction with the Moss Vein.

100 **Mine Dump:** Near the Moss mine shaft. Several drill samples indicate it averages .075 - 0.125 opt Au. It is estimated to be approximately 5000 - 10,000 tons.

Survey data was entered when final surveys were received from the contractor. Surveys for old MC-series holes in the eastern portion of our drilled area were adjusted 20 to 40 feet to the east of their original database locations because of apparent errors in location as determined by the new survey of several of the old holes which were located on the ground. The digitized topographic map (made from aerial data) is also apparently flawed, since the old holes which were adjusted to the east are now not corresponding well to topography. The topo map is probably the cause of the drill hole survey errors. The old holes were likely surveyed by brunton and tape from prominent topographic points.

A lot of time was spent in a vain attempt to get the old pen plotter to work. Eventually, a good HP650c was rented. New cross section plots were made and new cross sectional geologic interpretations were put on the plots. All sections with new interpretations were then redigitized into Geomodel. Cross sectional polygonal reserve estimates were then run.

POLYGONAL RESOURCE ESTIMATES

Cross section polygonal reserves were calculated for both the "Main Area" and the entire project area at 50' 100' and 200' areas of influence. The 100' reserve was run twice, once using old underground and trench data, and once without. The results of these calculations are given in the accompanying table.

A limitation of the cross sectional reserve calculations is that no values are interpolated across section boundaries. Therefore, if any section has minimal drilling, it will not add much to the resource, even if the two adjoining sections have numerous high grade holes. This method is conservative if section spacing is close relative to overall drill hole density. Tight spacing is required to properly constrain the geologic model so grades are applied to the correct rock type in the Geomodel calculations. Cross section spacing at Moss varies, but in the main higher grade area it is at 50 ft. I made some deletions and additions of sections before final interpretation to account for sections lacking drill data.

It is my belief that a geostatistical method such as krieging will result in a significantly higher reserve calculation for the Moss Deposit than the polygonal reserve method.

Level plans were created at 10 ft. intervals and geology was interpolated to them from the cross sections. These plans were then geologically interpreted and digitized into geomodel. A polygonal reserve estimate was made utilizing the levels. These reserve estimates are even more conservative than the sectional reserve, since no grade values are applied up or down dip outside of the 10' level. A drill hole generally penetrates the vein along a fairly narrow vertical corridor, and that will be the only place where the grade and tons get applied. The estimate is included in the accompanying table, but keep in mind that it is unrealistically conservative. Typically, level plans are constructed after a block model has been created and grade-tons blocks have been interpolated between data points.

The level plans were quite useful, however, in displaying the geology of the deposit. The mineralized zone appears to be quite cohesive, with several displacements along high angle faults. The lateral displacements are on the order of 5 to 50 feet, possibly up to 100 feet at the major "Blind Boy" fault. This fault separates ore grade rock to the east from sub-ore grade material to the west, and the displacement is not a concern. The geometry of the Blind Boy Fault was determined to be N25W, 70NE. It occupies the gully to the west of the shaft.

MOSS PROJECT, ARIZONA

SECTIONAL POLYGON RESERVE ESTIMATES

Polygons constrained by rock type
20 ft. composites within rock types
0.015 oz./ton Au cut-off grade
Thickness limited by section width

		TONS	Grade	1996 est. OZ. Au	1995 est. OZ. Au	grade	% increase
All Sections	50 ft. Rad.of influence:	3,786,933	0.040	**152,311**	122,746	0.042	**24.10%**
(290250E Thru 294950E)	100 ft. " "	6,238,240	0.037	**229,422**	185,332	0.039	**23.80%**
	200 ft. " "	8,832,461	0.033	**294,629**	240,273	0.037	**22.60%**
w/ no trench or u.g data	100 ft. " "	6,201,668	0.035	218,005	NA		
Main Area Only	50 ft. Rad.of influence:	3,031,077	0.043	**129,903**	NA		
(290800E thru 293300E)	100 ft. " "	4,719,410	0.040	**187,678**	NA		
	200 ft. " "	6,363,621	0.036	**232,074**	NA		

For 100 ft. Radius calculation (all sections,1996)

ROCK TYPE	Tons	Au opt	Oz. Au
Moss Vein	2,390,202	0.053	126,345
Hanging Wall Vein Zone	2,291,098	0.030	68,887
Footwall Zone	493,112	0.022	10,820
Distal Hanging Wall	683,065	0.021	14,429
Moss Porphyry	159,070	0.019	2,945
Other Quartz Veins	25,741	0.027	685
Faults	14,905	0.026	393
Rhyolite Porphyry	170,702	0.023	3,926
Mine Dump	10,345	0.096	991
TOTAL (.015 cut-off):	**6,238,240**	**0.037**	**229,422**
Using .054 opt Au Cut-off	**1,019,319**	**0.101**	**102,904**

50 ft. Radius of influence(all sections, 1996)

ROCK TYPE	Tons	Grade	Oz. Au
Moss Vein	1,559,511	0.057	89,352
Hanging Wall Vein Zone	1,482,414	0.031	46,130
Footwall Zone	305,241	0.022	6,783
Distal Hanging Wall	304,299	0.021	6,433
Moss Porphyry	54,090	0.018	996
Other Quartz Veins	14,868	0.027	397
Faults	10,128	0.029	288
Rhyolite Porphyry	47,617	0.023	1,095
Mine Dump	8,765	0.095	835
TOTAL (.015 cut-off):	**3,786,933**	**0.040**	**152,311**
Using .053 opt Cut-off:	**777,056**	**0.100**	**77,644**

LEVEL PLAN POLYGONAL RESERVE ESTIMATE

Grade from composites not projected beyond 10 ft. level boundaries.
1600 - 2350 levels
Levels digitized from 290,800 E to 293,500 E (corresponds to "Main Zone" of sectional reserves)

100 ft. area of influence (horizontal)

ROCK TYPE	TONS	AU OPT.	Oz. Au
Moss Vein	944,845	0.063	59,174
Hanging Wall Vein Zone	1,412,178	0.035	48,745
Footwall	195,848	0.035	6,835
Porphyry	86,050	0.018	1,583
Distal Hanging Wall	507,847	0.025	12,670
Rhyolite Dike	8,607	0.023	198
Mine Dump	11,268	0.064	726
TOTAL	**3,166,643**	**0.041**	**129,930**

TOTAL TONS BY LITHOLOGY ONLY

ROCK TYPE	Tons (Levels)	Tons (Sections)
Moss Vein	3,453,664	7,908,083
Hanging Wall Vein Zone	6,438,506	12,932,309
Footwall	2,518,372	5,477,214
Mine Dump	11,884	10,345
TOTAL	**12,422,427**	**26,327,951**

CHEMEX COMPUTER ACCESS INSTRUCTIONS

- Run "HyperTerminal" application from your Windows 95 start menu (in Accessories)

- Follow the instructions to set up a connection. Once you set it up, the information is retained and you can click on your chosen icon for the connection.

- The computer link number is **(604) 681-4531** to log on.

- Enter Addwest's username precisely: **C_ADD_LSA**

- Enter Addwest's password: **BIGPIT**

- The menu should then come up on the screen. Choose "2" to download assay files.

- Choose "2" for ZMODEM file tranfer protocol.

- The file will be downloaded to the c:\program files\accessories\hyper terminal directory automatically, unless you specify otherwise.

- Unzip the file with Pkunzip (any version later than 1.1)

If you have any problems, call John Keller or**Nerissa Parto at Chemex. Phone: (604) 984-0221**

INSTRUCTIONS FOR ADDWEST'S NUMONICS <u>DIGITIZER</u>

(For use on the MicroSys 486 machine)

- For future reference, to configure the digitizer for Gemcom software you must configure the digitizer as follows (from the Configure Digitizer menu in Gemcom):

Digitizer Make/Model: User Defined

Length of Format: 21
Length of X = 9
Length of Y = 9
Start of X = 2
Start of Y = 12
ASCII Value = 10

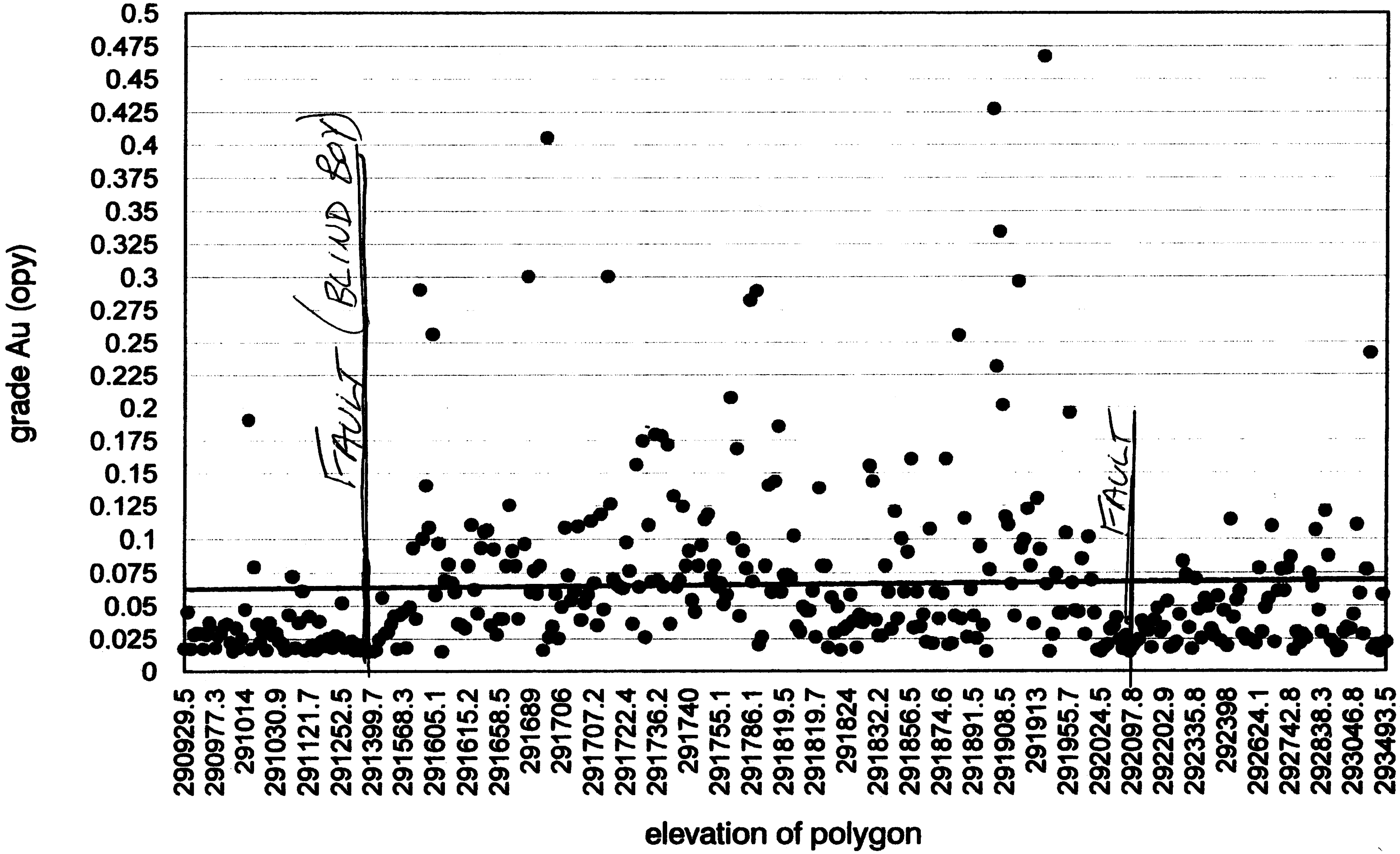
General Definition
Minimum X = 0
Minimum Y = 0
Maximum X = 36
Maximum Y = 24
Resolution = 1

Communications
Com 1
9600 Baud
Even Parity
7 data bits
1 stop bit
protocol off

DIGITIZING
1. Plug cable into Com 1. Normally, the mouse is attached, so you must disconnect it.
2. Turn computer on.
3. Re-start computer in DOS mode (from shut-down menu only; digitizing will not work in the dos shell environment. Windows 95 must be off) You can avoid getting into Win 95 by hitting F8 as when you see "starting Windows 95" as the machine is booting. Then choose option 6 to get a DOS prompt.
4. Turn digitizer on.
5. Hit a number key on the digitizer's "mouse" pad to initialize the digitizer.
6. Begin digitizing in Gemcom.

Grade vs Easting

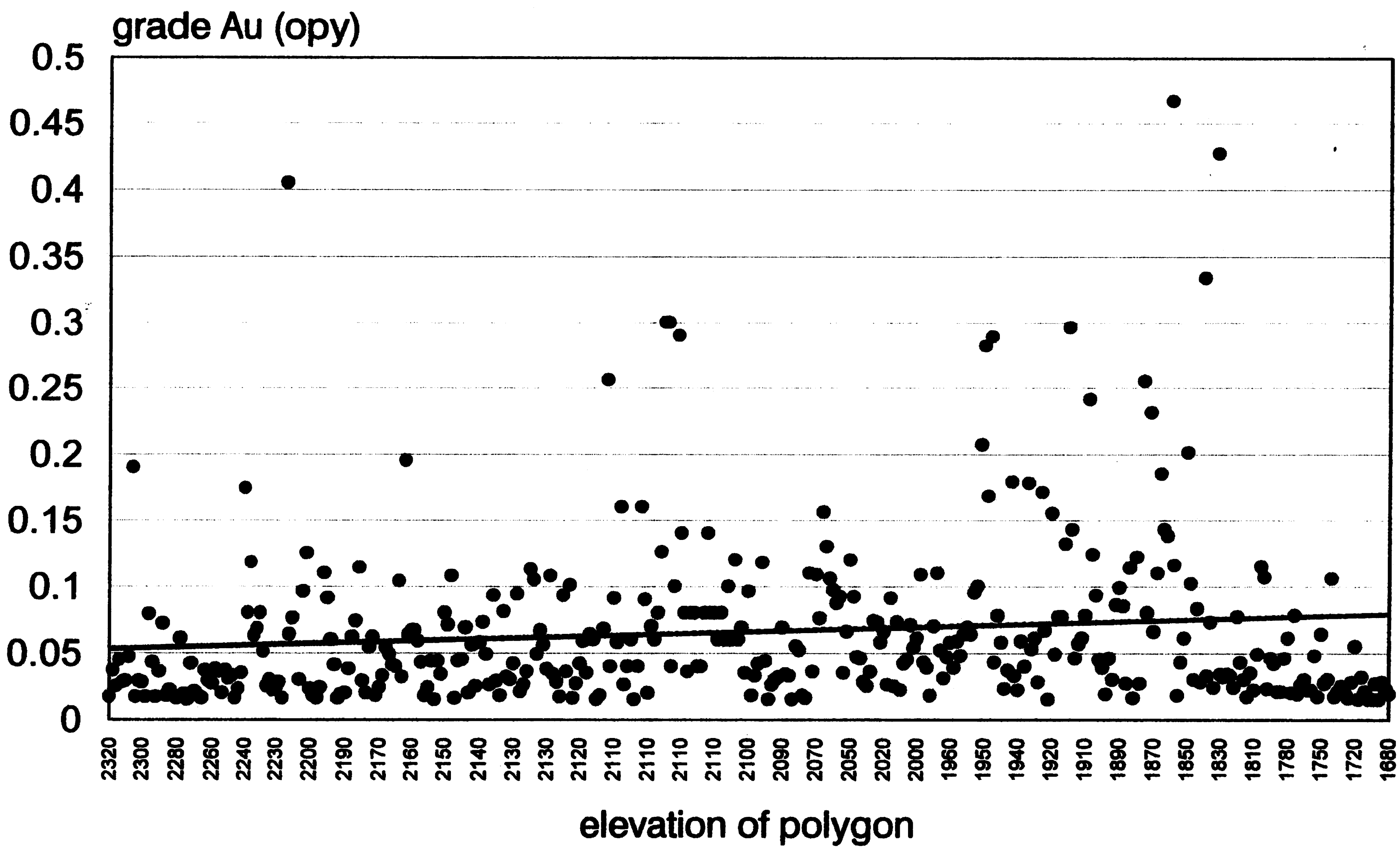
Moss Project Arizona



Grades in Moss Vein Only, from polygons

Grade vs Elevation

Moss Project Arizona



Grades in Moss Vein Only, from polygons

STATE OF ARIZONA
FIELD ENGINEERS REPORT

✓

Mine Moss Mine

Date December 19, 1957

District San Francisco Dist. Mohave Co

Engineer Lewis A. Smith

Subject: Visit to the Property

Location: Sec. 13, T 20 N, R 21 W, 7 miles NW of Oatman and 2 miles north of Silver Creek.

Owners: W. H. Hittson and James McCarthy, Oatman, Arizona

Production: Reported to be about $240,000 from near the surface.

Work: The Moss Vein was developed by a 230' shaft, around 750' of workings, 900' of tunnel and several irregular surface openings. Ransome states that the vein, on the 220 level, appeared to be 90 feet wide and, as a whole, probably carries from 0.15 to 0.20 oz of gold per ton. The vein strikes from N 78°W to N 85°W and dips 70°S and lies in what appears to be quartz-monzonite porphyry. The width varies from 20 to 100' wide, the widest part being in the west portion and is traceable for over a mile to the east of the mine and the vein fracture is traceable for some distance to the west.

The vein filling consists of fine grained quartz, calcite, cut by stringers and clusters of pale green fluorite. Sulphides appear to be marcasite and cupriferous pyrite (or miner chalcopyrite). The gold values are mainly in limonitic, or hematitic blebs and stringers, or are associated, deeper, with sulphides. The Moss carries more silver than most of the Oatman ores. The largest ore shoot extended to a depth of 65 feet, lying entirely in oxidized material.

This shoot generally is located where a N-S multiple shear zone crosses the vein. Here as at the Hardy, small rich shoots project out past the vein into the country rock. These shoots were reported to have been much richer than the average grade of the main vein. This shear was prospected, to the south, by shallow pits & cuts, and this highly iron stained zone locally contained areas of material which may exceed $3.00 per ton.

Chester Miller repts. 8/13/73 - drilled 70' of .04 opt Au

Check Kingman Mining Project

ADDWEST MINERALS, INC.

MOSS PROJECT 4/5/96
Drilling - 1996

Hole #		T.D Feet	Interval	Thickness	Ore Zone Grade	High Grade Interval: Hole #	Interval	Thickness	Ore Zone Grade
M96-1		123	0-75	75	0.058	M96-1	20-65	45	0.082
M96-2		250	0-135	135	0.033	M96-2	100-135	35	0.061
M96-3		300	45-225	180	0.029	M96-3	155-215	60	0.062
M96-4		300	0-80	80	0.016	M96-4	0-55	55	0.019
M96-5		340	15-135	120	0.017	M96-5	15-35	20	0.034
M96-6		180	0-105	105	0.043	M96-6	10-45	35	0.073
M96-7		200	0-105	105	0.085	M96-7	0-65	65	0.128
M96-8		165	0-80	80	0.037	M96-8	0-65	65	0.043
M96-9	(Holes 9 thru 13 Are	85	0-25	25	0.011	M96-9	5-10	5	0.029
M96-10	Outside of the Known	435	95-130	35	0.010	M96-10			
	Mineralized Area,		205-220	15	0.026		205-220	15	0.026
M96-11	They all Contain	300	60-150	90	0.011	M96-11	60-150	90	0.011
M96-12	Intermittant Low Grade	385	275-285	10	0.028	M96-12	275-285	285	0.028
M96-13	[.01X-.03X] 5 ft Zones)	245	90-115	25	0.015	M96-13	90-115	25	0.015
M96-14		265	100-225	125	0.040	M96-14	145-205	60	0.068
M96-15		425	155-395	240	0.048	M96-15	285-380	95	0.068
M96-16		440	245-385	140	0.042	M96-16	350-385	35	0.060
M96-17		560	305-495	190	0.034	M96-17	345-380	35	0.096
M96-18		205	5-145	140	0.042	M96-18	75-145	70	0.064
M96-19		205	25-65	40	0.018	M96-19	30-55	25	0.021
M96-20		100	0-55	55	0.024	M96-20	10-35	25	0.034
M96-21		120	0-100	100	0.024	M96-21	0-15	15	0.040
M96-22		150	0-110	110	0.036	M96-22	75-100	25	0.079
M96-23		525	365-495	130	0.016	M96-23	395-410	15	0.037
			225-230	5	0.034				
			330-345	15	0.013				
M96-24		385	140-150	10	0.049	M96-24	295-325	30	0.081
			275-355	80	0.040				
M96-25		202	165-190	25	0.057	M96-25	170-190	20	0.066
M96-26		345	195-330	135	0.021	M96-26	270-305	35	0.037
M96-27		235	165-230	65	0.024	M96-27	175-195	20	0.056
M96-28		325	190-275	85	0.085	M96-28	220-255	35	0.152
M96-29		200	130-185	55	0.045	M96-29	135-155	20	0.105
			55-65	10	0.018				
M96-30		225	190-205	15	0.029	M96-30	190-205	15	0.029
Total Footage: (Assayed To Date)		8220							

TOTAL FOOTAGE DRILLED: 8,220 ft.

Reg. to: CARLTON-SHUMWAY-NIELSON & ASSOC.
File Name: C:\SIMPLCTY\SURVEYS\921.DAT

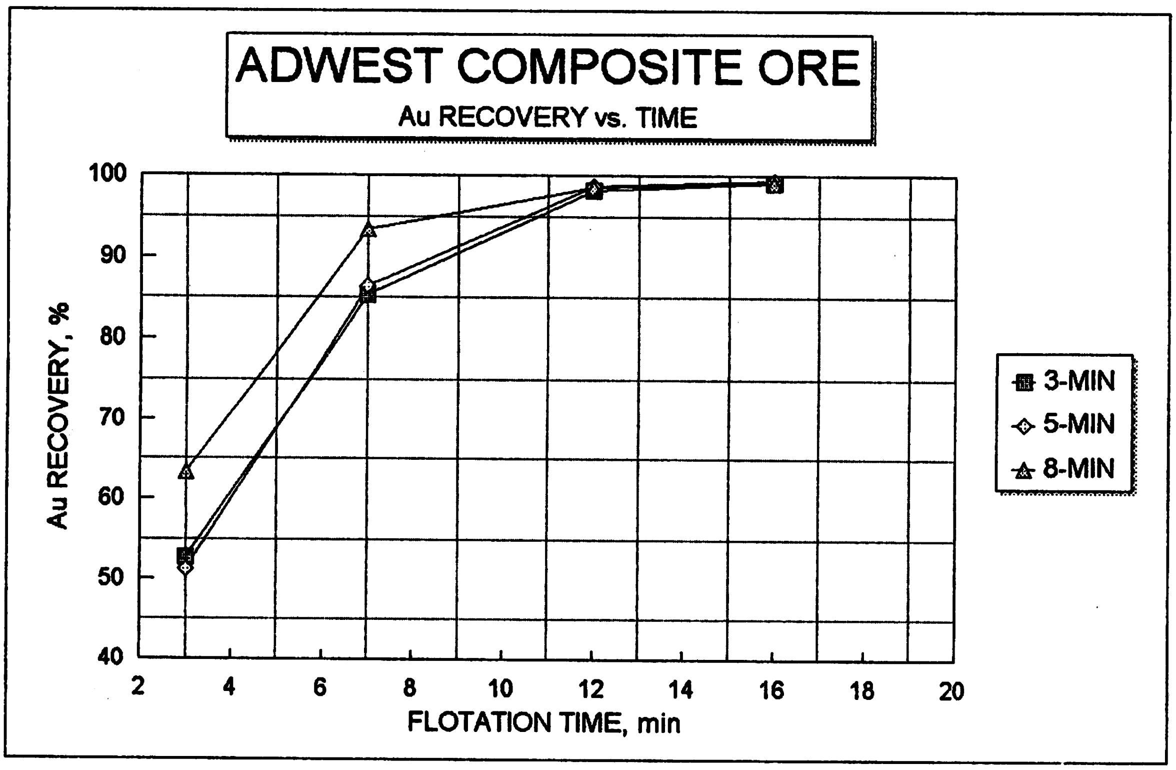
Job: DRILL HOLE LOCATION AND MINERAL SURVEY RETRACEMENT OF THE MOSS MINE LOCATED IN SECTION 19, T20N, R20W NOTES IN BOOK 89

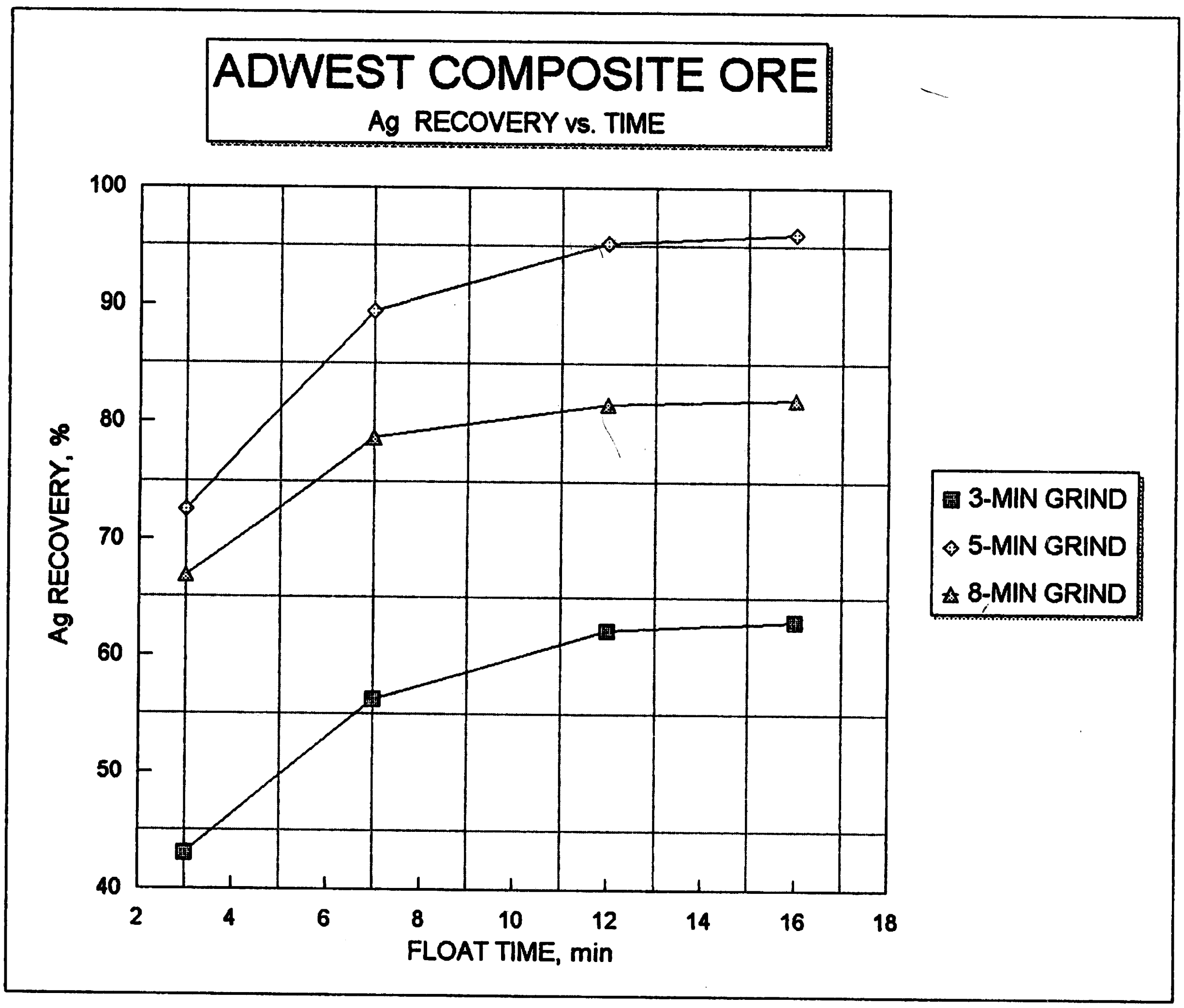
By: JSC

Point	Direction	Distance	Northing	Easting	Elevation
List					
300			1492300.00000	293150.00000	0.00
1	M96-1		1492274.20538	291651.79679	2166.17
2	M96-2		1492264.60282	291652.07205	2165.63
3	M96-3		1492232.79014	291706.84267	2168.75
4	M96-4		1492179.51371	291656.60012	2153.05
5	M96-5		1492135.27576	291710.10976	2149.33
6	M96-6		1492314.29703	291608.65174	2166.87
7	M96-7		1492263.10306	291605.12307	2165.27
8	M96-8		1492272.91280	291552.37034	2166.45
9	M96-9		1492289.40680	291512.40421	2166.62
10	M96-10		1492104.93380	291641.69907	2164.43
11	M96-11		1492147.20106	291609.38550	2166.43
12	M96-12 SET PK		1492084.17630	291486.89010	2240.33
13	M96-13		1492218.43183	291458.45103	2179.83
14	M96-14		1492116.09834	291819.49318	2147.54
15	M96-15		1492108.26046	291819.73731	2146.82
16	M96-16		1492018.66637	291868.33163	2143.47
17	M96-17		1491948.16520	291921.06413	2140.64
18	M96-18		1492158.74645	291912.97415	2158.72
19	M96-19		1492132.06931	292114.23401	2147.94
20	M96-20		1492245.85788	292122.46801	2201.66
21	M96-21		1492248.53600	292067.15553	2204.00
22	M96-22		1492249.08816	292013.82207	2201.26
23	M96-23		1491901.87116	292024.46115	2135.37
24	M96-24		1491920.92328	292329.86670	2113.13
25	M96-25		1492047.50760	292335.74857	2131.43
26	M96-26		1491859.32956	292534.56979	2111.05
27	M96-27		1491966.68173	292530.23875	2129.56
28	M96-28 SET PK		1491792.35782	293104.40789	2092.89
29	M96-29		1491873.74169	293041.82805	2084.48
30	M96-30		1491875.11125	292939.63507	2088.03
31	CNTR MOSS MINE SHAFT		1492305.86085	291592.51548	2167.91
32	COR.2 KEYSTONE WEDGE MS4484		1492105.72975	291549.34986	2178.73
33	COR.4 KEYSTONE WEDGE MS 4484		1491726.50422	293119.43675	2092.23

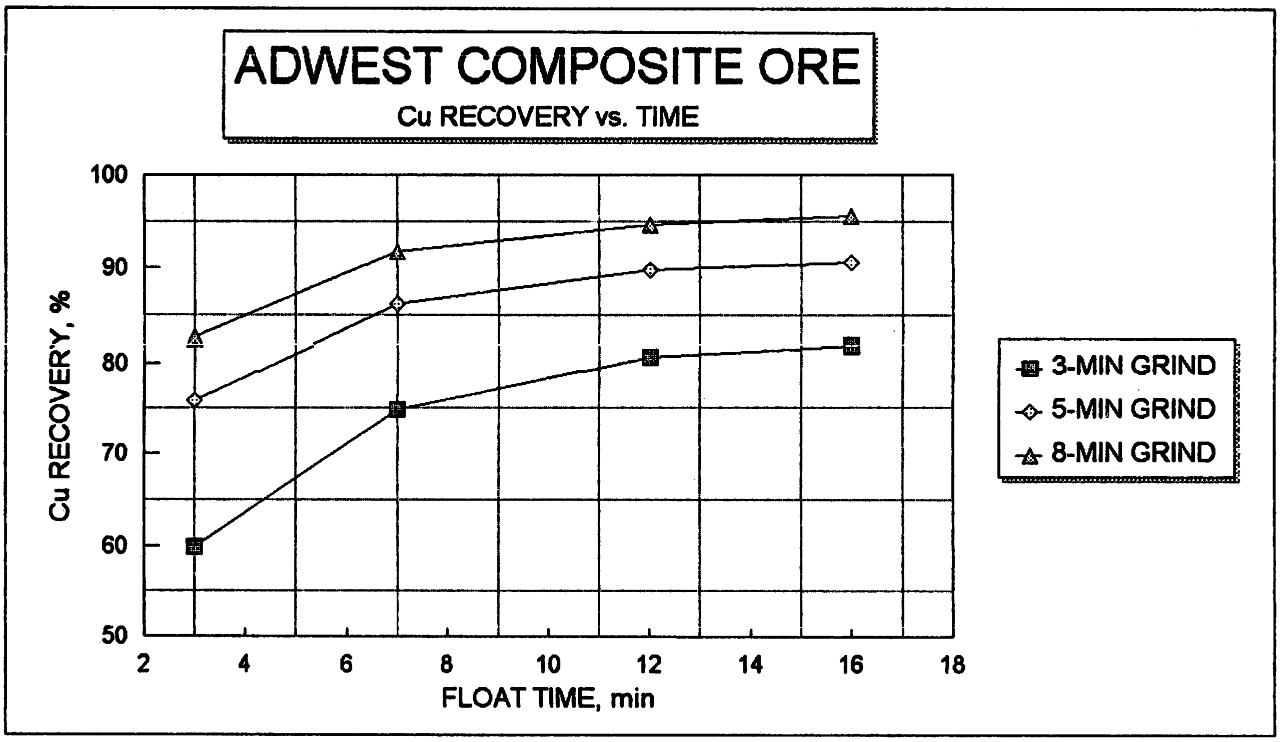
RPI

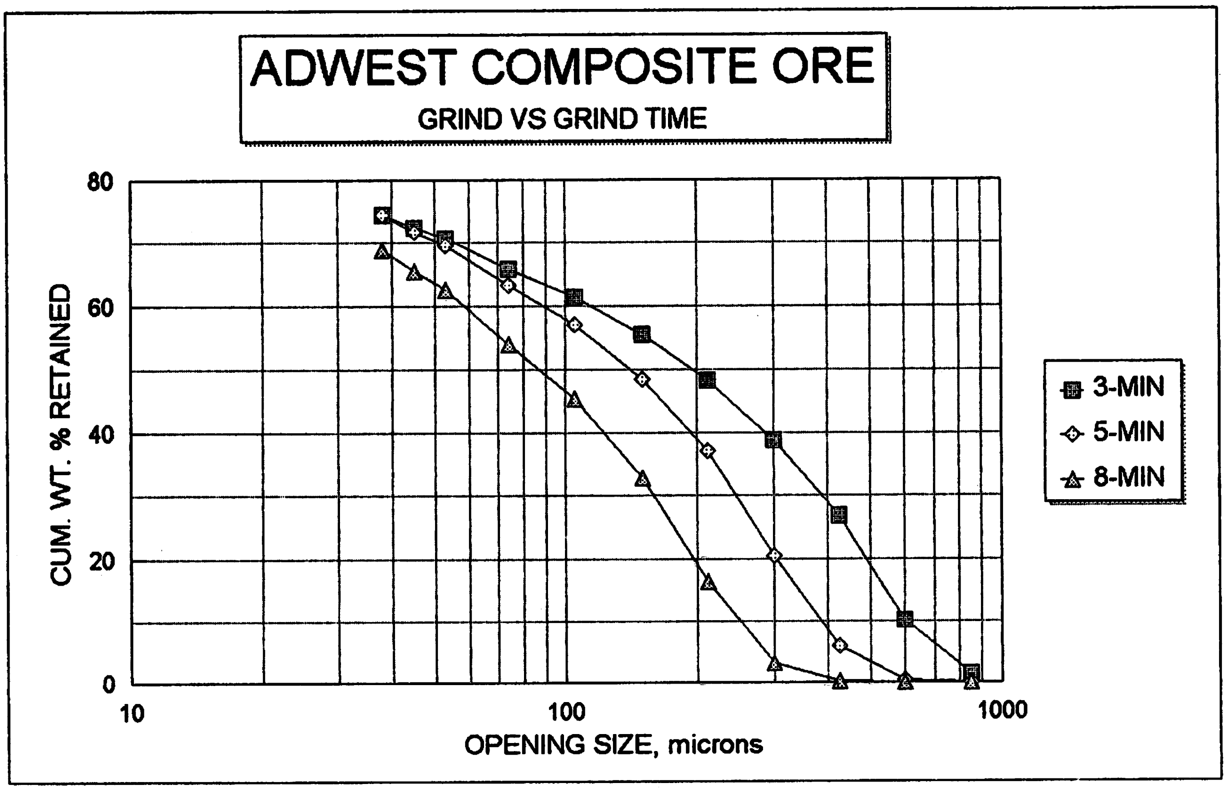
4/26/96


ADWEST COMPOSITE ORE
Au RECOVERY vs. TIME
Au RECOVERY, %
100
90
80
70
60
50
40
2
4
6
8
10
12
14
16
18
20
FLOTATION TIME, min
3-MIN
5-MIN
8-MIN



ADWEST COMPOSITE ORE
Ag RECOVERY vs. TIME
100
90
80
70
60
50
40
Ag RECOVERY, %
2
4
6
8
10
12
14
16
18
FLOAT TIME, min
3-MIN GRIND
5-MIN GRIND
8-MIN GRIND


ADWEST COMPOSITE ORE
Cu RECOVERY vs. TIME
Cu RECOVERY, %
FLOAT TIME, min
100
90
80
70
60
50
2
4
6
8
10
12
14
16
18
3-MIN GRIND
5-MIN GRIND
8-MIN GRIND


ADWEST COMPOSITE ORE
GRIND VS GRIND TIME
CUM. WT. % RETAINED
0
20
40
60
80
10
100
1000
OPENING SIZE, microns
3-MIN
5-MIN
8-MIN

RESOURCE DEVELOPMENT INC.

MATERIAL BALANCE CALCULATIONS

ADWEST MINERALS
COMPOSITE CUBIC FOOT
GRIND 3 MINUTES

18-Apr-96

INPUT DATA
==========

	WEIGHT (GMS)	AU	AG	CU	AS
CON 1	318.6	59.800	327.000	2.412	8.650
CON 2	322.2	36.500	99.000	0.597	9.430
CON 3	286.7	16.100	49.000	0.260	7.300
CON 4	105.3	3.530	18.000	0.146	1.130
TAILS	8967.2	0.035	10.000	0.026	0.390
TOTAL	10000.0				
CALC HEAD		3.611	24.170	0.128	1.150
ASSAY HEAD		5.000	25.000	0.146	1.870
PCT DIFF		27.8	3.3	12.1	38.5

PERCENT DISTRIBUTION
================================

CON 1	3.19	52.76	43.10	59.85	23.96
CON 2	3.22	32.56	13.20	14.98	26.41
CON 3	2.87	12.78	5.81	5.81	18.19
CON 4	1.05	1.03	0.78	1.20	1.03
TAILS	89.67	0.87	37.10	18.16	30.40
TOTAL	100.00	100.00	100.00	100.00	100.00

CUMULATIVE PERCENT DISTRIBUTION
================================

CON 1	3.19	52.76	43.10	59.85	23.96
CON 2	6.41	85.32	56.30	74.84	50.37
CON 3	9.28	98.10	62.11	80.64	68.56
CON 4	10.33	99.13	62.90	81.84	69.60
TAILS	100.00	100.00	100.00	100.00	100.00

CUMULATIVE ASSAY IN CONCENTRATE
================================

CON 1		59.800	327.000	2.412	8.650
CON 2		48.085	212.360	1.499	9.042
CON 3		38.198	161.863	1.116	8.504
CON 4		34.663	147.196	1.017	7.752
TAILS		3.611	24.170	0.128	1.150

CUMULATIVE ASSAY IN TAILS
================================

CON 1	9681.4	1.762	14.204	0.053	0.904

RESOURCE DEVELOPMENT INC.

MATERIAL BALANCE CALCULATIONS PAGE 1

ADWEST MINERALS
COMPOSITE FLOTATION TEST
CUBIC FOOT 5 MIN GRIND

18-Apr-96

INPUT DATA
==========

	WEIGHT (GMS)	AU	AG	CU	AS
CON 1	448.6	49.500	295.000	2.344	8.120
CON 2	446.4	34.100	69.000	0.321	9.850
CON 3	272.0	19.600	38.000	0.182	6.770
CON 4	133.6	1.870	11.000	0.085	0.640
TAILS	8699.4	0.035	0.850	0.015	0.070
TOTAL	10000.0				
CALC HEAD		4.331	18.234	0.139	1.058
ASSAY HEAD		5.000	25.000	0.146	1.870
PCT DIFF		13.4	27.1	5.1	43.4

PERCENT DISTRIBUTION
===============================

CON 1	4.49	51.27	72.58	75.86	34.44
CON 2	4.46	35.14	16.89	10.34	41.58
CON 3	2.72	12.31	5.67	3.57	17.41
CON 4	1.34	0.58	0.81	0.82	0.81
TAILS	86.99	0.70	4.06	9.41	5.76
TOTAL	100.00	100.00	100.00	100.00	100.00

CUMULATIVE PERCENT DISTRIBUTION
===============================

CON 1	4.49	51.27	72.58	75.86	34.44
CON 2	8.95	86.41	89.47	86.20	76.02
CON 3	11.67	98.72	95.14	89.77	93.43
CON 4	13.01	99.30	95.94	90.59	94.24
TAILS	100.00	100.00	100.00	100.00	100.00

CUMULATIVE ASSAY IN CONCENTRATE
===============================

CON 1		49.500	295.000	2.344	8.120
CON 2		41.819	182.278	1.335	8.983
CON 3		36.640	148.650	1.066	8.467
CON 4		33.069	134.510	0.965	7.663
TAILS		4.331	18.234	0.139	1.058

CUMULATIVE ASSAY IN TAILS
===============================

CON 1	9551.4	2.210	5.235	0.035	0.726

RESOURCE DEVELOPMENT INC.

MATERIAL BALANCE CALCULATIONS

ADWEST MINERALS
COMPOSITE FLOTATION TEST
CUBIC FOOT 8 MIN GRIND

18-Apr-96

INPUT DATA
==========

	WEIGHT (GMS)	AU	AG	CU	AS
CON 1	437.6	52.000	298.000	2.292	8.220
CON 2	420.6	25.700	55.000	0.261	9.910
CON 3	259.4	7.130	21.000	0.140	3.150
CON 4	64.7	3.330	15.000	0.175	1.740
TAILS	8817.7	0.035	4.000	0.006	0.040
TOTAL	10000.0				
CALC HEAD		3.594	19.523	0.121	0.905
ASSAY HEAD		5.000	25.000	0.146	1.870
PCT DIFF		28.1	21.9	16.9	51.6

PERCENT DISTRIBUTION
================================

CON 1	4.38	63.32	66.80	82.67	39.76
CON 2	4.21	30.08	11.85	9.05	46.07
CON 3	2.59	5.15	2.79	2.99	9.03
CON 4	0.65	0.60	0.50	0.93	1.24
TAILS	88.18	0.86	18.07	4.36	3.90
TOTAL	100.00	100.00	100.00	100.00	100.00

CUMULATIVE PERCENT DISTRIBUTION
================================

CON 1	4.38	63.32	66.80	82.67	39.76
CON 2	8.58	93.40	78.65	91.71	85.83
CON 3	11.18	98.54	81.44	94.71	94.86
CON 4	11.82	99.14	81.93	95.64	96.10
TAILS	100.00	100.00	100.00	100.00	100.00

CUMULATIVE ASSAY IN CONCENTRATE
================================

CON 1		52.000	298.000	2.292	8.220
CON 2		39.110	178.907	1.297	9.048
CON 3		31.688	142.256	1.028	7.679
CON 4		30.136	135.292	0.981	7.354
TAILS		3.594	19.523	0.121	0.905

CUMULATIVE ASSAY IN TAILS
================================

CON 1	9562.4	1.379	6.779	0.022	0.570

RESOURCE DEVELOPMENT INC.

MATERIAL BALANCE CALCULATIONS

ADWEST MINERALS
COMPOSITE LAB FLOATS
GRIND P80 65

18-Apr-96

INPUT DATA
==========

	WEIGHT (GMS)	AU	AG	CU	AS
CON 1	37.0	85.900	349.000	2.512	8.380
CON 2	43.6	27.600	101.000	0.513	9.340
CON 3	24.3	9.530	38.000	0.187	4.640
CON 4	28.1	3.270	15.000	0.112	1.270
TAILS	860.9	0.930	4.700	0.019	0.150
TOTAL	993.9				
CALC HEAD		5.540	22.847	0.140	1.001
ASSAY HEAD		5.000	25.000	0.146	1.870
PCT DIFF		-10.8	8.6	4.0	46.5

PERCENT DISTRIBUTION
===============================

CON 1	3.72	57.73	56.87	66.69	31.17
CON 2	4.39	21.86	19.39	16.05	40.93
CON 3	2.44	4.21	4.07	3.26	11.33
CON 4	2.83	1.67	1.86	2.26	3.59
TAILS	86.62	14.54	17.82	11.74	12.98
TOTAL	100.00	100.00	100.00	100.00	100.00

CUMULATIVE PERCENT DISTRIBUTION
===============================

CON 1	3.72	57.73	56.87	66.69	31.17
CON 2	8.11	79.58	76.26	82.74	72.10
CON 3	10.55	83.79	80.33	86.00	83.43
CON 4	13.38	85.46	82.18	88.26	87.02
TAILS	100.00	100.00	100.00	100.00	100.00

CUMULATIVE ASSAY IN CONCENTRATE
===============================

CON 1		85.900	349.000	2.512	8.380
CON 2		54.363	214.846	1.431	8.899
CON 3		43.977	173.880	1.143	7.913
CON 4		35.377	140.312	0.925	6.509
TAILS		5.540	22.847	0.140	1.001

CUMULATIVE ASSAY IN TAILS
===============================

CON 1	956.9	2.432	10.236	0.049	0.716

Job: DRILL HOLE LOCATION AND MINERAL SURVEY RETRACEMENT OF THE MOSS MINE LOCATED IN SECTION 19, T20N, R20W NOTES IN BOOK 89

By: JSC

Point	Direction	Distance	Northing	Easting	Elevation
34	COR.1 DIVIDE=COR.1 OMEGA4484		1491861.36563	291584.73843	2193.11
35	COR.1 KEYSTONE WEDGE MS 4484		1491511.33312	291635.42975	2187.57
36	CP MOSS-1		1491958.06322	291975.13565	2149.50
37	CP HEAD FRAME MOTOR PAD SWc		1492317.48023	291514.58901	2167.52
38	THEO COR.2 DIVIDE 4484		1491859.74579	290656.63985	0.00
39	THEO COR.4 OMEGA=COR.4MOSSMI		1491858.74764	290084.74072	0.00
40	THEO COR.3 MOSS MILLSITE		1492112.60271	289383.47384	0.00
41	M-1-60 EXISTING DH		1492242.00009	291899.99965	2197.41
42	MR-2 EXISTING DH		1492250.86309	291963.77980	2197.07
43	THEO COR.2 KEY#2 & MOSS MILL		1492672.25057	289302.32876	0.00
44	THEO COR.3 KEY#2		1493257.64793	289433.89593	0.00
45	MR-5 EXISTING DH		1492255.13904	291826.08607	2206.17
46	THEO COR.4 KEY#2=COR.3 KEY#1		1492726.48573	290747.46828	0.00
47	MC-7 EXISTING DH		1491916.25663	292160.91992	2121.54
48	MC-8 EXISTING DH		1491725.58737	292954.99525	2084.94
49	THEO C1MM,C1K2,C4K1,C3D 4484		1492141.08836	290615.90111	0.00
50	THEO C2 KEY#1		1492539.35169	292235.74946	0.00
51	MC-11 EXISTING DH		1492038.12881	292185.03354	2123.88
52	THEO C1 KEY#1=C2 CALIF.MOSS		1491953.95432	292104.18228	0.00
53	THEO USLM NO. 1		1491958.94478	291972.27665	0.00
54	THEO COR.V CALIF.MOSS MS182		1492524.94758	292241.60813	0.00
55	THEO S.1/4 SEC.19		1491763.32787	291425.38032	2193.11
56	THEO COR.3 KEYSTONE WEDGE		1492320.90053	293033.35695	0.00
57	THEO COR.III CALIF.MOSSMS182		1491646.56495	293558.65515	0.00
58	THEO COR IV CALIF.MOSS 182		1492217.55600	293696.08936	0.00
59	THEO COR.1 RUTH EXT.MS4485		1491396.30927	294582.64258	2092.23
60	THEO SEc SEC.19		1491753.26249	294067.77692	2092.23

File: 921.DAT
Session terminated at 2:09 PM on 05-01-1996

PROPOSED DRILLING PROGRAM
For Fall, 1996
MOSS PROJECT, ARIZONA

Addwest Minerals, Inc.

Holes previously planned, not yet drilled.

Temp. Hole No	Depth	Bearing	Angle	Northing	Easting	Legal Description
MP-11	150	0	-45	1,492,250	291,700	same as above
MP-12	140	0	-45	1,492,250	291,700	same as above
MP-17 (CORE)	100	0	-60	1,492,320	291,850	same as above
MP-35	180	0	-50	1,492,060	292,540	same as above
MP-38	280	0	-50	1,492,000	292,650	same as above
MP-39	180	0	-50	1,492,000	292,750	same as above
MP-41	170	0	-60	1,491,960	292,800	SW, SE, SE, SEC. 19, T20N, R20W
MP-47 (CORE)	350	0	-70	1,492,143	291,350	SE,SE,SW, SEC. 19, T20N, R20W
MP-48	520	0	-70	1,492,033	291,250	same as above
MP-49 (CORE)	220	0	-60	1,492,400	291,150	same as above
MP-50	.320		VERT	1,492,276	291,150	same as above
MP-51	200	0	-50	1,492,276	291,150	same as above
MP-52 (CORE)	360	0	-60	1,492,387	291,039	same as above
MP-53	260	0	-60	1,492,292	291,050	same as above
MP-54	500	0	-60	1,492,300	290,950	same as above
MP-56	240	0	-50	1,491,787	293,300	SW, SE, SE, SEC. 19, T20N, R20W
MP-57 (CORE)	390	0	-60	1,491,700	293,460	NE, NE, NE, SEC. 30, T20N, R20E
MP-58	280	0	-60	1,491,715	293,990	NE, NE, NE, SEC. 30, T20N, R20E
MP-59	320	0	-60	1,491,695	293,810	NE, NE, NE, SEC. 30, T20N, R20E
MP-60	300	0	-60	1,491,827	294,190	SW, SW, SW, SEC. 20, T20N, R20E

New Proposed Holes

Temp. Hole No	Depth	Bearing	Angle	Northing	Easting	Legal Description
P-1	420	0	-75	1,492,160	291,780	
P-2	220	0	-45	1,492,210	291,780	
P-3	220	0	-45	1,492,200	291,865	
P-4	260	0	-45	1,492,100	291,970	
P-5	500		-90	1,492,100	291,970	
P-6	210	0	-45	1,492,140	292,055	
P-7	350		-90	1,492,140	292,055	
P-8	210	0	-45	1,492,075	292,275	
P-9	480	0	-65	1,491,855	292,275	
P-10	620	0	-60	1,491,700	292,350	
P-11	160	0	-45	1,492,150	292,275	

Temp. Hole No	Depth	Bearing	Angle	Northing	Easting	Legal Description
P-12	200	0	-65	1,492,100	292,450	
P-13	520	5	-65	1,491,700	292,500	
P-14	410	0	-60	1,491,900	292,460	
P-15	310	0	-50	1,491,900	293,000	
P-16	340	0	-65	1,491,800	293,050	
P-17	225	0	-50	1,491,885	293,110	
P-18	480	0	-50	1,491,680	293,100	
P-19	570	0	-75	1,491,680	293,100	
P-20	330	0	-50	1,491,800	293,200	
P-21	500		-90	1,491,785	293,300	

Total Footage: 12,995

COMMENTS: MP-47 thru MP-54 are located west of the Blind Boy Fault and are considered the lowest priority of these proposed holes.

The deepest hole listed is 620 ft. In the event a more powerful RC rig is contracted, or a core rig in addition to an RC rig, one or more deep holes should be planned to test the Moss - Ruth intersection.

Extraction File : C:\PXDBMP\EXTRACT\20AU_ALL.MEX
Data Description : Moss vein, all areas - no cut-off

Minimum Cutoff Value	0.001000
Maximum Cutoff Value	0.650000
Number of Samples <=0	0
Total Number of Samples Used	1052
Minimum Histogram Value	0.001000
Maximum Histogram Value	0.650000
Number of Class	30
Class Interval	0.021600
Minimum Population Data point	0.001000
Maximum Population Data point	0.650000
Total Population	1052

	Ungrouped Data	Grouped Data
Mean	0.047092	0.046869
Median	N/A	0.027931
Geometric Mean	0.028668	0.029080
Natural LOG Mean	-3.551963	-3.537696
Standard Deviation	0.058667	0.058834
Variance	0.003442	0.003461
Log Variance	0.987240	0.859598
Coefficient of Variation	1.245797	1.255287
Moment 1 about Arithmetic Mean	0.000000	0.000000
Moment 2 about Arithmetic Mean	0.003442	0.003461
Moment 3 about Arithmetic Mean	0.000839	0.000829
Moment 4 about Arithmetic Mean	0.000362	0.000350
Moment Coefficient of Skewness	30.517584	29.211111
Moment Coefficient of Kurtosis	4.155798	4.070436

DRILL SAMPLES ONLY

Addwest Minerals, Inc. : Arvada Office :
GEMCOM Services PCX_404: DB=C:\PXDBMP\REPORTS :

Extraction File : C:\PXDBMP\EXTRACT\30AU_ALL.MEX
Data Description : rock type 30 (hanging wall vein zone) stats - no cut-off

Minimum Cutoff Value	0.001000
Maximum Cutoff Value	0.595100
Number of Samples <=0	0
Total Number of Samples Used	1472
Minimum Histogram Value	0.001000
Maximum Histogram Value	0.595100
Number of Class	30
Class Interval	0.019800
Minimum Population Data point	0.001000
Maximum Population Data point	0.595000
Total Population	1472

	Ungrouped Data	Grouped Data
Mean	0.021501	0.022347
Median	N/A	0.015176
Geometric Mean	0.013732	0.016324
Natural LOG Mean	-4.287997	-4.115112
Standard Deviation	0.030224	0.029687
Variance	0.000913	0.000881
Log Variance	0.845292	0.447220
Coefficient of Variation	1.405672	1.328446
Moment 1 about Arithmetic Mean	0.000000	0.000000
Moment 2 about Arithmetic Mean	0.000913	0.000881
Moment 3 about Arithmetic Mean	0.000215	0.000207
Moment 4 about Arithmetic Mean	0.000092	0.000086
Moment Coefficient of Skewness	109.771707	111.032089
Moment Coefficient of Kurtosis	7.773892	7.921231

Addwest Minerals, Inc. : Arvada Office :
GEMCOM Services PCX_404: DB=C:\PXDBMP\REPORTS :

Extraction File : C:\PXDBMP\EXTRACT\MAIN_20.MEX
Data Description : Au stats for main zone only, Moss Vein - no cut-off

Minimum Cutoff Value	0.002000
Maximum Cutoff Value	0.650000
Number of Samples <=0	0
Total Number of Samples Used	658
Minimum Histogram Value	0.002000
Maximum Histogram Value	0.650000
Number of Class	30
Class Interval	0.021600
Minimum Population Data point	0.002000
Maximum Population Data point	0.650000
Total Population	658

	Ungrouped Data	Grouped Data
Mean	0.059354	0.059217
Median	N/A	0.041046
Geometric Mean	0.038053	0.039250
Natural LOG Mean	-3.268764	-3.237801
Standard Deviation	0.065107	0.064819
Variance	0.004239	0.004201
Log Variance	0.972397	0.808640
Coefficient of Variation	1.096926	1.094594
Moment 1 about Arithmetic Mean	0.000000	0.000000
Moment 2 about Arithmetic Mean	0.004239	0.004201
Moment 3 about Arithmetic Mean	0.001053	0.001034
Moment 4 about Arithmetic Mean	0.000478	0.000462
Moment Coefficient of Skewness	26.596459	26.176401
Moment Coefficient of Kurtosis	3.814101	3.798385

DRILL SAMPLES ONLY

Extraction File : C:\PXDBMP\EXTRACT\30_MAIN.MEX
Data Description : Hanging wall vein zone, Main Area - no cut-off

Minimum Cutoff Value	0.001000
Maximum Cutoff Value	0.595100
Number of Samples <=0	0
Total Number of Samples Used	1022
Minimum Histogram Value	0.001000
Maximum Histogram Value	0.595100
Number of Class	30
Class Interval	0.019800
Minimum Population Data point	0.001000
Maximum Population Data point	0.595000
Total Population	1022

	Ungrouped Data	Grouped Data
Mean	0.024182	0.025198
Median	N/A	0.016377
Geometric Mean	0.014879	0.017736
Natural LOG Mean	-4.207814	-4.032155
Standard Deviation	0.034763	0.034245
Variance	0.001208	0.001173
Log Variance	0.936741	0.519178
Coefficient of Variation	1.437553	1.359032
Moment 1 about Arithmetic Mean	0.000000	0.000000
Moment 2 about Arithmetic Mean	0.001208	0.001173
Moment 3 about Arithmetic Mean	0.000298	0.000287
Moment 4 about Arithmetic Mean	0.000129	0.000121
Moment Coefficient of Skewness	88.027585	87.803736
Moment Coefficient of Kurtosis	7.095548	7.145882

	A	B	C	D	E	F	G	H	I
1	1996 LEVEL PLAN POLYGONAL RESERVE ESTIMATE							05/20/96	
2	10 FT. levels								
3	Moss Project Arizona								
4	.015 opt Au cut-off								
5									
6									
7	Level	Poly ID	Rock Code	Hole-ID	Easting	Northing	opt Au	Tons	Oz. Au
8	2350lv	9	30	M-9-45	290,979.9	1,492,418.5	0.020	2,672	53
9	2340lv	7	30	M-9-45	290,978.3	1,492,423.7	0.032	346	11
10	2340lv	10	30	M-8-30	290,935.3	1,492,408.4	0.022	5,316	117
11	2340lv	12	30	M-9-30	290,977.0	1,492,427.9	0.041	2,125	87
12	2330lv	7	30	M-9-60	290,977.3	1,492,426.8	0.021	1,374	29
13	2330lv	9	30	M-10-30	291,014.0	1,492,435.7	0.050	2,596	130
14	2330lv	10	30	M-10-45	291,014.0	1,492,432.0	0.095	161	15
15	2330lv	11	30	M-10-60	291,014.0	1,492,429.9	0.047	1,215	57
16	2330lv	14	30	M-8-30	290,932.3	1,492,425.4	0.030	3,648	109
17	2330lv	15	30	M-8-45	290,934.7	1,492,411.7	0.016	1,175	19
18	2330lv	16	30	M-9-45	290,975.3	1,492,433.3	0.043	188	8
19	2320lv	8	30	M-10-60	291,014.0	1,492,435.7	0.089	2,809	250
20	2320lv	10	30	M-11-60	291,067.8	1,492,425.9	0.017	615	11
21	2320lv	11	30	M-11-30	291,067.3	1,492,431.6	0.020	2,829	57
22	2320lv	14	20	M-9-45	290,972.4	1,492,442.9	0.017	541	9
23	2320lv	15	20	M-9-60	290,975.6	1,492,432.4	0.037	266	10
24	2320lv	17	20	M-10-30	291,014.0	1,492,453.0	0.025	3,681	92
25	2320lv	19	30	M-8-45	290,933.0	1,492,421.6	0.028	3,212	90
26	2320lv	20	30	M-10-45	291,014.0	1,492,442.0	0.106	479	51
27	2310lv	7	30	M-11-60	291,067.3	1,492,431.6	0.016	1,317	21
28	2310lv	18	20	M-8-45	290,931.2	1,492,431.4	0.045	3,345	151
29	2310lv	19	20	M-9-60	290,973.9	1,492,437.9	0.028	724	20
30	2310lv	20	20	M-8-60	290,934.1	1,492,415.2	0.029	355	10
31	2310lv	24	20	M-10-45	291,014.0	1,492,452.0	0.047	707	33
32	2310lv	25	20	M-10-60	291,014.0	1,492,441.4	0.190	264	50
33	2310lv	26	30	M-11-30	291,065.7	1,492,448.9	0.023	1,107	26
34	2310lv	27	30	M-11-45	291,066.7	1,492,437.9	0.049	608	30
35	2310lv	28	30	M-16-45	291,023.1	1,492,376.9	0.021	49	1
36	2300lv	16	20	M-8-45	290,929.5	1,492,441.3	0.017	3,625	62
37	2300lv	17	20	M-9-60	290,972.2	1,492,443.4	0.029	1,254	36
38	2300lv	18	20	M-8-60	290,933.1	1,492,420.9	0.028	1,100	31
39	2300lv	20	20	M-10-45	291,014.0	1,492,462.0	0.017	772	13
40	2300lv	21	20	M-10-60	291,014.0	1,492,447.2	0.079	769	61
41	2300lv	22	20	M-11-30	291,064.2	1,492,466.1	0.043	3,635	156
42	2300lv	23	30	M-11-45	291,065.8	1,492,447.9	0.059	640	38
43	2300lv	24	30	M-11-60	291,066.7	1,492,437.4	0.022	1,537	34
44	2300lv	25	30	M-17-45	291,037.1	1,492,398.9	0.034	854	29
45	2290lv	6	30	M-12-30	291,122.0	1,492,440.4	0.020	865	17
46	2290lv	7	30	M-12-45	291,122.4	1,492,428.0	0.018	645	12
47	2290lv	9	30	M-17-60	291,037.0	1,492,399.6	0.020	1,712	34
48	2290lv	18	20	M-8-60	290,932.1	1,492,426.6	0.017	5,094	87

	A	B	C	D	E	F	G	H	I
49	2290lv	19	20	M-10-60	291,014.0	1,492,453.0	0.036	2,013	73
50	2290lv	21	20	M-11-45	291,065.0	1,492,457.9	0.072	2,264	163
51	2290lv	22	30	M-11-60	291,066.2	1,492,443.1	0.019	1,485	28
52	2290lv	23	30	M-17-45	291,035.6	1,492,408.7	0.030	693	21
53	2290lv	24	30	M-15-30	290,982.6	1,492,404.2	0.030	2,696	81
54	2280lv	4	20	M-12-30	291,121.4	1,492,457.7	0.061	2,615	160
55	2280lv	12	20	M-15-30	290,977.3	1,492,420.7	0.018	1,593	29
56	2280lv	13	20	M-10-60	291,014.0	1,492,458.8	0.022	851	19
57	2280lv	15	20	M-16-30	291,012.4	1,492,431.5	0.018	735	13
58	2280lv	16	20	M-11-45	291,064.1	1,492,467.8	0.016	1,156	19
59	2280lv	19	30	M-17-60	291,036.1	1,492,405.3	0.039	1,276	50
60	2270lv	3	20	M-13-30	291,195.6	1,492,439.6	0.019	2,058	39
61	2270lv	6	10	M-12-30	291,120.8	1,492,475.1	0.015	2,242	34
62	2270lv	9	30	M-20-45	291,052.2	1,492,363.7	0.022	4,035	89
63	2270lv	10	30	M-13-45	291,192.4	1,492,428.4	0.016	201	3
64	2270lv	16	10	M-10-60	291,014.0	1,492,461.8	0.020	1,234	25
65	2270lv	17	20	M-16-30	291,009.1	1,492,448.5	0.015	824	12
66	2270lv	20	20	M-12-45	291,121.7	1,492,448.0	0.042	1,559	66
67	2270lv	21	20	M-17-45	291,032.4	1,492,428.5	0.021	509	11
68	2270lv	25	30	M-17-60	291,035.2	1,492,411.0	0.023	1,811	42
69	2260lv	7	20	M-13-30	291,200.4	1,492,456.3	0.018	677	12
70	2260lv	9	20	M-13-60	291,192.1	1,492,427.4	0.016	622	10
71	2260lv	15	20	M-17-45	291,030.9	1,492,438.4	0.029	905	26
72	2260lv	19	20	M-12-45	291,121.4	1,492,458.0	0.037	810	30
73	2260lv	20	20	M-15-45	290,979.0	1,492,415.3	0.027	3,261	88
74	2260lv	23	30	M-18-45	291,027.1	1,492,361.5	0.017	1,314	22
75	2260lv	26	30	M-20-45	291,050.4	1,492,373.5	0.016	7,605	122
76	2250lv	8	20	M-13-60	291,193.7	1,492,433.0	0.038	1,419	54
77	2250lv	18	30	M-18-45	291,025.4	1,492,371.3	0.023	1,519	35
78	2250lv	21	20	M-12-60	291,121.9	1,492,443.9	0.020	2,271	45
79	2250lv	22	20	M-17-45	291,029.3	1,492,448.2	0.037	1,555	58
80	2250lv	23	20	M-15-45	290,976.9	1,492,421.8	0.031	2,198	68
81	2250lv	24	20	M-16-45	291,011.6	1,492,435.8	0.033	794	26
82	2250lv	25	20	M-15-60	290,984.4	1,492,398.7	0.036	1,740	63
83	2240lv	7	20	M-13-60	291,195.3	1,492,438.5	0.023	3,806	88
84	2240lv	16	10	M-16-45	291,009.9	1,492,444.5	0.016	2,791	45
85	2240lv	17	20	M-12-60	291,121.7	1,492,449.7	0.016	2,373	38
86	2240lv	19	20	M-15-60	290,982.6	1,492,404.2	0.035	3,437	120
87	2240lv	24	35	BX-6	291,059.1	1,492,096.5	0.015	14,776	222
88	2240lv	26	30	M-18-45	291,023.6	1,492,381.2	0.029	1,473	43
89	2240lv	30	20	TR-6	291,729.7	1,492,343.1	0.174	212	37
90	2240lv	31	20	TR-7	291,739.6	1,492,345.0	0.080	234	19
91	2240lv	33	20	TR-8	291,750.1	1,492,344.8	0.118	2,429	287
92	2230lv	4	20	TR-5	291,721.0	1,492,335.7	0.063	534	34
93	2230lv	5	20	TR-6	291,733.7	1,492,328.3	0.068	103	7
94	2230lv	6	20	TR-7	291,743.6	1,492,330.3	0.080	530	42
95	2230lv	7	20	TR-8	291,755.1	1,492,326.1	0.051	3,509	179
96	2230lv	13	20	M-13-60	291,196.9	1,492,444.1	0.025	4,994	125

	A	B	C	D	E	F	G	H	I
97	2230lv	23	20	M-17-60	291,031.6	1,492,433.8	0.023	2,531	58
98	2230lv	26	20	M-15-60	290,981.1	1,492,408.7	0.030	3,152	95
99	2230lv	27	20	M-19-45	291,006.4	1,492,380.8	0.022	831	18
100	2230lv	30	10	M-12-60	291,121.5	1,492,455.4	0.020	2,176	44
101	2230lv	33	35	BX-6	291,065.9	1,492,089.2	0.020	16,380	328
102	2220lv	9	30	M-21-60	291,264.6	1,492,363.9	0.015	293	4
103	2220lv	19	20	M-17-60	291,030.7	1,492,439.5	0.028	3,281	92
104	2220lv	22	20	M-18-45	291,020.2	1,492,400.9	0.016	811	13
105	2220lv	32	20	TR-4	291,701.5	1,492,330.2	0.405	797	323
106	2220lv	33	20	TR-6	291,737.2	1,492,315.4	0.064	3,068	196
107	2220lv	34	20	TR-5	291,724.8	1,492,321.3	0.076	765	58
108	2210lv	2	20	TR-3	291,681.5	1,492,327.9	0.942	3,180	2,996
109	2210lv	6	10	M-16-60	291,012.8	1,492,429.8	0.020	582	12
110	2210lv	18	35	BX-6	291,079.6	1,492,074.6	0.028	18,118	507
111	2210lv	24	10	M-17-60	291,029.9	1,492,444.3	0.265	2,099	556
112	2210lv	26	20	M-18-45	291,018.8	1,492,408.7	0.030	516	16
113	2200lv	3	20	TR-3	291,686.0	1,492,311.0	0.096	3,436	330
114	2200lv	4	20	TR-2	291,663.0	1,492,319.5	0.125	1,034	129
115	2200lv	6	30	M96-20	292,122.5	1,492,245.9	0.020	772	15
116	2200lv	8	30	M-5-30	291,763.3	1,492,284.9	0.040	1,318	53
117	2200lv	9	30	M-5-60	291,765.8	1,492,280.3	0.030	411	12
118	2200lv	10	30	MR-7	291,763.5	1,492,279.8	0.016	157	3
119	2200lv	12	30	MR-5	291,799.7	1,492,263.0	0.033	889	29
120	2200lv	14	30	MR-1	291,824.0	1,492,259.0	0.017	182	3
121	2200lv	15	30	MR-2	291,961.3	1,492,249.8	0.028	662	19
122	2200lv	16	30	MR-3	291,943.9	1,492,243.6	0.061	1,172	72
123	2200lv	17	30	M96-21	292,067.2	1,492,248.5	0.051	1,240	63
124	2200lv	18	30	M96-22	292,013.8	1,492,249.1	0.052	2,142	111
125	2200lv	20	30	M-1-30	291,899.7	1,492,243.7	0.046	1,923	89
126	2200lv	21	30	M-2-30	291,959.9	1,492,256.4	0.047	1,116	53
127	2200lv	24	30	MR-6	291,764.8	1,492,281.3	0.021	10	0
128	2200lv	34	35	MM-9	291,023.8	1,492,159.9	0.022	4,591	101
129	2200lv	35	35	BX-6	291,086.4	1,492,067.3	0.017	18,070	307
130	2200lv	43	20	M-21-60	291,267.7	1,492,375.0	0.023	469	11
131	2200lv	44	20	M-21-60A	291,261.7	1,492,366.0	0.018	342	6
132	2200lv	45	20	M-21-45	291,271.9	1,492,389.6	0.016	2,219	36
133	2200lv	59	10	MR-9	292,577.5	1,492,217.0	0.026	2,031	53
134	2190lv	3	20	M96-20	292,122.5	1,492,245.9	0.024	944	23
135	2190lv	4	30	M-1-60	291,899.2	1,492,246.0	0.061	448	27
136	2190lv	7	30	MR-3	291,936.4	1,492,247.6	0.081	691	56
137	2190lv	8	30	MR-5	291,794.2	1,492,264.7	0.032	1,571	50
138	2190lv	9	30	M96-22	292,013.8	1,492,249.1	0.030	1,596	48
139	2190lv	10	20	TR-1	291,642.1	1,492,319.0	0.110	1,504	166
140	2190lv	11	20	TR-2	291,666.7	1,492,305.6	0.091	690	63
141	2190lv	12	30	M96-21	292,067.2	1,492,248.5	0.022	1,380	30
142	2190lv	13	30	MR-2	291,959.9	1,492,255.4	0.021	440	9
143	2190lv	14	20	TR-3	291,689.0	1,492,299.7	0.060	3,868	232
144	2190lv	16	30	M-1-30	291,897.7	1,492,253.9	0.021	1,529	32

	A	B	C	D	E	F	G	H	I
145	2190lv	18	30	M-2-30	291,955.7	1,492,273.2	0.058	539	31
146	2190lv	19	30	M-2-60	291,959.9	1,492,256.4	0.035	398	14
147	2190lv	20	30	M-5-30	291,755.6	1,492,299.4	0.058	528	31
148	2190lv	21	30	MR-6	291,762.2	1,492,286.1	0.033	112	4
149	2190lv	22	30	M-5-60	291,763.2	1,492,285.1	0.036	431	16
150	2190lv	23	30	M-25-30	291,823.3	1,492,277.8	0.019	663	13
151	2190lv	24	30	MR-1	291,824.0	1,492,263.9	0.044	248	11
152	2190lv	25	20	M-3-30	292,070.9	1,492,273.7	0.041	1,522	62
153	2190lv	42	30	M-22-45	291,304.6	1,492,308.6	0.016	7,296	117
154	2190lv	44	20	M-21-60	291,269.3	1,492,380.5	0.016	551	9
155	2190lv	45	20	M-21-60A	291,263.3	1,492,371.5	0.019	932	18
156	2190lv	46	20	M-21-45	291,273.5	1,492,395.1	0.020	425	9
157	2190lv	48	35	MM-10	291,097.4	1,492,208.7	0.016	13,366	214
158	2190lv	64	10	MR-9	292,582.5	1,492,208.4	0.037	1,936	72
159	2180lv	1	20	TR-1	291,645.4	1,492,306.9	0.062	3,411	212
160	2180lv	4	20	M96-20	292,122.5	1,492,245.9	0.038	1,015	39
161	2180lv	6	30	M-6-30	291,705.2	1,492,284.6	0.112	398	45
162	2180lv	8	30	MR-2	291,958.5	1,492,261.0	0.020	1,413	28
163	2180lv	9	30	MR-3	291,927.6	1,492,252.3	0.057	1,805	103
164	2180lv	10	30	MR-4	291,835.3	1,492,254.3	0.031	2,765	86
165	2180lv	13	30	M96-21	292,067.2	1,492,248.5	0.018	2,492	45
166	2180lv	14	30	M96-22	292,013.8	1,492,249.1	0.023	2,820	65
167	2180lv	17	20	M-2-30	291,951.5	1,492,290.0	0.074	2,411	178
168	2180lv	18	20	M-25-30	291,822.7	1,492,295.1	0.029	3,264	95
169	2180lv	19	10	M-3-30	292,063.3	1,492,289.3	0.031	3,445	107
170	2180lv	20	20	M-5-30	291,747.5	1,492,314.7	0.114	2,831	323
171	2180lv	21	30	M-1-30	291,894.4	1,492,270.9	0.024	1,066	26
172	2180lv	23	30	M-5-60	291,760.5	1,492,290.2	0.096	374	36
173	2180lv	24	30	MR-6	291,759.5	1,492,291.2	0.021	274	6
174	2180lv	26	30	MR-1	291,824.0	1,492,269.7	0.022	356	8
175	2180lv	44	20	M-21-60	291,270.9	1,492,386.0	0.020	502	10
176	2180lv	46	30	M-22-45	291,302.4	1,492,298.9	0.020	6,655	133
177	2180lv	48	30	MM-12	291,370.3	1,492,272.3	0.026	7,961	207
178	2180lv	64	20	MR-8	292,499.0	1,492,191.8	0.054	4,011	217
179	2180lv	65	10	MR-9	292,587.5	1,492,199.7	0.041	2,201	90
180	2170lv	1	100	M96-11	291,609.4	1,492,147.4	0.070	3,293	231
181	2170lv	10	20	M96-20	292,122.5	1,492,245.9	0.033	1,715	57
182	2170lv	16	30	MR-2	291,957.1	1,492,266.6	0.032	1,887	60
183	2170lv	17	30	MR-3	291,918.8	1,492,257.0	0.052	2,566	133
184	2170lv	18	30	MR-4	291,827.1	1,492,260.1	0.077	4,442	342
185	2170lv	19	30	MR-5	291,783.1	1,492,268.1	0.020	3,247	65
186	2170lv	21	30	M96-2	291,652.1	1,492,264.6	0.021	1,373	29
187	2170lv	22	30	M96-7	291,605.1	1,492,263.1	0.065	2,051	133
188	2170lv	34	30	M96-6	291,608.7	1,492,314.3	0.017	2,110	36
189	2170lv	48	30	MM-12	291,370.7	1,492,276.9	0.019	6,552	125
190	2170lv	49	100	M96-8	291,552.4	1,492,273.3	0.064	2,047	131
191	2170lv	58	20	M-3-60	292,071.9	1,492,271.6	0.024	2,229	54
192	2170lv	59	20	M-1-30	291,891.1	1,492,287.9	0.062	3,403	211

	A	B	C	D	E	F	G	H	I
193	2170lv	60	20	M-25-30	291,822.1	1,492,312.4	0.018	2,606	47
194	2170lv	61	20	M-6-30	291,706.0	1,492,295.8	0.049	3,169	155
195	2170lv	62	20	M-5-30	291,741.0	1,492,326.9	0.054	1,672	90
196	2170lv	63	30	MR-7	291,747.3	1,492,285.1	0.059	1,457	86
197	2170lv	66	30	M-22-45	291,300.1	1,492,289.1	0.023	5,871	135
198	2170lv	69	30	M-2-60	291,957.1	1,492,267.6	0.036	87	3
199	2170lv	70	30	M-5-60	291,757.8	1,492,295.3	0.057	323	18
200	2170lv	71	30	MR-6	291,756.8	1,492,296.3	0.070	100	7
201	2170lv	72	30	M-25-60	291,823.4	1,492,275.5	0.018	288	5
202	2170lv	73	30	MR-1	291,824.0	1,492,275.5	0.021	108	2
203	2170lv	96	20	MR-8	292,493.4	1,492,183.5	0.041	3,122	128
204	2160lv	18	30	M96-2	291,652.1	1,492,264.6	0.029	2,929	85
205	2160lv	20	30	M96-11	291,609.4	1,492,148.9	0.061	1,623	99
206	2160lv	34	100	M96-8	291,552.4	1,492,276.6	0.035	836	29
207	2160lv	39	30	M96-6	291,608.7	1,492,314.3	0.015	2,707	41
208	2160lv	41	20	M-7-70	291,568.1	1,492,321.9	0.043	2,726	117
209	2160lv	46	30	MR-8	292,487.8	1,492,175.2	0.018	9,610	173
210	2160lv	52	100	MM-6	291,569.1	1,492,149.1	0.073	2,099	153
211	2160lv	64	20	M-1-30	291,887.8	1,492,304.9	0.040	2,057	82
212	2160lv	66	20	M-2-60	291,955.7	1,492,273.2	0.104	1,035	108
213	2160lv	67	30	MR-3	291,909.9	1,492,261.7	0.025	2,873	72
214	2160lv	68	20	MR-2	291,955.7	1,492,272.2	0.195	557	109
215	2160lv	69	20	M96-21	292,067.2	1,492,248.5	0.018	3,100	56
216	2160lv	70	20	M-5-60	291,755.1	1,492,300.4	0.067	892	60
217	2160lv	71	20	MR-6	291,754.1	1,492,301.4	0.064	1,136	73
218	2160lv	72	20	MR-1	291,824.0	1,492,281.3	0.032	1,012	32
219	2160lv	73	20	M-6-30	291,707.2	1,492,313.1	0.067	2,013	135
220	2160lv	74	20	M-6-60	291,705.7	1,492,292.4	0.059	1,717	101
221	2160lv	75	30	MR-7	291,741.8	1,492,286.9	0.044	1,319	58
222	2160lv	77	30	M-22-45	291,298.9	1,492,284.0	0.020	5,516	110
223	2160lv	80	30	M-1-60	291,895.9	1,492,263.0	0.024	2,439	59
224	2160lv	81	30	MR-4	291,818.9	1,492,265.8	0.029	4,983	145
225	2160lv	85	100	M96-7	291,605.1	1,492,263.1	0.141	923	130
226	2160lv	86	100	MM-5	291,556.4	1,492,229.9	0.025	2,069	52
227	2150lv	20	35	M96-15	291,819.7	1,492,108.4	0.015	1,400	21
228	2150lv	27	30	M96-4	291,656.6	1,492,179.5	0.026	4,969	129
229	2150lv	29	30	M96-18	291,913.0	1,492,167.5	0.025	8,764	219
230	2150lv	34	30	M96-8	291,552.4	1,492,282.4	0.062	3,171	197
231	2150lv	38	20	MR-11	291,545.0	1,492,349.0	0.024	248	6
232	2150lv	44	30	MR-8	292,482.2	1,492,166.9	0.019	10,178	193
233	2150lv	49	35	MM-5	291,551.6	1,492,235.7	0.020	3,023	61
234	2150lv	50	35	MM-6	291,566.3	1,492,152.4	0.044	5,436	239
235	2150lv	57	10	M-1-30	291,885.6	1,492,316.0	0.047	4,281	201
236	2150lv	58	10	M-3-60	292,066.8	1,492,282.0	0.028	1,527	43
237	2150lv	59	10	M-6-30	291,708.2	1,492,327.8	0.016	3,145	50
238	2150lv	61	20	M-2-60	291,954.3	1,492,278.8	0.044	403	18
239	2150lv	62	20	M-1-60	291,894.8	1,492,268.6	0.015	2,039	31
240	2150lv	63	20	MR-2	291,954.3	1,492,277.8	0.044	1,225	54

	A	B	C	D	E	F	G	H	I
241	2150lv	64	30	MR-3	291,901.1	1,492,266.4	0.022	4,093	90
242	2150lv	65	20	MR-1	291,824.0	1,492,287.0	0.034	1,544	53
243	2150lv	66	20	M-5-60	291,752.4	1,492,305.5	0.080	1,070	86
244	2150lv	67	20	MR-6	291,752.3	1,492,304.7	0.071	704	50
245	2150lv	68	20	M-6-60	291,706.1	1,492,298.1	0.108	1,909	206
246	2150lv	69	20	M-25-60	291,823.0	1,492,287.0	0.016	994	16
247	2150lv	70	20	M96-1	291,651.8	1,492,290.4	0.044	1,536	68
248	2150lv	71	20	M-7-70	291,568.3	1,492,324.6	0.045	824	37
249	2150lv	72	20	M96-6	291,608.7	1,492,314.3	0.069	1,156	80
250	2150lv	74	20	M96-21	292,067.2	1,492,248.5	0.020	3,367	67
251	2150lv	79	30	MR-4	291,810.7	1,492,271.5	0.023	4,581	105
252	2150lv	80	30	M96-22	292,013.8	1,492,249.1	0.015	7,542	113
253	2150lv	82	30	MR-7	291,736.4	1,492,288.6	0.051	1,026	52
254	2150lv	85	30	M96-2	291,652.1	1,492,264.6	0.044	2,568	113
255	2150lv	86	30	M96-7	291,605.1	1,492,263.1	0.058	4,352	252
256	2140lv	36	20	MR-11	291,550.0	1,492,340.4	0.056	352	20
257	2140lv	39	30	MR-8	292,476.6	1,492,158.7	0.019	10,076	191
258	2140lv	46	35	MM-7	291,808.2	1,492,115.1	0.040	5,351	214
259	2140lv	52	35	MM-6	291,562.6	1,492,156.9	0.015	3,748	56
260	2140lv	60	10	M-3-60	292,064.3	1,492,287.2	0.035	1,744	61
261	2140lv	64	20	MR-3	291,892.3	1,492,271.1	0.025	552	14
262	2140lv	65	20	MR-1	291,824.0	1,492,292.8	0.058	1,438	83
263	2140lv	68	20	MR-7	291,730.9	1,492,290.4	0.026	623	16
264	2140lv	69	20	M-6-60	291,706.5	1,492,303.9	0.073	1,596	117
265	2140lv	70	30	MR-5	291,766.6	1,492,273.1	0.017	3,427	58
266	2140lv	71	20	M-25-60	291,822.8	1,492,292.8	0.049	1,099	54
267	2140lv	72	20	M96-1	291,651.8	1,492,300.4	0.093	1,738	162
268	2140lv	75	20	M96-8	291,552.4	1,492,288.2	0.029	644	19
269	2140lv	76	20	M-7-70	291,568.5	1,492,328.3	0.018	728	13
270	2140lv	78	20	M96-6	291,608.7	1,492,314.3	0.081	1,001	81
271	2140lv	81	30	MR-4	291,802.5	1,492,277.3	0.026	4,872	127
272	2140lv	82	20	M96-21	292,067.2	1,492,248.5	0.032	3,350	107
273	2140lv	84	30	M96-7	291,605.1	1,492,263.1	0.127	2,597	330
274	2140lv	91	30	MM-11	291,250.0	1,492,278.4	0.028	12,419	348
275	2140lv	97	30	M96-4	291,656.6	1,492,179.5	0.016	3,285	53
276	2140lv	98	30	M96-2	291,652.1	1,492,264.6	0.029	2,499	73
277	2140lv	101	30	M96-22	292,013.8	1,492,249.1	0.025	7,189	180
278	2130lv	17	35	BX-6	291,133.6	1,492,016.7	0.035	13,832	484
279	2130lv	31	20	M96-8	291,552.4	1,492,294.0	0.030	1,240	37
280	2130lv	35	20	MR-11	291,555.0	1,492,331.7	0.042	396	17
281	2130lv	40	30	MR-8	292,471.0	1,492,150.4	0.090	12,908	1,162
282	2130lv	54	30	M96-18	291,913.0	1,492,187.5	0.034	21,880	744
283	2130lv	55	35	M-26-63	292,011.4	1,492,084.1	0.030	1,791	54
284	2130lv	57	35	MM-7	291,809.0	1,492,118.6	0.016	4,045	65
285	2130lv	61	30	M96-5	291,710.1	1,492,135.3	0.025	2,379	60
286	2130lv	63	30	MM-10	291,103.4	1,492,242.8	0.045	11,706	527
287	2130lv	64	35	M96-10	291,641.7	1,492,104.9	0.018	4,086	74
288	2130lv	77	20	M-1-60	291,892.6	1,492,280.0	0.094	2,043	192

	A	B	C	D	E	F	G	H	I
289	2130lv	78	20	M96-22	292,013.8	1,492,249.1	0.028	1,540	43
290	2130lv	79	20	MR-3	291,883.4	1,492,275.8	0.021	1,338	28
291	2130lv	81	20	MR-4	291,794.3	1,492,283.0	0.026	1,199	31
292	2130lv	82	30	MR-5	291,761.0	1,492,274.8	0.021	5,931	125
293	2130lv	83	20	MR-7	291,725.4	1,492,292.2	0.036	951	34
294	2130lv	84	20	M-6-60	291,706.9	1,492,309.6	0.113	1,214	137
295	2130lv	85	30	M96-2	291,652.1	1,492,264.6	0.030	4,275	128
296	2130lv	86	20	M96-1	291,651.8	1,492,310.4	0.105	1,721	181
297	2130lv	88	20	M-7-70	291,568.8	1,492,331.9	0.049	619	30
298	2130lv	89	20	M96-6	291,608.7	1,492,314.3	0.067	1,095	73
299	2130lv	90	20	M-25-60	291,822.6	1,492,298.5	0.056	436	24
300	2130lv	91	20	MR-1	291,824.0	1,492,298.6	0.038	1,071	41
301	2130lv	94	20	M96-7	291,605.1	1,492,263.1	0.108	339	37
302	2130lv	96	20	M96-21	292,067.2	1,492,248.5	0.034	2,238	76
303	2130lv	115	35	MC-10	293,372.3	1,491,628.5	0.020	4,226	85
304	2120lv	30	20	MR-11	291,560.0	1,492,323.0	0.017	342	6
305	2120lv	33	30	MR-8	292,465.4	1,492,142.1	0.102	12,130	1,237
306	2120lv	48	35	M-26-63	292,009.5	1,492,087.5	0.022	1,463	32
307	2120lv	50	30	M96-19	292,114.2	1,492,142.2	0.019	13,058	248
308	2120lv	55	30	M96-5	291,710.1	1,492,135.3	0.041	1,844	76
309	2120lv	65	30	M96-4	291,656.6	1,492,179.5	0.019	2,704	51
310	2120lv	66	10	MR-2	291,950.1	1,492,294.6	0.025	3,347	84
311	2120lv	69	10	M96-21	292,067.2	1,492,248.5	0.023	2,651	61
312	2120lv	73	20	M-7-70	291,569.0	1,492,335.5	0.093	408	38
313	2120lv	74	10	M96-1	291,651.8	1,492,320.4	0.046	2,563	118
314	2120lv	76	30	M96-2	291,652.1	1,492,264.6	0.029	3,488	101
315	2120lv	77	20	M96-7	291,605.1	1,492,263.1	0.256	548	140
316	2120lv	79	20	MM-5	291,532.3	1,492,258.6	0.016	1,419	23
317	2120lv	82	20	M-24-70	291,398.7	1,492,322.0	0.015	3,229	48
318	2120lv	84	20	MM-11	291,250.8	1,492,287.7	0.027	4,996	135
319	2120lv	85	20	M96-22	292,013.8	1,492,249.1	0.101	2,336	236
320	2120lv	86	20	M-1-60	291,891.5	1,492,285.6	0.042	1,914	80
321	2120lv	87	20	MR-3	291,874.6	1,492,280.5	0.059	1,683	99
322	2120lv	88	20	MR-7	291,719.9	1,492,294.0	0.064	2,025	130
323	2120lv	89	20	M-6-60	291,707.3	1,492,315.4	0.035	1,419	50
324	2120lv	91	20	M96-6	291,608.7	1,492,314.3	0.060	1,872	112
325	2120lv	93	20	MR-4	291,786.1	1,492,288.7	0.068	1,771	121
326	2120lv	94	20	MR-1	291,824.0	1,492,304.3	0.018	736	13
327	2120lv	95	30	MR-5	291,755.5	1,492,276.5	0.018	4,347	78
328	2120lv	97	20	M96-8	291,552.4	1,492,299.7	0.036	973	35
329	2120lv	103	30	M-4-30	292,199.5	1,492,192.0	0.019	1,662	32
330	2120lv	105	30	M96-3	291,706.8	1,492,232.8	0.045	4,117	185
331	2120lv	122	30	MR-14	293,880.4	1,491,820.8	0.016	8,709	139
332	2120lv	124	60	MC-10	293,373.3	1,491,633.1	0.023	8,607	198
333	2110lv	13	30	MM-9	291,010.4	1,492,210.1	0.017	3,046	52
334	2110lv	47	10	M96-8	291,552.4	1,492,305.5	0.044	690	30
335	2110lv	52	10	M-7-70	291,569.3	1,492,339.2	0.041	1,173	48
336	2110lv	67	10	M96-21	292,067.2	1,492,248.5	0.020	1,964	39

	A	B	C	D	E	F	G	H	I
337	2110lv	72	20	UG65-1	291,570.0	1,492,323.7	0.040	618	25
338	2110lv	77	20	M96-7	291,605.1	1,492,263.1	0.058	598	35
339	2110lv	78	20	M-24-70	291,398.9	1,492,318.4	0.015	3,662	55
340	2110lv	81	20	M-1-60	291,890.4	1,492,291.3	0.026	1,526	40
341	2110lv	82	20	UG65-40	291,877.2	1,492,286.2	0.160	234	38
342	2110lv	83	20	M96-22	292,013.8	1,492,249.1	0.069	2,842	196
343	2110lv	84	20	UG65-32	291,871.1	1,492,249.2	0.040	700	28
344	2110lv	85	20	UG65-41	291,869.5	1,492,275.4	0.060	329	20
345	2110lv	90	20	UG65-33	291,851.6	1,492,289.9	0.040	389	16
346	2110lv	91	20	UG65-34	291,856.5	1,492,285.7	0.160	60	10
347	2110lv	92	20	UG65-35	291,856.0	1,492,281.0	0.090	67	6
348	2110lv	93	20	MR-4	291,777.9	1,492,294.5	0.091	1,367	124
349	2110lv	94	20	UG65-21	291,791.0	1,492,257.3	0.020	251	5
350	2110lv	95	20	UG65-13	291,716.0	1,492,294.6	0.070	656	46
351	2110lv	96	20	UG65-25	291,817.5	1,492,280.7	0.060	478	29
352	2110lv	97	20	UG65-23	291,799.0	1,492,273.9	0.080	465	37
353	2110lv	98	20	MR-7	291,714.4	1,492,295.8	0.126	431	54
354	2110lv	99	20	UG65-14	291,714.3	1,492,290.6	0.300	427	128
355	2110lv	100	20	UG65-11	291,687.7	1,492,281.3	0.300	241	72
356	2110lv	101	20	UG65-10	291,680.7	1,492,284.5	0.040	266	11
357	2110lv	103	20	UG65-3	291,588.4	1,492,311.1	0.290	115	33
358	2110lv	104	20	UG65-2	291,588.4	1,492,313.3	0.100	182	18
359	2110lv	105	20	UG65-4	291,599.7	1,492,311.1	0.140	212	30
360	2110lv	106	20	UG65-5	291,615.2	1,492,303.5	0.080	740	59
361	2110lv	107	20	M96-6	291,608.7	1,492,314.3	0.036	175	6
362	2110lv	108	20	UG65-9	291,673.5	1,492,287.8	0.080	624	50
363	2110lv	109	20	UG65-8	291,659.5	1,492,308.1	0.080	613	49
364	2110lv	110	20	UG65-7	291,659.2	1,492,312.7	0.040	163	7
365	2110lv	111	20	UG65-6	291,658.5	1,492,317.6	0.040	112	5
366	2110lv	112	20	UG65-12	291,696.9	1,492,276.3	0.080	321	26
367	2110lv	113	30	UG65-15	291,720.8	1,492,269.5	0.040	438	18
368	2110lv	114	30	MR-5	291,750.0	1,492,278.2	0.031	139	4
369	2110lv	115	20	UG65-22	291,806.1	1,492,255.4	0.140	176	25
370	2110lv	116	20	UG65-27	291,821.9	1,492,271.8	0.080	285	23
371	2110lv	117	30	UG65-20	291,775.9	1,492,259.9	0.060	2,950	177
372	2110lv	118	20	UG65-24	291,821.3	1,492,254.3	0.080	168	13
373	2110lv	119	20	UG65-26	291,818.6	1,492,278.3	0.060	112	7
374	2110lv	120	20	UG65-28	291,837.6	1,492,254.1	0.080	189	15
375	2110lv	122	20	UG65-36	291,854.9	1,492,275.1	0.060	106	6
376	2110lv	123	20	UG65-29	291,846.4	1,492,252.3	0.060	60	4
377	2110lv	124	20	UG65-39	291,852.2	1,492,261.0	0.100	101	10
378	2110lv	126	20	UG65-30	291,850.6	1,492,251.0	0.120	54	6
379	2110lv	127	20	UG65-31	291,862.9	1,492,250.4	0.060	110	7
380	2110lv	128	30	M96-18	291,913.0	1,492,207.5	0.019	13,185	251
381	2110lv	129	30	MM-10	291,105.4	1,492,254.2	0.029	11,994	348
382	2110lv	134	30	UG65-18	291,750.8	1,492,263.8	0.100	376	38
383	2110lv	135	30	UG65-17	291,743.9	1,492,265.3	0.020	294	6
384	2110lv	136	30	UG65-16	291,731.1	1,492,267.1	0.060	338	20

	A	B	C	D	E	F	G	H	I
385	2110lv	137	30	UG65-19	291,761.2	1,492,262.4	0.060	622	37
386	2110lv	140	30	MM-8	291,718.9	1,492,151.7	0.138	1,586	219
387	2110lv	141	30	M96-14	291,819.5	1,492,153.6	0.021	5,784	122
388	2110lv	142	30	M96-4	291,656.6	1,492,179.5	0.025	2,511	63
389	2110lv	143	35	MM-7	291,810.9	1,492,127.7	0.068	2,182	148
390	2110lv	156	35	M-26-63	292,007.1	1,492,091.9	0.030	2,333	70
391	2110lv	165	35	MC-10	293,374.3	1,491,637.7	0.022	12,173	268
392	2100lv	24	20	M96-7	291,605.1	1,492,263.1	0.096	1,273	122
393	2100lv	28	30	M96-2	291,652.1	1,492,264.6	0.016	2,424	39
394	2100lv	45	10	M-7-70	291,569.5	1,492,342.8	0.027	2,077	56
395	2100lv	47	20	M96-6	291,608.7	1,492,314.3	0.035	1,521	53
396	2100lv	48	35	MM-13	291,820.0	1,491,957.0	0.042	286	12
397	2100lv	53	10	M-1-60	291,889.7	1,492,295.1	0.030	5,167	155
398	2100lv	59	20	M96-22	292,013.8	1,492,249.1	0.044	3,093	136
399	2100lv	62	20	M-4-60	292,204.0	1,492,176.4	0.018	4,226	76
400	2100lv	64	20	MR-3	291,856.9	1,492,289.9	0.033	4,703	155
401	2100lv	65	20	MR-4	291,771.4	1,492,299.1	0.042	2,386	100
402	2100lv	67	20	MR-7	291,708.9	1,492,297.6	0.118	3,034	358
403	2100lv	70	30	M96-19	292,114.2	1,492,149.5	0.026	13,589	353
404	2100lv	71	30	M-26-63	292,004.6	1,492,096.4	0.025	6,813	170
405	2100lv	72	30	M96-18	291,913.0	1,492,217.5	0.034	10,323	351
406	2100lv	75	30,	MM-7	291,811.9	1,492,132.2	0.119	1,789	213
407	2100lv	76	30	M96-5	291,710.1	1,492,135.3	0.015	2,139	32
408	2100lv	77	30	MM-8	291,719.9	1,492,156.2	0.035	1,667	58
409	2100lv	80	30	M96-3	291,706.8	1,492,232.8	0.036	3,341	120
410	2100lv	92	35	MM-6	291,547.7	1,492,174.5	0.015	6,368	96
411	2100lv	96	35	MM-14	291,820.2	1,491,957.7	0.017	145	3
412	2090lv	18	30	MM-9	291,007.4	1,492,221.3	0.015	2,220	33
413	2090lv	35	10	MR-10	292,875.4	1,492,058.4	0.022	1,718	38
414	2090lv	57	20	M96-7	291,605.1	1,492,263.1	0.015	977	15
415	2090lv	81	20	M96-6	291,608.7	1,492,314.3	0.033	1,122	37
416	2090lv	85	20	MM-11	291,252.0	1,492,301.6	0.026	5,869	153
417	2090lv	90	20	M-4-60	292,202.4	1,492,182.0	0.030	4,179	125
418	2090lv	93	20	MR-3	291,848.1	1,492,294.6	0.032	5,623	180
419	2090lv	94	20	MR-5	291,739.0	1,492,281.6	0.069	2,531	175
420	2090lv	95	20	MR-7	291,703.4	1,492,299.3	0.034	2,576	88
421	2090lv	111	30	M96-18	291,913.0	1,492,227.5	0.025	8,474	212
422	2090lv	112	30	M-26-63	292,002.1	1,492,100.8	0.029	7,519	218
423	2090lv	113	30	MR-12	291,725.4	1,492,188.9	0.015	3,454	52
424	2090lv	122	35	MC-11	292,188.3	1,492,053.6	0.016	12,660	203
425	2080lv	20	35	MC-10	293,377.2	1,491,651.3	0.022	13,058	287
426	2080lv	25	20	M-24-70	291,399.7	1,492,307.5	0.015	1,019	15
427	2080lv	31	10	MR-10	292,867.0	1,492,053.0	0.027	1,272	34
428	2080lv	36	20	MR-9	292,637.5	1,492,113.1	0.055	1,735	95
429	2080lv	56	30	M96-2	291,652.1	1,492,264.6	0.022	1,587	35
430	2080lv	82	35	M96-13	291,458.5	1,492,236.0	0.021	4,957	104
431	2080lv	95	20	MM-11	291,252.5	1,492,306.3	0.052	6,390	332
432	2080lv	97	20	M-4-60	292,200.8	1,492,187.5	0.018	4,226	76

	A	B	C	D	E	F	G	H	I
433	2080lv	100	20	MR-7	291,697.9	1,492,301.1	0.016	2,554	41
434	2080lv	101	20	MR-5	291,733.4	1,492,283.3	0.110	4,225	465
435	2080lv	102	20	M96-18	291,913.0	1,492,237.5	0.036	6,140	221
436	2080lv	107	30	M-26-63	291,999.7	1,492,105.3	0.035	7,106	249
437	2080lv	109	30	MM-7	291,813.8	1,492,141.4	0.016	2,268	36
438	2080lv	113	30	MM-8	291,721.8	1,492,165.4	0.018	2,762	50
439	2080lv	114	30	MR-12	291,727.5	1,492,198.7	0.015	3,323	50
440	2080lv	121	30	MM-10	291,108.4	1,492,271.3	0.035	8,540	299
441	2080lv	134	35	M96-11	291,609.4	1,492,170.4	0.022	4,574	101
442	2070lv	36	20	MR-9	292,640.4	1,492,108.1	0.109	1,778	194
443	2070lv	40	10	MR-10	292,858.6	1,492,047.5	0.100	1,473	147
444	2070lv	53	10	M96-6	291,608.7	1,492,314.3	0.029	1,061	31
445	2070lv	77	30	MC-14	292,639.9	1,491,989.4	0.042	10,017	421
446	2070lv	94	20	MR-7	291,692.4	1,492,302.9	0.076	3,125	238
447	2070lv	96	30	M96-2	291,652.1	1,492,264.6	0.019	1,333	25
448	2070lv	100	20	MR-5	291,727.9	1,492,285.0	0.156	4,338	677
449	2070lv	101	20	M96-18	291,913.0	1,492,247.5	0.130	6,502	845
450	2070lv	105	30	MM-2	291,910.0	1,492,148.0	0.016	6,686	107
451	2070lv	106	30	M-26-63	291,997.2	1,492,109.7	0.047	7,390	347
452	2070lv	107	30	MC-17	291,863.3	1,492,151.2	0.025	2,295	57
453	2070lv	108	30	MM-7	291,814.8	1,492,145.9	0.043	2,687	116
454	2070lv	109	30	M96-14	291,819.5	1,492,193.6	0.021	5,029	106
455	2070lv	112	30	MM-8	291,722.8	1,492,169.9	0.035	3,109	109
456	2070lv	126	35	MM-6	291,536.6	1,492,187.8	0.026	4,942	129
457	2060lv	22	35	MC-10	293,379.1	1,491,660.5	0.019	14,125	268
458	2060lv	42	20	MR-10	292,850.2	1,492,042.1	0.087	2,691	234
459	2060lv	77	10	MM-11	291,253.3	1,492,315.5	0.025	2,919	73
460	2060lv	78	20	M96-2	291,652.1	1,492,264.6	0.106	2,120	225
461	2060lv	79	10	MR-7	291,686.9	1,492,304.7	0.035	2,526	88
462	2060lv	81	20	MR-5	291,722.4	1,492,286.6	0.097	4,758	462
463	2060lv	82	20	M96-18	291,913.0	1,492,257.5	0.092	7,096	653
464	2060lv	85	30	MM-2	291,910.0	1,492,158.0	0.034	6,322	215
465	2060lv	87	30	M-26-63	291,994.7	1,492,114.2	0.026	7,841	204
466	2060lv	88	30	MC-17	291,864.2	1,492,155.8	0.057	2,316	132
467	2060lv	89	30	MM-7	291,815.8	1,492,150.5	0.033	3,017	100
468	2060lv	100	30	MC-14	292,640.8	1,491,994.0	0.027	11,667	315
469	2060lv	110	35	MM-6	291,532.9	1,492,192.2	0.025	4,435	111
470	2060lv	124	35	MC-12	292,382.0	1,491,996.4	0.020	9,792	196
471	2050lv	32	10	M96-6	291,608.7	1,492,314.3	0.017	1,410	24
472	2050lv	45	20	MR-10	292,841.8	1,492,036.6	0.120	2,917	350
473	2050lv	73	30	M96-3	291,706.8	1,492,232.8	0.020	3,045	61
474	2050lv	79	35	MM-3	291,998.0	1,492,096.4	0.016	2,105	34
475	2050lv	82	10	MM-11	291,253.7	1,492,320.2	0.019	3,157	60
476	2050lv	87	20	M96-2	291,652.1	1,492,264.6	0.035	1,840	64
477	2050lv	88	10	MR-7	291,681.4	1,492,306.5	0.029	2,165	63
478	2050lv	91	20	MR-5	291,716.9	1,492,288.3	0.066	4,756	314
479	2050lv	95	30	MM-2	291,910.0	1,492,168.0	0.022	5,936	131
480	2050lv	96	30	M-26-63	291,992.2	1,492,118.7	0.252	7,880	1,986

	A	B	C	D	E	F	G	H	I
481	2050lv	98	30	MC-17	291,865.2	1,492,160.3	0.042	2,675	112
482	2050lv	99	30	MM-7	291,816.7	1,492,155.1	0.144	3,393	489
483	2050lv	101	30	M96-5	291,710.1	1,492,135.3	0.035	2,837	99
484	2050lv	102	30	MM-8	291,724.7	1,492,179.1	0.291	3,509	1,021
485	2050lv	103	30	MR-12	291,733.7	1,492,228.0	0.020	2,375	48
486	2050lv	115	35	MM-4	292,079.7	1,492,066.0	0.038	5,343	203
487	2050lv	117	35	M96-12	291,497.0	1,492,141.5	0.018	14,051	253
488	2050lv	130	35	MC-14	292,641.8	1,491,998.5	0.081	8,674	703
489	2040lv	40	30	MC-14	292,642.8	1,492,003.1	0.044	12,844	565
490	2040lv	42	20	MR-10	292,833.4	1,492,031.2	0.046	3,039	140
491	2040lv	47	20	M96-2	291,652.1	1,492,264.6	0.092	2,215	204
492	2040lv	48	30	M96-3	291,706.8	1,492,232.8	0.016	2,274	36
493	2040lv	76	10	MR-7	291,678.6	1,492,307.4	0.046	1,985	91
494	2040lv	86	20	MR-5	291,711.4	1,492,290.0	0.047	4,672	220
495	2040lv	89	30	MM-2	291,910.0	1,492,178.0	0.016	3,473	56
496	2040lv	91	30	M-26-63	291,989.8	1,492,123.1	0.016	7,316	117
497	2040lv	96	30	MM-7	291,817.7	1,492,159.6	0.018	3,994	72
498	2040lv	98	30	MM-8	291,725.7	1,492,183.6	0.029	3,592	104
499	2040lv	99	30	M96-14	291,819.5	1,492,223.6	0.058	2,646	153
500	2040lv	100	30	MR-12	291,735.8	1,492,237.8	0.025	1,787	45
501	2040lv	110	35	BX-5	291,669.0	1,491,972.2	0.025	18,814	470
502	2030lv	43	20	MR-10	292,825.0	1,492,025.7	0.074	3,213	238
503	2030lv	53	20	M96-2	291,652.1	1,492,264.6	0.028	1,794	50
504	2030lv	54	30	M96-3	291,706.8	1,492,232.8	0.023	2,643	61
505	2030lv	57	90	MC-1	292,076.9	1,491,979.7	0.016	10,692	171
506	2030lv	79	20	MR-5	291,705.8	1,492,291.7	0.025	1,675	42
507	2030lv	80	20	MR-12	291,737.9	1,492,247.6	0.036	2,421	87
508	2030lv	81	20	M96-14	291,819.5	1,492,233.6	0.073	5,470	399
509	2030lv	86	30	MM-2	291,910.0	1,492,188.0	0.029	2,438	71
510	2030lv	87	30	MM-1	291,910.0	1,492,121.2	0.025	2,199	55
511	2030lv	88	30	M-26-63	291,987.3	1,492,127.6	0.026	6,025	157
512	2030lv	90	30	MC-17	291,867.2	1,492,169.5	0.016	3,036	49
513	2030lv	96	30	MM-7	291,818.7	1,492,164.2	0.023	6,448	148
514	2030lv	106	35	M96-11	291,609.4	1,492,183.8	0.017	3,921	67
515	2020lv	10	20	MR-13	293,487.6	1,491,890.3	0.058	2,639	153
516	2020lv	34	30	M96-3	291,706.8	1,492,232.8	0.024	1,475	35
517	2020lv	55	90	MM-14	291,829.4	1,491,992.1	0.023	2,492	57
518	2020lv	72	90	MC-8	292,961.1	1,491,754.3	0.016	18,565	297
519	2020lv	81	20	MR-5	291,702.8	1,492,292.6	0.026	2,606	68
520	2020lv	86	20	MM-2	291,910.0	1,492,198.0	0.066	4,332	286
521	2020lv	87	20	M96-14	291,819.5	1,492,243.6	0.073	3,834	280
522	2020lv	89	20	MR-12	291,740.0	1,492,257.4	0.091	2,750	250
523	2020lv	92	20	MR-10	292,816.7	1,492,020.3	0.025	3,524	88
524	2020lv	102	30	MC-17	291,868.1	1,492,174.0	0.015	3,459	52
525	2020lv	107	30	MC-11	292,195.1	1,492,085.6	0.015	7,528	113
526	2020lv	109	30	MM-7	291,819.6	1,492,168.7	0.018	6,118	110
527	2020lv	116	35	MC-12	292,385.9	1,492,014.7	0.016	4,633	74
528	2010lv	11	20	MR-13	293,493.5	1,491,898.4	0.022	3,025	67

	A	B	C	D	E	F	G	H	I
529	2010lv	24	90	M96-6	291,608.7	1,492,314.3	0.017	7,685	131
530	2010lv	41	20	M96-3	291,706.8	1,492,232.8	0.054	2,562	138
531	2010lv	44	30	MC-14	292,645.7	1,492,016.8	0.017	11,751	200
532	2010lv	45	35	M96-27	292,530.2	1,492,086.2	0.015	7,984	120
533	2010lv	56	90	M96-7	291,605.1	1,492,263.1	0.022	5,878	129
534	2010lv	84	20	MM-2	291,910.0	1,492,208.0	0.042	4,693	197
535	2010lv	85	20	M96-14	291,819.5	1,492,253.6	0.071	3,682	261
536	2010lv	88	20	MR-12	291,742.0	1,492,267.2	0.045	2,402	108
537	2010lv	92	30	MM-1	291,910.0	1,492,128.5	0.015	3,216	48
538	2010lv	94	30	MC-17	291,869.1	1,492,178.6	0.033	2,826	93
539	2010lv	99	30	MM-7	291,820.6	1,492,173.3	0.021	6,251	131
540	2010lv	105	30	MC-13	292,827.6	1,491,930.2	0.025	6,786	170
541	2010lv	106	30	MR-10	292,810.7	1,492,016.4	0.037	4,326	160
542	2010lv	107	30	MC-15	292,732.1	1,491,966.0	0.016	5,007	80
543	2000lv	11	10	MR-13	293,499.4	1,491,906.5	0.023	912	21
544	2000lv	37	30	MC-14	292,646.6	1,492,021.3	0.035	11,373	398
545	2000lv	38	35	M96-27	292,530.2	1,492,096.2	0.066	7,253	479
546	2000lv	71	20	M96-3	291,706.8	1,492,232.8	0.061	5,780	353
547	2000lv	72	30	MM-8	291,729.6	1,492,201.9	0.031	5,685	176
548	2000lv	78	10	MM-2	291,910.0	1,492,218.0	0.143	2,474	354
549	2000lv	79	10	M96-14	291,819.5	1,492,263.6	0.025	3,445	86
550	2000lv	80	10	MR-12	291,744.1	1,492,276.9	0.060	1,902	114
551	2000lv	86	30	MM-1	291,910.0	1,492,132.1	0.022	3,218	71
552	2000lv	91	30	MC-17	291,870.1	1,492,183.1	0.015	2,118	32
553	2000lv	92	30	MM-3	291,998.0	1,492,119.7	0.015	4,051	61
554	2000lv	95	30	MM-7	291,821.6	1,492,177.9	0.025	3,349	84
555	2000lv	101	30	MC-15	292,733.1	1,491,970.6	0.018	6,652	120
556	1990lv	41	10	M96-27	292,530.2	1,492,106.2	0.016	2,638	42
557	1990lv	46	30	MC-14	292,647.6	1,492,025.9	0.031	11,804	366
558	1990lv	71	20	M96-3	291,706.8	1,492,232.8	0.109	5,724	624
559	1990lv	72	30	MM-8	291,730.5	1,492,206.4	0.028	4,972	139
560	1990lv	77	10	MM-2	291,910.0	1,492,228.0	0.018	3,980	72
561	1990lv	88	20	M96-29	293,046.8	1,491,968.1	0.043	4,640	200
562	1990lv	89	30	MM-1	291,910.0	1,492,135.8	0.024	3,378	81
563	1990lv	93	30	M96-15	291,819.7	1,492,135.9	0.043	4,183	180
564	1990lv	94	30	MC-17	291,871.0	1,492,187.7	0.022	1,883	41
565	1990lv	103	35	M96-24	292,329.9	1,491,992.0	0.043	14,381	618
566	1980lv	9	20	M-29-60	291,070.8	1,492,309.6	0.018	5,511	99
567	1980lv	49	35	M96-16	291,868.3	1,492,094.9	0.034	8,570	291
568	1980lv	62	20	M96-3	291,706.8	1,492,232.8	0.039	5,455	213
569	1980lv	63	30	MM-8	291,731.5	1,492,211.0	0.044	4,120	181
570	1980lv	83	20	M96-25	292,335.8	1,492,134.9	0.070	4,650	326
571	1980lv	84	20	M96-29	293,047.3	1,491,978.1	0.110	5,180	570
572	1980lv	85	30	MM-1	291,910.0	1,492,139.4	0.026	3,479	91
573	1980lv	88	30	M96-15	291,819.7	1,492,137.7	0.044	4,302	189
574	1980lv	89	30	MC-17	291,871.7	1,492,190.7	0.050	1,589	80
575	1980lv	101	30	MC-13	292,830.5	1,491,943.9	0.016	8,645	138
576	1980lv	103	30	MC-14	292,648.6	1,492,030.5	0.024	10,620	255

	A	B	C	D	E	F	G	H	I
577	1980lv	122	35	M96-12	291,500.7	1,492,162.6	0.016	17,324	277
578	1970lv	52	30	MM-8	291,732.5	1,492,215.5	0.044	3,396	149
579	1970lv	56	20	M96-3	291,706.8	1,492,232.8	0.052	5,222	272
580	1970lv	72	20	MC-11	292,200.0	1,492,108.4	0.031	4,174	129
581	1970lv	73	20	M96-25	292,335.8	1,492,140.7	0.047	4,009	188
582	1970lv	78	30	MM-7	291,824.5	1,492,191.5	0.023	2,615	60
583	1970lv	79	30	MM-1	291,910.0	1,492,143.1	0.056	3,690	207
584	1970lv	83	30	M96-15	291,819.7	1,492,139.4	0.025	4,920	123
585	1970lv	95	30	MC-13	292,831.5	1,491,948.4	0.017	8,595	146
586	1970lv	98	30	MC-14	292,649.5	1,492,035.0	0.030	10,665	320
587	1970lv	115	35	M96-12	291,501.2	1,492,165.6	0.016	17,818	285
588	1960lv	46	90	MC-2	291,812.4	1,492,044.0	0.021	1,300	27
589	1960lv	58	20	M96-3	291,706.8	1,492,232.8	0.058	3,090	179
590	1960lv	60	30	MM-8	291,733.5	1,492,220.1	0.059	3,279	194
591	1960lv	75	20	MC-11	292,200.9	1,492,112.9	0.039	4,759	186
592	1960lv	80	30	MM-1	291,910.0	1,492,146.7	0.017	3,684	63
593	1960lv	82	30	M96-15	291,819.7	1,492,141.2	0.024	6,945	167
594	1960lv	84	30	MM-3	291,998.0	1,492,138.3	0.029	4,661	135
595	1960lv	91	30	MC-13	292,832.5	1,491,953.0	0.020	8,003	160
596	1960lv	94	30	MC-14	292,650.5	1,492,039.6	0.073	9,484	692
597	1950lv	55	90	UG220-1	291,679.1	1,492,266.0	0.043	2,392	103
598	1950lv	56	10	UG220-1	291,709.0	1,492,268.1	0.042	733	31
599	1950lv	57	20	UG220-1	291,694.0	1,492,267.2	0.059	507	30
600	1950lv	61	30	UG220-5	291,726.2	1,492,218.4	0.065	1,274	83
601	1950lv	65	10	UG220-1	291,722.5	1,492,268.6	0.060	2,278	137
602	1950lv	67	20	UG220-3	291,790.4	1,492,232.9	0.289	1,029	297
603	1950lv	68	20	MM-7	291,826.4	1,492,200.7	0.043	3,823	164
604	1950lv	70	20	UG220-4	291,778.9	1,492,204.7	0.078	476	37
605	1950lv	75	20	MC-11	292,201.9	1,492,117.5	0.048	4,953	238
606	1950lv	76	30	MM-4	292,091.7	1,492,111.1	0.021	9,188	193
607	1950lv	79	20	UG220-2	291,728.3	1,492,256.5	0.064	609	39
608	1950lv	81	20	UG220-2	291,736.2	1,492,243.8	0.069	490	34
609	1950lv	82	20	UG220-5	291,738.8	1,492,226.2	0.064	141	9
610	1950lv	83	20	UG220-5	291,746.6	1,492,231.6	0.095	207	20
611	1950lv	84	20	UG220-3	291,766.6	1,492,235.8	0.100	415	42
612	1950lv	85	20	UG220-3	291,781.4	1,492,233.9	0.282	273	77
613	1950lv	86	20	UG220-6	291,762.8	1,492,228.9	0.207	116	24
614	1950lv	87	20	UG220-4	291,771.2	1,492,217.6	0.168	230	39
615	1950lv	88	30	UG220-4	291,784.8	1,492,194.9	0.060	2,896	174
616	1950lv	89	20	UG220-6	291,757.6	1,492,220.9	0.058	138	8
617	1950lv	92	30	MM-1	291,910.0	1,492,150.3	0.021	3,079	65
618	1950lv	94	30	M96-15	291,819.7	1,492,143.0	0.018	4,851	87
619	1950lv	95	30	MM-3	291,998.0	1,492,143.0	0.033	5,029	166
620	1950lv	97	30	MM-8	291,734.4	1,492,224.7	0.076	371	28
621	1950lv	101	30	MC-13	292,833.5	1,491,957.6	0.017	7,189	122
622	1950lv	104	30	MC-14	292,651.5	1,492,044.1	0.042	8,621	362
623	1950lv	125	35	M96-10	291,641.7	1,492,104.9	0.033	15,800	521
624	1940lv	25	20	M96-30	292,939.6	1,491,999.3	0.023	1,977	46

	A	B	C	D	E	F	G	H	I
625	1940lv	50	20	MM-7	291,827.4	1,492,205.2	0.037	5,145	190
626	1940lv	52	20	MM-8	291,735.4	1,492,229.2	0.179	2,382	426
627	1940lv	54	30	M96-15	291,819.7	1,492,144.7	0.015	8,266	124
628	1940lv	58	20	MC-11	292,202.9	1,492,122.1	0.033	4,593	152
629	1940lv	61	20	MC-14	292,652.5	1,492,048.7	0.022	5,218	115
630	1940lv	66	20	M96-28	293,104.4	1,491,920.7	0.059	5,830	344
631	1940lv	68	30	MM-1	291,910.0	1,492,154.0	0.015	2,733	41
632	1940lv	71	30	MM-3	291,998.0	1,492,147.7	0.040	4,376	175
633	1940lv	79	30	MC-15	292,738.9	1,491,998.0	0.016	10,265	164
634	1930lv	29	90	M96-23	292,024.5	1,492,002.0	0.017	14,898	253
635	1930lv	45	20	MM-8	291,736.4	1,492,233.8	0.178	3,022	538
636	1930lv	52	20	MM-7	291,828.4	1,492,209.8	0.040	5,134	205
637	1930lv	55	30	M96-15	291,819.7	1,492,146.5	0.018	7,256	131
638	1930lv	60	20	MC-11	292,203.8	1,492,126.6	0.053	4,504	239
639	1930lv	62	20	MC-14	292,653.4	1,492,053.3	0.061	5,435	332
640	1930lv	63	20	M96-28	293,104.4	1,491,929.0	0.028	6,045	169
641	1930lv	65	30	MM-1	291,910.0	1,492,157.6	0.015	1,562	23
642	1930lv	68	30	MM-3	291,998.0	1,492,152.3	0.083	4,206	349
643	1930lv	73	30	M96-26	292,534.6	1,491,963.9	0.022	12,674	279
644	1930lv	76	30	MC-15	292,739.8	1,492,002.5	0.032	9,424	302
645	1920lv	44	20	MM-8	291,737.3	1,492,238.4	0.171	3,150	539
646	1920lv	58	30	MC-9	293,191.0	1,491,747.4	0.015	10,582	159
647	1920lv	59	20	MM-3	291,998.0	1,492,157.0	0.067	2,029	136
648	1920lv	60	20	MM-4	292,095.3	1,492,124.6	0.015	3,190	48
649	1920lv	62	20	MM-7	291,829.3	1,492,214.4	0.155	5,236	812
650	1920lv	63	20	MC-12	292,395.6	1,492,060.3	0.049	4,910	241
651	1920lv	67	20	MC-14	292,654.4	1,492,057.8	0.077	4,953	381
652	1920lv	68	20	M96-28	293,104.4	1,491,937.4	0.077	6,552	505
653	1920lv	69	10	MC-11	292,204.8	1,492,131.2	0.015	4,536	68
654	1920lv	70	35	M96-15	291,819.7	1,492,148.3	0.027	5,350	144
655	1920lv	71	35	MM-1	291,910.0	1,492,161.3	0.073	1,175	86
656	1920lv	72	35	M96-16	291,868.3	1,492,122.9	0.051	2,380	121
657	1920lv	92	35	MC-15	292,740.8	1,492,007.1	0.049	7,480	367
658	1920lv	93	35	MC-5	292,612.7	1,491,913.2	0.018	10,775	194
659	1910lv	22	30	M96-15	291,819.7	1,492,150.0	0.033	6,354	210
660	1910lv	32	90	MM-13	291,820.0	1,491,957.0	0.023	8,482	195
661	1910lv	41	20	MM-8	291,738.3	1,492,242.9	0.132	2,860	378
662	1910lv	49	30	MC-13	292,837.3	1,491,975.8	0.053	8,137	431
663	1910lv	51	30	M96-16	291,868.3	1,492,127.5	0.050	3,230	162
664	1910lv	56	20	MM-3	291,998.0	1,492,161.7	0.046	2,075	95
665	1910lv	59	20	MM-1	291,910.0	1,492,164.9	0.296	1,671	495
666	1910lv	62	20	MM-7	291,830.3	1,492,218.9	0.143	4,661	666
667	1910lv	66	20	MC-12	292,396.6	1,492,064.8	0.057	5,578	318
668	1910lv	69	20	MC-14	292,655.4	1,492,062.4	0.061	4,264	260
669	1910lv	71	20	MC-15	292,741.8	1,492,011.6	0.078	2,912	227
670	1910lv	72	20	M96-28	293,104.4	1,491,945.8	0.241	6,548	1,578
671	1910lv	73	10	MC-11	292,205.8	1,492,135.7	0.015	4,129	62
672	1910lv	79	35	MC-5	292,613.6	1,491,917.8	0.015	11,663	175

	A	B	C	D	E	F	G	H	I
673	1900lv	18	30	M96-15	291,819.7	1,492,151.8	0.041	5,805	238
674	1900lv	19	20	MM-8	291,739.3	1,492,247.5	0.124	3,181	394
675	1900lv	37	10	MC-14	292,656.3	1,492,066.9	0.024	6,323	152
676	1900lv	38	10	M96-28	293,104.4	1,491,954.2	0.095	4,870	463
677	1900lv	40	20	MM-3	291,998.0	1,492,166.3	0.045	2,456	111
678	1900lv	41	20	MM-1	291,910.0	1,492,168.5	0.093	2,367	220
679	1900lv	42	20	MM-7	291,831.3	1,492,223.5	0.039	4,654	182
680	1900lv	43	20	MM-4	292,097.8	1,492,133.6	0.019	3,133	60
681	1900lv	46	20	MC-12	292,397.6	1,492,069.4	0.046	5,844	269
682	1900lv	50	20	MC-13	292,838.3	1,491,980.4	0.030	2,191	66
683	1900lv	51	20	MC-15	292,742.8	1,492,016.2	0.086	3,721	320
684	1900lv	63	35	MC-5	292,614.4	1,491,922.4	0.030	10,892	327
685	1900lv	75	30	M96-16	291,868.3	1,492,132.2	0.029	3,327	97
686	1890lv	23	30	M96-15	291,819.7	1,492,153.5	0.018	5,184	93
687	1890lv	26	10	MM-8	291,740.2	1,492,252.0	0.073	2,518	184
688	1890lv	52	10	MC-14	292,657.3	1,492,071.5	0.022	4,344	96
689	1890lv	53	20	MM-7	291,832.2	1,492,228.0	0.027	6,310	170
690	1890lv	54	20	MM-1	291,910.0	1,492,172.2	0.099	2,467	244
691	1890lv	55	20	MM-3	291,998.0	1,492,171.0	0.085	2,337	199
692	1890lv	58	20	MC-12	292,398.5	1,492,074.0	0.114	5,623	641
693	1890lv	62	20	MC-15	292,743.7	1,492,020.8	0.016	3,662	59
694	1890lv	75	35	M96-10	291,641.7	1,492,104.9	0.015	14,944	224
695	1890lv	80	30	M96-16	291,868.3	1,492,136.9	0.022	3,285	72
696	1890lv	86	35	MC-6	292,381.7	1,491,938.8	0.018	18,684	336
697	1880lv	23	30	M96-15	291,819.7	1,492,155.3	0.020	4,785	96
698	1880lv	26	10	MM-8	291,741.2	1,492,256.6	0.017	2,589	44
699	1880lv	46	10	MM-3	291,998.0	1,492,175.6	0.024	2,948	71
700	1880lv	58	10	MC-14	292,658.3	1,492,076.1	0.021	3,953	83
701	1880lv	59	20	MM-1	291,910.0	1,492,175.8	0.122	3,813	465
702	1880lv	60	20	MM-7	291,833.2	1,492,232.6	0.027	6,004	162
703	1880lv	80	30	M96-16	291,868.3	1,492,141.5	0.071	3,286	233
704	1880lv	83	30	M96-26	292,534.6	1,491,992.7	0.016	8,802	141
705	1880lv	84	30	MC-6	292,382.5	1,491,943.2	0.018	6,710	121
706	1880lv	87	30	MC-9	293,194.8	1,491,765.7	0.023	9,036	208
707	1870lv	25	30	M96-15	291,819.7	1,492,157.1	0.030	2,780	83
708	1870lv	44	10	MM-7	291,834.2	1,492,237.2	0.049	5,524	271
709	1870lv	58	20	UG300-2	291,887.4	1,492,164.1	0.255	1,020	260
710	1870lv	59	20	MM-1	291,910.0	1,492,179.5	0.080	160	13
711	1870lv	61	20	UG300-1	291,818.4	1,492,207.7	0.185	3,506	649
712	1870lv	62	20	UG300-3	291,915.0	1,492,172.4	0.066	469	31
713	1870lv	63	20	UG300-2	291,909.2	1,492,171.5	0.110	68	7
714	1870lv	64	20	UG300-2	291,901.6	1,492,168.9	0.231	250	58
715	1870lv	65	20	UG300-1	291,817.6	1,492,192.9	0.143	1,493	214
716	1870lv	68	20	UG300-1	291,821.0	1,492,178.7	0.138	1,073	148
717	1870lv	70	20	UG300-3	291,914.7	1,492,157.4	0.467	2,111	986
718	1870lv	90	30	UG300-3	291,914.7	1,492,118.9	0.070	5,458	382
719	1870lv	92	30	UG300-3	291,914.7	1,492,127.4	0.151	1,168	176
720	1870lv	93	30	M96-16	291,868.3	1,492,146.2	0.033	1,217	40

	A	B	C	D	E	F	G	H	I
721	1870lv	94	30	UG300-2	291,873.1	1,492,160.7	0.051	252	13
722	1870lv	100	30	M96-26	292,534.6	1,491,998.5	0.021	9,163	192
723	1870lv	101	30	M96-24	292,329.9	1,492,061.3	0.015	5,450	82
724	1870lv	102	30	UG300-1	291,828.6	1,492,166.0	0.143	153	22
725	1870lv	103	30	UG300-1	291,839.0	1,492,155.5	0.097	203	20
726	1870lv	104	30	UG300-2	291,843.8	1,492,159.2	0.095	234	22
727	1870lv	105	30	UG300-1	291,847.7	1,492,147.9	0.150	1,343	202
728	1870lv	106	30	UG300-2	291,858.5	1,492,159.1	0.048	307	15
729	1860lv	22	20	MC-16	293,004.2	1,491,943.0	0.018	3,369	61
730	1860lv	43	30	M96-15	291,819.7	1,492,158.8	0.060	2,500	150
731	1860lv	45	10	MM-3	291,998.0	1,492,184.7	0.026	1,995	52
732	1860lv	46	10	MM-1	291,910.0	1,492,183.1	0.060	1,986	119
733	1860lv	47	20	M-27-68	291,908.5	1,492,150.4	0.116	5,756	668
734	1860lv	53	20	M96-26	292,534.6	1,492,004.3	0.061	5,814	355
735	1860lv	61	20	M96-24	292,329.9	1,492,067.1	0.043	5,303	228
736	1860lv	74	35	MC-9	293,196.8	1,491,774.8	0.022	13,509	297
737	1860lv	81	30	M96-16	291,868.3	1,492,150.9	0.021	6,787	143
738	1850lv	26	20	MC-16	293,005.2	1,491,947.6	0.030	3,542	106
739	1850lv	48	10	MM-1	291,910.0	1,492,186.7	0.015	3,243	49
740	1850lv	53	10	MC-12	292,402.2	1,492,091.0	0.023	3,940	91
741	1850lv	56	20	M96-26	292,534.6	1,492,010.1	0.028	6,138	172
742	1850lv	57	20	M-27-68	291,905.4	1,492,152.9	0.201	3,424	688
743	1850lv	58	20	M96-15	291,819.7	1,492,160.6	0.102	5,758	587
744	1850lv	63	20	M96-24	292,329.9	1,492,072.8	0.083	5,661	470
745	1850lv	65	30	MC-6	292,384.8	1,491,956.4	0.015	10,159	152
746	1850lv	72	35	MC-9	293,197.8	1,491,779.3	0.022	14,988	330
747	1850lv	74	30	MC-1	292,094.4	1,492,061.8	0.015	1,695	25
748	1850lv	76	30	M96-17	291,921.1	1,492,065.6	0.021	6,308	133
749	1850lv	79	30	M96-16	291,868.3	1,492,155.5	0.027	3,813	103
750	1840lv	20	30	M96-15	291,819.7	1,492,162.4	0.249	2,182	543
751	1840lv	24	20	MC-16	293,006.1	1,491,952.2	0.033	3,541	117
752	1840lv	41	10	MM-1	291,910.0	1,492,190.4	0.057	3,358	191
753	1840lv	44	20	M-27-68	291,902.3	1,492,155.5	0.334	5,070	1,693
754	1840lv	53	20	M96-24	292,329.9	1,492,078.6	0.073	6,189	452
755	1840lv	55	20	M96-26	292,534.6	1,492,015.8	0.024	6,143	147
756	1840lv	56	30	MC-6	292,385.6	1,491,960.8	0.025	10,924	273
757	1840lv	61	30	M96-17	291,921.1	1,492,069.6	0.015	7,020	105
758	1840lv	62	30	MC-7	292,200.9	1,492,045.6	0.015	10,391	156
759	1840lv	67	30	M96-16	291,868.3	1,492,160.2	0.024	3,227	77
760	1830lv	16	30	MC-10	293,401.4	1,491,765.4	0.036	6,055	218
761	1830lv	28	20	MC-16	293,007.1	1,491,956.7	0.032	3,726	119
762	1830lv	39	10	MM-1	291,910.0	1,492,194.0	0.017	5,028	86
763	1830lv	43	20	M-27-68	291,899.1	1,492,158.0	0.427	2,602	1,111
764	1830lv	44	20	M96-16	291,868.3	1,492,164.8	0.034	1,134	39
765	1830lv	47	20	M96-15	291,819.7	1,492,164.1	0.034	4,316	147
766	1830lv	49	20	M96-24	292,329.9	1,492,084.4	0.033	5,413	179
767	1830lv	51	20	M96-26	292,534.6	1,492,021.6	0.024	5,796	139
768	1830lv	52	30	MC-6	292,386.4	1,491,965.2	0.018	12,419	224

	A	B	C	D	E	F	G	H	I
769	1830lv	55	35	M96-23	292,024.5	1,492,050.8	0.015	9,002	135
770	1830lv	64	30	MC-7	292,201.7	1,492,050.2	0.017	11,658	198
771	1830lv	65	30	MC-5	292,620.0	1,491,954.5	0.134	14,777	1,980
772	1820lv	15	35	MC-10	293,402.4	1,491,769.9	0.033	14,605	482
773	1820lv	20	10	MC-16	293,008.1	1,491,961.3	0.076	2,784	212
774	1820lv	42	20	M96-15	291,819.7	1,492,165.9	0.030	3,699	111
775	1820lv	48	20	M-27-68	291,896.0	1,492,160.6	0.077	2,800	216
776	1820lv	49	30	M96-17	291,921.1	1,492,077.7	0.086	10,826	931
777	1820lv	53	20	M96-16	291,868.3	1,492,169.5	0.043	1,123	48
778	1820lv	54	20	M96-24	292,329.9	1,492,090.2	0.017	5,653	96
779	1820lv	67	30	MC-7	292,202.5	1,492,054.8	0.018	10,966	197
780	1820lv	68	30	MC-5	292,620.8	1,491,959.1	0.021	13,722	288
781	1810lv	20	10	MC-16	293,009.1	1,491,965.9	0.017	2,694	46
782	1810lv	35	20	M96-15	291,819.7	1,492,167.7	0.049	3,023	148
783	1810lv	44	10	MM-1	291,910.0	1,492,201.3	0.023	4,522	104
784	1810lv	48	10	M96-24	292,329.9	1,492,095.9	0.023	4,476	103
785	1810lv	51	20	M-27-68	291,892.8	1,492,163.1	0.035	2,596	91
786	1810lv	52	20	M96-16	291,868.3	1,492,174.2	0.022	977	22
787	1810lv	61	30	M96-17	291,921.1	1,492,081.8	0.064	5,446	349
788	1810lv	65	30	MC-7	292,203.3	1,492,059.4	0.019	10,363	197
789	1810lv	66	30	MC-5	292,621.6	1,491,963.7	0.015	13,597	204
790	1800lv	19	90	MM-1	291,910.0	1,492,204.6	0.016	13,668	219
791	1800lv	25	30	MM-14	291,856.0	1,492,091.2	0.030	5,795	174
792	1800lv	33	20	M96-15	291,819.7	1,492,169.4	0.046	2,377	109
793	1800lv	59	20	M-27-68	291,889.7	1,492,165.7	0.115	2,563	295
794	1800lv	61	20	M96-16	291,868.3	1,492,178.8	0.107	746	80
795	1800lv	62	20	MC-5	292,622.5	1,491,968.3	0.023	6,957	160
796	1800lv	76	30	M96-17	291,921.1	1,492,085.8	0.114	5,782	659
797	1800lv	80	30	MC-7	292,204.1	1,492,064.0	0.017	10,164	173
798	1790lv	30	30	MM-14	291,857.2	1,492,095.7	0.018	5,056	91
799	1790lv	38	20	M96-15	291,819.7	1,492,171.2	0.046	1,666	77
800	1790lv	67	20	M-27-68	291,886.6	1,492,168.2	0.042	2,295	96
801	1790lv	68	20	M96-16	291,868.3	1,492,183.5	0.021	625	13
802	1790lv	71	20	MC-5	292,623.3	1,491,972.9	0.021	6,049	127
803	1790lv	73	30	M96-17	291,921.1	1,492,089.8	0.062	5,704	354
804	1780lv	24	30	MM-14	291,858.4	1,492,100.2	0.123	4,987	613
805	1780lv	34	20	M96-15	291,819.7	1,492,172.9	0.061	1,510	92
806	1780lv	64	10	M96-16	291,868.3	1,492,188.2	0.020	3,747	75
807	1780lv	66	20	M-27-68	291,883.4	1,492,170.7	0.020	2,740	55
808	1780lv	69	20	MC-7	292,205.7	1,492,073.2	0.019	3,604	69
809	1780lv	70	20	MC-5	292,624.1	1,491,977.5	0.078	6,407	500
810	1780lv	73	30	M96-17	291,921.1	1,492,093.9	0.023	5,710	131
811	1780lv	76	30	M96-23	292,024.5	1,492,075.2	0.031	4,279	133
812	1770lv	25	30	MM-14	291,859.2	1,492,103.2	0.077	4,706	362
813	1770lv	30	20	M96-15	291,819.7	1,492,174.7	0.026	2,323	60
814	1770lv	48	30	MC-6	292,391.0	1,491,991.5	0.021	3,833	81
815	1770lv	56	10	M-27-68	291,880.3	1,492,173.3	0.020	1,919	38
816	1770lv	57	10	M96-16	291,868.3	1,492,192.8	0.043	1,698	73

	A	B	C	D	E	F	G	H	I
817	1770lv	61	20	MC-7	292,206.5	1,492,077.8	0.022	3,883	85
818	1770lv	62	20	MC-5	292,624.9	1,491,982.1	0.030	6,648	199
819	1770lv	74	30	M96-23	292,024.5	1,492,080.1	0.028	4,258	119
820	1770lv	75	30	MC-3	292,750.0	1,491,937.5	0.032	6,071	194
821	1760lv	31	30	MC-6	292,391.8	1,491,995.8	0.020	9,066	181
822	1760lv	48	30	M96-17	291,921.1	1,492,102.0	0.026	10,104	263
823	1760lv	60	10	MC-7	292,207.3	1,492,082.4	0.029	4,486	130
824	1760lv	61	20	MC-1	292,103.1	1,492,102.8	0.022	1,967	43
825	1760lv	65	20	MC-5	292,625.7	1,491,986.6	0.048	6,620	318
826	1760lv	68	30	MC-4	292,825.7	1,491,918.7	0.036	1,443	52
827	1750lv	30	30	M96-17	291,921.1	1,492,106.0	0.016	9,963	159
828	1750lv	55	10	MC-7	292,208.2	1,492,087.0	0.033	3,517	116
829	1750lv	56	20	M-28-78	292,088.0	1,492,092.5	0.017	3,562	61
830	1750lv	61	20	MC-4	292,826.7	1,491,923.3	0.064	3,875	248
831	1740lv	10	20	MC-10	293,410.1	1,491,806.4	0.017	6,083	103
832	1740lv	51	30	MC-6	292,393.3	1,492,004.6	0.040	7,481	299
833	1740lv	61	20	M-28-78	292,088.0	1,492,094.6	0.027	3,781	102
834	1740lv	62	20	MC-3	292,755.2	1,491,950.5	0.030	3,557	107
835	1740lv	63	20	MC-4	292,827.6	1,491,927.9	0.106	3,211	340
836	1730lv	12	20	MC-10	293,411.1	1,491,811.0	0.020	5,683	114
837	1730lv	22	20	MC-6	292,394.1	1,492,009.0	0.025	5,549	139
838	1730lv	66	20	MC-3	292,756.9	1,491,954.8	0.021	3,520	74
839	1730lv	82	30	M96-23	292,024.5	1,492,099.6	0.026	6,729	175
840	1720lv	12	20	MC-10	293,412.1	1,491,815.5	0.015	5,830	87
841	1720lv	41	20	MC-6	292,394.9	1,492,013.4	0.055	5,942	327
842	1720lv	60	20	M96-23	292,024.5	1,492,104.5	0.016	2,303	37
843	1720lv	61	20	MC-3	292,758.7	1,491,959.2	0.028	4,395	123
844	1710lv	35	20	M96-17	291,921.1	1,492,122.2	0.015	1,564	24
845	1710lv	38	20	MC-6	292,395.7	1,492,017.8	0.032	6,137	196
846	1710lv	46	20	MC-8	292,991.2	1,491,895.7	0.021	3,421	72
847	1710lv	57	20	M96-23	292,024.5	1,492,109.3	0.015	2,473	37
848	1700lv	37	20	M96-17	291,921.1	1,492,126.2	0.028	1,399	39
849	1700lv	41	20	MC-6	292,396.4	1,492,022.2	0.027	5,786	156
850	1700lv	45	20	MC-8	292,992.1	1,491,900.3	0.015	2,845	43
851	1690lv	33	10	M96-17	291,921.1	1,492,130.2	0.034	1,241	42
852	1690lv	38	20	MC-6	292,397.2	1,492,026.5	0.023	6,136	141
853	1690lv	53	10	M96-23	292,024.5	1,492,119.1	0.015	1,498	23
854	1680lv	37	20	MC-6	292,398.0	1,492,030.9	0.019	6,340	120
855	1680lv	40	10	M96-17	291,921.1	1,492,134.3	0.024	1,407	34
856	1670lv	12	10	MC-9	293,215.2	1,491,861.4	0.020	4,361	87
857	1670lv	32	10	MC-6	292,398.7	1,492,035.3	0.016	3,702	59
858	1660lv	22	10	MC-9	293,215.9	1,491,864.9	0.037	3,404	126
859									
860						TOTALS	0.041	3,166,643	129,930

SURVEY 4-930827-4-0827 05-01-1996 2:08 PM Page 1
Reg. to: CARLTON-SHUMWAY-NIELSON & ASSOC.
File Name: C:\SIMPLCTY\SURVEYS\921.DAT

Job: DRILL HOLE LOCATION AND MINERAL SURVEY RETRACEMENT OF THE MOSS MINE LOCATED IN SECTION 19, T20N, R20W NOTES IN BOOK 89

By: JSC

Point	Direction	Distance	Northing	Easting	Elevation
List					
300			1492300.00000	293150.00000	0.00
1	M96-1		1492274.20538	291651.79679	2166.17
2	M96-2		1492264.60282	291652.07205	2165.63
3	M96-3		1492232.79014	291706.84267	2168.75
4	M96-4		1492179.51371	291656.60012	2153.05
5	M96-5		1492135.27576	291710.10976	2149.33
6	M96-6		1492314.29703	291608.65174	2166.87
7	M96-7		1492263.10306	291605.12307	2165.27
8	M96-8		1492272.91280	291552.37034	2166.45
9	M96-9		1492289.40680	291512.40421	2166.62
10	M96-10		1492104.93380	291641.69907	2164.43
11	M96-11		1492147.20106	291609.38550	2166.43
12	M96-12 SET PK		1492084.17630	291486.89010	2240.33
13	M96-13		1492218.43183	291458.45103	2179.83
14	M96-14		1492116.09834	291819.49318	2147.54
15	M96-15		1492108.26046	291819.73731	2146.82
16	M96-16		1492018.66637	291868.33163	2143.47
17	M96-17		1491948.16520	291921.06413	2140.64
18	M96-18		1492158.74645	291912.97415	2158.72
19	M96-19		1492132.06931	292114.23401	2147.94
20	M96-20		1492245.85788	292122.46801	2201.66
21	M96-21		1492248.53600	292067.15553	2204.00
22	M96-22		1492249.08816	292013.82207	2201.26
23	M96-23		1491901.87116	292024.46115	2135.37
24	M96-24		1491920.92328	292329.86670	2113.13
25	M96-25		1492047.50760	292335.74857	2131.43
26	M96-26		1491859.32956	292534.56979	2111.05
27	M96-27		1491966.68173	292530.23875	2129.56
28	M96-28 SET PK		1491792.35782	293104.40789	2092.89
29	M96-29		1491873.74169	293041.82805	2084.48
30	M96-30		1491875.11125	292939.63507	2088.03
31	CNTR MOSS MINE SHAFT		1492305.86085	291592.51548	2167.91
32	COR.2 KEYSTONE WEDGE MS4484		1492105.72975	291549.34986	2178.73
33	COR.4 KEYSTONE WEDGE MS 4484		1491726.50422	293119.43675	2092.23

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

MP-7

HOLE NO. M96-1 COORDINATES: ______ N, ______ E ELEV. ______

BEARING N00E (NORTH) CORE/RVC RVC (Bit face return) LOGGED BY JW KELLER

INCLINATION -45° HOLE SIZE 5½" STARTED 2-22-96 7:45 AM

LENGTH 123' DRILLER HACKWORTH (MIKE) COMPLETED 2-22-96 ?:50 AM

PAGE 1 OF 2 COMMENTS: ∡ of hole such that sample 0-5 actually 0-3, 5-10 actually 3-13, etc.

Actual	FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA) OPT	Au CN SOL	Ag (FA)
0-3'	0	5	Qz STK WX in Moss Porph	30	Lt. brn	Qz STKWX, Some pervasive silic. Qz lt. gry - wht. - dense	10	Qz	–	60%	.011		
3-13	5	10	Moss Porph + Qz STKWX	30	Lt Brn	" " ± CaCO3	5	Qz	–	100%	.008		
13-18	10	15	Moss PORPH - STKWX + MOSS VN	30 / 20	LT BRN WHT Qz	Incr. Dense wht - Buff Qz VN. Minor drusy Qz + CC.	15	Qz, Minor CC	–	100	.020		
18-23	15	20	MOSS VN - SOME Altered porph.	20	Wht - lt. gry brn Qz some PINK	Qz VN. Incr. Org + PNK FeOx.	65	Qz Fe CC	– (FeOx)	100	.030		
23-28	20	25	Moss VN - some alt. porph.	20	Pink - BRN Lt. tan [illegible]	Pink Coloration (Hem) Some Coarse drusy Qz.	75	Qz	– (FeOx)	100	.046		
28-33	25	30	"	20	Pink + BRN - WHT	Sl. incr. porph material (darker Brown)	65	Qz	– FeOx	100	.054		
33-38	30	35	MOSS VN	20	WHT - LT TAN	Qz VN - Coarse chips	95	Qz	– FeOx	100	.077		
38-43	35	40	MOSS VN	20	" " some LT GREEN	Less blky chips, sl. incr. porph inclusions	80	Qz	– FeOx	100	.096		
43-48	40	45	Moss VN	20	Wht - PINK to GRN	Blky, Qz VN, incr. hem. some drusy Qz MnOx spots.	90	Qz	– FeOx	100	.109		
48-53	45	50	Moss VN - Porph.	20	PINK + Wht + Lt Brn	Incr. pink FeOx; silfd Porph clasts in VN, MnOx spots.	75	Qz	– FeOx	100	.131		
53-58	50	55	"	20	"	As Above. Some drusy Qz (blockier). Small vugs MnOx	80	Qz	– FeOx	100	.097		
58-63	55	60	Moss VN	20	"	Blocky VN Qz, MnOx less silfd. porph, some local vugs, bright red hem.	90	Qz	FeOx	100	.074		
63-68	60	65	Moss PORPH (FOOTWALL)	10	Med grn - BRN	Qz decreased; Only weakly altered porph Qz vlts (wht)	7	Qz - CC	– FeOx (tr)	100	.055		
68-73	65	70	Moss PORPH (FW)	10	" "	Wht. Qz ± CC vlts in Moss Porph.	5	Qz - CC	– FeOx	100	.035		
73-78	70	75	" "	10	" "	" Chloritic alt. (prop. assemblage)	5	Qz - CC	– FeOx	100	.031		
78-83	75	80	" "	10	" "	Same as above. Green - Brn propylitized MP w/ 5-10% VLTS.	5-10	Qz - CC	–	100	.007		
83-88	80	85	" "	10	" "	As above; decr. VLTS	2-3	Qz - CC	–	100	.011		
88-93	85	90	" "	10	" "	" " (Fairly fresh looking)	3	Qz - CC	–	100	.008		
93-98	90	95	Moss Porph	90(?)	" "	Fresher, Very few vlts	1	Qz - CC	–	100	.007		
	95	100	" "	90	" "	As Above FeOx on frx	1-2	Qz	–	↓	.005		

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-1

PAGE 2 **OF** 2

	FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
103-108	100	105	Moss Porphyry	90	Med. grn-Brn	Wk-Mod. propylitic alteration. ± Qz VLT.	<1	Qz-cc	-	100			
108-113	105	110	" "	"	"	" "	<1	-	-	100			
113-118	110	115	" "	"	"	" "	<1	-	-	100			
118-123	115	120	" "	90	" Turning grey	Fresh looking Moss Porphyry. Mnr VLTs	<1	Qz	-	100			
			TD = 123'										

MP-8

DRILL HOLE LOG

ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-2 **COORDINATES:** ____ N, ____ E **ELEV.** ____
BEARING Vertical **CORE/RVC** RC (BIT FACE) **LOGGED BY** J. Keller
INCLINATION – **HOLE SIZE** ____ **STARTED** 2-22-96 10:10 AM
LENGTH 250' **DRILLER** MIKE (HackWORTH **COMPLETED** 2-22-96 3:00 PM
PAGE 1 **OF** 3 **COMMENTS:** 20'-65' occ. Metal pieces from casing weld in cuttings. This hole cuts VN H.W. near redox boundary →

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	StKWX IN Moss PORPHYRY (HW)	30	LT BRN + WHT(Qz)	Silicification of porphyry w/ abund. Qz VLTS	20	Qz	–	40%	.021		
5	10	RUBBLE ↕ --- " - 8' - " --- STKWX IN Moss PORPH.	30	"	BIKY - FRACTURED. As above SiO2	25	Qz	–	80%	.033		
10	15	" "	30	"	Finer chips, less blky.	20	Qz-cc	–	100%	.048		
15	20	" "	30	" Tz purple	Tz amethyst Qz (drusy). Fractured. Some caving of rod change	30	Qz-cc	–	100	.042		
20	25	STOCKWORKS IN ALTERED MOSS PORPHYRY. SULFIDE PROB. CONTAM.	30	LT BRN changing To GRN-GRY	Silicification + Sericite, Qz-cc VNS. SULFIDE Dissem. in porph locally	25	Qz-cc	Local 2-3% (CONTAM)	100	.030		
25	30	Qz StKWX in Moss PORPH.	30	Lt BRN	Decr. Qz VLTS, Sl. incr. FeOx. No contam	10	Qz	– FeOx	100	.025		
30	35	" "	30	LT BRN-Gry	Incr. Qz VLTS, Tz drusy Amethestine qz. Decr. FeOx	30	Qz-cc	– WK FeOx	100	.053		
35	40	" "	30	LT gry-BRN, Some grn	Decr. Qz VLTS, otherwise AA	15	Qz, Tz cc	– wk FeOx	100	.008		
40	45	" "	30	"	Tz Amethyst	25	Qz-cc?	– wk FeOx	100	.049		
45	50	" "	30	"	No amethyst noted. Decr. Veining	15	Qz-cc?	– WK FeOx	100	.014		
50	55	" "	30	ORG-BRN (FeOx)	Much incr. FeOx (diss) Banded Qz VLTS w/ Tz Amethyst. SOFT-	15	Qz-cc?	– str FeOx	100	.006		
55	60	" " – FAULT – " "	30 / 30	ORG-BRN	As above but <5% TAN-ORG CLAY. SOFT	10	Qz-cc	– STR FeOx	100	.005		
60	65	Qz StKWX IN Moss PORPH	30	LT. GRN-BrN	OUT OF FLT ZONE. Harder. Silfd/StKwx Ser.	15	Qz-cc?	– Mod FeOx	100	.019		
65	70	" "	30	"	" "	20	Qz-cc?	– wk FeOx	100	.014		
70	75	" "	30	"	" (a little fractured-blky)	25	Qz-cc?	– wk FeOx	100	.008		
75	80	" "	30	"	" " Decr. Qz VLTS. xlnce	10	Qz-cc	– wk FeOx	100	.013		
80	85	" "	30	" to Org-brn	" " SL. INCR. FeOx (diss)	7	Qz-cc	– Loc. Mod FeOx	100	.012		
85	90	" "	30	Lt. brn + gry brn	Decr. FeOx, 3-5 mm drusy VLTS.	10	Qz-cc	– wk FeOx	100	.032		
90	95	" "	30	" but grn-gry where unox	Redox boundary beginning. Local diss. XLN Py to .5 mm. Chlorite.	15	Qz-cc	<1% Py wk FeOx	100	.016		
95	100	" "	30	Grn-gry/ GRN-BRN	60% unoxidized 40% ox. Decr. Qz, incr cc	5	Qz-cc	Tz Py wk FeOx	100	.017		

REDOX

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-2

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	STKWX in M. Porph.	30	GRN GRY + WHT	Silicif. + Qz STKWX, Chlor., Ser., Diss Py, Ox now on frx only	20	Qz + cc?	.5% Py (diss)	GOOD	.055		
	110	Moss VN	20	WHT-LT BRN	80% WHT, Dense Qz + minor Cc VN. VN OXIDIZED.	80	Qz-Cc.	— Oxidized Loc. str FeOx	↓	.160		
	115	"	20	WHT-LT BRN + LT BLU-gry	Qz VN. 30% altered Porph. inclusions which are partially oxidized	70	Qz-Cc	Tr Py loc. FeOx		.039		
	120	"	20	WHT-BLU GRN	Almost completely unoxidized VN + Silfd Porph, Ser/ some seric./Mariposite or chlor	85	Qz-cc(?)	Tr Py FeOx decr.		.025		
	125	" incr. Oxide	20	LT BRN - WHT	Decr. % VN compared to silfd. PORPH	60	Qz-Cc.	Tr Py, incr. FeOx (mod)		.093		
	130	"decr Ox."	20	WHT	Almost all VN material * Py. only diss in altered porph - NOT VN	95	Qz-cc(?)	Tr Py (diss in Porph) V. wk FeOx		.095		
	133	" "	20	WHT + LT GRN-GRY	FeOx on frx Only. Porph silfd/ser. (grn gry, tr Py)	85	Qz-cc(?)	Tr Py Tr FeOx		.055		
	140	" " 138' FAULT	20	Lt gry - WHT	VN BXD, resealed w/ SiO2, Local frx py, Poss gouge (flt?)	50	Qz-Cc	Tr Py (Tr-1%)		.008		
	145	Moss PORPHYRY	90	LT GRN-GRY	SOFT, clayey due to proxim. to fault.	—		<1% Py				
	150	" "	90	"	" "	—		<1% Py				
150	155	" "	90	"	Gradually getting more competent	—		<1%				
	160	" "	90	"	" "	—		<1%				
	165	" "	90	"	Local clots of Py cubes to 0.5 mm. Prop alt.	—		1% Py		.015		
	170	" "	90	"		Tr	Qz	<1%				
	175	" "	90	"	Minor WHT Qz VLTS & clay	3%	Qz	Tr				
	180	" "	90	" PINK-GY	Fresher/harder Material (still fairly soft) some biotite unaltered.	1%	Qz	Tr				
	185	" "	90	"	Tr FLUORITE XLS Otherwise as above	Ø		Tr				
	190	" "		"	Mottled green specks, local pink color	—		Tr		.019		
	195	" "		"	" "	—		Tr				
	200	" "		LT gry, local grn gry	Poss. incr. silicif. & ser. residual biotite flecks not present	Tr	Qz	Diss + Frx Py 1%				
	205	" "		Med grn gry + PINK	Fresher looking/some biotite (most biotite still chloritized)	—		Tr				
	210	" "		"	" " "	—		Tr				
	215	" "		PINK Gry	Fresher yet. Fresh biotite common	—		—				
215	220	" "		"	" "	—		—				

Red

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-2

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
220	225	~~#~~ Moss Porphyry	90	Med Pink-Gry	WK propylitic alt. along 1-3 mm qz-chlor stringers, otherwise fresh	<1%	Qz chlor	-	100			
	230	" "	"	"	As Above	<1%	Qz	-	100			
	235	" "	"	Pink gry + grn gry	incr. propylitic alt - Qz vLts, Tr Fluorite	2-3	Qz	Tr Py	100			
	240	" "	"	"	Decr. VLTS & alt. Quite fresh	-	-	-	100			
	245	" "	"	Pink-gry	" " Biotite Mostly Fresh	-	-	-	100			
	250	" "	"	"	As Above	-	-	-	100			
		TD = 250										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

MP-14

HOLE NO. M96-3 COORDINATES: ____ N, ____ E ELEV. ____
BEARING Vert CORE/RVC RC (Bit face sample) LOGGED BY J Keller
INCLINATION Vert. HOLE SIZE ____ STARTED 2-22-96 3:55 pm
LENGTH 300' DRILLER Mike (Hackworth) COMPLETED 2-23-96 11:25 AM
PAGE 1 OF 3 COMMENTS: Hit workings 206-213! Drilled to 120' 2-22
X-sxn on back for Big Fault true dip. Fault below workings cut off Moss vn

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Moss Porphyry w/ qz stkwk.	30 or 35	LT-Med green-BRN. Local org-Brn	WK silicification near narrow qz VLTS. 15% Massive wht. Qz (some fresh biot.)	15%	Qz + CC	— WK FeOx	70%	.006		
5	10	" "	30 or 35	"	As Above; qz locally drusy & clear. Generally wht.	20%	Qz + cc	— WK FeOx	100%	.019		
10	15	Moss Porphyry	90	"	Almost no qz veining. WK alt. & FeOx	1%	[illegible]	— WK FeOx	100%			
15	20	" "	90	"	Same as above	1-2%	Qz-cc	— Locally Str. FeOx	100%			
20	25	" "	90	"	Same as above (± Jarosite): gradually incr. VLTS.	2-3	Qz-cc	— Local mod FeOx	100%			
25	30	" "	90	"	As Above	2-3%	Qz-cc	— Mod FeOx	99%			
30	35	" "	90	ORG BRN	Str dis FeOx staining, some of which is red hematite, otherwise as Above	2%	Qz-cc	— STR FeOx	100			
35	40	" "	90	ORG BRN + GRY BRN	Diminished FeOx, Still weakly altered Moss Porph w/ minor VLTS	2%	Qz-cc	— Mod FeOx	100			
40	45	" "	90	Org Brn + 20% LT gry	As Above + 20% Lt gry (silfd?) chips. Very little qz vn.	<1%	?	— Local Str FeOx	100%			
45	50	STKWK IN MOSS PORPHYRY	30 or 35	ORG BRN + 40% WHT-LT GRY	40% WHT-LT GRY QZ VN W/ SILFD PORPH ADJACENT	40%	Qz Minor CC	Local STR FeOx	100	.074		
50	55	" "	30 or 35	ORG BRN WHT, Lt gy	As above but decr. qz %. Qz XLN, crisp contacts	20%	Qz	— Loc. STR FeOx	100	.020		
55	60	" "	"	"	Drusy qz VLTS Banded, vuggy	25%	Qz	— Loc. FeOx	100	.006		
60	65	" "	30	ORG-Gry BRN + WHT-GRY	Silicification of porphyry increasing - Numerous gry qz stringers. Larger drusy wht veinlets	20%	Qz	— Local FeOx	100	.012		
65	70	" "	30	WHT-Gry + org BRN	Strong veining & Lt gry silicif. of porph. Removes mineral texture. Drusy qz common still	60%	Qz	Local Mod FeOx	100	.061		
70	75	" "	30	Red Org + WHT-GRY	Decr. SiO2 but local diss. hem. STKWK structure visible	20%	Qz	Local STR hem FeOx	100	.010		
75	80	" "	30	LT BRN GRY + WHT	Out of hem. zone quickly. Min. texture more visible. Drusy qz still prevalent.	15%	Qz	— WK FeOx	100	.015		
80	85	" "	30	"	As above. FeOx pseudos. aft py noted w/ hem stain rims	15%	Qz	WK FeOx (Pseudos)	100	.010		
85	90	" "	30	" + org BRN	Drusy qz VLTS common WK silicif. of porph (as above)	20%	Qz	— Local incr. FeOx	100	.018		
90	95	" "	30	"	As above	15%	Qz	Local mod FeOx	100	.005		
95	100	" "	30	Lt/Med Brn gry	Dec. FeOx. Drusy qz continues	15%	Qz	WK FeOx	100	.010		

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M 96-3

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) An (FA)	An CN SOL	Ag (FA)
100	105	Qz stkwx in Moss Porphyry	30	Lt-med brn gry loc. grngy	Drusy qz vlts (wht-lt gry) w/ wk silicif. of porphyry	10	Qz	— local Mod FeOx	100	.014		
	110	" "	30	"	As Above	10	Qz	"	100	.010		
	115	" "	30	"	Incr. Qz - Drusy x milky wht.	20	Qz	"	100	.007		
	120	" "	30	BRN Gry + Org BRN	Decr. Qz again, inc. local FeOx	15	Qz	— local str FeOx	100	.011		
	125	" " - FAULT -	30 FAULT	" "	5-10% Buff-org clay (fault?).	20	Qz	"	100	.037		
125	130	Qz stkwx in Moss Porphyry	30	Lt Brn Gry	Incr. silicif. of M.P	25	Qz	— wk FeOx	100	.010		
	135	" "	30	"	As Above	30	Qz-cc	wk FeOx	100	.016		
	140	" "	30	" + WHT	WHT xln Qz incr., also silicif.	50	Qz-cc	— wk FeOx	100	.029		
	145	" "	30	"	Sl. incr. % cc vlts. Local large qz druses.	40	Qz-cc	— wk FeOx	100	.017		
	150	" "	30	" Some Org-Brn	Massive wht. xln qz ?. Incr. FeOx	50	Qz-cc	— Mod FeOx	100	.036		
150	155	" "	30	Org Brn-Gry	Incr. FeOx + MnOx, less Qz	15	Qz-cc	— Mod-Str FeOx	100	.011		
	160	MOSS VEIN	20	Many	Reddish + greenish Qz - Black + red FeOx chunks - JUICY	60	Qz-cc	— STR FeOx *	100	.073		
	165	" "	20	Grey, Black, red, wht	Local jarosite - Decr. Qz vn material, Local clay (fault?)	40	Qz-cc	— STR FeOx *	100	.042		
	170	" "	20	Grn Gry Red-brn blk	Tr Amethyst - green + pink qz. Sulfide appears	50	Qz-cc-fluorite	< 1% Py STR local FeOx	100	.082		
170	175	" "	20	LT Gry wht	FeOx only frx non. VN Qz + silfd MP ~~Amethyst~~ present	45	Qz-cc	< 1% Py Tr FeOx	100	.040		
	180	" "	20	Lt Grn Gry + Wht	Massive wht xln qz incr. Minor amethyst.	55	Qz-cc	< 1% Py	100	.198		
	185	" " ?	20 ?	Lt-mod grn gy	Decr. qz & silicif. of MP	30	Qz-minor cc	Tr Py	100	.014		
	190	" " ?	20 ?	Med-Dk GRN + WHT	STR CHLORITE ALT. Large wht massive qz chips.	45	Qz	Tr Py	100	.044		
	195	" "	20	WHT-Lt GN	90% MASSIVE WHT XLN QZ.	90	Qz-Minor cc	Tr	100	.040		
195	200	" "	20	WHT LT grn gy	Qz vn, local chlor, Tr GREY Qz	70	Qz-minor cc	Tr	100	.048		
	205	" "	20	"	" "	80	"	Tr	100	.061		
	210	WORKINGS 207-213		"	HIT WORKINGS ±4' VOID, LITTLE SAMPLE Large CHUNKS.	40	Qz	Tr	15	.081		
	215	FAULT	FAULT	GRN GY PINK	20% gray Fault gouge clay. Decr. Qz chips	20	Qz	<1%	50	.026		
215	220	Moss Porphyry	[illegible]	GRN GRY	5% Qz vlts ONLY.	5	[illegible]	<1%	[illegible]	[illegible]		

WATER IN HOLE

DRILL WET ↓

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-3

DRILLING WEST — 2-23 9:45 am — Repair head

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
220	225	Moss Porphyry	90	Grn, Pink gry	Chloritization of biotite. Feldsp. fresh. Looks Barren.	1-2	Qz	Tr	100	.004		
	230	" "	"	"	" " No VLTS	–	–	Tr	100			
	235	" "	"	"	Incr. WHT VLTS, otherwise as above	2-3	Qz-CC	Tr	100			
	240	" "	"	"	As above, decr. VLTS. Tr Fluorite	1-2	Qz CC	Tr	100			
	245	" "	90	"	As Above Tr contam.	1-2	Qz-CC	<1%	100			
245	250	" "	90	" (darker)	Incr. py clots (diss + frx), otherwise same.	<1	Qz	1%	100			
	255	" "	90	"	Fresh looking Porphyry weak propylitic alt.	–	–	<1%	100			
	260	" "	90	"	" "	–	–	<1%	100			
	265	" "	90	"	" "	–	–	<1%	100			
	270	" "	90	"	" "	–	–	Tr	100			
270	275	" "	90	"	Plag. + Biot → Chlorite (partial)	–	–	Tr	100			
	280	" "	90	"	" "	–	–	Tr	100			
	285	" "	"	"	" "	–	–	Tr	100			
	290	" "	"	"	" "	–	–	Tr	100			
	295	" "	"	"	" "	–	–	Tr	100			
295	300	" "	"	"	" "	–	–	Tr	100			
		TD = 300'										

DRILL HOLE LOG
ADDWEST MINERALS, INC. **MOSS PROJECT, ARIZONA**

MP-9

HOLE NO. M96-4 COORDINATES: ________ N, ________ E ELEV. ________
BEARING Vert CORE/RVC RC (BIT FACE SMPL) LOGGED BY J. Keller
INCLINATION Vert HOLE SIZE ________ STARTED 2-23-96 1:00 PM
LENGTH 300' DRILLER Mike (Hackworth) COMPLETED 2-24-96 8:55 AM
PAGE 1 OF 3 COMMENTS: FAULT 53'-56' (BLIND BOY) 2/23 footage = 420
Why is rock Oxidized so deep in this hole? Where's the vein?

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	DUMP RUBBLE - ROAD RUBBLE	?	Varied BROWN-GRY	LOTS OF MOSS VEIN MATERIAL IN RUBBLE				20	.023		
5	10	" " STKWX ZONE	" 30	"	" " Qz VLTS & VNS, FeOx				30	.030		
10	15	STKWX IN MOSS PORPHYRY (H. Wall)	30	ORG-BRN	Silicified Moss Porph w/ numerous qz VNS & VLTS. Stg Limonite + Hem.	20%	Qz	STR FeOx	90	.012		
15	20	" "	30	GRY-BRN (Light)	As Above, but much decreased FeOx.	20%	Qz-Minor CC	WK FeOx	90	.013		
20	25	" "	30	"	Fractured, blky, poss. 5% contam. from setting casing; Qz VLTS locally drusy	15%	Qz-CC	WK FeOx	100%	.010		
25	30	" "	30	"	No blocky chunks - No CONTAM. Silfd. Moss porphyry, VLTS	10%	Qz-CC	WK FeOx	"	.021		
30	35	" "	30	"	" "	10%	Qz-CC	WK FeOx	"	.012		
35	40	" "	30	"	" "	15%	Qz-CC	WK-Mod FeOx	"	.029		
40	45	" "	30	"	" "	10%	Qz-CC	WK FeOx	"	.026		
45	50	" "	30	" + WHT	Incr. WHT XLN Qz, otherwise AA	25%	Qz-WK CC	WK FeOx	"	.021		
50	55	FAULT ZONE GOUGE + RK as Above	30 FAULT	TAN-ORG + GRY BRN	30% TAN ORG GOUGE	15%	Qz	Mod FeOx	"	.014		
55	60	15% GOUGE STKWX ZONE in MP.	30	GRY-BRN + TAN Org	Decreased gouge. Into Silicified M.P. STKWX zone again	20%	Qz	Mod FeOx	"	.010		
60	65	STKWX ZONE in Moss Porphyry	30	Gry-BRN	Silicification (mod) Qz VLTS (some drusy)	20%	Qz	WK FeOx	"			
65	70	" "	30	"	As Above	20%	Qz	WK FeOx	"			
70	75	" "	30	"	As Above	20%	Qz-Minor CC	WK FeOx	"	.016		
75	80	" "	30	WHT + BRN-GRY	MUCH INCREASED WHT XLN Qz VN MATERIAL LOOKS "CLEAN"	65%	Qz-MINOR CC	WK FeOx	"	.010		
80	85	" "	30	GRY-BRN	Decr. Qz. PORPH still silfd.	10%	Qz-CC	WK FeOx	"	.010		
85	90	" "	30	"	As Above NOTE: Qz VLTS cut by LATER CC VLTS.	5-10%	Qz + CC	WK FeOx	"	.		
90	95	" "	30	" + WHT	Incr. Qz VLTS (Local drusy)	35%	(Qz)-CC	WK FeOx (local mod)	"	.011		
95	100	" "	30	GRY-BRN	Decr. VLTS. RK slightly less silfd.	25%	Qz-CC	WK FeOx	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-4

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	StKwx Zone in Moss Porphyry	30	Gry Brn w/ Org brn	WK Silicification - Carbonate Vuggy amber calcite Vlts	10%	Qz + cc	Mod FeOx	100	.011		
	110	" "	30	BRN-GRY	Decr. Calcite, incr. Qz	20%	Qz - minor cc	wK FeOx	100			
	115	" "	30	"	Decr. VLTS. Fractured, Incr. FeOx on Frx	5%	Qz - cc	Mod FeOx	100			
	120	" "	30	GRY - BRN	Same as above	10%	Qz - cc	Mod FeOx	100			
120	125	LOW "GRADE" ZONE?	30 or 35?	"	Alteration - Silicif. appears to be decreasing. LESS VLTS.	5%	Qz	WK FeOx	100			
	130	" "	30	"	INCR. VEINING & Silicif. again	20%	Qz Minor cc	Tr FeOx	100			
	135	" "	30	"	" "	25	Qz	Tr FeOx	100			
	140	" "	30	"	" "	15%	Qz - Minor cc	Tr FeOx	100			
	145	" "	30	BRN - GRY	Increased silicif. of Porphyry. Not much vn qz	10%	Qz	WK FeOx	100			
145	150	" "	30	"	As above Mainly, but tr clay	15%	Qz	Localized STR FeOx	100	.017		
	155	- POSS FAULT - " "	30	"	Local Tan-Org clay (fault?) Mainly wk-mod silfd. porph.	10	Qz	Local Mod FeOx	100	.010		
	160	STKWX ZONE in PORPH	30	GRY - BRN	Qz VLTS/silicif. somewhat decreased.	5-10	Qz	WK dis FeOx	100			
	165	BEGIN DRILLING w/ H₂O (No BLOW-BY) MOSS PORPHYRY	90	BRN Gry to GN GY	Becoming less Oxidized. Decr. alteration & VLTS Chlorite present	3	Qz	WK FeOx	100			
	170	Moss Porphyry w/ Qz STKWX	30	GY BRN to GN GY	Somewhat incr. silicif. & VLTS again.	5-8%	Qz	Local Mod FeOx	100			
170	175	" "	30	GN GY to GY BRN	As above. Narrow Vlts have halos of FeOx & Silicif. outward.	5-10%	Qz	"	100			
	180	Moss "Vein" (Replacement)	20	"	Increased Silicif. & Qz VLTS.	20%	Qz	"	100			
	185	Moss "Vein"	20	"	As Above	15%	Qz	"	100			
	190	Moss "Vein"	20	GRY BRN	Strong Silicification Decr. chlorite	25%	Qz	"	100	.011		
	195	"Moss Vein"	20/90	Greenish Gry - BRN	Mod. silicif. but less qtz VNLTS.	10%	Qz	WK FeOx	100			
195	200	-	90	" (incr. GRN)	WK - mod (localized) silicif. Little veining	5%	Qz	WK FeOx	100			
	205	" "	90	"	" " Chloritic alt. of biot/hbld	3%	Qz	"	"			
	210	" "	90	Olive grn - GRN-gry	Incr. Chlorite - Decr. SiO₂, Basically A.A.	3%	Qz	Local Mod FeOx	"			
	215	" "	90	"	As Above	1%	Qz	"	"			
	220	" "	90	"	As above Vlts locally drusy.	1%	Qz	"	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

HOLE NO. M96-4

MOSS PROJECT, ARIZONA

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
220	225	Moss Porphyry + Dike (?), dense, dk grn, f.g.	90 + ?	DK grn to gry grn local pink	Chloritic alt, local wk-mod silicif, a few small drusy qz vlts	1%	Qz	wk-mod FeOx.	100			
	230	Moss Porphyry	90	Lt grn-gry	Chloritic alteration. FeOx on frx, diss Py.	Tr	Qz	< .5% py Frx FeOx	100			
	235	" "	90	Lt-med grn + Pink gry	As above; local zones of incr. diss py. DK gry	-	-	.5% Py ⇒ Frx FeOx	100	.010		
	240	" "	90	Grn Gry Pink gry Lt brn	As above. Tr clear xln calcite	Tr	CC	< .5 Py ox frx	100			
	245	" "	90	"	As Above: still part ox.	Tr	CC	< .5 Py Frx FeOx	100			
245	250	" "	90	"	As above. Fractured, Minor clear qz	<1%	Qz	Tr Local FeOx	100			
	255	" "	90	DK GN GY to PNK GY	Much less oxidation. Hard- less frx Propylitic alt. decreasing	—	—	< .5% Tr FeOx only	"			
	260	" "	90	"	As above. Barren	-	-	< .5% No ox	"			
	265	" "	90	"	" "	—	—	< .5% Py No ox	"			
	270	" "	90	Pink Gry	Homogeneous, fresh. Almost no chlor. alt.	-	-	Tr Py	"			
270	275	" "	90	Pnk Gry + Grn	Local propylitic alt.	-	-	Tr Py	"			
	280	" "	90	"	As above.	-	-	Tr Py	"			
	285	" "	90	"	As Above; Tr Oxide	-	-	Tr Py local FeOx	"			
	290	" "	90	"	As Above	-	-	Tr Py Tr Ox	"			
	295	" "	90	"	As Above: NOTE: Pink, fresh Moss Porph. has Magnetite (diss)	-	-	Tr Py Tr Ox	"			
295	300	" "	90	"	Propylitized has py - No mag As Above. Minor cc vlts	Tr	CC	Tr Py Tr Ox	"			

Rea

2/23
2/26

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

MP-13

HOLE NO. MP-13 M96-5 COORDINATES: ______ N, ______ E ELEV. ______
BEARING — CORE/RVC RC (Bit Face Sampl) LOGGED BY J. Keller
INCLINATION Vertical HOLE SIZE ______ STARTED 2/24/96 9:45 AM
LENGTH 340' DRILLER Mike (Hackworth) COMPLETED 2/24/96 6:15 PM
PAGE 1 OF 3 COMMENTS: NOTE DEEP oxidation. (320')

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	PAD FILL/COLLUVIUM to ≈ 8'										
5	10	— — — —	— —	— —	Org clay along bedrock boundary	— —	— —	— —				
10	15	Moss porphyry w/ Qz VLT STKWX	30	LT BRN	Partially silicified causing bleaching. Qz VLTS common, generally wht.-v. Lt gry, xln	15	Qz	— wk FeOx	100			
15	20	" "	30	"	LITTLE FeOx, local MnOx - As ABOVE; incr. Qz	25	Qz	"	100	.030		
20	25	" "	30	Lt Brn	As above. Qz locally drusy/vuggy.	25	Qz-cc	"	100	.022		
25	30	Qz VEIN	25	WHT - LT gry BRN	Dense, locally banded, wht, brn, green gry qz	85	Qz-cc	"	100	.059		
30	35	Moss PORPH. w/stkwx (fault gouge too)	35	LT-med gry BRN	Tr yellow clay; otherwise fairly fresh Moss Porph. w/ Qz VLTS	15	Qz-MNR CC	Mod FeOx	100	.023		
35	40	Moss Porphyry w/ a few VLTS	90	Med gry-BRN + Pink-brn	Darker (fresher) than above, fewer VLTS. Pink MP w/ Magnetite	5	Qz-MNR cc	— wk FeOx	100			
40	45	Moss Porphyry	90	"	WK-Mod Prop. alt.	Tr	Qz-cc	"	100			
45	50	Moss Porph. w/ Qz stkwx	35	Lt-med gry brn	Mod silicif., qz vlts again - Lighter color	10	Qz	"	100	.024		
50	55	" "	35	"	Decr. vlts & silicif.	5	Qz-cc	"	100	.007		
55	60	" "	35	"	Incr. drusy qz & silicif.	15	Qz-cc	"	100	.008		
60	65	" "	35	LT BRN-BUFF	Bleaching, poss due to wk argillic alt. fairly soft.	10	Qz-cc	Local MOD FeOx	100	.005		
65	70	" "	35	Lt-med gry brn	Decr. bleaching, but still present locally. WK silicif. Incr. VLTS	15	Qz-Mnr cc	— wk FeOx	100	.003		
70	75	" "	35	Lt BRN	Incr. bleaching/veining. Tr Amethyst	25	Qz-cc	— wk FeOx	100	.017		
75	80	" "	35	Lt-med BRN	Less bleached, otherwise AA.	15	Qz-cc	— wk FeOx	100			
80	85	" "	35	"	wk-Mod silicif/bleaching Little vn Qz	5	Qz-Mnr cc	— wk FeOx	100			
85	90	" "	35	"	Only wk silicif.	5	Qz-cc	— wk FeOx	100			
90	95	" "	35	"	As above	5	Qz-Mnr cc	— wk FeOx	100			
95	100	FAULT Clay gouge (30%)	10 FAULT	Gouge = Tan Org Rk = Lt BrN	70% as above 30% Fault gouge	15	Qz	wk-mod FeOx	100	.027		

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-5

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Moss Porphyry w/ Qz stkwx	35	Lt-Med gry brn w/ some Pink	Qz vlts increased below fault.	25	Qz	— wk-mod FeOx	100	.049		
105	110	" "	35	"	Decr. Qz vlts, incr. Local FeOx (org-brn)	10	Qz	— Locally str FeOx	100	.015		
110	115	" "	35	"	As above: drusy vlts cut weakly altered Porphyry. Tr clear xln cc	10	Qz-cc	— wk FeOx	100			
115	120	" "	35	Lt brn-gry - buff	Mod silicif/ bleaching. Much incr. veining	30	Qz-cc	— wk-mod FeOx limonite/pyrite	100	.013		
120	125	" "	35	"	Decr. silicif./Qz veining Coarse xln vuggy calcite	15	Qz-cc	— wk FeOx	100			
125	130	" "	35	Lt-med BN-GY + pink gy	As Above: weakly altered Moss Porph. w/ Qz + cc vlts. No coarse cc	15	Qz-cc	— wk FeOx	100	.012		
130	135	" "	35	"	Fractured, w/ FeOx coatings (limonitic) - Sl. incr veining	15-20	Qz-cc	— Loc. str FeOx	100	.012		
135	140	" "	35	"	As above. Dk brn-org FeOx on some vlt selvages.	15-20	Qz-cc	— Loc. str FeOx	100			
140	145	" "	35	" + gn gy	Basically as above; Qz-cc vlts now milky wht rather than grey-wht/clear	20	Qz-cc	— Loc. str FeOx	100			
145	150	" "	35	"	Grn color increasing vlts decr.	10	Qz-cc	"	100			
150	155	" "	35	"	" (less milky qtz)	10	Qz-cc	Loc. Mod FeOx (FRX)	100			
155	160	" "	35	"	Increased Qz-cc vlts, some vlts wht, some translucent gry. Porph not silicif.	20	Qz-cc	"	100			
160	165	DRILL WET ↓ " "	35	"	As above: Prop alt MP w/ vlts.	15	Qz-cc	"	100			
165	170	" "	35	GN BRN to BRN GY	Silicification (mod-str); dense. No incr. in vlts.	15-	Qz-cc	wk-mod FeOx	100			
170	175	" "	35	BRN Gry some GN BRN	Incr. Qz vlts. Silicif. decreasing. Incr. prop. alt.	25	Qz	"	100			
175	180	" "	35	"	AS ABOVE, sl. incr. silicification.	25-30	Qz	"	100			
180	185	" " Moss vn?	20? 35	LT GRY BRN	Stronger silicification & qz veining. Dense, grey brn, texture destroying.	40	Qz cc some drusy vuggy	— Local str FeOx	100			
185	190	" "	35/20?	"	As Above	50	Qz mnr cc	— Local Mod FeOx	100			
190	195	" "	35	LT Gry BRN to GRN BRN	Sl. decr. silicif. Chloritic chips w/ mineral texture returning	35	Qz-mnr cc	— "	100			
195	200	" "	35	Lt-Med GRN GRY & GRY BRN	Propylitic. Much decr. veining & silicif.	15	Qz-mnr cc	— wk FeOx	100			
200	205	" "	35	"	Sl. incr. silicif. & veining again.	20	Qz mnr cc	— wk FeOx	100			
205	210	" "	35	DK grn to BRN-GRN	Strong chloritic alt, diminishing silicif.	15	Qz-cc	— Local str FeOx on FRX	100	.012		
210	215	" "	35	BRN GRY-GRN	Silicification dominant again (Moderate)	20	Qz-mnr cc	— "	100			
215	220	" "	35	"	Tr Fluorite. Stronger silicification & veining	35	Qz-mnr cc	— mod FeOx	100			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-5

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Moss Porphyry w/ Qz STKWX	35	Greenish brown-gry	Variable silicification & chloritization. Drusy, xln qz vlts, FeOx	25	Qz-MNR CC	— Mod-str FeOx	100			
	230	" "	35	"	As Above	20	Qz-MNR CC	— Mod FeOx	100			
	235	" "	35	Med. grn-BRN	Decr. silicification (almost non-existent) Chloritized.	5	Qz	— Mod-loc. str FeOx	100			
	240	" "	35	"	As above. sil. only adj. to vlts	5	Qz	— " FeOx	100			
	245	" "	35	"	As above: chloritized MP w/Qz vlts, Diss + Frac-fill FeOx (hematite common)	5	Qz-Mnr cc	"	100			
245	250	" "	35	"	Mostly as above, but locally a little silicified	10	Qz-cc	"	100			
	255	" "	35	Lt gyBN + GRN BRN	Stronger silicification less chlorite. Lighter color	15	Qz	"	100			
	260	" "	35	Lt-Med gN BRN	Decr. Silicification, incr. chlorite. A little argillic alt. Decr. vlts.	5	Qz	— Mod FeOx	100			
	265	" "	35	"	As above, sl. incr. drusy qz vlts	10	Qz	"	100			
	270	" "	35	"	Silicif. & veining more intense again. A little lighter color	15-20%	Qz	"	100			
270	275	" "	35	Lt gry BRN to Lt GN GY	A little more silicified	20	Qz	wk-Mod FeOx	100			
	280	Moss VN (?)	20	"	STRONG SILICIFICATION Dense. VLTS remain about same	20	Qz	— "	100	.005		
	285	" "	20	Lt grn-BRN to Lt gry	Very strong Silicification & Qz veining. Drusy locally	50	Qz	WK FeOx	100	.003		
	290	" "	20	Lt-med gN-BN to lt gry BN	Strongly silicified, but sl. less than above; darker	30	Qz	WK FeOx	100	.002		
	295	" "	20	"	Variable silicification but abund. qz vn. Incr. Chlor. where not silic'd	60	Qz	WK FeOx	100	.007		
295	300	" " ?	20	Olive green	Moderately silicified, Chloritic, deen grn qtz (still drusy locally)	25	Qz	WK FeOx	100	.002		
	305	" " ?	20	Lt. olive green	Strongly silicified, dense, fairly homogeneous except for Qz vlts. TR Amethyst	15	Qz	WK FeOx	100	.004		
	310	" " ?) Extremely slow drillin' due to excess H2O	20	"	As above: Fractured-blocky	10	Qz	WK FeOx	100	.004		
	315	" - - Moss Porphyry (FW)	20 / 10	"	Variably silicified, becoming less so. Min. textures getting visible	15	Qz	WK-mod FeOx	100	.003		
	320	(FW) Moss Porphyry	10	Med. olive grn	Greatly diminished Silicification. Strong chlorite, VLTS cont.	10	Qz	WK FeOx ER	100	.004		
320	325	Moss Porphyry (fw)	10	BLU-GRN + PINK	Sharp redox boundary. No silicification. Local diss py (euhedral cubes, .2mm) ~~no silicified propyliticaln~~	2%	Qz-mnr cc	(1% Py)	100	.012		
	330	Moss Porphyry	90	"	As Above. Fresh & barren looking.	1%	wht clear qz	.5% Py	100			
	335	" "	90	Pink + med gygrn	Decreased propylitic alt (pink color more common). Py only in green rk. FRX	<1%	qz	<.5% py FeOx on FRX.	100			
	340	" "	90	"	As above. FeOx on blky frx.	<1%	qz	<.5% Py FeOx on Frx	100			

Moss VEIN (280–315)

Rec

T.D. = 340'

DRILL HOLE LOG

ADDWEST MINERALS, INC. **MOSS PROJECT, ARIZONA**

MP-4 (old)

HOLE NO. M96-6 **COORDINATES:** ____ N, ____ E **ELEV.** ____

BEARING Vert **CORE/RVC** RC (Bit Face) **LOGGED BY** J. Keller

INCLINATION Vert. **HOLE SIZE** 5¼" **STARTED** 2/25/96 8:45 AM

LENGTH 180' **DRILLER** Mike Adkins (Hackworth) **COMPLETED** 2/25/96 2:30 PM

PAGE 1 **OF** 2 **COMMENTS:** Poss X-SXN on BACK

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Moss Porphyry w/Qz stkwx (Hd)	30	gry-BRN	WK-Mod silicif., a few xln qz vlts. FeOx (org-brn) Chlorite alt.	5	qz	–	60	.017		
5	10	" " large chips. ~~getting into Moss Vein?~~	30	" Red BRN	20% BRN gy + red brn densely silicified chips, Incr. qz. Poss V.G. in red silica (or [illegible])	10	qz	Fe? Mod FeOx	70-80	.011		
10	15	MOSS PORPHYRY W/VLTS / WORKINGS	30	GRY BRN to GN-BN	PARTIALLY SILICIFIED.	5-10	Qz	– Mod FeOx	95 above working	.020		
15	20	WORKINGS/FILL	FILL	MANY	FILL or caved material INCLUDES 30-40% qz VN material, locally red-brn, hematitic	30-40	Qz-CC	Mod-str FeOx	20%	.073		
20	25	WORKINGS/FILL	FILL	"	BLOCKY " "	"	"	"	20%	.140		
25	30	? FILL ? ? Moss VN?	FILL 20/VN	WHT + Gry BRN Red hem	50% milky wht-yell Qz 50% Moderately silicified porph. PROB CONTAM	50%	Qz-Mnr CC	WK-MOD FeOx	30%	.051		
30	35	MOSS VN (?) (contam)	20	"	Many large fragments. Prob contam. WHT Qz VN (hem on frx-locally), WK silfd. Porphyry	40%	Qz-Mnr CC	WK-mod FeOx	30%	.060 NOT GOOD		
35	40	Moss VN (?) Tr charcoal from workings (Contam)	20	"	As Above		Qz-CC	WK-Mod FeOx	20%	.053 Samples		
40	45	Moss VN (NOT CONTAM)	20	WHT TAN + BRN	75% wht - lt tan Qz + CC GOOD Sample	75	Qz-CC	"	65%	.114		
45	50	" "	20	Lt gy BRN + wht-tan	Qz decreased. Porph. is only weakly silfd. Small chips	40	Qz-CC	"	90%	.040		
50	55	" "	20	"	As Above. Incr Qz + Calcite.	60	Qz CC	"	100	.023		
55	60	" "	20	WHT + BRN	Vein material clearly dominant.	75	Qz CC	"	100	.045		
60	65	" "	20	"	" "	80	Qz CC	"	100	.034		
65	70	" "	20	"	VN Material decreasing	50	Qz CC	"	100	.037		
70	75	" "	20	"	Incr VN again Some PINK Qz	70	Qz CC	"	100	.033		
75	80	" "	20	WHT	Vein	95	Qz CC	"	100	.042		
80	85	Moss Porphyry (FW)	20 / 10	WHT / Med BN GY Blu + GN	30-40% VN Material, FW. Porphyry propylitized Fe Py	35	Qz CC	Fe Py (diss) WK FeOx	100	.010		
85	90	" "	10	GN GY Blu-GN	Qz vlts, propylitic alt. RE DOX	10	Qz CC	≤.5% Py	100	.011		
90	95	Vein in FW	25	Org BRN + WHT	BACK INTO VN Material. Abundant FeOx. No sulfides	50	Qz CC	– STR. FeOx	"	.031		
95	100	VEIN in FW	25	WHT-Buff + Org BRN	May be Moss VN	80	Qz CC	Local str FeOx		.033		

Bit-F. Ham. Brok. dow.

Drill. Rego. RC a. X-ov

Dril. We

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-6

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Moss Porphyry (footwall)	10	gN gy to Org BRN	Local wk-Mod silicif., Propylitic dominant. diss py in propylitized rk	8	Qz-cc	.5% py Loc Str Ox	100	.014		
105	110	" "	10	Org BRN gN BN	Strong limonite Stain. Fractured; propylitic	3	Qz cc	Str. FeOx	100			
	115	FAULT? Narrow clay zn MOSS PORPH-FW	10	GN GY GN BN	Tr pink Org clay - FAULT? Decr. FeOx, incr. Qz	20	Qz cc	Tr Py MOD FeOx	100	.012		
	120	Moss Porphyry (FW)	10	GN GY	Much decr. FeOx. Chlorite + Py (propylitic) alt. Ox only on frx.	15	Qz cc	1% Py ox. on frx	100	.025		
120	125	" "	10	Org-BRN GN-BN	Incr. FeOx, much decreased vlts. Prop.	2	Qz cc	STR FeOx Tr Py	100			
	130	" "	10	GN-GY Org BN	FeOx mainly on frx. Chloritic alt. continues	8	Qz cc	.5% py wk-Mod FeOx	100			
	135	" "	10	GN-GY	Oxide almost totally gone now. Strong propylitic alt. continues	4	Qz cc	<.5% py	100			
	140	" "	10	GN-GY + Pink BN	" "	8	Qz cc	<.5% py	100			
	145	" "	10	" "	" "	7	cc Qz	<.5% py	"			
145	150	FAULT ZONE	50	GN GY WHT	Abundant GY clay, VLTs common, chlor. cont.	15	Qz cc	<.5% py	"	.012		
	155	FAULT ZONE	50	" "	Abundant GY clay " "	15	Qz cc	<.5% py	"	.023		
	160	Moss Porphyry	90	GN GY	Clay diminishing VLTS diminishing propylitic alt. continues	5	Qz cc	Tr py	"	.017		
	165	Moss Porphyry	90	" "	Much Decr. clay str. propylitic alt. FeOx on frx	3	Qz cc	<.5% py Local FeOx	"			
	170	Moss Porphyry	90	DK purple grey + gn gy	Propylitic alt. diminishing Fresh, DK Purple gry	1	Qz cc	Tr Py (magnetite)	"			
170	175	Moss Porphyry	90	DK purple gry	Fresh, "	—	—	— (Magnetite)	"			
175	180	Moss Porphyry	90	"	Fresh, "	—	—	— (magnetite)	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

MP-5

HOLE NO. M96-7 COORDINATES: ____ N, ____ E ELEV. ____
BEARING — CORE/RVC RC (regular) LOGGED BY J. Keller
INCLINATION -90° HOLE SIZE 5 1/2 STARTED 2/25/96 3:00 PM
LENGTH 200' DRILLER Mike Adkins (Hackworth) COMPLETED 2/26/96 9:15 AM
PAGE 1 OF 2 COMMENTS: Very cold, Rainy, & windy! Snow @ GOLD ROAD.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Pad Fill/Rubble	—		Small Sample				5%	.065		
5	10	" " to 9'							15%	.218		
10	15	Stkwk Zone in Moss Porphyry	30	Lt BRN to Buff	WK silicification/bleaching	5	Qz	Tr FeOx	60%	.041		
15	20	" "	30	Buff-Lt BRN	Mod - locally strong silicification + bleaching. Local drusy qz. Mgd.	15	Qz	Tr FeOx	75%	.074		
20	25	CONTAM. plugging	30	Varied	Generally as above, but CONTAM.	±10			20%	.072		
25	30	CONTAM! Plugging	30	"	" "	±10			20%	.179		
30	35	CONTAM! Wood from surface!	30	"	" "	±10			20%	.144		
35	40	Moss Vein	20	BUFF-Lt BRN, some DK RD BRN	ABUNDANT VN MATERIAL, inclusions, Silfd. Tmp.	60	Qz CC	Minor FeOx	Good	.056		
40	45	"	20	"	↓	50	"	"	↓	~~.298~~ .430		
45	50	"	20	"		60	"	"		.103		
50	55	"	20	"		60	"	"		.050 ~~[illegible]~~		
55	60	"	20	"		60	"	"		.058		
60	65	"	20	"		80	"	"		.046		
65	70	"	20	"		75	"	"		.021		
70	75	"	20	"		40	"	"		.010		
75	80	"	20	"		80	"	Minor FeOx		.020		
80	85	"	20	"	↓	80	"	Localized limonite FeOx		.009		
85	90	Tmp (footwall)	10	MD-DK GN BN	MD-DK GN BRN silfd TMP still present	10	Qz	~~Loc.~~ Mod FeOx		.017		
90	95	" "	10	GN ~~BN~~	Unsilicified, but a little clayey (arg. alt?) GOOD MIN. TXTR.	1	—	wk FeOx		.002		
95	100	" "	10	ORG BRN	Strong FeOx, fractured	2	Qz	STR FeOx	↓	.015		

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-7

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Moss Porphyry (FW?) (fault?)	10	Lt GN BN	A little clayey & bleached - FAULT ZONE?	1-2	Qz cc	– wk FeOx	±50, but rep.	.012		
105	110	" "	10	Mod gn BN to pinkish	Decr. clay. Fresher, good mineral texture. Looks barren.	1-2	Qz - cc	– Loc. mod FeOx	±50 blow-by			
110	115	" " (fault)	10 + 50	Grv GY + Pinkish	Local Grey + tan Org clay (gouge?). Decr. FeOx.	1-2	Qz cc	(Tr Py) wk FeOx	±50			
115	120	" (fault)	10 + 50	"	Gouge + clay alt. Shear zone	3-5	Qz - cc	(Tr Py) wk FeOx	60 (Good samples)			
120	125	Moss Porphyry	90	Pinkish BRN	~~Outer~~ wk argillic alt	1	Qz - cc	wk FeOx	↓			
125	130	Moss Porphyry	90	" + GRN	" , Fractured	1	Qz. cc	~~wk~~ FeOx on Frx	Good			
130	135	" "	90	"	" "	–	–	" "	↓	.011		
135	140	" "	90	MO-DK GN-BN + PNKish	Local silicification, but generally just fractured & propylitized. OX	–	–	– mod-str FeOx				
140	145	" "	90	PNK BN to GN BN	No local silicif., localized Prop. alt, fresh magnetite where pink. still a little clayey	–	–	– wk ~~frx~~ FeOx				
145	150	" "	90	"	Slight clayeyness diminishing getting harder. FeOx on frx.	–	–	– wk FeOx frx				
150	155	" "	90	"	A little pinker (fresher) harder. still fractured	–	–	– wk FeOx frx				
155	160	" "	90	" + Local org brn	5-10% limonitic ~~frx~~ chips (local hematite)	–	–	– Loc. str FeOx				
160	165	" "	90	Pink-BN + GRN	wk Propylitic alt. FeOx on fractures	–	–	– wk FeOx				
165	170	" "	90	" "	" "	–	–	– wk FeOx				
170	175	" "	90	" "	" "	–	–	– wk FeOx on FRX				
175	180	" "	90	" "	" "	–	–	" "				
180	185	" "	90	" "	" "	–	–	" "				
185	190	" "	90	" "	" "	–	–	" "				
190	195	" "	90	" "	" " Rather monotonous Rock	–	–	" "				
195	200	" "	90	" "	" "	–	–	" "	↓			
		TD = 200'										

Recb.

DRILL HOLE LOG
ADDWEST MINERALS, INC. MOSS PROJECT, ARIZONA

MP-3

HOLE NO. M96-8 COORDINATES: ____ N, ____ E ELEV. ____
BEARING Due North CORE/RVC RC (regular) LOGGED BY J Keller
INCLINATION -60° HOLE SIZE 5½ STARTED 2/26/96 10:00 AM
LENGTH 165' DRILLER Mike Adkins COMPLETED 2/26/96 12:25 PM
PAGE 1 OF 2 COMMENTS: Snowing

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Rubble (Dump)	–	Varied	Abundant Vein material, also barren M.P.	50	Qz-cc	–	30	.064		
5	10	Rubble (No Sample)	–	?	(No Sample)			–	–	–		
10	15	3+Kwx in Moss Porphyry	30	gn BN + org BN	Locally silicified, else propylitic	15-20%	Qz-cc	str FeOx	60	.005		
15	20	" "	30	Lt. BN + wht-gry	Moderately silicified & bleached, abund. dense xln qz	40	Qz-cc	Mod FeOx	80	.111		
20	25	" "	30	Buff-gry + Lt BRN	Mod-strong silicification. Bleached. Dense. Tr Amethyst	40.	Qz-cc	Mod FeOx	100	.031		
25	30	" " gradational	30	Buff-gry + Lt BRN	A few pervasively limonitic silicif. chips, otherwise bleached & silfd. as above	30	Qz-cc	Loc. STR FeOx	100	.023		
30	35	Moss VN (?)	20	Buff + Lt gry	Abund. dense qz + silfd. porphyry	60	Qz-cc	wk FeOx	100	.033		
35	40	Moss VN	20	" "	" "	80	Qz-cc	wk FeOx	100	.037		
40	45	Moss VN	20	" "	As above w/ some bxd qz w/ qz seal.	70	Qz cc	Mod FeOx	100	.030		
45	50	Moss VN	20	" " + Md Brn	Local BXD Qz as above, 15% Brown porph. chips	75	Qz-cc	wk FeOx	100	.019		
50	55	Moss VN	20	" "	VN & VN Bx(?) as above.	70	Qz-Mnr cc	wk FeOx	100	.044		
55	60	Moss VN	20	Buff-Lt gry	Decr. dk brn porph. chips Strong silicif. Dense.	75	Qz	wk-Mod FeOx	Good	.036		
60	65	Moss VN	20	Buff-Lt gry	A little clayey (flt?) V. str. silicification.	85	Qz	Loc. str FeOx	↓	.080		
65	70	Moss Porphyry (FW)	10	Greenish Brown	Clayey. Argillic alt. Poss. Fault. Very little Qz	5	Qz	wk FeOx	↓	.016		
70	75	" "	10	Md-dk brown & gry brn	Local dense dk brn-gy silicification, otherwise porphyry (a little clayey)	3	Qz	wk FeOx	↓	.005		
75	80	Moss Porph (FW) w/ VN	10	Reddish Brown to gy BRN	Incr. qz veining & local STRONG silicification. Hematite & limonite.	15	Qz-	STR FeOx	↓	.018		
80	85	Moss Porphyry (FW)	10	Med GN-BN to pinkish	Fresher looking, but a little clayey	Tr	Qz	wk FeOx	↓			
85	90	Moss Porphyry	90	" "	" "	–	–	V. weak FeOx	↓			
90	95	" "	90	" "	" "	–	–	" "	↓			
95	100	" "	90	" "	" "	–	–	" "	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-8

PAGE 2 **OF** 2

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Moss Porph + (fault?) les. fault	90 50	Olive Green	Mos clay gouge. Mnr Qz VLTs	1	Qz		Good			
	110	FAULT ZONE in M.P	50	LT GN GY	Slickensides seen in chips. [illegible]	–	–	FeOx on Frx	↓	.011		
	115	" "	50	"	Slicks/clay as above. Looks barren.	–	–	" "				
	120	" "	50	Many	Clay gouge (10%). sl. incr. Fe Ox	–	–	Local STR FeOx				
	123	Moss Porphyry	90	DK PINK	~~Decr.~~ No clay. DK PINK TMP	–	–	–				
125	130	" "	90	Lt pink to Olive gN	5% Silfd. gry (VN?) w/ 5% Py (diss & on frx), otherwise fresh M.P.	5(?)	Qz w/Py	.5% py in qz		.019		
	135	" "	90	Pink-grN	± 10% Silicified chips, some clean xln qz VLTS (Maybe VN)	10% (?)	Qz	Tr				
	140	" "	90	Med. PNK-gry	No silicification, but a few clean VLTs.	1%		–				
	145	" "	90	"	Fresh looking Moss Porphyry, No VLTs, FeOx on frx	–	–	–				
145	150	" "	90	"	As Above	<1%	CC	WK FeOx				
	155	" "	90	"	As above - quite fresh blky, frx w/ limonite	–	–	–				
	160	" "	90		" "	–	–	WK FeOx				
160	165	" "	90	Pink grey	Very fresh.	–	–	FeOx on Frx	↓			
		TD = 165'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-1)

HOLE NO. M96-9 COORDINATES: ______ N, ______ E ELEV. ______
BEARING Due N. CORE/RVC RC (Reverse) LOGGED BY J. Keller
INCLINATION -45° HOLE SIZE 5½ STARTED 2/26/96 1:00 PM
LENGTH 85' DRILLER Mike Adkins COMPLETED 2/26/96 2:30 pm
PAGE 1 OF 1 COMMENTS:
Had to drill 9' east of proposed spot.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Colluvial/Alluvial rubble	–	Variable	Mainly Tmp clasts ± 10-15% wht Qz	10-15	Qz	–	Poor	.010		
5	10	"	–	"	"			–	Poor	.029		
10	15	"	–	"	"				Poor			
15	20	"	–	"	"				Fair			
20	25	Moss VN	20	WHT LT BRN Org. BRN	WHT dense qz vn + local Org-BRN silicified Material. Some blky contam	35%	Qz	–	FAIR			
25	30	Moss VN	20	Buff-ltgry	strongly silicified (dense) Tr Amethyst. "Vein" here may be Tmp replacement	80	Qz	–	GOOD			
30	35	Moss VN	20	"	Totally silicified & bleached	95	Qz	–	↓			
35	40	Moss VN	20	"	As above, but 5-10% ORG Clay (FeOx-RICH)	95	Qz	–	↓			
40	45	" " / Tmp (Fw)	20 / 90	" / Md gN-BN	30% as above, else Tmp w/only local silicif.	30	Qz	–	↓			
45	50	Tmp (Fw)	10	" " Tan clay	clayey, a few narrow Silicif. zones. Arg alt. Some Hem-rich	10	Qz	–	↓			
50	55	Tmp (Fw)	10	"	Local str. clay alt. Rare silicification	3	Qz	–	↓			
55	60	Tmp (Fw)	10	Md-DK grN-BrN	A little clayey (wk-arg alt-pervasive) No silicification	Tr	Qz	STR FeOx	↓			
60	65	Tmp (Fw)	10	" " + Tan clay	Abundant tan clay. Str. argillic alt? or FLT.	–	–	–	↓			
65	70	Tmp (Moss Porphyry)	90	Md-dK gN BRN to Pinkish	Barren looking, a little clayey, chloritic. Minor frac-fill FeOx	–	–	–	↓			
70	75	Tmp	90	"	"	–	–	–	↓			
75	80	Tmp	90	"	" Tr Clean wht Calcite	Tr	CC	–	↓			
80	85	Tmp	90	"	"	–	–		↓			
85	90	TD = 85'										
90	95											
95	100											

DRILL HOLE LOG
ADDWEST MINERALS, INC.
MOSS PROJECT, ARIZONA

(MP-10)

HOLE NO. M96-10 COORDINATES: ____ N, ____ E ELEV. ____
BEARING — CORE/RVC RC (regular) LOGGED BY J. Keller
INCLINATION Vert HOLE SIZE 5 ½" STARTED 2/26/96 3:15 pm
LENGTH 435' DRILLER Mike Adkins COMPLETED 2/27/96 5:40 pm
PAGE 1 OF 4 COMMENTS: ZONE FROM 340-380 produced great quantities of H_2O. Very slow drilling below this zone, but no contam. Dump eroding/setting

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Dump Rubble	-		Abund. VN Material	60	Qz cc	—	poor	.018		
5	10	Tmp (Moss Porphyry) Hanging wall	35	Md-DK Pinkish BRN + Pink-GRN	Weak alteration, no mineralization SOME CONTAM from dump (10%)	±5% contam	Qz-cc	WK FeOx	fair			
10	15	" "	35	"	V. weak alteration, No mineralization Some contam from dump (10%)	±5% contam	Qz-cc	Tr FeOx	Fair			
15	20	" "	35	" + ORG BN	15% ORG BRN limonitic chips, otherwise same as above SOME contam from dump (10%)	±5% contam	Qz-cc	Loc. STR FeOx	Fair			
20	25	Qz VEIN + Tmp	25	Org BRN + DK PNK-GN BN	Dense (w/ occ. small vugs) Fe stained qz zone in Tmp. NO CONTAM - CASED	35%	Qz	Str FeOx	Good			
25	30	CALCITE VEIN + TmP	?	WHT + PNK BN	Clean XLN WHT Calcite vein. Only 3% Org-BN silfd. chips as above	65	CC	WK FeOx	↓	.011		
30	35	Tmp (HW.LG)	35	Md. PNK + greenish BN	Out of CC VN. TmP looks fairly fresh, w/ only wk propylitic alt. (deuteric)	10	CC	WK FeOx		.026		
35	40	" "	35	"	" " includes minor qz : cc VLTS	1	Qz-cc	WK FeOx (FRX)		.010		
40	45	" "	35	Pink + GN BN	Harder, fresher	1-2	Qz-cc	V. WK FeOx				
45	50	" "	35	"	as above	1-2	Qz-cc	"				
50	55	" "	35	"	A little clean cc + incr. FeOx	3	CC, Qz	Loc. Mod. FeOx		.017		
55	60	" "	35	Grn BRN Org-BRN Pink BN	15% dense silfd, incr. Qz veining + FeOx, clean calcite still present	5	Qz cc	Loc. mod FeOx				
60	65	" "	35	"	Coarse, drusy Qz VLT little alteration (away from Main system)	5	Qz-Mar cc	"				
65	70	" "	35	" incr pink + lt grn	Still a little coarse drusy qz, but diminished	1-2	Qz-cc	"				
70	75	" "	35	Grn BRN + Pnk BN	" "	1	Qz-cc	WK FeOx				
75	80	" "	35	"	VLTS Rare	<1	Qz-cc	V. WK FeOx				
80	85	" "	35	"	" (homogeneous)	<1	Qz-cc	"				
85	90	" "	35	"	" "	<1	Qz	"				
90	95	" "	35	"	Sl. incr. VLTS & FeOx	1	Qz-cc	WK FeOx				
95	100	" "	35	"	Local dense silicification (or is it aplite?)	1	Qz	WK FeOx	↓	.019		

end of day @ 100'

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-10

PAGE 2 **OF** 4

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
2/27/96 100	105	Tmp (Hanging wall "Lo-Grade" zone)	35	LT-md gn BN & Pink BN	Propylitic alteration, a few qz+cc VLTS	1	Qz cc	— WK FeOx	Good	.012		
105	110	" "	35	"	" "	<1	Qz cc	"	"			
110	115	" "	35	" +grn gry	Sl. incr. VLTS Decr. Oxidation (grn gry)	1	Qz cc	"	"	.011		
115	120	" "	35	"	Incr. wht calcite (clean) & FeOx	1-2	CC Qz	Mod FeOx	"	.011		
120	125	" "	35	Pinkish BRN	As above - No gngy, ie increased oxidation	1	cc qz	wk FeOx	"			
125	130	" "	35	"	3% limonitic chips. otherwise As Above	1	cc qz	Local STR FeOx	"	.011		
130	135	" "	35	"	Decr. Limonitic zones	1	cc qz	wk-mod FeOx	"			
135	140	" "	35	"	As above	1	cc qz	wk FeOx	"			
140	145	" "	35	PNK BN + GRN BN	A little softer, slightly clayey, 3% limonitic chips	1	Qz cc	Local STR FeOx	"			
145	150	" "	35	LT pnk BN-GN BRN	~~As Above~~ Decr. FeOx, a little more clay alteration +VLTS	3	Qz cc	wk FeOx	"			
150	155	"Qz VEIN"	25?	LT BN + PK BN GY	Strongly, densely silicified w/ sugary texture. 30% chips Tmp less altered	40?	Qz	wk FeOx	"			
155	160	Tmp (HW) + some VN Qz	30 (25)	LT-MD PK+GN BN	Clayey (alt, not gouge) + 20% vn & silfd Tmp as above	10	Qz MNR cc	Loc. STR FeOx				
160	165	Tmp - "Hi grade" zone of H.W. STKWX	30	"	"A little clayey, slightly bleached", Local FeOx-rich zones, variable VLTS	3	Qz-MNR cc	"				← OA w/ He
165	170	" "	30	"	" "	10	"	"				
170	175	" "	30	"	" "	5	"	wk-mod FeOx				
175	180	" "	30	"	" "	5	"	wk FeOx				
180	185	" "	30	"	" "	3	"	" "				
185	190	" "	30	LT. BN	Incr. clay & qz VLTS - Light	10	"	Loc str FeOx				
190	195	" "	30	"	Incr VLTS, still Clayey	15	"	"				
195	200	" "	30	~~LT~~-MD GN BN, + PK BN	Darker grn color common. Harder, fewer VLTS	3	"	wk-Mod FeOx				
200	205	" "	30	LT-MD GN BN	Incr. VLTS (some drusy Qz), FeOx, clay	10	Qz CC	Loc. STR FeOx				
205	210	" "	30	LT-MD gn BN	Fractured, decr. qz, a little clayey, incr. xln calcite	5	cc qz	"		.012		
210	215	" "	30	" "	WHT to clear XLN, locally drusy qz VLTS.	15	Qz cc	Mod FeOx		.042		
215	220	" "	30	" " + Blu-gn	Qz increasing. Druses common. Tr Amethyst	20	Qz CC	Tr Py Mod FeOx		.025		

Decreased oxidation locally. Incr. chlor

DRILL HOLE LOG
ADDWEST MINERALS, INC. | **MOSS PROJECT, ARIZONA**

HOLE NO. M96-10 |

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION -Redox-	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp (HW STKWX)	30	GY GN + PINK	Propylitic. Mag → Py Plag - BIOT → Chlor. Local FeOx HARDER	1	Qz cc	.5% Diss + FRX Py	GOOD			
	230	" "	30	"	" " Looks unmineralized.	1	Qz cc	<.5 Py Tr FeOx	"			
	235	" "	30	"	A little more drusy Qz VLTS + FeOx on Frx.	2	Qz cc	Tr Py Frx FeOx	"			
	240	" "	30	GN BN	Oxidized again Incr. VLTS, Some Silicif.	5	Qz	— Mod FeOx	"			
	245	Qz - Calcite VN (Moss?)	25	WHT-LT TAN + DKGN	Abund Qz-Calcite & Silicified Tmp. Also DK grn Tmp (NOT SILCD)(wall)	80	Qz cc	WK FeOx				
245	250	" " + Tmp inclusions	25	BN-gN + WHT	Decr. Veining & Silicif	50	Qz cc	Local STR FeOx				
	255	" "	25	" "	Veining diminishing	30	Qz cc	"				
	260	Tmp (H.W. ZONE)	30	BN GN	Out of vein, a few VLTS. Continue. Oxidized Propylitized	3	Qz cc	mod-str FeOx (lim+Hem)				
	265	TMP "	30	BLUISH GRN-GRY	Harder - v. little veining, unoxidized, except on frax.	<1	cc Qz	<.5% Py Tr FeOx		.010		
	270	Tmp "	30	"	As above, w/ increased Qz veinlets (xln)	2-4	Qz cc	<.5% Py Tr FeOx				
270	275	Tmp "	30	LT-med gn gy + PINK GY	Almost No OX. Harder. Getting fresher	<1	Qz	Tr Py		.020		
	280	Tmp "	30	"	" "	<1	Qz	Tr Py		.011		
	285	Tmp "	30	" + GN BN, GRBN	VLT zone encountered w/ Drusy Qz & FeOx, Minor silicif.	5	Qz	Tr Py Loc str FeOx				
	290	Tmp "	30	LT. MD GRY GRN + PINK	Hard & fresher again wk prop. alt. No Ox	-	-	Tr Py				
	295	Tmp "	30	"	As above, but incr. wht-clear xln qz	1-2	Qz	<.5% Py				
295	300	Tmp "	30	"	Decr. Qz., hard, wk Prop. alt.	1	Qz. cc	Tr Py				
	305	Tmp	90	"	As Above; No VLTS	-	-	Tr Py				
	310	Tmp	90	"	A little clean xln Qz. Generally As Above	1	Qz	Tr Py				
	315	Tmp	90	"	5% Dense sugary GN GY material. Probably aplite. but poss. Silicif. Hairline Qz VLTS	<1%	Qz	<.5% Py				
	320	Tmp	90	"	INCR Drusy xln Qz Py VLTS. Translucent	3%	Qz-cc	LOCAL Py-Rich zones (up to 5%, 1% total)				
320	325	Tmp	90	"	No drusy Qz. Tr dense grn-gry silfd chips w/ hairline Qz	Tr	Qz	Tr Py local 1%				
	330	Tmp	90	"	No Veinlets or Silfd material. Continued local propylitic alt	Tr	Qz	Tr Py				
	335	Tmp	90	" + Org-BN	Incr. FeOx (rare) Ox. assoc. w/ xln Qz VLTS	1	Qz	Tr Py				
	340	Tmp	90	" "	Local Oxidation Continues. Prop. alt continues	<1	Qz	Tr Py				

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-10

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
340	345	Tmp + Qz VN (4i - GRD HW)	25	BN GRN - ORG BN	Oxidized again, w/ drusy, XLN Qz	10	Qz	STR FeOx	Good			
345	350	" "	25	"	As Above - VN Hematitic FeOx + Lim.	25	Qz	STR FeOx	GOOD			
350	355	Tmp (HW)	30	GNGY + GN BRN	Oxide / Qz decreased. Py is common in altered halo adj to vlts.	3	Qz	1% Py Local str FeOx	GOOD			
355	360	Tmp + Qz VN	25	BN-GN + Org BN	Ox + Qz incr again drusy / vuggy	15	Qz	STR FeOx	"			
360	365	Tmp - Qz VN	25	GRN + ORG BN	About the same as above	~~15~~	Qz	MOD FeOx	"			
365	370	MOSS VEIN	20	Red, GRN, WHT ORG BRN	Chunky chips of drusy Qz, Hematite stain	25	Qz	STR FeOx	"			
370	375	very slow drilling - Lots of H2O MOSS VEIN	20	WHT-BUFF + GREEN + red	ABUNDANT DRUSY QZ. Hem. stain in alt. porph	60	QZ	Loc. STR FeOx	"			
375	380	MOSS VEIN	20	Variable Brown-Reddish-WHT	Tr AMETHYST Decreased drusy qz but strong lt. red-brown dense silicif. present	25	Qz	" " Hem + Lim.	"	.013		
380	385	Moss VN? (silicified Porph)	20	Lt. gry BROWN	Intensely silicified Moss Porphyry. Fracture Zone 381-382 w/ Drusy Qz	5-10	Qz some drusy	STR FeOx in Fx zone	"	.014		
385	390	Moss VN / Tmp	20	Md gy BN to gN BRN	Somewhat decreased silicification & darker, but still silicified w/ vlts	5-10	Qz (dense)	WK-Mod FeOx.	"			
390	395	Tmp (footwall)?	10	OLIVE Green	Diminishing silicification Mineral texture visible. A few dense vlts. FeOx Fx	2-4	Qz	Local FeOx (Frx)	"			
395	400	Tmp (footwall)?	10	"	Silicification now wk. Clean drusy qz vlts present. Propylitized. still oxidized	5	Qz drusy	FeOx on frx.	"			
400	405	Tmp (fw)?	10	"	As above "	2	Qz	MOD FeOx	"			
405	410	Tmp (Fw, silicified)	10	"	Densely silicified again but vlts rare.	2	Qz	Mod FeOx	"			
410	415	Tmp (Fw)	10	OLIVE GRN & PNK/GRNGY	Getting out of silfd zone, into fresher Tmp, Locally blky/fractured.	1	Qz	Local mod FeOx / FRx	"			
415	420	Tmp (fw) vlts	10	" "	Not silicified. Just propylitized. Increased clean drusy qz vlts	8	Qz	" "	"			
420	425	Tmp (Fw)	10		Gettin Fresh, but still a few qz vlts, dense gn-gy to drusy. wk prop alt.	3-4	Qz	WK FeOx	"			
425	430	Tmp -	90	Pink, grn	Fresh looking (only wk prop. alt) fractured locally (blkky)	Tr	Qz	WK FeOx	"			
430	435	Tmp -	90	"	Very homogenous, Fresh	-	-	WK FeOx	"			
~~435~~	~~440~~											
		TD = 435										

DRILL HOLE LOG
ADDWEST MINERALS, INC. — MOSS PROJECT, ARIZONA

(MP-1)

HOLE NO. M96-11 COORDINATES: ______ N, ______ E ELEV. ______
BEARING Due North CORE/RVC RC (Bit Face) LOGGED BY J. Keller
INCLINATION -75° HOLE SIZE 5 1/4" STARTED 2/28/96 7:30 AM
LENGTH 300' DRILLER Mike Adkins COMPLETED 2/28/96 3:30 pm
PAGE 1 OF 3 COMMENTS:

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	Mine Dump	–	WHT-LT BRN	Abundant wht. VN Material	50	QZ CC	–	70%	.070		
5	10	" "	"	"	"	50	"	–	"	.074		
10	15	Tmp - (Hw) qz vlts ("Lo-GRD" ZONE)	35	Med Pink BN to gy BN	WK FeOx (diss + fracture) Minor wht. x/n qz + lesser Calcite Vlts.	3	Qz, cc	WK FeOx	Good			
15	20	" "	35	"	As above	5	Qz cc	– wk FeO	Good			
20	25	" "	35	LT PNK-BN	a little clayey-argillic alt. Calcite Vlts dom.	3	CC qz	– wk FeO	"	.012		
25	30	" "	35	" "	sl. decr. arg. alt, local silicif. adj. to VLTS. QZ dominant	5	Qz CC	wk FeOx	"			
30	35	" "	35	Md PK-BN	as above	3-4	Qz cc	"	"			
35	40	" "	35	"	sl. Incr. clay content (weakly argillized A)	2	Qz CC	"	"			
40	45	" "	35	"	As above: argillized, wht/translucent qz vlts	3	Qz cc	"	"			
45	50	" "	35	"	Decr. clay, a little harder. Less Vlts. Coarse XLN cc	1	QZ CC	"	"			
50	55	" "	35	LT PK BN	Softer again - argillic alt. Bleached	1-2	Qz. minor cc	"	"			
55	60	" "	35	MD PK-BRN	Harder, no argillization. Magnetic xenolith noted, a little drusy qz	1-2	qz	wk-mod FeOx	"			
60	65	" "	35	"	Incr. vlts, blky/fracs.	7	Qz cc	"	"	.011		
65	70	" "	35	"	As above.	5	Qz Minor CL	"	"			
70	75	" "	35	"	" "	5	Qz cc	"	"			
75	80	" "	35	"	Decr. vlts; fairly soft. v. weakly argillized locally	3	Qz cc	"	"	.010		
80	85	" "	35	"	XLN Qz vlts increased Incr. FeOx on Frp	5	Qz cc	mod FeOx	"			
85	90	" "	35	"	As Above	5	Qz - cc	"	"			
90	95	Tmp - HW stockwx zone	30	LT PK-BN to Buff	Local wk Silicification assoc. w/ numerous qz VLTS, Bleached	15	Qz cc	wk FeOx		.040		
95	100	"	30	"		15	Qz cc	wk FeOx				

DRILL HOLE LOG
ADDWEST MINERALS, INC. **MOSS PROJECT, ARIZONA**

HOLE NO. M96-11

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - H.W. Stkwx Zone (Lo Grade again)	35	Med PK-BRN	FeOx on fry, drusy Qz VLTS, fairly hard	3	Qz	wk FeOx	Good			
105	110	" "	35	" "	As Above	2	Qz	wk FeOx	"			
110	115	" " (Hi GRD? HW)	30	" "	Incr. Qz VLTS, a little harder. Local wk silicif.	7	Qz	wk-mod FeOx	"	.013		
115	120	" "	30	" "	~~bed~~ Local mod. silicif, Incr. VLTS. A litte bleached	8	Qz cc	— " "	"	.023		
120	125	Tmp w/stkwx (H.W.)	30	" "	Decr. local silicif. & qz VLTS. Harder	3	Qz	wk FeOx	"			
125	130	" "	30	" "	As above: wk local Silicif.,	5	Qz	" "	"			
130	135	" "	30	" "	" "	5	Qz	" "	"			
135	140	" "	30	" "	FRACTURED, Blocky, Incr. qz & local silicif. Calcite	10	Qz CC	wk FeOx	"	.030		
140	145	" "	30	" "	Not so fractured & blky. Incr. Veining, but decr. silicif. of Tmp	15	Qz & cc	" "	"			
145	150	" "	30	Md GN BN (olive) to PK BN	MOD-STR silicification of Tmp + abund qz VN material	25	Qz	" "	"	.017		
150	155	" "	30	MD PK BN	Decr. VLTS, and Silicification	5	Qz cc	" "	"	.009		
155	160	" "	30	" "	Incr. VLts but no pervasive silicif.. drusy qz	15	Qz minor cc	wk-mod FeOx	"	.006		
160	165	" "	30?	BRN GY to PK GY	MOD-STR Silicification (grey), fewer VLTS	10	Qz	" "	"	.008		
165	170	MOSS VN Lost Circulation @ 169'	20	Grey BRN some Red BRN	MOD-STR SILICIFICATION Fractured, blocky. Grey Qz VN increased	25	Qz	" "	"	.006		
170	175	Moss VN	20	"	STR. SILICIFICATION Blocky, fractured, brittle	60	Qz replacement	wk FeOx	"	.005		
175	180	MOSS VN	20	Lt BRN + Blu-Grey	Very densely, pervasively silicified. Replacement Vein. Porph. texture "ghosts"	100	Qz replacement	" "	"	.008		
180	185	Moss VN	20	Buff to Lt gn BRN	As above, but silicif. locally decr., & a few drusy qz VLTS. Hem.	90	Qz replace. + drusy	" Some Hem	"	.010		
185	190	Tmp (footwall zone) 5% clay (arg alt)	10	Md GRN-BRN	Out of densely silfd ~~clay~~ replacement VN. WK local silicif., propylitized. XLN Qz	10	Qz drusy	wk FeOx frc.	"	.007		
190	195	Tmp (f.w.)	10	olive GN	Propylitized.	1	Qz	wk FeOx	"	.005		
195	200	Tmp (f.w)	10	Olive GN + PK	Propylitized	—	—	"	"	.004		
200	205	Tmp. (f.w.)	10	"	As above	—	—	" (Frx)	"	.012		
205	210	Tmp	90	"	Local propylitic alt	—	—	"	"	.006		
210	215	Tmp	90	"	" "	—	—	"	"	.007		
215	220	Tmp	90	"	" "	—	—	"	"	.003		

WAT
DRI
WE

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-11

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp	90	GREEN + PINK	Blocky, fractured, propylitic alt, FeOx on frx	–	–	– WK-MOD FeOx	GOOD			
225	230	"	"	BLU-GN-GY + PINK	Mostly unoxidized. Propylitized	–	–	Tr Py Tr FeOx	"			
230	235	"	"	"	~~Partially ox~~ as Above	–	–	Tr Py WK FeOx	"			
235	240	"	"	" + LT gy	30% dense f.g. Lt PK-gy aplite.	–	–	Tr Py WK FeOx	"			
240	245	"	"	GRN + PNK	WK Propylitic alt	–	–	Tr Py WK FeOx	"			
245	250	"	"	GN BN OLIVE GN PINK	Increased FeOx, a few qz vlts	1	Qz (XLN, Dense)	– MOD FeOx	"			
250	255	"	"	"	~~too~~ As Above fractured	1	Qz	"	"			
255	260	"	"	GY GN PK	Mixed ox. + unox. Prop. alt, qz vlts Local clay	1-2	Qz	Tr Py WK-MOD FeOx	"			
* 260	265	" + silicified material	"	LT PK-GN local BRN	±3% material identical to Moss Replacement VN (Dense, BRN + gry) contam.	3	Qz (drusy + replacement)	Tr Py VN material oxidized	"			
265	270	Tmp	"	Lt GN some pink	Decr silfd material, ~~Do~~ Dominantly unoxidized, propylitized	1	Qz (Dense)	Py on FRX (<.5 mm) FeOx on vlts	"			
270	275	Tmp	"	" " + BN	Fractured, incr. FeOx. Tr Qz only	Tr	Qz-Cc (vln)	Tr Py MOD FeOx	"			
275	280	Tmp	"	GN-PK + BN GN	Fractured, oxidized, incr. qz vlts. Prop.	1	Qz	No Py Mod FeOx				
280	285	Tmp	"	Pink GY + GN GY	~~Bo~~ Out of fracture Zone Unoxidized, weakly propylitized.	Tr	Qz	Tr Py Tr FeOx				
285	290	"	"	" "	Sl. fractured / oxidized looks barren. WK Prop. alt.	<1%	Qz vln	Tr Py WK FeOx				
290	295	"	"	" "	As above. FeOx along frx. Hard, blocky, fresher	–	–	Tr Py WK FeOx				
295	300	"	"	" "	As above. More pink than green.	<1%	Qz (Dense)	– WK FeOx				
		TD = 300'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

(MP - "New")

MOSS PROJECT, ARIZONA

HOLE NO. M96-12 **COORDINATES:** ______ N, ______ E **ELEV.** ______
BEARING N10E **CORE/RVC** RC (B-FACE) **LOGGED BY** J. Keller
INCLINATION -73° **HOLE SIZE** 5¼" **STARTED** 2/28/96 4:45 PM
LENGTH 385' **DRILLER** Mike Watkins **COMPLETED** 2/29/96 4:10 PM
PAGE 1 **OF** 4 **COMMENTS:** Had to move hole 20' S70W due to pad problems ie not level.

X-SXN on BACK.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp	90	Md-dk gn-BN	WK Propylitic	<1	Qz clear XLN	— WK FeOx	good			
5	10	"	90	"	" Fractured - FeOx	1-2	Qz + CC	— Mod FeOx	"			
10	15	"	90	"	Not Fractured. Homogeneous	1	Qz	— WK FeOx	"			
15	20	"	90	"	Incr. Qz Vlts w/ silicification adjacent	2	Qz (drusy)	WK FeOx	"			
20	25	Tmp H.W. Zone	35	"	As Above w/ incr. FeOx/fx	3	Qz	~~Mod~~ WK-Mod FeOx	"			
25	30	"] FRX - FeOx	35	" + Org BN	Str FeOx stain, no concurrent increase in VEINING	2	Qz	~~Str~~ FeOx	"			
30	35	"	35	" + Rd BN	More intense FeOx stain, blky, a little silicified, sl. VLT incr. Hematite	4	Qz	STR FeOx	"			
35	40	" "	35	Md PK BN + GN BN	Decreased Fractures, FeOx, Qz.	1	Qz	WK FeOx	"			
40	45	" "	35	Lt-md gn BN org BN	Locally str argillic alt, some blky silicif. + frx w/ qz vlts. FeOx	3	Qz	Mod-Str FeOx	"			
45	50	" "	35	" + Lt GY	Local ~~Str~~ silicif. (Lt gy), Incr. clay (≈ argillic) Str. FeOx	2	Qz	STR FeOx	"			
50	55	" "	35	~~MD~~ gn BN + org BN	No grey silicif. FeOx continues.	2	Qz	Str FeOx	"			
55	60	" "	35	" + olive GN	5% olive GN pervasive silicification. Fractured/blocky, local clay, decr. FeOx	2	Qz	Mod FeOx	"			
60	65	" "	35	MD GN BN	No dense silicif. like above. Incr. XLN WHT Qz	4-5	Qz	MOD FeOx	"			
65	70	" "	35	"	Decr. XLN Qz Frac. FeOx continues.	1-2	Qz	MOD FeOx.	"			
70	75	" "	35	PK BN GN BN	Much Fresher than above. Decr. FeOx/frx, Qz	<1	Qz (clear)	WK FeOx.	"			
75	80	" "	35	"	~~Ex~~ Drusy XLN Qz vlt w/ local silicif. of Tmp, otherwise AA	4-5	Qz	WK-Mod FeOx	"			
80	85	" "	35	"	Drusy XLN VLTS To 2 cm. BLKY, frax locally. ≈ local silicif. of Tmp	5	Qz	"	"			
85	90	" "	35	" + WHT	As above, abund. qz.	15-20	Qz	"	"			
90	95	" "	35	"	Calcite Vein. Coarse XLN. Less Qz.	30	CC Qz	"	"			
95	100	" "	35		Clayey. VN decreased.	5	CC Qz	"	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-12

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp (Moss Porphyry) Hanging Wall zone	35	Md Pinkish to greenish BN	Tr clay, generally just propylitic alt. Fractured locally	<1	Qz cc	– wk-Mod FeOx	Good			
105	110	″ ″	35	″	Harder than above. Little mineralization	<1	cc Qz	– wk FeOx	″			
110	115	″ ″	35	″	A little fractured, incr. calcite	2	cc qz	– ″	″			
115	120	″ ″	35	″ WHT calcite	INCR. Calcite VLTS. Looks Barren	5	cc qz	″	″			
120	125	″ ″	35	″ (No WHT)	A little fractured. Decr. CC	1	cc qz	wk-Mod FeOx	″			
125	130	″ ″	35	″	Sl. incr. CC	2	cc qz	″	″			
130	135	″ ″	35	″ slightly lighter	As above.	2	cc qz	″	″			
135	140	″ ″	35	″	As above	2	cc qz	″	″			
140	145	″ ″ MIXED OX/SULF	35	Md PK BN to GN BN Gy GN	Tr Py (Gy GN Material) becoming unox. locally. Incr. Calcite + FeOx	4	cc Qz	Tr Py MOD FeOx	″			
145	150	″ ″	35	″	Decr. CC VLTS. WK Prop alt (Some Biot. is Semi-fresh)	1-2	CC Qz	″ (locally hematite)	″			
150	155	″ ″	35	Gy GN + PK GN – GN/PK BN	As Above	2	cc Qz	″ ″	″			
155	160	″ ″ UNOXIDIZED	35	GY GN + PK GN	Almost totally unox. Qz VLTS Now ≥ CC. WK prop alt continues.	1-2	Qz cc	Tr FeOx	″			
160	165	″ ″ A LITTLE FeOx	35	″ ″	Vuggy Drusy qz VLTS, Sl. incr FeOx. WK prop.	2	Qz cc	V. wk FeOx	″			
165	170	″ ″ UNOX	35	″ ″	Decr. VLTS. QUITE Barren. UNOXIDIZED.	1	CC Qz	Tr Py	″			
170	175	″ ″	35	″ ″	As above	<1	cc Qz	TR Py	″			
175	180	Tmp HW STKWK Zone ("hi-grade HW")	30	GN + PK BN GY GN	Incr FeOx + Qz Veins, local silicif. w/ VLTS	3	Qz CC	wk + MOD FeOx	″			
180	185	″ ″	30	Lt-MD GN BN + BUFF	INCR Qz VLTS STKWK w/ MOD silicif. associated. (silfd = lighter color)	10	Qz MNR cc	Mod FeOx	″			
185	190	″ ″	30	″ ″	As ABOVE (Looks Good for .0X Au)	10	″	″	″			
190	195	″ ″	30	″ ″	As ABOVE	10	″	″	″			
195	200	″ ″	30	″ ″	Decr. total Qz, Tr Amethyst. Sl silicif.	4	″	″	″			
200	205	″ ″	30	″ ″	MOD - str. silicification No Major VN Qz incr.	6	″	″	″			
205	210	″ ″	30	MD GN-PK BRN	Decr. Silicif., but still present locally TR FLUORITE	3	Qz CC FLR	″	″			
210	215	″ ″	30	″ ″	As above; No Fluorite	2	Qz cc	″	″			
215	220	″ ″	30	PK-GN GY & BN	Fresher, less Oxidized Decr. Qz	1	CC Qz	MAG wk FeOx	″			

A li... wat...

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-12

BOXCAR WILLIE SHOWED UP & PLAYED A TUNE!

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp - HW stkwx [DRILL WET]	30	PK-GN GY + BN	WK-mod propylitic alt., a few Calcite + Qz VLTS, FeOx on frx, mostly unox	1	Qz cc	Mag WK FeOx	Good			
225	230	" "	30	PK GY, GN GY	A little fractured unox blocky, hard. WK local silicif. w/ hairline VLTS	2	Qz cc	TR FeOx	"			
230	235		30	" + ORG BRN	Fractured/blocky Incr Qz Veins, local silf.	3-4	Qz-CC	WK-locally Str FeOx	"			
235	240	Tmp (+fault?)	30/[illegible]	GN BN + Buff + GN GY	Clayey (gouge?), incr. ox.	2	Qz	MOD FeOx	"			
240	245	Tmp (HW stkwx)	30	GN BN	OUT of Clay. Decr FRx. All oxidized. Milky Qz (not drusy)	4	Qz-cc	WK-Mod FeOx	"			
245	250	" "	30	GN BN	Decr. Qz; VLTS mainly XLN Qz, not milky	2	Qz	WK FeOx	"			
250	255	" "	30	GY GN PK GY	Fresher, unox. Mod-str. prop. alt. A few VLTS.	1-2	CC Qz	(Tr Py) Tr FeOx	"			
255	260	" "	30	" " + BN GN	Fractured, partially oxidized, incr. Calcite & drusy qz	4	cc Qz	Py? MOD FeOx	"			
260	265	" "	30	" + WHT	MILKY WHT XLN CALCITE; Fractured. Otherwise fairly fresh	15	CC	MOD FeOx	"			
265	270	" "	30	PK gy - MOLDY GN	Decr. Calcite, incr. drusy qz. Tr Py in Qz	5	Qz CC	Tr Py WK FeOx	"			
270	275	" "	30	" " + BN	MIXED OX/UNOX; FRx Local dense red BN silicif, (<3%) FeOx	2-3	CC Qz	Tr Py in Qz MOD-STR FeOx	"			
275	280	" "	30	PK-GN BN	All oxidized. Fractured. WK silicif. due to hairline Qz VLTS.	2	Qz MNR CC	" "	"			
280	285	" "	30	GN-PK BN	local str. argillic alt., Incr. silicif. + qz VNS. Softer.	5	Qz cc	WK-Mod FeOx	"			
285	290	" "	30	" "	Not clayey, decr. local silicif, fractured	3	Qz cc	" " FRx	"			
290	295	" "	30	" "	Harder. Qz cleaner & locally drusy	3	Qz cc	WK FeOx	"			
295	300	" "	30	" "	Decr. Qz. Homogeneous	1	Qz cc	WK FeOx	"			
300	305	" "	30	" "	Tr local silicif. " " " Propylitic alt. (as above)	<1	Qz	V. WK FeOx	"			
305	310	" "	30	GRY BRN - GN BN	Incr. local silicif. + hairline Qz stringers. Fractured/FeOx.	3	Qz	WK-Mod FeOx	"			
310	315	" " Getting into Moss VN	30/20	" "	Some Strongly Silicified blky chips. Fractured. Incr. H2O flow	10?	Qz Replacement	Mod FeOx (frx)	"			
315	320	MOSS VEIN (W. ZONE Replacement VN)	20	GN GY GN BRN OLIVE	Strong to intense silicif. of Tmp (replacement vn), Blocky. Not much VNLTS.	40?	Qz (Replacement)	" "	"			
320	325	" "	20	" "	As above. FRACTURED Silicif. is variable. Some cherty pieces are Org-BRN	40?	Qz (replacement)	" "	"			
325	330	Tmp ? fw	?10	PK GRN to PINK GY	Appear to be out of VN. Into moderately argillized Tmp in fw. Still some silfd.	10	Qz replacement	WK-Mod FeOx (FRX)	"			
330	335	Tmp (fw)	10	Mottled PINK BN + GN BRN	Coarse grn size. WK-argillic alt. Very little silfd. still fractured.	1	Qz XLN & replacement	" " (frx)	"			
335	340	" "	10	" "	As above. Plag. phenos → clay	1	" "	" "	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-12

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
340	345	Tmp	90	PK GN + BN	Fractured w/ FeOx on fr surfaces. Harder, no argillization. Minor vlts	<1	Qz (drusy)	(Tr Py) FeOx on Fr	Good			
345	350	"	90	PK-GN GY	UNOXIDED, fresher. Fresh biotite locally, but mostly propylitized	<1	Qz	Tr Py	"			
350	355	"	90	"	Local pyrite in bleached chips	–	–	.5 Py localized	"			
355	360	"	90	"	Incr. Py content, locally 2%	–	–	.5% py localized	"			
360	365	"	90	"	Variably propylitized (deuteric?) Tmp. No min	Tr	Qz (brn)	Tr Py	"			
365	370	"	90	"	As above. Blockier	–	–	–	"			
370	375	"	90	"	As above. Not so blocky - looks barren	–	–	–	"			
375	380	"	90	"	As above - very homogeneous.	–	–	–	"			
380	385	"	90	"	" "	–	–	–	"			
		T.D. = 385'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-13 COORDINATES: ______ N, ______ E ELEV. ______
BEARING Due North CORE/RVC RC (Regular) LOGGED BY J. Keller
INCLINATION -80° HOLE SIZE 5½" STARTED 3/1/96 7:00 AM
LENGTH 245' DRILLER Mike Adkins (Hackworth) COMPLETED 3/1/96 11:30 AM
PAGE 1 OF 3 COMMENTS: Hole caving @ silicif. zone. Some contam. 225-245

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	PAD FILL			RUBBLE from Surface				POOR			
5	10	PAD FILL			" "				POOR			
10	15	Tmp - w/qz vnts	35		FeOx (surficial weathering)	5	Qz	Loc. str FeOx	POOR			
15	20	"	35	Md gn BN to PK BN	a little "clayey"	2	Qz	Loc. str FeOx	GOOD 100%			
20	25	"	"	"	Fractured, Minor local clay. wk. propylitic alt.	1-2		wk FeOx				
25	30	"	"	"	" "	1-2		"				
30	35	"	"	"	" "	2		"				
35	40	"	"	"	Incr. Qz veining (WHT, clean, xln)	5	Qz	"				
40	45	Tmp - Stkwx in H.W. ("Hi-grade"?)	30	LT-md GY BN - PK BN Buff	Lighter color due to wk silicification, local wht clay (arg. alt).	8	Qz	wk FeOx only		.017		
45	50	" "	"	"	" " Some feldsp → clay	3	Qz	"				
50	55	" "	"	"	Darker color overall decr. SiO_2	1-2	Qz	"				
55	60	" "	"	"	" " Generally just wk prop. alt.	2	Qz cc	"				
60	65	" "	"	"	Weakly propylitized, a little local argillic alt of feldspars	3	Qz, MNR cc	"				
65	70	" "	"	"	" "	2	Qz, cc	"				
70	75	" "	"	"	" "	1	Qz MNR cc	"				
75	80	" "	"	"	" "	1	"	"				
80	85	" "	"	"	" "	2	"	"				
85	90	" "	"	"	" "	2	"	"				
90	95	" "	"	"	" "	"	Qz cc	"		.013		
95	100	" "	"	"	" "	"	Qz cc	"	✓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-13

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - HW VLT Zone	30	LT-MD gN BN + PK BN	Propylitized, local argillization of plag. Poss WK local silicif.	1	Qz	WK FeOx	GOOD	.038		
	110	VEIN (50%) MOSS?	20	As Above + WHT-Buff	50% wht-milky Qz + CC vein Material. Tmp Wallrx Brn, only weakly silfd	50	Qz-CC	"	"			
	115	VEIN + Silfd. Tmp	20	Buff + Lt Gry	VEIN + strongly silfd. Tmp	95	Qz + SiO2 replacement	"	"	.012		
	120	" "	20	"	" "	95	"	minor FeOx stained clay	"			
	125	" "	20	"	" " Blocky, some vuggy	85	"	"	"			
	130	" "	20	"	Mostly as above VN; exiting VN @ 129". A little clayey	80	"	"	"			
	135	Tmp - Poss. "horse" between Veins	30	Lt-Md GY BN	WK- locally mod/str silicification.	1	Qz	WK FeOx	"			
	140	" "	30	"	" "	2	Qz	"	"			
	145	" "	30	"	" "	2	Qz	"	"			
	150	" "	30	"	" "	3	Qz	Localstr FeOx	"			
	155	" " Getting into Vein @ 154'	30	"	" " STR FeOx	15	Qz	LIMONITE common	"	.015		
	160	MOSS VEIN (?)	20	WHT + LT BN GY	Vein QZ and strong pervasive silicif. of Tmp	95	Qz	WK FeOx	"	.071		
	165	" " DRILL WET H_2O ↓	20	"	" "	70	Qz	"	"			
	170	" "	20	"	" "	60	Qz	"	"			
	175	" "	20	"	" "	75	Qz	"	"			
	180	" "	20	"	" "	80	Qz	"	"			
	185	" "	20	"	" "	95	Qz	"	"			
	190	" " Return Line Plugging V. Blocky	20	"	" " Getting into Tmp @ 193'	50	Qz	"	"			
	195	Tmp - (Footwall)	10	Mod. DK gN + PK GN	Green, propylitized Tmp, FeOx stain	3	Qz	wk-Mod FeOx	"			
	200	" "	10	" "	" " Dimin'd [illegible] local [illegible]	<1	Qz	"	"			
	205	" "	10	"	Clayey. WK-Mod argillication (pervasive) V. little Veining	<1	Qz	"	"			
	210	" "	10	"	" "	<1	Qz	"	"			
	215	" "	10	"	" "	<1	Qz	"	"			
	220	" "	10	"	" "	<1	Qz	"	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-13

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC. %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp - footwall	10	DK GN to PK GY	Decreased oxidation. Redox. Propylitized	–	–	Tr Py wk-mod FeOx	Good			
	230	Tmp Appears to be Contam. w/ vein material	10	"	20% Dense Brn-PkBr silicif. chips (contam) (hole caving). otherwise as above	15	CONTAM ?	Tr Py local wk FeOx	↓			
	235	Tmp	10	"	5% contam.	5	CONTAM ?	Tr Py	↓			
	240	Tmp	10	"	5% contam.	5	CONTAM ?	Tr Py	↓			
	245	Tmp	10	PK GY to GRN	<5% contam. Decreasing prop. alt. Becoming fresher more pink some felds → clay locally	3	CONTAM ?	Tr Py No Ox.	↓			
		T.D. = 245										
		Hole caving @ silicif. zone										

DRILL HOLE LOG
ADDWEST MINERALS, INC.
MOSS PROJECT, ARIZONA

(MP-15) moved S. South

HOLE NO. M96-14 **COORDINATES:** ____ N, ____ E **ELEV.** ____
BEARING Due North **CORE/RVC** RC **LOGGED BY** J. Keller
INCLINATION -45° **HOLE SIZE** 5 ½" **STARTED** 3/7/96 11:00 AM
LENGTH 265' **DRILLER** Mike Adkins **COMPLETED** 3/7/96 3:25 PM
PAGE 1 **OF** 3 **COMMENTS:** Arrived at site after days off. Drillers found welding equip. missing. MOSS VEIN IS WIDE, LOOKING GOOD 165' - 206' = 41'

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - HW VLT Zone	35	Md GN BRN	Local silicif. assoc. w/ Qz VLTS (xl'n). Otherwise mod. propylitic alteration.	3	Qz xl'n	MOD-STR FeOx stain	POOR			
5	10	" "	35	" "	" "	3	Qz	WK-MOD FeOx	GOOD			
10	15	" "	35	" "	" "	1	Qz	WK-MOD FeOx	"			
15	20	" "	35	LT-MD GN BN	Sl. lighter color, Tr clay, local silfd. otherwise AA	2	Qz	MOD FeOx	"			
20	25	" " (incr. Min)	30?	" "	As above; local Amethyst Qz	3	Qz	"	"			
25	30	" "	30	MED GN BN	As above; decr. VLTS. Blockier. Tr Amethyst	1	Qz	MOD-STR FeOx	"			
30	35	" "	30	" "	As Above. Some FeOx hematitic. CC vn	2	Qz CC	WK-MOD FeOx	"			
35	40	" "	30	MD GY-BN	some dense, limonitic chips. WK-locally mod silicif., wk bleaching. Hairline Qz VLTS (xl'n, some amethyst	3	Qz CC	" "	"			
40	45	" " (Fault?)	30/50?	"	2% Tan-Yellow Clay otherwise AA. Xl'n VLTS continue.	2	Qz CC	"	"			
45	50	" "	30	" " + purple-BN	Greatly incr. VN Qz. Fractured. Qz locally purple/BRN	15	Qz MNR CC	MOD-STR FeOx	"	.015		
50	55	" "	30	" "	As Above. Qz various colors. Brn-Rd-purple-WHT	8	Qz CC	" "	"	.033		
55	60	" "	30	GY BN + ORG BN	Incr. hem. stain. Not as blocky as above. Qz more WHT	10	Qz CC	" "	"	.013		
60	65	" "	30	"	Same as above.	10	Qz CC	MOD FeOx	"	.012		
65	70	" "	30	GY BN	Decr. veining/FRAX/ Silicif./FeOx	4	Qz CC	WK FeOx	"			
70	75	" "	30	GY BN + org BN	Incr. hem. stain Decr. VLTS: WK Silicif.	2	Qz CC	MOD-STR FeOx	"			
75	80	" "	30	GY BN	Sl. incr. silicif. & VLTS frx. Decr. FeOx	8	Qz CC	WK FeOx	"			
80	85	" "	30	GY BN + org BN	Incr. FeOx again, w/ diminished VLTS	3	Qz CC	MOD-STR FeOx	"			
85	90	" "	30	GY BN + local org BN	As above: WK silicif.	3	Qz CC	MOD FeOx	"			
90	95	" "	30	GY BN	Incr. VLTS & local silicif., Decr. FeOx	5-6	Qz CC	WK FeOx	"	.012		
95	100	" "	30	" "	" "	8	Qz CC	V. WK FeOx	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-14

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)	
100	105	Tmp - hw stkwx zone	30	GY BN + WHT	WK silicif. abund. wht Qz + CC VLTS. Tr amethyst. Hem.	15	Qz CC	WK-MOD FeOx	good	.023			
	110	" "	30	GN BN + WHT	Incr. WHT Qz. Color change (Tmp) to GN	20	Qz CC	MOD FeOx	"	.040			
	115	" "	30	" " + org BN	Decr. Qz. A few dense Org BN silfd chips	6	Qz CC	MOD FeOx	"				
	120	" "	30	GY BN	Decr. green coloration. Incr. XLN Qz + CC	10	Qz CC	WK-MOD FeOx	"				
120	125	" "	30	GY BN GN BN	Looks a little fresher. Decr. Qz & silicif. Locally chloritic	5	Qz CC	MOD FeOx	"				
	130	" "	30	GN BN + GN GY	Mixed Oxide/sulfide. F.g. diss py in clots. wk-mod silicif.	15	Qz CC	<.5% Py Local mod FeOx	"	.011			Redox
	135	" "	30	GN GY + GN BN	Mod. silicification. Decr. oxidation.	8	Qz CC	<.5% Py Local mod FeOx	"	.017			
	140	" "	30	" " + WHT	As above, w/ much VN Material.	25	Qz CC	" "	"	.015			
	145	" "	30	GN BN GY BN	WK silicif. Now totally oxidized again (hem stain common) decr. qz.	10	Qz CC	MOD FeOx	"				
145	150	" "	30	" "	Same as above. Amethyst noted	10	Qz CC	" "	"	.045			
	155	" "	30	GY BN + org BN + WHT	Abund VN Qz. Locally str. FeOx stain.	35	Qz CC	MOD-STR FeOx	"	.091			
	160	" "	30	" "	Decr. qz VN material. A few dense - org BRN siliceous chips	12	Qz CC	" "	"	.034			
	165	" "	30	GY BN + WHT	Incr. Vein material, but little FeOx stain	20	Qz CC	WK FeOx	"	.033			
	170	MOSS VEIN	20	WHT-Buff + BN	ABUND Qz + lesser CC. MOD silicif. of TMP. Little FeOx	60	Qz CC	WK FeOx	"	.095			
170	175	MOSS VEIN	20	" "	As above.	85	Qz CC	" "	"	.111			
	180	Moss Vein	20	BUFF + Org BRN	Qz less wht. Some greenish qz. Incr. FeOx (MnOx)	80	Qz CC	MOD FeOx	"	.063			
	185	Moss Vein / Drill wet ↓	20	Lt BN-Tan + V. DK BRN	Damp sample. Blocky, fractured. Abund MnOx & little Hem.	85	Qz CC	STR MnOx	"	.051			WATE
	190	Moss Vein	20	Buff + WHT + V. LT GRN	Not so fractured; Decr. MnOx	95	Qz CC	Local MnOx.	"	.110			
	195	Moss Vein	20	" " + BRN	Basically as above. Sl. decr. Vein. FeOx	85	Qz CC	Local FeOx + MnOx	"	.090			
195	200	Moss Vein	20	BUFF-WHT + GN BRN	Decr. vein material. Qz locally Lt. grn + Brn. Tmp only wk silfd.	70	Qz CC	MOD FeOx	"	.055			
	205	Moss Vein & Rose Qz	20	Buff + GY BN + DK GY	5% dk gy str. silfd. chips w/ 1% py (dk Brn where oxidized) Near FW.	70	Qz CC	<.5% Py Local FeOx stain	"	.060			
	210	Tmp - Footwall Zone	10	GN BN + GN-PK GY	Mixed ox-sulf. Out of Moss Vein, but still numerous vlts. 5% dense, brown silicif.	15	Qz CC	<.5% Py Mod-str FeOx	"	.018			Redc
	215	Tmp - Footwall zone	10	GN GY PK GY	Totally unoxidized. Str. propylitic alt.	<1	Qz CC	<.5% Py	"				
	220	" "	10	" "	Harder - fresher. Incr. Pink Tmp (Pink Magnetite - No Py) Minor ox on frx	<2	Qz CC	<.5 Py WK FeOx frx	"				

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-14

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp - Fw Zone	10	GN GY + PK GY	MoD - Str Propylitic alt. Chlor-cc-qz-py.	3	Qz cc	<.5% Py Tr FeOx	Good	.020		
225	230	" "	10	PK GY + GN GY	Gradually diminishing propylitic alt. VLTS are clean wht cc & Qz.	3	cc Qz	<.5% Py Tr FeOx				
230	235	" "	10	" "	As above. A little fractured w/FeOx stain	1-2	cc Qz	Tr Py Local FeOx				
235	240	" "	10	" "	Decr. FeOx/frx WK Prop. alt.	2	cc Qz	" "				
240	245	" " Poss aplite sill < 1' wide	10	GN GY + PK GY	Minor local silicif(?) w/ diss Py. Sl. incr VLTS + prop. alt.	2-3	cc Qz	<.5% Py				
245	250	" "	10	GN GY PK GY + WHT	Abund. XLN Qz VLTS Local silicif. FeOx on frx	25	Qz cc	<.5% Py WK FeOx				
250	255	" "	10	PK GY + WHT	Decr. Qz. Mostly PK gry (v. WK Prop alt)	8	Qz cc	Tr Py				
255	260	Tmp - Moss Porph.	90	PK GY GN GY	Quite fresh. Only localized prop. alt	1	cc Qz	Tr Py				
260	265	" "	90	PK GY	As above	1	cc Qz	–	↓			
		TD = 265'										

X-SXN for BIG FAULT TRUE DIP ON BACK

DRILL HOLE LOG
ADDWEST MINERALS, INC.
MOSS PROJECT, ARIZONA

MP-16 (moved N.)

HOLE NO. M96-15 **COORDINATES:** ______ N, ______ E **ELEV.** ______
BEARING Due North **CORE/RVC** RC **LOGGED BY** J. Keller
INCLINATION -80° **HOLE SIZE** 5½" **STARTED** 3/7/96 4:00 pm
LENGTH 425' **DRILLER** Mike Adkins **COMPLETED** 3/8/96 4:20 PM
PAGE 1 **OF** 4 **COMMENTS:** ≥ 100 gpm water below 400'

* Hole M96-14 (-45°) had much more vns near surface. HW VLTS Must dip NORTH or near Vertical.

Hole made enormous amount of water below 250', including within moss. Loss of fines.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - Hw VLT Zone (Low grade)	35	ORG-RD BN	Hem & limonite stain wk Silicif. due to hairline Qz	1-2	Qz	Str FeOx	Poor	.015		
5	10	" "	"	" "	" "	2	Qz	Str FeOx	Fair			
10	15	" "	"	" " + GY BN	Decr. FeOx stain	2	Qz	MoD FeOx	Good			
15	20	" "	"	Rd Org	Incr. FeOx stain - Pervasive - Hairline Vlt	1	Qz	STR FeOx	Good			
20	25	" "	"	GY BRN + ORG BN	~~[illegible]~~ Diminished FeOx Hairline VLts / wk Silic.	1	Qz	MoD FeOx	Good			
25	30	" "	"	GY BRN + org BRN	~~Diminished~~ Silicif. & hairline VLTS.	1	Qz		"			
30	35	" "	"	"	Fe argillic Alt. otherwise wk silicif. due to hairline qz stringers.	<1	Qz		"			
35	40	" "	"	GY BN to GN BN	~~Alteration~~ mainly just propylitic. FeOx + minor clay in numerous frx.	<1	Qz	MoD-STR FeOx	"			
40	45	" "	"	"	As above. Slightly clayey (wk arg alt?)	<1	Qz	MoD FeOx	"			
45	50	" "	"	"	" "	<1	Qz?	Mod FeOx	"			
50	55	" "	"	" " + Org BN	V. wk Silicif. & hairline VLts, FeOx	1	Qz	Str FeOx	"			
55	60	" "	"	"	As Above	1	Qz	STR FeOx	"			
60	65	" "	"	GY BN GN BN	Decr. FeOx & hairline VLts. (A few)	<1	Qz	WK-MOD FeOx	"			
65	70	" "	"	" "	Vlts coarser - 3-5 mm & drusy - x'ln.	2	Qz cc	" "	"	.012		
70	75	" "	"	" "	Coarse Drusy Calcite. Vugsy. Otherwise weak alt. Fe Org - Bn Clay	3	CC QZ	" "	"			
75	80	" "	"	" "	No drusy Calcite, a few hairline qz vlts Minor silicif, Prop alt. soft	1	Qz cc	WK FeOx	"			
80	85	" "	"	" "	" "	1-2	Qz cc	WK FeOx	"			
85	90	" " (local Redox)	"	GN BN + GN GY	Harder - Partly unox. Very little minrlztion, a few hairline qz vlts	<1	Qz	Tr Py wk-mod FeOx	"			
90	95	" "	"	Lt PK gy GN GY	Not oxidized. FeOx on frx only. As above vlts. Bleached	<1	Qz	Tr Py Tr FeOx	"			
95	100	" "	"	" "	" "	<1	Qz	"	"			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-15

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp – HW VLTS (LO-GRD)	35	LT PK GY + GN GY	V. WK silicif. assoc. w/ hairline qz vlts, Prop. alt. Bleached	<1	Qz	Tr Py	Good			
	110	" "	35	LT GN GY + PK GY	Incr. prop alt + cc VLTS. Local arg. alt.	1	cc Qz	Tr Py	"			
	115	" "	35	" "	As above. Incr. local diss Py	1	cc qz	.5% Py	"			
	120	" "	35	" "	" "	1	cc qz	.5% Py Tr FeOx	"			
120	125	" "	35	" " GY BN/org	± 50% oxidized again. Sl. incr. in VLTS (coarser)	1-2	Qz cc	.5 Py MOD FeOx	"			
	130	" "	35	GY BN + GN BN	All ox. again. Prop. Alt continues. Local wk silicif. Tr Amethyst	1-2	Qz Mnr cc	WK-MOD FeOx	"			
	135	" "	35	" "	As above	1	Qz	WK-MOD FeOx	"			
	140	" "	35	" "	As Above	1-2	Qz	MOD FeOx	"			
	145	Tmp – HW STKWX Zone ("HI-GRD")	30	GY BN + GN BN	Incr. Qz-cc Veining. Amethyst common	4	Qz cc	WK-MOD FeOx	"			
145	150	" " – A LITTLE H_2O –	30	" "	Decr. Qz VLTS H_2O	2-3	Qz cc	WK-Mod FeOx	"			
	155	" "	30	GY BN	Few VLTS, Minor clay (local arg. alt)	2	Qz cc	" "	"			
	160	" "	30	Org BRN + GY BN	Strong veining + FeOx staining; silicif. Tmp	10	Qz cc	STR FeOx	"	.032		
	165	QZ VEIN MUCH H_2O	25	TAN + BRN GY	Dense WHT-TAN VN Qz + Densely silicified Tmp. Some Grey & BRN Qz	50	Qz	WK-Mod FeOx	"	.063		
	170	Qz Vein — DRILL WET ↓	25	WHT-BUFF + GN BN	Abund. wht-Tan-Lt gn qz. Dense, sugary. Decr. silicif. of porphyry	60	Qz	WK FeOx	"	.044		
170	175	Qz Vein	25	GN BN + Tan WHT	Sl. decr. qz. Tmp mod silicified.	45	Qz	WK-Mod FeOx	"	.042		
	180	Tmp – HW STKWX Zone	30	GN BN + Org BN	Qz vlts coarse, some drusy. 5% pervasively limonitic chips (gossanous)	17	Qz	Local Pervasive FeOx	"	.021		
	185	" "	30	GN BN to Lt gy BN	Locally strong silicif of Tmp, incr. qz vlts, some calcite.	25	Qz cc	MOD FeOx	"	.027		
	190	" "	30	" " + WHT-BUFF	Fractured Mod-str silicif, abund xln qz vlts, FeOx	40	Qz Mnr cc	Str FeOx	"	.030		
	195	" "	30	Str-mod gn bn	Fractured Decr qz vns & silicif (wk-mod)	10	Qz Mnr cc	Mod FeOx	"	.018		
195	200	" " (Hole making Lots of H_2O) ↓	30	" "	As above. Propylitic alt dominant	8	Qz cc	WK-Mod FeOx	"	.014		
	205	" "	30	" " + GRN	As above. Local vugg/drusy Qz, Chlorite clots.	7	Qz cc	WK-Mod FeOx	"	.023		
	210	" "	30	LT GN-BN + Lt gn GY	5% UNOX. chips w/ Tr Py. Incr silicification (mod-str)	5	Qz cc	(Tr Py) WK-Mod FeOx	"	.018		
	215	" "	30	mod GN BN + Lt gn GY	Mixed ox/sulf. as above. Decr. silicif., incr VLTS	10	Qz cc	" "	"	.011		
	220	" "	30	" "	All oxidized again. Fractured. Incr. VLTS.	15	Qz cc	WK FeOx	"	.015		

↑ 3/7 / 3-8 ↓

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-15

PAGE 3 **OF** 4

X SXN ON BACK

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)	
220	225	Tmp - HW stKwx Zone	30	WHT-BUFF LT GN GY	Abund. Qz-CC VN. Blocky- Fractured. Tmp host weakly silfd.	50	Qz CC	Local STR FeOx	Good	.020			
	230	" "	30	GY + PK GY	Quik change to unox material (95%). Mod-STR Prop. alt. 3% gossenous chips	3	Qz cc	(TR Py) Local STR FeOx		.025			Redo
	235	" "	30	GN GY PK GY - BN	Mixed ox/sulf. Fractured Incr. Qz vlts - local silicif.	15?	Qz cc	Tr Py wk-Mod FeOx		.029			
	240	" "	30	GN GY + GN BN	As above but decr. vlts. Minor silicif.	5	Qz cc	" "		.023			
	245	" "	30/25	" " + WHT	ABUND WHT Qz + CC. "Clean" MOSTLY UNOX.	20	Qz cc	" "		.041			
245	250	" "	30/25	LT GN BN + WHT	" " Oxidized. A little silfd.	60	Qz cc	WK-MOD FeOx		.053			
	255	" "	30/25	LT GN GY PK GY GN BN WHT	Mixed ox/sulf. WK-MOD silicif. Bleached. Abund. Qz cc	50	Qz cc	Tr Py Local Mod FeOx		.034			
	260	" "	30	" "	Mostly unox. Locally str. silicif. Somewhat diminished VN	40	Qz cc	<.5% Py Minor FeOx		.018			
	265	" "	30	LT-MD GY GN + PK GY	Greatly decr. veining & silicif. Tr Amethyst. MOD. propylitic alt. FeOx on frx only	5	Qz cc	<.5% Py wk FeOx	✓	.018			
	270	MOSS VEIN?	20	ORG BN + GN BN	Fractured & OXIDIZED ABUND QZ/STR SILICIF. Pervasive Limonite (BLOCKY)	30	Qz cc	STR FeOx		.017			
270	275	MOSS VEIN?	20	WHT ORG BN GN BN	20% BLOCKY - Limonitic as above Then into major WHT Qz-CC vein. Tr amethyst	65	Qz cc	Local STR FeOx		.020			
	280	MOSS VEIN?	20	Lt GN BN ORG BRN WHT	Decr. Qz VN. WK to locally str. silicification. Occ Maroon inclusions in VN	45	Qz cc	WK to locally str FeOx		.029			
	285	Tmp - Hw stKwx Zone	30	Lt GRN GY + Org BRN	Rapidly into unox material. Decr. VN Qz-cc. 10% med gry silfd. chips. Local FeOx	15	Qz cc Replacement	<.5% Py Local STR FeOx		.023			
	290	" "	30	Lt-DK GRN GRY + WHT	Incr. Silicif. & veining. local str. chlorite. Gry Silicif. chips contain incr. dissPy	30	Qz cc	1% Py Locally 5%		.060			
	295	MOSS VEIN	20	WHT + LT GN GY	ABUND VN Qz + CC, MOD silicif. of Tmp NOT OXIDIZED	70	Qz cc	<.5% Py		.044			
295	300	MOSS VEIN	20	LT GN WHT ORG-BN	BACK INTO OXIDIZED VN MATERIAL. STR DK BRN MnOx stain on alt. Tmp	65	Qz cc	STR FeOx + (MnOx)		.121			
	305	MOSS VEIN	20	WHT- LT GN + Rd BRN	Incr. Vein Material. ~~Inclusions or Tmp locally~~ reddish brown Calcite	75	Qz cc	Local FeOx + MnOx		.088			
	310	MOSS VEIN	20	" " + Org-BRN	Red-BRN Material is calcite (Manganiferous?) & str FeOx in alt Tmp	80	Qz cc	" "	✓	.102			
	315	MOSS Vein	20	GN BN ORG BN WHT DK BN	Decr. VN Material. Tmp is strongly oxidized, mod-str silicif. MnOx	40	Qz cc	Str FeOx + MnOx		(>.292)			
	320	Moss Vein	20	" "	As above w/ sl. decr. Oxides.	40	Qz cc	Mod FeOx + MnOx		.041			
320	325	Moss Vein	20	WHT-TAN + Lt GN BN + org BN	Incr. Vn Material. Tmp variably silicified	60	Qz cc	Mod FeOx wk MnOx		.027			
	330	Moss Vein	20	WHT-TAN LT GN BN DK BN	Incr. Brown calcite. otherwise as above	60	Qz cc	" "		.042			
	335	Moss Vein?	20	Lt GN BN + WHT TAN	Decr. Qz VN material. Some fractured Qz w/ str MnOx Stain. Mod silicif. of Tmp	25	Qz cc	Mod FeOx Lc. str MnOx		.016			
	340	Moss Vein?	20	Lt-MdGY BN WHT-TAN	Basically same as above "is this the Moss?"	30	Qz cc	" "	↓	.046			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-16 COORDINATES: ____ N, ____ E ELEV. ____
BEARING Due North CORE/RVC RC LOGGED BY J. Keller
INCLINATION -65° HOLE SIZE 5½" STARTED 3/8/96 5:35 pm
LENGTH 440' DRILLER Mike Hatkins COMPLETED 3/13/96 4:50 PM
PAGE 1 OF 4 COMMENTS: MAJOR veining 245' - 310' in HW. Prob. dips 68°-72° North due to wide drill hole intercept.
– RIG BROKE DOWN AFTER Tripping for tri-cone @ 397.5'. Down 3 days

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - Moss Porphyry w/ minor VLTS	90	Md GY BN	WK propylitic alt. Oxidized. Minor CC + QZ VLTS, A few hairline Qz VLTS	<1	CC QZ	MOD. FeOx	FAIR			
5	10	" "	90	" "	As Above	<1	CC Qz	WK FeOx	FAIR			
10	15	" "	90	" "	As above; incr. qz VLTS (XLN) & FeOx. Local silicification.	2	Qz CC	MOD FeOx	GOOD			
15	20	" "	90	Red + GY BN	Hematite stained. Fractured. Poss. WK Silicif.	1	Qz CC	STR FeOx				
20	25	" "	90	GY BN + Red	Decr. Hem stain, else as above.	<1	Qz	MOD FeOx				
25	30	" "	90	" "	WK Silicif. - Fractured. Hairline qz VLTS, hem stain. ≂ clay	2	Qz	STR FeOx				
30	35	" "	90	" "	As above	1-2	Qz	Str FeOx				
35	40	" "	90	Red BRN	INCR. Hematite stain, & qz VLTS. WK Silicif. ≂ clay	2	Qz	V. Str FeOx stain				
40	45	" "	90	GY BN + Org BN	Decr. hematite. Decr qz, incr. CC. Hairline qz stringers continue/WK silicif.	1-2	CC Qz	Mod-Str FeOx.				
45	50	" "	90	GY BN	Diminishing Qz VLTS. Softer. Propylitic alt, local argillization ≂ Clay	<1	Qz CC	" "				
50	55	" "	90	" "	As above ≂ beige clay	<1	Qz CC	WK FeOx				
55	60	" "	90	" "	3% beige clay (arg. alt.) as above	<1	Qz CC	WK-mod FeOx				
60	65	" "	90	" "	Beige clay as above (2-3%) Some white clay. No VLTS.	—	—	WK FeOx				
65	70	" "	90	" "	A little ~~dru~~ xln qz (clear)	<1	Qz	" "				
70	75	" "	90	" " + Red	Sl. incr. vlts, ≂ local Silicification, ~~&~~ Hem. Stain.	1	Qz	~~WK~~ MOD FeOx				
75	80	" "	90	Gy BN + red org	WK silicif. assoc. w/ hairline qz VLTS. A few larger xln VLTS present. FeOx	1-2	Qz	MOD-STR FeOx				
80	85	" "	90	"	AS ABOVE	2	Qz	" "				
85	90	" "	90	Org BRN	Limonite Stained/some hematite also. Hairline Qz VLTS.	<1	Qz	STR FeOx				
90	95	" "	90	Lt and gy BN	Much diminished FeOx. Just propylitic alt	—	—	WK FeOx				
95	100	" "	90	ORG BN GY BN GN GY	Becoming unoxidized. Incr. FeOx, Rare XLN Qz	<1	Qz	(≂ Py) mod FeOx	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-16

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)			
										Au (FA)	Au CN SOL	Ag (FA)	
100	105	Tmp - Moss Porphyry	90	Lt-md gn GY	90% unoxidized. strong propylitic alt. No Fresh biotite. Diss Py	<1	Qz	<.5% Py	Good				Redo.
	110	" "	90	" " + Org BN	50% oxidized. As above.	–	–	<.5 Py Local str FeOx stain	"				
	115	" "	90	Lt-md GY BN	All oxidized again. Decr. FeOx	–	–	wk-FeOx	"				
	120	" "	90	" "	Minor hairline qz vlts ± vin cc	<1	Qz cc	wk-md FeOx	"				
120	125	" "	90	" "	A little clayey. wk arg. alt. Minor hairline qz vlts	<1	Qz cc	wk FeOx	"				
	130	" "	90	" "	Decr. clay. otherwise Same as above	<1	Qz	wk FeOx	"				
	135	" "	90	" "	Slightly incr. FeOx. XLN CC VLTS.	<1	CC Qz	MOD FeOx	"				
	140	" "	90	" "	Decr calcite & FeOx. Propylitized Tmp. Dull	<1	Qz cc	wk FeOx	"				
	145	" "	90	" "	Local increased FeOx & hairline qz vlts. ± Occ. 4 mm xln Qz vlt.	1	Qz cc	Local str FeOx	"				
145	150	" "	90	Lt GY BN + Lt gn GY	20% UNOX. MOD-str prop alt continues. Looks barren.	–	–	± Py wk FeOx	"				
	155	" "	90	Lt gn GY	90% UNOX. XLN CC blebs/vlts. MOD-str prop. alt.	1	cc	<.5% Py FeOx on FRX	"				Redo.
	160	" "	90	Lt-md GY BN	Oxidized again. Minor hairline vlts.	<1	Qz	wk-Mod FeOx	"				
	165	" "	90	" "	as above	<1	Qz	" "	"				
	170	" "	90	Org BN + Lt gy	15% UNOX. Str Lim. + Hem stain. Poss. wk silicif. No vlts	<1	Qz	Str FeOx ± Py	"				
170	175	" "	90	" "	40% UNOX. Cont. prop. alt.; occ. hairline qz vlts; ± FeOx	<1	Qz	<.5 Py str FeOx	"				
	180	" "	90	LT gn GY	All UNOX. Propylitized. Poss. wk silicif. diss Py. incr. Qz vlts coarse	1	Qz	1% Py wk FeOx on Frx	"	.070			
	185	" " A little H2O	90	md GN BN + GN GY	80% oxidized again. As above alteration. ± rosy xln qz	<1	Qz	<.5 Py wk-mod FeOx	"				
	190	" " DRILL WET	90	LT GN GY + GN BN	60% unox. Prop. alt.	<1	Qz	.5 Py Local Mod FeOx	"	.010			
	195	" "	90	" "	80% UNOX. as above alt.	<1	Qz	<.5 Py wk FeOx	"				
195	200	Tmp - HW VLT ZONE	35	Lt-md GN BN	All oxidized. XLN Qz VLTS common. Some pinkish. Prop. alt.	2	Qz	wk-Mod FeOx	"				
	205	" "	35	" "	Propylitic alt only	Tr	Qz	wk FeOx	"				
	210	" "	35	" "	Local limonitic zones. Sl. incr. Qz vlts	1	Qz cc	wk to locally Str FeOx	"				
	215	" "	35	" "	Incr. XLN Qz VLTS Some drusy.	2-3	Qz Mnr cc	wk-Mod FeOx	"				
	220	" "	35	" "		1	Qz cc	" "	"				

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-16

Cross Sxn on Back

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp - Hw vnt zone	35	Lt-Md gn-BN	Mod-str prop. alt., Local wk silicif., Variable Qz-cc vnts	2	Qz cc	wk-mod FeOx	Good			
	230	" "	35	"	" " 2% unox.	2	Qz mnr cc	" Tr Py	"			
	235	" "	35	"	" " (All ox)	4	Qz cc	wk-mod FeOx	"	.016		
	240	" "	35	LT-md GN GY	" " (a little fractured, 90% UNOX)	3	Qz cc	.5% Py Local str FeOx (frx)	"	.014		
	245	" "	35	ORG BRN	" " (All ox., str FeOx)	2	Qz	str FeOx stain	"			
245	250	Qz VEIN	25	Forest GRN + WHT	WHT to locally green Qz, mod silfd grn Tmp Partly oxidized	50	Qz mnr cc	<.5 Py wk FeOx	"	.091		
	255	" " + SILFD Tmp	25	Md GN-BN + GN GY	Fractured, INTENSELY SILICIFIED Tmp w/ Qz veining. Blocky	20	Qz mnr cc	<.5 Py mod FeOx	"	.041		
	260	" "	25	WHT + GN-TAN	Blocky - Abund Qz (WHT - Massive - dense; Tr Amethyst) strongly silfd. Tmp	75	Qz mnr cc	wk FeOx	"	.063		
	265	" "	25	MD GN-BN + WHT	Decr. Qz, MOD-str silicif. - Very blky, frx	30	Qz mnr cc	MOD FeOx (loc. STR)	"	.036		
	270	" " Sample oz RC LINE PLUGGED ~~-Small Sample Contam~~	25/30	" " + Org Brn	Decr. Blockiness & fractures, WK to v. str. silicif. Str. Limonite. GRN Qz	30	Qz mnr cc	STR FeOx	"	.023		
270	275	Tmp - Hw stkwk zone LOTS OF H2O ±60gpm	30	Various BN GN GY	Decreasing silicif of Tmp. Partially oxidized. Abund Qz vnts continue. Green Qz common	30	Qz cc	<.5 Py loc. str FeOx	"	.033		
	280	" "	30	Md GN GY - PK GY - TN BN	As above Tr Amethyst. Diminishing ox. Tmp propylitized, v. wk silicif	25	Qz cc	<.5 Py loc. STR FeOx	"	.018		
	285	Qz VEIN fractured	25	Buff WHT Tan Org BRN	90% oxidized again. Abund VN Qz, but v. wk silicif of Tmp host.	65	Qz cc	Tr Py loc. str FeOx	"	.020		
	290	Tmp - Hw stkwk zone Fractured - caving	30	Org BN Gy BN WHT	Strongly fractured OXIDIZED, str. silfd.	30	Qz cc	STR FeOx	"	.108		
	295	" "	30	" "	As Above.	20	Qz cc	" "	"	.040		
295	300	" "	30	GN BN Org BN WHT	Variable wk - str silicification, Abund VN, Decr. FeOx.	30	Qz cc	wk-MD FeOx	"	.050		
	305	" " (CONTINUED Fractured/caving)	30	LT GN GY GN BN ORG BN WHT	±50% unoxidized. Localized silicif (MOD) ABUND Qz; Tr WHT clay	35	Qz cc	<.5 Py MOD FeOx	"	.023		
	310	" " Diminish fracturing/caving	30	Lt BN GY WHT	90% oxidized INCR. VN Material. Tmp only wk silfd.	45	Qz cc	Tr Py Mod-loc Str FeOx	"	.028		
	315	" "	30	Lt-MD GN BN + WHT	All OXIDIZED wk silicif. of Tmp, remnant prop. alt.	25	Qz cc	wk-MOD FeOx	"	.020		
	320	" "	30	LT-MD GN GY	Qz Diminishing Propylitized. 80% unox.	10	Qz cc	<.5 Py v. wk FeOx	"	.017		
320	325	" "	30	Variable GN GY BN BN	Mixed ox/sulf. Incr. VN. Local silicif. Occ. Blk & Tr Amethyst	25	Qz cc	<.5 Py wk-str FeOx	"	.041		
	330	" "	30	Mostly GN GY	90% unoxidized; mod-str propylitic alt. Diss Py	10	Qz cc	.5 Py Tr FeOx	"	.014		
	335	" "	30	GN GY + GN BN + WHT	Mostly as above, but local (5%) dense silicif. Linear qz vnts. 15% oxidized	15	Qz cc	<.5 Py wk FeOx	"	.021		
	340	" "	30	" "	±5-10% dense grey silfd. material (unox). 15% oxidized Continued prop. alt.	10	Qz cc	<.5 Py wk FeOx	"	.029		

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-16

PAGE 4 **OF** 4

Slow drilling due to ± 100 ?? min. 20 flow. Loss of fines.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION ± 10% oxidized	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
340	345	Tmp- Hanging wall StKwx Zone	30	Lt-md GN GY + GN BN	General propylitic alt, localized silicification. ± 2% dense gry silicif.	6	Qz MNR CC	<.5 py wk FeOx near Frx	GOOD	.030		
345	350	Qz Vein	25	WHT-LT GN + LT ORG BN	Major Qz calcite VN. Brown calcite common. Local dense silicif. Tmp wk silfd OXIDIZED	65	Qz CC	MD-STR FeOx Tr MnOx	"	.022		
	355	Tmp - H.W. StKwy zone	30	DK BRN + Lt grn BN	Abundant MnOx. Softer a little clayey. All oxidized. Local silicif. Decr. VN. Large druses	20	Qz CC	STR MnOx + FeOx	"	.087		
	360	" "	30	ORG-BN + GN BN + DK BN	Decr. MnOx, but still present. Fairly soft from local arg. alt. Variable wk - mod silicif. Tr BN cc.	10	Qz CC	Str FeOx loc. Str MnOx	"	.023		
	365	" "	30	Lt brN + WHT	"Bleached" Variable wk silicif. WHT VN material. WK MnOx	15	Qz CC	Mod FeOx wk MnOx	"	.017		
	370	" " ?	30	TAN-WHT + ORG BN	Strong to INTENSE silicification, Light color to gry unox. qz/silicif.	25 ?	Qz CC	wk-Mod FeOx Tr Py	"	.027		
370	375	MOSS VEIN	20	Tan-Lt BN WHT	Strong color bleaching Difficult to tell difference between VN & silfd. porph.	30?	Qz CC	WK FeOx ≤ Py	"	.020		
	380	MOSS VEIN	20	Lt Tan Lt GRN WHT	Bleached - strongly silfd porph. + Qz VN. Similar to Moss VN to W. of BB FLT	60?	Qz CC	WK FeOx all ox.	"	.103		
	385	MOSS VEIN	20	" "	AS ABOVE	65?	Qz CC	V. WK FeOx	"	.142		
	390	MOSS VEIN	20	Olive gN GY + WHT	Silica-flooded Tmp w/ diminished open-space fill qz. Green.	35	Qz MNR CC	WK FeOx	"			
	395	MOSS VEIN	20	" "	AS Above. Silicification intense.	35	Qz MNR CC	WK FeOx	"			
395 ↓ TRI-CONE BIT	400	Moss Vein ± 15% Contam - HW zone BIG Sample	20	Lt-Med GY + GRN	Strong silicification. Tr Amethyst 60-70% UNox. <.5% diss Fg py. Org BRN Tmp+VLTS CONTAM	60 M	Qz (VN + replacement)	<.5% Py wk-Mod FeOx	"			
	405	Tmp - Footwall VLT Zone?	10 ?	Med gN GY	Greatly diminished Silicif. & veining. Strong propylitic alteration. Local incr. Py. Tr Amethyst	15	Qz	.5-1%? V. WK FeOx	"			
	410	MOSS VEIN ?	20 ?	Med GN GY + MD GY	Incr Silicif. & Veining (Localized)	25	Qz MNR CC	.5% Py V. WK FeOx	"			
	415	Moss Vein	20	" "	Strong to intense silicif. Tr Amethyst. Strong prop-alt where less silfd	30	Qz	.5 Py	"			
	420	Tmp - Footwall VLTS ZONE	10	MD GY GN + PK GY	Greatly diminished silicif. & VLTS. MOD-str. prop. alt.	4	Qz MNR CC	.5 Py No FeOx	"			
420	425	Tmp - " "	10	"	MOD. Prop. alt only. No silicif.	<1	Qz CC	<.5 Py No FeOx	"			
	430	Tmp " "	10	"	As above; a few Qz VLTS	3	Qz CC	<.5 Py	"			
	435	Tmp	90	"	Diminished VLTS; sl. decr. prop. alt	1	Qz	<.5% Py	"			
	440	Tmp	90	PK GY + GN GY	Prop. alt diminishing.	1±	CC Qz	<.5 Py	"			
	445	TD										
445	450											
	455											
455	460											

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-29)

HOLE NO. M96-17 COORDINATES: ______ N, ______ E ELEV. ______
BEARING Due North CORE/RVC RC LOGGED BY J. Keller
INCLINATION -68 HOLE SIZE 5 ½" STARTED 3/13/96
LENGTH 560' DRILLER Mike Adkins COMPLETED 3/20/96 11:30 AM
PAGE 1 OF 5 COMMENTS:
Hit H_2O @ 185'

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	PAD FILL							POOR 10%			
5	10	Tmp - Moss Porphyry	90	Med GN BN + ORG BN	Weak propylitic alteration. Some plag. phenos wk argillized. Minor VLTS	1	Qz cc	— Mod FeOx	POOR			
10	15	" "	"	"	" " Sl. incr. XLN CC VLTS	2	CC Qz	WK-mod FeOx	Fair			
15	20	" "	"	"	" "	3	cc Qz	WK FeOx	GOOD			
20	25	" "	"	"	" "	1	cc Qz	WK FeOx	GOOD			
25	30	" "	"	"	" " Sl. incr. FeOx on Frx	1	cc Qz	WK-mod FeOx				
30	35	" "	"	"	" (MONOTONOUS Rx)	1-2	cc Qz	" "				
35	40	" "	"	"	" " (a few hairline Qz VLTS)	<1	cc Qz	" " some HEM				
40	45	" "	"	MD GN BN + MD GN GY	30% UNOXIDIZED. WK-MOD Propylitic alt. Chlor - CC - Py (as above)	<1	cc	Tr Py WK FeOx				
45	50	" "	"	MD GN BN	Oxidized. Alt. as above.	<1	cc	WK-mod FeOx				
50	55	" "	"	" + GN GY	15% UNOX. Minor local arg. alt + silicif, otherwise prop alt	1	cc Qz	Tr Py MOD FeOx				
55	60	" "	"	"	5% UNOX. ONLY Alt. as above. Tr silicif. due to minor hairline Qz VLTS	<1	Qz cc	Tr Py MOD FeOx				
60	65	" "	"	MD GN BN to PK BN	Oxidized. WK prop. alt. Rare argillization of feldsp.	<1	cc	WK-Mod FeOx				
65	70	" "	"	MD GN BN + PK BN	" "	<1	cc	" "				
70	75	" "	"	" "	" " (A few XLN Qz VLTS)	1	Qz cc	" "				
75	80	" "	"	" " + GN-PK GY	30% unoxidized. Incr. Qz VLTS (drusy + hairline)	2	Qz cc	Tr Py WK FeOx				
80	85	" "	"	" "	20% UNOX. V. WK Prop. alt. Decr. Qz VLTS Occ. hairline VLTS	1	cc Qz	Tr Py WK FeOx				
85	90	" "	"	MD GN BN	Only 2-4% UNOX.	<1	cc	Tr Py WK FeOx				
90	95	" "	"	PK-GN GY + BN	70% UNOX. Pinkish. Quite fresh. V. WK prop. alt. spotty	<1	cc	Tr Py WK FeOx				
95	100	" "	"	" "	As above. A few drusy VLTS	1	Qz cc	Tr Py WK FeOx	↓			

LOCAL Redc

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-17

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - Moss Porphyry	90	MD GN BN	WK Propylitic alt., Occ. Qz + CC VLTS	1	CC Qz	WK FeOx	Good			
	110	" "	"	MD GN BN + PK-GN GY	As above - 20% UNOX	<1	CC	<.5 Py WK-Mod FeOx				
	115	" "	"	" "	" "	<1	CC	" "				
	120	" "	"	MD PK GY + GN GY + PK BN	" " (70% UNOX) harder	<1	Qz Qz	" "				
120	125	" "	"	MD PKGNGY	As above WK propylitic alt. 95% UNOX.	<1	Qz CC	<.5 Py V. WK FeOx				
	130	" "	"	" " + PK-GN BN	" " (Sl. incr. FeOx + Qz)	1	Qz CC	<.5 Py WK FeOx				
	135	" "	"	" "	" "	1	Qz CC	" "				
	140	" "	"	" "	" " (50% oxidized)	1-2	Qz CC	" "				
	145	" "	"	" "	" incr. VLTS " softer (all weekly oxidized)	2	Qz CC	WK-MD FeOx				
145	150	" "	"	MD PK GN GY	Decr. VLTS & oxide. FeOx frx only WK prop alt.	<1	Qz CC	TR Py V. WK FeOx				
	155	" "	"	" "	" " (Barren looking)	<1	CC	" "				
	160	" "	"	" "	" " (Sl. incr. FeOx locally)	<1	CC Qz	TR Py WK FeOx				
	165	" "	"	" "	" " (decr. FeOx)	<1	CC	TR P TR FeOx				
	170	" "	"	" "	" " Homogeneous	<1	CC	" "				
170	175	" "	"	" "	As Above - increasing chlorite/ prop. alt.	<1	CC	" "				
	180	" "	"	" "	" "	<1	CC	" "				
	185	" "	"	" " + GN BN	A little fractured. Local FeOx stain. MOD Prop. alt.	1	CC	<.5 Py WK FeOx				
	190	Tmp - HW VLT ZONE H2O	35	MD GN BN	All oxidized again. Fractured. Local arg alt. TR Fluorite. ∴ Local wk silicif.	1-2	Qz CC	WK FeOx				
	195	" " DRILL wet ↓	"	"	Larger (FRX) VLTS - Calcite + Qz. Brown calcite. TR Fluorite/Amethyst?	5	CC Qz	Mod FeOx				
195	200	" "	"	"	Decr. VN. All oxidized still, Soft. Some BRN CC. TR Amethyst	2	Qz CC ?	MOD-STR FeOx				
	205	" "	"	"	Fluorite (pale green) VLTS common. Prop. alt. FRACTURED.	3	CC FL Qz	MOD FeOx				
	210	" "	"	" " + GN GY	10% UNOX. Decr. frx. VLts still present. XIN - open space filling -	2	CC Qz FL?	TR Py WK-Mod FeOx				
	215	" "	"	GN GY + GN BN	80% UNOX. Harder. VLTS Mainly w/ ox Material	2	CC Qz	TR Py V. WK FeOx				
215	220	" "	"	" "	90% unox. Fewer VLTS. General prop alt CONT.	1-2	CC Qz	TR Py local FeOx	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-17

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp - HW VLT ZONE	35	GN GY + PK GY	Propylitic alteration (mod). Occ. cc + qz vlts. FeOx on frx only	1-2	Qz cc	<.5 Py / v. wk FeOx	Good			
	230	" "	"	" "	Local incr. py + VLTS. Some frx fill py.	2	Qz cc	.5 Py Tr FeOx				
	235	" "	"	" "	As above. Occ. hairline qz vlts noted in larger chips.	1	Qz cc	.5 Py Tr FeOx				
	240	" "	"	" "	" " (Coarser xc. cc - qz VLTS - WHT)	2	cc Qz	<.5 Py				
	245	" "	"	" "	MONOTONOUS hard, weakly propylitized, occ hairline Qz VLTS. As Above	<1	Qz cc	<.5 Py				
245	250	" "	"	" "	" " Tr brite apple green Minrl.	1	cc Qz	<.5 Py				
	255	" "	"	" "	WK. prop alt, occ. Hairline VLTS (as above) Monotonous Rx. Diss Py	<1	cc Qz	<.5 Py				
	260	" "	"	" "	As above	<1	?	<.5 Py				
	265	" "	"	" "	Sl Incr. Xln wht cc.	1-2	cc Qz	.5 Py				
	270	" "	"	" "	Incr. Qz VLTS + local FeOx	2	Qz cc	.5 Py Local FeOx				
270	275	" "	"	" "	Monotonous pk-grn weakly propylitized Rock as above.	<1	Qz cc	.5 Py				
	280	" "	"	" "	" "	<1	Qz cc	.5 Py				
	285	" "	"	" "	Alt. as above, but a little fractured & Oxidized	<1	Qz cc	.5% Py wk FeOx				
	290	" "	"	LT-MD GN GY + PK GY	Partially bleached; incr. diss + frac-fill py. Decr. FeOx.	1	cc Qz	1% Py				
	295	" "	"	" "	Decr bleached chips & VLTS	<1	cc Qz	1% Py				
295	300	" "	"	" " + GN BN	40% oxidized - fractured. FeOx (limonite) on frx. WK-mod prop. alt continues	<1	Qz cc	.5 Py Mod FeOx				
	305	" "	"	" "	10% oxidized. Diminished frx, Prop. alt.	1	Qz	.5 Py Local FeOx				
	310	Tmp - HW STKWK ZONE	30	ORG-BN + PK GN GY	Numerous xln to dense (faster drilling) sugary Qz VLTS, OXIDIZED Local wk-str silicif. Tr Amethyst	6	Qz MNR cc	<.5 Py Str FeOx				
	315	" "	"	ORG BN + GN BN	As above. 5% wht Qz, 5% translucent gry-brn.	10	Qz	No Py STR FeOx				
	320	" "	"	" "	Sl. decr qz & FeOx. Silicif. locally adj. to VLTS.	6	Qz	MOD-STR FeOx				
320	325	" "	"	" "	BLOCKY - FRACTURED. Abund. FeOx. Qz drusy locally.	5	Qz	STR FeOx				
	330	" " "Return Line plugging	"	GN GY + ORG BN	Back into dominantly UNOX. material. Decr. Qz (drusy, vuggy) & silicif. Local bleaching.	2	Qz	Local STR FeOx .5% Py				
	335	" "	"	PK-GN GY	95% UNOX. Propylitized. Minor drusy Qz VLTS. Harder.	1-2	Qz	<.5 Py V. wk FeOx				
335	340	" "	"	" " + BN-GN	60% Oxidized. Incr. frx + VLTS DRUSY Qz + MNR cc	3	Qz cc	<.5 Py Loc. STR FeOx	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-17

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
460	465	Tmp - Silfd (Moss?)	30?	Lt-md GN GY + Tan + WHT	Variable silicification x bleaching - partial oxidation Abundant dense to drusy Qz	30	Qz cc	.5% Py, wk FeOx	Good			
	470	Tmp - VLTS	30?	Lt-md GN GY + WHT	Decr. bleaching/silicif x Qz VLTS.	10	Qz cc	<.5 Py, v. wk FeOx				
	475	" " (Moss?)	30?	Lt GN gy + Tan + white	Variable silicif/bleaching, incr. Qz VLTS x FeOx	20	Qz cc	<.5 Py, wk-mod FeOx				
	480	Moss Vein	20	WHT to v. Lt gy x tan	Strongly bleached/silfd. Local minor clay(?) ABUND. VEIN Material	75	Qz cc	Tr Py wk FeOx				
	485	Moss Vein	20	WHT - v. Lt grn + tan	As above. Local Green Silica.	70	Qz cc	v. wk FeOx				
	490	Moss Vein	20	Lt-MD GRAY	INTENSELY SILICIFIED Tmp, Local vuggy, Decr. xln Qz	70? replacement	Qz	? Py V. wk FeOx				
	495	Tmp (FW ZONE)	10	GN GY	Strong propylitic alt. A few Qz ± cc VLTS w/ chlorite + py. UNOX.	5	Qz cc	0.5% Py NO FeOx				
495	500	" "	10	"	As above. VLTS diminishing	2	Qz cc	.5 py				
	505	" "	10	"	" "	3	Qz cc	.5 py				
	510	" "	10	"	" "	1	Qz cc	.5 py				
	515	Tmp (Moss Porphyry)	90	PK GY + GN GY	WK localized prop. alt., generally fresh, magnetic pink	<1	"	<.5 py				
	520	" "	90	"	" "	<1	"	"				
520	525	" "	90	"	" "	<1	"	"				
	530	" "	90	"	" "	<1	"	"				
	535	" "	90	"	" "	<1	"	"				
	540	" "	90	"	" "	<1	"	"				
	545	" "	90	"	" "	<1	"	"				
545	550	" "	90	"	" "	<1	"	"				
	555	" "	90	"	" "	<1	"	"				
555	560	" "	90	"	Slightly bleached, otherwise as above	<1	"	"	↓			
		TD = 560										

DRILL HOLE LOG

ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-18 COORDINATES: ____ N, ____ E ELEV. ____

BEARING Due North CORE/RVC RC LOGGED BY J. Keller

INCLINATION -45° HOLE SIZE 5½" STARTED 3-20-96 1:20 pm

LENGTH 205' DRILLER Mike Myers COMPLETED 3-20-96 4:20 pm

PAGE 1 OF 2 COMMENTS:

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp- HW STKWX ZONE	30	Lt-med gn-BN + ORG BN	Localized wk silicification Numerous Qz+Calcite VLTS; Chloritic alt.	8	Qz cc	— MOD FeOx	FAIR			
5	10	" "	30	"	" " (SOME PINKISH Qz	12	Qz CC	"	GOOD			
10	15	Qz-CC VEIN	25	WHT + GN BN + ORG BN	Abund. vein Material. PINK Qz + BN CC common Tr purple Qz	65	Qz cc	MOD FeOx	⎮			
15	20	Tmp- HW STKWX ZONE	30	Med GN BN	Localized wk silicif general prop. alt.	4	Qz cc	STR FeOx	⎮			
20	25	" "	30	Lt-med GN BN	" " (Incr. veining)	15	Qz cc	MOD-STR FeOx	⎮			
25	30	" "	30	" "	" "	12	Qz cc	"	⎮			
30	35	" "	30	" "	" (Incr. FeOx) "	10	Qz CC	STR FeOx	⎮			
35	40	" "	30	" "	" "	15	Qz cc	MOD FeOx	⎮			
40	45	" "	30	Lt gn gy to GN BN	Softer, local argillic alt. (bleached a little) BROWN cc common. MnOx	15	Qz cc	MOD-Loc. str FeOx	⎮			
45	50	" "	30	" "	Decr. clay; still fairly soft. General prop. alt continues. MnOx	15	Qz cc	" "	⎮			
50	55	" "	30	" "	Local wk silicif. + Minor argillic alt. General prop alt.	17	Qz cc	MOD FeOx	⎮			
55	60	" "	30	LT-gn BN	As above. (cc locally lt. purple-BN	10	Qz cc	WK-MOD FeOx	⎮			
60	65	" "	30	" "	" "	7	Qz cc	WK FeOx	⎮			
65	70	" "	30	Lt-med GN BN	" " (calcite locally Org-BN-Pink)	5	Qz cc	MOD FeOx	⎮			
70	75	" "	30	" "	INCR. Veining, esp. WHT XLN Qz. Tr Amethyst	20	Qz cc	" "	⎮			
75	80	" "	30	WHT-Buff LT gn BN	wk argillic alt. ABUND. WHT Qz VN material. WK-mod argillic alt	50	Qz CC	WK-MOD FeOx	⎮			
80	85	" "	30	Lt GN BN + ORG BN + WHT	As above; decr. Veining Locally limonitic	20	Qz cc	MOD-locally STR FeOx	⎮			
85	90	" "	30	LT GN BN	General propylitic alt, WK argillic. Minor local wk silicif.	15	Qz cc	MOD FeOx	⎮			
90	95	" "	30	" "	" " (Local Amethyst)	12	Qz cc	" "	⎮			
95	100	" "	30	" " + ORG BN	" " (Incr. Argillic alt, Tr WHT clay)	20	Qz cc	STR FeOx	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.
MOSS PROJECT, ARIZONA

HOLE NO. M96-18

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - HW STKWK ZONE	30	Lt GY BN + GN BN + Org BN	WK-Mod argillic; Local WK silfd; General Prop alt. (FeOx + MnOx)	15	Qz cc	Mod-Str FeOx. MnOx	Good			
	110	MOSS VEIN	20	WHT/Buff Lt-GN BN	ABUND. WHT Qz Vein. WK-MOD argillic in Tmp. local silfd	60	Qz cc	Local Str FeOx				
	115	MOSS VEIN	20	LT-MED GN BN + WHT	WK-MOD silicif., Decr VN Qz. Hematite common	30	Qz cc	" "				
HI-GRADE	120	MOSS VEIN	20	WHT/BUFF + DK BN	Abund Vein material DK BN MnOx (15%)	70	Qz cc	Str MnOx + FeOx				
120	125	MOSS VEIN	20	Lt-MD GN BN + WHT + DK BN	Decr. Vein material, Cont. abund. MnOx. (Tmp argillized, locally silfd. Some red-BN VN material.)	40	Qz cc	" "				
HI-GRADE 125	130	MOSS VEIN	20	DK BN + TAN + RD BN	ABUND MnOx, BRN to Red BN Qz. Local clay	90	Qz cc MnOx	INTENSE MnOx + FeOx				
	135	MOSS VEIN	20	Lt-md GN-ORG + BUFF + DK BN	Diminished MnOx, but still abundant. Red-BN Qz present. Hem. stain	65	Qz cc	Str FeOx + MnOx Hem. common				
	140	MOSS VEIN	20	BUFF/WHT	Greatly diminished MnOx + FeOx. "Clean" Qz cc vein	95	Qz cc	WK FeOx				
	145	MOSS VEIN	20	" " + Lt BN	As Above: 25% bleached, MOD silfd Tmp	75	Qz cc	WK FeOx				
145	150	Tmp - FW ZONE	10	Lt-MED GN BN	Local MOD. silfd., a little clayey (arg alt.) Little veining	3	Qz cc	WK-MOD FeOx				
	155	" "	10	" "	No silicification. Strong propylitic to WK argillic alt.	5	Qz cc	" "				
	160	" "	10	" "	getting harder + fresher. Some hard-dense wht + bn Qz VLT to 2cm.	3	Qz minor cc	" "				
	165	" "	10	" " + ORG BN	Softer again, incr. alt. Fractured, WK-Mod arg. alt; Local Hem.	3	Qz cc	Str. FeOx				
	170	" "	10	MD GN BN + PK BN	Harder. Becoming unoxidized. Prop alt, No argillic alt	1	Qz cc	WK-MOD FeOx				
170	175	" "	10	MD GN GY + PK GY	REDOX Boundary. Harder. Chloritic alt. ONLY.	<1	cc Qz	Tr Py Minor FeOx.				
	180	" "	10	" " + GN BN	70% oxidized again INCR. VLTS. Prop. alt. as above. Local WK Silfd.	4	Qz cc	Tr Py WK FeOx				
	185	" "	10	" "	Incr. Veining. Fractured. Local WK Silfd.	10	Qz cc	Tr Py MOD-STR FeOx				
	190	Tmp	90	MED GN GY + PK GY	Harder, fresher. 95% UNOX.	<1	Qz cc	Tr Py V. WK FeOx				
	195	Tmp	90	" "	" "	<1	Qz cc	" "				
195	200	Tmp (+ Vein Zone)	90	" "	OXIDIZED AGAIN, Fractured Qz VNS, locally [illegible]	10	Qz cc	Tr Py WK-MOD FeOx				
200	205	Tmp	90	MD PK GY + GN GY	Fresh - Hard, V. Little alteration. (WK prop) UNOX	-	-	Tr Py				
		T.D. = 205										

6

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-29)

HOLE NO. M96-19 COORDINATES: ____ N, ____ E ELEV. ____
BEARING Due North CORE/RVC RC LOGGED BY J. Keller
INCLINATION -69° HOLE SIZE 5½" STARTED 3-20-96 5:00 PM
LENGTH 205' DRILLER Mike Folkins COMPLETED 3-21-96 8:10 AM
PAGE 1 OF 2 COMMENTS:
A little H_2O @ 170'. All dry drilling.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - HW STKWX ZONE	30	RED-ORG BN	Str. FeOx stain Lim. + Hem	8	Qz cc	Str FeOx	Fair			
5	10	"	30	"	" "	3	Qz cc	"	Fair			
10	15	"	30	"	" "	1-2	Qz cc	"	Good			
15	20	"	30	"	" "	4	Qz cc	"				
20	25	"	30	"	Slightly diminished FeOx. WK silicif. due to hairline Qz vlts.	10	"	MOD-STR FeOx				
25	30	"	30	LT-MD GY BN + ORG BN	" "	10	"	" "				
30	35	"	30	" " + WHT	ABUND. Qz/calcite veining. Peach. colored calcite common.	35	"	MOD FeOx				
35	40	"	30	"	As above. Also Brown-Maroon calcite	10	"	MOD-STR FeOx				
40	45	"	30	ORG BN + LT-MD GY BN	10% densely silicified limonitic material. Jasperoid-like.	5	"	STR FeOx				
45	50	"	30	" " + WHT	Incr. vein qz (some amethyst) Diminished Jasp.-like chips.	40	Qz cc	MOD FeOx				
50	55	"	30	WHT/BUFF + ORG BN	ABUND WHT - LT. Purple VN Qz. WK Silicif. Tmp	80	Qz cc	" "				
55	60	"	30	GY BN ORG BN WHT	Diminished Qz. WK Silicif. Tmp.	40	Qz cc	" "				
60	65	"	30	MD GY BN + WHT	" "	30	Qz cc	" "				
65	70	" "	30	LT-MD GY BN + Red	WK Local silicif., Hem stain on frac.	10	Qz cc	MOD FeOx				
70	75	" "	30	Lt-md GY BN - GN BN	" " (also local argillic)	4	Qz cc	"				
75	80	" "	30	" "	" "	4	Qz cc	"				
80	85	" " + FAULT	30 [illegible]	" " + TAN ORG clay	Fractured, w/ clays in frac. FAULT GOUGE. WK Silicif.	4	Qz cc	MOD-STR FeOx				
85	90	Tmp - HW STKWK ZONE	30	LT-md GY BN + GN BN	WK- Local str. silicif. Minor frac. fill wht. clay. Harder.	15	Qz cc	WK FeOx				
90	95	" "	30	"	As Above	8	Qz cc	"				
95	100	" "	30	" " + Org BN	Local dense Org-BN Silicification. Also <2% DK BN siliceous material within Qz vn. Jasperoid-like.	15	Qz cc	Local STR FeOx	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-19

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - HW stkwx ZONE	30	LT-MD GY BN +ORG BN	Local Silicification, some with pervasive limonite stain.	12	Qz MNR cc	Local STR FeOx	GOOD			
	110	" "	30	LT GY BN	Incr. silicif. & Veining. Decr. FeOx	35	Qz cc	WK-MOD FeOx				
	115	" "	30	LT-MD GY BN + ORG-BN	Tr Brown Qz WK-MOD Silicif., INCR Lim stain (Pervasive locally)	20	"	MOD-STR FeOx				
	120	" "	30	LT-MD GY BN	As above, but Decr. limonite.	30	"	WK-MOD FeOx				
120	125	" " (Moss?)	30	" "	Fractured blky silicif. & Qz VN. MOD-STR silicif. of Tmp.	40	Qz MNR cc	" "				
	130	Moss Vein	20	LT-MD BN, WHT-BUFF	Incr. Veining & Silicif. Hem stain	50	Qz	Local STR FeOx				
	135	Moss Vein	20	LT BUFF-GY LT BN, WHT	Brittle splintery Qz + dense silicif.	95	Qz cc	WK-MOD FeOx				
	140	Moss Vein	20	" "	Dense, massive Qz as above	100	Qz MNR cc	WK FeOx				
	145	Moss Vein	20	WHT + LT BN	LIGHT COLOR - Vein not as dense & splintery	95	Qz MNR cc	" "				
145	150	Moss Vein / Tmp-FW ZONE	20	WHT+LT GN + MD-DK GN BN	60% Vein (some Lt. green) 40% propylitized Tmp	55	Qz MNR cc	WK-MD FeOx				
	155	Tmp - FW ZONE	10	MD-DK GN BN	Propylitized to weakly argilized, Qz VLTS	15	Qz MNR cc	WK FeOx				
	160	Qz VN (Moss?)	25	WHT/BUFF + MD GN BN + GN GY.	Abund Blky massive Qz; Tmp partly UNOXIDIZED. Some xln Qz	60	Qz MNR cc	Tr Py WK FeOx				
	165	Tmp - FW ZONE	10	MD GN GY	95% unoxidized, strongly propylitized w/ numerous Qz VLTS	7	Qz cc	<.5 Py Tr FeOx				
	170	" "	10	MD-DK GY GN + PK GY	Harder, fresher, Decr. Qz. MOD Prop. Alt.	3	Qz cc	.5 Py Tr FeOx				
170	175	" "	10	" "	Local silicif. assoc. w/ incr. Qz VLTS. Tr clay	5	Qz cc	.5 Py Local FeOx				
	180	" "	10	MD GY GN + PK GY	Local argillic alt, fractured, Minor local silicif.	8	Qz cc	<.5 Py Tr FeOx				
	185	" "	10	" " + WHT	Propylitized Tmp w/ numerous WHT VLTS.	15	Qz cc	.5 Py No FeOx				
	190	" "	10	DK GY GN	Local pyritic zones, VLT selvages, diss.	3	Qz cc	1-2% Py				
	195	" "	10	MD-DK GY GN	Abund. VN Qz Diss Py in Tmp	30	Qz MNR cc	1% Py				
195	200	" "	10	DK GY GN + PK GN	V. little veining, Incr. Diss. Py cubes	1-2	Qz cc	2% Py	↓			
200	205	Tmp -	90	DK PK GY to GN GY.	Harder - fresher Decr. prop. alt. & Py	1	Qz cl	.5-1% Py				
		TD = 205'										

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DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-30) ± 25-30' NORTH

HOLE NO. M96-20 **COORDINATES:** ______ N, ______ E **ELEV.** ______

BEARING — **CORE/RVC** RC **LOGGED BY** J. KELLER

INCLINATION Vertical **HOLE SIZE** 5½" **STARTED** 3-21-96 9:25 AM

LENGTH 100' **DRILLER** Mike Adkins **COMPLETED** 3-21-96 10:50 AM

PAGE 1 **OF** 1 **COMMENTS:** Drilled on high road. ⊻ hole not possible. 25-30' N. of original site, on SXN.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
BIG Sample 0	5	Moss VEIN	20	WHT/Buff + DK ORG BN	Abund. wht - lt. BN vein material + silfd (MOD-STR) Tmp. FeOx + MnOx	75	Qz cc	STR FeOx + MnOx in Tmp.	GOOD			
5	10	Moss VEIN	20	" "	" " (local ORG BN vuggy Qz+cc)	85	Qz cc	" "				
10	15	MOSS VEIN	20	RD ORG BN + WHT/Buff	~~E~~ INTENSELY SILFD Splintery Tmp (repl. vn) + WHT VN as above.	100	Qz cc	~~STR~~ MOD-STR FeOx stain				
15	20	MOSS VEIN	20	RD ORG BN	Cherty Splintery Pervasive silicified Tmp. Replacement VN	100	Qz	Str FeOx (pervasive)				
20	25	MOSS VEIN	20	RED + RD ORG BN	Diminished silicification Strong HEMATITE stain	40	Qz	V. STR FeOx Hem.				
25	30	Moss VEIN	20	" " + WHT	Incr. replacement vein + WHT. VN Qz	60?	Qz	Str. FeOx				
30	35	MOSS VEIN	20	" "	Limonite dom. over hem. Intense silicif. again Tr Py in DK gry chips	80?	Qz	Tr Py STR FeOx				
35	40	Tmp - FW ZONE	10	GY BN + ORG BN	Greatly decr. silicif. MOD. Argillic alt. SOFT.	<1	Qz	STR FeOx				
40	45	" "	10	" "	Local WK silicification, FeOx + MnOx increased	2-3	Qz MNR CC	MOD-STR FeOx				
45	50	" "	10	GN BN + ORG BN	Decr. Silicif., a little clayey - WK argillic alt. TR GN Fluorite	1-2	Qz CC FLUOR	WK-MOD FeOx				
50	55	" "	10	GY BN	WK local argillic alt No silicif., decr. FeOx	1-2	Qz MNR cc	WK FeOx				
55	60	" "	10	GY BN + Org BN	MOD Argillic alt. WHT clay 5% strongly limonitic chips Qz locally vuggy	3	Qz cc	MOD-STR FeOx				
60	65	" "	10		(Local silfd. / Tr WHT clay) Veining incr. XLN Qz + Calcite. Local silfd.	15	Qz CC	MOD FeOx				
65	70	" "	10	GY BN + GN BN	Diminished veining. Locally argillized. FRACS. MOD Prop. alt., harder	5	Qz cc	WK-MOD FeO				
70	75	" "	10	PK BN + GN BN	Much fresher & Harder. No Veins	—	—	WK-MOD FeOx (on FRX)				
75	80	" "	10	GN BN + PK BN	INCR. Qz Veins, local WK-MOD silicif. Qz VLTS XLN, drusy.	7	Qz (XLN) MNR cc	MOD FeOx stain				
80	85	Tmp	90	" " + GN GY	~~E~~ Just ~~prop~~ propylitic alt. + a few VLTS. fresher.	4	Qz cc	WK FeOx				
85	90	"	90	GN BN + PK BN	" "	2	Qz cc	" "				
90	95	"	90	GN GY + PK GY	REDOX. V. Little ox. Tr Py, VLTS Mostly cc	1-2	CC Qz	Tr Py Tr FeOx				
95	100	"	90	GN BN + GN GY	Oxidized again (90%) Vlts Calcite only.	3	CC	Tr Py WK FeOx	↓			

TD

DRILL HOLE LOG
ADDWEST MINERALS, INC. **MOSS PROJECT, ARIZONA**

(New Hole) Between [illegible]

HOLE NO. M96-21 COORDINATES: ______ N, ______ E ELEV. ______
BEARING — CORE/RVC RC LOGGED BY J. KELLER
INCLINATION Vertical HOLE SIZE 5½" STARTED 3-21-96 11:20 PM
LENGTH 120' DRILLER Mike Adkins COMPLETED 3-21-96 1:30 PM
PAGE 1 OF 2 COMMENTS:

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - HW STKWK ZONE	30	ORG BN + RD BN	Qz calcite veining, Fe + Mn Ox. some BN calcite. Local wk silicif.	15-20	Qz cc	MOD FeOx	GOOD			
5	10	" "	30	LT RD BN + ORG BN + WHT	" "	20	Qz cc	" "				
10	15	" "	30	ORG BN + RD BN	" " Hematitic FeOx common.	8	Qz cc	MOD-STR FeOx				
15	20	" "	30	GY BN + ORG BN	" " Limonitic, less Hem.	15	Qz cc	MOD FeOx				
20	25	" "	30	GY BN + WHT	Decr. FeOx WK Silicified (within vns)	15	Qz cc	WK FeOx				
25	30	" "	30	" "	" " (sl incr. FeOx + Qz)	20	Qz cc	WK-MOD FeOx				
30	35	" "	30	" "	" "	18	Qz cc	" "				
35	40	" "	30	GY BN + ORG BN + WHT	" " (Sl. INCR Qz + FeOx)	25	Qz cc	MOD FeOx				
40	45	" "	30	Red-Org BN + WHT	MOD - V. strongly silicified. incr. xln Qz & cc.	30	Qz cc	WK-MOD FeOx				
45	50	MOSS VEIN	20	WHT + RED ORG BN	WHT to LT gry to Buff Qz-cc Vein + mod. silfd. Tmp.	75	Qz cc	" "				
50	55	MOSS VEIN	20	ORG BN + WHT	~~As above~~; decr. Qz %. Abund. clayey fines (FeOx-rich)	50	Qz cc	STR - FeOx				
55	60	MOSS VEIN	20	WHT + ORG BN	Decr. FeOx & clayey fines. Local drusy qz	75	Qz cc	MOD-STR FeOx				
60	65	MOSS VEIN	20	WHT/LT GY + LT PINK	Nearly all vein; Fairly "clean" looking	95	Qz cc	WK local FeOx				
65	70	MOSS VEIN	20	WHT + RD GY BN	"Clean" VN as Above + Densely silfd. replacement/vn splinters	85	Qz cc	WK-MOD FeOx				
70	75	MOSS VEIN	20	WHT - LT gry + LT BN	VN Qz (decr. calcite) + silfd. replacement of Tmp	100	Qz Mnr cc	" "				
75	80	Moss Vein	20	PK BN + LT BN, Tz Gry	V. blocky & splintery. VN + Tmp 100% replaced w/ SiO2.	100	Qz	" "				
80	85	" " Tmp - FW ZONE	10	Mod-DK GY BN	30% silfd as above, 70% WK-Mod silfd, less xln Qz	30	Qz	WK-MOD FeOx				
85	90	Tmp - FW Zone	10	" "	V. little qz or silicif; wk arg. alt?	2	Qz	"				
90	95	" "	10	" " + Org BN	Incr. veining & local wk-mod silicif	15	Qz	MOD-STR FeOx				
95	100	" "	10	GN BN + PK BN	WK - locally str. silicif. Generally ~~[illegible]~~ propylitized.	10	Qz MNR cc	WK-MOD FeOx				

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-21

PAGE 2 **OF** 2

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp- FW Zone	10	GN BN	Diminished Veining. Propylitic alt-Minor argillic	2	Qz	WK FeOx	GOOD			
	110	Tmp	90	GN BN PX+ BN	(no " VLTS) "	–	–	" "	"			
	115	Tmp	90	" "	Harder - Fresher	–	–	" "	"			
	120	Tmp	90	" "	" " Minor qz vlt	1	Qz	" "	"			
		TD = 120'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-22 COORDINATES: ______ N, ______ E ELEV. ______
BEARING — CORE/RVC RC LOGGED BY J. KELLER
INCLINATION 90° HOLE SIZE 5½" STARTED 3-21-96 2:40 pm
LENGTH 150' DRILLER Mike Adkins COMPLETED 3-21-96 4:25 pm
PAGE 1 OF 2 COMMENTS:

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp- HW STKWX ZONE	30	GY BN WHT	Abundant Vein Material in Tmp	40	Qz cc	wk-MOD FeOx	Fair			
5	10	Qz VN	25	WHT-Buff	WHT- Buff "clean" Vein. Tmp alt. soft, porous	90	Qz cc	wk FeOx	fair			
10	15	" "	25	" "	As Above; clean Massive xln	95	Qz cc	Tz FeOx	GOOD			
15	20	Tmp'- HW STKWX ZONE	30	" " + Lt Org-BN	Back into STKWX Tmp. Local Silicif.; FeOx stain	50	Qz cc	MOD FeOx	|			
20	25	" "	30	Lt-md ORG-BN + GN BN	Local wk silicif. due to hairline vlts Tz drusy Qz	7	Qz	wk-MOD FeOx				
25	30	" "	30	Lt-md GN BN + Org BN	" "	8	Qz	" "				
30	35	" "	30	Lt-md GY BN	As "above" incr cc. decr. FeOx.	8	Qz cc	wk FeOx				
35	40	" "	30	" "	" "	5	Qz cc	"				
40	45	" "	30	" " + Org BN	Incr. vlts Tr peach calcite Tr drusy x FeOx. CONT wk Local Silicif	15	Qz cc	wk-MOD FeOx				
45	50	" "	30	Lt-md Gy BN	Incr. Qz.	20	Qz cc	wk FeOx				
50	55	" "	30	ORG-BN	Decr Qz, incr. FeOx	5	Qz cc	MOD-Str FeOx				
55	60	" "	30	Lt-md GN BN + Orn BN	Incr. Qz, decr. FeOx. Softer. Tz Clear cc.	15	Qz cc	wk-MOD FeOx				
60	65	" "	30			50	Qz cc	" "				
65	70	" "	30			50	Qz cc					
70	75	" "	30	ORG-BN + WHT	MOD-Str Silicif. of Tmp. Numerous Hairline-2mm Stringers + typical larger vlts.	25	Qz cc	MOD-FeOx				
75	80	MOSS VEIN	20	WHT/Buff + Lt Rd BN + PK	Overall reddish color. Dense Silicif., abund VN	95	Qz	Local FeOx				
80	85	MOSS VEIN	20	WHT/Buff + Org BRN	Decr Lt Pink coloration.	80	Qz cc	FeOx Stain Tmp				
85	90	MOSS VEIN	20	V. Lt. grn-Tan	Homogenous V. Lt GRN-TAN Vein.	100	Qz cc	Tz FeOx				
90	95	MOSS VEIN	20	Lt. GRN. to Lt-md Gry BN	Darker VN color. INTENSE Tmp SiO2 replacement also.	95	Qz cc	Tz FeOx				
95	100	Moss Vein	20	MD GY BN to WHT/Buff	Blocky chips; hard splintery Qz + Silfd Tmp. MnOx	95	Qz mna cc	Str FeOx + MnOx	↓			

DRILL HOLE LOG

ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-22

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	MOSS VEIN	20	LT BN + GRAY	5% gray chip (unox) V. Dense silicification & Qz Vein	95	Qz	Str FeOx locally	Good			
	110	Tmp - F.W. ZONE	10		Argillic alt., SOFT Str. FeOx	10	Qz	STR FeOx				
	115	" "	10		" "	–	–	Str FeOx				
	120	" "	10	ORG BN + GY GN	Partially unox: Propylitic alt.; Harder	1	Qz	Tr Py Mod FeOx				
	125	" "	10	GY GN + PK GY	95% UNox. FeOx frx only. Prop. alt	–	–	Tr Py Tr FeOx				
	130	Tmp	90	" " + GN BN	A little fractured. w/ sl. incr. FeOx	<1	Qz	Tr Py wk FeOx				
	135	"	90	" "	" " Generally unox, but str. FeOx along frx.	<1	Qz	Tr Py Loc. Str FeOx				
	140	"	90	GY BLU GN + PK GY	Prop. alt, poss local argillic; soft. Almost Blu-green.	<1	Qz cc	"				
	145	"	90	PK GY + GN GY	~~Harder~~ - Fresher. Decr. Chlorite	<1	Qz cc	Tr Py Tr FeOx				
	150	"	90	PK GY + GN GY	Quite fresh.	Tr	cc	—	↓			

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DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-27)

HOLE NO. M96-23 COORDINATES: ______ N, ______ E ELEV. ______
BEARING Due North CORE/RVC RC LOGGED BY J. Keller
INCLINATION - HOLE SIZE 5½" STARTED 3/21/96 5:25 pm
LENGTH 525' DRILLER Mike Adkins COMPLETED 3-22-96 5:10 PM
PAGE 1 OF 5 COMMENTS:

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - Moss Porphyry	90	MD GN-BN + RD BN	3-4% Coarse glass-green FLUORITE. WHT-BRN cc also. FROM N25W, ±90 Vein. ± FeOx	10	CC FL	STR FeOx	FAIR			
5	10	" "	90	" "	2% FLUORITE as above FRx, Str. FeOx	5	CC FL	" "	GOOD			
10	15	" "	90	MD GN BN	Decr. FeOx, out of CC-FL VN.	3	Qz	MOD FeOx				
15	20	" "	90	" "	General wk propylitic alt. FeOx on frx	2	Qz					
20	25	" "	90	" "	" "	1	Qz					
25	30	" "	90	MD-DK GN BN + PK BN	Propylitic alt (weak), FeOx on Frax [As Above]	-	-	WK FeOx				
30	35	" "	90	" "	" " (sl. incr. FeOx)	±	CC	MOD FeOx				
35	40	" "	90	" "	" " (FeOx locally hematitic)	-	-	" "				
40	45	" "	90	" "	Barren looking, decr. FeOx.	-	-	WK FeOx				
45	50	" "	90	" "	General wk propylitic alt. hard local frx. Looks Barren.	-	-	" "				
50	55	" "	90	" "	" "	-	-	WK-MOD FeOx				
55	60	" "	90	" "	" "	-	-	"				
60	65	" "	90	" "	" "	-	-	"				
65	70	" "	90	" "	" "	-	-	"				
70	75	" "	90	" " ± GN GY	Mixed oxide-SULFIDE (± diss Py). As Above alt.	-	-	± Py WK FeOx				
75	80	" "	90	" "	" "	-	-	" "				
80	85	" "	90	" "	" "	-	-	" "				
85	90	" "	90	GN GY	95% unoxidized. Quite barren looking	-	-	<.5 Py ± FeOx				
90	95	" "	90	" "	Local oxidation.	1	CC	<.5 Py WK local FeOx				
95	100	" "	90	ORG BR ± GN GY	Incr. FeOx + Py. Py on frax.	<1	CC	(1% Py) Local str. FeOx	↓			

3/21
3/22

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-23

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp- Moss Porphyry	90	LT GN GY + ORG BN	Propylitic alteration, Diss py. Partially oxidized	-	-	<.5% py Local MOD FeOx	GOOD			
	110	" "	90	" "	" "	1	CC Qz	" "	↓			
	115	" "	90	" "	Calcite - FLUORITE VN. Coarse XLS.	15	CC FL	" "				
	120	" "	90	LT. GN GY + PK GY	WK- MOD Propylitic alt. Looks quite barren. NOT OXIDIZED	-	-	<.5% py				
	125	" "	90	" "		1	Qz cc	<.5% py				
	130	" "	90	" "	" " (Tr local argillic)	1-2	Qz Cc	<.5% py				
	135	" "	90	" "	" " (clear-WHT Qz VLT)	2	Qz	<.5% py				
	140	" "	90	" "	CONT. Mild propylitic alt. Barren?	-	-	.5% py				
	145	" "	90	" "	" " (Local incr. py in frx)	1	CC	.5% py				
	150	" "	90	" "	Homogeneous, WK-MOD propylitic.	-	-	<.5 py				
	155	" "	90	" "	" "	—	—	<.5 py				
	160	" "	90	" " + ORG BN	" " (Minor FeOx in FRX)	Tr	cc	<.5 Py WK FeOx				
	165	" "	90	" "	Propylitic Alt. continues. A little VN qz w/ FeOx, minor clay.	2	Qz	Tr py Local str FeOx				
	170	" "	90	PK GRY + GN GY	WK propylitic alt. Harder, magetite dom. over pyrite. D.O.G.	-	—	Tr, Py (MAG) dom.				
	175	" "	90	" "	" "	-	-	"				
	180	" "	90	" "	" "	-	-	"				
	185	" "	90	" "	" "	-	-	"				
	190	" "	90	" "	" "	-	-	"				
	195	" "	90	" "	" " (Quite Monotonous)	-	-	"				
	200	" "	90	" "	" "	-	—	"				
	205	" "	90	Lt. GN GY + PK GY	Basically as above. A few hairline Qz ± cc VLTS throughout.	<1	Qz	<.5 py				
	210	" "	90	" "	" "	<1	Qz cc	<.5 py				
	215	" "	90	" "	" " (sl. incr. Py, frx + diss)	<1	cc Qz	.5 py				
	220	" "	90	" "	" " (decr. py)	<1	cc Qz	<.5 py	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-23

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp - Moss porphyry	90	Lt GN GY → PK	WK - mod propylitic alt: a few hairline Qz + Cc stringers. Diss Py	<1	Cc Qz	<.5% Py	Good			
	230	" "	90	" "	" " " (A few coarse xln Qz chips)	1	Qz Cc	<.5 Py				
	235	" "	90	" "	" " (No coarse VLTS)	<1	Cc Qz	" "				
	240	" "	90	" "	" "	<1	Qz Cc	" "				
	245	" "	90	" "	" " (MONOTONOUS)	<1	"	" "				
245	250	" "	90		" "	<1	Qz Cc	" "				
	255	" "	90		" "	<1	Qz Cc	" "				
	260	" "	90	Lt PK GY → Lt GN GY	" " (Becoming lighter colored)	<1	Cc Qz	" "				
	265	" "	90	Lt gn gy → PK	" " (somewhat darker again)	<1	Qz Cc	<.5 Py				
	270	" "	90	" "	" " (sparse coarse xln Qz veins)	1	Qz Cc	<.5 Py				
270	275	" "	90	" "	As above; but a little fractured, w/ minor FeOx	1-2	Qz Cc	<.5 Py Tr FeOx				
	280	" "	90	" "	Decr. XLN Qz & FRX. Barren, WK-MD Prop.	<1	Cc Qz	<.5 Py				
	285	" "	90	" "	" "	<1	Cc Qz	<.5 Py				
	290	Tmp - Qz VLT ZONE; DRILL WET ↓	35	" "	Generally as above. (Sl. Consistent Incr. in Qz VLTS)	1	Qz Cc	<.5 Py				
	295	" "	35	" "	INCR. Qz + Cc VLTS. Locally oxidized. FRX Py in FRX + DISS.	2	Qz Cc	.5 Py				
295	300	" "	35	" "	Prop. alt + Hairline Qz VLTS CONTINUE Decr. FRX / FeOx	1	Cc Qz	<.5 Py				
	305	" "	35	PK gy + GN GY	" "	1	Qz Cc	<.5 Py				
	310	" "	35	" "	" " FeOx locally (frx).	2	Qz Cc	<.5 Py Local FeOx				
	315	" "	35	" "	" " No FeOx	1	Cc Qz	<.5 Py				
	320	" "	35	" "	" " (Homogeneous hard, propylitized)	<1	Cc Qz	<.5 Py				
320	325	" "	35	" "	" "	<1	Cc Qz	<.5 Py				
	330	" "	35	" "	" "	<1	Cc Qz	<.5 Py				
	335	" "	35	" "	" " (Incr. VLTS)	1-2	Cc Qz	<.5 Py				
335	340	" "	35	" "	" " (Incr. VLTS, Slight FeOx)	2	Qz Cc	<.5 Py	↓			

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FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
340	345	Tmp - HW VLT ZONE	35	Lt-med gn GY pk GY	General propylitic alt. Unoxidized. Minor diss. py. Occ. VLTS	<1	cc Qz	<.5% py	Good			
345	350	" "	35	" "	Local wk silicif., incr. qz veining, Local frac-fill py, otherwise as above.	3	Qz cc	.5 py				
	355	" "	35	" "	" " -silicif causes bleaching -	2	Qz cc	<.5 py				
	360	" "	35	" "	" "	4	Qz cc	<.5 py				
	365	" "	35	" "	Decr. veining.	1	Qz cc	Tr py				
	370	Tmp - HW Stkwx ZONE	30	Lt-MD GN +PK gy	Incr. veining/local wk silicif., some argillic alt.	4	Qz cc	<.5 py				
370	375	" "	30	" "	" " (calcite dominant)	3	cc Qz	<.5 py				
	380	" "	30	Md-DK PK gry +GN GY	Tmp darker (magnetic, less propylitized)	2-3	Qz cc	Tr py				
	385	Tmp - HW Stkwx ZONE ?	30?	Lt-MD GN + PK-GRY	Local wk-MD silicification assoc. w/ incr. Qz-cc veining. Incr. Diss Py	4	Qz cc	.5% py				
	390	" "	30	PK GRY - Green	Decr. py. Rk more pink (w/ diss. magnetite)	3	Qz cc	<.5 py				
	395	" "	30	Lt-Md GN GY + PK gy	Incr. veining, mod local silicif., Part oxidized Tr Amethyst	10	Qz cc	<.5 py Local FeOx				
395	400	" " ~~Lost H2O~~ SMPL-CAVING	30	Buff-Lt grn Org BN	ABUND VN Material. Fractured, Oxidized. Tr Amethyst. MOD silicif.	20	Qz cc	Tr Py Local str FeOx				
	405	SAMPLE SPLIT -	30	"	SAME MATERIAL DRILLERS SCREWED UP.	20	Qz cc					
	410	Tmp - HW Stkwx ZONE FINES SAMPLED	30	MD GN GY + WHT BUFF + ORG BN	also red-BN Qz Apple-GrN Qz present, +dense wht qz. Local mod-str. silicif. incr. py Local limonitic	15	Qz cc	.5 py STR FeOx				
	415	" "	30	GN BN GN GY ORG BN	Decr. Qz (some drusy), CONT. FRX, FeOx + Py = Py locally abund. diss in.	8	Qz cc	<.5 py (locally abund) loc. str FeOx				
	420	" "	30	GN GY + PK GY + ORG BN	Diminished Qz x Ox. Qz now wht. dense. FeOx in frx only (w/minor drusy Qz)	5	Qz cc	<.5 py FeOx in frx				
420	425	" "	30	" "	" " - as above -	4	Qz cc	" "				
	430	" "	30	GN GY PK GY	Generally only propylitic alt w/clean WHT VLTS. TR FeOx only	4	Qz cc	TR Py Tr FeOx				
	435	" "	30	" "	" "	2-3	Qz cc	<.5 py				
	440	" "	30	PK GY + GN GY	Incr. Qz veining, mostly wht but Tr narrow Green VLTS. WK alt. only	5	Qz cc	<.5 py FeOx on FRX				
	445	" "	30	" "	Decr. VLTS. WK-MOD prop. alt., Local FeOx	2	Qz cc	Tr Py Local FeOx (<.5%)				
445	450	" "	30	GN GY + PK GY	Slightly lighter color (poss. wk silicif.), incr. Qz, tr green qz dense	7	Qz cc	<.5 py Tr FeOx				
	455	" "	30	" "	Local wk-Mod silicif. chloritic zones. Decreasing pink color.	8	Qz mnr cc	Tr Py Tr FeOx				
455	460	" "	30	" "	As above; decr. VLTS	4	Qz cc	<.5 py Tr FeOx				

FINES

COMBINED

DRILL HOLE LOG
ADDWEST MINERALS, INC.
HOLE NO. M96-23

MOSS PROJECT, ARIZONA

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
460	465	Tmp - HW Stkwx Zone	30	GN GY + Lt. BN - Org BN	MOD - STR Silicification / mostly oxidized. Local strong FeOx FRX.	20?	Qz	Tr Py STR FeOx	Good			
	470	Moss Vein	20	Lt GN BN - Org BN	Mostly densely silicified Tmp. Not much open-space filling Qz. All oxidized	75 replacement	Qz	MOD-STR FeOx				
470	475	Moss Vein	20	Lt GN BN + WHT/Buff	Vein Qz/cc + intensely silfd. Tmp. Greenish Qz common. Tr drusy.	100	Qz cc	WK FeOx				
	480	Moss Vein (fines sample)	20	Lt. GN BN Lt GN WHT	Abund. xln Qz. decr. silfd. material. still abundant Tr Amethyst.	80	Qz cc	WK-MOD FeOx locally				
	485	Moss Vein	20	" "	VN Qz + mod. to intense silfd Tmp.	90	Qz	" "				
	490	Moss Vein	20	Lt-md GN BN + WHT	Qz mainly open space filling - Decr. intense silicif. some Drusy-vuggy; still mod. silicif.	65	Qz	WK-MOD FeOx				
	495	Moss Vein	20	Lt-DK BN + Blu-GN GY + WHT-BUFF	WK - Locally intense (again) silicif.; partially unox. Tmp. Abund. Qz VN + replacement	60	Qz	Tr Py mod FeOx				
495	500	Tmp - FW Zone	10	Bluish GY GN	Greatly decreased Qz & silicif. Strong propylitic alt., WK argillic. UNOX.	3	Qz cc	(.5% of) Tr FeOx				
	505	" "	10	GN + PK GY	WK - MOD propylitic alt. No silicification. Barren looking.	<1	Qz cc	Tr Py No FeOx				
	510	" "	10	" "	" "	–	–	Tr Py				
	515	" "	10	"	(Slightly bleached) " "	<1	Qz cc	Tr Py				
	520	Tmp - Moss porph	90	PK GY GN GY	Fresher, darker color, harder	–	–	Tr Py				
520	525	" "	90	" "	" "	<1	Qz cc	Tr Py	↓			
		TD: 525'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-33)

HOLE NO. M96-24 **COORDINATES:** ____ N, ____ E **ELEV.** ____
BEARING Due North **CORE/RVC** RC **LOGGED BY** J. Keller
INCLINATION -60° **HOLE SIZE** 5½" **STARTED** 3-23-96 6:45 AM
LENGTH 385' **DRILLER** Mike Adkins **COMPLETED** 3-23-96 4:10 pm
PAGE 1 **OF** 4 **COMMENTS:**

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Pad Fill - Tmp			Pad Fill - Rubble				Poor			
5	10	Colluvium Tmp - Moss Porphyry	90	Lt GN BN -PK BN	No sample return in colluvium. Only in rock. Propylitic alt; minor FeOx	–	–	WK FeOx	Poor			
10	15	" "	90	Lt-md GN BN	Propylitic alteration. Looks Barren.	Tr	CC	" "	Good			
15	20	" "	90/50	" "	" " w/ a little local clay. FRX	<1	CC	WK-mod FeOx				
20	25	Fault Zone in Tmp Probably trends NW in gully	50	" " Beige clays	Incr. clayey frx. FeOx - Fault Zone -	<1	CC	Mod FeOx				
25	30	Tmp - Moss Porphyry	90	Lt-Md GN BN	Not clayey; fractured. Propylitic alt: FeOx locally	–	–	WK-mod FeOx				
30	35	" "	90	" "	" " (some hematite stain)	Tr	CC	" "				
35	40	" "	90	" "	" " Decr. Hem stain	–	–	" "				
40	45	Minor Fault in Tmp	50	Lt GN BN to GY BN	Local clayey frx. Fault zone	Tr	CC	~~wk~~ " "				
45	50	Tmp - Moss Porph	90	" "	A little bleached, incr. FeOx; VLTS.	3	CC Qz	Mod FeOx				
50	55	" "	90	Lt-Md PK BN + GN-PK GY	20% unox. chips. ~~No veining.~~ WK Propylitic alt.	1	CC Qz	Tr Py WK-Mod FeOx				
55	60	" "	90	" "	30% unox. chips. Minor CC VLTS; Propylitic alt. Tr clay	<1	CC	" "				
60	65	" "	90	Lt GN GY PK GY	FeOx only in frx now. Very little Pyrite. Mostly Magnetite. WK Prop. alt.)	<1	CC	Tr Py V. WK FeOx				
65	70	" "	90	" "	" "	<1	CC	No Py seen. Tr FeOx				
70	75	" "	90	" "	" "	–	–	" "				
75	80	" "	90	" " + GN BN	80% oxidized, otherwise as above	Tr	Qz CC	Local Mod FeOx				
80	85	" "	90	Lt PK BN + Lt PK GY	50% Oxidation. V. little metal. WK. propylitic alt	Tr	CC	WK-mod FeOx				
85	90	" "	90	Lt PK GY + BN	10% Ox. A few Calcite vlts, Tr Py	1	CC	Tr Py local FeOx stain				
90	95	" "	90	Lt PK BN GN BN	90% oxidized RK. Incr. chlorite.	1	CC	WK-Mod FeOx				
95	100	Fault in Tmp	50	Lt-md GN BN + Beige	10% beige clay. Fractured. Soft. Incr. FeOx	1	CC	Mod FeOx				

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										Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - Moss Porphyry	90	GN-PX BN - GN-PX GY	40% unox material. Out of minor fault	Tr	Qz cc	Tr Py wk-mod FeOx stain	Good			
	110	Tmp - HW VLT ZONE	35	Lt-md GN GY	Unoxidized. Incr. Qz VLTS Tr FeOx only	3	Qz cc	Tr Py Tr FeOx				
	115	" "	35	" "	Occ. hairline qz vlts, incr. prop. alt. local frac. fill py.	1	Qz cc	<.5 py Tr FeOx				
	120	" "	35	" "	Decr. Py. Occ. frx w/ epidote-chlor-py filling (mod. prop. alt)	Tr	cc	Tr Py Tr FeOx				
120	125	" "	35	" "	Sl. incr. vlts & local FeOx. (<5%)	1	cc Qz	Tr Py Local FeOx				
	130	" "	35	" "	Tr MOLY(?) Local silicif. assoc. w/ qz vlts	2	Qz cc	Tr Py Mo Local FeOx				
	135	" "	35	" "	Incr. Qz vlts, local Py. Softer. Argillic alt. Vlts larger.	3	Qz cc	<.5 py Local FeOx				
	140	" "	35	" "	30% ox. Decr. Large vlts. Numerous hairline vlts. Local argillic alt.	1	Qz cc	Tr py Local/mod. FeOx				
	145	Tmp - as above HW VLT ZONE	35	ORG BN	All oxidized. Incr. dense WHT + BRN Qz. Soft, argillized. FeOx-rich	5	Qz cc	STR FeOx				
145	150	" "	36	" "	Local v. soft, argillized. Also some wk-mod silfd, [illegible]	1	Qz cc	STR FeOx				
	155	" "	35	Lt. md GN GY + ORG BN	95% unox. again. Harder. Prop. alt + v. wk silicif. / Hairline vlts	<1	Qz	<.5 py Loc. str FeOx				
	160	" "	35	GN BN + GN GY	50% ox. again Prop. alt. only.	<1	Qz cc	<.5 py wk-mod FeOx				
	165	" "	35	" "	As above, but a little fracture, Hairline vlts	<1	Qz cc?	" "				
	170	" "	35	GN GY	All unox. HARDER v. wk silicif. / hairline vlts, otherwise mod. prop. alt.	<1	Qz cc	<.5 py				
170	175	" "	35	" "	" "	<1	cc Qz	<.5 py				
	180	" "	35	Lt GN GY	Sl. incr. silicif. & Diss v. fg py. Lighter	<1	Qz	1% py				
	185	" "	35	" "	" " (+ some oxidation)	<1	Qz	1% py Local FeOx				
	190	" "	35	" "	" " (No ox.)	<1	Qz	1% py				
	195	" "	35	Lt. md GN GY	Decr. silicif (v. weak) & diss py. A few hairline Qz vlts. Some coarser.	<1	Qz cc	<.5 py				
195	200	" "	35	" "	SOFTER Incr. coarse Qz vlts (wht.) Local frac. fill py + clots w/ chlor	1-2	Qz cc	.5 py				
	205	" A LITTLE H2O "	35	" "	Decr. coarse vlts, but incr. hairline vlts, py, diss + frac fill.	1	Qz cc	1% py				
	210	" " DRILL WET ↓	35	" "	Py + Qz py stringers. v. wk silicif., general prop. alt.	<1	Qz	2% py				
	215	" "	35	" "	Incr. coarser xln Qz vlts, Decr. hairline. Decr. Py stringers.	1	Qz	1% py				
215	220	" "	35	" " + GN BN	Incr. Hairline vlts & local silicif. Py continues.	1	Qz	1% py Local wk FeOx				

generally as above, though

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										Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp- HW VLT ZONE	35	Med GN GY + PK GY	Diss - Frac-Fill Py. General propylitic, v. wk silicif. from occ. hairline Qz VLTS	.5	Qz	1% Py FeOx on Frx	Good			
	230	" "	35	" "	" " (a few coarse wht drusy VLTS)	1	Qz	1% Py No Ox.				
	235	" "	35	" "	" "	1	Qz	" "				
	240	" "	35	" "	" " (Incr. Py + Qz)	2	Qz	2% Py				
	245	" "	35	" "	" " (decr. qz / py)	1	Qz cc	1% Py				
245	250	" "	35	" "	" " (Py greatly decr., Qz [illegible])	<1	CC Qz	<.5 Py				
	255	" "	35	"	" " (wht - green cc VLTS, Py) incr. again: FeOx [illegible]	2	CC Qz	1% Py FeOx on Frx				
	260	" "	35	" "	Decr. FeOx. Rare Qz VLTS w/ adjacent bleaching / silicif.	1	Qz cc	1% Py Tr FeOx				
	265	" "	35	" " + GN ORG BN	Incr. Xln qz VLTS, local oxidation.	2	Qz cc	.5% Py Local Mod FeOx				
	270	Tmp - HW stkwx ZONE	30	Lt gn gy to v. Lt gy	Increased silicification + bleaching - more numerous hairline VLTS. Local chloritic zones w/ 5-10% Py.	4	Qz cc	1% Py Local Str FeOx				
270	275	" "	30	" " + Org BN	Localized MOD-STR Silicif., 50% oxidation. incr. qz - dense some BN	6	Qz cc	.5% Py STR FeOx				
	280	" "	30	ORG BN PK BN GRY	some Grn Qz, BN CC MOD. to V. Str. Silicif. 95% oxidized.	20(?)	Qz cc	Tr Py STR FeOx				
	285	" "	30	Org BN GN GY	Decr. pervasive silicif. & Oxidation (60%), cont. vein Qz (some green)	12	Qz cc	.5 Py STR FeOx				
	290	" "	30	GN BN + Green + GN GY	75% oxidized. Decr. Qz. Green halo in qz around Ox. Py cube. WK silfd.	7	Qz cc	Tr Py				
	295	MOSS VEIN	20	Lt-MD BN + GN B + WHT	Abund. VN qz + intensely silfd. Tmp. Brown. Local MnOx - FeOx	90	Qz cc	MOD-STR FeOx + MnOx				
295	300	Lots of H_2O Moss Vein	20	WHT V. Lt BN ORG BN	V. Lt. color VN material Mainly open-space - Not replacement.	100	Qz cc	Local MnOx dots + FeOx				
	305	MOSS VEIN	20	WHT Lt. Yello. + V. lt GN	Basically all white. Massive Vein Qz + CC. Some Calcite is Brown.	100	Qz CC	Tr. - WK FeOx & MnOx				
	310	MOSS VEIN	20	" "	As Above, LOOKS GOOD.	100	Qz CC	" "				
	315	MOSS VEIN (± 100 gpm H_2O)	20	" "	V. little of anything but qz & calcite. V. Lt. grn Qz common.	100	Qz CC	Tr FeOx + MnOx				
	320	Moss Vein	20	" " + GN BN	50% as above 50% Tmp, weakly silfd but good texture.	50	Qz CC	Mod FeOx				
320	325	Moss Vein	20	WHT Lt GN	Tr. drusy qz w/ str MnOx. As above, but Tmp now more strongly silfd & lighter color. Diss FeOx after Py	75	Qz CC	" " pseudomorphs				
	330	Moss Vein	20	V. lt-md gry + WHT	XLN Qz + CC in variably (mod-dense) silfd. Tmp. 90% UNOX.	40	Qz cc	<.5 Py Local FeOx				
	335	Moss Vein	20	" " + Lt gn gy	As above; Silicification diminishing. More chloritic	30	Qz cc	<.5 Py Minor FeOx				
	340	Moss Vein	20	" "	Variable mod- v. strong Silicification as above	45	Qz cc	<.5 Py Tr FeOx				

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FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
340	345	Tmp- FW VLT ZONE	10	MD-DK GN + PK + WHT	Greatly diminished Tmp silica-flooding, but abund. VN persists. Prop. alt.	30	Qz cc	<.5 py · Local FeOx	Good ↓			
345	350	Tmp- FW VLT ZONE	10	MD-DK GN + PK GY	Greatly diminished vein material. No silicif. Str. propylitic alt. Py	3	Qz cc	2% Diss Py. Tr FeOx				
350	355	" " (fault?)	50	" " + WHT + ORG BN	5% beige gouge?-clay. 30% oxidized material. Drusy Qz - Tr amethyst	15	Qz cc	<.5 py Loc. str. FeOx				
355	360	Tmp- Fw Zone	10	GY GN ORG BN WHT	Some slicks seen. Curious DK bn mottling (MnOx specks?) abund WHT Qz-cc, 40% Tmp oxidized	20	Qz cc	<.5 py. Local str FeOx & MnOx				
360	365	" "	10	MD-DK GY GN + PK GY	Out of fracture zone Not oxidized. Propylitic & Qz veining continues	10	Qz MnR cc	<.5 py Tr FeOx				
365	370	" "	10	" " + WHT + ORG BN	Abund XLN Qz VLts, some drusy. 30% oxidized Rx.	30	Qz	<.5 py Loc. MOD-STR FeOx				
370	375	very slow drilling. Tmp- Porphyry	90	MD-DK GYGN + PK GY	Abrupt absence of Qz. WK prop. alt. only. Quite barren.	<1	Qz cc	<.5 Py No Ox.				
375	380	" "	90	Lt.-DK gy gn + PK GY	Incr. py, esp. in chloritic zones. WHT. "Bull" Qz. Mod. Prop. alt. Local Lt color	1	Qz cc	1% py				
380	385	" "	90	" "	Decr. py & Qz. Mod. Prop. alt. continues	<1	Qz cc	.5% py	↓			
		T.D. = 385'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-32)

HOLE NO. M96-25 **COORDINATES:** ______ N, ______ E **ELEV.** ______

BEARING Due North **CORE/RVC** RC **LOGGED BY** J. Keller

INCLINATION -60° **HOLE SIZE** 5½" **STARTED** 3-23-96 5:25 pm

LENGTH 202' **DRILLER** Mike Adkins **COMPLETED** 3-2[illegible]-96

PAGE 1 **OF** 2 **COMMENTS:** * FW of vein outcrop in section is ±95' North of MP-31 site. Change X-SXN.

Hole lost. BIT LOST down hole. Hammer sheared. NOTE Narrowness of moss VN compared to down dip in M96-24

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	ASSAYS (OPT) Au CN SOL	ASSAYS (OPT) Ag (FA)
0	5	Tmp - HW VLT ZONE	35	ORG-BRN	Str. MnOx + FeOx Stain. MnOx mottled FeOx as diss. pseudos after py.	1	Qz	— Str. FeOx -MnOx	FAIR			
5	10	" "	35	Lt-md GN GN	Decr. FeOx/MnOx. Prop. alt., Occ. hairline Qz Vlts	<1	Qz cc	WK-Mod FeOx	GOOD			
10	15	" "	35	" "	As ABOVE	<1	Qz cc	MOD FeOx				
15	20	" "	35	" "	" " (Hairline VLts produce mild silicif.)	1	Qz cc	" "				
20	25	" "	35	" "	as above (No drusy VLts)	<1	Qz cc	" "				
25	30	" "	35	" " + GN GY	5% Unox. otherwise as above Calcite VLts, Qz only hairline	≥1	cc qz	Tr Py MOD FeOx				
30	35	" "	35	Lt-md GN BN	No UNOX chips. Prop. alt, diss + frx FeOx to silicif. from hairline VLts.	<1	Qz cc	MOD FeOx				
35	40	" "	35	" " - GN GY	30% UNOX. (Diss py) Same alt as above. Rare coarse xln Qz VLt.	1	Qz cc	.5 Py MOD FeOx.				
40	45	" "	35	Lt gn gy + Lt GN BN	70% UNoxidized Alteration as above	<1	Qz cc	<.5 Py Mod FeOx				
45	50	" "	35	ORG BN + Lt gn gy	80% oxidized again. 15% strongly limonitized chips. MnOx on frx	1	Qz cc	<.5 Py Str FeOx				
50	55	Tmp - HW STKWK ZONE	30	ORG BN	All OXIDIZED. Local silicif. Strongly limonitic. INCR WHT Qz. (Dense)	5	Qz	STR FeOx				
55	60	" "	30	" " + GN BN	Blocky FRXRD Qz + silfd Tmp (20%), else wk-mod silfd Tmp. Strong FeOx	10	Qz	" "				
60	65	" "	30	Lt-MD GN BN + ORG BN	" " wk - locally str silicif	15	Qz	WK-MOD FeOx				
65	70	" "	30	md gn bn + gn gy	Diminished silicif./VN material. 25% unox chips. wk-local mod silicif. prop alt	1-2	Qz cc	<.5 py wk FeOx				
70	75	" "	30	GN GY + org bN	75% UNOX. Incr. silicif. but decr VN material. Locally incr. diss py. 20% limonitized	<1	Qz cc	.5 py Loc str FeOx				
75	80	" "	30	GN BN GN GY ORG BN	Incr. xln - drusy Qz VLts. 80% oxidized decr. str limonitized chips	4	Qz cc	Tr Py mod FeOx				
80	85	" "	30	GN GY + GN BN	90% UNOX. Only wk localized silicif. decr. VLts.	1	cc Qz	<.5 Py wk FeOx				
85	90	" "	30	" "	Mixed ox/sulf Little veining. wk-mod prop alt., tr silicif.	1	cc Qz	" "				
90	95	" "	30	Lt-MD GN BN	Mostly oxidized, Tr Clay incr. VLts, local silicif. increased.	5	Qz cc	Tr Py MOD FeOx				
95	100	" "	30	" " + Org BN	Fractured, tr. clay (fault?) FeOx on frx. Some Qz/drusy	3	Qz cc	MOD-STR FeOx	↓			

a little MnOx

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-25

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
00	105	Tmp- HW STKwx zone	30	Lt-MD GN BN + GN GY	10% unox. chips. Fractured, Tr argillic alt., [illegible] prop. alt.	2	Qz cc	Tr Py MOD FeOx	GOOD			
	110	FAULT in Tmp - STKWX zone	50	ORG BN - GN GY	30% clKy chips w/ ORG-TAN clay. Fractured. MOD silicif., Incr diss Py	3	Qz cc	(1% Py) STR FeOx				
	115	Tmp- HW STKwx zone	30	Lt GN GY	Unoxidized below fault. Bleached due to wk silicification where unox. FeOx only on a few frx.	4	Qz cc	1% Py Tr FeOx				
	120	" "	30	Lt GN GY - GN BN	70% oxidized. Incr. Qz vlts + silicification (MOD. Bleached Tr Arg. alt	15	Qz cc	1% Py Local MOD-STR FeOx				
120	125	" "	30	V. LT GN GY + WHT + Lt BN	Abund wht - lt brn Qz + cc vn., Bleached Tmp, Mod silicif., Tr clay	40	Qz cc	.5 Py Local mod-str FeOx				
	130	" "	30	Lt GN GY	Greatly decr. Qz/cc vn. wk argillic alt, poss wk silicif - bleached. unox.	1	Qz cc	1% Py Tr FeOx				
	135	" "	30	"	" (incr. FeOx on a few frx)	1	Qz cc	1% Py wk FeOx				
	140	" "	30	" "	" "	2	Qz cc	.5-1% Py No FeOx				
	145	" "	30	Lt-MD GN + LT PK	10% oxidized. Decr bleaching, incr chlorite. wk local silicif. xln vlts	2-3	Qz cc	<.5% py wk FeOx				
145	150	" "	30	Lt GN BN + PK BN	All oxidized. wk silicf numerous narrow Qz vlts, A little bleached.	5	Qz cc	– wk-mod FeOx				
	155	" "	30	"	" (decr. FeOx-rich chips)	5	Qz cc	– wk FeOx				
	160	" "	30	Lt gn Gy	Mostly unox. Same alt. as above though; decr. Qz vlts.	3	Qz cc	Tr Py wk local FeOx.				
	165	" "	30	"	Incr. vlts. All unox. Bleached, propylitized, v wk silicif. little py.	7	Qz cc	Tr Py				
	170	FAULT? MOSS VEIN	50? 20	MD GN-BN + BUFF	30% buff colored sheared? Qz chips, bxd. Poss. slicks. 70% Brown strongly silfd Tmp	100 (vn + replacement)	Qz cc	No Py MOD FeOx				
170	175	MOSS VEIN ABUND H2O / DRILL WET ↓	20	WHT/BUFF V. Lt ORN Peach	V. light colored Qz + cc vein material. Rare BN calcite - peach Qz-cc.	100	Qz cc	wk FeOx. MnOx dendrites				
	180	MOSS VEIN	20	V. Lt. GN-WH + MD-DK BN GN	15% altered (argillized?) Tmp inclusions. VN is WHT, LT GN + Lt BN	85	Qz cc	wK FeOx				
	185	MOSS VEIN	20	Lt-MD GN BN + WHT	Incr. (40%) Tmp inclusions, now mod. silfd. + Gritty.	60	Qz cc	wK FeOx				
	190	MOSS VEIN	20	Lt-MD GN BN + BUFF + GN-PK GY	VN w/ Tmp inclusions as above 10% unox- less altered chips - Footwall?	50	Qz cc	MOD FeOx				
	195	Tmp- FW Zone	10	MED GN-PK GY	Out of vein completely. MOD. Prop. alt., a few vlts.	1	Qz cc	Tr Py No FeOx				
195	200	" "	10	" "	" " (sl. incr. vlts + py)	2	Qz cc	<.5 py				
200	202	" " HOLE LOST / PROB. w/ Hammer TRIP OUT/IN	10	" "	Quite fresh looking, except for a little dense WHT Qz.	2-3	Qz	Tr Py Tr FeOx	↓			
	~~210~~											
	~~215~~											
~~215~~	~~220~~											

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-37)

HOLE NO. M96-26 **COORDINATES:** ______ **N,** ______ **E** **ELEV.** ______

BEARING Due North **CORE/RVC** RC **LOGGED BY** J. Keller

INCLINATION -60° **HOLE SIZE** 5½" **STARTED** 3-25-96 6:30 AM

LENGTH 345' **DRILLER** Mike Hawkins **COMPLETED** 3-25-96 4:30 pm

PAGE 1 **OF** 3 **COMMENTS:** Moss Vein appears to dip less steeply than predicted here.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp- Moss Porphyr	90	Med GN BN	Moderate propylitic alteration. Fe Ox on local frx + some diss. aft. py.	–	–	wk-MOD FeOx	FAIR			
5	10	" "	90	" "	" "	Tr	cc	wk FeOx	GOOD			
10	15	" " + FAULT	50 minor	" "	" " FRACS. (Tr gry-BN clay gouge)	Tr	Qz cc	MOD " FeOx				
15	20	" " + FAULT	50 minor	" "	" " FRACS. (Tr tan-gry clay gouge)	Tr	cc	" "				
20	25	" "	90	" "	" " (" – as, but fractured)	Tr	cc	wk-MOD FeOx				
25	30	" "	90	" "	" "	Tr	cc	" "				
30	35	" "	90	Lt-Md GN BN	Softer, a little clayey. MOD argillic alt'n. Incr. Diss FeOx after py.	Tr	cc	MOD FeOx				
35	40	" "	90	" "	" " (lighter color due to acid-leach?)	Tr	cc	wk-MOD FeOx				
40	45	" "	90	" "	" "	Tr	cc	" "				
45	50	" "	90	Lt gn-BN to TAN	Lighter color, continued soft due to mod. pervasive argillic alt	Tr	cc	" "				
50	55	" "	90	" "	" "	Tr	cc	MOD FeOx				
55	60	" "	90	Lt-Md GN BN	Harder – Decr. argillic alteration. MOD propylitic alt. Becoming unoxidized.	–	–	Tr Py wk-MOD FeOx				
60	65	" "	90	Lt gn gy + gn BN	70% unoxidized. Bleached. wk argillic alt continues. Py w/ cc	Tr	cc/Py	<.5 py Local MOD FeOx				
65	70	" "	90	LT GN GY	All unoxidized. " "	Tr	cc/Py	<.5 py				
70	75	" "	90	" "	" "	TR	cc/Py	<.5 py Tr FeOx				
75	80	" "	90	" " + GN BN	" " (Fractured, w/ FeOx + minor clay in frx)	Tr	cc/Py	.5 py Local MOD FeOx				
80	85	" "	90	LT GN GY	Bleached, soft, mod argillic alt., incr. diss py. Qz vlt	<1	Qz cc	1% py Tr FeOx				
85	90	" "	90	" "	" " (Py dissem. + frx-fill w/ cc)	<1	Qz cc	1% Py				
90	95	" "	90	" "	Sl. harder & darker color. Decreasing arg. alt	–	–	.5 Py				
95	100	" "	90	" "	Same as above	<1	Qz cc	.5 Py Tr FeOx	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-26

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp- Moss Porphyry	90	LT-MD GN GY	WK-mod argillic alteration & bleaching. Diss. Py + frac. Py.	–	–	1% Py	Good			
	110	" "	90	" "	As above, but incr. Py + Qz cc VLTS. [illegible]	2	Qz cc	1-2% Py				
	115	" "	90	" "	Sl. darker color & harder. Decr. argillic alt.	TR	cc	1% Py				
	120	FAULT in Tmp	50	" "	10% grey clay gouge. Otherwise as above.	TR	cc	1% Py				
120	125	Tmp - Moss Porphyry	90	LT GN GY	Incr. bleaching and argillic alt & diss Py.	–	-	2% Py				
	130	" "	90	" "	* TR v dk gry sulfidic VLTS. also Qz-Py stringer noted Otherwise as above.	<1	Qz cc	2% Py				
	135	" " a little damp	90	LT-MD GN GY	Harder, a little fractured. Not argillized. Hairline Qz VLTS present. TR silicif.	1	Qz cc	1% Py				
	140	" " DRILL WET	90	" "	V. wk silicif. due to presence of hairline Qz VLTS. Rare XLN Qz VLTS 3-5mm	1	Qz cc	1% Py				
	145	" "	90	"	" " (Calcite dom. over Qz)	1	cc Qz	1% Py				
145	150	Minor FAULT ZONE IN Tmp	50	LT gn gy	Bleached, soft, 10% lt gy clay, 1-2% DK GY SULFIDIC material	2	cc Qz	2% Py TR FeOx				
	155	" "	50	MD GN GY + PK GY	<3% org-BN clay gouge. FeOx common on frx. Darker RK below fault.	1	Qz cc	.5 Py				
	160	Tmp - Moss Porph	90	" "	TR v. DK gry sulfidic VLTS. 20% oxidized RK. Mod. propylitic alt	1	Qz cc	.5 Py Local Mod FeOx				
	165	" "	90	" "	Cont. a wk silicif. near hairline Qz VLTS. Occ coarser Qz + cc VLTS. wk prop alt.	1	Qz cc	.5 Py TR FeOx				
	170	" "	90	" "	" " (occ. XLN Qz VLTS w/ diss Py)	1	Qz cc	TR Py				
170	175	" "	90	" "	V. small chips - As Above Alt	1	Qz cc	TR Py				
	180	" "	90	" "	" " (a little more chloritic)	<1	Qz cc	TR Py				
	185	" "	90	" "	" "	<1	Qz cc	TR Py				
	190	" "	90	" "	" " (decr. Chlor. - a little FeOx)	<1	cc Qz	TR Py TR FeOx				
	195	" "	90	" "	5% WHT XLN Calcite. Sl. INCR. chloritization	5	cc Qz	<.5 Py TR FeOx				
195	200	VEIN	25	WHT + LT GRY	Abundant Calcite + Qz, Tmp bleached, mod silfd., incr. diss Py.	65	cc Qz	2% Py TR FeOx				
	205	Tmp - HW STKWK ZONE	30	LT-MD GN GY + PK GY	Out of vein. WK-mod silfd + bleached. Decr. Py	5	Qz cc	1% Py TR FeOx				
	210	" "	30	LT-MD GN GY + PK GY	Incr. Veining & WK - locally strong silicif. Incr. diss Py	10	Qz cc	1-2% Py TR FeOx				
	215	" "	30	" "	" " as above	12	Qz cc	.5% Py				
215	220	" "	30	" "	" " (silicif. consistent - wk)	12	cc Qz	.5% Py	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-26

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp- HW STKWK ZONE	30	LT PK -WHT GRY -Blu-GRN	Local wKly-fractured. Qz chunks. Coarse XLN Qz - pale blu-grn CC. V. wK silicific clasts.	30	Qz CC +FL?	.5%	Good			
	230	" "	30	Lt gn gy -Lt pk gy	Bleached wKly-mod silfd CC - Qz VLts, incr py	10	CC Qz	1% Py Tr FeOx				
	235	" "	30	" "	Decr. silicif./bleaching but still present.	5	Qz CC	.5% Py				
	240	" "	30	Lt-Md GN GY + PK GY	" "	2	Qz CC	<.5% Py				
	245	" "	30	LT GN GY PK GY	Incr. veining, wK-Mod silicif.	15	Qz CC	.5% Py				
245	250	" "	30	" "	Decr. mineralization	3	Qz CC	.5% Py				
	255	" "	30	" "	Sl. incr. silicif/bleach + VLts.	8	Qz CC	<.5 Py				
	260	" "	30	" "	As above: [illegible] silicif., mod bleaching, prop. alt. VLts	8	Qz [illegible]	<.5 Py				
	265	" "	30	" "	as above	8	Qz CC	<.5 Py				
	270	" "	30	V. LT GN GY + V. LT PK gy	MOD-STR pervasive silicification, INCR Qz veining. Little chlorite	15	Qz CC	<.5 Py				
270	275	" "	30	" " + WHT	Greatly incr. Qz/cc veining. silicif. as above	50	Qz CC	<.5 Py				
	280	" "	30	Lt-md gn gy + PK gy	WK - locally intense silicification Getting into Moss VEIN	30	Qz CC	.5 Py				
	285	MOSS VEIN	20	WHT/ Buff	Very white & "clean" looking. 3% oxidized Tmp chips w/ FeOx after Py. CC dom.	100	CC Qz	Tr Py Lgt. FeOx				
	290	MOSS VEIN	20	WHT - V. Lt gn TN	As above. Lt greenish tint. Locally vugsy calcite - Org-TAN. one large chip green silfd. Tmp.	100	CC Qz	Minor FeOx Tr MnOx				
	295	MOSS VEIN	20	WHT + V. DK GN to BLACK	Unusual v. dK gn-blk & dK gry silfd-pyritized Tmp inclusions in VN as above	70	CC Qz	2% Py Tr FeOx				
295	300	VEIN + Tmp (Bx?)	20	WHT + V. Lt-MD GY GN	Tmp inclusions or Bx frags wK to locally str. silfd. Not as pyritized as above	50	CC Qz	.5% Py Tr FeOx				
	305	MOSS VEIN	20	WHT + LT-DK GN + GY	INCR. VN/Tmp ratio. Local dK gy silfd Tmp w/ Py.	80	Qz CC	<.5 Py Tr FeOx				
	310	MOSS VEIN	20	WHT + ORG GN	Mostly oxidized now. Diss FeOx in Tmp clasts. Tmp clasts wK silfd.	75	Qz CC	Tr Py Local MD-STR FeOx				
	315	MOSS VEIN	20	WHT/Buff + Various GN & BN	Basically as above. Tr Brown Calcite.	85	Qz CC	" " Tr MnOx				
	320	Moss Vein	20	LT GN GY + WHT	STRONGLY silfd Tmp + Vein Qz. Unoxidized incr. Py, Locally only wK sil.	50-60	Qz MNR CC	1-2% Py Tr FeOx				
320	325	MOSS VEIN	20	WHT & Lt GY	Very WHT & clean looking Calcite agg. Tmp frags v. lt gy silfd w/ Py	90	CC Qz	<.5% Py Tr FeOx				
	330	Tmp- FW VLT ZONE	10	MD-DK PK GY + GN GY	Dramatic decr. in VN material. Strongly silfd locally (adj. to VN). Str. prop. alt.	5	CC Qz	<.5% Py Tr FeOx				
	335	" "	10	" "	No silicification Mod prop. alt	Tr	Qz	Tr Py No FeOx				
	340	Tmp - Moss Porph.	90	PK gy + GN GY	WK. prop. alt. Quite fresh looking	Tr	CC Qz	" "	↓			
T.D. 340	345	" "	90	GN GY - PK GY	wK-Mod. prop. alt	1	CC Qz	<.5 Py				

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MP-36)

HOLE NO. M96-27 **COORDINATES:** ______ **N,** ______ **E** **ELEV.** ______
BEARING Due North **CORE/RVC** RC **LOGGED BY** J. Keller
INCLINATION -45° **HOLE SIZE** 5½" **STARTED** 3/25/96 5:30 PM
LENGTH 235' **DRILLER** Mike Adkins **COMPLETED** 3/26/96 10:00 AM
PAGE 1 **OF** 3 **COMMENTS:** Very fast drilling top 100' due to soft argillic altered rock 100'/hour

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - Moss Porphyry	90	ORG-Tan GN BN	Blocky, fractured, locally soft due to argillic alt. Str. FeOx, some MnOx	Tr	cc	MOD-STR FeOx	fair			
5	10	" "	90	GN BN + ORG-TAN	As Above	-	-	WK-loc. Str. FeOx	fair			
10	15	" "	90	MD GN BN	Generally harder. Decr. clay & argillization. Prop. alt. A little xlnqz	<1	Qz	wk-mod FeOx	fair			
15	20	" "	90	" " + ORG-BN	Blocky - fractured. Clayey frac coatings, poss. local wk silicif.	<1	Qz cc	MOD FeOx	fair			
20	25	FAULT in Tmp	50		10% clay (gouge?) Fractured, bleached, argillized.	1	Qz cc		good			
25	30	" "	50		Decr. clay gouge, but still quite clayey in frx and arg. alt. VLts inc.	1	Qz cc					
30	35	Tmp - Moss Porph	90			1	Qz cc					
35	40	" "	90			3	Qz cc					
40	45	Tmp - poss fault	fault? 50?		20% strongly limonitized chips. <3% clay - gouge? Some FeOx hematitic.	1	Qz cc	STR FeOx				
45	50	Tmp - Moss Porphyry	90		Harder, greatly ~~[illegible]~~ decr. clay.	<1	Qz cc	wk-mod FeOx				
50	55	" "	90		Localized silicif. Str. FeOx, a little clayey	<1	cc Qz	STR FeOx				
55	60	" "	90		SOFT, argillic alt. clayey fractures locally, Calcite commonly in frx, little Qz	Tr	cc	MOD-STR FeOx				
60	65	" "	90		" "	1	cc	MOD. FeOx				
65	70	" "	90		" "							
70	75	" "	90		" "							
75	80	" "	90		" " Tr Drusy Qz	1	cc Qz					
80	85	" "	90		" " Incr. drusy Qz vets	1-2	Qz cc					
85	90	" "	90	LT gn gy + GN BN	85% Unoxidized. Bleached, continued argillic alt., chloritic zones.	1	cc Qz	Tr Py local mod FeOx				
90	95	" "	90	" "	" "	1	cc Qz					
95	100	" "	90		80% Oxidized again	<1	cc Qz	Tr Py mod-str FeOx	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-27

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - Moss porphyry	90	Lt GN GY	95% Unoxidized. Bleached - wk argillic alt, chloritized, diss + frac-fill py, Tr pink siliceous material.	<1	CC Qz hairline	.5% py, FeOx on fracs.	Good			
	110	" "	90	" "	" " Tr hairline Qz vlts, incr. Py Decr. FeOx	<1	CC Qz	" "				
	115	" "	90	" "	" 10% ox. " (incr. diss v.f.g. py)	<1	CC MNR Qz	1% py Local STR FeOx				
	120	" "	90	" " + GN BN	20% oxidized, fractured, a little clayey + bleached. Softer.	<1	CC	.5% py				
	125	" "	90	Lt gn gy	Only 5% oxidized. Decr. clay & fracs. Sl. incr. hairline Qz vlts.	<1	CC Qz	.5% py Local Fe Ox stain				
	130	" "	90	Lt-md GN BN + Org BN	Incr. Qz + Oxidation 90% RK is oxidized	1	Qz CC	<.5 py MOD-STR FeOx				
	135	" "	90	Lt-Md PK BN + GN BN	Soft, mod. pervasive argillic alt.	1	Qz cc	WK-Mod FeOx				
	140	" "	90	" " + ORG BN	" "	<1	Qz cc	Tr Py MOD-STR FeOx				
	145	" "	90	" "	" "	<1	Qz cc					
	150	Tmp - HW Stkwx Zone (Poss. fault contact)	30	GN BN + Lt-MD GN GY	Mixed strong argillic alt + WK - v. str SILICIFICATION. Incr vlts	3	Qz CC	<.5 py Loc. Mod. FeOx.				
	155	" "	30	Lt GN GY + WHT + ORG BN	MOD-Str Silicification, Strong stkwx veining. 20% oxidized	15	Qz cc	.5 py loc. mod-str FeOx				
	160	" "	30	Lt gn gy	All unoxidized again. Decr. veining. WK Silicif. MOD prop. alt.	3	Qz cc	<.5 py Tr FeOx				
	165	" "	30	Lt-md Olive GN + GN GY	MOD - locally strong silicif. Tmp w/ strong stkwx veining. 90% ox.	15	Qz cc	WK-Mod FeOx Tr Py				
	170	" "	30	Lt GN GY + WHT	95% UNOX. Softer, decr. silicif., but still strong locally. Tr argillic	15	Qz cc	.5 py WK FeOx				
	175	" "	30	Lt gn gy to Mgn BN	20% sl. oxidized. MOD-str. silfd. ~~Getting~~ into Moss Vein.	20	Qz cc	<.5 py WK FeOx				
	180	MOSS Vein (a little H2O)	20	WHT	Very Clean looking Qz + Calcite Vein	100	Qz cc	Tr MnOx Tr FeOx				
	185	Moss Vein	20	WHT + MD BN GN [illegible]	As above + 15% silfd. Tmp frags.	85	Qz CC	Tr Py Local FeOx				
	190	Tmp - FW ZONE	10	MD-DK GN BN + GN GY	Greatly diminished VN & silicif. ([illegible]) Mixed ox & sulf	3	Qz cc	Tr Py MOD-Str FeOx				
	195	" "	10	MD GN GY + PK GY	Incr. VLTS. Occ. v. dk gy sulfidic chips. Str. Propylitic alt.	7	Qz cl	1% Py Local mod-str FeOx				
	200	" "	10	Lt-md gn gy + wht	Strong veining & locally intense silicif. of Tmp. Overall wk silicif. FeOx stained	25	Qz cc	.5 py Local FeOx stain				
	205	" "	10	MD-DK GN GY + PK GY	Much fresher looking Tmp. wk-mod. prop. alt. Qz Calcite Vlts common drusy Qz	6	Qz cc	<.5 py Tr FeOx				
	210	" "	10	" "	2-3% v. dk gry - Blk strongly sulfidic chips w/ Qz Vlts. Same wk alt as above	5	Qz/Py cc	1% Py Tr FeOx				
	215	" "	10	" "	No blk sulfidic chips. wk alt + vlts as above.	5	Qz cc	<.5 py Tr FeOx				
215	220	" "	10	" "	" "	3-4	Qz cc					

FAULT

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-27

PAGE 3 **OF** 3

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Tmp- FW Zone	10	MD GNGY + PK GY	WK - MOD Propylitic alt. A few Qz Calcite vlts. ± black sulfidic chips	2	Qz cc	<.5 Py ± FeOx				
225	230	Tmp - Moss Porphyry	90	" "	No blk sulfidic chips. Minor Qz vlts. WK propylitic alt.	1	Qz	± Py				
230	235	" "	90	" "	" "	1	Qz	± Py				
		T.D = 235'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

(MA 55)

HOLE NO. M96-28 **COORDINATES:** ______ N, ______ E **ELEV.** ______

BEARING Due North **CORE/RVC** RC **LOGGED BY** J. Keller

INCLINATION -50° **HOLE SIZE** 5½" **STARTED** 3/26/96 10:45 AM

LENGTH 325' **DRILLER** Mike Hodkins **COMPLETED** 3/26/96 6:00 PM

PAGE 1 **OF** 3 **COMMENTS:** Strongly fractured and vuggy in Hanging wall portion of Moss Vein. Several samples w/ poor or irregular recovery. Caving caused some samples to be very large.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - Moss Porphyry	90	MD. ORG BRN	Limonitized Acid-Leached, bleached			STR FeOx	Poor			
5	10	" "	90	"	" "			"	fair			
10	15	" "	90	"	" "			"	fair			
15	20	" "	90	"	" "			"	good			
20	25	" "	90	"	" "			"				
25	30	" "	90	"	" "			"				
30	35	" "	90	"	" "			"				
35	40	" "	90	"	" "			"				
40	45	" "	90	" " + Earthy DK BRN	" " + MnOx stain			STR FeOx + MnOx				
45	50	" "	90	ORG + Lt BN BN + GN GY								
50	55	" "	90	GN GY + gn BN + org BN								
55	60	" "	90	" "								
60	65	" "	90	GN GY + Lt MD gn BN								
65	70	" "	90	Lt.-Med GN GY	Harder, slower drilling. 98% unoxidized. Mod. propylitic alt., Tr Silicif.	<1	Qz CC Hairline Qz	<.5 py Tr FeOx				
70	75	" "	90	" "	As Above (- Tr silicif. due to hairline veins)	<1	Qz CC	<.5 Py Tr FeOx				
75	80	" "	90	" "	" "	<1	Qz CC	.5 Py Tr FeOx				
80	85	" "	90	" "	" " (This may also have sericite)	<1	CC Qz	.5 py diss + frx				
85	90	" "	90	" "	" "	Tr	Qz CC	1% py				
90	95	" "	90	" "	" "	Tr	CC Qz	2% py				
95	100	" "	90	" "	" "	Tr	" "	2% py				

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-28

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp- Moss Porphyry	90	LT-MD GN GY	Tr Silicif. due to hairline Qz vlts. Poss. Sericite, Chlorite. Less Py than above.	<1	Qz CC	.5% Py Tr FeOx	Good			
105	110	" "	90	" " ORG BN	Silicif. increased to Moderate Tr Jarosite	2	Qz minor CC	Local mod FeOx				
	115	Tmp - HW STKWK ZONE	30	ORG BN BLK GN GY	Drusy vuggy XLN Qz Vn w/ Abund. MnOx Stain 90% oxidized.	15	Qz	Str Tr Py MnOx + FeOx				
	120	" "	30	Lt gn gy Lt gn BN ORG BN	As above w/ decr. Qz. VN oxidized. Tmp mixed ox/sulf. MnOx in Qz Vugs	5	Qz	1-2% Py STR FeOx + MnOx				
120	125	" "	30	Lt gn gy org BN	90% UNOX. Vn material ox., however. Tmp is as above, wk-mod silfd, bleached, pyritized	3	Qz	" "				
	130	" "	30	" "	" "	3		" "				
	135	" "	30	" "	" " (Decr. VN)	1		" "				
	140	" "	30	Lt gn gy BN GN ORG BN	" " ± 80% UNOX. Incr. drusy Qz (ox)	4		" "				
	145	" "	30	Lt GNGY + ORG BN	" " as above but decr. VN.	2	Qz MNR CC	" "				
145	150	Tmp - Moss PORPHYRY	90	Lt GN GY	wk silfd, bleached chloritized mafics. Minimal veining, 95% unox. diss Py	<1	Qz	.5% Py wk FeOx				
	155	" "	90	" " + 10% GN BN	Sl. incr. oxidation	<1	Qz	<.5% Py Local FeOx				
	160	" "	90	LT GNGY + 10% ORG BN	XLN Calcite vlts, Sl incr. diss + Frx py.	3	CC Qz	.5 Py Local mod FeOx				
	165	" "	90	LT gn gy	Py. localized in v. dk gn vlts (<2%) w/ Qz + CC. Tr Propylitized.	1	CC Qz	.5 Py				
	170	" "	90	" "	Incr. pyritic vlts + Diss Py. Little Qz or CC. Propylitized.	<1	Qz CC	1% Py				
170	175	" "	90	" "	Diminished pyritic zones. Cont. propylitic alt. - Moderate-str	<1	CC Qz	.5% Py				
	180	" "	90	" " + GN BN	15% oxidized Rk. A little fractured.	1	CC Qz	<.5 Py Local wk FeOx				
	185	Tmp - HW STKWK ZONE	30	LT-MED GN BN + GN GY + ORG BN	FRACTURED - MORE H_2O 70% Rk oxidized. wk to locally strong silicification. Mixed ox/sulf. 5% wht xln cc	5	Qz CC	1-2% Py STR FeOx				
	190	" "	30	" "	" " Incr dense WHT Qz	15	Qz CC	1-2% Py STR FeOx				
	195	" " Lots of H_2O	30	Lt-md GN BN + DK BN	Abund. v. DK BRN oxide (MnOx?), Str. Limonite stain. Fractured, Druses common. 98% ox.	30%	Qz MNR CC	V. STR FeOx + MnOx				
195	200	Moss VEIN + Caving, big sample	20	WHT + ORG BN + DK BN	Tr 90% oxidized. Abund oxides as above. Very blocky & fractured - caving. Vuggy Qz after cc textures	60	Qz CC	" "				
	205	MOSS VEIN - Big Sample. Sample line plugging	20	Lt GN BN + WHT + ORG BN	~~Tmp~~ Tmp wk silfd, abund. ox. Tr Abund oxides as above. Very large chunks of Qz. Silicified material plugged hose.	50	Qz MNR CC Tr Fluorite?	" "	BIG, caving			
	210	Moss Vein - POOR sample, small ~~[illegible]~~	20	Lt-Md BN Org BN	Mod- Densely silfd Tmp + xln/vn Qz. Abund MnOx-rich fines. Prob. contam.	60	Qz	" " esp. fines (contam?)	POOR			
	215	Moss Vein Small sample, poor circ.	20	Various GN & BN & WHT	Blocky as above. Getting better circ. toward 215'. Qz replaces BN Calcite	60?	Qz CC	STR FeOx + MnOx Tr Py	POOR			
215	220	Moss Vein	20	" "	Green Qz + cc common. Mixed Vein & silfd Tmp. 5% UNOX. Tmp	50	Qz CC	Tr Py STR FeOx MnOx	BIG SAMPLE caving			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-28

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
220	225	Moss Vein Bad Circulation	20	Lt GN WHT Earthy BN	Very vuggy/porous, fractured! Qz replacement of calcite. Some green	90	Qz MNR CC	STR MnOx fines, loc FeOx	irreg.			
	230	Moss Vein Losing circ. occasionally	20	WHT, LT GN TAN Earthy BN	"pseudomorphic " (Qz after CC - earthy BN)	100	Qz	STR MnOx + FeOx	irreg.			
	235	Moss Vein	20	" "	" " (Some calcite now - Brown & clear/lt grn	100	Qz CC	STR MnOx + FeOx	GOOD			
	240	Moss vein	20	WHT v. Lt TAN	White, cleaner looking v. little calcite. Tr clear qz + calcite	100	Qz MNR CC	Still Abund MnOx fines	"			
	245	Moss Vein *[Fines Sample	20	WHT v. LT TAN DKBN	As above. Sl. incr. earthy bN Qz after cc. & Tr Apple-GN Silfd porph.	100	Qz cc	Loc. STR MnOx + FeOx.	"			
245	250	Moss Vein	20	WHT v. LT TAN Loc. DKBN	As Above wht, clean looking, but local MnOx Rich zones.	100	Qz cc	Loc Str MnOx	"			
	255	Moss Vein - Tmp - FW Zone -	20	WHT. v. Lt. gn Lt BN + LT GNGY	Getting out of Vein. Occ. apple gn silfd Tmp. Tr peach cc	75	Qz MNR CC	Tr Py Loc str FeOx + MnOx	"			
	260	Tmp - FW VLT ZONE	10	MD GNGY + PKGY + WHT	85% UNOxidized. A few large Qz VN frags. MOD-STR Prop alt. Occ. Vuggy	15 Tmp	Qz MNR CC	.5% Py Local MOD-STR FeOx	"			
	265	Tmp. FW VLT ZONE	10	MD GNGY + PK GY	Becoming quite fresh. Biotite noted. WK prop. alt, a few vlts. poss ± 2% contam	3-4	Qz CC	<.5 Py FeOx on FRX/VLTS	"			
	270	" "	10	Lt gn BN	Oxidized RK, but little metal. WK prop. alt, poss WK silicif., a few vlts	1	Qz CC	NO Py WK FeOx	"			
270	275	" "	10	" "	" " (Homogeneous)	1-2	Qz CC	" "	"			
	280	" "	10	LT GN BN + Lt GNGY	Sl. incr. vlts + FeOx, then getting back into UNOX. Tmp.	3	Qz MNR CC	MOD FeOx Tr Py	"			
280	285	" "	10	LT GNGY + Lt gn BN	Mixed ox./unox (60% unox) WK silicif./vlts. Some drusy. WK-mod chlor.	3	Qz CC	Tr Py WK FeOx	"			
	290	" "	10	Lt-MD GN GY + PK GY	99% UNOX. Decr. local silicif./VLTS. WK propylitic alt.	1-2	Qz CC	Tr Py Tr FeOx	"			
	295	" "	10	" "	Sl. incr. Oxides, otherwise as above	1-2	Qz MNR CC	Tr Py Local FeOx + MnOx on frx	"			
295	300	" caving? " Big sample CONTAM w/ vein?	10	" " + GN BN	Dense WHT - Lt Tan - GN Qz common. Also some drusy (CONTAM?). 50% Oxidized. also local v. dk green pyritic zones	15	Qz	(.5 Py) Local mod FeOx	" CONTAM?			
	305	" "	10	Lt-md GY GN	95% UNOX, Qz vlts ox. WK-mod local silicif., incr diss py. Local FeOx on frx	3	Qz	(.5 Py) Local str FeOx	"			
	310	" "	10	Lt-md GN BN + PK BN + GNGY	60% oxidized RK. Incr. Qz vlts, Minor dk grn silfd chips w/ hairline vlts. <1% v. dk gy pyritic zones.	5	Qz	(.5 Py) Local wk FeOx, MnOx	"			
	315	" "	10	Lt.-md GNGY + PK GY + BN GN	Decr. local silicif & veining. 60% UNOX. WK propylitic alt.	2	Qz CC	Tr Py WK FeOx	"			
	320	" "	10	" "	As above. WK alt, & oxidation, Qz CC vlts	4	Qz CC	<.5 Py WK-Mod local FeOx	"			
320	325	" "	10	LT-MD GN BN + PK BN + GN GY	WK oxidation, Prop. alt continues (MOD)	3	Qz CC	Tr Py WK FeOx				
		T.D.										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-29 (MP-45) COORDINATES: ______ N, ______ E ELEV. ______
BEARING N03E CORE/RVC RC LOGGED BY J. Keller
INCLINATION -45° HOLE SIZE 5 ½" STARTED 3-27-96 7:25 AM
LENGTH 200' DRILLER Mike Adkins COMPLETED 3-27-96 10:35 AM
PAGE 1 OF 2 COMMENTS: Note porous Qz after cc in FW, 180-185. Any Au? Probably post ore.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
0	5	Alluvial fill	–	BRN TAN ORG BN	Rubbly fill - Tmp frags			FeOx	Fair			
5	10	Tmp - Moss Porphyry	90	TAN Org	Soft, weathered, Supergene clay - FeOx, bleached	1	Qz cc	Str Limonite stain	Good			
10	15	" "	90	ORG BN + TAN ORG	" "	<1	cc	"				
15	20	" "	90	ORG BN + MD GN BN	" " Incr. Qz + cc VLTS	2	Qz cc	"				
20	25	" "	90	MD GN BN + ORG BN	Decr. limonite stain, harder, less bleached. WK local silicif. + Limonite adj. to vlts	2	Qz cc	WK-loc. str FeOx (lim) MnOx				
25	30	" "	90	Lt-MD GN BN	MOD. Propylitic alt. A few xln qz vlts. A little MnOx	1	Qz cc	WK FeOx				
30	35	" "	90	" "	" " (sl. incr. FeOx)	<1	Qz cc	WK-MD FeOx				
35	40	" "	90	MD GN ORG BN + GN GY	Mixed ox./unox material, incr. FeOx stain	1	Qz cc	<.5 Py MOD-STR FeOx				
40	45	" "	90	MD GN BN + GN GY	" " Decr. FeOx stain. Where unox., 1% diss Py.	1	Qz cc	<.5 Py WK-MOD FeOx				
45	50	" "	90	LT-MD GN GY + ORG BN	60% unox. RK. MOD prop. alt - bleached appearance. Limonitic zones. Minor MnOx	1	Qz cc	.5 Py Loc. str FeOx				
50	55	" "	90	Lt-MD gn gy + GN BN - ORG BN	Mixed ox/unox RK Alt. as above.	1	Qz cc	<.5 Py MOD FeOx				
55	60	" "	90	" "	" "	<1	Qz cc	" "				
60	65	" "	90	" "	" " (incr. oxidation of RK)	<1	Qz cc	" "				
65	70	" "	90	Lt gn BN + ORG BN	All oxidized, fractured locally, WK argillic alt. FeOx on frx.	<1	Qz cc	MOD-locally str FeOx				
70	75	" "	90	Lt gn BN + Lt GN GY	Decr. FRX, a little harder. MOD-str propylitic alt.	<1	Qz cc	WK-MOD FeOx <.5 Py				
75	80	" "	90	Lt-md gn gy + ORG BN	RK 90% unox. MOD-str propylitic alt, ± argillic, ± drusy qz	1	Qz	.5 Py Local str FeOx				
80	85	Tmp - HW StKwk ZONE	30	Lt-Md BU GY + GN GY + WHT	Dense wht + Lt BN XLN Qz w/ some large drusy Qz. Mixed ox/unox. ± MnOx	10	Qz	(1% Py) MOD FeOx + MnOx				
85	90	" "	30	Earthy GN BN + Org BN	All oxidized. Strong MnOx + FeOx. Decr Qz. Vuggy porous	4	Qz	Str. MnOx + FeOx				
90	95	" " Jarosite on FRX	30	MD GY GN + ORG BN	Unox. again. Str. prop. alt., local silicif., a few hairline vlts. WHT chalky cc	3	CC Qz	(1% Py) Loc. str FeOx + MnOx				
95	100	" "	30	" "	Decr. local silicif. Str. prop. alt. 40% ox.	1-2	CC Qz	" "	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-29

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT)		
										Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp - HW STKWX ZONE (A little H2O)	30	LT-MD GN GY + ORG BN	WK silicification locally, MOD-STR propylitic alt; Diss - FRX Py, Fracture oxide	1	Qz CC?	(2% Py) Local STR FeOx	Good			
	110	" " Numerous hairline Qz VLTS. DRILL WET ↓	30	ORG BN + GN GY	WK to ½ STR silicif. Local dk gry-blk pyritic siliceous zones. Py clots	4	Qz	(2% Py) STR FeOx + MnOx				
	115	" " ~~[illegible]~~	30	GY GN + ORG BN	Decr. silicif - WK, local. Coarser diss py. CONT. MIXED OX/UNOX. Prof.	5	Qz	(1-2% Py) Loc. STR FeOx				
	120	" "	30	" + PK GY.	ONLY ≈ 5% oxidized. M.A. Alt. as above. Occ. hairline VLTS CONTINUE. WK prop	3	Qz MNR CC	1% Py FeOx on FRX x Qz				
	125	" "	30	" "	15% oxidized. Incr. Qz, some drusy. & WHT XLN CC w/py.	5	Qz CC	.5 Py Loc. Md-Str FeOx + MnOx				
	130	" "	30	ORG BN MD-DK GN GY WHT/BUFF	20% oxidized. VN all ox. Tac usual. Local mod silicif, Some argillic	15	Qz	(1-2% Py) STR FeOx + MNOx				
	135	Moss VN (good sample)	20	V. LT BN + WHT	VN + intensely silfd & bleached Tmp. Str MnOx. A little drusy Qz	50	Qz	Str MnOx + FeOx				
	140	Moss VN "	20	V. LT-DK BN + WHT	Abund. MnOx fines + totally silfd Tmp & VN. ē opp. grn Qz. Some drusy	95	Qz	STR MNOx + FeOx				
	145	Moss VN	20	WHT + V. LT GN + DK BN	Clean looking VN. Banded. Minor CC. BLOCKY. Qz after CC	100	Qz CC	STR MnOx (fines)				
	150	Moss VN	20	WHT + V. LT BN + DK BN	BLOCKY. Banded Qz - DK BN - Clear drusy - LT BN. DK BN SILFD Tmp (?%)	90	Qz CC	" "				
	155	Moss VN	20	WHT + V. LT TAN + LT GN	Very clean looking, less blocky. ē greeny drusy Qz. 3% BN-WHT CC-Qz	100	Qz CC	" "				
	160	Tmp - FW ZONE	10	MD PK GY + GN GY + WHT	Out of Vein @ 158'. Then weakly propylitized Tmp. Semi-fresh biotite.	10	Qz CC	1% diss Py, Local FeOx				
	165	" "	10	" "	Qz-CC VLTS in Tmp, local silicif, wk. loc. str. prop. alt, diss py	5	Qz CC	1% py Tr FeOx, Frx only.				
	170	" "	10	MD GN GY	MOD-STR PROP. ALT. Calcite blebs. No fresh biotite. Decr. diss py & Qz	3	Qz CC	<.5 py ē FeOx.				
	175	" "	10	MD GN GY + PK GY	WK-mod prop alt, INCR. clean dense WHT Qz. Looks Barren.	10	Qz MNR CC	<.5 Py ē FeOx				
	180	" "	10	" " + LT GN BN	INCR veining, locally bleached & oxidized Tmp	15	Qz CC	<.5 Py WK FeOx				
	185	" "	10	LT PK BN + GN BN	Vuggy, porous Qz. * Porous, bleached Tmp. Appears to be late stage Qz after CC	20	Qz MNR CC	— MOD FeOx				
	190	" "	10	MD PK GY + GN GY	Mainly out of porous Qz zone. Into quite fresh Tmp. WK prop alt	3	Qz MNR CC	<.5 Py Loc FeOx				
	195	Tmp - Moss Porph.	90	" "	Fresher - harder ē hairline Qz VLTS.	2	Qz MNR CC	<.5 Py ē FeOx				
	200	" "	90	" "	As above	<1	Qz ē CC	ē Py	↓			
	~~205~~	T.D. = 200'										

DRILL HOLE LOG
ADDWEST MINERALS, INC.

MOSS PROJECT, ARIZONA

HOLE NO. M96-30 (MP-44) COORDINATES: ________ N, ________ E ELEV. ________
BEARING North - Ø CORE/RVC RC LOGGED BY J. Keller
INCLINATION -50° HOLE SIZE 5½" STARTED 3-27-96 11:30 AM
LENGTH 225' DRILLER Mike Adkins - Hackworth COMPLETED 3-27-96 4:00 pm
PAGE 1 OF ____ COMMENTS: Tight Narrow Vein. No oxide in Hanging Wall.

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
0	5	Tmp - Moss Porphyry	90	ORG BN	Supergene Fe-Ox enrichment.	1	Qz	Strong Limonite stain.	Fair			
5	10	" "	90	Lt-MD GN BN	Fairly soft. Weakly chloritized bleached - prob. wk acid leach. Diss FeOx, MnOx stain	<1	Qz	wk-mod FeOx, MnOx	Good			
10	15	" "	90	" "	" "	<1	Qz	"				
15	20	" "	90	" " +ORG BN	" " (3% limonitized chips)	<1	Qz	wk to locally str FeOx				
20	25	" "	90	" "	" " (Incr. FeOx)	<1	Qz	MOD-STR FeOx +MnOx				
25	30	" "	90	ORG BRN	" " (Stronger FeOx)	Tr	Qz CC?	" "				
30	35	" "	90	ORG BRN	" "	1	Qz	STR FeOx Tr MnOx				
35	40	" "	90	Lt GN BN	Greatly reduced Fe-Ox. Bleached, chloritized. Looks barren.	-	-	WK FeOx				
40	45	" "	90	Lt GN BN + ORG BN	" " + few Qz vlts (Locally str FeOx)	1	Qz	wk to loc. str FeOx				
45	50	" "	90	Lt GRY + ORG BN	50% unox. Pyrite on frx. A few hairline Qz vlts. Str. FeOx locally	<1	Qz	2% Py STR FeOx				
50	55	" "	90	" "	80% unox. Pyritic bleached Tmp. Occ. hairline qz vlts + xln qz	1	Qz	3% Py STR FeOx				
55	60	" "	90	Lt-md GN BN + ORG BN + GN GY	90% oxidized again, w/ some coarse wht to clear qz. Some large druses	3	Qz	Local 2% Py Mod-Str FeOx				
60	65	" "	90	Lt GN GY + GN BN + ORG BN	50% unox. WK alt. as above: Bleached chloritized pyritized.	<1	Qz	1-2% Py MOD-STR FeOx				
65	70	" "	90	Lt GN GY + Lt GN BN	" " (decr. FeOx)	-	-	1% Py WK FeOx				
70	75	" "	90	Lt gn gy	99% unox. Chloritic alt. wk bleached diss py, hairline Qz vlts	<1	Qz cc	1% Py Tr FeOx				
75	80	" "	90	" "	" " (Harder, decr. py)	<1	Qz cc	.5% Py				
80	85	" "	90	" "	" " (decr. Hairline Qz vlts)	<1	CC Qz	.5 Py				
85	90	" "	90	" " GN BN	" " (5% ox., incr. py)	<1	Qz CC	1% Py Local Mod FeOx				
90	95	" "	90	" "	Harder, rather fresh looking. 10% wk oxidized.	-	-	<.5 Py Tr FeOx				
95	100	" "	90	Lt-md GN GY + PK GY	Only mod prop. alt. Occ. hairline Qz vlts	<1	Qz cc	.5 Py	↓			

DRILL HOLE LOG
ADDWEST MINERALS, INC.

HOLE NO. M96-30

MOSS PROJECT, ARIZONA

FROM	TO	ROCK DESCRIPTION	ROCK CODE	COLOR	ALTERATION	% VN	VN TYPE	SULFS %	REC %	ASSAYS (OPT) Au (FA)	Au CN SOL	Ag (FA)
100	105	Tmp. Moss Porphyry	90	LT-Med GNGY + PK GY	WK-Mod propylitic alt. Cee hairline qz VLTS, minor cc VLTS. AS ABOVE	<1	Qz cc	.5 Py No Ox.	GOOD			
	110	" "	90	" "	" "	<1	Qz cc	<.5 Py Tr FeOx				
	115	" " DRILL WET ↓	90	" "	" "	<1	Qz cc	.5 Py Tr FeOx				
	120	" "	90	" "	" " (MONOTONOUS)	<1	Qz cc	.5 Py Tr FeOx				
120	125	" "	90	LT-Med GN GY	MOD-STR PROPYLITIC ALT, local bleached w/ wk silicif. Hairline VLTS	<1	Qz cc	1% Py Tr FeOx				
	130	" "	90	" "	" "	<1	Qz cc	1% Py No Ox				
	135	" "	90	" "	" " + local wk silicification	1	cc Qz	2% Py				
	140	Tmp - HW STKWX ZONE	30	" " + Lt GY	WK - locally STR. silicif. - INCR. veining & bleaching. Not oxidized.	4	Qz	2% Py No FeOx				
	145	" "	30	" "	" "	6	Qz	1-2% Py No FeOx				
145	150	" "	30	" "	Decr. Silicif. & veining	2	Qz MNR cc	1% Py				
	155	" "	30	" "	Sl. incr. veining, local silicif & bleaching, & Py.	4	Qz cc	2% Py				
	160	" "	30	" "	" " (Some vuggy, porous Qz)	4	Qz cc	2% Py				
	165	" "	30	" "	Basically as above. Local wk-mod silicification & bleaching, chloritic alt, diss py	3	Qz cc	1-2% py				
	170	" "	30	" " + PK GY	Mod pervasive silicif due to hairline VLTS. Decr. XLN Qz	1	Qz MNR cc	1% Py				
170	175	" "	30	Lt-md GN GY	Localized wk silicif, Mod chloritic alt.	1	Qz cc	.5 Py				
	180	" "	30	" "	" " (incr. diss py)	1	cc Qz	1% Py				
	185	" "	30	MD-DK GRN	Darker color, strongly chloritized	1	cc Qz	1-2% py				
	190	--MOSS VEIN---	20	DK GN GY + WHT + ORG BU	60% as above, becoming silic near vein. 40% wht - Lt tan vein	40	Qz cc					
	195	Moss Vein	20	WHT TAN GRN	Dominantly Qz, some cc. Apple green qz present. Peach calcite	100	Qz cc					
195	200	MOSS VEIN	20	WHT Minor Tan + GN	Very WHT & clean looking. Some green & Tan colors, Tr FW Tmp inclusions	100	Qz cc					
	205	Tmp - FW VLT ZONE	10	V. Lt GN GY	Silicified adj. to vein, becoming wk-Mod prop. away. Tr argillic	10	Qz MNR cc	.5 py				
	210	" "	10	MD GN GY + PK GY	Mod Propylitic alt. No silicif., good mineral texture	5	Qz MNR cc	<.5 py				
	215	Tmp. Moss Porphyry	90	MD-DK PK GY + GN GY	V. wk propylitic alt. Fresh biotite noted. Late stage VLTS	<1	cc Qz	Tr Py				
215	220	" "	90	" "	" "	2	cc Qz	Tr Py				

McCLELLAND LABORATORIES, INC.

1016 Greg Street, Sparks, Nevada 89431 702 / 356-1300
FAX 702 / 356-8917

Report
on
Direct Agitated Cyanidation Tests - Drill Cuttings Samples
MLI Job No. 2194
July 18, 1995

for

Mr. Alan Founie
Addwest Minerals, Inc.
5460 Ward Road, Suite 370
Arvada, CO 80002

TABLE OF CONTENTS

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Direct Agitated Cyanidation Tests - Drill Cuttings Samples
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EXECUTIVE SUMMARY

Direct agitated cyanidation (bottle roll) tests were conducted on drill cuttings samples MM-2A LOW, MM-2B HIGH, MM-7A LOW, MM-7B MED, MM-7C HIGH, and MM-14 at the as received (nominal 1/4 inch) feed size to determine precious metal recovery, recovery rate, and reagent requirements.

All samples were moderately amenable to direct agitated cyanidation treatment at the as received feed size. Gold recoveries achieved in 96 hours of leaching ranged from 52.5 to 66.7 percent. Silver recoveries ranged from 30.8 to 50.8 percent.

Gold recovery rates were fairly slow. Gold extraction was progressing at a slow rate for all samples except MM-2A LOW and MM-7A LOW when leaching was terminated at 96 hours. Silver recovery rates were also fairly slow, and silver extraction was progressing at a slow rate for all samples except MM-2B HIGH and MM-7A LOW when leaching was terminated.

Cyanide consumptions were low and did not exceed 0.43 pounds per ton of ore for any of the samples. Lime requirements were low and ranged from 2.2 to 3.5 pounds per ton of ore.

SAMPLE PREPARATION AND HEAD ANALYSES

A total of six drill cuttings samples were received for cyanidation testwork. Each sample was thoroughly blended and split to obtain about two kilograms for a bottle roll test and 500 grams for a single direct head assay. Hot cyanide shake analysis was performed on each head assay pulp.

Head samples were assayed using conventional fire assay fusion procedures to determine precious metal content. Head assay analysis results and head grade comparisons are provided in Table 1. Cyanide shake analysis results are presented in Table 2.

Table 1. - Head Assay Results and Head Grade Comparisons, Drill Cuttings Samples

	Head Grade, oz/ton ore			
	Direct Assay		Calc'd Bottle Test, As Received	
Sample	Au	Ag	Au	Ag
MM-2A Low	0.022	0.15	0.018	0.13
MM-2B High	0.095	1.35	0.100	1.40
MM-7A Low	0.034	0.25	0.039	0.20
MM-7B Med	0.034	0.58	0.036	0.59
MM-7C High	0.101	1.29	0.102	1.36
MM-14	0.053	0.60	0.059	0.55

Table 2. - Cyanide Shake Results, Drill Cuttings Samples

	Extracted, oz/ton ore		Percent Recovery*	
Sample	Au	Ag	Au	Ag
MM-2A Low	0.019	0.10	86	67
MM-2B High	0.088	1.30	93	96
MM-7A Low	0.031	0.19	91	76
MM-7B Med	0.029	0.57	85	98
MM-7C High	0.077	1.20	76	93
MM-14	0.049	0.57	92	95

* Percent recoveries were calculated on head assays presented in Table 1.

Bottle test calculated head grades and the direct head assays agreed closely for all drill cuttings samples.

DIRECT AGITATED CYANIDATION TEST PROCEDURES AND RESULTS

Direct agitated cyanidation (bottle roll) tests were conducted on drill cuttings samples MM-2A LOW, MM-2B HIGH, MM-7A LOW, MM-7B MED, MM-7C HIGH, and MM-14 at the as received (nominal 1/4 inch) feed size to determine precious metal recovery, recovery rate, and reagent requirements. Ore charges were mixed with water to achieve 40 weight percent solids. Natural pulp pHs were measured. Lime was added to adjust the pH of the pulps to 11.0 before adding the cyanide. Sodium cyanide, equivalent to 2.0 pounds per ton of solution, was added to the alkaline pulps.

Leaching was conducted by rolling the pulps in bottles on laboratory rolls for 96 hours. Rolling was suspended briefly after 2, 6, 24, 48, and 72 hours to allow the pulps to settle so samples of pregnant solution could be taken for gold and silver analysis by A.A. methods. Pregnant solution volumes were measured and sampled. Cyanide concento that withdrawn, was added to the pulps. Cyanide concentrations were restored to initial levels. Lime was added, when necessary, to maintain leaching pH at between 10.8 and 11.2. Rolling was then resumed.

After 96 hours, the pulps were filtered to separate liquids and solids. Final pregnant solution volumes were measured and sampled for gold and silver analysis. Final pH and cyanide concentrations were determined. Leached residues were washed, dried, weighed, and assayed in triplicate to determine residual precious metal content.

Overall metallurgical results from the bottle roll tests are provided in Table 2. Gold leach rate profiles are shown graphically in Figure 1. Silver leach rate profiles are shown graphically in Figure 2. Tail assay results are presented in Table 3. Bottle roll test raw data sheets are provided in the Appendix to this report.

Table 3. - Overall Metallurgical Results, Bottle Roll Tests, Drill Cuttings Samples, As Received Feed Size (Nominal 1/4 Inch)

Metallurgical Results	MM-2A Low		MM-2B High		MM-7A Low		MM-7B Med.		MM-7C High		MM-14	
Extraction: pct of total	Au	Ag	Au	Ag	Au	Ag	Au	Ag	Au	Ag	Au	Ag
in 2 hours	29.2	13.5	23.6	7.5	38.1	20.8	17.0	14.4	17.2	11.9	7.4	11.6
in 6 hours	47.1	18.6	41.5	18.2	42.7	25.3	35.8	24.7	39.2	20.9	26.2	20.2
in 24 hours	60.8	25.6	51.6	28.7	56.3	34.8	49.1	39.2	57.6	34.5	42.7	30.5
in 48 hours	65.1	28.4	54.5	32.8	59.0	37.6	54.3	46.0	59.4	40.8	47.8	34.7
in 72 hours	66.7	29.3	57.5	37.1	61.5	40.0	57.2	49.2	60.4	44.0	51.6	37.3
in 96 hours	66.7	30.8	60.0	37.1	61.5	40.0	58.3	50.8	61.8	45.6	52.5	38.2
Extracted, oz/ton ore	0.012	0.04	0.060	0.52	0.024	0.08	0.021	0.30	0.063	0.62	0.031	0.21
Tail Assay, oz/ton[1]	0.006	0.09	0.040	0.88	0.015	0.12	0.015	0.29	0.039	0.74	0.028	0.34
Calc'd Head, oz/ton ore	0.018	0.13	0.100	1.40	0.039	0.20	0.036	0.59	0.102	1.36	0.059	0.55
Assayed Head, oz/ton ore	0.022	0.15	0.095	1.35	0.034	0.25	0.034	0.58	0.101	1.29	0.053	0.60
Cyanide Consumed, lb/ton ore	0.20		0.43		0.30		0.15		0.15		0.34	
Lime Added, lb/ton ore	3.1		2.2		3.0		2.5		2.4		3.5	
Final Solution pH	11.0		10.5		10.8		10.9		10.7		11.1	
Natural pH (40% solids)	8.3		8.4		8.3		8.4		8.3		8.4	

1) Average of three.

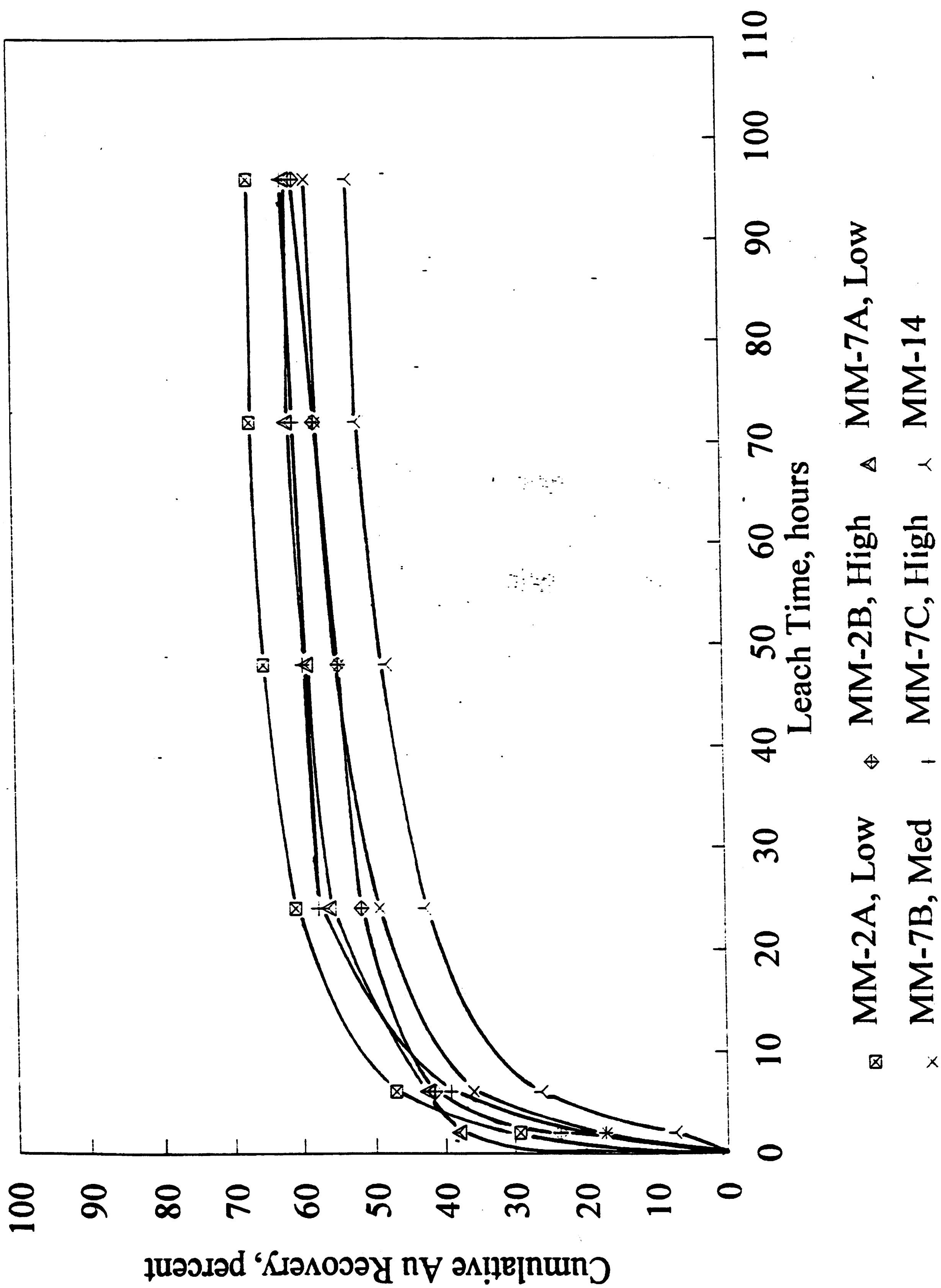
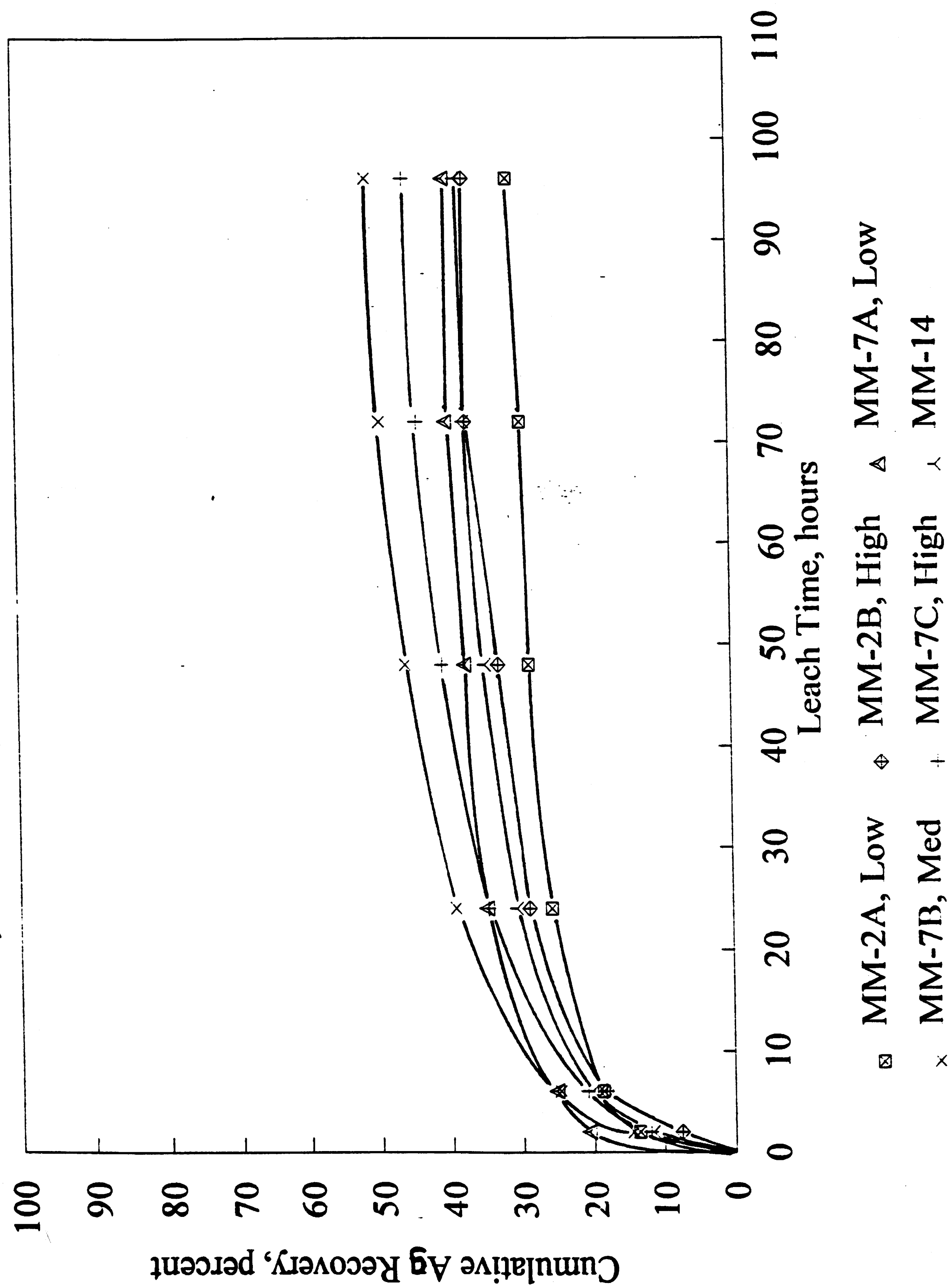


Figure 1. - Gold Leach Rate Profiles,
Bottle Roll Tests, Drill Cuttings Samples, As Received Feed Size (Nominal 1/4")

Figure 2. - Silver Leach Rate Profiles,
Bottle Roll Tests, Drill Cuttings Samples, As Received Feed Size (Nominal 1/4")



Overall metallurgical results show that all six drill cuttings samples were moderately amenable to direct agitated cyanidation treatment at the as received feed size. Gold recoveries achieved from samples MM-2A LOW, MM-2B HIGH, MM-7A LOW, MM-7B MED, MM-7C HIGH, and MM-14 were 66.7, 60.0, 61.5, 58.3, 61.8, and 52.5 percent, respectively in 96 hours. Respective silver recoveries were 30.8, 37.1, 40.0, 50.8, 45.6, and 38.2 percent.

Gold recovery rates were fairly slow, and extraction was progressing at a slow rate for samples MM-2B HIGH, MM-7B MED, MM-7C HIGH, and MM-14 when leaching was terminated at 96 hours. Silver recovery rates were also fairly slow. Silver extraction was progressing at a slow rate for all samples except MM-2B HIGH and MM-7A LOW when leaching was terminated. Longer leaching cycles would improve precious metal recovery.

Cyanide consumptions were low and ranged from 0.15 to 0.43 pounds per ton of ore. Consumption rates were fairly constant throughout the leaching cycles.

Lime requirements were low and ranged from 2.2 to 3.5 pounds per ton of ore. Controlling the pH was not difficult, and over half of the total lime required was added during initial pH adjustment procedures for all samples except for MM-14.

Table 4. - Tail Assay Results, Bottle Leached Residues,
Drill Cuttings Samples, As Received Feed Size (Nominal 1/4 Inch)

	Tail Assay, ozAu/ton				Tail Assay, ozAg/ton			
Sample	Init.	Dup.	Trip.	Avg.	Init.	Dup.	Trip.	Avg.
MM-2A LOW	0.005	0.005	0.007	0.006	0.06	0.08	0.12	0.09
MM-2B HIGH	0.040	0.041	0.038	0.040	0.90	0.93	0.82	0.88
MM-7A LOW	0.015	0.018	0.012	0.015	0.16	0.08	0.13	0.12
MM-7B MED	0.015	0.016	0.015	0.015	0.28	0.30	0.29	0.29
MM-7C HIGH	0.037	0.039	0.040	0.039	0.69	0.78	0.74	0.74
MM-14	0.028	0.028	0.027	0.028	0.35	0.34	0.32	0.34

CONCLUSIONS

- Drill cuttings samples were moderately amenable to direct agitated cyanidation treatment at the as received feed size.
- Gold and silver recovery rates were fairly slow.
- Reagent requirements were low.

RECOMMENDATIONS

We recommend that column leach tests be conducted on representative core or bulk ore samples to determine amenability to heap leach cyanidation treatment.

Sam Matthews

Sam Matthews
Project Manager

APPENDIX

Bottle Roll Test

Job No: 2194
Test No: CY-01
Sample: MM-2A-LOW
Feed Size: AS RECEIVED FEED

	grams	tons	assay tons
Ore Charge:	2041.90	0.0023	70.007

	mls	tons
Solution Vol.:	3062.85	0.0034

	Weight %
Solids Density	40.0

	stu
Natural pH:	8.3

Cyanide Concentration Maintained at: 2.0 lb NaCN/ton sol

Raw Data

Leach Time, hours	Reagents Applied grams lime	NaCN	Solution Withdrawn and Solution Analysis: Volume mls	NaCN Conc. lb/ton sol	pH	Au PPM	Ag PPM	Removed From Pulp: Au mg	Ag mg
Initial	2.00	3.06	--------	--------	--------	--------	--------	--------	--------
2	--------	--------	100	2.0	11.3	0.12	0.40	0.012	0.040
6	0.00	0.10	100	2.0	11.2	0.19	0.54	0.019	0.054
24	0.00	0.10	100	2.0	10.9	0.24	0.73	0.024	0.073
48	0.20	0.10	100	1.9	10.7	0.25	0.79	0.025	0.079
72	0.50	0.25	100	2.0	10.8	0.25	0.79	0.025	0.079
96	0.50	0.00		1.9	11.0	0.25	0.79	0.000	0.000

Metallurgical Results

Leach Time, hours	Cumulative Au Extraction mg	oz/ton ore	percent of total	Cumulative Ag Extraction mg	oz/ton ore	percent of total	Reagent Requirements Cumulative lb/ton ore: Cyanide Consumed	Lime Added
Initial								2.0
2	0.368	0.0053	29.2	1.225	0.0175	13.5	-0.00	2.0
6	0.594	0.0085	47.1	1.694	0.0242	18.6	-0.00	2.0
24	0.766	0.0109	60.8	2.330	0.0333	25.6	-0.00	2.2
48	0.821	0.0117	65.1	2.587	0.0369	28.4	0.15	2.6
72	0.846	0.012	66.7	2.666	0.0381	29.3	0.15	3.1
96	0.871	0.012	66.7	2.745	0.04	30.8	0.20	3.1

	Au	% of total	Ag	% of total
Extracted, oz/ton ore	0.012	66.7	0.04	30.8
Tail assay, oz/ton ore	0.006		0.09	
Calculated Head, oz/ton ore	0.018		0.13	

Cyanide Consumed, lb/ton ore 0.20
Lime Added, lb/ton ore 3.1

Leached Residue

Final Residue Weight, grams 1998.75

Tail Assay	ozAu/ton	ozAg/ton
Initial	0.005	0.06
Duplicate	0.005	0.08
Triplicate	0.007	0.12
Average	0.006	0.09

Head Assay	ozAu/ton	ozAg/ton
	0.022	0.15

Bottle Roll Test

Job No: 2194
Test No: CY-02
Sample: **MM-2B-HIGH**
Feed Size: **AS RECEIVED FEED**

	grams	tons	assay tons
Ore Charge:	2021.65	0.0022	69.313

	mls	tons
Solution Vol.:	3032.48	0.0033

	Weight %
Solids Density	40.0

	stu
Natural pH:	8.4

Cyanide Concentration Maintained at: 2.0 lb NaCN/ton sol

Raw Data

Leach Time, hours	Reagents Applied grams lime	NaCN	Solution Withdrawn and Solution Analysis Volume mls	NaCN Conc. lb/ton sol	pH	Au PPM	Ag PPM	Removed From Pulp Au mg	Ag mg
Initial	2.00	3.03	-------	-------	-------	-------	-------	-------	-------
2	-------	-------	100	2.0	11.5	0.54	2.39	0.054	0.239
6	0.00	0.10	100	2.0	11.5	0.93	5.75	0.093	0.575
24	0.00	0.10	100	1.9	11.2	1.13	8.92	0.113	0.892
48	0.00	0.24	100	1.9	10.7	1.16	9.92	0.116	0.992
72	0.10	0.24	100	1.9	10.8	1.19	11.10	0.119	1.110
96	0.10	0.24		2.0	10.5	1.20	10.60	0.000	0.000

Metallurgical Results

Leach Time, hours	Cumulative Au Extraction mg	oz/ton ore	percent of total	Cumulative Ag Extraction mg	oz/ton ore	percent of total	Reagent Requirements Cumulative lb/ton ore Cyanide Consumed	Lime Added
Initial								2.0
2	1.638	0.0236	23.6	7.248	0.1046	7.5	-0.00	2.0
6	2.874	0.0415	41.5	17.676	0.2550	18.2	-0.00	2.0
24	3.574	0.0516	51.6	27.864	0.4020	28.7	0.15	2.0
48	3.778	0.0545	54.5	31.788	0.4586	32.8	0.29	2.1
72	3.985	0.0575	57.5	36.359	0.52	37.1	0.43	2.2
96	4.134	0.060	60.0	35.952	0.52	37.1	0.43	2.2

	Au	% of total	Ag	% of total
Extracted, oz/ton ore	0.060	60.0	0.52	37.1
Tail assay, oz/ton ore	0.040		0.88	
Calculated Head, oz/ton ore	0.100		1.40	

Cyanide Consumed, lb/ton ore 0.43
Lime Added, lb/ton ore 2.2

Leached Residue

Final Residue Weight, grams 1992.60

Tail Assay	ozAu/ton	ozAg/ton
Initial	0.040	0.90
Duplicate	0.041	0.93
Triplicate	0.038	0.82
Average	0.040	0.88

Head Assay	ozAu/ton	ozAg/ton
	0.095	1.35

Bottle Roll Test

Job No: 2194
Test No: CY-03
Sample: MM-7A-LOW
Feed Size: AS RECEIVED FEED

	grams	tons	assay tons
Ore Charge:	2199.20	0.0024	75.400

	mls	tons
Solution Vol.:	3298.80	0.0036

Solids Density — Weight %: 40.0

Natural pH: 8.3 stu

Cyanide Concentration Maintained at: 2.0 lb NaCN/ton sol

Raw Data

Leach Time, hours	Reagents Applied grams lime	NaCN	Solution Withdrawn and Solution Analysis Volume mls	NaCN Conc. lb/ton sol	pH	Au PPM	Ag PPM	Removed From Pulp Au mg	Ag mg
Initial	2.00	3.30	--------	--------	--------	--------	--------	--------	--------
2	--------	--------	100	2.0	11.5	0.34	0.95	0.034	0.095
6	0.00	0.10	100	2.0	11.1	0.37	1.13	0.037	0.113
24	0.00	0.10	100	1.8	10.7	0.48	1.53	0.048	0.153
48	0.40	0.42	100	2.0	10.6	0.49	1.61	0.049	0.161
72	0.60	0.10	100	2.0	10.8	0.50	1.67	0.050	0.167
96	0.25	0.10		2.0	10.8	0.49	1.68	0.000	0.000

Metallurgical Results

Leach Time, hours	Cumulative Au Extraction mg	oz/ton ore	percent of total	Cumulative Ag Extraction mg	oz/ton ore	percent of total	Reagent Requirements Cumulative lb/ton ore Cyanide Consumed	Lime Added
Initial								1.8
2	1.122	0.0149	38.1	3.134	0.0416	20.8	0.00	1.8
6	1.255	0.0166	42.7	3.823	0.0507	25.3	0.00	1.8
24	1.654	0.0219	56.3	5.255	0.0697	34.8	0.30	2.2
48	1.735	0.0230	59.0	5.672	0.0752	37.6	0.30	2.7
72	1.817	0.024	61.5	6.031	0.08	40.0	0.30	3.0
96	1.834	0.024	61.5	6.231	0.08	40.0	0.30	3.0

	Au	% of total	Ag	% of total
Extracted, oz/ton ore	0.024	61.5	0.08	40.0
Tail assay, oz/ton ore	0.015		0.12	
Calculated Head, oz/ton ore	0.039		0.20	

Cyanide Consumed, lb/ton ore 0.30
Lime Added, lb/ton ore 3.0

Leached Residue

Final Residue Weight, grams 2187.35

Tail Assay	ozAu/ton	ozAg/ton
Initial	0.015	0.16
Duplicate	0.018	0.08
Triplicate	0.012	0.13
Average	0.015	0.12

Head Assay	ozAu/ton	ozAg/ton
	0.034	0.25

Bottle Roll Test

Job No: 2194
Test No: CY-04
Sample: MM-7B-MEDIUM
Feed Size: AS RECEIVED FEED

	grams	tons	assay tons
Ore Charge:	2013.10	0.0022	69.020

	mls	tons
Solution Vol.:	3019.65	0.0033

	Weight %
Solids Density	40.0

	stu
Natural pH:	8.4

Cyanide Concentration Maintained at: 2.0 lb NaCN/ton sol

Raw Data

Leach Time, hours	Reagents Applied grams lime	NaCN	Solution Withdrawn and Solution Analysis Volume mls	NaCN Conc. lb/ton sol	pH	Au PPM	Ag PPM	Removed From Pulp Au mg	Ag mg
Initial	2.00	3.02	-------	-------	-------	-------	-------	-------	-------
2	-------	-------	100	2.0	11.3	0.14	1.94	0.014	0.194
6	0.00	0.10	100	2.0	11.3	0.29	3.27	0.029	0.327
24	0.00	0.10	100	1.9	11.0	0.39	5.11	0.039	0.511
48	0.00	0.25	100	2.0	10.7	0.42	5.86	0.042	0.586
72	0.20	0.10	100	2.0	10.7	0.43	6.10	0.043	0.610
96	0.35	0.10		2.0	10.9	0.42	6.17	0.000	0.000

Metallurgical Results

Leach Time, hours	Cumulative Au Extraction mg	oz/ton ore	percent of total	Cumulative Ag Extraction mg	oz/ton ore	percent of total	Reagent Requirements Cumulative lb/ton ore Cyanide Consumed	Lime Added
Initial								2.0
2	0.423	0.0061	17.0	5.858	0.0849	14.4	0.00	2.0
6	0.890	0.0129	35.8	10.068	0.1459	24.7	0.00	2.0
24	1.221	0.0177	49.1	15.951	0.2311	39.2	0.15	2.0
48	1.350	0.0196	54.3	18.727	0.2713	46.0	0.15	2.2
72	1.422	0.0206	57.2	20.038	0.2903	49.2	0.15	2.5
96	1.435	0.021	58.3	20.859	0.30	50.8	0.15	2.5

	Au	% of total	Ag	% of total
Extracted, oz/ton ore	0.021	58.3	0.30	50.8
Tail assay, oz/ton ore	0.015		0.29	
Calculated Head, oz/ton ore	0.036		0.59	

Cyanide Consumed, lb/ton ore	0.15
Lime Added, lb/ton ore	2.5

Leached Residue

Final Residue Weight, grams 2001.80

Tail Assay	ozAu/ton	ozAg/ton
Initial	0.015	0.28
Duplicate	0.016	0.30
Triplicate	0.015	0.29
Average	0.015	0.29

Head Assay	ozAu/ton	ozAg/ton
	0.034	0.58

Bottle Roll Test

Job No: 2194
Test No: CY-05
Sample: MM-7C-HIGH
Feed Size: AS RECEIVED FEED

	grams	tons	assay tons
Ore Charge:	2032.55	0.0022	69.687

	Weight %
Solids Density	40.0

	mls	tons
Solution Vol.:	3048.83	0.0034

	stu
Natural pH:	8.3

Cyanide Concentration Maintained at: 2.0 lb NaCN/ton sol

Raw Data

Leach Time, hours	Reagents Applied grams lime	NaCN	Solution Withdrawn and Solution Analysis Volume mls	NaCN Conc. lb/ton sol	pH	Au PPM	Ag PPM	Removed From Pulp Au mg	Ag mg
Initial	2.00	3.05	--------	--------	--------	--------	--------	--------	--------
2	--------	--------	100	2.0	11.5	0.40	3.70	0.040	0.370
6	0.00	0.10	100	2.0	11.5	0.90	6.36	0.090	0.636
24	0.00	0.10	100	1.9	11.2	1.30	10.40	0.130	1.040
48	0.00	0.25	100	2.0	10.9	1.30	12.00	0.130	1.200
72	0.10	0.10	100	2.0	10.7	1.28	12.60	0.128	1.260
96	0.30	0.10		2.0	10.7	1.28	12.70	0.000	0.000

Metallurgical Results

Leach Time, hours	Cumulative Au Extraction mg	oz/ton ore	percent of total	Cumulative Ag Extraction mg	oz/ton ore	percent of total	Reagent Requirements Cumulative lb/ton ore Cyanide Consumed	Lime Added
Initial								2.0
2	1.220	0.0175	17.2	11.281	0.1619	11.9	0.00	2.0
6	2.784	0.0399	39.2	19.761	0.2836	20.9	0.00	2.0
24	4.093	0.0587	57.6	32.714	0.4694	34.5	0.15	2.0
48	4.223	0.0606	59.4	38.632	0.5544	40.8	0.15	2.1
72	4.293	0.0616	60.4	41.661	0.5978	44.0	0.15	2.4
96	4.421	0.063	61.8	43.226	0.62	45.6	0.15	2.4

	Au	% of total	Ag	% of total
Extracted, oz/ton ore	0.063	61.8	0.62	45.6
Tail assay, oz/ton ore	0.039		0.74	
Calculated Head, oz/ton ore	0.102		1.36	

Cyanide Consumed, lb/ton ore	0.15
Lime Added, lb/ton ore	2.4

Leached Residue

Final Residue Weight, grams 2024.80

Tail Assay	ozAu/ton	ozAg/ton
Initial	0.037	0.69
Duplicate	0.039	0.78
Triplicate	0.040	0.74
Average	0.039	0.74

Head Assay	ozAu/ton	ozAg/ton
	0.101	1.29

Bottle Roll Test

Job No: 2194
Test No: CY-06
Sample: MM-14
Feed Size: AS RECEIVED FEED

	grams	tons	assay tons
Ore Charge:	1941.70	0.0021	66.572

	mls	tons
Solution Vol.:	2912.55	0.0032

	Weight %
Solids Density	40.0

	stu
Natural pH:	8.4

Cyanide Concentration Maintained at: 2.0 lb NaCN/ton sol

Raw Data

Leach Time, hours	Reagents Applied grams lime	NaCN	Solution Withdrawn and Solution Analysis Volume mls	NaCN Conc. lb/ton sol	pH	Au PPM	Ag PPM	Removed From Pulp Au mg	Ag mg
Initial	1.50	2.91	--------	--------	--------	--------	--------	--------	--------
2	--------	--------	100	2.0	10.7	0.10	1.46	0.010	0.146
6	0.40	0.10	100	2.0	10.9	0.35	2.49	0.035	0.249
24	0.35	0.10	100	2.0	10.9	0.56	3.70	0.056	0.370
48	0.40	0.10	100	1.8	10.9	0.61	4.10	0.061	0.410
72	0.40	0.38	100	2.0	10.9	0.64	4.29	0.064	0.429
96	0.30	0.00		1.9	11.1	0.64	4.35	0.000	0.000

Metallurgical Results

Leach Time, hours	Cumulative Au Extraction mg	oz/ton ore	percent of total	Cumulative Ag Extraction mg	oz/ton ore	percent of total	Reagent Requirements Cumulative lb/ton ore Cyanide Consumed	Lime Added
Initial								1.5
2	0.291	0.0044	7.4	4.252	0.0639	11.6	-0.00	2.0
6	1.029	0.0155	26.2	7.398	0.1111	20.2	-0.00	2.0
24	1.676	0.0252	42.7	11.171	0.1678	30.5	-0.00	2.7
48	1.878	0.0282	47.8	12.706	0.1909	34.7	0.30	3.1
72	2.026	0.0304	51.6	13.670	0.2053	37.3	0.30	3.5
96	2.090	0.031	52.5	14.274	0.21	38.2	0.34	3.5

	Au	% of total	Ag	% of total
Extracted, oz/ton ore	0.031	52.5	0.21	38.2
Tail assay, oz/ton ore	0.028		0.34	
Calculated Head, oz/ton ore	0.059		0.55	

Cyanide Consumed, lb/ton ore	0.34
Lime Added, lb/ton ore	3.5

Leached Residue

Final Residue Weight, grams 1916.65

Tail Assay	ozAu/ton	ozAg/ton
Initial	0.028	0.35
Duplicate	0.028	0.34
Triplicate	0.027	0.32
Average	0.028	0.34

Head Assay	ozAu/ton	ozAg/ton
	0.053	0.60

PREPARED FOR:

BILLITON MINERALS U.S.A., INC.

CYANIDE LEACH TESTS
AND
MINERALOGICAL CHARACTERIZATION
OF GOLD ORE SAMPLES
FROM THE MOSS MINE PROJECT

By

Wolfgang Baum & Louis W. Lherbier, Jr.

Project O M 33

December 17, 1990

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BACKGROUND AND OBJECTIVE OF WORK

On November 15, 1990, Billiton Minerals requested a proposal for bottle roll cyanide leach tests and a mineralogical characterization of two gold ore samples from the Moss Mine project.

The objective of the work was outlined by Mr. Michael Lucid and was summarized in a PMET quotation of November 15, 1990. It included the following work objectives:

Tested High Grade

- Perform bottle roll cyanidation tests on three selected size fractions of a high-grade gold ore composite.
- Determine the gold mineralogy, quantitatively, in order to evaluate and interpret the results of the cyanidation tests.
- Determine the pertinent mineralogical characteristics of the ore which would impact feasible metallurgical treatment options and the gold recovery.
- Determine the reason(s) for unrecovered gold in the cyanide leach residues.
- Determine the mode of occurrence of gold and the gold size distribution in a low(er)-grade composite in order to evaluate if there is a bimodal gold mineralogy between high- and low-grade ore feed causing differences in cyanide leach amenability.

SAMPLES RECEIVED AND METHODS OF STUDY

Three ore zone interval samples were received from Billiton on November 20, 1990, at the PMET laboratories. The samples were designated as shown in Table 1.

Table 1

Samples Received

PMET No.	Billiton Designation		Billiton Assay	Weight
444-1	MM-8-46	225-230'	0.229 oz/ton Au	6.55 lbs.
444-2	MM-8-48	235-240'	0.236 oz/ton Au	4.10 lbs.
444-3	MM-1-49	Coarse Rej.	0.622 oz/ton Au	2.0 lbs.

An equal-weight composite was prepared from samples 444-1 and 444-2 for the cyanide leach tests. Due to small sample size, sample 444-3 was used for mineralogical work only.

The laboratory work included sample preparation, bottle roll cyanidation tests, fire assays of head samples and leach residues, chemical analyses of filtrates and wash water, bulk X-ray diffraction analyses, heavy liquid separations with assays and mineralogical characterization of separation products, optical microscopy with modal analysis, particle size analysis by screening and microscopy and photomicrography.

This work was performed under Billiton purchase order number VAM 901 105.

DISCUSSION OF RESULTS

Chemical Characterization

Well-blended assay pulps were split out from the head samples and subjected to fire assays for gold. The assay results are summarized in Table 2.

Table 2

Gold Assays of Head Samples

Sample No.	Gold (oz/ton)
Composite 444-1-2	0.220
444-3	0.270

The pH of the ore samples was determined using Method ASA 12-2 (Methods of Soil Analysis). The results of this work are summarized in Table 3.

Table 3

pH Measurements

Sample	pH
444-1-2	7.90
444-3	8.23

Mineralogical Characterization

Prior to the ore blending, a megascopic characterization was prepared of the three samples.

Sample 444-1

White-yellow gray, coarse-grained ferruginous carbonate-rich quartz vein(?) material. The calcite is intimately associated with hydrated iron oxides, jarosite, hydrated

Cyanide consumers ?

manganese oxides and clay minerals. Most of the iron/manganese hydrated oxides appear to represent a former disseminated iron sulfide mineralization. The sample contains 5-8% of chloritic-siliceous rock fragments which contain large amounts of relatively fresh, well-crystallized and coarse-grained pyrite. The sample contains an estimated quartz content of 40-50% and a carbonate content of 25-35%.

Sample 444-2

White to light gray, carbonate-bearing quartz vein material which is distinctly less ferruginous than the first sample. The sample contains an estimated quartz content of 40-60% and a carbonate content of 10-20%. Both the quartz as well as the carbonates contain a weak, disseminated and strongly oxidized sulfide mineralization. In addition, there are also noticeable amounts of manganese oxides and hydroxides.

Sample 444-3

White-yellow gray, carbonate-bearing siliceous vein material. The overall mineralogical sample characteristics are very similar to sample 444-1. Ferruginous and weakly chloritic. Contains considerable amounts of well-crystallized quartz and calcite.

Subsequently, the blended composite and sample 444-3 were subjected to a bulk X-ray diffraction analysis. The XRD work confirmed the optical microscopy, i.e. that the dominating ore-forming minerals are quartz (with minor silica modifications such as opaline silica and chalcedony) and calcite. In addition, minor amounts of swelling clay minerals were identified. The XRD analyses are summarized in Table 4.

Table 4

Bulk XRD Analyses of Moss Mine Gold Ore Samples

Sample	Minerals & Concentration: Major	Minor	Trace
444-1-2	Quartz Calcite	Muscovite Montmorillonite	Chlorite
444-3	Quartz	K-feldspar Calcite Montmorillonite	Muscovite

The bulk XRD analysis represents crystallized minerals present in concentrations above 2%. Extremely fine-grained, poorly crystalline and/or amorphous mineral phases such as alteration products and clay minerals may not be detectable or may be under-represented.

Concentration Ranges: Major = 20 - >50%
Minor = 5 - 20%
Trace = <5%

Representative split portions of each sample were subjected to optical microscopy with modal analysis in order to quantify pertinent mineralogical characteristics. The results of the modal analysis are summarized in Table 5.

Table 5

Microscopic Modal Analysis of Head Samples

Mineral	Sample 444-1-2	Sample 444-3
Silica/Feldspar Groundmass	49% vol.	63% vol.
Carbonates	41	20
Clay Minerals	7	15
Opaque Minerals	3	2

Gold Mineralogy

The gold mineralization in the Moss Mine samples is characterized by the presence of mostly silver-rich native gold which frequently may approach electrum composition. The silver content in this gold shows an average concentration of 27% according to semiquantitative SEM-EDX analyses. Intimately associated with the silver-rich gold is native gold with extremely low silver concentrations (<5%).

The gold is primarily associated with siliceous gangue and hydrous iron oxides. These iron oxide minerals represent alteration products of gold-bearing pyrite and/or are the result of hydrothermal iron mobilization and reprecipitation. Minor amounts of the gold are associated with small concentrations of pyrite, some of which occurs as the spheroidal variety. Approximately 20 - 30% of the total pyrite mineralization consists of spheroidal fine-grained iron sulfides. The spheroidal pyrite exhibits particles sizes of <1 to 50 micron in diameter.

In addition to the iron sulfides there are minor to trace amounts of sphalerite, chalcopyrite, bornite and galena. Most of these sulfide minerals occur as inclusions in the pyrite.

Some of the liberated gold particles observed in these samples exhibit surface coatings of (hydrous) iron oxides and/or silica clay slimes. Approximately 30% of the gold displays rapid surface tarnishing. In composite sample 444-1-2, 64% of the gold is associated with hydrous iron oxides. Most of the remaining gold (30%) is intergrown with silica gangue. Minor amounts of gold (<10%) occur as refractory gold associated with pyrite. Many pores and fractures in the gangue particles are filled with silica-carbonate-clay slimes.

As indicated by the microscopic analysis of the head samples, the gold mineralogy in the composite 444-1-2 differs distinctly from sample 444-3 with regard to particle size and mineralogical residence:

1. The gold in the PMET cyanide leach composite contains distinctly more fine-grained (-25 micron) gold than sample 444-3.

2. In the cyanide leach composite, the majority (64%) of the gold is locked with hydrous iron oxides; whereas in sample 444-3, gold association with silica gangue is dominating.

The gold particle sizes range from <1 micron to 300 micron with the majority of the gold occurring in the coarser (+400 mesh) sizes. The microscopic work indicates that the native gold present in sample 444-3 shows distinctly coarser particle sizes than the gold observed in composite 444-1-2. Table 6 summarizes a microscopic gold particle size analysis for both samples.

Table 6

Microscopic Gold Particle Size Analysis of Moss Mine Samples

Size of Gold Particles (Approximate Diameter)

Size(micron)	Samples 444-1-2	444-3
< 5	60%	21%
> 5 - 20	21%	15%
> 20 - 50	10%	24%
> 50-- 100	7%	22%
>100	2%	18%
	100%	100%

Both samples contain noticeable amounts of tramp iron shavings (from drilling?) and fragments of copper wire. Trace concentrations of organic/carbonaceous material were observed in sample 444-1-2.

Gravity Separation Tests

The gravity testwork was performed on 800-gram splits from samples 444-1-2 and 444-3 by way of heavy liquid separation at a S.G. of 2.95. Prior to separation, the samples were carefully stage-crushed to -48 mesh and deslimed at 400 mesh.

- The gravity separation tests confirmed the conclusions made from the optical microscope analysis, i.e. that the gold mineralogy of composite 444-1-2 and sample 444-3 exhibits significant differences in particle size and gold occurrence. Both of these factors will impact gold ore processing and precious metal recovery.

50% of value / 400 mesh slimes

- In composite 444-1-2, almost half of the gold reported to the -400 mesh slimes fraction. This fraction represents 30% of the sample weight. Less than one third (26.8% distribution) of the gold was recovered in an extremely small (0.12% of the weight) gravity concentrate assaying 38 oz/ton gold. The remainder (28.7% distribution) of the gold occurred in the gravity tailings (float fraction) due to encapsulation in (light) silica gangue. The gravity tailings account for the majority of the sample weight (69%).

- In sample 444-3, the majority of the contained gold (69.4% distribution) was recovered in a high-grade (71.8 oz/ton Au) gravity concentrate which represents 0.29% of the sample weight. Eighteen percent of the gold reported to the float fraction. This fraction accounts for 75% of the sample weight. Only 12% of the gold occurred in the -400 mesh slimes.

  The reasons for the high gold recovery by gravity methods in this particular sample are a) distinctly coarse gold particle sizes and b) good liberation of gold at the 48 mesh grind.

The results of the gravity separation tests are summarized in Table 7 and Figure 1.

Table 7

Gravity Separation Tests

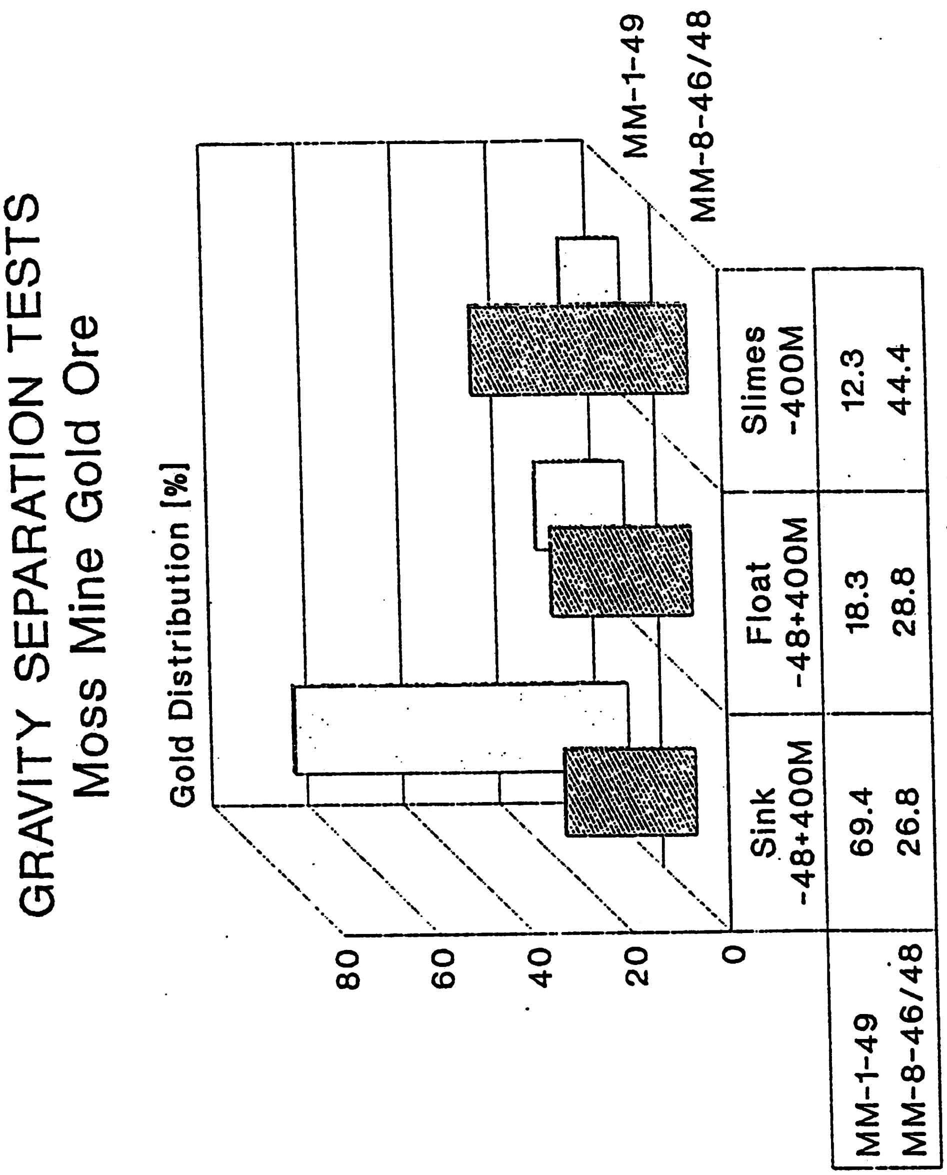
Sample 444-1-2

Product	Weight(%)	Assay Gold(oz/ton)	Distribution (%)
Assay Head		0.220	
Calc. Head	100.0	0.173	100.0
Grav. Conc.	0.12	38.70	26.82
Grav. Tails	69.16	0.072	28.79
-400 Slimes	30.72	0.250	44.39

Sample 444-3

Product	Weight(%)	Assay Gold(oz/ton)	Distribution (%)
Assay Head		0.270	
Calc. Head	100.0	0.299	100.0
Grav. Conc.	0.29	71.80	69.43
Grav. Tails	75.13	0.073	18.27
-400 Slimes	24.58	0.150	12.30

Figure 1


GRAVITY SEPARATION TESTS
Moss Mine Gold Ore
Gold Distribution [%]
0
20
40
60
80
MM-1-49
MM-8-46/48
Sink -48+400M
Float -48+400M
Slimes -400M
69.4
18.3
12.3
26.8
28.8
44.4
Product

Cyanide Leach Tests 72 Hour Bottle Rolls

Well-blended split portions of three different size fractions were prepared from the head sample by stage crushing and grinding. The sample splits were then subjected to bottle roll cyanidation tests using the following conditions.

Samples:	Composite 444-1-2 1. As-received 2. -10 mesh 3. -200 mesh
Amount of Sample:	300 grams
% Solids:	23.08%
NaCN Concentration:	3 g/l NaCN
pH:	10.5 - 11
Temperature:	Ambient
Leach Time:	72 hours with solution samples taken at 6, 24, 48, and 72 hours.

- A total of 300 grams of sample was slurried in an aqueous solution containing 3 g/l NaCN at a pH of 10.5 to 11. Solution pH was adjusted using hydrated lime, i.e. $Ca(OH)_2$.

- Tests were initiated and conducted for a total time of 72 hours. Solution pH was measured and adjusted to target levels after 0.5, 2, 6 and 24 hours of total target levels using hydrated lime additions. Free lime concentrations were also measured via acid titration after 2, 6, 24, 48 and 72 hours.

- NaCN concentrations were also measured after 2, 6, 24, 48, and 72 hours. If required, NaCN additions were made following the 2-, 6-, 24- and 48-hour measurements to bring the solution NaCN concentration to the target of 3 g/l. NaCN concentrations were measured via titration with $AgNO_3$ solutions.

- After 72 hours, the samples were filtered and the leach residues were washed. The first wash was performed with 500 ml of DI water containing low levels of cyanide. This was followed by two additional washing steps with 500 ml DI water each. Total water used amounted to 1500 ml.

- Samples of leach solution were collected after 6, 24, 48 and 72 hours of leaching for gold analysis. In addition, gold fire assays were done on splits of the head sample and leach residue. The final wash water was also analyzed for gold.

Gold extractions were calculated in two fashions: one being based on the head sample assays and the solution assays and one being based on the leach residue assays and the solution assays. In the former case, a solution volume of 1000 ml was assumed, and solution aliquots removed for assay and titration were included in the calculations to account for all the gold. Extractions calculated from head sample assays in all cases differ from those calculated from residue assays. This reflects both sampling and analytical error.

Leach Results

The leach results indicate that gold liberation appears to be the most significant factor for high gold recovery. The gold extraction was lowest in the as-received material (59.7%) and increased with crushing to -10 mesh to 73.7%. Almost complete gold extraction was achieved in the sample material ground to -200 mesh. The lime consumptions are negligible whereas the cyanide consumptions were equally high in all tests (21.6 - 22.9 lbs. NaCN/ton).

A potential for preg robbing is indicated for this sample material. It is tentatively concluded that preg robbing could be caused by spheroidal pyrite, hydrous iron oxides and oxidizing tramp iron, as well as minor amounts of carbonaceous matter occurring in the ore. The cyanide consumption is affected by natural cyanicides present such as iron oxidation minerals, ferruginous clays and sulfides. In addition, artificial cyanicides such as tramp iron shavings from drilling and copper wire fragments were also present.

A summary of the leach test results is presented in Table 8. Details of the cyanidation tests and the complete mass balance information are presented in Table 9. The solution pH measurements are listed in Table 10. Figure 2 provides a graphic presentation of the NaCN leach tests based on solution and head sample assays.

Table 8

Cyanide Leach Extractions of Gold and Reagent Consumptions

Sample	Gold Extractions(%) after 72 hours	NaCN Consumption (lbs/ton)	Lime Consumption (lbs CaO/ton)
444-1-2 As-is	59.7	22.9	< 1
444-1-2 -10 Mesh	73.7	22.7	< 1
444-1-2 -200 Mesh	100.0*	21.6	< 1

* Based on outputs

Table 9

aCN LEACH TEST RESULTS

10-Dec-90

ample: 444-1 As-Is

:nputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
Ore	300.00	-	-	-	0.220 oz/t	0.0	0.00	2.263	100.0
Solution	-	1000	23.8 mg/l	3.0 gpl	-	23.8	3.00	-	0.0
Sln - 2 Hrs	-	20	23.8 mg/l	3.0 gpl	-	0.5	0.06	-	0.0
Sln - 6 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 24 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 48 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
NaCN - 2 Hrs	1.47	-	-	100 %	-	-	1.47	-	0.0
NaCN - 6 Hrs	0.80	-	-	100 %	-	-	0.80	-	0.0
NaCN - 24 Hrs	0.48	-	-	100 %	-	-	0.48	-	0.0
NaCN - 48 Hrs	0.31	-	-	100 %	-	-	0.31	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Wash Water	-	1500	-	-	-	-	-	-	0.0
Total	303.06	2625				26.7	6.44	2.263	'100.0

Sample: 444-1 As-Is

Outputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
2 Hr Sample	-	20	140 mg/l	1.50 gpl	mg/l	2.8	0.03	0.000	0.0
6 Hr Sample	-	35	64 mg/l	2.18 gpl	0.990 mg/l	2.2	0.08	0.035	1.6
24 Hr Sample	-	35	32 mg/l	2.50 gpl	1.130 mg/l	1.1	0.09	0.040	1.9
48 Hr Sample	-	35	51 mg/l	2.68 gpl	1.180 mg/l	1.8	0.09	0.041	2.0
NaCN Filtrate	-	970	153 mg/l	2.72 gpl	1.000 mg/l	148.4	2.64	0.970	46.1
Wash Filtrate	-	1430	3 mg/l	0.06 gpl	0.120 mg/l	4.6	0.08	0.172	8.2
Dry Residue	301.71	-	-	-	0.082 oz/t	-	-	0.848	40.3
Total	301.71	2525				160.9	3.01	2.105	100.0

Au Accountability: 93.0 %

Final Au Extraction: 59.7 %

NaCN Consumption: 22.9 lbs/ton

Lime Consumption: <1.0 lbs CaO/ton

Table 9 (Continued)

_N LEACH TEST RESULTS

10-Dec-90

Sample: 444-1 -10M

Inputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
Ore	300.00	-	-	-	0.220 oz/t	0.0	0.00	2.263	100.0
Solution	-	1000	23.8 mg/l	3.0 gpl	-	23.8	3.00	-	0.0
Sln - 2 Hrs	-	10	23.8 mg/l	3.0 gpl	-	0.2	0.03	-	0.0
Sln - 6 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 24 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 48 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
NaCN - 2 Hrs	1.50	-	-	100 %	-	-	1.50	-	0.0
NaCN - 6 Hrs	0.75	-	-	100 %	-	-	0.75	-	0.0
NaCN - 24 Hrs	0.48	-	-	100 %	-	-	0.48	-	0.0
NaCN - 48 Hrs	0.31	-	-	100 %	-	-	0.31	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Wash Water	-	1500	-	-	-	-	-	-	0.0
Total	303.04	2615				26.5	6.39	2.263	100.0

_mple: 444-1 -10M

Outputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
2 Hr Sample	-	10	280 mg/l	1.49 gpl	mg/l	2.8	0.01	0.000	0.0
6 Hr Sample	-	35	89 mg/l	2.23 gpl	1.250 mg/l	3.1	0.08	0.044	2.2
24 Hr Sample	-	35	32 mg/l	2.50 gpl	1.390 mg/l	1.1	0.09	0.049	2.4
48 Hr Sample	-	35	45 mg/l	2.68 gpl	1.420 mg/l	1.6	0.09	0.050	2.5
NaCN Filtrate	-	950	102 mg/l	2.70 gpl	1.220 mg/l	96.9	2.57	1.159	57.3
Wash Filtrate	-	1458	3 mg/l	0.09 gpl	0.130 mg/l	5.1	0.14	0.190	9.4
Dry Residue	298.50	-	-	-	0.052 oz/t	-	-	0.532	26.3
Total	298.50	2523				110.6	2.97	2.023	100.0

Au Accountability: 89.4 %

Final Au Extraction: 73.7 %

NaCN Consumption: 22.7 lbs/ton

Lime Consumption: <1.0 lbs CaO/ton

Table 9 (Continued)

LEACH TEST RESULTS

10-Dec-90

Sample: 444-1 -200M			Analyses						Au
	Mass	Volume				CaO	NaCN	Au	Dist
Inputs	[g]	[ml]	CaO	NaCN	Au	[mg]	[g]	[mg]	[%]
Ore	300.00	-	-	-	0.220 oz/t	0.0	0.00	2.263	100.0
Solution	-	1000	23.8 mg/l	3.0 gpl	-	23.8	3.00	-	0.0
Sln - 2 Hrs	-	10	23.8 mg/l	3.0 gpl	-	0.2	0.03	-	0.0
Sln - 6 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 24 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 48 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
NaCN - 2 Hrs	1.54	-	-	100 %	-	-	1.54	-	0.0
NaCN - 6 Hrs	0.77	-	-	100 %	-	-	0.77	-	0.0
NaCN - 24 Hrs	0.43	-	-	100 %	-	-	0.43	-	0.0
NaCN - 48 Hrs	0.28	-	-	100 %	-	-	0.28	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Wash Water	-	1500	-	-	-	-	-	-	0.0
Total	303.02	2615				26.5	6.36	2.263	100.0

ple: 444-1 -200M			Analyses						Au
	Mass	Volume				CaO	NaCN	Au	Dist
Outputs	[g]	[ml]	CaO	NaCN	Au	[mg]	[g]	[mg]	[%]
2 Hr Sample	-	10	280 mg/l	1.45 gpl	mg/l	2.8	0.01	0.000	0.0
6 Hr Sample	-	35	51 mg/l	2.20 gpl	1.930 mg/l	1.8	0.08	0.068	3.5
24 Hr Sample	-	35	32 mg/l	2.55 gpl	1.900 mg/l	1.1	0.09	0.067	3.5
48 Hr Sample	-	35	38 mg/l	2.71 gpl	1.830 mg/l	1.3	0.09	0.064	3.4
NaCN Filtrate	-	960	76 mg/l	2.85 gpl	1.520 mg/l	73.4	2.74	1.459	76.4
Wash Filtrate	-	1410	2 mg/l	0.08 gpl	0.180 mg/l	3.1	0.11	0.254	13.3
Dry Residue	297.28	-	-	-	<0.005 oz/t	-	-	0.000	0.0
Total	297.28	2485				83.5	3.13	1.911	100.0

Au Accountability: 84.5 %

Final Au Extraction: 100.0 % (Based on Outputs)

NaCN Consumption: 21.6 lbs/ton

Lime Consumption: <1.0 lbs CaO/ton

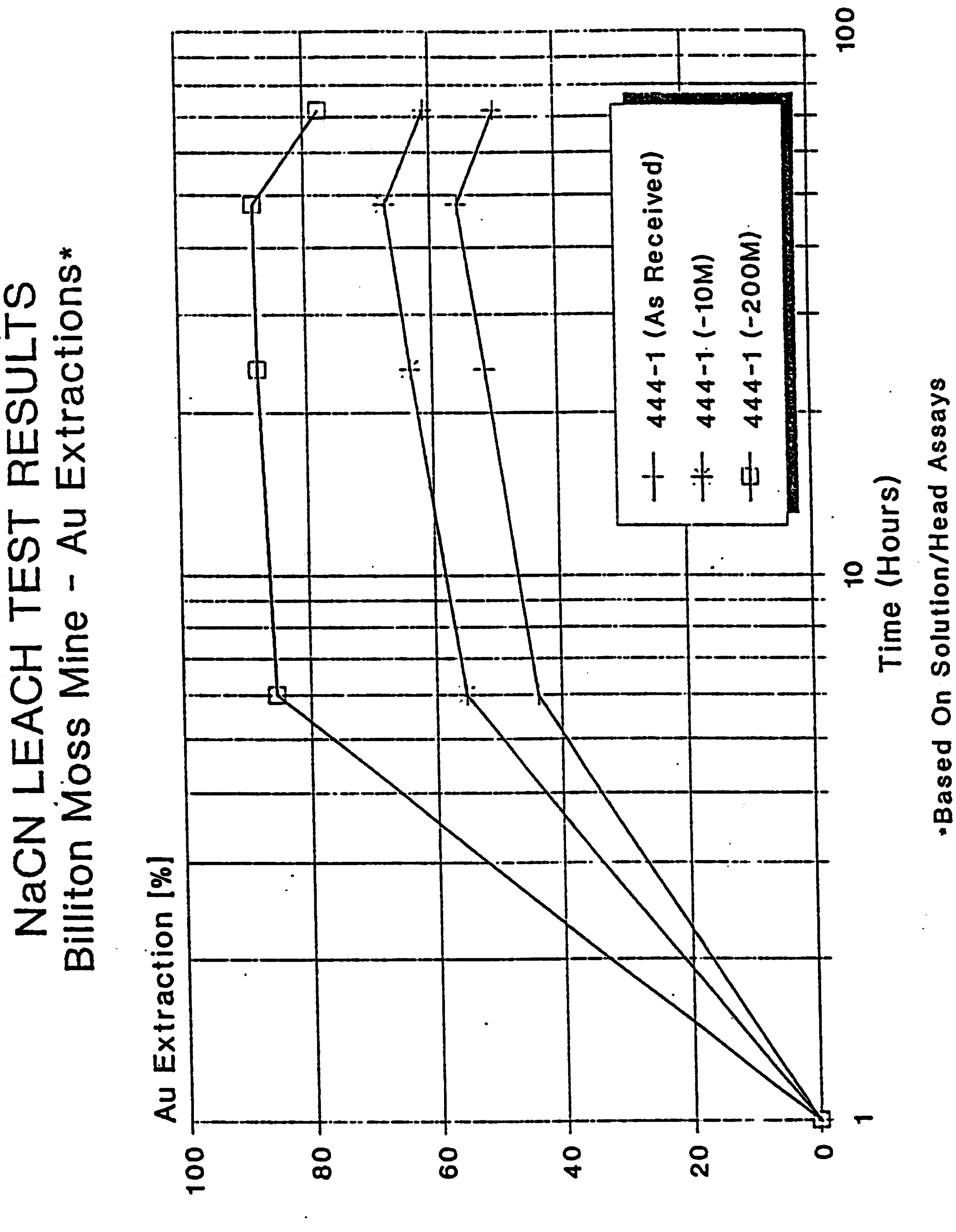
Table 10

Billiton - Moss Mine
NaCN Leach Tests - Solution pH

Sample	Elapsed Time [hrs]	Slurry pH Data Initial	Slurry pH Data Adjusted
444-1 (As-Is)	0.0	10.94	NA
	0.5	10.84	NA
	2.0	10.82	NA
	6.0	10.83	NA
	24.0	10.81	NA
	48.0	10.69	NA
	72.0	10.65	NA
	Avg.	10.82	-
444-1 (-10M)	0.0	10.94	NA
	0.5	10.82	NA
	2.0	10.75	NA
	6.0	10.81	NA
	24.0	10.88	NA
	48.0	10.85	NA
	72.0	10.86	NA
	Avg.	10.84	-
444-1 (-200M)	0.0	10.72	NA
	0.5	10.67	NA
	2.0	10.62	NA
	6.0	10.65	NA
	24.0	10.69	NA
	48.0	10.65	NA
	72.0	10.69	NA
	Avg.	10.67	-

NA = No Adjustment

Figure 2


NaCN LEACH TEST RESULTS
Billiton Moss Mine - Au Extractions*
Au Extraction [%]
100
80
60
40
20
0
1
10
100
Time (Hours)
444-1 (As Received)
444-1 (-10M)
444-1 (-200M)
*Based On Solution/Head Assays

Mineralogy of Unleached Gold

Following the cyanide leach tests, a split portion of the leach residue from sample 444-1-2 (-10 mesh) was used to determine the mode of occurrence of unleached gold in order to assist in the interpretation of gold extraction rates.

Due to the small sample size, it was decided to perform a wet screen analysis followed by fire assays of the screen size fractions. Concurrently, the screen fractions were examined by microscopic methods for the mineralogical residence of the gold.

The screening indicates that the major reason for the presence of unleached gold in the -10 mesh composite (as well as coarser-grained material) is locking of native gold in iron oxide/hydroxide and siliceous host minerals all of which are impervious to the lixiviant. From the unleached gold in the -10 mesh cyanide leach residue, 64% distribution of the gold occurs in the +48 mesh screen fraction. This fraction represents half of the sample weight. Most of the remaining gold (30%) occurs in the -400 mesh fraction, also primarily caused by locking and slimes coatings. The results of the screen analysis are summarized in Table 11.

Table 11

Screen Analysis and Gold Distribution
in -10 Mesh Cyanide Leach Residue
(Sample 444-1-2)

Product (Mesh)	Weight (%)	Gold Assay oz/ton	Gold Distribution (%)
Head Assay		0.052	
Head Calc.	100.0	0.062	100.0
+48	49.15	0.081	64.61
-48+100	11.14	0.022	3.90
-100+200	10.14	0.006	0.97
-200+400	8.58	0.004	0.49
-400	20.99	0.088	30.03

Based on the mineralogical work of head samples, gravity separation products and leach residues as well as the results of the bottle roll tests, the following Table 12 quantifies the mode of occurrence of gold in the Moss Mine samples.

Table 12

Mineralogical Mode of Occurrence of Gold in Moss Mine Gold Ore Samples

Type of Gold Occurrence	Frequency (%) 444-1-2	444-3
Native gold associated with hydrous iron oxides*..................	64	7
Native gold associated with quartz or other gangue minerals........	30	89
Native gold associated with partially oxidized pyrite..............	6	4
Total	100	100

* This includes gold associated with hydrous iron oxides which are pseudomorphous after pyrite as well as gold remobilized during alteration/oxidation and reprecipitated in (layered) iron hydroxides.

It is pointed out that the gold mineralogy established in Table 12 is based on the sample material investigated. Fluctuations and deviations of the mode of occurrence of gold may occur throughout the deposit.

Pertinent mineralogical features of the Moss Mine samples are shown in Figures 3 to 12 in the Appendix.

CONCLUSIONS

- The Moss Mine gold ore samples examined during this study contain a fine- to coarse-grained mineralization of silver-rich native gold some of which may be equivalent to electrum. Minor amounts of gold with low silver contents are also present. It is indicated that the ore may contain a bimodal occurrence (mineralogical residence) of gold as well as a bimodal gold particle size distribution:

  1. In the composited samples MM-8-46/48, the majority of the gold is associated with iron oxidation minerals and the gold is primarily of ultrafine particle size.

  2. In the MM-1-49 sample, most of the gold is associated with siliceous gangue and exhibits distinctly coarse particle sizes.

- The characteristics of the gold mineralogy described above have a distinct impact on ore processing and gold recovery. The fine gold intergrown/encapsulated by iron oxides will require a sufficiently fine grind to become amenable to direct cyanidation. The coarser gold mineralization found in sample MM-1-49, however, showed a good response to gravity concentration, i.e. almost 70% of this gold can be recovered into a small-volume, high-grade concentrate by physical preconcentration.

- The bottle roll cyanidation tests and subsequent mineralogical analyses of a leach residue confirmed the mineralogical characteristics identified in the head samples. The leach tests revealed a particle size-dependent refractoriness to direct leaching. Based upon the recent work, it is also concluded that in ore samples similar to the composite MM-8-46/48, 10-15% of the gold occurs encapsulated in pyrite and may require oxidation prior to cyanidation.

- It is concluded that losses encountered during cyanide leaching are primarily due to partial or complete locking (encapsulation) of gold in iron oxidation minerals, siliceous gangue and/or middlings particles of these minerals.

- The very coarse gold particle sizes observed in sample MM-1-49 could become troublesome in sampling, sample preparation and assaying by causing severe nugget effects. In addition, extremely coarse gold may not be entirely leached during short bottle roll tests. The resultant poor gold extraction could be erroneously interpreted as being caused by locking. Routine gravity separation tests are therefore of critical importance during further development work.

- Due to the presence of spheroidal pyrite, sorptive clay minerals, and traces of carbonaceous matter, the ore may exhibit minor preg-robbing effects. Considerably more follow-up work is required to confirm these conclusions.

- Increased cyanide consumption is caused by cyanicides such as soluble iron oxidation products, spheroidal pyrite, tramp iron and copper wire contamination and cyanide-consuming ferruginous gangue in the slimes fraction.

Figure 3: Photomicrograph showing the typical occurrence of fine native gold (see arrows) locked in hydrous iron oxides (gray).
Scale = ⌴ 100 micron

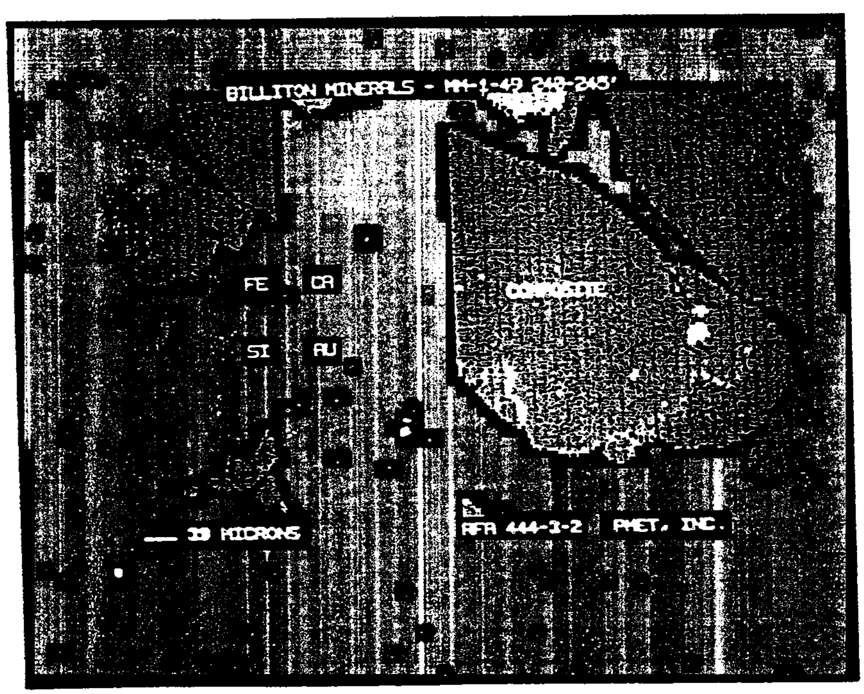


Figure 4 SEM digital X-ray map of the particle shown in Figure 3 outlining the gold encapsulation.

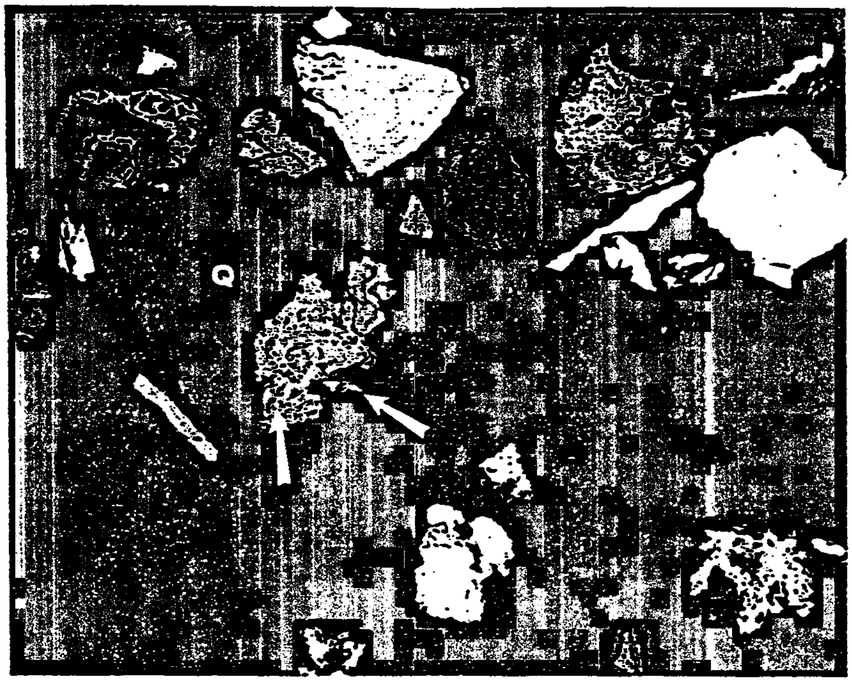


Figure 5 Photomicrograph showing encapsulated and partially liberated native gold (see arrows) in a hydrous iron oxide particle which is attached to a larger quartz grain (Q).
Scale = ⌴ 100 micron

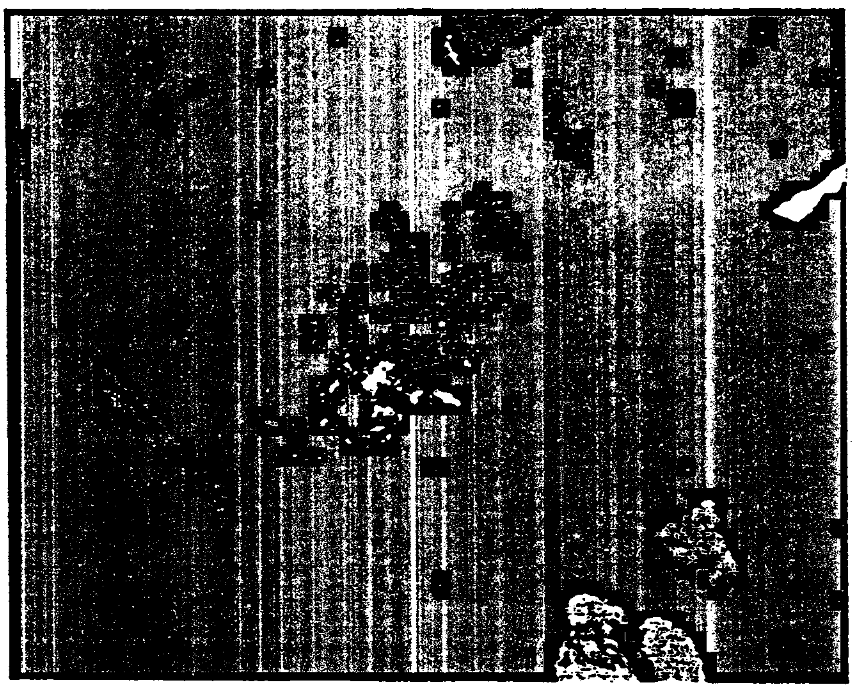


Figure 6 Detail of Figure 5. Fine native gold (yellow) intimately associated with hydrous iron oxides.
Scale = ⌴ 50 micron

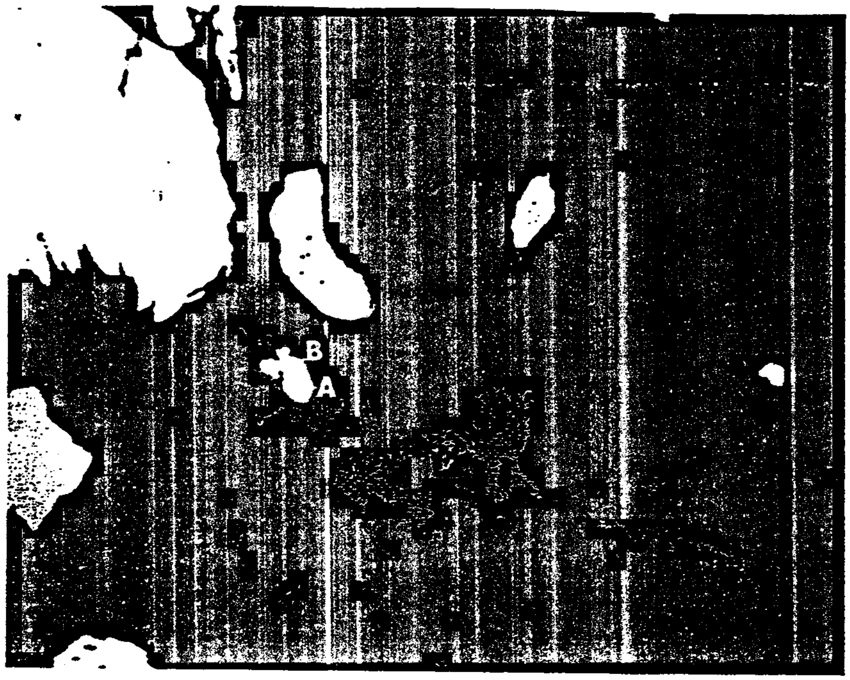


Figure 7 Photomicrograph showing the presence of silver-rich (A) and silver-poor (B) gold particles both of which are encapsulated by hydrous iron oxides.
Scale = ⌴ 50 micron

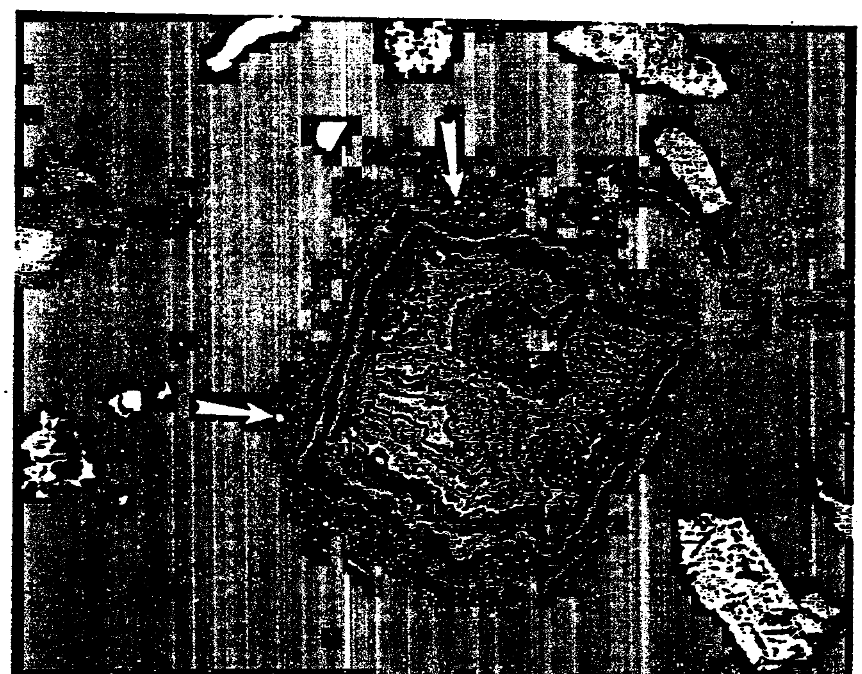


Figure 8 Photomicrograph showing rhythmic iron precipitation with ultrafine gold formation (see arrows). It is tentatively concluded that this gold has been remobilized from a primary mineralization during alteration and was thereafter co-precipitated with the iron.
Scale = ⌴ 50 micron

Figure 9 Photomicrograph showing a liberated particle of coarse native gold (G).
Scale = ⎵ 100 micron

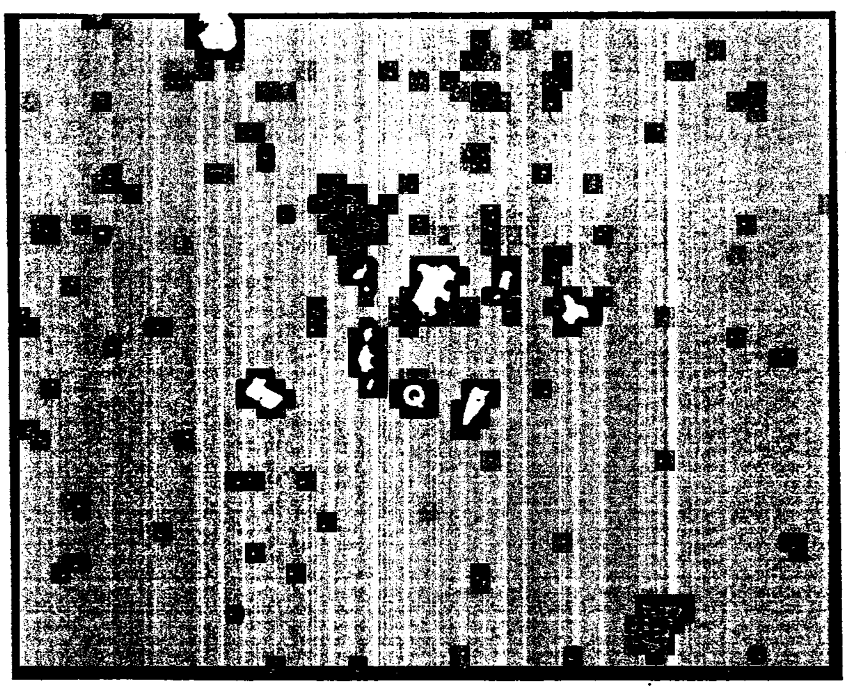


Figure 10 Photomicrograph showing a larger quartz grain (Q) with partially as well as completely locked native gold (yellow).
Scale = ⎵ 100 micron

Figure 11 Photomicrograph showing the occurrence of spheroidal pyrite (see arrows) which may exhibit preg-robbing potential.
Scale = ⎵⎵⎵⎵ 100 micron

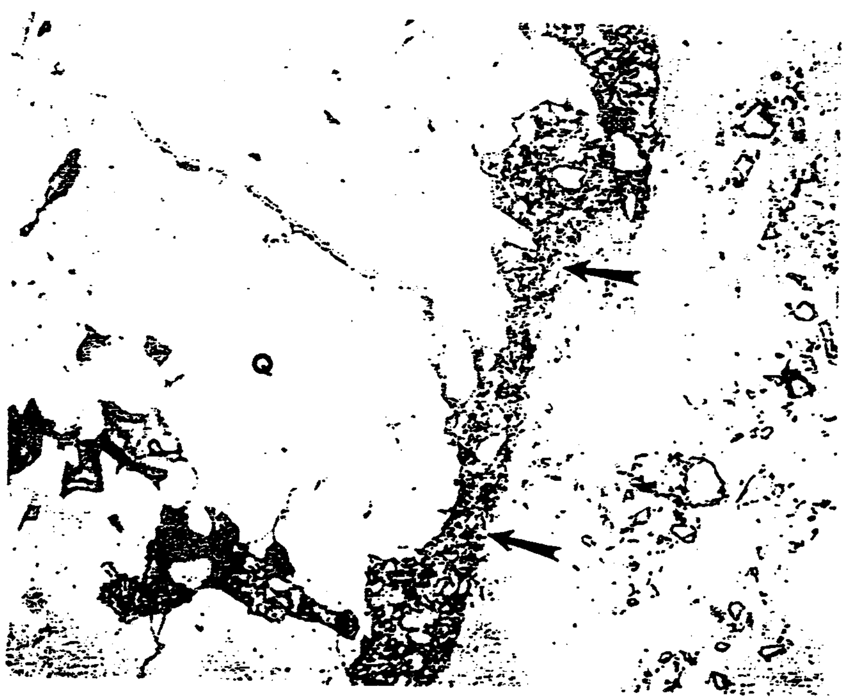


Figure 12 Photomicrograph showing a large quartz grain (Q) coated by clay and silica slimes (see arrows). These slimes coatings may retard or prevent lixiviant penetration.
Scale = ⎵⎵⎵⎵ 100 micron

Pittsburgh
Mineral &
Environmental
Technology, Inc.

December 17, 1990

Mr. Michael F. Lucid
Billiton Minerals U.S.A., Inc.
200 N. Dairy Ashford
Woodcreek, Room 3496
Houston, Texas 77079

Dear Mike:

The attached report summarizes and concludes our mineralogical laboratory work on the Moss Mine gold ore samples. Please contact us if we can be of any further service.

Sincerely,

Wolfgang Baum

Wolfgang Baum
Manager, Process Mineralogy

WB/mkf

Attachment

cc: Messrs. Jeff Schafer & Ed Hanley (Reno)

700 Fifth Avenue
New Brighton, PA 15066
(412) 843-5000
FAX: (412) 843-5353

lcCLELLAND LABORATORIES, INC.

1016 Greg Street, Sparks, Nevada 89431 702 / 356-1300
FAX 702 / 356-8917

May 29, 1991

Mr. Mark Sander
MAGMA COPPER COMPANY
7400 North Oracle Road, Suite 200
Tucson, AZ 85704

Dear Mark:

Enclosed is our report concerning metallurgical results obtained from direct agitated cyanidation testwork conducted on the Moss bulk ore sample, and cuttings intervals. An original of this report was sent to Mr. Richard Jeanne.

Enclosed also is our invoice (MLI Job No. 1615/1631) for the testwork.

Thank you for allowing us the opportunity to serve you on the Moss project.

Sincerely,

Frank

Frank A. Macy
Project Manager

FAM:aah
Enclosure

McCLELLAND LABORATORIES, INC.

1016 Greg Street, Sparks, Nevada 89431 702 / 356-1300
FAX 702 / 356-8917

Report
on
Direct Agitated Cyanidation Testwork
Moss Bulk Ore and Cuttings Samples
MLI Job No. 1567
May 29, 1991

for

Mr. Mark Sander
Magma Copper Company
7400 North Oracle Road
Suite 200
Tucson, AZ 85704

EXECUTIVE SUMMARY

Direct agitated cyanidation (bottle roll) tests were conducted on 1 bulk ore sample, and 14 cuttings intervals from the Moss project to determine gold recovery, recovery rate, and reagent requirements. The bulk ore sample was evaluated at a 100 percent minus 1 inch feed size. Cuttings intervals were evaluated at the as received feed size.

Metallurgical results show that the bulk ore sample was not readily amenable to direct agitated cyanidation treatment at a minus 1 inch feed size. A gold recovery of 42.1 percent was achieved in 96 hours of leaching. Gold recovery rate was fairly slow and extraction was progressing at a slower, but fairly constant rate, when leaching was terminated at 96 hours. Reagent requirements were low.

Metallurgical results show that the cuttings intervals were amenable to direct agitated cyanidation treatment at the as received feed size. Gold recoveries ranged from 51.9 to 78.1 percent, and averaged 62.4 percent in 96 hours of leaching. Gold recovery rates were fairly rapid and extraction was substantially complete in from 6 to 24 hours. Additional gold was extracted after 24 hours, but at a slow rate. Cyanide and lime requirements were low to moderate.

SAMPLE PREPARATION AND HEAD ASSAYS

One bulk ore sample, and 14 cuttings intervals from the Moss project were received for the testing program. The bulk ore sample was stage crushed to 100 percent minus 1 inch in size, and was thoroughly blended and split to obtain 3 kilograms for a bottle roll test, and samples for triplicate direct head assay. Cuttings intervals were thoroughly blended and split to obtain 1 kilogram for a bottle roll test. Cuttings intervals from hole MM-2 were split further to obtain a 300 gram sample for direct head assay.

Head samples were assayed directly using conventional fire assay fusion procedures to determine gold content. Head assay results and head grade comparisons for the bulk ore sample are provided in Table 1. Head assay results for cuttings intervals are provided with overall metallurgical results from the bottle roll tests later in this report.

Table 1. - Head Assay Results and Head Grade Comparisons, Moss Bulk Ore Sample

Determination Method	Head Grade, ozAu/ton
Direct Assay: Initial	0.250
Duplicate	0.254
Triplicate	0.325
Calculated, Bottle Test	0.214
Arithmetic Average	0.261
Maximum Deviation from Average	0.064
Precision, percent	80.3

Head grades determined by the various methods did not agree closely. Gold occurrence was somewhat "spotty". The cause of "spottiness" was not established. The calculated head grade determined from the bottle roll test is considered more reliable than direct head assays because of the quantity of sample evaluated.

DIRECT AGITATED CYANIDATION TEST PROCEDURES AND RESULTS

Direct agitated cyanidation (bottle roll) tests were conducted on 1 bulk ore sample, and 14 cuttings intervals from the Moss project to determine gold recovery, recovery rate, and reagent requirements. The bulk ore sample was evaluated at a 100 percent minus 1 inch feed size. Cuttings intervals were evaluated at the as received feed size. Ore charges were mixed with water to achieve 40 weight percent solids. Natural pulp pHs were measured. Lime was added to adjust the pH of the pulps to 11.0 before adding the cyanide. Sodium cyanide, equivalent to 2.0 pounds per ton of solution, was added to the alkaline pulps.

Leaching was conducted by rolling the pulps in bottles on the laboratory rolls for 96 hours. Rolling was suspended briefly after 2, 6, 24, 48, and 72 hours to allow the pulps to settle so samples of pregnant solution could be taken for analysis by A.A. methods. Pregnant solution volumes were measured and sampled. Cyanide concentration and pH were determined for each pregnant solution. Make-up water, equivalent to that withdrawn, was added to the pulps. Cyanide concentrations were restored to initial levels. Lime was added, if necessary, to maintain the leaching pH at between 10.8 and 11.2. Rolling was then resumed.

After 96 hours, the pulps were filtered to separate liquids and solids. Final pregnant solution volumes were measured and sampled for analysis. Final pH and cyanide concentrations were determined. Leached residues were washed, dried, weighed, and assayed in triplicate to determine residual gold content.

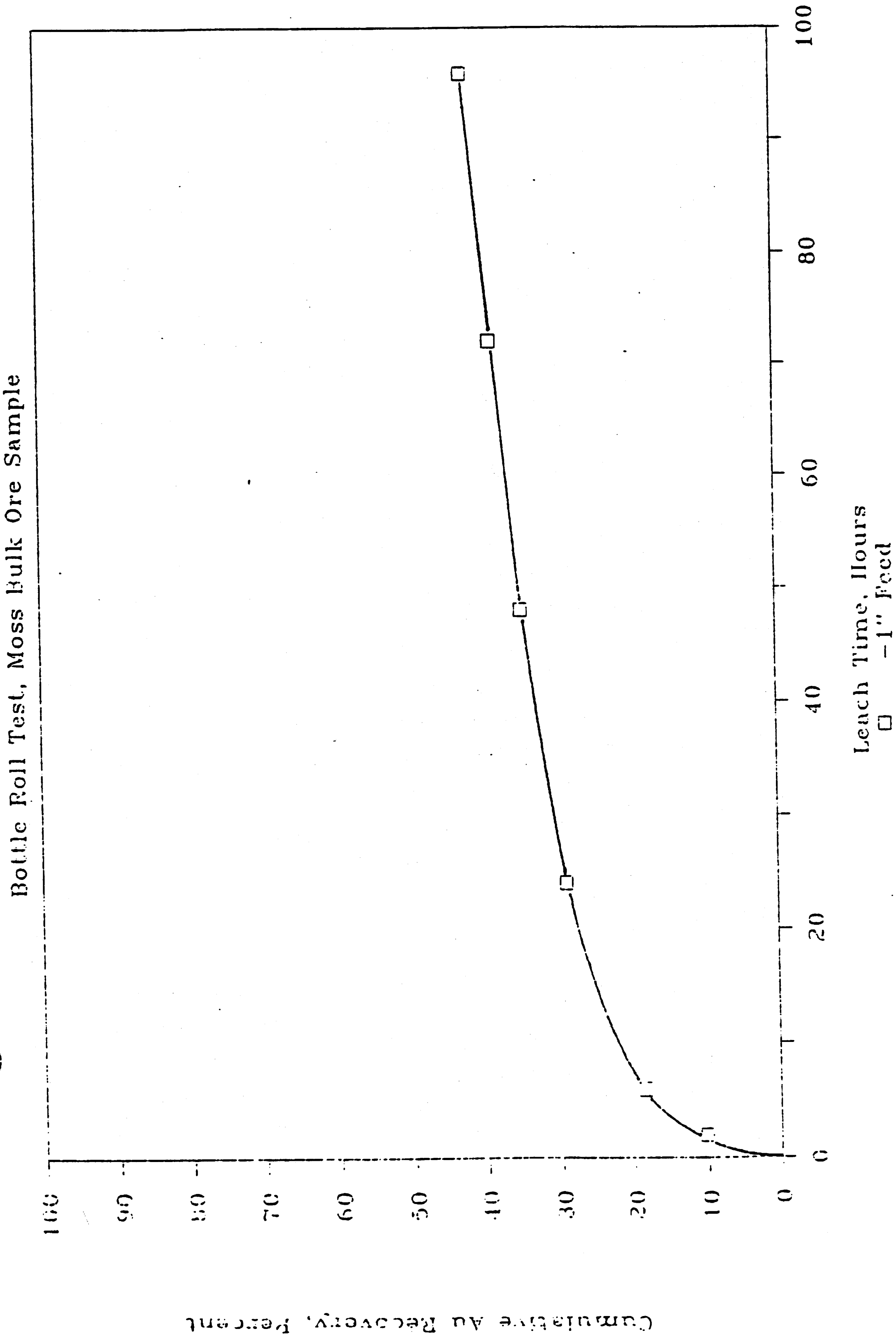
Overall metallurgical results for the bottle roll tests are provided in Tables 2 through 7. Gold leach rate profiles are shown graphically in Figures 1 through 6. Triplicate gold tail assay results for the cuttings intervals are provided in Table 8. A summary of bottle roll test results conducted on the cuttings intervals is provided in Table 9.

Table 2. - Overall Metallurgical Results, Bottle Roll Test, Moss Bulk Ore Sample

Metallurgical Results	Feed Size
Extraction: pct. total Au	-1"
in 2 hours	10.2
in 6 hours	18.4
in 24 hours	29.0
in 48 hours	34.7
in 72 hours	38.6
in 96 hours	42.1
Extracted, ozAu/ton ore	0.090
Tail Grade, ozAu/ton[1)]	0.261
Calculated Head, ozAu/ton ore	0.214
Head Grade, ozAu/ton ore[2)]	0.261
Cyanide Consumed, lb/ton ore	0.15
Lime Added, lb/ton ore	3.4
Final Solution pH	11.0
Natural pH (40% solids)	7.1

1) Average of three (0.132, 0.119, and 0.121 ounce gold per ton).
2) Average of all head grade determinations.

Figure 1. - Gold Leach Rate Profile,
Bottle Roll Test, Moss Bulk Ore Sample



Metallurgical results show that the bulk ore sample was not readily amenable to direct agitated cyanidation treatment at a 100 percent minus 1 inch feed size. A gold recovery of 42.1 percent was achieved in 96 hours of leaching. Gold recovery rate was fairly slow and extraction was progressing at a slower, but fairly constant rate, when leaching was terminated at 96 hours. Additional gold values would be extracted with a leaching cycle longer than 96 hours, but at a slow rate.

Cyanide consumption was low at 0.15 pounds per ton of ore. The lime requirement was low at 3.4 pounds per ton of ore.

Table 3. - Overall Metallurgical Results, Bottle Roll Tests, Moss Cuttings Intervals, As Received Feeds

Metallurgical Results	Sample	
Extraction: pct total Au	MM-1-30	MM-1-64
in 2 hours	20.0	13.3
in 6 hours	38.0	33.9
in 24 hours	49.7	63.3
in 48 hours	54.9	71.7
in 72 hours	57.4	74.7
in 96 hours	60.0	75.0
Extracted, ozAu/ton ore	0.021	0.027
Tail Assay, ozAu/ton[1)]	0.014	0.009
Calculated Head, ozAu/ton ore	0.035	0.036
Predicted Head, ozAu/ton ore[2)]	0.029	0.046
Cyanide Consumed, lb/ton ore	0.24	0.10
Lime Added, lb/ton ore	4.3	5.9
Final Solution pH	11.1	11.1
Natural pH (40% solids)	7.8	7.8

1) Average of three.
2) Provided by Magma Copper personnel.

Figure 2. - Gold Leach Rate Profiles,
Bottle Tests, Moss Cuttings Intervals

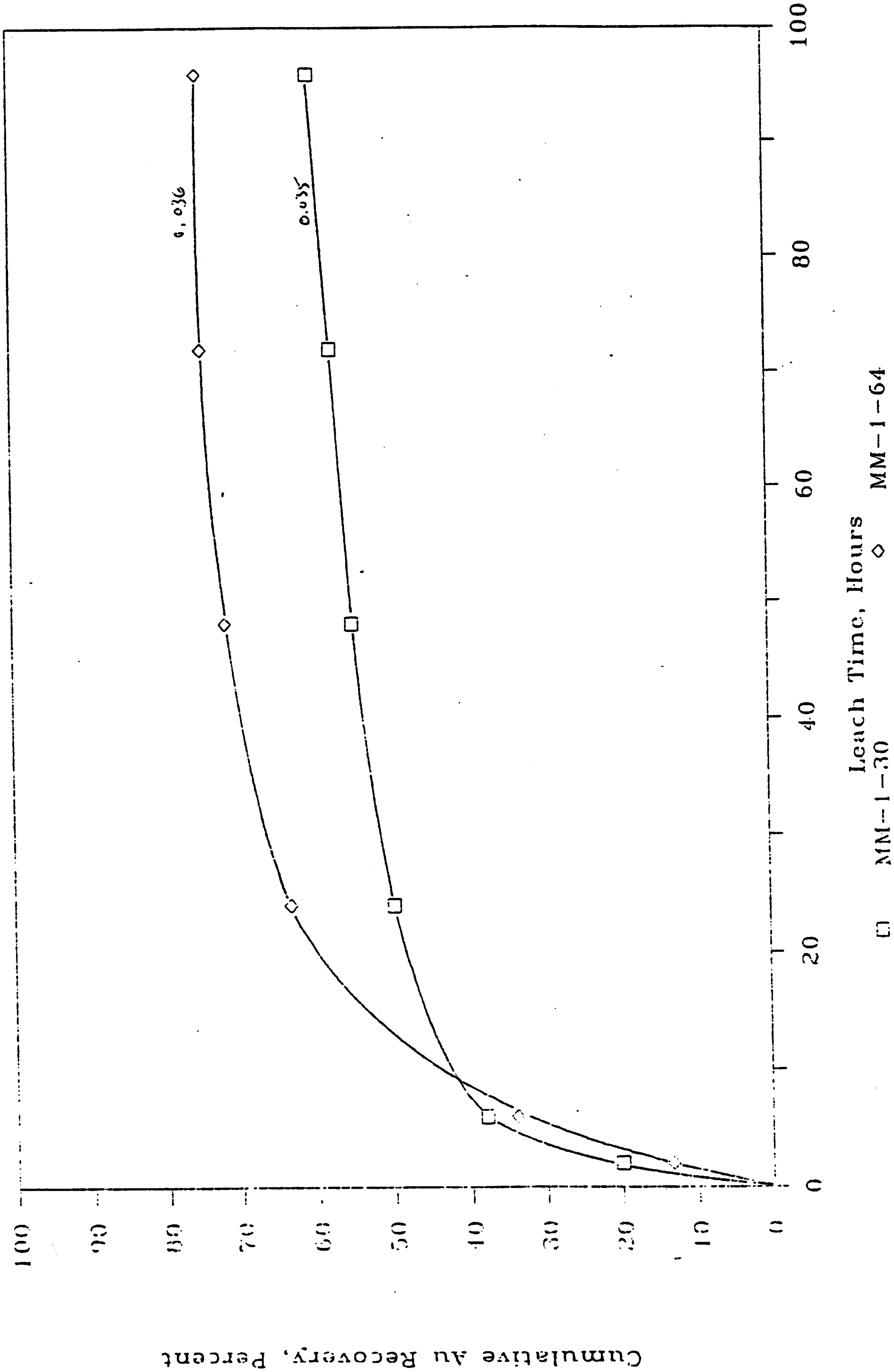


Table 4. - Overall Metallurgical Results, Bottle Roll Tests, Moss Cuttings Intervals, As Received Feeds

Metallurgical Results	Sample		
Extraction: pct total Au	MM-2-22	MM-2-23	MM-2-31
in 2 hours	22.6	28.2	19.4
in 6 hours	39.3	42.5	33.1
in 24 hours	47.4	54.3	45.0
in 48 hours	49.3	58.9	50.0
in 72 hours	51.1	61.8	52.7
in 96 hours	51.9	64.3	53.8
Extracted, ozAu/ton ore	0.014	0.018	0.028
Tail Assay, ozAu/ton[1)]	0.013	0.010	0.024
Calculated Head, ozAu/ton ore	0.027	0.028	0.052
Head Assay, ozAu/ton ore	0.028	0.026	0.046
Predicted Head, ozAu/ton ore[2)]	0.052	0.032	0.055
Cyanide Consumed, lb/ton ore	0.14	0.27	1.29
Lime Added, lb/ton ore	5.9	4.6	5.1
Final Solution pH	10.9	10.8	10.9
Natural pH (40% solids)	7.8	7.6	7.7

1) Average of three.
2) Provided by Magma Copper personnel.

Mr. Mark Sander/Magma Copper Company
MLI Job No. 1615 - May 29, 1991

Figure 3. - Gold Leach Rate Profiles,
Bottle Tests, Moss Cuttings Intervals

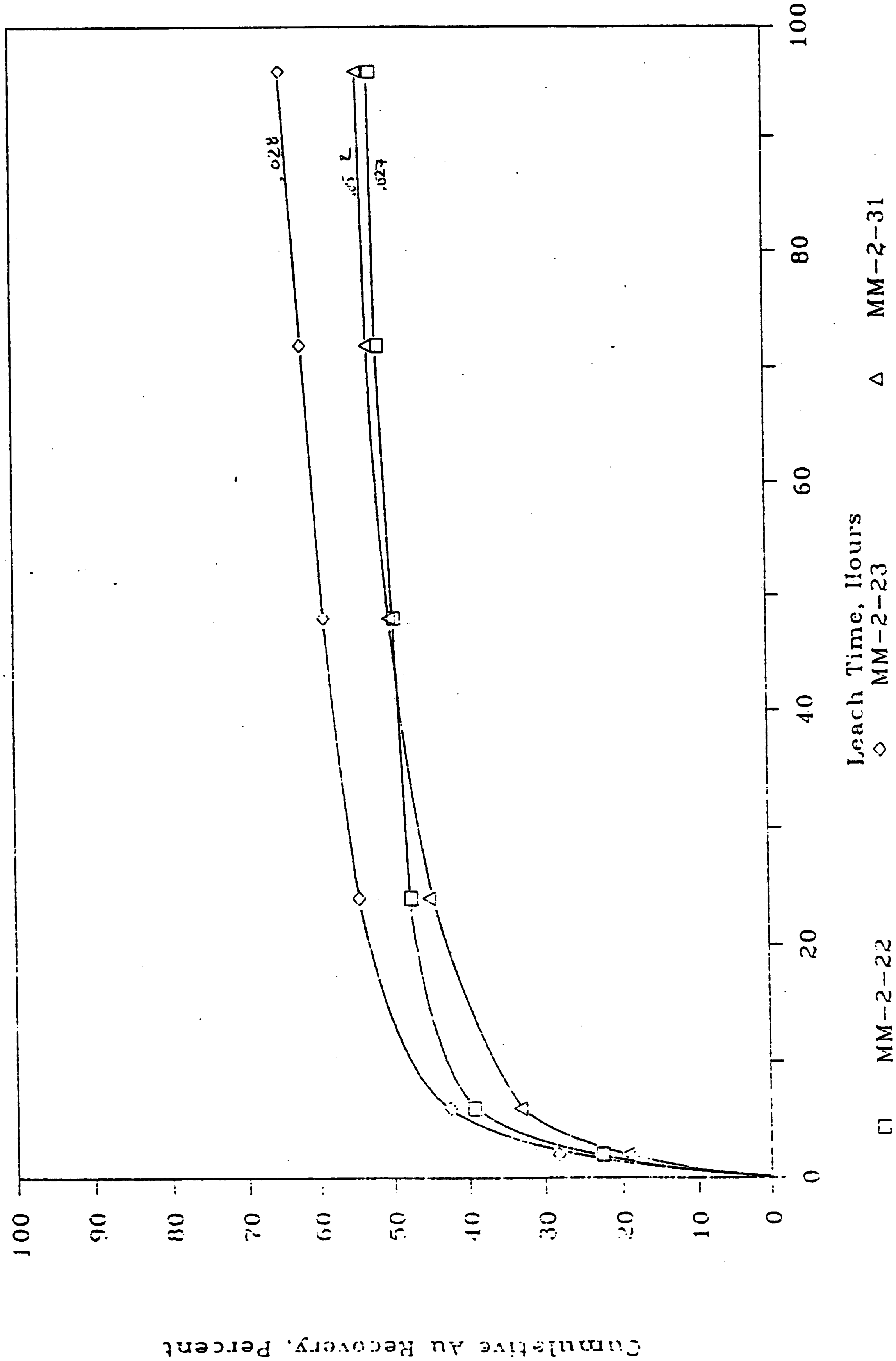


Table 5. - Overall Metallurgical Results, Bottle Roll Tests, Moss Cuttings Intervals, As Received Feeds

Metallurgical Results	Sample		
Extraction: pct total Au	MM-2-33	MM-2-36	MM-2-37
in 2 hours	38.4	29.5	27.1
in 6 hours	52.0	41.2	38.1
in 24 hours	59.0	50.2	47.9
in 48 hours	63.0	54.4	52.6
in 72 hours	63.9	55.8	54.5
in 96 hours	64.6	58.1	57.1
Extracted, ozAu/ton ore	0.053	0.025	0.024
Tail Assay, ozAu/ton[1)]	0.029	0.018	0.018
Calculated Head, ozAu/ton ore	0.082	0.043	0.042
Head Assay, ozAu/ton ore	0.093	0.038	0.038
Predicted Head, ozAu/ton ore[2)]	0.071	0.038	0.039
Cyanide Consumed, lb/ton ore	0.86	0.46	0.32
Lime Added, lb/ton ore	4.6	4.2	3.9
Final Solution pH	10.9	10.9	10.8
Natural pH (40% solids)	7.7	7.7	7.7

1) Average of three.
2) Provided by Magma Copper personnel.

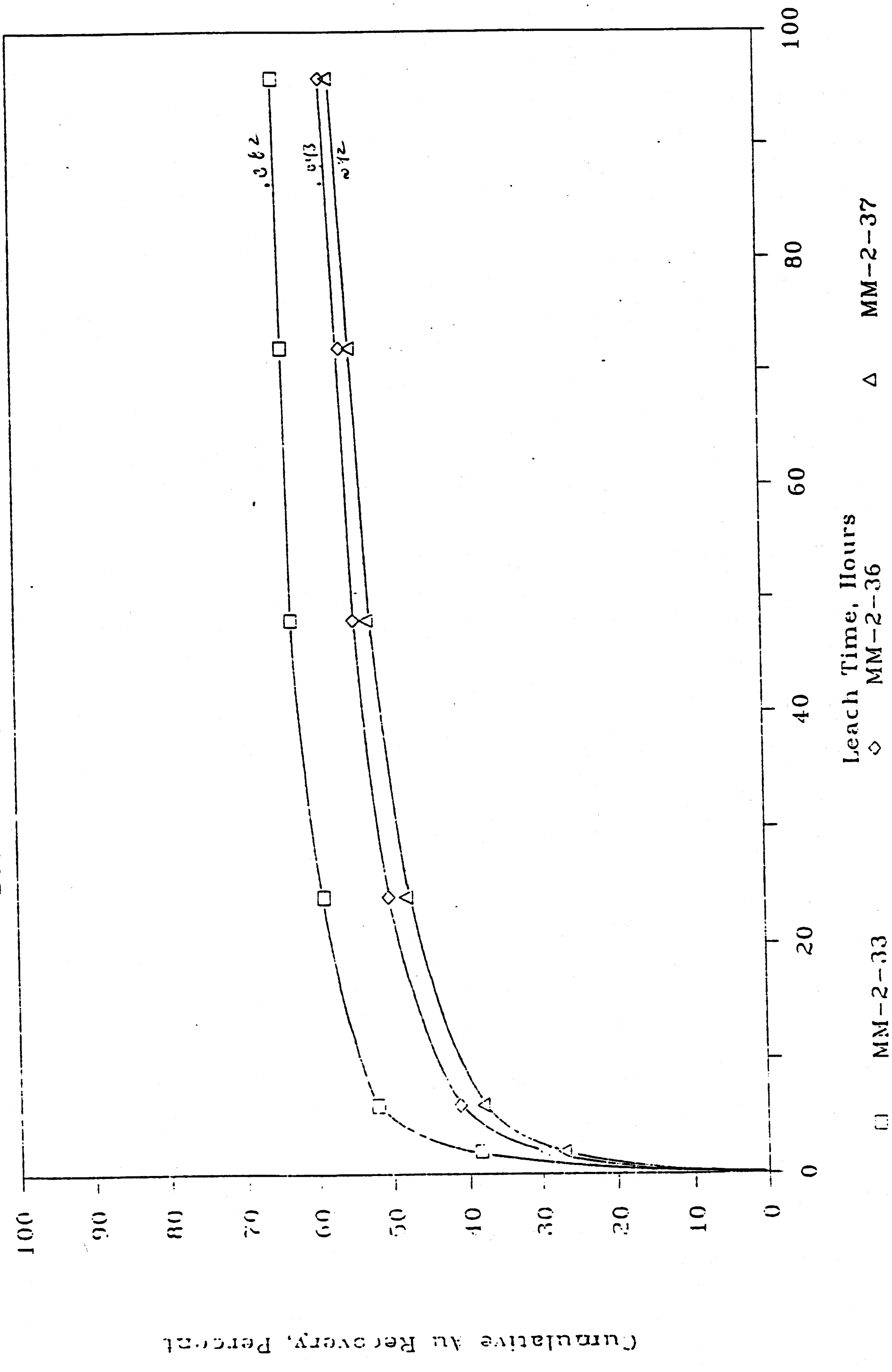


Figure 4. - Gold Leach Rate Profiles,
Bottle Tests, Moss Cuttings Intervals

Table 6. - Overall Metallurgical Results, Bottle Roll Tests, Moss Cuttings Intervals, As Received Feeds

Metallurgical Results	Sample			
Extraction: pct total Au	MM-4-18	MM-8-30	MM-8-49	MM-8-56
in 2 hours	20.3	21.0	23.3	36.9
in 6 hours	33.3	39.5	38.7	57.8
in 24 hours	44.1	52.9	54.3	70.3
in 48 hours	48.8	59.5	61.0	72.5
in 72 hours	51.4	63.8	64.5	74.7
in 96 hours	53.4	66.7	66.5	78.1
Extracted, ozAu/ton ore	0.031	0.014	0.125	0.025
Tail Assay, ozAu/ton[1)]	0.027	0.007	0.063	0.007
Calculated Head, ozAu/ton ore	0.058	0.021	0.188	0.032
Predicted Head, ozAu/ton ore[2)]	0.056	0.016	0.185	0.028
Cyanide Consumed, lb/ton ore	0.47	0.28	0.73	0.75
Lime Added, lb/ton ore	3.8	4.3	3.6	5.0
Final Solution pH	10.7	10.8	10.8	10.9
Natural pH (40% solids)	8.0	8.2	8.1	8.3

1) Average of three.
2) Provided by Magma Copper personnel.

Figure 5. - Gold Leach Rate Profiles,

Bottle Tests, Moss Cuttings Intervals

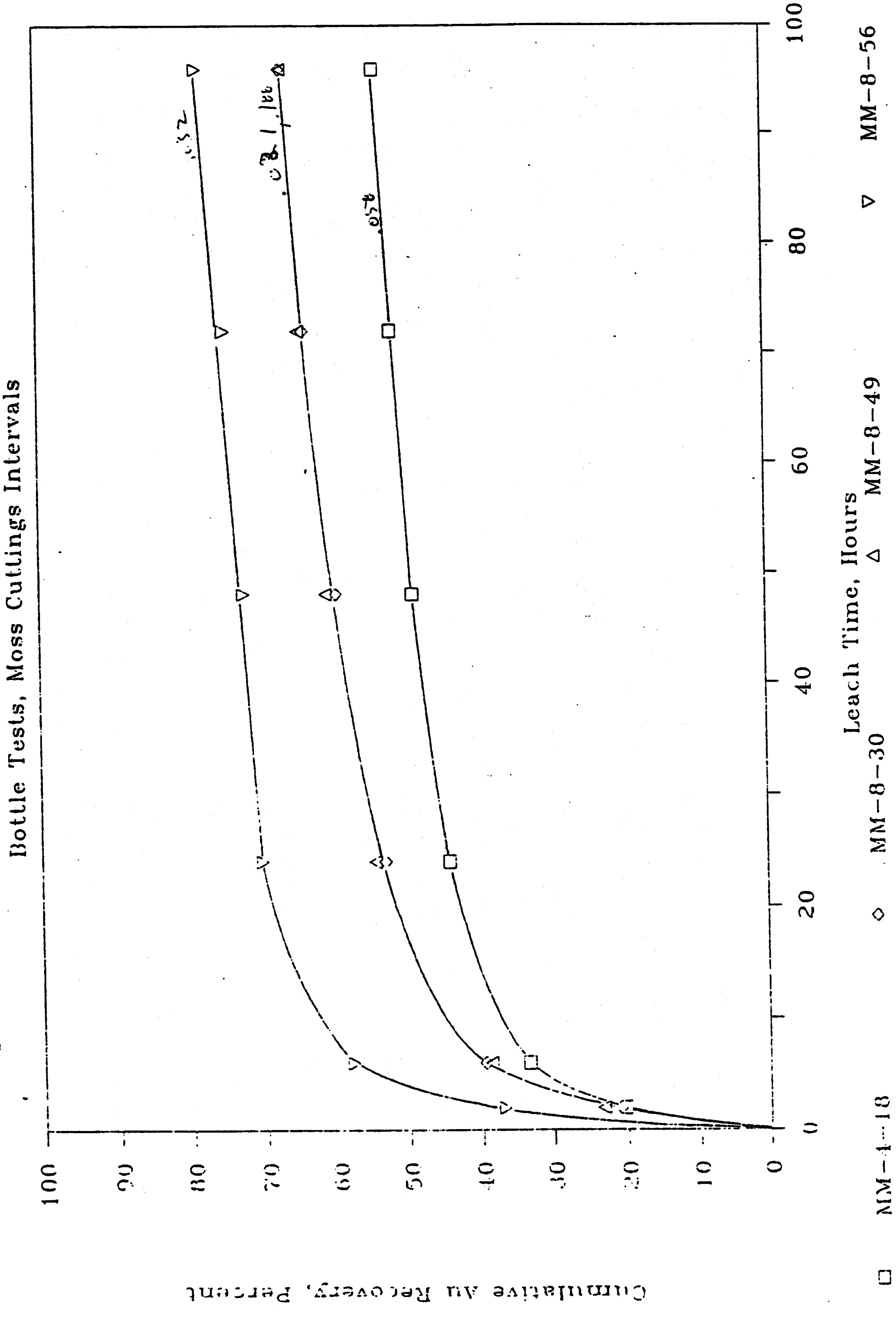


Table 7. - Overall Metallurgical Results, Bottle Roll Tests, Moss Cuttings Intervals, As Received Feeds

Metallurgical Results	Sample MM-14-72	Sample MM-18-58
Extraction: pct total Au		
in 2 hours	14.8	22.2
in 6 hours	29.4	40.4
in 24 hours	45.4	55.7
in 48 hours	51.5	61.2
in 72 hours	54.6	64.4
in 96 hours	57.5	66.4
Extracted, ozAu/ton ore	0.046	0.089
Tail Assay, ozAu/ton[1)]	0.034	0.045
Calculated Head, ozAu/ton ore	0.080	0.134
Predicted Head, ozAu/ton ore[2)]	0.077	0.127
Cyanide Consumed, lb/ton ore	0.61	0.44
Lime Added, lb/ton ore	5.0	3.9
Final Solution pH	11.1	10.9
Natural pH (40% solids)	8.3	8.4

1) Average of three.
2) Provided by Magma Copper personnel.

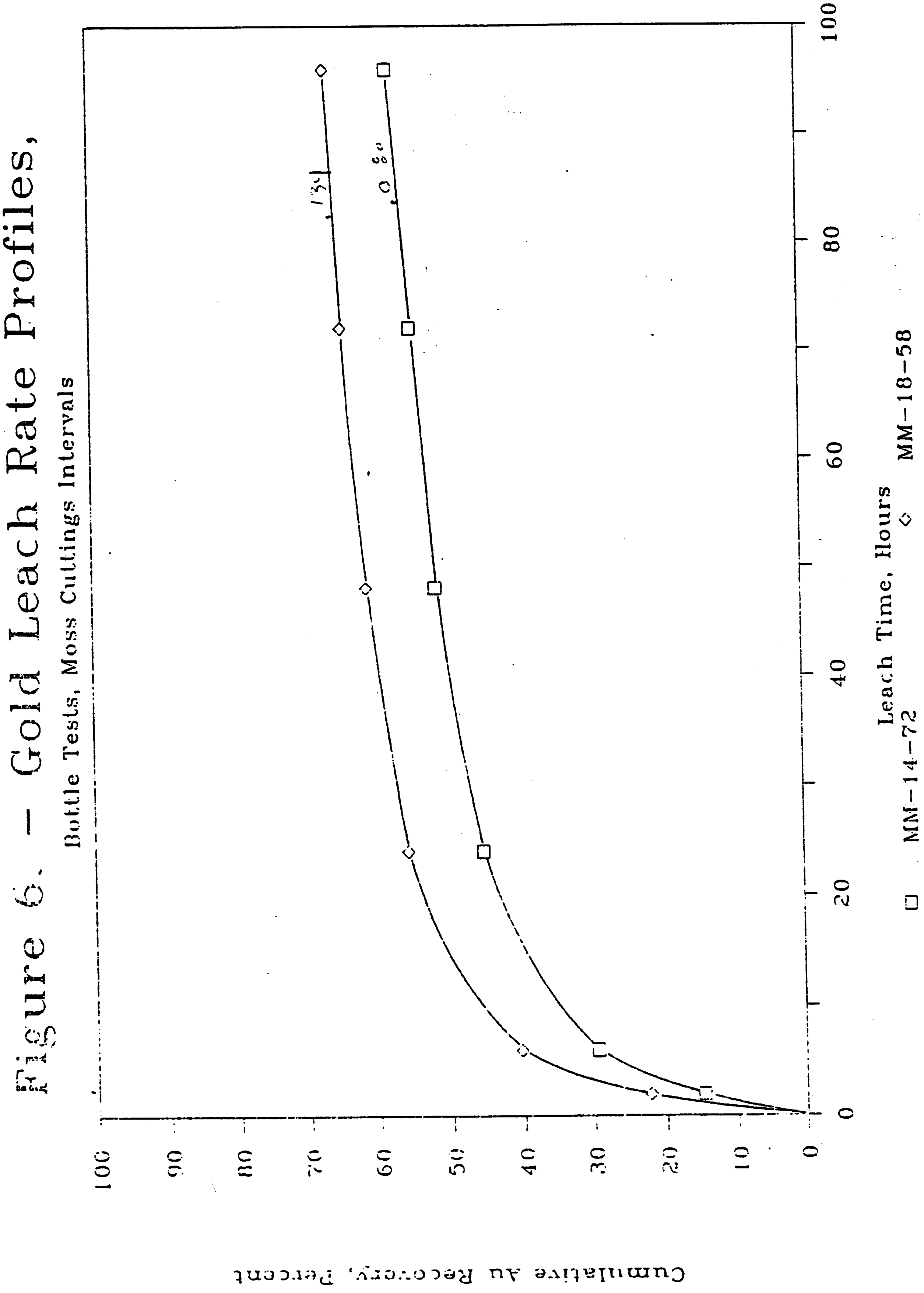


Figure 6. - Gold Leach Rate Profiles,
Bottle Tests, Moss Cuttings Intervals

Table 8. - Tail Assay Results, Bottle Leached Residues, Moss Cuttings Intervals, As Received Feeds

	Tail Assays, ozAu/ton			
Interval	Initial	Duplicate	Triplicate	Average
MM-1-30	0.013	0.015	0.014	0.014
MM-1-64	0.012	0.010	0.006	0.009
MM-2-22	0.014	0.009	0.015	0.013
MM-2-23	0.008	0.008	0.014	0.010
MM-2-31	0.028	0.027	0.018	0.024
MM-2-33	0.030	0.027	0.030	0.029
MM-2-36	0.018	0.019	0.018	0.018
MM-2-37	0.018	0.018	0.018	0.018
MM-4-18	0.029	0.025	0.028	0.027
MM-8-30	0.007	0.008	0.007	0.007
MM-8-49	0.063	0.070	0.057	0.063
MM-8-56	0.006	0.007	0.009	0.007
MM-14-72	0.035	0.031	0.036	0.034
MM-18-58	0.047	0.044	0.045	0.045

Table 9. - Summary of Bottle Roll Test Results, Moss Cuttings Intervals, As Received Feeds

Interval	Extracted, ozAu/ton	Calculated Head, ozAu/ton	Au Recovery, percent	Cyanide Consumed, lb/ton	Lime Added, lb/ton
MM-1-30	0.021	0.035	60.0	0.24	4.3
MM-1-64	0.027	0.036	75.0	0.10	5.9
MM-2-22	0.014	0.027	51.9	0.14	5.9
MM-2-23	0.018	0.028	64.3	0.27	4.6
MM-2-31	0.028	0.052	53.8	1.29	5.1
MM-2-33	0.053	0.082	64.6	0.86	4.6
MM-2-36	0.025	0.043	58.1	0.46	4.2
MM-2-37	0.024	0.042	57.1	0.32	3.9
MM-4-18	0.031	0.058	53.4	0.47	3.8
MM-8-30	0.014	0.021	66.7	0.28	4.3
MM-8-49	0.125	0.188	66.5	0.73	3.6
MM-8-56	0.025	0.032	78.1	0.75	5.0
MM-14-72	0.046	0.080	57.5	0.61	5.0
MM-18-58	0.089	0.134	66.4	0.44	3.9

Metallurgical results show that the Moss cuttings intervals were amenable to direct cyanidation treatment at the as received (cuttings) feed size. Gold recoveries ranged from 51.9 (MM-2-22) to 78.1 (MM-8-56) percent, and averaged 62.4 percent in 96 hours of leaching. Gold recovery rates were fairly rapid and extraction was substantially complete in from 6 to 24 hours. Additional gold values were extracted between 24 and 96 hours, but at a slow rate.

Cyanide consumptions were low to moderate and ranged from 0.10 (MM-1-64) to 1.29 (MM-2-31) pounds per ton of ore. Consumption rates were more rapid early in the leaching cycles. Lime requirements were low to moderate and ranged from 3.4 to 5.9 pounds per ton of ore. Controlling pH was not difficult even though lime addition was required at various sampling intervals to maintain leaching pH at between 10.8 and 11.2. An average of 82.5 percent of the total lime required was added during initial pH adjustment procedures. The remaining 17.5 percent was added during the leaching cycles.

CONCLUSIONS

- The Moss bulk ore sample was not readily amenable to direct agitated cyanidation treatment at a 100 percent minus 1 inch feed size.
- Gold recovery rate was fairly slow. Additional gold values would be extracted with a longer leach cycle, but at a very slow rate.
- The Moss cuttings intervals were amenable to direct cyanidation treatment at the as received feed size.
- Gold recovery rates were fairly rapid.
- Reagent requirements were low to moderate.

RECOMMENDATIONS

We recommend that column percolation leach tests be conducted on core or representative bulk ore samples from the Moss project to determine gold recovery, recovery rate, reagent requirements, and sensitivity to feed size under simulated heap leaching conditions.

Frank

Frank A. Macy
Project Manager

McCLELLAND LABORATORIES, INC.

1016 Greg Street, Sparks, Nevada 89431 702 / 356-1300
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Report
on
Direct Agitated Cyanidation Testwork - Moss Cuttings Intervals

MLI Job No. 1727
January 29, 1992

for

Mr. Mark Sander
Magma Copper Company
7400 North Oracle Road - Ste 200
Tucson, AZ 85704

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McCLELLAND LABORATORIES, INC.

1016 Greg Street, Sparks, Nevada 89431 702 / 356-1300
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Report
on
Preliminary Direct Agitated Cyanidation Testwork - Moss Cuttings Intervals
MLI Job No. 1727
January 29, 1992

for

Mr. Mark Sander
Magma Copper Company
7400 North Oracle Road - Ste 200
Tucson, AZ 85704

EXECUTIVE SUMMARY

Direct agitated cyanidation (bottle roll) tests were conducted on two Moss cuttings intervals at the as received (nominal 10 mesh) feed size to determine precious metal recovery, recovery rate, and reagent requirements.

Metallurgical results show that Moss cuttings intervals were amenable to direct agitated cyanidation treatment at the as recieved feed size. Gold recoveries of 87.9 and 78.7 percent were achieved from intervals MC-6 (56) and MC-14 (28), respectively, in 96 hours of leaching. Respective silver recoveries were 70.0 and 59.4 percent. Gold recovery rates were fairly rapid and extraction was substantially complete in 24 hours. Additional gold values were extracted between 24 and 96 hours, but at a very slow rate. Reagent requirements were low.

SAMPLE PREPARATION AND HEAD ASSAYS

Two cuttings intervals from the Moss project were received for the preliminary testing program. Each interval was thoroughly blended and split to obtain one kilogram for a bottle roll test, and a sample for single direct head assay.

Head samples were assayed directly using conventional fire assay fusion procedures to determine precious metal content. Head assay results are provided with overall metallurgical results from bottle roll tests later in this report.

DIRECT AGITATED CYANIDATION TEST PROCEDURES AND RESULTS

Direct agitated cyanidation (bottle roll) tests were conducted on two Moss cuttings intervals at the as received (nominal 10 mesh) feed size to determine precious metal recovery, recovery rate, and reagent requirements. Ore charges were mixed with water to achieve 40 weight percent solids. Natural pulp pHs were measured. Lime was added to adjust the pH of the pulps to 11.0 before adding the cyanide. Sodium cyanide, equivalent to 2.0 pounds per ton of solution, was added to the alkaline pulps.

Leaching was conducted by rolling the pulps in bottles on the laboratory rolls for 96 hours. Rolling was suspended briefly after 2, 6, 24, 48, and 72 hours to allow the pulps to settle so samples of pregnant solution could be taken for gold and silver analysis using A.A. methods. Pregnant solution volumes were measured and sampled. Cyanide concentration and pH were determined for each pregnant solution. Make-up water, equivalent to that withdrawn, was added to the pulps. Cyanide concentrations were restored to initial levels. Lime was added, when necessary, to maintain the leaching pH at between 10.8 and 11.2. Rolling was then resumed.

After 96 hours, the pulps were filtered to separate liquids and solids. Final pregnant solution volumes were measured and sampled for analysis. Final pH and cyanide concentrations were determined. Leached residues were washed, dried, weighed, and assayed in triplicate to determine residual precious metal content.

Overall metallurgical results for the bottle roll tests are provided in Table 1. Gold leach rate profiles are shown graphically in Figure 1. Triplicate tail assay results are provided in Table 2.

Table 1. - Overall Metallurgical Results, Bottle Roll Tests, Moss Cuttings Intervals, As Received Feeds

Metallurgical Results	Sample			
	MC-6 (56)		MC-14 (28)	
Extraction, pct. of total	Au	Ag	Au	Ag
in 2 hours	41.2	35.0	31.7	15.2
in 6 hours	78.2	50.0	59.6	26.8
in 24 hours	83.0	62.0	73.4	43.6
in 48 hours	85.5	67.0	76.8	51.3
in 72 hours	87.0	69.0	78.1	55.8
in 96 hours	87.9	70.0	78.7	59.4
Extracted, oz/ton ore	0.029	0.07	0.037	0.41
Tail Assay, oz/ton*	0.004	0.03	0.010	0.28
Calculated Head, oz/ton ore	0.033	0.10	0.047	0.69
Assayed Head, oz/ton ore	0.034	0.13	0.051	0.56
Cyanide Consumed, lb/ton ore	0.58		0.46	
Lime Added, lb/ton ore	2.8		3.7	
Final Solution pH	11.1		11.0	
Natural pH (40% solids)	8.4		8.4	

* Average of three.

Figure 1. – Gold Leach Rate Profiles,
Bottle Roll Tests, As Rec'd Feeds

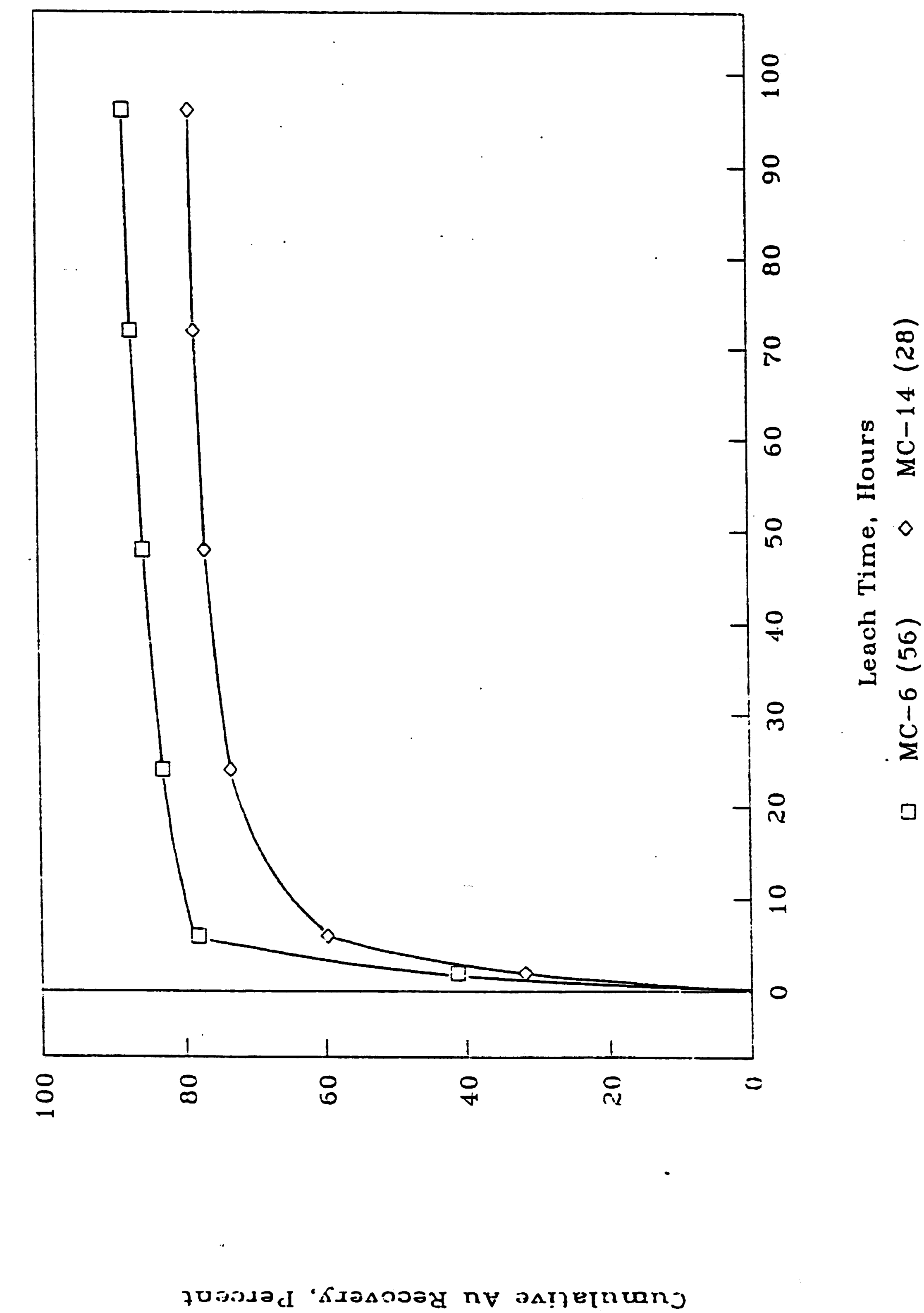

Table 2. - Tail Assay Results, Bottle Leached Residues, Moss Cuttings Intervals, As Received Feeds

	Tail Assays, oz/ton			
	MC-6 (56)		MC-14 (28)	
	Au	Ag	Au	Ag
Initial	0.004	0.03	0.011	0.24
Duplicate	0.004	0.03	0.010	0.45
Triplicate	0.003	0.03	0.010	0.15
Average	0.004	0.03	0.010	0.28

Metallurgical results show that the Moss cuttings intervals were amenble to direct agitated cyanidation treatment at the as received (nominal 10 mesh) feed size. Gold recoveries of 87.9 and 78.7 percent were achieved from intervals MC-6 (56) and MC-14 (28), respectively, in 96 hours of leaching. Respective silver recoveries were 70.0 and 59.4 percent. Gold recovery rates were fairly rapid and extraction was substantially complete in 24 hours. Additional gold values were extracted between 24 and 96 hours, but at a very slow rate.

Cyanide consumptions were low for both intervals and averaged 0.52 pounds per ton of ore. Consumption rates tended to increase slightly after 48 hours of leaching. Lime requirements were low for both intervals and averaged about 3.3 pounds per ton of ore. Controlling pH was not difficult for either interval even though lime was added to interval MC-14 (28) at various sampling intervals to maintain leaching pH at between 10.8 and 11.2. About 80.0 percent of the total lime required for that interval was added during initial pH adjustment procedures. The remaining 20.0 percent was added during leaching.

CONCLUSIONS

- The Moss cuttings intervals were amenable to direct agitated cyanidation treatment at the as received (nominal 10 mesh) feed size.

- Gold recovery rates were fairly rapid.

- Reagent requirements were low.

RECOMMENDATIONS

We recommend that additional testwork be conducted on representative cuttings composites from various areas of the Moss ore deposit to determine if these metallurgical results are representative of the entire mineable ore body. We recommend also that column percolation leach tests be conducted on representative core or bulk ore composites to determine gold recovery, recovery rate, and reagent requirements under simulated heap leaching conditions.

Frank A. Macy
Project Manager

Pittsburgh
Mineral &
Environmental
Technology, Inc.

December 17, 1990

Mr. Michael F. Lucid
Billiton Minerals U.S.A., Inc.
200 N. Dairy Ashford
Woodcreek, Room 3496
Houston, Texas 77079

Dear Mike:

The attached report summarizes and concludes our mineralogical laboratory work on the Moss Mine gold ore samples. Please contact us if we can be of any further service.

Sincerely,

Wolfgang Baum
Manager, Process Mineralogy

WB/mkf

Attachment

cc: Messrs. Jeff Schafer & Ed Hanley (Reno)

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New Brighton, PA 15066
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PREPARED FOR:

BILLITON MINERALS U.S.A., INC.

CYANIDE LEACH TESTS
AND
MINERALOGICAL CHARACTERIZATION
OF GOLD ORE SAMPLES
FROM THE MOSS MINE PROJECT

By

Wolfgang Baum & Louis W. Lherbier, Jr.

Project O M 33

December 17, 1990

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SAMPLES RECEIVED AND METHODS OF STUDY

Three ore zone interval samples were received from Billiton on November 20, 1990, at the PMET laboratories. The samples were designated as shown in Table 1.

Table 1

Samples Received

PMET No.	Billiton Designation		Billiton Assay	Weight
444-1	MM-8-46	225-230'	0.229 oz/ton Au	6.55 lbs.
444-2	MM-8-48	235-240'	0.236 oz/ton Au	4.10 lbs.
444-3	MM-1-49	Coarse Rej.	0.622 oz/ton Au	2.0 lbs.

An equal-weight composite was prepared from samples 444-1 and 444-2 for the cyanide leach tests. Due to small sample size, sample 444-3 was used for mineralogical work only.

The laboratory work included sample preparation, bottle roll cyanidation tests, fire assays of head samples and leach residues, chemical analyses of filtrates and wash water, bulk X-ray diffraction analyses, heavy liquid separations with assays and mineralogical characterization of separation products, optical microscopy with modal analysis, particle size analysis by screening and microscopy and photomicrography.

This work was performed under Billiton purchase order number VAM 901 105.

DISCUSSION OF RESULTS

Chemical Characterization

Well-blended assay pulps were split out from the head samples and subjected to fire assays for gold. The assay results are summarized in Table 2.

Table 2

Gold Assays of Head Samples

Sample No.	Gold (oz/ton)
Composite 444-1-2	0.220
444-3	0.270

The pH of the ore samples was determined using Method ASA 12-2 (Methods of Soil Analysis). The results of this work are summarized in Table 3.

Table 3

pH Measurements

Sample	pH
444-1-2	7.90
444-3	8.23

Mineralogical Characterization

Prior to the ore blending, a megascopic characterization was prepared of the three samples.

Sample 444-1

White-yellow gray, coarse-grained ferruginous carbonate-rich quartz vein(?) material. The calcite is intimately associated with hydrated iron oxides, jarosite, hydrated manganese oxides and clay minerals. Most of the iron/manganese hydrated oxides appear to represent a former disseminated iron sulfide mineralization. The sample contains 5-8% of chloritic-siliceous rock fragments which contain large amounts of relatively fresh, well-crystallized and coarse-grained pyrite. The sample contains an estimated quartz content of 40-50% and a carbonate content of 25-35%.

Sample 444-2

White to light gray, carbonate-bearing quartz vein material which is distinctly less ferruginous than the first sample. The sample contains an estimated quartz content of 40-60% and a carbonate content of 10-20%. Both the quartz as well as the carbonates contain a weak, disseminated and strongly oxidized sulfide mineralization. In addition, there are also noticeable amounts of manganese oxides and hydroxides.

Sample 444-3

White-yellow gray, carbonate-bearing siliceous vein material. The overall mineralogical sample characteristics are very similar to sample 444-1. Ferruginous and weakly chloritic. Contains considerable amounts of well-crystallized quartz and calcite.

Subsequently, the blended composite and sample 444-3 were subjected to a bulk X-ray diffraction analysis. The XRD work confirmed the optical microscopy, i.e. that the dominating ore-forming minerals are quartz (with minor silica modifications such as opaline silica and chalcedony) and calcite. In addition, minor amounts of swelling clay minerals were identified. The XRD analyses are summarized in Table 4.

Table 4

Bulk XRD Analyses of Moss Mine Gold Ore Samples

	Minerals & Concentration		
Sample	Major	Minor	Trace
444-1-2	Quartz Calcite	Muscovite Montmorillonite	Chlorite
444-3	Quartz	K-feldspar Calcite Montmorillonite	Muscovite

The bulk XRD analysis represents crystallized minerals present in concentrations above 2%. Extremely fine-grained, poorly crystalline and/or amorphous mineral phases such as alteration products and clay minerals may not be detectable or may be under-represented.

Concentration Ranges: Major = 20 - >50%
Minor = 5 - 20%
Trace = <5%

Representative split portions of each sample were subjected to optical microscopy with modal analysis in order to quantify pertinent mineralogical characteristics. The results of the modal analysis are summarized in Table 5.

Table 5

Microscopic Modal Analysis of Head Samples

Mineral	Sample 444-1-2	Sample 444-3
Silica/Feldspar Groundmass	49% vol.	63% vol.
Carbonates	41	20
Clay Minerals	7	15
Opaque Minerals	3	2

Gold Mineralogy

The gold mineralization in the Moss Mine samples is characterized by the presence of mostly silver-rich native gold which frequently may approach electrum composition. The silver content in this gold shows an average concentration of 27% according to semiquantitative SEM-EDX analyses. Intimately associated with the silver-rich gold is native gold with extremely low silver concentrations (<5%).

The gold is primarily associated with siliceous gangue and hydrous iron oxides. These iron oxide minerals represent alteration products of gold-bearing pyrite and/or are the result of hydrothermal iron mobilization and reprecipitation. Minor amounts of the gold are associated with small concentrations of pyrite, some of which occurs as the spheroidal variety. Approximately 20 - 30% of the total pyrite mineralization consists of spheroidal fine-grained iron sulfides. The spheroidal pyrite exhibits particles sizes of <1 to 50 micron in diameter.

In addition to the iron sulfides there are minor to trace amounts of sphalerite, chalcopyrite, bornite and galena. Most of these sulfide minerals occur as inclusions in the pyrite.

Some of the liberated gold particles observed in these samples exhibit surface coatings of (hydrous) iron oxides and/or silica clay slimes. Approximately 30% of the gold displays rapid surface tarnishing. In composite sample 444-1-2, 64% of the gold is associated with hydrous iron oxides. Most of the remaining gold (30%) is intergrown with silica gangue. Minor amounts of gold (<10%) occur as refractory gold associated with pyrite. Many pores and fractures in the gangue particles are filled with silica-carbonate-clay slimes.

As indicated by the microscopic analysis of the head samples, the gold mineralogy in the composite 444-1-2 differs distinctly from sample 444-3 with regard to particle size and mineralogical residence:

1. The gold in the PMET cyanide leach composite contains distinctly more fine-grained (-25 micron) gold than sample 444-3.

2. In the cyanide leach composite, the majority (64%) of the gold is locked with hydrous iron oxides; whereas in sample 444-3, gold association with silica gangue is dominating.

The gold particle sizes range from <1 micron to 300 micron with the majority of the gold occurring in the coarser (+400 mesh) sizes. The microscopic work indicates that the native gold present in sample 444-3 shows distinctly coarser particle sizes than the gold observed in composite 444-1-2. Table 6 summarizes a microscopic gold particle size analysis for both samples.

Table 6

Microscopic Gold Particle Size Analysis of Moss Mine Samples

Size of Gold Particles (Approximate Diameter)

	Samples	
Size(micron)	444-1-2	444-3
< 5	60%	21%
5 - 20	21%	15%
> 20 - 50	10%	24%
> 50 - 100	7%	22%
>100	2%	18%
	100%	100%

Both samples contain noticeable amounts of tramp iron shavings (from drilling?) and fragments of copper wire. Trace concentrations of organic/carbonaceous material were observed in sample 444-1-2.

Gravity Separation Tests

The gravity testwork was performed on 800-gram splits from samples 444-1-2 and 444-3 by way of heavy liquid separation at a S.G. of 2.95. Prior to separation, the samples were carefully stage-crushed to -48 mesh and deslimed at 400 mesh.

- The gravity separation tests confirmed the conclusions made from the optical microscope analysis, i.e. that the gold mineralogy of composite 444-1-2 and sample 444-3 exhibits significant differences in particle size and gold occurrence. Both of these factors will impact gold ore processing and precious metal recovery.

- In composite 444-1-2, almost half of the gold reported to the -400 mesh slimes fraction. This fraction represents 30% of the sample weight. Less than one third (26.8% distribution) of the gold was recovered in an extremely small (0.12% of the weight) gravity concentrate assaying 38 oz/ton gold. The remainder (28.7% distribution) of the gold occurred in the gravity tailings (float fraction) due to encapsulation in (light) silica gangue. The gravity tailings account for the majority of the sample weight (69%).

- In sample 444-3, the majority of the contained gold (69.4% distribution) was recovered in a high-grade (71.8 oz/ton Au) gravity concentrate which represents 0.29% of the sample weight. Eighteen percent of the gold reported to the float fraction. This fraction accounts for 75% of the sample weight. Only 12% of the gold occurred in the -400 mesh slimes.

  The reasons for the high gold recovery by gravity methods in this particular sample are a) distinctly coarse gold particle sizes and b) good liberation of gold at the 48 mesh grind.

The results of the gravity separation tests are summarized in Table 7 and Figure 1.

Table 7

Gravity Separation Tests

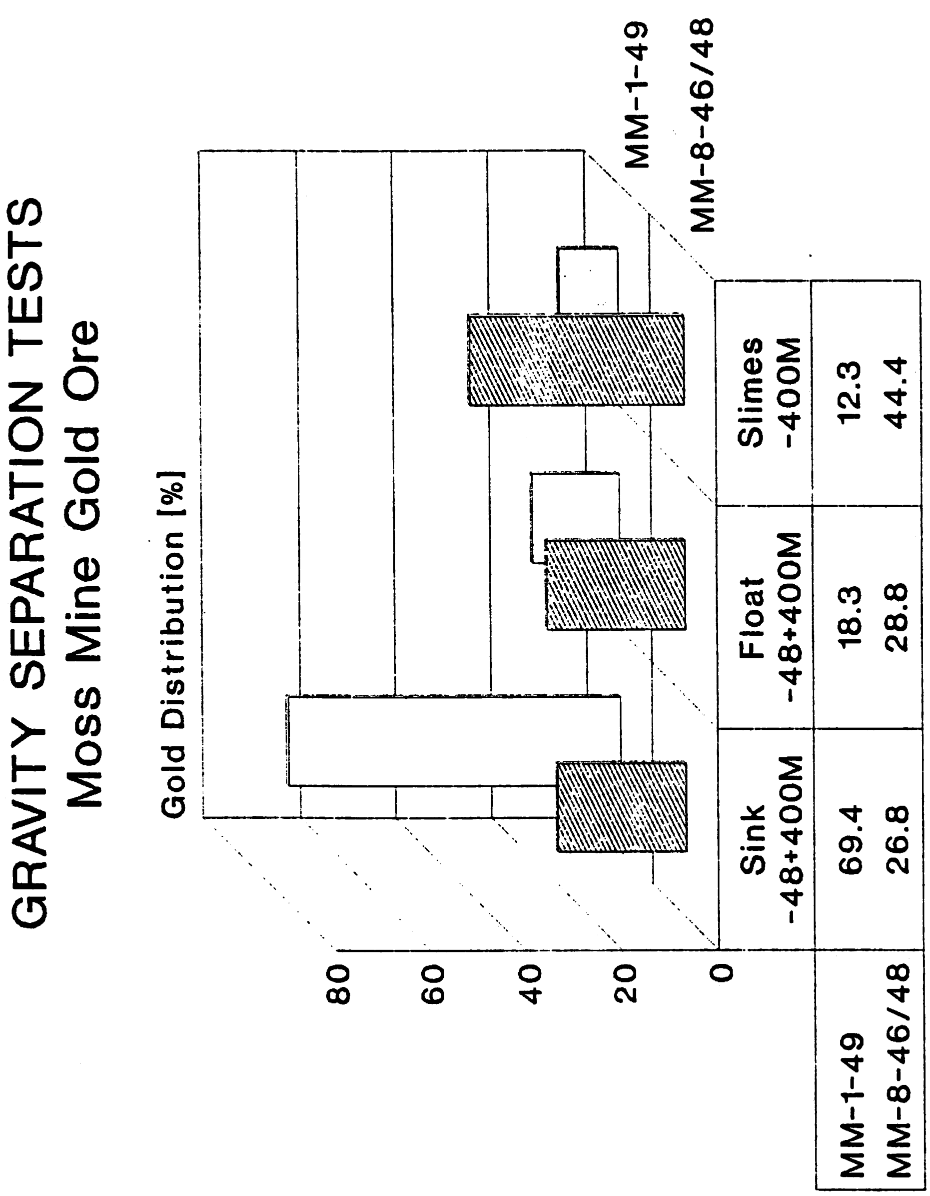
Sample 444-1-2

Product	Weight(%)	Assay Gold(oz/ton)	Distribution (%)
Assay Head		0.220	
Calc. Head	100.0	0.173	100.0
Grav. Conc.	0.12	38.70	26.82
Grav. Tails	69.16	0.072	28.79
-400 Slimes	30.72	0.250	44.39

Sample 444-3

Product	Weight(%)	Assay Gold(oz/ton)	Distribution (%)
Assay Head		0.270	
Calc. Head	100.0	0.299	100.0
Grav. Conc.	0.29	71.80	69.43
Grav. Tails	75.13	0.073	18.27
-400 Slimes	24.58	0.150	12.30

Figure 1



	Sink -48+400M	Float -48+400M	Slimes -400M
MM-1-49	69.4	18.3	12.3
MM-8-46/48	26.8	28.8	44.4

Cyanide Leach Tests

Well-blended split portions of three different size fractions were prepared from the head sample by stage crushing and grinding. The sample splits were then subjected to bottle roll cyanidation tests using the following conditions.

Samples:	Composite 444-1-2 1. As-received 2. -10 mesh 3. -200 mesh
Amount of Sample:	300 grams
% Solids:	23.08%
NaCN Concentration:	3 g/l NaCN
pH:	10.5 - 11
Temperature:	Ambient
Leach Time:	72 hours with solution samples taken at 6, 24, 48, and 72 hours.

- A total of 300 grams of sample was slurried in an aqueous solution containing 3 g/l NaCN at a pH of 10.5 to 11. Solution pH was adjusted using hydrated lime, i.e. $Ca(OH)_2$.

- Tests were initiated and conducted for a total time of 72 hours. Solution pH was measured and adjusted to target levels after 0.5, 2, 6 and 24 hours of total target levels using hydrated lime additions. Free lime concentrations were also measured via acid titration after 2, 6, 24, 48 and 72 hours.

- NaCN concentrations were also measured after 2, 6, 24, 48, and 72 hours. If required, NaCN additions were made following the 2-, 6-, 24- and 48-hour measurements to bring the solution NaCN concentration to the target of 3 g/l. NaCN concentrations were measured via titration with $AgNO_3$ solutions.

- After 72 hours, the samples were filtered and the leach residues were washed. The first wash was performed with 500 ml of DI water containing low levels of cyanide. This was followed by two additional washing steps with 500 ml DI water each. Total water used amounted to 1500 ml.

- Samples of leach solution were collected after 6, 24, 48 and 72 hours of leaching for gold analysis. In addition, gold fire assays were done on splits of the head sample and leach residue. The final wash water was also analyzed for gold.

Gold extractions were calculated in two fashions: one being based on the head sample assays and the solution assays and one being based on the leach residue assays and the solution assays. In the former case, a solution volume of 1000 ml was assumed, and solution aliquots removed for assay and titration were included in the calculations to account for all the gold. Extractions calculated from head sample assays in all cases differ from those calculated from residue assays. This reflects both sampling and analytical error.

Leach Results

The leach results indicate that gold liberation appears to be the most significant factor for high gold recovery. The gold extraction was lowest in the as-received material (59.7%) and increased with crushing to -10 mesh to 73.7%. Almost complete gold extraction was achieved in the sample material ground to -200 mesh. The lime consumptions are negligible whereas the cyanide consumptions were equally high in all tests (21.6 - 22.9 lbs. NaCN/ton).

A potential for preg robbing is indicated for this sample material. It is tentatively concluded that preg robbing could be caused by spheroidal pyrite, hydrous iron oxides and oxidizing tramp iron, as well as minor amounts of carbonaceous matter occurring in the ore. The cyanide consumption is affected by natural cyanicides present such as iron oxidation minerals, ferruginous clays and sulfides. In addition, artificial cyanicides such as tramp iron shavings from drilling and copper wire fragments were also present.

A summary of the leach test results is presented in Table 8. Details of the cyanidation tests and the complete mass balance information are presented in Table 9. The solution pH measurements are listed in Table 10. Figure 2 provides a graphic presentation of the NaCN leach tests based on solution and head sample assays.

Table 8

Cyanide Leach Extractions of Gold and Reagent Consumptions

Sample	Gold Extractions(%) after 72 hours	NaCN Consumption (lbs/ton)	Lime Consumption (lbs CaO/ton)
444-1-2 As-is	59.7	22.9	< 1
444-1-2 -10 Mesh	73.7	22.7	< 1
444-1-2 -200 Mesh	100.0*	21.6	< 1

* Based on outputs

Copper Lime?

Table 9

NaCN LEACH TEST RESULTS

10-Dec-90

Sample: 444-1 As-Is

Inputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
Ore	300.00	-	-	-	0.220 oz/t	0.0	0.00	2.263	100.0
Solution	-	1000	23.8 mg/l	3.0 gpl	-	23.8	3.00	-	0.0
Sln - 2 Hrs	-	20	23.8 mg/l	3.0 gpl	-	0.5	0.06	-	0.0
Sln - 6 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 24 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 48 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
NaCN - 2 Hrs	1.47	-	-	100 %	-	-	1.47	-	0.0
NaCN - 6 Hrs	0.80	-	-	100 %	-	-	0.80	-	0.0
NaCN - 24 Hrs	0.48	-	-	100 %	-	-	0.48	-	0.0
NaCN - 48 Hrs	0.31	-	-	100 %	-	-	0.31	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Wash Water	-	1500	-	-	-	-	-	-	0.0
Total	303.06	2625				26.7	6.44	2.263	100.0

Sample: 444-1 As-Is

Outputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
2 Hr Sample	-	20	140 mg/l	1.50 gpl	mg/l	2.8	0.03	0.000	0.0
6 Hr Sample	-	35	64 mg/l	2.18 gpl	0.990 mg/l	2.2	0.08	0.035	1.6
24 Hr Sample	-	35	32 mg/l	2.50 gpl	1.130 mg/l	1.1	0.09	0.040	1.9
48 Hr Sample	-	35	51 mg/l	2.68 gpl	1.180 mg/l	1.8	0.09	0.041	2.0
NaCN Filtrate	-	970	153 mg/l	2.72 gpl	1.000 mg/l	148.4	2.64	0.970	46.1
Wash Filtrate	-	1430	3 mg/l	0.06 gpl	0.120 mg/l	4.6	0.08	0.172	8.2
Dry Residue	301.71	-	-	-	0.082 oz/t	-	-	0.848	40.3
Total	301.71	2525				160.9	3.01	2.105	100.0

Au Accountability: 93.0 %

Final Au Extraction: 59.7 %

NaCN Consumption: 22.9 lbs/ton

Lime Consumption: <1.0 lbs CaO/ton

Table 9 (Continued)

NaCN LEACH TEST RESULTS

10-Dec-90

Sample: 444-1 -10M

Inputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
Ore	300.00	-	-	-	0.220 oz/t	0.0	0.00	2.263	100.0
Solution	-	1000	23.8 mg/l	3.0 gpl	-	23.8	3.00	-	0.0
Sln - 2 Hrs	-	10	23.8 mg/l	3.0 gpl	-	0.2	0.03	-	0.0
Sln - 6 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 24 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 48 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
NaCN - 2 Hrs	1.50	-	-	100 %	-	-	1.50	-	0.0
NaCN - 6 Hrs	0.75	-	-	100 %	-	-	0.75	-	0.0
NaCN - 24 Hrs	0.48	-	-	100 %	-	-	0.48	-	0.0
NaCN - 48 Hrs	0.31	-	-	100 %	-	-	0.31	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Wash Water	-	1500	-	-	-	-	-	-	0.0
Total	303.04	2615				26.5	6.39	2.263	100.0

Sample: 444-1 -10M

Outputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
2 Hr Sample	-	10	280 mg/l	1.49 gpl	mg/l	2.8	0.01	0.000	0.0
6 Hr Sample	-	35	89 mg/l	2.23 gpl	1.250 mg/l	3.1	0.08	0.044	2.2
24 Hr Sample	-	35	32 mg/l	2.50 gpl	1.390 mg/l	1.1	0.09	0.049	2.4
48 Hr Sample	-	35	45 mg/l	2.68 gpl	1.420 mg/l	1.6	0.09	0.050	2.5
NaCN Filtrate	-	950	102 mg/l	2.70 gpl	1.220 mg/l	96.9	2.57	1.159	57.3
Wash Filtrate	-	1458	3 mg/l	0.09 gpl	0.130 mg/l	5.1	0.14	0.190	9.4
Dry Residue	298.50	-	-	-	0.052 oz/t	-	-	0.532	26.3
Total	298.50	2523				110.6	2.97	2.023	100.0

Au Accountability: 89.4 %

Final Au Extraction: 73.7 %

NaCN Consumption: 22.7 lbs/ton

Lime Consumption: <1.0 lbs CaO/ton

Table 9 (Continued)

NaCN LEACH TEST RESULTS

10-Dec-90

Sample: 444-1 -200M

Inputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
Ore	300.00	-	-	-	0.220 oz/t	0.0	0.00	2.263	100.0
Solution	-	1000	23.8 mg/l	3.0 gpl	-	23.8	3.00	-	0.0
Sln - 2 Hrs	-	10	23.8 mg/l	3.0 gpl	-	0.2	0.03	-	0.0
Sln - 6 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 24 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
Sln - 48 Hrs	-	35	23.8 mg/l	3.0 gpl	-	0.8	0.11	-	0.0
NaCN - 2 Hrs	1.54	-	-	100 %	-	-	1.54	-	0.0
NaCN - 6 Hrs	0.77	-	-	100 %	-	-	0.77	-	0.0
NaCN - 24 Hrs	0.43	-	-	100 %	-	-	0.43	-	0.0
NaCN - 48 Hrs	0.28	-	-	100 %	-	-	0.28	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Ca(OH)2 (T) - XX Hrs	0.00	-	75.7 %	-	-	0.0	-	-	0.0
Wash Water	-	1500	-	-	-	-	-	-	0.0
Total	303.02	2615				26.5	6.36	2.263	100.0

Sample: 444-1 -200M

Outputs	Mass [g]	Volume [ml]	Analyses CaO	NaCN	Au	CaO [mg]	NaCN [g]	Au [mg]	Au Dist [%]
2 Hr Sample	-	10	280 mg/l	1.45 gpl	mg/l	2.8	0.01	0.000	0.0
6 Hr Sample	-	35	51 mg/l	2.20 gpl	1.930 mg/l	1.8	0.08	0.068	3.5
24 Hr Sample	-	35	32 mg/l	2.55 gpl	1.900 mg/l	1.1	0.09	0.067	3.5
48 Hr Sample	-	35	38 mg/l	2.71 gpl	1.830 mg/l	1.3	0.09	0.064	3.4
NaCN Filtrate	-	960	76 mg/l	2.85 gpl	1.520 mg/l	73.4	2.74	1.459	76.4
Wash Filtrate	-	1410	2 mg/l	0.08 gpl	0.180 mg/l	3.1	0.11	0.254	13.3
Dry Residue	297.28	-	-	-	<0.005 oz/t	-	-	0.000	0.0
Total	297.28	2485				83.5	3.13	1.911	100.0

Au Accountability: 84.5 %

Final Au Extraction: 100.0 % (Based on Outputs)

NaCN Consumption: 21.6 lbs/ton

Lime Consumption: <1.0 lbs CaO/ton

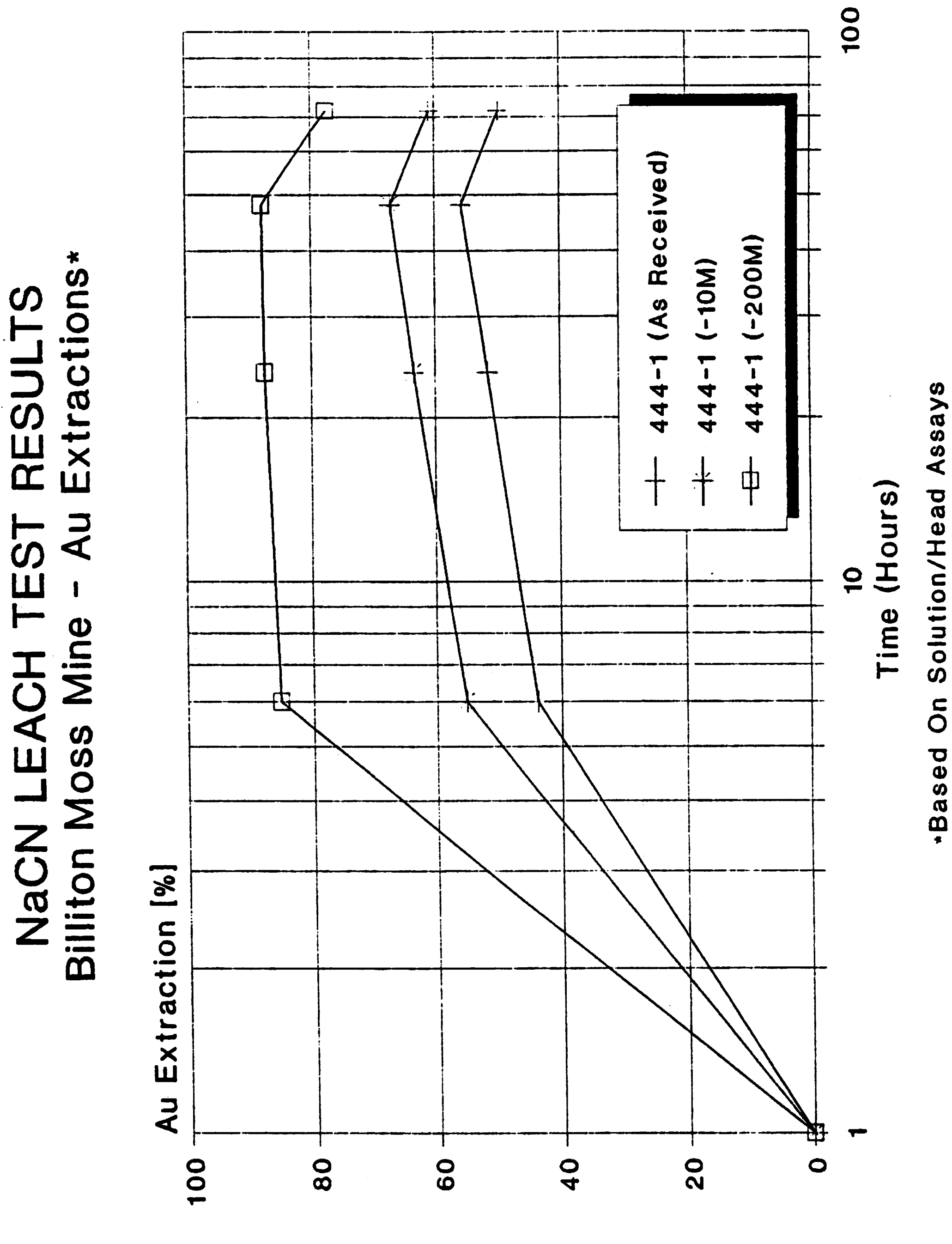
Table 10

Billiton - Moss Mine
NaCN Leach Tests - Solution pH

Sample	Elapsed Time [hrs]	Slurry pH Data Initial	Slurry pH Data Adjusted
444-1 (As-Is)	0.0	10.94	NA
	0.5	10.84	NA
	2.0	10.82	NA
	6.0	10.83	NA
	24.0	10.81	NA
	48.0	10.69	NA
	72.0	10.65	NA
	Avg.	10.82	-
444-1 (-10M)	0.0	10.94	NA
	0.5	10.82	NA
	2.0	10.75	NA
	6.0	10.81	NA
	24.0	10.88	NA
	48.0	10.85	NA
	72.0	10.86	NA
	Avg.	10.84	-
444-1 (-200M)	0.0	10.72	NA
	0.5	10.67	NA
	2.0	10.62	NA
	6.0	10.65	NA
	24.0	10.69	NA
	48.0	10.65	NA
	72.0	10.69	NA
	Avg.	10.67	-

NA = No Adjustment

Figure 2



NaCN LEACH TEST RESULTS
Billiton Moss Mine - Au Extractions*
Au Extraction [%]
100
80
60
40
20
0
1
10
100
Time (Hours)
444-1 (As Received)
444-1 (-10M)
444-1 (-200M)
*Based On Solution/Head Assays

Mineralogy of Unleached Gold

Following the cyanide leach tests, a split portion of the leach residue from sample 444-1-2 (-10 mesh) was used to determine the mode of occurrence of unleached gold in order to assist in the interpretation of gold extraction rates.

Due to the small sample size, it was decided to perform a wet screen analysis followed by fire assays of the screen size fractions. Concurrently, the screen fractions were examined by microscopic methods for the mineralogical residence of the gold.

The screening indicates that the major reason for the presence of unleached gold in the -10 mesh composite (as well as coarser-grained material) is locking of native gold in iron oxide/hydroxide and siliceous host minerals all of which are impervious to the lixiviant. From the unleached gold in the -10 mesh cyanide leach residue, 64% distribution of the gold occurs in the +48 mesh screen fraction. This fraction represents half of the sample weight. Most of the remaining gold (30%) occurs in the -400 mesh fraction, also primarily caused by locking and slimes coatings. The results of the screen analysis are summarized in Table 11.

Table 11

Screen Analysis and Gold Distribution
in -10 Mesh Cyanide Leach Residue
(Sample 444-1-2)

Product (Mesh)	Weight (%)	Gold Assay oz/ton	Gold Distribution (%)
Head Assay		0.052	
Head Calc.	100.0	0.062	100.0
+48	49.15	0.081	64.61
-48+100	11.14	0.022	3.90
-100+200	10.14	0.006	0.97
-200+400	8.58	0.004	0.49
-400	20.99	0.088	30.03

Based on the mineralogical work of head samples, gravity separation products and leach residues as well as the results of the bottle roll tests, the following Table 12 quantifies the mode of occurrence of gold in the Moss Mine samples.

Table 12

Mineralogical Mode of Occurrence of Gold in Moss Mine Gold Ore Samples

Type of Gold Occurrence	Frequency (%) 444-1-2	444-3
Native gold associated with hydrous iron oxides*..................	64	7
Native gold associated with quartz or other gangue minerals........	30	89
Native gold associated with partially oxidized pyrite..............	6	4
Total	100	100

* This includes gold associated with hydrous iron oxides which are pseudomorphous after pyrite as well as gold remobilized during alteration/oxidation and reprecipitated in (layered) iron hydroxides.

It is pointed out that the gold mineralogy established in Table 12 is based on the sample material investigated. Fluctuations and deviations of the mode of occurrence of gold may occur throughout the deposit.

Pertinent mineralogical features of the Moss Mine samples are shown in Figures 3 to 12 in the Appendix.

CONCLUSIONS

- The Moss Mine gold ore samples examined during this study contain a fine- to coarse-grained mineralization of silver-rich native gold some of which may be equivalent to electrum. Minor amounts of gold with low silver contents are also present. It is indicated that the ore may contain a bimodal occurrence (mineralogical residence) of gold as well as a bimodal gold particle size distribution:

  1. In the composited samples MM-8-46/48, the majority of the gold is associated with iron oxidation minerals and the gold is primarily of ultrafine particle size.

  2. In the MM-1-49 sample, most of the gold is associated with siliceous gangue and exhibits distinctly coarse particle sizes.

- The characteristics of the gold mineralogy described above have a distinct impact on ore processing and gold recovery. The fine gold intergrown/encapsulated by iron oxides will require a sufficiently fine grind to become amenable to direct cyanidation. The coarser gold mineralization found in sample MM-1-49, however, showed a good response to gravity concentration, i.e. almost 70% of this gold can be recovered into a small-volume, high-grade concentrate by physical preconcentration.

- The bottle roll cyanidation tests and subsequent mineralogical analyses of a leach residue confirmed the mineralogical characteristics identified in the head samples. The leach tests revealed a particle size-dependent refractoriness to direct leaching. Based upon the recent work, it is also concluded that in ore samples similar to the composite MM-8-46/48, 10-15% of the gold occurs encapsulated in pyrite and may require oxidation prior to cyanidation.

- It is concluded that losses encountered during cyanide leaching are primarily due to partial or complete locking (encapsulation) of gold in iron oxidation minerals, siliceous gangue and/or middlings particles of these minerals.

- The very coarse gold particle sizes observed in sample MM-1-49 could become troublesome in sampling, sample preparation and assaying by causing severe nugget effects. In addition, extremely coarse gold may not be entirely leached during short bottle roll tests. The resultant poor gold extraction could be erroneously interpreted as being caused by locking. Routine gravity separation tests are therefore of critical importance during further development work.

- Due to the presence of spheroidal pyrite, sorptive clay minerals, and traces of carbonaceous matter, the ore may exhibit minor preg-robbing effects. Considerably more follow-up work is required to confirm these conclusions.

- Increased cyanide consumption is caused by cyanicides such as soluble iron oxidation products, spheroidal pyrite, tramp iron and copper wire contamination and cyanide-consuming ferruginous gangue in the slimes fraction.

RECOMMENDATIONS

1. The ore samples analyzed during this study indicate differences in gold mineralogy and particle size distribution. Therefore potential variations in metallurgical amenability within the ore body can be anticipated. It is recommended that future assessment work should continue to monitor the mode of occurrence of gold as well as its particle size characteristics.

2. Bottle roll leach tests should be performed on several size fractions of a test sample (e.g. as-is, -10 mesh, -100 mesh).

3. Routine gravity separation tests are recommended in order to assess the preconcentration potential of the gold and control nugget effects.

4. The alteration minerals (specifically iron oxidation phases) and the clay mineralogy warrant further attention.

5. Representative ore zone samples should be subjected to periodic Total Carbon and Organic Carbon analyses.

WB/mkf

APPENDIX

Photomicrographs

Figures 3 to 12

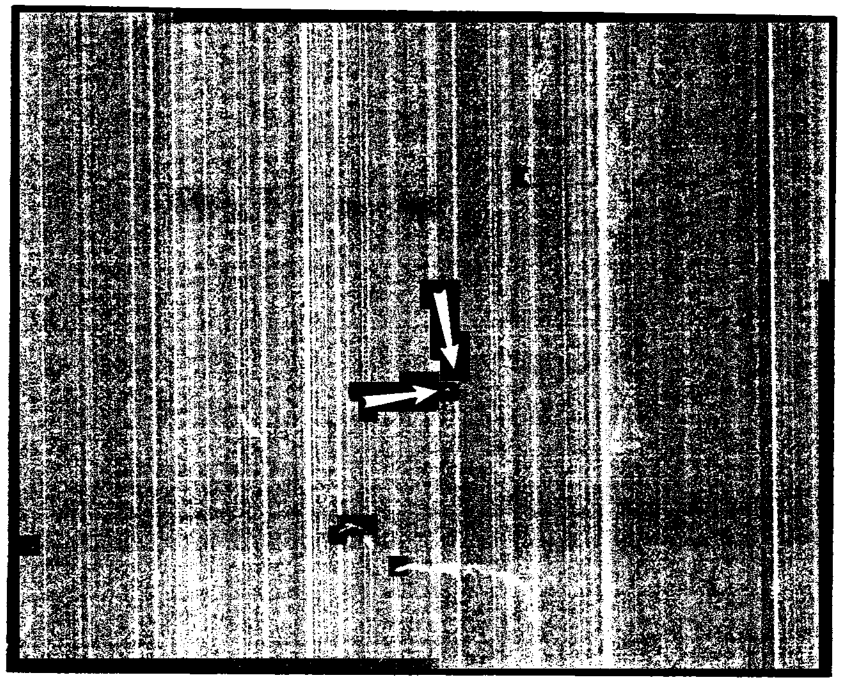


Figure 3: Photomicrograph showing the typical occurrence of fine native gold (see arrows) locked in hydrous iron oxides (gray).
Scale = ⌞______⌟ 100 micron

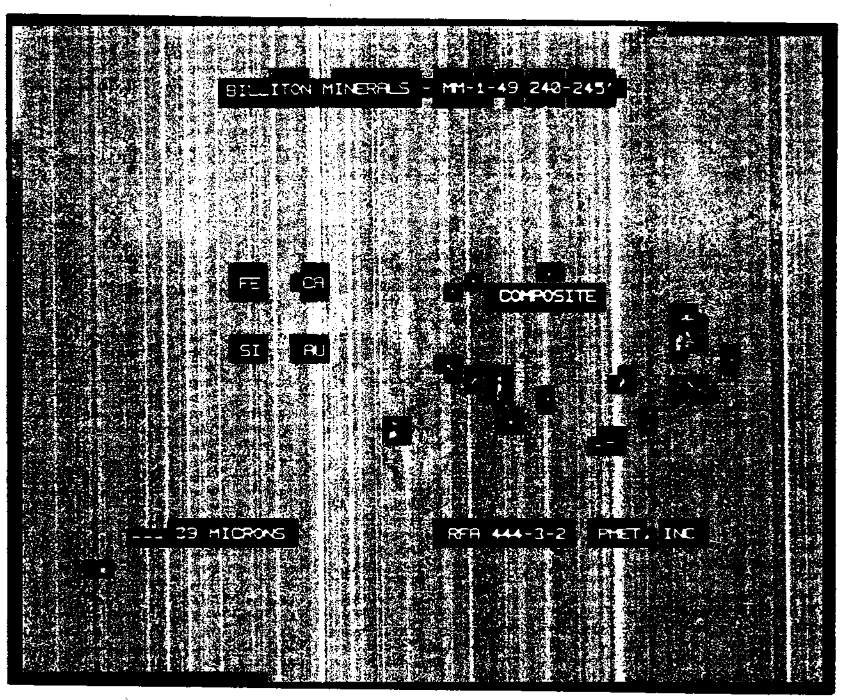


Figure 4 SEM digital X-ray map of the particle shown in Figure 3 outlining the gold encapsulation.

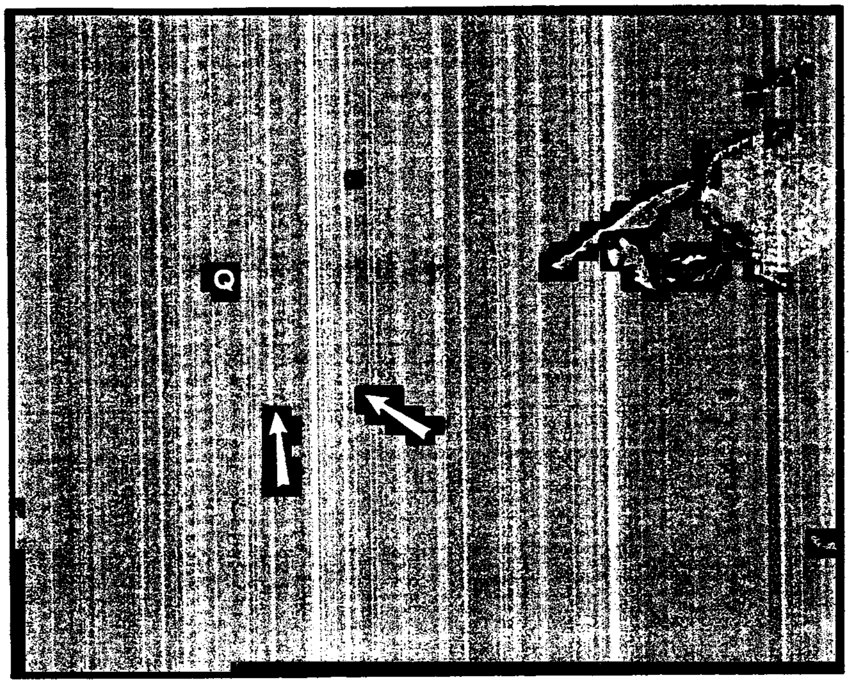


Figure 5 Photomicrograph showing encapsulated and partially liberated native gold (see arrows) in a hydrous iron oxide particle which is attached to a larger quartz grain (Q).
Scale = ⌴ 100 micron

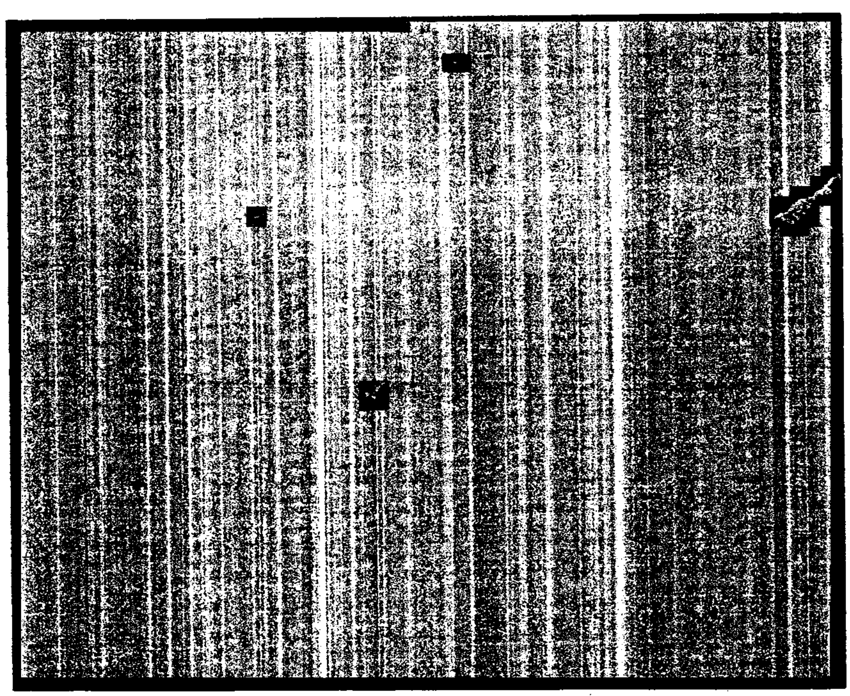


Figure 6 Detail of Figure 5. Fine native gold (yellow) intimately associated with hydrous iron oxides.
Scale = ⌴ 50 micron

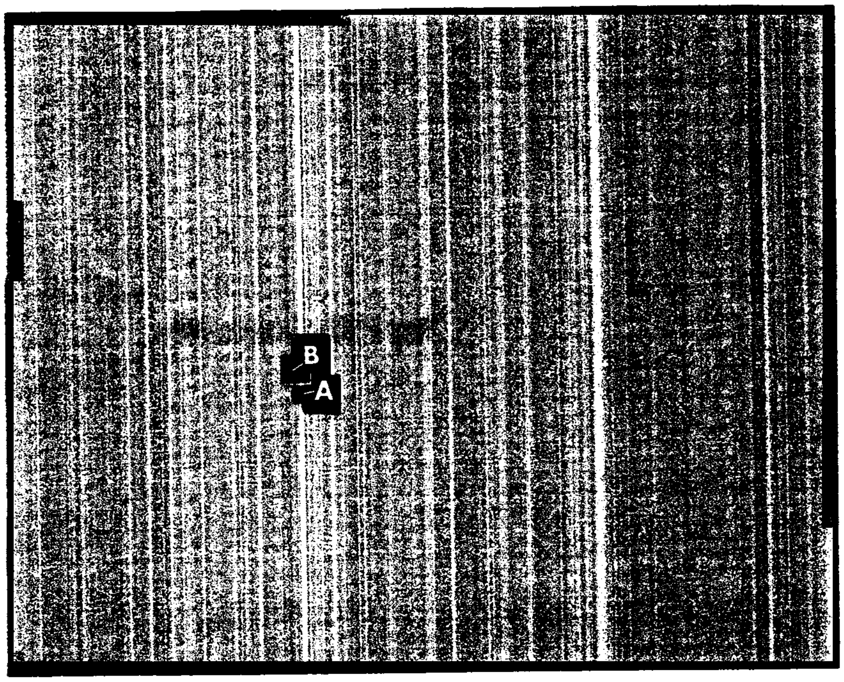


Figure 7 Photomicrograph showing the presence of silver-rich (A) and silver-poor (B) gold particles both of which are encapsulated by hydrous iron oxides.
Scale = ⎵ 50 micron

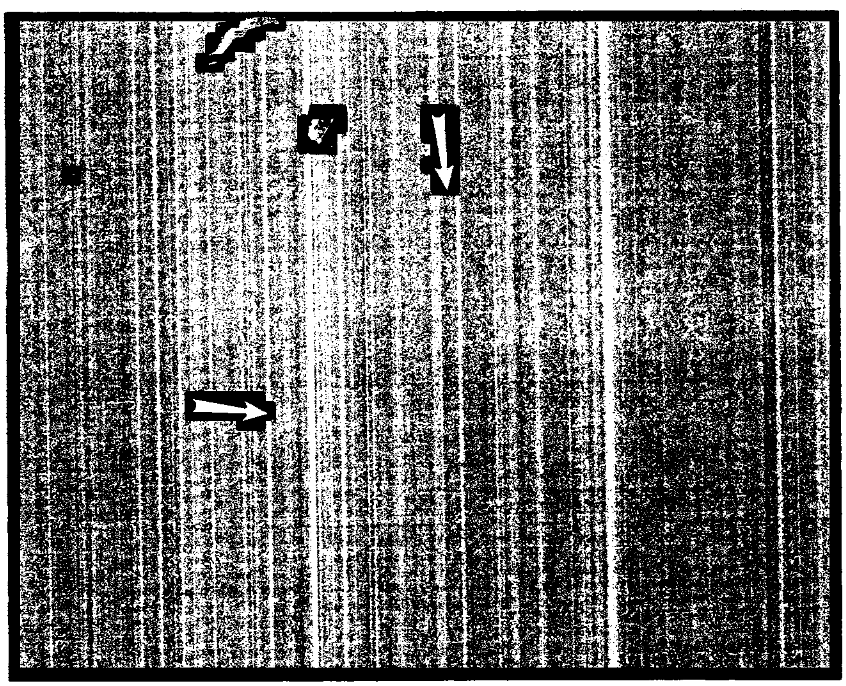


Figure 8 Photomicrograph showing rhythmic iron precipitation with ultrafine gold formation (see arrows). It is tentatively concluded that this gold has been remobilized from a primary mineralization during alteration and was thereafter co-precipitated with the iron.
Scale = ⎵ 50 micron

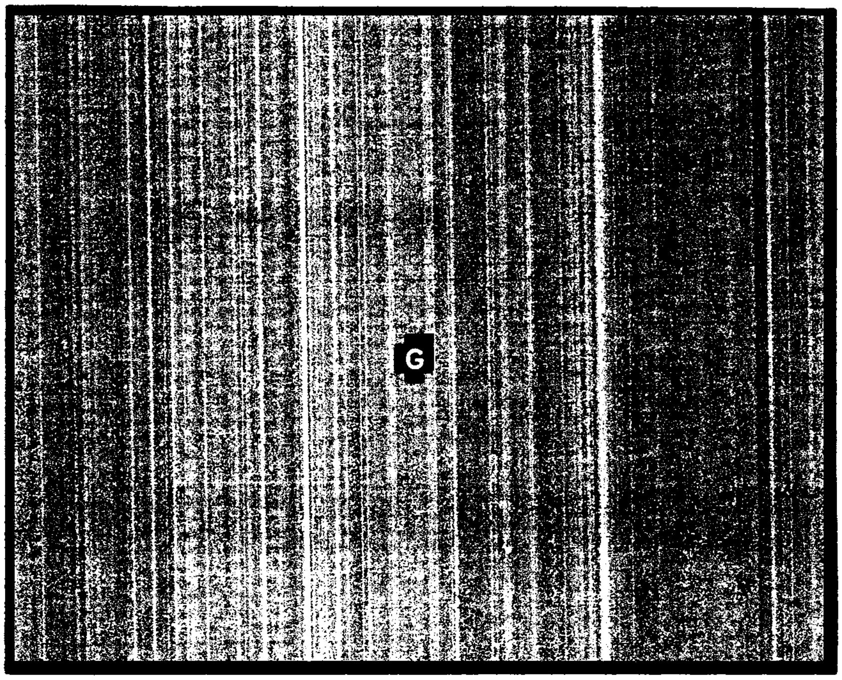


Figure 9 Photomicrograph showing a liberated particle of coarse native gold (G).
Scale = ⌴ 100 micron

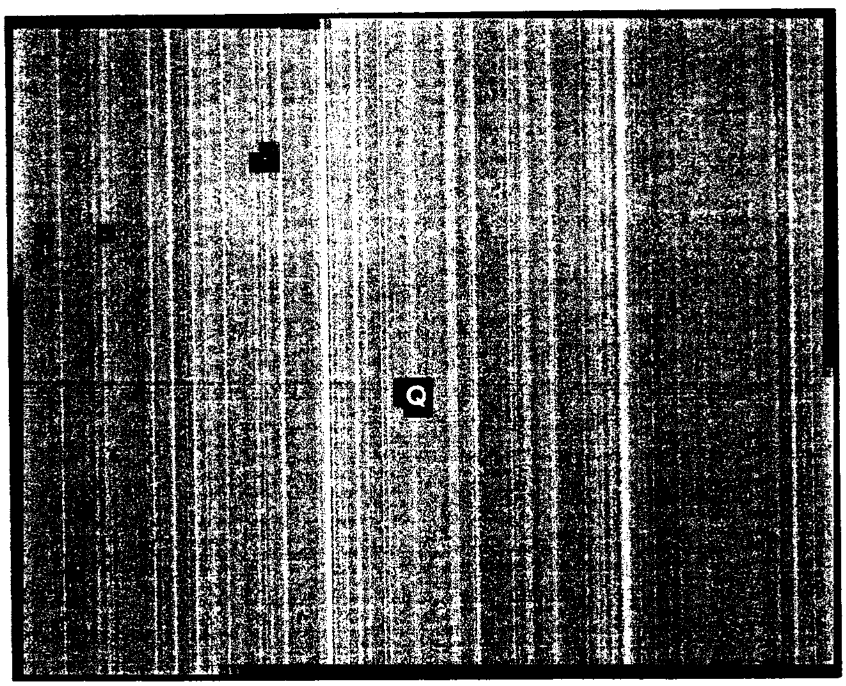


Figure 10 Photomicrograph showing a larger quartz grain (Q) with partially as well as completely locked native gold (yellow).
Scale = ⌴ 100 micron

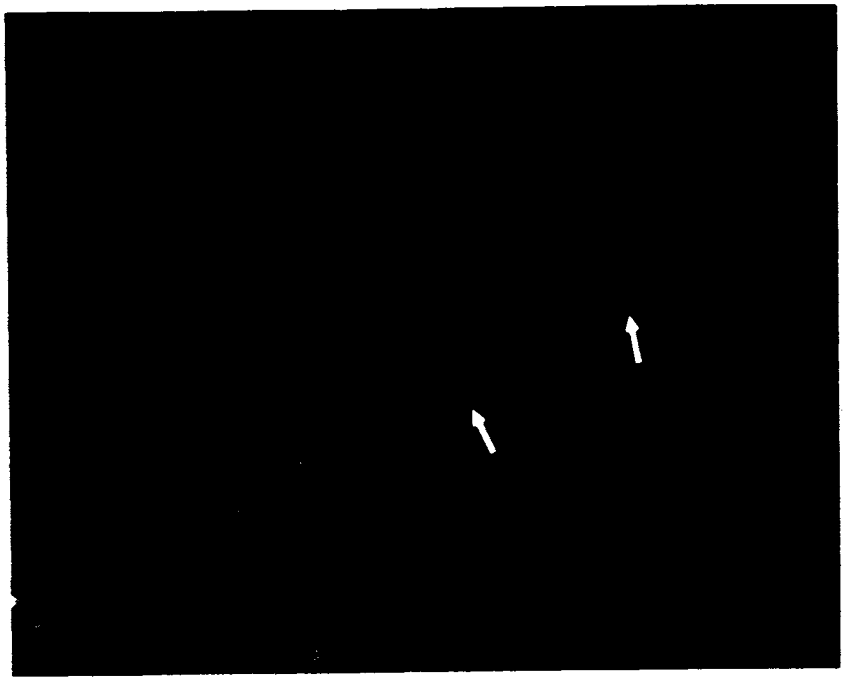


Figure 11 Photomicrograph showing the occurrence of spheroidal pyrite (see arrows) which may exhibit preg-robbing potential.
Scale = ⌴ 100 micron

Figure 12 Photomicrograph showing a large quartz grain (Q) coated by clay and silica slimes (see arrows). These slimes coatings may retard or prevent lixiviant penetration.
Scale = ⌴ 100 micron