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Kaaterskill Exploration *Geochemistry • Petrology • Structural Analysis*

691 ROBINSON DRIVE • PRESCOTT, ARIZONA 86303 • 602/778-5321

DRAFT

DUPLICATE

PROPERTY EXAMINATION REPORT December 12, 1990

PROPERTY NAME: Roadside Mine Lease		
PRIORITY: high	**COMMODITY:** gold	
EXAMINED BY: P. O'Hara		
REPORT REQUESTED BY: Ivy Minerals Inc.		
AMS SHEET: Kingman	**TOPOGRAPHIC MAP:** Davis Dam 7.5' (AZ–NEV) Union Pass 7.5', Burns Spring 7.5' and Spirit Mountain 7.5' (AZ–NEV) (figure 1)	
DISTRICT: Katherine	**COUNTY:** Mohave	**STATE:** Arizona
TOWNSHIP,RANGE,SECTION: T21N/R21W/S 1, 2, 3, 10, 11, 12, 13, 14, 24 T22N/R21W/S 25, 26, 27, 34, 35, 36 T21N/R20W/S 4, 6, 7, 18		

6/2002 JM - Con- of Report 2 of 10 file.

ADAMS TARGET AU VALUES

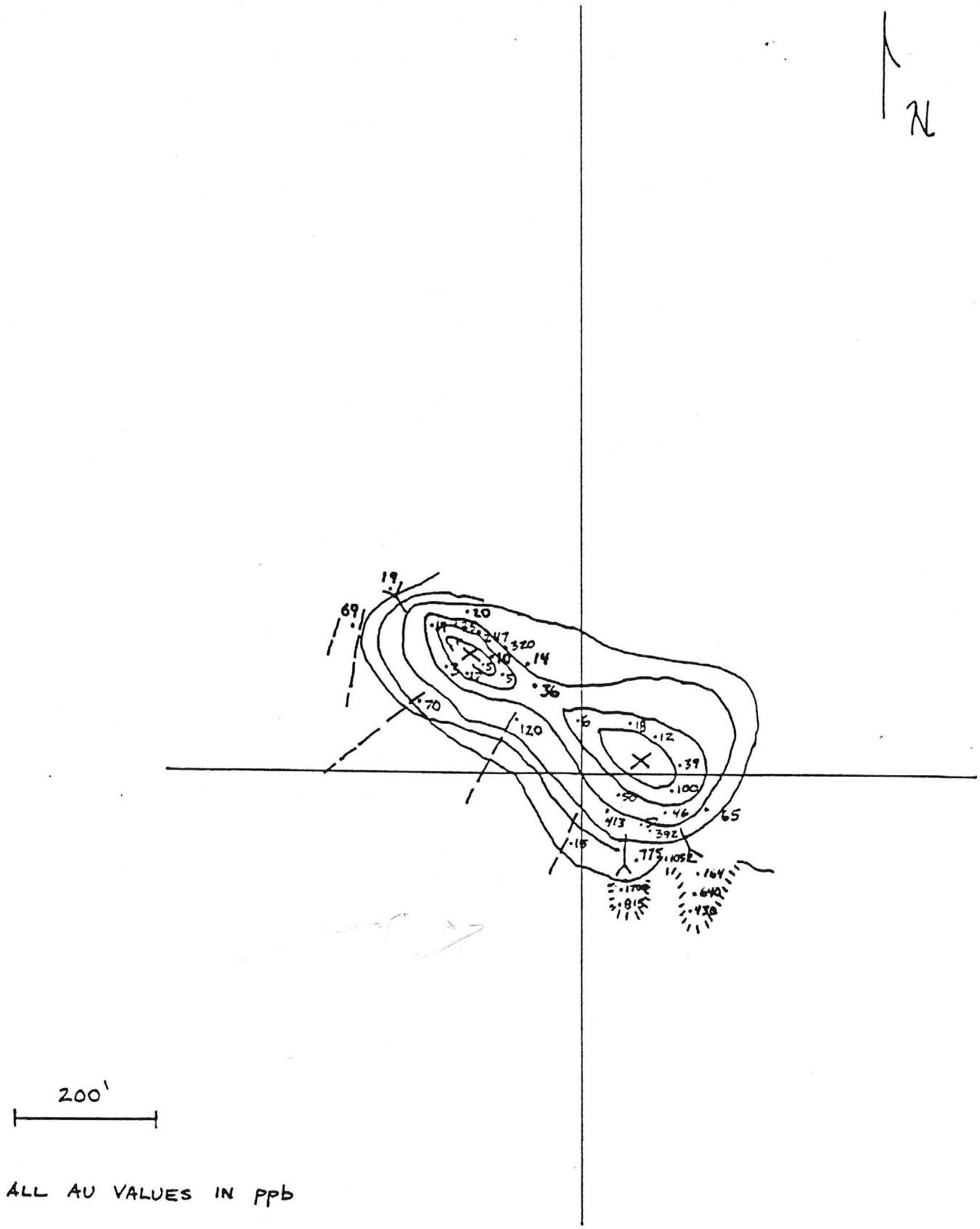
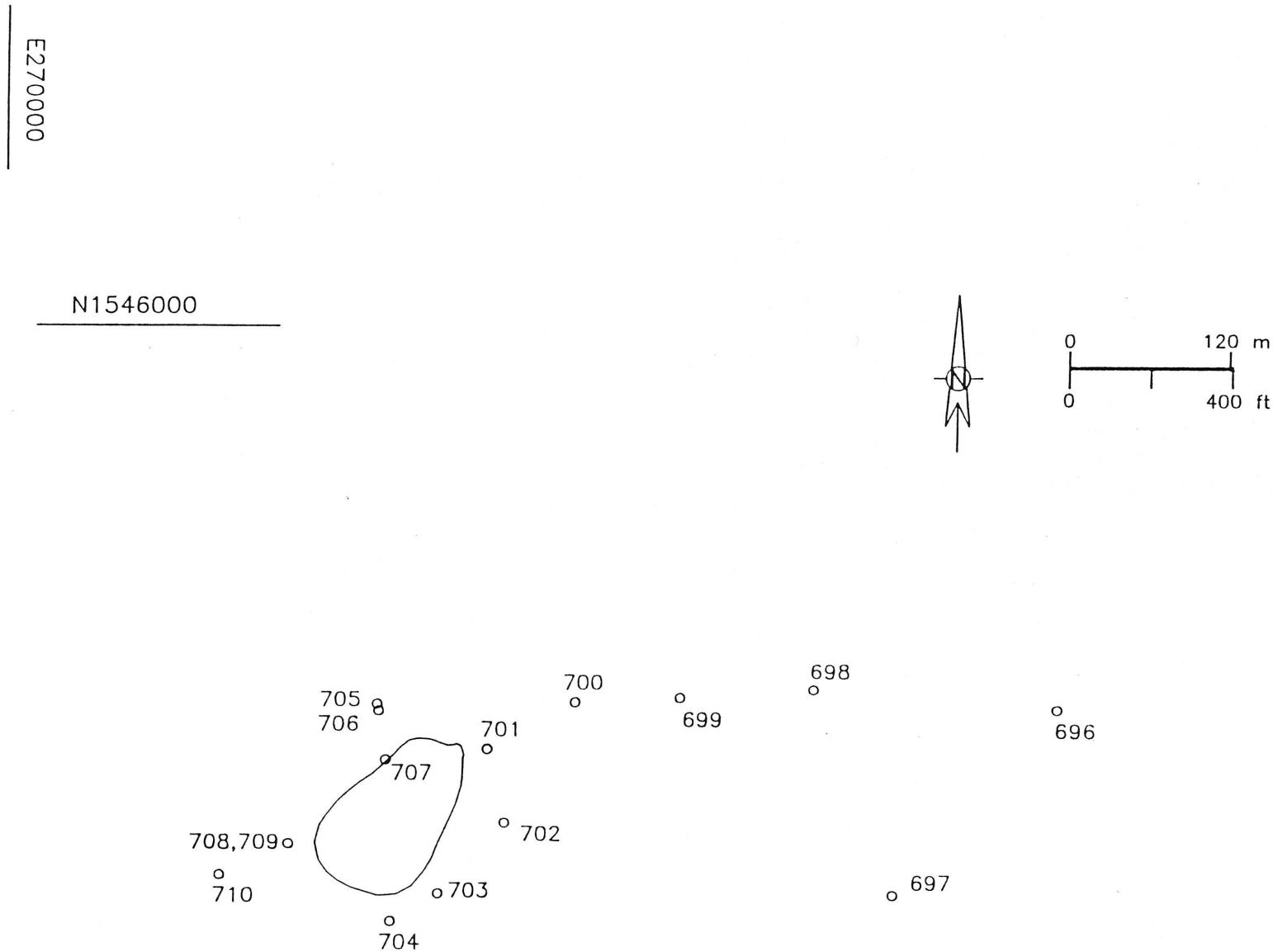


Figure 33. Map of gold concentrations at Adams target



SAMPLE NUMBERS BEGIN WITH 142

AMERICAN COPPER AND NICKEL CO., INC.
SPARKS, NEVADA

Project: ROADSIDE

Area: MOHAVE COUNTY, ARIZONA

BURT HILL SAMPLE LOCATIONS

Date drawn: 8-28-90

Revised:

Drawn by: R. LASSEN

Figure 34. ACNC sample locations at Burt Hill

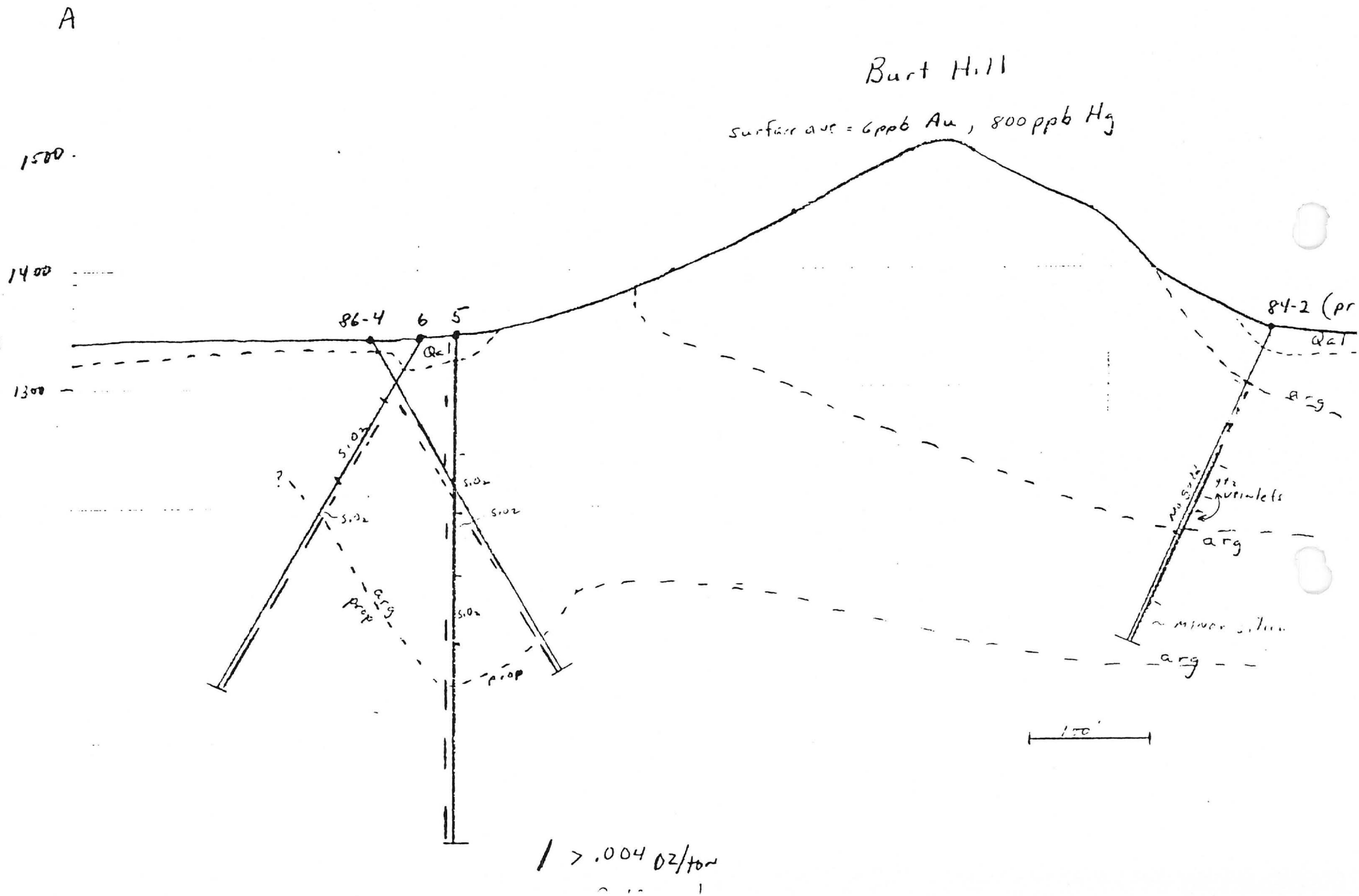


Figure 35. Drill cross-sections through Burt Hill with gold intercepts

granodiorite into the volcanic complex. Locally slightly anomalous samples (Figure 36) along with alteration, indicate that a potential target is present at depth. Drilling in the past concentrated on the pediment surrounding the inselberg (Map 9).

BLACK DYKE:

The Black Dyke target is controlled by Western States Mining Inc. Western States has delineated 1.3 million tons of 0.032 oz/ton gold by RVC drilling. Carbonate breccia with clasts of silicified granodiorite and carbonate alteration is located in a curing fault zone, which changes strike from east–west to north–south. Drilling indicates that the calcite alteration changes to silica at depth. Surface samples contain up to 3.4 ppm gold although the majority of the samples were in the 100–500 ppb range (Figure 37). Two float trains extend westward from the Black Dyke onto the Roadside lease (Figures 38, 39). This material contains up to 700 ppb gold. Three RVC holes and one core hole have been drilled into these zones with no results. Either those zones are float trains derived from block dyke by sediment transport or if they are indicating mineralization at depth the drilling may have intersected the target zone below a low angle structure. A carbonate alteration zone extends north from the Black Dyke area towards Gold Chain Hill. ACNC sampling targeted only one sample with greater than 100 ppb gold. Anaconda drilled a core hole which contained a five foot interval with 120 ppb gold.

SOUTH "DETACHMENT" ZONE:

The contact between tilted Tertiary volcanic fault blocks and Precambrian brecciated granodiorite appears to be a low angle fault. (Figure 40) This fault may be related to detachment tectonics as per the Fischer–Watt interpretation. This area is tentatively named the South "Detachment" Zone because it lies near the southern boundary of the claim block.

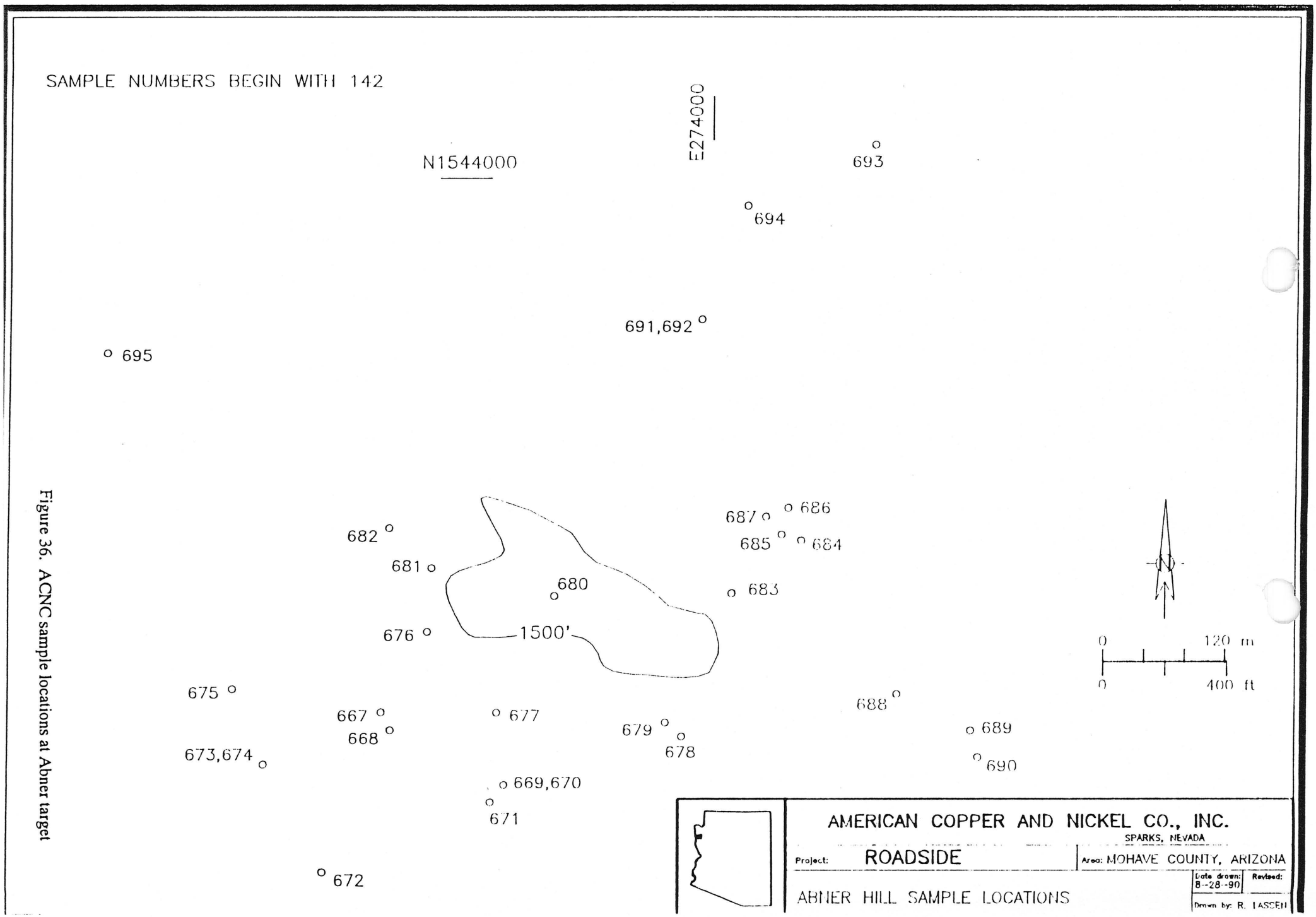


Figure 36. ACNC sample locations at Abner target

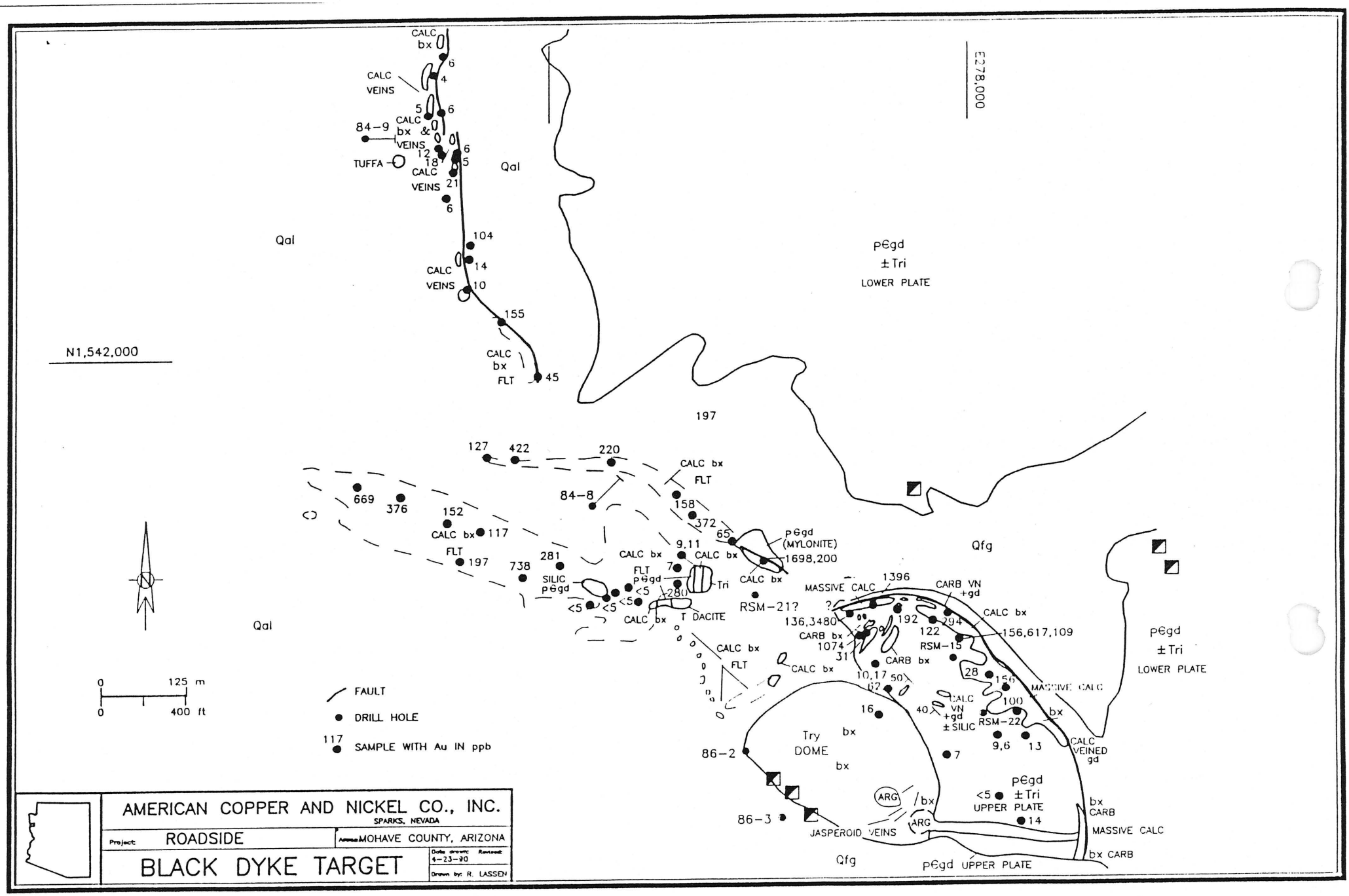
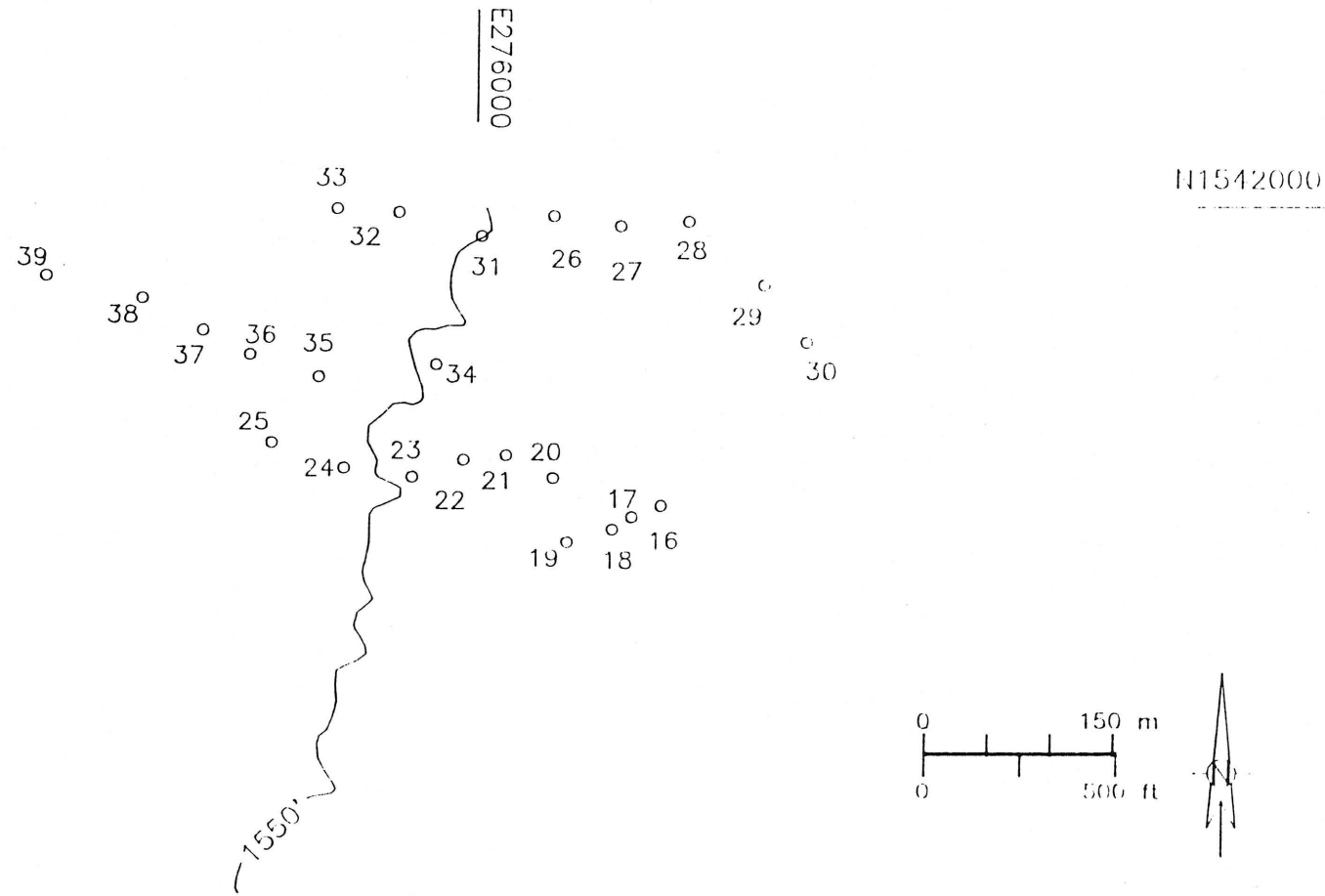


Figure 37. Geologic sketch map and AGNC gold concentrations at Black Dyke



SAMPLE NUMBERS BEGIN WITH 1627

AMERICAN COPPER AND NICKEL CO., INC.
SPARKS, NEVADA

Project: ROADSIDE

Area: MOHAVE COUNTY, ARIZONA

BLACK DYKE WEST EXT. SAMPLE LOCATIONS

Date drawn: 8-28-90

Revised:

Drawn by: R. LARSEN

Figure 38. ACNC sample locations at Black Dyke extension

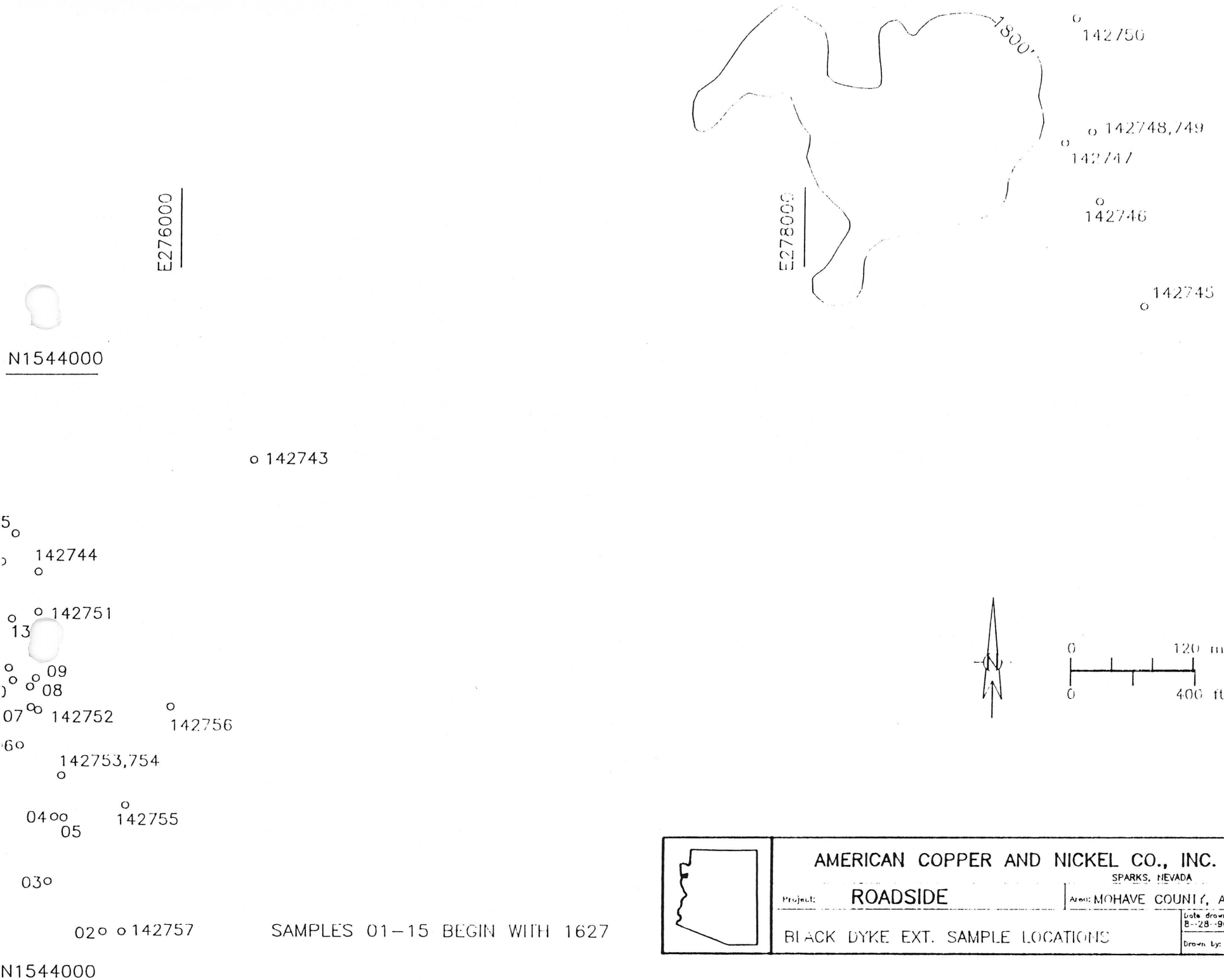


Figure 39. ACNC sample locations at Black Dyke

Fig. 11 Geologic Map of South Detachment Zone

The Tertiary volcanics are intruded by later rhyolite, which may be responsible for mineralization. Locally, the rocks are altered with the Precambrian granodiorite altered to hematite and the Tertiary volcanic altered to hematite and/or argillic phases.

The contact zone (detachment fault?) is apparently cut by later faults with an east–west strike slip component of movement. A recent tuffa occupies the intersection between one of the strike slip faults and the low angle structure. This tuffa and the older alteration indicate that hydrothermal fluids migrated throughout this zone and economic mineralization may be present.

Based upon the above criteria, the old road was flagged for cleaning and twelve air track drill sites were flagged in 1988 but were not drilled. Seventeen samples of altered rock was collected from this area (Figure 40).

RECONNAISSANCE TARGETS ON THE MAIN CLAIM BLOCK:

Map 2 demonstrates the many prospects remaining to be evaluated on the main claim block. Outlying claim blocks need to be visited and evaluated, also.

GEOCHEMISTRY:

There is plenty of surface sample lithogeochemistry in the files from various companies. Some of the data is located on maps while the rest is not. Various elements were analyzed by different companies and the sample descriptions vary in quality. This data will have to be compiled on a consistent set of maps in order to be useful.

Twenty–eight samples collected by Duval were used for preliminary statistical analysis in order to determine whether any pathfinder elements could be discovered. Fifteen elements were analyzed for each sample. The elements are Au, Ag, As, Sb, Hg, Cu, Pb, Zn, Mo,

Ni, Cr, F, Ba, Tl and W. This element suite contains elements thought to be useful pathfinders for gold in "detachment" terrain. The data is summarized in Appendix 21. As, Sb, Mo, Ni and Tl are present in very low concentrations with most samples being reported as below the detection limit. Therefore, they were left out of the data base. The remaining elements were $\log_{10}$ normalized which reduced the skewness of all the elements. The reduction in skewness more closely approximates a normal population for statistical analysis. The statistical results are summarized in Appendix 22.

Factor analysis using principle component analysis along with a varimax rotation indicates that gold, silver and copper are geochemically related. Tungsten is weakly related with these three elements. This association is explained by the first factor which explains 36.5% of the variance in the population. Factor two explains 21.1 % of the variance in the data base and suggests that zinc and barium are related and that both of these elements are inversely related to chromium plus weak lead. Factor three explains 12.0% of the variance in the data base and suggests that fluorine is weakly associated with tungsten. Mercury has an extremely low communality and is not significant in the factor solution.

The association of tungsten and fluorine is not surprising because this is a common association in nature. This is especially true in fluorine enriched granitoids such as 1.4 Ga. "anorogenic granites", which is thought to be the host rock. The gold, silver, copper association is common in "detachment" type mineralization. The weak tungsten association can be attributed to either remobilization out of the granites during hydrothermal alteration into the ore zone or there may be two separate tungsten associations. The $(Zn + Ba)(Cr + Pb)_{-1}$ relationship is odd. The inverse nature of Zn and Pb is not normal to these systems and Ba usually is associated with F in "detachment" hydrothermal systems.

Plotting factor scores against one another usually presents patterns which can be used to identify potential sub populations in the data. In this case the plots are random and therefore are not usable.

Statistical analysis of the Roadside Mine database demonstrates significant differences between the four preselected subpopulations; namely:

1. mineralized
2. barren
3. above mineralization
4. rhyolite

One hundred–twenty samples were selected from the 1988 IVY reverse circulation drilling program. Thirty samples, which characterize each subpopulation, were chosen and then sent to Bondar–Clegg (Au + 33, INNA) and ACME (ICP + Au + Hg, standard ACNC analyses) for analysis. One pulp from the "above mineralization" subpopulation was lost. Therefore, twenty–nine samples characterize this subpopulation.

Descriptive statistics (Table 7) were calculated for the whole database. Each variable was analyzed as an arithmetic population and as a log 10 normalized population. The choice of population for further analysis was made based upon lower skewness.

Figure 4 illustrates the relationship between Bondar–Clegg gold analyses (INNA) and ACME gold analyses (acid leach/AA). Perfect reproducibility (precision) is demonstrated by a straight line which passes through the origin with a slope of 1.0 (illustrated by the line in Figure 1). Although there is more scatter above 1.0 ppm, the results were used to represent gold for the statistical analyses.

Discriminant analysis is a multivariate technique, which maximizes the differences between two populations using a linear function. Table 8 illustrates the form of the computer printout. Table 8a lists the variables in order of their contribution to the solution; in this case between the mineralized and barren subpopulations. Table 2b illustrates the actual equation which was calculated. This equation takes the form of:

$$D.F. = -.04\ (\mathrm{Log}_{10}\ As) - .25\ (\mathrm{Log}_{10}\ Ba).....$$

Number of Valid Observations (Listwise) = 119.00

Variable	Mean	Std Dev	Skewness	S.E. Skew	Minimum	Maximum	N
CODE	2.50	1.13	.01	.22	1.00	4.00	119
OS	6.49	5.75	7.85	.22	2.00	68.00	119
BO	476.82	445.95	.82	.22	50.00	1700.00	119
CE	88.92	51.48	.98	.22	18.00	270.00	119
FE	2.05	1.39	.63	.22	.25	5.30	119
HF	6.07	2.29	.03	.22	1.00	12.00	119
LO	40.13	22.61	.71	.22	5.00	95.00	119
NO	1.03	.58	-.09	.22	.08	2.40	119
RB	205.29	50.64	.52	.22	80.00	350.00	119
SB	2.94	1.71	.97	.22	.70	8.70	119
SC	6.20	5.30	1.90	.22	.70	35.00	119
SM	6.72	5.22	2.06	.22	.50	30.00	119
TH	17.15	9.08	1.22	.22	3.10	54.00	119
U	3.85	2.51	1.57	.22	.90	13.00	119
W	3.61	2.56	1.63	.22	1.00	14.00	119
MO	2.79	4.30	8.77	.22	1.00	46.00	119
CU	22.44	13.08	1.96	.22	9.00	80.00	119
PB	28.92	18.54	.74	.22	2.00	79.00	119
ZN	61.39	27.11	1.87	.22	10.00	188.00	119
AG	.83	.77	1.43	.22	.10	3.70	119
NI	11.66	13.50	3.43	.22	4.00	89.00	119
CO	5.97	4.76	1.41	.22	1.00	27.00	119
MN	517.11	360.71	3.14	.22	80.00	2603.00	119
SR	20.00	12.62	.86	.22	3.00	60.00	119
V	17.45	14.50	1.50	.22	1.00	75.00	119
CA	.64	.49	1.55	.22	.04	2.99	119
P	.07	.05	.28	.22	.00	.19	119
CR	25.08	26.39	3.32	.22	10.00	155.00	119
MG	.54	.48	1.67	.22	.01	2.60	119
TI	.02	.01	3.74	.22	.01	.09	119
B	4.92	3.80	2.19	.22	2.00	23.00	119
OU	314.16	543.21	2.57	.22	1.00	2750.00	119
HO	75.29	53.28	.61	.22	5.00	280.00	119
LAS	.75	.20	1.42	.22	.30	1.79	119
LBO	2.43	.51	-.15	.22	1.70	3.23	119
LCE	1.80	.26	-.09	.22	1.25	2.43	119
LFE	.19	.36	-.60	.22	-.60	.80	119
LHF	.74	.20	-1.24	.22	0.0	1.08	119
LLO	1.53	.26	-.28	.22	.70	1.98	119
LNO	-.10	.36	-.97	.22	-1.10	.38	119
LRB	2.30	.11	-.38	.22	1.90	2.54	119
LSB	.40	.26	-.03	.22	-.15	.94	119
LSC	.63	.40	-.25	.22	-.15	1.54	119
LSM	.71	.33	-.22	.22	-.30	1.40	119
LTH	1.17	.25	-.56	.22	.49	1.74	119
LU	.51	.26	.26	.22	-.05	1.11	119
LW	.45	.32	-.21	.22	0.0	1.15	119
LMO	.31	.31	.81	.22	0.0	1.66	119
LCU	1.30	.20	.86	.22	.95	1.90	119
LPB	1.36	.33	-.66	.22	.30	1.90	119
LZN	1.75	.18	-.33	.22	1.00	2.27	119
LAGG	-.25	.39	.13	.22	-1.00	.52	119
LNI	.94	.28	1.66	.22	.60	1.95	119
LCO	.62	.39	-.33	.22	0.0	1.43	119
LMN	2.64	.25	.04	.22	1.90	3.42	119
LSR	1.23	.29	-.41	.22	.48	1.78	119
LV	1.07	.42	-.39	.22	0.0	1.89	119
LCA	-.33	.37	-.52	.22	-1.40	.48	119
LP	-1.44	.61	-.87	.22	-3.00	-.78	119
LCR	1.29	.25	2.08	.22	1.00	2.19	119
LMG	-.46	.47	-.81	.22	-2.00	.43	119
LTI	-1.08	.20	1.64	.22	-2.00	-1.05	119
LB	.50	.26	.78	.22	.30	1.36	119
LAU	1.83	.85	.09	.22	0.0	3.44	119
LHG	1.70	.46	-.83	.22	.70	2.45	119

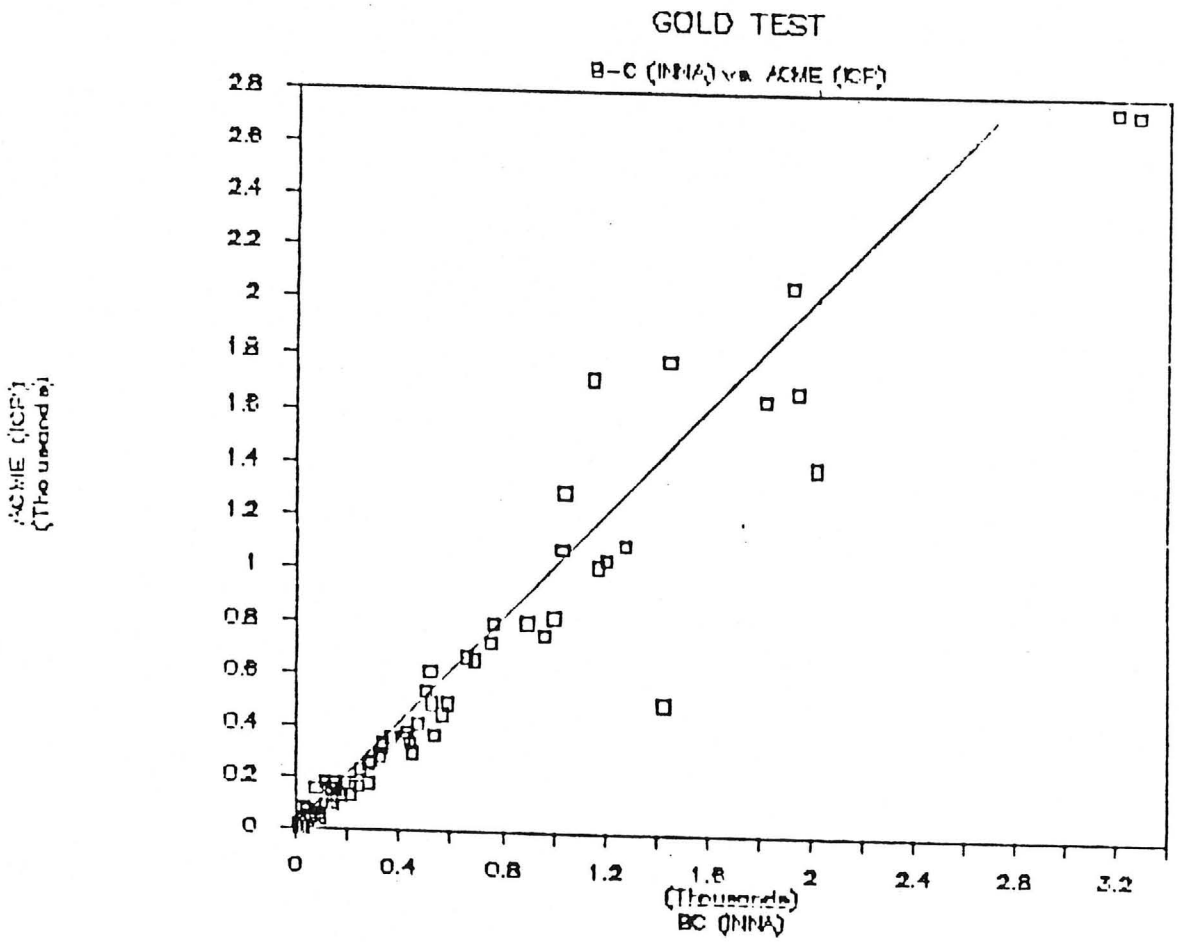


Figure 41. Gold assay precision test

-- by size of correlation within function)

	FUNC		
LAU	-.61801	LMG	.09592
LSB	-.40978	LB	-.08581
LAGG	-.36974	LFE	.08422
LHG	.36225	LV	.07817
HF	.20291	LRB	.07784
LLA	.16759	LCO	.07243
LCE	.16450	LMN	.06924
LSM	.15966	LU	.06689
P	.15626	LCR	-.04861
LPB	-.15100	LTI	.04459
LCU	-.15020	LNI	-.04220
NA	.12758	LMO	-.04044
LSC	.12433	LW	.03507
LSR	.11155	LTH	-.02854
LAB	-.10665	LZN	.02032
LBA	.10578	LCA	-.00431

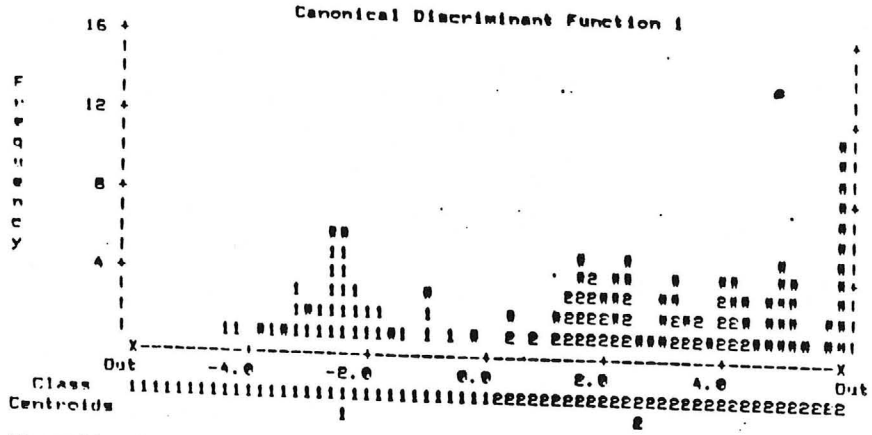
B. Standardized Canonical Discriminant Function Coefficients

	FUNC 1		
LAB	-.04454	LPB	1.02613
LBA	-.24821	LZN	-.51367
LCE	-1.34413	LAGG	-.35597
LFE	.49019	LNI	-1.66944
HF	.21255	LCO	.71349
LLA	1.32958	LMN	-.60829
NA	.21331	LSR	.77954
LRB	.66248	LV	1.83060
LSR	-.00763	LCA	-.26026
LSC	-2.75723	P	.86091
LSM	.14390	LCR	1.14137
LTH	-.59529	LMG	.30370
LU	.51769	LTI	-.50207
LW	-.32878	LB	.18969
LMO	-.24551	LAU	-1.23045
LCU	.33301	LHG	.18099

C.

All-groups stacked Histogram

Canonical Discriminant Function 1



D.

Classification Results -

Actual Group	No. of Cases	Predicted Group Membership 1	2
Group 1 barren	30	30 100.0%	0 .0%
Group 2 barren	30	0 .0%	30 100.0%
Ungrouped Cases	59	8 13.6%	51 86.4%

Percent of "grouped" cases correctly classif

Table 8. Discriminant analysis (barren vs. mineralized)

where As and Ba are the elemental concentrations reported by the laboratory. Once the equation is deduced, a test is performed, which determines the usefulness of the equation. The test uses the sample data set as knowns and applies the equation to each sample. The number of correct assignments is summarized pictorially (Table 8c) and in a chart (Table 8d). Multiple runs were made using various subsets of elements in order to determine the best "exploration" suits of elements for each test between subpopulations. The functions are summarized below (all results are in Appendix 24):

mineralized vs barren (95% reliability)

$$D.F. = .84\,(\mathrm{Log}_{10}\,Au) - \mathrm{Log}_{10}\,Sb + .05\,(\mathrm{Log}_{10}\,Ag) - .34\,(\mathrm{Log}_{10}\,Hg) + .14\,Hf - .17\,(\mathrm{Log}_{10}\,La)$$

mineralized vs "above mineralization" (88% reliability)

$$D.F. = 1.04\,(\mathrm{Log}_{10}\,Au) - .23\,(\mathrm{Log}_{10}\,Ag) + .35\,(\mathrm{Log}_{10}\,Sb) - \mathrm{Log}_{10}\,Pb - .90\,(\mathrm{Log}_{10}\,Cu) - .50\,(\mathrm{Log}_{10}\,Hg) + .36\,(\mathrm{Log}_{10}\,Rb) + .18\,Hf + 19\,Na + .39\,P - .29\,(\mathrm{Log}_{10}\,B)$$

mineralized vs rhyolite (88% reliability)

$$D.F. = .48\,(\mathrm{Log}_{10}\,Au) + .90\,(\mathrm{Log}_{10}\,Sb) - .20\,(\mathrm{Log}_{10}\,Ag) + .45\,(\mathrm{Log}_{10}\,Hg) - .61\,(\mathrm{Log}_{10}\,Ba) + .57\,(\mathrm{Log}_{10}\,Hf)$$

barren vs "above mineralization" (80% reliability)

$$D.F. = .79\,(\mathrm{Log}_{10}\,Ce) - .26\,(\mathrm{Log}_{10}\,La) - .34\,(\mathrm{Log}_{10}\,Sm) + .32(\mathrm{Log}_{10}Sc) + .60\,(\mathrm{Log}_{10}\,Sr) - .15\,(\mathrm{Log}_{10}\,Sb) - .90\,(\mathrm{Log}_{10}\,B) - .08(\mathrm{Log}_{10}Pb) + .31\,(\mathrm{Log}_{10}\,Ag) - .37\,(\mathrm{Log}_{10}\,Cu) + .43\,(\mathrm{Log}_{10}\,Zn) + .25\,(\mathrm{Log}_{10}\,Mo)$$

barren vs rhyolite (97% reliability)

$$D.F. = .96 (\log_{10} Sb) + .81 (\mathrm{Log}_{10} Zn) + .26 (\mathrm{Log}_{10} Au) + .31 (\mathrm{Log}_{10} U) - .05 (\mathrm{Log}_{10} Ni) - .53 (\mathrm{Log}_{10} Ba) + .17 (\mathrm{Log}_{10} La) + .51 Na - .17 (\mathrm{Log}_{10} Ca) + .28 (\mathrm{Log}_{10} Hg) + .37 Hf$$

"above mineralization" vs rhyolite (90% reliability)

$$D.F. = .90 (\mathrm{Log}_{10} Sb) - .02 (\mathrm{Log}_{10} Au) + .37 (\mathrm{Log}_{10} Pb) + .80 (\log_{10} Ni) - .10 (\mathrm{Log}_{10} Cu) + .38 (\mathrm{Log}_{10} B) - .49 (\mathrm{Log}_{10} Mo) - 1.12 (\mathrm{Log}_{10} Ba) - 3.39 (\mathrm{Log}_{10} La) + 1.69 (\log_{10} Ce) + 4.01 (\mathrm{Log}_{10} Sm) - 1.66(\mathrm{Log}_{10} V) + .18 Hf - .20 (\mathrm{Log}_{10} Hg)$$

Factor analysis using Principle Component Analysis with a varimax rotation generates elemental association within a database. This procedure was run on the entire database, on each of the four subpopulations as well as on a subset of "all samples minus rhyolite." The varimax subroutine was unable to generate a satisfactory conclusion for the sample set "all samples minus rhyolite" after 25 iterations. Therefore, a quartimax rotation was used to generate favorable results.

Table 9 summarizes the results using the entire database (probably an apples and oranges type situation). God and silver are related and together are weakly inversely related to mercury plus rubidium (Factor 3). Factor 1 appears to represent the various mineralogical changes associated with alteration. Ba (barite or substitution in feldspar?), LREE + P (monazite?), Hf (analog for zircon?) are associated with Fe (most likely dominated by FeOx), Mg (dolomite–ankerite with Ca + Fe or with Fe as a ferromagnesian mineral?). Na may be related to the destruction of feldspar with a Na for K exchange. All these potential alteration effects vary inversely with antimony, molybdenum and lead.

Table 10 summarizes the factor analysis results on the mineralized subpopulation. Gold is weakly inversely related to tungsten. Ba, Hg, Hf and LREE (La Ce + Sm) are inversely related to Sb (Factor 2). Aside

ALL

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
LOG 10 AS					0.71		
LOG 10 BA	0.74						
LOG 10 CE	0.89						
LOG 10 FE	0.76						
HF	0.79						
LOG 10 LA	0.91						
NA	0.8						
LOG 10 RB			-0.62				
LOG 10 SB	-0.67						
LOG 10 SC	0.85						
LOG 10 SM	0.95						
LOG 10 TH				0.63			
LOG 10 U				0.87			
LOG 10 W							
LOG 10 MO	-0.72						
LOG 10 CU		0.7					
LOG 10 PB	-0.6						
LOG 10 ZN		0.63					
LOG10 AG			0.8				
LOG 10 NI		0.93					
LOG 10 CO	0.79						
LOG 10 MN		0.71					
LOG 10 SR	0.81						
LOG 10 V	0.81						
LOG 10 CA	0.74						
P	0.89						
LOG 10 CR		0.93					
LOG 10 MG	0.79						
LOG 10 TI	0.54						
LOG 10 B							
LOG 10 AU			0.83				
LOG 10 HG	0.57		-0.6				

Table 9. Factor analysis (all data)

MINERALIZED

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
LOG 10 AS			0.81				
LOG 10 BA		0.66					
LOG 10 CE		0.82					
LOG 10 FE	0.9						
HF		0.83					
LOG 10 LA		0.84					
NA	0.76						
LOG 10 RB	-0.76						
LOG 10 SB		-0.89					
LOG 10 SC	0.91						
LOG 10 SM	0.62	0.74					
LOG 10 TH	-0.6						
LOG 10 U				-0.84			
LOG 10 W	0.63					-0.61	
LOG 10 MO	-0.75						
LOG 10 CU			0.58				
LOG 10 PB			0.69				
LOG 10 ZN	0.6		0.67				
LOG10 AG					-0.74		
LOG 10 NI	0.73						
LOG 10 CO	0.94						
LOG 10 MN	0.73						
LOG 10 SR	0.89						
LOG 10 V	0.94						
LOG 10 CA	0.66						
P	0.79						
LOG 10 CR	0.67						
LOG 10 MG	0.92						
LOG 10 TI							
LOG 10 B							
LOG 10 AU						0.87	
LOG 10 HG		0.81					

Table 10. Factor analysis (mineralized)

from the LREE partial partitioning into Factor 2 with Hf. Factor 1 remains similar to Factor 1 for the entire database.

In Table 11, which summarizes factor loadings for barren rocks, gold is associated with silver and arsenic. The rhyolite subpopulation illustrates a gold + arsenic association (Table 12). Table 13 illustrates that gold and arsenic are also associated in the "above mineralization" subpopulation. In the "all granodiorite" group (mineralized + barren + "above mineralization") gold and silver are associated and are inversely related to rubidium (Table14).

Samples collected from RVC drill holes 80201 through 80253 were analyzed by Bondar Clegg (Au + 33 – INAA) and ACME (multielement ICP package as per ACNC). Elements from both packages were combined (Table 15). Discriminant functions derived above were entered as formulas into LOTUS and the calculated results are included in Table 1. The two discriminant functions are:

mineralized vs barren*

$$D.F. = .84\,(\mathrm{Log}_{10}\,Au) - \mathrm{Log}_{10}\,Sb + .05\,(\mathrm{Log}_{10}\,Ag) - .34\,(\mathrm{Log}_{10}\,Hg) + .14\,Hf - .17\,(\mathrm{Log}_{10}\,La)$$

"above mineralization" vs barren*

$$D.F. = .79\,(\mathrm{Log}_{10}\,Ce) - .36\,(\mathrm{Log}_{10}\,La) - .34\,(\mathrm{Log}_{10}\,Sm) + .32\,(\mathrm{Log}_{10}\,Sc) + .60\,(\mathrm{Log}_{10}\,Sr) - .15\,(\mathrm{Log}_{10}\,Sb) - .90\,(\mathrm{Log}_{10}B) - .08\,(\mathrm{Log}_{10}Pb) + .31\,(\mathrm{Log}_{10}\,Ag) - .37\,(\mathrm{Log}_{10}\,Cu) + .43\,(\mathrm{Log}_{10}\,Zn) + .25\,(\mathrm{Log}_{10}Mo)$$

*denotes old classification – now = spatially related to mineralization (low gold)

Figure 42 illustrates the two drill holes (#10 and #21) which contained samples which passed the "mineralized" test. Two samples are on the boundary between the two populations and are contained in holes

BARREN

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
LOG 10 AS				0.55			
LOG 10 BA	0.6		0.65				
LOG 10 CE	0.87						
LOG 10 FE	0.77						
HF							
LOG 10 LA	0.91						
NA	0.73						
LOG 10 RB	-0.75						
LOG 10 SB					-0.58		
LOG 10 SC	0.76						
LOG 10 SM	0.89						
LOG 10 TH						0.68	
LOG 10 U			-0.81				
LOG 10 W		0.55					
LOG 10 MO	-0.67						
LOG 10 CU		-0.67					
LOG 10 PB	-0.62						
LOG 10 ZN		0.79					
LOG10 AG				0.73			
LOG 10 NI		0.92					
LOG 10 CO	0.78						
LOG 10 MN		0.82					
LOG 10 SR	0.76						
LOG 10 V	0.75	0.56					
LOG 10 CA	0.84						
P	0.82						
LOG 10 CR		0.94					
LOG 10 MG	0.73						
LOG 10 TI			0.74				
LOG 10 B			0.69				
LOG 10 AU				0.74			
LOG 10 HG					0.84		

Table 11. Factor analysis (barren)

RHYOLITE

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
LOG 10 AS				0.66			
LOG 10 BA	0.74						
LOG 10 CE	0.92						
LOG 10 FE	0.65						
HF	0.83						
LOG 10 LA	0.91						
NA	0.69						
LOG 10 RB		-0.64					
LOG 10 SB	-0.8						
LOG 10 SC	0.78	0.56					
LOG 10 SM	0.91						
LOG 10 TH		-0.91					
LOG 10 U		-0.85					
LOG 10 W					0.83		
LOG 10 MO	-0.57	-0.61					
LOG 10 CU			0.84				
LOG 10 PB		-0.55					
LOG 10 ZN							
LOG10 AG							
LOG 10 NI			0.92		0.78		
LOG 10 CO	0.74	0.56					
LOG 10 MN			0.58				
LOG 10 SR		0.76					
LOG 10 V	0.84						
LOG 10 CA		0.75					
P	0.87						
LOG 10 CR			0.87				
LOG 10 MG	0.78						
LOG 10 TI						0.57	
LOG 10 B					0.56		
LOG 10 AU				0.8			
LOG 10 HG						-0.57	

Table 12. Factor analysis (rhyolite)

ABOVE ORE

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
LOG 10 AS				0.63			
LOG 10 BA	0.86						
LOG 10 CE	0.9						
LOG 10 FE	0.91						
HF	0.86						
LOG 10 LA	0.92						
NA	0.89						
LOG 10 RB		0.78					
LOG 10 SB	-0.88						
LOG 10 SC	0.98						
LOG 10 SM	0.97						
LOG 10 TH		0.85					
LOG 10 U		0.78					
LOG 10 W		-0.76					
LOG 10 MO	-0.82						
LOG 10 CU			0.74				
LOG 10 PB	-0.56				0.61		
LOG 10 ZN	0.61				0.7		
LOG10 AG		-0.56					
LOG 10 NI	0.67		0.64				
LOG 10 CO	0.93						
LOG 10 MN	0.88						
LOG 10 SR	0.96						
LOG 10 V	0.96						
LOG 10 CA	0.9						
P	0.9						
LOG 10 CR			0.77				
LOG 10 MG	0.95						
LOG 10 TI	0.84						
LOG 10 B	0.81						
LOG 10 AU				0.79			
LOG 10 HG							

Table 13. Factor analysis (above ore)

ALL GRANODIORITE

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
LOG 10 AS					0.66		
LOG 10 BA	0.79						
LOG 10 CE	0.86						
LOG 10 FE	0.83						
HF	0.72						
LOG 10 LA	0.88						
NA	0.83						
LOG 10 RB			-0.67				
LOG 10 SB	-0.66						
LOG 10 SC	0.92						
LOG 10 SM	0.96						
LOG 10 TH				0.55			
LOG 10 U				0.85			
LOG 10 W							
LOG 10 MO	-0.74						
LOG 10 CU		0.78					
LOG 10 PB	-0.57						
LOG 10 ZN		0.66					
LOG10 AG			0.77				
LOG 10 NI		0.92					
LOG 10 CO	0.86						
LOG 10 MN	0.61	0.63					
LOG 10 SR	0.89						
LOG 10 V	0.9						
LOG 10 CA	0.79						
P	0.94						
LOG 10 CR		0.94					
LOG 10 MG	0.85						
LOG 10 TI	0.61						
LOG 10 B							
LOG 10 AU			0.78				
LOG 10 HG	0.59						

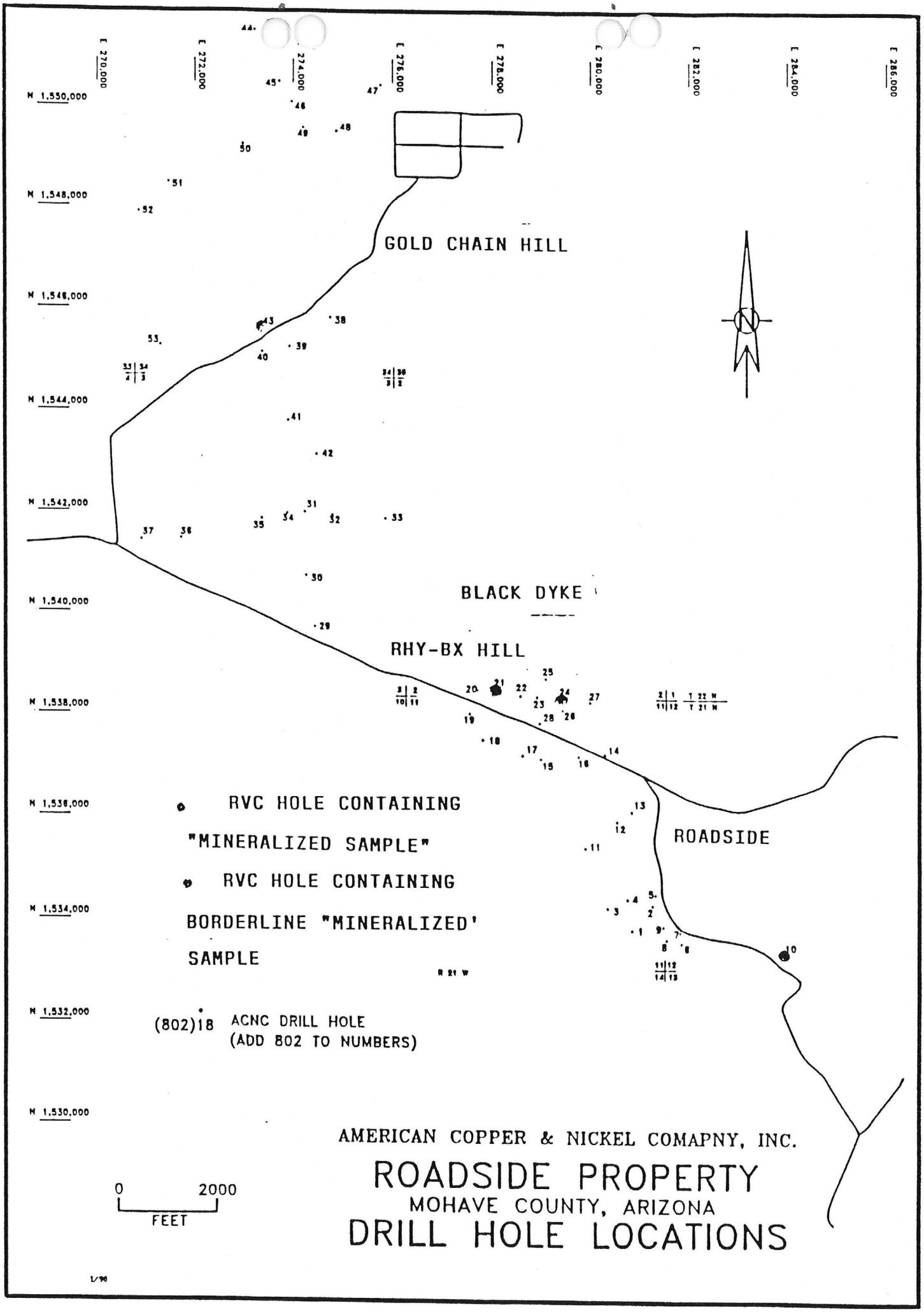
Table 14. Factor analysis (all granodiorite)

Table 15. Discriminant analysis test case on 1989 drill results

In	Ag	Ni	Co	Mn	Sr	V	Ca	P	Cr	Mg	Ti	B	Au	Hg	MIN VS 'PAP'	ABOVE VS 'PAP'
59	0.1	3	5	506	45	18	2.21	0.073	4	0.7	0.01	6	2.5	30	0.397061511	1.4690524324
68	0.3	3	7	591	62	21	1.79	0.077	5	0.86	0.01	8	2.5	20	0.3122439835	1.5574602103
86	0.3	46	12	511	56	43	1.65	0.17	86	1.43	0.08	8	2.5	50	0.780335286	1.5736718146
120	0.4	70	21	634	78	68	1.9	0.293	144	2.12	0.14	7	2.5	70	0.7039492863	1.7957755655
34	0.4	6	17	264	540	53	0.26	0.07	10	0.07	0.01	12	9	47000	0.9025713692	2.0650411419
29	0.3	6	10	29	671	56	0.24	0.087	2	0.08	0.01	11	2.5	4100	0.5329396311	2.1843665735
8	0.1	1	1	576	83	1	1.6	0.003	7	0.02	0.01	6	2.5	150	0.3142805735	1.0516348432
46	0.2	24	6	368	45	15	0.55	0.057	16	0.23	0.01	12	2.5	340	0.3645146455	1.0832415654
39	0.1	23	5	508	39	20	0.79	0.059	28	0.26	0.01	10	2.5	300	0.720409545	0.9215249854
72	0.3	28	9	469	96	24	0.78	0.089	17	0.43	0.02	11	2.5	5200	0.4203661739	1.5643532859
83	0.2	259	30	900	123	102	4.12	0.197	442	2.51	0.35	12	7	800	0.6260405076	1.4913551537
87	0.2	363	36	851	180	111	5.53	0.188	482	3.93	0.45	6	7	1200	0.4787552955	1.8603884792
78	0.3	333	34	854	178	103	5.45	0.174	471	4.35	0.37	10	2.5	90	0.5807509517	1.6837601912
86	0.1	335	35	708	200	103	4.07	0.196	430	4.85	0.33	6	2.5	50	0.9553028802	1.8683397273
96	0.1	16	11	404	46	48	1.51	0.197	21	0.84	0.14	14	2.5	30	0.8342518065	1.2012055224
86	0.1	8	9	401	41	48	1.4	0.188	14	0.74	0.13	7	2.5	40	1.2758926187	1.4399119177
89	0.1	8	10	406	39	51	1.26	0.204	14	0.79	0.15	7	2.5	50	1.3783273324	1.5229994371
119	0.1	10	12	460	57	58	1.44	0.228	15	0.99	0.13	11	2.5	50	0.974607904	1.5008580841
96	0.1	11	10	374	39	46	1.33	0.19	16	0.76	0.14	7	2.5	30	0.6966346526	1.4308753283
85	0.1	13	9	401	36	46	1.31	0.172	15	0.76	0.14	9	6	10	1.4432100874	1.2818641306
56	0.1	13	3	892	76	4	0.64	0.013	11	0.27	0.01	7	2.5	90	0.5571044786	1.3784510795
17	0.1	3	1	708	55	2	0.41	0.003	4	0.07	0.01	6	2.5	60	0.4210686542	1.2879475391
271	0.5	9	7	549	55	25	2.18	0.152	19	0.66	0.07	8	12	50	0.7409180003	1.658512065
90	0.1	11	11	411	43	50	1.44	0.201	16	0.75	0.11	8	2.5	10	1.0968930906	1.3104748319
95	0.1	10	10	351	38	52	1.28	0.216	22	0.74	0.11	8	2.5	5	1.1506438774	1.2893641185
130	0.1	7	11	616	39	43	1.23	0.188	20	0.79	0.08	7	2.5	5	0.2150365611	1.2380722919
82	0.1	10	7	584	35	19	1.86	0.095	13	0.59	0.06	9	2.5	5	-0.342157155	0.904623828
63	0.1	19	7	237	102	17	0.59	0.083	5	0.35	0.01	15	2.5	330	0.4453811641	1.3581703298
55	0.1	14	6	462	186	26	2.69	0.079	8	0.57	0.03	10	2.5	110	0.9236936498	1.6524880219
47	0.1	11	5	321	174	27	1.43	0.077	9	0.57	0.04	7	2.5	120	0.8711955159	1.6422375601
52	0.1	16	6	442	192	29	2.16	0.088	14	0.56	0.05	8	2.5	150	0.7094824426	1.5787875491
51	0.1	17	7	369	175	31	1.58	0.082	18	0.57	0.05	6	6	200	0.9843851866	1.6720580868
61	0.1	26	10	562	168	32	1.35	0.078	17	0.67	0.05	9	2.5	330	0.452054225	1.6130957994
63	0.1	29	11	660	174	33	1.77	0.076	20	0.73	0.06	11	2.5	450	0.5482795778	1.4563918412
49	0.1	15	6	394	169	30	1.74	0.081	18	0.68	0.06	6	2.5	240	0.4980861199	1.6852882384
93	0.1	10	11	441	65	60	1.81	0.198	28	0.88	0.14	8	2.5	10	1.3063479587	1.5721341274
109	0.1	10	11	454	55	57	1.68	0.207	29	0.83	0.15	6	2.5	5	1.6847770556	1.5987870759
74	0.1	14	14	820	55	74	3.07	0.302	37	1.29	0.12	5	2.5	10	1.02074443095	1.7555067678
79	0.1	13	7	406	34	39	1.06	0.115	21	0.54	0.08	8	11	20	0.7497347292	1.1038202703
99	0.1	12	8	397	34	41	1.09	0.122	33	0.59	0.08	18	10	30	0.8414250165	0.8017640182
97	0.1	15	10	1095	112	37	2.83	0.178	20	0.98	0.03	6	2.5	5	0.7913311169	1.6885430629
46	0.2	11	9	749	97	42	2.66	0.17	30	0.93	0.09	2	2.5	10	1.0003073465	2.0814173058
49	0.2	8	6	405	32	16	0.77	0.047	17	0.39	0.01	8	27	20	1.0912029325	1.1986674563
113	0.1	15	5	357	28	14	0.38	0.054	21	0.44	0.01	6	42	10	1.8897443923	1.2858437544
57	0.2	10	12	723	34	46	0.6	0.162	24	0.8	0.05	27	26	110	1.924532133	0.8776354304
110	0.1	9	7	395	25	15	0.34	0.07	21	0.52	0.01	12	26	40	1.3334670861	1.0433191397
103	0.1	8	8	518	72	38	1.9	0.177	13	0.7	0.09	5	2.5	30	1.1091291804	1.7706870483
83	0.1	10	9	572	46	35	1.13	0.163	12	0.76	0.07	15	8	40	1.323669104	1.1245566012
79	0.1	11	10	416	37	52	1.33	0.175	26	0.71	0.17	10	2.5	20	1.4450598434	1.2575428504
92	0.1	7	9	440	41	41	1.16	0.155	17	0.67	0.09	6	6	40	1.1882560805	1.4334519993
81	0.1	11	10	658	75	40	2.58	0.17	18	0.8	0.03	10	2.5	110	0.5483331681	1.537344288
81	0.1	10	9	505	41	40	1.61	0.152	23	0.71	0.04	7	2.5	250	0.6563118148	1.3710210249
				488	42	4[illegible]	1.43	0.161	23	0.72	0.06	9	2.5	[illegible]	0.[illegible]782194	1.3769248813
75	0.1	9	8	342	38	38	1.36	0.143	20	0.71	0.08	9	2.5	10	1.7306352662	1.3661154208
89	0.1	12	10	632	55	44	2	0.171	26	0.88	0.06	9	2.5	120	1.0685061605	1.463277981
97	0.1	12	10	783	68	40	1.27	0.176	25	0.9	0.02	12	2.5	310	0.9269513694	1.4198984613
141	0.1	242	38	1753	141	211	1.27	0.355	528	2.71	0.02	11	2.5	2500	0.1714782779	1.6686039302
147	0.2	448	49	1750	79	183	1.29	0.249	697	2.46	0.01	17	9	4800	0.3405726779	1.2887433548
128	0.2	3[illegible]0	46	1211	90	140	1.31	0.253	640	3.19	0.02	21	2.5	3200	-0.337310684	1.2053941167
46	0.1	8	5	280	30	23	7.95	0.083	16	0.44	0.04	8	10	130	0.197879066	1.0595265332
51	0.1	8	5	305	30	23	7.89	0.094	13	0.47	0.04	10	6	90	0.2815243817	0.968928004
46	0.2	7	5	284	29	21	6.42	0.084	14	0.42	0.04	9	7	120	0.1573200048	1.0772811634
99	0.1	9	10	578	52	40	2.42	0.147	18	0.92	0.03	13	2.5	160	0.5335757082	1.2456006624
87	0.1	7	7	525	51	34	2.42	0.127	19	0.8	0.04	17	2.5	120	0.8218172272	1.1359709076
93	0.1	8	10	580	43	33	1.76	0.156	17	0.78	0.01	10	2.5	20	0.8999402563	1.3150919897
94	0.1	5	10	617	50	34	1.84	0.152	16	0.84	0.01	11	2.5	50	0.6595692102	1.3145728613
51	0.1	10	2	536	16	4	0.32	0.002	26	0.09	0.01	9	2.5	250	0.054234309	0.6099120098
36	0.1	13	1	502	12	2	0.24	0.001	15	0.06	0.01	17	2.5	300	-0.005361169	0.2509458633
48	0.2	10	2	304	13	4	0.14	0.008	13	0.07	0.01	7	2.5	30	0.3910830151	0.9411426465
90	0.1	8	2	705	17	5	0.61	0.006	11	0.16	0.01	12	12	50	1.0551840475	0.8886849535
49	0.1	7	1	391	23	4	0.16	0.007	10	0.11	0.01	5	2.5	30	0.3295450822	1.0524280776
55	0.1	4	1	354	23	3	0.18	0.004	7	0.1	0.01	7	6	20	0.8952799865	1.071142214
66	0.1	5	1	688	48	6	0.66	0.038	6	0.41	0.02	16	2.5	150	0.4645071686	0.9322909414
58	0.6	12	2	475	14	3	0.21	0.002	34	0.07	0.01	5	29	210	0.5366490635	0.8602002997
22	0.3	13	1	557	13	3	0.2	0.001	37	0.05	0.01	11	9	230	0.3694641564	0.4518568725
50	0.1	5	3	458	33	17	2.52	0.183	11	2.04	0.07	8	2.5	40	1.1763238004	1.3360033415
105	0.2	6	7	424	30	24	2.23	0.058	9	4.73	0.01	8	2.5	50	1.1548340342	1.5943294889
43	0.1	11	9	305	46	29	1.37	0.21	13	0.98	0.14	14	2.5	30	1.2952942582	1.0257334652
35	0.1	12	7	300	53	22	1.47	0.201	12	0.86	0.13	15	2.5	20	1.0227573312	1.0043242685
57	0.3	6	5	336	40	28	11.12	0.094	16	0.55	0.05	2	10	240	0.3699832747	1.8001338485
68	0.1	7	8	364	45	34	8.51	0.126	18	0.67	0.06	12	2.5	330	0.041573567	1.0549142747
96	0.1	7	10	735	48	27	2.16	0.151	16	0.69	0.01	7	2.5	130	0.2396180729	1.42899661
82	0.1	8	9	573	47	30	1.71	0.134	13	0.73	0.02	16	2.5	100	0.3207046288	1.0838096297
77	0.1	7	9	413	44	23	1.31	0.175	15	0.41	0.01	21	2.5	380	0.593620481	1.018054327
61	0.1	7	8	410	57	20	1.76	0.168	14	0.53	0.01	6	2.5	800	0.3394151054	1.5661418887
96	0.1	9	11	497	31	30	1.32	0.162	18	0.4	0.01	9	2.5	60	0.9181315723	1.4880227871
66	0.1	7	8	724	42	20	2.03	0.136	16	0.28	0.01	16	2.5	100	0.6496531051	1.2342748328
47	0.1	4	3	495	95	16	2.17	0.063	3	0.6	0.06	3	2.5	20	1.5663986056	2.0457758214
46	0.1	2	3	519	105	16	2.12	0.065	4	0.53	0.07	7	2.5	10	1.9336875407	1.8380241869
65	0.1	11	7	404	57	30	2.97	0.089	17	0.75	0.05	7	2.5	20	0.448801656	1.3579545417
73	0.1	11	8	625	47	32	1.46	0.118	19	0.75	0.01	11	14	10	1.5315101932	1.128646513
107	0.1	8	10	689	53	38	1.63	0.181	15	0.88	0.01	5	2.5	50	0.8180156938	1.7633524949
100	0.1	8	11	597	52	33	1.29	0.177	17	0.65	0.01	3	2.5	160	0.4239669987	1.7667525416
110	0.1	7	10	650	52	40	1.61	0.181	13	0.85	0.07	9	2.5	30	0.9616114177	1.5144898234
111	0.1	7	11	628	51	43	1.36	0.188	14	0.82	0.08	5	2.5	20	1.0909334753	1.6786255994
109	0.1	9	11	592	41	47	1.65	0.194	17	0.91	0.11	6	2.5	20	1.3709334753	1.5905037923
92	0.1	6	11	488	37	48	1.7	0.198	14	0.78	0.14	18	2.5	10	1.6126952575	1.1609959827
68	0.1	8	8	308	62	4	1.81	0.128	7	0.55	0.01	3	2.5	40	0.2885501807	1.6867215935
57	0.1	10	8	439	61	3	1.95	0.129	9	0.55	0.01	3	2.5	30	0.3222499377	1.6704238802
27	0.1	11	5	214	95	23	1.72	0.179	12	1.96	0.01	10	2.5	20	1.5445101753	1.5461516101
15	0.1	9	2	167	73	12	1.35	0.073	7	0.89	0.01	6	2.5	10	1.2164747022	1.515568834
92	0.1	13	10	679	58	31	4.42	0.19	17	0.93	0.02	5	2.5	60	0.4611135324	1.6502320908
110	0.1	11	11	815	60	37	2.88	0.208	15	1.03	0.01	4	2.5	20	1.157880265	1.8165441554
90	0.1	9	8	632	40	19	1.95	0.127	14	0.55	0.01	18	2.5	20	1.1167314019	1.0939518445
63	0.1	9	6	381	24	15	1.01	0.093	13	0.51	0.01	17	2.5	30	0.8294263351	0.9299044062
69	0.2	12	8	461	31	33	0.67	0.115	16	0.62	0.09	3	2.5	10	1.0535862165	1.7208953803
59	0.1	8	5	423	26	21	0.71	0.078	14	0.48	0.09	23	2.5	20	0.7441155025	0.7203234357
72	0.1	10	6	386	27	28	0.95	0.089	15	0.55	0.08	4	2.5	20	0.9030945312	1.514615918
46	0.1	9	4	292	19	15	0.5	0.054	11	0.34	0.07	7	2.5	10	0.7926122849	1.1142909127
55	0.1	10	5	414	32	17	2.12	0.067	14	0.52	0.06	12	2.5	30	0.1333527762	0.9928197582
58	0.1	9	5	394	23	17	1.06	0.077	15	0.45	0.05	19	2.5	5	0.7597729509	0.8449796871
99	0.2	8	10	810	58	22	3.1	0.192	12	0.65	0.01	5	2.5	5	1.0169647184	1.72995893
98	0.1	9	9	900	57	29	3.7	0.196	12	0.72	0.02	18	2.5	5	1.0981765251	1.2191004184
75	0.1	6	7	1002	355	17	11.73	0.154	7	0.51	0.01	8	2.5	5	0.5728769221	1.9026797452
86	0.1	8	7	936	261	18	8.48	0.176	7	0.69	0.01	6	2.5	5	0.9447697284	1.9718230602
88	0.1	6	8	657	117	26	3.62	0.18	10	0.61	0.01	3	22	5	1.5207303169	2.004392694
95	0.1	8	9	528	46	32	1.76	0.178	11	0.56	0.01	6	53	10	1.6595578285	1.6307299625
89	0.2	8	8	500	40	31	1.23	0.193	13	0.45	0.01	4	25	5	1.575760511	1.7967832555
76	0.1	18	13	592	87	30	2.63	0.118	18	1.12	0.13	5	2.5	10	0.0315864132	1.6148300868
84	0.1	19	13	553	93	33	1.79	0.122	15	1.11	0.18	4	2.5	5	-0.000374300	1.8284284619
133	0.1	12	10	483	48	22	0.5	0.083	14	0.75	0.01	3	18	5	1.4474873956	1.8298735945
219	0.2	11	7	335	55	24	0.52	0.079	14	0.37	0.01	20	8	5	1.3836627526	1.3155276295
157	0.1	11	9	762	44	24	0.6	0.087	14	0.53	0.03	9	15	10	1.456138806	1.4198579906
110	0.1	10	10	585	32	33	1.89	0.138	19	0.71	0.01	21	10	10	1.5441985367	0.9259440219
65	0.2	8	8	482	37	23	1.39	0.108	12	0.6	0.01	6	5	30	1.0598383334	1.5211489212
73	0.2	9	7	417	39	23	1.96	0.099	13	0.55	0.01	8	28	50	1.4518577055	1.3067836308
85	0.1	10	9	411	22	36	1.03	0.11	21	0.66	0.12	9	2.5	70	0.9507838059	1.1925385885
82	0.1	12	9	394	20	32	0.81	0.098	23	0.63	0.12	4	2.5	40	0.7578926621	1.4054793086
69	0.1	10	7	391	31	27	1.09	0.088	16	0.55	0.07	17	2.5	50	0.786061089	0.9411163705
77	0.1	8	7	439	39	31	0.94	0.098	18	0.59	0.08	7	2.5	30	1.123882284	1.391473065
50	0.1	12	7	320	54	34	3.54	0.073	18	0.66	0.06	8	14	50	0.8086920533	1.2509653163
53	0.1	10	6	303	52	30	9.02	0.083	15	0.6	0.06	8	7	60	0.268786953	1.2354180979
52	0.1	8	5	324	29	21	1.15	0.083	13	0.43	0.04	7	2.5	10	0.7698490982	1.1526515888
64	0.1	9	6	352	55	23	1.14	0.086	14	0.51	0.03	8	2.5	70	0.8305897527	1.3496763489
111	0.1	12	11	595	33	40	1.73	0.134	20	0.81	0.08	14	2.5	60	1.0945101753	1.19425192
74	0.2	7	7	434	25	28	1.43	0.089	13	0.55	0.05	4	5	70	1.0322162987	1.6349176041
55	0.1	17	8	430	104	45	2.25	0.086	18	0.64	0.06	2	2.5	180	0.1089732405	1.9589891859
123	0.1	11	23	171	776	120	0.39	[illegible]								

ACME data from BONDAR CLEGG for FX (drill data) test

Sample ID	As	Ba	Ce	Fe	Hf	La	Na	Rb	Sb	Sc	Sm	Th	U	W	Mo	Cu	Pb
													ACME DATA				
FX-160946	0.5	1100	66	2.5	4	28	1.9	130	0.5	6.3	5.2	6	2.8	2	1	7	10
FX-160947	2	1200	71	2.8	5	31	2.1	130	1	7.3	5.4	6	2.1	1	1	9	10
FX-160966	4	1400	170	2.9	9	64	1.9	210	0.8	10	12	24	4.6	1	2	36	14
FX-160967	5	2100	220	5.1	9	100	0.8	330	0.8	17	16	20	4.3	1	2	52	31
FX-160986	8	2100	280	2.5	11	120	0.1	5	0.3	9.1	18	15	7.2	2	3	30	6
FX-160987	3	1000	210	2.2	9	87	0.1	5	0.3	10	13	13	6.1	1	3	14	12
FX-425019	3	590	61	0.8	7	32	1.2	180	0.9	1.6	3.5	33	5.7	1	1	5	37
FX-425039	4	1100	110	2.7	7	42	1.4	230	0.6	5.3	7.4	21	3.1	1	1	20	27
FX-425040	4	1200	100	2.5	9	46	1.5	200	0.5	4.9	7.8	22	2.9	1	1	25	18
FX-425079	4	1300	170	2.6	10	82	1.8	160	0.5	7.9	11	25	4.6	1	1	17	25
FX-425092	14	1500	130	6.6	6	58	1.5	83	0.4	19	10	19	4.4	1	1	55	16
FX-425093	6	1800	120	6.4	6	51	0.6	62	0.5	19	8.7	11	3.6	1	1	67	7
FX-425099	4	1200	100	6.5	5	48	0.52	38	0.3	19	8.4	8.7	3.3	1	1	60	9
FX-425100	5	920	120	6.3	6	51	0.67	27	0.2	20	9.1	10	3	1	1	59	8
FX-425117	6	1500	170	5.1	9	62	1.4	150	0.8	16	17	4.6	1.7	1	1	25	7
FX-425118	4	1700	160	5.1	11	62	1.3	160	0.5	15	18	5.4	2.1	1	1	22	6
FX-425119	4	1700	180	5.4	12	66	1.5	160	0.5	18	18	4.4	1.8	1	1	23	2
FX-425120	7	1200	200	6.2	11	74	1.4	140	0.9	21	20.1	3.6	1.8	1	2	27	6
FX-425140	18	1600	170	5.5	10	66	1.5	170	1.5	17	17	5.1	2	1	2	28	11
FX-425160	4	1700	150	4.9	9	60	1.6	160	0.6	15	14	4.9	1.6	1	1	25	8
FX-425179	3	760	89	1.4	7	36	0.31	210	0.6	2.6	4.6	35	5.4	1	1	10	52
FX-425180	4	280	73	0.6	6	31	0.11	180	0.7	1.8	3.7	35	4.3	3	1	2	99
FX-425189	25	1200	120	4.7	9	50	0.58	120	3.5	14	12	4	1.8	4	2	37	56
FX-425190	12	1800	160	5.6	11	65	1.1	190	1.2	16	16	5.2	2	1	1	29	10
FX-425195	12	1600	180	6.1	12	77	1.5	190	1.8	18	19	5.3	1.8	1	1	27	9
FX-425199	46	1300	170	5.8	10	74	1.2	210	8.2	15	16	5.4	2.5	3	1	28	37
FX-425200	30	1100	91	3.1	6	44	1.2	210	8.9	6.7	6.9	4.2	1.6	1	1	25	28
FX-425210	6	1600	180	2.4	8	81	0.19	150	0.6	6.5	10	21	3.9	3	1	11	21
FX-425211	0.5	1700	170	2.3	9	81	0.45	140	0.4	6.4	10	23	3.4	1	1	11	21
FX-425212	0.5	2100	180	2.4	10	85	1	140	0.6	5.4	11	24	4.1	1	1	15	23
FX-425216	3	1900	160	2.3	9	73	1.1	120	0.6	4.7	11	22	4.1	1	1	16	25
FX-425217	3	1800	150	2.6	9	75	1.4	130	0.6	5.5	10	22	4.3	1	1	19	12
FX-425218	2	1800	170	2.7	8	74	1.4	110	0.6	6.1	10	21	4.3	1	1	17	12
FX-425219	2	1600	140	3.2	9	72	1.3	130	0.6	6	10	21	4.1	1	1	21	10
FX-425220	2	1600	170	2.8	8	75	1.3	150	0.6	5.2	10	21	4.2	1	1	19	14
FX-425230	5	1800	140	6.2	9	55	1.7	120	0.4	17	14	2.3	1.2	1	1	28	2
FX-425231	5	1600	140	5.8	11	58	1.7	120	0.4	19	14	2	2.9	1	1	28	6
FX-425239	9	1000	210	7.3	10	80	1.6	110	1	26	19	2.6	1.7	1	1	34	6
FX-425241	13	1400	140	4.8	8	51	1.5	150	2.9	11	10	13	1.9	1	1	32	27
FX-425242	19	1400	150	4.6	10	60	1.4	160	3.5	12	12	16	2.5	3	1	30	18
FX-425259	12	1600	120	5	7	45	0.58	180	0.9	10	8.2	1.1	1.1	1	1	25	18
FX-425260	6	1800	120	4.7	8	48	1.2	130	0.6	12	9.5	1.1	2.8	1	1	30	13
FX-425273	4	650	200	2.9	5	92	1.2	230	1	5.8	10	30	2.5	1	2	41	10
FX-425274	4	850	150	2.5	8	72	1.2	240	0.8	6	8.7	19	2.8	3	1	21	11
FX-425275	8	960	210	4.7	14	92	1.3	230	1.4	16	15	34	4.1	4	2	38	20
FX-425276	6	990	290	2.5	9	130	1.5	220	1.5	6.2	15	39	3.7	2	2	34	15
FX-425279	7	1500	170	4.8	12	68	1.1	190	1.1	15	15	7.7	1.9	1	2	25	16
FX-425280	6	1600	150	4.6	11	59	1.2	190	1.2	14	15	5.9	1.7	1	1	23	10
FX-425299	2	1500	170	4.3	10	76	1.3	170	0.3	15	15	12	1.3	1	1	30	10
FX-425300	3	1400	130	4.3	8	52	1.5	170	0.5	16	13	6	1	1	1	28	10
FX-425319	1	1500	200	4.2	8	73	1.1	210	0.7	13	14	7.2	1.1	6	1	19	8
FX-425339	10	1400	120	4.2	9	54	1.8	180	0.6	17	11	5.8	0.9	1	1	28	9
FX-425340	6	1500	170	3.7	9	71	1.6	170	0.5	15	11	8.9	1	1	1	24	12
FX-425360	2	1500	160	4.3	10	69	1.4	160	0.2	10	11	8.4	1.4	1	1	19	10
FX-425379	4	1400	140	4.6	9	52	1.8	130	0.3	14	13	3.7	1.1	1	1	23	6
FX-425380	7	1500	170	5	10	65	1.1	160	0.4	17	14	6.9	1.4	1	1	24	16
FX-425399	125	1900	200	9.3	7	94	0.11	73	0.4	27	15	16	4.1	1	1	48	17
FX-425419	123	1300	140	8.9	7	66	0.08	74	0.7	28	12	12	3.4	1	1	88	10
FX-425420	83	1300	130	7.9	5	58	0.1	51	0.7	24	10	11	2.7	3	1	85	13
FX-425430	12	1100	97	3.1	5	40	1.3	150	2	7.6	7.4	10	1.6	1	1	16	7
FX-425431	14	1100	95	2.7	7	42	1.2	140	2.3	8	7.9	10	1.7	1	1	15	9
FX-425432	16	1300	97	2.6	6	39	1.2	160	2.4	6.6	8	10	1.8	1	1	16	4
FX-425439	9	1400	150	4.3	9	64	1.1	190	0.9	17	15	8	1.6	1	1	20	17
FX-425440	7	1500	160	3.8	10	67	1.4	200	0.7	12	13	11	1.3	4	1	21	8
FX-425459	6	1600	170	4.2	11	63	1.7	240	1.5	20	17	7.4	1.9	5	1	19	15
FX-425460	4	1500	160	4.3	9	64	1.6	170	1	16	16	6.3	1.7	4	1	18	13
FX-425479	8	50	56	1.6	7	29	1.8	230	1.4	1.6	3.1	33	6.4	3	2	25	26
FX-425480	7	50	60	1.7	6	28	1.7	260	1.1	1.4	3	33	6	1	2	25	26
FX-425499	5	50	75	1.7	6	28	2.2	250	1	2.1	4.6	32	5	3	4	21	29
FX-425500	5	50	140	1.9	8	60	1.7	380	1.1	2.5	6.3	77.3	13	1	3	20	41
FX-425505	4	50	70	1.3	6	30	1.9	290	1.1	2	4.6	33	6.1	1	2	16	32
FX-425506	4	50	72	1.1	7	28	2.3	230	1	1.9	4.5	34	6	3	4	12	46
FX-425507	4	1100	120	2	9	57	2.2	240	1.1	2.8	7.4	34	7.3	3	1	10	34
FX-425514	13	480	39	1.7	7	25	1.8	210	4.3	1.2	2.6	32	6.1	1	2	28	24
FX-425515	9	210	57	2	7	26	1.5	290	2.2	1.3	3	32	6.2	1	2	28	9
FX-425519	3	50	87	2	11	33	4.1	110	0.7	11	10	26	3	3	1	7	2
FX-425520	0.5	50	49	4.7	9	21	2.6	93	0.4	12	4.6	5.8	1.6	2	1	4	10
FX-425539	4	880	190	5	12	78	1.6	130	0.7	10	14	7.1	2.7	3	1	19	33
FX-425540	5	520	180	4.8	11	74	1.7	86	1.1	9.4	13	7.2	2.3	1	1	16	19
FX-425553	12	1000	89	2.9	6	39	1	110	1.6	7.2	7.6	7.3	1.4	1	1	17	17
FX-425554	14	1400	110	3.5	8	42	1.1	140	1.7	10	10	7.1	1.9	1	1	20	17
FX-425559	9	1400	150	3.9	8	58	1.3	210	1.4	13	15	7.9	1.5	6	1	21	7
FX-425560	6	1800	160	3.9	7	66	1.4	220	0.9	8.4	13	12	1.6	5	1	19	7
FX-425579	12	1400	180	3.9	10	67	1.7	160	0.8	14	14	7.2	1.9	1	1	20	16
FX-425580	8	970	190	4.1	9	71	1.5	140	0.8	15	14	8.2	1.7	3	1	19	14
FX-425599	59	1300	200	4.8	9	79	1.6	220	0.5	15	17	12	2	1	3	16	14
FX-425600	45	2400	160	3.6	9	68	1.6	180	0.8	14	14	10	2	1	3	14	10
FX-425619	2	1900	250	2.2	12	120	1.2	91	0.4	6.5	14	15	2.5	1	1	7	14
FX-425620	2	3500	260	2.1	13	120	1.4	120	0.3	6.3	14	15	2.1	1	1	5	8
FX-425625	10	1200	100	3.3	8	46	1.1	190	1.7	8.2	8.8	13	2.4	1	2	17	23
FX-425626	6	1700	85	3.9	8	33	1.4	180	0.8	10	7.4	5.4	1.9	3	1	24	12
FX-425639	5	1700	150	4.8	9	61	1.6	150	0.7	17	14	4.8	1.3	1	2	19	13
FX-425640	17	1600	130	5.2	9	52	1.4	180	1.2	15	13	3.4	1.4	1	1	22	16
FX-425648	3	1700	150	4.4	9	60	1.4	200	0.6	16	15	6	2	3	2	18	24
FX-425649	3	1800	160	5.2	10	63	1.1	180	0.7	16	15	6.9	1.8	1	2	24	46
FX-425659	4	1600	160	4.9	12	63	1.3	160	0.7	20	20.8	6.1	2.4	3	2	22	12
FX-425660	4	1600	170	5	12	69	1.3	210	0.5	23	20.3	5.8	2.4	1	2	23	9
FX-425679	8	1600	160	3.5	8	72	0.12	240	1.8	10	14	28	2.4	1	1	21	17
FX-425680	7	1500	150	3.7	8	59	0.1	190	1.9	9.2	12	22	2.2	1	2	27	32
FX-425699	5	110	230	2.3	13	99	4.5	60	0.6	13	17	31	1.3	1	1	6	9
FX-425700	3	50	120	0.9	9	50	5.36	46	0.5	7.5	8.6	33	1.1	1	1	4	11
FX-425719	7	1200	140	4.6	8	56	1.8	130	1.1	17	13	6.4	1.6	3	1	18	17
FX-425720	6	1400	160	5.1	10	63	1.9	130	0.6	18	14	6.9	1.4	1	1	21	21
FX-425739	3	830	250	4.1	10	110	1.2	210	0.6	9.4	16	34	1.9	1	1	18	19
FX-425740	2	1200	200	2.8	7	88	1.4	210	0.4	5.8	12	28	1.4	1	1	13	14
FX-425759	4	1200	160	3.3	8	73	1.5	240	0.5	10	12	35	2.1	1	1	19	18
FX-425760	3	1000	170	2.8	8	71	1.4	260	0.8	8.5	14	37	4	1	1	17	19
FX-425779	1	1100	170	3.3	7	73	1.4	200	0.4	8.5	13	33	2.3	2	1	17	14
FX-425780	2	1000	150	2.1	6	61	1.6	270	0.6	6.3	12	33	4	1	1	11	13
FX-425799	4	860	150	2.6	6	69	1.5	230	1.5	7	12	34	3.4	1	1	13	11
FX-425800	3	850	160	2.9	7	69	1.4	250	0.9	7.7	12	34	3.8	3	2	15	16
FX-425819	5	840	160	4.6	9	62	1.2	230	1	16	14	7.1	2	3	1	25	15
FX-425820	3	1400	170	4.6	10	64	1.5	210	1.1	17	16	8	1.6	2	1	15	12
FX-425835	6	890	110	3.3	6	40	0.82	150	1.1	12	10	4.2	1.3	5	1	13	15
FX-425836	3	2100	120	3.6	9	46	0.75	160	1.2	13	11	5	2	10	1	14	9
FX-425838	7	1500	120	3.8	8	53	1.1	200	1.4	13	13	5.2	2	7	2	18	15
FX-425839	9	1400	170	4.3	8	71	1.3	180	1.6	14	13	9.1	1.9	6	2	14	16
FX-425840	8	1800	150	4.1	8	58	1.7	190	1.4	16	13	5.6	1.3	7	2	20	11
FX-425851	5	970	87	3.7	4	38	2.6	150	1.6	9	6.1	9.3	1.9	1	1	18	11
FX-425852	5	1000	88	4	4	36	2.6	130	2.2	9.5	6.4	7.5	1.7	1	1	9	15
FX-425858	10	330	170	3.4	8	82	3.1	85	1.3	8.9	14	36	3.8	1	4	22	126
FX-425859	14	730	190	3.4	10	83	1.9	210	1.5	11	15	51.8	3.8	1	4	26	192
FX-425860	10	830	180	3.5	9	79	2	190	1.2	10	14	40	3.8	1	3	22	137
FX-425870	4	1300	160	4	9	77	1.3	220	0.7	8.4	11	13	1.6	4	3	32	46
FX-425879	3	1100	250	3.1	9	110	0.66	210	0.8	7.9	15	47	1.6	1	1	16	19
FX-425880	4	1100	250	3	10	110	0.74	160	1.6	6.8	16	57	1.7	3	1	23	21
FX-425899	1	1300	200	3.7	10	85	1.6	230	0.6	11	14	39	2.6	4	1	18	19
FX-425900	2	1200	190	3.6	8	80	1.5	200	0.6	10	14	40	2.5	4	1	26	14
FX-425919	1	1200	120	3.2	7	57	1.4	200	0.4	9.1	10	24	2	1	1	16	15
FX-425920	0.5	1100	130	3.5	8	59	1.5	230	0.3	10	11	26	1.9	1	1	20	9
FX-425930	8	1100	140	3.1	7	60	1.3	150	1.6	7.6	8	18	1.7	1	1	19	18
FX-425931	8	1000	140	3	5	67	1.2	160	1.5	7.7	9.1	22	1.8	1	1	20	11
FX-425939	1	1200	160	3	7	66	1.7	210	0.7	6.7	12	29	1.9	1	1	21	14
FX-425940	2	1300	150	2.7	9	65	1.3	180	0.6	7.5	12	31	2.2	1	1	15	22
FX-425959	2	1500	260	5.1	11	110	1.2	250	0.6	16	20.3	53	3.5	1	1	27	9
FX-425960	2	1200	180	3.3	8	70	1.4	260	0.5	9.4	13	35	2.4	1	1	16	11
FX-425972	10	1300	130	4.4	7	66	1.4	140	1.2	10	10	17	2.2	1	2	28	35
FX-425979	13	1500	250	5.1	10	110	0.67	74	0.3	11	20	18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]


E 270,000
E 272,000
E 274,000
E 276,000
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N 1,546,000
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N 1,542,000
N 1,540,000
N 1,538,000
N 1,536,000
N 1,534,000
N 1,532,000
N 1,530,000
GOLD CHAIN HILL
BLACK DYKE
RHY-BX HILL
ROADSIDE
RVC HOLE CONTAINING "MINERALIZED SAMPLE"
RVC HOLE CONTAINING BORDERLINE "MINERALIZED' SAMPLE
(802)18 ACNC DRILL HOLE (ADD 802 TO NUMBERS)
0 2000
FEET
AMERICAN COPPER & NICKEL COMAPNY, INC.
ROADSIDE PROPERTY
MOHAVE COUNTY, ARIZONA
DRILL HOLE LOCATIONS

24 and 43. None of the samples passed the test for "above mineralization."

Analysis of other multivariate data in the files will be completed in the future.

Two tests should be conducted on data using multivariate statistics. These tests will be more tightly constrained than the use of previous data allows. In both tests we will use our own pulps from the March, 1988 drilling. The first test will be designed to determine the chemical zoning associated with mineralization. Specifically, we will collect thirty samples from Precambrian granodiorite in the mineralized zone, thirty samples from barren Precambrian granodiorite well outside the mineralized zone and thirty samples from barren Precambrian granodiorite directly above the mineralized zone. These ninety samples will be sent to Bondar–Clegg for their gold + 33 element analysis. The data will be used to better understand geochemical processes within each subpopulation as well as in the entire data base. The subpopulations will also be compared mathematically in order to determine whether a derived function can uniquely discriminate between barren granodiorite immediately above potential ore and totally barren granodiorite.

Because of the low angle structures and discontinuous nature of mineralization it is necessary to develop a technique to try and determine whether gold mineralization is present below rocks with gold values which are either very low or below the detection limit.

The second test will be to compare mineralized rhyolite with unmineralized barren rhyolite to determine whether an exploration tool can be generated using the Tertiary rhyolites. Thirty samples will be collected from each subpopulation and will be compared as described above. If a viable tool is generated, then sampling exposed Tertiary rhyolite intrusions or rhyolite encountered in drill cuttings will give us a second means of determining potential mineralized targets.

GEOCHEMICAL TEST OF SAMPLE FINES:

Because of the loss of dust during drilling of dry rock and occasionally the loss of muddy water caused by decanting fluid from the sample barrel during drilling of rock below the water table, a test was set up to determine whether fine grained gold was being lost. Six dry samples and six wet samples were selected and the rejects sieved through a 100 mesh screen. These minus 100 mesh samples were analyzed by fire assay with an atomic absorption finish to compare with the initial samples. If these sieved samples were very much higher in gold (one order of magnitude or more) then it would be probable that fine grained gold was present in the fines and that it was being lost. This would appreciably lower the original assay by a factor related to the volume of fines lost per sample.

The results are summarized below:

Drill Hole #	interval	original gold assay (oz/ton)	−100 mesh fraction concentration gold assay (oz/ton)
88−RM−1	70−75	0.003	0.002 dry
	75−80	0.005	0.002 dry
	100−155	0.030	0.005 wet
	155−160	0.015	<0.001 wet
88−RM−5	195−200	0.007	0.002 wet
	200−205	0.024	0.004 wet
88−RM−7	185−190	0.008	<0.001 wet
	190−195	0.007	0.001 wet
88−RM−8	45−50	0.012	0.009 dry
	50−55	0.009	0.005 dry
88−RM−9	140−145	0.004	0.003 dry
	145−150	0.010	0.008 dry

The above results indicate that all the minus 100 mesh analyses were lower than the original total sample. The dry samples tend to be less depleted than the wet samples. These observations suggest several hypotheses; namely:

1. Gold is concentrated in a coarser fraction and there is very little in the fine fraction to loose.

2.The greater increase in apparent gold loss in wet samples may be caused by gold settling in the bucket before decanting.

Therefore, wet samples may be slightly enriched in the original values of gold over equivalent dry samples. The amount of enrichment will depend upon the size distribution of gold in each sample and the volume of fines which are lost. More detailed sampling will have to be done to better understand this process. However, it does not appear that we are losing a large percentage of fine gold.

PRELIMINARY SAMPLES IN ALTERED VOLCANICS:

Samples B–430 to B–438 were collected from various altered Tertiary volcanics near the Roadside Mine. Half of the samples contained detectable gold (Table 16) which is anomalous in the regional sense, because the detection limit is well above clarke. Once we can locate the earlier reconnaissance geochemistry on a map along with these samples, a better picture of anomalous areas will emerge.

GEOPHYSICS:

A complete VLF–EM study of the pediment should identify fractures and faults. Once we know which orientation of fracture and faults controls mineralization and which orientations offset mineralization, we can use the VLF data to help target favorable target areas (Map 10).

Magnetic lows suggest the presence of hematite alteration zones, which may be related to mineralization.

Table 16. 1988 reconnaissance samples from altered Tertiary volcanics

16-Mar-88

LAB JOB #: IVY02314

ATTN: Wm. Vanderwall

Client name: Ivy Minerals Inc.

No. Samples: 9
Date Received: 03-03-88
Submitted by: Pat O'Hara

Billing address: PO Box 9125 KS
Bullhead City, AZ 86430

Phone number: (602) 754-4481

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID IVY02314	Lab ID	FA/AA Au oz/ton	Au ppb
B-430	2314- 1	0.003	90
B-431	2314- 2	0.002	70
B-432	2314- 3	<.001	20
B-433	2314- 4	0.001	30
B-434	2314- 5	<.001	<10
B-435	2314- 6	<.001	<10
B-436	2314- 7	<.001	10
B-437	2314- 8	<.001	<10
B-438	2314- 9	<.001	<10

RESERVES:

Fourteen RVC drill holes by Ivy Minerals Inc. and Fischer–Watt Inc. intercepted mineralized rock (>0.01 oz/ton gold). There is a high degree of variance to the intercept thickness and grade. The average thickness of the fourteen major intercepts is 40 feet. As a preliminary estimate of tonnage and grade only simplistic averages were used. All estimates are minimum estimates because the mineralization is still open in several directions.

550'(average length) x 200'(average width) x 40'(average thickness) = 4.4m cu'

using an estimate of 1 cu' = 200lbs then

4.4m cu' x 200lbs/2000lbs(1ton) = 440,000 tons

The average grade of all the intercepts in the 14 holes is 0.024 oz/ton gold.

Using only the seven holes with intercepts >0.03 oz/ton gold

425'(av. length) x 100'(av. width) x 40'(av. thickness) = 1.7m cu'

1.7m cu' x 200 lbs/2000 lbs(1ton) = 170,000 tons

The average of all the intercepts in the 7 "ore" holes is 0.034oz/ton gold.

At the request of Ivy Minerals Inc., a more precise estimate of reserves was calculated using the polygon method. All the drill intercepts were projected to the surface map. Polygonal blocks were generated using angular bisectors. (Figure 43) The area of each polygon was calculated using the grid method. The area of the polygon was multiplied by the thickness of the intercept in order to calculate the volume. The

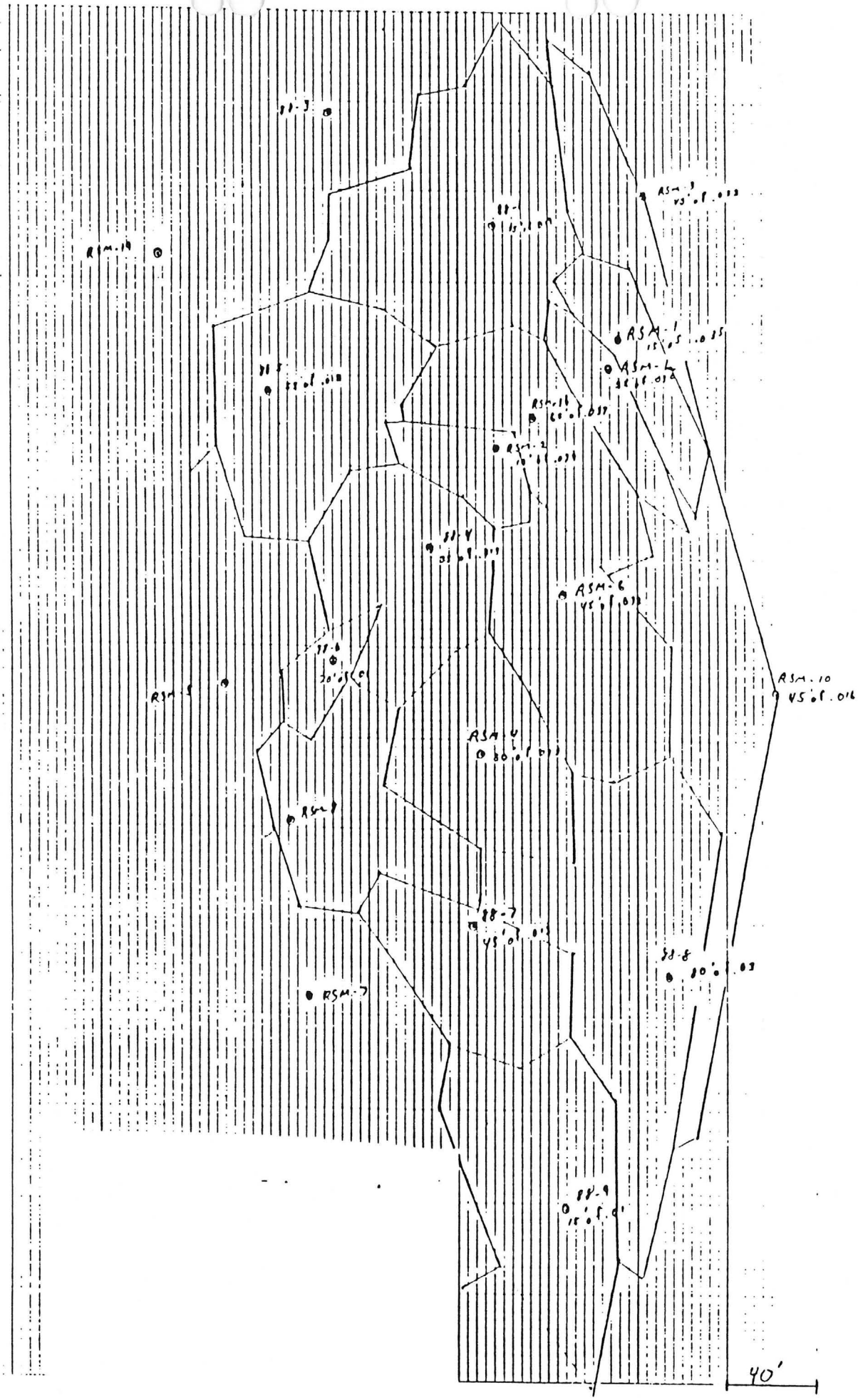

Figure 43. Polygonal blocks generated from RVC drill intercepts using angular bisectors at the Roadside Mine site.

2. Fischer–Watt Phase 1 RVC drill logs

Table 17. Tonnage and grade estimates for Gold Chain Hill

ROUGH ESTIMATE
TONNAGE + GRADE
GOLD CHAIN HILL

0.15=density fact
hem-qtz-cc

LOW GRADE ESTIMATE — 0.01 cutoff

HOLE	SQ FOOT	THICK.	CU FOOT	GRADE	T*G	TONNAGE
54	6200	200	1240000	0.013	2.6	186000
55	7000	70	490000	0.014	0.98	73500
56	8000	50	400000	0.01	0.5	60000
58	5500	90	495000	0.019	1.71	74250
59	10000	39	390000	0.01	0.39	58500
60	7300	31	226300	0.015	0.465	33945
61	8900	4	35600	0.012	0.048	5340
63	9000	137	1233000	0.01	1.37	184950
64	9400	21	197400	0.012	0.252	29610
66	7000	61	427000	0.01	0.61	64050
67	7900	60	474000	0.05	3	71100
68	7800	65	507000	0.013	0.845	76050
72	10000	75	750000	0.016	1.2	112500
73	10000	30	300000	0.015	0.45	45000
74	7300	45	328500	0.014	0.63	49275
84-5	10000	18	180000	0.017	0.306	27000
84-10	8000	81	648000	0.01	0.81	97200
84-6	8100	5	40500	0.02	0.1	6075
RSM-20	6200	160	992000	0.024	3.84	148800
RSM-16	1400	75	105000	0.018	1.35	15750
	TOTALS	1317			21.456	1418895

GRADE = 0.016291 OZS = 23116.02

HIGH GRADE ESTIMATE — 0.012 cutoff

HOLE	SQ FOOT	THICK.	CU FOOT	GRADE	T*G	TONNAGE
54	6200	90	558000	0.02	1.8	83700
55	7000	45	315000	0.017	0.765	47250
56	8000	20	160000	0.016	0.32	24000
58	5500	55	302500	0.027	1.485	45375
59	10000	18	180000	0.017	0.306	27000
60	7300	20	146000	0.021	0.42	21900
61	8900	4	35600	0.012	0.048	5340
63	9000	40	360000	0.017	0.68	54000
64	9400	21	197400	0.012	0.252	29610
66	7000	13	91000	0.04	0.52	13650
67	7900	35	276500	0.064	2.24	41475
68	7800	40	312000	0.017	0.68	46800
72	10000	40	400000	0.025	1	60000
73	10000	20	200000	0.016	0.32	30000
74	7300	10	73000	0.043	0.43	10950
84-5	10000	18	180000	0.017	0.306	27000
84-10	8000	18	144000	0.018	0.324	21600
84-6	8100	4	32400	0.02	0.08	4860
RSM-20	6200	160	992000	0.024	3.84	148800
RSM-16	1400	20	28000	0.026	0.52	4200
	TOTALS	691			16.336	747510

GRADE = 0.023641 OZS = 17671.95

volume was converted to tonnage by multiplying volume X 0.1 (specific gravity of 3.2 X 62.5/2000). The specific gravity of granite is approximately 2.7. Because of the variable presence of hematite (specific gravity of 5.2) as an alteration product, the specific gravity of the rock is assumed to be 3.2.

For each polygon, grade was multiplied by tonnage to derive an arbitrary integer. The sum of these values was divided by the total tonnage to derive the average grade. No site specific weightings were given to any of the data.

Therefore, preliminary indications are that the Roadside Mine site contains as minimum values between 440,000 tons of 0.024 oz/ton gold and 170,000 tons of 0.034 oz/ton gold. More precise estimates of reserves indicate that the Roadside mine site contains approximately 358,500 tons of 0.027 oz/ton gold.

Tonnage and grade (at different cut–offs) were estimated for the Gold Chain Hill target (Table 17).

POWER AND WATER SUPPLY:

Power is available at the mine site and water is available from wells at the mine site for drilling. The high level of the water table at the north end of the Roadside ore body could cause mining problems. Flash flooding along Katherine creek could also cause problems with mining operations unless potential drainage is diverted.

RAILHEAD AND SUPPLY POINTS:

Kingman, AZ is the nearest railhead and is located forty miles east of the mine site. Kingman, AZ, Bullhead City, AZ and Los Vegas, Nevada are the nearest supply points.

CONCLUSIONS AND RECOMMENDATIONS:

Favorable rock preparation for mineralized hydrothermal fluid flow exists along low angle faults and steeper dipping upper plate structures associated with detachment tectonics along the western front of the Black Range in Mohave County, Arizona. Intersection of the steeper dipping upper plate structures with the low angle "detachment fault" (Roadside Mine) generates high permeability for hydrothermal fluid flow. However, high angle east–west and northeast striking younger faults cut off mineralized rocks limiting tonnage at the Roadside prospect. Potential structural intersections on the Roadside lease associated with Gold Chain Hill, Black Dyke extension and numerous other targets remain to be explored.

At various targets throughout the property, hydrothermal alteration assemblages vary. Hematite bearing assemblages are present at most targets, but silicification, quartz veining, various carbonate minerals and carbonate veins are present locally. Preliminary trace element studies of mineralized alteration assemblages at the Roadside mine site indicate that classical trace element suites (As, Sb, Tl, Mo) used to target gold mineralization elsewhere in the western USA are not present in concentrations above detection limits. Although mercury is present in measurably concentrations, it is not associated with gold. Gold is associated with silver and copper. Using a 120 sample database including all rock types and alteration assemblages at the Roadside mine site suggests that gold is related to silver and inversely related to mercury and rubidium. The thirty sample subpopulation of mineralized rock demonstrates that gold is weakly inversely related to tungsten. This preliminary information suggests that unless very complex 3–dimensional zoning studies are completed, the Roadside "type" mineralization is best explored using gold analyses. Trace element data is not necessary. Trace element studies have not been initiated for any of the other types of mineralization on the property at this time. Discriminant analysis between subpopulations of the Roadside mine database reveals significant differences between trace element populations, but requires neutron activation to analyze specific elements and to reduce the detection limits of standard trace elements for use with this technique.

Biogeochemical analysis of plants on the pediment produced many anomalies. Secondary dispersion may be present. Therefore, a more detailed review of the data is necessary to determine drill targets.

Preliminary analysis of magnetic data and VLF–EM data suggests that mineralization may occur in magnetic lows and quiescent zones. Locally very small VLF crossovers are also present in or near the magnetic anomalies. More detailed filed data and mathematical reduction of the geophysical data is required to evaluate these techniques for targeting mineralization under the pediment cover.

REFERENCES:

Gardner, E.D., 1936, Gold Mining and Milling in the Black Mountains, Western Mohave County, AZ: U.S. Bureau of Mines Information Circular 6901, 59p.

Hillemeyer, Bud, 1983, unpublished report

Kirwin, Peter H., 1990, unpublished report

Kirwin, Peter H. and O'Hara, Patrick F., 1990, unpublished report

APPENDICES:

1. List of unpatented lode and association placer claims comprising the Roadside property
2. Fischer–Watt Phase 1 RVC drill logs
3. Fischer–Watt Phase 1 RVC drill results
4. Anaconda core drill logs + results (Phase 2)
5. Fischer–Watt Phase 3 RVC drill logs
6. Fischer–Watt Phase 3 RVC drill results
7. Ivy Minerals Assays of air track drill results
8. Drill logs of Ivy–88–Rm–# RVC holes
9. Graphical representation of drill logs
10. Drill assays of Ivy–88–RM–# RVC holes

11. ACNC 1989 RVC drill logs
12. ACNC 1989 RVC drill results
13. ACNC Feb.–March RVC drill logs
14. ACNC Feb.–March RVC drill results
15. ACNC Feb.–March RVC Drill data diagrams
16. ACNC Feb.–March graphical representation of drill data
17. ACNC May–June RVC drill logs
18. ACNC May–June RVC drill results
19. ACNC May–June RVC drill data diagrams
20. ACNC May–June graphical representation of drill data
21. ACNC May–June drill cross–sections
22. Duval geochemistry used in preliminary statistical analysis
23. Results of statistical analysis on Duval geochemistry
24. Report on statistical study of Roadside Mine data

Sincerely;

Pat O'Hara

1. List of unpatented lode and association placer claims comprising the Roadside property

List of Claims Comprising "Roadside" property.

ACNC CLAIMS SUMMARY

407 HOPEFULL ET AL MOHAVE COUNTY, ARIZONA OWNER: ONANON INC.

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
J&L	1	190433	894 702	12-15-82	
J&L	2	190444	894 704	12-15-82	
J&L	3	50835	279 996	06-25-79	
J&L	4	190445	894 705	12-15-82	
J&L	5	190446	894 707	12-15-82	
J&L	6	190447	894 709	12-15-82	
J&L	7	50839	279 1000	06-25-75	
AMENDED			555 130-131		
J&L	8	50840	280 1	06-25-75	
AMENDED			555 132-133		
J&L	9	50841	280 2	06-25-75	
AMENDED			555 134-135		
KATYDID	1	235415	1102 164-165	03-20-85	
KATYDID	2	235416	1102 166-167	03-20-85	
KATYDID	3	235417	1102 168-169	03-20-85	
KATYDID	4	235418	1102 170-171	03-20-85	
KATYDID	5	235419	1102 172-173	03-20-85	
KATYDID	6	235420	1102 174-175	03-20-85	
KATYDID	7	235421	1102 176-177	03-20-85	
KATYDID	8	235422	1102 178-179	03-20-85	
KATYDID	9	235423	1102 180-181	03-20-85	
KATYDID	10	160112	788 305-306	02-15-82	
KATYDID	11	160113	788 307-308	02-15-82	
KATYDID	12	160114	788 309-310	02-15-82	
KATYDID	13	190448	897 779-780	01-07-83	
KATYDID	14	190449	897 781-782	01-07-83	
KATYDID	15	190450	897 783-784	01-07-83	
GOLD SLAB	1	50855	6P 133	04-23-69	
AMENDED			555 158-159		
GOLD SLAB	2	50856	6P 380	05-05-69	
AMENDED			555 160-161		
GOLD SLAB	3	50857	6P 381	05-05-69	
AMENDED			555 162-163		
GOLD SLAB	4	50858	6P 382	05-05-69	
AMENDED			555 164-165		
GOLD SLAB	5	50859	6P 383	05-05-69	
AMENDED			555 166-167		
GOLD SLAB	6	241825	1130 757-758	05-05-69	
GOLD SLAB	7	194608	914 287-288		
GOLD SLAB	8	194609	914 289-290		
GOLD SLAB	9	194610	914 291-292		
ROADSIDE EXTENSION	1	192731	911 620-621	03-15-83	
ROADSIDE EXTENSION	2	192732	911 622-623	03-15-83	
ROADSIDE EXTENSION	3	192733	911 624-625	03-15-83	
ROADSIDE EXTENSION	4	192734	911 626-627	03-15-83	
ROADSIDE EXTENSION	5	192735	911 628-629	03-17-83	
ROADSIDE EXTENSION	6	192736	911 630-631	03-17-83	
ROADSIDE EXTENSION	7	267798	1307 278-279	04-02-87	

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
ROADSIDE EXTENSION	8	192737	911 632-633	03-17-83	
ROADSIDE EXTENSION	9	192738	911 634-635	03-17-83	
ROADSIDE EXTENSION	10	192739	911 636-637	01-07-83	
ROADSIDE EXTENSION	11	192740	911 638-639	01-07-83	
ROADSIDE EXTENSION	12	192741	911 640-641	01-15-83	
ROADSIDE EXTENSION	13	192742	911 642-643	01-15-83	
ROADSIDE EXTENSION	14	192743	911 644-645	01-15-83	
ROADSIDE EXTENSION	15	192744	911 646-647	01-15-83	
ROADSIDE EXTENSION	16	192745	911 648-649	01-15-83	
ROADSIDE EXTENSION	17	192746	911 650-651	01-15-83	
ROADSIDE EXTENSION	18	192747	911 652-653	01-15-83	
ROADSIDE EXTENSION	19	192748	911 654-655	03-15-83	
ROADSIDE EXTENSION	20	192749	911 656-657	03-15-83	
ROADSIDE EXTENSION	21	192750	911 658-659	03-15-83	
ROADSIDE EXTENSION	22	192751	911 660-661	03-15-83	
ROADSIDE EXTENSION	23	192752	911 662-663	03-17-83	
ROADSIDE EXTENSION	24	192753	911 664-665	03-17-83	
ROADSIDE EXTENSION	25	192754	911 666-667	03-17-83	
ROADSIDE EXTENSION	26	192755	911 668-669	03-17-83	
ROADSIDE EXTENSION	27	192756	911 670-671	03-17-83	
ROADSIDE EXTENSION	28	192757	911 672-673	03-15-83	
ROADSIDE EXTENSION	29	192758	911 674-675	03-15-83	
ROADSIDE EXTENSION	33	261563	1261 892-893	10-28-86	
ROADSIDE EXTENSION	34	261564	1261 894-895	10-28-86	
ROADSIDE EXTENSION	35	261565	1261 896-897	10-28-86	
ROADSIDE EXTENSION	36	261566	1261 898-899	10-28-86	
ROADSIDE EXTENSION	37	261567	1261 900-901	10-28-86	
ROADSIDE EXTENSION	38	261568	1261 902-903	10-28-86	
AGIE	4	50861	6E 105	12-05-66	
AMENDED			555 168-169		
AGIE	5	190439	897 771-772	01-07-83	
AGIE	6	190440	897 773-774	01-07-83	
AGIE	7	190441	897 775-776	01-07-83	
AGIE	8	190442	897 777-778	01-07-83	
ABNER A	A	111676	657 396-397	08-26-80	
ABNER	2	50922	555 201-202	03-28-68	
ABNER	3	50862	6N 231-232	01-20-69	
AMENDED			555 172-173		
ABNER	4	50863	6N 233-234	01-20-69	
AMENDED			555 174-175		
ABNER	5	50864	6N 235-236	01-20-69	
AMENDED			555 176-177		
ABNER	6	50865	6N 237-238	01-20-69	
AMENDED			555 178-179		
ABNER	7	50866	6N 239-240	01-20-69	
AMENDED			555 180-181		
ABNER	8	100717	617 401-402	03-17-80	
ABNER	9	100718	617 403-404	03-17-80	
ABNER	10	111677	657 398-399	08-26-80	
ABNER	11	111678	657 400-401	08-26-80	
ABNER	12	111679	657 402-403	08-26-80	
ABNER	13	190454	897 769-770	01-07-83	

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
POCO LOCO	1	50846	6T 38	02-05-70	
AMENDED			555 140-141		
POCO LOCO	2	50847	6T 39	02-05-70	
AMENDED			555 142-143		
POCO LOCO	3	50848	6T 40	02-05-70	
AMENDED			555 144-145		
POCO LOCO	4	50849	6T 104	03-02-70	
AMENDED			555 146-147		
POCO LOCO	5	50850	6T 105	03-02-70	
AMENDED			555 148-149		
POCO LOCO	6	50851	6T 106	03-02-70	
AMENDED			555 150-151		
POCO LOCO	7	50852	6W 218	11-27-71	
AMENDED			555 152-153		
POCO LOCO	8	50853	6W 219	11-27-71	
AMENDED			555 154-155		
POCO LOCO	9	50854	6W 220	11-27-71	
AMENDED			555 156-157		
POCO LOCO	10	190452	897 787-788	01-07-83	
POCO LOCO	11	190818	898 788-789	01-13-83	
ANTHONY	3	73220	567 482-483	12-10-66	
ANTHONY	4	73221	567 484-485	12-05-66	
ANTHONY	5	73222	567 486-487	12-08-66	
ANTHONY	6	73223	567 488-489	12-09-66	
ANTHONY	7	73224	567 490-491	12-05-66	
ANTHONY	8	73225	567 492-493	12-09-66	
CHARLOTTE	3	50881	6-E 96	12-10-66	
AMENDED			558 702-803		
CHARLOTTE	4	50882	6-E 225	12-05-66	
AMENDED			558 704-705		
CHARLOTTE	7	50883	6-E 97	12-06-66	
AMENDED			558 706-707		
CHARLOTTE	8	50884	6-E 98	12-05-66	
AMENDED			558 708-709		
DESERT MINE	2	73226	6-G 231	09-27-67	
AMENDED			6-J 218-219		
AMMENDED			567 494-495		
DESERT MINE	3	73227	6-G 232	09-27-67	
AMENDED			567 496-497		
DESERT MINE	4	73228	6-J 1	04-22-68	
AMENDED			6-J 220-221		
AMENDED			567 498-499		
DESERT MINE	5	73229	6-J 2	04-22-68	
AMENDED			567 500-501		
DESERT MINE	8	186362	873 543	08-10-82	
KAREN	4	50890	6-E 221	01-06-67	
AMENDED			6-J 183-184		
AMENDED			558 720-721		
KAREN	8	50891	6-E 222	01-12-66	
AMENDED			558 722-723		
LUCKY	1	50873	6-E 90	12-05-66	
AMENDED			558 686-687		

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
LUCKY	2	50874	6-E 91	12-08-66	
AMENDED			558 688-689		
LUCKY	3	50875	6-E 92	12-10-66	
AMENDED			558 690-691		
LUCKY	4	50876	6-E 219	12-09-66	
AMENDED			558 692-693		
LUCKY	5	50877	6-E 93	12-06-66	
AMENDED			558 694-695		
LUCKY	6	50878	6-E 94	12-10-66	
AMENDED			558 696-697		
LUCKY	7	50879	6-E 95	12-09-66	
AMENDED			558 698-699		
LUCKY	8	50880	6-E 220	12-09-66	
AMENDED			6-J 181-182		
AMENDED			558 700-701		
ODD BALL	1	50885	6-E 215	04-16-69	
AMENDED			558 710-711		
ODD BALL	2	50886	6-E 104	12-10-66	
AMENDED			558 712-713		
ODD BALL	3	50887	6-E 216	04-16-69	
AMENDED			558 714-715		
ODD BALL	7	50888	6-E 217	01-04-67	
AMENDED			558 716-717		
ODD BALL	8	50889	6-E 218	01-04-67	
AMENDED			558 718-719		
K	1	126615	693 120-121	02-01-81	
K	2	126616	693 122-123	02-01-81	
K	3	126617	693 124-125	02-01-81	
K	4	126618	693 126-127	02-01-81	
K	5	126619	693 128-129	02-01-81	
K	6	126620	693 130-131	02-01-81	
K	7	126621	693 132-133	02-01-81	
K	8	126622	693 134-135	02-01-81	
K	9	126623	693 136-137	02-01-81	
K	10	126624	693 138-139	02-01-81	
K	11	126625	693 140-141	02-01-81	
K	12	126626	693 142-143	02-01-81	
TIN LIZZIE		111680	657 404-405	08-29-80	
TIN TANK	1	111681	657 406-407	08-27-80	
TIN TANK	2	111682	657 408-409	08-27-80	
TIN TANK	3	111683	657 410-411	08-27-80	
TIN TANK	4	111684	657 412-413	08-27-80	
TIN TANK	5	111685	657 414-415	08-28-80	
TIN TANK	6	111686	657 416-417	08-28-80	
CRAZY	A	100715	617 397-398	03-17-80	
CRAZY	B	100716	617 399-400	03-17-80	
CRAZY STICK	2	50868	6-O 249	04-16-69	
AMENDED			555 182-183		
CRAZY STICK	3	50869	6-O 250	04-16-69	
AMENDED			555 184-185		
CRAZY STICK	4	50870	6-O 251	04-16-69	
AMENDED			555 186-187		

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
CRAZY STICK	5	50871	6-0 252	04-16-69	
AMENDED			555 188-189		
CRAZY STICK	6	50872	6-0 253	04-16-69	
AMENDED			555 190-191		
LOCO	1	50842	22 175	04-17-72	
AMENDED			555 136		
LOCO	2	50843	22 176	04-17-72	
AMENDED			555 137		
LOCO	3	50844	22 177	04-17-72	
AMENDED			555 138		
LOCO	4	50845	22 178	01-07-83	
AMENDED			555 139		
LOCO	5	190451	897 785-786	04-17-72	
HOPEFUL	1	199775	937 475-476	04-11-83	
HOPEFUL	2	199776	937 477-478	04-11-83	
HOPEFUL	3	199777	937 479-480	04-11-83	
HOPEFUL	4	199778	937 481-482	04-11-83	
HOPEFUL	5	199779	937 483-484	04-11-83	
HOPEFUL	6	199780	937 485-486	04-11-83	
HOPEFUL	7	199781	937 487-488	04-11-83	
HOPEFUL	8	199782	937 489-490	04-11-83	
HOPEFUL	9	199783	937 491-492	04-11-83	
HOPEFUL	10	199784	937 493-494	04-11-83	
HOPEFUL	11	199785	937 495-496	04-11-83	
HOPEFUL	12	199786	937 497-498	04-11-83	
HOPEFUL	13	199787	937 499-500	04-11-83	
HOPEFUL	14	199788	937 501-502	04-11-83	
HOPEFUL	15	199789	937 503-504	04-11-83	
HOPEFUL	16	199790	937 505-506	04-11-83	
HOPEFUL	17	199791	937 507-508	04-11-83	
HOPEFUL	18	199792	937 509-510	04-11-83	
HOPEFUL	19	199793	937 511-512	04-11-83	
HOPEFUL	20	199794	937 513-514	04-11-83	
HOPEFUL	21	199795	937 515-516	04-11-83	
HOPEFUL	22	199796	937 517-518	04-11-83	
HOPEFUL	23	199797	937 519-520	04-11-83	
HOPEFUL	24	199798	937 521-522	04-11-83	
HOPEFUL	25	199799	937 523-524	04-11-83	
HOPEFUL	26	199800	937 525-526	04-11-83	
HOPEFUL	27	199801	937 527-528	04-11-83	
HOPEFUL	28	199802	937 529-530	04-11-83	
HOPEFUL	29	199803	937 531-532	04-11-83	
HOPEFUL	32	199804	937 533-534	04-11-83	
HOPEFUL	33	199805	937 535-536	04-11-83	
HOPEFUL	34	199806	937 537-538	04-11-83	
HOPEFUL	35	199807	937 539-540	04-11-83	
HOPEFUL	37	199808	937 541-542	04-11-83	
HOPEFUL	38	199809	937 543-544	04-11-83	
HOPEFUL	39	199810	937 545-546	04-11-83	
HOPEFUL	40	199811	937 547-548	04-11-83	
HOPEFUL	41	199812	937 549-550	04-11-83	
HOPEFUL	42	199813	937 551-552	04-11-83	

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
HOPEFUL	43	199814	937 553-554	04-11-83	
HOPEFUL	44	199815	937 555-556	04-11-83	
HOPEFUL	45	199816	937 557-558	04-11-83	
HOPEFUL	46	199817	937 559-560	04-11-83	
HOPEFUL	47	199818	937 561-562	04-11-83	
HOPEFUL	48	199819	937 563-564	04-11-83	
HOPEFUL	49	199820	937 565-566	04-11-83	
HOPEFUL	50	199821	937 567-568	04-11-83	
HOPEFUL	51	199822	937 569-570	04-11-83	
HOPEFUL	52	199823	937 571-572	04-11-83	
HOPEFUL	53	199824	937 573-574	04-11-83	
HOPEFUL	54	199825	937 575-576	04-11-83	
HOPEFUL	55	199826	937 577-578	04-11-83	
HOPEFUL	56	199827	937 579-580	04-11-83	
HOPEFUL	57	199828	937 581-582	04-11-83	
HOPEFUL	58	199829	937 583-584	04-11-83	
HOPEFUL	59	199830	937 585-586	04-11-83	
HOPEFUL	60	199831	937 587-588	04-11-83	
HOPEFUL	61	199832	937 589-590	04-11-83	
HOPEFUL	62	199833	937 591-592	04-11-83	
HOPEFUL	63	199834	937 593-594	04-11-83	
HOPEFUL	64	199835	937 595-596	04-11-83	
HOPEFUL	65	199836	937 597-598	04-11-83	
HOPEFUL	66	199837	937 599-600	04-11-83	
HOPEFUL	67	199838	937 601-602	04-11-83	
HOPEFUL	68	199839	937 603-604	04-11-83	
HOPEFUL	69	199840	937 605-606	04-11-83	
HOPEFUL	70	199841	937 607-608	04-11-83	
HOPEFUL	71	199842	937 609-610	04-12-83	
HOPEFUL	72	199843	937 611-612	04-12-83	
HOPEFUL	73	199844	937 613-614	04-12-83	
HOPEFUL	74	199845	937 615-616	04-12-83	
HOPEFUL	75	199846	937 617-618	04-12-83	
HOPEFUL	76	199847	937 619-620	04-12-83	
HOPEFUL	77	199848	937 621-622	04-12-83	
HOPEFUL	78	199849	937 623-624	04-12-83	
HOPEFUL	79	199850	937 625-626	04-12-83	
HOPEFUL	80	199851	937 627-628	04-12-83	
HOPEFUL	81	199852	937 629-630	04-11-83	
HOPEFUL	82	199853	937 631-632	04-11-83	
HOPEFUL	83	199854	937 633-634	04-11-83	
HOPEFUL	84	199855	937 635-636	04-11-83	
HOPEFUL	85	199856	937 637-638	04-11-83	
HOPEFUL	86	199857	937 639-640	04-11-83	
HOPEFUL	87	199858	937 641-642	04-11-83	
HOPEFUL	88	199859	937 643-644	04-11-83	
HOPEFUL	89	199860	937 645-646	04-11-83	
HOPEFUL	90	199861	937 647-648	04-11-83	
HOPEFUL	91	199862	937 649-650	04-11-83	
HOPEFUL	92	199863	937 651-652	04-11-83	
HOPEFUL	93	199864	937 653-654	04-11-83	
HOPEFUL	94	199865	937 655-656	04-11-83	

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
HOPEFUL	95	199866	937 657-658	04-11-83	
HOPEFUL	96	199867	937 659-660	04-11-83	
HOPEFUL	97	199868	937 661-662	04-11-83	
HOPEFUL	98	199869	937 663-664	04-11-83	
HOPEFUL	99	199870	937 665-666	04-11-83	
HOPEFUL	100	199871	937 667-668	04-11-83	
HOPEFUL	101	199872	937 669-670	04-11-83	
HOPEFUL	102	199873	937 671-672	04-12-83	
HOPEFUL	103	199874	937 673-674	04-12-83	
HOPEFUL	104	199875	937 675-676	04-12-83	
HOPEFUL	105	199876	937 677-678	04-12-83	
HOPEFUL	106	199877	937 679-680	04-12-83	
HOPEFUL	107	199878	937 681-682	04-12-83	
HOPEFUL	108	199879	937 683-684	04-12-83	
HOPEFUL	109	199880	937 685-686	04-12-83	
HOPEFUL	110	199881	937 687-688	04-12-83	
HOPEFUL	112	199882	937 689-690	04-12-83	
HOPEFUL	113	199883	937 691-692	04-12-83	
HOPEFUL	114	199884	937 693-694	04-12-83	
HOPEFUL	115	199885	937 695-696	04-12-83	
HOPEFUL	116	199886	937 697-698	04-12-83	
HOPEFUL	117	199887	937 699-700	04-12-83	
HOPEFUL	118	199888	937 701-702	04-12-83	
HOPEFUL	119	199889	937 703-704	04-12-83	
HOPEFUL	120	199890	937 705-706	04-14-83	
HOPEFUL	121	199891	937 707-708	04-14-83	
HOPEFUL	122	199892	937 709-710	04-14-83	
HOPEFUL	123	199893	937 711-712	04-14-83	
HOPEFUL	124	199894	937 713-714	04-14-83	
HOPEFUL	125	199895	937 715-716	04-14-83	
HOPEFUL	126	199896	937 717-718	04-14-83	
HOPEFUL	127	199897	937 719-720	04-14-83	
HOPEFUL	128	199898	937 721-722	04-14-83	
HOPEFUL	129	199899	937 723-724	04-14-83	
HOPEFUL	130	199900	937 725-726	04-14-83	
HOPEFUL	131	199901	937 727-728	04-14-83	
HOPEFUL	132	199902	937 729-730	04-14-83	
HOPEFUL	133	199903	937 731-732	04-14-83	
HOPEFUL	134	199904	937 733-734	04-14-83	
HOPEFUL	135	199905	937 735-736	04-14-83	
HOPEFUL	136	199906	937 737-738	04-14-83	
HOPEFUL	137	199907	937 739-740	04-14-83	
HOPEFUL	138	199908	937 741-742	04-14-83	
HOPEFUL	139	199909	937 743-744	04-14-83	
HOPEFUL	140	199910	937 745-746	04-14-83	
HOPEFUL	141	199911	937 747-748	04-14-83	
HOPEFUL	142	199912	937 749-750	04-14-83	
HOPEFUL	143	199913	937 751-752	04-14-83	
HOPEFUL	144	199914	937 753-754	04-14-83	
HOPEFUL	145	199915	937 755-756	04-14-83	
FLAPDRAGON	3	50926	6-P 392	06-01-69	
AMENDED			558 774		

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE		LOCATION DATE	LOCATION 1\4 S \ T \ R
FLAPDRAGON	4	50927	6-P	393	06-01-69	
AMENDED			558	774		
OCCULT	1	50929	6-P	384	06-01-69	
AMENDED			558	206		
OCCULT	2	50930	6-P	385	06-01-69	
AMENDED			558	774		
OCCULT	3	50931	6-P	386	06-01-69	
AMENDED			558	774		
OCCULT	4	50932	6-P	387	06-01-69	
AMENDED			558	774		
OCCULT	5	50933	6-P	388	06-01-69	
AMENDED			558	774		
TRACY	1	50924	6-N	216	01-15-69	
AMENDED			555	207		
TRACY	2	50925	6-N	217	01-15-69	
AMENDED			555	208		
TRACY	3	73242	6-N	218	01-15-69	
AMENDED			574	19-20		
TRACY	4	73243	6-N	219	01-15-69	
AMENDED			574	21-22		
TRACY	5	73244	6-N	220	01-15-69	
AMENDED			574	23-24		
GLADYS	4	50938	6-N	212	01-10-69	
AMENDED			558	775		
GLADYS	5	50939	6-N	213	01-10-69	
AMENDED			558	775		
GLADYS	6	50940	6-N	214	01-10-69	
AMENDED			558	776		
ZEKE	5	50917	6-E	361	01-06-67	
AMENDED			558	766-767		
AMENDED			6-J	201-202		
ZEKE	6	50918	6-E	362	01-06-67	
AMENDED			558	768-769		
AMENDED			6J	203-204		
ZEKE	7	50919	6-E	363	01-06-67	
AMENDED			558	770-771		
AMENDED			6J	205-206		
ZEKE	8	50920	6-E	364	01-06-67	
AMENDED			558	772-773		
AMENDED			6J	207-208		
W AND P	6	73231	6-R	323	10-29-69	
AMENDED			574	6		
W AND P	7	73232	6-R	324	10-29-69	
AMENDED			574	6		
P AND W	2	73233	6-R	315	10-28-69	
AMENDED			574	9-10		
P AND W	3	73234	6-R	316	10-28-69	
AMENDED			574	6		
P AND W	4	73235	6-R	317	10-28-69	
AMENDED			574	6		
P AND W	5	73236	6-R	319	10-29-69	
AMENDED			574	6		

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
P AND W	6	73237	6-R 320	10-29-69	
AMENDED			574 6		
ELLEN	1	50892	6-E 194	01-02-67	
AMENDED			558 724-725		
ELLEN	2	50893	6-E 195	01-02-67	
AMENDED			558 726-727		
ELLEN	3	50894	6-E 196	01-03-67	
AMENDED			558 728-728		
ELLEN	4	50895	6-E 197	01-03-67	
AMENDED			558 730-731		
ELLEN	5	50896	6-E 198	01-03-67	
AMENDED			558 732-733		
ELLEN	6	50897	6-E 199	01-02-67	
AMENDED			558 734-735		
ELLEN	7	50898	6-E 200	01-02-67	
AMENDED			558 736-737		
ELLEN	8	50899	6-E 201	01-02-67	
AMENDED			558 738-739		
ROSE	1	50900	6-E 207	01-04-67	
AMENDED			558 740-741		
ROSE	2	50901	6-E 208	01-04-67	
AMENDED			558 742-743		
ROSE	3	50902	6-E 209	01-04-67	
AMENDED			558 744-745		
ROSE	4	50903	6-E 210	01-04-67	
AMENDED			558 746-747		
ROSE	5	50904	6-E 211	01-04-67	
AMENDED			558 748-749		
ROSE	6	50905	6-E 212	01-04-67	
AMENDED			558 750-751		
AMENDED			6J 191-192		
ROSE	7	50906	6-E 213	01-04-67	
AMENDED			558 752-753		
ROSE	8	50907	6-E 213	01-04-67	
AMENDED			558 754-755		
SUE	1	50908	6-E 202	01-03-67	
AMENDED			558 756-757		
SUE	2	50909	6-E 203	01-03-67	
AMENDED			558 758-759		
SUE	3	50910	6-E 204	01-03-67	
AMENDED			558 760-761		
SUE	4	50911	6-E 205	01-03-67	
AMENDED			558 762-763		
SUE	5	50912	6-E 206	01-03-67	
AMENDED			558 764-765		
HOPEFUL		101964	626 269-270	04-16-80	
HOPEFUL	2	110320	645 436-437	03-08-84	
HOPEFUL	3	217926	1004 833-834	03-08-84	
HOPEFUL	4	110322	645 440-441	03-08-84	
HOPEFUL	5	110323	645 442-443	03-08-84	
HOPEFUL	6	217927	1004 835-836	03-08-84	
HOPEFUL	7	217928	1004 837-838	03-08-84	

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
HOPEFUL	8	217929	1004 839-840	03-08-84	
SPUNKY	1	110318	651 380-381	03-1283	
SPUNKY	2	110319	651 382-383	03-1283	
SPUNKY	3	157636	781 941-942	03-1283	
SPUNKY	4	194604	909 978-979	03-1283	
SPUNKY	5	194605	909 980-981	03-1283	
SPUNKY	6	194606	909 982-983	03-1283	
SPUNKY	7	194607	916 620-621	04-01-83	
SPUNKY	8	246617	1165 602-603	12-01-85	
SPUNKY	9	246618	1165 604-605	12-01-85	
SPUNKY	10	246619	1165 606-607	12-01-85	
SPUNKY	11	246620	1165 608-609	12-01-85	
GEM TRAC		107690	637 214-215	06-02-80	
GOLDEN GATE		107688	637 210-211	06-02-80	
HIGHLAND SURPRISE	1	107685	637 216-217	06-02-80	
HIGHLAND SURPRISE	2	107686	637 218-219	06-02-80	
MEXICAN HAT		107687	637 208-209	06-02-80	
YELLOW ASTER		107689	637 212-213	06-02-80	
KD	1	199205	923 199-200	04-15-83	
KD	2	199206	923 201-202	04-15-83	
KD	3	199207	923 203-204	04-15-83	
KD	4	199208	923 205-206	04-15-83	
KD	5	199209	923 207-208	04-15-83	
KD	6	199210	923 209-210	04-15-83	
KD	7	199211	923 211-212	04-15-83	
KD	8	199212	923 213-214	04-15-83	
KD	9	199213	923 215-216	04-15-83	
KD	10	199214	923 217-218	04-15-83	
KD	11	199215	923 219-220	04-15-83	
KD	12	199216	923 221-222	04-15-83	
KD	13	199217	923 223-224	04-15-83	
KD	14	199218	923 225-226	04-15-83	
KD	15	199219	923 227-228	04-15-83	
KD	16	199220	923 229-230	04-15-83	
KD	17	199221	923 231-323	04-15-83	
KD	18	199222	923 233-234	04-15-83	
KD	19	199223	923 235-236	04-15-83	
KD	20	199224	923 237-238	04-15-83	
KD	21	199225	923 239-240	04-15-83	
T	1	199201	936 205-206	06-08-83	
T	2	199202	936 207-208	06-08-83	
T	3	199203	936 209-210	06-08-83	
T	4	199204	923 211-212	06-08-83	
ROUGE		193912	911 773-774	03-22-83	
ANDY	1	299280			
ANDY	2	299281			
116-F		299282			
ANDY	3	299948	1614 515-516	10-13-89	
ANDY	4	299949	1614 517-518	10-13-89	
ANDY	5	299950	1614 519-520	10-14-89	
ANDY	6	299951	1614 521-522	10-17-89	
ANDY	7	299952	1614 523-524	10-17-89	

CLAIM NAME	CLAIM NO.	BLM SERIAL # A MC	MOHAVE CTY BOOK\PAGE	LOCATION DATE	LOCATION 1\4 S \ T \ R
109-F		299953	1614 525-526	10-15-89	
BIRD-F		299954	1614 527-528	10-17-89	

Fischer-Watt Mining Co. Inc.

PAGE 1-1

PROJECT: Roadside Mine DDH # 1 BEARING: _____ DIP: _____ TD: 200'

LOGGED BY: B. Hillemeyer DATE: 7/10 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (-20, 20-40, 40-60, 60-80, 80-100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu
0			Red. pr [illegible]	[illegible]						
5			aa [illegible]	"						
10			[illegible] and pr [illegible]	"						
15			[illegible]							
20			Pr [illegible]	"						
25			[illegible] qtz. and [illegible] Also [illegible] fault gouge?							
30			[illegible] pr [illegible]							
35			Pr [illegible]							
40			Pr [illegible]							
45			[illegible]							
50			Pr [illegible]							
55			chlo. [illegible] pr [illegible] (gray-green) [illegible]	chlo.						
60			[illegible]	"						
65			[illegible]							

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PAGE 1-2

PROJECT: Roadside Mine DDH # 1 BEARING: _____ DIP: _____ TD: 200'

LOGGED BY: B. Hillemeyer DATE: 7-10-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu
65	0-20 20-40 40-60 60-80 80-100		[illegible]	[illegible]						
70			Pred. rhyolite w/ minor pf gran. minor qtz. vein material.							
75			Orange-gray rhyolite w/ minor qtz vein							
80			Pinkish rhyolite w/ minor qtz vein material							
85			Rhyolite w/ minor qtz and calcite vein material small blebs of fe mod							
90			gray, [illegible] rhyolite w/ v. minor calcite veins and minor qtz vein material							
95			Pred. rhyolite but [illegible] pf gran frags. minor qtz [illegible] veins							
100			pf gran [illegible]							
105			(?) pf gran [illegible] and calcite)							
110			Rhyol. [illegible]							
115			(?) Pred. rhyolite w/ min. med-grained pf gran. mod. qtz vein, V. Minor calcite vein.							
120			Rhyolite w/ very minor qtz vein (slightly Fe-stained).							
125			Wholesale rhyolite.							
130										

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PAGE 1-3

PROJECT: Roadside Mine DDH # RSM1 BEARING: _____ DIP: _____ TD: 200'

LOGGED BY: B. Hillemeyer DATE: 7-10-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
130	100		Banded rhyolite w/ minor microcrystln rhy flow breccia (?). Minor qtz vein (?) material.							
135			Wholesale rhyolite w/ v. minor Fe-stained qtz. v. material,							
140	(?)		Pred. light-gray rhyolite w/ mod. brown pe gran, v. minor qtz vein material							
145			Med grained Pt gran. w/ mod. abund. light gray and brown rhy. (brown rhyol : intrusive contact?)							
150	(?)		Med. grained Pt gran w/ abund microcrystline bio							
155			Med - grained Pt granite. Abund. micro xstlln bio. minor qtz vein, v. min epid,							
160			Mod. fine-gr. Pt gran. w/ v. fined grained andesite (?) minor qtz and calcite vein. V. min. fine-gr. epidote.							
165			Pt granite. V. min Epidote vein material.							
170			Pt granite w/ vo minor fine-gr. epid on fac, surfaces and v min qtz v. material							
175			Pt granite w/ minor red/brown Fe oxide w/ qtz.							
180			Pt granite.							
185			Pt gran w/ v. minor fine-gr. epidote and qtz (v.?) with red Fe oxide stain coating surfaces. Coarse grained.	NONE						
190			Pt granite w/ v. minor fine-grained epidote. Abund bio and pink K-spar. coarse grained	NONE						
195										

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PROJECT: Roadside Mine DDH # RSM 1 BEARING: _____ DIP: _____ TD: 200'

LOGGED BY: B. Hillemeyer DATE: 7-10-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
195	70 80 90 100		Fe granite w/ v. minor qtz vein material. Minor red/brown Fe oxide.	NONE							
200 (TD)											

PAGE 1

PROJECT: Lonoside DDH # RSM-1A BEARING: DIP: -90 TD:

LOGGED BY: P.A.D. DATE: 8/29/83 SCALE: 1"=10' CORE SIZE:

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	20 40 60 80 100		Mixed weakly Fe-stained aplitic pC w/ greyish-green chloritic								
10			predominantly chloritic								
20			no chips								
			pC w/ lots of milky qtz								
30			unaltered pC - aplitic, slightly altered								
40			aa								
50			no chips								
			flashy - to grey chloritic								
60											

PROJECT: Roadside DDH # RSM-1A BEARING: _____ DIP: -90 TD: _____

LOGGED BY: RAD DATE: 8/29/03 SCALE: 1"=10' CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
60			aa							
70										
80										
90										
			weakly clay-alt pE (?)							
110			light grey rhyolite							
120										

PROJECT: Roadside DDH # RSM-1A BEARING: - DIP: -90 TD:

LOGGED BY: P.A.D. DATE: 8/22/83 SCALE: 1" = 10' CORE SIZE:

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
120	-20 -40 -60 -80 -100		lt. brown to white rhyolite							
			as but more grey rhyolite							
130			mixed pC and grey rhyolite							
			pC gr w/ tr Fe-stain, tr epidote							
140										
150			as, Fe-stain gr.c							
160			as, weak Fe-stain, and earthy clay coating on fgnts							
170			as earthy clay coatings, otherwise as							
180										

PROJECT: Roadside DDH # RSM-1A BEARING: ____ DIP: ____ TD: ____

LOGGED BY: R.A.D. DATE: 8/29/83 SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
10	20 40 60 80 100		brown sandy pt g.								
170			66								
TD											

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PROJECT: ROADSIDE MINE DDH # RSM 1A BEARING: _____ DIP: _____ TD: 200'

LOGGED BY: B. HILLEMEYER DATE: 8-17-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	-20 +40 -60 -80 +100		Qal.								
5											
10			pre-Є gr i megacrysts of feld (?orth) Є mag. inclusions minor biotite sch. frags;								
15			pre-Є gr, strong Fe-stained (qtz frags + along feld clav.) biotite inclusions Є in felds								
20			missing								
25			pre-Є gr: strong Fe stained: some felds entirely Fe-stained (hematite); but numerous felds remain pristine white								
30			pre-Є gr: dominantly Fe stained aggregates of feld/qtz Є minor bio + mag.								
35			aa except less hematite staining of felds/qtz								
40			pre-Є leucogr.; hematite dust on ~25% felds; mag. incl. in some felds								
45			aa except more pervasive hematite staining of feld/qtz aggregates								
50			missing								
55			pre-Є gr; hematite coated feld/qtz aggregates + minor rhyolite								
60			rhyolite + trace pre-Є gr.								
65											

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PAGE 1A-2

PROJECT: ROADSIDE MINE DDH # RSM 1A BEARING: _____ DIP: _____ TD: 200'

LOGGED BY: B. HILLEMEYER DATE: 8-17-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
65	20 40 60 80 100		Rhy c̄ minor rhy breccia								
70			rhyodacite; grayish; minor milky white qtz vein material moderately Hematized								
75			rhyodacite aa except less abundant qtz vein material								
80			few frags c̄ gr/yellow dusting rhyodacite c̄ abundant qtz vein material slight hematite staining; trace rhyd. br.								
85			pt leucogranite moderate Fe staining (more yellowish ± limonitic)								
90			Leucogranite w/ minor qtz vein material								
95			aa minus qtz vein.								
100			aa mod. Fe-St. w/ Biot. rich agg. ag.								
105			≈ 40% pe & aa + 90% rhyol and rhyol. bx weak ag. alt								
110			unaltered rhyol.								
115			Dacite w/ minor qtz v. material.								
120			Pe aplite abund FeOx dusting grains								
125			aa								
130											

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PAGE 1A-3

PROJECT: ROADSIDE MINE DDH # RSM 1A BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. HILLENBRAND DATE: 8-17-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu	
130	-20 +40 +60 -80 +100		mod. Fe-stained pt gr.								
135											
			Pt gr. aa.								
140											
			aa qtz and biot.-rich pt gr								
145											
			aa w/ abund. K feldspar and plag.								
150											
			aa								
155											
			aa								
160											
			aa								
165											
170											
175											
180											
			aa v. biot-rich pt gr.								
185											
			aa								
190											
			aa								
195											

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PROJECT: ROADSIDE MINE DDH # RSM 1A BEARING: _____ DIP: _____ TD: 200'

LOGGED BY: B. HILLEMEYER DATE: 8-17-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
175	20 40 60 80 100		aa									
200		T.D.										

Fischer-Watt Mining Co. Inc.

PAGE 1B-1

PROJECT: ROADSIDE DDH # RSM 1B BEARING: ____ DIP: ____ TD: 205'

LOGGED BY: B. HILLEMEYER DATE: 11-18-83 SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	20 40 60 80 100		wholesale pt gr.								
			aa + silic dike material ~5%								
10			Fe-st'd Pt gr.								
			aa + abund grbx and minor rhyol.								
20			Pt gr. + minor g.v.								
			Pt gr + gr/qtz bx (< 5%).								
30											
			lomc. qz-rich gr.								
40											
50			Pt gr + minor Fe/gr bx								
60			qtz-rich gran + minor qbx w/ FeOx cement.								

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PROJECT: ROADSIDE DDH # RSM-18 BEARING: DIP: TD:

LOGGED BY: B. H DATE: SCALE: CORE SIZE:

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu
			aa							
70										
80			Pinkish rhyol. and rhyol. bx							
			Pt gv and gvbx wk arg. alt. minor gv							
90										
100			No sample recv'd							
			aa + minor alt gv. as below.							
110		D. F(?)								
120			Silicified and arg/sericitic altered Rhyol and pe aplite (v. leucocratic)							
130										

PAGE _____

PROJECT: ROADSIDE DDH # _____ BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. HILLEMEYER DATE: _____ SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (20 40 60 80 100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130			aa								
140			aa + sil/FeOx/chlor mbx								
150			chlor-altered pt gr. (barren?) to bottom of hole								
160											
170											
180											
190											

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PROJECT: RSM DDH # RSM 1B BEARING: DIP: TD:

LOGGED BY: B. H. DATE: 11/12 SCALE: CORE SIZE:

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu	
	20 40 60 80 100										
200			aa								
205		T.D.									

Fischer-Watt Mining Co. Inc. REVERSE CIRC. ROT

PAGE 2-1

PROJECT: ROADSIDE MINE DDH # RSM #2 BEARING: _____ DIP: _____ TD: 300'

LOGGED BY: B. HILLEMEYER DATE: 7-10-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	-20 +40 +60 -80 +100										
			= Pt granite								
5			= Rhyolite								
10			COVER – NO SAMPLES TAKEN								
15			= qtz vein material								
			= calcite vein material								
20											
25			Boll qtz. and metam. rk, prob. contamination from alluv. cover. And. and v. minor Pt gran.	no sign. alt.							
30			Abund qtz v., minor calcite vein, some rhyol. bx cem. w/ qtz and calcite.								
			" but w/ less calcite veining "								
35			Rhyol., silicified rhyol. and minor Fe-stained qtz vein material. NO calcite. Minor Pt gr.	Min. Fe-stained qtz.							
40			Rhyol., brown silicified rhyol. and qtz vein (mod. abund.)								
45			Pink → white rhyol. w/ metallic opaques (?) (partially oxidized)								
50			Rhyol. w/ v. minor Fe-stained qtz and silicified rhyol. Min. calcite veining.	weak argill.							
55			Rhyol. w/ mod. abund clear calcite vein material [illegible] alt. of a few grains also limonitic clays (trace)								
60			Rhyol., silicified rhyolite, grn and blue calcite (minor clear calcite) v. fine yellow mineral Fe sulfate?								

Fischer-Watt Mining Co. Inc.

PAGE 2-2

PROJECT: ROADSIDE MINE DDH # RSM-2 BEARING: _____ DIP: _____ TD: 300'

LOGGED BY: D. HILLEMEYER / P. ROBECK DATE: 7-10-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
65	20 40 60 80 100		Rhol. and mod. abund qtz vein material							
70			" plus minor orangish/red Fe oxide on milky qtz vein material							
75			Rhyol. w/ v. minor qtz vein							
80	D.F. (?)		qtz rich pt gran. w/ abund K-feldspar. matrix of qtz. and microcrystalline bio. Minor rhyol.							
85			" " but minus the rhyolite	mem FeOx on qtz frags and fractures.						
90			aa							
95			aa							
			aa							
105			aa							
110	logged by P.A.D.		biotite granite w/ clay dusting on K-spar phenocrysts.							
115			Dense greenish grey rhyolite w/ weak FeOx stains on fgmt. faces, some pure white qtz							
120			mixed greenish-grey rhyol. aa + colorless vitreous qtz, minor frags of pt gran.							
125	DF (?)		pt gran. gneiss, note frags. of grey plag. phenocrysts up to 3mm across. Some gneissic banded frags. Gen lack of Fe-stain							
130										

Fischer-Watt Mining Co. Inc.

PROJECT: Roadside Mine DDH # RSM #2 BEARING: _____ DIP: _____ TD: 300'

LOGGED BY: Rk Drobeck DATE: 7-10-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130			aa, not some brot.	no sig. alt							
135											
			aa								
140											
			aa note some deep pink of fgnts typical of pl in this area								
145											
			aa, some fgnts showing gneissic fabric								
150											
			ac. dk greenish-gry, f.g. micaceous matrix to gneiss	tr FeOx on fc's							
155											
			dk greenish gry pl; rock tr epid.; some fgnts showing foliation	some							
160											
			pl, much more qtz rich, no foliated fgnts; found as hem. pseudomorph for magnetite								
165											
			some qtz-rich pl	tr sericite							
170				tr sericite							
			aa								
175											
			No sample								
180											
			some qtz rich pl	no sericite tr FeOx							
185											
			aa	"							
190											
			aa w/ more thol. fogs.								
195											

Fischer-Watt Mining Co. Inc.

PAGE 2-4

PROJECT: ROADSIDE MINE DDH # BEARING: DIP: TD: 300'

LOGGED BY: B. HILLEMEYER DATE: 7-10-83 SCALE: CORE SIZE:

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
195	0 0 0 0 0 / 2 4 6 8 10	+ + +	Ryol. w/ minor qtz. vein material, lt. gray w/ minor Fe oxide on frac. surfaces.							
200		+ + +	aa but with very minor amounts of pt granite							
205		T. D.								
210										
220										
225										
230										
235										
240										
245										
250										
255										
60										
265										

Fischer-Watt Mining Co. Inc.

REVERSE CIRC. - HAMMER

PAGE 3-1

PROJECT: [illegible] DDH # RSM-3 BEARING: _____ DIP: _____ TD: 150'

LOGGED BY: B. Hillemeyer DATE: 7-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	+20 +40 +60 +80 +100										
5			Pred. pt grey w/ v. minor calcite veining. Both vitreous and [illegible] prob. from gr. Minor rhyol.	no signif. alt							
10			Pred. lt grey w/ abund. feldspar, biot., and qtz. ~10% lg chips of [illegible] and. Minor trace (?) [illegible]	"							
15			Pred. [illegible] pt grey w/ abund chips of qtz, feldsp. Xenlth aggreg. of bio and qtz. Minor fine grn. bx w/ felsy matrix. Minor andes. & rhyolite.	"							
20			aa w/ abund feldspar minor "bands" of biot.	"							
25			Andesite and pt grey. v. minor calcedonic clusters of qtz. Minor calcite frags of mbx (?)								
30			Very leucocratic pt grey w/ abund feld and qtz grains w/ qtz/biot matrix. Large chips of [illegible] minor to ox. Trace calcite	"							
			aa plus andes. pos. minor v. minor calc								
40			Extremely qtz-rich pt grey also abund plag. Minor to ox qtz (veins) frags.	"							
45			Extreme qtz rich. also abund feldspar => qtz-rich pt grey.	"							
50			aa w/ more abundant biotite. microxtln aggreg. of qtz and hem. (after mafics?). Also, orange-red dusting on rare grains.								
55			aa w/ rhyolite								
60			Wholesale read to brown pt grey w/ rare frags of andesite								

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REVERSE CIRC. - HAMMER

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PROJECT: ROADSIDE MINE DDH # RSM-7 BEARING: _____ DIP: _____ TD: 150'

LOGGED BY: B. Hillemeyer DATE: 7-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
65	0-20 20-40 40-60 60-80 80-100		EXTR. QTZ.-RICH PK GRAN. w/ SMALL AGGREG. OF MEM. AND QTZ (ATCH MOLICS) ABUND VITREOUS QTZ. w/ LIGHT, MED. DUSTING	NO SIGN. ALT.							
70			QA w/ SLIGHTLY MORE BIO, AND VERY MINOR CALCITE VEINING.	"							
75			aa								
80			aa MINUS THE CALCITE.	"							
85			aa minus chlor, plus SLTLY MORE FeOx DUSTING PRED. ON QTZ GRAINS.	SLIGHT. CHLOR. ALT.							
90			V. QTZ.-RICH PK GRAN w/ V. RARE AGGREG. OF EPIDOTE								
95			med.- to fine grained pk gran w/ more ABUND. BIOTITE THAN ABOVE.								
100			aa w/ minor aplite dike material minor qtz vein.								
105			Pred. FeOx-dusted rhyolite ~ 20% fine xstln qtz bio and chlor. frags. chan fold. and qtz ⇒ pk gran minor calc and qtz vein BANDED(?) contact.								
110			Orange FeOx-stained Rhol. minor rhyol. bx med. qtz vein.	Pass. Or. Fe staining							
115			Fresh, gray rhyol. w/ med. abund. vitreous qtz. V. minor rhyol. bx.								
120			aa								
125			Diorite, Rhyolite, and rhyol. bx FeOx-stained red rhyol. (min). Minor calcite vein.								

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PROJECT: Rainside Mine DDH # RSM-3 BEARING: _____ DIP: _____ TD: 150'

LOGGED BY: B. Hillemeyer DATE: 7-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130	0-20 / 20-60 / 60-80 / 80-100	+ + + + + + + + + + + +	gray to white rhyol. and rhyol. brx. Min. vitr. qtz. v. min FeOx - stain on fractures and in rhyol. brx.								
135		+ + + + + + + + + + + +	aa - no FeOx								
140		+ + + + + + + + + + + +	~ 50% gray rhyol aa & ~ 50% mafic dike.								
145		x x x x x x x x x x x x / / / / / / \ \ \ \ \ \	Prod. pt gran w/ min. mafic dike - mat. aa. v min. calcite								
150 (T.D.)											

Fischer-Watt Mining Co. Inc.

REVERSE CIRC.

PAGE 4-1

PROJECT: ROADSIDE MINE DDH # RSM-4 BEARING: _____ DIP: _____ TD: 180'

LOGGED BY: B. HILLEMEYER DATE: 7-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	20 40 60 80 100		— COVER —								
5			95% Pt gran w/ v. minor frags of rhyol. vole.	No sign ALT.							
10			Pt gran (reddish brown) w/ abund mic. xstln qtz and bio. frags. Minor lg K-spar phnxs.	"							
15			aa w/ more biotite.								
20			med.-grained pt gran. qtz and biot. rich.	"							
25			aa w/ minor Fe-stained qtz v. material								
30			aa some frags appear slightly gneissic.	"							
35			aa								
40			med.-grained biot-rich pt gran minor Fe ox on vitreous qtz.								
45			aa	"							
50			aa								
55			Rhyol. and pt gran extensive clays (not seen on chip board) minor qtz vein. faulted contact Fe ox dusting rhyol. grains.	"							
60			gray rhyo-dacite w/ qtz vein. RARE HEM.-COATED VOLC. GRAINS. Fe ox after mafics in rhyol								

Fischer-Watt Mining Co. Inc.

PROJECT: ROADSIDE MINE DDH # RSM-4 BEARING: _____ DIP: _____ TD: 180'

LOGGED BY: B. HILLEMEYER DATE: 7-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
65	20 40 60 80 100		aa w/ minor pt gran.								
70			Pt gran and rhyolite minor qtz vein and hem. esp on brecciational(?) grains.	min sericite							
75			qtz-rich pt gran. w/ minor rhyolite v. leucocratic.	no sign. alt.							
80			Dacite w/ abund qtz vein material minor hem.-dusted frags.	"							
85			aa w/ less qtz								
90			aa w/ andesitic frags. and rhyol. frags ass'om. flows? or tuff?	"							
95			aa w/ extr. fine qtz veining also more mafic micro xstln grains								
100			Rhyolite and qtz vein	"							
105			aa								
110			exten. qtz-vein rhyo-dacite								
115	?		aa w/ FeOx-stained fracture surfaces could pos. be a finer-grained qtz-rich pt gran.	"							
120			Very qtz-rich pt gran. minor grains w/ FeOx dusting.								
125			aa								
130											

Fischer-Watt Mining Co. Inc.

PROJECT: ROADSIDE MINE DDH # RSM-4 BEARING: _____ DIP: _____ TD: 180'

LOGGED BY: B. HILLEMEYER DATE: 7-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130	100		Same qtz-rich pt gran as above but w/ more aggreg of qtz/biotite. Minor hem staining on grains.	NO SIGN. ALT.							
135			aa w/ very little biot. Minor qtz veining (very thin) Bio. is present in microxtlln aggreg w/ qtz.	"							
140			aa								
145			aa w/ more abund K-spar v. min. hem staining of some grains	"							
150			a a								
155			a a								
160			aa but w/ more abund biot. not as qtz rich	"							
165			qtz-rich pt gran.								
170			VOID- NO SAMPLE								
175			Fragments of qtz-rich pt grans and min. dacite. Prob. contaminated. Cave-in from void above. Lost circulation.	"							
180 (T.D)											

Fischer-Watt Mining Co. Inc.

PAGE 1

PROJECT: Roadside DDH # 5 BEARING: — DIP: 90° TD: 110'

LOGGED BY: P.A. Dubeck DATE: 7/21/83 SCALE: 1" = 10' CORE SIZE: Reverse Circ

Footage	RQD %	Rock Type	Rock Description	Alteration	Sample	Au	Ag	Pb	Zn	Cu	
0	20 40 60 80 100		—								
5			pℓ gneiss, fairly equigranular	slight clay alt of feldsp.							
10			aa, with bio wthd somewhat giving Fe stain; tr epidote, tr volc fgmts; note a few fgmts rhyolite, minor fgmts bx pℓ	"							
15			aa								
20			aa								
25			aa again tr epid.								
30			aa; note fgmts of mild grey pℓ which was probably matrix to bx pℓ fgmts - note wthd bio stains and lt stg Fe-stain								
35			aa note brown stain on biot being alt to chlor or pstg? + good Fe-stain on biot								
40			aa, stg Fe-stain								
45			aa, again note brown alt biot as well as Fe-stain assoc. w/ biot								
50			aa								
55			aa								
60											

Fischer-Watt Mining Co. Inc.

PROJECT: Roadside DDH # 5 BEARING: – DIP: TD: 110'

LOGGED BY: P.A. Dioback DATE: 7/21/83 SCALE: 1" = 10' ~~CORE~~ SIZE: Reverse Circ

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0			pt with [illegible] (~30%) in f.g. bx matrix - reddish mixture milled pt, well predominance of brassy-colored mica in the milled fgmts								
5			aa - still good red Fe-stain								
70			80-90% milled bx - tiny rounded qtz + feldsp fgmts in matrix red-stained biot + other micas (?)								
75			aa								
80			~5-10% milled rock - predominantly f.g. sugrgranular pt qz; some fgmts coarse grained fgmts, weak Fe stain								
85			10-20% milled, Fe-stained rock, rest aa								
90			aa but more qtz-rich								
95			mixture - 40% Tert ckyd.; 55% qtz (some from pt, some vein?), 5% granitic pt								
100			aa, 2-3% pt								
105			aa								
110											
TD											

Fischer-Watt Mining Co. Inc.

PAGE 5A-1

PROJECT: Roadside Mine DDH # RSM-5A BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. Hillemeyer DATE: 8-20 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (20 40 60 80 100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
0			Qal									
5			Qal									
10			Qal									
15			moderately hematized bio gr.									
20			blgray aa									
25			bio gr. (bio pretty fresh) v rare epidotized frag less hematized than above									
30			aa c̄ abundant qtz vein mat									
35			aa c̄ bio more hematized									
40			aa									
45			aa									
50			aa									
55			aa									
60			deeper red, coarser grained frags strongly hematized gr. frag;									

Fischer-Watt Mining Co. Inc.

PAGE 5A-2

PROJECT: Roadside Mine DDH # BSM-5A BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. Hillemeyer DATE: 8-20 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (-20 +40 -60 -80 -100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
65											
70			moderately hematized pref gr								
75											
80			vcgrained strongly hematized pref gr								
85			cgrained mod → str hematized prefgr; minor qtz material								
90			pref gr + minor vhy								
95			end of Fe staining → Finer grained than above, gray green color begins vhyo + trace pref gr,								
100			vhyo								
105											
110											
115											
120											
125			aa c̄ qtz vein								
130											

Fischer-Watt Mining Co. Inc.

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PROJECT: Roadside Mine DDH # RSM-5A BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. Hillemeyer DATE: 8-20 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (20 40 60 80 100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
130			rhyo									
135			rhyo									
140			rhyo									
145			rhyo									
150			rhyo									
155			rhyo + minor pre-f gr									
160			rhyo + minor pre-f gr									
165			→ begin coarser grained, grayer section pre-f gr (wkly hematized) + minor rhyo + qtz vein									
170			pre-f gr + minor rhyo, tr qtz vein									
175			pre-f gr + (tr qtz + rhyo)									
180			pre-f gr + minor qtz vein									
185			→ end gray section, now reddier wkly hematized pre-f gr									
190												
195												

Fischer-Watt Mining Co. Inc.

PAGE 5A-4

PROJECT: Roadside Mine DDH # RSM-5A BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. Hillemeyer DATE: 8-20 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
195	-20 20-40 40-60 60-80 80-100		moderately hematized prob gr; tr. qtz vein							
200			aa + more qtz vein material							
205			aa							
210			→ begin fine grained, gray section aa							
215			rhyo + tr. qtz vein							
220			abundant rhyo (some frags cut by silica veins)							
225			→ coarser grained than 210-225' section, lighter gray due to ?leon leucogr; weak hematite staining of leucogr.							
230			?leucogr + trace qtz vein mat,							
235			weakly hematized leucogr							
240			weakly hema. leucogr; abundant qtz vein mat.							
245			5' coarse grained red section: hematized (moderately) leucogr.; trace qtz vein mat.							
250			coarse grained gray section; chloritized frags/qtz vein abundant; grayish/hematized ?leucogr.							
255			fine grained green/gray section white-gray leucogr (can see xtals in frags.: not hypo.) hematite coats some frags							
260			lighter red due to abundant vein material skip to next page note 260-265 overlap							
265										

Fischer-Watt Mining Co. Inc.

PAGE 5A-5

PROJECT: Roadside Mine DDH # RSM-5A BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. Hillemeyer DATE: 8-20 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (-20 / 20-40 / 40-60 / 60-80 / 80-100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
260			moderate Fe staining leucogr; trace epidotized frags minor qtz vein							
265		QV	dominantly qtz vein material							
270			slightly less qtz material than above, more Fe stained preE gr.							
275		QV.	white qtz vein material c̄ trace Fe-stained preE gr							
280			white qtz vein material + preE gr c̄ wk to moderate Fe staining							
285			preE gr, mostly wk Fe stained c̄ trace of strong Fe staining and very rare chloritized frags minor qtz vein material							
290			leucogranite frags (?), wk'ly hematized minor qtz vein mat.							
295			moderately Fe stained leucogr (?) c̄ minor qtz vein mat.							
300		TD								

DUCKER- WELL DRILLING CO. INC.

PROJECT: ROADSIDE MINE DDH # RSM #6 BEARING: _____ DIP: _____ TD: 120'

LOGGED BY: B. HILLEMEYER DATE: 7/27/83 SCALE: _____ ~~CORE~~ REV. CIRC. HAMMER SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu	
0											
5			NO SAMPLE RECOVERED.								
			Prod. equigranular, biot.-rich pt granitoid. Rare rhyol. chips. V. minor pt bx.	NO SIGN. ALT.							
15			aa w/ min. dacite. Minor FeOx stain on bio/qtz grains.	"							
20			Dacite and v. minor pt gran aa. Dacite is fresh w/ no sign veining								
25			Bio.-rich pt granodiorite. Red FeOx coating qtz and qtz/bio. grains. Groundmass granitic	"							
30			aa more qtz-rich.								
35	?		Bio.-rich pt gran. w/ bx? or poss. prod. and pt gran. w/ calcite.	"							
40	?		aa								
45			qtz.- and calcite-(Tv) veined Pink rhyol w/ dusting of Pinkish → orangish bx	"							
50			Prod. orth. qtz-veined rhyol (also with qtz-bio. fine-grained)								
55			aa w/ qtz and pt gr	"							
60			qtz [illegible] Altered [illegible] qtz., feld., and [illegible], biotite.	"							
65											

Discover- Well Drilling Co. Inc.

PROJECT: Roadside Mine DDH # RSM #6 BEARING: _____ DIP: _____ TD: 120'

LOGGED BY: D. Hillemeyer DATE: 7/27/83 SCALE: _____ ~~CORE SIZE:~~ REV. CIRC. HAMMER

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
65			Pebbly [illegible]	No [illegible] Alt.							
70			aa plus qtz bx veins [illegible] (minor)	"							
75			aa more biotite v. minor [illegible]								
80			Pred pt aa plus pt grn. bx, some gray [illegible]	"							
85			[illegible] grn [illegible]								
90				"							
95			aa								
100			Pred. red/brown ff grn aa 60-85'	"							
105			aa								
110			[illegible] gray [illegible] minor [illegible]	"							
115			Pred gray [illegible] qtz veins	"							
120											

Fischer-Watt Mining Co. Inc.

PROJECT: Roadside Mine DDH # RSM #7 BEARING: _____ DIP: _____ TD: 165'

LOGGED BY: B. Hillemeyer DATE: 7/29/83 SCALE: _____ ~~CORE SIZE:~~ REV. CIRC. HAMMER

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	-20 +40 -60 -80 +100		- Alluvial Cover -								
5			Leuc. gran.	No significant							
10			Leuc. pt gr. w/ tr. calcite veins. [illegible] frags. [illegible] (vein?)	"							
15			pt-rich pt gr w/ minor rhyol. [illegible] bio rich than above. Minor orange felix [illegible] pt and [illegible] grains.								
20			ac								
25			Pt gran [illegible] rhyol. Minor red [illegible] coatings.	"						11	
30			wholesale pt gr w/ minor [illegible] felix as above.	[illegible]							
35			aa [illegible] weak.	[illegible]							
40			aa [illegible]								
45			Red/brown [illegible] pt gr. [illegible] bio rich [illegible].								
50											
55			aa								
60			aa								

Fischer-Watt Mining Co. Inc.

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PROJECT: Rawhide Mine DDH #: RSM-7 BEARING: _____ DIP: _____ TD: 165'

LOGGED BY: B. Hillemeyer DATE: 7/20/82 SCALE: _____ CORE SIZE: Rev. Circ. Hammer

FOOTAGE	BOD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
60			aa								
70											
75											
80											
85											
90											
95											
100			dacite								
105			dacite								
110			dacite								
115											
120											
125											
130											

Fischer-Watt Mining Co. Inc.

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PROJECT: Rossbank MINE DDH# RM-7- BEARING: _____ DIP: _____ TD: 165'

LOGGED BY: B. Hillemeyer DATE: 7/20/83 SCALE: _____ ~~CORE SIZE~~ REV. CIRC. HAMMER: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130	[illegible]	[illegible]	[illegible] 55'-> 80'	[illegible]							
			[illegible]								
135				"							
140											
145			"	"							
			"								
150			"								
155			"	"							
			[illegible]								
160			[illegible]	"							
			125' [illegible]								
165		T.D									

Fischer-Watt Mining Co. Inc.

PROJECT: Roadside Mine DDH # RSM #8 BEARING: _____ DIP: _____ TD: 160'

LOGGED BY: B. Hillemeyer DATE: 7/27/83 SCALE: _____ ~~CORE~~ REV. CIRC. HAMMER SIZE: _____

Footage	RQD %	Rock Type	Rock Description	Alteration	Sample	Au	Ag	Pb	Zn	Cu
0	-20 0 +40 +80 +100		Pt gran. w/ locally brecc, weathered biotite. Min. And. and Rhyol. prob. from alluv. cover.	No sign. alt.						
5			aa minus volc. xx. Minor vitr. pt frags.	"						
10			Pt gran w/ v. min. hem. stained pt gr bx also minor rhyol. Min qtz v.	"						
15			Reddish pt gran.							
20				"						
			aa							
25			med. grain FeOx-stained pt gran and gran bx.	"						
30			Red/brown Diorite or pos. milled pt gran?	"						
35			FeOx - stained diorite. (red/brown).							
40				"						
			aa							
45			Lt. gray dacite w/ minor hem.-cemented bx and red/brown diorite aa	"						
50			Lt. gray dacite w/ v. minor qtz and calcite vein material	"						
55			Orangish rhyol → dacite frags. (fine dusting of orange to red FeOx, Minor calc. vein, Hem. coating? on fract. surfaces.							
60			Lt. gray → gray rhyol. to dacite w/ extensive clear calcite vein material. FeOx dust on grains and coating fract. surfaces							
65										

Fischer-Watt Mining Co. Ltd.

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PROJECT: ROADSIDE DDH # RSM-13A BEARING: _____ DIP: _____ TD: 285

LOGGED BY: B.H. DATE: _____ SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
250	-20 -40 -60 -80 -100										
			aa - greenish grey								
			w/ v. fine py.								
260											
270											
280											
			T.D.								
290											

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM-14 BEARING: _____ DIP: _____ TD: 150'

LOGGED BY: B. HILLEMEYER DATE: 12/14/87 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
0			Greenish alt. pt gr w/ rhyol frags. cover?							
			Greenish-grey pt gr. w/ abund qtz and ksper. No significant alteration							
20			aa							
			as							
			aa + minor rhyol.							
30			gr bx w/ hem cement + gr aa							
			NO SAMPLE (35-40')							
40			Fe-st'd and brecciated pt gr.							
			aa (30%) + white rhyol.							
50			pt gr. and Fe st gr bx							
			grey rhyol.							
60			pink, lt grey and dk grey rhyol.							

Fischer-Watt Mining Co. Inc.

PROJECT: RSM DDH # RSM14 BEARING: DIP: TD:

LOGGED BY: B.H. DATE: SCALE: CORE SIZE:

FOOTAGE	RQD % (20 40 60 80 100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
			Tan rhyol.							
70										
			aa							
			white → grey rhyol. w/ abund vitreous qtz.							
80										
			? rhyol aa (70%) + gr as below (30%)							
			Fe st'd pt gr. Single piece of extr. sulph. alt. (gr?) w/ 2% py.							
90										
			Fe st'd and chlor-alt. pt gr.							
			aa							
			aa							
110										
			aa chlor alt. extreme							
			aa							
120										
130										

Fischer-Watt Mining Co. Inc.

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PROJECT: RSM DDH # #14 BEARING: DIP: TD:

LOGGED BY: D.H. DATE: SCALE: CORE SIZE:

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
130	20 40 60 80 100		aa trace calcite v.							
			aa							
140			aa q. veined							
			aa							
150		T.D. 150'								

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM #15 BEARING: _____ DIP: _____ TD: 240

LOGGED BY: B. HILLEMEIER DATE: 11-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100		Bio.-rich ptgr w/ minor qtz. v. material								
10											
			T. andesite with minor rhyolite and qtz vein. Also minor ptgr.								
20											
30											
			Qtz-rich ptgr w/ med brown/red hem st. Minor								
40			aa								
			aa w/ orange/red hem. st.								
50											
			Lava. Granite min. Fe st.								
60											
			Granite granite								

Fischer-Watt Mining Co. Inc.

PROJECT: ROADSIDE DDH # RSM-15 BEARING: _____ DIP: _____ TD: 240

LOGGED BY: B. HILLEMEYER DATE: 11-14-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100										
70			Fg gneiss w/ abundant qtz. and feldspar. Staining red/brown Fe ox								
80											
90											
100											
110			aa w/ mod. amorph. silica veining								
120											
130											

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM-15 BEARING: ____ DIP: ____ TD: 240

LOGGED BY: B. HILLEMEIER DATE: 11-14-83 SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD % (20 40 60 80 100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
140			qa w/ abundant milky qtz.								
0			fine → med - grained Pt gravitional and quartz bx minor qtz vein material								
160			Microcrystalline qtz. Ex silica. rhyol. dike(?)								
170											
80			Pt gr / Pt gr. bx minor qtz qa.								
190			fresh/white rhyol. w/ minor Pt gr.								

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM-15 BEARING: _____ DIP: _____ TD: 240

LOGGED BY: B. HILLEMEYER DATE: 11/4 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100		rsd. → coarse gran pt gr w/ minor [illegible]								
200			Minor FeOx on fracture surfaces								
			otherwise fresh – no vein material.								
210											
220											
			rsdm grained, equigranular, glz rich granite								
230			v. fresh, no Fe, st.								
240											

Fischer-Watt Mining Co. Inc.

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PROJECT: FORMIDE DDH # RSM-16 BEARING: ____ DIP: ____ TD: 300'

LOGGED BY: B. Hillemeyer DATE: 11-15-82 SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
	20 40 60 80 100		Pinky Fe-St pegm w/ abundant lge frags of kspar.							
10			Bio.-rich pg granite w/ abund kspar frags: plag weakly alt (arg)							
20										
30										
40										
			aa w/ minor limonite stain on fractures.							
50										
			Bio-rich kspar granite - minor vitreous qtz material							
60										

Fischer-Watt Mining Co. Inc.

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PROJECT: Roadside DDH # RSM-16 BEARING: _____ DIP: _____ TD: 300'

LOGGED BY: B. Hillemeyer DATE: 11-15-82 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100										
70			aa w/ lem. alte matrix.								
80											
90											
100			Buff → pinkish rhyol. w/ minor vitreous qtz vein.								
110			- finer-grained phase of the pt qz. w/ abund. bot. lacks k-spar porph.								
120			- slightly pink hue from fine k-spar crystals.								

Fischer-Watt Mining Co. Inc.

PROJECT: Roadside DDH # RSM-16 BEARING: DIP: TD: 300'

LOGGED BY: B. Hillemeyer DATE: 11-15-83 SCALE: CORE SIZE:

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
140			bio. - rich porphyritic phase of the pf granite weak arg. alt of the plag.							
			- abund. subhedral grains of pinkish kspar.							
150										
160										
170										
180			aa with mod. limonitic alter. local fragments w/ pervasive lim st.							
190										

Fischer-Watt Mining Co. Inc.

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PROJECT: Roadside DDH # RSM-16 BEARING: _____ DIP: _____ TD: 300'

LOGGED BY: R. Hillemeyer DATE: 11-15-93 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu	
	0-20 20-40 40-60 60-80 80-100										
200			Grey/green Equigranular pt granitoid non porphyritic mod. chem. alt.								
210			aa w/ orange and red/brown Fe st.								
270			Grey - porphyritic pt granitoid minor arg. alt. no significant Fe st.								
23											
240			Pervasively lim. stained rhyolite dike.								
250			hematized pt gran.								
260			Fresh, barren pos. w/ minor FeOx								

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM-16 BEARING: _____ DIP: _____ TD: 300'

LOGGED BY: D. Hillemeyer DATE: 11-15-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100										
270											
			a a.								
280											
290											
300			T.D.								

Fischer-Watt Mining Co. Inc.

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PROJECT: Roadside DDH # RSM #17 BEARING: _____ DIP: _____ TD: 190'

LOGGED BY: B. Hillemeyer DATE: 11-15-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	0-20 / 40-60 / 80-100		Fill (?) pt gr. w/ min T andesite.								
10			Pervasively Fe-st. and brecciated pt granodiorite rich in biotite w/ min k-spar phenxts								
20											
30			Finer-grained phase of the pt hno rich w/c avg. alt. strong fe-st (red/brown).								
40											
50			aa — poorly fe-stained.								
60											

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM-17 BEARING: _____ DIP: _____ TD: 190'

LOGGED BY: B. HILLEMEYER DATE: 11-15-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu	
	20 40 60 80 100										
			qa								
70			altered gran bx choc. brown								
			DETACHMENT								
80			granite gneiss and chlor. alter								
90											
100			Dead, greenish-gray Pt gran. gneiss with very weak chlor. alteration. This is predominant until the total depth.								
110											
120											
130											

Fischer-Watt Mining Co. Inc.

PAGE 17-3

PROJECT: ROADSIDE DDH # PSM-17 BEARING: _____ DIP: _____ TD: 190'

LOGGED BY: B Hillemeyer DATE: 11-15-82 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu	
	20 40 60 80 100										
140											
150			aq								
160											
170											
180											
190		T.D.									

Fischer-Watt Mining Co. Inc.

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PROJECT: Ronnside DDH # RSM-18 BEARING: _____ DIP: _____ TD: 285'

LOGGED BY: B. Hillemeier DATE: 11-15-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	20 40 60 80 100										
10											
20			No SAMPLE RECOVERED.								
30											
40											
50			- gray to greenish-gray Tertiary andesite w/ v. small, unidentifiable phxs giving a spotted appearance.								
60											

Fischer-Watt Mining Co. Inc.

PROJECT: ROADSIDE DDH # _____ BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B HILLEMEYER DATE: _____ SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
	20 40 60 80 100									
70			aa w/ Trace qtz fracture filling							
80										
			No SAMPLE RECOVERED.							
90										
100			aa but a more steel-grey color.							
110										
120										
			Bleached rhyol. sill or dike w/ wk							

Fischer-Watt Mining Co. Inc.

PROJECT: Roadside DDH # RSM-18 BEARING: ____ DIP: ____ TD: 285

LOGGED BY: D. Hillemeier DATE: 11-15-83 SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130	20 40 60 80 100										
			aa								
140											
150			aa w/ minor andesite frags.								
160			same bleached and altered rhyol. as seen from 125-150'								
170											
180											
190			Altered and Fe-St. andesite (non porphy.) Probably barren and altered zone related to Rhyol above.								

PROJECT: ROADSIDE DDH # RSM-18 BEARING: _____ DIP: _____ TD: 285'

LOGGED BY: B HILLEMEYER DATE: 11-15-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	AU	AG	PB	ZN	CU
190	20 40 60 80 100		slightly fe. st and arg-altered Tert. andesite as below, No significant veining.							
200										
210			Steel gray Tertiary andesite (nonporphyr) with no significant veining or alteration.							
220										
230			minor Fe st. on fractures and minor chlor altered frags.							
240										
250										
260										

Fischer-Watt Mining Co. Inc.

PROJECT: Roadside Mine DDH # RSM #8 BEARING: _____ DIP: _____ TD: 160'

LOGGED BY: B. Hillemeyer DATE: 7/27/83 SCALE: _____ ~~CORE SIZE~~ REV. CIRC. HAMMER: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
65	20 40 60 80 100		aa minus calcite vein.	No sign. alt.						
70										
			aa	"						
			wh. grade dacite w/ minor orange/red FeOx on frac. surfaces							
80										
			aa							
85				"						
			aa							
90										
			aa							
95										
			aa	"						
100			Darker gray dacite w/ no sign. Fe Oxide stain.							
			aa w/ v. minor qtz. v. material.	"						
110			same gray dacite aa minus qtz. vein.							
115			aa plus v. minor qtz and calcite vein material							
120			aa w/ sign. amount of clay and qtz vein.	argil alt. (mod)						
125			Fresh, gray dacite w/ minor qtz. vein.	No sign. alt.						

FISCHER-WALL DRILLING CO. INC.

PROJECT: ROADSIDE MINE DDH # RSM #8 BEARING: _____ DIP: _____ TD: _____

LOGGED BY: B. HILLEMEYER DATE: 7/27/83 SCALE: _____ ~~CORE SIZE:~~ REVI CIRC. HAMMER

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130	20 40 60 80 100		qa	NO SIGN. ALT							
135			qa w/ v. minor pt gran and trace calc. vein.	"							
140			qa minus calcite plus v. rare perv. Fe staining frags. More andesitic.								
145			qa	"							
150			qa								
155			qa plus trace calcite.	"							
160 T.D.											

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM-9A BEARING: DIP: TD: 230'

LOGGED BY: B. HILLEMEYER DATE: 11-18-83 SCALE: CORE SIZE:

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	20 40 60 80 100		Valley fill - pred. pt gr and minor Tert. rhyol. No sample								
10											
			Pred Pt gr (Fill?)								
20			NO SAMPLE								
			Pt gr w/ minor rhyol frags.								
30			altered pt diabase (?) or a chloritized alter. zone of det. fault (?)								
40											
50			lava. pt gr. - no sign. veining								
60		D.F.?	Pt gran. w/ mod → intense chlor alt.								

Fischer-Watt Mining Co. Inc.

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PROJECT: ROADSIDE DDH # RSM-9 BEARING: _____ DIP: _____ TD: 230

LOGGED BY: B. HILLEMEYER DATE: _____ SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu		
70			Wholesale pf gran with a greenish-grey color (weak chlor alt.)									
			— no sign. veining									
80			↓									
90												
			aq									
100			↓									
110												
120			aq									
			↓									
130												

Fischer-Watt Mining Co. Inc.

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PROJECT: RSM DDH #: RSM-9 BEARING: DIP: TD: 230

LOGGED BY: B.H. DATE: SCALE: CORE SIZE:

FEET	RQD%	CORE TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130			↓								
140											
			aa								
150											
			↓								
160											
170											
			aa								
180			↓								
			— — — — COLOR CHANGE — — — —								
190			- Red/brown to brown Pt granites and granite gneisses.								

Fischer-Watt Mining Co. Inc.

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PROJECT: RSM- DDH # RSM-9 BEARING: DIP: TD: 230'

LOGGED BY: B.H DATE: SCALE: CORE SIZE:

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100										
200			↓ qq								
210			↓ qq								
220			Dear brown pt gran. no sign. vein. or alt.								
230		T.D.									

FISCHER-WALL DRILLING CO. INC.

PROJECT: ROADSIDE MINE DDH # RSM#10 BEARING: _____ DIP: _____ TD: 105'

LOGGED BY: B. HILLEMEYER DATE: 7/27/83 SCALE: _____ REV. CIRC. HAMMER CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu	
0			Pt grav and rhyol. (pred pt grav) Prob. some alluv. cover mixed in.								
5											
10			Pred. rhyol/dac. w/ mod. qtz vein material and trace calcite vein v. min. grav (chlor, qtz?) v. material.								
15			aa minus calcite plus hem. cem. rhyol bx (trace) min. and. (or pt gr. bx?)								
20			(?) Dark-grey to reddish-grey qtz. veined andesite. or Pt gr. bx								
25			aa ?								
30			aa? plus rhyol. Abund vitr. qtz. frags.								
35			Pred. qtz veined dac. and dac. bx. min. FeOx during grav.								
40											
45			aa v. qtz rich. No FeOx								
50			v qtz-rich rhyol aa.								
55			qtz-rich pt grav (?)								
60			aa								
65			aa. Mine FeOx coatings and dusting on fracture surfaces								

DISCOVERY WELL DRILLING CO. INC.

PROJECT: ROADSIDE MINE DDH # RSM-10 BEARING: _____ DIP: _____ TD: 105'

LOGGED BY: B. HILLEMEYER DATE: 7/27/83 SCALE: _____ ~~CORE SIZE:~~ REV. CIRC. HAMMER

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu
65	100 100 100 100		qtz-veined and silicified rhyol w/ minor FeOx and Py(?) matrix							
70			aa plus pt gran mbx.							
80	Mbx		pt gr. mbx chly. bio matrix w/ micro. frags of qtz and feldspar. Minor FeOx							
			aa - more qtz.							
85			Pt gran. gneiss and pt gran. mbx and pt bio. gneiss							
90			qtz-rich, equig. gran gneiss w/ min. FeOx stain giving red tinge.							
95			bio/chlo-rich pt granitoid. gneissic.							
100			aa							
T.D.										

Fischer-Watt Mining Co. Inc.

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PROJECT: Rendezvous DRILL HOLE: RSM #11 BEARING: _____ DIP: _____ TD: 110'

LOGGED BY: B Hallerman DATE: 11-18-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0			Valley Fill - mostly pt crystalline								
10			med-grained ptgran w/ weak chlr alt. and Fe-st.								
20			aa - very leucocratic								
			aa - no signif. vein material								
30			aa - minor epid/sericite of fracs.								
			aa - w/ vitreous qtz								
40			wackestone pt Sv w/ weak chlr alt.								
50											
60											

Fischer-Wall Mining Co. Inc.

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PROJECT: RSM DDH # RSM-11 BEARING: DIP: TD: 110'

LOGGED BY: B.H. DATE: 11-19-83 SCALE: CORE SIZE:

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100										
			a.a								
70											
			more chlorite alt.								
80											
			a.a								
90											
			a.a								
100											
110		T.D.									

Fischer-Watt Mining Co. Inc.

PAGE 1

PROJECT: Roadside DDH # RSM-12 BEARING: — DIP: 90° TD: 200'

LOGGED BY: P.A.D. DATE: 8/26/83 SCALE: 1" = 10' CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu
0			fcd, lightly chlor alt not to f.g. pℰ gr. <5% white hydrite	chlor, weak Fe stain						
5			aa, no hydrite	aa						
10			aa	moderate chlor and Fe stain, tr epid.						
			aa	chlor. fairly and, Fe stain mod.						
0			aa	epidote gen						
			aa							
0			mixture 20% lm yellow alt hbl rich dacite w/75% chlor gtz + 55% pℰ fgmts	clay alt of pℰ						
			dacite gen; gtz rich pℰ	tr Fe stain						
0			aa	tr epid + weak Fe stain						
			aa, note some clips are bx pℰ							
0			aa							
			aa w/ 15% fgmts gtz-chlor + trace py rock - thick zone silicified + pyritized andesite	(???)						
0										

Fischer-Watt Mining Co. Inc.

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PROJECT: Roadside DDH # RSM-12 BEARING: ____ DIP: 90° TD: 200'

LOGGED BY: R.A.D. DATE: 8/26/83 SCALE: 1" = 10' CORE SIZE: ____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
0	-20 +40 -60 -80 +100		80-90% of the qtz chlor py rock. (or in: a silic. chlor.) (has <10% py) but a 10-20% clay + Fe stain, pE							
			aa							
10			70% lightly Fe stained pE, 30% qtz-chlor-py rock							
			75% qtz chlor-py rock, 25% lightly Fe							
20			50% qtz chlor py, 50% pE							
		DETFAULT (?)	lightly Fe stained, but still fresh biot in pE granite							
30			aa, note some fgmts milled, gouldy pE							
			aa, note some of the milled fgmts well Fe stained, also mod to wkt Fe on fc's							
			aa							
			aa							
			aa							
			aa, note to epidote							

Fischer-Watt Mining Co. Inc.

PAGE 3

PROJECT: Rodeo DDH # RSM-12 BEARING: — DIP: -90° TD: 200'

LOGGED BY: P.A.S. DATE: 8/26 SCALE: 1" = 10' CORE SIZE: —

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
20	20 40 60 80 100		fol'd, partly mild pt, locally to of fe-stain on fol's							
30			oo							
40										
50										
60										
70										
80			oo to TD							

PAGE 1

PROJECT: Roadside DDH # RSM-13 BEARING: - DIP: -90 TD: 220

LOGGED BY: P.A.D DATE: 8/20/85 SCALE: CORE SIZE:

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
0	-20 -40 -60 -80 -100		mixture of purple and flooky-pink rhyolite	none						
			on							
10			mostly white rhyolite							
			flooky-pink rhyolite							
20			pink-grey rhyolite							
			tan rhyolite							
30			variolated grey-brown rhyolite							
			glassy, jaspery rhyolite							

PROJECT: Roadside DDH # RSM-13 BEARING: — DIP: -90° TD: ____

LOGGED BY: P.A.D. DATE: 8/28/83 SCALE: 1" = 10' CORE SIZE: —

FOOTAGE	RQD % (20 40 60 80 100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
0			brick-red volcanic	deuteric Fe								
			do									
			fair rhyolite or rhyodacite									
			brick-red volcanic	deuteric Fe								
			do									
			mixture brownish clay alt volc and soft white tuff fragments	slight deuteric clay								
			reddish grey brown volc w/ varying proportions white tuff									
			brick-red volc									

PROJECT: Roadside DDH # RSM-13 BEARING: — DIP: -90° TD: 220'

LOGGED BY: R.A.D. DATE: 9/28/83 SCALE: 1" = 10' CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	AG	PB	ZN	Cu
0	-20 -40 -60 -80 -100		white tuff							
0			light brown volc							
			greenish - brown volc							
0			dk green andesite							
			green andesite w/ ~ 2% pyrite							
0										
			brown andesite, no py							
0										
			green, pyritic andesite							
0										
			brown-green pyritic andesite							
0										

PROJECT: ROADSIDE DDH # RSM-13 BEARING: _____ DIP: -90 TD: 220'

LOGGED BY: R.A.D. DATE: 8/28/83 SCALE: 1" = 10' CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
0	20 40 60 80 100		blue - green pyritic andesite									
0												
10			mixture of light brown clay + py altered andesite + minor pink rhyolite									
			green - brown andesite, weak clay alt									
0			mixed brown + green andesite (some rhyodacite?)									
20												

PROJECT: ROADSIDE DDH # PSM-13A BEARING: _____ DIP: _____ TD: 285'

LOGGED BY: B. HILLEMEYER DATE: 4-21-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (-20 +20 -60 -80 +100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
0			Grey, purple, & pink rhyolite, wk a.g. alt. some chalc. qtz.							
			Pink and orange rhyol. mildly jaspuroidal no sign alt.							
10			aa							
			variolated rhyol.							
20			mostly tan rhyol some gray or brown frags							
30			aa							
40										
50										
60										
70			aa + altered frags of rhyol (mod. a.g.)							

DIAMOND- WELL DRILLING CO. LTD.

PROJECT: RSM DDH # RSM-13A BEARING: ____ DIP: ____ TD: ____

LOGGED BY: B. H DATE: ____ SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
	20 40 60 80 100									
60			a q							
70			NO SAMPLE							
80			Brick red rhyodacite (?)							
90										
100			bleached, white rhyol.							
110			unaltered rhyol. some frags. w/ pev. lim replac.							
120										

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PROJECT: RSM DDH # RSM-13A BEARING: ____ DIP: ____ TD: ____

LOGGED BY: B.H DATE: ____ SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD % (-20, +40, -60, -80, +100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
20		+ + + + +								
30		✓ ✓ ✓	muddy brown volcanic (andesite?)							
40		✓	alt. and. w/ trace py							
50		✓ ✓	ua rare py.							
			Green, pyritic andesite							
160		✓ ✓								
170		✓ ✓	(Decreasing py. 150-155 = max 185-190 = min							
180		✓ ✓								

PROJECT: ROADSIDE DDH # RSM-13A BEARING: ____ DIP: ____ TD: 21

LOGGED BY: B. H. DATE: ____ SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu
	20 40 60 80 100									
		✓	ag							
190		✓ ✓	lim st'd rhyol. pred. orange/brown frags only trace py.							
		✓								
200		✓	ag							
		✓								
210		✓								
		✓								
220		✓								
		✓								
230		✓ ✓								
		D.F (?)	Extreme alt. pf gv. (pyritic) (chloritized)	st. ag.						
240			sulph. alteration	(sulph.)						
250										

PROJECT: Roadside. DDH # RSM-18 BEARING: _____ DIP: _____ TD: 285'

LOGGED BY: B. Hallemeyer DATE: 11-15-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100										
		D.F. (?)	weakly chlor altered contact zone between Tu above and pt below. Base of volc flow or intrusive.								
270			Fe-ct. pt gran w/ minor and. frags aa. wk chlor alt.								
280											
		T.D. = 285'									

PROJECT: Rawhide DDH # RSM-19 BEARING: ____ DIP: ____ TD: 285'

LOGGED BY: B. Allemeyer DATE: 11-15-85 SCALE: ____ CORE SIZE: ____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0	-20 -40 -60 -80 -100										
10			porphyritic pt granite w/ weak chlorite alteration. — no significant veining or alteration.								
20											
30			fine-grained pt diorite or granodiorite								
			porphyritic pt gran.								
40			Finer grained, biotite-rich, pt diorite or granodiorite. No significant alter., Fe-St., or veining. 40-45' Pervasive Fe-St.								
50											
60											

PAGE

PROJECT: Ronnside DDH # RSM-19 BEARING: DIP: TD: 285'

LOGGED BY: B. HILLEMEYER DATE: 11-15-83 SCALE: CORE SIZE:

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
	20 40 60 80 100											
70			qm w/ more abund k-spar frags.									
80			Barren red/brown Fe-st. pk granodiorite w/ abund k-spar frags.									
90												
100												
110			Barren greenish to gray Trhyol. with minor qtz veins in the 220-225' interval and minor Fe-st and alt in the 130-135. (Post-mineral rhyolite).									
120			* This is predominant to the bottom of the hole (285')									
130												

PROJECT: _____ DDH # _____ BEARING: _____ DIP: _____ TD: _____

LOGGED BY: _____ DATE: _____ SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
	20 40 60 80 100										
140											
150											
160											
170											
180											
190											
200											

PAGE _____

PROJECT: _____ DDH # _____ BEARING: _____ DIP: _____ TD: _____

LOGGED BY: _____ DATE: _____ SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD %	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
	20 40 60 80 100											
20												
20												
30												
40												
50												
60												

PAGE _____

PROJECT: _____ DDH # _____ BEARING: _____ DIP: _____ TD: _____

LOGGED BY: _____ DATE: _____ SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD % (20, 40, 60, 80, 100)	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu		
270												
280												
		T.D = 285'										
290												

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PROJECT: ROADSIDE DDH #: RSM-20 BEARING: _____ DIP: _____ TD: 285'

LOGGED BY: B. HILLEMEIER DATE: 11-18-83 SCALE: _____ CORE SIZE: _____

FOOTAGE	RQD%	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
0			Talus (chal. + pegr).								
10			Silicified, Fe-stained and well-broken pegr and mus gneiss. w/ sign. chlor alt.								
20			aa more chlor. alt								
30			aa								
40			aa								
			weakly chloritized and Fe-st. pegr.								
50			aa + more pegr and q.v.								
60			Pav. Fe. stnd pegr weakly → modly chlor. altered								
			aa								

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PROJECT: ROADSIDE DDH #: RSM-20 BEARING: ____ DIP: ____ TD: 785

LOGGED BY: B.H. DATE: ____ SCALE: ____ CORE SIZE: ____

DEPTH	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
70		homogeneous fe-st. and weakly alt. pe qz. no sign vein material								
80										
90										
100										
110										
120		silicic zone w garnet pe and rypl (?)								
130										

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PROJECT: ROADSIDE DDH #: RSM-20 BEARING: _____ DIP: _____ TD: 275

LOGGED BY: B. H DATE: _____ SCALE: _____ CORE SIZE: _____

DEPTH	ROCK TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	Au	Ag	Pb	Zn	Cu	
130		a a								
		small rhyol. dike								
140										
		chlorite / sericite-alt. pt qz								
150										
160										
170		a a								
180										
190										
		a a								
200										

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PROJECT: RSM DDH #: RSM-20 BEARING: ____ DIP: ____ TD: 280'

LOGGED BY: B.H. DATE: ____ SCALE: ____ CORE SIZE: ____

DEPTH	BODY	CORE TYPE	ROCK DESCRIPTION	ALTERATION	SAMPLE	AU	AG	PB	ZN	CU
210			D.F. Intensely-altered pt gr w/ abund chlor, clays and qr bx (chlorite bx zone)							
220										
230										
240										
250			less altered pt gr							
260			a lower, chlorite breccia zone with minor silicified breccia frags.							
			less-altered pt gr.							