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UVX PROJECT

A PROPOSED SURFACE MATERIAL-HANDLING PLANT

EDITH SHAFT - JEROME, ARIZONA

Prepared by

H. G. King, P.E.

June, 1986

SUMMARY

The objective of this mining project is to produce 100-tons per day of silica ore from the 950 level of the Edith shaft located in Jerome, Arizona. Due to its location within the town limits of Jerome and other environmental considerations, the surface plant would be operated only during a single shift during daylight hours. This report will address only the surface plant requirements of this mining project.

Ore will be hoisted from a skip loading pocket located about 800-feet below the shaft collar. It may be noted that the mine level designations do not indicate the actual depth of the levels below the shaft collar. Run-of-mine ore, reduced to minus 9 inches in size, will be hoisted to the surface in 2-ton-capacity skips. The surface plant, through a system of conveyors, feeders, screens and crushers, will reduce the ore to a 2-inch by ¼-inch product after which it will be stockpiled for later shipment to a smelter. Minus ¼-inch material will be rejected to a separate stockpile either to be sent to the waste dump or to be trucked offsite for valuable mineral recovery through other facilities.

Attached to this report is a schematic diagram of the ore processing plant, a cost estimate breakdown, and other data related to revising the existing facilities to produce the final products required.

Equipment cost estimates used in this report are preliminary in nature and are based on using good, but used, equipment. Good small-sized conveying and rock handling plant equipment is difficult to find at this time and is also relatively costly. This is due primarily to the increased activity in small gold mining projects and to the current boom in road building and new construction. After investigating the size and capability of the existing hoist and headframe and their components, it is felt that only the hoist motor and its electrical systems need to be serviced and repaired. The headframe would need relatively minor changes to accommodate the skip dump facilities. Therefore, existing hoist and headframe modifications would be inexpensive.

In summary, once approval has been given to proceed with the project as described herein, it would take about four to six weeks to procure and deliver most of the equipment needed and an additional three weeks to complete the installation--for a total elapsed time of about two months. Total installed capital cost of the project as described herein is 124,000 U.S. dollars ($124,000).

This report should be considered only as a feasibility report since all of the cost data is based on preliminary technical information and the apparent availability and cost of used equipment. In the final design, equipment sizes and types could change slightly due to final considerations of more detailed technical information and the actual types of equipment available.

An attempt was made to design a material-handling system which would require less initial capital cost but obtain the same results. An alternative was to consider hauling the material from a bin at the shaft to the crushing and screening plant either by front end loader or by dump truck. It soon became apparent that this system would require extra manpower, additional mobile equipment, dump hoppers, and ramps to elevate the transporting vehicles to the crushing plant and stockpile dumping levels. These costs probably would be equal to, or greater than, the conveyors they would replace. Space would also start to become a limiting factor, and handling the material in this manner would create a greater proportion of fines due to rehandling the rock with mobile equipment. Additional fines would create a greater dust-control problem and result in a loss in tonnage of the 2 x ¼-inch material, which is likely the most valuable product of the mine.

Attached to this report is a schematic layout of the material processing plant, a general plan of the plant site, a hoist horsepower-demand curve, and a cost breakdown of the proposed work.

EXISTING MINE SITE FACILITIES AND EQUIPMENT

In 1981 Phelps-Dodge Company erected a 42-foot high headframe complete with a 48-inch diameter headpulley over a 48 x 66-inch compartment of the Edith shaft. The headframe had been disassembled, moved, and re-erected by the Sierrita Mining and Ranching Company of Sahuarita, Arizona; it had been formerly located at the Glove mine near Sahuarita, Arizona. A 40-ton rock bin and a combination man cage and skip was sent to the site with the headframe, but only the man-cage was installed in the shaft. The rockbin and skip were hauled to another location, but many components of the skip are missing. Phelps Dodge supplied the hoist, and it is thought that the hoist came from Bisbee, Arizona. The hoist is a single drum of 6-feet in diameter and 42-inch width, and is equipped with a 7/8-inch, 6 x 19 IPS wire rope which is 1400-feet long. The hoist was manufactured by Wellman Seaver Morgan Company of Cleveland, Ohio, and appears to be in excellent condition. The hoisting system produces a maximum skip vertical speed of 290-feet per minute in the shaft. The hoist is powered by a G.E. 112 H.P., 440 V, 500 rpm wound-rotor motor complete with grid resistances and a Lilly "D" controller.

The Edith shaft is concrete lined to a point well below the proposed location of the skip loadout pockets, and the concrete lining is in excellent condition. It is a three-compartment shaft with a total length of 14 ft.- 6 in. and a width of 5 ft.-6 in.; the partitions are also constructed

of concrete. The center compartment, which is the hoisting compartment, is 4 ft.-0 in. wide by 5 ft.-6 in. deep with the distance between guides being 41½-inches. The 3¼ x 5-inch wooden cage guides were installed in 1981 and are in good condition. The compartment on the right side of the hoisting compartment is an escape compartment equipped with wooden ladders built and installed in 1981 and appear to be in good condition. The left-side compartment is empty at this time with the exception of utility lines which are installed in the shaft lining and a row of channel beams running down one side of the compartment. All of the level landings appear to be in good condition. The man and supply cage is now installed in the shaft and is being used in the current operation.

Ancillary surface facilities consist of a hoist house, trailer office building, workmen's change house, and miscellaneous equipment such as compressors, a 2-cubic-yard frontend loader, welding equipment, etc. All appear to be in good condition and should be adequate to support the proposed mining operation. The incoming power is controlled by a 480-volt load center of 800-amp, 250-volt A.C. or 600-volt A.C. capacity. Power is furnished by the Arizona Public Service Company.

The surface area around the shaft location is level and large enough to accommodate the newly proposed plant processing equipment and its stockpiling and truck loadout areas.

PROPOSED PROCESSING PLANT

The existing headframe and hoist have been investigated for their ability to produce 100-tons per shift from the 950 level of the Edith shaft. A 2-ton capacity skip will be added to the current man cage and with the weight of the 7/8-inch hoist rope will produce a maximum static load of 7,350 pounds when the loaded skip is at the load pocket. Arizona mine laws require a safety factor of 7 to 1 for new ropes having lengths between 500 and 1,000 feet long and a safety factor of 5.8 to 1 minimum safety factor before a used rope must be replaced. The existing 7/8-inch, 6 x 19 IPS rope appears to be in good condition, and, if so, will meet the above conditions. However, it needs to be inspected by a wire rope expert to determine its actual wear and minimum breaking strength to assure that the safety factor exceeds the 3.57-ton static load by at least 5.8 to 1. The four headframe main vertical support legs consist of one pair of 4 x 3½ x ¼-inch angles each, which are of adequate strength to carry the maximum design loads of the new cage and skip combination.

Maximum motor horsepower required to hoist the load at a rate of 290-feet per minute will be 106.5-H.P. (For H.P. required for the hoisting cycle, see the curve detail sheet attached to this report.) Complete dump cycle time will be 6½ minutes, which will produce 18.5-tons per hour. The process plant is being designed for 20-tons per hour. With

the above cycle time, the 100-tons per shift can be produced in approximately 5½ hours continuous production, which should allow adequate time for shift changes, man/supply cage needs, and some delays in mine and plant production.

The headframe will require some modifications to permit the skip to dump out of its back side toward the hoist house. The 112-H.P. motor on the hoist does not at this time appear to be producing its rated H.P. and needs to be investigated and the problem corrected. It has been determined that the power company's transformers are producing only 400 volts; this problem is in the process of being corrected. The cost for correcting the motor problem and modifying the headframe are included in the cost estimate.

The surface-ore handling plant would be designed to process a maximum of 20-tons per hour of silica rock. The final product would be 2-in. x ¼-in. stockpiled for future truck loadout and ¼-in. x zero material stockpiled either to be wasted or to be trucked offsite for valuable mineral recovery through other facilities.

The plant would receive 9-in. x zero run-of-the-mine ore from the skip in 2-ton lots which would be dumped onto an apron feeder at the headframe. The feeder would discharge its load at a rate of 20-tons per hour onto a 30-inch conveyor which would elevate the ore to a screening and crushing plant. The screening system would consist of a double-deck vibrating screen which would pass 2-inch plus material through a jaw crusher capable of crushing 20-tons per hour of 9-in. x 2-in.

silica ore to a 2-inch minus product. All of the crusher discharge would be recirculated over the incoming vibrating screen to screen out the 2-inch minus material. All minus 2-inch material would be screened to two product sizes; one being 2-in. x ¼-in. size and the other to ¼-in. x zero material. The ¼-inch x zero material would be placed in a single stockpile and disposed of as stated above, while the 2-in. x ¼-in. material would be stockpiled by a radial stacker. The radial stacker would permit stockpiling one large stockpile or several selected stockpiles if required by metallurgical conditions. With an 80-foot radial stacker operating over a 90-degree swing, it would be possible to stockpile approximately 3500-tons of material, which represents about 35 days of mine production. The level area immediately to the north of the Edith shaft is large enough to build the plant, stockpile the material, and to load the trucks with very little work needed to be done to ready this site. Or it could be used for three or four separate stockpiles of approximately 700-tons each; the sized rock is being estimated at weighing about 100-pounds per cubic foot. The stockpiled material would later be loaded into trucks by a frontend loader and sent to market as required. The total processing-plant-connected power requirement would be approximately 45-H.P. with 25-H.P. of that amount being required by the crusher alone. Total mine incoming power capacity appears to be about 600-amp at 277/480-volts, which should be adequate to furnish the total mining and processing needs.

Since the processing plant will likely be put together on a piecemeal basis utilizing used equipment, it will have to be designed to include a waterspray dust-control system, emergency stop switches and pull cords, a central electrical control system, etc. This will require some additional engineering costs, but it will allow the total project to be put together more cheaply than purchasing a complete new packaged plant.

CONSTRUCTION DETAILS AND COST ESTIMATING

This report assumes that most of the plant construction work would be done by about a 5-man crew of experienced small-mine-plant construction workers, which would include a working leadman. The average cost per worker would be about $18.50/hour, which includes the contractor's overhead and profit plus $30/day per man for subsistance. Tools and equipment would be rented on an as-needed basis. This basic crew would be needed at the site for approximately 4 weeks to complete the headframe modifications, repair and install the cage/skip combination, and to construct the processing plant. Existing personnel and equipment at the mine would be utilized at times where appropriate. Conveyor sections, crushing and screening plant, feeders, stacker, etc. would be delivered to the job site in mostly a prefabricated condition. The components, however, would need to be assembled into a working configuration and tied together electrically. The attached cost breakdown sheet provides the detail used in estimating the overall installed cost.

CONSTRUCTION COST ESTIMATE

PROJECT: UVX PROJECT
JEROME, ARIZ.

SHEET NO: - 1 of 2
DATE: - June 1986
NAME - H.G. KING

NO.	DESCRIPTION	QUANTITY	UNIT	MATERIAL UNIT	MATERIAL TOTAL	LABOR UNIT	LABOR TOTAL	TOTAL UNIT	TOTAL TOTAL
I	HOIST, SKIP AND HEADFRAME					M.H.			
1/	Hoist Motor Electrical Repairs	1	LS	LS	3500	24	440		3940
2/	Modify Head Frame For Skip Installation	5,000#	Steel	25¢	1,250	200	3700		4950
3/	Repair & Install Skip	1	LS	LS	4,500	80	1470		5970
	* S.T.				9,250		5,610		14,860
II	ORE PROCESSING PLANT								
1/	Apron Feeder & Receiving Hopper	L.S		L.S.	10,000	32	590		10,590
2/	Crushing Plant Feed Conv. 30"x80'	80	LF	50[8]	4,000	16	300		4,300
3/	Crushing and Screening Plant								
	• Structures								
	• Double Deck Vib. Screen / Feeder 3'x8'								
	• 12x24 Jaw Crusher 25 H.P.								
	• Recycle Conv. #1, 18"x20'	1	LS		31,000	300	5520		36,520
	• Recycle Conv #2, 18x20								
	• ¼x0 Reject Discharge Conv. 18x20								
	• 2x¼ Ore Discharge Conv. 18x20								
	• Electrical Controls								
	• Misc Repairs, Painting & Service								
4/	Radial Stacker 18"x80'	80	LF	130[8]	10,400	16	300		10,700
5/	Misc. Structural Steel & Chutes	10,000	lb.	50¢	5,000	32	590		5,590
	* S.T.				60,400		7,300		67,700
III	CONSTRUCTION EQUIPMENT & RELATED								
1/	Mobile Crane	1	Month	2,500[8]	2,500	170	3,400		5,900
2/	Welding Machines (2 Each)	2	Month	500	1,000	-	-		1,000
3/	General Field Tools	21	Days	30[8]	630	-	-		630
4	Pick up Truck	21	Days	50[8]	1,050	-	-		1,050
5	Welding Truck	21	Days	50[8]	1,050	-	-		1,050
6	Front End Loader (By owner)	—	—	—	—	—	—		Zero
7	Electric Power Cost	21	day	30[8]	630	-	-		630
8	Fuel Cost	21	days	50[8]	1,100		-		1,100
	* S.T.								

CONSTRUCTION COST ESTIMATE

PROJECT: UVX PROJECT
JEROME, AZ

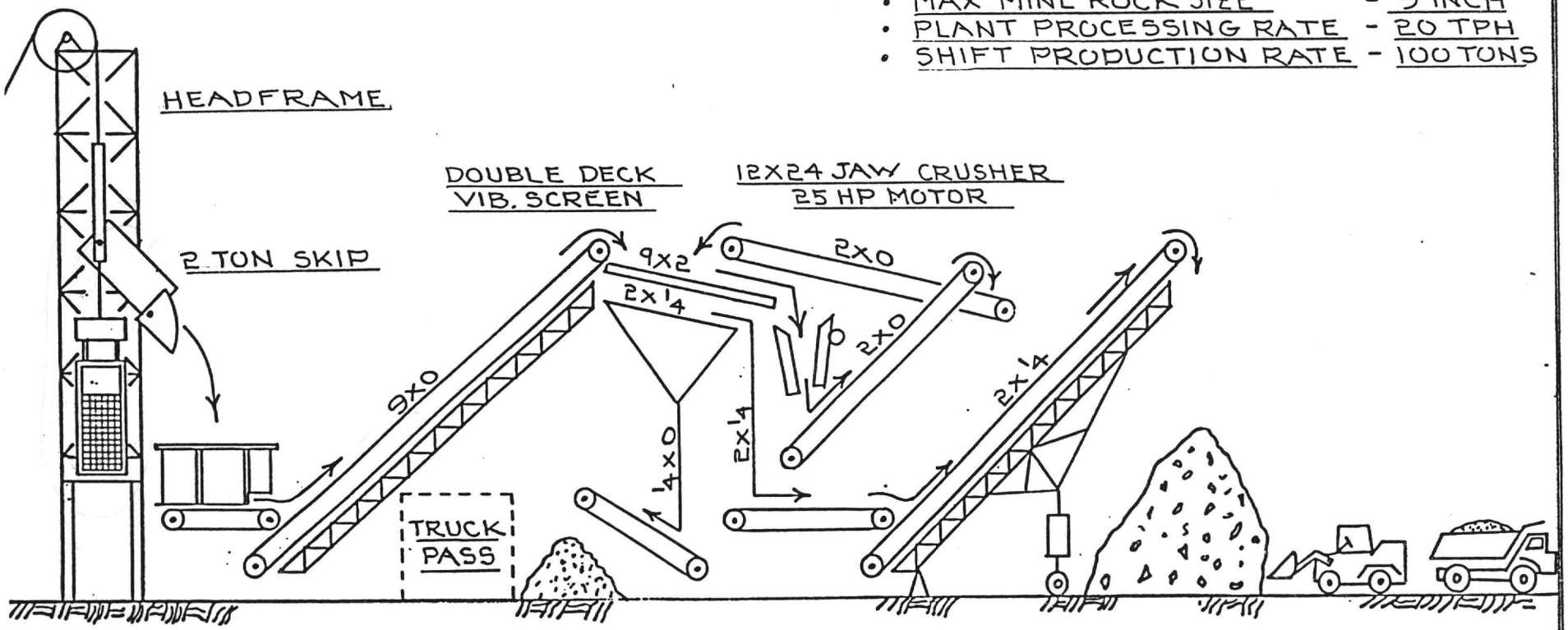
SHEET NO: 2 OF 2
DATE: JUNE, 86
NAME: H.G.KING

NO.	DESCRIPTION	QUANTITY	UNIT	MATERIAL UNIT	MATERIAL TOTAL	LABOR UNIT	LABOR TOTAL	TOTAL UNIT	TOTAL TOTAL
IV	GENERAL SITE WORK					MH			
1,	Earthwork For Site Preparation	1	LS	—	—	40	740		740
2,	Electrical Distribution & Yard Lighting	1	LS	LS	2,500	40	740		3240
3,	Water Distribution For Dust Control	1	LS	LS	1,100	80	1470		2570
4,	Noise Abatement Systems	1	LS	LS	500	40	740		1240
5,	Plant Concrete Foundations	10	CY	70	700	50	920		1620
	* S.T.				4,800		4,610		9,410
V	GENERAL								
1,	Engineering Design & Field Inspection								10,000
2,	Freight								5,000
3,	Outside Services								2,000
4,	Labor Crew Subsistance @ 30$/Man/Day	105	ManDay	—	—		3,150		3,150
5,	Contingency								10,000
	* S.T				zero		3,150		30,150
	TOTALS				82,410		24,070		123,940

NOTE: Labor crew consists of 5 men including one leadman
- Avg. cost per laborer is 18.40$/hr which includes contractor's overhead & profit.
- Plant equipment is priced using good used equipment.

NOTE:

- SKIP CAPACITY - 2 TONS
- SKIP CYCLE TIME - 6½ MIN
- MAX MINE ROCK SIZE - 9 INCH
- PLANT PROCESSING RATE - 20 TPH
- SHIFT PRODUCTION RATE - 100 TONS



MAN CAGE

36"X6' APRON FEEDER

¼X0 STOCKPILE

30"X80' CONVEYOR

CRUSHING & SCREENING PLANT

2X¼ STOCKPILE

18"X90' RADIAL STACKER

TRUCK LOADOUT

SCHEMATIC DIAGRAM

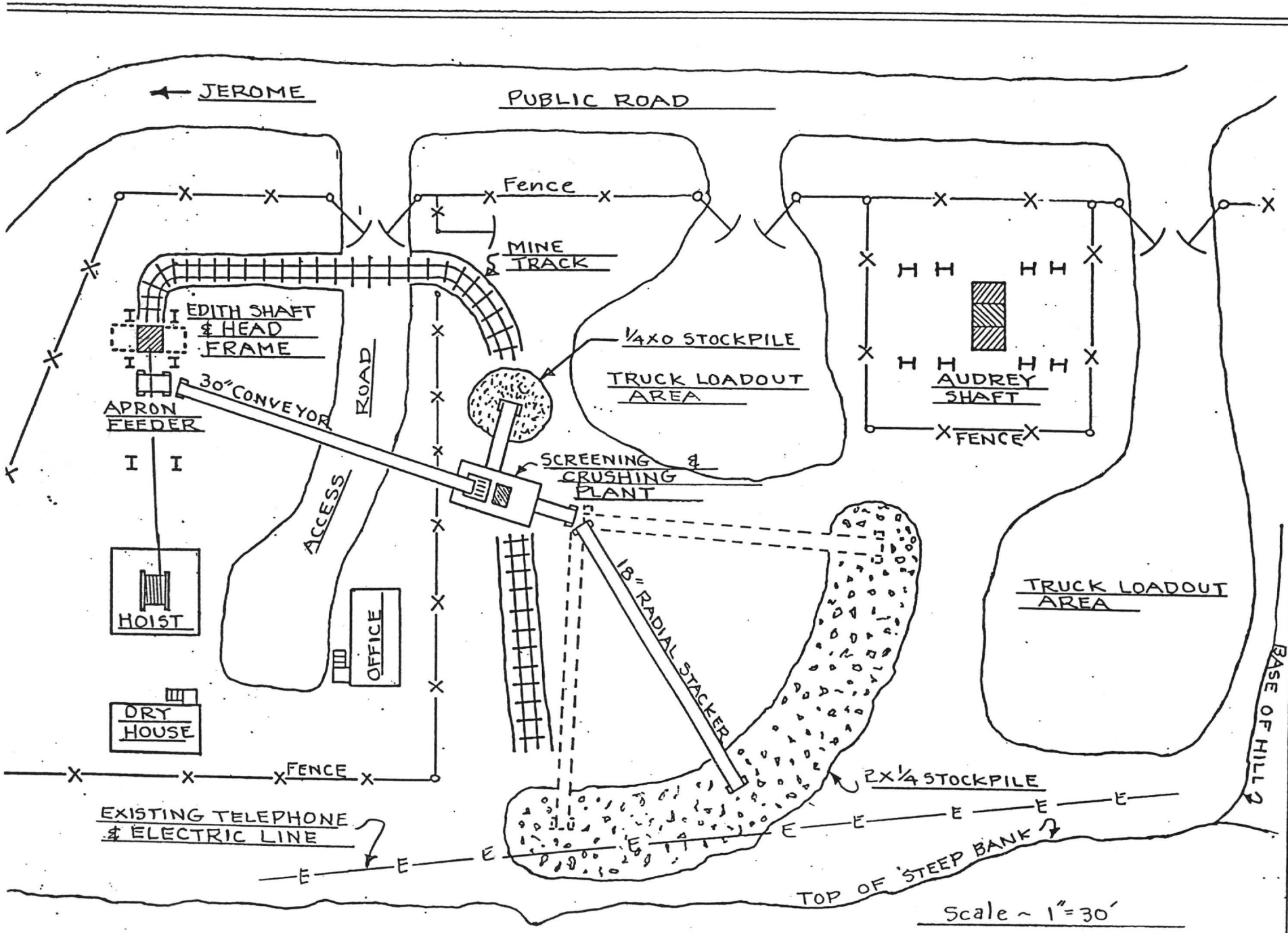
NO SCALE

SURFACE PROCESSING PLANT

UVX PROJECT ~ JEROME, AZ.

H.G. KING, P.E.

JUNE, 1986



PLANT SITE LAYOUT

UVX PROJECT ~ JEROME, AZ.

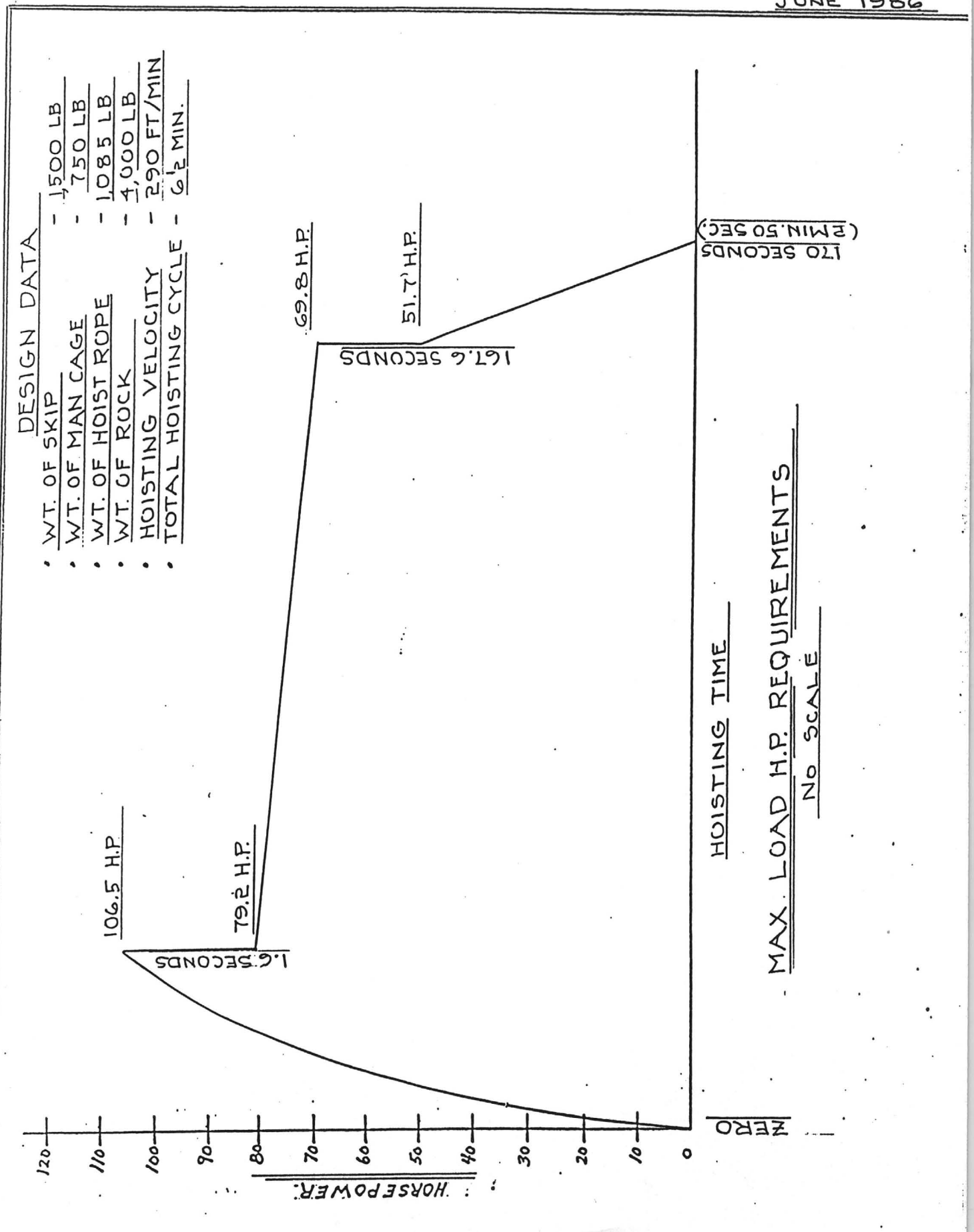
H.G. KING, P.E.

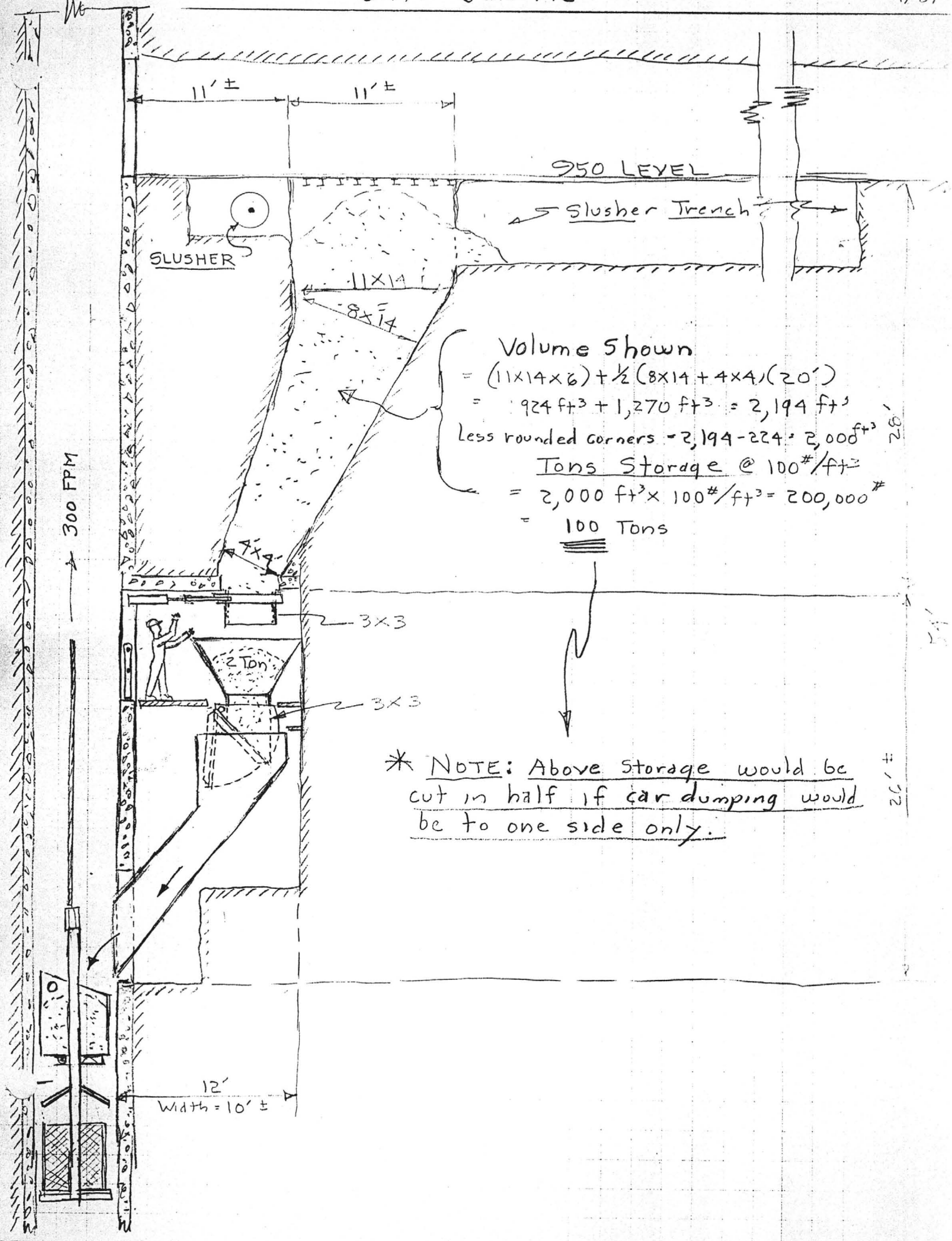
JUNE, 1986

HOIST HORSE POWER DEMAND

UVX PROJECT ~ JEROME, AZ.

H.G. KING, P.E.
JUNE 1986





Volume Shown

= (11×14×6) + ½ (8×14 + 4×4)(20′)

= 924 ft³ + 1,270 ft³ = 2,194 ft³

Less rounded corners = 2,194 − 224 = 2,000 ft³

Tons Storage @ 100#/ft³

= 2,000 ft³ × 100#/ft³ = 200,000#

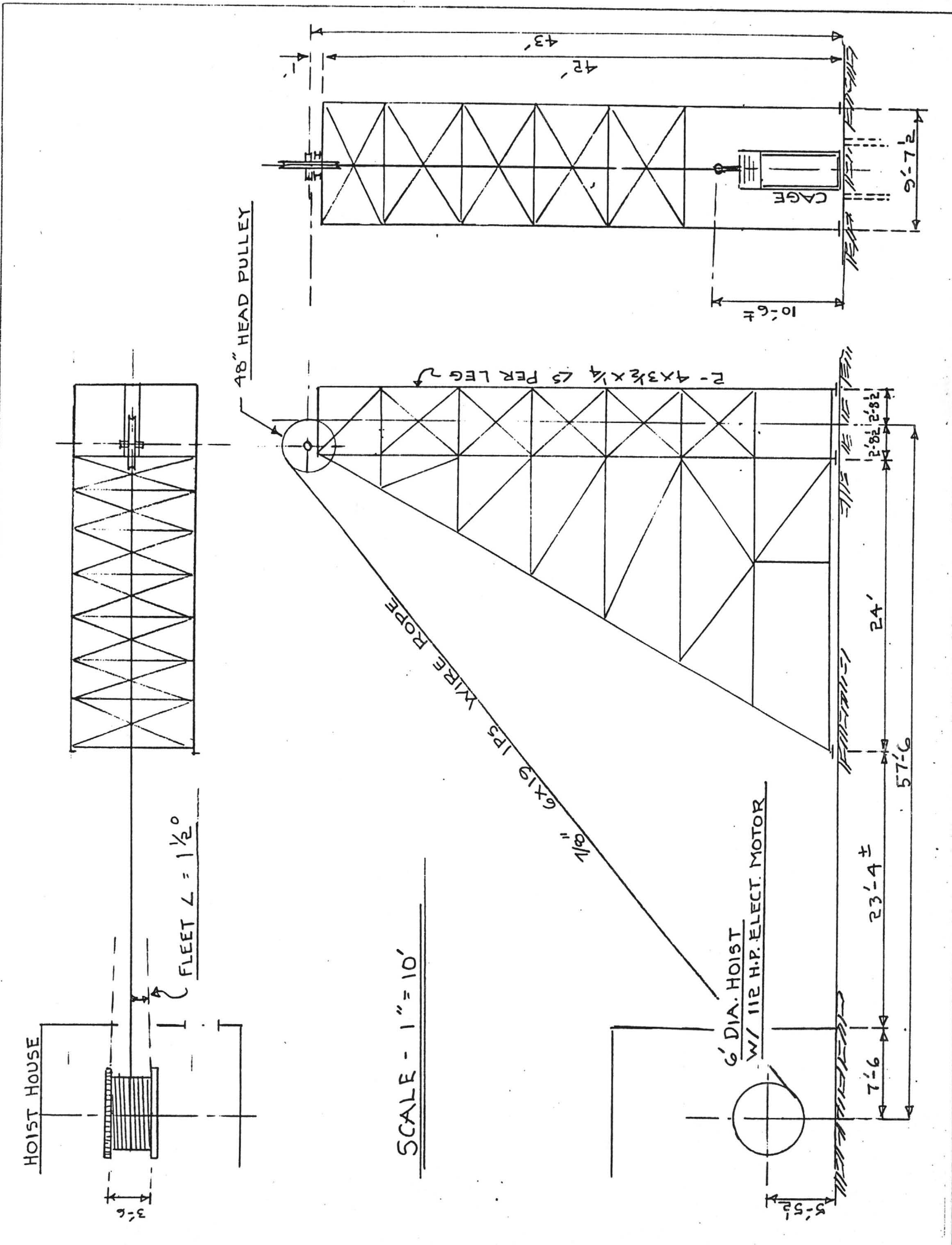
= 100 Tons

* NOTE: Above storage would be cut in half if car dumping would be to one side only.

UVX PROJECT ~ JEROME, AZ.

EDITH HEADFRAME & HOIST

MAY 1986



Howard G. King
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Tucson, Arizona 85704
Telephone 602-297-2053

Consultant
Mining and Civil
Engineering and Management

June 16, 1986

DME Ltd.
7340 E. Shoeman Lane
Suite 111 "B" (E)
Scottsdale, AZ 85251

DMEA LTD.
JUN 18 1986
RECEIVED

ATTENTION Mr. Ben F. Dickerson III

Gentlemen:

Subject: UVX Project

Enclosed herewith are two copies of a report entitled "A Proposed Surface Material-Handling Plant" which was prepared for the Edith Shaft, Jerome, Arizona. The intent of the study is to assist you in determining the technical and economical feasibility of modifying the existing surface facilities and of adding an additional rock plant to produce and process 100-tons per shift of silica rock.

I hope that the information provided in the report will be of substantial value to you, and if I can be of any further assistance, please let me know.

Respectfully,

H. G. King

HGK/v

Enclosure

Assumptions and Parameters

gold	$450.00	per ounce
silver	$7.50	per ounce
low grade reserves	120000	tons
grade (gold)	0.172	oz/t
grade (silver)	2.68	oz/t
high grade reserves	46000	tons
grade (gold)	0.267	oz/t
grade (silver)	3.31	oz/t
low grade reserves (total)	360000	tons
grade (gold)	0.172	oz/t
grade (silver)	2.68	oz/t
high grade reserves (total)	138000	tons
grade (gold)	0.267	oz/t
grade (silver)	3.31	oz/t
cost, mining rock	$60.00	per ton
Smelter return (%)	0.85	85%
Recovery in CIL	0.85	85%
Processing, CIL	$9.00	per ton
Transporation	$13.00	per ton

Low Grade Reserves: $\frac{500 \text{ ft.} \times 80 \text{ ft.} \times 40 \text{ ft.}}{13 \text{ cu.ft./ton}} = 120{,}000 \text{ tons}$

High Grade Reserves: $\frac{500 \text{ ft.} \times 80 \text{ ft.} \times 15 \text{ ft.}}{13 \text{ cu.ft./ton}} = 46{,}000 \text{ tons}$

Total: above numbers x 3

UVX Mine Options (June 18, 1987)

Assumptions: Gold at $450.00/ounce
Silver at $7.50/ounce

(A) Indicated Low Grade Reserves of 120,000 tons of 0.172 oz/t gold and 2.68 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

(B) Indicated High Grade Reserves of 46,000 tons of 0.267 oz/t gold and 3.31 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

(C) Indicated TOTAL Low Grade Reserves of 360,000 tons of 0.172 oz/t gold and 2.68 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

(D) Indicated TOTAL High Grade Reserves of 138,000 tons of 0.267 oz/t gold and 3.31 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

	(A) Ore to Smelter or Custom Mill	(A) Ore to CIL Plant at UVX	(B) Ore to Smelter or Custom Mil	(B) Ore to CIL Plant at UVX	(C) Ore to Smelter or Custom Mil	(C) Ore to CIL Plant at UVX	(D) Ore to Smelter or Custom Mil	(D) Ore to CIL Plant at UVX
Gross Revenues	$8,026,380	$8,026,380	$5,668,523	$5,668,523	$29,835,000	$29,835,000	$17,005,568	$17,005,568
Capital	$0	$1,000,000	$0	$1,000,000	$0	$1,000,000	$0	$1,000,000
Operating Costs								
Mining	$7,200,000	$7,200,000	$2,760,000	$2,760,000	$21,600,000	$21,600,000	$8,280,000	$8,280,000
Processing	$0	$1,080,000	$0	$414,000	$0	$3,240,000	$0	$1,242,000
Transportation	$1,560,000	$0	$598,000	$0	$4,680,000	$0	$1,794,000	$0
Operating Profit	($733,620)	($253,620)	$2,310,523	$2,494,523	$3,555,000	$4,995,000	$6,931,568	$7,483,568
Recovery of Capital	($0)	($1,000,000)	($0)	($1,000,000)	($0)	($1,000,000)	($0)	($1,000,000)
Sunk Costs	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)
Additonal Exploration	$0	$0	$0	$0	($900,000)	($900,000)	($900,000)	($900,000)
Net Profit on Project	($2,313,620)	($2,833,620)	$730,523	($85,478)	$1,075,000	$1,515,000	$4,451,568	$4,003,568

UVX Assays

Morgan Drill Station: Mine grid 11565N, 7080E

Hole No.	Azimuth	Inclination	Total Length	From	To	Interval	True Width	Core Gold oz/t	Silver oz/t	Rock type
M-1	240	+42	262	122	125	3		0.461	3.44	chert breccia
				125	128	3		0.357	1.94	chert breccia
				128	130	2		0.064	0.71	chert breccia
				130	133	3		0.106	0.96	chert breccia
				133	136	3		0.193	1.12	chert breccia
				136	138	2		0.143	0.27	chert breccia
				138	140	2		0.090	0.63	chert breccia
				140	143	3		0.032	0.55	chert breccia
				143	146	3		0.070	0.58	chert breccia
				146	150	4		0.026	0.45	chert breccia
				150	153	3		0.050	0.67	chert breccia
				153	157	4		0.072	1.16	chert breccia
				157	160	3		0.109	1.63	chert breccia
				160	167	7		0.086	1.34	chert breccia
				167	170	3		0.555	1.55	chert breccia
				170	173	3		0.399	1.38	chert breccia
				173	176	3		0.170	2.18	chert breccia
		Low grade interval		122	176	54	47	0.168	1.24	all flux quality
		High grade intervals		122	138	16	14	0.235	1.52	all flux quality
				157	176	19	17	0.226	1.56	all flux quality
M-2	240	+60	226	118	121	3		0.096	0.49	chert breccia
				121	124	3		0.066	1.11	chert breccia
				124	127	3		0.103	1.54	chert breccia
				127	131	4		0.234	1.51	ironstone
				131	136	5		0.140	1.53	ironstone
				136	141	5		0.055	1.35	ironstone
				141	146	5		0.055	2.24	ironstone
		Low grade interval		118	146	28	28	0.106	1.47	breccia & ironstone
		High grade intervals		124	136	12	12	0.162	1.53	breccia & ironstone
M-3	178	+20	233							
				146	151	5		0.066	3.74	siliceous grit
				151	153	2		0.161	11.55	siliceous grit
				153	156	3		1.216	6.26	siliceous grit
				156	158	2		0.447	58.72	siliceous grit
				158	161	3		1.045	53.89	siliceous grit
				161	163	2		1.541	65.11	siliceous grit
				163	166	3		0.916	35.42	siliceous grit
				166	171	5		1.113	31.86	siliceous grit
				171	176	5		1.379	34.23	siliceous grit
				176	179	3		0.839	56.16	siliceous grit
				179	181	2		0.321	15.95	siliceous grit

				181	185	4		0.134	3.76 siliceous grit
				185	188	3		0.045	1.11 chert breccia
				188	191	3		0.110	1.88 chert breccia
				191	194	3		0.065	1.90 chert breccia
				194	196	2		0.094	5.48 chert breccia
				196	198	2		0.157	4.66 chert breccia
				198	200	2		0.062	2.93 chert breccia
				200	202	2		0.249	2.91 chert breccia
				202	204	2		0.509	11.16 chert breccia
				204	206	2		0.029	1.03 ironstone
				206	209	3		0.190	1.99 ironstone
				209	213	4		0.093	2.83 ironstone
				213	216	3		0.103	2.70 ironstone
				216	221	5		0.122	3.51 ironstone
				221	226	5		0.099	5.34 ironstone
				226	230	4		0.052	1.36 ironstone
		Low grade interval		146	230	84	59	0.425	15.10 mixed material
		High grade intervals		146	185	39	27	0.777	28.77 siliceous grit
				185	204	19	13	0.147	3.63 chert breccia
				204	230	26	18	0.101	2.97 ironstone
M-4	178	+50	295	107	109	2		0.090	11.64 ironstone
				109	112	3		0.123	4.00 ironstone
				112	115	3		0.074	1.39 ironstone
				115	117	2		0.301	2.52 ironstone
				117	120	3		0.221	5.50 ironstone
				120	123	3		0.123	1.97 ironstone
				123	126	3		0.181	1.81 ironstone
				126	130	4		0.081	1.58 ironstone
				130	134	4		0.037	1.69 ironstone
				134	137	3		0.032	1.66 chert breccia
				137	141	4		0.045	2.28 chert breccia
				141	145	4		0.078	2.36 chert breccia
				145	150	5		0.080	1.97 chert breccia
				150	153	3		0.037	1.64 chert breccia
				153	157	4		0.059	1.12 chert breccia
				157	161	4		0.033	0.89 chert breccia
				161	165	4		0.020	0.84 chert breccia
				165	170	5		0.043	0.80 chert breccia
				170	175	5		0.037	1.22 chert breccia
				175	180	5		0.062	1.84 chert breccia
				180	185	5		0.055	1.78 chert breccia
				185	190	5		0.029	2.34 chert breccia
				190	195	5		0.374	1.45 chert breccia
				195	200	5		0.253	2.83 chert breccia
				200	203	3		0.206	1.94 chert breccia
				203	206	3		0.050	0.96 chert breccia
		Low grade interval		107	206	99	50	0.101	2.07 mixed material
		High grade intervals		107	130	23	12	0.142	3.42 ironstone
				190	206	16	8	0.244	1.88 chert breccia
M-5	178	+10	198 no mineralized intercepts						

UVX Assays

M-6	178	+30	195						
				148	151	3		0.222	9.18 chert breccia
				151	155	4		0.060	18.46 ironstone
				155	158	3		0.133	12.14 chert breccia
				158	160	2		0.446	5.84 chert breccia
				160	162.5	2.5		0.804	5.64 chert breccia
				162.5	165	2.5		0.346	9.00 chert breccia
				165	167.5	2.5		0.215	3.95 chert breccia
				167.5	170	2.5		0.180	2.03 ironstone
				170	172.5	2.5		0.682	5.92 ironstone
				172.5	175	2.5		0.287	5.33 ironstone
				175	177.5	2.5		0.255	4.22 ironstone
				177.5	180	2.5		0.103	3.71 ironstone
				180	182.5	2.5		0.080	2.20 ironstone
				182.5	185	2.5		0.080	2.04 ironstone
				185	190	5		0.152	3.60 ironstone
				190	195	5		0.307	7.16 ironstone
		Low grade interval		148	195	47	33	0.257	6.67 mixed material
		High grade intervals		155	167.5	12.5	9	0.376	7.57 chert breccia
				167.5	195	27.5	19	0.235	4.27 ironstone
M-7	240	+25	129	no mineralized intercepts					
M-8	210	+40	187	90	92	2		0.186	4.26 chert breccia
				92	94	2		0.261	3.05 chert breccia
				94	96	2		0.043	1.15 chert breccia
				96	98	2		0.085	1.07 chert breccia
				98	100	2		0.010	0.38 chert breccia
				100	103	3		0.008	0.80 chert breccia
				103	105	2		0.045	0.52 chert breccia
				105	107	2		0.062	0.64 chert breccia
				107	110	3		0.108	0.82 chert breccia
				110	112	2		0.124	0.22 chert breccia
				112	114	2		0.187	0.54 chert breccia
				114	116	2		0.250	0.74 chert breccia
				116	118	2		0.235	0.46 chert breccia
				118	120	2		0.078	0.55 chert breccia
				120	122	2		0.045	0.57 chert breccia
				122	124	2		0.035	0.60 chert breccia
				124	126	2		0.027	0.63 chert breccia
				126	129	3		0.043	0.39 chert breccia
				129	132	3		0.047	0.82 chert breccia
				132	135	3		0.062	1.18 chert breccia
				135	138	3		0.042	0.69 chert breccia
				138	141	3		0.061	1.00 chert breccia
				141	144	3		0.263	1.44 chert breccia
		Low grade interval		90	144	54	47	0.097	0.97 mixed material
		High grade intervals		90	98	8	7	0.144	2.38 chert breccia
				107	118	11	10	0.174	0.58 chert breccia

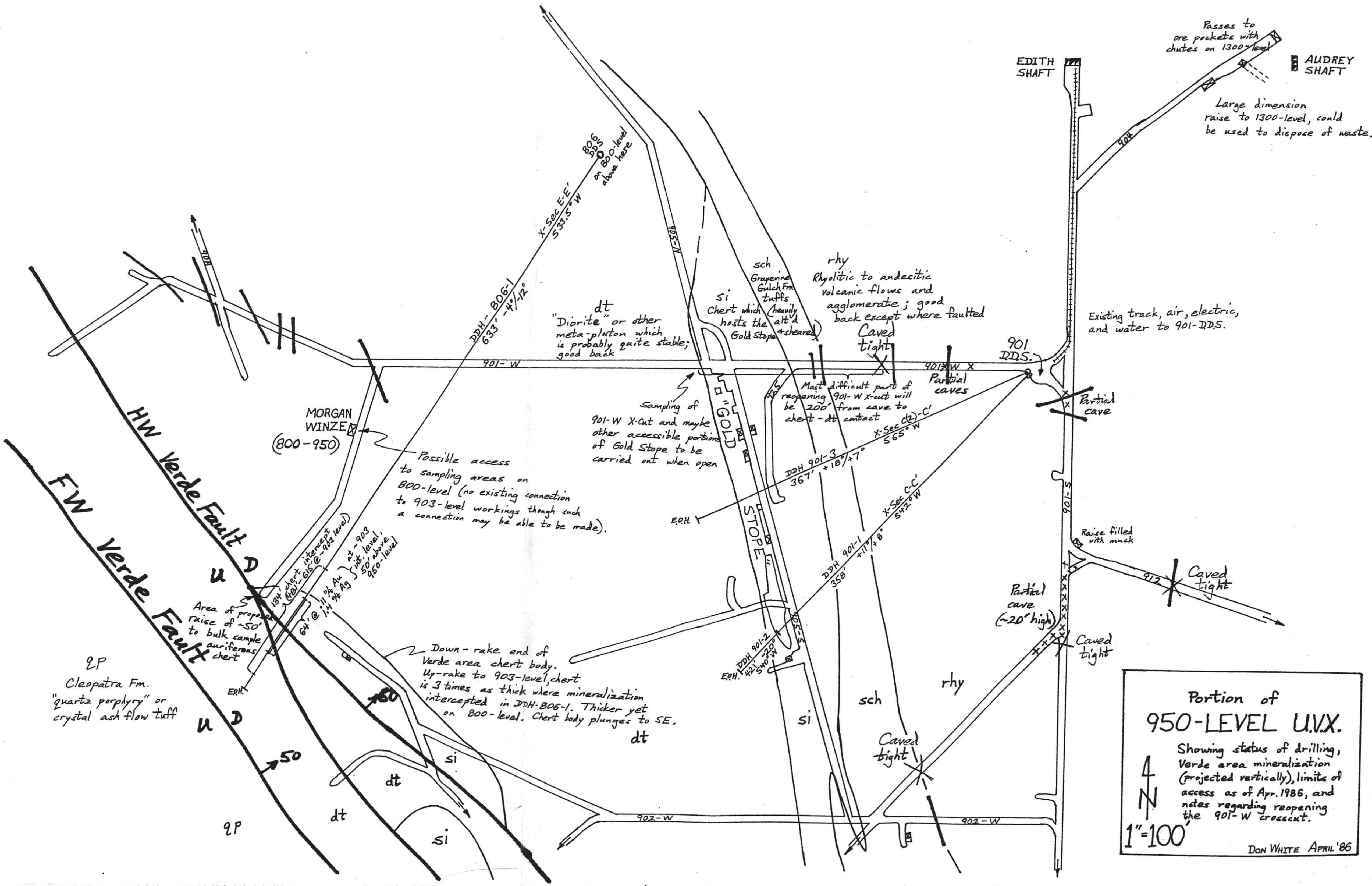
UVX Assays

M-9	195	+20	183	100	104	4		0.029	1.64 chert breccia
				104	107	3		0.203	3.12 chert breccia
				107	109	2		0.335	1.67 chert breccia
				109	111	2		0.305	2.03 chert breccia
				111	113	2		0.614	1.59 chert breccia
				113	115	2		0.241	1.58 chert breccia
				115	119	4		0.687	1.18 chert breccia/grit
				119	121	2		0.181	1.26 chert breccia/grit
				121	123	2		0.148	1.72 chert breccia/grit
				123	125	2		0.156	2.28 chert breccia/grit
				125	127	2		0.158	2.26 chert breccia/grit
				127	129	2		0.155	1.89 chert breccia/grit
				129	131	2		0.124	1.99 chert breccia/grit
				131	133	2		0.085	2.56 chert breccia/grit
				133	135	2		0.083	1.70 chert breccia/grit
				135	137	2		0.118	1.11 chert breccia/grit
				137	139	2		0.051	1.23 chert breccia/grit
				139	142	3		0.060	1.33 chert breccia/grit
				142	144	2		0.024	2.27 chert breccia/grit
				144	147	3		0.134	0.95 chert breccia/grit
				147	150	3		0.072	0.76 chert breccia/grit
				150	154	4		0.052	0.95 chert breccia/grit
				154	157	3		0.078	0.92 chert breccia
		Low grade interval		100	157	57	44	0.180	1.59 mixed flux material
		High grade intervals		104	131	27	21	0.303	1.87 flux material
M-10	163	+23	278	no mineralized intercepts (no chert)					
M-11	173	+25	210	165	168	3		0.034	3.79 ironstone
				168	170	2		0.126	8.22 chert breccia/grit
				170	172	2		0.386	7.98 chert breccia/grit
				172	174	2		0.458	7.98 chert breccia/grit
				174	177	3		0.310	12.85 chert breccia/grit
				177	180	3		0.050	4.20 chert breccia/grit
				180	182	2		0.081	4.08 chert breccia/grit
				182	184	2		0.186	4.89 chert breccia/grit
				184	187	3		0.240	7.91 chert breccia/grit
				187	190	3		0.057	5.53 chert breccia/grit
				190	194	4		0.290	5.33 ironstone
				194	198	4		0.208	10.80 ironstone
				198	202	4		0.284	4.12 ironstone
				202	206	4		0.476	9.44 ironstone
				206	210	4		0.411	7.28 ironstone
		Low grade interval		165	210	45	32	0.249	7.04 mixed material
		High grade intervals		168	190	22	15	0.202	7.17 chert breccia/grit
				190	210	20	14	0.334	7.39 ironstone

UVX Assays

809 Drill station: mine grid 11790N, 6905E

809-1	205	+23	336	183	187	4	0.083	1.95 massive chert
				187	190	3	0.215	1.92 massive chert
				190	193	3	0.109	3.15 massive chert
				193	196	3	0.100	2.52 massive chert
				196	200	4	0.057	1.99 massive chert
				200	203	3	0.229	0.84 massive chert
				203	206	3	0.184	0.79 massive chert
				206	210	4	0.324	0.70 massive chert
				210	214	4	0.128	0.76 massive chert
				214	219	5	0.032	1.26 massive chert
				219	222	3	0.168	0.69 massive chert
				222	225	3	0.061	1.09 massive chert
				225	228	3	0.095	1.20 massive chert
				228	231	3	0.209	1.09 massive chert
				231	234	3	0.202	1.62 massive chert
				234	237	3	0.074	1.82 massive chert
		Low grade interval		183	237	54	0.138	1.446 chert - flux
		High grade intervals		200	214	14	0.218	0.766 chert - flux
809-2	185	+23	240	156	160	4	0.063	2.05 massive chert
				160	163	3	0.075	1.58 massive chert
				163	167	4	0.091	3.72 massive chert
				167	170	3	0.077	0.35 massive chert
				170	173	3	0.047	1.60 massive chert
				173	176	3	0.130	0.95 massive chert
				176	179	3	0.313	0.70 massive chert
				179	182	3	0.448	1.60 massive chert
				182	185	3	0.334	1.38 massive chert
				185	188	3	0.537	1.75 massive chert
				188	191	3	0.661	1.56 massive chert
				191	194	3	0.326	2.08 massive chert
				194	197	3	0.094	1.33 massive chert
				197	200	3	0.135	1.51 massive chert
				200	203	3	0.057	0.66 massive chert
				203	206	3	0.042	0.82 massive chert
				206	209	3	0.089	0.79 massive chert
		Low grade interval		156	209	53	0.202	1.49 chert - flux
		High grade intervals		173	200	27	0.331	1.43 chert - flux



Portion of
950-LEVEL U.V.X.
Showing status of drilling, Verde area mineralization (projected vertically), limits of access as of Apr. 1986, and notes regarding reopening the 901-W crosscut.
1"=100'
N
Don White April '86
EDITH SHAFT
AUDREY SHAFT
Passes to ore pockets with chutes on 1300-level
Large dimension raise to 1300-level, could be used to dispose of waste.
Existing track, air, electric, and water to 901-DDS.
901 DDS.
901-W
901-S
902-W
908
912
Caved tight
Partial caves
Partial cave
Partial cave (~20' high)
Raise filled with muck
rhy
Rhyolitic to andesitic volcanic flows and agglomerate; good back except where faulted
sch
Grayenne Gulch Fm. tuffs
si
Chert which (heavily alt'd + sheared) hosts the Gold Stope
dt
"Diorite" or other meta-pluton which is probably quite stable; good back
Most difficult part of reopening 901-W X-cut will be 200' from cave to chert-dt contact
Sampling of 901-W X-Cut and maybe other accessible portions of Gold Stope to be carried out when open
"GOLD STOPE"
DDH 901-3 367', +18°/+7°
X-Sec C(2)-C' S65°W
DDH 901-1 358', +11°/+6°
X-Sec C-C' S42°W
DDH 901-2
E.O.H.
DDH-806-1 633', -4°/-12°
X-Sec E-E' S33.5°W
806 DDS on 800-level above here
MORGAN WINZE (800-950)
Possible access to sampling areas on 800-level (no existing connection to 903-level workings though such a connection may be able to be made).
HW Verde Fault
FW Verde Fault
U
D
50
Area of proposed raise of ~50' to bulk sample auriferous chert
Down-rake end of Verde area chert body. Up-rake to 903-level, chert is 3 times as thick where mineralization intercepted in DDH-806-1. Thicker yet on 800-level. Chert body plunges to SE.
QP
Cleopatra Fm. "quartz porphyry" or crystal ash flow tuff

Assumptions:

The M-3 zone represents a typical "target" in the Verde area, containing 46,000 tons of 0.15 oz/t gold and 2.6 oz/t silver, or an equivalent grade of 0.19 oz/t total gold.

Therefore, our "targets" would each contain about 8,500 ounces.

"Targets" are M-3, 809, 901, 902 and 906 for a total of 42,500 ounces.

The M-3 "target" has been identified.

We are currently drilling the 809 "target"

The 901 "target" will be accessed from the 901-S drift:

450 ft. of drift to rehabilitate at $300/ft	$135,000.00
2000 ft. of drilling at $50/ft	$100,000.00

The 902 "target" will be accessed from the 902 DDS:

240 ft. of new drift (underway)	$60,000.00
2000 ft. of drilling at $50/ft	$100,000.00

The 906 "target" will be accessed by the 906 DDS:

280 ft. of new drift at $250/ft.	$70,000.00
2000 ft. of drilling at $50/ft.	$100,000.00

Connecting drift between 901 DDS and 906 DDS:

300 ft. of new drift at $250/ft.	$75,000.00
Sub-total	$640,000.00
More realistically: 9 mos. x $100,000/month	$900,000.00
Total expenditures to 5-31-87:	$1,578,981.18
Total	$2,478,981.18

If all "targets" are located, and 42,500 ounces indicated:

Gross at $450/ounce		$19,125,000.00
Mining at $300/ounce (=$60/ton)	-	$12,750,000.00
Net smelter at 85%		$5,418,750.00
Net from Verde		$4,168,125.00
Net Profit after recovery of $2.5 million in expenditures		$1,668,125.00

UVX Drilling Summary

Morgan Drill Station: Mine grid 11565N, 7080E

Hole No.	Total Length	From	To	Width	True Width	Gold oz/t	Silver oz/t
M-1	262	122	176	54	47	0.168	1.24
		Includes:					
		122	138	16	14	0.235	1.52
Bearing S60°W		157	176	19	17	0.226	1.56
@ +42°							
M-2	226	118	146	28	28	0.106	1.47
		Includes:					
		124	136	12	12	0.162	1.53
Bearing S60°W							
@ +60°							
M-3	233	146	230	84	59	0.425	15.10
		Includes:					
		146	185	39	27	0.777	28.77
Bearing S2°E		185	204	19	13	0.147	3.63
@ +20°		204	230	26	18	0.101	2.97
M-4	295	107	206	99	50	0.101	2.07
		Includes:					
		107	130	23	12	0.142	3.42
Bearing S2°E		190	206	16	8	0.244	1.88
@ +50°							
M-5	198 no mineralized intercepts						
Bearing S2°E							
@ +10°							
M-6	195	148	195	47	33	0.257	6.67
		Includes:					
		155	167.5	12.5	9	0.376	7.57
Bearing S2°E		167.5	195	27.5	19	0.235	4.27
@ +30°							
M-7	129 no mineralized intercepts						
Bearing S60°W							
@ +25°							

UVX Drilling Summary

M-8	187	90	144	54	47	0.097	0.97
	Includes:						
		90	98	8	7	0.144	2.38
Bearing S30°W		107	118	11	10	0.174	0.58
@ +40°							
M-9	183	100	157	57	44	0.180	1.59
	Includes:						
		104	131	27	21	0.303	1.87
Bearing S15°W							
@ +20°							
M-10	278 no mineralized intercepts (no chert)						
Bearing S17°E							
@ +23°							
M-11	210	165	210	45	32	0.249	7.04
	Includes:						
		168	190	22	15	0.202	7.17
Bearing S7°E		190	210	20	14	0.334	7.39
@ +25°							
809 Drill station: mine grid 11790N, 6905E							
809-1	336	183	237	54	38	0.138	1.45
	Includes:						
Bearing S25°W		200	214	14	10	0.218	0.77
@ +23°							
809-2	240	156	209	53	37	0.202	1.49
	Includes:						
		173	200	27	19	0.331	1.43
Bearing S5°W							
@ +23°							
809-3	370	50	68	18	10	0.171	0.39
		287	343	56	32	0.150	1.04
	Includes:						
		326	343	17	10	0.196	1.19
Bearing S15°E							
@ -5°							
	Averages	Low Grade			40	0.172	2.68
		High Grade			15	0.267	3.31

Assumptions:

The M-3 zone represents a typical "target" in the Verde area, containing 46,000 tons of 0.15 oz/t gold and 2.6 oz/t silver, or an equivalent grade of 0.19 oz/t total gold.

Therefore, our "targets" would each contain about 8,500 ounces.

"Targets" are M-3, 809, 901, 902 and 906 for a total of 42,500 ounces.

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2000 ft. of drilling at $50/ft	$100,000.00

The 906 "target" will be accessed by the 906 DDS:

280 ft. of new drift at $250/ft.	$70,000.00
2000 ft. of drilling at $50/ft.	$100,000.00

Connecting drift between 901 DDS and 906 DDS:

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Net from Verde		$4,168,125.00
Net Profit after recovery of $2.5 million in expenditures		$1,668,125.00

Carole

Hole No. 809-3

Collar location: U.V.X. Mine - 800 Level, 809 D.D.S. Mine grid 11,790 N 6,905 E

Inclination: -5° at collar (-7° at 280' by camera)

Azimuth: 170° at collar

Length: 370 feet

Driller: Longyear Co., Phoenix, AZ — Bert Hansen + Dennis Sager, drillers

Core recovery: About 95% in diorite except where very gouge (i.e., ~50% 225'-279') ~80% but erratic in chert

Dates: May 29 to June 16, 1987

Assayer: Iron King Assay, Inc - Humboldt, AZ using Fire Assay, one assay ton and A.A. followup for low grades.

Logger: Don White, geologist

Remarks: Drilled with Longyear 34, pneumatic rig. NQ core from collar thru 345 ft. BQ from 345'-370' (E.O.H.). Overall drilling rate 15.4 ft/shift incl. moving (3 hr) + pump repairs (6 hr) for 10 hr. shifts, 2 shifts/day. 6.25 ft/shift for just the last 12 shifts in 2nd chert zone. All rods, casing, etc. removed from hole.

Core Size RQD	Runs/recovery Core boxes	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type	Lithology
									Note: Virtually no reliable sense-of-orientation indicators within chert. Best estimates are bedding ~35° to core axis. Therefore true thicknesses ~57% of drill intercepts.
NQ; 1.875" diameter core (Skeleton) Box A								Silicic-altered diorite	0'-20' Purple + white, blotchy, silicic-altered diorite. Foliation ~50° to core axis
									20'-49' Beige + tan, banded and foliated (wavy foliation, $\bar{x}$=50° to CA) with increasing abundance of intrusive breccia fragments toward chert contact (49'). Clasts are milky white and light gray qtz. ≤2" dia.
								Very ferruginous si	49'-55' Dark red-brown, very dense, very ferruginous (~40% FeO) chert bx with ~40% lt. gray clasts ($\bar{x}$=1") 53'-55' includes dk purple + yellow-brown earthy stringers.
				.068	.31			Saccharoidal si	55'-68' Rusty red-orange, saccharoidal textured but competent chert bx with ~60% matrix supported clasts, milky wt. to lt. gray ($\bar{x}$=½")
				.306	.61	55'-68'=13' (-7° true) at .21 Au, 0.4 Ag			
				.177	.23				
				.123	.38				
				.016	.81			Ferruginous si	68'-72' Red-brown, very ferruginous si bx with ~60% lt. gr. + wt clasts ($\bar{x}$=1"). "Crackled" clasts, ~30% red (earthy)
				.010	.50			Banded si	72'-76' Banded red-br + yellow-brown si with ~40% wt. + lt. gr. clasts (⅛"-6", $\bar{x}$=3"). Seemingly "injected" matrix with "flow banding" and oriented clasts. Banding ~10° to core axis.
				.024	.40			Massive si	
				.009	.56				
				.007	.56				76'-85' Massive, yell-br. + red-br, earthy looking, non-reactive with ~20% lt. gr. + wt clasts ($\bar{x}$=1")
				.008	.50				85'-97' Massive, beige + rusty brown, with ~30% wt, lt. gr. + red gray clasts ($\bar{x}$=½").
				.008	.49				
				.019	.19			Silicic-alt'd diorite	97'-105' Beige + tan, massive, locally earthy, silicic-alt'd diorite. Some red-br. blotches. Banding (relic) ~30° to CA.
				.028	.62	Sludge		Massive si	105'-115' Massive, red-br. + tan, blotchy + swirly, with ~10% lt. gray clasts ($\bar{x}$=1")
				.017	.25	.043	.61		115'-124' Massive, tan-brown + red br., hematitic (~10% FeO) with ~20% lt. gray clasts ($\bar{x}$=¼").
				.009	.38				
				.001	.38				124'-129' Banded, pale yellow-tan chert with ~10% lt. gray clasts ($\bar{x}$=¼")
				<.001	.37			Banded si	
				.001	.50				129'-139' Banded, red-br + yell-br., hematitic (≤20% FeO locally) with ~40% milky wt. + lt. gr. clasts (⅛"-6", $\bar{x}$=1")
				.025	.75	.029	1.00		139'-142' Red-br hematitic matrix (~10% FeO) with ~70% wt. + lt. gr. rounded, assimilated, chert-like clasts, some "crackled". Clasts ⅛"-3" $\bar{x}$=½"
				.113	1.65	.056	.86	Hematitic si bx	142'-148' Dark purple + red brown hematitic (~20% FeO) bx with ~60% lt. gray clasts ($\bar{x}$=½").
				.125	1.46				
				.181	1.50				
				.034	.73			Massive si	148'-152' Massive, rusty br. + yell-br. with ~10% fine gray-brown clasts ($\bar{x}$=¼").
								Silicic-alt'd diorite	152'-170' Tan-beige massive, silicic-alt'd diorite. Cores smooth. H~6.5
								Argillic-alt'd diorite (red blocky schist)	170'-205' Tan, massive, argillic-altered diorite with abundant (~10%) x-cutting, non-oriented hematite-filled fractures (≤¼" across) so-called red, blocky schist. Cores with rough surface. Soft (H~5.5) locally broken + even gouge.
								Silicic-altered diorite	205'-279' White, blotchy purple + white, or tan, silicic-altered diorite. Locally gouge (230'-265').
									Note: Lost circulation ~300', never regained despite casing at 345'. While drilling unlocated 300'-345', hole M-1 at Morgan DDS was discharging water and drill mud. Hole 809-3 crosses above M-1 at 300'.
								Massive + banded si	279'-370' (E.O.H.) - Chert; variously massive, banded, ferruginous + brecciated as follows:
				.017	.67				279'-285' Red-brown, massive + banded, ferruginous (up to 30% FeO) chert bx. with ~30% lt. gray clasts ($\bar{x}$=½")
				.010	.72				
				.016	.64				
				.030	.91				
				.257	.68				285'-290' Locally very ferruginous (up to 30% FeO) si. bx. Yellow-brown + red-br. matrix with ~60% milky wt + lt. gray clasts $\bar{x}$=1"; some banded clasts, very hard.
				.022	.50				
				.015	.45				290'-300' Clast-supported bx of ~90% milky, white + tan clasts ($\bar{x}$=1") in a tan, banded matrix. Exceedingly hard! Two bits needed to drill 10 ft.
				.173	.92				
				.160	1.36				
				.178	2.43				
				.158	.97				300'-309' Very heterogeneous breccia of multiple clast types in mixed matrix types. Matrix-supported bx ~70% clasts ($\bar{x}$=1") of tan, lt. gray, yellow, white + red varieties in red-br, yell.-br, + gray matrix. Hard, broken drilling. Last circulation ~300'
				.062	.68				
				.150	.60				
				.107	.79				
				.100	.91				
				.198	1.05				
				.100	1.26				
				.243	1.24	326'-345'=15'+2' void at .21 Au, 1.2 Ag			
				.284	1.37				
				.137	1.05				
				.080	.88				
				VOID	VOID				
				.367	1.80				
				.279	1.26				
				.045	.99				
				.042	1.25				
				.046	1.37				
				.018	1.02				309'-343' Coarse, heterogeneous bx of ~60% lt. gr., tan, yell. br, + red clasts ($\bar{x}$=1", but some clasts up to 10") in partly limonitic pale gray to yellow-gray matrix. Largest clasts (313'-314' and 332'-333') are tan, banded chert or else 2nd gen. massive tan si bx with lt. gr. si clasts. Matrix slightly "sucrosoidal" but solid, more limonitic 341'-343'
				.030	1.04				
				.038	.94				
				.014	.94				
				.009	1.07				
				.047	.96				
				.096	2.50				
				.367	9.33	Old	Workings	Ferruginous si workings	343'-354' Clast bx with ~60% lt. gray clasts (¼"-6" $\bar{x}$=½") in yellow-gray, limonitic, + vuggy (≤10% voids, ≤¼") matrix.
						287'-343'=~56' (~32' true) at .15 Au, 1.0 Ag		Chert breccia	354'-357' Clast-supported bx with ~80% tan, massive, 2nd generation bx (containing ~10% lt. gray clasts) as coarse (¼"-10", $\bar{x}$=3") clasts within red-brown hematitic matrix.
									357'-365' Heterogeneous bx of ~60% lt. gr., yell. br., black, red, + tan 2nd gen. bx clasts ($\bar{x}$=½") in red-br. matrix.
									365'-370' Red-brown, very dense, very ferruginous (~50-60% FeO) chert with ~20% red-br., yell. br., + black ferruginous clasts ($\bar{x}$=1"). Some patches of yellow silica gel + black specular hematite. All water pressure lost at 365', only partial core return and able to push rods sporadically indicating old stope fill (?) or cave (?)

Casing 345'

BQ core 1.43" dia.

NQ core to 345'; 1.875" diameter.

Skeleton Box A; Box 1; Box 2; (Skeleton) Box 3; Box 4; Box 5; Box 6; (Skeleton) Box 7; Box 8; (Skeleton) Box 9; Box 10; (Skeleton) Box 11; Box 12; (Skeleton) Box 13; Box 14; Box 15; Box 16; Box 17; Box 18; Box 19; Box 20; E.O.H. 370'

Assumptions and Parameters

gold	$450.00	per ounce
silver	$7.50	per ounce
low grade reserves	120000	tons
grade (gold)	0.172	oz/t
grade (silver)	2.68	oz/t
high grade reserves	46000	tons
grade (gold)	0.267	oz/t
grade (silver)	3.31	oz/t
low grade reserves (total)	360000	tons
grade (gold)	0.172	oz/t
grade (silver)	2.68	oz/t
high grade reserves (total)	138000	tons
grade (gold)	0.267	oz/t
grade (silver)	3.31	oz/t
cost, mining rock	$60.00	per ton
Smelter return (%)	0.85	85%
Recovery in CIL	0.85	85%
Processing, CIL	$9.00	per ton
Transporation	$13.00	per ton

Low Grade Reserves: $\frac{500 \text{ ft.} \times 80 \text{ ft.} \times 40 \text{ ft.}}{13 \text{ cu.ft./ton}} = 120{,}000 \text{ tons}$

High Grade Reserves: $\frac{500 \text{ ft.} \times 80 \text{ ft.} \times 15 \text{ ft.}}{13 \text{ cu.ft./ton}} = 46{,}000 \text{ tons}$

Total: above numbers x 3

UVX Mine Options (June 18, 1987)

Assumptions: Gold at $450.00/ounce
Silver at $7.50/ounce

(A) Indicated Low Grade Reserves of 120,000 tons of 0.172 oz/t gold and 2.68 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

(B) Indicated High Grade Reserves of 46,000 tons of 0.267 oz/t gold and 3.31 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

(C) Indicated TOTAL Low Grade Reserves of 360,000 tons of 0.172 oz/t gold and 2.68 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

(D) Indicated TOTAL High Grade Reserves of 138,000 tons of 0.267 oz/t gold and 3.31 oz/t silver
Indicated by drilling from Morgan and 809 Drill Stations

46000
50,00
96

	(A) Ore to Smelter or Custom Mill	(A) Ore to CIL Plant at UVX	(B) Ore to Smelter or Custom Mil	(B) Ore to CIL Plant at UVX	(C) Ore to Smelter or Custom Mil	(C) Ore to CIL Plant at UVX	(D) Ore to Smelter or Custom Mil	(D) Ore to CIL Plant at UVX
Gross Revenues	$8,026,380	$8,026,380	$5,668,523	$5,668,523	$29,835,000	$29,835,000	$17,005,568	$17,005,568
Capital	$0	$1,000,000	$0	$1,000,000	$0	$1,000,000	$0	$1,000,000
Operating Costs								
Mining	$7,200,000	$7,200,000	$2,760,000	$2,760,000	$21,600,000	$21,600,000	$8,280,000	$8,280,000
Processing	$0	$1,080,000	$0	$414,000	$0	$3,240,000	$0	$1,242,000
Transportation	$1,560,000	$0	$598,000	$0	$4,680,000	$0	$1,794,000	$0
Operating Profit	($733,620)	($253,620)	$2,310,523	$2,494,523	$3,555,000	$4,995,000	$6,931,568	$7,483,568
Recovery of Capital	($0)	($1,000,000)	($0)	($1,000,000)	($0)	($1,000,000)	($0)	($1,000,000)
Sunk Costs	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)	($1,580,000)
Additonal Exploration	$0	$0	$0	$0	($900,000)	($900,000)	($900,000)	($900,000)
Net Profit on Project	($2,313,620)	($2,833,620)	$730,523	($85,478)	$1,075,000	$1,515,000	$4,451,568	$4,003,568

Assumptions and Parameters

gold	$450.00	per ounce
silver	$7.50	per ounce
tons of high grade	127000	tons
grade	0.086	oz/t
strip	3.6	3.6:1
tons of low grade	445000	tons
grade	0.062	oz/t
strip	2.9	2.9:1
tons of tailings	225000	tons
grade	0.045	oz/t
cost, mining rock	$1.50	per ton
cost, mining tails	$1.00	per ton
recovery, rock (heap)	0.55	55%
recovery, fines (CIL)	0.85	85%
recovery, tails (heap)	0.7	70%
recovery, tails (CIL)	0.85	85%
processing, heap leach	$5.50	per ton
processing, CIL	$9.00	per ton

Vulture Mine Options (June 18, 1987)

Assumptions: Gold at $450.00/ounce

Tailings Reserve of 225,000 tons of 0.045 oz/t

High grade Reserves of 127,000 tons of 0.086 oz/t
with a Waste:Ore ratio of 3.6:1

Lower grade Reserves of 445,000 tons of 0.062 oz/t
with a Waste:Ore ratio of 2.9:1

	Heap Leach High Grade	Heap Leach Lower Grade	Heap Leach High Grade & C-I-L	Heap Leach Lower Grade & C-I-L	C-I-L
Gross Revenues	$5,892,570	$10,017,900	$6,944,625	$11,632,500	$14,425,988
Capital	$650,000	$765,000	$750,000	$865,000	$1,700,000
Operating Costs					
Mining (Rock)	$876,300	$2,603,250	$876,300	$2,603,250	$2,603,250
Mining (Tailings)	$225,000	$225,000	$225,000	$225,000	$225,000
Processing	$1,936,000	$3,685,000	$2,834,625	$4,861,875	$6,030,000
Royalties & Bonus	$351,960	$518,303	$362,700	$548,944	$662,719
Operating Profit	$2,503,310	$2,986,347	$2,646,000	$3,393,431	$4,905,018
Recovery of Capital	($650,000)	($765,000)	($750,000)	($865,000)	($1,700,000)
Sunk Costs (6-15-87)	($632,000)	($632,000)	($632,000)	($632,000)	($632,000)
Net Profit	$1,221,310	$1,589,347	$1,264,000	$1,896,431	$2,573,018
Mining Rate	1,000 tpd	1000 tpd	1,000 tpd 200 tpd	1000 tpd 200 tpd	500 tpd
Mine Life	1.3 yrs	2.5 yrs			

U.V.X. M-

950 L

1" = 2

Don White

To Morgan Winze

Morgan X-Cut (1986)

11,565 N
7,080 E
~4,180 Elev.

Caved

Morgan DDS

152°

Caved

-8

-9

-10

82' 5/21/87

102' 6/1/87

126' 6/18/87

~21°

~32°

~10°

Hi-grade on 90s
Int./Projected Vent.
to 960'

Ore Zone

Target Line ~ S47

EOH M-8

EOH M-9

EOH M-6

11500N

7200E

135'

)OKS MINERALS INCORPORATED

TELEPHONE
(303) 232-5955

Assumptions and Parameters

gold	$450.00	per ounce
silver	$7.50	per ounce
tons of high grade	127000	tons
grade	0.086	oz/t
strip	3.6	3.6:1
tons of low grade	445000	tons
grade	0.062	oz/t
strip	2.9	2.9:1
tons of tailings	225000	tons
grade	0.045	oz/t
cost, mining rock	$1.50	per ton
cost, mining tails	$1.00	per ton
recovery, rock (heap)	0.55	55%
recovery, fines (CIL)	0.85	85%
recovery, tails (heap)	0.7	70%
recovery, tails (CIL)	0.85	85%
processing, heap leach	$5.50	per ton
processing, CIL	$9.00	per ton

Vulture Mine Options (June 18, 1987)

Assumptions: Gold at $450.00/ounce

Tailings Reserve of 225,000 tons of 0.045 oz/t

High grade Reserves of 127,000 tons of 0.086 oz/t
with a Waste:Ore ratio of 3.6:1

Lower grade Reserves of 445,000 tons of 0.062 oz/t
with a Waste:Ore ratio of 2.9:1

	Heap Leach High Grade	Heap Leach Lower Grade	Heap Leach High Grade & C-I-L	Heap Leach Lower Grade & C-I-L	C-I-L
Gross Revenues	$5,892,570	$10,017,900	$6,944,625	$11,632,500	$14,425,988
Capital	$650,000	$765,000	$750,000	$865,000	$1,700,000
Operating Costs					
Mining (Rock)	$876,300	$2,603,250	$876,300	$2,603,250	$2,603,250
Mining (Tailings)	$225,000	$225,000	$225,000	$225,000	$225,000
Processing	$1,936,000	$3,685,000	$2,834,625	$4,861,875	$6,030,000
Royalties & Bonus	$351,960	$518,303	$362,700	$548,944	$662,719
Operating Profit	$2,503,310	$2,986,347	$2,646,000	$3,393,431	$4,905,018
Recovery of Capital	($650,000)	($765,000)	($750,000)	($865,000)	($1,700,000)
Sunk Costs (6-15-87)	($632,000)	($632,000)	($632,000)	($632,000)	($632,000)
Net Profit	$1,221,310	$1,589,347	$1,264,000	$1,896,431	$2,573,018
Mining Rate	1,000 tpd	1000 tpd	1,000 tpd 200 tpd	1000 tpd 200 tpd	500 tpd
Mine Life	1.3 yrs	2.5 yrs			