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The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

### BROOKS MINERALS INCORPORATED

8700 W. 14th AVE. LAKEWOOD, CO 80215 TELEPHONE (303) 232-5955

May 1, 1986

DMEA LTD. MAY 2 1986 RECEIVED

Ben F. Dickerson, III DMEA, Ltd. 7340 E. Shoeman Lane Suite 111 "B" (E) Scottsdale, AZ 85251

Dear Ben:

Here are our estimates on the costs that would be entailed in opening up the 950 Level, and capital and operating costs for mining.

If there are any questions, please call.

Very truly yours,

Maurice

Maurice Brady

MB:mkf

Brooks Minnels file ESTIMATE Manpower 13.50 +35% =18.22 1200/11 1 Hoistman 12 00 > 12.00 + 35% = 16.20 1 Mechanic 1 Toplander 16.50 Miners 2 24 >122 16.50 1 Trammer-nipper 12 175 23.00 1 Foreman 30 1 Supt 119 ° C. 1.43 × 8. × 22 = 30.000 /m Equipment fentots Compnessor (tone) 1700 (E/ce) Trommer w/charger + battace== 900 Laro (2) 200 Macher 12.8 650 Drills (2) 600 Fans + 6 hours w/ stectrics 200 Vehicter (2) 600 Lamps + Shangers 150' Tools, welders telephone, Find aid the 400 5400 Total 4300× 10=48,000 Labor (start) 1 mo # 90.42 × 8×22 = 15,915 Supt. \$30 × 30 hrz 1,000 17,000 accting, Misc. 2,000 19,000 +15% 2,850 # 21,850

Summary Labor + Supr. 30,000 Supplies + power (2 50%) Equipment Aontel Contracted Services (Elect. sole) 15000 5400 1500 745 2500 Insura de 350 Admin - Payroll, Decig, ste 1500 Total monthly 56,250 Mgm fee e 15! 8450 \$ 64700 Total One time stan up - mobilization Energht & travel 5000 Labor 3 who - install 10,000 Thise 5000 20. 000

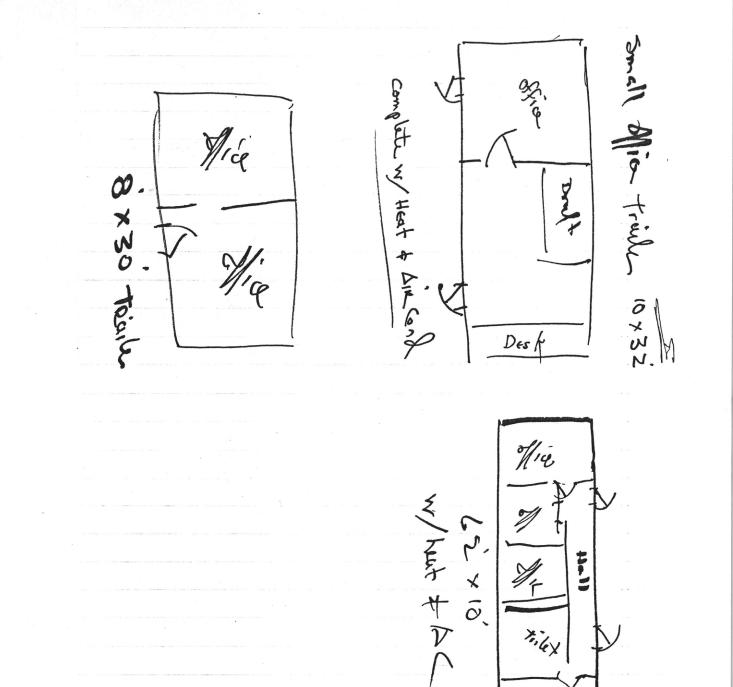
Left to go to BLM at noon. Should be back by 3. Fred & Maurice have reservations on Frontier flight # 52 leaving Phoenix at 6:38 p.m. They should get to airport early enough to arrange the paperwork, and get any refund. In order, trailer man called, Michael Yates called, Milt Hood called, Tony called, Grant called, Jim Bright called and Barry Watson returned my call. Will report on all of the above in due course.

Your money is in the bank. \$7,833.09. Mine isn't!!

BFD

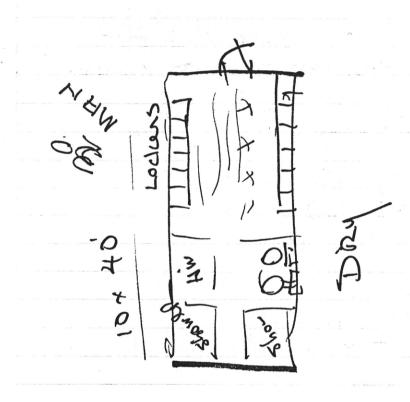
Questions for P.D. 2) Mine cars - are the cars they used still underground? 2) Can we talk to their Electrician Re UG cables, etc. power U. 3) General condition of UG workings on various levels 4) Possibility of using measuring podets for waste noch 5) Quandity of water available for DRY trailer Hems to bring down for rental and/or sall to project Office trailer sition 10×62' 02 10×30' 62 mbroth Day & Change Room House traile for stall house? Tranmers - 2 w/Extra battony box Muckens - 2 al/ sxtra bucket & pants Drills - 4 (me stoper) w/ parts Chipping hamme RY - 2 - sampling Welder - sketric & oxy acet torch Fans + Electrics 1 ton cons (theck dimensions) Compression 750 efm Sulivan (2/20) Ben bow soon can we mobilize. Lamps & chargens Hand Hab, boots better sup Reacure etc. Shop tools Yent bry

Ponder Magazines Cape Non-Els First aid supplies - stretchars, oxygen resubitor, etc., Rock bolts



×. lex

office



## ESTIMATED COSTS, JEROME

## Open up 950 level

Project: Open up 1200 feet of drift on 950 level off of the Edith shaft. Install track, air and water lines, timber and bolt as required, cut out diamond drill stations if required. Supplies

Rail:	: 1000 feet needed (about 200 feet on han at the mine). 35 lb rail = 12 tons. Available from Portland, Oregon at			
	\$350/ton (4/86)	\$	4200.	
	3 kegs spikes		600.	
	140 sets splice bars @\$5.50 w/bolts		770.	
	Extra charge - cut to 15-ft lengths and drill		400.	
	Freight Portland to Jerome		1200.	
Ties:	1200'/2.5 = 246 4"x6"x3" = 1.5 MBF @\$500/MBF including freight		750.	
		\$	7920.	
Timber:	Estimate 10% (120 feet) will require timber on 5' centers = 24 sets @200 BF/set including blocking.			
	24x200 = 4800 BF. 5MBF @\$500 delivered		2500.	
	Wedges		125.	
		\$	2625.	
Bolts:	At one bolt per 1-1/2 linear feet on 1000 ft = 650 bolts. Price (4/86 delivered) on 5-foot bolts, @\$6.25/bolt			
	plus 0.79/plate = \$7.04 x 650		4600.	

-		
<b>D</b> 1	no	•
Pi	PC	•

4" Al at \$2.12/ft (4/86) x 1200 ft	2544.
60, #75 couplings @\$9.41	565.
Valves, elbows, etc.	1000.
2" Al pipe @\$1.02/ft x 1200	1224.
60 couplings @\$4.88	293.
Valves, etc.	500.
Total Pipe	\$ 6126.
Vent bag: 1200' 16" D @\$55/50'	1320.
Electrical cable: 1200' @\$2.00/ft	2400.

Total Supplies \$24,991.

LABOR, UNDERGROUND

Assume average advance of 15 feet/day = 80 days at 6 days/week = +14 weeks 2 men @\$116/shift, including burden = \$1508/week. 14 x \$1508 = \$21,112.

TOP SIDE AND SUPPORT PER MONTH

Foreman	\$ 3500.
Hoistman	2300.
Mechanic - top lander	2300.
Supervision	3000.
Equipment rental	7700.
Building rental	400.
T&E	1000.
Insurance	1000.
Administration	2000.
Power	3500.Det A
Phone	200. <sup>1</sup>
Phone	200.
Outside supplies	4000.

30,900.

 $30,900 \times 3-1/2$  months

\$108,150.

13.20

R.A.S.

#### RECAP

Supplies Underground labor Top side and support	\$ 24,991. 21,112. 108,150.
Plus 15%	\$154,253. 
	\$177,410.

#### NOTES ON OPENING UP 950 LEVEL

#### JEROME

If a new drift is needed out in the proposed stoping area, or if any bypasses around the caved areas are necessary, cost would be in the range of \$400/foot including the top-side costs at 4 feet/shift.

The 50 feet of raise mentioned on Don's map would be about the same per foot, probably down to \$300/foot if we can run it bald-headed on a 45 degrees.

#### CAPITAL COSTS

Skip and scrolls (from Card 4/86), new	\$ 23,000.
Skip pocket on 950. Cut out, install measuring pocket and gate. 2 weeks	15,000.
Establish waste dump pocket at old gob pass on 950.	7,000.
Bulkhead on dump at surface	3,000.
Revise headframe	5,000.
Crusher and belt (used)	35,000.
Apron feeder (used)	10,000.
Surge bin, 20-cubic-yard capacity w/belt (used)	19,500.
Replace hoist motor, increase grids and breakers	12,000.
Refuge bay	10,000.
	\$139,500.
Contract electrical work	5,500.
	\$145,000.
15% to BMI	21,750.
	\$166,750.
Possible used 3 trucks @\$25,000.	\$ 75,000.
(±15 ton capacity)	\$241,750.*

\*Assumes available BMI equipment will handle mining.

### NOTES ON CAPITAL COSTS

The quote on skip and scrolls seems high; a large part of this is no doubt the engineering design required to make a skip to fit the rather peculiar dimensions of the compartments. It may be possible to adapt a used skip at a lower cost. Cage will have to be hung under the skip.

Some changes would have to be made to the headframe for production hoisting. The skip would have to dump over a bulkhead built on the outside (north). Men and supplies would have to enter from the south (hoist) side, and changes will be needed to permit lowering pipe, rail, and timber.

If a used motor and additional grids that are adaptable can be found, the cost of the changeover to a larger motor may be down to around \$8,000. If a motor has to be rebuilt to fit, and new controllers installed, it may be \$15,000 plus labor.

MSHA has said we can probably get by with a refuge bay. Otherwise ladders will have to be installed from surface to the 800 level in the Audrey, or a second small hoist installed there.

The cost of used 15-ton trucks has been added. Contract haulage, of course, would eliminate this capital charge but increase the haulage costs.

No allowance for a new road up the gulch has been made. The assumption is made that the present road will be rebuilt as the State Highway Department proposes and that the operation would be able to use this route.

### OPERATING COSTS JEROME

# Rate 100 TPD, 5-day week, or 2200 STPM

(A)	U.G. labor 8 men @\$116/day x 22 days Supplies Other expenses (top side and support) Power Phelps Dodge rental Haulage to railroad Crusher BMI 15% Total/month	\$ 20,416. 2,000. 23,575. \$ 45,991. 8,800. 1,500. 5,500. 1,650. \$ 63,441. 9,516. \$ 72,957.
	@2200 TPM	\$33.16/ton

## Second estimate, per ton

(B)	Labor	\$ 12.77
	Supplies	1.36
	Equipment operating cost	\$ .75
	Stoping, direct	 14.88
	Stope prep.	3.34
	Tramming and loading at station	2.82
	Top-side costs	10.72
	Power	4.00
	P-D	.70
	Haulage	2.50
	Crusher	 .75
		\$ 39.71
	BMI 15%	5.95
	Total per ton	\$ 45.66

At 200 tons/day, quite a few of the fixed costs would remain the same, and an estimate gives (A) \$24.87 - \$26.29 and (B) \$34 - \$36.

#### NOTES ON OPERATING COSTS

Two sets of numbers have been presented, based on shrinkage stoping of the assumed orebody. The lower number assumes excellent conditions and may, as a practical matter, be somewhat low. The other set takes a more conservative view. However, these numbers should cover the range that might be reasonably expected from what we know at this time.

Haulage is based on company-operated trucks (see capital costs) and assumes that a dump spot is available and cars will be in place.

Power costs have been calculated from the rates paid in 1985, and the estimated horsepower requirements for larger hoist motor, electric compressors, ventilation fans, crusher, and other needs.

#### EQUIPMENT RENTALS

#### JEROME PROJECT

Equipment	t	Monthly	Rate	Standby	Rate	Char	ged
<i>b</i>							
Comp	ressor	\$1100		\$700		\$400	*
Locor	notive	1000		400		-	
Mucke	er	650		260		_	
Drill	ls (2)	400		160		_	
Slush	ner -elect.	250		100		-	
Tugge	ers (2)	200		80		-	
Fans	(2)	100		40		100	
Troja	n Loader	2900		1100		-	
Mine	Lamps (10)	100		40		_	
Tools	s,welder,etc	200		80			
Total	L Equipment	6900		2960		500	
			•				
Vehicles		۰.					
Picku	ıp	500				<b>50</b> 0	
Sedar	1 <u>,</u> ,	300				-	
Trailers							
Offic	e	200				200	
Dry &	Change	200				<u>    200    400                         </u>	
Total Rer	ntals					1400	

\* For the most part I have charged rental only for equipment in use. However, even though we are not using the compressor, this is the one item which does not belong to BMI and I must charge a nominal standby for this.

## ESTIMATED COSTS, JEROME

## Open up 950 level

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Rail:	1000 feet needed (about 200 feet on hand at the mine). 35 lb rail = 12 tons. Available from Portland, Oregon at	d	
	\$350/ton (4/86)	\$	4200.
	3 kegs spikes		600.
	140 sets splice bars @\$5.50 w/bolts		770.
	Extra charge - cut to 15-ft lengths and drill		400.
	Freight Portland to Jerome		1200.
Ties:	1200'/2.5 = 246 4"x6"x3" = 1.5 MBF @\$500/MBF including freight		750.
		\$	7920.
Timber:	Estimate 10% (120 feet) will require timber on 5' centers = 24 sets @200 BF/set including blocking.		
	24x200 = 4800 BF. 5MBF @\$500 delivered		2500.
	Wedges	-	125.
		\$	2625.
Bolts:	At one bolt per 1-1/2 linear feet on 1000 ft = 650 bolts. Price $(4/86)$		
	<pre>delivered) on 5-foot bolts, @\$6.25/bolt plus 0.79/plate = \$7.04 x 650</pre>		4600.

Pipe:

4" Al at \$2.12/ft (4/86) x 1200 ft	2544.
60, #75 couplings @\$9.41	565.
Valves, elbows, etc.	1000.
2" Al pipe @\$1.02/ft x 1200	1224.
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Vent bag: 1200' 16" D @\$55/50'	1320.
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Total Supplies \$24,991.

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Assume average advance of 15 feet/day = 80 days at 6 days/week = +14 weeks 2 men @\$116/shift, including burden = \$1508/week. 14 x \$1508 = \$21,112.

TOP SIDE AND SUPPORT PER MONTH

-	÷ 2500
Foreman	\$ 3500.
Hoistman	2300.
Mechanic - top lander	2300.
Supervision	3000.
Equipment rental	3000. 7700.u1= 2500
Building rental	400. —
T&E	1000
Insurance	1000.11= 500
Administration	2000. " 1200
Power	3500.
Phone	200.
Outside supplies	4000. 432 3500

30,900 x 3-1/2 months

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Crusher and belt (used)	35,000.		
Apron feeder (used)	10,000.		
Surge bin, 20-cubic-yard capacity w/belt (used)	19,500.		
Replace hoist motor, increase grids and breakers	12,000. hobo		
Refuge bay	<u>10,000</u> . 47,5%		
	12,000. hojet 12,000. hojet <u>10,000.</u> 43,500 ¥150,000 \$139,500.		
Contract electrical work	5,500.		
	\$145,000.		
15% to BMI	21,750.		
	\$166,750.		
Possible used 3 trucks @\$25,000.	\$ 75,000.		
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	BMI 15% Total/month	\$ 63,441. <u>9,516</u> . \$ 72,957.			
@2200 TPM		\$33.16/ton			
Commandation and the					

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### EQUIPMENT RENTALS

## JEROME PROJECT

Equipment	Monthly	Rate	Standby	Rate	Charged
а. А.					
Compressor	\$1100		\$700		\$400 *
Locomotive	1000		400		-
Mucker	650		260		-
Drills (2)	400		160		-
Slusher -elect.	250		100		
Tuggers (2)	200		80		-
Fans (2)	100		40		100
Trojan Loader	2900		1100		-
Mine Lamps (10)	100		40		_
Tools,welder,et	200		80		
Total Equipment	6900		2960		500
		•			
Vehicles	1	4			
Pickup	500				500
Sedan	300				
Trailers					
Office	200				200
Dry & Change	200			*.	200
					400
Total Rentals					1400

\* For the most part I have charged rental only for equipment in use. However, even though we are not using the compressor, this is the one item which does not belong to BMI and I must charge a nominal standby for this.