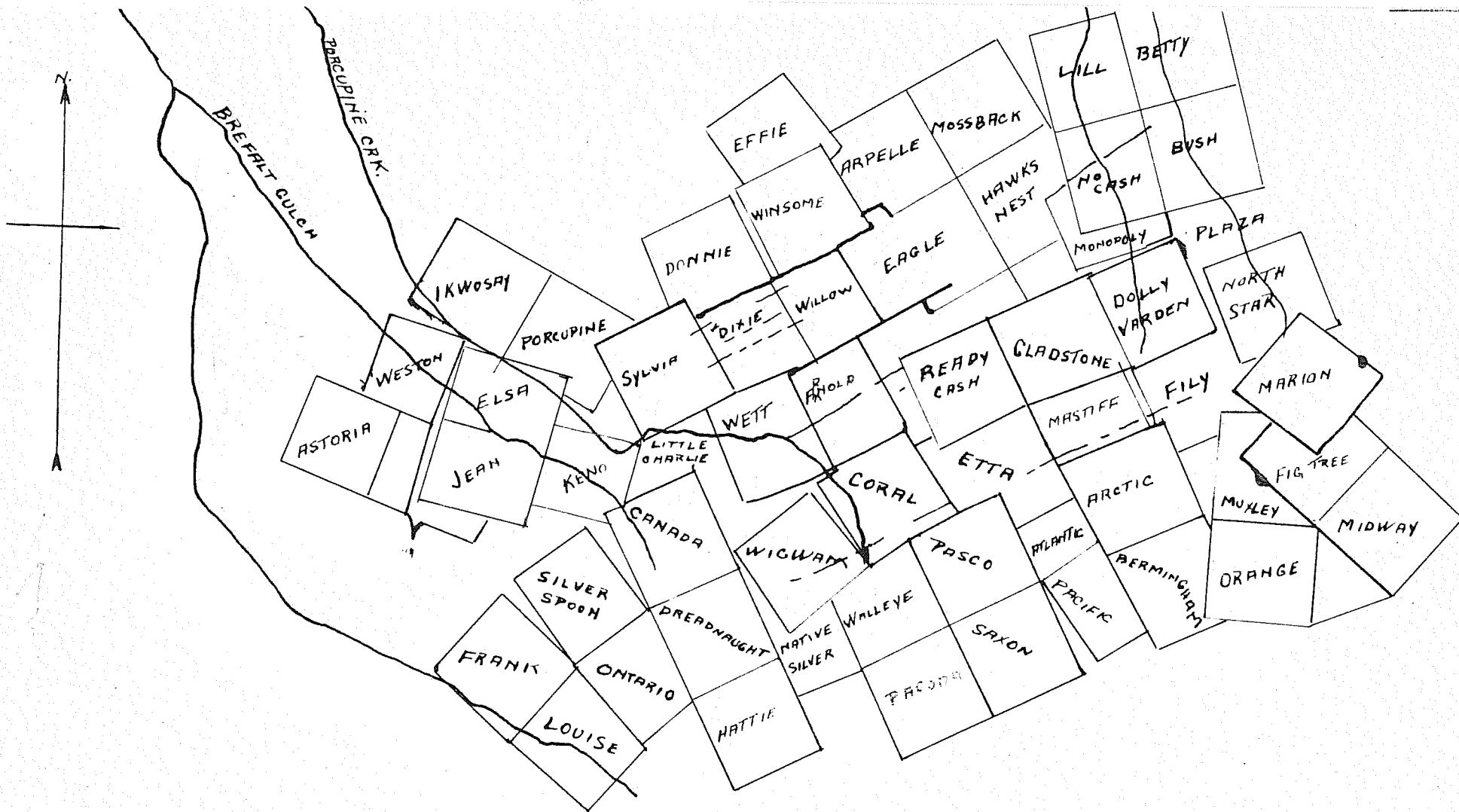


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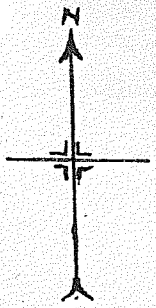
Report on  
the  
CORAL--WIGWAM GROUP  
Galena Hill  
MAYO MINING DISTRICT  
Yukon Territory.  
Canada

by  
MARSHALL D. DRAPER, E.M.

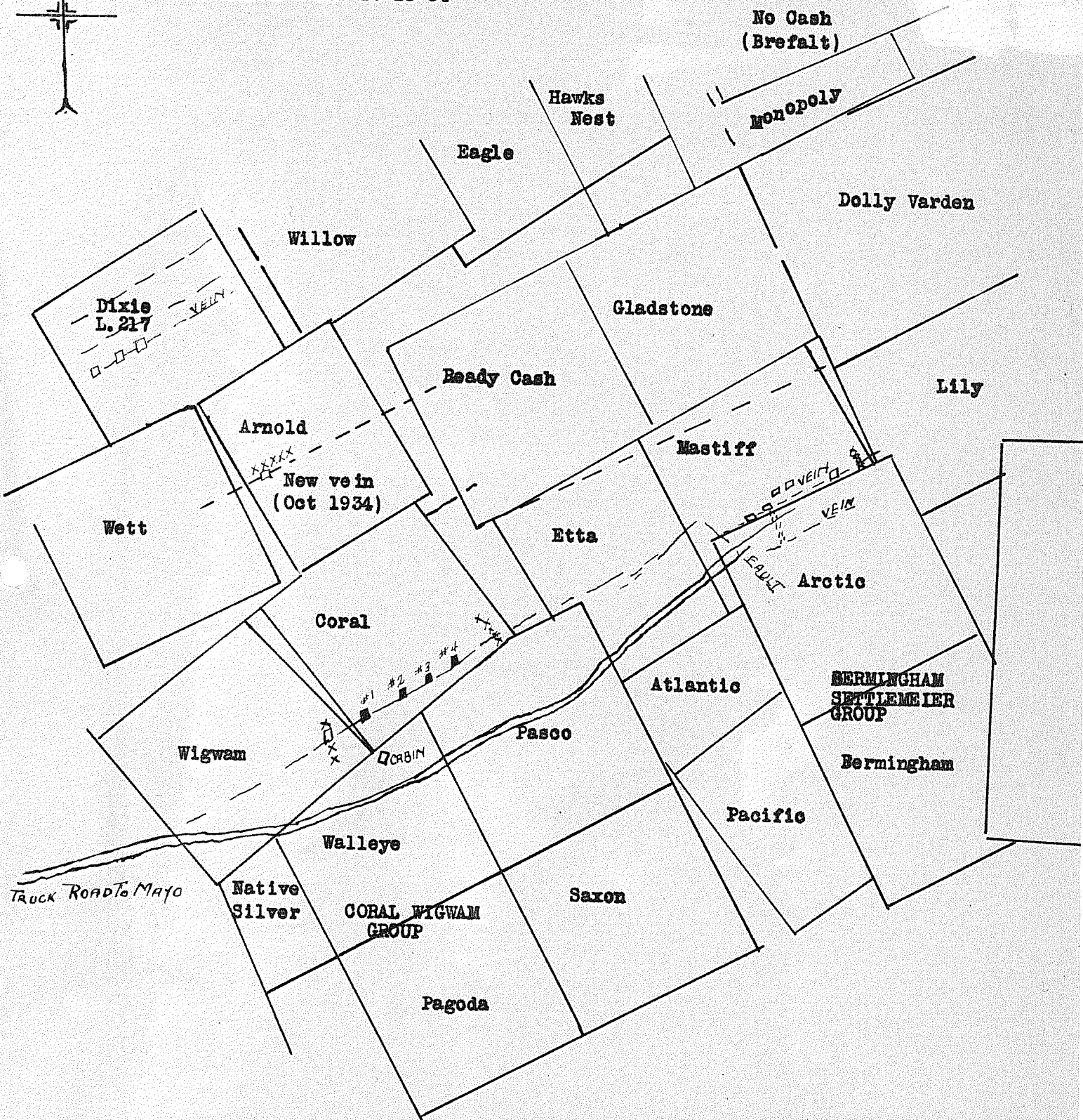
November 16th  
1934



PARTIAL CLAIM MAP  
 CALENA HILL  
 MAYO CAMP  
 YUKON TERRITORY  
 1934  
 SCALE 1 INCH = 2000 FT.



**CORAL WIGWAM GROUP**  
**1 inch = 1000 ft.**  
**Examined Oct 10-15-34**



MARSHALL D. DRAWER, E.M.

Hollingsworth Building  
Los Angeles, Calif.

CORAL-WIGWAM GROUP:

Examination of the following property was made by me in October, 1954, during my stay in the district of some three weeks giving me time to examine property and district in detail.

PROPERTY:

Claims:

- |            |                   |                        |
|------------|-------------------|------------------------|
| 1. Coral   | 7. Arnold         | 13. Louise             |
| 2. Wigwam  | 8. Little Charlie | 14. Wett               |
| 3. Pasco   | 9. Canada         | 15. Grubstake Fraction |
| 4. Walleye | 10. Dreadnaught   | 16. Winifred Fraction  |
| 5. Pagoda  | 11. Silver Spoon  | 17. Native Silver      |
| 6. Saxon   | 12. Frank         |                        |

each claim approximately 1500 feet x 1500 feet or a contiguous area of 750 acres, more or less.

LOCATION:

This large group of claims is located in the heart of the producing section on Galena Hill in the Mayo District, Yukon Territory, Dominion of Canada, and a side road six miles in length from the Coral claim connects with the main haulage road to Mayo, some 50 miles distant.

TITLE AND OWNERSHIP:

The claims are clear and unencumbered. Title is vested in local owners.

HISTORY:

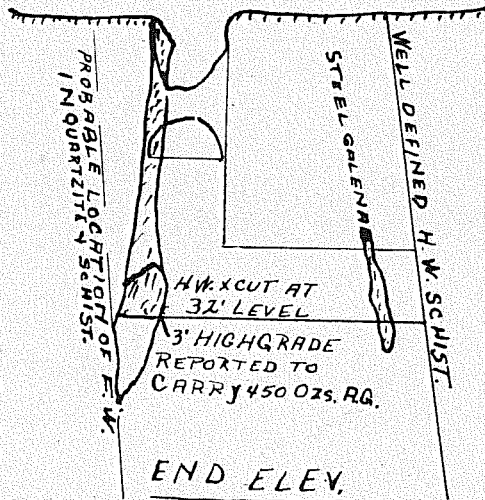
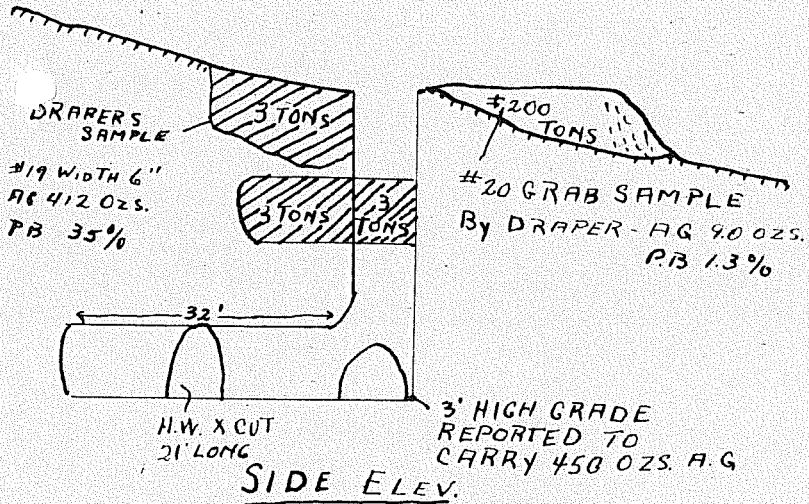
Located among the first on Galena Hill in 1921, these claims have had little development - four shallow shafts and a few open cuts and beamed trenches.

Nearby producers have been Birmingham-Settlemeier Group, whose vein system passes through these claims; the Breaftt or No Cash vein also probably passes through the Arnold claim; the Elsa and others of local importance are within one-quarter mile. At one time the properties of this group were considered by the A.S. & R. Co. on an extended time development basis assuming large figures. The negotiations were ended by the owners.

Later, Mr. Livingston Wernecke, Manager for Treadwell Yukon Company, offered \$125,000. for three claims of this group - the Coral, Pasco, and Arnold, with tunnel rights through others adjacent. These negotiations being stopped by decline in silver lead prices in 1929.

# CORAL SHAFT NO. 1

LENGTH = 20 FT.



Coral-Wigwam - Cont'd

Although one of the largest groups in the whole district, very little development has been accomplished.

VEINS - ORE VALUES:

There are two known veins on the property. The Coral - Strike N.54°W., on which four shafts and one boomed open cut show a strong vein with known continuity N.E. & S.W. of some 3,000 ft. and probably continuing on through the Dresdnaught and into the Louise, a further distance of 4,000 ft. Surface float and indications to the S.W. on the Wigwam were so promising that I placed two men at work for 1½ days. Much more promising float was uncovered in this surface trench but bedrock was reached, clearly showing the vein to be some 40 feet more up the slope and my time was too limited to expose the vein at the time.

The appended maps show the locations, descriptions and the sampling of the four shafts on the Coral vein, dumps, etc.

CORAL SHAFT NO. 1  
1 inch - 20 ft.

SIDE ELEV.

END ELEV.

Shipments of eight tons were made in 1926 and 1928 from ore produced from the shaft and drift and ran : Ag 268 ozs. Pb 42%.

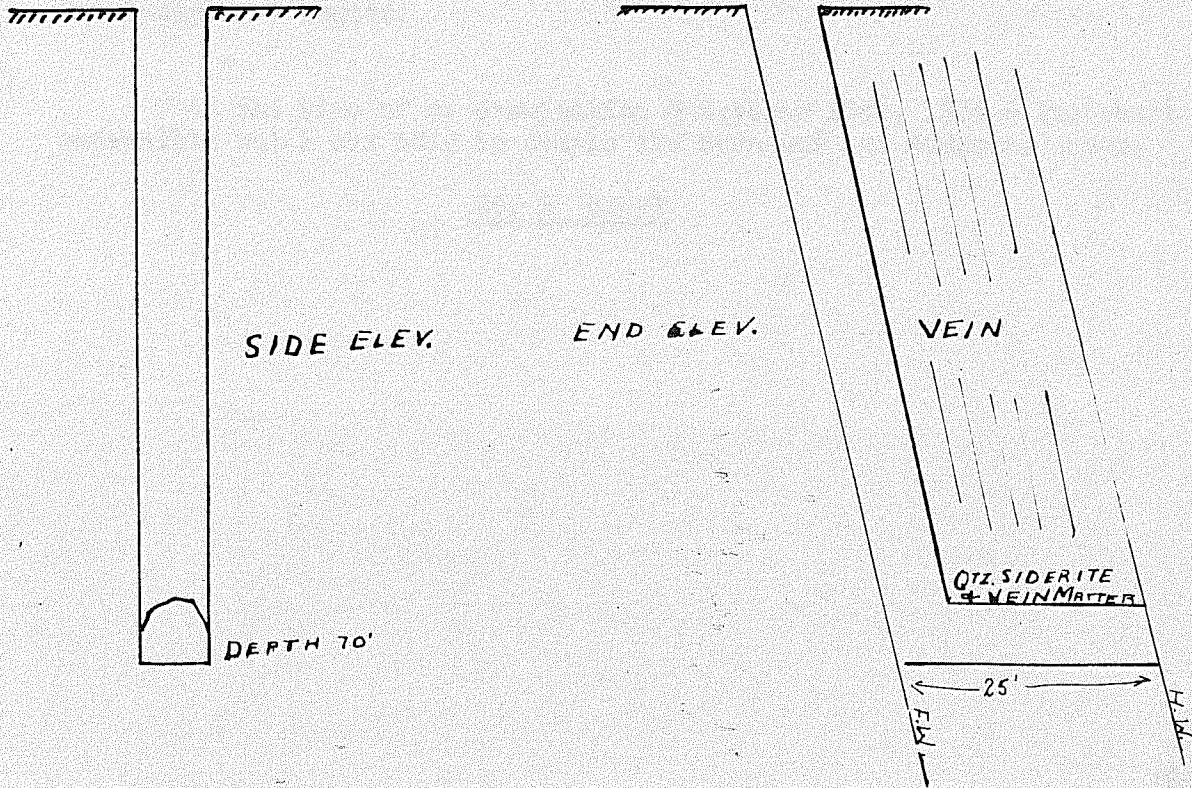
In 1934, nine tons were shipped from the small drift from the shaft, the open cut and back of the shaft as shown in cross hatched areas.

This last ore was grab sampled in the usual manner before shipment to Trail, B.C. giving Ag 350 ozs. Pb 44%.

Total shipments from these small openings:

17 tons - content Ag 310 ozs. Pb 43%.

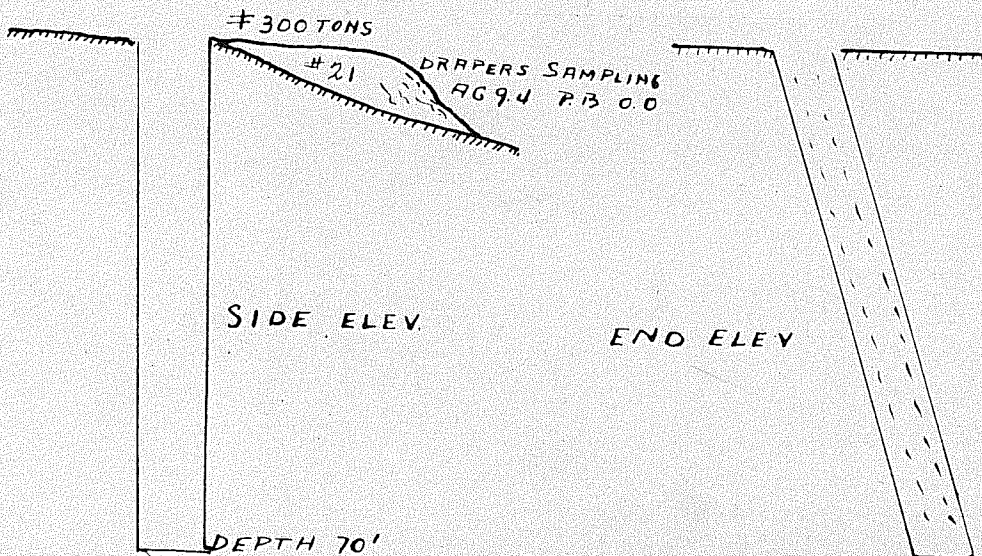
No. 2 SHAFT



Much of the material on the dump at this shaft was siderite and other favorable vein matter. No drifting was done. The amount of siderite was very promising.

NO. 3 SHAFT

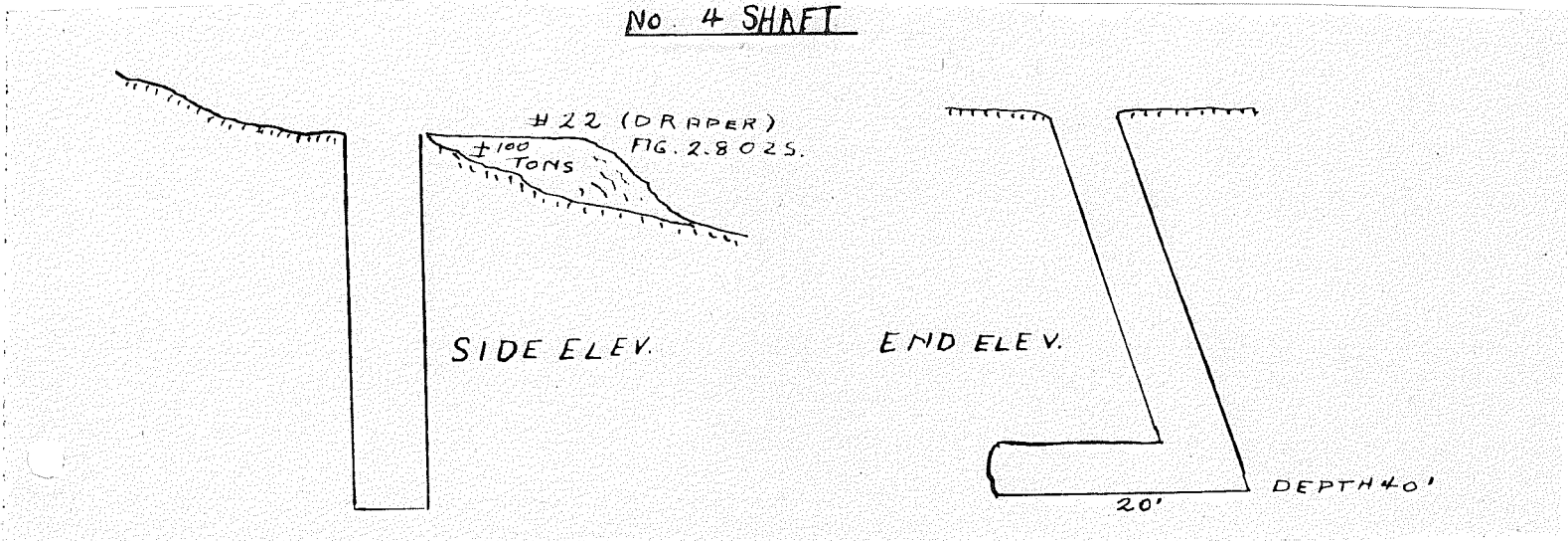
No. 3 SHAFT



Coral-Wigwam - Cont'd.

Good looking ore in steaks and bunches said to have been met with all the way down this shaft. A few sacks were recently sorted out, included in the last shipment and ran: Ag 260 ozs. Pb 40%.

This shaft with much favorable siderite and iron stained vein matter is possibly the most favorable of the four shafts. No cross-cutting or drifting was done and no walls were encountered.



Siderite with much iron and manganese in evidence are the distinguishing characteristics of this dump which on sampling showed only nominal values. No country rock is in evidence in the dump material and the vein here appears to be in a bulge.

In this footwall area, on the surface, stibnite was to be seen in small blobs and patches at a distance of 100 feet from this shaft. It is claimed, therefore, that the vein is that width here and substantiating this claim, to some extent at least, is a noticeable depressed area where subsidence may have been caused by oxidization of siderite or other vein matter.

Streaks of this stibnite on assaying gave : Ag 6 ozs.

They occur in considerably folded or distorted possible quartzite and schist footwall.

From all these four shafts and other indications it is clearly evident that this vein probably has a minimum width of some 20 feet and is continuous for at least 3,000 feet.

The occurrence of ore at No.1 shaft where 17 tons of the usual grade ore have been taken out, make it a promising and logical point of attack. Furthermore, a large width of this vein added to analagous conditions prevailing on the other now large developed properties at a similar stage of development, make me think that here are some large ore bodies. The general direction is toward

Coral-Wigwam - Cont'd

the Bermingham-Settlemeier workings and it may be on the same vein.

In brief, this vein is most promising. It is this combination of favorable items that no doubt caused Mr. Wernecke, for the Treadwell-Yukon Co. to have offered \$125,000. for the Coral, Pasco and Arnold claims.

ARNOLD CLAIM:

A few months ago - in August 1934 - float being discovered near a boomed trench near the west side of the claim, an open cut, now four feet deep, disclosed a vein of importance with high grade ore in place. This vein apparently strikes N. 54° E. The walls are not in evidence as yet and the vein material is seamed country rock with iron oxide and irregular patches of high grade galena showing gray copper and freibergite specimens which carry several hundred ounces silver with 50 to 75% lead. Though nothing definite can yet be determined as to this vein, the discovery is nevertheless of large importance, particularly as it may well be a continuation of the Brefalt lead, which is a recent high grade discovery distant to the N.E. about one mile on the same approximate strike and which property is now sacking and shipping high grade ore in quantity, the last 180 tons carrying 450 ozs. Ag and 60% Pb.

Whether or not a continuation of the Brefalt lead, the discovery is of large importance in itself and amply warrants immediate intensive development.

Though in this small open cut the ore as yet exists in small patchy stringers, in this stage it much resembles many of the now large properties at a similar time of development and the fact remains that even now the breaking and sacking of high grade ore can be commenced on the Arnold discovery.

In all probability the same vein and ore will be traced S.W. down the hill to the nearby gulch bottom, which place offers a convenient point for development by tunnel.

OTHER CLAIMS OF THE GROUP:

Various of the other claims are known, by reason of float being found on them, that other veins and ore bodies exist. No work other than a few small scattered pits or ditches has ever been done.

GENERAL:

This group - probably the largest number of contiguous claims in the entire Mayo District - is most favorably situated as regards nearby producers of note.

It is already connected by fair branch road with the main road to Mayo.

Coral-Wigwam - Cont'd

It has one known large vein of major importance - the Coral-Wigwam - and the new discovery on the Arnold is similarly extremely promising.

Various other veins are known to exist.

17 tons of high grade have already been shipped from the very limited openings on the Coral consisting of a 32 foot shaft and a 20foot drift and the breaking and shipping of ore both on the Coral-Wigwam and Arnold can be started immediately.

Such shipments would appreciably help out in diminishing the expense of an extensive campaign of development on this group and which campaign is amply warranted by both the showings and conditions related, and the moderate terms upon which the property can be had.

CONCLUSIONS:

The size and the extent of the area and vein system amply warrant, in my opinion, the sum of \$75,000. to be expended in development of the group and I hereby recommend that this amount be expended for that purpose.

Distribution of Expenditures:

1.	Sink Coral shaft to 200'	\$	3,000.	
	500' drifts		10,000.	
	400' raises		4,000.	
	Surface plant equipment		7,000.	
	Buildings		5,000.	
	Water Supply		1,000.	
	Gen. Equip. & Supplies		5,000.	
	Operating fund, roads, ore trans- port, etc.		10,000.	\$ 50,000.
			<u>10,000.</u>	
2.	Arnold - 300' tunnel		6,000.	
	Raises, X-cuts, winzes		2,500.	
	Track, cars, fan, pipe		1,500.	
	Surface trenching		3,000.	
	Operating fund, ore transp. etc.		12,000.	<u>25,000.</u>
			<u>12,000.</u>	
				\$ 75,000.

It will be recalled that separate ore bodies have been developed in this district which are still in their younger stages and have produced from relatively small development from one to four million dollars each in net smelter returns and it is the possible development of such ore bodies on this ground that I have in mind in the recommended expenditures.

Coral-Wigwam - Cont'd

This enterprise, in my opinion, is one of the most promising in an unusually promising mining camp. The breaking and sacking of ore of high grade can be started at once on both the Coral and the Arnold claims.

I can unhesitatingly recommend the expenditures noted with the conviction that ore bodies of first importance will be disclosed as a result.

Respectfully

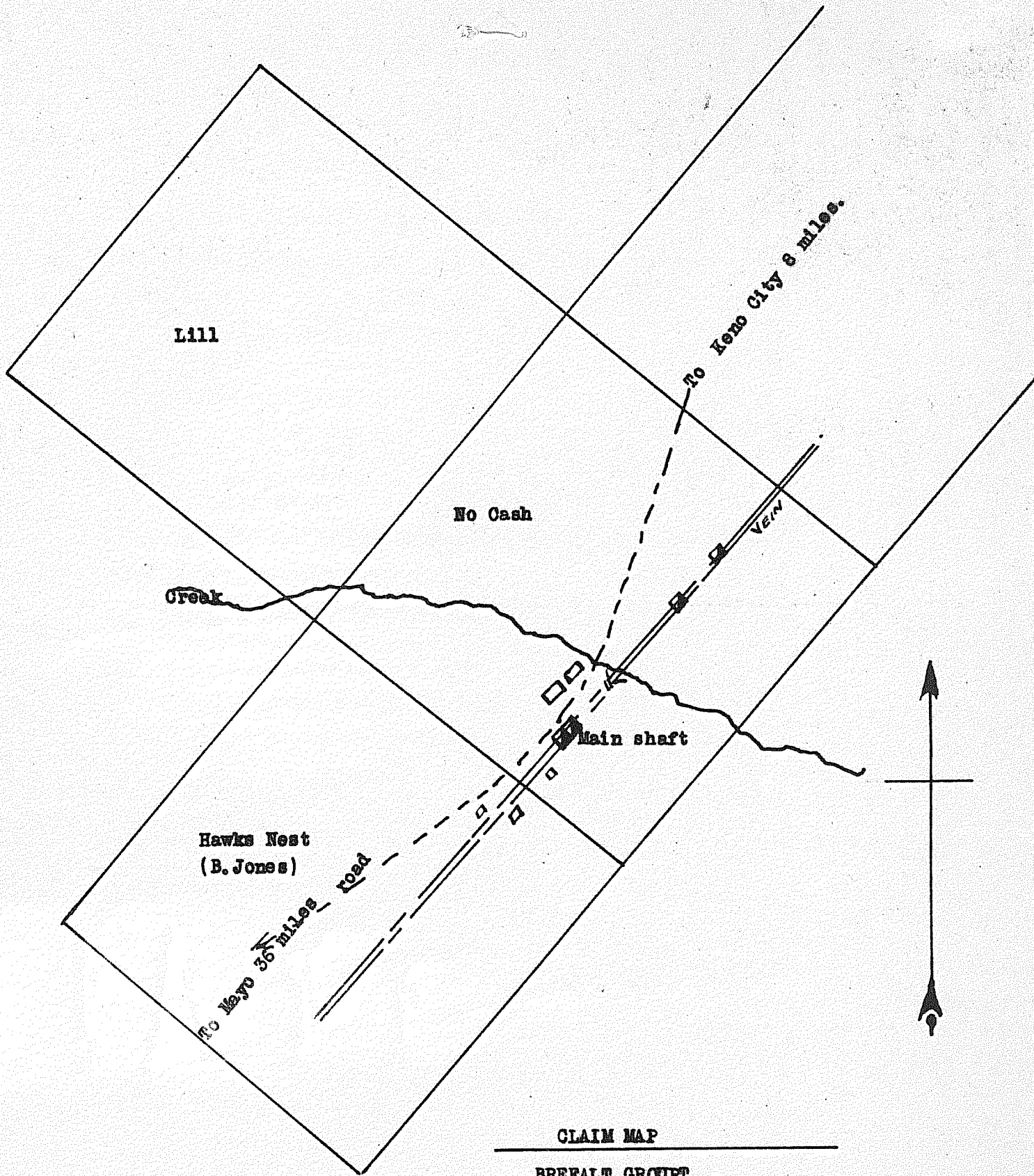
Marshall D. Draper

November 16th, 1934.

Report on  
the  
BREXALTI GROUP  
Galena Hill  
MAYO MINING DISTRICT  
Yukon Territory  
Canada

by  
MARSHALL D. DRAPER. E.M.

November 16th  
1934



CLAIM MAP

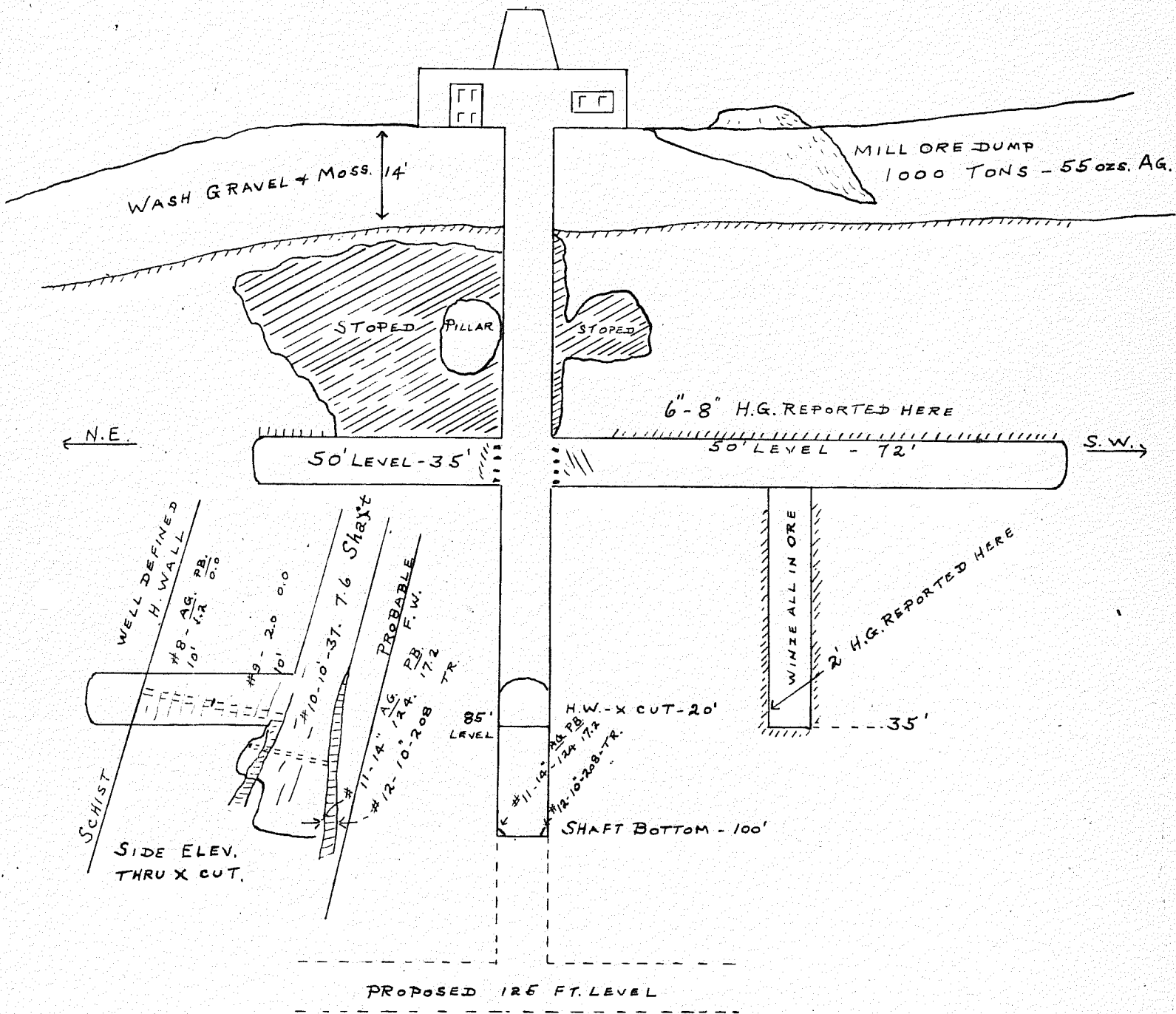
BREFALT GROUP

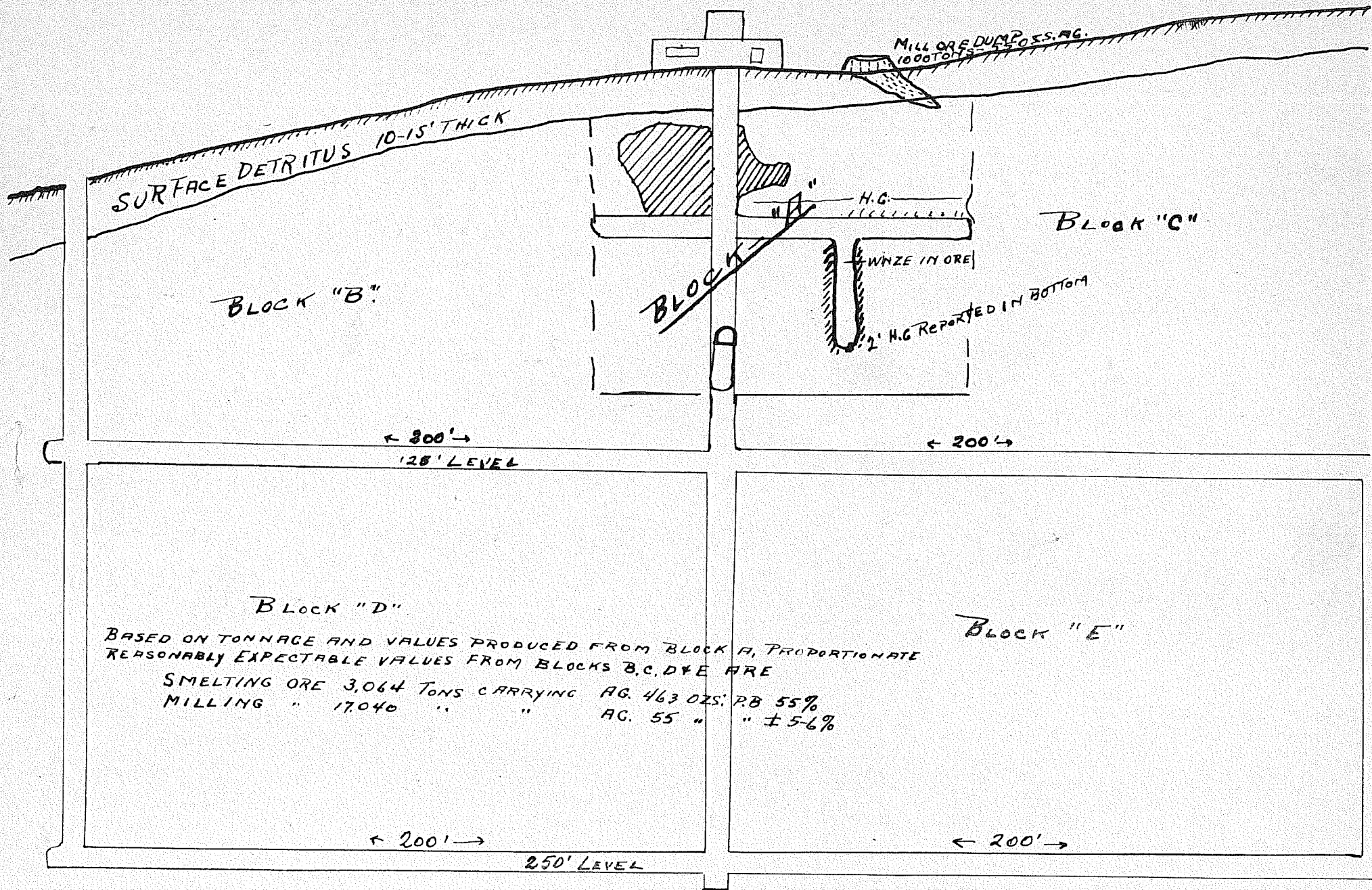
SCALE 1 inch - 500 ft.

Oct. 7 1934

To accompany report by

Marshall D. Draper.





BREFALT MINE  
 PROPOSED DEVELOPEMENT IN RED  
 SCALE 1 INCH = 40 FT.  
 OCT. 1934.  
 TO ACCOMPANY REPORT BY MARSHALL D. DRAPER.

MARSHALL D. DRAPER, E.M.

Hollingsworth Building  
Los Angeles, Calif.

Report on

BREFALT GROUP

LOCATION:

On the north side of Galena Hill, Mayo District, Yukon Territory, Dominion of Canada, connected with Keno City by fair winter road recently made through timber to main haulage road to Mayo connecting about three miles from Keno City. Forty miles to Mayo.

PROPERTY:

Two claims, NO CASH AND LILL, each approximately 1500' x 1500'. The latter claim was taken up for timber. It has no development of any kind, though likely to contain veins, (Ownership - Charles Brefalt and Dan Tolmie, Keno City, P.O. Y.T.)

HISTORY:

Staked by Brefalt in 1924. First ore was found in 1928 by a lessee, Nels Bjornnes, who had obtained a five year lease, expiring in August, 1933.

The owners, as stated, have just finished retimbering shaft preparatory to active operations after they had also sunk main shaft 15' to the present 100' depth and sunk winze 35', installed new shaft house, ore bins, bunk house for twelve men, boarding house and built some four miles of new road. This small amount of recent development in the mine has produced 50 tons of ore carrying 450 ozs. Ag and 52% Pb. The last one foot round in the shaft produced 17 sacks - 1.1 tons of ore. This I grab sampled, obtaining as content 450 ozs. silver and 55% lead.

DEVELOPMENT:

This, as stated, is all on the NO CASH claim, consisting of a shaft 100' deep, sunk on the vein (which dips at about 75°) and two drifts run 35' N.E. and 72' S.W. on the 50' level. Also a winze in the 50' level sunk 30' S.W. from the shaft and 35' deep. (See accompanying map).

Good ore existing in shaft and winze, the owners recently retimbered the shaft, blocking off the drifts and the winze, which are now partly filled with mill ore.

Shaft sinking is now in progress and N. and S. levels will be started at 125' level, (October, 1934).

Brefalt Group - Cont'd.

PRESENT EQUIPMENT:

At present the equipment consists of warm bunk house and cots to house 12 to 20 men, good boarding house building for 20 men, shaft house housing, blacksmith shop, sorting floor and small 6 h.p. gasoline hoist.

Investment in building, equipment, roads, camp supplies including groceries for 6 men for 6 - 8 months, powder, fuse and caps for a similar time, telephone line (to Keno City and Mayo) totals about \$10,000.

With the present layout some 20 men could be worked if desired as additional food and other supplies may be taken in from Mayo stores at any time.

ROADS:

The mine is now 1.5 miles distant from the road that connects with the main haulage road into Mayo and from the main junction point it is 38 miles to Mayo or a total distance of about 38 miles.

This road should be built at once and probably such winter road for truck haul has already been started by Mr. Brefalt. The distance to Keno City is 8 miles of which 5 miles of good winter road has been built recently. Contract price for truck haul from the mine to Mayo is \$15.00 to \$20.00 per ton.

TOPOGRAPHY:

The mine is located on a gently sloping (10°) side hill alongside a small creek furnishing domestic water. Development by tunnel is not feasible. There is little likelihood of water trouble. Good timber for the mine surrounds the camp.

SAMPLING: (October 14, 1934)

(See accompanying sketch)

The shaft, at the time of my examination, was being retimbered preparatory to shaft sinking to 125' level and an otherwise active campaign of development and ore extraction. The 50' level and winze were blocked off so that sampling was confined to shaft bottom.

The results are as follows:

- #8 - W. 10' in H.W.X cut 10' long extending from H.W. as shown in X cut at 85' level to a point 10' back therefrom.  
This section was thought to be low grade mill ore.  
Ag 1.2 ozs. Pb Nil
- #9 - W. 10' adjoining #8 towards F.W.  
Ag 2.0 ozs. Pb. Nil
- #10 - W. 10' on F.W. section of vein containing two galena-bearing streaks - some 10' apart as shown. The section cut is some 6' below #9.  
Ag 137 ozs. Pb 17.6 %
- #11 - W. 14" on F.W. Containing galena bands - N. end of shaft  
Ag 124 ozs. Pb 17.2%
- #12 - W. 10" on F.W. containing galena bands - S. end of shaft

Brefalt Group - Cont'd

- Ag 208 ozs. Pb. Tr.  
 # 13 - General sample from 17 sacks of sorted ore produced from last round sunk in shaft (some 12" in depth).  
 Wt. 1.1 tons Ag 466 ozs. Pb. 55.2%  
 # 14 - Mill ore dump measured by myself included some 40 tons of tailings from sluicing that amount in riffled box and from which operation was obtained six tons clean concentrate (dump material was not pre-crushed) carrying Ag 370 ozs. Pb 60% 1,000 ton dump average Ag 55 ozs.

It is interesting to note that total tonnage extracted from all openings shown on map come to - 1,250 tons and that as a rough check on same is:-

High grade shipped 177  
 Mill ore on dump 1,000

1,177 tons

Also that one-seventh (roughly) of all rock broken, by weight, was high grade shipping ore.

ORE SHIPMENTS: (To Bunker Hill & Sullivan Co. at Kellogg, Idaho.

Smelter Settlement - Hals Bjornnes - Lessee - Brefalt Claims:

Date	Lot #	Dry Wt.	Ozs.		%		Analysis				
			Ag	Au	Pb	Insol.	Fe	Zn	S	Sb	As
6/30/30	5	20 tons	437.	.02	46.65	18.5	7.9	1.1	9.5	.9	.07

Treatment	Base	Per Ton	Deduction	(Price)
	\$10.00			
Silver: refng. @ 1 1/4 per oz. On excess over 350 ozs. 437-35		\$ 9.56	Ag 3% 262.72 @	.34396 \$ 90.37
= 402 @ 1 1/4 c Rr Frt. on Pb. Kellogg to NY @ \$13.50 per ton		6.04	Pb 1 1/2 500	5.25 26.25
		5.54	Pb 10% 1825%	5.25 95.81
As & Sb @ \$1. per unit		.97		
Total Treatment		\$ 22.11	Total Deductions	\$ 654.88

Brefalt Group - Cont'd

Net Value - - - - -	\$ 3,441.69
Federal import tax on government assay of 45.6%	
Pb 18,251# @ 1.4¢	<u>575.77</u>
Bal. due shipper	3,067.92

In addition to smelting charges proper as shown, the Treadwell-Yukon Co., which forwarded the ore, made following deductions, etc.

Bjornes - Smelter lot #5 - 346 sacks	\$3,067.92
Ashes (resacking and burned old sacks)	
346 sacks @ .03	10.58
	<u>\$3,078.50</u>
Less Frt. (Mayo to Smelter) at \$31.74 p. ton	654.99
	<u>\$2,443.41</u>
Less Insurance on \$2947.65 @ .625¢	18.42
	<u>\$2,424.99</u>
Marking, Checking, resacking, loading	
20.58 tons @ .55¢	\$ 11.32
Customs bonds and entries	
20.58 tons @ .15¢	3.09
Discount and Commissions, transferring \$2,513.10 @ 65¢	15.05
	29.44
	<u>\$2,395.55</u>

Treadwell Yukon Co. also made other charges (probably for truck haul to Mayo from Galena Hill at \$15.00 per ton or more) so that finally, the shipment netted, according to Mr.

Bjornes - - - - - \$2,000.00

Details of Lot #6 are shown following:

Shipper	Lot #	Ag Ozs.	Au. Ozs.	Pb%	Quotation	
					Ag.	Pb.
Nels Bjornes	6	468.3	.04	60.65	\$ .426	4.30¢
	Dry tons					
	36.5					
<u>Metal Deductions:</u>				<u>Metal Values</u>		
Ag. - 512.66 ozs. at \$ .426		\$ 225.86		Ag		\$ 7,462.14
Pb. - 912# @ \$ .043		39.22		Pb - 44,264# @ .043		1,903.35
Pb. - 4,335# @ .043		186.41				\$ 9,365.49
		\$ 449.49				
Treatment per ton @ \$25.70		933.07				
		<u>1,387.56</u>				<u>1,387.56</u>
				Net Value		\$ 7,977.93
Federal Duty - 42,913# @ 1.5						643.70
				Balance due shipper		<u>\$ 7,334.23</u>

Brefalt Group - Cont'd.

A summary of shipments to date show approximate figures as follows:  
(As net smelter receipts).

<u>Lot No.</u>	<u>Dry Tons</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Net Received</u>
5	20	437.	46.85	3,067.92
6	36.5	468.3	60.65	7,334.43
-	50	487	58	12,280.00
-	<u>70.5</u>	<u>451.</u>	<u>52.10</u>	<u>14,080.00</u>
177	463	55.6	Net Smelter Returns	\$ 36,702.00

The last two shipments have been sent to smelter at Trail, B.C. but returns are not yet in. However, content as shown, may be relied upon as the local Government assayer, Mr. Sime, runs sack grab sample checks on all such shipments, has done so in this case and the examination of a large number of similar shipments shows local sampling agreeing with smelter determinations. I examined at least 100 such comparisons.

Such ore production is usually sampled in five ton lots. I present the following data obtained by me from Mr. Sime, the local Government assayer, covering contained values in this last shipment of 70.5 tons by Mr. Brefalt.

<u>Tons</u>	<u>Ozs. Ag</u>	<u>%Pb</u>	<u>Ag Factor</u>	<u>Pb Factor</u>	<u>Nature of Ore</u>
17	306	37	5202	629	Carbonate ore (Oxidized)
5.5	447	48	2458	264	" " "
5	593	55.5	2965	277.5	Coarse Galena
5	371	65	1855	325	" "
5	394	61	1970	305	" "
5	514	69	2570	345	" "
5	548	61	2720	305	" "
5	458	69	2290	345	" "
5	700	46	3500	230	Galena - Zincy
5	445	57	2225	285	Coarse Galena
5	378	54	1890	270	" "
3	<u>736</u>	<u>32</u>	<u>2208</u>	<u>96</u>	Zincy galena

70.5 tons      70.5)31853      70.5)3676.5  
 Av. Ag.      451.8      ozs. 52.1% Pb

Details of smelter settlements covering Lots #5 and #6 shipped by Nels Bjornes as lessee on Brefalt claims have been previously shown.

Brefalt Group - Cont'd

Summarized: 177 tons have been shipped from these limited openings which have a content, after smelter deductions were made, of:

Ag 440 ozs. Pb 50.1%

Smelter settlements total about \$36,700. or \$207. per ton.

120.5 tons were shipped in 1934. Final returns from this last 120.5 tons are not yet in but have been roughly calculated on the basis of present metal prices and smelter charges.

FUTURE OPERATING RESULTS:

By means of development outlined, Blocks B, C, D and E will be available for stoping.

Not over one-half of the available ore has been extracted from Block A, which is 107 x 90 ft. = 9,630 square feet in extent and which has already produced:

177 tons shipping ore with content of 463 ozs. Ag & Pb 55%

and

1,000 tons mill ore with content of 55 ozs. Ag.

It is altogether likely that Block A will at least produce as much more, so that production from this block will approximate 350 tons smelting ore and 2,000 tons mill ore of the same grade as before.

On this basis one sq. ft. on plane of the vein will produce .0374 tons smelting ore and .206 tons mill ore. Whence, on the same basis, reasonably expectable contents in Blocks B, C, D and E are as follows:

<u>Block</u>	<u>Sq. Ft. Area</u>	<u>Factor</u>	<u>Tons Smelting</u>	<u>Factor</u>	<u>Tons Mill Ore</u>
B	16,425	.0374	614.5	.206	3,416
C	15,500		579.7		3,224
D	25,000		935		5,200
E	25,000		935		5,200
	81,925		3,064.0		17,040

Brefalt Group - Cont'd

PRESENT OPERATING PROFIT

With present prices and conditions the smelting ore will show approximately as follows :-

Smelting Ore - 465 ozs. Ag -- 55% Pb

Ag. - 95% of 465 @ .55¢	\$ 241.19
Pb. - 90% of (55-1.5) x 2,000 x 4¢	<u>38.52</u>
	\$ 279.71

Deductions and Charges

Base rate - treatment	\$ 10.00	
Freight - lead to N.Y. - 965#		
@ \$13.50	6.50	
As and Sb -- .9	.90	
Ag refining charge -		
(440-35) x 1 1/2¢	<u>6.08</u>	\$ 25.48
Net Smelter Return		\$ 256.23

Present Costs Per Ton Crude Ore

Mining	10.00	
Hauling to Keno	5.00	
Sacks and sacking	5.00	
Haul to Mayo	10.00	
Steamer & R. R. Freights	32.00	
Federal Duty on lead - 965# @ 1.5¢	14.45	
Brokerage & Insurance	<u>1.50</u>	87.95
Present Net Operating Profit per Ton		\$ 168.28

Operating Profit per Ton on Smelting Ore - Local smelting

Under proposed acquisition of property.

Recovery

95% of 465 ozs. Ag. @ .55¢	\$ 241.92
95% of 55% lead - 1045#	

Cost

Treatment	\$ 18.15	
Mining	20.00	
Hauling to plant	5.00	
Royalty (applying on purchase)		
15% of (\$256. - \$100)	<u>23.40</u>	66.55
Net Operating Profit Per Ton		\$ 175.37

(With an additional profit later due to marketing 1,045# lead produced at Keno at no cost)

Brefalt Group - Cont'd

Operating Profit on Mill Ore

Basis of calculation - 55 ozs. Ag content (-5% Pb)  
 Ag extraction 95% of 55 = 52.25 @ 55¢ = \$ 28.74  
 Rate of concentration - 8:1

Operating Cost

Milling	\$ 5.00	
Hauling	5.00	
Smelting (1/8 of \$18.15)	2.27	<u>12.27</u>
Net Operating Profit Per Ton		\$16.47

Estimated Value of Probable Ore

(In Blocks B, C, D and E)

Smelting Ore - 3,064 tons @ \$ 175.37	\$	537,535.
Mill Ore - 17,040 " @ \$ 16.47		<u>280,648.</u>

Total Probable Realizable Value of  
 Blocks B, D, C and E \$ 817,961.

To the above may be added profit on pig lead  
 to minimum recovered amounts of :

1045# per ton on 3,064 tons crude	5,201,880#
100# " " "17,040 " mill ore	<u>1,704,000#</u>
Approx. total lead - lbs.	4,905,880

DEVELOPMENT AND EQUIPMENT COSTS:

On acquiring the property, it should be equipped with a heavier hoist, say, 15 h.p., capable of taking 1,200 lbs. ore at a trip. Small compressor and drills should be installed and expansion of development started at once, the approximate cost of which is as follows:

Brefault Group - Cont'd.

OUTLINE OF DEVELOPMENT AND EQUIPMENT COSTS:

A. Development

1. Shaft sunk to 250' and 10' sump - 135' sinking @ \$40.00	\$5,400.00	
2. Drifting - on 125' level		
200 ft. North @ \$20.	4,000.00	
200 ft. South @ \$20	4,000.00	
On 250' level		
200 ft. North @ \$20.	4,000.00	
200 ft. South @ \$20.	4,000.00	
3. Raises -		
500 ft. @ \$15.	7,500.00	
4. 8 - X cuts 20' each - 160' @ \$25.	4,000.00	
5. General Development	3,000.00	
6. Surface trenching and pits	4,100.00	
		\$ 40,000.00

B. Equipment

Hoist - installed	2,500.00	
Buckets, cars, truck, cable	2,400.00	
Compressor and Receiver - 300 installed	3,000.00	
Drills, repair parts, steel	2,800.00	
Sharpener	1,600.00	
Small machine and blacksmith shop and equipment, tools and appl.	2,700.00	
Buildings,	4,000.00	
Fan, pipe and gas engine	800.00	
Pipe and track	2,500.00	
General	3,000.00	
		\$ 25,300.00

C. Transportation Equipment

One Ford semi-trailer	3,000.00	
Two Ford - 2 1/2 ton trucks	3,500.00	
One Ford car	1,500.00	
Repair parts and tires	500.00	
Garage	1,500.00	
		\$ 10,000.00

D. General

Roads 6 miles @ \$2,500.00	15,000.00	
Office and supplies	1,200.00	
Garage and supplies - Mayo	5,000.00	
In transit and advanced charges	10,000.00	
Preliminary expense general	5,000.00	
Operating fund - 3 months turnover	25,000.00	
Overhead, unforeseen, general	13,500.00	
		\$ 74,700.00
		\$ 150,000.00

Brefalt Group - Cont'd

GENERAL:

The above figures are thought to be approximate results to be anticipated. They are well within the range of possibilities, and it will illustrate and emphasize what has been done elsewhere in this camp with similar ore bodies.

Operating conditions here, except for high transportation costs to the "outside", differ not at all from those met with in any part of Canada or such Northern States as Montana, Dakota, Idaho or the high altitude camps of Colorado.

Year around operations can be maintained without the slightest difficulty and have been for fifteen years past.

Although costs will always be higher than ordinarily, the present prevailing ones can be cut very largely and along a number of lines of attack.

It may be well to here again stress the fact that the annual precipitation is some 12 inches. There is consequently no heavy snowfall and with an unusually still atmosphere, no wind and little drifting.

FINANCIAL REQUIREMENTS :

With the knowledge that an immediate payment requirement of \$ 22, 500.; in six months \$ 11,250., and in one year \$47,812.50 must be met with the additional other capital requirements and that there is a royalty of 15% of smelter returns AFTER allowing \$100. per ton for marketing costs, with royalty to apply on payments due, I submit the following:

Brefalt Group - Cont'd.

<u>Immediate</u>		
First payment	¢ 22,500.	
Equipment cost	65,000.	
Operating fund	<u>12,500.</u>	¢ 100,000.

<u>In Two months</u>		
Two months operating @ ¢5,000.	10,000.	

<u>In Four months</u>		
Two months operating @ ¢5,000.	10,000.	

<u>In Six Months</u>		
Two months operating @ ¢5,000.	10,000.	
Second payment	<u>11,250.</u>	41,250.

<u>In eight months</u>		
Two months operating - ¢ 10,000.		
Cash in hand for ship-		
ments liquidated - say		
500 tons @ ¢150.	<u>75,000.</u>	
Surplus ¢	65,000.	

<u>In Twelve months</u>		
Cash in hand for ship-		
ments liquidated - say		
500 tons @ ¢150.	<u>75,000.</u>	
	¢140,000.	
Four Mo. oper. ¢20,000.		
Third payment		
¢ 47,812.50	<u>67,812.50</u>	
Oper. Surplus	¢ 72,187.50	

After one year the mine should be amply self-supporting.

Total cash Requirements (First six months) - - - ¢141,250.00

The foregoing presupposes a crew of some 30 - 40 men all told, with outlined development to be accomplished in twelve months.

CONCLUSIONS:

This is the best partly-developed small mine in the entire district. At present, I have formed the highest opinion of its large merit.

It is clearly shown that the vein is a large one, probably some 30 feet in width, and based on an analogy of some six or eight others, it is my opinion that it is just now entering one of the bonanza ore shoots typical of this camp, many of which have shown 30 to 60 feet between walls carrying 40 to

Brefalt Group - Cont'd

80 ozs. and with the accompanying streaks of high grade of 2 to 10 feet of direct shipping ore on one wall or intersected with the vein.

I am indebted to Mr. Nels Bjornes, a locally reputable man, lessee of the property formerly, for the following data:

A crosscut was run by him on the 50' level N., showing vein width of 15.5 feet and the shaft was gouged back or widened in two places, exposing respectively widths of 13 ft. and 12 feet. All three widths sampled separately gave an average of 75 ozs. Ag and 8% lead for average width of 13.5 feet. He sluiced, without crushing, some 30 tons of the mill ore dump and obtained three tons of ore running 350 ozs. Ag.

Whether or not this is the case, the mine is now on a very profitable paying basis. I have no doubt that Mr. Brefalt, the operating owner, will take out 500 tons of ore carrying 450 ozs. Ag and 55% lead inside of six or eight months with some four men working underground with hand steel.

Mining only the hitherto small high grade widths of four inches to twelve inches, he will probably net \$80,000. by next June with these few miners, and moreover, will probably put on his mill ore dump in addition, some 3,000 tons carrying 50 to 60 ozs. Ag.

No footwall is yet in evidence and the reverse dip of the high grade streak towards the footwall, its continual widening for the last 30 feet, the coming-in of another galena-bearing zone shown some 10 feet distant towards the hanging wall, and the presence of siderite and gray copper in the gangue between, all are such direct evidence and present such a parallel with ore bodies of magnitude elsewhere in the camp, that I am convinced that one of these typical bonanza bulges is not far distant.

The vein, except for its very evident width, does not now present any spectacular appearance, but the fact remains that 180 tons of ore carrying 450 ozs. Ag and 55% lead have been taken from a shaft 100 feet deep, 100 feet of drifts, a 35 ft. winze and a small amount of stoping.

About one mile distant on a parallel vein is a claim known as the Elsa, formerly owned by Mr. Brefalt, who did some small development, shipped 215 tons of high grade ore - carrying about 450 ozs. Ag and 55% lead - and then sold to Treadwell Yukon Co. for \$150,000. receiving total payment in eighteen months.

The Treadwell Yukon Co. in 1933 shipped 2471 tons - therefrom- 1,206,909 ozs. Ag and 1,565,734 lbs. Pb with smelter receipts as per Government Recorder's office of \$529,893.34 and with mill ore exposed in this operation of some 30,000 tons carrying 60 - 80 ozs. Ag and 8 % Pb.

The Elsa is about 200 feet deep, has no mill and was only shut down at extreme low prices of silver.

Brefalt Group - Cont'd.

In conjunction with the Silver King, another nearby and similar occurrence, this company, it is said, is now considering erection of 350 ton mill to treat the ore of both mines.

The foregoing is cited as only one of several similar instances of the encountering of these remarkably wide and rich ore bodies.

Any experienced mining man cannot fail to be impressed with the richness, widths, magnitudes, and possibilities of these ore bodies and coincidentally with the singular and metaphorically speaking, total lack of surface trenching to discover others.

When local conditions are better understood and studied, the reasons for such lack of surface work are more apparent.

RECOMMENDATIONS:

I have given much thought and careful consideration to this property and spent, incidentally, some three weeks in the district in detailed examination and comparison of the mines themselves, as well as their vital statistics. As a result, and as a summary of the foregoing notes, I strongly advise the immediate acquisition of this property on the terms offered.

It is on a sound, profitably producing basis at present, has every evidence of becoming a large producer and constitutes, in my opinion, as safe and profitable a mining investment as could be found anywhere.

Prophets are fallible and the property is still, in point of development at least, a prospect, yet it will indeed be an outstanding exception to the invariably prevailing history of its predecessors if it fails to produce some three or four millions in net smelter receipts in the next three or four years.

Respectfully,

Marshall D. Draper

November 16th, 1934.