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PRELIMINARY REPORT

on the

DIAMOND EXCELSIOR MINES - EUREKA, NEVADA

September, 1932

By

Earl B. Young

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PRELIMINARY REPORT

ON THE

DIAMOND EXCELSIOR MINES, EUREKA, NEVADA.

September, 1932

This preliminary report is based on a study of the Eureka District and of the Diamond-Excelsior Mines of about two months duration in the company of Mr. George F. Stott. Mr. Stott has five years of mining and geological experience in the district and has studied many localities in considerable detail. Many of our geological observations are based on Mr. Stott's work which was checked at critical points during my visit.

The Diamond Excelsior Mines are located on the east slope of the irregular mountain spur which heads on Prospect Mountain and descend gradually northward to the town of Eureka, Nevada. The mines are about four miles by fair auto road from the town. Eureka is the county seat of Eureka County and is the terminus of the Eureka, Nevada Railroad, a narrow gauge line which connects with the Western Pacific and Southern Pacific Systems at Palisade, Nevada about 90 miles distant.

Elevation at Eureka is 6,500, on Prospect Mountain 9571, and at the Main Tunnel of the Diamond about 7,900. Eureka is on the Lincoln Highway, 80 miles west of Ely and 335 miles west of Salt Lake City.

Property and Ownership:

The property consists of 49 mining lode claims, 21 of which are patented and 3 patented mill sites. Total acreage is given as about 420 acres. The main tunnel crosscuts the property from east to west and has drifts and crosscuts which traverse the property north and south for almost the entire length.

Three inside shafts, known as Nos. 1, 2 and 3 with drifts and winzes, extend 500, 270 and 770 feet respectively below the main Diamond Tunnel Level.

There are nearly eight miles of workings on the property, most of which is accessible and in good condition. There are over three miles of workings on the main Diamond Tunnel Level. There is no water other than a little seepage in the mine.

There is no timber on the property. Water suitable for domestic purposes and sufficient to furnish steam for a 180 H.P. boiler is available from a spring and a dug well on the Horrub Spring Claim which is patented.

The property is owned by the Diamond Mining Co. and the Excelsior Mining Company both corporations of the State of Utah and qualified to do business in the State of Nevada.

The property is now under option to George F. Stott of Eureka, Nevada who has a five year lease and bond which expires in May, 1937. While no attempt was made to investigate titles, locations or boundaries, the property map submitted, herewith, is believed to be substantially correct.

History and Production:

The first mining claim in the district was recorded in 1864 and from about 1870 to 1895 the activity was of such magnitude as to attract the attention of the world. Even approximate figures on production are impossible to secure, but estimates of gross production as high as 200 million have been made. It is claimed that 350,000 tons of lead was produced. From a Wells, Fargo and Company Production Report in 1875 an estimate of shipments actually passing through their hands was:

Gold	$12,146,218.00
Silver	28,332,151.00
	$40,478,369.00

Arnold Hague reports in Monograph No. 20, U.S.G.S. that up to 1885 the gold silver bullion totaled 60 million about 1/3 of which was gold. From the Mining Review, July 5, 1932 in a note on mining in Eureka - "The average of all ores smelted from the mines at Ruby Hill during its period of heavy production contained 33% lead, 27.55 oz. silver and $32.86 gold."

From about 1895 to date mining has proceeded on a much smaller and more irregular basis. Among the causes may be mentioned demonetization of silver with a price since 1893 of about half its previous price, high costs of smelting, transportation and operation. It is estimated that in the early days, it was necessary for ore to average better than $50.00 per ton to make operations attractive. However, the many improvements in mining, transportation and smelting have reduced this breaking point so that we now believe $20.00 ore can be mined at a profit.

Production from the Diamond and Excelsior Mines was reported in the early 70's and continued more or less regularly until about 1906. Since that date production has been small altho operations have been resumed for brief periods during the past twenty five years. The total gross production of the mine is placed at about 7 million dollars. The character of the production is indicated by the following:- The Diamond Mine 1890-1896 - 25,750 tons averaged, 20.19% lead; 24.62 oz. silver, 0.506 oz. gold.

The Excelsior Mine 1895-1898 - 7,200 tons averaged. 7.13% lead, 39.40 oz. silver and 1.575 oz. gold.

Geology:-

The workings of the Diamond-Excelsior Mine are in the Prospect Mountain dolomites of Cambrian Age. The geological history is very complicated and will require much study. The following is suggested as preliminary outline of events.

1. Sedimentation - the forming of the beds from Cambrian to Carboniferous, inclusive.

2. Overthrusting of the N 50° East type with thrust from the northwest. Formation of the major anticline.

3. Normal faulting as shown by the Lawton and Jackson. North-south faults with east side down relative to west side. 900' vertical displacement estimated at one point on the Lawton. Ruby Hill type - N 50° W with northeast dip - may be nearly contemporaneous.

4. Overthrusting with pressure from the northeast. Result is a scab of Cambrian Quartzite resting on Cambrian limestone at the northern end of the district. Particularly noticeable south of Ruby Hill.

5. Intrusions of porphyry along all old faults, overthrusts and normal faults. Examples are the Bullwhacker sill, the granite on Mineral Hill and the outcrops along the Jackson and Ruby Hill Fault.

6. Mineralization along premineral fissures. The north-south Jackson-Lawton systems especially strong. 90% of production of district associated with Lawton system.

7. Replacement of dolomites along the intersections of various east-west northeast and northwest fractures, with the major overthrusts and north-south fault fissures.

8. Post mineral adjustments of various kinds - usually small.

9. Formation of caves in the dolomites along intersections of fractures and depositions from descending ore solutions on the footwall side and bottom of caves. Where caves bottom on premineral overthrusts conditions are particularly favorable.

Conditions in the Diamond Excelsior Mines:

The workings are in good condition and a large part of the mine is accessible. As will be observed from the assays submitted above, there is a marked difference in the character of the ores of the north end and of the south end. The ores of the north end, tributary to Shaft No. 1 are lead silver ores with some gold.

The ores of the south and which are reached by the Main Tunnel and workings from No. 3 Shaft are low in lead but good in silver and gold. The gold content is particularly attractive at this time.

The orebodies occur associated with masses of iron oxides on the lower side and bottoms of caves. These caves are localized by intersections of fissures. A number of these caves have been discovered and have produced ore of excellent grade. However, a brief study of the fracturing of the mine strongly suggests the probability of many caves that were unknown to the previous miners. Further there are several caves discovered on upper levels which have not been developed in depth. These offer unusual opportunity for ore finding.

Costs of Operation:

It has been estimated that $25,000.00 spent on equipment and installation will bring the property into condition for production. The major items are:

Machinery - Diesel engine compressor, 2 tugger hoists, jackhammers, stoker, hose, tract (10 tons), pipe, drill steel, etc.----------$10,000.00

Misc. supplies for installation	$5,000.00
New Headframe bearing sets at No. 3 shaft	500.00
Retimbering in 500 level winze	1,500.00
Labor 5 men, and supt. salary (3 months)	5,000.00

An estimate of the cost of operation is as follows:
(Based on $30 - $40 ore)

Mining	$5.00	per ton
Development	.50	per ton
Haulage	1.50	" "
Freight	8.50	" "
Smelting	3.00	" "
Royalty	3.00	" "
Total	$21.50	" "

It is believed that as substantial tonnage of say 50 - 100 tons a day became available this cost can be lowered by at least $5.00 per ton.

Exhibits A,B,C,D,E, F and G, are made a part of this report and are believed to be self-explanatory.

Conclusions:

(1) Many places exist where short drifts, raises, or winzes will explore intersections with excellent chances of winning ore.

(2) It is believed that several of the known caves have not been explored to exhaustion and that much good ore can be secured from additional work both laterally and in depth.

(3) It is believed that a large tonnage of iron ore carrying some gold can be developed and that this may prove a valuable asset.

(4) Overthrust faulting, Lawton fissuring, scores of cross fissures in a dolomite which has already proved productive, together with 8 miles of workings which make expensive development unnecessary - all these make a set-up which is unusually attractive.

(5) The south portion of the mine with its large gold values is particularly suited for development at this time.

(6) In the north portion several showings have been found that will yield shipping ore even at the present low prices. When normal prices again prevail the northern part should be explored thoroughly.

(7) Geological maps of the various levels and sections through typical areas have been prepared. These maps show many of the known and probable orebodies. A thorough sampling of the mine is needed, and is being carried on as rapidly as present facilities permit.

Respectfully submitted,

Earl B. Young
Mining Geologist.

EXHIBIT "A"

SHOWING AVERAGE ASSAYS OF SHIPMENTS TO SMELTERS FROM

DIAMOND MINE

EUREKA, NEVADA.

YEAR	NET POUNDS	PER CENT LEAD	SILVER OUNCES	GOLD OUNCES
1890	5,912,086	26.13	20.64	0.283
1891	8,687,788	16.87	22.72	0.310
1892	15,828,322	18.50	21.99	0.340
1893	10,761,716	23.66	29.20	0.859
1894	8,137,119	19.10	21.74	0.798
1895	1,751,188	19.17	25.86	0.402
1896	640,974	14.90	19.92	0.273
TOTAL	51,304,929	20.19	24.62	0.506

EXCELSIOR MINE

EUREKA, NEVADA

YEAR	NET POUNDS	AVERAGE PER CENT LEAD	AVERAGE SILVER OUNCES	AVERAGE GOLD OUNCES
1895	2,903,452	17.19	32.72	0.876
1896	4,180,089	10.38	46.43	1.110
1897	5,237,805	1.15	44.79	2.568
1898	2,772,089	4.25	27.38	1.938
TOTAL	14,413,435	7.13	39.40	1.575

EXHIBIT "B"

DIAMOND AND EXCELSIOR MINES

Eureka, Nevada.

TEMPORARY SET-UP FOR OPERATION - ABSOLUTE MINIMUM

A - Equipment Required -

Portable Compressor, 150 to 200 cu. ft. capacity.
6 tons 12 lb. rails, fish plates and bolts.
Ties 500 - 4" x 6" by 30".
2 Kegs Truck Spikes 3 1/2" long.
100 - 2" x 4" x 16' for ladders.
1 Keg 20 Penny Nails.
1 Ingersoll-Rank EUL Utility Air Hoist.
1 " " D6U " " "
2 " " S39 Wet Jackhammers 7/8" Hex Chuck
1 Cochise Wet Stoper 1" Quarter Octogon Chuck.
600 ft. 3/8" Strand 19 Wire Hoisting Rope.
2 Water Tanks for Drilling Water 20 gal. capacity.
2 - 50' lengths 6 Ply 3/4" Air Hose.
2 - 50' " 4 Ply 1/2" Water Hose.
Drilling Steel for Jackhammers 7/8" Hollow Hex and shanked - no bits.
12 Sets 5' Length 12 Sets 3' Length 12 Sets 2' Length
Drilling Steel for Stope 1" Quarter Octogon.
6 Sets cut 5' 6 Sets cut 3' 6 Sets cut 2'
(Note) All drill steel Colonial Red Star.
Shovels 42" Copper Miners handles with extra high lift.
6 Round Point Shovels 6 Square Point Shovels
3 - 18" Stilson Wrenches.

B - Schedule for period 3 to 6 months -

Stope surveying, examination of older workings.
Probable little or no production unless extremely lucky.
Mine being prepared for production - Engineering study of all sorts extending from bottom to surface inclusive.
Operation of one development face above tunnel level south end.
Minimum crew 5 to 6 men as per lease agreement.
Distribution of crew - 3 men prospecting for new ore above tunnel, and 3 men repairing and replacing ladders and timbers for second Stage of Development.

C - First work contemplated -

110 ft. above tunnel level in area above No. 3 shaft involves expenditure of $500 and about 40 feet of development work hoping to duplicate orebodies similar to those already opened up and mined by old timers said to be $100 to $300 per ton with values principally in gold. If unsuccessful, next program, unless better one is found will be in the No. 2 shaft area tunnel level where U. S. Smelting encountered cave debris West of Excelsior Fault. Ores in the No. 2 Shaft Area are lead-silver with about 1/2 of gold content found in the No. 3 Shaft Area, (No. 2 Shaft Area about $15 to $20 per ton). Present winze down about 40' below Tunnel Level and

EXHIBIT "B" Cont'd.

continues in cave debris. Time estimated 1 month to 6 weeks. If unsuccessful here some of the other score or more places will be developed in turn.

D - Pay Roll and Supplies based on 6 man crew per month -

6 men @ $120 - - - - - - - - - - - -	$720.00
Supplies - - - - - - - - - - - - - -	360.00
Total	$ 1,080.00

George F. Stott.

Earl B. Young.

EXHIBIT "C"

DIAMOND AND EXCELSIOR MINES

Eureka, Nevada.

SECOND STATE OR SUBSTITUTE PLAN - THIS PLAN IS PREFERRED

A - Equipment Required -

Full Diesel Engine Compressor 600 to 800 cu. ft. instead of portable compressor.
6 tons 12 lb. rail - fish plates & bolts.
1000 - Ties 4" x 6" x 30".
4 - Kegs Track Spikes 3 1/2".
200 - 2" x 4" 16' long for ladders.
2 Kegs - 20 Penny Nails.
2 BUL Ingersoll Rank Utility Hoists.
2 D6U " " " "
1200 ft. 3/8" 6 Strand 19 wire hositing rope.
4 - Ingersoll Rank S-39 Wet Jackhammers 7/8" Hex Chucks.
2 - Cochise Wet Stopers 1" Quarter Octogon Chucks.
6 - Drilling Water Tanks capacity 20 gal.
6 - 50' Lengths 6 Ply 3/4" Air Hose.
6 - 50' " 4 Ply 1/2" Water Hose.
Drill Steel for Jackhammers - 7/8" Hollow Hex - Shanked - no bits.
30 - 5' Lengths 30 - 3' Lengths 30 - 2' Lengths.
Drill Steel for Stopes - 1" Hollow Quarter Octogon, no shanks or bits.
18 cut 5 Lengths. 18 cut 3' Lengths 18 cut 2' Lengths
(Note) All Drill Steel Colonial Red Star.
Shovels 42" Copper Miners handles with extra high lift.
18 square point shovels 18 - Round point shovels.
12 - Stilson Wrenches 18".
2 - 12 Cu. ft. Sinking Buckets.
2 - 6 " " " "
2 - 1 Horse drag scrapers.
6 - Snatch blocks 8" Diam. Pulley.
1 - Air Hoist from Ruby Hill - use on 500 incline.
100' 1" Hositing Rope Roebling Blue center.
600' 7/8" " " " " "
Mall Machue (Battery locomotive and charging equipment)

B- This program will allow us to mine ore now available on lower levels - especially below 500 level. It will take 90 days to get workings in shape to move ore to the smelter. Value of ores will range from $25 to $75 per ton. It is estimated that within 90 days a daily tonnage of 30 tons can be mined under this program. Three places are now available on 500 level or below. Undoubtedly as many more places will be discovered before geological investigation is completed.

EXHIBIT "C" Cont'd.

C - Pay roll and Supplies Based on 20 Man Crew.

20 Men @ $120 - - - - - - - - - - - -	$2,400.00
Supervision - - - - - - - - - - - - - - -	300.00
Supplies - - - - - - - - - - - - - - - - -	2,400.00
Total	$5,100.00

George F. Stott.

Earl B. Young.

EXHIBIT "D"

FREIGHT AND HAULING SCHEDULE

A - TRACTOR HAUL - Eureka to Mine.

UP - $4.25 per ton. DOWN - $1.50 per ton.

B - FREIGHT -

Crude	$6.00 - $4.20	Eureka	to	Salt	Lake.	
"	10.00 - 4.60	"	"	"	"	
"	15.00 - 5.20	"	"	"	"	
"	20.00 - 6.40	"	"	"	"	

Carload Lots of 80,000 T.

Smelter Value of Ore	Eureka to Palisade	Palisade to Salt Lake	Total
$20 - $30	$3.40	$3.80	$ 7.20
30 40	4.20	4.30	8.50
40 50	4.60	4.80	9.40
50 60	5.20	5.30	10.50
60 70	5.80	6.30	12.10
70 80	6.60	6.80	13.40
80 90	7.00	7.30	14.30

(Add about $1.00 per ton for L.C.L.

EXHIBIT "E"

SMELTER ORE PURCHASING BASIS OPEN MARKET

FOR SALT LAKE CITY, UTAH

CREDITS

Lead - pay for 90% of lead @ N. Y. quotations less 1½% - based on wet lead assay less 1½%.
Silver - pay for 95% of silver @ N. Y. quotations.
Gold - pay for all gold @ $19.00, if over 0.02 ozs.
Iron - pay 0.06¢ per unit.

DEBITS

Insoluble - Charge 8¢ per unit.
Sulphur - 4% free, excess 0.25¢ per unit up to a max. chg. of $2.50
Zinc - 7% free, 35¢ per unit over 7%.

Treatment - $2.50 on 20% lead, charge 10¢ per unit under 20%.
credit 10¢ " " over 20%.

Speis - 3% free, 25¢ per unit over 3%.

PRESENT NET VALUES PER TON FOR SALT LAKE CITY OF AVERAGE ORES OF PAST SHIPMENTS FROM DIAMOND AND EXCELSIOR MINING COMPANIES

DIAMOND MINING COMPANY (North Portion of Property)

Assume Lead 3.5¢ and Silver 28¢

	Assay	Credit	Debit
Lead	20.13%	$ 6.91	
Silver	24.62 oz.	6.55	
Gold	0.506 oz.	9.61	
Iron	24.47%	1.47	
Insoluble	20.78		$1.66
Treatment			2.50
Minimum lead penalty			.13
Truck Haul			1.50
R.R. freight Eureka to Salt Lake			7.20
		$24.54	$12.99

Net value per ton F.O.B. Smelter	$11.55
Less Royalty (10%)	1.16
Net to Mine	$10.39
Cost of mining (estimated)	4.50
Profit per ton	$ 5.89

Assuming Lead 5¢ and Silver 50¢ the profit per ton is $14.00

EXHIBIT "E"

EXCELSIOR MINING COMPANY (South Portion of Property)

Assume Lead 3.5¢ and Silver 28¢

	Assay	Credit	Debit
Lead	7.13%	$2.25	
Silver	39.50 oz.	10.48	
Gold	1.575 oz.	29.05	
Iron	32.2%	1.93	
Insoluble	19.4%		$1.55
Treatment			2.50
Minimum lead penalty			1.44
Truck Haul			1.50
R.R. freight Eureka to Salt Lake			8.50
		$ 44.61	$ 15.49

Net Value per ton F.O.B. Smelter	$29.12
Less: Royalty (10%)	2.91
Net to Mine	$26.21
Cost of Mining (Estimated)	5.00
Profit per ton	$21.21

Assuming Lead 5¢ and Silver 50¢ the profit per ton is $26.50.

EXHIBIT "F"

EXTRACT FROM REPORT BY R. H. STRICKLAND

September, 1922

The following samples were taken during my second examination:

Sample Number	Width	Gold Ounces	Silver Ounces	Lead Per Cent
1	13'-0"	0.14	10.08	8.70
2	1'-3"	0.06	43.42	38.10
3	2'-0"	0.06	12.14	17.20
4	4'-0"	0.04	10.76	9.30
5	0'-6"	0.16	124.64	36.10
6	3'-3"	0.14	5.02	5.60
7	8'-0"	0.20	14.38	8.20
8	1'-0"	0.76	176.84	40.30
9	4'-9"	1.04	13.16	10.80
10	3'-0"	0.38	48.92	1.00
11	1'-0"	1.02	94.64	26.10
12	1'-0"	0.56	80.54	39.40
13	2'-0"	Trace	0.40	14.70
14	10'-0"	0.04	3.80	———
15	6'-0"	0.08	1.00	Trace
16	0'-6"	1.62	127.40	7.20
17	2'-0"	0.24	9.50	2.00
18	6'-8"	0.02	0,70	7.00
19-	2'-6"	0.16	14.00	Trace
20	5'6"	0.80	8.20	3.20
21	4'-0"	0.12	9.80	Trace
22	2'-4"	0.50	3.80	Trace
23	1'-0"	0.44	21.40	4.10
24	0'-4"	0.04	6.20	1.40
25	Small Seam	0.12	148.40	56.90
26	0'-4"	0.10	1.90	3.70
27	1'-8"	0.32	7.00	22.70
28	2'-0"	0.14	18.00	13.80
29	3'-0"	0.04	33.40	18.00
30	9'-0"	0.18	15.30	18.00
31	2'-0"	0.18	28.80	21.20
32	0'-8"	———	Trace	Trace
33	1'-8"	0.02	7.10	1.60
34	3'-0"	0.16	25.40	2.10
35	5'-0"	Trace	0.70	0.50
36	0'-10"	1.10	33.50	5.60
37	1'-9"	0.04	0.70	0.40
38	1'-0"	Trace	0.80	0.30
39	0'-4"	Trace	0.80	0.40
40	2'-0"	0.10	10.00	0.40
41	1'-6"	Trace	0.40	Trace
42	4'-0"	0.04	1.10	0.30
43	3'-7"	0.04	0,30	Trace

EXHIBIT "F"

LOCATION OF SAMPLES

NORTH ORE CHANNEL

Above Diamond Tunnel Level

Sample No.	
4	60 ft. in Berryman Raise.
5	60 " " " "
28	120 " " " "
29	150 " " " "
30	180 " " " "
23	In caved portion of Berryman Tunnel leading to Berryman Raise.

On Diamond Tunnel Level

1	15 ft. beyond Berryman Winze.
2	Over Berryman Winze.
3	220 ft. southeast from Berryman Winze.
31	120 ft. " " " "

No work below Diamond Tunnel Level on North Ore Channel, except one small winze.

NO. 1 SHAFT ORE CHANNEL

Above Diamond Tunnel Level

24	300 ft. above Daimond Tunnel Level in McIntosh Tunnel, Level, near end of last crosscut to southwest.
25	300 ft. above Diamond Tunnel Level in McIntosh Tunnel, small seam near Sample No. 24.
26	Drift on Iron showing in McIntosh Tunnel.
27	Small stope in Clay Pipe Tunnel above McIntosh Tunnel.

On Diamond Tunnel Level

6	10 ft. below Diamond Tunnel Level West Crosscut from North Drift.
7	In West part of big cave, 40 ft. above Diamond Tunnel Level on West Crosscut from North Drift.
8	High grade ore in same cave as sample No. 7.

Below Diamond Tunnel Level

9	20 ft. below 400 Level, No. 1 Shaft.
10	On 4th Level, No. 1 Shaft.
11	30 ft. above 4th Level, No. 1 Shaft.
12	On Floor Jumbo cave, 250 ft. Level, No. 1 Shaft.
13	In small raise from First Level, Southeast Drift, from No. 1 Shaft.

NO. 2 [illegible] CHANNEL

No samples were taken on this channel on account of lack of ladders.

EXHIBIT "F"

NO. 3 ORE CHANNEL

On Diamond Tunnel Level

Sample No.	
34	Iron Dyke Drift, Southwest from No. 3 Shaft.
35	Iron Dyke Drift, Southwest from No. 3 Shaft.
36	In stope above Iron Dyke Drift.
22	On Sublevel in Lundgren Raise.

Below Diamond Tunnel Level

14	On First Level at face Main Drift, Northwest from No. 3 Shaft.
15	40 ft. below 1st Level, No. 3 Shaft.
16	125 ft. below 1st Level, No. 3 Shaft.
17	On 2nd Level No. 3 Shaft, near Manway.
18	On 2nd Level, 60 ft. northwest from No. 3 Shaft.
19	On Sublevel, between 2nd and 3rd Level, #3 Shaft.
20	On 3rd Level on main drift from No. 3 Shaft.
21	On 4th Level on drift to North from No. 3 Shaft.
40	Where 1st level, No. 3 Shaft enters big cave.
41	On 1st Level, No. 3 Shaft, 50 feet west of Manway to 2nd Level.
42	On 2nd Level, No. 3 Shaft, 1st cave from shaft.
43	Near Sample No. 42.

No sampling above Diamond Tunnel was done on No. 3 Ore Channel on account of lack of ladders.

MISCELLANEOUS SAMPLES:

32	In Dominic Tunnel.
37	Diamond Tunnel Level South of No. 3 Shaft.
38	Vein crossing Diamond Tunnel South of No. 3 Shaft.
39	70 feet South of Sample No. 38.
33	Surface outcrop above No. 3 Ore Channel.

EXHIBIT "G"

SAMPLING AND ASSAYS BY GEO. F. STOTT

September 7, 1932

			Oz. Ag.	Oz. Au.
#1	1660	40' E - Lundgren Ore Pass under breccia next gray L.	56.6	1.60
#2	1664	"A" Stopes Gob Fines thru 8 mesh 40%	4.4	.08
#3	1664B	"A" Stopes Gob, Rejects on 8 mesh 60%	4.6	.06
#4	1665	Main North Drift 20' South of North crosscut No. 3 Chimney 18" galena in vert, pipe west of Banner Virgin Country	109.8	.08
#5	1666	Chimney Raise in North crosscut #3 Tunnel L. Face and cave country	2.30	.02
#6	1667	Chimney Raise in North crosscut #3 Tunnel L. Iron chert nodules	6.4	.01
#7	1668	Specimen ore Kopp Incline	154.30	.02
#8	1669	Gob filling vertical winze in Kopp Incline - Section Fines 60%	4.6	.16
#9	1670	Test Shipment "A" Stope Sorting	126.8	.44
#10	1671	Specimen Sample Honey Comb Quartz from Banner Fissure	7.8	.02
	1663	Gob from top Andy's Cave fines thru 8 mesh 70% rejected	4.8	.01
	1670	Check Assay	131.2	.45

EXHIBIT "G"

September 1, 1932

	Description	Oz. Ag.	Oz.Au.	Remarks
#1	High grade galena and sand carbonates No. 1 Shaft. 300 Level N.E. from January Cave across 18" - - - - - - - - - - -	539.6	.10	Excellent possibilit of widening and maki ahead 50' at Junctio E.W. Fissure.
#2	400 Level No. 3 Shaft Sample across 30" Yellow Carbonate- - - - - - - - - - - - - - -	15.10	.24	This from proposed working face, reched later for smaller high grade seam.
#3	400 Level No. 3 Shaft. Same place as above but across 48" hard black iron - - - - - - - - - - -	3.20	.18	
#4	300 Level No. 3 Shaft. Manway Fissure 3rd Level to 2nd Level. Across 30" Black Iron- - - -	18.20	.08	
#5	Pete Read's Prospect 80' above tunnel level #3 shaft. Area bottom & south end 18"- - - - - - - -	.40	Tr.	
#6	Same as #5 Bottom North end across 12"- - - - - -	1.0	Tr.	
#7	Pyrites E-W Fissure at Manway to 400 level No. 1 Shaft. Across 2"- - - - - - - - - - - - - - - - -	22.00	.04	
#8	Chimney Iron 300 Level West Face No. 1 Shaft, U.S. Exploration Development West of Shale- - - - - - -	2.4	.03	
#9	Silcox Raise Prospect, 80' above Tunnel Level #3 Shaft Area - - - - - -	2.4	.02	
#10	Pete Read's Prospect Clay Gouge- - - - - - - - - - - - - - -	.8	Tr.	
#11	E.B. Young Bright Yellow Carbon 400 Level No. 3 Shaft- - - - - - - - -	.8	.04	This yellow is lime and iron. C.F.S
#12	Stopes West of Pete Read's Prospect 2" seam, merly yellow carbon- - - - - -	214.2	2.24	This is our first high grade. Easily told after only seeing the ore.

EXHIBIT "G"

September 3, 1932

Ser. No.	DESCRIPTION	Oz. Ag.	Oz. Au.
1645	Avery Stope 6" Yellow H. G. 20' North of Raise Con.	18.8	1.74
1646	Avery Stope 8" Galena & Quartz NE Fissure in H.W.	78.6	.38
1647	Avery Stope 3" Galena & Carbon Upper West Bench	16.8	.14
1648	Avery Stope 50' north of manway- Yellow Carbonate	25.2	.28
1649	Avery Stope Manway North wall & N 60 degrees E Fissure	-	.08
1650	#2 Shaft Stopes, Northwest Fissure 2'	4.30	.22
1651	Excelsior Fault, East Stopes, 8" Yellow Carbonate	14.7	.78
1652	Excelsior Fault, East Stopes, Specimen Yellow H.C. 1½" x 3'	6.7	.20
1653	Raise on Excelsior Fault, 18" Yellow Lime	11.8	.15
1654	Under U.S. Cave, Above Tun. L. 12" Yellow Iron and Galena	4.4	.17
1655	Under U.S. Cave, Floor Iron & Quartz, Northwest Fissure 4"	13.6	.30
1656	U.S. Cave Breccia, Ore Boulder in Breccia	1.8	.10
1657	Lungren Stopes, Top Black Iron S 30 degrees E Fissure	1.10	Tr.
1658	Lungren Stopes, S 60 degrees E. Fissure 6" Going away S.W.	1.20	Tr.
1659	Lungren Stopes, Turn small pocket H.C. (?)	2.20	12.56
1660	Lungren Raise 30' below 70' L. Yellow Carbonate & Breccia next sandy grey L's	56.6	1.60
1661	Lungren Raise N 60 degrees E Fissure at Tunnel L.	.9	.04
1662	Pete Lees Stope (?) Clay in bottom	1.00	Tr.
	" " Sample for Cowan	.70	Tr.

EXHIBIT "G"
September 20, 1932

Ser. No.	Description	Oz.Ag.	Oz. Au.
1680	"A" Stopes, Extreme NW End, Specimen, Iron, Yellow, Honeycomb Qtz. Carbonate	.9	Tr.
1676	"A" Stopes, Gob in Area under sand, 60% thru 60 mesh	1.3	Tr.
1678	"A" Stopes, Gob Top & South of ladder openings, 50% fines thru 8 Mesh	2.5	.06
1675	"A" Stopes, North End & West Bottom under sand, Hard dark brown iron chert 18" width	1.1	.04
1679	"A" Stopes, Gob Top & South of Ladder, Reject on 8 mesh 50%	Lost	Lost
1677	"A" Stopes, West wall & top of Ladder, 15" Iron and quartz	7.1	.06
1674	"A" Stopes, Under 1673, harder yellow carbonates, iron and quartz12" width	8.0	.18
1672	"A" Stopes, Extreme NW End, 6" Flat Seam Yellow Carbonate	9.9	.15
1673	"A" Stopes, North End 18" Width, under sand breccia, iron & sparsed yellow carbonate	4.6	.32
	Ed Berryman Drift to get under "A" Stopes Across 30" Iron	1.6	Tr.
	September 20, 1932.		
1692	Repeat Sample, East Incline Caves 4th Level	16.6	3.10
"	Specimen - Glassy Brown Chert, over sample 1700 Incline Caves above 4th Level	.4	None
"	Specimen - Quartz top of iron veins over Incline Stopes, 4th level	1.7	Tr.
Upper Stopes 4th L. Incline	Specimen - Calcite, iron & quartz crystallized sample, porous and maybe Core material	1.8	.04
1695	Caves & Iron Stopes NE & above 4th level incline, 30' N.W. of Ore Pass, Flinty Iron Ore 48"	1.65	.14
1694	Caves & Iron Stopes N.L. & above 4th L. Incline over Ore Pass, black and brown chert.	1.80	.08

EXHIBIT "G"

September 29, 1932 (Cont'd)

Ser. No.	Description	Oz.Ag.	Oz.Au.
No tag 1695 (?)	Iron Gate Winze 4th L. SW Face & Bottom Iron Red Vug Holes, 15" S55 degrees W Dip 60 degrees E	1.0	Tr.
1696	Iron Gate Winze 4th Level, Sacked Ore (2 Sacks) in footwall side S55 degrees W, Fissure Yellow Carbonate	83.10	1.24
1697	4th Level Incline Cave, 100' Above Level Top & face black Iron Chert Vein N 30 degrees E Dip 40 degrees NW, 30" Width	3.20	.04
1698	Same as 1697 but 15' lower on the Vein. More brown chert, 30" width	2.30	.10
1699	Top of Cave open to receiver, 4th Level Incline, Glassy Black & Brown Chert, 24"	0.4	Tr.
1700	Same as 1699 but 15" width Yellow Lime over Glassy Chert	2.8	.03
1701	Same as 1699-1700, but brown chert over yellow lime, 18' width	10.4	.6
	September 26, 1932		
1681	Boulder Raise #1 Area N.W. 15' Above Tunnel Level - limey replacement in Lawton for values	.8	Tr.
1683	Boulder Raise #1 Area N.W. Highgrade $Pb.CO_3$ Ore Specimen for Ag. & Au.-Sample	27.0	.10
Bill's Iron	4th Level Incline Caves #3 Shaft, Hard Iron Ore, Specimen	1.7	.01
Barney's Copper	4th Level #3 Shaft Incline Fissure Copper and iron 4" 6.0% Cu.	2.7	.01
1684	Main N. Drift 20' South, North crosscut #3 Black Iron in NS Fissure & under Sample 1685 Stripes Hazy and silver	15.5	.06
1685	Main N. Drift, 20' South, North crosscut #3 Top of Raise, quartz & Iron around Pb. Ore 24"	7.10	.10
1686	Crosscut from West Drift to Main Co. Flat N 50 degrees W. quartz Fissure dip 43 degrees NE14"	2.6	.04
1687	#3 Shaft under 4th Level, near main Incline Specimen quartz 12" edge of filled caves	[illegible].3	.06

EXHIBIT "G"

September 26, 1932 (Cont'd)

Ser. No.	Description	Oz. Ag.	Oz.
1688	#3 Shaft under 4th Level, east in Flat Iron Vein, center core sandy iron calcite & chert 6"	.9	Tr
1689	#3 Shaft under 4th Level same as above #1688 Thin Iron Fish Scale Type casing -24"	6.8	.6
1690	#3 Shaft over incline caves 4th L. Porous Iron dry and sandy, very light and may be apparent core material Est. .5% Cu.	Lost	.0
1691	#3 Shaft over incline caves 4th L. Center and over ore Pass Pockets of apparent Pb. ore, within brown chert breccia	.5	Tr
1692	Same place as #1691, brown chert breccia in NW Fissure - 30"	20.4	3.6
1682	Boulder Raise Lower End 10' above Level Lawton Fissure 6" Sand & Iron	1.5	.0

October 1, 1932

	Iron under Highgrade gold ore sample 1659 Lundgren Stopes	1.72	.
	Bug Hole at 1659 Lundgren Stopes	3.30	.
	1 Ton Pile Grab, north Main Drift #1 Area	10.78	.
	Chimney Iron North Drift	10.6	.
1501	East crosscut from #3 Shaft Tunnel L. 122' E from Main Drift, Flat Iron Fissure in roof, N 80 degrees E, 35 degrees N. 1" Iron & Yellow	3.8	Tr
1502	South Face Drift from Lundgren crosscut Root and N 80 degrees E Quartz Iron Fissure Dip 35 degrees N. 1" Quartz and Iron	2.5	Tr
1503	30' North from Sample 1502, sandy Iron in Flat Fissure N 35 degrees E - Dip 30 degrees N	4.7	2.
1504	130' North from Sample 1502, N. 85 degrees E 80 degrees S. Vertical Type E-W Fissure Iron Seam in Lime 2"	Tr.	Tr
1505	60' South of Junction East Crosscut from No. 3 Shaft, Flat Fissure in Roof	1.9	Lo
1506	45' South of Junction East crosscut. Same Fissure as 1505	.8	.0

EXHIBIT "G"

October 1, 1932 (Cont'd)

Ser. No.	Description	Oz. Ag.	Oz. Au.
1507	140 Level above #3 Shaft, Bottom First Winze, 4" Yellow Carbonate	1.0	.15
1508	140 Level above #3 Shaft. H.W. of Manway & Chute. Honeycomb Iron & Quartz next lime	1.6	Tr.
1509	Pete's Raise, East Fissure, 4" Iron	.25	Tr.