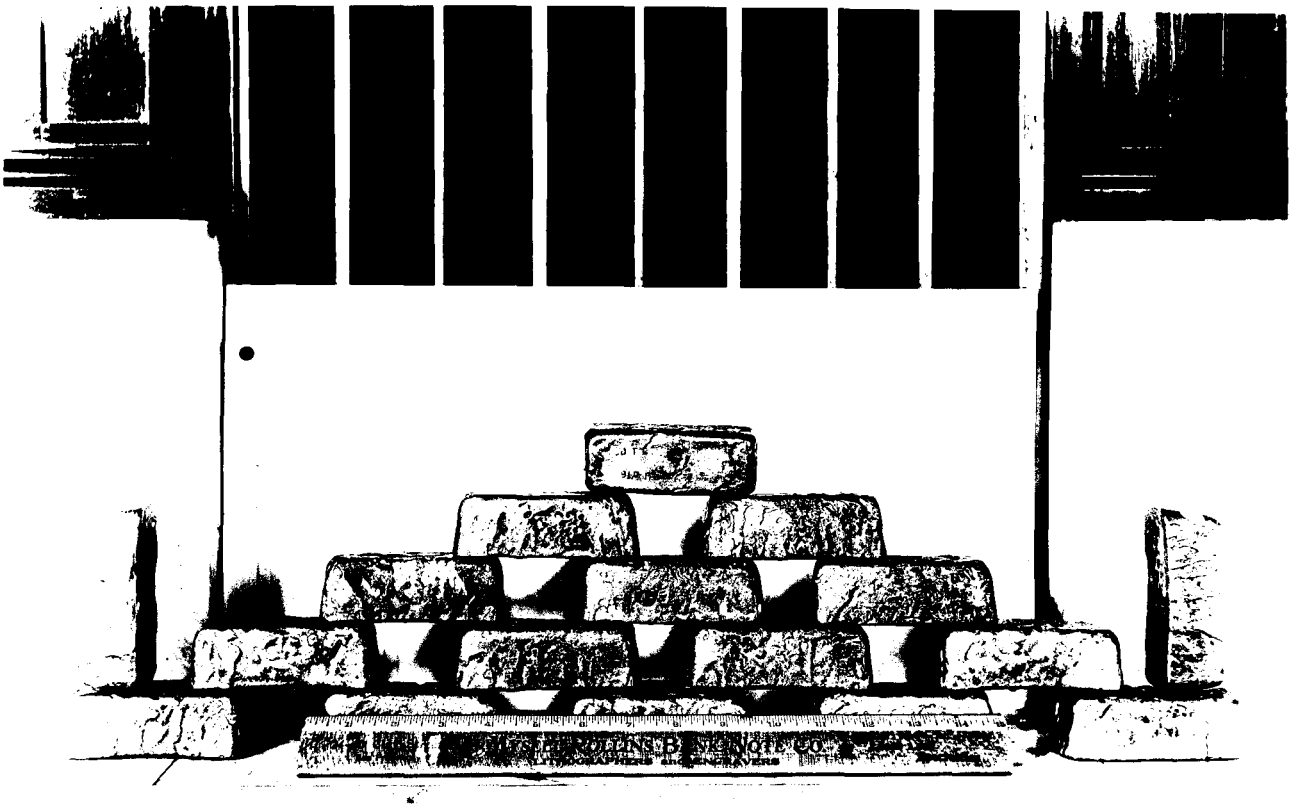

FLUMES

No.2, MIDDLE DITCH

Number	Length Feet	Size Sds. Bot. Inches
1	16	36 X 48
2	96	36 X 48
3	48	36 X 48
4	64	36 X 48
5	48	36 X 48
6	48	36 X 48
7	32	36 X 48
8	208	40 X 48
9	40	36 X 48
10	704	30 X 48
11	32	40 X 48
12	70	36 X 48
13	56	36 X 48
14	208	38 X 48
15	56	44 X 48
Total,--	1726	

No.3, HIGH LINE DITCH

Number	Length Feet	Size Sds. Bot. Inches
1	1764	16 X 36
2	104	28 X 36
3	48	28 X 36
4	32	28 X 36
5	16	28 X 36
6	60	28 X 36
7	80	28 X 40
8	88	28 X 36
9	32	28 X 36
10	120	28 X 40
11	216	28 X 42
12	32	30 X 42
13	80	30 X 42
14	64	30 X 42
15	64	32 X 42
16	96	32 X 42
17	28	32 X 42
18	128	30 X 42
19	64	30 X 42
20	48	30 X 42
21	96	30 X 42
22	192	30 X 40
23	112	30 X 40
24	60	32 X 42
25	112	30 X 42
26	34	34 X 54
27	88	28 X 42
28	32	30 X 42
29	48	24 X 38
30	48	30 X 42
31	48	30 X 42
32	192	30 X 40
Total,--	4226	

September 1st 1923.

G.M.Esterly.

Removed South of Logan Pit (1)

22444
17776
41832
102340

184392 Cu yds

184392
167,270

Total Prod.

Probably 100,000 Cu yds Remaining

Cu yd	val	Prod
22444	29	650876
17776	49	871024
41832	7	292824
102340	48	4912,320
184392		6927044

22444 × 29: 201996 + 44888 = 650876

17776 × 49: 159984 + 71104 = 871024

41832 × 7 = 292824

102340 × 48: 818720 + 409360 = 4,912,320

6927044
553176
1195284

36¢ per Cu y

By [illegible] Piles

(2)

6	39	— 1014
9	34	306
9	9½	85
15	35	525
10	9½	95
18	30	540
26	33½	871
18	20	360
10	34	340
14	21½	301
12	5	60
9	5	45
20	24½	490
196		5032

392
1112

25.4¢ per cu yd

25
40 0/0
10.00

Increase 26
36 ¢ / Increase shafts 40%

1,800,000 — 6,000.00 — 416,000,000

Probably Rem around
Border of Pit Top = 75000
North of Pit — 75000
Extreme No. " " 36000

185000

Probably 200,000

North of Pit area [illegible]

51000 x 20 — 20 ac.

30'	10	300
23'	10	230
21	30	630
20	25	500
20	12½	250
114		1910

1910 / 114 — 770

16½
3
480

30% increase —

Bottom of Pit By Sluicing

Cu

34041	38 —	1,293,558
2016	.40	80640
3238	94½	306011
8337	74½	613106
1382	94½	130599

34041 × 38 = 1293558

2016 × 40 = 80640

3238 × 94 = 306,011

8337 × 74½ = 613106

1382 × 94½ = 130,599

34041
2016
3238
8337
1,382
49,014 Cu yd

1,30599
2,423,914
19 6 6 56
4 6335" 50¢

25,000
50¢ are
50,000 cuyds

1,800,000 6,000,000 Total 416,000,000

Corrected

Continuation of Page #5

235392 @ 33½ 7749044
7640 @ 52 397280

243032 8144324 | 33½
729096
853364
729096
124268

243032 @ 33½ 8144324
442037 @ 22½ 9945832
685069 18090156 | 26/rd
1370138
4388776
4110444
278362

Total Ares all ground Sluiced upper Pit

carried forward from pg 1 & 2 (5)

184392 @ 36¢ = 6727044
51000 @ 20¢ 1020000

235392 — 7747044 (32.9
  9
7747044
506176
685284
470782
2148000
2118528

33¢ per cu yd are for all ground work in upper Pit — Exclusive of Lyman Pit.

235392 @ 33¢ = 7747044
442037 @ 22½ 9945832
22½
884074
884074
221018
9945832

677429 — 17692876 (26.
1354858
4144296
4064574
797220

are for all ground Sluiced = 26¢ per cu yd — Includ

1,8???,000 ← 2,000,00? Total 716,000,000

(6)

Mining Records =

Upper Pit. 26 1/2 ¢ 10a Logan 10a Est.

Lower Pit 50 ¢

Increase 85% with Depth

Acreage probably the Same.

Depth unknown but not less than say 5 to 6' less than upper Pit.

Esterly ground averaged

10 ac = 33 1/2 ¢ = 81,443.24

~~$80,000 per acre~~

Upper Pit.

Logan

10a 52 1/2¢ 99,458.32

$10,000 per acre

Bottom Pit = 3 acres 28,211.94

~~9,500 per ac~~

81443.24
28211.94
109655.18
$110,000

Land ~~worth~~ practically 20,000 per acre

1,800,000 6,000,000 Total 416,000,000

Mining Records =

Upper Pit. 26½¢ 10ª Logan 10ª Est.

Lower Pit 50 ¢

Increase 85% with Depth

Acreage probably the Same.

Depth unknown but not less than say 5 to 6' less than upper Pit.

Easterly ground averaged

10 ac = 33½¢ = ~~81,443.24~~

~~$80,000 per acre~~

Upper Pit.

Logan

10ª 42½¢ ~~99,458.32~~

$10,000 per acre

Bottom Pit = 3 acres 28,211.94

~~9,500 per ac~~

81443.24
28211.94
109655.18
$110,000

Land ~~[illegible]~~ practically

20,000 per acre

1,800,000 ... 2,000,000 ... 416,000,000

Upper Field (7)

Acreage = 250 acres

~~43560~~
~~250~~
~~17424~~
~~87120~~ sq.ft.
~~9 / 10,454,400~~ sq. yds
~~1,050,500~~
~~9~~ yds deep
~~9,454,500~~ cu yds Reclaimable Upper Flat.

18'
36
2 / 54
3 / 27
9 yds

10,000,000 cu yds
@ 18¢
$ 1,800,000 Gross

~~3000' x 45000~~
~~3000~~
~~135,000,000~~
~~43560~~

1,000,000 val
2,500,000 Lower Pit Inventory
1,150,000
3,500,000 Gross

French Flat. 120 a
43560
120
871200
43560
9 / 5,227,200
580,800 cu yds
10
6,000,000 cu yds
@ 18¢
Say 1,000,000 in this ground.

$3,000,000 value of Property

Lower Pit 50¢
17,000
9
153,000

16 000 000 cu yds.

1,800,000 6,000,000 Total 16,000,000 yds

Assured value

Iron Bottom —	250 000
17ac 500,000 cu yds. 7 yds deep 50¢	
7a Border & South 275000 cu yds @ 35¢	100 000
North of Pit 500,000 15¢	75 000
Extreme north 250,000 @ 15¢	35,000
	460,000
Ind Value	350 —
Measured + Ind value =	850,000

600 000 total value
20 @ 20%
120,000 per year
60 000 @ 10%

3 | 100 000 per year = 16%
33 33

In addition to 10,000,000 Upper Field
6 000,000 Iron & Hat.
probably 1.000 000 in South & Race
17,000,000 yds or 17 years to work,
300 working days or rate of 3000 yds per day

1,800,000 — 6,000,000 — 16,000,000

(9)

100 000	15	15 000 00
290 000	20	58 000 00
150 000	10	15 000 00
500 000	10½	52 500 00
260 000	10	26 000 00
1,300,000	12.8¢	166 500 00

1 300 000
3 65 0000
260 0000
105 00000
104 00000
1 000 000

12.8¢

Increase 40%

12.8
.40
5.120
17.9 say 18¢ per cu yd

3000
1625 000
8000
32

3a	150 000	$ 30	10	15000 00
3a	100 000	15	15	15000 00
4a	50 000	9	10	5000 00
	300 000			35 000 00

12¢
40
16¢ 480
16

val dn 60%

10
9 435600
48400 sq yds
5
200,000 cu yds
80
1600,000

160000
125000
285000

9 | 304929
33880 sq yds
257,160 cu yds
128580
250,000 @ 50¢

1,800,000
2,000,000
716,000,000

Esgon Pits Concealed (70)

add 12,021 85

99

43560
1611

43560
43560
261360
43560

9 | 6017560

6686.2/9 yds

1337
5

700000 / 524
66860
31400
26744
4656

440
13
456

1,800,000 ... 6,000,000 ... 716,000,000 yds

3170 acres land @ 75.00	$237,750.00
25 miles ditches @ 5000.00	125000.
Pipe Lines + Mine Equipment	25000.
Shop Equipment and Plant	10000.
Power Plant and Equip.	5000.
1713 ft Tunnel 8 x 8	51000.
Tunnel Equipment	10000.
1800 ft Told Race + Flume	5000.
	$468,750

3 - 88

- 750

Recapitulation

		cu yds	¢	$
10a	Mined by Logan Upper Pit	442,037	@ 22½ =	99,458.32
10a	" by Soterly "	" 243,032 (3,372)	@ 33½ =	81,443.24 (12,021)
20a	" by Logan + Soterly =	685,069 / 698,441	@ 27½ =	180,901.56 / 192,923.41
3a	" " Soterly Lower Pit	56,654	@ 50¢ =	28,211.94 (9,405)
				109,655.18 (121,677.03)

yardage value has increased 85% from Upper to Lower Pit. $121,677.03 Diff = 12,021.85

741,723 yds.
13,372
755,095

209,113.50
221,134.35

Ave value of ground removed within limits of Certain shafts = 36¢ p.c.y.

Ave, value of same ground by prospecting = 26¢ p.c.y.

Showing an Increase of 40% in value by Sluicing

Worked ground has returned by acreage an average $18,450

~~new Race area not included~~

There is remaining in Sec 22 + 27 = 250 acres of reclaimable ground according to the valuation of all Shafts ~~has a value~~ contains

$18¢ per cu yd. West Side = 18' deep
worked to depth of new Race. East Side = 36 "

(This only to depth reclaimable by new Race.)

2/54
127
9 yds ave depth.

250 a or 10,800,000 cu yds @ 18
$1,800,000 gross

In Sec 15 adj North = French Flat 120 a or 6,000,000 cu yds or say Total 16,000,000 cu yds

This ground reclaimable from has one 3½ times as ... cu yds ... $2,500,000 profit

Demonstrated ground now open & prepared for mining by present method and not included in above estimates.

7a = 250000 cu yds @ 7yds @ 50¢ = 125000.00
10a = 200000 " " @ 5yds @ 80¢ = 160,000.00
Increase 60%

In addition there remains 10 acre
Bordering Present Pit containing — 40,000.00
250,000 cu yds @ 16¢ — 75,000.00
Same area Lower pit @ 30¢ — 400,000.00
250,000
950,000

say 1,000,000 cu yds — 400,000 / 350,000

Val of Prop — 750,000 / 50,000

Cost 5¢ per cu yd — 700,000 / 300,000

Half Int —

Re claim by new Rec = 2,800,000.00
" " Old Elev = 400,000.00
3,200,000

Including lot of real estate 350,000.00
3,550,000

Work at rate of 1,000,000 yds per year
3333 per day
or 300 working days

On basis of 600,000
1,000,000 yds = 30% on Invest.

13000/300 cu yds per inch

LAL: (1916)

52 Ac.,

1,300,000 yd³

$ 166,500.

= 25,000 yd³/Ac.

= 13¢/yd³

Say 18¢ avg; then:

$234,000. gross @ 20¢/g;

∴, x30 = $7,020,000 @ $600./g.

If: 1500 Ac now (per GWS)

37,500,000 yd³

x .18¢ x 30 = 5¢/o

= $202,500,000. gross value

(2) deposits in narrow gulches traversing Tertiary conglomerate, and (3) transported deposits to which the Tertiary and other formations have contributed material. Deposits of the first group were largely worked out during the early days, so that little is known regarding their productivity. Good examples occur in the SE. ¼ sec. 21 and the SW. ¼ sec. 10, T. 40 S., R. 8 W., where the gold collected on serpentine bedrock. Deposits of the second type are well illustrated by the placers of Sailor and Allen Gulches. They were richly productive but, like the deposits of the first group, were worked by the early-day miners, and hence little is known of the amount of gold they produced. Most of the gold and platinum in recent years has come from the deposits of the third group, illustrated by the Llano de Oro and Deep Gravel mines and portions of Fry Gulch.

LLANO DE ORO MINE

The Llano de Oro mine, formerly the Logan, Simmons & Cameron mine, has for many years been the most productive gold-platinum placer in Oregon. The property includes over 3,000 acres of land in secs. 8, 9, 10, 15, 16, 21, 22, and 27, T. 40 S., R. 8 W., although practically all of the mining has been confined to the S. ½ sec. 15, the S. ½ sec. 22, and the N. ½ sec. 27. The property is operated by George M. Esterly, of Waldo.

The first important work on the Llano de Oro property was done south of the highway near the center of sec. 27 by early-day miners. C. H. White, who was acquainted with one of the miners, states that they mined gold worth $80,000 from this place. Later George Simmons, Frank Ennis, and Theodric Cameron took $110,000 out of Carroll Slough.[53] J. T. Logan mined the gravel on French Flat from 1907 to 1917, when the property was sold to G. M. Esterly. Mr. Esterly has worked the property almost continuously, during the mining seasons, up to the present time. He estimates the production in gold and platinum since 1917 at about $225,000 and the total production of the entire property at about $500,000.

Since 1907 most of the work at the Llano de Oro mine has been confined to the vicinity of French Flat. Four pits have been excavated, covering in all an area of over 30 acres. The depths of the pits vary considerably from place to place. For example, the depth to bedrock in pit 3 is about 8 feet on the west side and about 18 feet on the east side, whereas the average depth of the Logan or no. 1 pit is more than 30 feet, and at one place in it the tailings were elevated 50 feet. The company owns three ditches known as the upper, middle, and lower, together with three water rights to 500, 518, and 1,100

[53] Historical data furnished by C. D. Cameron and G. M. Esterly.

miner's inches from the East Fork of the Illinois River.[54] The total length of the ditches is over 15 miles. During the mining season, which averages about 7 months yearly, sufficient water is available to operate 2 giants in the pits, 2 hydraulic elevators, and 1 giant for stacking tailings. When the plant is operating steadily from 15,000 to 30,000 cubic yards of gravel, depending largely upon the seasonal water supply, is washed each month.

Both the Tertiary conglomerate and the Quaternary Llano de Oro formation have been worked at the Llano de Oro mine, but the latter has been by far the most productive. In only one place on Llano de Oro ground, in the SW. ¼ sec. 15, has the Tertiary formation been washed for its gold content. At this place the formation is well exposed in several cuts, where it can be seen resting upon serpentine in fault contact. The fault, which in part defines the eastern boundary of the Tertiary formation, strikes north and dips 65° W., whereas the normal contact dips 20° W.

The Llano de Oro formation consists of gravel, sand, and clay, is in general poorly sorted, and ranges in thickness from less than 1 foot near the edges to nearly 50 feet, but within the prospected areas on French Flat averages about 18 feet. Few boulders with diameters exceeding 6 inches are present. The bedrock varies at different localities. At several places it is Tertiary conglomerate; at other places serpentine or Horsetown (?) sandstone. The gold and platinum are concentrated near bedrock, although prospect holes show that some gold is distributed throughout most of the formation.

Most of the gold is angular and is associated with platinum chromite, magnetite, ilmenite, hematite, limonite, epidote, zircon, and other heavy minerals. Chromite was abundant enough in some of the areas of serpentine bedrock to be troublesome in the sluice boxes. The platinum occurs as flattened scales with rounded corners, which range in size from tiny grains to pieces over 2 millimeters in cross-section. Picked grains of platinum from the concentrate were analyzed by E. T. Erickson of the chemical laboratory of the United States Geological Survey, who reports that "the sample consists largely of platinum and ruthenium with smaller proportions of iridium and osmium. A small quantity of gold and slight quantities of palladium and rhodium were also detected." According to Mr. Esterly, platinum accounted for one tenth of the value of the clean-ups when it was worth $110 an ounce. In other words, the ratio of platinum to gold in the mined areas on French Flat is about 1 to 50.

In 1921 L. A. Levensaler, mining engineer in charge of prospecting for Mr. Esterly, estimated that the unmined gravel on French Flat

[54] Hornor, R. R., op. cit., p. 29.

within the prospected areas would average about 18 cents to the cubic yard. According to Mr. Levensaler, the value of the ground worked by J. T. Logan in the upper (No. 1) pit averaged 22½ cents a cubic yard, and that worked by Mr. Esterly at the other places in the same pit averaged 33½ cents a cubic yard. Kay [55] states that the gold content of the gravel mined in Carroll Slough was about 12½ cents a cubic yard.

DEEP GRAVEL MINE

The Deep Gravel mine is in Butcher Gulch, in secs. 16, 17, 20, and 21, T. 40 S., R. 8 W. Four deep pits covering a total area of approximately 50 acres and shallow pits covering well over 15 acres constitute the principal workings. The deep pits are designated, from north to south, Joe Smith Gulch, Wadleigh No. 2, Weimer, Wadleigh No. 1, and Johnson pits. The mine was first worked about 1874 by George and Walter Simmons. W. J. Weimer and sons purchased the property in 1878. In 1900 the ownership passed to the Deep Gravel Mining Co., in which Mr. Weimer retained an interest. In 1911 the Waldo Consolidated Mining Co. obtained an option on the property, but when the payments were not completed the ownership reverted to the Deep Gravel Mining Co. A. E. Reams, of Medford, Oreg., at present owns two thirds of the stock and acts as the representative of the company. Mr. Weimer stated that until 1908 about $130,000 had been expended on the property and it had produced $250,000.[56] Since 1907 the mine has produced about $26,316 in gold.[57] The Deep Gravel Mining Co. owns 350 acres of patented placer land, 410 acres of land held by mineral location, and a water right to take 2,800 inches of water from the East Fork of the Illinois River at a point a short distance west of Takilma.[58]

Most of the production of the Deep Gravel mine has come from the Llano de Oro formation, but recently Charles Johnson, of Takilma, excavated a small cut in Tertiary conglomerate in the S½ sec. 21. The Tertiary formation is here almost identical in appearance with the exposures at the Cameron mine, in Scotch Gulch. The lower beds are purplish conglomerate and sandstone; the upper beds are tan conglomerate composed of poorly sorted, coarse boulders which are fairly well indurated with sandy material. Like those at the Cameron mine, the boulders of the Tertiary conglomerate in the Johnson cut are for the most part highly decomposed. On the west they are in fault contact with Cretaceous sandstone.

[55] Diller, J. S., and Kay, G. F., Mineral resources of the Grants Pass quadrangle and bordering districts, Oreg.: U. S. Geol. Survey Bull. 380, p. 74, 1909.
[56] Kay, G. F., op. cit., p. 74.
[57] Data supplied by Victor C. Heikes, of the United States Bureau of Mines, and published with permission of owner.
[58] Hornor, R. R., op. cit., p. 32.

At the Deep Gravel mine, as elsewhere, the Llano de Oro formation is composed of gravel, sand, and clay and except in the lower 10 feet contains but few boulders over 6 inches in diameter. Stratification is well shown in some places. The thickness of the formation ranges from less than 1 foot near the edges to over 80 feet. Joe Johnson, of Takilma, assisted in the sinking of two prospect pits south of Mr. Potter's house. According to Mr. Johnson, the shafts passed through sand and clay containing lenses of fine gravel and at about 70 feet entered sandstone bedrock. A 2-foot layer of gravel on bedrock prospected very well, but above this layer the gold was sparsely distributed. So far as known, the bedrock in the various pits is either Cretaceous sandstone or Tertiary conglomerate. According to Kay [59] the bedrock in Joe Smith Gulch was 30 feet below the stream bed of the West Fork of the Illinois River, and hence hydraulic elevators were necessary to lift the gravel after the coarse gold had been removed on the riffles of a short sluice. After being elevated, the gravel was washed through another sluice 400 feet long in which the finer gold was collected. According to Kay [60] the average value of the pay gravel over a period of five years was about 25 cents to the cubic yard.

FRY GULCH

Fry Gulch is in secs. 28 and 33, T. 40 S., R. 8 W. Much of the gravel in it was worked in the early days, but some unworked ground remains. Two northward-trending branches of Fry Gulch join near the quarter corner between secs. 28 and 33. Both branches, as well as the main gulch for about 1,500 feet below the junction, have been mined. The east branch heads at the High Gravel mine, and the gold in it was clearly derived from the Tertiary conglomerate. The west branch heads near a flat summit close to the quarter corner of secs. 32 and 33. The boulders in it are similar to those in the east branch, but the source of the gold is not known, although it probably came from a patch of the Tertiary conglomerate, now completely eroded. Like Sailor Gulch and other small gulches receiving the wash from the Tertiary conglomerate, Fry Gulch was undoubtedly a rich placer, but, because much of the mining was done in the early days, no records of production are available.

In 1930 A. L. Bailey was working in a small cut near the mouth of the west branch. The gravel in the cut is composed of dark-red sand with pebbles of greenstone, serpentine, granitic rocks, sandstone, hematite, and chromite. The material is principally sand, and only a few of the boulders exceed 6 inches in diameter. Patches of unworked material of this sort extend up the west branch for about

[59] Kay, G. F., op. cit., p. 73. [60] Idem, p. 74.

3-3-F°

Field Notes

CAVE JCT. PLACERS – OREGON

* Jim Bentley, Carl Matthews, Geo. Sintzy (Don....)
* Ariz? Jack Devault (deal – owner (contact)), Box 1498, Wickenburg (602) 684-5514
* Need (want) from Sunshine:
  - Engineering – expertise; $
  - $ for property acquisit
  - Plant $
  - Explor./develop't $
* They provide:
  - poss some $
  - local presence, contacts
  - loc. experience
  - property (eg., Esterly No. 1)
* Limited partnership (their present set-up)
  - 4 lim. prtnrs
  - 3 gn'l prtnrs
  - GWS --- some % interest?
* Have invested in Devault:
  - $2,000 – 3,000 per Jim
  - prob. more like $15,000 per GWS
* Deal on S.W. Ore:
  - They "have the say;" They oper.
  - 50/50 net profit split (I suggested 65/35)
* Literature: USGS 84C-C (map – good); Cave Jct – 1954, 15' quad.; Dogami. Bull 100
* Victor Mining Co. – ditch? – from Bearpaw Mts, MT?; have ("failed to establish credibility") (per Jim).
* Lease – Esterly No. 2 – 5 Ac. – washing tailings

Billman –

- unpatd
- "surprise" @ shack – out 2 avail? (old man coming up to mine, w/ boat)
- 5–8 mill. yd³ + 7–8 Acres contested (per GWS)
- lease "avail" (but – no – see above)
  - 30 K front (to buy out ??...)
  - 15% net profit yr #1; then 25%
  - $3 mill buy-out
- Hg values
- phoney sidehill "dredge" w/ 2 draglines – communist set-up
- Quick look @ "boat"

Esterly:

- 2 parts: (1) 500 Ac tender nogot; 200 Ac "mineable," + (2) .....
- Total 1,000 to 1,300 Ac (both parcels)
- On "leased" parcel. (not really leased as yet)
  - 50,000,000 yd³ (I question that!). (maybe ½ mill.)
  - 20' deep avg (not proven, overall)
  - 200 Ac "mineable" (prob. ok)
  - 18¢–37¢ (@ 20.67, or 35.00/oz.?) (prob. 20.67?) (GWS drug 30+ holes; mtl not yet assayed).

Serious question – Area of remaining gravels – look at maps – looks like just restricted area on Esterly No. 1 (much is bedrock!).

CAVE JCT ORE. 3-3-80

Permitting - regulation:
- DEQ (Dept Environ. Qual
- Reclam Plan (? - prob not rq'd if was mined earlier)
- Zoning Commission
- Claim they are in good shape.

Sailors Diggings:
- hippie problem
- avail for lease
- tested - deep; gold @ base
- Zoning ok
- of "secondary" interest — potential problems.

Jim — rancher from 50 mi. N. of John Day — 50,000 Ac

Intercoastal Engrg C.?? — Seattle (plant)

Concentrator: (clean-up)
- 3-tier table (Wilfley) — for 3 sz. fracs.
- Mtl placed in 3 bins @ outside (how sized??)
- Est. from 5 to 20 lb of concentr from washing plant per yd³ of bank-run gravel
- Approx. Avg. 5 lb of black sand + free gold per yd³ of bank-run
- Blk-sand concentr, after free gold removed, valued @ $150. — $400. per ton

(4)

	Esterly #1	Esterly #2	Billman	Others
	→ 1320 Ac.; est ~ ½ = gravel ←		10-12 claims	
Area	500+ Ac. (2nd mineral)	320+ Ac	=	
Yd³	20 m.+ (50 m. poss?)	20' × 320 Ac ~ 30 m. yd³?	7 m. yd³+	
Grade	18-37 ¢, av. ~27¢ (@ 20m, ws35=?)	-do-	40¢ {@?	
yd³/day	5 zy 10,000+	-do-		
day/yr	300+	-do-		
Front $	29% of 500,000 = $150,000 (1)	-	$30,000+	
Royalty	-	$10,000./yr MIN.? 5% NSR (Net profit)	15% → 25% Net Profit	
Buy-out	$500,000	?	$3 mill.	
Explor. Option	-	$10,000?	?	
Exploration	$100,000.	$100,000	$100,000	
Prep.	-			
Plant (2)	$1.1 million			
Roads				
Oper. cost/yd³	25¢ (-)			
Royalty				
Legal/permitting	5,000.			
Reclam:	50,000?			
Salv. Equipt	15%			
Salv. Land	50,000?			

(1) They have 31 (?) test pits; run assays yet; four-ft cuts. Could get another test option?

(2)

Aggreg plat	375,000	Water System	10,000
Feeder	50,000	Underpass	15,000
Sluices	25,000	Pump	10,000
Generator	50,000	Tools	5,000
Wiring	25,000	Dozer	250,000
		Loader	250,000
			1,025,000

CAVE JCT. ORE. PLACERS 3-3-80

They don't know what grade to expect — think 27¢/yd is (was) at 35$/oz. — when — prob. was at 20.67/oz. ??

Testing of their Bailey property ... say they just went to 12 ft. w/ backhoe — if so ... no data on bedrock?? (defin — needs further defin., per luncheon conversation:
- closer pits than 400'
- to bedrock
- Calweld auger
- Cross-sectioning
- define for — (1) reserve (2) mining plan

Claim they have $800,000 into it now (borrowed against Jim Bentley's land?)

Jim Bentley — his father a smelter engineer?

Esterly No. 1:

Say 30 m yd³ @ 27¢ @ 20.67/oz. ~ $8.10/yd³ @ $600 =	8.10 × 30,000,000 = 243,000,000
Say: gross revenue:	200,000,000
Property	- 500,000
Plant	- 1,100,000
Explor.	- 100,000
Oper. cost @ 50¢/yd³	- 15,000,000
Legal/permitting/reclam	- 55,000
Salvg. equipt.	+ 100,000
Land	+ 50,000
	183,395,000

(6)

\# Esterly No. 1 - "exercise"

200 Ac Land - mineable	200 Ac	
Say 20 Ac. pre mined, leaves	180 Ac	100
@ av. 15' thk = 1613 × 180 × 15 = (100) (10)	4,355,100 yd³	1,613,000
(10) 22¢ × 30 = 6.60/yd	28,743,660	4,839,000
Recover 90%:	25,869,294	4,355,100
Say $600/day oper. costs ÷ 5,000 yd/dy:	12¢/yd³	
25,869,294 − 522,612 =	25,346,682	
Say 1.00/yd oper cost 25,869,294 − 4,355,100 =	$21,514,194.	3,226,000 / 1,129,100

Less:
- Purch 500,000
- Expl 100,000
- Startup 50,000
- Plant 1,100,000
- Legal 5,000
- Reclam 50,000
- 1,805,000

	1,805,000
	$19,709,194
50% Search	9,854,597

\# But - question:
1) overall grade
2) " volume
3) throughput; ∴ cost per yard prod fig - could well be several $/yd³!

File No. G-27

PROSPECT CARDS

Code No.

Property Name Logan Mine (Esterly placer)

Property Owner

Submitted by

Location: State Oregon

County Josephine

Mining D.

T 40S R 8 W Sec.

Followup Recom. NO

Later Review Recom.

Examined by

Company

Date

Where filed

Metals	Production Metal
Cu	
Mo	
Pb	
Zn	
Ag	
Au X	
Fe	
Mn	
Cr	
Ni	
W	
U	
Re	
P_2O_5	
K_2O	
Sn	
Be	
Coal	
Hg	
Other	

AMS Quad

Other Quad

Production

	None	10^2	10^3	10^4	10^5	50^5	10^6
TONS							

Geology

Host Rock placer

Mineralization

Type

Trend

Ore

Gangue

Alteration

Type

Extent

Bibliography

USGS

USBM

Other

Field Time

None

1 Day

1 Week

1 Mo

+1 Mo

Remarkes:

Follow-up Recom.