**CONTACT INFORMATION**
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

**ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

**CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

**QUALITY STATEMENT**

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.

10/23/2000

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: DELTA

ALTERNATE NAMES:
MAX-DELTA
HALL PAT. CLAIM
MAXAMILLION PAT. CLAIMS
LEGGAT PAT. CLAIM
RICHARD STANTON PAT. CLAIMS
ORA GRANDA PAT. CLAIM
THOMPSON PAT. CLAIM
MONTANA CLAIM

MARICOPA COUNTY MILS NUMBER: 383

LOCATION: TOWNSHIP 1 S RANGE 3 E SECTION 19 QUARTER NW
LATITUDE: N 33DEG 19MIN 44SEC LONGITUDE: W 112DEG 05MIN 53SEC
TOPO MAP NAME: LONE BUTTE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD LODE
SILVER
COPPER
IRON GOETHITE

BIBLIOGRAPHY:
ADMMR DELTA MINE FILE
ADMMR "U" FILE
BLM MINING DISTRICT SHEET
ELSING M & HEINEMAN R AZBM BULL 140 P 94
WILSON E, CUNNINGHAM J & BUTLER G AZBM BULL 137 P 166-167
ADMMR MAPS (UPSTAIRS,ROLLED PHX OFFICE) [7] - MAPS UNDER MAX DELTA, DELTA & PARKVIEW
ADMMR MAX DELTA COLVO FILE
BUSCH, J.E., PHOENIX MTN PARK, DOI, 1925

PHOTO FILE DELTA

# REPORT

on

DELTA GROUP

ACE MINING & DEVELOPMENT CO.

Maricopa County Arizona

Phoenix, Arizona
April 5th, 1935

A. L. Flagg
Consulting Engineer

Though the above record is very satisfactory, it is easily understood that to continue shipping without developing is an unsound policy which cannot be followed indefinitely. While this ore has been mined for shipment, no development has been carried on. However, this past year of operation has not made any serious inroad on the ore available. Instead it has opened up much ground, making possible a clearer understanding of the nature of the vein system, and exposing a considerable volume of mill ore in the main Delta workings. Until this situation is accurately set out in detail on an assay map, no positive statement can be made regarding the volume and value of such ore, but it is the opinion of those who have mined the ore that has been shipped, men of long experience, that a minimum of 50 tons per day, that will average $8.00 in gold, can be mined from above the lowest adit on the main Delta system, for a period of two years. The writer agrees with this estimate.

As a potential source of profitable bodies of mill ore, the whole property merits serious consideration. The shipment of 3000 tons of ore, at a profit, demonstrates unmistakably the existence of pay values. Such sampling as has been done to date at many places outside the areas from which shipments have been made indicates a widespread distribution of gold values sufficiently high to yield a profit if the ores are milled on the ground. The most promising undeveloped sources of mill ore, the Leggat and Maxamillion veins can be prospected to a depth of at least 500-ft. by a system of adits at a very low cost. The cost of exploration on the Hall and Thompson claims will be more expensive but not necessarily very high.

The known distribution of gold over a considerable area, in profitable amount, justifies the exploration necessary to prove the volume of mill ore available, and there is every reason to anticipate a tonnage that will pay a satisfactory return on the investment.

Phoenix, Arizona
December 1st, 1934.

Respectfully submitted,

A. L. Flagg

MAX-DELTA SAMPLING

In cutting the samples described on the following pages, large amounts of material were taken. The samples were cut with (a) moils, (b) drift picks or (c) a stoper with a broad bit, according to the conditions at the site sampled. The average weight of the individual samples was more than thirty pounds.

Each sample was put through a chipmunk crusher twice, then put through a sample splitter. One-half of the final cut was sent to the assayer and one-half preserved by the Company.

The rejects from the splitting operations are still preserved, intack and in the original sacks. It is likely that these will be used later for any preliminary ore testing that may be carried on.

MAX-DELTA MINE SAMPLES

1- Across 12 inches compact quartz, on hanging wall, north side of winze, at portal of upper tunnel. 1.08 oz. gold

2- In upper tunnel; 3-ft. south of Sta. 101 (portal) across 18 inches solid quartz on foot wall; light copper stains. 2.42 oz. gold

2A-At location No. 2; across 18 inches crushed vein material between quartz of No. 2 and hanging wall. 0.04 oz. gold

3- Ten feet south of No. 2 samples; across 9 inches quartz like No. 2 with less copper but more iron sulphides. 0.96 oz. gold

3A-At location No. 3; 18 inches of crushed vein material similar to 2A, but on foot wall side of quartz. Tr. gold

4- Ten feet south of No. 3; across 26 inches crushed vein filling with few quartz streaks. 0.04 oz. gold

5- Ten feet south of No. 4; across 18 inches crushed vein filling with small amount of quartz. 0.10 oz. gold

6- Ten feet south of No. 5; across 14 inches similar to No. 5 with a little more quartz. 0.30 oz. gold

7- Ten feet south of No. 6; across 20 inches, on foot wall 2 inches of firm quartz, balance crushed vein filling. 0.76 oz. gold

8- Ten feet south of No. 7; across 16 inches of hard quartz on foot wall side of vein. 0.30 oz. gold

8A-At location No. 8; across 3-ft. crushed vein filling from quartz of No. 8 hanging wall; some quartz stringers. 0.06 oz. gold

9- Ten feet south of No. 8; across 12 inches solid quartz in small raise back of drift. 0.44 oz. gold

10- At Sta. 102, approximately 10-ft. south of No. 9; across 28 inches of quartz on footwall; two other quartz stringers not included. 1.50 oz. gold

11- Ten feet south of No. 10; across 12 inches quartz at the north end of small stope. 0.54 oz. gold

12- In back of small stope, approximately 10-ft. of No. 12; across 18 inches crushed vein filling, some quartz. 0.30 oz. gold

13- In back of small stope, approximately ten feet south of No. 12; 20 feet above the rail, across 2-ft. mostly quartz. 0.52 oz. gold

14- In back of small stope, approximately 10-ft. south of No. 13, about 12-ft. above rail across 24 inches crushed vein filling and quartz with the quartz predominating. 1.32 oz. gold

15- In back of small stope, approximately 10 feet south of No. 14, across 36 inches crushed quartz and vein filling, 10-ft. above rail. 0.72 oz. gold

16- Ten feet back from face upper tunnel, across 42 inches of back, of which 6 inches on footwall is quartz, rest crushed vein. 0.24 oz. gold

17- On 200 level; approximately opposite Sta. 203, at north end of underhand stope; 6 inches quartz on hanging wall, 6 inches crushed vein. 0.24 oz. gold

18- Across 12 inches in footwall, in "glory hole" around old shaft, about 25-ft. above rail, 200 level. 0.10 oz. gold

19- Across 35 inches directly above No. 18. 0.30 oz. gold

20- On south side of shaft "glory hole" about 20-ft. above rail, across 48 inches quartz and crushed veinffilling. 0.14 oz. gold

21- On south side of shaft "glory hole", about 5-ft. below No. 20, across 84 inches quartz and crushed vein filling. 0.16 oz. gold

22- On 200 level; about 5-ft. north of Sta. 205, across 36 inches of shattered quartz. 0.26 oz. gold

23- See Drill Hole sample No. D-1

24- At Sta. 205 on 200 level; across 24 inches crushed vein filling with little or no quartz. 0.20 oz. gold

25- On 200 level; 13-ft south of Sta. 205, across 24 inches with a small amount of quartz. 0.38 oz. gold

26- Across 24 inches, mostly quartz, on east side of drift, just opposite chute No. 5. 0.52 oz. gold

27- Missing.

28- On 200 level, from back of drift on north side of chute No. 5, across 48 inches, much quartz. 0.02 oz. gold

29- In 200 level; across 48 inches on south side of manway at chute No. 5; about 8-ft. above rail, just above platform. 0.10 oz. gold

29A-In stope off 200 level; above chute No. 5, 20-ft. above rail and over platform, across 36 inches, mostly quartz.- 0.28 oz. gold

29B-Opposite No. 29A, in stope above chute No. 5, 200 level, across 16 inches quartz and crushed vein on south side of stope. 0.80 oz. gold

30- Sta. 207 plus 8-ft., north end of stope; across 6-ft. of crushed material, ore in wall. 0.16 oz. gold

30A-Across 33 inches of mineralized footwall, under No. 30, in the footwall. 0.10 oz. gold

31- In center of back of stope at Sta. 207 plus 8-ft., across 6-ft. of crushed material, mostly quartz. 0.16 oz. gold

32- In 200 level; approximately at Sta. 208, across 30 inches of hard dull quartz. 0.24 oz. gold

33- In 200 level (on vertical of "B" vein ) across 6 inches crushed quartz and vein filling. 0.28 oz. gold

34- In 200 level, on "B" vein, in short crosscut near Sta. 213, across 10 inches, north side. 0.80 oz. gold

34A-On opposite side of short crosscut, at location No. 34 on "B" vein, across 14 inches quartz. 1.00 oz. gold

35- On 300 level, in north face of drift, across 10 inches quartz in hanging wall vein, 5-ft. back from face. 0.04 oz. gold

36- On 300 level; 11-ft. south of No. 35, across 16 inches crushed vein with very little quartz. 0.12 oz. gold

37- On 300 level; 3-ft. south of face of north drift, across 18 inches of crushed vein filling. 0.10 oz. gold

38- On 300 level; at north side of chute at Sta. 305, across 24 inches of dull quartz. 0.08 oz. gold

39- On 300 level; on south of chute, same location as No. 38, across 48 inches of quartz. 0.06 oz. gold

40- On 300 level; approximately at Sta. 305 (old) across 48 inches of quartz. 0.16 oz. gold

41- On 300 level; across 50 inches quartz, firm and dull, about ten feet south of No. 40. 0.12 oz. gold

42- On 300 level; on south side of 500-ft. incline shaft, across 54 inches dull quartz. 0.06 oz. gold

43- On 300 level; about 20-ft. north of Sta. 306 (old) across 36 inches crushed vein on footwall side. 0.10 oz. gold

43B-On 300 level; at location No. 43, across 24 inches of dull quartz next above No. . 0.02 oz. gold

43C-On 300 level; at location No. 43, across 36 inches crushed vein and quartz, east of 43B. 0.10 oz. gold

43D-On 300 level; at location No. 43, across 48 inches, next east of 43C, all crushed vein material. 0.08 oz. gold

44- On 300 level; across 36 inches in face of small drift started near location Nos. 43 to 43D, 6 inches quartz on west. 0.06 oz. gold

45- On 300 level; from N side of manway in chute at Sta. 306 across 7½ feet. 0.08 oz. gold

46- On 300 level; north side of crosscut, opposite chute near Sta. 306 (old) across 30 inches quartz. 0.10 oz. gold

47- On 300 level; south side of chute near Sta. 306 (old) across 36 inches mostly quartz. 0.30 oz. gold

48- On 300 level; across 36 inches, mostly quartz approximately at Sta. 307, old survey. 0.10 oz. gold

49- On 300 level; above No. 48, just under bulkhead in manway, across 36 inches; 12 inches quartz, rest crushed vein filling. 0.26 oz. gold

50- On 300 level; just above No. 49, five feet above buklhead, in manway, across 36 inches in pillar. 0.64 oz. gold

51- On 300 level; in back of stope, above 307 raise, across 36 inches of vein matter. 0.40 oz. gold

52- On 300 level; location of No. 51, about in center of stope, across 36 inches vein matter. 0.14 oz. gold

53- On 300 level, in same stope, south side, on pillar next to raise, across 108 inches. 0.24 oz. gold

54- On 300 level; in same stope, south side of pillar, location No. 53, across 40 inches. 0.16 oz. gold

55- On 300 level; in same stope, directly over platform, between two chutes, across 106 inches. 0.22 oz. gold

56- On 300 level; in same stope, opposite No. 54, on south side of raise to 200 level, across 41 inches. 0.22 oz. gold

57- On 300 level; in same stope, on south side of raise, about 12-ft. below No. 56, across 30 inches crushed vein material. 0.38 oz. gold

58- On 300 level; around turn from Sta. 308 (old) plus 5-ft., across 41 inches. 0.12 oz. gold

59- On 300 level; at north end of first underhand stope, just beyond Sta. 308 (old) 5-ft. below rail, across 48 inches. 0.40 oz. gold

60- On 300 level; same underhand stope, about 8-ft. below rail level, across 36 inches. 0.80 oz. gold

61- On 300 level; directly above No. 60, about rail level, across 30 inches, hangingwall showing sulphides. 0.48 oz. gold

62- On 300 level; above No. 60, about rail level, across 24 inches of quartz on the footwall. 0.40 oz. gold

63- On the 300 level; in south end of new stope, south side of raise, about 12-ft. above rail, across 36 inches in footwall showing sulphides with little or no quartz. 0.80 oz. gold

63A-Approximately the same cut as No. 63, coarse. 0.36 oz. gold

64- On 300 level; at north end of next underhand stope, three feet below rail level, across 24 inches quartz. 0.28 oz. gold

65- On 300 level; at bottom of north end, same underhand stope, across 48 inches, including 10 inches footwall mineralized. 0.82 oz. gold

66- On 300 level; at bottom south end same underhand stope, about 8-ft below rail, across 36 in. (ore in both walls still). 0.32 oz. gold

67- On 300 level; directly above No. 66 at nearly rail level, across 24 inches, but still ore in both walls. 0.14 oz. gold

68- On 300 level; in raise near south end, last underhand stope, across 48 inches about 30 feet above rail. 0.12 oz. gold

69- On 300 level; in raise location No. 68, some 5-ft lower, across 18 inches footwall material and heavy sulphides. 0.56 oz. gold

70-On 300 level; fifteen feet from face, across 12 inches crushed vein material, in back of drift, no quartz. 0.10 oz. gold

71- On 300 level; across 12 inches of quartz in face of drift, as of October 1, 1934. 0.82 oz. gold

72- Above the 200 level; location No. 73, sample gob, 0.16 oz. gold

73- Above 200 level; sample of gob in new stope. 0.20 oz. gold

74- On 200 level; in inclined raise, at first chute, 12 inches of

12 inches of quartz dipping west. 0.26 oz. gold

75- On 200 level; at location No. 74, in raise on east side, across 36 inches, hangingwall streak ("A" vein?). 0.34 oz. gold

76-90 inclusive, outside samples, on subsequent list.

91- On 400 level; 10 inches on hangingwall side directly under dike, at beginning of drift from shaft. 0.02 oz. gold

91A-On 400 level; directly under No. 91, across 24 inches crushed vein matter, much quartz. 0.68 ozl gold

92- On 400 level; one foot south of No. 91, across 24 inches white quartz, some siderite, no hematite. 0.08 oz. gold

93- On 400 level; 10-ft. south of No. 92, across 30 inches white quartz, some iron stain, some sulphides, no hematite. 0.02 oz. gold

94- On 400 level; 10-ft. south of No. 93, across 14 inches quartz, vein narrowing to south into break. 0.22 oz. gold

95- On 400 level; Sta. 402 plus 23 ft. across 18 inches crushed material, except for 4 inches, which are quartz. 0.06 oz. gold

96- On 400 level; Sta. 402 plus 33 ft, across 18 inches crushed material and 2 inches quartz. 0.04 oz. gold

97- On 400 level; 10-ft. south of No. 96 across 12 inches crushed material and 2 inches quartz. 0.06 oz. gold

98- On 400 level; 10-ft south of No. 97 across 20 inches fault breccia under smooth wall. 0.10 oz. gold

99- On 400 level; 10-ft south of No. 98, chipped out of hard smooth wall. 0.06 oz. gold

100- On 400 level; face across 41 inches crushed material with no appreciable amount of quartz. 0.06 oz. gold

101- On 400 level; north of station 402 about 12 feet across 36 inches of diorite and sulphides, with some quartz. 0.04 oz. gold

102- On 400 level; in crossout west from Sta. 402, at face 36 inches down the south face of x-cut. 0.06 oz. gold

102A- On 400 level; in crosscut, west from 402, at face across 48 inches north side. 0.08 oz. gold

102B-On 400 level; in cross cut west from 402, in diorite just under dike at contact, siderate and sulphides. 0.08 oz. gold

## Drill-Hole Samples

A few test drill holes were drilled into the walls, not for the purpose of adequately prospecting, but more to determine to what extent the gold values might reach into the wall in selected spots. There are not the necessary facilities for deep drilling, which might disclose more important data. In the further development of the property drilling should play an important part. The few holes drilled indicate some values in the walls.

D-1 On the 200 level; into hanging wall near Sta. 205, depth of hole 65 inches, 0.02 oz. gold

D-2 On the 200 level; approximately 20-ft. south of D-1; depth of hole 60 inches, 0.10 oz. gold

D-3 On the 200 level; approximately 11 feet south of D-2, depth of hole 30 inches, 0.02 oz. gold

D-4 On the 200 level; approximately 12-ft. south of D-3 depth of hole 60 inches, 0.02 oz. gold

D-5 On the 4-- level; at location of cut sample No. 98, depth of hole, 62 inches, 0.04 oz. gold

D-6 On the 400 level; at location of cut sample No. 97, Depth of hole 36 inches, 0.02 oz. gold

D-7 On the 400 level; at location of cut sample No. 96, depth of hole 62 inches, 0.12 oz. gold

D-8 On the 400 level; abandoned, bad ground.

D-9 On the 400 level; opposite Sta. 402, depth of hole 62 inches, 0.02 oz. gold

D-10 On the 400 level; at sample 101, above heavy sulphides area and probably into dike, 63 inches, 0.04 oz. gold

The following samples are from locations outside the main workings (Sketch No. 2) with the exception of a few samples of old fill which ran into and still lies in the shaft. It is not claimed that the whole property has been sampled thoroughly as yet, for there are many shallow openings, as well as inconspicuous outcrops, which have not been investigated. In addition to the samples listed herein a great many more have been taken by the Company or by lessees. These are not described because no accurate sampling information is available as to the exact location or the sampling conditions.

76 From open cut, south side of road, on Delta No.2 claim. Only shattered outcrop, vein not in place.
0.54 oz. gold

77 From shaft 10-ft. deep, east side of draw, northeast of Hall shaft; Vein Str. N. 17 W, Dip 80, East; 10 inches quartz. 1.10 oz. gold

78 On knoll west of No. 77; shallow shaft, 8-ft. deep, vein str. S 40 E, dip W 87; 12 inches quartz on hanging wall, 10 inches crushed vein fill (horse?) 4 inches quartz on foot wall. 1.50 oz. gold

79 Sample of about one ton on dump of 125-ft. incline shaft on Thompson claim (ore shipped). 3.08 oz. gold

80 Open cut on ridge north of Hall shaft vein strike S 30 E, dip 47 W; across 36 inches quartz and schist lenses.
).40 oz. gold

81 On ridge north of Hall shaft; shallow open cut, showing broken outcrop 20 inches wide, Str S 25 E, dip W 67.
0.48 oz. gold

82 Shallow opening in gulch on Thompson claim, near south end; flat vein 6 inches, Str. S 20 W.
0.74 oz. gold

83 At "Double Incline Shaft" on Thompson claim; vein Str. S 20 E, dip 69 W, 4 to 10 inches broken quartz.
3.32 oz gold

84 Open cut on ridge NE of 125-ft incline shaft; vein Str N 5 E, dip E 82; 4 to 10 inches quartz with heavy iron stain. 1.26 oz. gold

85 Narrow quartz stringer on N side of road, Se of Hall Shaft; a pile of 300 lbs shipped. Vein Str N 15 E vein irregular. 0.42 oz. gold

86 ANorth of No. 85 about 50-ft; in shaft 10-ft deep a 7 inch quartz stringer; possibly not in place.
0.88 oz. gold

86 South side of road, near No. 85 shallow open cut; vein Str S 12 W; dip 78 E; 7 inches quartz.
0.36 oz. gold

87 Pile of ore shipped, about 700 lbs. 0.24 oz. gold

88 From outcrop east side of gulch, east of Thompason, location of new claim; across 3 feet.
0.08 oz. gold

89 Across 10 inches quartz, north side 2-ft hole Maxamillion claim, near SW corner. 14.04 oz. gold

90 Open cut south of Hall shaft, Str S 8 E, shattered quartz, outcrop definite walls not visible, quartz blocks 10 to 14 inches in thickness, probable width of streak. 0.52 oz. gold

108 Float from flat, south end Ora Granda
0.04 oz. gold

109 Float from flat south end of Ora Granda
0.02 oz. gold

110 Float from south end Ora Granda 0.02 oz. gold

111 Across 10 inch outcrop in draw, S 5 E 100-ft from south end of rhyolite dike west of Sta. 100, Str S 25 W. 0.08 oz. gold

112 Float in main Delta wash at S end rhyolite dike (F11) at junction with east draw. 0.02 oz. gold

113 Adit on old "Montana"; open cut 15-ft tunnel 10-ft across 4 inches gouge and crushed quartz and 8 inches solid quartz. 0.16 oz. gold

114 From open cut above sample No. 113, 8 inches quartz on E side; Vein Str S 10 E, dip E 70.
0.02 oz. gold

115 Across 16 inches quartz in opening east of trail near "glory hole" on Maxamillion on peak.
0.88 oz. gold

116 Across 6 inches soft gouge-like material with some crushed quartz, directly under No. 115.
0.30 oz. gold

117 Across 30 inches firm quartz and 4 inches of gouge same location Nos. 115 and 116, but above.
0.46 oz. gold

| | | |
|---|---|---|
| 137 | Loose fill at 30-ft below 300 level in shaft. | 0.18 oz. gold |
| 138 | Loose fill in shaft below 300 level. | 0.20 oz. gold |
| 139 | Across 9 inches in north end bottom of hole from which No. 89 sample was taken. | 1.02 oz. gold |
| 140 | Across 10 inches beyond No. 139. | 0.64 oz. gold |
| 141 | Ore pile at No. 139. | 0.82 oz. gold |
| 142 | Ore pile at No. 139. | 0.68 oz. gold |

A. L. Flagg

118 On east side old "Glory Hole" Maxamillion, across 16 INCHES soft material, including 4 inches waste; above No. 117. 0.10 oz. gold

119 Across 30 inches quartz in "Three Way Tunnel" near north end line of Maxamillion claim. 0.46 oz. gold

120 Across 54 inches about 30-ft. above portal of 150-ft tunnel on Maxamillion claim; west streak. 0.26 oz. gold

121 On east wall in 150-ft tunnel, on Max claim, 12-ft back from face where vein goes into east wall. 0.06 oz. gold

122 44-ft back from face 150-ft tunnel on Maxamillion; across 36 inches, on hanging wall 20 inches glassy quartz, 16 inches spongy quartz. 0.04 oz. gold

123 In 150-ft tunnel on Maxamillion; across 26 inches north side small raise about 50-ft in tunnel. 0.32 oz. gold

124 Same location No. 123;24 inches on east side. Principally quartz, breccia and crushed country rock. 0.04 oz gold

125 Across 18 inches face of Leggat tunnel, including 8 inches of crushed wall rock on hanging wall side. 0.06 oz. gold

126 In face Leggat tunnel, across 12 inches solid quartz, iron stained. 0.24 oz. gold

127 In Leggat tunnel, 12-ft back from face, across 28 inches of milky quartz. 0.02 oz. gold

128 In Leggat tunnel, 18 feet from face across 12 inches quartz similar to No. 127, on footwall side. 0.04 oz. gold

130 Across 22 inches quartz above the portal of the Leggat tunnel, below junction of lenses. 0.32 oz. gold

131 Above No. 130, across 24 inches of quartz in the east lense only. 0.12 oz. gold

132 Above No. 130, across 12 inches west lense. 2.26 oz. gold

133 Loose fill in shaft just under 300 level. 0.40 oz. gold

134 Coarse material out of No. 135. 0.24 oz. gold

135 Fines out of No. 133. 0.42 oz. gold

136 Loose fill in shaft, lower down. 0.20 oz. gold

ACE MINING & DEVELOPMENT COMPANY

GEOLOGICAL REPORT

The geological studies of the Delta Mine, property of the Ace Mining & Development Company, have been divided into three purely arbitrary parts, a division based in part on the immediate requirements of the operating company, in connection with it's development, and in part on the natural geographical divisions of the property. The first area to be mapped and studied in detail comprises those parts of the Delta and the Delta No. 2 claims shown in Sketch 2, which accompanies this report. The second unit takes in the Delta No. 3, the Hall and Thompson claims. The third unit deals with the Meggat and Maxamillion claims.

In the absence of any petrographic studies, the rock classification used in this report necessarily will be subject to revision and correction. The immediate requirements of the operators do not make it necessary to draw fine distinctions of rock classification. On the other hand more detail than is available with respect to the nature and the composition of the ores is really desirable. The matter of ore genesis will not be discussed in this report.

ACE MINING & DEVEOPMENT COMPANY

GEOLOGICAL REPORT

PART I

Broadly speaking the rock formation in the area to be described in Part I consists of a complex series of dark gneissic rocks, believed to occur as a roof pendant in the granite batholith underlying the South Mountains and adjacent areas. Pegmatite and aplite dikes, one or more rhyolite porphyritic dikes and possibly a fine grained, dark, basic dike of approximate diorite composition have been encountered in the first dividing of the territory. In the area covered by Part II there are some considerable quantities of a light sericitic schist and a darker rock, which is principally hornblende. These have not been found to any extent in either the other areas.

The principal featured of the gneissic formation are: (1) the general predominance of dark colored minerals; (2) conspicuous deformation in certain sections which probably antedates the period of ore deposition; (3) it's blocky nature; (4) occasional weaker or softer zones which sometimes have considerable influence on the physical nature of the ore deposit; and (5) a striking irregularity in the distribution of the several most conspicuous characteristics.

In a preliminary report on the property, dated December 1, 1934, on page two, the occurrence of three veins of different strike and dip was mentioned. It is probable that the descriptions of the separate veins may require modification after more work is done. At the present time it seems that the vein striking N 10 W with a low dip to the east probably has a northeasterly strike. As development proceeds and more is learned about the individual veins, and their inter-relation more accurate statements can be made as to the age, position and importance of each vein.

Such records of previous operations are available, indicate that the principal reason for the abandonment of the property by the original operators was the failure to appreciate the true significance of some of the complicated geological structure. There is no indication that any of the previous operators realized that such veins as had been partially prospected in these principal workings were definitely cut off by a fault just below the lowest adit level (300 level) and that the shaft had been sunk from this point in the fault plane. There is no intimation that more than one vein had been recognised in these workings.

An appreciation of these fundamentals is essential to the proper and successful development of the property. Even a

partial solution of this problem requires a large amount of detailed mapping. The most essential data are shown on the two underground geological maps attached hereto.

The drift on the 400 level appears to have been driven entirely along a fault which shows many indications of considerable movement, without a clue as to the probable extent or direction of such movement. Nothing definite can be said as to it's relative age. The fault breccia is very fine and the fault zone moderately wide. Along with the fault, commencing at the shaft and extending southward about forty feet on the hanging wall side of the fault is a small amount of quartz, carrying low gold values. This quartz ends abruptly against a block of unaltered gneiss. Beyond this point the hanging wall shows sulphides, in the gneiss, in varying amounts. This wall has never been crosscut.

The Shaft Fault (Fault "A" on the maps) and this 400 level fault, (Fault "B" on the maps ) appear to intersect on the 400 level about at the shaft. The calculated intersection on the 300 level is shown in Figures I and II on "Underground Geology I". In figure I is the grapjic method of determining the angle and course of this intersection. If these deductions are correct it is very evident that neither of these two faults will ever interfere with the further development of the steeper dipping veins as they are followed along their strike to the south.

In the face of the east crosscut just south of the shaft on the 300 level is an exposure of a rhyolite dike. The crosscut was not carried into the dike far enough to afford any dependable information as to the strike, dip or width. It is assumed that this is the foot-wall of the same dike exposed in the crosscut to the west, directly under in the 400 level. In calculating the probable movement of this dike vertical and horizontal (horizontal only at right angles to the plane of the dike) this exposure is assumed to have the same strike and dip as the foot-wall below. It is believed that the dike is faulted by the "A" fault, evidence of great disturbance beginning at a point about 20-ft. east of the centerline of the 300 level drift from which this crosscut takes off, and extending right to the dike. In Figure III the displacement of the dike is shown (Underground Geology I). The calculations indicate that the so-called "Shaft Vein" and possibly much of the profitable shoot in Zone I[1], Underground Geology II, are to be sought southwest of the shaft at about 70 feet distance.

On the second (II) map of underground geology the major features of the first four levels are shown. Very little work is done on the fifth level (see Assay Map) and no detailed mapping was done there. The bottom level or whatever other work may be below this fifth level is under water and so inaccessible. So far as is inown there is no dependable map of any of these lowest workings.

There is every reason to anticipate the extention to the south and vertically of the two major veins of Zone IV, in areas of much less post-mineral disturbance. From what is known of them they may be expected to yield aconsiderable tonnage of very profitable ore.

PART II
(Outline)

The detailed mapping of the area to be covered in Part II is not completed. Preliminary investigations indicate several promising shoots and surface sampling is very satisfactory. The deepest work in this section, now inaccessible, is reported to show a considerable width of mill ore. From this area leasers have shipped during the past eighteen months several hundred tons of ore that has been profitable, and compared favorably in it's gold content with the ore from other locations on the property.

PART III
(Outline)

Nothing but preliminary investigating and some surface sampling has been done in this section. The detailed work here bids fair to be of very great importance because of the possible large tonnage of mill ore. No other portion of the property seems to promise so much in the way of large tonnage for a similar area as is to be found here. The conture of the land makes it possible to develop it cheaply, by tunnels, and quickly. Ore can be delivered by a gravity tramway to any feasible mill site on the whole property. From very shallow and limited surface workings more than 500 tons of ore have been shipped by leasers. The average gold content was over 0.70 ounce to the ton and some very high assays have been had on surface samples.

Though on some parts of the Delta property the geology is undoubtedly somewhat complicated there is no indication of the kind of problems impossible to solution. Accurate observation of the features as the development prodeeds will be of great help in solving any problem that is met with. Nothing has been observed about the property to indicate definite limits beyond which further prospecting is almost certain to be futile. On the contrary such evidence as is available creates confidence in the future of the property. Past production records, positive ore in the principal Delta workings, and the probable ore indicated at many places where leasing operations have been carried out profitably, giving assurance of a sufficient volume of ore to justify the starting of a comprehensive development program, which may be expected to indicate, very shortly, the advisability of providing a mill on the property.

Phoenix, Arizona
April 5, 1935

Respectfully submitted,

A. L. Flagg

Miscellaneous exploration in this area, as suggested in the Geological Report, to the extent of about $2500 is justified. In this connection the use of some standard portable diamond drill might prove advantageous and such a drill can be used very profitably on other parts of the property.

It has been suggested that a crosscut be driven from the lower West Delta tunnel (see Sketch 2) to connect with the 500 foot incline shaft. This would intersect the shaft at a point about sixty feet below the 300 level and the length of the crosscut would be six hundred feet. The cost of such a crosscut is estimated to be $15,000. It would afford a cross-section of the less extensively explored area on the west of the main Delta workings and, of course, would accomplish what the projected crosscut from the 400 level would do with respect to the faulted segments.

The next most important development project is on the Leggat and Maxamillion claims, referred to as the "Max" by those familiar with the property. The natural advantages of this situation were pointed out in the general report. Though there is a considerable amount of work done on these two claims, nothing can be said about the amount of ore that is developed, except that there are several thousand tons of material on dumps that are suitable for milling. The scattered development have disclosed conditions sufficiently convincing to justify a rather elaborate program of work in this section. A compressor of not less than 350 cu. ft. capacity and the necessary accessory equipment should be provided. It is believed that this is the greatest potential source of mill ore on the property.

If these larger plans of development outlined above are carried out no elaborate program is necessary for the Hall-Thompson group for the present. The work suggested above is calculated to afford enough ore to supply a suitable mill for some time to come. However, from time to time some exploratory work should be done on the Hall-Thompson group. The Donivin-Tinney lease area should be explored at depth and certainly the 125-ft. incline shaft should be investigated. For this work it would seem that not more than $5000 need be provided for the first year.

The above development programs calls for an expenditure of $65,000 if all the projects are undertaken. This is believed to be ample for the work contemplated and sufficient to open up the property to a point where actual production will take care of all further development. To this sum must be added the cost of the necessary equipment. Such equipment as there is on the ground now is satisfactory for the sort of work in progress but it is not suited to the proposed work. Very little will be required in the way of buildings and almost nothing for roads. Suitable mining equipment is the most important thing. The estimated cost of all the requirements is $35,000.

Four zones are laid out on the "Underground Geology II" map, by which it is hoped to express a little more clearly the conditions due to vein intersections and the small amount of post-mineral movement. No satisfactory theory can be formulated concerning the supposed faulting of the veins on each other until more ground has been opened up. To differentiate between the several veins more must be known about the specific nature of individual veins and more positions must be mapped. It is believed that most of this necessary information will be disclosed in the normal progress of exploration without any special or expensive side development.

At best any attempt toexpress in plan such conditions can be only an approximation because geological phenomena do not confine themselves to straight lines or plane surfaces. It is also true that some features not observed, or if observed possibly considered inconsequential, may have influenced the situation profoundly, even to the extent of rendering almost useless some of the conclusions drawn. The zones referred to include only ground above the floor of the 300 level.

Zone I is an areaof limited horizontal extent. It seems to indicate a section containing but oneof the veins, rather erratic in strike, with a moderately steep dip to the east. No much high grade ore has been taken from this zone. Values are low but the width of the vein is very much greater at some points than anywhere suth of the shaft. Certain prominent characteristics of higher grade shoots in otherparts of the mine have been observed near the present ends (north ) in this zone. Extention of the drift on the 300-ft. level northwesterly might disclose other shoots of shipping ore. On it's dip, in this zone, this vein is affected by the "A" fault.

During the early part of the present operations Zone II was the most productive part of the property. Stope widths of five feet (wall to wall) of ore carrying almost an ounce to the ton were seen. This zone is an area of intersections. Apparently the three vein systems, noted previously, intersect with this zone at these levels. If the calculated effect of the disturbance along the "A" Fault is proven this zone of intersections should prove profitable for quite a depth below. One of the determining factors in the question of what depth is the relative strikes and dips of the veins that are involved. It is believed that this zone still has some possiblities above the 300 level. The most abundant evidence remaining of the real nature of this zone, i. e., that is a zone of intersections, is to be found in the stoped section above the 200 level. Some dependable data can still be obtained from the "Intermediate Level" and pillars left in the stopes.

Zone III is a transition area. The so-called "Flat vein" has not been identified here and there is strong evidence to support the belief that there has been a shifting of positions be-

# THE DELTA MINE

The property of the Ace Mining and Development Company, formerly known as the Max-Delta Mine, is in Maricopa County, State of Arizona. It is in the northern portion of the Salt River Mountains, that portion familiarly known to the residents of Phoenis as the "South Mountains." It is ten miles from the civic center of Phoenix to the property.

There are nine patented and five unpatented mining claims in the property. With the exception of the Ora Granda, which sets apart from the rest, the claims are in one group/

The equipment on the property at the present time is very limited. It consists of a portable compressor, a small gasoline hoist, drills, track, cars, pipe and steel, blacksmith shop for hand sharpening and loading terminals. All of the original equipment, even to mine timbers and the collar of the shaft, was removed a great many years ago. Though simple, the equipment on the property meets all the most immediate requirements.

There is no water developed on the property. It is reported that the 500-ft. inclined shaft furnished enough water for the 25-ton mill which was on the property at one time. There is also some water in the Hall shaft. In all probability water can be developed by drilling wells in the property not over 200-ft. depth.

There are no transportation difficulties. Seven miles of the road from Phoenix is either paved or oiled. The rest of the road is very good road. Ore is hauled in trucks to Phoenix and loaded for 75¢ a ton.

The claims lie on the north slope of the mountains, at elevations ranging from 1200 to 2600 feet above sea level. The country rock is a complex of gneiss and schist, with a general southerly dip at low angles. There are frequent local variations due to faulting. Several fine grained, dark dikes, probably diorite, occure and there is at least one lighter colored, porphyritic dike of an acid composition, provisionally called rhyolite. Irregular dikes of aplite and pegmatite are abundant throughout the range. Outcrops of veins, excepting the pegmatite dikes, are inconspicuous. In marked contrast is the abundance of quartz float on the mountainside.

The veins are fissures cutting across the gneiss with a general NW to SE strike and easterly dip. The country rock on either side of the veins, more particularly noticeable at lower depths, is more or less silicified, the mineralization extending out into the walls for an undetermined distance. The vein filling is largely quartz, with altered inclusions of country rock. Gold is the principal metal. Silver is present in small amounts and copper to the extent of less than one-half of one percent. There is neither lead nor zinc. Sulphides of iron are found at practically all horizons.

No investigation has been made of the water situation. All the water now used about the mine is brought in barrels. The 500-ft. incline shaft is said to have furnished ample water for a small mill in 1916-17 but as the operations of the mill were not steady, this information is of doubtful value. The Hall shaft, nearly 100-ft. deep, has some water but there is no accurate data regarding the amount it will produce. If sufficient water cannot be developed in drilled wells in the east-west valley crossing the property an almost limitless supply, far in excess of the property's needs can be had at a short distance north. The development of an adequate water supply is not considered to be a serious problem.

While the underground development is in progress serious thought should be given to the subject of a mill. The rejects from systematic sampling during the last part of 1934 have been saved for testing purposes, for preliminary work this is the most satisfactory material that can be obtained. It is an accurate representation of all the ore exposed at the time the sampling was done. There is probably a ton or more of this material, which is ample. Properly conducted tests will indicate the essential features for the most sutable mill to give the best results. In all probability it will be an all flotation plant. Assuming that it will be and that the capacity is to be 100 tons per 24 hours the probable cost will be $75,000.

To determine what material in the mine may be classed as ore it is necessary to know the cost of mining and the cost of milling. Tonarrive at the total cost there should be added to this a sum sufficient to cover the interest on the original investment, the depreciation of the equipment and the depletion of the mine, taxes and amortization.

Past experience in the mine indicates that when the work is properly organized the mining cost should not exceed $3.00 per ton. In mill of 100 ton daily capacity, operating on ores of a somewhat similar nature and making recoveries in excess of 90% the costs do not exceed $3.00 per ton. If to this is added $1.50 per ton to cover the fixed charged indicated above, then the indicated minimum grade of material that can be mined and milled without any loss is $7.50; that is the ore must contain at least $7.50 in recoverable value or it cannot be handled. Sampling to date indicates that the general average recoverable content is quite a bit more than this.

The recommendations may be summarized as follows: (1) the property should be equipped with the necessary machinery and other facilities to insure efficient and economical results in whatever development program is determined upon; the estimated cost of these improvements is put at $35,000. (2) major development programs on the Delta and Max groups to cost $20,000 and $25,000 respectively; (3) mill construction, based on tests of the ore and other pertinent data, to cost $75,000. In addition alternative or secondary development projects have been suggested involving an expenditure of another $20,000. If all the projects are carried out the total capital outlay will be approximately $175,000.

Respectfully submitted,

A. L. Flagg

RECOMMENDATIONS

A study of the general report and the geological report on the Delta property of the Ace Mining and Development Company clearly indicates that there is no lack of places in which development can be expected to show satisfactory results. Leasing operations at many points on the ground have indicated the existence of profitable ore bodies. Therefore the determination of a site or sites for further development work becomes simply a matter of the funds available for such work. For that reason all of the more important possibilities will be discussed rather than attempting to lay out a specific plan.

Naturally the area described in Part I of the Geological Report is the most attractive because it has the most extensive development now and the most is known about this particular section. As is indicated in that report there is a known tonnage of ore with an average gold content that will yield a very satisfactory profit, if treated on the ground. There is also a small amount of ore ~~used~~ now in the gob above the 200 level and a dump estimated to contain 9000 tons which the original operators planned to mill. In this connection it might be mentioned that there are many hundreds of tons of material on dumps scattered over the property which can be treated to a profit on the ground.

There are two important pieces of development work possible in this section. The first is the further exploration of the two veins in Zone IV, which is now in progress. All the work done on these veins beyond the point where they separate has paid for itself. The new drift just begun on the S 10 W vein gives promise of doing as well. However, it is to be expected that leaner zones will be encountered with ore of a grade that cannot be shipped. In any development plan it is desirable to allocate at least $10,000 for the immediate exploration of these two veins on and above the 300 level. Further development of these veins would follow as a matter of course in the normal operation of the property.

The most economical manner in which these two veins can be opened up below the 300 level is through a winze. If the raise now being put through to the 200 level is carried through to the surface such a winze could be started directly under the raise and the sinking carried on from the surface, as an independent operation. The probable cost of completing the connection with the surface will be about $1000. To this should be added some $4000 to explore below the 300 level.

The cost of driving the proposed crosscut on the 400 level, southwest from the shaft to cut the faulted segments of the vein opened above in Zones I and II will be about $2000. Another $500 should be allowed for, any possible incidental expense that may be incurred in preparing for this work.

The original discovery on these claims is said to have been made on the crst of the ridge at an elevation of approximatly 2600-ft. above sea level, on the Maxamillion claim. Near the surface, this vein has a low dip and can be traced for 600 to 800-ft. along it's strike on the surface, showing widths from 3 to 12 feet. Numerous small openings, made many years ago, are said to have yeilded about $30,000. in gold. The vertical range on this vein from the highest point on the crest to the lowest working on the north slope, is about 400-ft., which would be over 600-ft. measured on the dip. No systematic development has been done on this part of the property but previous sampling in the old openings give very promising indications of a large amount of milling ore above an adit which would enter about 800-ft. below the highest point and would have a length of over 700-ft. when vertically under the original discovery. At present ore is being shipped off this part of the property.

Near the north end of the Maxamillion claim a spur takes off this vein with a more northerly strike. This vein is known as the Leggat vein. Not much work has been done on it. There is from 3 to 4 feet of ore along the outcrop over a considerable distance. Previous sampling indicates a gold content sufficiently high to warrant an expection of profitable mill ore.

The topography is such that the Maxamillion and Leggat veins can be prospected very cheaply by a system of adits, the lowest of which would attain a maximum depth of nearly 800-ft. measured on the dip. Mill ore from this system could be transported to a mill on the main Delta claim by gravity.

The most extensive development on the whole property is on the Delta No. 1 claim. It consists of an inclined shaft, 500-ft in depth, with not less than 2500-ft. of tunnels. Two adits, entering from the north, intercept this shaft at levels approximately 50 and 100-ft. respectovely, from the surface. It is from these two adits and above that most of the shipping ore has been taken during the past nine months. Present operations have not included any of the levels below the lower of these two adits. Water stands in the shaft at about 100-ft. above the bottom of the shaft and nothing is known about the lowest level.

The Delta vein system is an interesting one on which, as yet, not enough information has been compiled to attempt a detailed description. The acid porphyry dike, mentioned above, is seen first in the level next below the lower of the two adits. What it's relation, if any, to the veins maybe has not been worked out yet. The fundamental facts regarding the Delta vein system are that it consists of three veins, intersecting and faulted on each other, containing overlapping ore-shoots of moderate size in which there are similarly shaped and similarly oriented lenses of quartz of higher grade which constitute the shipping ore. The strike and dip of the three veins are (1) Strike N 60 W, Dip 50 NE; (2) Strike N 30 W, Dip _0 NE; (3) Strike N 10 W, Dip 20 (sometimes even less) to 40 NE.

The principal workings of the West Delta consist of (1) a 62-ft. crosscut tunnel at an elevation slightly higher than the lower adit on the main Delta, from which about 200-ft. of drifting has been done. It was from this part of the property that ore was mined for the little mill years ago. During the present operations ore has been shipped steadily from this vein. Though the strike of this vein is NW to SE as is the case with the other veins, the dip is to the SW in the upper workings.

From a flat, about 85-ft. lower than the last mentioned working, a long crosscut tunnel of nearly 400-ft. has been driven, together with other work totalling about another hundred feet. This was to explore the West Delta vein at this horizone, and was done many years ago. No work has been done here recently. It is probable that this crosscut will furnish the datanecessary for the solution of the faulting in this vein system.

On the Hall claim, north of the Delta, is a shaft 100-ft. deep from which there is some drifting and crosscutting. The ore here is from 3 to 4-ft. in width and recently leasers have taken out two or three cars.

On the Thompson claim, which adjoins the Hall on it's north end line, there is a shaft 124-ft deep and several other openings of lesser extent, none of which have been worked during the present operations.

The Ora Granda claim, which lies on a south slope of the mountains about 3000 feet north of the north end line of the Leggat has not been worked under the present program. The outcrop is one of the most conspicuous on the whole property and the float from it, strewn over a wide area, amounts to many thousand tons. Several old reports on the property credit this claim with a large tonnage of ore that assayed nearly $5.00 in gold. No systematic sampling has been done yet on this claim by the present operators.

During the past year, sixty cars, each containing more than fifty tons of ore, have been shipped from the property. The most of this ore came from the main Delta workings. There were ten cars from the Maxamillion vein and three cars from the Hall Shaft, all of which was mined by leasers. The following tabulation gives the weight and content of the various shipments.

| LOT | DRY WEIGHT | OZ. GOLD | OZ. SILVER | % COPPER |
|---|---|---|---|---|
| 1 | 108434 | 0.815 | 0.50 | 0.07 |
| 2 | 107936 | 0.920 | 0.80 | 0.08 |
| 3 | 114226 | 1.070 | 0.90 | 0.03 |
| 4 | 118670 | 0.845 | 0.80 | 0.00 |
| 5 | 94536 | 0.467 | 0.37 | 0.18 |
| 6 | 113850 | 0.392 | 0.46 | 0.09 |
| 7 | 118012 | 0.689 | 0.64 | 0.06 |
| 8 | 116622 | 0.612 | 0.50 | 0.13 |
| 9 | 117298 | 0.500 | 0.44 | 0.06 |

| Lot | Dry Weight | Oz. Gold | Oz. Silver | % Copper |
|---|---|---|---|---|
| 10 | 106956 | 0.581 | 0.43 | 0.05 |
| 11 | 113256 | 0.517 | 0.41 | 0.04 |
| 12 | 120602 | 0.640 | 0.67 | 0.06 |
| 13 | 117336 | 0.753 | 0.56 | 0.06 |
| 14 | 116158 | 0.740 | 0.58 | 0.05 |
| 15 | 120330 | 0.720 | 0.51 | 0.05 |
| 16 | 118100 | 0.504 | 0.52 | 0.04 |
| 17 | 113930 | 0.517 | 0.73 | 0.06 |
| 18 | 107988 | 0.532 | 0.72 | 0.05 |
| 19 | 119980 | 0.547 | 1.10 | 0.05 |
| 20 | 100336 | 0.455 | 0.81 | 0.37 |
| 21 | 110563 | 0.490 | 0.40 | 0.27 |
| 22 | 103336 | 0.490 | 0.42 | 0.06 |
| 23 | 105940 | 0.400 | 0.30 | 0.17 |
| 24 | 107674 | 0.447 | 0.42 | 0.07 |
| 25 | 108366 | 0.617 | 0.57 | 0.05 |
| 26 | 87420 | 0.620 | 0.20 | 0.25 |
| 27 | 109494 | 0.597 | 0.44 | 0.10 |
| 28 | 107217 | 0.540 | 0.35 | 0.10 |
| 29 | 118720 | 0.575 | 0.41 | 0.04 |
| 30 & 31 | 206058 | 0.750 | 0.58 | 0.08 |
| 32 | 102584 | 0.627 | 0.65 | 0.08 |
| 33 | 103099 | 0.560 | | |
| 34 | 119770 | 0.740 | 0.35 | 0.09 |
| 35 | 118454 | 0.580 | 0.44 | 0.06 |
| 36 | 111556 | 0.490 | 0.53 | 0.05 |
| 37 | 117236 | 0.46 | 0.45 | 0.14 |
| 38 | 117810 | 0.720 | 0.30 | 0.21 |
| 39 | 113590 | 0.547 | 00.50 | 0.06 |
| 40 | 116324 | 0.445 | 0.43 | 0.07 |
| 41 | 115978 | 0.600 | 0.46 | 0.05 |
| 42 | 110542 | 0.630 | 1.53 | 0.27 |
| 43 | 113672 | 0.425 | 0.34 | 0.06 |
| 44 | 112374 | 0.417 | 0.34 | 0.09 |
| 45 | 116364 | 0.450 | 0.36 | 0.07 |
| 46 | 118760 | 0.500 | 0.36 | 0.07 |
| 47 | 113856 | 0.427 | 0.35 | 0.08 |
| 48 & 49 | 233680 | 0.443 | 0.27 | 0.07 |
| 50 | 117022 | 0.582 | 0.49 | 0.07 |
| 51 | 115098 | 0.520 | 0.29 | 0.07 |
| 52 | 118324 | 0.535 | 0.29 | 0.09 |
| 53 | 115190 | 0.480 | 0.32 | 0.06 |
| 54 | 117000 | 0.510 | 0.29 | 0.05 |
| 55 | 108940 | 0.620 | 0.40 | 0.08 |
| 56 | 118880 | 0.520 | 0.50 | 0.07 |
| 57 | 118740 | 0.72 | 0.60 | 0.20 |
| 58 | 57780 | 0.50 | 0.50 | 0.15 |
| 59 | 94080 | 0.72 | 0.80 | 0.40 |
| 60 | 106480 | 0.58 | 0.80 | 0.40 |
| 61 | 78500 | 0.50 | 0.40 | 0.23 |

tween the S 25-30 E vein of steep easterly dip and the S 5-10 W vein of more gentle dip easterly. It is not clear as yet which vein has had the greater movement, neither can it be determined which is the older. This zone is believed to have some possiblities above the 200 level.

Zone IV is an area of more regular conditions. It would seem that the two veins mentioned above, the S 25-30 E and the S 5-10 W veins begin to take their normal courses and they may be expected to continue with more or less regularity. Southward neither will be affected by either the "A" or the "B" fault except at very great depths. Neither of these veins have been explored to any great extent and each gives promise of an attractive volume of ore of a very good grade.

One important result of the detailed geological studies in the main Delta workings is the tentative determination of the probable position of the several veins to the north of Zone III and below the 300 level. The facts can be determined quickly at a small cost by driving a crosscut from the shaft at the 400 level, approximately S 45 W, not to exceed 100 ft. If the conclusions reached by these studies are proven a tonnage of ore at least equivalent to that originally contained to Zones I and II, above the 300 level or about 4000 tons can be reasonably expected over a similar vertical range.

Until further exploratory work is done in Zone III no positive tonnage of ore can be credited to this area. However, it is believed that this zone can furnish from between the 300 and 200 levels, not less than 2126 tons of ore with an average gold content of about 0.30 ounce per ton.

In Zone IV, there is indicated inthe S 20-30 E vein between the 100 and 300 levels approximately 4200 tons of ore with a gold content of 0.858 ounce to the ton. No definite tonnage can be assigned to the S 5-10 W vein between these levels. It is interesting to note that in the drift on this vein, just begun at the 300 level there is a total width of 66 inches of "pay rock". This face sampled in four different samples shows an equated gold content of 0.571 ounce to the ton. Such width and value, if consistent for any considerable distance along the strike, will add a considerable volume to the ore reserves.

On Sketch 2 the West Delta workings are shown in some detail. On the map of Surface Geology (I) other veins, less extensively prospected but productive in a small way under leasing operations are shown. As yet not enough data are available on these occurences to make it possible to attempt any detailed description of them. However, during the past eighteen months this part of the property has produced, principally through leasing operations, approximately 1000 tons of ore with a gold content above 0.50 oz. gold to the ton. Such development as there is has not reached any great depth and it is all very limited.

REPORT

ON

ACE MINING & DEVELOPMENT CO

Maricopa county, Arizona.

Phoenix, Arizona,
April 5th,1935,

A. L. Flagg,

Consulting Engineer.

35

ACE MINING AND DEVELOPMENT COMPANY.

Contents.

1. Report on Delta Mine,

2. Sampling,

3. Geological Report,

4. Photographs,

5. Map:Salt River Valley and Vicinity,

6. Claim Map,

7. Surface Map (Key)

8. Topographic Map,

9. Main Delta Workings,

10. Geological Map, I,

11. Geological Map, II,

12. Assay Map.

35

# THE DELTA MINE

The property of the Ace Mining and Development Company, formerly known as the Max-Delta Mine, is in Maricopa county, State of Arizona. It is in the northern portion of the Salt River Mountains, that portion familiarly known to the residents of Phoenix as the "South Mountains". It is ten miles from the civic center of Phoenix to the property.

There are nine patented and five unpatented mining claims in the property. With the exception of the Ora Granda, which sets apart from the rest, the claims are all in one group.

The equipment on the property at the present time is very limited. It consists of a portable compressor, a small gasoline hoist, drills, track, cars, pipe and steel, blacksmith shop for hand sharpening and loading terminals. All of the original equipment, even to mine timbers and the collar of the shaft, was removed many years ago. Though simple the equipment on the property meets all the most immediate requirements.

There is no water developed on the property. It is reported that th the 500-ft inclineed shaft furnished enough water for the 25-ton mill which was on the property at one time. There is also some water in the Hall shaft. I In all probability water can be developed by drilling wells on the property not over 200-ft deep.

There are no transportation difficulties. Seven miles of the road from Phoenix is either paved or oiled. The rest of the road is very good road. Ore is hauled in trucks to Phoenix and loaded for 75¢ a ton.

The claims lie on the north slope of the mountains, at elevations ranging from 1200 to 2600 feet above sea level. The country rock is a complex of gneiss and schist, with a general southerly dip at low angles. There are frequent local variations due to faulting. Several fine grained, dark dikes, probably diorite occur and there is at least one lighter colored, porphyritic dike, of an acid composition, provisionally called rhyolite. Irregular dikes of aplite and pegmatite are abundant throughout the range. Outcrops of veins excepting the pegmatite dikes are inconspicuous. In marked contrast is the abundance of quartz float on the mountainside.

The veins are fissures cutting across the gneiss with a general NW to SE strike and easterly dip. The country rock on either side of the veins, more particularly noticeable at lower depths, is more or less silicified, the mineralization extending out into the walls for an undetermined distance. The vein filling is largely quartz, with altered inclusions of country rock. Gold is the principal metal. Silver is present in small amounts and copper to the extent of less than one-half of one percent. There is neither lead nor zinc. Sulphides of iron are found at practically all horizons.

The original discovery on these claims is said to have been made on the creat of the ridge at an elevation of approximately 2600-ft above

sea level,on the Maxamillion claim. Near the surface this vein has a low dip and can be traced for 600 to 800-ft along it's strike on the surface, showing widths from 3 to 12 feet.Numerous small openings,made many years ago,are said to have yielded about $30,000 in gold.The vertical range on this vein from the highest point on the crest to the lowest working on the north slope,is about 400-ft,which would be over 600-ft measured on the dip.No systematic development has been done on this part of the property but previous sampling in the old openings give very promising indications of a large amount of milling ore above an adit which would enter about 800-ft below the highest point and would have a length of over 700-ft when vertically under the original discovery.At present ore is being shipped off this part of the property.

Near the north end of the Maxamillion claim a spur takes off this vein with a more northerly strike.This vein is known as the Leggat vein.Not much work has been done on it.There is from 3 to 4 feet of ore along the out - crop over a considerable distance.Previous sampling indicates a gold content sufficiently high to warrant the expectation of profitable mill ore.

The topography is such that the Maxamillion and Leggat veins can be prospected very cheaply by a system of adits,the lowest of which would attain a maximum depth of nearly 800-ft measured on the dip.Mill ore from this system could be transported to a mill on the main Delta claim by gravity.

The most extensive development on the whole property is on the Delta No.1 claim.It consists of an inclined shaft,500-ft in depth,with not less than 2500-ft of tunnels.Two adits,entering from the north,intercept this shaft at levels approximately 50 and 100-ft respectively from the surface.It is from these two adits and above that most of the shipping ore has been taken during the past nine months.Present operations have not included any of the levels below the lower of these two adits.Water stands in the shaft at about 100-ft above the bottom of the shaft and nothing is known about the lowest level.

The Delta vein system is an interesting one on which,as yet,not enough information has been compiled toattempt a detailed description.The acid porphyry dike,mentioned above,is seen first in the level next below the lower of the two adits.What it's relation,if any,to the veins may be has not been worked out yet.The fundamental facts regarding the Delta vein system are that it consists of three veins,intersecting and faulted on each other,containing overlapping ore-shoots of moderate size in which there are similarly shaped and similarly oriented lenses of quartz of higher grade which constitute the shipping ore.The strike and dip of the three veins are (1) Strike N 60 W, Dip 50 NE; (2) Strike N 30 W, Dip 60 NE; (3) Strike N 10 W, Dip 20 (sometimes even less) to 40 NE

The principal workings of the West Delta consist of (1) a 62-ft crosscut tunnel at an elevation slightly higher than the lower adit on the main Delta,from which about 200-ft of drifting has been done.It was from this part of the property that ore was mined for the little mill years ago.During the present operations ore has been shipped steadily from this vein.Though the strike of this vein is NW to SE as is the case with the other veins,the dip is to the SW in the upper workings.

From a flat,about 85-ft lower than the last mentioned working,a long crosscut tunnel of nearly 400-ft has been driven,together with other work totalling about another hundred feet.This was to explore the West Delta vein at this horizon,and was done many years ago.No work has been done here recently It is probable that this crosscut will furnish the data necessary for the solution of the faulting in this vein system.

On the Hall claim,north of the Delta,is a shaft 100-ft deep from which there is some drifting and crosscutting.The ore here is from 3 to 4 ft in width and recently leasers have taken out two or three cars.

On the Thompson claim,which adjoins the Hall on it's north end line there is a shaft 124-ft deep and several other openings of lesser extent, none of which have been worked during the present operations.

The Ora Granda claim,which lies on a south slope of the mountains about 3000-ft north of the north end line of the Leggat has not been worked under the present program.The outcrop is one of the most conspicuous on the whole peoperty and the float from it,strewn over a wide area,amounts to many thousand tons.Several old reports on the property credit this claim with a large tonnage of ore that assayed nearly $5.00 in gold.No systematic sampling has been done yet on this claim by the present operators.

During the past year sixty cars,each containing more than fifty tons of ore,have been shipped from the property.The most of this ore came from the main Delta workings.There were ten cars from the Maxamillion vein,and three cars from the Hall shaft,all of which was mined by leasers.The following tabulation gives the weight and content of the various shipments.

| Lot. | Dry Weight | Oz.Gold | Oz.Silver | % Copper |
|---|---|---|---|---|
| 1 | 108434 | 0.815 | 0.50 | 0.07 |
| 2 | 107396 | 0.920 | 0.80 | 0.08 |
| 3 | 114226 | 1.070 | 0.90 | 0.03 |
| 4 | 118670 | 0.845 | 0.80 | 0.00 |
| 5 | 94536 | 0.467 | 0.37 | 0.18 |
| 6 | 113850 | 0.392 | 0.46 | 0.09 |
| 7 | 118012 | 0.689 | 0.64 | 0.06 |
| 8 | 116622 | 0.612 | 0.50 | 0.13 |
| 9 | 117298 | 0.500 | 0.44 | 0.06 |
| 10 | 106956 | 0.581 | 0.43 | 0.05 |
| 11 | 113256 | 0.517 | 0.41 | 0.04 |
| 12 | 120602 | 0.640 | 0.67 | 0.06 |
| 13 | 117336 | 0.753 | 0.56 | 0.06 |
| 14 | 116158 | 0.740 | 0.58 | 0.05 |
| 15 | 120330 | 0.720 | 0.51 | 0.05 |
| 16 | 118100 | 0.504 | 0.52 | 0.04 |
| 17 | 113930 | 0.517 | 0.73 | 0.06 |
| 18 | 107988 | 0.532 | 0.72 | 0.05 |
| 19 | 119980 | 0.547 | 1.10 | 0.05 |
| 20 | 100336 | 0.455 | 0.81 | 0.37 |
| 21 | 110563 | 0.490 | 0.40 | 0.27 |
| 22 | 103336 | 0.490 | 0.42 | 0.06 |
| 23 | 105940 | 0.400 | 0.30 | 0.17 |
| 24 | 107674 | 0.447 | 0.42 | 0.07 |
| 25 | 108366 | 0.617 | 0.57 | 0.05 |
| 26 | 87420 | 0.620 | 0.20 | 0.25 |
| 27 | 109494 | 0.597 | 0.44 | 0.10 |
| 28 | 107217 | 0.540 | 0.35 | 0.10 |
| 29 | 118720 | 0.575 | 0.41 | 0.04 |
| 30 & 31 | 206058 | 0.750 | 0.58 | 0.08 |
| 32 | 102584 | 0.627 | 0.65 | 0.08 |
| 33 | 103099 | 0.560 | | |
| 34 | 119770 | 0.740 | 0.35 | 0.09 |
| 35 | 113454 | 0.580 | 0.44 | 0.06 |
| 36 | 111556 | 0.490 | 0.53 | 0.05 |
| 37 | 117236 | 0.46 | 0.45 | 0.14 |
| 38 | 117810 | 0.720 | 0.30 | 0.21 |
| 39 | 113590 | 0.547 | 0.52 | 0.06 |
| 40 | 116324 | 0.445 | 0.43 | 0.07 |

| Lot | Dry Weight | Oz.Gold | Oz.Silver | % Copper. |
|---|---|---|---|---|
| 41 | 115978 | 0.600 | 0.46 | 0.05 |
| 42 | 110542 | 0.630 | 1.53 | 0.27 |
| 43 | 113672 | 0.425 | 0.34 | 0.06 |
| 44 | 112374 | 0.417 | 0.34 | 0.09 |
| 45 | 116364 | 0.450 | 0.36 | 0.07 |
| 46 | 118760 | 0.500 | 0.36 | 0.07 |
| 47 | 113856 | 0.427 | 0.35 | 0.08 |
| 48 & 49 | 233680 | 0.443 | 0.27 | 0.07 |
| 50 | 117022 | 0.582 | 0.49 | 0.07 |
| 51 | 115098 | 0.520 | 0.29 | 0.07 |
| 52 | 118324 | 0.535 | 0.29 | 0.09 |
| 53 | 115190 | 0.480 | 0.32 | 0.06 |
| 54 | 117000 | 0.510 | 0.29 | 0.05 |
| 55 | 108940 | 0.620 | 0.40 | 0.08 |
| 56 | 118880 | 0.520 | 0.50 | 0.07 |
| 57 | 118740 | 0.72 | 0.60 | 0.20 |
| 58 | 57780 | 0.50 | 0.50 | 0.15 |
| 59 | 94080 | 0.72 | 0.80 | 0.40 |
| 60 | 106480 | 0.58 | 0.80 | 0.40 |
| 61 | 78500 | 0.50 | 0.40 | 0.23 |

Though the above record is very satisfactory it is easily understood that to continue shipping without developing is an unsound policy which cannot be followed indefinitely. While this ore has been mined for shipment no development has been carried on. However, this past year of operation has not made any serious inroad on the ore available. Instead it has opened up much ground, making possible a clearer understanding of the nature of the vein system, and exposing a considerable volume of mill ore in the main Delta workings. Until this situation is accurately set out in detail on an assay map no positive statement can be made regarding the volume and value of such ore but it is the opinion of those who have mined the ore that has been shipped, men of long experience, that a minimum of 50 tons per day, that will average $8.00 in gold, can be mined from above the lowest adit on the main Delta system, for a period of two years. The writer agrees with this estimate.

As a potential source of profitable bodies of mill ore the whole property merits serious consideration. The shipment of 3000 tons of ore, at a profit, demonstrates unmistakably the existence of pay values. Such sampling as has been done to date at many places outside the areas from whcich shipments have been made indicates a widespread, distribution of gold values sufficiently high to yield a profit if the ores are milled on the ground. The most promising undeveloped sources of mill ore, - the Leggat and Maxamillion veins can be prospected to a depth of at least 500-ft by a system of adits at a very low cost. The cost of exploration on the Hall and Thompson claims will be more expensive but not necessarily very high.

The known distribution of gold over a considerable area, in profitable amount, justifies the exploration necessary to prove the volume of mill ore available, and there is every reason to anticipate a tonnage that will pay a satisfactory return on the investment.

Phoenix, Arizona,
December 1st, 1934.

Respectfully submitted,

A. L. Flagg.

# MAX - DELTA MINE SAMPLING

In cutting the samples described on the following pages, large amounts of material were taken. The samples were cut with (a) moils, (b) drift picks or (c) a stoper with a broad bit, according to the conditions at the site sampled. The average weight of the individual samples was more than thirty pounds.

Each sample was put through a chipmunk crusher twice, then put through a sample splitter. One half of the final cut was sent to the assayer and one half preserved by the Company.

The rejects from the splitting operations are still preserved, intact and in the original sacks. It is likely that these will be used later for any preliminary ore testing that may be carried on.

MAX - DELTA MINE SAMPLES.

1.Across 12 inches compact quartz,on hanging wall,north side of winze,at portal of upper tunnel. 1.08 oz gold.

2. In Upper Tunnel; 3-ft south of Sta.101 (portal)across 18 inches solid quartz on foot wall;light copper stains. 2.42 oz gold.

2A At location No.2;across 18 inches crushed vein material between quartz of No.2 and hanging wall. 0.04 oz gold.

3. Ten feet south of No.2 sample;across 9 inches quartz like No.2 with less copper but more iron sulphides. 0.96 oz gold.

3A At location No.3;18 inches of crushed vein material similar to 2A,but on footwall side of quartz. Tr Gold.

4. Ten feet south of No.3;across 26 inches crushed vein filling with few quartz streaks 0.04 oz gold.

5. Ten feet south of No.4;across 18 inches crushed vein filling with small amount of quartz. 0.10 oz gold.

6. Ten feet south of No.5; across 14 inches similar to No.5 with a little more quartz. 0.30 oz gold.

7. Ten feet south of No.6;across 20 inches,-on foot wall 2 inches of firm quartz,balance crushed vein filling. 0.76 oz gold.

8. Ten feet south of No.7;across 16 inches of hard quartz on foot wall side of vein. 0.30 oz gold.

8A At location No.8;across 3-ft crushed vein filling from quartz of No.8 to hanging wall;some quartz stringers. 0.06 oz gold.

9. Ten feet south of No.8;across 12 inches solid quartz in small raise from back of drift. 0.44 oz gold.

10. At Sta.102,approximately 10-ft south of No.9;across 28 inches of quartz on footwall;two other quartz stringers not included. 1.50 oz gold.

11. Ten feet south of No.10;across 12 inches quartz at the north end of small stope. 0.54 oz gold.

12. In back of small stope,approximately 10-ft south of No.12; across 18 inches crushed vein filling,some quartz. 0.30 oz gold.

13. In back of small stope,approximately ten feet south of No.12 20-ft above the rail,across 2-ft mostly quartz. 0.52 oz gold

14. In back of small stope,approximately 10-ft south of No.13,about 12-ft above rail,across 24 inches crushed vein filling and quartz with the quartz predominating. 1.32 oz gold.

15. In back of small stope,approximately 10 feet south of No.14, across 36 inches crushed quartz and vein filling 10-ft above rain 0.72 oz gold

16. Ten feet back from face upper tunnel,across 42 inches of back, of which 6 inches on footwall is quartz,rest crushed vein. 0.24 oz gold.

17. On 200 level;approximately opposite Sta.203,at north end of underhand stope;6 inches quartz on Hwall,6 in crushed vein 0.24 oz gold.

18. Across 12 inches in footwall,in "glory hole" around old shaft, about 25-ft above rail,200 level. 0.10 oz gold.

19. Across 36 inches directly above No.18 0.30 oz gold.

20. On south side of shaft "glory hole"about 20-ft above rain, across 48 inches quartz and crushed vein filling o.14 oz gold.

21. On south side of shaft "glory hole",about 5-ft beloe No.20, across 84 inches quartz and crushed vein filling. 0.16 oz gold.

22. On 200 level;about 5-ft north of Sta.205,across 36 inches of shattered quartz. 0.26 oz gold.

23. See Drill Hole Sample No. D-1

24. At Sta 205 on 200 level;across 24 inches crushed vein filling with little or no quartz. 0.20 oz gold.

25. On 200 level;13-ft south of Sta.205,across 24 inches with a small amount of quartz. 0.38 oz gold.

26. Across 24 inches,mostly quartz on east side of drift,just opposite chute No.5 0.52 oz gold.

27. Missing.

28. On 200 level,from back of drift on north side of Chute No.5, across 48 inches,much quartz 0.02 oz gold.

29. On 200 level;across 48 inches on south side of manway at Chute No.5,about 8-ft above rail,just above platform. 0.10 oz gold.

29A In stope off 200 level;above Chute No.5,20-ft above rain and over platform,across 36 inches,mostly quartz, 0.28 oz gold.

29B Opposite No.29A,in stope above Chute5,200 level,across 16 inches quartz and crushed vein on south side of stope. 0.80 oz gold.

30. Sta 207 plus 8-ft,north end of stope;across 6-ft of c rushed material,ore in wall, 0.16 oz gold.

30A Across 33 inches of mineralized footwall,under No.30, in the footwall. 0.10 oz gold.

31. In center of back of stope at Sta.207 plus 8-ft,across 6-ft of crushed material,mostly quartz. 0.16 oz gold.

32. In 200 level;approximately at Sta.208,across 30 inches of hard dull quartz. 0.24 oz gold.

33. In 200 level (on vertical of "B" vein) across 6 inches crushed quartz and vein filling

34. In 200 level,on "B" vein,in short crosscut near Sta.213,across 10 inches,north side, 0.80 oz gold.

34A On opposite side of short crosscut,at location No.34 on "B" vein,across 14 inches quartz. 1.00 oz gold.

35 On 300 level,in north face of drift,across 10 inches quartz in hangingwall vein,5-ft back from face. 0.04 oz gold.

36. On 300 level;11-ft south of No.35,across 16 inches crushed vein with very little quartz. 0.12 oz gold

37 On 300 level;3-ft south of face of north drift,across 18 inches pf crushed vein filling 0.10 oz gold.

38 On 300 level;at north side of chute at Sta.305,across 24 inches of dull quartz. 0.08 oz gold.

39 On 300 level;on south side of chute,same location as No.38, across 48 inches of quartz. 0.06 oz gold.

40 On 300 level;approximately at Sta.305 (old) across 48 inches of quartz 0.16 oz gold.

41 On 300 level;across 50 inches quartz,firm and dull,about 10 feet south of No.40 0.12 oz gold.

42 On 300 level;on south side of 500-ft incline shaft, across 54 inches dull quartz. 0.06 oz gold.

43 On 300 level;about 20-ft north of Sta.306 (old) across 36 inches crushed vein on footwall side. 0.10 oz gold.

43B On 300 level;at location of No.43,across 24 inches of dull quartz next above No.43 0.02 oz gold.

43C On 300 level;at location No.43,across 36 inches crushed vein and quartz,east of 43B 0.16 oz gold

43D On 300 level;at location No.43,across 48 inches,nest east of 43C,all crushed vein material 0.08 oz gold.

44 On 300 level;across 36 inches in face of small drift started near location of Nos.43 to 43D,6 inches quartz on west 0.06 oz gold.

45 On 300 level;from N side of manway in Chute at Station 306, across 7½ feet. 0.08 oz gold.

46 On 300 level;north side of crosscut,opposite chute near Sta. 306 (old) across 30 inches quartz 0.10 oz gold

47 On 300 level;south side of chute near Sta 306 (old) across 36 inches mostly quartz 0.30 oz gold.

48 On 300 level;across 36 inches,mostly quartz approximately at Sta.307, old survey. 0.10 oz gold.

49 On 300 level;above No.48,just under bulkhead in manway,across 36 inches;12 inches quartz,rest crushed vein filling 0.26 oz gold.

50 On 300 level;just above No.49,five feet above bulkhead,in manway across 36 inches in pillar 0.64 oz gold.

51 On 300 level;in back of stope,above 307 raise,across 36 inches of vein matter. 0.40 oz gold.

52 On 300 level;location of No.51,about in center of stope,across 36 inches vein matter 0.14 oz gold.

54 ~~53~~ On 300 level;in same stope,south side of pillar,location No.53 across 40 inches 0.16 oz gold

53 ~~54~~ On 300 level;in same stope,south side,on pillar next to raise, across 108 inches, 0.24 oz gold.

55 On 300 level; in same stope,directly over platform,between two chutes,across 106 inches, 0.22 oz gold.

56 On 300 level;in same stope,opposite No.54,on south side of raise to 200 level,across 41 inches 0.22 oz gold.

57 On 300 level;in same stope,on south side of raise,about 12-ft below No.57,across 30 inches crushed vein material 0.38 oz gold.

58 On 300 level;around turn from Sta 308 (old survey) plus 5-ft across 41 inches, 0.12 oz gold.

59 On 300 level;at north end of 1st underhand stope,just beyond Sta 308 (old) 5-ft below the rail,across 48 inches 0.40 oz

60 On 300 level;same underhand stope,about 8-ft below rail level, across 36 inches. 0.80 oz gold.

61 On 300 level; directly above No.60,about rail level,across 30 inches,hangingwall showing sulphides 0.48 oz gold.

62 On 300 level;above No.60 at rail level,across 24 inches of quartz on the footwall. 0.40 oz gold.

63 On the 300 level;in south end of new stope,south side of raise, about 12-ft above rail,across 36 inches in footwall showing sulphides with little or no quartz 0.80 oz gold

63A Approximately the same cut as No63,coarse 0.36 oz gold.

64 On 300 level;at north end of next underhand stope,three feet below rail level,across 24 inches quartz, 0.28 oz gold.

65 On 300 level;at bottom of north end,same underhand stope, across 48 inches,including 10-in footwall mineralized 0.82 oz gold.

66 On 300 level;at bottom south end same underhand stope,about 8-ft below rail,across 36 inches (ore in both walls still) 0.32 oz gold.

67 On 300 level;directly above No.66 at nearly rail level,across 24 inches,but still ore in both walls, 0.14 oz gold.

68 On 300 level; in raise near south end,last underhand stope, across 48 inches about 30-ft above rail level. 0.12 oz gold.

69 On 300 level; in raise location No.68,some 5-ft lower,across 18 inches footwall material and heavy sulphides, 0.56 oz gold.

71 ~~70~~ On 300 level;across 12 inches of quartz in face of drift, as of October 1,1934, 0.82 oz gold.

70 ~~71~~ On 300 level;fifteen feet from face,across 12 inches crushed vein material,in back of drift;no quartz, 0.10 oz gold.

72 Above the 200 level;location No73,sample gob, 0.16 oz gold

73 Above 200 level,sample of gob in new stope 0.20 oz gold

74 On 200 level;in inclined raise,at 1st chute,12 inches of quartz dipping west,

75 On 200 level;at location No.74,in raise on east side,across 36 inches,hangingwall streak ("A" vein?) 0.34 oz gold.

76 to 90 inclusive,outside samples,on subsequent list.

91 On 400 level;10 inches quartz on hangingwall side,directly under dike,at beginning of drift from shaft 0.02 oz gold.

91A On 400 level;directly under No.91,across 24 inches crushed vein matter,much quartz 0.68 oz gold.

92 On 400 level;1-ft south of No.91,across 24 inches white quartz some siderite,no hematite, 0.08 oz gold.

93 On 400 level;10-ft south of No.92,across 30 inches white quartz some iron stain,some sulphides,no hematite 0.02 oz gold.

94 On 400 level;10-ft south of No.93,across 14 inches quartz, vein narrowing to south into break 0.22 oz gold.

95 On 400 level;Sta 402 plus 23-ft across 18 inches of which 4 inches is quartz,rest crushed vein material, 0.06 oz gold

96 On 400 level;Sta 402 plus 33 ft,across 18 inches crushed material and 2 inches quartz, 0.04 oz gold.

97 On 400 level; 10-ft south of No.96 across 12 inches crushed material and fine quartz,in fault breccia 0.06 oz gold.

98 On 400 level; 10-ft south Of No97 across 20 inches fault breccia under smooth wall, 0.10 oz gold.

99 On 400 level; 10-ft south of No.98 chipped out of hard smooth wall 0.06 oz gold.

100 On 400 level;face across 41 inches crushed material with no appreciable amount of quartz 0.06 oz gold.

101 On 400 level; north of Sta 402 about 12 feet,across 36 inches of diorite and sulphides,with some quartz. 0.04 oz gold

102 On 400 level; in crosscut west from Sta 402,at face 36 inches down the south face of xcut. 0.06 oz gold.

102A On 400 level; in crosscut,west from 402,at face across 48 inches north side 0.08 oz gold.

102B On 400 level;in crosscut west from 402,in diorite just under dike at contact,siderite and sulphides, 0.08 oz gold

106 In 500-ft incline,just under platform at 300 level,across 48 inches dull quartz 0.08 oz gold

107 In 500-ft incline shaft,on north side,about 30-ft down from No.106 across 36 inches 0.10 oz gold.

## DRILL - HOLE SAMPLES

A few test drill holes were drilled into the walls,not for the purpose of adequately prospecting,but more to determine to what extent the gold values might reach into the wall in selected spots.There are not the necessary facilities for deep drilling,which might disclose more important data. In the further development of the property drilling should play an important part.The few holes drilled indicate some values in the walls.

| | | |
|---|---|---|
| D-1 | On the 200 level;into hanging wall near Sta 205,depth of hole 65 inches, | 0.02 oz gold. |
| D-2 | On the 200 level;approximately 20-ft south of D-1; depth of hole 60 inches, | 0.10 oz gold. |
| D-3 | On the 200 level;approximately 11 feet south of D-2, depth of hole 80 inches | 0.02 oz gold. |
| D-4 | On the 200 level;approximately 12 ft south of D-3 depth of hole 60 inches | 0.02 oz gold. |
| D-5 | On the 400 level;at location of cut sample No.98,depth of hole, 62 inches | 0.04 oz gold. |
| D-6 | On the 400 level;at location of cut sample No.97,depth Of hole 36 inches | 0.02 oz gold. |
| D-7 | On the 400 level;at location cut sample No.96,depth of hole 62 inches | 0.12 oz gold. |
| D-8 | On the 400 level; abandoned,bad ground. | |
| D-9 | On the 400 level;opposite Sta 402, depth of hole 62 inches | 0.02 oz gold. |
| D-10 | On the 400 level;at Sample 101,above heavy sulphides area and probably into dike,63 inches | 0.04 oz gold. |

Max-Delta Outside Samples.

The following samples are from locations outside the main workings (Sketch No.2) with the exception of a few samples of old fill which ran into and still lies in the shaft. It is not claimed that the whole property has been sampled thoroughly as yet, for there are many shallow openings, as well as inconspicuous outcrops, which have not been investigated. In addition to the samples listed herein a great many more have been taken by the Company or by lessees. These are not described because no accurate information is available as to the exact location or the sampling conditions.

76 From open cut,south side of road,on Delta No.2 claim. Only shattered outcrop,vein not in place

77 From shaft 10-ft deep,east side of draw,northeast of Hall Shaft;Vein Str N 17 W, dip 80 E; 10 inches quartz 1.10 oz gold.

78 On knoll west of No.77;shallow shaft,-8-ft deep,vein Str S 40 E, dip W 87;12 in quartz on hangingwall, 10 inches crushed vein fill (horse?) 4 inches quartz on footwall

79 Sample of about one ton on dump of 125-ft incline shaft on Thompson claim (ore shipped)

80 Open cut on ridge north of Hall Shaft;vein Str S 30 E, dip 47 W;across 36 inches quartz and schist lenses 0.40 oz gold.

81 On ridge north of Hall Shaft;shallow open cut,showing broken outcrop 2o inches wide Str S 25 E dip W 67 0.48 oz gold.

82 Shallow opening in gulch on Thompson claim,near south end; flat vein 6 inches,Str S 20 W 0.74 oz gold

83 At "Double Incline Shaft" on Thompsonmclaim;vein Str S 20 E, dip 69 W,4 to 10 inches broken quartz, 3.32 oz gold

84 Open cut on ridge NE of 125-ft incline shaft;vein Str N 5 E, dip E 82; 4 to 10 inches quartz with heavy iron stain 1.26 oz gold.

85 Narrow quartz stringer on N side of road,SE of Hall shaft;a pile of 300 lbs shipped.Vein Str N 15 E.Vein irregular 0.42 oz gold.

85A North of No.85 about 50-ft; in shaft 10-ft deep a 7 inch quartz stringer;possibly not in place 0.88 oz gold.

86 South side of road,near No.85 shallow open cut;vein Str S 12 W dip 78 E; 7 inches quartz 0.36 oz gold.

87 Pile of ore shipped;about 700 lbs 0.24 oz gold.

88 From outcrop east side of gulch,east of Thompson,location of new claim; across 3 feet. 0.08 oz gold.

89 Across 10 inches quartz,north side 2-ft hole Maxamillion claim,near SW corner 14.04 oz gold.

90 Open cut south of Hall Shaft Str S 8 E shattered quartz

outcrop definite walls not visible,quartz blocks lo to 14 inches in thickness,probable width of streak 0.52 oz gold.

108 Float from flat,south end Ora Granda 0.04 oz gold.

109 Float from flat south end of Ora Granda 0.02 oz gold

110 Float from south end Ora Granda 0.02 oz gold.

111 Across 10 inch outcrop in draw,S 5 E 100-ft from south end of rhyolite dike west of Sta.100, Str S 25 W 0.08 oz gold.

112 Float in main Delta wash at S end rhyolite dike ( F 11) at junction with east draw 0.02oz gold.

113 Adit on old "Montana"; open cut 15-ft,tunnel 10-ft,across 4 inches gouge and c rushed quartz and 8 inches solid quartz 0.16 oz gold.

114 From open cut above Sample No.113, 8 inches quartz on E side. Vein Str S 10 E dip E 70 0.02 oz gold.

115 Across 16 inches quartz in opening east of trail near "glory hole" on Maxamillion on peak 0.88 oz gold.

116 Across 6 inches soft gouge-like material with some crushed quartz directly under No. 115 0.30 oz gold.

117 Across 30 inches firm quartz and 4 inches of gouge,same location Nos.115-116,but above 0.46 oz gold.

118 On east side old "Glory Hole" Maxamillion across 16 inches soft material,including 4 inches waste;above No.117 0.10 oz gold

119 Across 30 inches of quartz in "Three Way Tunnel,near north end line of Maxamillion claim 0.46 oz gold.

120 Across 54 inches about 30-ft above portal of 150-ft tunnel on Maxamillion claim;west streak 0.26 oz gold.

121 On east wall in 150-ft tunnel, on Max claim,12-ft back from face where vein goes into east wall. 0.06 oz gold.

122 44-ft back from face 150-ft tunnel on Max;across 36 inches,on hangingwall 20 inches glassy quartz,16 inches spongy quartz 0.04 oz gold

123 In 150-ft tunnel on Max;across 26 inches north side small raise about 50-ft in tunnel 0.32 oz gold.

124 Same loc.No.123; 24 inches on east side.Principally quartz breccia and crushed country rock 0.04 oz gold.

125 Across 18 inches face of Leggat tunnel,including 8 inches of crushed wall rock on hanging wall side 0.06 oz gold.

126 In face Leggat Tunnel,across 12 inches solid quartz, iron stained 0.24 oz gold.

127 In Leggat Tunnel, 12-ft back from face, across 28 inches of milky quartz, 0.02 oz gold.

128 In Leggat Tunnel, 18 feet from face across 12 inches quartz similar to No.127,on footwall side 0.04 oz gold.

129 In Leggat Tunnel, at No.128, across 18 inches crushed wall rock to hanging wall. 0.02 oz gold.

130 Across 22 inches quartz above the portal of the Leggat Tunnel,below junction of lenses 0.22 oz gold.

131 Above No.130, across 24 inches of quartz in the east lense only, 0.12 oz gold

132 Above No.130 across 12 inches west lense 2.26 oz gold.

133 Loose fill in shaft just under 300 level 0.40 oz gold

134 Coarse material out of No.133 0.24 oz gold

135 Fines out of No.133 o.42 oz gold

136 Loose fill in shaft,lower down 0.20 oz gold

137 Loose fill at 30-ft below 300 level in shaft 0.18 oz gold

138 Loose fill in shaft below 300 level 0.20 oz gold

139 Across 9 inches in north end bottom of hole from which No. 89 sample was taken 1.02 oz gold

140 Across 10 inches beyond No.139 0.64 oz gold.

141 Ore pile at No.139 0.82 oz gold.

142 Ore pile at No.139 0.68 Oz gold.

# ACE MINING & DEVELOPMENT CO

## GEOLOGICAL REPORT.

The geological studies of the Delta Mine,property of the Ace Mining & Development Co.,have been divided into three purely arbitrary parts, a division based in part on the immediate requirements of the operating company,in connection with it's development, and in part on the natural geographical divisions of the property. The first area to be mapped and studied in detail comprises those parts of the Delta and the Delta No.2 claims shown in Sketch 2,which accompanies this report. The second unit takes in the Delta No.3, the Hall and Thompson claims. The third unit deals with the Leggat and Maxamillion claims.

In the absence of any petrographic studies the rock classification used in this report necessarily will be subject to revision and correction. The immediate requirements of the operators do not make it necessary to draw fine distinctions of rock classification.On the other hand more detail than is available with respect to the nature and the composition of the ores is really desirable. The matter of ore genesis will not be discussed in this report.

ACE MINING & DEVELOPMENT COMPANY

GEOLOGICAL REPORT

PART I

Broadly speaking the rock formation in the area described in Part I consists of a complex series of dark gneissic rocks, believed to occur as a roof pendant in the granite batholith underlying the South Mountains and adjacent areas. Pegmatite and aplite dikes, one or more porphyritic rhyolite dikes and possibly a fine grained, dark, basic dike of approximate diotite composition have been encountered in the first division of the territory. In the area covered by Part II there are some considerable quantities of a light sericitic schist and a darker rock, which is principally hornblende. These have not been found to any extent in either of the other two areas.

The principal features of the gneissic formation are: (1) the general predominance of dark colored minerals; (2) conspicuous deformation in certain sections which probably antedate the period of ore deposition; (3) it's blocky nature; (4) occasional weaker and softer zones which sometimes have considerable influence on the physical nature of the ore deposit; and (5) a striking irregularity in the distribution of the several most conspicuous characteristics.

In a preliminary report on the property, dated December 1st, 1934, on page two, the occurrence of three veins of different strike and dip was mentioned. It is probable that the descriptions of the separate veins may require modification after more work is done. At the present time it seems that the vein striking N 10° W with a low dip to the east probably has a northeasterly strike. As development proceeds and more is learned about the individual veins, and their inter-relation, more accurate statements can be made as to the age, position and importance of each vein.

Such records of previous operations as are available indicate that the principal reason for the abandonment of the property by the original operators was the failure to to appreciate the true significance of some of the complicated geological structure. There is no indication that any of the previous operators realized that such veins as had been partially prospected in these principal workings were definitely cut off by a fault just below the lowest adit level (300 level) and that the shaft had been sunk from this point in the fault plane. There is no intimation that more than one vein had been recognised in these workings.

An appreciation of these fundamentals is essential to the proper and successful development of the property. Even a partial solution of this problem requires a large amount of detailed mapping. The most essential data are shown on the two underground geological maps attached hereto.

The drift on the 400 level appears to have been driven entirely along a fault which shows many indications of considerable movement, without a clue as to the probable extent or direction of such movement. Nothing definite can be said as to it's relative age. The fault breccia is very fine

and the fault zone moderately wide. Along with the fault, commencing at the shaft and extending southward about forty feet on the hanging wall side of the fault is a small amount of quartz, carrying low gold values. This quartz ends abruptly against a block of unaltered gneiss. Beyond this point the hanging wall shows sulphides, in the gneiss, in varying amounts. This wall has never been crosscut.

The Shaft Fault (Fault "A" on the maps) and this 400 level fault, (Fault "B" on the maps) appear to intersect on the 400 level about at the shaft. The calculated intersection on the 300 level is shown in Figure I and II on "Underground Geology I". In Figure I is the graphic method of determining the angle and course of this intersection. If these deductions are correct it is very evident that neither of these two faults will ever interfere with the further development of the steeper dipping veins as they are followed along their strike to the south.

In the face of the east crosscut just south of the shaft on the 300 level is an exposure of a rhyolite dike. The crosscut was not carried into the dike far enough to afford any dependable information as to the strike, dip or width. It is assumed that this is the foot wall of the same dike exposed in the crosscut to the west, directly under in the 400 level. In calculating the probable movement of this dike, vertical and horizontal, (horizontal only at right angles to the plane of the dike) this exposure is assumed to have the same strike and dip as the footwall below. It is believed that the dike is faulted by the "A" fault, evidence of great disturbance beginning at a point about 20-ft east of the centerline of the 300 level drift from which this crosscut takes off, and extending right to the dike. In Figure III the displacement of the dike is shown (Underground Geology I) The calculations indicate that the so-called "Shaft Vein" and possibly much of the profitable shoot in Zone II, Underground Geology II, are to be sought southwest of the shaft at about 70 feet distance.

On the second (II) map of underground geology the major features of the first four levels are shown. Very little work is done on the fifth level (see Assay Map) and no detailed mapping was done there. The bottom level or whatever other work may be below this fifth level is under water and so inaccessible. So far as is known there is no dependable map of any of these lowest workings.

Four zones are laid out on the "Underground Geology II" map, by which it is hoped to express a little more clearly the conditions due to vein intersections and the small amount of post-mineral movement. No satisfactory theory can be formulated concerning the supposed faulting of the veins on each other until more ground has been opened up. To differentiate between the several veins more must be known about the specific nature of individual veins and more positions must be mapped. It is believed that most of this necessary information will be disclosed in the normal progress of exploration without any special or expensive side development.

At best any attempt to express in plan such conditions can be only an approximation because geological phenomena do not confine themselves to straight lines or plane surfaces. It is also true that some features not observed, or if observed possibly considered inconsequential, may have influenced the situation profoundly, even to the extent of rendering almost useless some of the conclusions drawn. The zones referred to include only ground above the floor of the 300 level.

Zone I is an area of limited horizontal extent. It seems to indicate a section containing but one of the veins, rather erratic in strike, with a moderately steep dip to the east. Not much high grade ore has been taken from this zone. Values are low but the width of the vein is very much greater at some points than anywhere south of the shaft. Certain prominent characteristics of higher grade shoots in other parts of the mine have been observed near the present ends (north) of this zone. Extention of the drift on the 300 level northwesterly might disclose other shoots of shipping ore. On it's dip, in this zone, this vein is affected by the "A" fault.

During the early part of the present operations Zone II was the most productive part of the property. Stope widths of five feet (wall to wall) of ore carrying almost an ounce to the ton were seen. This zone is an area of intersections. Apparently the three vein systems, noted previously, intersect within this zone at these levels. If the calculated effect of the disturbance along the "A" fault is proven, this zone of intersections should prove profitable for quite a depth below. One of the determining factors in the question of what depth is the relative strikes and dips of the veins that are involved. It is believed that this zone still has some possibilities above the 300 level. The most abundant evidence remaining of the real nature of this zone, i.e., that it is a zone of intersections, is to be found in the stoped section above the 200 level. Some dependable data can still be obtained from the "Intermediate Level" and pillars left in the stopes.

Zone III is a transition area. The so-called "Flat Vein" has not been identified here and there is strong evidence to support the belief that there has been a shifting of positions between the S 25-30° E vein of steep easterly dip and the S 5-10° W vein of more gentle easterly dip. It is not clear as yet which vein has had the greater movement, neither can it be determined which is the older. This zone is believed to have some possibilities above the 200 level.

Zone IV is an area of more regular conditions. It would seem that the two veins mentioned above, the S 25-30° E and the S 5-10° W veins begin to take their normal courses and they may be expected to continue with more or less regularity. Southward neither will be affected by either the "A" or the "B" fault except at very great depths. Neither of these veins has been explored to any great extent and each gives promise of an attractive volume of ore of a very good grade.

One important result of the detailed geological studies in the main Delta workings is the tentative determination of the probable position of the several veins to the north of Zone III and below the 300 level. The facts can be determined quickly at a small cost by driving a crosscut from the shaft at the 400 level, approximately S 45° W, not to exceed 100 ft. If the conclusions reached by these studies are proven a tonnage of ore at least equivalent to that originally contained in Zones I and II, above the 300 level or about 4000 tons can be reasonably expected over a similar vertical range.

Until further exploratory work is done in Zone III no positive tonnage of ore can be credited to this area. However, it is believed that this zone can furnish from between the 300 and 200 levels, not less than 2126 tons of ore with an average gold content of about 0.30 oz per ton.

In Zone IV there is indicated in the S 25-30° E vein between the 100 and 300 levels approximately 4200 tons of ore with a gold content of 0.858 ounce to the ton. No definite tonnage can be assigned to the S 5-10° W vein between these levels. It is interesting to note that in the drift on this vein, just begun on the 300 level, there is a total width of 66 inches of "pay rock" This face sampled in four different samples shows an equated gold content of 0.571 ounce to the ton. Such width and value, if consistent for any considerable distance along the strike, will add a considerable volume to the ore reserves.

On Sketch 2 the West Delta workings are shown in some detail. On the map of Surface Geology (I) other veins, less extensively prospected but productive in a small way under leasing operations are shown. As yet not enough data are available on these occurrences to make it possible to attempt any detailed description of them. However, during the past eighteen months this part of the property had produced, principally through leasing operations, approximately 1000 tons of ore with a gold content above 0.50 oz to the ton. Such development as there is has not reached any great depth and it is all very limited.

Summing up the situation in the area covered by Part I, or as much of it as has been studied in detail, there appears to be available definitely more than 10,000 tons (10,326) of ore having an average gold content of 0.432 oz. to the ton. This is all above the 300 level and opened by the present development work. There is every reason to anticipate the extention to the south and vertically of the two major veins in Zone IV, in areas of much less post-mineral disturbance. From what is known of them they may be expected to yield a considerable tonnage of very profitable ore.

## Part II (Outline)

The detailed mapping of the area to be covered in Part II is not complete. Preliminary investigations indicate several promising shoots and surface sampling is very satisfactory. The deepest work in this section, now inaccessible, is reported to show a considerable width of mill ore. From this area leasers have shipped during the past eighteen months several hundred tons of ore that has been profitable, and compared favorably in it's gold content with the ore shipped from other locations on the property.

## Part III (Outline)

Nothing but preliminary investigating and surface sampling has been done in this section. The detailed work here bids fair to be of very great importance because of the possible large tonnage of mill ore. No other portion of the property seems to promise so much in the way of large tonnage for a similar area as is to be found here. The contour of the land makes it possible to develop it cheaply, by tunnels, and quickly. Ore can be delivered by a gravity tramway to any feasible mill site on the whole property. From very shallow and limited surface workings more than 500 tons of ore have been shipped by leasers. The average gold content was over 0.70 ounce to the ton and some very high assays have been had on surface samples.

Though on some parts of the Delta property the geology is undoubtedly somewhat complicated there is no indication of the kind of problems impossible of solution. Accurate observations of the features as the development proceeds will be of great help in solving any problem that is met with. Nothing has been observed about the property to indicate definite limits beyond which further prospecting is almost certain to be futile. On the contrary much evidence as is available creates confidence in the future of the property. Past production records, positive ore in the principal Delta workings, and the probable ore indicated at many places where leasing operations have been carried out profitably, give assurance of a sufficient volume of ore to justify the starting of a comprehensive development program, which may be expected to indicate, very shortly, the advisability of providing a mill on the property.

Phoenix, Arizona,
April 5th, 1935.

Respectfully submitted,

W. R. Flagg

35

## RECOMMENDATIONS.

A study of the general report and the geological report on the Delta property of the Ace Mining & Development Company clearly indicates that there is no lack of places in which development can be expected to show satisfactory results. Leasing operations at many points on the ground have indicated the existence of profitable ore bodies. Therefore the determination of a site or sites for further development work becomes simply a matter of the funds available for such work. For that reason all of the more important possibilities will be discussed rather than attempting to lay out a specific plan.

Naturally the area described in Part I of the Geological Report is the most attractive because it has the most extensive development now and the most is known about this particular section. As is indicated in that report there is a known tonnage of ore with an average gold content that will yield a very satisfactory profit, if treated on the ground. There is also a small amount of ore used in the gob above the 200 level and a dump estimated to contain 9000 tons which the original operators planned to mill. In this connection it might be mentioned that there are many hundreds of tons of material on dumps scattered over the property which can be treated in a mill with a profit on the ground.

There are two important pieces of development work possible in this section. The first is the further exploration of the two veins in Zone IV, which is now in progess. All the work done on these veins beyond the point where they separate has paid for itself. The new drift just begun on the S 10° W vein gives promise of doing as well. However, it is to be expected that leaner zones will be encountered with ore of a grade that cannot be shipped. In any development plan it is desirable to allocate at least $10,000 for the immediate exploration of these two veins on and above the 300 level. Further development of these two veins would follow as a matter of course in the normal operation of the property.

The most economical manner in which these two veins can be opened up below the 300 level is through a winze. If the raise now being put through to the 200 level is carried through to the surface such a winze could be started directly under the raise and the sinking carried on from the surface, as an independent operation. The probable cost of completing the connection with the surface will be about $1000. To this should be added some $4000 to explore below the 300 level.

The cost of driving the proposed crosscut on the 400 level, southwest from the shaft to cut the faulted segments of the vein opened above in Zones I and II will be about $2000. Another $500 sould be allowed for any possible incidental expenses that may be incurred in preparing for this work.

Miscellaneous exploration in this area, as suggested in the Geological Report, to the extent of about $2500 is justified. In this connection the use of some standard portable diamond drill might prove very advantageous and such a drill can be used very profitably on other parts of the property.

It has been suggested that a crosscut be driven from the lower West Delta tunnel (see Sketch 2) to connect with the 500-ft incline shaft. This would intersect the shaft at a point about sixty feet below the 300 level and the length of the crosscut would be six hundred feet. The cost of such a crosscut is estimated to be $15,000. It would afford a cross-section of the less extensively explored area on the west of the main Delta workings and, of course, would accomplish what the projected crosscut from the 400 level would do with respect to the faulted segments.

The next most important development project is on the Leggat and Maxamillion claims, referred to as the "Max" by those familiar with the property. The natural advantages of this situation were pointed out in the general report. Though there is a considerable amount of work done on those two claims nothing can be said about the amount of ore that is developed, except that there are several thousand tons of material on dumps that are suitable for milling. The scattered development has disclosed conditions sufficiently convincing to justify a rather elaborate program of work in this section. A compressor of not less than 350 cu. ft. capacity and the necessary accessory equipment should be provided and the development work carried out with the object of proving up and making accessible the large tonnage of mill ore that is indicated. For this project not less than $25,000 should be provided. It is believed that this is the greatest potential source of mill ore on the property.

If the larger plans of development outlined above are carried out no elaborate program is necessary for the Hall-Thompson group for the present. The work suggested above is calculated to afford ore enough to supply a suitable mill for some time to come. However, from time to time some exploratory work should be done on the Hall-Thompson group. The Donivin-Tinney lease area should be explored at depth and certainly the 125-ft incline shaft should be investigated. For this work it would seem that not more than $5000 need be provided for the first year.

The above development program calls for an expenditure of $65,000 if all the projects are undertaken. This is believed to be ample for the work contemplated and sufficient to open up the property to a point where actual production will take care of all further development. To this sum must be added the cost of the necessary equipment. Such equipment as there is on the ground now is satisfactory for the sort of work in progress but it is not suited to the proposed work. Very little will be required in the way of buildings and almost nothing for roads. Suitable mining equipment is the most important thing. The estimated cost of all the requirements is $35,000.

No investigation has been made of the water situation. All the water now used about the mine is brought in barrels. The 500-ft incline shaft is said to have furnished ample water for a small mill in 1916-17 but as the operations of the mill were not steady this information is of doubtful value. The Hall shaft, nearly 100-ft deep, has some water but there is no accurate data regarding the amount it will produce. If sufficient water cannot be developed in drilled wells in the east-west valley crosing the property an almost limitless supply, far in excess of the property needs, can be had at a short distance north. The development of an adequate water supply is not considered to be a serious problem.

While the underground development is in progress serious thought should be given to the subject of a mill. The rejects from systematic sampling during the last part of 1934 have been saved for testing purposes. For preliminary work this is the most satisfactory material that can be obtained for it is an accurate representation of all the ore exposed at the time the sampling was done. There is probaly a ton or more of this material which is ample. Properly conducted tests will indicate the essential features for the most suitable mill to give the best results. In all probability it will be an all flotation plant. Assuming that it will be and that the capacity is to be 100 tons per 24 hours the probable cost will be $75,000.

To determine what material in the mine may be classed as ore it is necessary to know the cost of mining and the cost of milling. To arrive at the total cost there should be added to this sum a sum sufficient to cover the interest on the priginal investment, the depreciation of the equipment, and the depletion of the mine, taxes and amortization.

Past experience in the mine indicates that when the work is properly organized the mining cost should not exceed $3.00 per ton. In a mill of 100 tons daily capacity, operating on ores of a somewhat similar nature and making recoveries in excess of 90% the costs do not exceed $3.00 per ton. If to this is added $1.50 per ton to cover the fixed charges indicated above, then the indicated minimum grade of material that can be mined and milled without any loss is $7.50; that is, the ore must contain at least $7.50 in recoverable value or it cannot be handled. Sampling to date indicates that the general average recoverable content is quite a bit more than this.

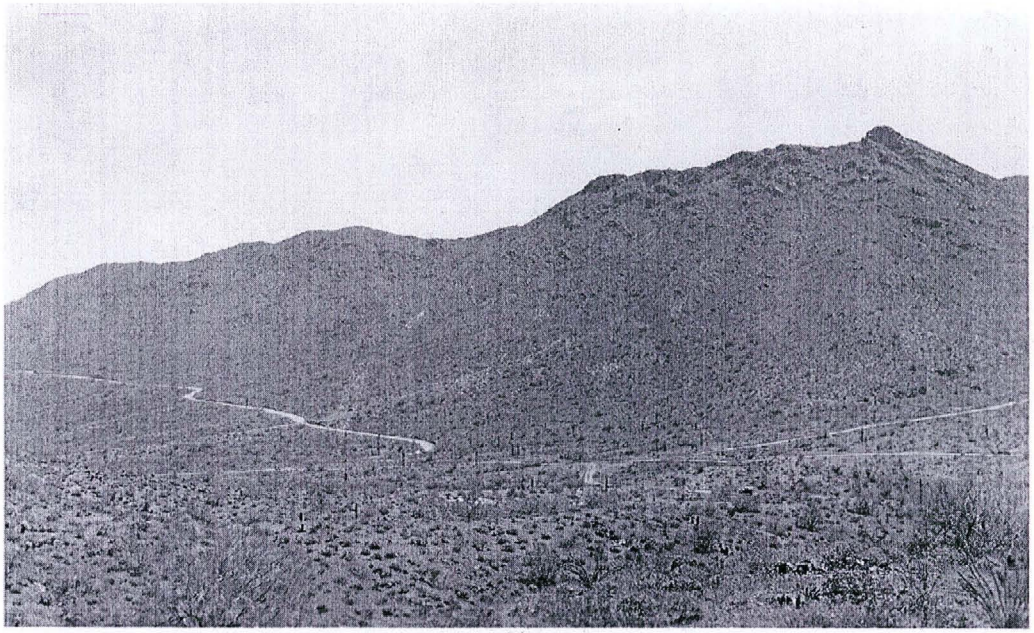
The recommendations may be summarized as follows: (1) the property should be equipped with the necessary machinery and other facilities to insure efficient and economical results in whatever development program is determined upon; the estimated cost of these improvements is put at $35,000. (2) major development programs on the Delta and Max groups to cost $20,000 and $25,000 respectively; (3) a mill, based on tests of the ore and other pertinent data to cost $75,000. In addition alternative or secondary development projects have been suggested involving an expenditure of another $20,000. If all the projects are carried out the total capital outlay will be approximately $175,000.

Phoenix, Arizona,
April 5th, 1935.

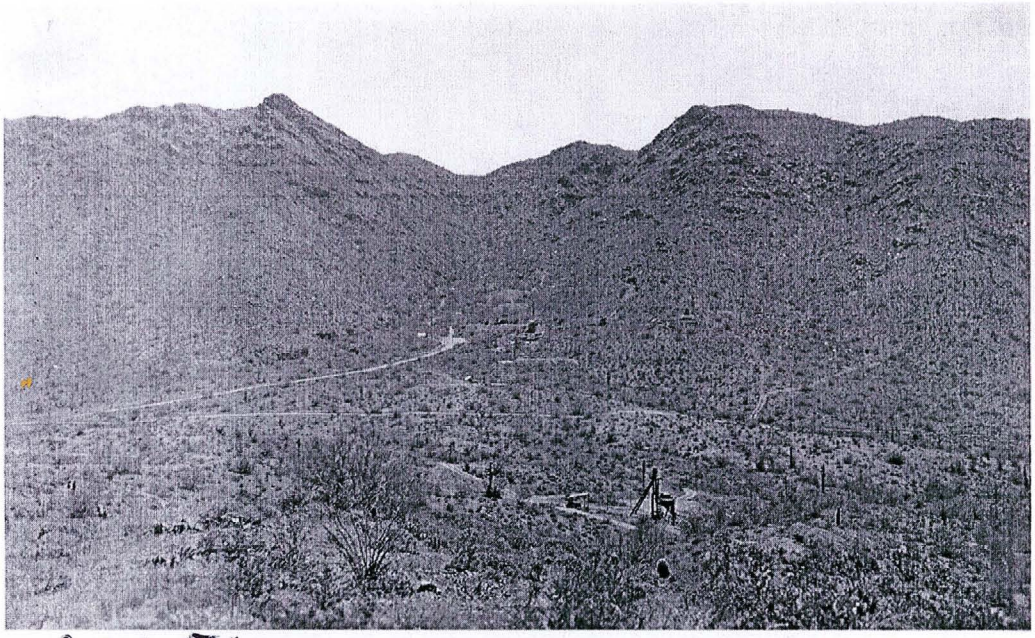
Respectfully submitted,

A. L. Flagg.

35

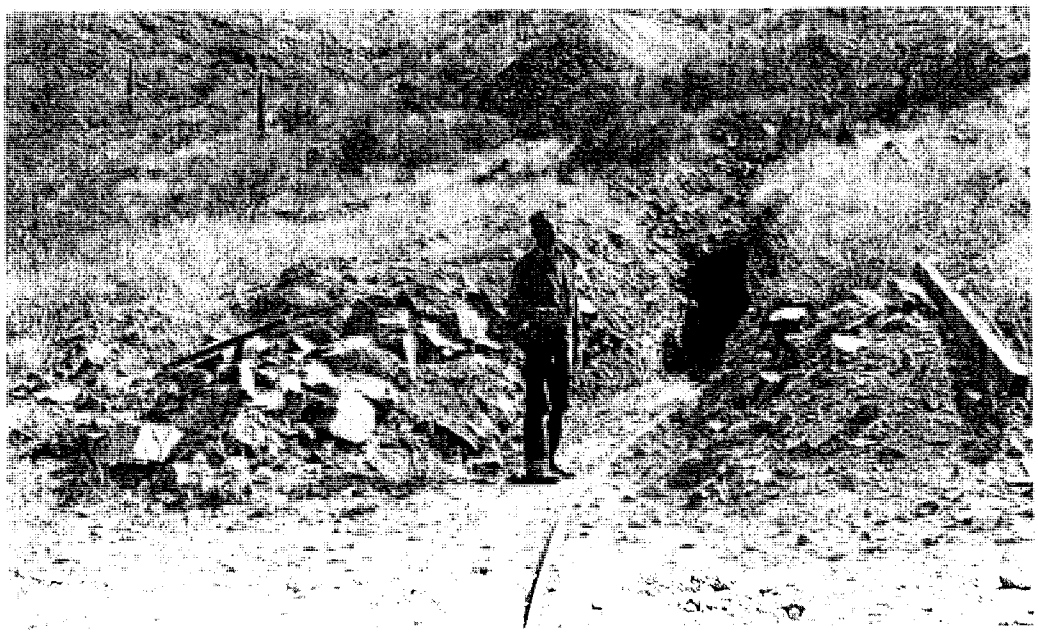


A-31-55



A-31-56

Panorama,looking SE from approximately the S end center of the Thompson claim.Lower road to left (NO.1) to Phoenix. Rising road to left (No.1) senic road to amphitheater.Original Maxamillion discovery at left of highest peak.Middle road to right:St.John's Mission.Lower to right Hall Shaft. Upper to right: main Delta workings. In No.2: main Delta center; West Delta at left of "Y" road, Stanton at right of "Y" road. Hall shaft right foreground. St.John's Mission road extreeme right.



A 31.53

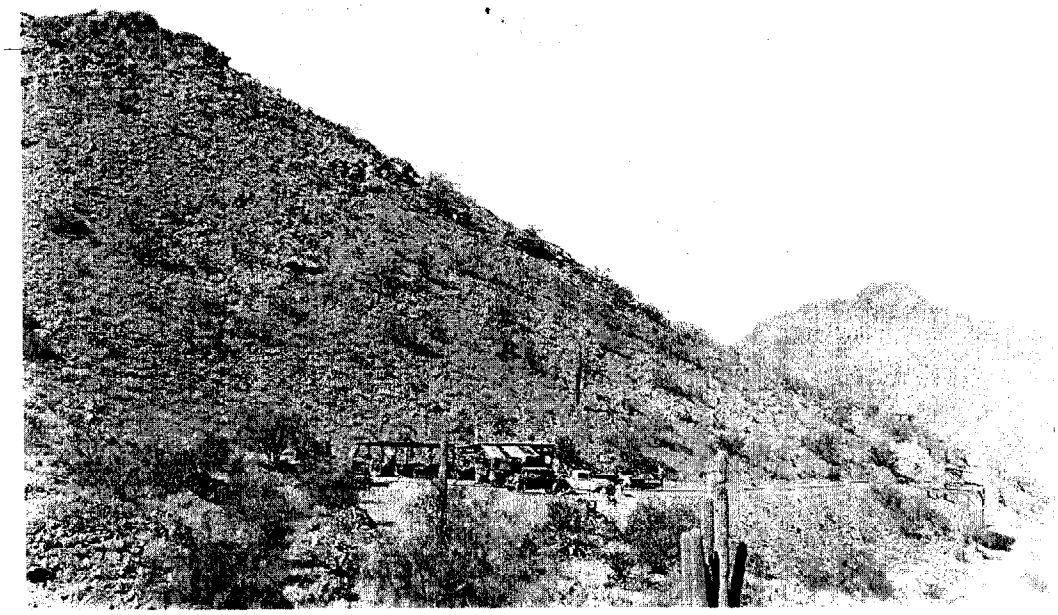
Portal of 300 level at beginning,after debris had been cleared off and track laid. Don C.SCott,Pres.Ace Mining and Development Co.

A. 31-54

First car of waste out of 300 level in cleaning up work. Howard Gentra and Jim O'Haver,originators of the lease and Ace M & D Co.

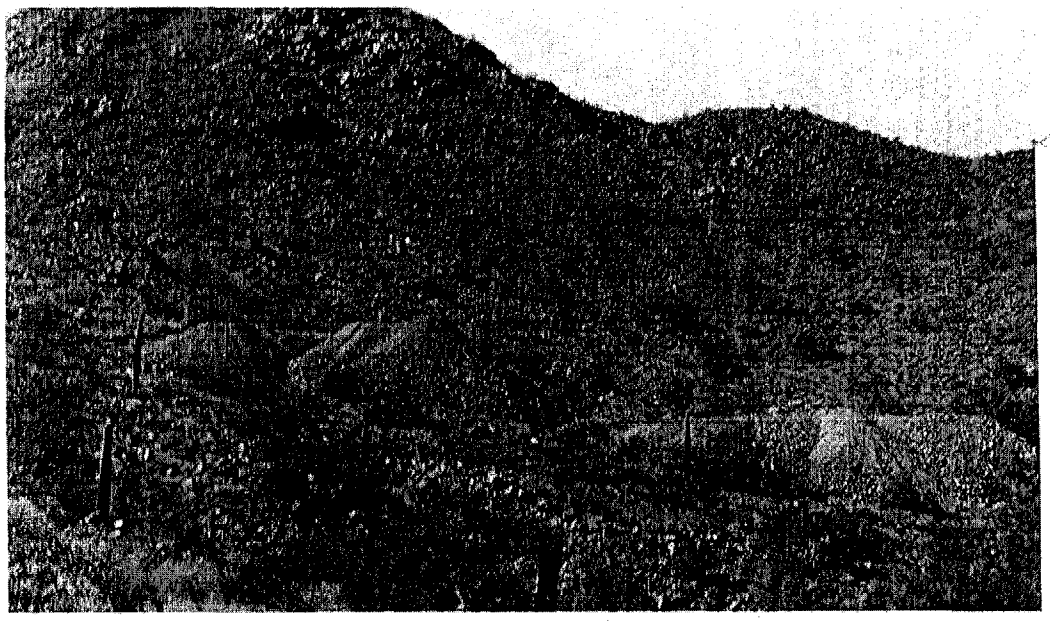
A 31-51

Building the large loading bin.



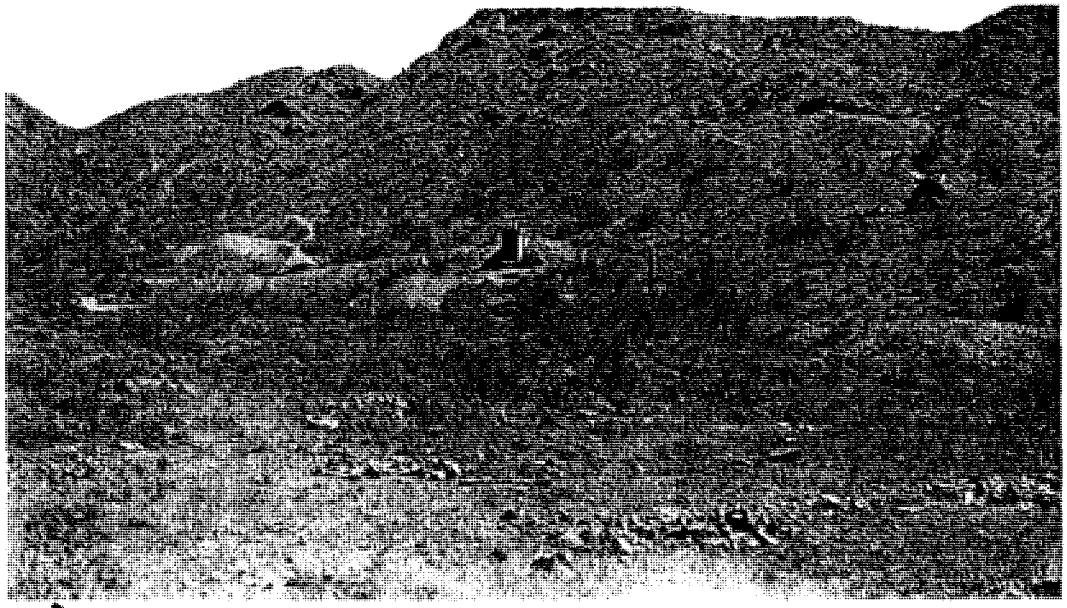
A-31-52

Entire plant, on dump of 300 level. Loading bin at right.



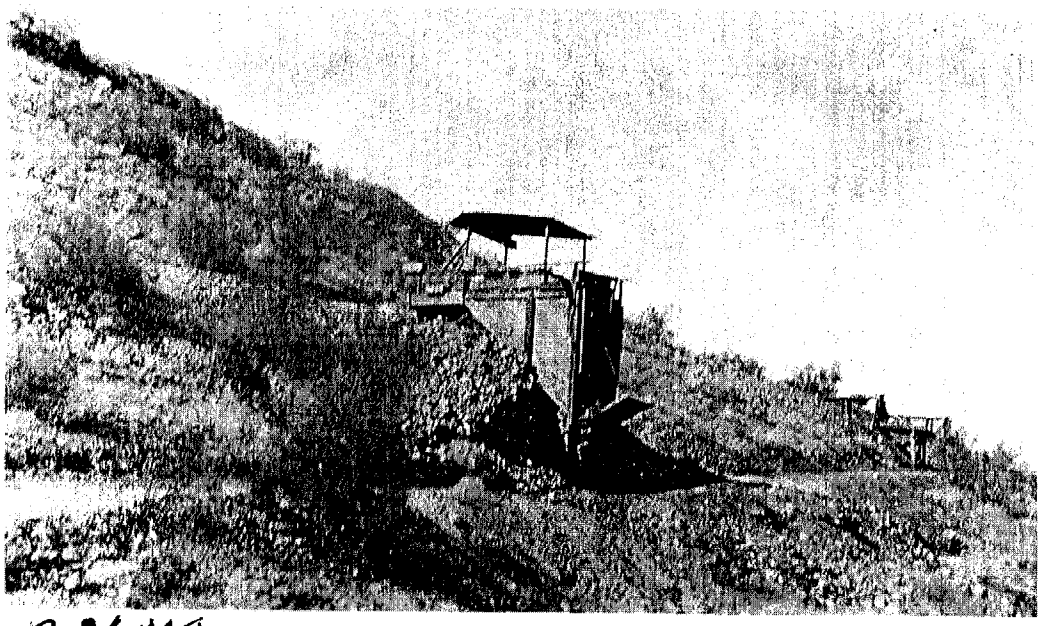
A-21-49

Dumps of:- 200 level, old shaft and 100 level, Main Delta.
SW Cor Delta No.2 and SE Cor Stanton on skyline (approx)



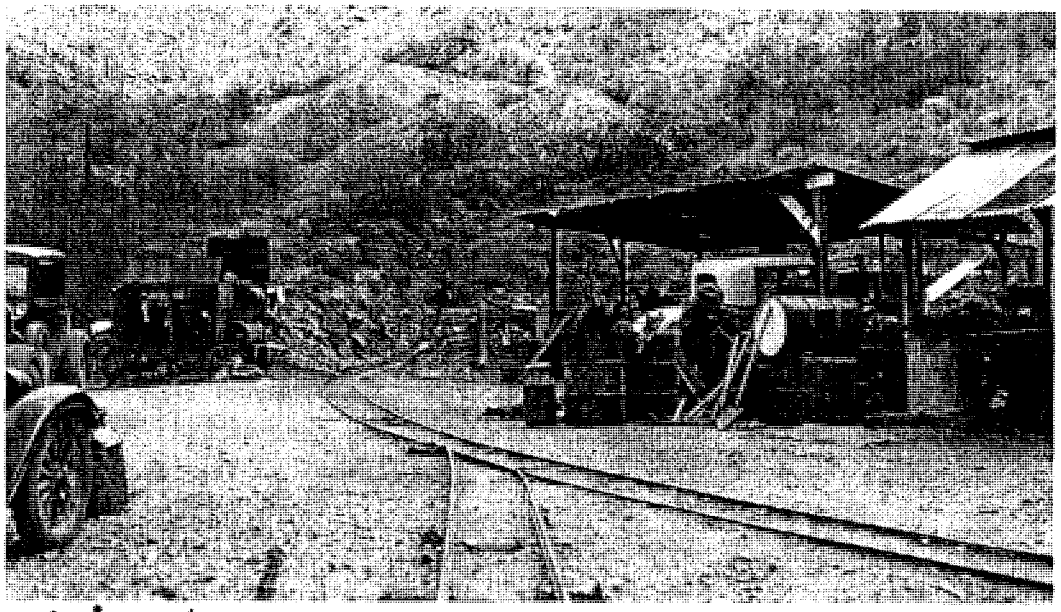
A-21-50

Looking south from lower country. West Delta upper right and lower right.Loading platform middle right "Big Jim" a recent discovery (that is by AM&D Co)



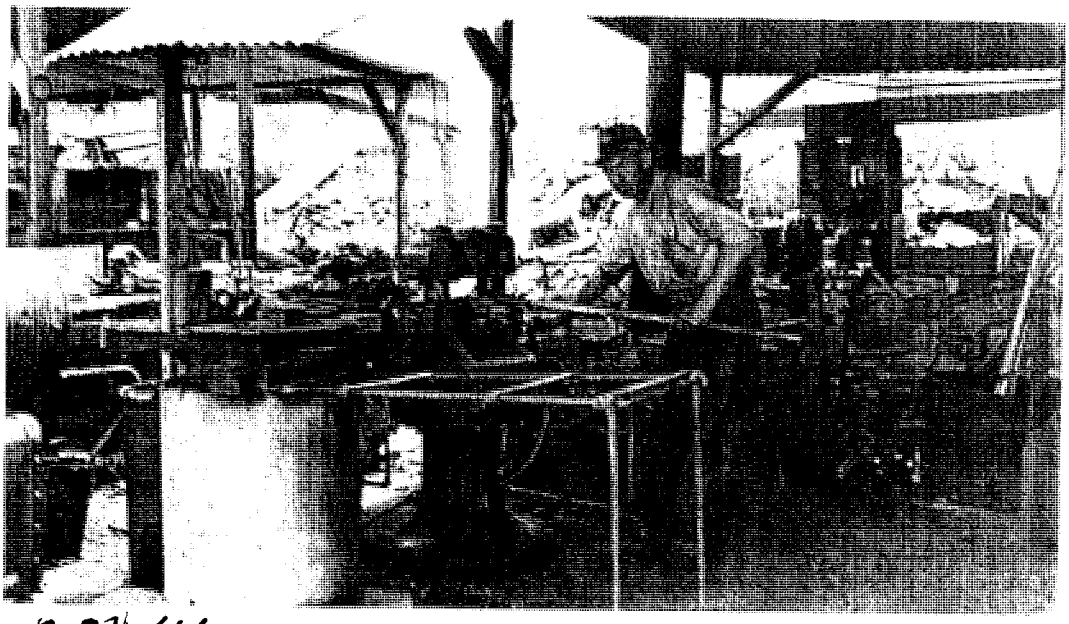
A-31-48

Main loading bin and loading platforms for Big Jim and upper West Delta.



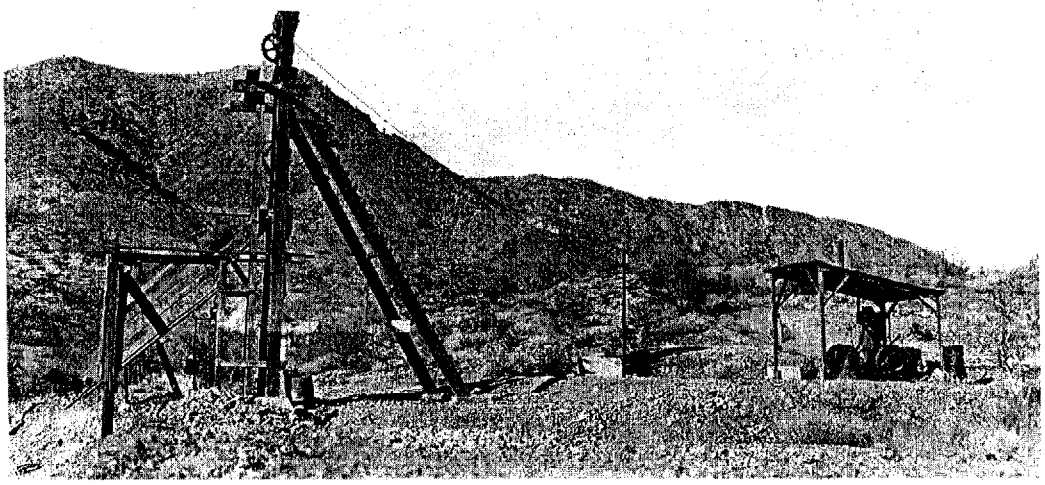
A-30-1

Compressor, garage, shop etc on the 300 Delta level dump. Track to right leads to loading bin. Waste track in center. 200 level, shaft and 100 level dumps in background



A-3/-46

Blacksmith shop at main Delta workings.

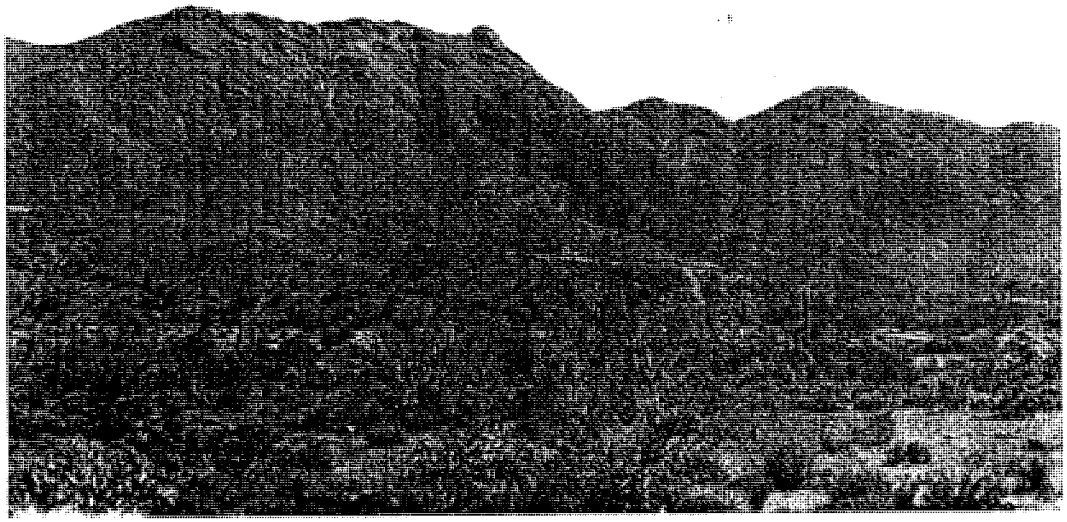


A-3/-47

Hall shaft.North line of Thompson claim across the mountain in left backgrouns about 2/3 distance to top.

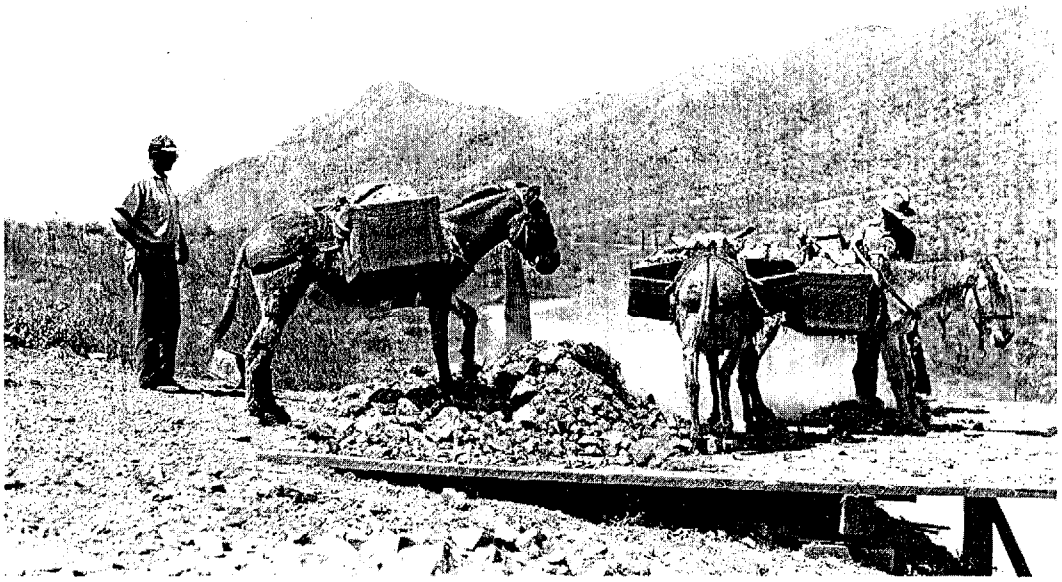
A-3144

Tinney lease on Hall Claim.



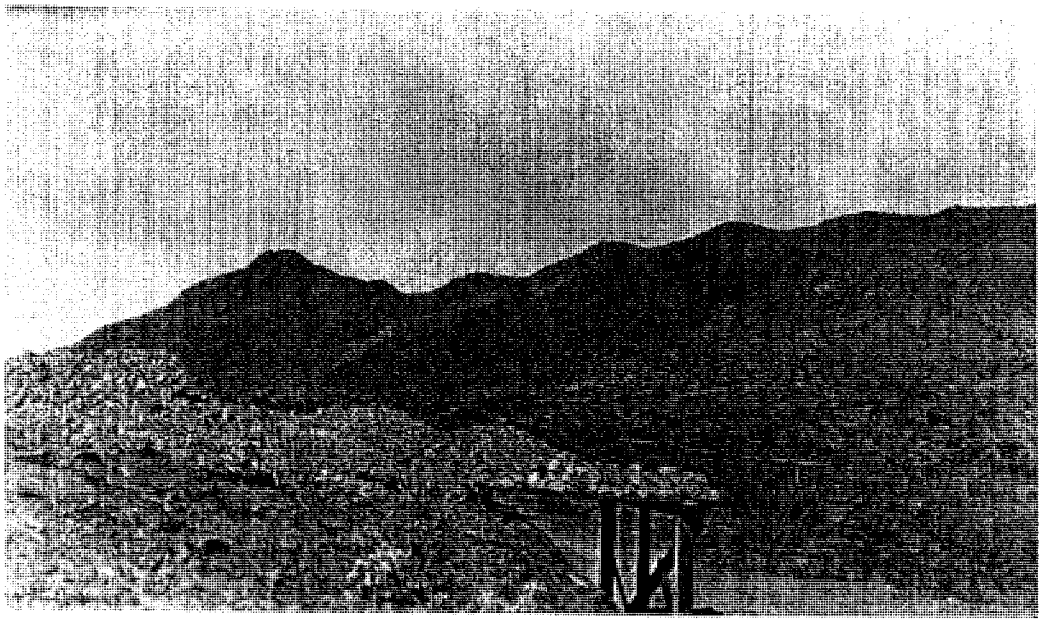
A-3145

Maxamillion and Leggat claims lie on facing slope with center of Max claim at knob-like peak. Loading platform for Max-Leggat ores on Senic Highway at right of short, facing road.



A-20-3 Unloading burros at Max-Leggat platform.

A-31-413

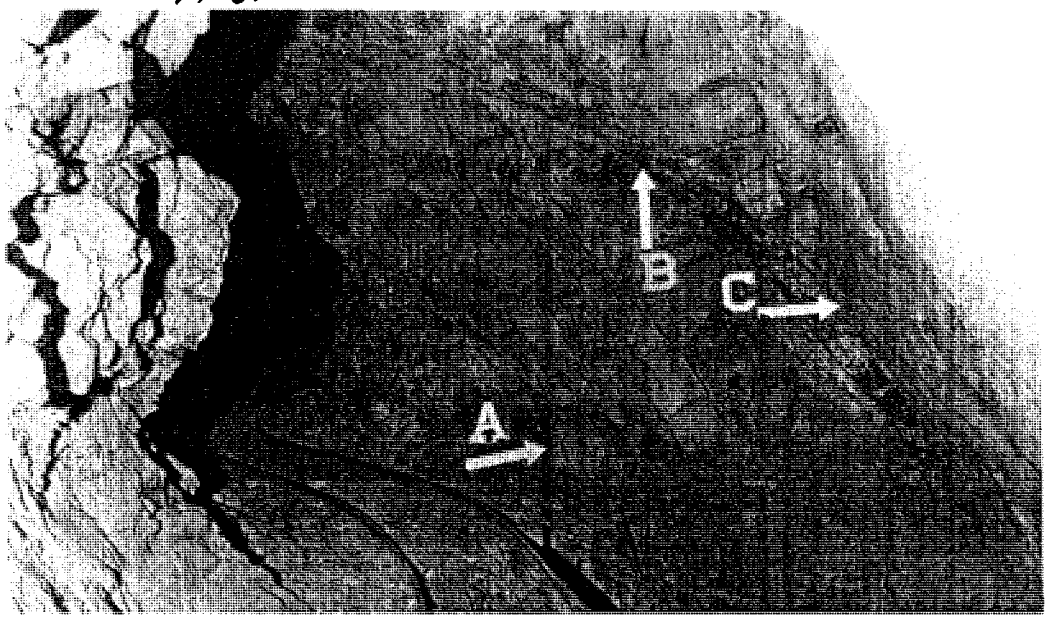


Loading platform for Max-Leggat ores. Hall shaft over center of platform.

A-20-2

Burros unloading Max ore at platform. Road to main Delta on left; road to St. John's center left, curving road left to Hall shaft. Road to right to Phoenix. Road by platform Senic Road in Park.

A·31·42



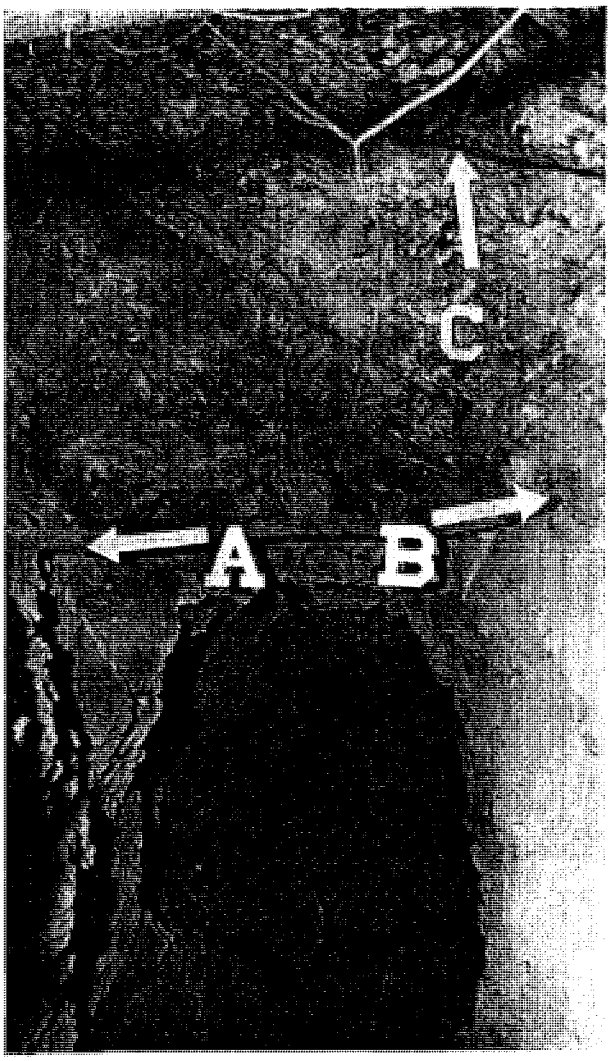

From Sta.203 looking N 56 20 W

A - Hangingwall of "Shaft Vein"

B - Footwall of "Flat Vein" which widens rapidly from this point south (towards camera)

C - Hangingwall of "Flat Vein" and probable segment of footwall of "Straight Vein"

P-10-2 A-31-41

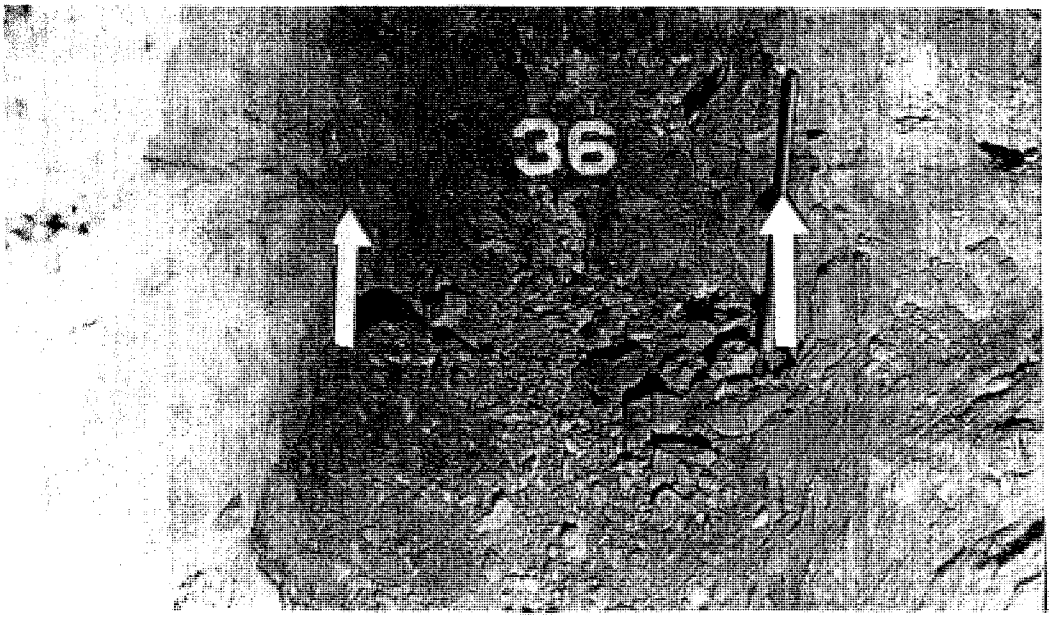



From Sta 208 towards Sta.207 looking N 28 48 W

A - Footwall of Straight vein.

B - Hangingwall of "Straight Vein" and footwall of "Flat Vein"

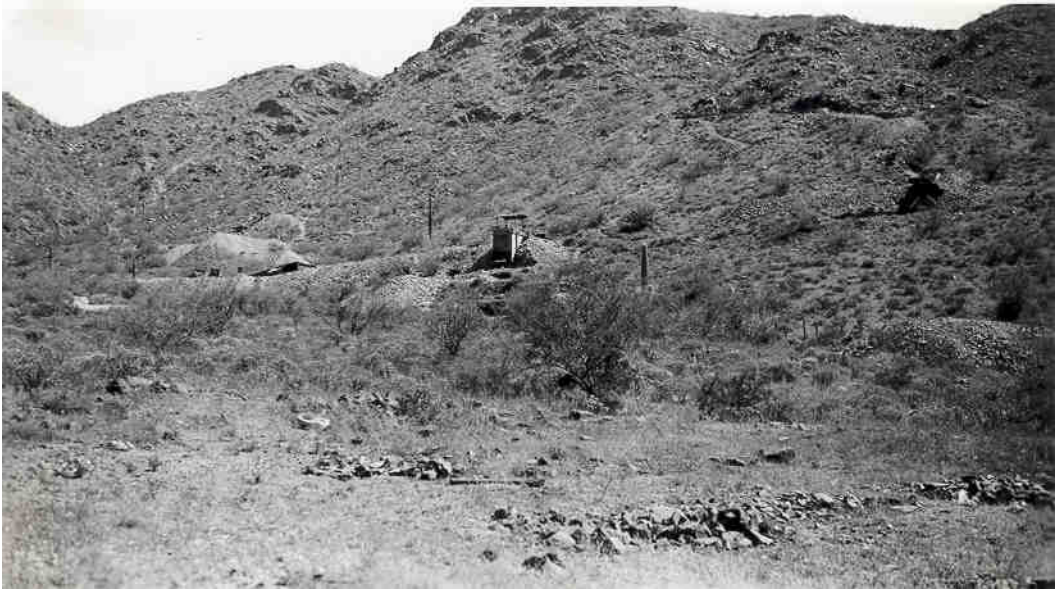
C - Hangingwall of "Flat Vein"

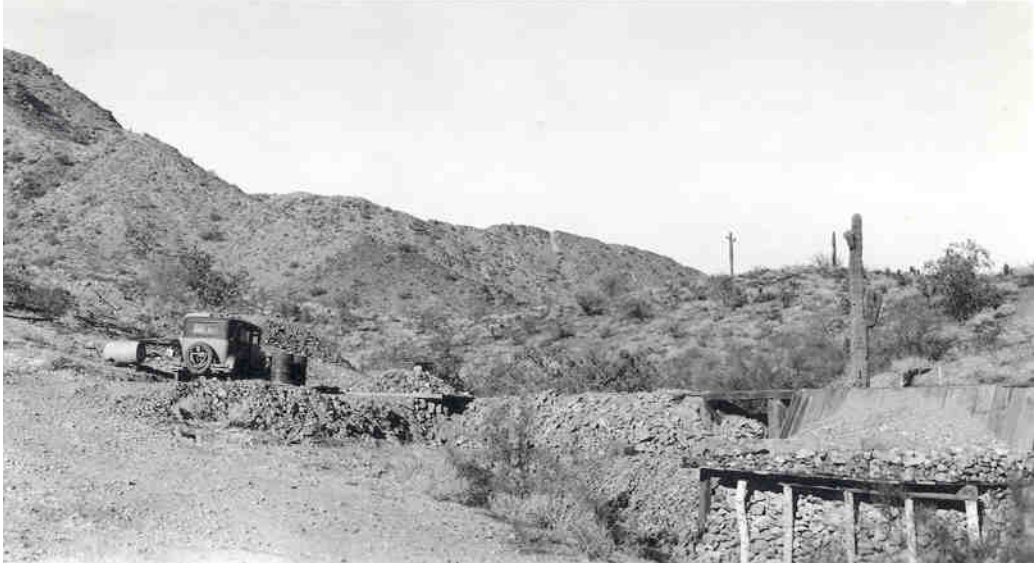


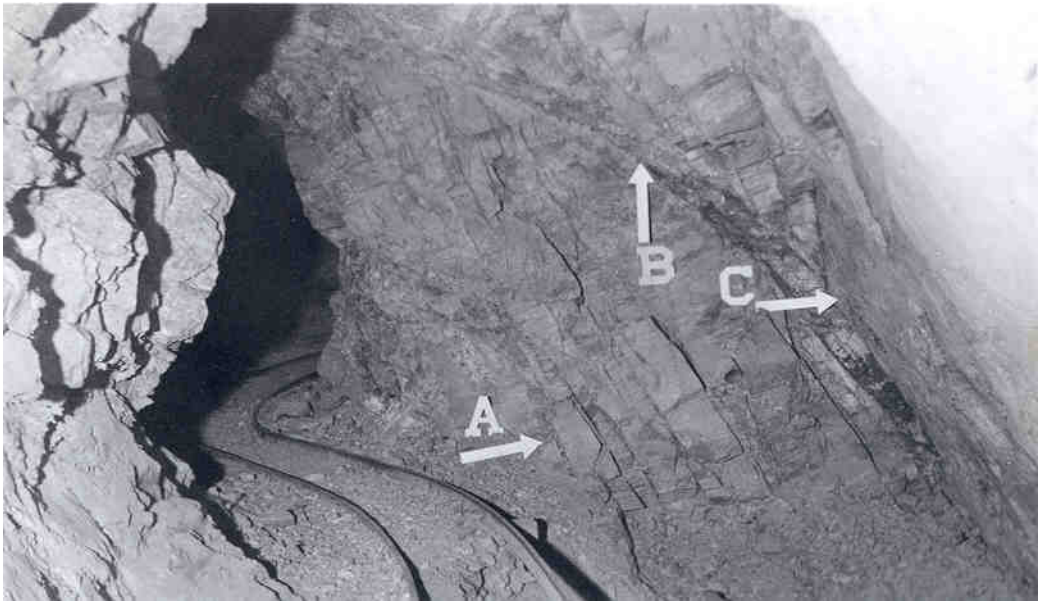

A-31-40

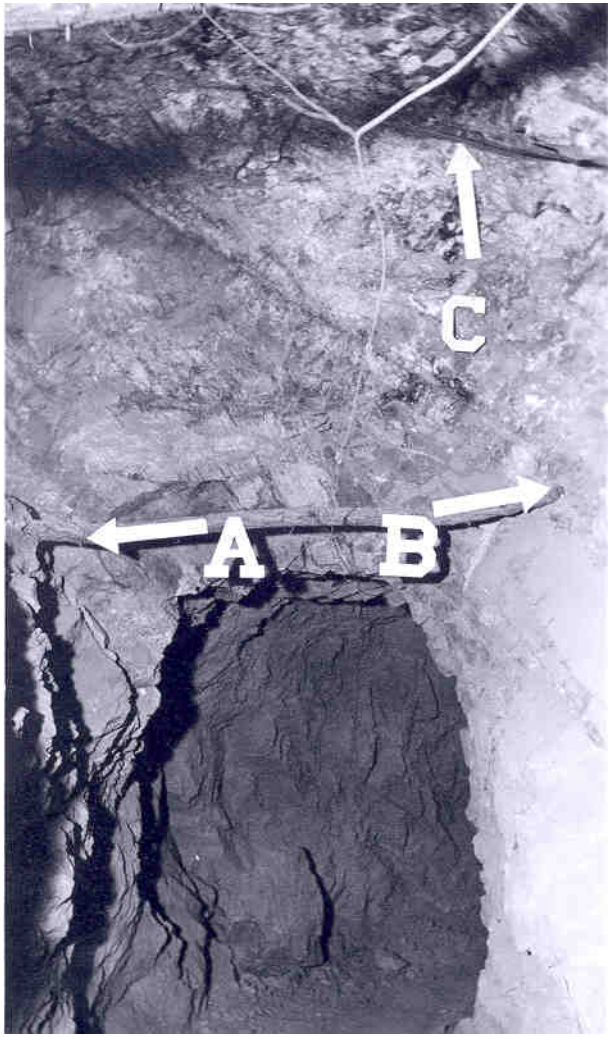
From Sta. 216 at top of raise from 300 to 200 level, looking S 41° 00′ E to face of drift.

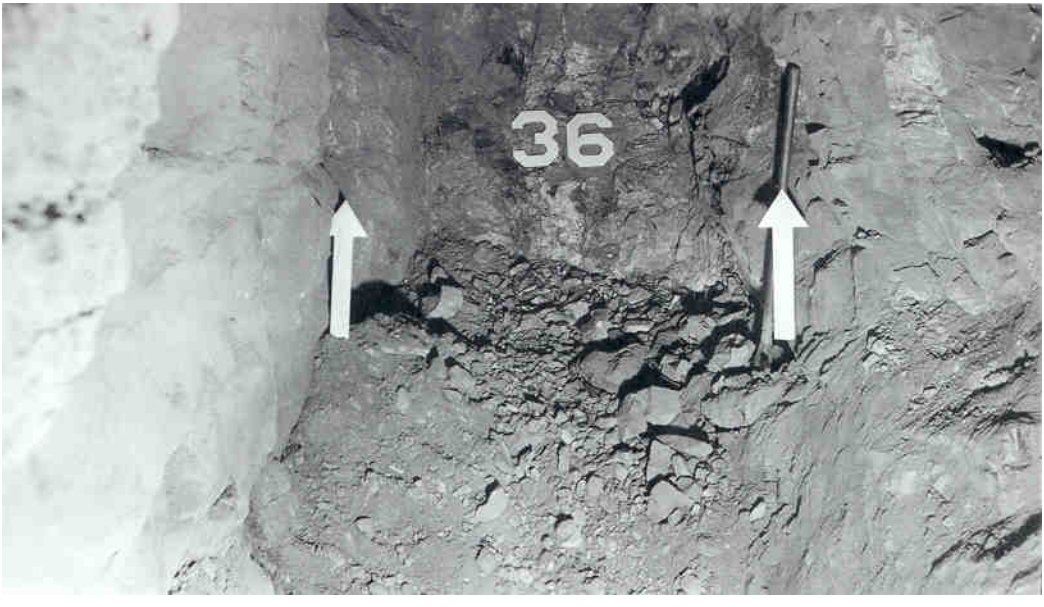
Face shows 36 inches of ore. This is the "Straight Vein" which shows in the 100 level and is the one on which the drift was driven south on the 300 level from Sta.310

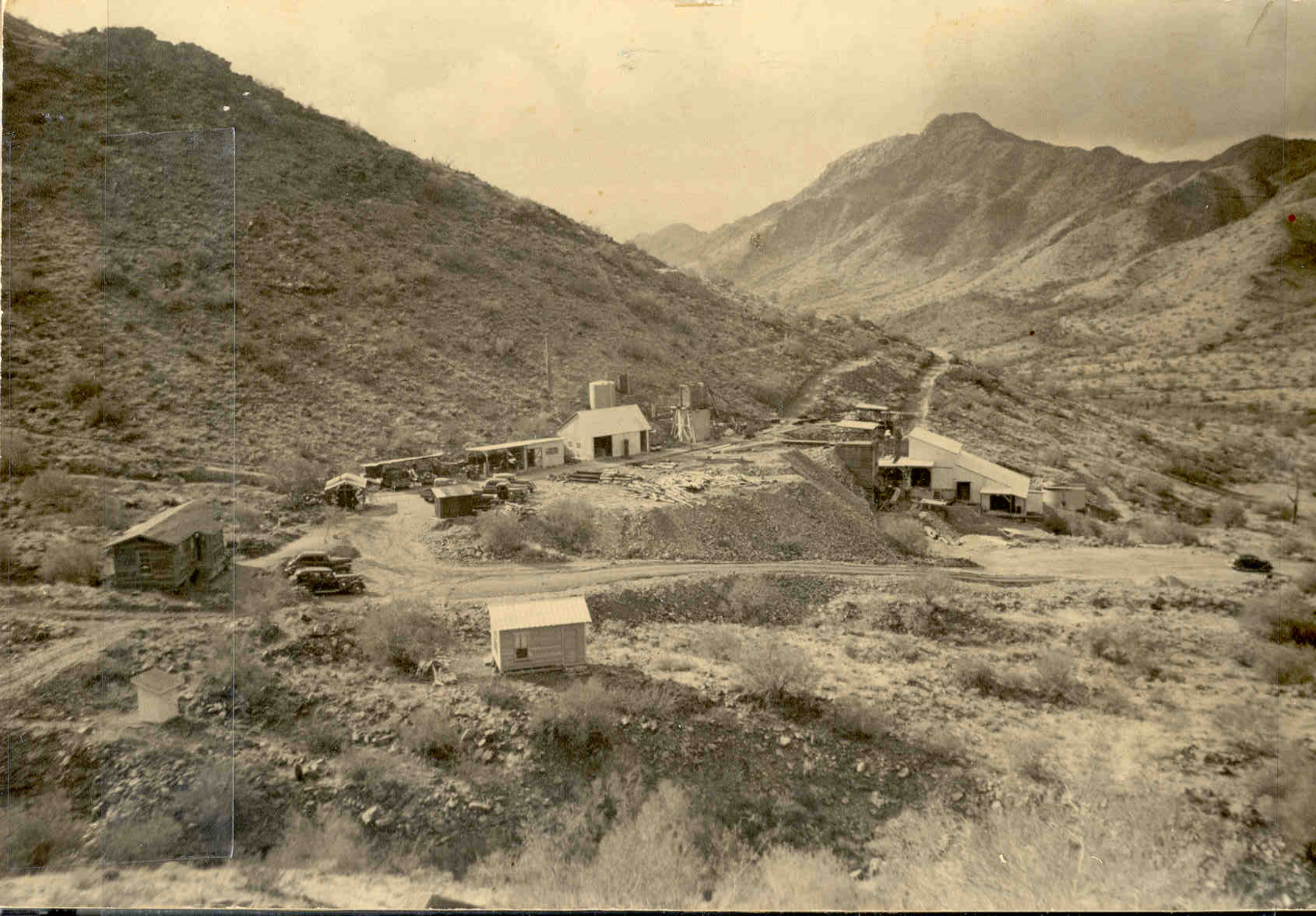


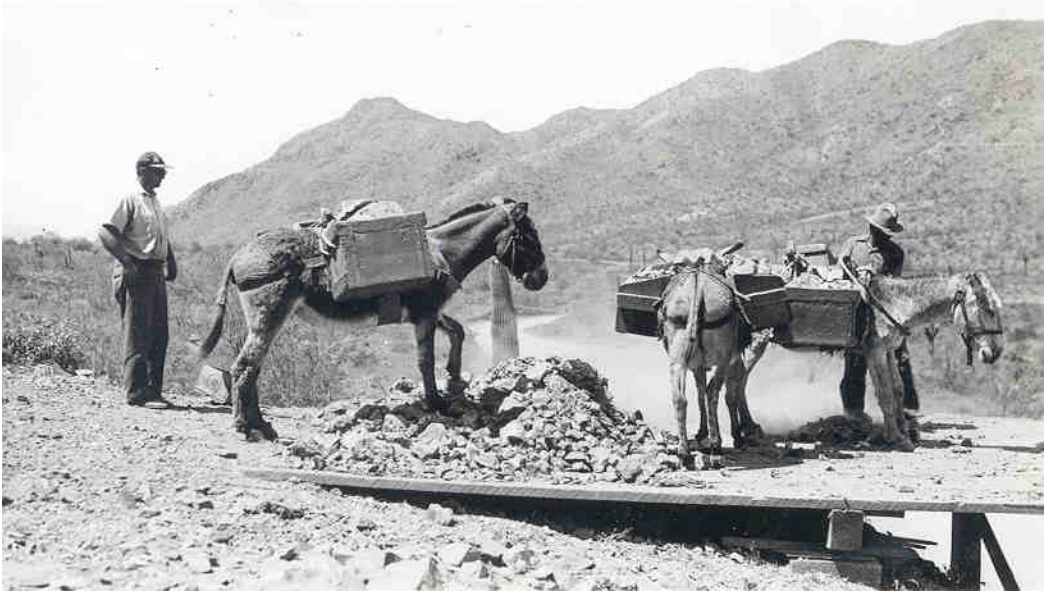


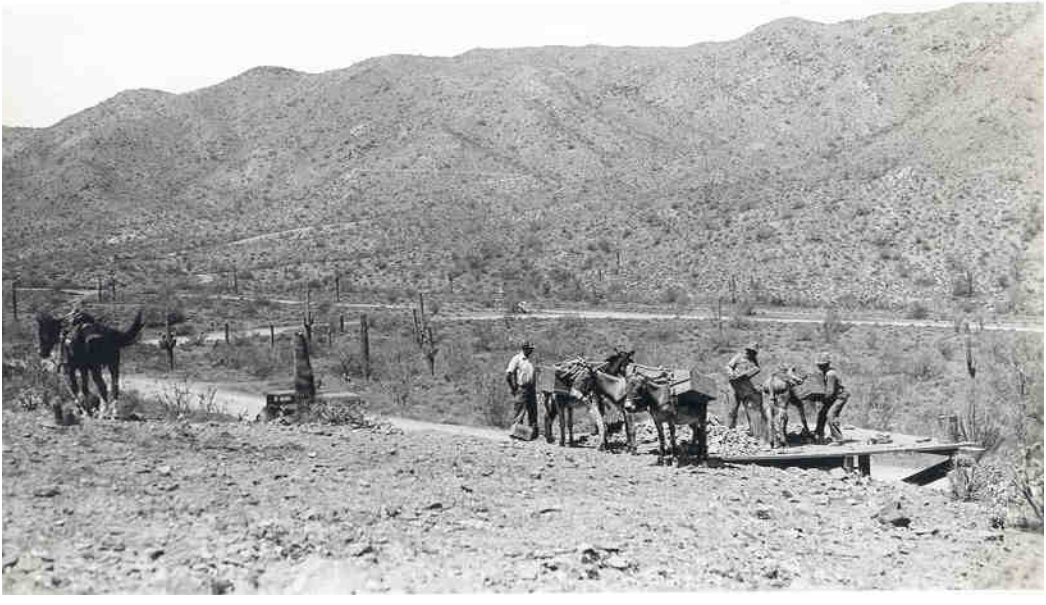

A
B
C

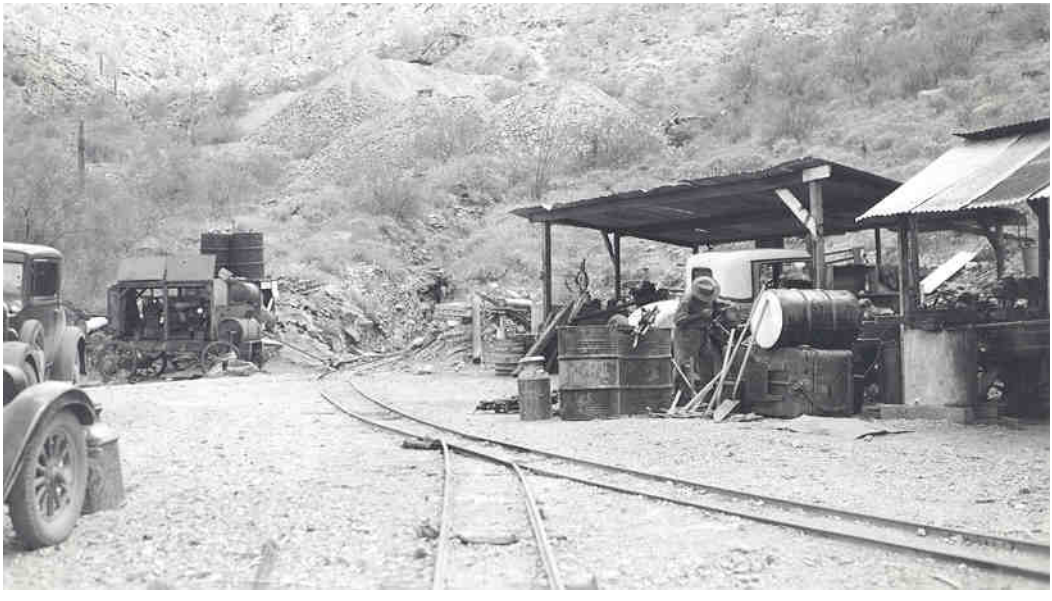

C
A
B

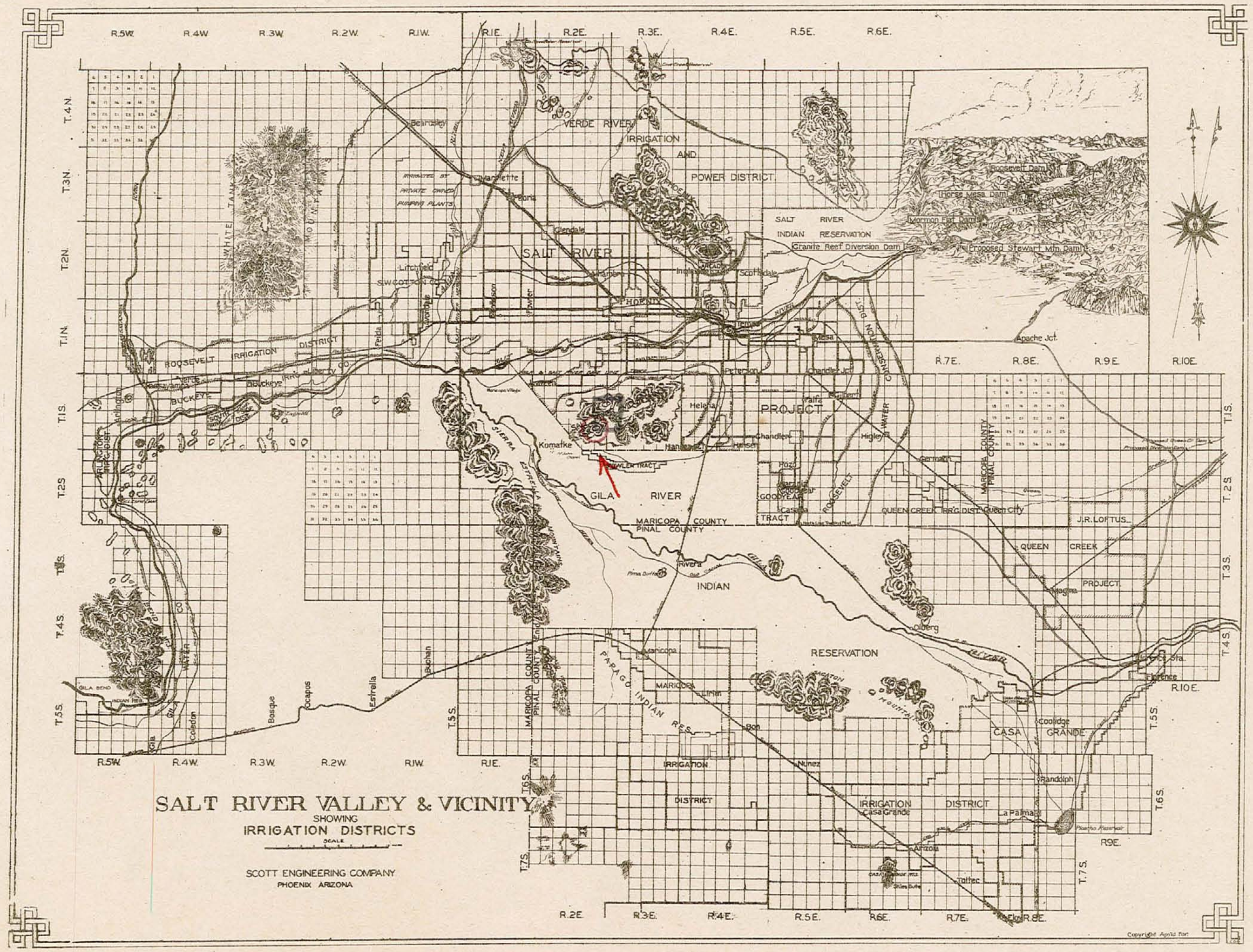

36

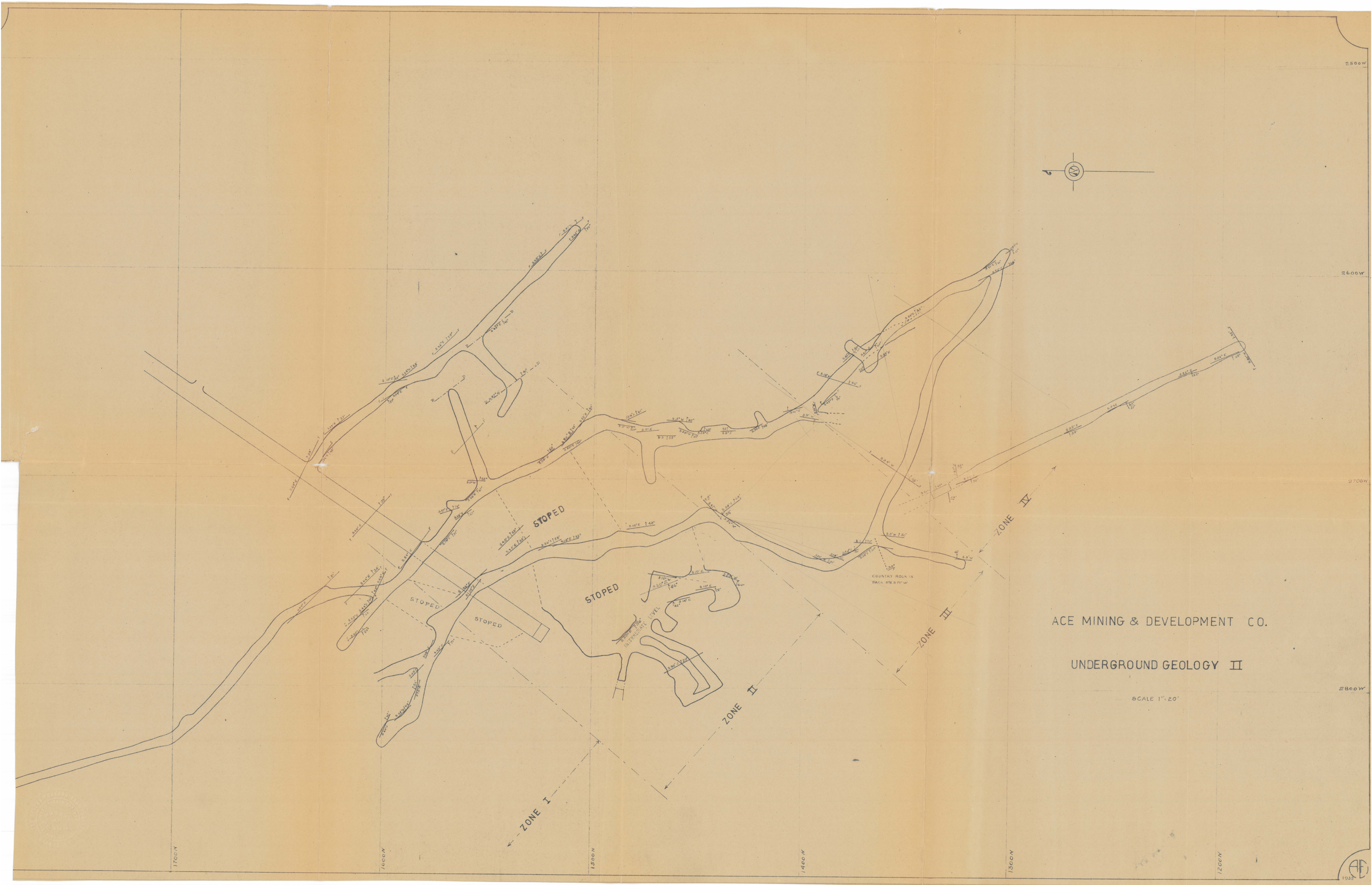









SALT RIVER VALLEY & VICINITY
SHOWING
IRRIGATION DISTRICTS
SCALE
SCOTT ENGINEERING COMPANY
PHOENIX ARIZONA
R.5W.
R.4W.
R.3W.
R.2W.
R.1W.
R.1E.
R.2E.
R.3E.
R.4E.
R.5E.
R.6E.
R.7E.
R.8E.
R.9E.
R.10E.
T.4N.
T.3N.
T.2N.
T.1N.
T.1S.
T.2S.
T.3S.
T.4S.
T.5S.
T.6S.
T.7S.
VERDE RIVER
IRRIGATION
AND
POWER DISTRICT
SALT RIVER
INDIAN RESERVATION
Granite Reef Diversion Dam
Roosevelt Dam
Horse Mesa Dam
Mormon Flat Dam
Proposed Stewart Mtn. Dam
Apache Jct.
SALT RIVER
PROJECT
Phoenix
Glendale
Scottsdale
Beardsley
Marinette
Litchfield
Mesa
Chandler
Higley
Helena
Komatke
Hanson
ROOSEVELT IRRIGATION DISTRICT
BUCKEYE
Buckeye
GILA RIVER
INDIAN
RESERVATION
MARICOPA COUNTY
PINAL COUNTY
Rivera
Sacaton
Olberg
Maricopa
PAPAGO INDIAN RES.
GOODYEAR TRACT
QUEEN CREEK IRR'G DIST.
Queen City
J.R. LOFTUS
QUEEN CREEK
PROJECT
CASA GRANDE
Coolidge
Randolph
La Palma
IRRIGATION DISTRICT
Casa Grande
Arizona
Toltec
Picacho Reservoir
Florence
Gila Bend
Bosque
Estrella
Buchan
Nunez
Copyright April 1921


ACE MINING & DEVELOPMENT CO.
UNDERGROUND GEOLOGY II
SCALE 1" = 20'
STOPED
STOPED
STOPED
STOPED
ZONE I
ZONE II
ZONE III
ZONE IV
COUNTRY ROCK IN BACK STR. IS 70° W
2500 W
2600 W
2700 W
2800 W
1700 N
1600 N
1500 N
1400 N
1300 N
1200 N

MAP
SHOWING TOPOGRAPHY AT
DELTA MINE

ACE MINING AND DEVELOPMENT CO

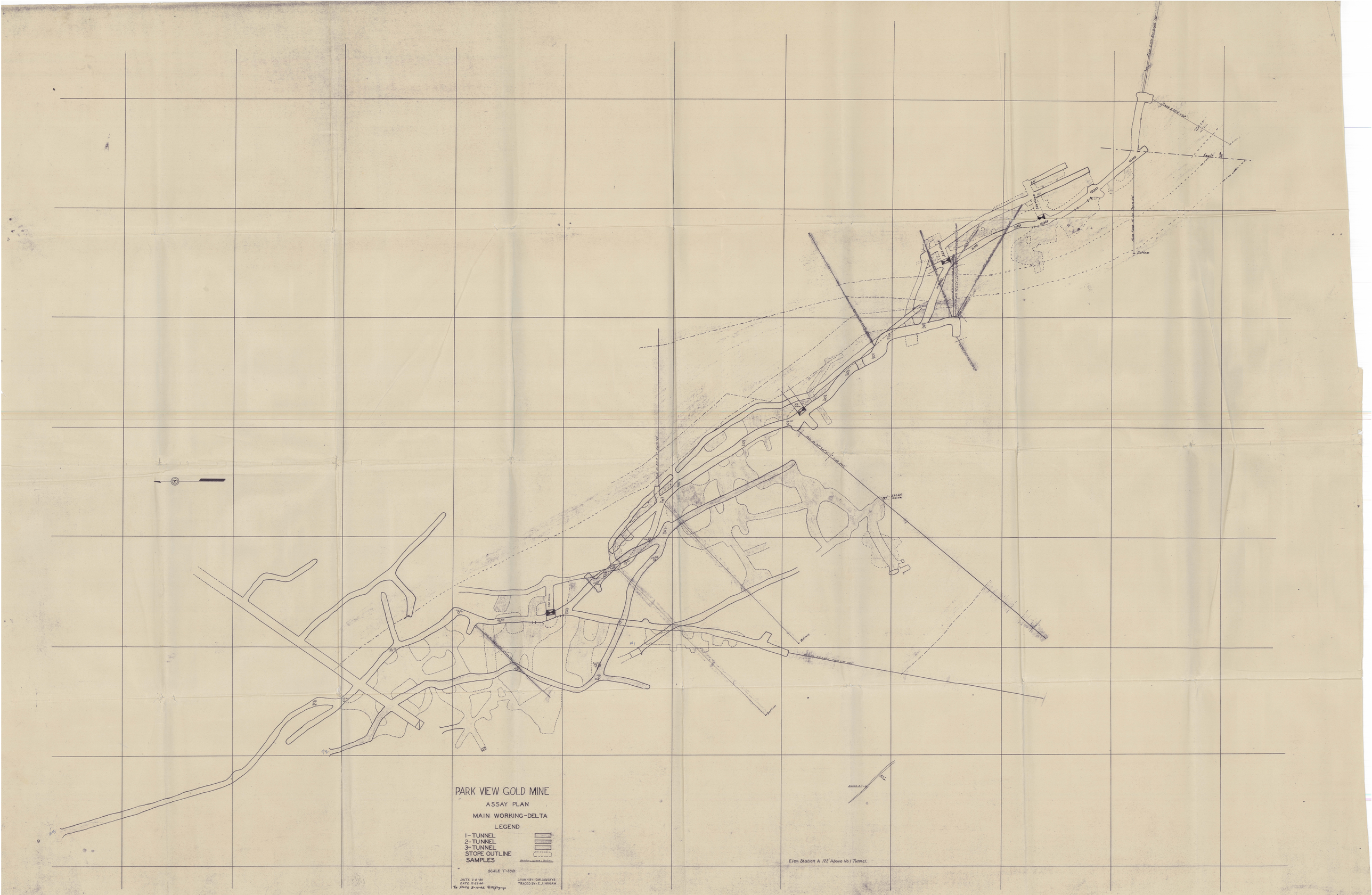
SCALE 1" = 10 CHAINS OR 660' 10-22-34

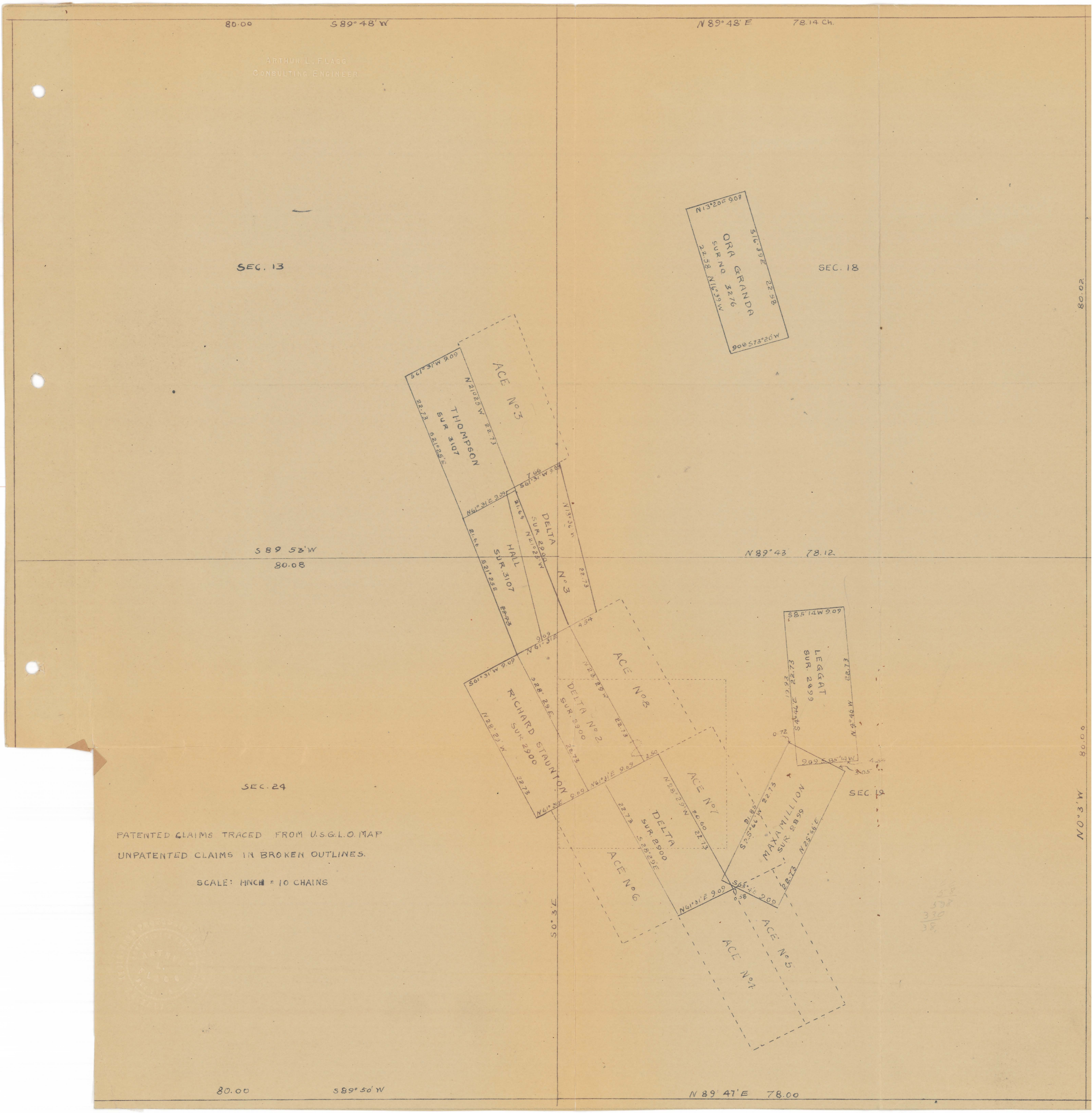
SURFACE MAP DELTA GROUP
ACE MINING AND DEVELOPMENT CO.

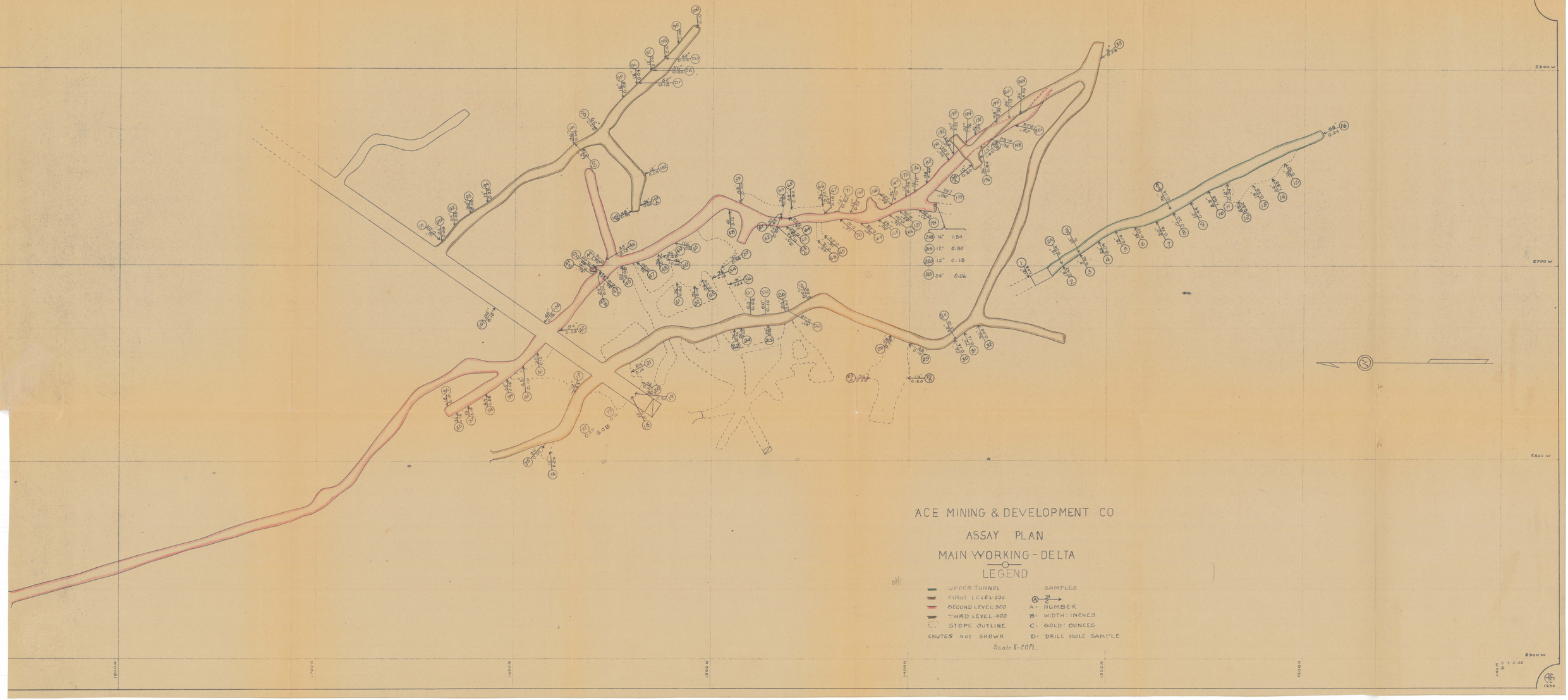
PHOENIX ARIZ APRIL 15 1935

SCALE 1" = 300'

SKETCH NO. 2
SHOWING MAIN WORKINGS — DELTA MINE
ACE MINING AND DEVELOPMENT CO.
SCALE 1" = 100' PHOENIX ARIX. 9-22-1934


PARK VIEW GOLD MINE
ASSAY PLAN
MAIN WORKING-DELTA
LEGEND
1-TUNNEL
2-TUNNEL
3-TUNNEL
STOPE OUTLINE
SAMPLES
Number Location & Width
SCALE 1"=20ft.
DATE 1-8-40
DATE 11-25-40
To Date 3-10-42
DRAWN BY: DW JAQUAYS
TRACED BY: E.J. HOGAN
Elev. Station A 122' Above No. 1 Tunnel.


80.00
S 89° 48' W
N 89° 48' E
78.14 Ch.
ARTHUR L. FLAGG
CONSULTING ENGINEER
SEC. 13
SEC. 18
ORA GRANDA
SUR. NO. 3276
N 13° 20' E 9.08
S 16° 39' E
22.58
22.58 N 16° 39' W
S 73° 20' W 9.08
80.02
ACE No. 3
THOMPSON
SUR 3107
N 21° 25' W 22.73
S 61° 31' W 9.09
22.73
S 21° 25' E
N 61° 31' E 9.09
7.06
S 61° 31' W 9.09
21.65
DELTA
SUR 2900
N 21° 29' W
N 13° 36' W
22.73
HALL
SUR. 3107
21.66
S 21° 25' E 22.73
N 3
S 89 53' W
80.08
N 89° 43
78.12
4.54
9.09
N 61° 31' E
S 61° 31' W 9.09
N 28° 29' W
22.73
ACE No. 8
RICHARD STAUNTON
SUR 2900
S 28° 29' E
N 28° 29' W
22.73
N 61° 31' E 9.09
DELTA No. 2
SUR. 2900
22.73
2.50
N 61° 31' E 9.09
N 61° 31' E 9.09
ACE No. 7
N 28° 29' W
20.60
22.73
DELTA
SUR. 2900
22.73
S 28° 29' E
ACE No. 6
LEGGAT
SUR. 2899
S 85 14 W 9.09
22.73
19.93
S 74° 45' E
22.73
N 4° 48' W
0.72
9.09 S 85° 14' W
4.55
3.05
SEC. 19
MAXAMILLION
SUR 2899
S 25° 66' W 22.73
21.85
N 25° 66' E
22.73
S 65° 46' E 9.09
0.58
N 61° 31' E 9.09
ACE No. 5
ACE No. 4
S 0° 3' E
N 0° 3' W
80.00
SEC. 24
PATENTED CLAIMS TRACED FROM U.S.G.L.O. MAP
UNPATENTED CLAIMS IN BROKEN OUTLINES.
SCALE: INCH = 10 CHAINS
80.00
S 89° 50' W
N 89° 47' E
78.00


ACE MINING & DEVELOPMENT CO
ASSAY PLAN
MAIN WORKING - DELTA
LEGEND
UPPER TUNNEL
FIRST LEVEL-200
SECOND LEVEL-300
THIRD LEVEL-400
STOPE OUTLINE
CHUTES NOT SHOWN
SAMPLES
A: NUMBER
B: WIDTH: INCHES
C: GOLD: OUNCES
D: DRILL HOLE SAMPLE
Scale 1"=20ft.
2600 W
2700 W
2800 W
2900 W
1800 N
1700 N
1600 N
1500 N
1400 N
1300 N
1200 N
1100 N
1954

NING & DEVELOPMENT CO.

# UNDERGROUND GEOLOGY I

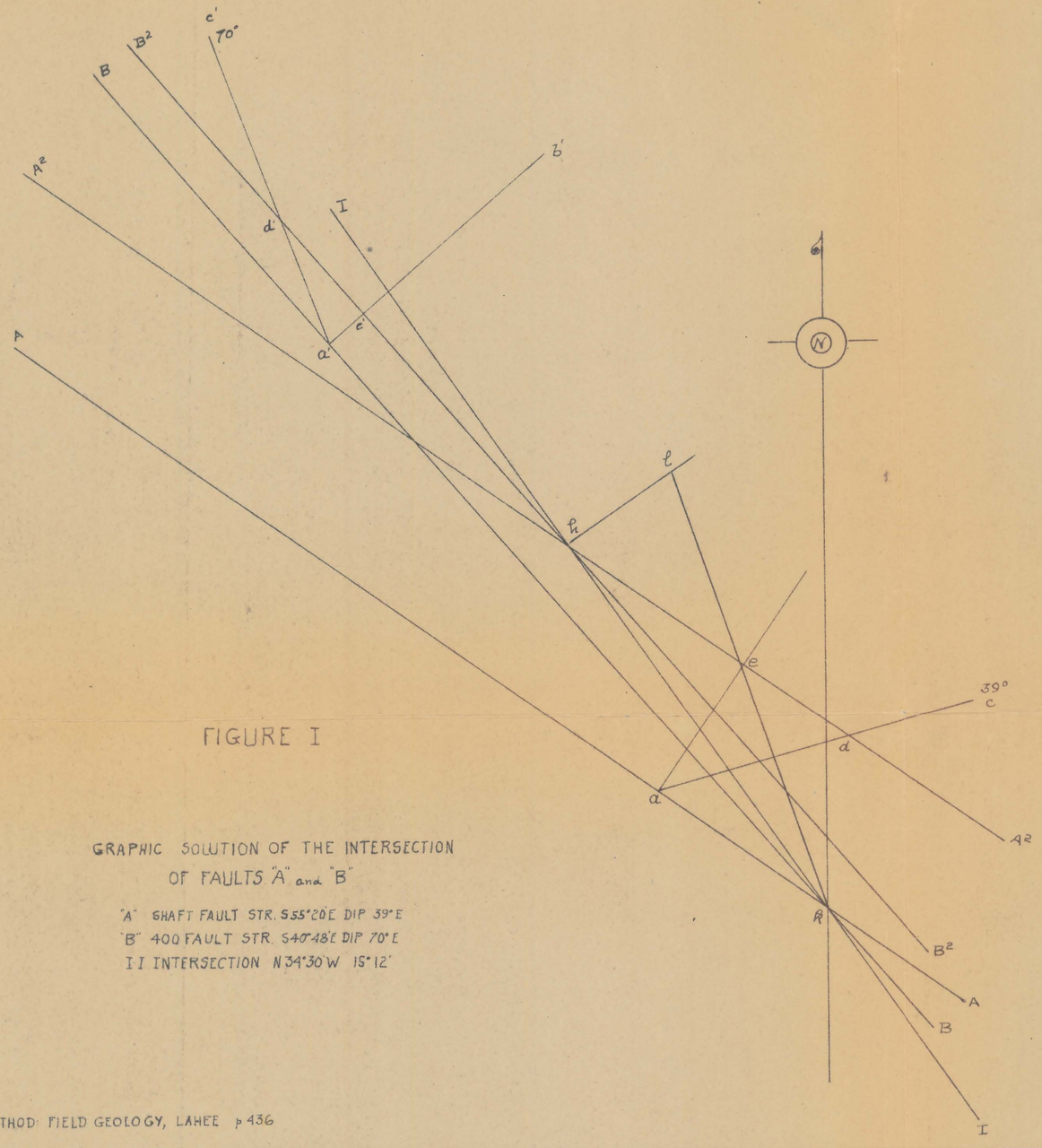



FIGURE I

GRAPHIC SOLUTION OF THE INTERSECTION OF FAULTS "A" and "B"

"A" SHAFT FAULT STR. S55°20'E DIP 39°E
"B" 400 FAULT STR. S40°48'E DIP 70°E
I I INTERSECTION N34°30'W 15°12'

METHOD: FIELD GEOLOGY, LAHEE p 436

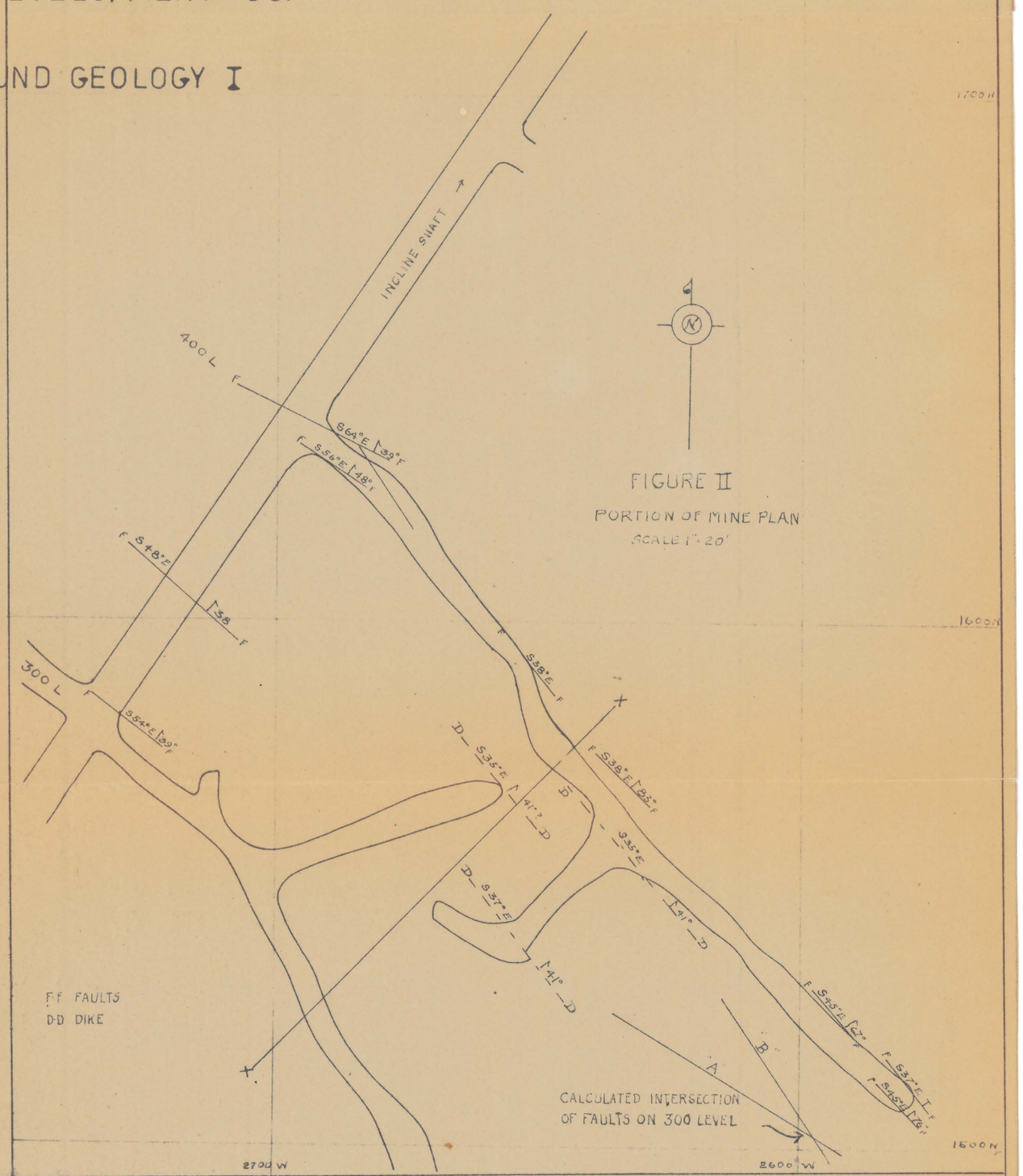



FIGURE II

PORTION OF MINE PLAN

SCALE 1" = 20'

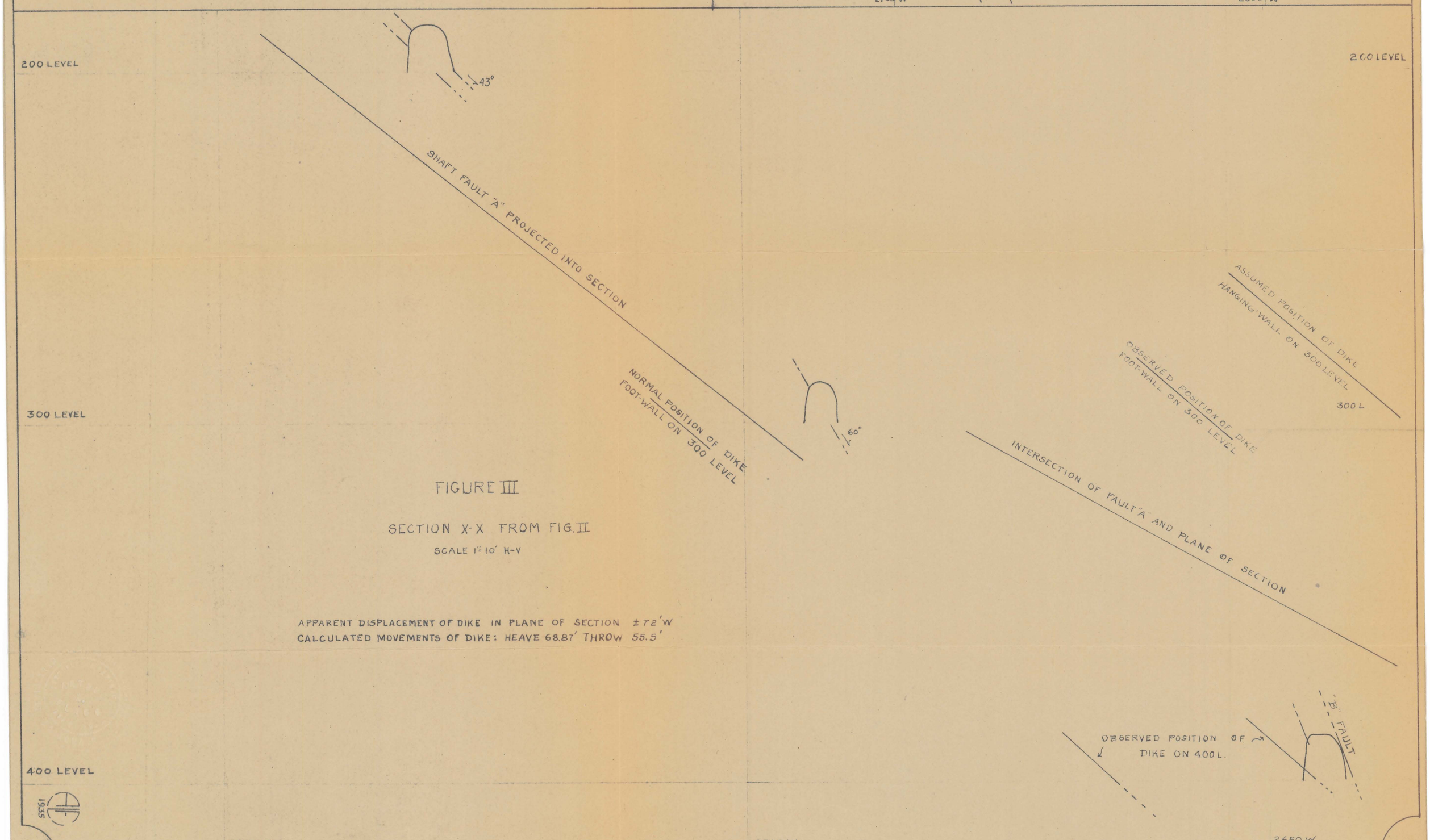



FIGURE III

SECTION X-X FROM FIG. II

SCALE 1" = 10' H-V

APPARENT DISPLACEMENT OF DIKE IN PLANE OF SECTION ± 72' W
CALCULATED MOVEMENTS OF DIKE: HEAVE 68.87' THROW 55.5'

1935

1.

| Date 1933 | Lot | Smelter Lot | | Car No | Wet Weight | Moist. % | Dry Wt | Lot | Dry tons | OZ Gold ea. Car | OZ. Gold per ton | Gold Price (Smelter) | OZ. Silver Per ton | Silver Price | Smelter gross Value per ton | Smelter Net Value per ton | Lot | Treatment Charge per Ton | Copper penalty per ton | Gross Proceeds | Freight Per ton | Total Freight | Net Proceeds. | Smelter Gross Value per car Before Deductions | Lot | Note. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 20 | 1 | A.S.&R. | 1475 | S.P. 93691 | 109640 | 1.1% | 108434 | 1 | 54217 | 44.187 | 0.815 | # 30.4107 | .60 | # 0.4225 | 25.0382 | | 1 | # 4.05 | # 0.35 | 1126.35 | # 4.10 | # 228.82 | # 897.53 | 1357.50 | 1 | | Provisional settlements made |
| 12 3 | 2 | " " " " | 1542 | S.P. 93040 | 108700 | 1.2 | 107396 | 2 | 53.698 | 49.402 | 0.92 | 31.4952 | .80 | 0.42021 | 29.3117 | | 2 | 4.03 | .33 | 1320.61 | 4.10 | 222.84 | 1097.77 | 1573.98 | 2 | | " " " |
| 12 11 | 3 | " " " " | 1584 | S.P. 93877 | 115380 | 1.0 | 114226 | 3 | 57.113 | 61.111 | 1.07 | 31.4952 | .90 | 0.41625 | 34.0745 | | 3 | 4.08 | .38 | 1649.14 | 4.10 | 236.53 | 1412.61 | 1946.10 | 3 | | " " " |
| 12 18 | 4 | " " " " | 1643 | S.P. 93323 | 120600 | 1.6 | 118670 | 4 | 59.335 | 50.138 | 0.845 | 31.4952 | .80 | 0.42021 | 26.9496 | | 4 | 4.13 | .43 | 1328.86 | 4.10 | 247.23 | 1081.63 | 1599.05 | 4 | | " " " |
| 12 26 | 5 | P.D. Corp. | 671 | S.P. 92920 | 96840 | 2.38 | 94536 | 5 | 47.268 | 22.074 | 0.467 | 31.5284 | .37 | — | # 14.7238 | # 10.8738 | 5 | 3.85 | .35 | # 513.98 | 2.20 | 106.52 | 407.46 | 695.96 | 5 | | — |
| 12 29 | 6 | " " " | 681 | SP 71832 | 115000 | 1.00 | 113850 | 6 | 56.925 | 23.097 | 0.392 | 31.5284 | .46 | — | 12.3519 | 8.4091 | 6 | 3.95 | .45 | 478.69 | 2.20 | 126.50 | 352.19 | 701.90 | 6 | | |
| 1934 1 9 | 7 | " " " | 7 | SP 46261 | 119240 | 1.03 | 118012 | 7 | 59.006 | 40.655 | 0.689 | 32.1195 | .64 | 0.64125 | 22.5403 | 18.3003 | 7 | 4.24 | .49 | 1079.83 | 2.50 | 149.05 | 928.36 | 1330.01 | 7 | # 2.42 | deduction on silver payment smelter profit 10% |
| 1 22 | 8 | " " " | 39 | SP 93541 | 118740 | 1.75 | 116662 | 8 | 58331 | 35.699 | 0.612 | 32.1195 | .50 | 0.64125 | 19.9771 | 16.0871 | 8 | 3.89 | .39 | 938.38 | 2.20 | 130.61 | 805.90 | 1165.28 | 8 | $1.87 | " " " " " " |
| 2 5 | 9 | " " " | 75 | SP 93673 | 118940 | 1.38 | 117298 | 9 | 58.649 | 29.324 | 0.50 | 32.1195 | .44 | — | 16.0597 | 12.0997 | 9 | 3.96 | .46 | 709.64 | 2.20 | 130.83 | 578.81 | 941.89 | 9 | | |
| 2 9 | 10 | " " " | 710 | SP 93468 | 108540 | 1.46 | 106956 | 10 | 53.478 | 31.071 | 0.581 | " | .43 | — | 18.6614 | 14.6914 | 10 | 3.97 | .47 | 785.67 | 2.20 | 119.39 | 666.28 | 997.97 | 10 | | |
| 2 26 | 11 | " " " | 128 | SP 93483 | 118000 | 4.02 | 113256 | 11 | 56.628 | 30.749 | 0.543 | " | .31 | — | 17.4409 | 13.4609 | 11 | 3.98 | .48 | 762.26 | 2.20 | 132.80 | 629.46 | 987.64 | 11 | $3.00 | Charge for Umpire on Silver |
| 3 5 | 12 | " " " | 154 | SP 92418 | 121820 | 1.00 | 120602 | 12 | 60.301 | 38.593 | 0.640 | " | .67 | 0.64125 | 20.9865 | 16.9265 | 12 | 4.06 | .46 | 1020.68 | 2.50 | 152.28 | 865.81 | 1265.51 | 12 | 2.59 | deduction on silver payment |
| 3 9 | 13 | " " " | 159 | SP 92391 | 120600 | 2.69 | 117356 | 13 | 58.678 | 44.185 | 0.753 | " | .56 | 0.64125 | 24.5460 | 20.1360 | 13 | 4.41 | .46 | 1181.54 | 2.50 | 152.86 | 1028.68 | 1440.31 | 13 | 2.11 | " " " " |
| 3 13 | 14 | " " " | 171 | SP 92396 | 117700 | 1.31 | 116158 | 14 | 58.079 | 42.978 | 0.740 | " | .58 | 0.64125 | 24.1384 | 19.7584 | 14 | 4.38 | .47 | 1147.55 | 2.50 | 147.13 | 998.27 | 1401.93 | 14 | 2.15 | " " " " |
| 3 16 | 15 | " " " | 186 | SP 46959 | 122460 | 1.74 | 120330 | 15 | 60.165 | 43.319 | 0.720 | " | .51 | 0.64125 | 23.4560 | 19.1360 | 15 | 4.32 | .47 | 1151.32 | 2.50 | 153.08 | 996.26 | 1411.23 | 15 | 1.98 | " " " " |
| 3 19 | 16 | " " " | 197 | SP 91453 | 120180 | 1.73 | 118110 | 16 | 59.050 | 29.525 | 0.500 | " | .52 | 0 " | 16.3897 | 12.4097 | 16 | 3.98 | .48 | 732.80 | 2.20 | 132.20 | 595.65 | 967.81 | 16 | 4.95 | " " " " and Umpire |
| 3 23 | 17 | " " " | 208 | SP 93146 | 115080 | 1.00 | 113930 | 17 | 56.965 | 29.456 | 0.517 | " | .73 | " | 17.0758 | 13.1158 | 17 | 3.96 | .46 | 747.14 | 2.20 | 126.59 | 617.87 | 972.72 | 17 | 2.68 | " " " " |
| 3 26 | 18 | " " " | 237 | SP 92665 | 109500 | 1.38 | 107988 | 18 | 53.994 | 28.725 | 0.532 | " | .70 | " | 17.5376 | 13.5676 | 18 | 3.97 | .47 | 732.57 | 2.20 | 120.45 | 609.69 | 946.93 | 18 | 2.43 | " " " " |
| 3 31 | 19 | " " " | 245 | SP 91662 | 121560 | 1.30 | 119980 | 19 | 59.990 | 32.815 | 0.547 | " | 1.10 | " | 18.2794 | 14.3094 | 19 | 3.97 | .47 | 858.42 | 2.20 | 133.72 | 702.44 | 1096.58 | 19 | 4.26 | " " " " |
| 4 6 | 20 | " " " | 269 | SP 92990 | 101660 | 1.30 | 100338 | 20 | 50.169 | 22.827 | 0.455 | " | .81 | " | 15.1344 | 11.4944 | 20 | 3.64 | 1.14 | 576.66 | 2.20 | 111.83 | 462.22 | 759.28 | 20 | 2.61 | " " " " |
| 4 10 | 21 | Magma | 296 | SP 46868 | 111680 | 1.00 | 110563 | 21 | 55.281 | 27.088 | 0.490 | 32.200 | .40 | ✓ | 15.7778 | 12.278 | 21 | 3.50 | ✓ | 678.75 | 1.00 | 55.84 | 618.61 | 791.56 | 21 | 4.30 | Additional treatment Charge |
| 4 14 | 22 | P.D. Corp. | 302 | SP 91770 | 104380 | 1.00 | 103336 | 22 | 51.668 | 25.317 | 0.490 | 32.1195 | .42 | ✓ | 15.7386 | 11.7486 | 22 | 3.99 | .49 | 607.02 | 2.20 | 114.82 | 492.20 | 813.18 | 22 | | |
| 4 17 | 23 | Magma | 315 | SP 93612 | 105940 | 1.30 | 104563 | 23 | 52.281 | 20.913 | 0.40 | 32.200 | .30 | ✓ | 12.880 | 9.38 | 23 | 3.50 | ✓ | 490.40 | 1.00 | 52.97 | 437.43 | 673.39 | 23 | | |
| 4 23 | 24 | P.D Corp. | 336 | SP 91699 | 109060 | 1.27 | 107694 | 24 | 53.837 | 24.065 | 0.447 | 32.1195 | .42 | ✓ | 14.3574 | 10.3574 | 24 | 4.00 | .50 | 557.61 | 2.20 | 119.97 | 437.64 | 772.96 | 24 | | |
| 4 27 | 25 | " " " | 343 | SP 92104 | 109460 | 1.00 | 108366 | 25 | 54.183 | 33.431 | 0.617 | " | .57 | 0.64125 | 20.1877 | 16.1477 | 25 | 4.04 | .52 | 874.93 | 2.50 | 136.83 | 736.10 | 1093.83 | 25 | $2.00 | deduction on silver payment. |
| 5 1 | 26 | Magma | 355 | SP 91476 | 89420 | 1.00 | 88526 | 26 | 44.263 | 27.443 | 0.62 | 32.20 | .20 | ✓ | 19.964 | 16.464 | 26 | 3.50 | ✓ | 728.75 | 1.30 | 58.12 | 648.66 | 883.67 | 26 | $21.97 | Additional treatment Charge. |
| 5 4 | 27 | P.D. Corp | 371 | S.P. 92249 | 110600 | 1.00 | 109494 | 27 | 54.747 | 32.684 | 0.597 | 32.1195 | .44 | ✓ | 19.1753 | 15.2153 | 27 | 3.96 | .46 | 832.99 | 2.20 | 121.66 | 711.33 | 1049.79 | 27 | | |
| 5 9 | 28 | Magma | 386 | S.P. 92065 | 108300 | 1.00 | 107217 | 28 | 53.608 | 28.949 | 0.54 | 32.20 | .38 | ✓ | 17.388 | 13.888 | 28 | 3.50 | ✓ | 744.51 | 1.00 | 55.15 | 677.56 | 932.14 | 28 | 12.80 | " " " |
| 5 14 | 29 | P.D. Corp. | 410 | SP 46879 | 119920 | 1.00 | 118720 | 29 | 59.36 | 34.132 | 0.575 | 32.1195 | .41 | ✓ | 18.4687 | 14.4387 | 29 | 4.03 | .53 | 857.08 | 2.20 | 131.91 | 725.17 | 1096.30 | 29 | | |
| 5 19 | 30 | " " " | 424 | SP 46498 | 208140 | 1.00 | 206058 | 30 | 103.029 | 77.272 | 0.75 | " | .58 | 0.64125 | 24.4596 | 20.0296 | 30 | 4.43 | .48 | 2063.63 | 2.80 | 291.39 | 1768.43 | 2520.05 | 30 | 3.81 | deduction on silver payment |
| 5 21 | 31 | " " " | | SP 92918 | | | | 31 | | | | | | | | | 31 | | | | | | | | 31 | | |
| 5 31 | 32 | " " " | 461 | SP 92345 | 103620 | 1.00 | 102584 | 32 | 51.292 | 32.160 | 0.627 | " | .65 | " | 20.5589 | 16.5189 | 32 | 4.04 | .48 | 847.29 | 2.50 | 129.53 | 715.61 | 1054.51 | 32 | 2.15 | " " " " |
| 6 7 | 33 | A.S.+R. | 1001 | 42315 | 104140 | 1.00 | 103099 | 33 | 51.549 | 28.868 | 0.56 | " | — | — | 17.99 | 13.92 | 33 | 4.07 | .57 | 717.57 | 3.50 | 182.25 | 535.32 | 927.37 | 33 | | |
| 6 14 | 34 | Magma | 476 | SP 91709 | 120980 | 1.00 | 119770 | 34 | 59.885 | 47.609 | Umpire 0.795 0.74 | 32.20 | .35 | — | 23.828 | 20.328 | 34 | 3.50 | ✓ | 1217.34 | 1.30 | 78.64 | 1085.83 | 1426.94 | 34 | 52.87 | Additional treatment charge cr. 77.31 won on umpire |
| 6 13 | 35 | P.D. Corp. | 510 | SP 93834 | 114600 | 1.00 | 113454 | 35 | 56.727 | 32.902 | 0.580 | 32.1195 | .44 | — | 18.6293 | 14.6093 | 35 | 4.02 | .52 | 828.75 | 2.20 | 126.06 | 702.69 | 1056.78 | 35 | | |
| 6 16 | 36 | " " " | 525 | SP 93523 | 112980 | 1.26 | 111556 | 36 | 55.778 | 27.331 | 0.490 | " | .53 | 0.64125 | 16.0786 | 12.0486 | 36 | 4.03 | .53 | 672.04 | 2.20 | 124.28 | 545.86 | 896.83 | 36 | 1.90 | deduction on silver payment. |
| 6 20 | 37 | Magma | 495 | SP 93041 | 118420 | 1.00 | 117236 | 37 | 58.618 | 28.137 | Umpire 0.480 0.460 | 32.20 | .45 | — | 14.812 | 11.312 | 37 | 3.50 | ✓ | 663.09 | 1.00 | 59.21 | 603.88 | 868.25 | 37 | | cr. 32.08 won on umpire |
| 7 3 | 38 | " | 518 | SP 46413 | 119000 | 1.00 | 117810 | 38 | 58.905 | 42.412 | 0.72 | " | .30 | — | 23.184 | 19.684 | 38 | 3.50 | ✓ | 1159.49 | 1.30 | 77.35 | 1033.93 | 1365.65 | 38 | 48.21 | Additional treatment charge |
| 7 5 | 39 | P.D. Corp. | 600 | SP 91501 | 117600 | 3.41 | 113590 | 39 | 56.795 | 25.955 | 0.457 | 32.1195 | .52 | 0.64125 | 15.0086 | 10.9586 | 39 | 4.05 | .55 | 622.39 | 2.20 | 129.36 | 522.37 | 852.41 | 39 | 1.87 | deduction on silver payment (net proceeds includes 31.21 freight overcharge) |
| 7 9 | 40 | " " " | 624 | SP 91414 | 117500 | 1.00 | 116324 | 40 | 58.162 | 25.882 | 0.445 | " | .43 | — | 14.2932 | 10.2532 | 40 | 4.04 | .54 | 596.35 | 2.20 | 129.25 | 467.10 | 831.32 | 40 | | |
| 7 19 | 41 | " " " | 684 | SP 92916 | 117660 | 2.28 | 114978 | 41 | 57.489 | 34.493 | 0.600 | " | .46 | — | 19.2717 | 15.2117 | 41 | 4.06 | .56 | 874.50 | 2.20 | 129.43 | 745.07 | 1107.91 | 41 | | |
| 7 19 | 42 | " " " | 685 | SP 92110 | 112740 | 1.95 | 110542 | 42 | 55.271 | 34.821 | 0.630 | " | 1.53 | 0.64125 | 21.2153 | 17.3053 | 42 | 3.91 | .29 | 956.48 | 2.50 | 140.93 | 810.13 | 1172.59 | 42 | 5.42 | deduction on silver payment |
| 7 24 | 43 | " " " | 714 | SP 91623 | 113600 | 1.08 | 112374 | 43 | 56.187 | 23.430 | 0.417 | " | .34 | — | 13.3938 | 9.3838 | 43 | 4.01 | .51 | 527.25 | 2.20 | 124.96 | 402.29 | 752.56 | 43 | | |
| 7 29 | 44 | " " " | 758 | SP 46592 | 114820 | 1.00 | 113672 | 44 | 56.836 | 24.155 | 0.425 | " | .34 | — | 13.6508 | 9.6008 | 44 | 4.05 | .55 | 545.67 | 2.20 | 126.30 | 419.37 | 775.86 | 44 | | |
| 8 2 | 45 | " " " | 777 | SP 93524 | 117540 | 1.00 | 116364 | 45 | 58.182 | 26.182 | 0.450 | " | .36 | — | 14.4538 | 10.3738 | 45 | 4.08 | .58 | 603.57 | 2.20 | 129.29 | 474.28 | 840.95 | 45 | | |
| 8 4 | 46 | " " " | 801 | SP 92939 | 119960 | 1.00 | 118760 | 46 | 59.38 | 29.190 | 0.500 | " | .36 | — | 16.0597 | 12.0197 | 46 | 4.04 | .54 | 713.73 | 2.20 | 131.96 | 581.77 | 953.36 | 46 | | |
| | | | | | | | | | [illegible] | [illegible] | | | | | | | | | | [illegible] | | | [illegible] | 49,069.74 | | | |
| 8 7 | 47 | P.D. Corp. | 811 | SP 93839 | 115920 | 1.78 | 113856 | 47 | 56.928 | 23.910 | 0.42 | 32.1195 | .35 | — | 13.4902 | 9.4602 | 47 | 4.03 | .53 | 538.56 | 2.20 | 127.51 | 407.05 | 767.97 | 47 | | Lost 11.97 on umpire |
| 8 17 | 48 | " " " | 883 | SP 44339 | 236100 | 1.00 | 233680 | 48 + 49 | 116.84 | 51.760 | 0.443 | 32.1195 | .27 | — | 14.2289 | 10.1889 | 48 + 49 | 4.04 | .54 | 1190.48 | 2.20 | 259.71 | 930.77 | 1662.50 | 48 + 49 | | |
| 8 15 | 49 | " " " | | SP 92025 | | 1.05 | | | | | | | | | | | | | | | | | | | | | |
| 8 22 | 50 | " " " | 928 | SP 46424 | 118540 | 1.28 | 117022 | 50 | 58.511 | 34.053 | 0.582 | " | .49 | — | 18.6935 | 14.6535 | 50 | 4.04 | .54 | 857.39 | 2.20 | 130.39 | 727.00 | 1093.78 | 50 | | |
| 8 23 | 51 | " " " | 927 | SP 92850 | 116260 | 1.00 | 115098 | 51 | 57.549 | 29.925 | 0.520 | " | .29 | — | 16.7021 | 12.6621 | 51 | 4.04 | .54 | 728.69 | 2.20 | 127.89 | 600.80 | 961.19 | 51 | | |
| 8 27 | 52 | " " " | 963 | SP 92099 | 119520 | 1.00 | 118324 | 52 | 59.162 | 31.652 | 0.535 | " | .29 | — | 17.1839 | 13.1739 | 52 | 4.01 | .51 | 779.40 | 2.20 | 131.47 | 647.93 | 1075.80 | 52 | | |
| 9 2 | 53 | " " " | 1008 | SP 46436 | 116660 | 1.26 | 115190 | 53 | 57.595 | 27.646 | 0.480 | " | .32 | — | 15.4174 | 11.3674 | 53 | 4.05 | .55 | 654.71 | 2.20 | 128.33 | 526.38 | 887.97 | 53 | | |
| 9 12 | 54 | " " " | 1048 | SP 46754 | 117000 | 1.00 | 115830 | 54 | 57.915 | 29.537 | 0.510 | " | .29 | — | 16.3809 | 12.3209 | 54 | 4.06 | .56 | 713.57 | 2.20 | 128.70 | 584.87 | 948.70 | 54 | | |
| 9 14 | 55 | " " " | 1058 | SP 92440 | 110040 | 1.00 | 108940 | 55 | 54.470 | 33.771 | 0.620 | " | .40 | — | 19.9141 | 15.8841 | 55 | 4.03 | .53 | 865.20 | 2.50 | 137.55 | 727.65 | 1084.72 | 55 | | |
| 9 16 | 56 | " " " | 1064 | SP 93743 | 120080 | 1.00 | 118880 | 56 | 59.440 | 30.909 | 0.520 | " | .50 | 0.64125 | 17.0221 | 12.9821 | 56 | 4.04 | .54 | 771.66 | 2.20 | 132.09 | 637.67 | 1011.79 | 56 | 1.90 | deduction on silver payment |
| 10 23 | 57 | Magma | 784 | SP 46978 | 118740 | 1.00 | 117553 | 57 | 58.776 | 42.319 | 0.72 | 32.20 | .60 | — | 23.184 | 19.684 | 57 | 3.50 | ✓ | 1156.96 | 1.30 | 77.18 | 1031.68 | 1362.74 | 57 | 48.10 | Additional treatment charge |
| 10 31 | 58 | " | 809 | SP 93762 | 57780 | 1.00 | 57202 | 58 | 28.601 | 14.300 | 0.50 | " | .50 | — | 16.10 | 12.60 | 58 | 3.50 | ✓ | 360.37 | 1.00 | 30.00 min. | 327.22 | 460.48 | 58 | 3.15 | " " " |
| 11 13 | 59 | " | 863 | SP 93670 | 94080 | 1.00 | 93139 | 59 | 46.569 | 33.530 | 0.72 | " | .80 | — | 23.184 | 19.684 | 59 | 3.50 | ✓ | 916.67 | 1.30 | 61.15 | 817.41 | 1079.67 | 59 | 38.11 | " " " |
| 11 20 | 60 | " | 883 | SP 93160 | 106480 | 3.300 | 102966 | 60 | 51.483 | 29.860 | 0.58 | " | .80 | — | 18.676 | 15.176 | 60 | 3.50 | ✓ | 781.31 | 1.00 | 53.24 | 709.14 | 961.50 | 60 | 18.93 | " " " |
| 11 27 | 61 | " | 913 | SP 93670 | 68220 | 1.00 | 67538 | 61 | 33.769 | 14.858 | 0.44 | " | .20 | — | 14.168 | 10.668 | 61 | 3.50 | ✓ | 360.25 | 1.00 | 34.11 | 326.14 | 478.44 | 61 | | |
| 12 6 | 62 | " | 939 | SP 96490 | 81020 | 1.80 | 79562 | 62 | 39.781 | 16.708 | 0.42 | " | .30 | — | 13.524 | 10.024 | 62 | 3.50 | ✓ | 398.76 | 1.00 | 40.51 | 358.25 | 538.00 | 62 | | |
| 12 11 | 63 | " | 962 | SP 93154 | 79100 | 1.00 | 78309 | 63 | 39.154 | 16.053 | 0.41 | " | .30 | — | 13.202 | 9.702 | 63 | 3.50 | ✓ | 379.88 | 1.00 | 39.55 | 340.33 | 516.92 | 63 | | |
| 12 20 | 64 | " | 1007 | SP 46986 | 111480 | 1.30 | 110031 | 64 | 55.015 | 17.605 | 0.32 | " | .40 | — | 10.304 | 6.804 | 64 | 3.50 | ✓ | 374.33 | 1.00 | 55.74 | 318.59 | 566.88 | 64 | | |
| 1935 1 2 | 65 | " | 1 | SP 93160 | 50420 | 2.60 | 49109 | 65 | 24.554 | 15.224 | 0.62 | " | 1.00 | Less 5% 0.64125 | 20.5732 | 17.0732 | 65 | 3.50 | ✓ | 419.22 | 1.30 | 39.00 | 366.54 | 505.16 | 65 | 13.68 | " " " |
| 1 2 | 66 | " | 2 | SP 91771 | 67040 | 1.80 | 65833 | 66 | 32.916 | 24.358 | 0.74 | " | .45 | — | 23.828 | 20.328 | 66 | 3.50 | ✓ | 669.13 | 1.30 | 43.58 | 596.49 | 784.33 | 66 | 29.06 | " " " |
| 1 2 | 67 | " | 3 | SP 46720 | 58580 | 2.10 | 57350 | 67 | 28.675 | 20.359 | 0.71 | " | .40 | — | 22.862 | 19.362 | 67 | 3.50 | ✓ | 555.21 | 1.30 | 39.00 | 493.67 | 655.57 | 67 | 22.54 | " " " |
| 1 19 | 68 | " | 73 | SP 93757 | 113520 | 3.50 | 109547 | 68 | 54.773 | 30.125 | 0.55 | " | .10 | — | 17.71 | 14.21 | 68 | 3.50 | ✓ | 778.33 | 1.00 | 56.76 | 706.73 | 970.04 | 68 | 14.84 | " " " |
| 2 1 | 69 | " | 123 | 83239 | 74400 | 3.50 | 73210 | 69 | 36.605 | 15.374 | 0.42 | " | .20 | — | 13.524 | 10.024 | 69 | 3.50 | ✓ | 366.93 | 1.00 | 37.20 | 329.73 | 495.05 | 69 | | |
| 2 2 | 70 | " | 129 | SP 93739 | 54540 | 1.00 | 53995 | 70 | 26.997 | 11.069 | 0.41 | " | .60 | — | 13.202 | 9.702 | 70 | 3.50 | ✓ | 261.93 | 1.00 | 30.00 min. | 231.93 | 356.42 | 70 | | |
| 2 12 | 71 | " | 164 | SP 46851 | 72820 | 1.00 | 72092 | 71 | 36.046 | 21.988 | 0.61 | " | .70 | — | 19.642 | 16.142 | 71 | 3.50 | ✓ | 581.85 | 1.30 | 47.33 | 517.79 | 708.62 | 71 | 16.73 | " " " |
| 2 12 | 72 | " | 165 | SP 93757 | 98320 | 1.30 | 97042 | 72 | 48.521 | 28.142 | 0.58 | " | .20 | — | 18.676 | 15.176 | 72 | 3.50 | ✓ | 736.35 | 1.00 | 49.16 | 669.35 | 906.18 | 72 | 17.84 | " " " |
| 2 26 | 73 | " | 210 | SP 92009 | 99520 | 1.20 | 98328 | 73 | 49.163 | 43.657 | 0.888 | " | .95 | — | 28.5936 | 25.0936 | 73 | 3.50 | ✓ | 1233.67 | 1.60 | 65.62 | 1078.72 | 1405.75 | 73 | 69.33 | " " " |
| 3 5 | 74 | " | 234 | SP 93490 | 94940 | 1.20 | 93801 | 74 | 49.9005 | 36.431 | Umpire 0.77 0.73 | " | .60 | — | 23.506 | 20.006 | 74 | 3.50 | ✓ | 938.29 | 1.30 | 61.71 | 836.69 | 1172.96 | 74 | 39.89 | " " " cr. 35.13 won on Umpire |
| 3 16 | 75 | " | 274 | SP 92403 | 73080 | 2.00 | 71618 | 75 | 35.809 | 20.053 | 0.56 | " | 1.00 | Less 5% 0.64125 | 18.6412 | 15.1412 | 75 | 3.50 | ✓ | 542.19 | 1.00 | 36.54 | 492.61 | 667.52 | 75 | 13.04 | " " " |
| 3 15 | 76 | " | 272 | SP 46292 | 72340 | 1.00 | 71617 | 76 | 35.8085 | 19.337 | 0.54 | " | .60 | — | 17.388 | 13.888 | 76 | 3.50 | ✓ | 497.31 | 1.00 | 36.17 | 452.59 | 622.64 | 76 | 8.55 | " " " |
| 3 28 | 77 | " | 316 | SP 92223 | 94940 | 1.00 | 93991 | 77 | 46.9955 | 30.547 | 0.65 | " | .80 | — | 20.93 | 17.43 | 77 | 3.50 | ✓ | 819.13 | 1.30 | 61.71 | 729.55 | 983.62 | 77 | 27.87 | " " " |
| 4 11 | 78 | " | 373 | SP 93046 | 75580 | 2.00 | 74068 | 78 | 37.034 | 28.516 | 0.77 | " | .70 | — | 24.794 | 21.294 | 78 | 3.50 | ✓ | 788.60 | 1.30 | 49.13 | 703.20 | 918.22 | 78 | 36.27 | " " " |
| 4 17 | 79 | " | 402 | SP 93088 | 87780 | 1.00 | 86902 | 79 | 43.451 | 38.237 | 0.88 | " | .60 | — | 28.336 | 24.836 | 79 | 3.50 | ✓ | 1079.15 | 1.60 | 70.22 | 950.98 | 1231.23 | 79 | 57.95 | " " " |
| 4 23 | 80 | " | 426 | SP 91620 | 91620 | 1.00 | 90704 | 80 | 45.352 | 30.386 | 0.67 | " | 1.00 | 0.70625 | 22.2449 | 18.7449 | 80 | 3.50 | ✓ | 850.12 | 1.30 | 59.55 | 757.71 | 1008.85 | 80 | 32.86 | " " " |
| 5 1 | 81 | " | 458 | SP 92233 | 59260 | 1.00 | 58667 | 81 | 29.3335 | 14.373 | 0.49 | " | .60 | — | 15.778 | 12.278 | 81 | 3.50 | ✓ | 360.16 | 1.00 | 30.00 | 327.88 | 462.82 | 81 | 2.28 | " " " |
| 5 3 | 82 | " | 465 | SP 91969 | 86520 | 2.60 | 84270 | 82 | 42.135 | 22.753 | 0.54 | " | .45 | — | 17.388 | 13.888 | 82 | 3.50 | ✓ | 585.17 | 1.00 | 43.26 | 531.85 | 732.64 | 82 | 10.06 | " " " |
| 5 8 | 83 | " | 486 | SP 93199 | 113180 | 1.30 | 111709 | 83 | 55.8545 | 63.674 | 1.14 | " | 1.05 | 0.77 | 37.4761 | 33.9761 | 83 | 3.50 | ✓ | 1897.72 | 1.90 | 107.52 | 1656.67 | 2093.21 | 83 | 125.55 | " " " |
| 5 15 | 84 | " | 515 | SP 93695 | 101580 | 1.00 | 100564 | 84 | 50.282 | 52.293 | 1.04 | " | .70 | — | 33.488 | 29.988 | 84 | 3.50 | ✓ | 1507.85 | 1.60 | 81.26 | 1333.62 | 1683.84 | 84 | 92.97 | " " " |
| 5 23 | 85 | " | 551 | SP 93702 | 102240 | 1.00 | 101218 | 85 | 50.609 | 45.042 | .89 | " | .50 | — | 28.658 | 25.158 | 85 | 3.50 | ✓ | 1273.22 | 1.60 | 81.79 | 1122.31 | 1450.35 | 85 | 69.12 | " " " |
| 6 4 | 86 | " | 597 | SP 93792 | 113520 | 1.00 | 112385 | 86 | 56.1925 | 48.326 | .86 | " | 1.02 | 0.77 | 28.4381 | 24.9381 | 86 | 3.50 | ✓ | 1401.34 | 1.60 | 90.82 | 1232.51 | 1598.00 | 86 | 75.51 | " " " |
| 6 4 | 87 | " | 602 | SP 46393 | 44680 | 1.10 | 50676 | 87 | 25.338 | 13.936 | .55 | " | .45 | — | 17.71 | 14.21 | 87 | 3.50 | ✓ | 360.05 | 1.00 | 30.00 | 323.18 | 448.74 | 87 | 6.87 | " " " |
| 6 18 | 88 | " | 662 | SP 92397 | 110840 | 1.50 | 109177 | 88 | 54.5885 | 41.487 | .76 | " | .65 | — | 24.472 | 20.972 | 88 | 3.50 | ✓ | 1144.83 | 1.391 | 77.09 | 1016.03 | 1335.89 | 88 | 51.71 | " " " |
| 6 27 | 89 | " | 700 | SP 46889 | 112900 | 1.00 | 111771 | 89 | 55.8855 | 33.531 | .60 | " | .50 | — | 19.32 | 15.82 | 89 | 3.50 | ✓ | 884.11 | 1.391 | 78.52 | 781.45 | 1079.71 | 89 | 24.14 | " " " ← This car only one received by Smelter during their shut-down period, 7-1-35 to 8-15-35. |
| 7 24 | 90 | " | 752 | SP 46393 | 99840 | 2.50 | 97344 | 90 | 48.672 | 36.504 | .75 | " | .35 | — | 24.15 | 20.65 | 90 | 3.50 | ✓ | 1005.08 | 1.391 | 69.44 | 891.11 | 1175.43 | 90 | 44.53 | " " " |
| 8 20 | 91 | " | 786 | SP 91750 | 111080 | 1.00 | 109969 | 91 | 54.9845 | 41.128 | .748 | " | .60 | — | 24.0856 | 20.5856 | 91 | 3.50 | ✓ | 1131.88 | 1.391 | 77.26 | 1001.66 | 1324.33 | 91 | 52.96 | " " " Includes 41.61 won on Umpire |
| | | | | | | | | | 4653.2900 | 2853.233 | | | | | | | | | | | | | 62784.95 | 91305.31 | | | |
| 8 27 | 92 | " | 811 | SP 46751 | 64760 | 2.00 | 63465 | 92 | 31.7325 | 19.357 | .61 | " | .60 | — | 19.642 | 16.142 | 92 | 3.50 | — | 512.23 | 1.391 | 45.04 | 449.46 | 623.29 | 92 | 14.73 | " " " Including 5.01 won on Umpire |
| 9 12 | 93 | " | 875 | SP 46666 | 114300 | 1.00 | 113157 | 93 | 56.5785 | 37.908 | .67 | " | .40 | — | 21.574 | 18.074 | 93 | 3.50 | — | 1022.60 | 1.391 | 79.50 | 905.91 | 1220.62 | 93 | 37.19 | " " " |
| 9 21 | 94 | " | 919 | SP 46997 | 78540 | 1.60 | 77283 | 94 | 38.6415 | 20.480 | .53 | " | .60 | — | 17.066 | 13.566 | 94 | 3.50 | — | 524.21 | 1.07 | 42.02 | 474.21 | 659.46 | 94 | 7.98 | " " " |
| 9 25 | 95 | " | 931 | SP 91533 | 76580 | 1.00 | 75814 | 95 | 37.907 | 29.188 | .77 | " | .80 | — | 24.794 | 21.294 | 95 | 3.50 | — | 807.19 | 1.712 | 65.55 | 704.51 | 939.87 | 95 | 37.13 | " " " |
| 10 5 | 96 | " | 978 | SP 93817 | 91760 | 1.00 | 90842 | 96 | 45.421 | 30.432 | .67 | " | .80 | — | 21.574 | 18.074 | 96 | 3.50 | — | 820.94 | 1.391 | 63.81 | 727.27 | 979.91 | 96 | 29.86 | |
| | | | | | | | | | 4863.6705 | 2990.598 | | | | | | | | | | | | | 66046.31 | 95728.46 | | | |