



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

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03/20/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: BETTY LEE MINE

ALTERNATE NAMES:

FRISCO
ELLA J

YUMA COUNTY MILS NUMBER: 120

LOCATION: TOWNSHIP 11 S RANGE 17 W SECTION 2 QUARTER NW
LATITUDE: N 32DEG 30MIN 28SEC LONGITUDE: W 113DEG 59MIN 39SEC
TOPO MAP NAME: MOHAWK SW - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD LODE
COPPER OXIDE
SILVER

BIBLIOGRAPHY:

KEITH, S.B., 1978, AZBM BULL. 192, P. 160
ADMMR BETTY LEE MINE FILE
ADMMR BETTY LEE COLVO FILE



3148 I
 (TINAJAS ALTAS)
 1:62 500

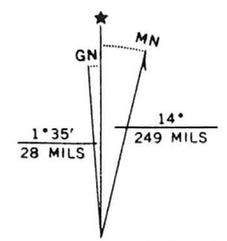
Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1962. Field checked 1965

Polyconic projection. 1927 North American datum
 10,000-foot grid based on Arizona coordinate system, west zone
 1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

Where omitted, land lines have not been established



UTM GRID AND 1965 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

BETTY LEE

YUMA COUNTY
T11S R17W Sec 1 & 2

MILS YUMA Index #120 (under Frisco mine)

ABM #134 p. 166

See LAFB G Miller Report p. 52, 106

THE COPPER HANDBOOK.

v. ~~X~~ 1, 1911

p. 355

ARIZONA DEPT. OF MINES & MINERAL RESOURCES
STATE OFFICE BUILDING
416 W. CONGRESS, ROOM 161
TUCSON, ARIZONA 85701

Frisco, Betty Lee & Ella J.
Yuma Co

ARIZONA CONSOLIDATED MINES CO.

ARIZONA.

Mine office: Wellton, Yuma Co., Ariz. Organized circa August, 1909, with capitalization \$3,000,000, shares \$10 par, by Geo. R. Bentel, F. M. Prescott and Thos. F. Bentel. Lands, 56 claims, 14 miles from Wellton, including lands bought of Hecla Consolidated Mining Co., and 2 adjoining properties. Mine is said to have about 4,000' of workings, and is claimed to have about 30,000 tons of ore on the dump, with 70,000 tons developed underground, with estimated average value, for entire 100,000 tons, of \$43.35 per ton, which figures are considered excessive.

C
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Y

← PART OF ASSAYS U.S. ARMY REPORT.

<u>Claim</u>	<u>No.</u>	<u>Location</u>	<u>Oz.Au/Ton</u>	<u>Oz.Ag/Ton</u>
Frisco #11	28 M-3	Across vein 14" face of N.Drift 200' level	0.010	0.30
Frisco #11	28 M-4	Across vein 24" face of raise 200' level	0.030	0.40
Frisco #11	28 M-5	Across 12" at SE end of stope 50' level (See Exhibit C sketch of workings in Appendix).	0.090	0.50
Frisco #20	28 M-6	Across 22" white quartz at east drift	0.005	0.15
Frisco #20	28 M-7	Across 48" vein in east stope	0.255	0.80
Frisco #20	28 M-8	Across 40" vein in west stope (See Exhibit C sketch of workings in Appendix).	0.125	1.90
Frisco #14	28 M-12	Across vein 24" in face of cut	0.005	0.25
Frisco #14	28 M-13	Across vein 24" in face discovery cut	0.120	0.25
Frisco #14	28 M-14	Across vein 40" in face cut to west of discovery	0.145	0.30
Frisco #4	28 M-16	Across vein 24" in face cut to west of discovery	0.060	0.35
Frisco #13	28 M-17	Across veing 60" in face cut to west of discovery	0.255	0.65
Frisco #18	28 M-11	Across vein 34" 25' new shaft	0.030	0.20
Frisco #16	28 M-10	Across vein 24" in face of discovery cut (Remaining samples from Betty Lee Claim)	0.008	0.25

<u>No. Sample</u>	<u>Location</u>	<u>Oz.Au/Ton</u>	<u>Oz.Ag/Ton</u>
28 M-15	Across vein 30" in face of NW tunnel 2nd level	0.200	1.35
28 M-21	Across vein 60" 30' from face NW tunnel	0.035	1.90
28 M-22	Across vein 39" 60' from face NW tunnel	0.120	1.40
28 M-23	Across vein 28" 85' from face NW tunnel check	0.120	0.25
28 M-24	Across vein 24" 90' from face Nw tunnel	0.140	0.10
28 M-25	Across vein 26" 120' from face NW tunnel	0.055	0.80
28 M-26	Across vein 28" 150' from face NW tunnel	0.035	0.65
28 M-27	Across vein 34" 156' from face NW tunnel check	0.090	0.45
28 M-28	Across vein 27" 180' from face NW tunnel	0.075	0.40
28 M-29	Across vein 36" 210' from face NW tunnel	0.110	0.65
28 M-30	Across vein 39" 240' from face NW tunnel	0.120	1.15
28 M-31	Across vein 44" 270' from face NW tunnel	0.040	1.15
28 M-32	Across vein 33" 300' from face NW tunnel	0.070	1.25
28 M-33	Across vein 34" 330' from face NW tunnel	0.070	2.15
28 M-34	Across vein 14" 360' from face NW tunnel	0.110	1.30
28 M-35	Across vein 24" 390' from face NW tunnel	0.040	0.70
28 M-36	Across vein 30" 420' from face NW tunnel	0.050	1.10
28 M-37	Across vein 52" 450' from face NW tunnel	0.040	0.90
28 M-38	Across vein 63" 480' from face NW tunnel	0.110	0.90
28 M-39	Across vein 30" 510' from face NW tunnel	0.110	0.45
28 M-40	Across vein 63" 540' from face at portal	0.020	0.10
28 M-41	Across vein 34" in face NW drift	0.010	0.95
28 M-42	Across vein 46" 30' from face NW drift	0.020	0.80
28 M-43	Across vein 58" 60' from face NW drift	0.100	0.35
28 M-44	Across vein 45" 90' from face NW drift	0.070	0.55
28 M-45	Across vein 48" 120' from face NW drift	0.205	0.65
28 M-46	Across vein 40" 160' from face MW drift	0.040	1.50
28 M-47	Across vein 36" 180' from face NW drift	0.090	0.50
28 M-48	Across vein 36" 210' from face NW drift	0.020	0.70
28 M-49	Across vein 31" 240' from face NW drift	0.040	0.95
28 M-50	Across vein 48" 270' from face NW drift	0.310	1.20
28 M-51	Across vein 55" 300' from face NW drift	0.020	0.80

a) GFS(MIN SUPP) 1
 b) GFS(MIN) 196(1983)
 c) GFS(MIN) 13(1972)
 d) GFS(MIN) 40(1980)
 e) GFS(MIN) 16(1971)
 f) GFS(MIN) 59(1973)
 g) GFS(MIN) SO-25(1962)
 h) GFS(MIN) JD-5(1972)
 i) GFS(MIN) 126(1980)
 j) GFS(MIN) 37(1984)
 k) GFS(MIN) 375(1981)
 l) GFS(MIN) 33(1980)
 m) GFS(MIN) 226(1980)
 n) GFS(MIN) 37(1984)
 o) GFS(MIN) 160(1983)
 p) GFS(MIN) 93(1983)
 q) GFS(MIN) 76(1983)
 r) GFS(MIN) 28(1975)
 s) GFS(MIN) 28(1973)
 t) GFS(MIN) SO-16(1968)
 u) GFS(MIN) 77(1983)
 v) GFS(MIN) 287(1982)
 w) GFS(MIN) 179(1982)
 x) GFS(MIN) 81(1982)
 y) GFS(MIN) 379(1981)
 z) GFS(MIN) 285(1981)
 aa) GFS(MIN) 105(1981)
 bb) GFS(MIN) 267(1980)
 cc) GFS(MIN) 236(1980)
 dd) GFS(MIN) 126(1980)
 ee) GFS(MIN) 73(1980)
 ff) GFS(MIN) 40(1980)
 gg) GFS(MIN) 5(1980)
 hh) GFS(MIN) 100(1979)
 ii) GFS(MIN) 65(1979)
 jj) GFS(MIN) 59(1979)
 kk) GFS(MIN) 9(1979)
 ll) GFS(MIN) 122(1978)
 mm) GFS(MIN) 101(1978)
 nn) GFS(MIN) 100(1978)
 oo) GFS(MIN) 81(1978)
 pp) GFS(MIN) 78(1978)
 qq) GFS(MIN) 13(1978)
 rr) GFS(MIN) 55(1977)
 ss) GFS(MIN) 31(1977)
 tt) GFS(MIN) 22(1977)
 uu) GFS(MIN) 60(1976)
 vv) GFS(MIN) 47(1976)
 ww) GFS(MIN) 32(1976)
 xx) GFS(MIN) 29(1976)
 yy) GFS(MIN) 7(1976)
 zz) GFS(MIN) 46(1975)

aaa) GFS(MIN) 36(1975)
 bbb) GFS(MIN) 8(1975)
 ccc) GFS(MIN) 57(1974)
 ddd) GFS(MIN) 12(1974)
 eee) GFS(MIN) 89(1973)
 fff) GFS(MIN) 57(1973)
 ggg) GFS(MIN) 59(1972)
 hhh) GFS(MIN) 16(1971)
 iii) GFS(MIN) SO-23(1969)
 jjj) GFS(MIN) SO-16(1969)
 kkk) GFS(MIN) 86(1973)
 lll) GFS(MIN) SO-1(1969)
 mmm) GFS(MIN) SO-20(1968)
 nnn) GFS(MIN) SO-9(1962)
 ooo) GFS(MIN) 20(1981)
 ppp) GFS(MIN) 101(1973)
 qqq) GFS(MIN) 16(1971)
 rrr) GFS(MIN) 3(1976)
 sss) GFS(MIN) 43(1974)
 ttt) GFS(MIN) 59(1973)
 uuu) GFS(MIN) SO-25(1962)
 vvv) GFS(MIN) 27(1974)

BETTY LEE

YUMA COUNTY
T11S R17W Sec 1 & 2

MG WR 10/13/77" Wrote letter to Mr. John Chakarun and copied him with our file information on the Betty Lee and Frisco mining claims. According to Mr. Tom Brock (Arizona Real Estate Office, U. S. Corps of Engineers, Phoenix) these claims were on long-term lease agreement between Federal government (owner) and individuals. Now an attempt is being made to validate the claims (re: Mr. Bob McColly, Bureau of Land Management) in order to initiate a Federal condemnation action. 10/25/77

Hearing being held in Yuma 3/30/81 for validation per Mr. Gordon Copple, G. B. Copple Associates, Private Investigator, 1232 W. 16th Street, Tempe, AZ 85281, Ph: 968-4947.

NJN WR 2/7/86: Gordon Copple, (c) owner of the Betty Lee Mine, Yuma Co. visited and reported that the mine is undergoing a validity (condemnation?) contest. The property sits on the Luke-Williams Gunnery Range south of Tacna and the military would like to end their lease of the property. Mr. Copple has hired John Chakarun, Metals Exploration and Mine Development, P O Box 176, Downieville Ca 95936 to evaluate the property and testify for him at the hearings. Mr. Copple reports they have been sampling the upper two underground levels and it appears it would warrant putting it into production. The ground is in good shape and with the levels already developed mining by stoping and slusher drifting would be relatively cheap. Part of the property has already survived the hearing process and if the rest does they may proceed with their plans.

NJN WR 7/3/87: Gordon Copple (card) visited and reported that he is appealing the BLM's decision to void his claims for his failure to file an intent to hold. (Betty Lee - file) Yuma County. He will bring in a summary of the evaluation of the claims when it is finished.



United States Department of the Interior

OFFICE OF HEARINGS AND APPEALS
INTERIOR BOARD OF LAND APPEALS
4015 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22203

UNITED STATES

v.

JANET B. COPPLE ET AL.

IBLA 82-38

Decided May 30, 1984

Appeal from a decision of Administrative Law Judge Robert W. Mesch declaring the Betty Lee lode mining claim, the Frisco Nos. 1 through 19 lode mining claims, and the Frisco No. 21 placer mining claim invalid. A-14905

Affirmed in part and reversed in part.

1. Mining Claims: Contests—Mining Claims: Determination of Validity—Mining Claims: Discovery: Marketability

The requirement that a mining claimant show that the mineral discovered on the claim is presently marketable at a profit simply means that, as a present fact, taking into consideration historic price and cost factors as well as the likelihood of their continuance or change, there is a reasonable likelihood of success that a paying mine can be developed.

2. Evidence: Burden of Proof—Evidence: Prima Facie Case—Mining Claims: Contests

Where a qualified expert, hired by mining claimants to evaluate contested claims, informs a Government mineral examiner that certain claims have no mineral values, the mineral examiner has no affirmative obligation to sample those claims. Testimony of the Government mineral examiner as to this conversation, unless impeached in cross-examination, is sufficient to establish a prima facie case that those claims are invalid.

3. Mining Claims: Discovery: Generally—Mining Claims: Withdrawn Land

Where lands have been withdrawn from mineral entry, any mining location on such land which is not then supported by a discovery of a valuable mineral deposit must be deemed invalid, even if such a discovery is made at a later date.

INDEX CODE:
43 CFR 4.24(b)

4. Mining Claims: Contests—Mining Claims: Termination of Validity

Where the Government has acquired a lease of lands embraced in a mining claim, and the evidence establishes that, during the term of this lease, access to lower workings has become impossible, it is the responsibility of the Government to restore access to the conditions existing prior to lease in order to permit sampling of a mineral deposit when the claimant alleges that values existed at depths which are no longer accessible. Where the Government fails to do so, the claimant's assertions of values at depth must be presumed to be true.

APPEARANCES: Stephen P. Shadle, Esq., Yuma, Arizona, for appellants.

OPINION BY ADMINISTRATIVE JUDGE BURSKI

Janet B. Copple and Gust E. Svensson, Jr., appeal from a decision of Administrative Law Judge Robert W. Mesch, dated September 1, 1981, declaring the Betty Lee lode mining claim, the Frisco Nos. 1 through 19 lode mining claims, and the Frisco No. 21 placer mining claim null and void for lack of a discovery of a valuable mineral deposit on any of the claims.

On September 30, 1980, the Arizona State Office, Bureau of Land Management (BLM), at the request and on behalf of the Corps of Engineers, Department of the Army, instituted Contest No. A-14905 through issuance of a complaint charging, *inter alia*, that certain named mining claims were invalid since they had not been perfected by a discovery. Claimants duly denied the charges and, on March 31, 1981, a hearing was held before Judge Mesch in Yuma, Arizona.

The claims at issue had been located between 1926 and 1936 on land then open to mineral entry by claimants' predecessors-in-interest. The lands embraced by the claims were subsequently included in an aerial gunnery and bombing range, established on November 6, 1942. At approximately that time, the War Department acquired a lease of the claims for a nominal rent. This area was subsequently withdrawn from all forms of entry and reserved for continued use as a gunnery and bombing range pursuant to the Act of August 24, 1962, P.L. 87-597, 76 Stat. 399 (1962). Since November 1943, claimants have been barred from access to the claims because of military activities, although, upon infrequent occasions, permission has been granted for a brief inspection of the claims. At the present time the claims are the subject of a condemnation action brought by the United States. The instant contest proceeding was initiated to determine whether the claims, or any of them, are valid, in order to assist the court in ascertaining whether claimants are entitled to compensation. This procedure comports with that followed in Best v. Humboldt Placer Mining Co., 371 U.S. 334 (1963).

The first Government witness was William Nelson, a mining engineer employed by BLM. He testified that he had examined the claims on three occasions. The first examination was in the nature of a general reconnaissance

and no samples were taken (Tr. 14-16). On the second examination, which took place on April 1, 1978, he was accompanied by a BLM geologist, Lance Vanderzyl, as well as Gordon Copple, son of Janet Copple, and John Chakarun, a geologist employed by the claimants to make a geological evaluation of the property (Tr. 16-17, 160).

Samples were taken from only three of the claims. Because of the importance ascribed to the Government's failure to sample all of the claims by the dissent, it is important to set out the justification presented by Nelson on this point. Nelson testified that he had a discussion with Chakarun as to the various claims. He stated:

A. [Nelson] Well, Mr. Chakarun had made, evidently, a previous examination of the property, and he had concluded that the Betty Lee claim and the Frisco 20 were the only claims that he considered valuable.

Q. [By Goreham] Based on that information, did you limit your investigation to those claims?

A. I believe we examined all -- we examined the Betty Lee, the Frisco 20, and the Frisco 11.

Q. Okay. Now --

JUDGE MESCH: Why did you examine the Frisco 11?

THE WITNESS: I believe it was on the way up to the Betty Lee and we saw the tunnel going in and we simply went in and looked at the particular workings and took a sample there.

JUDGE MESCH: Yeah, all right, but why did you bother at all with the No. 11 and not with any of the others? Other than the Betty Lee and the No. 20?

THE WITNESS: Well, my recollection is that it was right -- other than we just stopped and looked at it. There was no specific purpose except taking a sample and looking at the particular vein structure that existed there.

(Tr. 19-20).

No joint samples were taken. Rather, both Nelson and Chakarun took their own samples where they thought best. Nelson took a total of 13 samples, 10 from the Betty Lee, one from the Frisco No. 11, and two from the Frisco No. 20 (Tr. 39). These samples were assayed by an atomic absorption process (Tr. 40). While Nelson testified that he had requested a fire assay, he did state that he felt comfortable with the assay results in this case because they favorably correlated with the results of other samples subsequently taken from the claim which were fire assayed (Tr. 42-44).

The samples obtained on the second examination, assayed by atomic absorption, showed gold values in excess of 0.10 oz/ton only on the samples

taken for the Frisco No. 20. The highest silver assay for any of the Betty Lee samples was 0.70 oz/ton. Only the Frisco No. 20 samples showed the presence of an excess of 0.75 percent copper, and the average copper value found in the Betty Lee was 0.26 percent. See Exh. BLM J.

This third examination referred to by Nelson occurred on September 3, 1980. Nine samples from the second level of the Betty Lee were taken by Lance Vanderzyl (Tr. 49). While the original samples were taken across a mining width, the nine samples taken on the third examination were taken only across the vein (Tr. 56-57). The nine samples taken on the third examination, which were fire assayed, showed gold values up to 0.232 oz/ton, silver values to 1.25 oz/ton, and an average copper content of 0.35 percent. See Exh. BLM M.

Vanderzyl, in testimony taken out of order for purposes of voir dire, noted that he discounted these values owing to the fact that they were not taken across a mining width. He admitted that this computation was made under the operative assumption that there were no values in the country rock even though Nelson had testified that such country rock would show some mineralization. This computation, appearing on exhibit BLM L, showed that across a 4-foot mining width, gold would have a value of 0.0538 oz/ton, silver would be 0.358 oz/ton, and copper would have a value of 0.072 percent. ^{1/} It should be noted, however, that the vast majority of the samples taken from the Betty Lee were taken from the second level of the mine, and none were taken from the six levels below the second because the shaft had caved (Tr. 71). See Exh. BLM C.

Based on his examination of the Betty Lee and the Frisco No. 11, as well as the assay reports of the samples taken, Nelson concluded that a prudent man would not be justified in further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine (Tr. 83-84). Insofar as the Betty Lee was concerned, utilizing his assay results from the second examination, Nelson arrived at a mineral value of \$27 per ton as the present value, with a value of \$1.63 for 1962 when the land was withdrawn (Tr. 74-76). Nelson estimated that the present costs attributable to mining on the Betty Lee would be approximately \$42 or \$43 a ton (Tr. 78). He further noted that his figures assumed total recovery of the mineral, which would not occur (Tr. 79). Nelson admitted, however, that his view on the nonprofitability of the Betty Lee was based solely on evidence obtained from the second level (Tr. 104), even though he agreed that it was reasonable to conclude that the vein continued the full 700-foot depth of the Betty Lee main shaft (Tr. 95).

With reference to the Frisco No. 11, Nelson stated that the assay results showed that it possessed only minimal values (Tr. 76). Concerning the Frisco No. 20, however, Nelson testified that, in his opinion, it was "a valid claim" (Tr. 84).

^{1/} Actually, the copper figure was in error. Vanderzyl made a transcription error on sample 6. The assay showed that the copper content was 1.32 percent. In making his computations, Vanderzyl transcribed this figure as 0.132 percent. The correct copper figure, assuming a 4-foot mining width (and no values in the adjacent rock) is 0.157 percent copper.

The Government also presented the testimony of Lance Vanderzyl, who had accompanied Nelson on the second examination and taken the samples on the third examination. Vanderzyl expressed his view that the atomic absorption method was as valid a method of assessing mineral content as the fire assay, noting that "they're both used in the industry, and if the industry uses them and they're successful, they're fine with me" (Tr. 62). He admitted, however, that he was not personally familiar with the atomic absorption process (Tr. 65).

Contestees presented the testimony of two witnesses, Gordon Copple, the son of one of the claimants, and John D. Chakarun, a metals exploration geologist. Gordon Copple identified a number of documents he had found in his father's files relating to the claims. He also testified that in 1943 the General Land Office had contested a number of the claims, specifically the Frisco Nos. 2, 12, 15, and 21. While he stated that they were declared invalid (Tr. 130), he had no copy of a decision so stating. Copple also adverted to documents which indicated that Asarco Mining Company and Kennecott Copper Company had evidenced an interest in the claims (Tr. 140-41). Contestees introduced a letter, written in 1978, concerning Asarco's earlier investigation of the Betty Lee claim in 1931. See Exh. 8. That letter states, in part:

During the 1931 examination, forty samples were collected and assayed for gold, silver, and copper. The maximum values were 0.61 ounces per ton gold, 1.80 ounces per ton silver, and 0.81% copper. The averages of all the samples were 0.12 ounces per ton gold, 0.8 ounces per ton silver, and 0.24% copper.

The report noted that "the lowest level sampled was the 350 foot" since "below that the shaft, reported to be 770 feet deep, was caved." The "350 foot" level would correlate with the fifth level. This letter also provided important information relating to the question of the persistence of the vein:

At the portal of the tunnel, the vein shows 6 or 7 feet wide of massive quartz between good walls and throughout the tunnel, varies from 2 1/2 to 4 feet. On the 250 foot level, there has been a marked narrowing of the vein to a maximum of 2 1/2 feet. On the 350 foot level, it is only about 6 inches wide. It is reported that on the bottom level, the vein is 6 to 8 feet wide, and assays \$8 to \$14 in gold. Of this I am extremely doubtful, as the vein has every characteristic of the quartz filled "gash veins," so often found in the later granites, and our sampling would indicate that if this amount of gold were present, it is in spots very irregularly distributed.

(Exh. 8).

Copple testified that in his opinion, the claims at issue were supported by a discovery of a valuable mineral deposit (Tr. 156-57).

The bulk of contestees' evidence was provided by Chakarun. Chakarun noted that since 1973 he had been specializing in the geological evaluation of small gold properties (Tr. 159). A modified version of the map of the

underground workings at the Betty Lee Mine (see Exh. BLM C) was introduced as exhibit 19. Chakarun testified that all he had done was to indicate those sites which he had sampled and to outline the developed ore in the deposit (Tr. 163). Chakarun noted that he had visited the Betty Lee claim a number of times, at least two times by himself, once in May 1977, and again prior to November 1977, and a third time with Nelson on March 31, 1978. ^{2/} As a result of his May 1977 visit, Chakarun prepared a preliminary report of his findings. This report was introduced as exhibit 21. This report noted that seven samples were taken from the Betty Lee. They were fire assayed and showed an average of 0.05 oz/ton gold, 1.13 oz/ton silver, and 0.28 percent copper. At \$140 an ounce for gold, \$4.40 an ounce for silver, and \$0.70 per pound for copper, the vein material had a total metal value of \$15.89 per ton.

This preliminary report noted:

It is important to point out an apparent discrepancy between the assay results shown on the original 1936 map and those obtained in the present study. On the old map, an average of 82 sample sites recorded throughout the mine showed a gold-only value of \$9.16/ton. At the old price of \$35.00/oz., this would correspond to a gold content of 0.26 oz/ton or about five times the amount indicated by the present sample results. In addition, the old copper values were higher and the silver value lower.

* * * * *

New (Umpire) assays are being performed on the coarse rejects from the recent sampling effort and may provide some explanation. If the new assays support the 1936 sampling results then the value of the "ore" could be greatly increased.

(Exh. 21 at 4-5). This report expressly noted that the profitability of mining the "ore" remained to be proven. Id.

Based on this sampling, and projecting continuity of the vein to the fifth level, Chakarun estimated that this ore body, which he referred to as Block No. 1, would have a mined value of \$794,500. While admitting that further sampling was necessary, Chakarun concluded that "the Betty Lee Mine definitely has potential and is deserving of further study." Id. at 12. The estimated tonnage figures used to derive the volume of Block No. 1 involved an extrapolation that the values in the levels below level 2 were accurately shown on the exhibit BLM C (Tr. 216-17).

Contestees also submitted a copy of "Follow-up Report No. 1," prepared by Chakarun in November 1977, following another examination of the claim. See Exh. 22. This report noted that Chakarun had been able to gain entry past

^{2/} We note that there is a 1-day discrepancy as to when the joint examination occurred. Thus, Nelson stated it took place on Apr. 1, while Chakarun stated it occurred a day earlier. The actual date on which the examination took place is not, of course, a critical fact in deciding this appeal.

the winze to examine the northeasterly end of the second level. Four samples were taken. One assayed (using atomic absorption) at 0.33 oz/ton gold. ^{3/} The other three samples, however, showed 0.09 oz/ton, 0.08 oz/ton, and only trace amounts respectively. Combining these results with those obtained earlier, he noted that they averaged 0.09 oz/ton gold, 0.83 oz/ton of silver, and 0.33 percent copper, and that the corresponding ore value was \$22.80 per ton, "considerably more than the value derived from the preliminary examination" (Exh. 22 at 3). ^{4/}

A second followup report was prepared after the 1978 sampling. See Exh. 24. Chakarun took five samples at that time. The composite figures for these samples showed 0.144 oz/ton gold, 1.08 oz/ton silver, and 0.52 percent copper. A composite of the samples was then subjected to cyanide leaching. In this report, Chakarun stated that 78 percent of the gold and 49 percent of the silver could be recovered by this method. While Chakarun recognized that the composite sample indicated higher metal levels than either of the two previous sampling techniques, he suggested that it could be attributed "to a refinement of the sampling technique," noting that it was apparent that "a significant amount of the gold and silver are contained in the fine fraction, a portion of which was lost in the earlier sampling effort" (Exh. 24 at 3). After examining various estimated costs for mining at the rate of 150 tons per day, Chakarun concluded that "[a]lthough the ore is low-grade, mining cost estimates indicate that a potential profit of \$590,000 may be realized at the end of an 18-month period from the 50,000 ton block" (Exh. 24 at 7). He cautioned, however, that "no attempt should be made to begin mining operations without first checking the condition of the lower workings and the continuity of the ore. A feasibility study by a mining engineer is strongly recommended." Id.

In his testimony, Chakarun detailed his thought processes in arriving at his conclusions concerning the Betty Lee. He stated:

I realize that the ore values in this mine are lowgrade, there's no question about that. I also realize that there's been a tremendous amount of development work done on this property, and that this should be taken into consideration in arriving at any cost for development of the property.

^{3/} Chakarun discussed the possible different results obtained when using the atomic absorption method as opposed to the standard fire assay. He noted:

"It's highly variable. It can be — it can be higher and it can be much lower. Generally the atomic absorption method is used in reconnaissance-type surveys for trace analyses. It's very delicate and sensitive method for determining minute amounts of gold, but when the gold value is high, it's not that reliable."

(Tr. 209-10).

^{4/} While Chakarun did not point it out, one of the reasons the value was considerably more than the earlier computation was that he utilized metal prices of \$165 per ounce for gold, \$4.90 per ounce for silver, and \$0.60 per pound for copper. Both the gold and the silver values were greater than that used in the first report.

I consulted with people in the leach-mining industry to find out what the costs would be of — to operate on ores of these values. The result being that I feel that the Betty Lee Mine could be reopened and operated at a profit.

(Tr. 201). One major difference in cost factors between Nelson and Chakarun related to the values attributable to the extensive workings already present on the Betty Lee. Thus, Chakarun estimated the value of this development work as between \$900,000 and \$1,200,000 (Tr. 205). Secondly, Chakarun envisioned use of a leaching method which would also consistently lower costs. Chakarun's per ton mining costs therefore approximated \$14 a ton (Tr. 226).

Based on the amount of material left at the dump site, Chakarun estimated that it appeared that only about 500 tons had been shipped from the mine. A discussion of the reasons for this transpired:

Q. [By Goreham] Is it possible that the amount of workings there and the lack of sales, that maybe they were mining the investors rather than the mine?

A. I don't really think so, because they were actually developing ore, and from my — experience, people who are out to mine investors, as you say, they never —

JUDGE MESCH: They don't make extensive workings like that.

THE WITNESS: — they never mine — they don't mine anything.

(Tr. 221).

Chakarun was also examined as to the basis for his ultimate reliance on the samples taken in his third examination of the Betty Lee:

Q. [By Goreham] Mr. Chakarun, there's been a lot of samples taken out there through the years, and your 16 samples, by my mathematics, averaged out — now this is all on the second level and the dump — .086. I know you don't have the benefit of my math, but I'm getting to a question all right?

Mr. Nelson's 10 samples averaged .039; Mr. Vanderzyl's, which was across the vein, without dilution, .119; the Corps of Engineers, .081; and Asarco's .12. Which still comes up to an average of .08. Now that's of all the samples. And with today's value that would be — what? At 550 — at whatever gold prices are today?

A. These samples aren't relevant, taken as a whole. The only samples I consider valid are the one I took for fire assay, that were cut across the full mining width. I don't know how these samples were taken, nor do I even put value on my original sampling out there.

Q. Oh, so you're going to take your highest samples and live with them?

A. I'm taking the ones that were — that were collected across the full mining width including the fines. Now my first sampling effort, we did not collect the fines and we did not — we did not collect them expecting high values. This was a reconnaissance survey. I imagine Asarco, when they went in there, they — they probably fire-assayed and sampled the full mining width like we did. Our values came within 8 percent of theirs. They took 40 samples from that mine, not just on the second level.

(Tr. 234-36).

Chakarun also prepared a separate memorandum addressed to Gordon Copple detailing his investigation of the Frisco claims. This memorandum, dated November 10, 1977, discussed the Frisco Nos. 6, 7, 10, 11, 12, 14, 15, 16, 17, 18, 20, and 21. ^{5/} The conclusions stated as follows:

[T]he only sampling that proved copper - gold - silver ore values of interest was that of FRISCO No. 20, in the upper workings. Here, there are at least a few tons of ore in sight that have a value of at least \$200.00/ton. Both FRISCO No. 20 and FRISCO No. 11 have gem quality chrysocolla that may be present in sufficient amounts to market.

(Exh. 23 at 8).

With reference to the Frisco claims other than No. 20, Chakarun stated that he thought the Frisco No. 11 was valuable for gem quality chrysocolla, noting that "other than the chrysocolla, I don't think Frisco No. 11 has any -- any mining potential" (Tr. 214). In response to a question from Judge Mesch concerning which other claims he would recommend, Chakarun stated:

None other that I visited. Unfortunately, I was unable to visit Frisco No. 13, which according to older reports did have significant values. * * * I would like to have had the opportunity to visit it. We tried, but the heat was excessive, it's very remote, and we just couldn't afford the time or the expense to find this property at that time. [6/]

(Tr. 214).

^{5/} This report also mentioned that Chakarun was unable to locate Frisco No. 13 (Exh. 23 at 4).

^{6/} This reference to "older reports" relates to a report prepared for the Department of Mineral Resources of the State of Arizona, dated Mar. 11, 1947. This report listed a number of assayed samples. One identified as from the Frisco 13 showed gold values of 0.255 oz/ton, and silver values of 0.65 oz/ton. See Exh. 26. This report also noted, however, "assays taken by Bureau of Mines, Reno, and results much lower than those taken by owners engineer." We will discuss this matter, infra.

In response to a question from Government counsel concerning Nelson's testimony that Chakarun had told him that the only claims that were valuable were the Betty Lee and the Frisco No. 20, Chakarun stated, "Well, I think I told him something to that effect, except that we hadn't visited all of them" (Tr. 215).

The Government recalled Nelson to examine him on the question of mining costs. He stated that, in his view, even considering shrink stoping as suggested by Chakarun, the estimated costs were still too low (Tr. 240). He estimated that labor alone would run \$33 a ton, based on a union salary of \$16.50 an hour (Tr. 242). Nelson also increased his estimate of total mining costs from \$42 or \$43 a ton (Tr. 78) to between \$52 to \$55 a ton (Tr. 245).

Following the filing of briefs, Judge Mesch issued his decision on September 1, 1981. As noted above, Judge Mesch found all the claims invalid, with the exception of the Frisco No. 20, which the Government examiners had conceded was supported by a discovery.

[1] As a precondition to the location of a valid mining claim, a claimant must show an exposure of a valuable mineral deposit. 30 U.S.C. § 22 (1982). A valuable mineral deposit is said to exist where the mineral found is of such quantity and quality that a prudent man would be justified in the further expenditure of his labor and means with a reasonable prospect of success in developing a paying mine. Chrisman v. Miller, 197 U.S. 313 (1905); Castle v. Womble, 19 L.D. 455, 457 (1894).^a This "prudent man" test has been refined to require a showing that the mineral disclosed is "presently marketable at a profit," which simply means that the mining claimant "must show that as a present fact, considering historic price and cost factors and assuming that they will continue, there is a reasonable likelihood of success that a paying mine can developed." (Emphasis supplied.) In re Pacific Coast Molybdenum, 75 IBLA 16, 29, 90 I.D. 352, 360 (1983).^b

Where the Government contests the validity of a claim, the Government bears the burden of presenting a prima facie case that the claim is invalid. Foster v. Seaton, 271 F.2d 836, 838 (D.C. Cir. 1959). The claimant, however, as proponent of the rule that his or her claim is valid, bears the ultimate burden of proving entitlement under the mining laws, and, thus, must overcome the Government's showing by a preponderance of the evidence. United States v. Springer, 491 F.2d 239, 242 (9th Cir. 1974), cert. denied, 419 U.S. 234 (1974).

[2] The quantum of proof necessary to establish a prima facie case has been examined numerous times in decisions of this Board. A prima facie case means, in this context, that "the case is completely adequate to support the Government's contest of the claim and that no further proof is needed to nullify the claim." United States v. Bunkowski, 5 IBLA 102, 119, 79 I.D. 43, 51 (1972).^c Normally, a prima facie case has been made where the Government mineral examiner testifies that he has examined the claim and found any evidence of mineralization insufficient to support a finding of discovery. United States v. Hess, 46 IBLA 1, 5 (1980);^d United States v. Winters, 2 IBLA 329, 335-36, 78 I.D. 193, 195 (1971),^e and cases cited. But the Board has recognized other circumstances in which a prima facie case has been determined to exist, even where the mineral examiner has not physically traversed the claims at issue.

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Thus, where the existence of the claimed mineral was not disputed, but rather the contest was based on whether the claimant could develop the claimed deposit at a profit, the failure of the Government mineral examiner to physically examine each claim has not been held to preclude the finding of a prima facie case. See, e.g., United States v. Zweifel, 11 IBLA 53, 80 I.D. 323 (1973) (alumina-bearing compounds); United States v. Fisher Contracting Co., A-28779 (Aug. 21, 1962)^g (sand and gravel). In addition, in United States v. Hess, *supra*, this Board examined various Federal court rulings and held that a prima facie case would exist where the evidence established that the claimants had held the claims for a period of years and had failed to develop them, citing United States v. Zweifel, 508 F.2d 1150, 1156 n.5 (10th Cir. 1975), cert. denied, 423 U.S. 829 (1976), and United States v. Verrue, 457 F.2d 1202, 1204 (9th Cir. 1972).^h We wish to make it clear that we are not invoking this latter rule herein. Clearly, the presumption of invalidity which arises from a failure to develop a claim over a period of years presupposes that the claimants could legally do so. Where, as here, access is precluded by actions of the Government, no presumption from nondevelopment can properly arise. We reference this rule simply to point out that situations exist where the Government has established a prima facie case quite independent of any physical examination of the claims.

In the instant case, Judge Mesch ruled that, with the obvious exception of the Frisco No. 20, the Government presented a prima facie case of invalidity, and accordingly the burden then devolved to the claimants to overcome this showing by a preponderance of the evidence. We agree.

There is no question that, insofar as the claims actually examined are concerned, namely the Betty Lee and the Frisco No. 11, the Government presented a prima facie case. Nelson stated that based on his examination of these claims and the workings thereon, it was his view that a discovery of a valuable mineral deposit had not been shown to exist (Tr. 83-84). Inasmuch as Nelson had clearly qualified as an expert witness, his testimony was sufficient to serve as a basis for declaring the claims null and void absent countervailing evidence from the claimants. This is the essence of a prima facie case.

The dissent, however, suggests that the Government failed to establish the existence of a prima facie case insofar as the other claims are concerned because the mineral examiner failed to physically examine those claims. In the context of this case, we cannot agree.

We set out above the testimony of Nelson relating to his conversation with Chakarun when the two met on the claim. As related by Nelson, Chakarun told him that the Betty Lee and the Frisco No. 20 were the only claims which he considered valuable. Based on this statement, the Government mineral examiners limited their examination to those two claims, though they also looked at the Frisco No. 11 as it was necessary to cross this claim to arrive at the Betty Lee.

Chakarun was an expert geologist hired by the claimants to evaluate the claims. He had, in fact, already been on the claims prior to the examination of which Nelson testified. See Exh. 22. A statement that there were no values on some of the claims, made by an expert in the employ of the

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claimants, is in the nature of an admission against interest. While such a statement may not be preclusive against a subsequent attempt to contradict the substance of the admission, it clearly provides an adequate reason for a Government mineral examiner not to physically examine these claims. And, when testimony relating to this admission is introduced in the Government's case-in-chief, it may serve to establish a prima facie case since, if it is uncontroverted by the claimants, an Administrative Law Judge would be justified in concluding that the referenced claims were, indeed, without mineral values.

In point of fact, Chakarun did not deny making this statement (Tr. 215). While he did state that he had not completed his examination when he had this discussion with Nelson, he did not indicate that he informed Nelson at the time that his examination had not been concluded. In any event, the existence of a prima facie case is properly determined on the basis of the evidence and the testimony presented in the Government's case-in-chief. Nothing in the record on completion of the Government's case, which includes both direct and cross-examination, brought into question the veracity of Nelson's testimony. Nelson's recital of the conversation remained unchallenged and uncontradicted. This was a prima facie case.

The dissent suggests, in effect, that despite a claimant's express declaration that a claim is not supported by a discovery, the Government mineral examiner is still required to examine the claim himself. We feel that such an approach ignores a number of critical facts. First of all, a claim is precisely what its name implies, a "claim." A mining location is an assertion by the claimant that, consistent with the mining laws, he has made a discovery of a valuable mineral deposit within the physical limits of the claim. Where a locator denies that such is the case, he has ceased to make a "claim" and his mining location is properly declared null and void.

Second, the effect of an admission at a hearing has already been examined by this Board. In United States v. Hooker, 48 IBLA 22 (1980),ⁱ this Board expressly held that where a claimant admits at a hearing that a claim is not supported by a discovery of a valuable mineral deposit, he "will not be heard on appeal to contend that a discovery does in fact exist." Id. at 25. While an admission made only in the context of a field examination may not rise to the level of one made at the hearing, surely it is entitled to some weight.

Third, if a Government mineral examiner is unjustified in relying on the statements of mineral claimants and their representatives, it will be necessary not only to sample every claim, but to present evidence relating to every claim at the hearing. This would needlessly extend contest hearings, result in increased costs to both the claimant and the Government, and, in most cases, be without benefit for either party. In short, we can see no reason in either law or logic for not giving an admission against interest the effect it would normally have. We hold that where the Government mineral examiner testifies that a mineral claimant or his representative has stated that certain claims are not supported by a discovery, such testimony, unless impeached in cross-examination, is sufficient to constitute a prima facie case that those claims are invalid.

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The dissent also places heavy reliance on the mineral report filed on January 7, 1943, by Paul F. Cutter. This report, and supporting documents, while referenced in the hearing below were not submitted at that time and, thus, were not discussed in Judge Mesch's decision. Certain observations, we feel, are in order.

First, we agree with the dissent that, in a well run universe, BLM should have provided appellant with a copy of the Cutter report. The fact of the matter, however, is that not only was BLM unaware of the existence of the report, it was not even aware that four of the claims were declared invalid in 1944. See Tr. 129-32. The records relating to these matters had long since been consigned to the Archives from whence they were eventually retrieved pursuant to a request by the Board. While the failure of anyone in BLM to be aware of the existence of these records may be lamentable, we fail to see how this necessarily invalidates Chakarun's conclusions. ^{7/} In any event, the dissent necessarily assumes that had the Government mineral examiner read Cutter's report, he would have ignored Chakarun's statement and proceeded to examine the other Frisco claims. Alternatively, the dissent implies that Chakarun might have reconsidered his own investigation. In order to judge the likelihood of these assumptions, it is useful to make some note of the actual contents of the Cutter report.

To say the least, the Cutter report scarcely inspires confidence in the assumption that Nelson would have felt obligated to sample other Frisco claims as a result thereof. As we noted in United States v. Hooker, supra, utilization of an improper standard in determining the validity or invalidity of the claim renders a mining examiner's conclusion "fatally defective." Id. at 31. While, not surprisingly, this test has normally been applied when the examiner has found a claim invalid based on an improper standard, the analysis is equally applicable where the opposite conclusion has been reached. The actual report prepared by Cutter gives scant support for concluding that any claim other than the Betty Lee or the Frisco No. 20 was ever supported by a discovery, as that term is presently understood.

Cutter examined all 22 claims. Four, he found to be invalid (Frisco No. 2, 12, 15, and 21). Especially instructive, however, are his reports on claims that he indicated showed a discovery. As one example, for the Frisco No. 1 he stated: "Open cut No. 2 on this claim amounting to 15 cubic yards was excavated on a 2-foot pegmatite vein which is heavily iron stained and has a good segregation of copper minerals" (Report No. 27332). This is the totality of his written analysis. The vast majority of the specific claim reports are to similar effect. For the Frisco No. 16, which Cutter also held to be supported by a discovery, he noted that a sample had assayed at only \$0.35 per ton in gold and silver, but continued, "It is believed, however, from the evidence presented by smaller veins in the locality, that further work on this vein in depth will show better results" (Report No. 27348).

^{7/} Moreover, it is ingenuous to ascribe the failure to include the Cutter reports in the record below to the Government when, in fact, contestees had actual knowledge of the existence of the reports and could have obtained them from Archives as easily as did this Board. Contestees, however, expended no such efforts either in preparation for the hearing or afterwards.

Cutter, thus, clearly described a claim for which no discovery presently existed while at the same time holding that the claim was valid.

The paucity of analysis which characterizes the Cutter reports 8/ must be viewed in the light of the analysis which Chakarun made as to the present viability of the claims. The dissent leaves the impression that Chakarun made merely a casual reconnaissance of the Frisco claims. 9/ The record does not support this. In fact, Chakarun devoted more than 4 days to examining those claims. See Exh. 23. The dissent states "the condition of the workings and the discovery points had deteriorated during [the claimants'] long absence." While it could be expected that over a 40-year period of time some deterioration might occur, there is simply no evidence that access to any of the claim workings, with the exception of the Betty Lee 10/, was no longer possible. Indeed, what evidence there is, is to the contrary.

Thus, Chakarun's report on the Frisco claims mentions numerous adits and shafts on the Frisco claims, some extending more than 200 feet. Not once, with the exception of the Betty Lee, is there ever any mention of a caved tunnel. His testimonial evidence was similar. Nowhere does he mention difficulty in locating the discovery sites with the exception of the

8/ We recognize, of course, that at the time the reports were made the Second World War had already begun and Cutter clearly would not have been concerned with spending more time than necessary in detailing his findings. Nor would the General Land Office have been particularly interested in challenging them. But, regardless of the unwritten thought processes which might have led Cutter to find these claims valid, the fact is that we have only the written record to guide our present adjudications.

9/ Thus, the dissent states "I do not believe that Chakarun was permitted by the Army Corps of Engineers to do much more than a casual reconnaissance of the claims." A reading of this statement might give rise to an inference that the Army limited Chakarun's access to the claims. There is, however, absolutely no evidence to support such a conclusion in this record.

Not once did contestees contend that their examination was impeded by prohibitions emanating from the Army. On the contrary, Chakarun adverted to the real constraints which affected appellants when he explained why he had not examined the Frisco No. 13: "I would like to have had the opportunity to visit it. We tried, but the heat was excessive, it's very remote, and we just couldn't afford the time or expense to find this property at that time" (Tr. 214).

It is clear that such limitations as may have affected Chakarun's examination were occasioned by the exigencies of time and money rather than the dictates of the Army. In light of these realities, it is highly unlikely that appellants would view with favor the dissent's suggestion that they might desire to spend further funds to reexamine claims already examined by Chakarun on the basis of conclusory statements made by a mineral examiner in 1943, applying questionable theories of law.

10/ And even with respect to the Betty Lee, the evidence is less than absolute that workings accessible in 1942 are no longer accessible today. See discussion, infra.

Frisco No. 13, which he admittedly did not find. Far more probative than a report written 40-odd years ago, whose author is no longer subject to examination, is the testimony of a qualified mineral examiner who has examined the claim. Indeed, the ultimate conclusion of the dissent, that a new examination of the claims should be held, must be premised on an assumption that contestee's expert failed to adequately examine these claims, since, even if it were held that there was no prima facie case, Chakarun's expressed view that none of the other claims were valuable would be a sufficient basis upon which to predicate a finding of invalidity. See United States v. Pool, 78 IBLA 215 (1984). The record, however, offers no support for such an assumption. On the contrary, the report which Chakarun wrote, and his testimony adduced at the hearing, discloses that he faithfully discharged the trust which his employers had placed in his expertise, the dissent's speculation to the contrary notwithstanding.

This being the case, it is clear that the Government presented a prima facie case of invalidity because of a lack of discovery as to all of the claims save the Frisco No. 20. The burden of proof then fell to the claimants to overcome the Government's showing by a preponderance of the evidence. Foster v. Seaton, supra.

In their statement of reasons, appellants focus their efforts on three specific claims: Frisco No. 13, Frisco No. 11, and the Betty Lee. 11/ We will examine the evidence relating to these claims separately.

The Government did not examine the Frisco No. 13, presumably because Chakarun did not indicate that it had any value. Nor did Chakarun examine it, as he was unable to establish its location (Tr. 214; Exh. 23 at 4). The only evidence at all relating to Frisco No. 13 is found in exhibit 26, where it is noted that a single sample was taken from Frisco No. 13 in 1947, and it was assayed at 0.255 oz/ton gold and 0.65 oz/ton silver. No evidence relating to how this claim was sampled, or even where it is on the ground, was submitted. Even considering the fact that the Government's prima facie case on the Frisco No. 13 was based on Chakarun's statement that the claimants were only interested in the Betty Lee and Frisco No. 20, we cannot find that this unexplained sample, taken in 1947, overcame the Government's showing of invalidity, particularly where the claimants have not been able to locate the situs of the claim.

[3] Appellants' arguments as to the Frisco No. 11 are not based on any purported discovery of gold or other precious minerals. Rather, it is contended that a discovery exists on the Frisco No. 11 because of the presence of gem quality chrysocolla. See Statement of Reasons at 3-4. The sum and substance of appellants' assertion was set forth in Chakarun's testimony.

11/ While the appellants do make a pro forma assertion that the Government did not make a prima facie case (see Statement of Reasons at 3), the vast bulk of their 36-page brief is directed to these three claims. Indeed, with the exception of a passing reference to the Frisco No. 20, appellants did not mention any other claim. This reinforces our view that appellants do not presently assert a claim to any of the other locations.

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Q. [By Goreham] Mr. Chakarun, I was doing some figuring, so I'm not sure I heard exactly what you recommend other than the Betty Lee and the Frisco 20. Were there other claims that you recommend on the Frisco group?

A. Well, we — I had an opportunity of examining Frisco No. 11 as well. Now both Frisco No. 20 and Frisco No. 11 have gem quality chrysocolla in the veins.

Q. Did you sample 11, Frisco 11?

A. Yes, um-hum.

Q. Is there an assay report for that?

A. I don't recall. I wasn't concerned with the metal value, I was concerned with the gem quality material.

JUDGE MESCH: Why don't you explain for the record what you're talking about on Frisco No. 11.

THE WITNESS: On Frisco No. 11 and on Frisco No. 20, we have a chrysocolla type of copper oxide mineral. That's C-H-R-Y-S-O-C-O-L-L-A. This is commonly used in the lapidary, rock-hound field for jewelrymaking. In fact, on the day of our visit with the BLM, we met people out there who were collecting rocks for this purpose. Other than the chrysocolla, I don't think Frisco No. 11 has any — any mining potential.

(Tr. 213-14). This is the totality of the claimants' evidence on the presence of gem quality chrysocolla within the limits of the claims. A number of observations are in order.

First of all, it seems clear that the claims were not located for gem quality chrysocolla. Indeed, but for the inspection of Chakarun, it seems likely that the claimants and their predecessors would not have premised the validity of their location on chrysocolla, but rather on a discovery of gold, silver, and related metal minerals. It is apparent that any "discovery" of chrysocolla occurred upon Chakarun's investigation, long after the land had been removed from mineral entry. See generally United States v. Haskins, 59 IBLA 1, 85-86, 88 I.D. 925, 967 (1981).^K

Second, Chakarun merely testified that there was a deposit of chrysocolla and that people were rock-hounding it. There was no evidence, however, that there was any market for this deposit. People will often take freely what they would not purchase. Chrysocolla is a secondary mineral found in oxide zones of copper deposits. Chrysocolla's hardness varies from 2 to 4 and its color varies from blue to blue-green to brown to black depending upon the content and level of impurities (see Dana's Manual of Mineralogy). It is only when this mineral has the proper combination of hardness and color that it becomes a semiprecious gemstone. Therefore, there must be some basis in the record to support a conclusion that the chrysocolla is of gemstone quality. Appellants neither took samples of the chrysocolla nor did they have

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studies prepared as to its marketability, if any. Instead, they simply rested on an "eye-balling" of the deposit. Even had claimants "discovered" this chrysocolla prior to the 1962 withdrawal, they produced no evidence that the deposit was marketable at all, much less at a profit. We affirm Judge Mesch's finding of invalidity as it relates to the Frisco No. 11.

Appellants direct the overwhelming majority of their brief, as they did their evidence, to the Betty Lee claim. Appellants strenuously assert that a discovery exists within this claim. Before reviewing the evidence relating to this claim, we wish to make a few general observations concerning the rules which will guide our adjudication in the instant case.

[4] As we noted in United States v. Pool, *supra*, it is normally the claimant's responsibility to keep his workings available for inspection. Accordingly, if the workings are inaccessible because a shaft has caved or is otherwise unsafe, a mineral examiner has no obligation to either imperil himself or retimber the shaft. *Id.* at 225. In Pool, as in the instant appeal, however, the Government held a lease on the land. We noted therein:

Thus, it was the Government's obligation not to destroy evidence necessary for the claimant to show his entitlement to a patent. It seems clear that the destruction of the shaft occurred after the Government took possession. This being the case, it was the Government's obligation to restore the caved shaft to its prior condition so that an adequate examination could be made. Failing in that, the Government will not be heard to contest an assertion of a claimant that a discovery existed at depth.

Id.

The instant case reflects a similar situation. The main shaft on the Betty Lee is now caved and workings below the second level are no longer available for examination. However, it is also clear that the workings below the fifth level were not accessible as early as 1931. Thus, the Asarco report, submitted by claimants as exhibit 8, noted that below the 350-foot level "the shaft, reported to be 770 feet deep, was caved." While the evidence would tend to establish that the shaft was passable up to the 350-foot level prior to the Government's lease, the evidence also indicates that below that level the shaft was already impassable by the time the Government took control of the lease. Thus, claimants are justified in relying on the long section of the Betty Lee mine (Exh. BLM C) for purposes of showing estimated volume and values only to the fifth level. This would encompass only the deposit which Chakarun referred to as Block No. 1. Our review will be limited to this ore body.

The contention between the parties relates to three separate elements: (1) The values disclosed through sampling; (2) projections of continuity at depth; and (3) mining costs associated with the Betty Lee. We will discuss these concerns individually.

As noted above, Chakarun based his ultimate conclusion on the assay values disclosed in his third sampling, which occurred in 1978. The composite values for these five samples were 0.144 oz/ton gold, 1.08 oz/ton silver,

and 0.52 percent copper. The Government objected to the fact that, in effect, Chakarun was taking the highest samples and throwing out the rest (Tr. 235-36). As Chakarun noted, however, the values which he utilized were within 8 percent of the values disclosed by the Asarco sampling program undertaken in 1931.

The Government, for its part, arrived at values considerably lower than those shown by Chakarun. Thus, the composite value of Nelson's samples, taken across a mining width, were 0.039 oz/ton gold, 0.395 oz/ton silver, and 0.25 percent copper. See Exh. BLM J. Vanderzyl's samples, which were only taken across the vein, showed composite values of 0.0538 oz/ton gold, 0.358 oz/ton silver, and 0.072 percent copper, when computed across a 4-foot mining width. See Exh. BLM F. Neither of these groups of samples, however, were without problems. Thus, Nelson's samples were assayed by atomic absorption, a process with which he was generally uncomfortable but which he felt was acceptable in this case since they correlated with the sample taken by Vanderzyl which were fire assayed (Tr. 42-44). The fact that Nelson's samples correlated with Vanderzyl's, however, must be viewed in light of the fact that Vanderzyl's samples were intrinsically flawed.

Vanderzyl testified that he sampled only across the vein (Tr. 60). Nelson, on the other hand, had testified that it was possible that the high-grade ore would be found immediately adjacent to the vein or in nearby areas (Tr. 56). When Vanderzyl diluted the assay values to account for a mining width, he necessarily assumed that all country rock was totally valueless. Thus, if any mineralization occurred in the country rock it was completely ignored. Vanderzyl attempted to minimize this problem by noting that Nelson's samples, which were taken across a mining width, actually had lower values (Tr. 61).

In effect, Vanderzyl justified his assay values by arguing that they correlated with Nelson's, while, at the same time, Nelson was justifying his values based on his contention that they correlated with those taken by Vanderzyl. Not only could they correlate even if both were wrong (in effect, a mutually reinforcing error), the degree of correlation, particularly in the gold assays, was not particularly impressive. Thus, Nelson's assays showed only 72 percent of the gold value disclosed by Vanderzyl. Inasmuch as Vanderzyl's method completely discounted any mineral value in the country rock, it is likely that Vanderzyl's assays understate the gold values. It is therefore likely that the results actually correlate less than indicated.

In our view, the samples taken by Asarco (Exh. 8) and the Bureau of Mines (Exh. 26) tend to support a finding that values derived from all of Chakarun's sampling more likely approximated the real value of the deposit. Thus, Asarco's samples, partially taken from levels no longer accessible, showed an average gold content of 0.12 oz/ton gold and 0.80 oz/ton silver. The 40 samples taken by the Bureau of Mines in 1947, apparently only from the second level, averaged 0.0839 oz/ton gold, and 0.8766 oz/ton silver. Chakarun's 16 samples from the Betty Lee (excluding the dump samples) averaged 0.0894 oz/ton gold and 1.03 oz/ton silver. Giving each of these composite totals equal weight, we find that the deposit assays at 0.0978 oz/ton gold and 0.9022 oz/ton silver. We find these figures to be the end result most supported by the record.

The second issue relates to the question whether the values disclosed on the second level persist at depth. The Government basically takes the position that they may or they may not, that there is simply no way of knowing (Tr. 93-95). Claimants, on the other hand, rely on the notations appearing on the Betty Lee mine map as an indication of values at depth.

From our review of the record, we think that the bulk of the evidence establishes that values persist at depth, though the size of the vein diminishes. In this regard, we do not find the mine map controlling, since the Asarco report clearly indicated that at the fifth (350-foot) level, which was then accessible, the vein was only about 6 inches wide. In contradistinction, exhibit BLM C indicated that the vein at that level varied from 14 inches to 36 inches in width. We think it likely, therefore, that the total volume in Block No. 1 will be somewhat less than estimated by Chakarun. While this decrease in estimated tonnage will have a certain negative effect on over-all profitability, since it will provide less tonnage with which to recover capital expenditures, this decrease will not, in and of itself, be preclusive of ultimate profitable recovery.

The final, and most striking, area of disagreement related to estimated costs to mine the deposit. Thus, Nelson variously estimated present mining costs as \$42 to \$43 a ton (Tr. 78), all the way up to between \$52 to \$55 a ton (Tr. 245). Chakarun, for his part, estimated mining costs at \$14 a ton (Tr. 226). It is difficult to reconcile these two figures.

A few points can be made, however. First of all, Nelson figured in the cost of refitting the shaft (Tr. 95). While this would be a proper cost to assess in the normal situation, its consideration in this case was improper. As we have already noted, it was the Government's responsibility as lessee not to permit the premises leased from the claimants to deteriorate. This responsibility it did not discharge. Therefore, it would be the Government's financial burden to refit so much of the shaft as had deteriorated while the Government was the lessee.

Secondly, while Nelson and Chakarun eventually agreed on the relative per man-hour costs of labor (see Tr. 248) they differed greatly in their individual estimates as to the amount of labor necessary to mine ton-units of the deposit. Nelson relied heavily on a 1940 report concerning mining costs associated with the Ash Peak Mine in Duncan, Arizona, during 1938 (Tr. 241). While Nelson recognized that there would be modern-day efficiencies in some of the machine work, he did not believe that they would be sufficient to really cut the costs of mining (Tr. 249). We do not find the Government's testimony particularly persuasive on this point.

It is true, of course, that labor costs have increased dramatically since the 1940's. But a major reason for this increase has been increasing productivity per man-hour. To factor in increased labor costs since the 1940's without making a similar adjustment for productivity advances in the same time span is to totally distort the present costs of production. Indeed, if, as Nelson earlier testified, the effect of the existing improvements on the Betty Lee would be to lower present mining costs by at least one-third (Tr. 81), his later estimates of costs between \$52 and \$55 a ton actually becomes \$78 to \$82 a ton for an undeveloped mine, a minimum of

\$18 a ton more than he had earlier testified would be necessary to mine a deposit where there were no in-place improvements (Tr. 96). We find it difficult to give Nelson's revised cost estimates much credence.

Even if we credit Nelson's earlier estimate of production costs, i.e., \$42 to \$43 a ton, the assay values which we have found established by the preponderance of the evidence (0.0978 oz/ton gold, 0.902 oz/ton silver) show a return of \$45.43 a ton, assuming recovery of 75 percent of the gold and 50 percent of the silver, and, therefore, a profit of at least \$2.43 a ton. Obviously, use of Chakarun's estimated mining costs would greatly increase the profitability. We accordingly conclude that claimants preponderated on the question of present marketability.

The more difficult question relates to the issue of whether a discovery existed in 1962 when the land was withdrawn from mineral location. Where land has been withdrawn the United States has, in effect, withdrawn its permission for prospectors to continue in their efforts to discover a valuable mineral deposit. Thus, any location not then supported by a discovery is at that time invalid, and a subsequent discovery will be of no effect. Cameron v. United States, 252 U.S. 450 (1920); Clear Gravel Enterprises v. Keil, 505 F.2d 180 (9th Cir. 1974); United States v. Williamson, 45 IBLA 264, 87 I.D. 34 (1980).

It is clear that Judge Mesch's determination as to the invalidity of the Betty Lee was, to a great degree, premised on a finding that the claimants failed to preponderate on the question whether a discovery existed in 1962. As Judge Mesch noted, claimants presented virtually no evidence relating to marketability factors present in 1962. The only evidence which Chakarun gave as to cost factors was the following:

Well, in my experience and review of the metal prices and the history of mining, from the time this mine was first activated, we see that labor — that expense for labor, for instance, is just about identical in its inflationary trend as the price of gold. Gold right now is worth approximately fifteen and a half times what it was when the mine was last operated. And labor, labor expense is just about the same.

(Tr. 211).

There is an intrinsic problem with this analysis. While Chakarun was correct in stating that the value of gold had increased approximately fifteen-fold since the last time the mine was operated in 1942, it had also increased the exact same amount since the land was withdrawn in 1962. This is so because gold was officially pegged at a price of \$35 an ounce until the early 1970's. The rapid increase in the value of the gold thus occurred over a period of only 10 years. While it might be true that 40 years ago both gold values and mining costs had the same relative relationship, that is they were both one-fifteenth of what they are now, they could not have increased at a parallel rate. In other words, costs would have increased from 1942 to 1962. The value of gold, however, did not increase at all during this same time period.

Footnotes: See addendum page 81 IBLA 143A

There is no direct evidence in the record from either side as to what the mining costs were in 1962. ^{12/} Nelson guessed that, from his own experience in British Columbia in 1952, he would estimate that stoping costs were, at that time, \$10 to \$12 a ton. But there was no background testimony relating to the type of deposit, then being mined, nor whether the \$10 to \$12 included recovery of capitalization costs. As this Board has noted, while consideration of the likelihood of recovery of capitalization costs yet to be expended is a necessary element of determining the existence of present discovery, where the expenditures have already been made prior to either the contest or a withdrawal of the land, such factors are not properly considered in determining present marketability. See United States v. Mannix, 50 IBLA 110, 119 (1980).^m It is obvious that all of the development costs had already been incurred well before the withdrawal of the land in 1962. Thus, the amount expended need not be recouped in order to show marketability in either 1962 or at the present time. While it is obvious that all of the experts adopted this approach, insofar as the Betty Lee is concerned, it is unclear whether a similar discounting occurred with the figures which Nelson mentioned concerning mining in British Columbia in 1952.

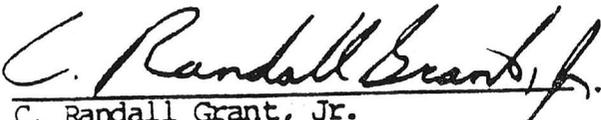
Thus, we are ultimately left with Nelson's extrapolations from his present estimates on the one hand, and Chakarun's similar extrapolations on the other. We have indicated above certain difficulties which we have with elements of Nelson's analysis. While we admit that Chakarun's cost estimates seem to be somewhat low, we also believe that, on the basis of this record, contestee preponderated on the issue of whether the mineral deposit in Block No. 1 was supported by a discovery at the time the land was withdrawn in 1962. Accordingly, we reverse the decision below declaring the claim null and void, and dismiss the contest relating thereto.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed as to the Frisco Nos. 1 through 19, and the Frisco No. 21, and reversed as to the Betty Lee.



 James L. Burski
 Administrative Judge

I concur:



 C. Randall Grant, Jr.
 Administrative Judge

^{12/} Nelson did refer to a publication by the Arizona State Bureau of Mines entitled "Exploration and Development of Small Mines," written by Harry E. Krumloft and published in 1966 (Tr. 80). However, the exhibit was withdrawn after Nelson testified that he "didn't use it at all" since it only dealt with mines which had no development, unlike the situation on the Betty Lee (Tr. 82-83).

Footnotes: See addendum page 81 IBLA 143A

ADMINISTRATIVE JUDGE MULLEN CONCURRING IN PART AND DISSENTING IN PART:

During the late 1930's and early 1940's Glen Copple and Gust Svensson (both now deceased) were the owners and operators of the active mining operation referred to as the "Betty Lee mine." About the time of the outbreak of World War II the War Department deemed it necessary to establish an aerial gunnery range in southwest Arizona for the purpose of training members of the Army Air Corps. The lands chosen for this gunnery range, named Luke Gunnery Range, included the Betty Lee mine lands. At about the same time the War Production Board declared gold mining nonessential and directed that gold mining operations cease. 1/

In furtherance of the program to establish the gunnery range, responsibility for acquisition of the lands to be included in the gunnery range was assigned to the Army Corps of Engineers. The Army Corps of Engineers undertook a program of identifying all private property interests in the area and made a formal request that the General Land Office (now BLM) aid in the identification of and examination of unpatented mining claims located within the gunnery range. The stated purpose for this examination was to "determine the validity of the unpatented mining claims in the area." 2/

Responding to this request, the General Land Office assigned Paul F. Cutter, a mineral examiner employed by the Branch of Field Examination, General Land Office, to examine the claims. Cutter undertook a physical examination of the property in September 1942. On January 7, 1943, Cutter submitted a report of his findings. This report noted that the lands within the Luke Gunnery Range had been withdrawn from mineral entry on September 13, 1941, (not 1962 as stated in the complaint and majority opinion) but that all of Copple's and Svensson's claims had been located prior to the withdrawal. The report described the general geology of the area, the geology of the mineral deposits in the property, and the workings on the claims observed by Cutter at the time of his inspection. The report concluded with a statement that certain claims named in the report were found by him to contain sufficient mineral to be considered valid. 3/

1/ War Production Board Order #208.

2/ Mineral Examiner's Report dated Jan. 7, 1943. This and other documents prepared by the mineral examiner were found in the BLM files reposing in the Archives. These are public documents open to the inspection of the general public, and this Board can take official notice of such documents under the provisions of 43 CFR 4.24(b). It is recommended that the mineral examiner also make inquiry as to the existence of such documents as a part of the mineral examination.

3/ In addition, Cutter prepared a report with respect to each of the claims dated Jan. 5, 6, or 7, 1943. These reports identified the conditions found by him during his inspection. I must agree with the majority that the Cutter reports were terse. For example, with respect to the ore in place in the Frisco No. 20 claim, the report stated: "The quartz shows good showings of chrysocolla." In the subsequent examination Nelson found sufficient values in the Frisco No. 20 to conclude that there was a discovery evident. I do not agree with the majority that there is no evidence of the closure of the

Based on Cutter's report, adverse proceedings were initiated against the Frisco No. 2, Frisco No. 12, Frisco No. 15, and Frisco No. 21 mining claims on January 27, 1943. The balance of the claims were listed on the Cutter report as having sufficient mineral to support a discovery, and no proceedings were initiated against these claims. On March 9, 1944, the Register reported that no action had been taken by the claim owners in defense of the claims named in the proceedings and on April 11, 1944, these claims were declared null and void. ^{4/}

The Army Corps of Engineers entered into an exclusive surface lease agreement with Cople and Svensson. These leases provided that the lands would be leased for a term certain, but that the leases could be terminated at will or extended for additional terms at the sole option of the Army Corps of Engineers. It is clear from the record in this case and other cases which have come before this Board that it was the intent of the Army Corps of Engineers to maintain sole and exclusive control of the property during the term of the lease. ^{5/} The claimants were allowed to go on the property only infrequently after obtaining advance written permission. They were not allowed to do any physical work on the property or to maintain the underground openings or discovery points. ^{6/}

The lease was in fact extended a number of times and the Army Corps of Engineers continued to pay nominal rentals to maintain the leases until 1977 or 1978 when the Corps of Engineers determined that condemnation action should be initiated against the property and ceased paying rentals. ^{7/} Following the initiation of these suits, the Army Corps of Engineers again contacted the Department of the Interior and requested that BLM conduct an examination of the claims to determine if the claims were supported by a discovery. Mineral examiners were once again assigned the task of examining the claims.

fn. 3 (continued)

discovery points on other claims during the period that the claimants were denied access. A comparison of the Cutter and Chakarun reports gives ample evidence to the contrary. See Appendix "A" to this dissent. Considering the "paucity of analysis which characterizes the Cutter report," I wonder what would be disclosed in a vein that "has a strong showing of copper minerals including chrysocolla and chalcocite" when a vein with "a good showing of chrysocolla" is subsequently examined and found to contain sufficient mineral that a prudent miner would spend his time and means to develop a mine.

^{4/} The leases between the Government and the claimants reflect this fact. The four claims were not listed on the face of the lease.

^{5/} See United States v. Pool, 78 IBLA 215 (1984); ⁿUnited States v. Pool, 74 IBLA 37 (1983); ^oappeal filed, Heirs of Will V. Pool v. United States, Civ. No. 83-1614 PHX-WEC (D. Ariz. Aug. 17, 1983); United States v. Jones, 72 IBLA 52 (1983); ^pUnited States v. Rosenberger, 71 IBLA 195 (1983); ^qappeal filed, Rosenberger v. United States, Civ. No. 83-842 PHX-CLH (D. Ariz. May 6, 1983); See also United States v. Fleming, 20 IBLA 83 (1975); ^rUnited States v. Martin, 9 IBLA 236 (1973); ^sand United States v. Coston, A-30835 (Feb. 23, 1968) ^f for similar action on other military withdrawals.

^{6/} See Tr. 132-33; Statement of Reasons at 2, and cases cited in note 5 above.

^{7/} Federal District Court Civil Action 77-242 PHX.

Footnotes: See addendum page 81 IBLA 143A

The military command in charge of the gunnery range was cooperative and aided the mineral examiners in their efforts by furnishing a helicopter and other personnel who flew the mineral examiners to the property for the purpose of making an examination (Tr. 14-15, 86-87). Though requested to do so, the Army Corps of Engineers did not furnish the mineral examiners or contestees any information regarding its activity when making the initial determination of property holdings or its subsequent activity on the claims. This information could have aided the mineral examiners or contestees in their examination and evaluation of the claims. The only information furnished was a copy of the location notices (Tr. 14). The mineral examiners commenced their inspection unaware of the fact that the claims had previously been inspected by a mineral examiner, that a determination had been made regarding the validity of the claims in 1943, and that certain of the claims had been declared invalid in 1944.

A mineral examiner is responsible for the determination of the validity of mining claims conflicting with nonmineral entries under the general public land laws, and when requested by other Federal agencies desiring clear title to lands for public purposes. 8/ An examiner is charged with the responsibility to conduct his examination with an open and impartial mind. 9/ All available literature that covers the geology, mineralization, mining history, and economics of the mineral commodities being examined should be reviewed by the mineral examiner prior to the field examination in order to allow a competent examination of the property. 10/ In this regard, it is imperative for a Federal agency requesting an examination of mining claims to furnish the mineral examiner all information in its possession regarding the claims. 11/ Failure to do so may lead to charges of partiality on the part of the mineral examiner. While I do not believe that the evidence in any way supports a contention of partiality, this case clearly demonstrates how this question is raised when the mineral examiner does not examine documents prepared by his own office. These documents were made available within 1 week of this Board's request. It is regrettable that an oversight such as this causes the parties to divert from the main issue of the case.

William Nelson, the mineral examiner in charge of the examination, is recognized as having many years of experience in examining mineral claims. It appears that during the initial examination Nelson may have been led to believe that there was no mineral showing on many of the claims by a statement of the expert hired by the heirs of Copple. The statement Nelson allegedly relied upon has been quoted by the majority and need not be quoted again in this dissent. While the ability of Nelson to rely on the statement by Copple's expert will be discussed later in this opinion, I wish to note here that if Nelson had been aware of and had read the 1943 report by Cutter, and

8/ Field Handbook for Mineral Examiners (1962 ed.) at 1.

9/ Id. at 5.

10/ Id. at 19.

11/ There is evidence that the Army Corps of Engineers also conducted an independent examination of the property in 1947. Exhibit 26 was obtained from the Arizona State Department of Mineral Resources. This exhibit shows assay results from 45 samples that appear to have been taken by the Army Corps of Engineers that year.

any reports based on subsequent Army Corps of Engineers examinations, I believe he would have conducted an examination of the other claims in order to confirm or refute the findings made by Cutter and the Army Corps of Engineers.

The determination of what constitutes a "prima facie case" is made on a case-by-case basis. The generally accepted rule for finding that a prima facie case has been established in a "normal" mineral contest ^{12/} is that a qualified mineral examiner has "examined the claims and found the mineral values insufficient to support a finding of discovery." Decisions by this Board and its predecessor are replete with this description. ^{13/} A further

^{12/} As discussed in my dissent in United States v. Pool, *supra*, the facts of this case remove it from the realm of the "normal" mineral contest.

^{13/} While the list is not intended to be all inclusive, the following decisions have recognized that physical examination of the claim is a necessary element of the prima facie case: United States v. Cook, 71 IBLA 268, 280 (1983);^u United States v. Jones, 67 IBLA 225, 231 (1982);^v United States v. Imperial Gold, Inc., 64 IBLA 241, 245 (1982);^w United States v. Downs, 61 IBLA 251, 254 (1982);^x United States v. Nunez, 59 IBLA 134, 136 (1981);^y United States v. Anderson, 57 IBLA 256, 260 (1981);^z United States v. Smith, 54 IBLA 12, 22 (1981);^{aa} appeal filed, Smith v. Watt, Civ. No. 80-1079 (D. Or.); United States v. Whitney, 51 IBLA 73, 84 (1980);^{bb} aff'd, Hernandez v. Watt, Civ. No. 81-35 M (D. Mont. July 22, 1982); United States v. MacLaughlin, 50 IBLA 176, 184 (1980);^{cc} United States v. Hooker, 48 IBLA 22, 28 (1980);^{dd} United States v. Chambers, 47 IBLA 102, 106 (1980);^{ee} United States v. Hess, 46 IBLA 1, 5-6 (1980);^{ff} United States v. Zimmers, 44 IBLA 142, 158 (1979);^{gg} aff'd, Zimmers v. Andrus, Civ. No. 81-424 (9th Cir. May 19, 1982); United States v. Burt, 43 IBLA 363, 367 (1979);^{hh} United States v. Harder, 42 IBLA 206, 208 (1979);ⁱⁱ United States v. Chappell, 42 IBLA 74, 78 (1979);^{jj} United States v. Knecht, 39 IBLA 8, 11 (1979);^{kk} United States v. Burns, 38 IBLA 97, 99 (1978);^{ll} United States v. Fisher, 37 IBLA 80, 86 (1978);^{mm} United States v. Marion, 37 IBLA 68, 86 (1978);ⁿⁿ United States v. Mattox, 36 IBLA 171, 173 (1978);^{oo} United States v. Larsen, 36 IBLA 130, 139 (1978);^{pp} United States v. Becker, 33 IBLA 301 (1978);^{qq} United States v. Rukke, 32 IBLA 155, 161 (1977);^{rr} aff'd, Rukke v. United States, Civ. No. 77-206 T (D. Wash. June 23, 1981); United States v. McClurg, 31 IBLA 8, 11 (1977);^{ss} United States v. Garner, 30 IBLA 42, 66 (1977);^{tt} appeal dismissed, Garner v. United States, Civ. No. 78-0314 (D. Colo. Oct. 24, 1978); United States v. Dietemann, 26 IBLA 356, 363 (1976);^{uu} aff'd, Dietemann v. Kleppe, Civ. No. 76-3532 RMT (D. Cal. Feb. 9, 1977); United States v. Reynders, 26 IBLA 131, 134 (1976);^{vv} United States v. Bechthold, 25 IBLA 77, 85 (1976);^{ww} United States v. Taylor, 25 IBLA 21 (1976);^{xx} United States v. Arcand, 23 IBLA 226, 228 (1976);^{yy} United States v. Hallenbeck, 21 IBLA 296, 300 (1975);^{zz} aff'd, Hallenbeck v. Kleppe, 590 F.2d 852 (10th Cir. 1979); United States v. MacIver, 20 IBLA 352, 354 (1975);^{aaa} United States v. Clark, 18 IBLA 368, 370 (1975);^{bbb} United States v. Shield, 17 IBLA 91, 95 (1974);^{ccc} United States v. Ramsey, 14 IBLA 152, 154 (1974);^{ddd} appeal dismissed, Ramsey v. Morton, Civ. No. 74-192 (D. Or. May 1, 1975); aff'd, Civ. No. 75-2782 (9th Cir. Mar. 22, 1977); United States v. Woolsey, 13 IBLA 120 (1973);^{eee} United States v. Kelty, 11 IBLA 38 (1973);^{fff} United States v. Blomquist, 7 IBLA 351, 354 (1972);^{ggg} United States v. Winters, 2 IBLA 329, 335, 78 I.D. 193, 195 (1971);^{hhh} United States v. Gould, A-30990 (May 7, 1969);ⁱⁱⁱ United States v. Stevens, 76 I.D. 56 (1969);^{jjj}

Footnotes: See addendum page 81 IBLA 143A

examination of the decisions discussing the Government's prima facie case discloses that there are few fact situations under which this Board has recognized exceptions to applicability of the above-quoted generally accepted rule. In order to fully understand the basis for the "exceptions" the basis for the rule should be examined.

The underlying basis for allowing the mineral examiner to present a prima facie case resulting in the shift of the burden to the claimant is well stated in United States v. Block, 12 IBLA 393 (1973)^{kkk}, aff'd, Block v. Morton, Civ. No. LV-74-9 BRT (D. Nev. June 6, 1975), rev'd and remanded, Block v. Andrus, Civ. No. 75-2928 (9th Cir.). In that case this Board stated:

The following evidentiary rule has received judicial approbation in Allstate Finance Corp. v. Zimmerman, 330 F.2d 740, 744 (5th Cir. 1964):

Where the burden of proof of a negative fact normally rests on one party, but the other party has peculiar knowledge or control of the evidence as to such matter, the burden rests on the latter to produce such evidence, and failing, the negative will be presumed to have been established. [Citations omitted.]

In the case at bar, the Government does not have the risk of non-persuasion, but only the obligation to make a prima facie case. A fortiori, the rule is even more binding here.

In Fleming v. Harrison, 162 F.2d 789, 792 (8th Cir. 1947), the court addressed itself to the requirement that a party, having evidence peculiarly within his knowledge or control, should adduce it, stating:

The applicable rule is stated in Selma, Rome and Dalton Railroad Co. v. United States, 139 U.S. 560, 567, 568, 11 S.Ct. 638, 640, 35 L.Ed. 266, as follows: " * * * While the general rule is that the burden of proof is where the pleadings place it, namely, upon the party against whom judgment must go, if no evidence whatever is introduced, its application is often affected by circumstances. 'From the very nature of the question in dispute,' says Mr. Best, 'all, or nearly all, the evidence that could be adduced respecting it must be in the possession of, or be easily attainable by, one of the contending parties, who accordingly could at once put an end to litigation by producing that evidence; while requiring his adversary to establish his case, because the affirmative lay on him, or because

En. 13 (continued)

United States v. Swain, A-30926 (Dec. 30, 1968)^{lll}, United States v. Flurry, A-30887 (Mar. 5, 1968)^{lynn}, United States v. Coston, supra; United States v. Patee, A-28731 (May 2, 1962).ⁿⁿⁿ

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there was a presumption of law against him, would, if not amounting to injustice, at least be productive of expense and delay. In order to prevent this, it has been established as a general rule of evidence that the burden of proof lies on the person who wishes to support his case by a particular fact which lies more peculiarly within his knowledge, or of which he is supposed to be cognizant.' 1 Best, Ev. § 274; 1 Greenl. Ev. § 79; 2 Starkie Ev. 589." See, also, United States v. Denver & Rio Grande Railroad Co., 191 U.S. 84, 92, 24 S.Ct. 33, 48 L.Ed. 106; Mammoth Oil Co. v. United States, 275 U.S. 13, 51, 53, 48 S.Ct. 1, 72 L.Ed. 137; Board of Commerce v. Security Trust Co., 6 Cir., 225 F. 454, 459, 20 Am. Jur., Evidence, § 139, page 145; 31 C.J.S., Evidence, § 113, p. 721.

This principle applies in a mining claim contest to the extent that where the Government has made a prima facie case of nonmarketability, and the contestee only testifies that he made sales, but fails to buttress the testimony with specific data, or provide corroborating evidence thereof, he will be deemed to have failed in his burden of proof.

United States v. Block, 12 IBLA at 401-03 (1973).

It is obvious that a mining claimant who has occupied the claims and conducted the mineral examination of the claims over a long period of time has knowledge and control of the evidence of such matters as the location, extent and nature of the minerals located on the claims. He is in the best position to develop this evidence and demonstrate these facts. ^{14/} On the other hand, the mineral examiner is just that. He conducts an examination

^{14/} The majority relies heavily on the fact that the Chakarun report makes no mention of the inaccessible underground workings. At the same time they allude to the fact that, having spent 4 days on the claim, Chakarun had done an in-depth study of the claims in discharge of his duty to the claimants. I do not believe that Chakarun was permitted by the Army Corps of Engineers to do much more than a casual reconnaissance of the claims. Chakarun and his assistant spent 11 man-days on the claims. Subtract from that, however, the 5 man-days when they accompanied the mineral examiner or worked on the Betty Lee, and a day for orientation and the total time spent examining the surface and underground workings on the remaining 20 claims was 4 man-days. That is equivalent to 5 claims per day (both surface and subsurface). Subtract further the time spent in travel, time spent sampling, and the time when they traveled together in the underground workings and it becomes obvious that the study could not have been in-depth. It is little wonder that Chakarun spent no time mapping or noting the existence of inaccessible underground workings. His investigation was further hampered by the remoteness of the claims, the heat, and the fact that during the period of Government occupancy the corners of the claims had been destroyed and there was no party available with knowledge of the claims or the workings who could assist him in his investigation. Considering the obstacles, Chakarun did an admirable job.

of the property, usually without prior experience with respect to the particular property. In that he has no first-hand knowledge of the property, he must gain this knowledge through available literature and the claimant (if the claimant is cooperative). He has not witnessed the exploration and development of the property and has not obtained his knowledge while in possession of the property. Therefore, he is not charged with the responsibility of obtaining intimate knowledge of the property. Mineral examiners have no affirmative duty to search for indications of discovery on a mining claim, nor do they have to go beyond examining the discovery points of the claimant. United States v. Wood, 51 IBLA 301, 313, 87 I.D. 628, 635 (1980); United States v. Bryce, 13 IBLA 340 (1973).^{PPP}

With an understanding of this reasoning, it is easy to accept the requirement that a mineral examiner need do no more than "examine the claims and find the mineral values insufficient to support a finding of discovery" to establish a prima facie case. The manner in which a mineral examiner is to present the prima facie case is well stated in United States v. Nunez, *supra*. In this opinion Judge Burski stated:

On appeal, claimant charges that Manchester's testimony was insufficient to establish a prima facie case. The cases which appellant cites to support this contention, however, are simply inapposite to the facts disclosed herein. Thus, in United States v. Winters, 2 IBLA 329, 78 I.D. 193 (1971),⁹⁹⁹ this Board noted:

Where a Government mineral examiner offers his expert opinion that discovery of a valuable mineral deposit has not been made within the boundaries of a contested claim, a prima facie case of invalidity has been made, provided that such opinion is formed on the basis of probative evidence of the character, quality and extent of the mineralization allegedly discovered by the claimant. Mere unfounded surmise or conjecture will not suffice, regardless of the expert qualifications of the witnesses. But an expert's opinion which is premised on his belief or hypothetical assumption of the existence of certain relevant conditions, if evidence is presented that those conditions do exist, is sufficient to establish a prima facie case and to shift the burden of evidence to the contestee. The admissibility of expert testimony in a mining claim contest is determined by the hearing examiner, who exercises a wide latitude of discretion in making these determinations.

United States v. Nunez, *supra* at 136-37.

There are cases which justify the finding that a prima facie case has been made even though the mineral examiner did not physically examine the claims. In United States v. Zimmers, *supra*, there was no sign of any activity on the claims examined and the claimant stated that he did not want the examiner to go on the remaining claims or take any samples. In United States v. Chappell, *supra*, the access to the location of the drill holes was dangerous

Footnotes: See addendum page 81 IBLA 143A

and the claimant who had witnessed the drilling indicated that the drilling had not demonstrated any discovery. In United States v. Rukke, *supra*, the eight claims not examined were inaccessible due to snow and glacial thawing causing rockslides. The mineral examiner had examined 32 of the 40 claims and had found nothing to demonstrate a discovery on any of the claims examined. In United States v. Long Beach Salt Co., 23 IBLA 41 (1975),^{rr} 36 consolidated placer claims were contested. The mineral examiner examined all except five of the claims and was unable to go upon the other five because these claims contained either water or a layer of slimy mud which made walking treacherous and vehicular access impossible. The claims were in a lake bed and the examiner could see the surface of all of the claims and observed no recent workings on any of them. The "mineral" deposit was in a lake bed, uniform in nature and composition, and all of the claims examined contained only traces of the mineral claimed. In United States v. Zweifel, 16 IBLA 74 (1974),^{sss} *aff'd*, Burkhardt v. Morton, Civ. No. C74-152 (D. Wyo. Nov. 7, 1975), appellant had located 1,583 placer claims in Wyoming embracing 253,000 acres of land. Evidence presented clearly demonstrated that the claims were not located in good faith and that the mineral claimed was not extractable at a profit using any known process. In United States v. Bryce, *supra*, while one of the claims contested was not examined, the record shows that this claim, which was physically separated from the others, could not be found by the claimant when he was accompanying the mineral examiner on the property. The owner of the claim testified that he was later able to find the claim after discussing it with his father. It is apparent that the owner had not previously been on the claim even though the claim had been located in 1901 and subject to the control of the owners since location. United States v. Zweifel, 11 IBLA 53, 80 I.D. 323 (1973),^{tt} *aff'd*, Roberts v. Morton, 389 F. Supp. 87 (D. Colo. 1975), *aff'd*, 549 F.2d 158 (10th Cir. 1977), like the other Zweifel case cited previously, turned on the lack of good faith on the part of the locator at the time of location. He had located 2,000 claims in Colorado in 1 day. In United States v. Fisher Contracting Co., A-28779 (Aug. 21, 1962),^{uuu} the claim was located for sand and gravel. The mineral examiner had been able to observe the claims from an adjoining road and had observed no workings on the claims. The weight of the mineral examiner's testimony was directed to the lack of a market for the sand and gravel and it was conceded that the claims contained sand and gravel. It was found that the mineral examiner established a prima facie case that there was no market for the product. On the other hand, Judge Burski stated in United States v. Hess, *supra*, that "[w]e have been unable, however, to discover any case in which the Department has ruled that a prima facie case was established by the testimony of a mineral examiner who had failed to actually traverse the claim, where the issue involved was the existence of mineralization within the claim's limits." Judge Burski further stated that "[a] mineral examiner is obligated to make a careful and competent inspection of a mining claim in order to testify meaningfully on the presence or absence of mineral discovery there. Testimony made in admitted ignorance of the physical status of the land or based on uncertain recollection about the nature of the land is entitled no weight."

In those cases in which the mineral examiner does traverse the claims and examine the workings that are exposed, the mineral examiner is not required to reopen any discovery points in order to conduct his examination. This Board has held on a number of occasions that, if the discoveries are not

Footnotes: Addendum page 81 IBLA 143A

open for inspection, a prima facie case can be made based on the examination of those workings actually exposed at the time of inspection. Maintenance of the discovery points in order to facilitate inspection is the obligation of the party in control of the property. 15/

This rule was emphasized in United States v. Foresyth, 15 IBLA 43 (1974),^{vvv} when this Board found that the claimant was not allowed to enter the property in order to take bulk samples for the purpose of presenting its case of marketability. The Forest Service did not allow the claimant the opportunity to do this work and therefore "made it more difficult, if not impossible for the claimants to prove whether they had perfected a discovery." Based on this denial the Board found that the failure to prove the existence of a discovery on the part of the claimant was justified and vacated the decision invalidating the claims.

Several facts are considered by me to be important regarding the determination of the Board and the outcome of this case. These facts are:

1. When the claims were examined by a Department of the Interior mineral examiner in 1942 most of the claims were found to have been supported by a discovery and the land was found to be mineral in nature.

2. During the course of the second examination, the mineral examiner never went on 14 of the claims. The majority relies on United States v. Hooker, supra, to reach the conclusion that examination was not necessary. Compare, however, the testimony relied on in this case with testimony given by the claimant in Hooker, who had been in possession of the claims for over 20 years prior to making the following statement on the stand:

THE COURT: So that the two claims then we are concerned with here today are Solitude Fraction and Circle "C". You are not making -- it is not your position that there is a discovery on any other of the claims here today?

MR. CRAIN: That is correct. There has been no discovery of ore regarded mineable ore on any of the other property. However, it can be assumed that this steeply dipping bed could very well go under these other claims to the east through the side-lines of those claims and extended who knows how far. But as to the actual discovery it is on this. [Emphasis supplied in original decision.]

United States v. Hooker, supra at 23-24. I cannot join the majority in their conclusion that the statement in the field and quoted in the majority opinion raised a reasonable presumption that there was no discovery on the other claims. The differences in the facts and the testimony are glaring.

15/ See United States v. Cook, supra at 270; United States v. Jones, supra at 231; United States v. Nunez, supra at 137; United States v. Smith, supra at 14, and cases cited. There is serious question in this case as to whether the claimants could be considered to have been in control of the property.

Footnotes: See addendum page 81 IBLA 143A

3. There is nothing in the record to cause me to believe that the mineral examiner who conducted the second examination was unable to locate the claims, unable to traverse the claims, or was denied access to the claims. There is no question of there being a good faith location of the claims or that the claimants were making a good faith effort to extract valuable mineral from the claims shortly before entering into the lease with the Army Corps of Engineers. In fact, there is nothing in the record to indicate that there were any of the facts present which has caused this Board to hold in prior cases that the mineral examiner need not at least traverse the claims.

4. During the course of the second examination, three claims were examined by the second mineral examiner. One, the Frisco No. 20, was determined to be valid, based on one assay. The mineral examiner stated, based on this one sample, "I believe it's a valid claim" (Tr. 84). The majority opinion concluded that the mineral examiner established a prima facie case with respect to the three claims examined. I agree.

5. The majority opinion found that, based on the evidence presented, the Betty Lee and Frisco No. 20 claims contained sufficient mineralization to support a discovery. I agree. I also agree that appellants did not carry their burden with respect to the Frisco No. 11, which had been examined during the second examination. This does not detract from the fact that the majority found that two of the three claims actually examined contained sufficient mineral to support discovery.

6. With the passage of time knowledge can be lost as well as gained. During the period between the first and second examination, the land was under the exclusive control of the Defense Department. From 1943 through the time of the hearing in 1981, the owners and later appellants (who are the heirs of the parties who worked the claims in 1943) were effectively barred from the property, having only been allowed to examine the property once in the 1950's and inspect, but not do any work on the property, on three occasions shortly before the hearing. The condition of the workings and the discovery points had deteriorated during their long absence. The original owners, who were familiar with these discovery points and workings, died and the knowledge gained by them when on the property has been lost. Because of this passage of time, appellants have been placed in a position similar to that of the mineral examiner. They had no "peculiar knowledge or control of the evidence as to" the property (the very foundation of a prima facie case). Further, they were denied the ability to gain this familiarization with the property and denied "control" of the property by the actions of the Department of Defense. As in the Foresyth case, supra, they were not allowed to do the work necessary to prove discovery.

7. Because of the inability to do so prior to the previous hearing, the determination by appellants' expert witness that he had not yet found anything of interest on these claims was not only reasonable and understandable, but was, in fact, to be expected. It was an honest observation of the conditions at the time. It was not, however, the fault of appellants that the discovery points open at the time of the initial examination could not be opened for inspection by any party at the time of the second inspection. Claimants had been barred from maintaining these discovery points.

8. When informed of the possibility of a prior examination and mineral contest, Judge Mesch asked counsel for the Government to have BLM pull the files out of the archives (Tr. 136). He stated that, if found, the files would be made a part of the record. 16/ These records were not obtained, and

16/ The majority seems to impart the failure to retrieve the files to the claimants. I fail to find any way to do so. The record is quite clear.

"JUDGE MESCH: Do you mind if I see that? I think the contest number, it's apparently a separate one for each of the four claims. 4-039 and then DI 27347 would be for one claim, and then the other numbers would be for the other three claims. Do the parties have any objection if the BLM tries to find this file and make it a part of the record?

"MR. SHADLE: [Counsel for claimants] Well, we certainly don't, Your Honor. Our position is that the BLM made an analysis of the properties at that time, selected certain nonmineral claims, and proceeded against them, and I believe the implication, if not the express result of that is that the balance of the claims were found to be valuable. Now if we can draw that inference, we have no objection to this, and certainly, I think, that's the inference a reasonable person would draw.

"Now it may be that it's even more important than that because there may have been, in conjunction with examination of the claims, some additional information on the rest of the claims. But Mr. Nelson has testified that he hasn't found any further records on the mine and we don't know whether there are any further records.

"But we have no compunction about looking up that file. It can only, we believe, lead to either an inference of validity to the balance, or even possibly information that will corroborate what we've presently found.

"JUDGE MESCH: Do you have any objection, Mr. Goreham, to at least making an effort to see if BLM can pull that file out of the archives?

"MR. GOREHAM: [Counsel for the Government] No.

"JUDGE MESCH: And then if it's not too voluminous, perhaps have a copy made and send it to Mr. Shadle and send the original to me, and I'll make it an exhibit in the proceedings? Is that agreeable with the parties?

"MR. GOREHAM: I take it I get an opportunity to address his statements as to what an inference it might mean?

"JUDGE MESCH: Well --

"MR. GOREHAM: I don't think it has any inference as to the possible --

"JUDGE MESCH: This is why I'm interested in seeing what the record is.

"MR. GOREHAM: I -- okay, that's fine.

"JUDGE MESCH: I'm not certain I'm willing to draw any inference from the contest complaint.

"MR. GOREHAM: No, I mean that's --

"JUDGE MESCH: But I do think it's significant.

"MR. GOREHAM: Absolutely. And as I stated previously, an adjudicator -- that information was not available to him, or he could not find it.

"JUDGE MESCH: Yes.

"MR. GOREHAM: And that's the reason the complaint is drawn in the way it's drawn.

"JUDGE MESCH: Yes.

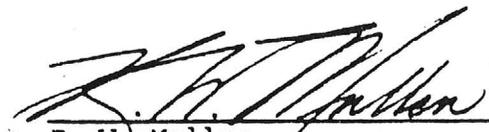
"MR. GOREHAM: And --

"JUDGE MESCH: But I'm certain that the old contest records are in the archives someplace.

appellants did not have these records available to them for use in the post-hearing briefs or the statement of reasons. This alone is sufficient cause for this Board to vacate the decision. As stated previously, the records were made available to the Board within 1 week from the date that a request was made.

When commenting upon this dissent, the majority leaves the impression that it is my intent to determine that the contest should be dismissed because appellant has overcome the Government's case. This is not my opinion. Rather, I believe that, due to the unusual circumstances surrounding this case, appellants should be given further opportunity to develop and present a case in support of the validity of the claims. This was done in United States v. Foresyth, supra, when this Board found that "sufficient justification exists for [the] failure [of the appellant to prove discovery] and we are not disposed to rule finally on the case in its present posture." There is more than sufficient justification for the failure of appellants herein to come forward with sufficient proof of discovery. Justice dictates that they at least be given the opportunity to do so.

The facts and equity of this case dictate that appellants at least be given the opportunity to do the work necessary to expose the 1943 discovery points on the 14 claims found to contain a discovery in 1943 but not examined in 1981. 17/ It is my opinion that with respect to those claims the decision on appeal should be set aside and the case remanded for a further hearing. The claimants should be given an opportunity to examine the discovery points described in the 1943 Cutter reports denied them by reason of the mineral examiner and Government counsel's failure to call for Department of the Interior records which were clearly available to them and to furnish a copy of the reports to the claimants. Claimants should also be allowed to do the work deemed by them to be necessary to reopen and examine the discovery points that were in the 1943 Cutter reports. After having been given an opportunity to do so, appellants will be in a position to reasonably determine if there is sufficient mineral for them to continue to claim a discovery on one or more of those claims.


R. W. Mullen
Administrative Judge

fn. 16 (continued)

"MR. GOREHAM: That's right, and it would be --

"JUDGE MESCH: And BLM shouldn't have any particular problem in running them down and getting them."

(Tr. 135-38 (emphasis added)).

17/ Cf. United States v. Jones, supra, where the claimants who had been barred from the claims desired to do work to establish the existence of a discovery rather than reopening previously identified discovery points.

APPENDIX "A"

<u>Claim Name</u>	<u>Cutter Report</u>	<u>Chakarun Report</u>
Frisco No. 1	30' tunnel and 12' drift good copper showings in the face.	No report of having found any accessible openings on this claim.
Frisco No. 3	Excavation with disclosing vein "which is heavily iron and copper stained and contains lots of chrysocolla."	No report of any findings of mineral.
Frisco No. 4	Mineral in an open cut.	No report of mineral.
Frisco No. 5	12' shaft with mineral and 15' drift with mineral "Either vein appears ample for discovery."	No report of finding accessible workings or mineral.
Frisco No. 6	30' crosscut with 32' of drifting at face on 4' vein. "Good showing of copper minerals."	10" quartz vein with trace of mineral; no mention of open workings being found.
Frisco No. 7	10' tunnel with segregation of copper mineral in 20" vein.	No workings reported to have been found. 24" vein on surface?
Frisco No. 8	75' drift with "lots of chrysocolla."	No report of accessible workings or mineral.
Frisco No. 9	35' tunnel on 3' vein with good showings of copper mineral.	No report on accessible workings or mineral.
Frisco No. 10	"Considerable work in the nature of tunnels, raises, winzes, and stoping. "Workings and openings briefly described. Connects with workings on Frisco No. 11. "Considerable copper minerals."	Some of the workings were open and examined.
Frisco No. 11	175' tunnel with drift at face having good showing of copper mineral. Additional shafts and workings described. Connects with workings on Frisco No. 10.	54' adit examined.

Frisco No. 13	Shafts, tunnels, and drifts on the claim.	"Could not locate."
Frisco No. 14	100' adit and 57' adit with 6' wide vein exposed. Probable extension of Betty Lee vein. Discovery in 57' adit.	100' adit open and inspected but the 57' adit not found and examined.
Frisco No. 16	Surface excavation discussed in the majority opinion and cited as a common example of the Cutter report.	Small location cut examined.
Frisco No. 17	25' shaft and 50' tunnel with 1' vein containing \$2.10 values at the 1943 mineral prices.	20' shaft and 40' of underground tunnel found open at time of inspection.
Frisco No. 18	Discovery point in surface excavation with 2-1/2' wide vein exposed. Good copper showings.	4" to 10" vein in a 30' adit examined. No vein in surface excavation found.
Frisco No. 19	Vein exposed in a shaft on Frisco No. 13 having a good showing of mineral traced a short distance to the Frisco No. 19.	No report of having examined this claim.
Frisco No. 20	Main shaft on a 4' vein with good showings of chrysocolla.	Extensive workings examined; discovery found by both claimants and mineral examiner.

DEPARTMENT OF MINERAL RESOURCES

State of Arizona

MINE OWNERS REPORT

their file No " Ariz; Yuma Aerial Gunnery Range Tract No., M-2 G.Copple et al "

MEMO:- CLAIMS WITHIN YUMA AERIAL GUNNERY RANGE NOT ACCESSIBLE NOW.

Date March 11, 1947

1. Mine: BETTY LEE

2. Location: Sec. 1 & 2 Twp. 10 S. Range 17 W. Nearest Town Wellton southwesterly from Ralph's Mill, on Hiway 80 Distance 12 m. / Direction Road Condition

3. Mining District & County: Yuma county

4. Former Name of Mine:

5. Owner: Gus E Swenson and Glenn Copple

Address: Wellton, Ariz

6. Operator: same

Address:

7. Principal Minerals: gold; some silver; some copper

8. Number of Claims: 18 Lode lode Placer

Patented Unpatented x

9. Type of Surrounding Terrain: desert mountains; low altitude; mild winters and hot summers.

10. Geology & Mineralization: granite prevailing country rock.

mineralization occurs in quartz veins, allied to pegmatite dikes in some instances. some faulting has displaced veins on some of claims.

11. Dimension & Value of Ore Body: not clear as to any well defined ore body form data at hand. principal vein appears to be about 3 ft in width, and is traceable for about 5500 ft on its strike. Some shipments have been made of sorted ore, ranging in gross values from about \$9.00 to \$42.00 per ton in gold and silver. Sampling of parts of the underground workings on Betty Lee claim by Army engineer indicates persistent gold values, but low grade. Assays made by Bureau of Mines, Reho, and results much lower than those taken by owners engineer.

12. Ore "Blocked Out" or "In Sight":

from data in Army engineer's report no ore can be said to be "blocked",
altho' the sample map indicates that the owner's consider they have some
blocks or low-grade ore (about \$8-\$10 gold on their sampling)

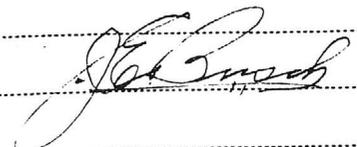
Ore Probable:

13. Mine Workings—Amount and Condition: were accessible in 1942

No.	Feet	Condition
Betty Lee Shafts..... 5 1	740	incline - 83 degree dip
Raises.....1	310	
Tunnels.....2	1320	
Crosscuts..... and drifts	1507	
Stopes.....		

14. Water Supply:..... no data

15. Brief History:

16. Signature: 

17. If Property for Sale, List Approximate Price and Terms:

ARIZONA DEPT. OF MINES & MINERAL RESOURCES
STATE OFFICE BUILDING
416 W. CONGRESS, ROOM 161
TUCSON, ARIZONA 85701

Frisco, Betty Lee, Ella J. file.
Yuma Co. (NW¹/₄, Sec 2, T11S, R17W)
La Posa District

THE BETTY LEE MINE

A Preliminary Report

By

JOHN D. CHAKARUN

June, 1977

INTRODUCTION

This report is the result of a preliminary geologic investigation of the Betty Lee lode mining claim situated on the southeast flank of the Copper Mountains, Yuma County, Arizona. It is written for and directed to Mr. Gordon B. Copple of Tempe, Arizona. Assisting with the field work was Terri Surlles, geologist and graduate student at the University of Arizona. Because the mine is enclosed by the Luke-Williams Gunnery Range, it was necessary to obtain permission for access from the Marine Corps Air Station in Yuma.

STRUCTURAL SETTING

The Betty Lee Mine is the largest mine in the immediate area, consisting of a 710 foot shaft and over 2500 feet of drifts, raises, and winzes (see accompanying map). It occupies a persistent vein-fault structure that strikes N 50° W and is essentially vertical. Near the surface, the vein is as much as 56 inches wide and is generally sandwiched between two slicken-sided walls of granite. The average vein width on the first and second levels is about three feet.

MAP IS NOT
INCLUDED

Drifts on the second level have followed the vein along strike for a distance of over 800 feet. No workings below the second level are accessible at the present time.

VEIN MINERALOGY

The vein material consists primarily of a translucent-to-creamy white quartz that has been highly fractured and somewhat brecciated. Oxidation and hydration of the primary sulfide minerals has been fairly complete, and the supergene transport of metal is evident. Copper oxides have filled fractures in, and partially replaced, the vein quartz. Chrysocolla ($\text{CuSiO}_3 \cdot 2\text{H}_2\text{O}$) is most abundant, accompanied by a minor amount of malachite ($\text{Cu}_2\text{CO}_3(\text{OH})_2$). A reddish, hematitic limonite occupies small vugs generally less than 1/2 inch in diameter and probably formed at the expense of chalcopyrite (CuFeS_2). A more yellowish, sericitic and goethitic limonite is concentrated in places as a vein selvage up to several inches thick, probably representing zones that were originally high in pyrites (FeS_2). A few specks of free gold were visible in this selvage. Gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$), although not abundant,

is present as fracture fillings and is probably a supergene product. Kaolin has replaced the feldspars in the adjoining granite wallrock, but is not abundant in the vein. Montmorillonite is present only in trace amounts. Large muscovite books up to 1/2-inch across exist in pegmatitic lenses adjacent to the vein that are probably pre-ore. Identification of the secondary vein minerals and alteration products was confirmed by x-ray diffractometer analysis.

SAMPLING - ASSAYING

Seven 10-15 pound samples were taken from the mine (see map). Four samples were cut across the full drift backs, which averaged 45 inches in width. Three samples were taken from the dump material, each sample consisting of a composite of 10 to 15 grab samples from just below the dump surface. Fluorescent pink ribbons were numbered and nailed to each sample site.

Each sample was fire-assayed for gold and silver, and wet assayed for copper, tungsten, and uranium. Jacobs Assay Office of Tucson performed the analyses, the results of which are as follows:

<u>Sample No.</u>	<u>Oz/ton Au</u>	<u>Oz/ton Ag</u>	<u>% Cu</u>	<u>% WO₃</u>	<u>% U₃O₈</u>
1 (vein)	0.08	1.15	0.06	0.05	0.005
2 (dump)	0.08	0.95	0.26	Trace	Trace
3 (dump)	0.04	0.50	0.08	Trace	Trace
4 (vein)	0.02	1.40	0.35	Trace	0.005
5 (vein)	0.06	0.35	0.49	0.02	0.005
6 (dump)	0.02	0.50	0.12	Trace	0.005
11 (vein)	0.04	1.60	0.20	Trace	0.005

The vein samples showed an average of 0.05 oz/ton gold, 1.13 oz/ton silver, and 0.28 percent copper. The average values of the dump samples were 0.047 oz/ton gold, 0.65 oz/ton silver, and 0.15 percent copper. Tungsten and uranium values are negligible. Assuming metal prices of \$140.00/oz. for gold, \$4.40/oz. for silver, and \$0.70/lb. for copper, the vein material would have a total metal value of \$15.89/ton. The corresponding dump value would be \$11.54/ton.

It is important to point out an apparent discrepancy between the assay results shown on the original 1936 map and those obtained in the present study. On the old map, an average of 82 sample sites recorded throughout the mine showed a gold-only value of \$9.16/ton.

At the old price of \$35.00/oz., this would correspond to a gold content of 0.26 oz/ton or about five times the amount indicated by the present sample results. In addition, the old copper values were higher and the silver values were lower.

Average Sample Values from Vein

<u>Present Sampling</u>	<u>1936 Sampling</u>
Au - 0.05 oz/ton	Au - 0.26 oz/ton
Ag - 1.13 oz/ton	Ag - 0.70 oz/ton
Cu - 0.28%	Cu - 0.80%

New (Umpire) assays are being performed on the coarse rejects from the recent sampling effort and may provide some explanation. If the new assays support the 1936 sampling results then the value of the "ore"* could be greatly increased.

CONCLUSIONS AND RECOMMENDATIONS

It is apparent that very little ore was ever shipped from the Betty Lee Mine, most of the rock removed during development work having remained on the dumps.

* The term "ore" versus ore is used here because the latter is generally reserved for material that can positively be mined at a profit. The profitability of mining the "ore" remains to be proven.

According to Arizona Bureau of Mine Bulletin 134 (1933), a little ore was shipped in 1913 that carried \$12.50/ton in gold. Also, a Phoenix newspaper article dated January 21, 1959 reported that two cars of ore per week were being shipped, however, not more than 500 tons could have been removed from the small stope that exists on the second level. In spite of some erosion, about 3600 tons of dump material remains today. At \$11.54/ton, the dumps contain approximately \$43,365 worth of gold, silver, and copper.

The workings on the first and second levels were found to be accurately represented on the 1936 underground map, and therefore the lower, inaccessible levels are assumed to be equally well represented. The apparent continuity of the vein makes possible the projection down to the fifth level of a large block of approximately 50,000 tons of developed "ore." Assuming an average value of \$15.89/ton, this block would have a mined metal value of \$794,500.

It is not known if the vein is as extensively leached of sulfides in the lower levels as it is near the surface. The higher average copper value indicated by the 1936 study is suggestive that the lower mine

levels were entering a zone of supergene copper enrichment. On the other hand, the average 1936 silver value was lower, and would not correspond to a similar trend. If valid, the relatively high (0.5 oz/ton) gold values in the sump area of the shaft probably represent primary ore concentrations. These are very interesting because the vein there is reported to be 66 to 84 inches wide.

Compared to the average vein deposit, the Betty Lee is an exceptionally easy one to mine. The vein is highly fractured and the walls are well defined by post-mineral faults so that breakage from the granite country rock is relatively simple. The upper levels are clean and self-supporting, having required almost no timbering. The vein structure is persistent despite minor pinching and swelling.

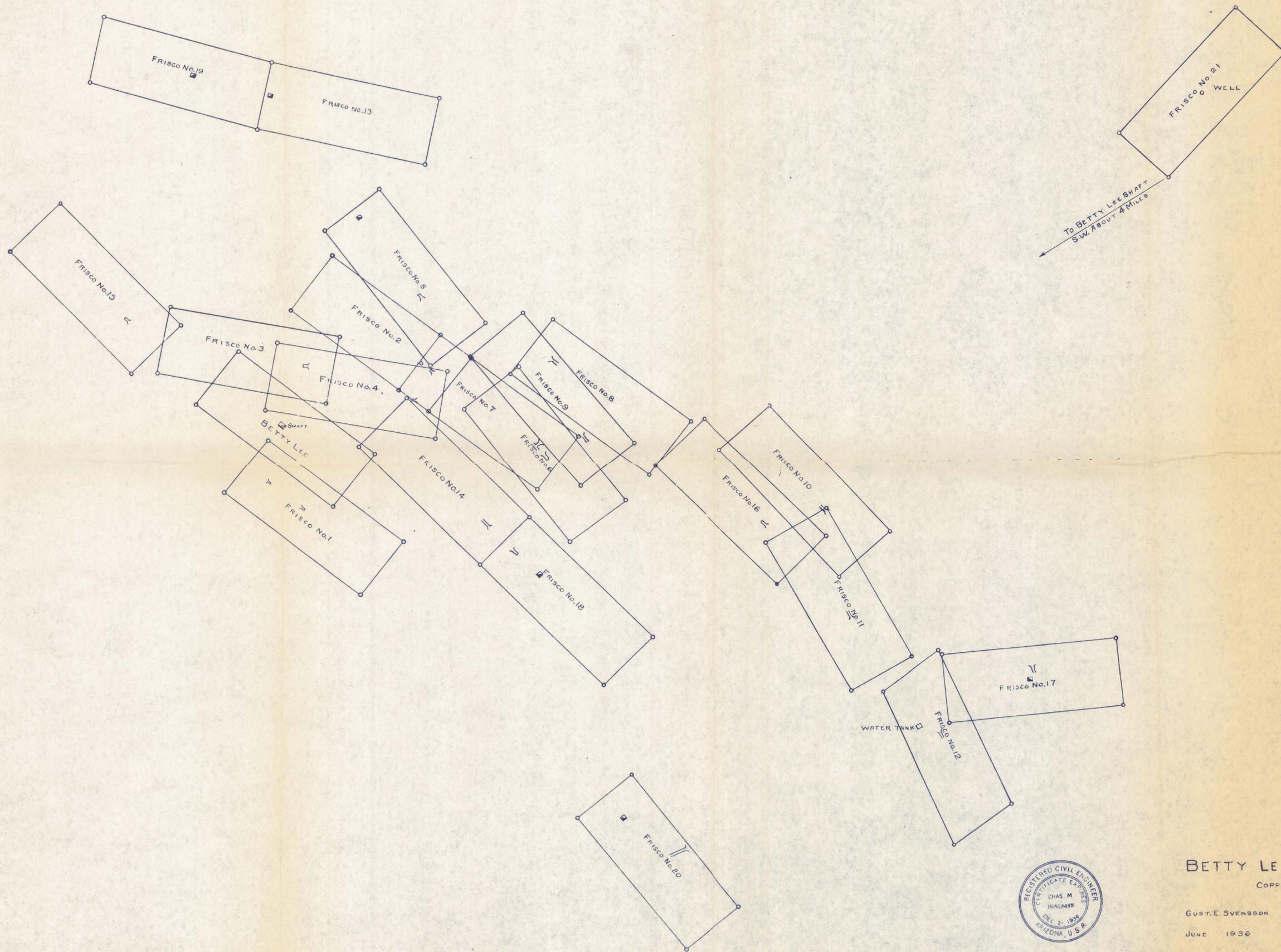
Because of recent developments in solution mining technique, many low-grade Au-Ag-Cu deposits are now being worked profitably in places where no ore grade rock existed just a few years ago. The Cerro Colorado Mine, Huelva Province, Spain is one example where ores averaging 1.225 oz/ton Ag and

0.07 oz/ton Au are successfully mined from a leached, limonitic zone overlaying a chalcocite (Cu_2S) copper zone (Gold and Silver Cyanidation Plant Practice Monograph, A.I.M.E., 1975). The ores are mined by open-pit method, crushed, and the metals extracted with a cyanide solution.

By taking advantage of the very extensive development work, it may be possible to set up an in-situ leaching process at the Betty Lee whereby no rock would have to be mined. Explosives could be placed in positions that would further crackle and brecciate the vein in the "ore" block, thereby rendering access for cyanide solutions. Ideally, the solutions would percolate downward and be pumped back to the surface from the lower end of the shaft. Cyanide recoveries generally average about 90% in the low grade deposits where the ores are crushed. If the Betty Lee vein can be leached without mining and without crushing then a recovery of less than 90% may be economically satisfactory.

If the umpire assays from the present sampling and additional assays from the lower levels confirm the results of the 1936 study, then there is a good chance that the mine can be worked at a profit by underground

methods. However, more sampling must be accomplished and extractive metallurgy tests made before one can place too much faith in the developed "ore" tonnage. Further access to the lower levels can probably be gained by utilizing the winzes and raises that connect the second and third levels. This would be easier than trying to penetrate the rubble in the second level shaft area. If the analyses continue to indicate low-grade values then an in-situ leaching project is the only method that could be considered feasible. However, an investment of several tens of thousands of dollars may be sufficient to begin a leaching project, whereas several hundred thousand dollars may be required to initiate underground mining. The Betty Lee Mine definitely has potential and is deserving of further study.



MAP
BETTY LEE AND FRISCO MINING CLAIMS
 COPPER MOUNTAIN-YUMA COUNTY
 ARIZONA

GUST. E. SVENSSON WELTON ARIZONA GLENN COPPLE
 JUNE 1936 SCALE 1 INCH = 400 FEET

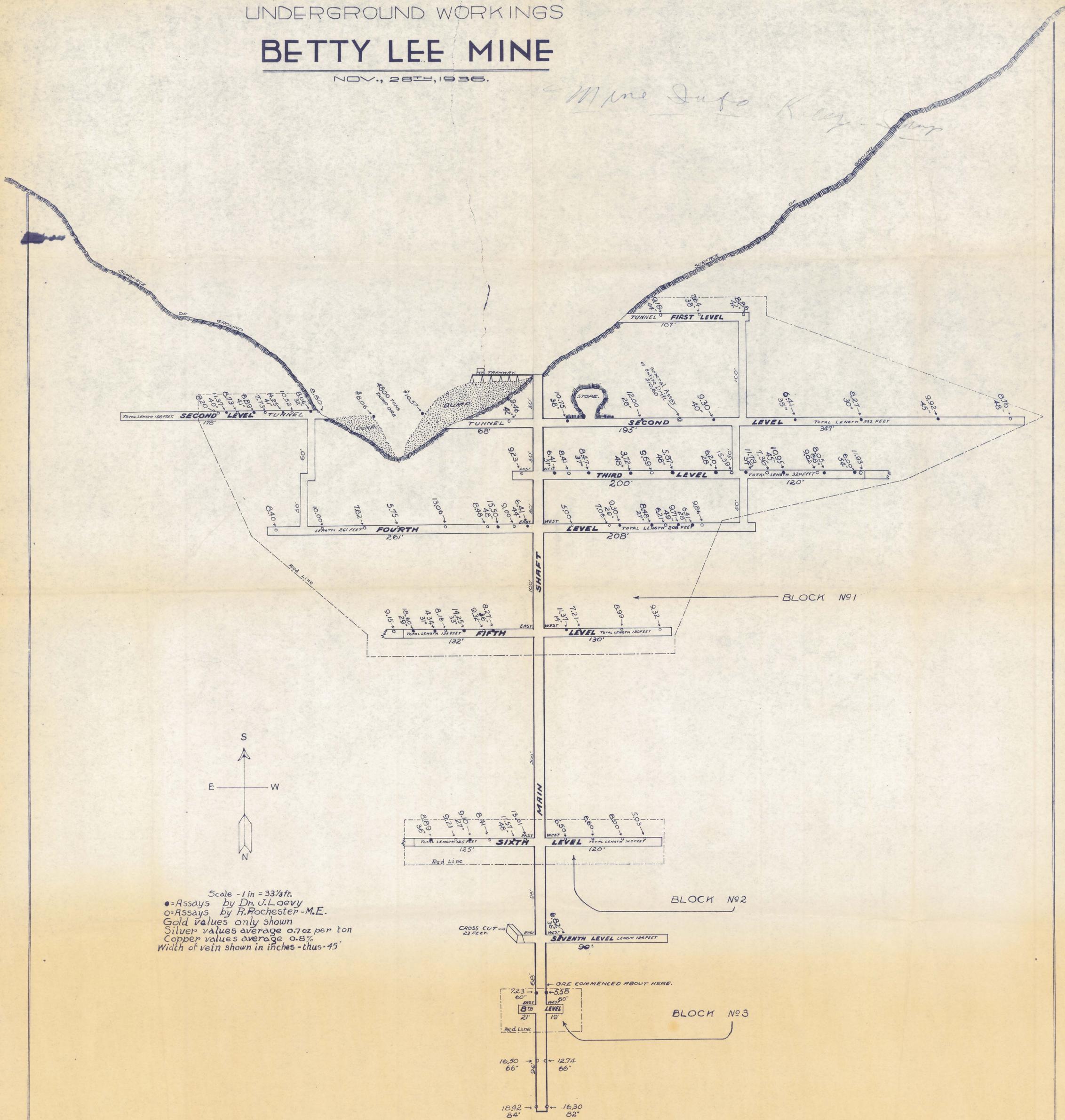


PLAN OF
UNDERGROUND WORKINGS

BETTY LEE MINE

NOV., 28TH, 1936.

Mine Info Key





FRISCO Nos. 1 to 21
 & BETTY-LEE
 MINING CLAIMS
 Survey June 1937 by C.H. Hammond
 Addendum Sept 1942 by C.H. Hammond
 EXHIBIT G
 YUMA AERIAL GUNNERY RANGE

34-20
 30-15
 28-40
 26-20
 24-10
 22-10
 20-10
 18-10
 16-10
 14-10
 12-10
 10-10
 8-10
 6-10
 4-10
 2-10
 0-10

100-217W
 35-38

100-217W
 35-38

100-217W
 35-38

100-217W
 35-38

100-217W
 35-38