# EVALUATION OF GEOLOGY AND ORE RESERVES
# PALM PARK BARITE DEPOSIT
# HATCH, NEW MEXICO

RTDC-US

Submitted by

DAMES & MOORE

March 1979

TABLE OF CONTENTS

## LIST OF FIGURES, TABLES AND PLATES

EVALUATION OF GEOLOGY AND ORE RESERVES

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HATCH, NEW MEXICO

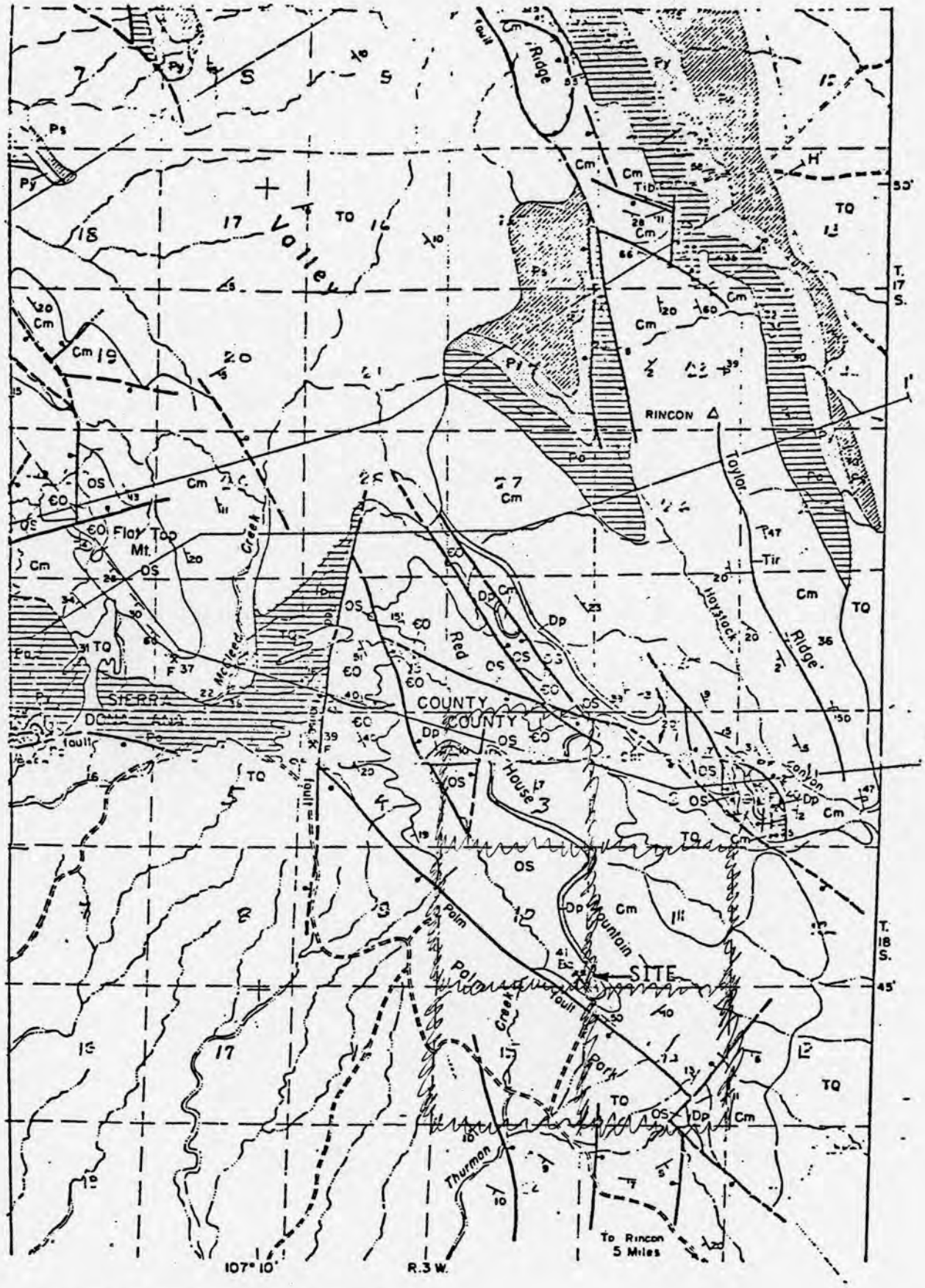
## INTRODUCTION

RTDC-US has staked and leased a total of 25 unpatented lode mining claims in Sections 3, 10, 11, 14 and 15 in Township 18 South, Range 3 West, in Dona Ana County, New Mexico. (Figure 1) This area is located approximately six miles northeast of Hatch, New Mexico, in the southern Caballo Mountains.

The property was acquired by RTDC-US after Callahan Mining Corporation dropped its lease in the latter part of 1978. Callahan had drilled by air hammer a total of 70 shallow holes or approximately 1380 feet in a six-month period. Callahan estimated reserves of drill inferred ore at 493,490 tons of 27.92 percent $BaSO_4$.

This report is a summary of work done by Dames & Moore for RTDC-US on the property. This work included drilling a series of widely spaced holes to examine the extent of barite mineralization down dip from the main mineralized (outcropping) structure,

GEOLOGIC MAP OF SITE VICINITY




From Kelley and Silver, 1952, Figure 2

FIGURE 1

claim-staking and re-estimating ore reserves using the new drill data and lower cutoff values than employed by Callahan.

## CONCLUSIONS AND RECOMMENDATIONS

Based on our evaluation of the results of 85 drill holes and a revised ore reserve estimate, we conclude the following:

1) $BaSO_4$ values are localized in the ore zone as replacement and vug-filling deposits;
2) Higher grade barite mineralization appears concentrated along a horst in the core of a N40°W trending antiform which plunges SE at 10 to 15 degrees;
3) Drill indicated reserves total approximately 893,000 tons on the property, at an average grade of 27% $BaSO_4$; and
4) Drill inferred reserves total approximately 634,000 tons on the property at an average grade of 27.3% $BaSO_4$.

Based on these conclusions, Dames & Moore recommends that the inferred reserves be upgraded to drill indicated reserves by closely spaced (100 feet) drilling, and mine-mill planning studies be undertaken to evaluate the feasibility of operating an economic venture.

## SITE GEOLOGY

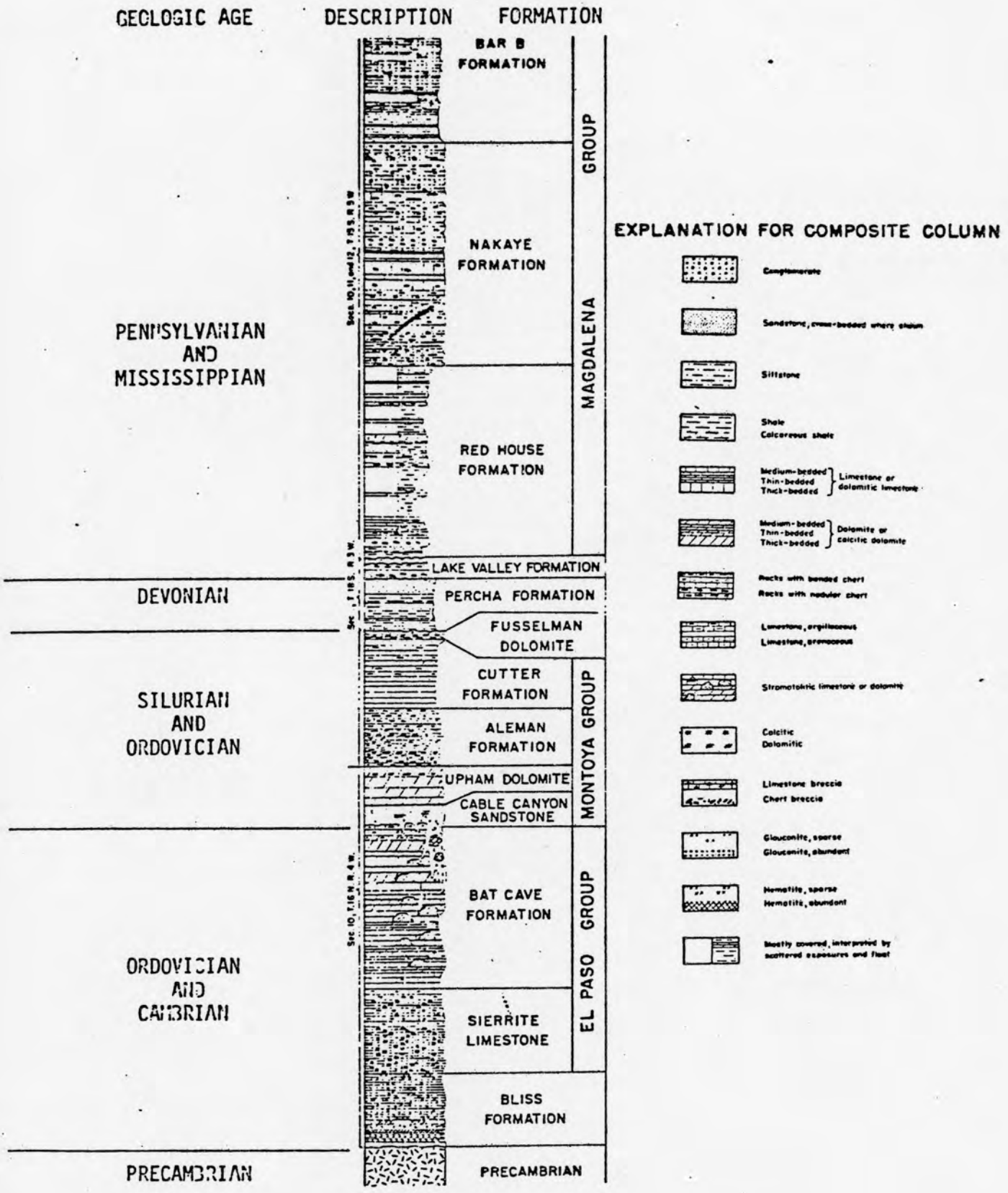
### Stratigraphy

Barite is found as discontinuous vein and replacement deposits in the upper part of the Fusselman Limestone of Upper Silurian age and in the lower portion of the Percha Formation of Devonian age. (Figure 2) The Fusselman ranges from 20 to 50 feet thick in the region (Kelley and Silver, 1952), and is a dark-colored gray to brownish-gray cherty dolomite. It is often found in a highly jointed condition, with vertical fractures filled with jasper and quartz. The Percha Formation varies in thickness from 0 to 105 feet in the region and consists of a lower gray-weathering calcareous claystone, an olive-drab weathering shale and an upper rusty-weathering sandstone and siltstone. Dames & Moore's drilling of hole DM-105 encountered at least 180 feet of the Percha Formation, which would indicate that the thickness is greater than that found by Kelley and Silver. Strata occuring above and below these host units are shown in Figure 2.

### Structure

The deposit is exposed in an eroded horst at the crest of a N40°W trending asymetrical southeastward plunging antiform which flanks the Palm Fault. (Figure 1) The fold has a known strike length of 3.6 miles. Bedding on the northeast flank of the fold in the site area dips 20 to 30 degrees to the northeast, while bedding on the southwest side dips 60 to 70 degrees to the southwest. The pre-ore antiform has been dissected by northeast

STRATIGRAPHIC COLUMN IN SITE AREA




From: Kelley and Silver, 1952, Figure 2.

FIGURE 2

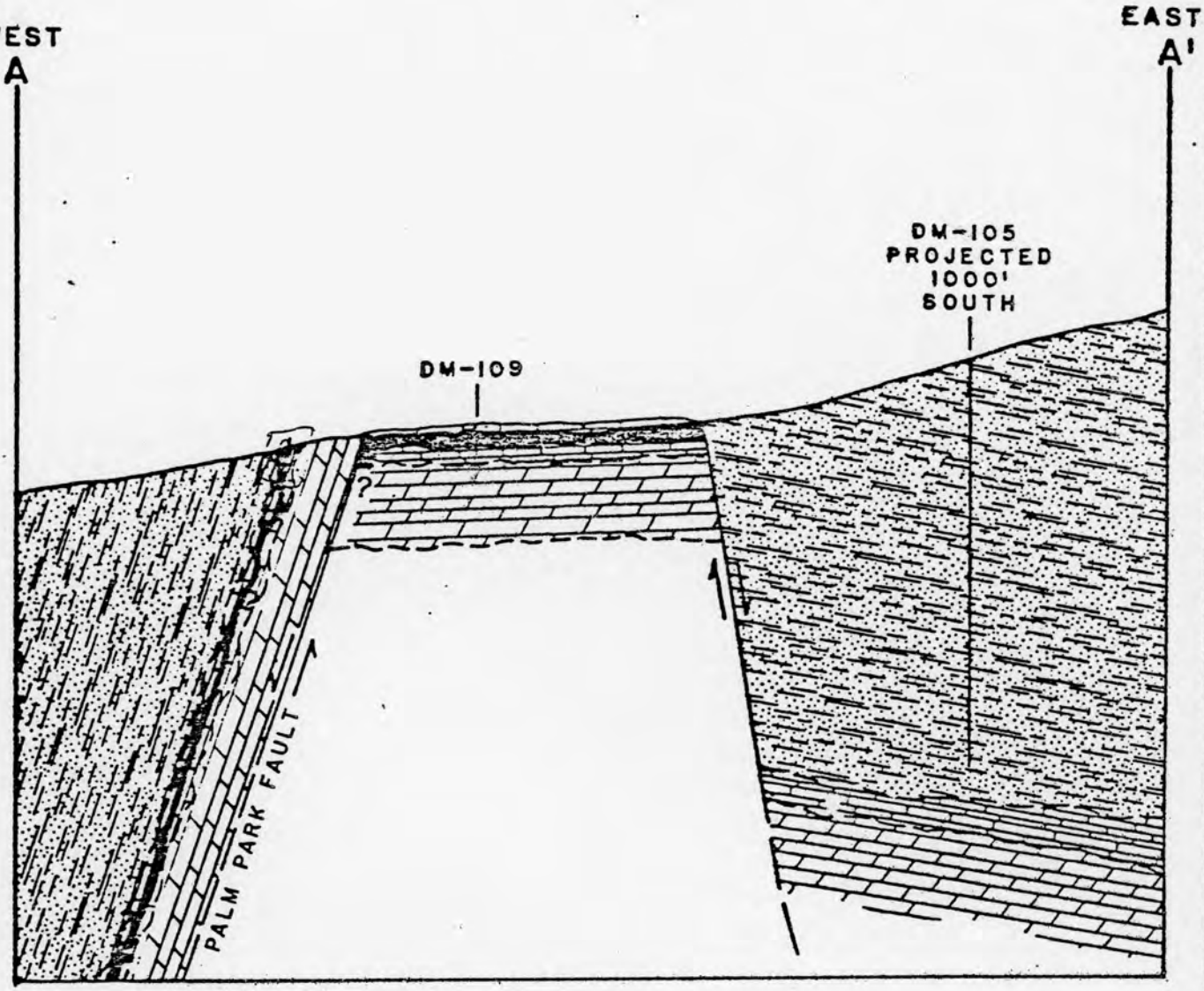
trending normal faults. These normal faults appear to be post ore, thus just offsetting mineralization.

Mineralization

Ore grade mineralization in the deposit appears at the present time to be confined to a central horst. The fault which bounds this uplifted block on the east, brought the Percha Formation in contact with the host formation, the Fusselman Dolomite. (Figure 3) Mineralized fluids apparently migrated up the Palm Park Fault and into the Fusselman Formation until they encountered the impermeable Percha Shale.

Uplift of the horst decreases to the south as displacement along the eastern fault nears zero. It is possible that the ore zone here extends across the fault, thus increasing the reserves substantially. Drilling to date indicates that mineralization does extend south and east of Callahan's drilling in certain areas, but the extent and grade are not yet known. (Plate 1) Holes 101, 101A and 110, 110A encountered mineralization, for instance, but cavities prevented drilling through the entire mineralized zone.

Additional mineralization may extend down dip to the southwest into Palm Park. Evidence for this exists at drill hole location DM-106. This hole was not drilled, but high values




# GEOLOGIC CROSS SECTION A–A'
# PALM PARK BARITE DEPOSIT
# HATCH, NEW MEXICO

DAMES & MOORE

FIGURE 3

(25% $BaSO_4$) are estimated from a stream valley just above the hole location which cuts the mineralized section. Here the mineralized beds dip 50 to 70 degrees into the park. This model can be projected the entire length of the park along the Palm Park Fault. If barite mineralization entered the Percha-Fusselman unconformity along the Palm Park Fault, it is reasonable to project the mineralization down dip to the southwest from hole location DM-106 and from the western edge of the known ore zone.

Fine and Kennedy (1948), in their analysis of ore-dressing methods for the deposit, found the ore to be "a mixture of barite, fluorite, chert and small amounts of quartz, calcite, sulfides, pyrite, sphalerite, galena and iron oxide staining." This mineral assemblage, plus the physical aspect of void filling and replacement, suggests that the deposit results from low temperature hydrothermal alteration of the host formations. The geologic model envisioned would indicate that hydrothermal solutions moved up along the Palm Fault from intrusive rocks at depth, into the Percha-Fusselman unconformity and thence into the axial region of the fold. The area of mineralization, therefore, may extend an additional 2,500 feet down the plunge of the fold (the present known extent) and an unknown distance (500 feet?) down the flanks of the fold.

## ORE RESERVES

### Method of Calculation

In evaluating the ore reserves on the property, Dames & Moore has employed the reserve classification scheme adopted by the U.S. Department of Interior (Economic Geology, 1974).

Indicated reserves have a minimum thickness of 5 feet, with a maximum included waste thickness of 2.5 feet between ore. A minimum average specific gravity of 2.90 per hole has been included as ore, with a cutoff of 2.79 per intercept. Indicated ore extends one-half the distance between drill holes to a maximum of 100 feet from each drill hole on strike and 50 feet at right angles to the strike direction of the ore zone.

We have employed similar cutoff thicknesses and specific gravities for inferred reserves which extend up to 200 feet on strike from an ore hole and up to 100 feet at right angles to the strike. These lengths have been occasionally shortened on Plate 1 due to the presence of faults which may limit the reserve category.

### Reserve Estimates

Ore blocks for indicated and inferred reserve categories

are shown on Plate 1. Chemical analyses of both Callahan and RTDC-US drill holes are included in the Appendix of this report.

Table 1 is a listing of drill hole and mineralization information used in the calculations. Tables 2 and 3 summarize the data for indicated and inferred reserves. Reserves on the property total approximately 1.5-million tons in indicated and inferred categories with an average grade of 27 percent $BaSO_4$ and an average thickness of 12 feet.

Additional ore grade mineralization may be located down dip from the ore zone, to the southwest and down the plunge of the antiform, to the southeast.

TABLE 1

RTDC - US
DRILL HOLE AND MINERALIZATION DATA
PALM PARK BARITE DEPOSIT

| HOLE | DEPTH INTERVAL | (FT) THICKNESS | WEIGHTED AVE.S.G. | GRADE % $BaSO_4$ |
|---|---|---|---|---|
| | | BLOCK 1 | | |
| C- 1 | 0-12.5 | 12.5 | 3.03 | 24.4 |
| C- 3 | 5-17.5 | 12.5 | 3.05 | 25.6 |
| C- 4 | 0-12.5 | 12.5 | 2.93 | 18.0 |
| C- 5 | 0-22.5 | 22.5 | 3.08 | 27.3 |
| C- 6 | 5-22.5 | 17.5 | 3.28 | 38.8 |
| C- 7 | 2.5-22.5 | 20.0 | 2.96 | 20.0 |
| C- 8 | 0-15.0 | 15.0 | 3.10 | 29.0 |
| C--9 | 0- 7.5 | 7.5 | 3.16 | 35.9 |
| C-12 | 0- 5.0 | 5.0 | 2.91 | 16.8 |
| C-14 | 0- 5.0 | 5.0 | 2.93 | 18.0 |
| Averages | | 13.0 | 3.06 | 26.3 |
| | | BLOCK 2 | | |
| C-66 | 20.0-37.5 | 17.5 | 2.94 | 19.0 |
| C-67 | 7.5-35.0 | 27.5 | 3.12 | 29.5 |
| C-68 | 12.5-20.0 | 7.5 | 3.34 | 42.4 |
| C-69 | 10.0-30.0 | 20.0 | 3.46 | 49.5 |
| C-70 | 20.0-27.5 | 7.5 | 3.22 | 35.3 |
| Averages | | 16.0 | 3.20 | 34.5 |
| | | BLOCK 3 | | |
| C-17 | 0- 7.5 | 7.5 | 3.44 | 49.5 |
| C-18 | 0-17.5 | 17.5 | 3.20 | 34.5 |
| C-19 | 0-15.0 | 15.0 | 2.96 | 20.0 |
| C-21 | 2.5- 7.5 | 5.0 | 3.03 | 24.4 |
| C-22 | 0- 5.0 | 5.0 | 2.96 | 20.0 |
| C-23 | 2.5-12.5 | 10.0 | 2.96 | 20.0 |
| C-24 | 0- 7.5 | 7.5 | 3.65 | 61.8 |
| C-26 | 7.5-12.5 | 5.0 | 2.93 | 18.0 |
| C-27 | 0- 7.5 | 7.5 | 3.48 | 51.7 |
| C-31 | 10.0-15.0 | 5.0 | 3.16 | 32.5 |
| C-32 | 2.5-20.0 | 17.5 | 3.17 | 33.0 |
| Averages | | 9.3 | 3.17 | 33.0 |
| | | BLOCK 4 | | |
| DM-109 | 8.0-18.0 | 10.0 | 3.16 | 32.4 |

TABLE 1 (Cont'd)

| HOLE | DEPTH INTERVAL | (FT) THICKNESS | WEIGHTED AVE.S.G. | GRADE % $BaSO_4$ |
|---|---|---|---|---|
| | | BLOCK 5 | | |
| C-34 | 0-17.5 | 17.5 | 2.90 | 16.5 |
| C-35 | 0-12.5 | 12.5 | 2.91 | 16.8 |
| C-36 | 0-17.5 | 17.5 | 2.91 | 16.8 |
| C-37 | 0-15.0 | 15.0 | 3.02 | 23.9 |
| C-38 | 0-12.5 | 12.5 | 3.00 | 22.5 |
| Averages | | 15.0 | 2.95 | 19.5 |
| | | BLOCK 6 | | |
| C-39 | 7.5-12.5 | 5.0 | 3.02 | 23.9 |
| | | BLOCK 7 | | |
| C-45 | 0- 5.0 | 5.0 | 3.00 | 22.5 |
| C-47 | 0-15.0 | 15.0 | 3.07 | 27.0 |
| C-48 | 0-10.0 | 10.0 | 2.92 | 17.4 |
| C-51 | 10.0-17.5 | 7.5 | 2.90 | 16.5 |
| C-52 | 12.5-20.0 | 7.5 | 2.93 | 18.0 |
| C-55 | 7.5-12.5 | 5.0 | 3.00 | 22.5 |
| C-57 | 10.0-15.0 | 5.0 | 3.00 | 22.5 |
| C-58 | 0-20.0 | 20.0 | 2.97 | 20.7 |
| Averages | | 9.4 | 2.98 | 21.4 |
| | | BLOCK 8 | | |
| C-64 | 0-17.5 | 17.5 | 2.92 | 17.4 |
| C-65 | 2.5- 7.5 | 5.0 | 2.97 | 20.7 |
| Averages | | 11.3 | 2.93 | 18.0 |
| | | BLOCK 9 | | |
| C-44 | 5.0-10.0 | 5.0 | 2.90 | 16.5 |
| | | BLOCK 10 | | |
| DM-106 | 0-15.0* | 15.0* | 3.04* | 25.0* |

*Estimated Values

TABLE 2

RTDC - US
SUMMARY OF INDICATED ORE DATA
PALM PARK BARITE DEPOSIT

| BLOCK | AREA (Sq.Ft.) | THICKNESS (Ft.) | WEIGHTED AVE.S.G. | TONS | SGXT |
|---|---|---|---|---|---|
| 1 | 90,000 | 13.0 | 3.06 | 117,000 | 358,020 |
| 2 | 96,400 | 16.0 | 3.20 | 154,240 | 493,568 |
| 3 | 192,000 | 9.3 | 3.17 | 178,560 | 566,035 |
| 4 | 20,000 | 10.0 | 3.16 | 20,000 | 63,200 |
| 5 | 78,000 | 15.0 | 2.95 | 117,000 | 345,150 |
| 6 | 15,600 | 5.0 | 3.02 | 7,800 | 23,556 |
| 7 | 227,600 | 9.4 | 2.98 | 213,944 | 637,553 |
| 8 | 40,000 | 11.3 | 2.93 | 45,200 | 132,436 |
| 9 | 20,000 | 5.0 | 2.90 | 10,000 | 29,000 |
| 10 | 20,000 | 15.0 | 3.04 | 30,000 | 91,200 |
| TOTALS | | 11.18 | 3.07 | 893,744 | 2,739,718 |

e%* $BaSO_4$ = 27

*Equivalent % $BaSO_4$ based on specific gravity of 3.07 as shown on Table 4.

TABLE 3

RTDC - US
SUMMARY OF INFERRED ORE DATA
PALM PARK BARITE DEPOSIT

| BLOCK | AREA (Sq.Ft.) | THICKNESS (Ft.) | WEIGHTED AVE.S.G. | TONS | SGXT |
|---|---|---|---|---|---|
| 1 | 32,000 | 13.0 | 3.06 | 41,600 | 127,296 |
| 2 | 129,200 | 16.0 | 3.20 | 206,720 | 661,504 |
| 3 | 47,600 | 9.3 | 3.17 | 44,268 | 140,330 |
| 4 | 46,800 | 10.0 | 3.16 | 46,800 | 147,888 |
| 5 | 83,600 | 15.0 | 2.95 | 125,400 | 369,930 |
| 6 | 24,400 | 5.0 | 3.02 | 12,200 | 37,844 |
| 7 | - | - | - | - | - |
| 8 | 47,600 | 11.3 | 2.93 | 53,788 | 157,599 |
| 9 | 27,600 | 5.0 | 2.90 | 13,800 | 40,020 |
| 10 | 60,000 | 15.0 | 3.04 | 90,000 | 273,600 |
| TOTALS | | 12.72 | 3.08 | 634,576 | 1,955,011 |

e%* $BaSO_4$ = 27.3

*Equivalent % $BaSO_4$ based on specific gravity of 3.08 as shown on Table 4.

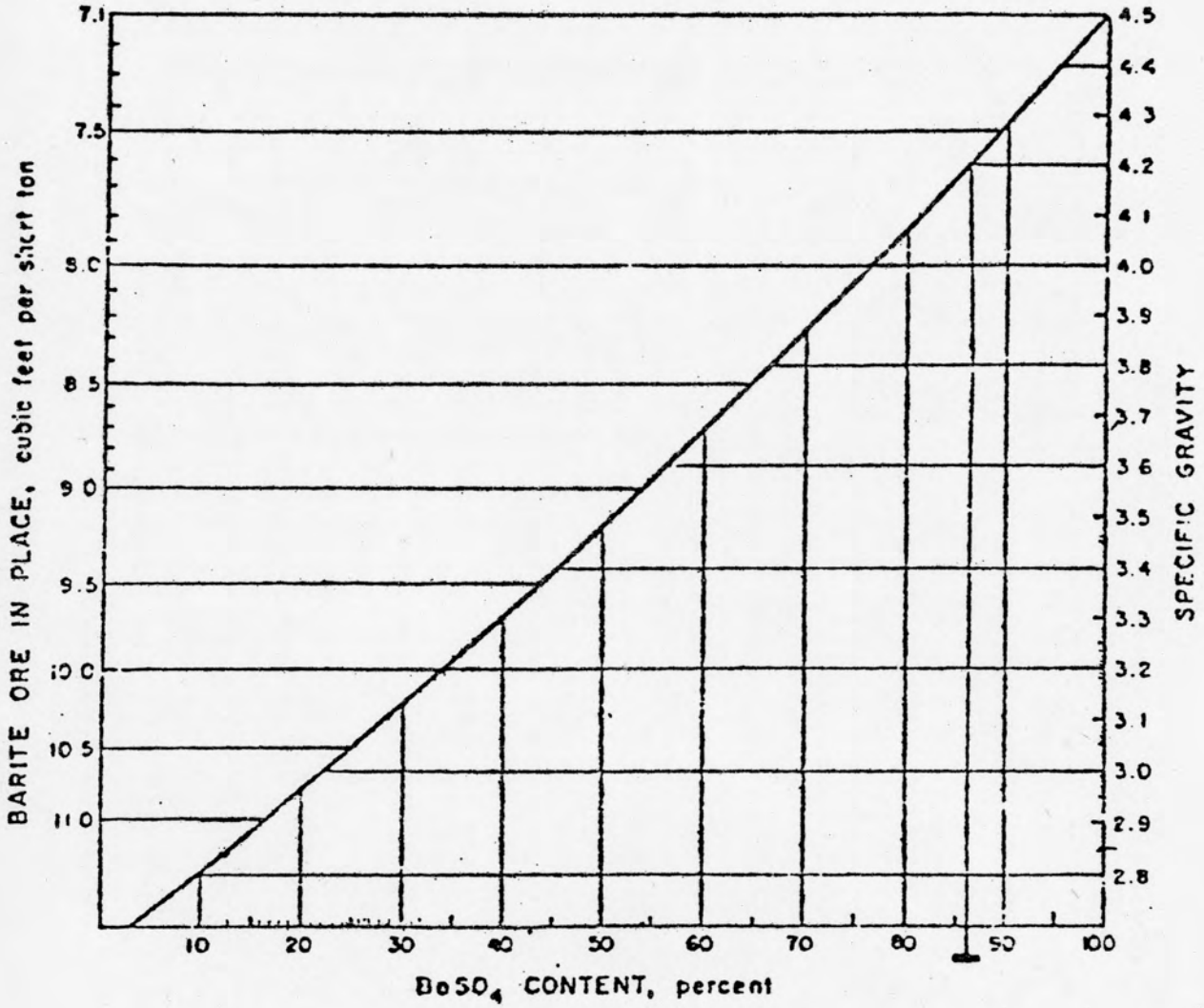



TABLE 4 - Graph Showing Relation of Specific Gravity, Percent $BaSO_4$ and Volume of Ore.

## REPORTS, DATA, AND REFERENCES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   Summary Memo - B. F. Dickerson, III, Manager of Exploration, September 5, 1978
   Statistical Analysis of Palmer Park Barite Samples, C. O'Brien, September 1, 1978
   Assay Data, El Paso Chemical Laboratories, 209 samples received 8/7/78 and 121 samples received 7/3/78
   Magnetometer Geophysical Survey, William G. Brown August, 1978
   Preliminary Examination, Sewell Mineral Exploration, C. R. Sewell, Tucson, Arizona, April, 1978
   Drilling Cost Estimate, Lloyd Krumrey, Jr., El Paso, Texas, April 6, 1978
   Preliminary Examination, Palmer Park Barite Deposit, Perry Exploration Company, Inc., A. J. Perry, August 20, 1977
   Agreements - Option, Limited Partnership Agreement, and Consulting Agreement between Callahan Mining Corp. and Ben F. Schaberg (Ben F. Schaberg Company)

2. Schaberg, B. F. -

   Summary of Palmer Park Barite Deposit - Geology, Mining and Milling Plans; Costs; Production Costs; Misc. Reports, October 29, 1976
   Lease Agreement - Between M/M Milton E. Hines and Ben F. Schaberg Co., December 20, 1976, with Amendments of December 9, 1977 and March 31, 1978
   Market Data - Prices, Specifications, Marketing Alternatives, Freight Rates, Markets, and Current Developments, August 1, 1978
   Water Well Data - Sec. 6, T.19S., R. 3W., 830 gallons per min., Depth 94 feet.

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10. Schmitt, H., 1947, Report to R. L. McCann, General Manager of New Jersey Zinc Co.; Subject: Palmer Park $BaSO_4$, New Mexico

11. Forbes, C. R., 1946, Report on Palmer Park Barite Deposit, Dona Ana County, New Mexico for Baroid Sales Div., National Lead Company

12. Economic Geology, 1974, Scientific Notes and News; Volume 69, p. 599.

# APPENDIX

n Siegel, B.S., M.S., P.E.
Director

2310 Alameda Ave.
Phone 544-7148
Area Code 915

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing,
Atomic Absorption,
Assaying

P. O. Box 1565

El Paso, Texas 79943

No. 78-7-9 REPORT SHEET Date July 18, 1978

Callahan Mining Corp.
CBT Plaza, 1120 Post Rd.
Darien, Conn. 06820
Att: Mr. A. E. Swanson

One Hundred Twenty One (121) Drill Samples - Received 7-3-78

| | Depth | | | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|---|---|
| SB-1 | | | | | |
| 7 should be 6 | X 0 | - | 2.5 | 2.88 | |
| | 2.5 | - | 5 | 8.57 | |
| | 5 | - | 7.5 | 3.12 | |
| | X 7.5 | - | 10 | (2.63) water - 7:0 | 26.00 % ? |
| | X 10 | - | 12.5 | 2.87 | |
| | X 12.5 | - | 15 | 2.73 | |
| | 17.5 | - | 20 - does not belong here (illegible) Possibly 15-17.5 on SB-9 | 2.52 | |
| SB-2 | Depth | | | Specific Gravity | $BaSO_4$ % |
| | 0 | - | 2.5 | 2.58 | |
| 7 ok | X 2.5 | - | 5 | 2.56 | |
| | 5 | - | 7.5 | 2.58 | |
| | 7.5 | - | 10 | 2.75 | 10.80 % |
| | X 10 | - | 12.5 not sent to florex | 2.70 | |
| | 12.5 | - | 15 | 2.81 | |
| | X 20 | - | 22.5 not sent to florex | 2.62 | |
| SB-3 | | | | | |
| | X 0 | - | 2.5 | 2.76 | |
| 7 ok | X 2.5 | - | 5 | 2.75 | |
| | 5 | - | 7.5 | 3.38 12.5' @ 25.6' | 48.12 % |
| | X 7.5 | - | 10 | 3.01 3.05 = 25.6' | |
| | X 10 | - | 12.5 | 2.94 | |
| | X 12.5 | - | 15 | 2.98 | |
| | X 15 | - | 17.5 not sent to florex | 2.92 | |
| SB-4 | | | | | |
| | X 0 | - | 2.5 | 2.87 | |
| | 2.5 | - | 5 | 2.91 | |
| 9 ok | 5 | - | 7.5 | 3.13 | |
| | X 7.5 | | 10 | 2.91 | |
| | X 10 | - | 12.5 | 2.84 | |
| | X 12.5 | - | 15 | 2.78 | |
| | X 15 | - | 17.5 | 2.84 | |
| | X 17.5 | - | 20 | 2.63 | |
| | X 20 | - | 22.5 | 2.75 | |

2.63 = water

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El Paso, Texas 79948

Lab. No. 78-7-9 REPORT SHEET Date July 18, 1978

Callahan Mining Corp.
Page -2-

| | Depth | | | Specific Gravity | $BaSO_4$ % | |
|---|---|---|---|---|---|---|
| SB-5 | | | | | | |
| 9 ok | X 0 | - | 2.5 | 3.42 | | |
| | 2.5 | - | 5 | 3.25 | | |
| | 5 | - | 7.5 | 2.95 | | |
| | X 7.5 | | 10 | 2.95 | | |
| | X 10 | - | 12.5 | 3.09 | | |
| | X 12.5 | - | 15 | 3.05 | | |
| | X 15 | - | 17.5 | 3.05 | | |
| | X 17.5 | - | 20 | 2.98 | | |
| | 20 | - | 22.5 | 2.98 | | |
| SB-6 | X 0 | - | 2.5 | 2.75 | | |
| | X 2.5 | - | 5 | 2.76 | | |
| 10 ok | 5 | - | 7.5 | 3.59 | 50.16 % | (4) |
| | 7.5 | - | 10 | 3.19 | 13.80 % | (4) |
| | X 10 | - | 12.5 | 3.40 | | |
| | X 12.5 | - | 15 | 3.21 | | |
| | X 15 | - | 17.5 | 3.43 | | |
| | 17.5 | - | 20 | 3.17 | 8.90 % | (1) |
| | X 20 | - | 22.5 | 2.98 | | |
| | X 22.5 | - | 25 | 2.78 | | |
| SB-7 | 0 | - | 2.5 | 2.65 | | |
| 9 | X 2.5 | - | 5 | 3.05 | | |
| ok | X 5 | - | 7.5 | 2.94 | | |
| | 7.5 | - | 10 | 2.94 | | |
| | 10 | - | 12.5 | 3.12 | | |
| | 12.5 | - | 15 | 2.73 waste | | |
| | X 15 | - | 17.5 | 2.91 | | |
| | 17.5 | - | 20 | 2.84 | | |
| | 20 | - | 22.5 | 3.13 | | |
| SB-8 | X 0 | - | 2.5 | 3.33 | | |
| | X 2.5 | - | 5 | 2.98 | | |
| | 5 | - | 7.5 | 3.43 3.10 | 42.54 | (+) |
| 6 ok | X 7.5 | - | 10 | 3.05 | | |
| | X 10 | - | 12.5 | 3.01 | | |
| | X 12.5 | - | ~~15~~ 17.5 ? | 2.82 | | |

20' 2.96

2.73 waste

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Lab. No 78-7-9 REPORT SHEET Date July 18, 1978

Callahan Mining Corp.
Page -3-

| | Depth | | | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|---|---|
| SB-9 | X 0 | - | 2.5 | 2.91 | |
| 7 | 2.5 | - | 5 | 3.59 — 3.16 | 68.70 % (-) |
| | X 5 | - | 7.5 | 2.98 | |
| | X 7.5 | - | 10 | 2.58 | |
| | X 10 | - | 12.5 | 2.72 } do not include | |
| SENT TO Flores | X 12.5 | - | 15 missing Could be Extra Sample on #1 | 2.98 | |
| | X 17.5 | - | 20 | 2.55 | |
| SB-10 | X 0 | - | 2.5 | 2.69 | |
| 6 OK | X 2.5 | - | 5 | 2.81 | |
| | X 5 | - | 7.5 | 2.84 | |
| | X 7.5 | | 10 | 2.75 | |
| | 10 | - | 12.5 | 2.69 | |
| | X 12.5 | - | 15 | 3.05 ✓ | |
| SB-11 to Flores | 0 | - | 2.5 | 2.55 | |
| 2.5-5 X | X 5 | - | 7.5 missing Probably Extra Sample on SB 15 | 2.79 — | |
| 8 | 7.5 | - | 10 | 2.60 10% | |
| | X 10 | - | 12.5 | 2.94 | |
| | X 12.5 | - | 15 | 2.60 | |
| | X 15 | - | 17.5 | 2.56 | |
| | X 17.5 | - | 20 | 2.58 | |
| SB-12 | X 0 | - | 2.5 | 5 @ 2.81 | |
| 4 ok | X 2.5 | - | 5 | 3.01 10% 2.91 = 16.8 % | |
| | X 5 | - | 7.5 | 2.81 | |
| | X 7.5 | - | 10 | 2.60 | |
| SB-13 | X 0 | - | 2.5 | 2.78 | |
| | X 2.5 | - | 5 | 2.70 | |
| 6 ok | X 5 | - | 7.5 missing | 2.94 | |
| NOT SENT | X 10 | - | 12.5 | 2.64 | |
| | 12.5 | - | 15 | 2.79 | |
| NOT SENT | X 15 | - | 17.5 | 2.64 | |
| SB-14 | X 0 | - | 2.5 | 5 @ 2.94 | |
| 5 ok | X 2.5 | - | 5 | 2.91 2.93 = 18% | |
| | X 5 | - | 7.5 | 2.81 | |
| | 7.5 | - | 10 } Small Sample | 2.54 | |
| | 10 | - | 14 } | 2.47 | |

2.81

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# EL PASO CHEMICAL LABORATORIES

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Assaying

P. O. Box 1565

El Paso, Texas 79948

Lab. No. 78-7-9 REPORT SHEET Date July 18. 1978

Callahan Mining Corp.
Page -4-

| | Depth | | | Sepcific Gravity | $BaSO_4$ % | |
|---|---|---|---|---|---|---|
| SB-15 | | | | | | |
| | 5 | - | 7.5 — does not belong here — #11 | 2.32 | | |
| 2 | X 15 | - | 17.5 | 2.50 | | |
| | X17.5 | - | 20 | 2.50 | | |
| SB-16 | X 0 | - | 2.5 | 2.61 | | |
| ok-3 | X 2.5 | - | 5 | 2.43 | | |
| | X 5 | - | 7.5 | 2.63 | | |
| SB-17 | X 0 | - | 2.5 — missing | 3.45 - 53.9% from Flores | 50.24 % | (-) |
| 3 | 2.6-5 X 5 | - | 7.5 | 2.42 | | |
| | sent to Flores | | | | | |
| SB-18 | X 0 | - | 2.5 | 3.01 | | |
| ok | 2.5 | - | 5 | 3.28 | 50.50 % | (- |
| | 5 | - | 7.5 | 3.74 | 56.30 % | + |
| 8 | 7.5 | | 10 | 3.49 - 3.38 = 44.9 % | 54.28 % | (-) |
| | X10 | - | 12.5 | 2.84 | | |
| | X 12.5 | | 15 | 2.91 | | |
| | X15 | - | 17.5 | 3.11 — 3.20 = 34.2 | | |
| | X17.5 | - | 20 | 2.69 ← do not include — 3.13 = 30% | | |
| SB-19 | X 0 | - | 2.5 | 2.87 | | |
| | X 2.5 | - | 5 | 2.84 | | |
| ok 6 | X 5 | - | 7.5 | 3.50 - 3.07 = 26.7 | | |
| | X 7.5 | - | 10 | 2.75 waste | | |
| | X10 | - | 12.5 | 2.84 | | |
| | X 12.5 | - | 15 | 2.98 - 2.76 = 20.0 % | | |

Respectfully submitted-

EL PASO CHEMICAL LABORATORIES

Leon Siegel

Leon Siegel, Director

2.75 waste

con Siegel, B.S., M.S., P.E.
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REPORT SHEET

Lab. No. ~~78-8-34~~

Date ~~August 7, 1978~~

Callahan Mining Corp.
CBT Plaza, 1130 Post Rd.
Darien, Conn. 06820

ATT: Mr. A.E. Swanson

One hundred and fifty nine ( 159) Drill Samples received: 7-21-78

| SB-20 | Depth | Specific Gravity | $BaSO_4$ |
|---|---|---|---|
| | 0- 2.5 | 2.81 | |
| | 2.5- 5 | 2.87 | |
| | 5 - 7.5 | 2.66 | |

| SB-21 | Depth | Specific Gravity | $BaSO_4$ |
|---|---|---|---|
| | 0 - 2.5 | 2.66 | |
| | 2.5- 5 | ~~3~~.13 | |
| | 5 - 7.5 | ~~2~~.93 3.03 | |
| | 7.5- 10 | 2.69 | |
| | 10-12.5 | 2.78 | |
| | 12.5-15 | 2.88 | |
| | 15 - 17.5 | 2.73 | |
| | 17.5-20 | 2.73 | |
| | 20 - 22.5 | 2.60 | |
| | 22.5-25 | 2.78 | |
| | 25- 27.5 | | |
| | 27.5-30 | 2.94 | |
| | 30 -32.5 | 2.76 | |
| | 32.5-35 | 2.63 | |
| MISSING → | 37.5-40 | 2.83 | |
| | 40 -42.5 | 2.83 | |
| | 42.5-45 | 2.69 | |
| | 45 -47.5 | 2.72 | |
| | 47.5 -50 | 2.78 | |
| | 50 - 52.5 | 2.78 | |
| | 52.5-55 | 2.70 | |
| | 55 - 57.5 | 2.70 | |

2.6

# EL PASO CHEMICAL LABORATORIES

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REPORT SHEET

No. 78-8-100 Date August 17, 1978

Callahan Mining Corp.
CBT Plaza, 1130 Post Rd.
Darien, Conn. 06820

Two Hundred Nine (209) Drill Samples - Received: 8-7-78

| | Depth | | | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|---|---|
| SB-22 | 0 | - | 2.5 | ~~2.86~~ | |
| | 2.5 | - | 5 | ~~3.06~~ | 22.96 |
| | 5 | - | 7.5 | 2.73 | |
| | 7.5 | - | 10 | 2.73 | |
| | 10 | - | 12.5 | 2.61 | |
| | 12.5 | - | 15 | 2.73 | |
| | 15 | - | 17.5 | 2.61 | |
| | 17.5 | - | 20 | 2.61 | |
| | 20 | - | 22.5 | 2.61 | |
| SB-23 | 0 | - | 2.5 | 2.61 | |
| | 2.5 | - | 5 | ~~3.00~~ | |
| | 5 | - | 7.5 | ~~3.10~~ 2.96 | 24.10 |
| | 7.5 | - | 10 | ~~2.86~~ | |
| | 10 | - | 12.5 | ~~2.86~~ | |
| | 12.5 | - | 15 | 2.73 | |
| | 15 | - | 17.5 | 2.86 | |
| | 17.5 | - | 20 | 2.79 | |
| | 20 | - | 22.5 | 2.73 | |
| SB-24 | 0 | - | 2.5 | ~~3.60~~ | 70.10 |
| | 2.5 | - | 5 | 15' ~~3.63~~ | |
| | 5 | - | 7.5 | ~~3.73~~ | 73.02 |
| SB-25 | 0 | - | 2.5 | 2.73 | |
| | 2.5 | - | 5 | 2.73 | |
| | 5 | - | 7.5 | 2.73 | |
| | 7.5 | - | 10 | 2.73 | |
| | 10 | - | 12.5 | 2.61 | |
| | 12.5 | - | 15 | 2.73 | |
| | 15 | - | 17.5 | 2.86 | |
| | 17.5 | - | 20 | 2.74 | |
| | 20 | - | 22.5 | 2.74 | |
| | 22.5 | - | 25 | 2.73 | |
| | 25 | - | 27.5 | 2.73 | |
| | 27.5 | - | 30 | 2.50 | |
| | 30 | - | 32.5 | 2.73 | |
| | 32.5 | - | 35 | 2.65 | |
| | 35 | - | 37.5 | 2.73 | 2.8 |

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REPORT SHEET

Lab. No. 78-8-100

Date August 17, 1978

Callahan Mining Corp.
Page -2-

| | Depth | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|
| SB-26 | 0 - 2.5 | 2.61 | |
| | 2.5 - 5 | 2.61 | |
| | 5 - 7.5 | 2.79 | |
| | 7.5 - 10 | 3.00 2.93 | 20.10 |
| | 10 - 12.5 | 2.86 | |
| | 12.5 - 15 | 2.61 } delete | |
| | 15 - 17.5 | 3.00 } 2.81 | 20.20 |
| SB-27 | 0 - 2.5 | 3.10 | 40.70 |
| | 2.5 - 5 | 3.58 | 65.20 |
| | 5 - 7.5 | 3.75 3.46 | 76.10 |
| | 7.5 - 10 | 2.58 | |
| | 10 - 12.5 | 2.73 | |
| | 12.5 - 15 | 2.63 | |
| | 15 - 17.5 | 2.85 | |
| SB-28 | 0 - 2.5 | 2.80 | |
| | 2.5 - 5 | 2.61 | |
| | 5 - 7.5 | 2.86 } delete | |
| | 7.5 - 10 | 2.92 } | 27.32 |
| | 12.5 - 15 | 2.61 | |
| | 15 - 17.5 | 2.73 | |
| | 17.5 - 20 | 2.79 | |
| | 20 - 22.5 | 2.67 | |
| | 22.5 - 25 | 2.73 | |
| SB-29 | 0 - 2.5 | 2.61 | |
| | 2.5 - 5 | 2.61 | |
| | 5 - 7.5 | 2.61 | |
| | 10 - 12.5 | 2.54 | |
| | 12.5 - 15 | 2.61 | |
| | 15 - 17.5 | 2.61 | |
| | 17.5 - 20 | 2.61 | |
| | 20 - 22.5 | 2.73 | |
| | 22.5 - 25 | 2.73 | |
| SB-30 | 2.5 - 5 | 2.73 | |
| | 5 - 7.5 | 2.61 | |
| | 7.5 - 10 | 2.61 | |
| | 10 - 12.5 | 2.73 | |
| | 12.5 - 15 | 2.73 | |

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Lab. No. 78-8-34 REPORT SHEET Date August 7, 1978

Callahan Mining Corp.
Page -2-

| | Depth | | | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|---|---|
| SB-32 | 0 | - | 2.5 | | |
| | 2.5 | - | 5 | 2.80 | |
| | 5 | - | 7.5 | 2.78 | 15.30 |
| | 7.5 | - | 10 | 3.20 | 35.10 |
| | 10 | - | 12.5 | 3.33 | 41.86 |
| | 12.5 | - | 15 | 3.73 | 66.48 |
| | 15 | - | 17.5 | 3.45 | 47.16 |
| | 17.5 | - | 20 | 2.90 → 3.37 | 20.86 |
| | 20 | - | 22.5 | 2.78 | |
| | 22.5 | - | 25 | 2.78 | |
| | 25 | - | 27.5 | 2.53 | |
| SB-33 | 0 | - | 2.5 | 2.85 | 12.26 |
| | 2.5 | - | 5 | 2.78 | |
| | 5 | - | 7.5 | 2.78 | |
| | 7.5 | - | 10 | 2.61 | |
| | 10 | - | 12.5 | 2.69 No Grade | |
| | 12.5 | - | 15 | 2.63 | |
| | 15 | - | 17.5 | 2.61 | |
| SB-34 | 0 | - | 2.5 | 2.95 | -0 |
| | 2.5 | - | 5 | 2.64 waste | |
| | 5 | - | 7.5 | 2.99 | 27.60 |
| | 7.5 | - | 10 | 2.81 | |
| | 10 | - | 12.5 | 2.78 | 8.70 |
| | 12.5 | - | 15 | 3.13 | |
| | 15 | - | 17.5 | 3.00 All 2.90 or 3.00's | 30.50 |
| | 17.5 | - | 20 | 2.64 | |
| | 20 | - | 22.5 | 2.63 | |
| | 22.5 | - | 25 | 2.65 | |
| | 25 | - | 27.5 | 3.23 | 36.03 |
| SB-35 | 0 | - | 2.5 | 2.96 | |
| | 2.5 | - | 5 | 2.90 | |
| | 5 | - | 7.5 | 2.93 | 24.62 |
| | 7.5 | - | 10 | 2.69 waste | |
| | 10 | - | 12.5 | 3.05 - 2.91 | |
| | 12.5 | - | 15 | 2.66 | |
| | 20 | - | 22.5 | 2.63 | |
| | 22.5 | - | 25 | 2.60 | |
| | 25 | - | 27.5 | 2.60 | |

2.6 waste

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Lab. No. 78-8-34 REPORT SHEET Date August 7, 1978

Callahan Mining Corp.
Page -3-

| | Depth | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|
| SB36 | 0 - 2.5 | 2.92 | |
| | 2.5 - 5 | 3.19 | |
| | 5 - 7.5 | 2.92 — 3.01 | |
| | 7.5 - 10 | 2.80 | |
| | 10 - 12.5 | 2.80 | |
| | 12.5 - 15 | 2.86 | |
| | 15 - 17.5 | 2.86 — 2.91 | |
| SB-37 | 0 - 2.5 | 3.09 | |
| | 2.5 - 5 | 2.60 : waste | |
| | 5 - 7.5 | 3.09 | |
| | 7.5 - 10 | 3.65 — 3.11 | 60.80 |
| | 10 - 12.5 | 2.88 | |
| | 12.5 - 15 | 2.80 — 3.02 | |
| SB-38 | 0 - 2.5 | 2.95 | |
| | 2.5 - 5 | 3.09 | |
| | 5 - 7.5 | 2.98 | |
| | 7.5 - 10 | 3.05 | |
| | 10 - 12.5 | 2.93 — 3.00 | 24.33 |
| SB-39 | 0 - 2.5 | 2.28 | |
| | 2.5 - 5 | 2.72 | |
| | 7.5 - 10 | 2.86 | |
| | 10 - 12.5 | 3.17 — 3.02 | |
| | 12.5 - 15 | 2.80 | |
| | 15 - 17.5 | 2.72 | 6.80 |
| SB-40 | 0 - 2.5 | 2.61 | |
| | 2.5 - 5 | 2.66 | |
| | 5 - 7.5 | 2.66 | |
| | 7.5 - 10 | 2.80 | |
| | 10 - 12.5 | 2.68 | 3.60 |
| | 12.5 - 15 | 2.70 | |

2.60 waste

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Lab. No. 78-8-34 REPORT SHEET Date August 7, 1978

Callahan Mining Corp.
Page -4-

| | Depth | Specific Gravity | $BaSO_4$ |
|---|---|---|---|
| SB-41 | 0 - 2.5 | 2.72 | |
| | 2.5 - 5 | 2.65 | |
| | 5 - 7.5 | 2.81 | |
| | 7.5 - 10 | 2.70 | |
| | 10 - 12.5 | 2.76 | |
| | 12.5 - 15 | 2.84 | |
| | 15 - 17.5 | 2.81 | |
| | 17.5 - 20 | 2.69 | |
| | 20 - 22.5 | 2.83 | |
| | 22.5 - 25 | 2.63 | |
| | 25 - 27.5 | 2.68 | |
| | 27.5 - 30 | 2.65 | |
| | 30 - 32.5 | 2.61 | |
| SB-4: | 35 - 38.5 | 2.62 | |
| SB-49 | 0 - 2.5 | 2.63 | 4.70 |
| | 2.5 - 5 | 2.68 | |
| | 5 - 7.5 | 2.95 | |
| | 7.5 - 10 | 2.63 | |
| | 10 - 12.5 | 2.61 | |
| | 12.5 - 15 | 2.76 | |
| | 15 - 17.5 | 2.63 | |
| SB-50 | 0 - 2.5 | 2.63 | |
| | 2.5 - 5 | 2.66 | |
| | 5 - 7.5 | 2.78 | |
| | 7.5 - 10 | 2.78 | |
| | 10 - 12.5 | 2.78 | |
| | 12.5 - 15 | 2.78 | |
| SB-51 | 0 - 2.5 | 2.78 | |
| | 2.5 - 5 | 2.73 | 3.40 |
| | 5 - 7.5 | 2.78 | |
| | 7.5 - 10 | 2.86 ← do not include | |
| | 10 - 12.5 | 2.91 | 21.50 |
| | 12.5 - 15 | 2.84 | |
| | 15 - 17.5 | 2.94 | |

7.5' @ 2.90 = 16.5 ft

2.82

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No. 78-8-100

REPORT SHEET

Date August 17, 1978

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| | Depth | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|
| SB-31 | 2.5 - 5 | 2.61 | |
| | 5 - 7.5 | 2.79 | |
| | 7.5 - 10 | 2.73 | |
| | 10 - 12.5 | ~~2.79~~ | |
| | 12.5 - 15 | ~~3.52~~ 5' = 3.16% | 63.00 |
| | 15 - 17.5 | ~~2.78~~ ← data | |
| SB-43 | 0 - 2.5 | 2.73 | |
| | 2.5 - 5 | 2.73 | |
| | 5 - 7.5 | 2.86 | |
| | 7.5 - 10 | 2.60 | |
| | 10 - 12.5 | 2.86 | |
| | 12.5 - 15 | 2.73 | |
| | 15 - 17.5 | 2.79 | |
| SB-44 | 0 - 2.5 | 2.73 | |
| | 2.5 - 5 | 2.73 | |
| | 5 - 7.5 | ~~2.86~~ 5' 2.90 = 16.5% | |
| | 7.5 - 10 | ~~2.93~~ | |
| | 10 - 12.5 | 2.73 | |
| SB-45 | 0 - 2.5 | ~~3.00~~ 5' 3.00 | |
| | 2.5 - 5 | ~~3.00~~ | |
| | 5 - 7.5 | 2.73 | |
| | 7.5 - 10 | 2.73 | |
| | 10 - 12.5 | 2.86 | |
| | 12.5 - 15 | 2.86 | |
| | 15 - 17.5 | 2.79 | |
| SB-46 | 0 - 2.5 | 2.50 | |
| | 2.5 - 5 | 2.67 | |
| | 7.5 - 10 | 2.73 | |
| | 10 - 12.5 | 2.67 | |
| | 12.5 - 15 | 2.79 | |
| | 15 - 17.5 | 2.86 | |
| SB-47 | 0 - 2.5 | ~~3.33~~ | 49.06 |
| | 2.5 - 5 | ~~3.33~~ | 49.06 |
| | 5 - 7.5 | ~~3.02~~ 15' 3.07 = 27% | |
| | 7.5 - 10 | ~~3.02~~ | |
| | 10 - 12.5 | ~~2.86~~ | |
| | 12.5 - 15 | ~~2.86~~ | |

2.78

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REPORT SHEET

No. 78-8-100

Date August 17, 1978

Callahan Mining Corp.
Page -4-

| | Depth | | | Specific Gravity | $BaSO_4$ |
|---|---|---|---|---|---|
| SB-48 | 0 | - | 2.5 | ~~3.16~~ | |
| | 2.5 | - | 5 | ~~2.86~~ 2.92 | |
| | 5 | - | 7.5 | 10' 2.86 | |
| | 7.5 | - | 10 | ~~2.79~~ | |
| | 10 | - | 12.5 | 2.79 | |
| | 12.5 | - | 15 | 2.86 | |
| | 15 | - | 17.5 | 2.86 | |
| SB-52 | 0 | - | 2.5 | 2.77 | |
| | 2.5 | - | 5 | 2.90 | 1.80 |
| | 5 | - | 7.5 | 2.73 | |
| | 7.5 | - | 10 | 2.80 | |
| | 10 | - | 12.5 | 2.73 | |
| | 12.5 | - | 15 | ~~3.00~~ | 3.00 |
| | 15 | - | 17.5 | ~~2.80~~ | |
| | 17.5 | - | 20 | ~~3.00~~ | |
| | 20 | - | 22.5 | 2.61 | |
| -53 | 0 | - | 2.5 | 2.60 | |
| | 2.5 | - | 5 | 2.73 | |
| | 5 | - | 7.5 | 2.73 | |
| | 7.5 | - | 10 | 2.73 | |
| | 10 | - | 12.5 | 2.60 | |
| | 12.5 | - | 15 | 2.85 | |
| | 15 | - | 17.5 | 2.73 | |
| SB-54 | 0 | - | 2.5 | 2.72 | |
| | 2.5 | - | 5 | 2.72 | |
| | 5 | - | 7.5 | 2.72 | |
| | 7.5 | - | 10 | ~~3.00~~ | 6.54 |
| SB-55 | 0 | - | 2.5 | 2.72 | |
| | 2.5 | - | 5 | 2.60 | |
| | 5 | - | 10 | 3 ~~3.00~~ 3.00 | |
| | 10 | - | 12.5 | ~~3.00~~ | |
| -56 | 2.5 | - | 5 | 2.51 | |
| | 5 | - | 7.5 | 2.75 | |
| | 7.5 | - | 10 | 2.83 | |
| | 10 | - | 12.5 | 2.72 | |

2.80

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El Paso, Texas 79948

Lab. No. 78-8-100 REPORT SHEET Date August 17, 1978

Callahan Mining Corp.


| | Depth | | | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|---|---|
| SB-57 | 2.5 | – | 5 | 2.60 | |
| | 5 | – | 7.5 | 2.72 | |
| | 7.5 | – | 10 | 2.72 | |
| | 10 | – | 12.5 | 3.00 | |
| | 12.5 | – | 15 | 3.00 | |
| SB-58 | 0 | – | 2.5 | 2.90 | 4.20 |
| | 2.5 | – | 5 | 3.00 | |
| | 5 | – | 7.5 | 3.00 | |
| | 7.5 | – | 10 | 2.85 | 1.64 |
| | 10 | – | 12.5 | 3.00 | 22.00 |
| | 12.5 | – | 15 | 3.00 | |
| | 15 | – | 17.5 | 3.00 | |
| | 17.5 | – | 20 | 3.00 | |
| SB-64 | 0 | – | 2.5 | 2.86 | |
| | 2.5 | – | 5 | 3.00 | |
| | 5 | – | 7.5 | 2.86 | |
| | 7.5 | – | 10 | 3.00 | |
| | 10 | – | 12.5 | 2.86 | |
| | 12.5 | – | 15 | 2.93 | |
| | 15 | – | 17.5 | 2.73 | |
| | 20 | – | 22.5 | 2.86 | |
| | 22.5 | – | 25 | 2.93 | |
| | 25 | – | 27.5 | | |
| SB-65 | 0 | – | 2.5 | 2.72 | |
| | 2.5 | – | 5 | 2.93 | |
| | 5 | – | 7.5 | 3.00 | 6.80 |
| | 7.5 | – | 10 | 2.60 | |
| | 15 | – | 17.5 | 2.93 | |
| SB-66 | 0 | – | 2.5 | 2.60 | |
| | 10 | – | 12.5 | 2.61 – not enough width | |
| | 12.5 | – | 15 | 3.00 | |
| | 15 | – | 17.5 | 2.72 | |
| | 17.5 | – | 20 | 2.75 | |
| | 20 | – | 27.5 | 2.87 17'@2.94 | |
| | 27.5 | – | 37.5 | 3.00 | |

7.5 @
10' @

2.85

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# EL PASO CHEMICAL LABORATORIES

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El Paso, Texas 79948

Lab. No. 78-8-34

REPORT SHEET

Date August 7, 1978

Callahn Mining Corp.
Page -5-

| | Depth | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|
| SB-59 | 0 - 2.5 | 2.88 | 14.80 |
| | 2.5 - 5 | 2.70 | 1.35 |
| | 5 - 7.5 | 2.60 | |
| | 7.5 - 10 | 2.80 | 11.06 |
| | 10 - 12.5 | 2.73 | |
| | 12.5 - 15 | 2.61 | |
| | 15 - 17.5 | 2.85 | 12.62 |
| SB-60 | 0 - 2.5 | 2.72 | |
| | 2.5 - 5 | 2.73 | |
| | 5 - 7.5 | 2.73 | |
| | 7.5 - 10 | 2.73 | |
| | 10 - 12.5 | 2.73 | |
| | 12.5 - 15 | 2.73 | |
| | 15 - 17.5 | 2.80 | 4.80 |
| SB-61 | 0 - 2.5 | 2.61 | |
| | 2.5 - 5 | 2.61 | |
| | 5 - 7.5 | 2.86 | |
| | 7.5 - 10 | 2.86 | |
| | 10 - 12.5 | 2.73 | |
| | 12.5 - 15 | 2.73 | |
| SB-62 | 0 - 2.5 | 2.61 | |
| | 2.5 - 5 | 2.61 | |
| | 5 - 7.5 | 2.86 | |
| | 7.5 - 10 | 2.73 | |
| | 10 - 12.5 | 2.73 | |
| | 12.5 - 15 | 2.73 | |
| SB-63 | 0 - 2.5 | 2.61 | |
| | 2.5 - 5 | 2.61 | |
| | 5 - 7.5 | 3.00 | |
| | 7.5 - 10 | 2.73 | |
| | 10 - 12.5 | 2.73 | |
| | 12.5 - 15 | 2.86 | |
| | 15 - 17.5 | 2.70 | 3.40 |

Lime zero

Respectfully submitted,

EL PASO CHEMICAL LABORATORIES

Leon Siegel, Director

Leon Siegel, B.S., M.S., P.E.
Director

2310 Alameda Ave.
Phone 544-7148
Area Code 915

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing,
Atomic Absorption,
Assaying

P. O. Box 1565

El Paso, Texas 79948

Lab. No. 78-8-100 REPORT SHEET Date August 17, 1978

Callahan Mining Corp.
Page -6-

| SB-67 | Depth | Specific Gravity | $BaSO_4$ % |
|---|---|---|---|
| | 7.5 - 10 | ~~3.33~~ | |
| | 10 - 12.5 | ~~2.33~~ | |
| | 12.5 - 15 | ~~3.75~~ | 54.00 |
| | 15 - 17.5 | ~~3.33~~ 3.44 | 28.44 |
| | 17.5 - 20 | ~~2.85~~ | |
| | 20 - 22.5 | 2.85 | |
| | 22.5 - 25 | ~~3.00~~ | |
| | 25 - 27.5 | 2.90 | 4.66 |
| | 27.5 - 30 | ~~3.00~~ | |
| | 30 - 32.5 | ~~3.00~~ | |
| | 32.5 - 35 | ~~3.00~~ | |
| SB-63 | 10 - 12.5 | 2.70 | |
| | 12.5 - 15 | ~~3.00~~ | |
| | 15 - 17.5 | ~~3.30~~ | 37.20 |
| | 17.5 - 20 | ~~3.73~~ 3.34 | 50.34 |
| | 20 - 27.5 | 2.72 | |
| SB-69 | 7.5 - 10 | 2.60 | |
| | 10 - 12.5 | ~~3.75~~ | 25.16 |
| | 15 - 17.5 | ~~3.20~~ | 33.10 |
| | 17.5 - 20 | ~~3.20~~ | 69.16 |
| | 20 - 22.5 | ~~3.60~~ | 56.90 |
| | 22.5 - 25 | 3.33 | |
| | 25 - 27.5 | ~~3.33~~ | |
| | 27.5 - 30 | ~~2.82~~ 3.46 maybe 5 above | |
| SB-70 | 20 - 22.5 | ~~3.00~~ | |
| | 22.5 - 25 | ~~3.33~~ | 40.54 |
| | 25 - 27.5 | ~~3.33~~ 3.22 | |
| | 30 - 40.5 | 2.70 | |

27.5 3.12 27.5 — Apparent high S.G. Low % $BaSO_4$

2.85

Respectfully submitted,

EL PASO CHEMICAL LABORATORIES

Leon Siegel, Director

Leon Siegel, B.S., M.S., P.E.
Manager

2310 Alameda Ave.
Phone 544-7148
Area Code 915

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-2-41

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

9 Samples of barite Received 2-8-79

Marked RTDC HATCH - Hole D.H. Samples 6-14, Incl.

RESULTS

| Sample Designation RTDC HATCH - Hole D.H. | $BaSO_4$ % | Specific Gravity |
|---|---|---|
| #6 - 5' - 10' | 1.50 % | 2.82 |
| #7 - 10' - 15' | 1.50 % | 2.82 |
| #8 - 15' - 20' | 1.90 % | 2.68 |
| #9 - 20' - 25' | 20.00 % | 2.89 |
| #10- 25' - 30' | 12.40 % | 2.87 |
| #11- 30' - 35' | 15.20 % | 2.84 |
| #12- 35' - 40' | 12.70 % | 2.74 |
| #13- 40' - 45' | 2.80 % | 2.78 |
| #14- 45' - 50' | 1.00 % | 2.77 |

Charges: $ 135.00

Respectfully submitted,

Leon Siegel, B.S., M.S., P.E.
Manager

2310 Alameda Ave.
Phone 544-7148
Area Code 915

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-2-48

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

4 Sample[s] of barite Received 2-9-79

Marked RTDC HATCH - Hole 108 Samples 15-18, Incl.

RESULTS

| Sample Designation RTDC HATCH - Hole 108 | $BaSO_4$ % | Specific Gravity |
|---|---|---|
| #15- 165' - 170' | Nil | 2.86 |
| #16- 170' - 175' | Nil | 2.71 |
| #17- 175' - 180' | Nil | 2.82 |
| #18- 180' - 185' | Nil | 2.88 |

Charges: $60.00

Respectfully submitted,

Leon Siegel, B.S., M.S., P.E.
Manager

2310 Alameda Ave.
Phone 544-7148
Area Code 915

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-2-37

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

5 Samples of barite Received 2-7-79

Marked RTDC HATCH - Hole 103 - #1,#2,#3,#4,#5

RESULTS

| Sample Designation RTDC HATCH - Hole 103 | $BaSO_4$ % | Specific Gravity |
|---|---|---|
| #1- 55' - 60' - | Trace | 2.77 |
| #2- 60' - 65' - | Nil | 2.57 |
| #3- 65' - 70' - | Nil | 2.77 |
| #4- 70' - 75' - | Nil | 2.80 |
| #5- 75' - 80' - | Trace | 2.76 |

Charges: $ 75.00

Respectfully submitted,
Leon Siegel

Leon Siegel, B.S., M.S., P.E.
Director

2310 Alameda Ave.
Phone 544-7148
Area Code 915

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing,
Atomic Absorption,
Assaying

P. O. Box 1565

El Paso, Texas 79948

Lab. No. 79-2-117

REPORT SHEET

Date February 28, 19

Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

Twenty (2) Barite Samples - Received 2-23-78
Marked: RTDC - HATCH - Hole 58
Hole 64
Hole 109

RESULTS

| | $BaSO_4$ % | Specific Gravity |
|---|---|---|
| HOLE RD-58 | | |
| 12' - 14' | NIL | |
| 14' - 16' | 1.20 % | |
| HOLE RD-64 | | |
| o' - 2' | 20.00 % | |
| 2' - 4' | 14.34 % | |
| 4' - 6' | 6.30 % | |
| 6' - 8' | 12.86 % | |
| 8' - 10' | 32.90 % | 3.17 |
| 10' - 12' | 12.00 % | |
| 12' - 14' | 27.05 % | |
| 14' - 16' | 17.30 % | |
| HOLE RD-109 | | |
| 0' - 2' | 12.80 % | |
| 2' - 4' | 7.90 % | |
| 4' - 6' | 8.20 % | |
| 6' - 8' | 7.80 % | |
| 8' - 10' | 28.60 % | |
| 10' - 12' | 49.60 % | 3.56 |
| 12' - 14' | 34.60 % | 3.22 |
| 14' - 16' | 25.60 % | |
| 16' - 18' | 23.60 % | |
| 18' - 20' | 9.40 % | |

Respectfully submitted,

EL PASO CHEM-TEC LABORATORIES

Leon Siegel

Charges: $215.00

Leon Siegel, B.S., M.S., P.E.
Manager

2310 Alameda Ave.
Phone 544-7148
Area Code 915

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-3-8

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

18 Sample of barite Received 3-1-79

Marked RTDC - Hole EE-1, Hole EE-2, Hole EE-3

| | RESULTS | | |
|---|---|---|---|
| RTDC - Hole EE-1 | $BaSO_4$ % | | |
| 0' - 2' | 2.65 % | | |
| 2' - 4' | 1.54 % | | |
| 4' - 6' | 9.40 % | | |
| 6' - 8' | 14.90 % | | |
| 8' - 10' | 1.50 % | | |
| RTDC - Hole EE-2 | $BaSO_4$ % | $CaF_2$ % | |
| 0' - 2' | 12.20 % | 1.60 % | |
| 2' - 4' | 2.90 % | 2.39 % | |
| 4' - 6' | 22.00 % | 5.60 % | |
| 6' - 8' | 5.00 % | 4.67 % | |
| 8' - 10' | 7.80 % | 1.25 % | |
| 10' - 12' | 12.78 % | 8.60 % | |
| RTDC - Hole EE-3 | $BaSO_4$ % | Specific Gravity | |
| 0' - 2' | 1.70 % | | |
| 2' - 4' | 34.86 % | 3.29 | |
| 4' - 6' | 30.42 % | | |
| 6' - 8' | 8.70 % | | |
| 8' - 10' | NIL | | |
| 10' - 12' | 1.80 % | | |
| 12' - 14' | NIL | | |

Respectfully submitted,

Manager

Phone 544-7148
Area Code 9

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-2-140

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

4 Samples of barite Received 2-28-79

Marked RTDC - Hole 110-A

RESULTS

| RTDC - Hole 110-A | $BaSO_4$ % |
|---|---|
| 50' - 55' | 2.90 % |
| 55' - 60' | 7.20 % |
| 60' - 62' | 6.90 % |
| 62' - 64' | 9.60 % |

Charges: $40.00

Respectfully submitted,

Leon Siegel, B.S., M.S., P.E.
Manager

2310 Alameda A
Phone 544-714
Area Code 91

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-3-

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

9 Samples of barite Received 3-2-79

Marked RTDC - Hole RD-5

RESULTS

| RTDC - Hole RD-5 | $BaSO_4$ % | Specific Grav |
|---|---|---|
| 0' - 2' | 64.92 % | 3.75 |
| 2' - 4' | 48.70 % | 3.41 |
| 4' - 6' | 8.00 % | |
| 6' - 8' | 6.80 % | |
| 8' - 10' | 8.94 % | |
| 10' - 12' | 5.32 % | |
| 12' - 14' | 8.74 % | |
| 14' - 16' | 6.35 % | |
| 16' - 18' | 28.00 % | |

Charges: $ 100.00

Respectfully submitted,

Leon Siegel, B.S., M.S., P.E.
Manager

2310 Alameda Ave.
Phone 544-7148
Area Code

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-2-59

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Roland McEldowney

11 Samples of barite Received 2-12-79

Marked RTDC HATCH - Hole 107 - Samples 19-29, Incl.

RESULTS

| Sample Designation | $BaSO_4$ % | Specific Gravity |
|---|---|---|
| #19- 88'-93' | 10.0 % | 2.90 |
| #20- 93'-95' | 2.9 % | 2.78 |
| #21- 95'-100' | 3.3 % | 2.82 |
| #22- 100'-105' | 1.7 % | 2.64 |
| #23- 105'-110' | Nil % | 2.76 |
| #24- 110'-115' | 1.5 % | 2.80 |
| #25- 115'-120' | Nil | 2.73 |
| #26- 120'-125' | Nil | 2.77 |
| #27- 125'-130' | 1.0 % | 2.72 |
| #27- 130'-135' | Nil | 2.77 |
| #28- 135'-140' | Nil | 2.70 |

Charges: $165.00

Respectfully submitted,

Leon Siegel, B.S., M.S., P.E.
Manager

2310 Alameda
Phone 544-
Area Code

# EL PASO CHEMICAL LABORATORIES

Chemical, Environmental Testing
Spectrographic-Atomic Absorption
Assaying

P. O. BOX 1565
El Paso, Texas 79948

Lab. No. 79-

## CERTIFICATE OF ANALYSIS

TO Dames & Moure
605 Parfet St.
Denver, Colorado 80215
Att: Mr. Rolan McEldowney

12 Samples of barite Received 2-21-79

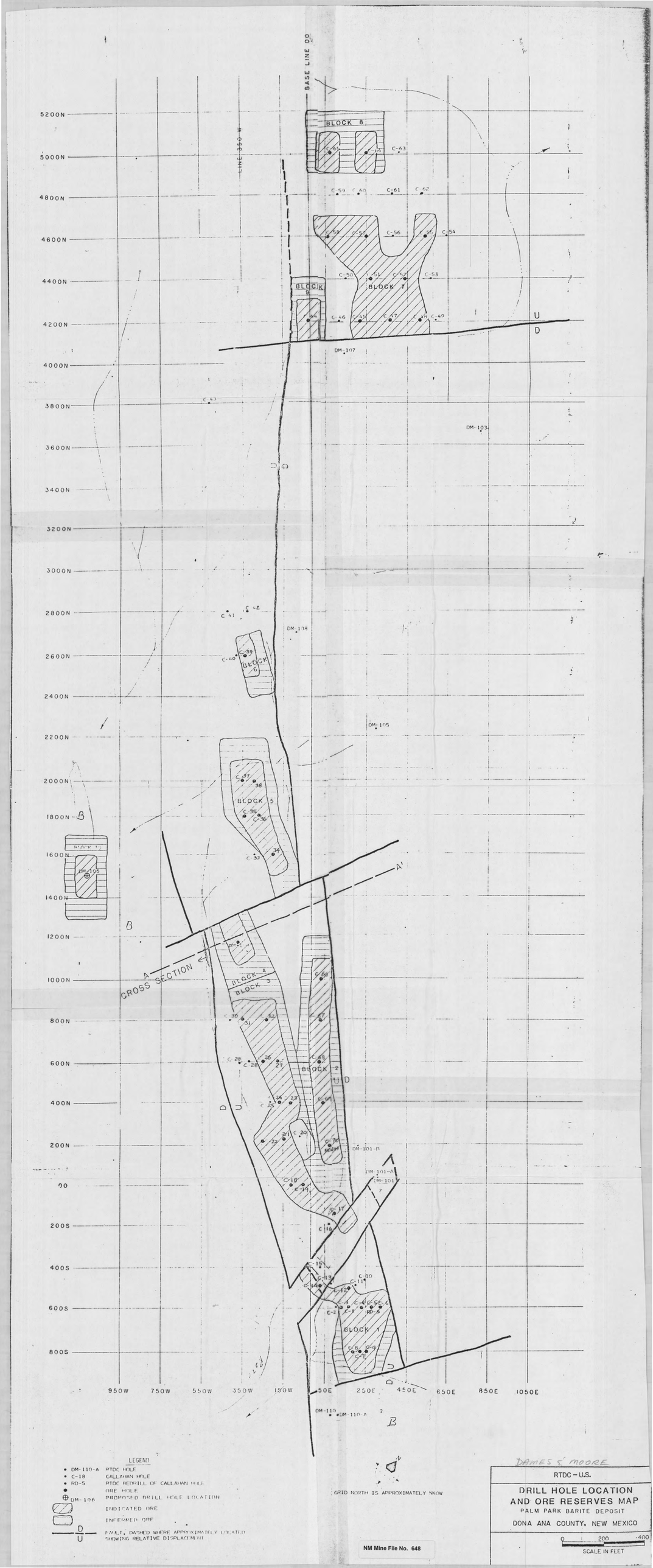
Marked RTDC HATCH - Hole RD-47 & Hole RD-58

RESULTS

| | | |
|---|---|---|
| HOLE RD-47 | $BaSO_4$ % | Specific Gravity |
| 0' - 2' | 36.00 % | 3.14 |
| 2' - 4' | 34.90 % | |
| 4' - 6' | 35.50 % | |
| 6' - 8' | 13.00 % | |
| 8' - 10' | 4.10 % | |
| 10' - 12' | 1.60 % | |
| HOLE RD-58 | $BaSO_4$ % | |
| 0' - 2' | 13.10 % | |
| 2' - 4' | 12.00 % | |
| 4' - 6' | NIL | |
| 6' - 8' | NIL | |
| 8' - 10' | NIL | |
| 10' - 12' | NIL | |

Charges: $125.00

Respectfully submitted,




LEGEND

- DM-110-A RTDC HOLE
- C-18 CALLAHAN HOLE
- RD-5 RTDC REDRILL OF CALLAHAN HOLE
- ORE HOLE
- ⊕ DM-106 PROPOSED DRILL HOLE LOCATION
- INDICATED ORE
- INFERRED ORE
- D/U FAULT, DASHED WHERE APPROXIMATELY LOCATED SHOWING RELATIVE DISPLACEMENT

GRID NORTH IS APPROXIMATELY N40W

DAMES & MOORE

RTDC – U.S.

# DRILL HOLE LOCATION AND ORE RESERVES MAP

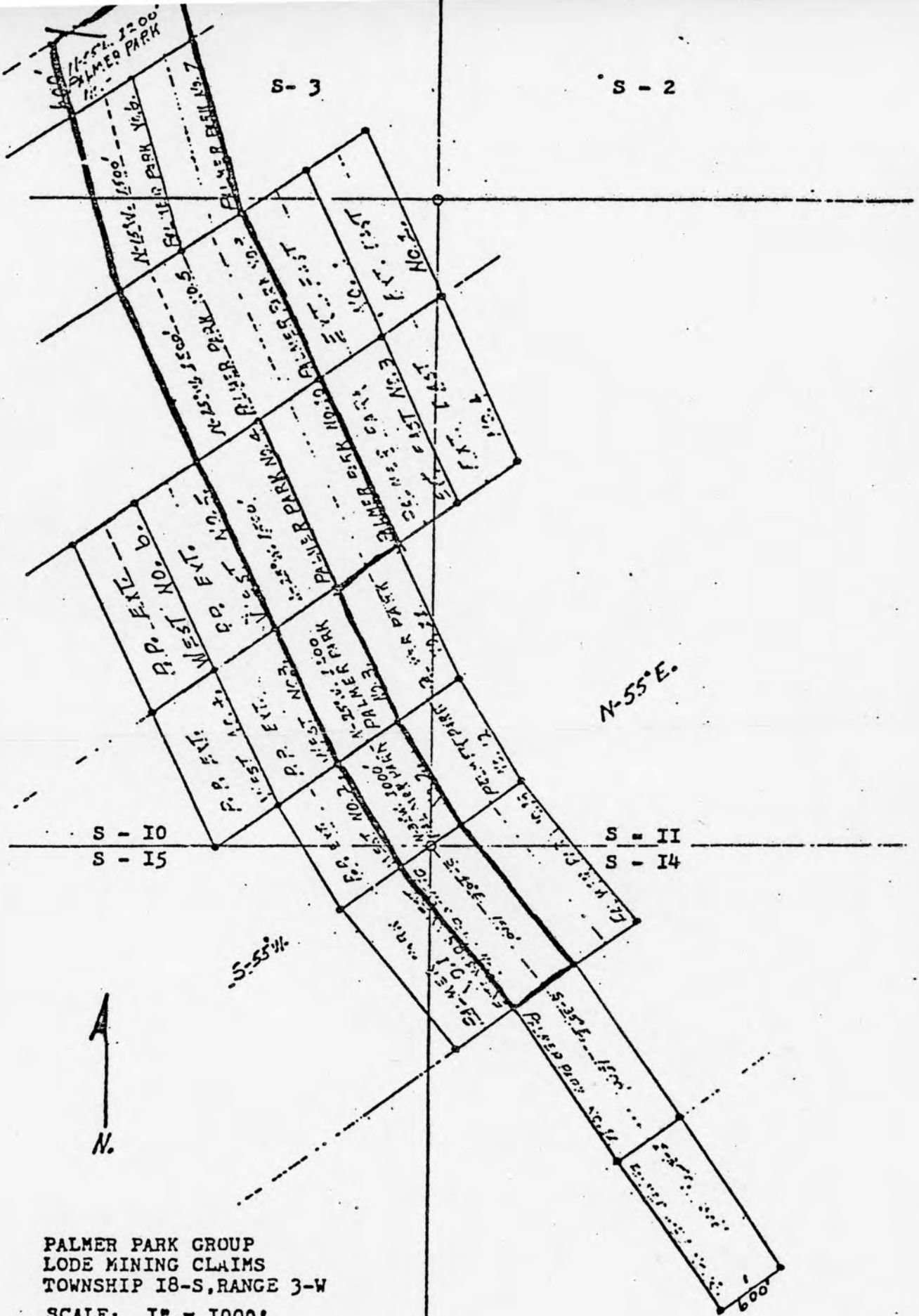
PALM PARK BARITE DEPOSIT

DONA ANA COUNTY, NEW MEXICO

0 200 400

SCALE IN FEET

NM Mine File No. 648


S - 3
S - 2
S - I0
S - I5
S - II
S - I4
N-55°E.
N.
PALMER PARK GROUP
LODE MINING CLAIMS
TOWNSHIP I8-S, RANGE 3-W
SCALE: I". = I000'