

A PROPERTY EXAMINATION
OF BARITE OF AMERICA, INC.
PROPERTIES, LUNA COUNTY, NEW MEXICO

By

D. G. Ellingwood and J. R. Brooks

Geologists
October 1979

N.M. Bureau of Mines
& Mineral Resources
Socorro, N.M. 87801 File Data

Confidential

Open

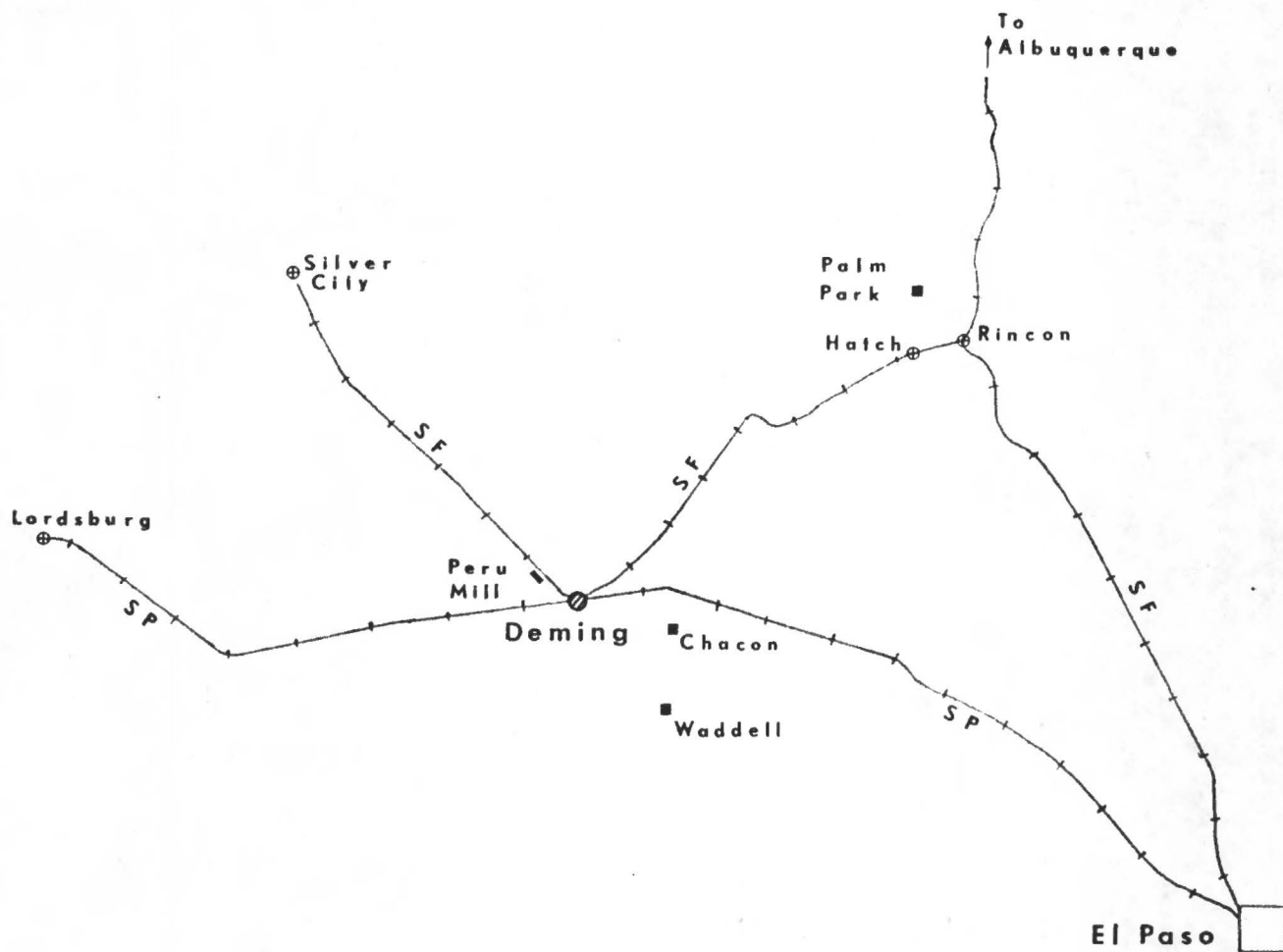
CF & I

TABLE OF CONTENTS

	<i>Page</i>
INTRODUCTION	1
PALM PARK PROSPECT	2
WADDELL DEPOSIT	3
CHACON MINE	4
PERU MILL	4
CONCLUSIONS	6
BIBLIOGRAPHY	7
 Index Map	 <i>ii</i>
 PLATES I, II, and III	 <i>after Bibliography</i>

INDEX MAP

Showing BOA Properties
Near Deming, New Mexico



1" = 20 Mi.

INTRODUCTION

An examination was made on October 24, 1979, of the holdings of Barite of America, Incorporated, located in and around Deming, New Mexico. D. G. Ellingwood and J. R. Brooks were met in Deming by Mr. Lou Osmer of B.O.A. who conducted a tour of the properties.

The properties examined consisted of the Waddell (Atir) Prospect, Chacon (Florida) Mine, Palm Park Prospect, and the Peru Mill. Two of the properties were separated by a distance of 63 miles; therefore, time permitted only a superficial examination of each site.

Mr. Gene Horton and Mr. Hoyt Burkhalter became interested in barite, apparently through their association with the oil exploration business, and felt that if a barite deposit could be developed in the New Mexico area, they would have a considerable transportation advantage over Nevada in servicing the New Mexico-West Texas Petroleum exploration areas. They apparently settled on Deming because of the availability of the Peru Mill, accessibility to the railroad, and the presence of a desirable barite deposit.

Barite of America, Incorporated, was organized on April 15, 1978, under the laws of the State of Oklahoma, and shortly thereafter acquired the old Peru Mill as well as available barite-fluorite properties within a 75-mile radius of Deming. At the time of this examination, B.O.A. was actively engaged in rehabilitating the Peru Mill and driving a 500-foot cross-cut to intersect a barite-fluorite-galena vein on the Waddell property.

PALM PARK PROSPECT

This property consists of 41 unpatented claims located in sections 9 and 10, T. 18 S., R. 3 W., Doña Ana County, about seven miles north of Hatch, New Mexico. B.O.A. also has ten mill sites to the south near the Rio Grande River and a state lease on section 16, T. 18 S., R. 3 W.

Between 1949 and 1951 some 450 tons of barite were produced by the Mudrite Chemical Corporation from a small cut in the NE $\frac{1}{4}$ section 10 and were processed in a small mill near Rincón. No other production is known from this area.

The barite consists of coarse-bladed crystals intermixed with quartz and chert and appears to replace a zone in the Fusselman dolomite. Mineralization is exposed over an area of about 300 by 3,000 feet and probably continues under the cover of gravel, shale, and limestone. The area is dissected by several drainages which expose a thickness ranging from 15 to 40 feet. Drilling by Dames & Moore indicates a tonnage of 10,000,000 tons of about 40% BaSO₄; 25.5% SiO₂, and 2% CaF₂.

This property is amenable to an open-pit operation and several million tons could be mined with little or no stripping. The ore would be trucked south over about 8 miles of unimproved road and then 2½ miles east to Rincón where it would be placed on the Santa Fe Railroad and shipped to the mill at Deming. An alternative plan would be to truck it direct to Deming over State 26, a total distance of about 60 miles.

WADDELL DEPOSIT

The Waddell deposit is located in section 24, T. 26⁵ S., R. 8 W., and sections 19 and 30, T. 26⁵ S., R. 7 W., and is about 21 miles by county and unimproved road southeast of Deming. The property consists of 22 unpatented lode claims. B.O.A. has developed a 35-gallon/minute well about 1,000 feet southeast of the mine.

The mineral deposit consists of two veins, trending N60°E, the first ranging from 20 to 50 inches thick, dipping 70° south, contains fluorite and quartz and can be traced for about 1,500 feet. The second, the Atir vein, ranges from about 4 feet to 12 feet thick, dips 55° south, and can be traced for at least 3,000 feet. Time permitted observing the Atir vein only at the old Atir adit where it contained barite, fluorite, galena and quartz. The vein was opened by a 90-foot adit most of which was caved and a 40-foot shaft, now inaccessible. The vein is developed along a fault contact between the cretaceous Lobo formation and a Precambrian granite. Galena appears to be concentrated in the upper 12 inches of vein material. A sample taken at this time in the adit across four feet of exposed vein assayed 3.1% BaSO₄, 34.9% CaF₂, 2.35% Pb, and .099 oz/ton Ag. The galena concentrate is reported to contain about 5 oz. Ag/ton, which checks reasonably well with our analysis.

B.O.A. is presently driving an 8 by 10 ft adit northwestward to intersect the Atir vein some 600 feet below the old Atir Mine. The adit on November 24, 1979, was at 266 feet and progressing at a rate of 12 feet per day. They expect to intersect the Atir vein at a distance of

about 500 feet. This adit should also intersect the fluorspar vein and they intend to examine it in passing. Their development costs are said to be \$50/ft. There is presently no geologic information on either of these veins at depth.

CHACON MINE

This property, located in sections 7 and 8, T. 24 S., R. 7 W., consists of four patented claims leased from Allied Chemical Co., and two unpatented lode claims in section 7, and a recently acquired 400-acre state lease in section 8. Two fluorite, barite, and calcite veins have been worked in the past by a shaft reported to be 350 feet deep. These veins were worked in a limited way for fluorite. The shaft and workings are reported to be in good condition, but were not examined.

The only exposure seam on this property was a dozer cut on a manganese barite-fluorite vein about 2,800 feet north of the shaft. A sample was cut across 5 feet of the mineralized portion which was nearly vertical with a southerly strike. The sample taken during this examination assayed only 4.4% BaSO_4 and 10.3% CaF_2 . This is the same deposit described in IC 8307 *Fluorspar Deposits of New Mexico* as the Florida Mine.

PERU MILL

This Mill was built prior to World War II by the American Peru Mining Co. to process lead-zinc ore from its mine near Santa Rita, New Mexico. The Mill ceased operations in about 1965 and at the time of acquisition by B.O.A., was in a state of disrepair. The Mill is located on the Santa Fe spur line from Deming to Santa Rita and has unloading facilities for both

truck and rail.

B.O.A. is spending considerable money on repair and modification of this Mill to process barite and recover both fluorite and galena. They expect to be able to process 300-900 tons of barite per day at a cost of \$30 per ton of material out of the Mill. This cost is predicated on the Palm Park property at Hatch and includes mining and a \$6-per-ton transportation cost. The Mill modifications appear to be several months from completion.

CONCLUSIONS

The Palm Park deposit would seem to have the best prospects of being a viable venture. A limited drilling program would be needed to verify the reported tonnage and the mill flow sheet should be critically examined to determine if a usable product can, in fact, be obtained.

The Waddell prospect may or may not be viable and on the basis of the one outcrop, assuming we saw the best exposure, probably isn't. About 30 more days of drifting should enable a much better evaluation to be made of this deposit.

The Chacon Mine as a fluorspar deposit was not a success. Whether or not the economics will benefit by utilizing the barite in addition to the fluorspar, cannot be determined without a much more detailed examination including either a look at the underground workings or a drilling program.

In the event a decision is made to utilize more than one of the deposits, mill tests would need to be made to test compatibility of the various ores. B.O.A. apparently has data only on the Palm Park deposit.

A successful barite venture, as with most nonmetallics, is dependent, in a large part, on being able to establish a market and compete with existing products and supplies. The future of the barite market is dependent on oil and gas drilling activity and the long-term forecast indicates that the U.S. reserves (25,000,000 tons) will not be adequate to handle the projected demand of 62,000,000 tons through the year 2000.

A report on the Palm Park prospect which included tonnage, grade, and drill logs, was promised to CF&I to aid in the evaluation of the project, but to date, in spite of several phone requests, the information has not been obtained.

BIBLIOGRAPHY

Forbes, C.R., *Unpublished Report on Palm Park Barite Deposit*, Doña Ana County, New Mexico, 1946

Griswold, G.B., *Mineral Deposits of Luna County, New Mexico*, State Bureau of Mines and Mineral Resources, Bulletin 72, 1971.

Williams, F. E., *Fluorspar Deposits of New Mexico*, U. S. Bureau of Mines, I.C. 8307, 1966.

Williams, Fillo, and Bloom; *Barite Deposits of New Mexico*, State Bureau of Mines and Mineral Resources, Circular 76, 1964.

TOPOGRAPHIC MAPS

Deming West New Mexico	7½'
Florida New Mexico	7½'
Gym Peak New Mexico	7½'
Hatch New Mexico	7½'
Rincón New Mexico	7½'
Upton New Mexico	15'

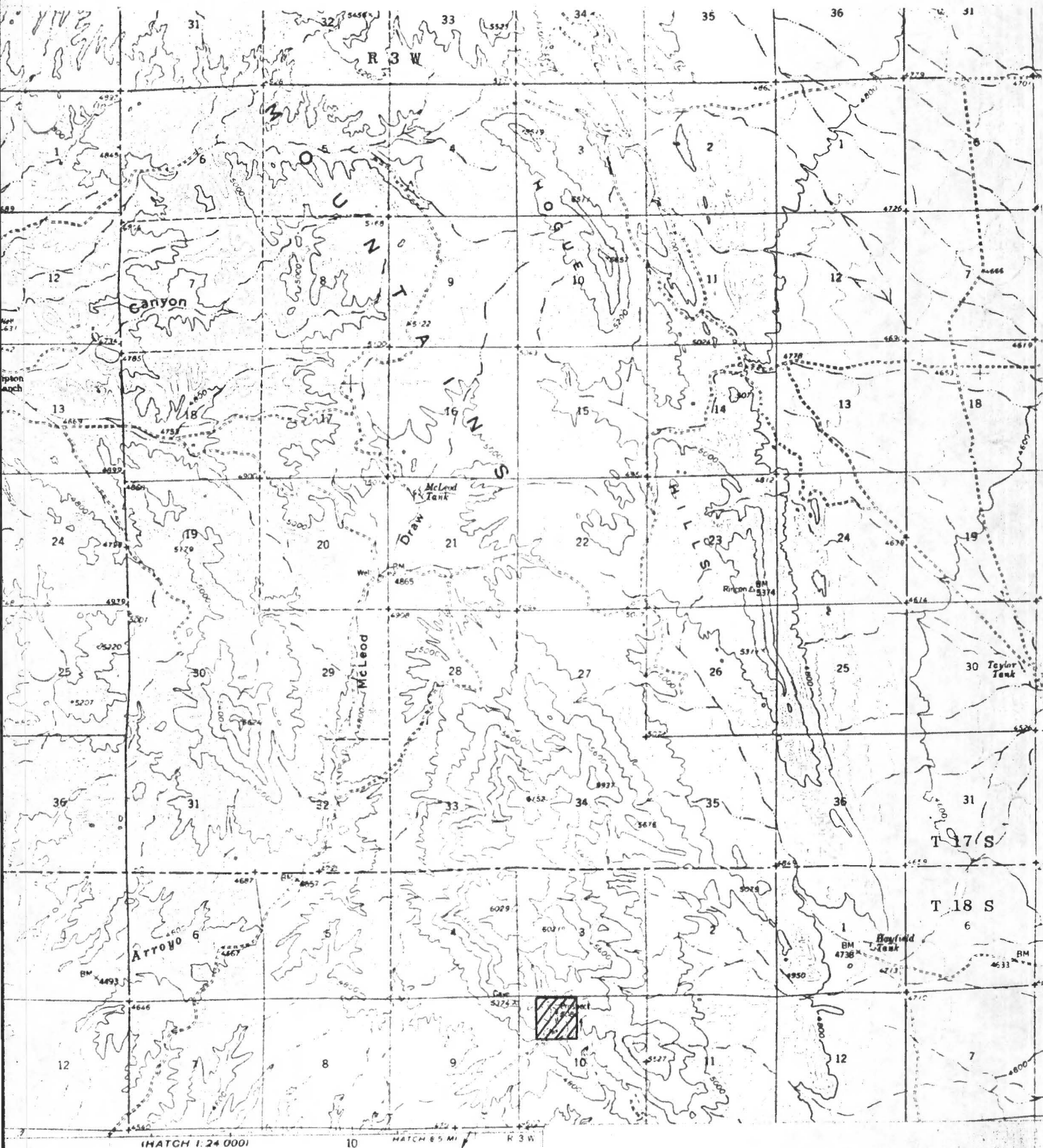


PLATE I

A portion of the Upton Quadrangle showing the location of the Palm Park Prospect

Scale 1:62,500'



GEOLOGICAL SURVEY

107°37'30"
32°07'30"

253000m. E.

254

255

256

257

3557000m. N.

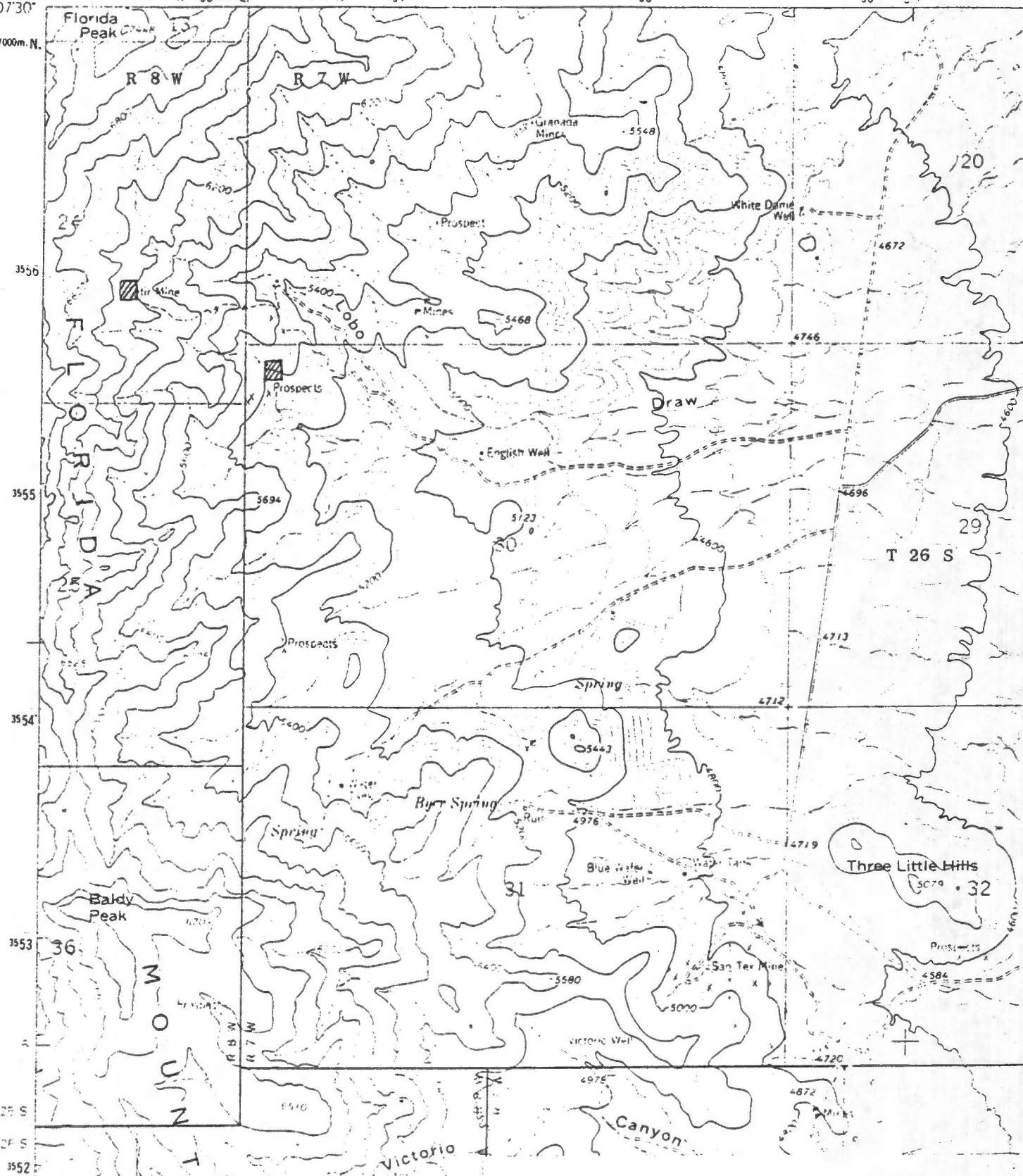


PLATE II

A portion of the Gym Peak Quadrangle
showing the location of the Waddell Deposit

Scale 1:24,000'

