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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MAGNESITE DEPOSIT

ALTERNATE NAMES:

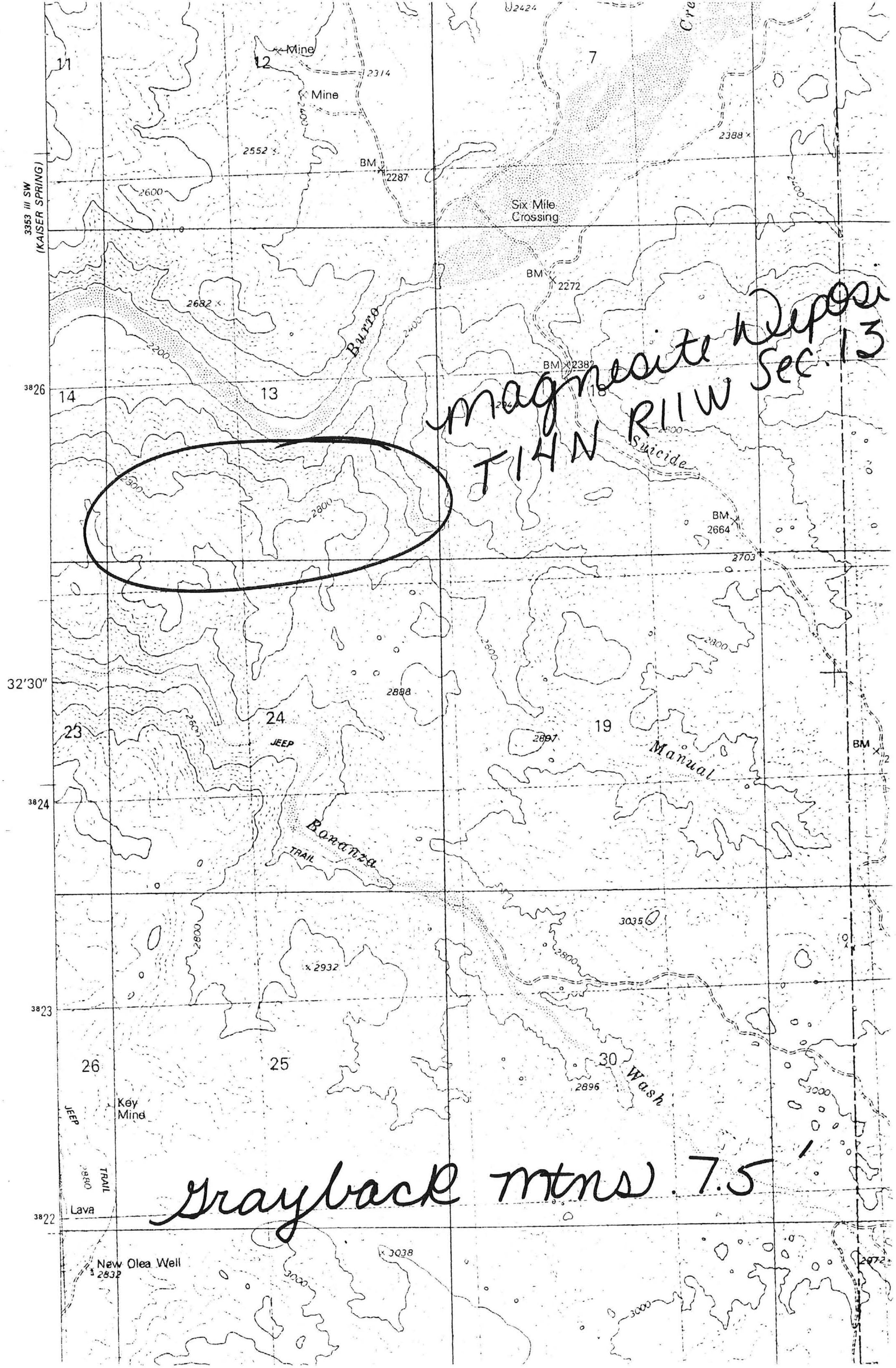
MOHAVE COUNTY MILS NUMBER: 435A

LOCATION: TOWNSHIP 14 N RANGE 11 W SECTION 13 QUARTER --
LATITUDE: N 34DEG 30MIN 21SEC LONGITUDE: W 113DEG 23MIN 37SEC
TOPO MAP NAME: KAISER SPRING - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
MAGNESIUM MAGNESITE
MAGNESIUM DOLOMITE
CALCIUM CALCITE

BIBLIOGRAPHY:
ADMMR MAGNESITE DEPOSIT MINE FILE
USGS BULLETIN 1701-B, 1987, MIN RES. LOWER
BURRO CREEK WSA, P. B8 BY R. SCHREINER


magnesite Deposi
T14N R11W Sec. 13
Graybackk Mtns 7.5'
3353 III SW
(KAISER SPRING)
Mine
Mine
Six Mile Crossing
Burro
Suicide
Manual
Bonanza
JEEP
TRAIL
Wash
Key Mine
Lava
New Olea Well
32'30"
3826
3824
3823
3822
BM 2287
BM 2272
BM 2382
BM 2664
2703
2682
2552
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MAGNESITE DEPOSIT MOHAVE COUNTY

Burrell Pace & Pace Mining Co. - no longer connected with this property as per Mr. William Holland. Office visit 4-22-68

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Magnesite Deposit — Date February 13, 1963

District Greenwood District, Mohave Co. — Engineer Lewis A. Smith

Subject: Conference with W. L. Holland (one of owners)
51 claims (Total) (1020 acres)
Property 14 claims (300 acres) (W L Holland)

Location: approx. Sections 11-12, 13-14, T. 14 N., R. 11 W. (half way between Wikieup and Bagdad, near Burro Creek.)

Owners: W.L. Holland et al, 3928 W. Orange Drive ✓1963 937 ✓1966 R, Phoenix (YE 7-6904)
E.E. Lowrey, Phoenix
Charles Mills, "
Burrel H Pace " (AL 4-7909)

Minerals: Dolomitic tuff, magnesite

Pace Mining Company - operating company

Work: 2 miles of bulldozer road
5 cuts 75-100 feet long and up to 10 feet deep at the face
several lesser cuts and pits

Equipment Available (but not on ground) R. D. 6, 7 and 8 cats
several trucks
2 frontloaders (caterpillar)
1 crusher (jaw type)
1 screening plant

Access: 8 miles to Burro Creek from Hwy. 93
1½ mile northwest from here to the mine, (dirt or bulldozer roads).

Geology: Briefed from an outside engineer's report shown to me by W. L. Holland.

The report indicates that the area consists of magnesite, dolomite and magnesitized sediments which cover 15 square miles of area as indicated by numerous exposures. According to it the magnesitized beds were formed by hydrothermal alternation of lacustrine dolomitic material in the shale beds of Tertiary age. The analyses, shown later, indicate that the magnesite was more probably formed by leaching of the CaO from the dolomite, leaving magnesite and very little CaO. This process nearly doubled the MgO content. It is probable that hydrothermal solutions would have produced the dolomite.

The dolomite deposit does not form a continuous bed of uniform thickness and composition, but rather occurs in lenses of variable lateral extent and thickness at different horizons in the shale formation. The amount and degree of magnesitization of the dolomite and the contiguous sediments vary especially from outcrop to outcrop and even within a given outcrop. The Tertiary series is highly folded and faulted and structures exerted structural control over the magnesitization. The upper portion of the Tertiary series that includes the upper part of the host shale formation, is exposed in many places along and in the slopes of numerous structurally controlled arroyos. Most slopes are covered by thin mantles of talus and or colluvium, so that continuity of the horizons is not now observable. Over much of the area the magnesite-bearing formations are overlain by arkosic conglomeratic sandstone, 20

or less feet thick, depending upon the amount of erosion. There are large areas that have minus 20 feet of relatively unconsolidated material and sizeable benches on the slopes that have comparatively little detrital cover. (The photographs of bulldozer cuts quite clearly show this.)

Outcrops of the white, porcelanous material (fine-grained), easily recognizable as high-grade magnesite, are less abundant, but still numerous. (The recent cat work shows considerably more continuity.) Close observation to some outcrops reveals that dolomite is dominent. Other areas of very white but slightly silty material are difficult to classify, grade wise, in the field. The latter does not analyze as well as the porcelanous type although it runs 90 per cent $MgCO_3$ as compared to 93 per cent for the porcelanous material. There are sizeable outcrops of white or near white sandstone, shale or dolomite which are only slightly magnesitized. Sampling, drilling and much analytical work will be required to outline the better areas, and to set up quality controls.

The examination covered only 1/4 of the known area, so that the amount of porcelanous outcrop could conceivably be as much as 4 times greater than is estimated in the report. About 12 high grade deposits are known to outcrop in the examined area. The average thickness is 30 feet and the average slope distance is about 100 feet. Past this the amount is not known. It is estimated that the 12 deposits range from 5000 to 25000 tons of high grade magnesite and will average around 10,000 tons. Thus over 100,000 tons of high grade ore is easily available by open pit methods, probably much more that is covered by detritus of varying thickness.

Samples:

1. High grade magnesite (Lowrey Claim) (porcelanous)

   $MgCO_3$: 93.4%
   MgO : 44.8%
   R_2O_3 : 10.8% (not differentiated)
   Acid soluble : 2.3%
   CaO : 1.8%
   Some B & Ni

2. Silty type (northern area) (extensive)

   $MgCO_3$ 90.0%
   MgO 43.1%
   CaO 2.8%

3. Silty type (central area)

   $MgCO_3$ 85.5%
   MgO 40.9%
   CaO 0.7

4. Dolomite

   MgO 21.9%
   CaO 25.0%

5. Bentonitic material Nr #4 sample

MgO	22.0%
CaO	1.6%

Mr. Holland thinks that a crushing, screening and washing plant could clean the silty variety and greatly increase reserves. A marketing survey is being undertaken.