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ITEM 44

To: Mr. Charles P. Knebel,
Utah Construction & Mining Co.
Reno, Nevada

Date: October 9, 1967

From: David LeCount Evans,
Consulting Geologist,
Reno, Nevada

Subj: East Northumberland
Canyon Barite Depos-
its, Nye County, Nevada

Foreword:

The deposits were examined in reconnaissance detail on October 4 and 5, 1967. Field conditions on the 4th were ideal, in sharp contrast to a wet snow on the 5th, which made surface studies difficult.

Locations which now cover the property are dated September 5 through 7. The first publicity in Reno papers, by United Press was on September 7. Geological Circular 555 (USGS) "Bedded Barite in East Northumberland Canyon, Nye County, Nevada", providing geological detail, not in press releases is dated "1967". The fact that the entire area was covered by the 7th suggests that information was released before United Press provided the publicity.

Sketches are attached to pinpoint location and assist in the following discussion.

Procedures:

With reference to the lower Flat, the exposures south of East Northumberland Canyon were studied and mapped on October 4. This is the "Type" area and the basis for the bulk of USGS detail in Circular 555. October 5 was devoted to checking the north side, where the same major stratigraphic unit is being developed, but with 'shows' limited to float.

Conclusions:

(1) Observed and measured was the lowest barite bed and the middle bed. Complete concurrence is expressed for the USGS accuracy for these two beds, both massive, finely crystalline barite, the first with 67 feet of thickness, and the second with 4½ feet of thickness. On the basis of such accuracy for the two lower beds, the upper bed is not questioned. (with its 8 feet of thickness).

(2) Accepted, too, is the occurrence of the same stratigraphic unit on the north side of the canyon, and the existence of barite within the unit. However, to accept

the premise that the main (bottom) BaSO_4 zone will extend as an uninterrupted trend throughout the 8000 feet of indicated possibility, on the north side, depends on the acceptance of USGS thinking that this is a sedimentary BaSO_4 bed, and not introduced mineralization. Two field days and a surface of heavy talus do not justify such rashness.

(3) Not accepted is the atmosphere propounded by U.P.'s September 7 release. We conclude that the area will not have economic possibilities for years to come.

(4) And we finally conclude that the authors of Circular 555 did a good, scientific job on the property with no thoughts of excessive promotion in mind. They did point out its size, if missing detail could be resolved, and if, as a sedimentary formation it continued to great depth, down dip.

The "Ballyhoo" through the United Press was probably arranged from above.

Current Situation:

The major claim holder is

Marcus M. Durfee,
P.O. Box 335,
Battle Mountain, Nevada.

It is our understanding that the claims were taken for the National Lead Company. Engineers Leonard Hawkins and K.E. Laughney, both of the Baroid Division of National Lead, were completing side and end line markers at the time of this study.

Other claims have been staked, but appear as marginal to the National Lead Company's block.

Final Summary:

(1) With reference to our Plat, south of the Canyon we traced the 67 foot bed for 2000 feet. From canyon level, the 100 feet of back would provide about 1,300,000 tons.

(2) The barite is finely crystalline, sugary, light gray to black, very massive, and without apparent deleterious material across its 67 feet. It stands vertically. Initially such might be mined from surface, but should it go down underground mining would be in order. Metasediments with black opaque chert over and underly the unit.

(3) Grade of massive material is reported at 86.3% to 93.9% barite, and specific gravity varies from 3.73 to 4.36. USGS geologists spot sampled the 67 foot bed. The lack of a 67 foot channel across exposures is disquieting. It reflects a difference in USGS methods and normal mining practice.

(4) The Survey's economic consideration is limited to:

- (a) a reference to 1958 reserves (national) of 285,000,000 tons of ore containing 46,000,000 tons of barite.
- (b) a comment that from 1958 to 1967 domestic mining had averaged about 1,000,000 tons of barite per year; and industry had added another 600,000 tons (with value of \$10,000,000) through imports.
- (c) an estimate that 90% is used in drilling muds and 10% in the preparation of barium chemicals and other industrial uses.

(5) Our current statistics, culled from EMJ show:

- (a) Domestic producers sold, in 1966) 947,200 tons at \$11.95 per short ton. Nevada's 152,000 tons, at \$8.28 per ton, represents 16% of domestic production. The bulk of this is from the Battle Mountain area, almost at rail side.

- (b) September 1967 prices according to EMJ are:

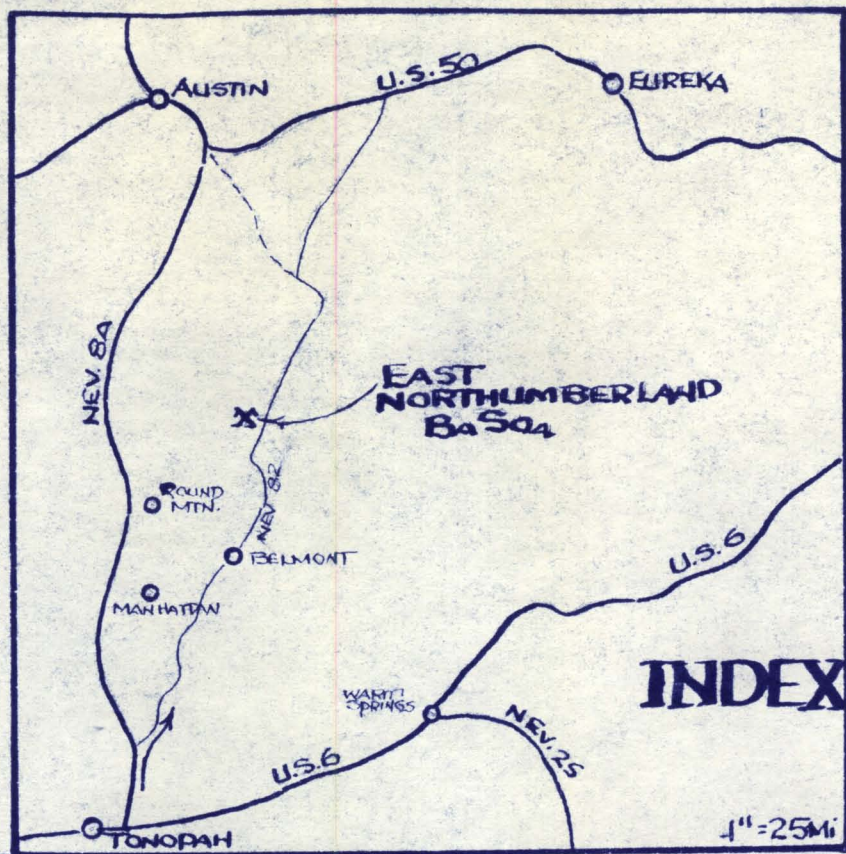
FOB shipping point:

Drilling mud grade: 83 to 93% BaSO_4 ,
3 to 12% Fe, and 4.2 to 4.3 Sp.Gr. \$12-16/ton

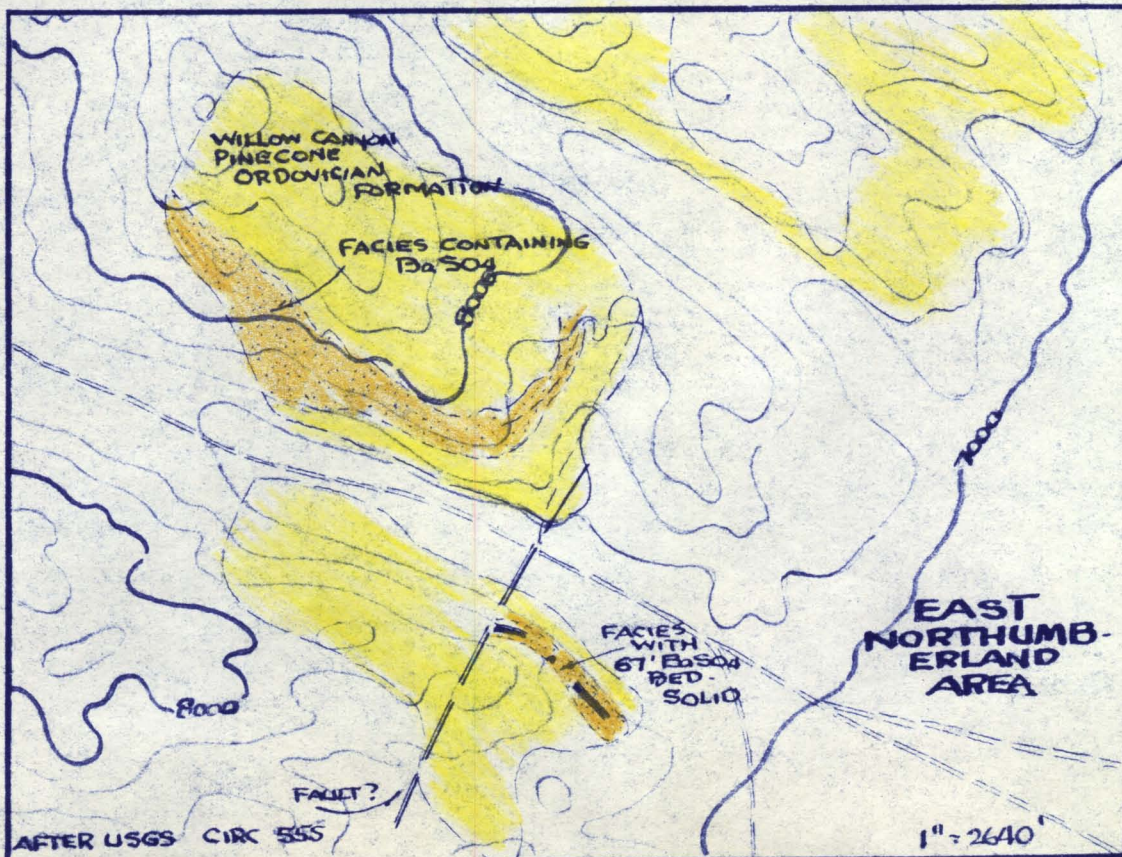
(6) Unacknowledged by USGS Circular 555 are the following:

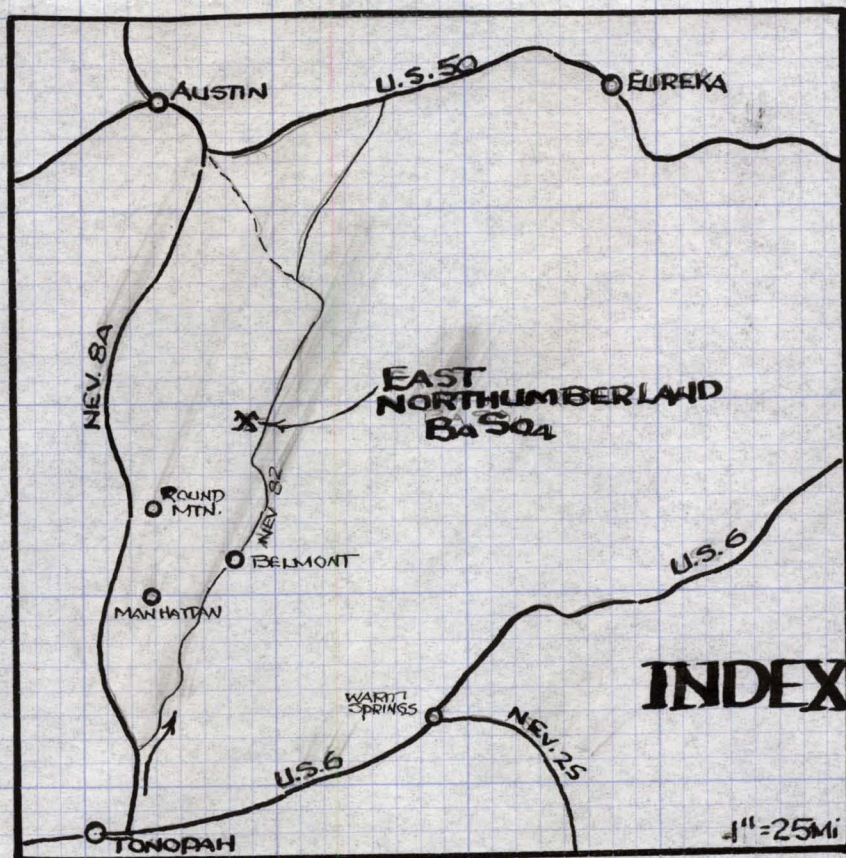
- (a) on the basis of the above, any profit or loss estimate must be tied to the \$8.28 per ton for 1966 Nevada production.
- (b) 150 miles trucking distance, property to nearest rail at Battle Mountain would add at least \$7.50 per ton to operating costs, preceding "FOB shipping point."
- (c) Underground mining is indicated. No estimate of cost is in order at this time, since no immediate operation, even by National Lead, seems indicated.
- (d) The 90% drilling mud market remains constant. The chances of impending oil discoveries, beyond Nevada's Railroad Valley area, are doubtful.
- (e) National Lead or FMC would be the logical companies to show interest in the area, since both are mining Barite at Battle Mountain. Their interest would be, perhaps, a requirement dictated by circumstances. The wisdom of others taking the area seriously is doubtful.

Respectfully submitted,

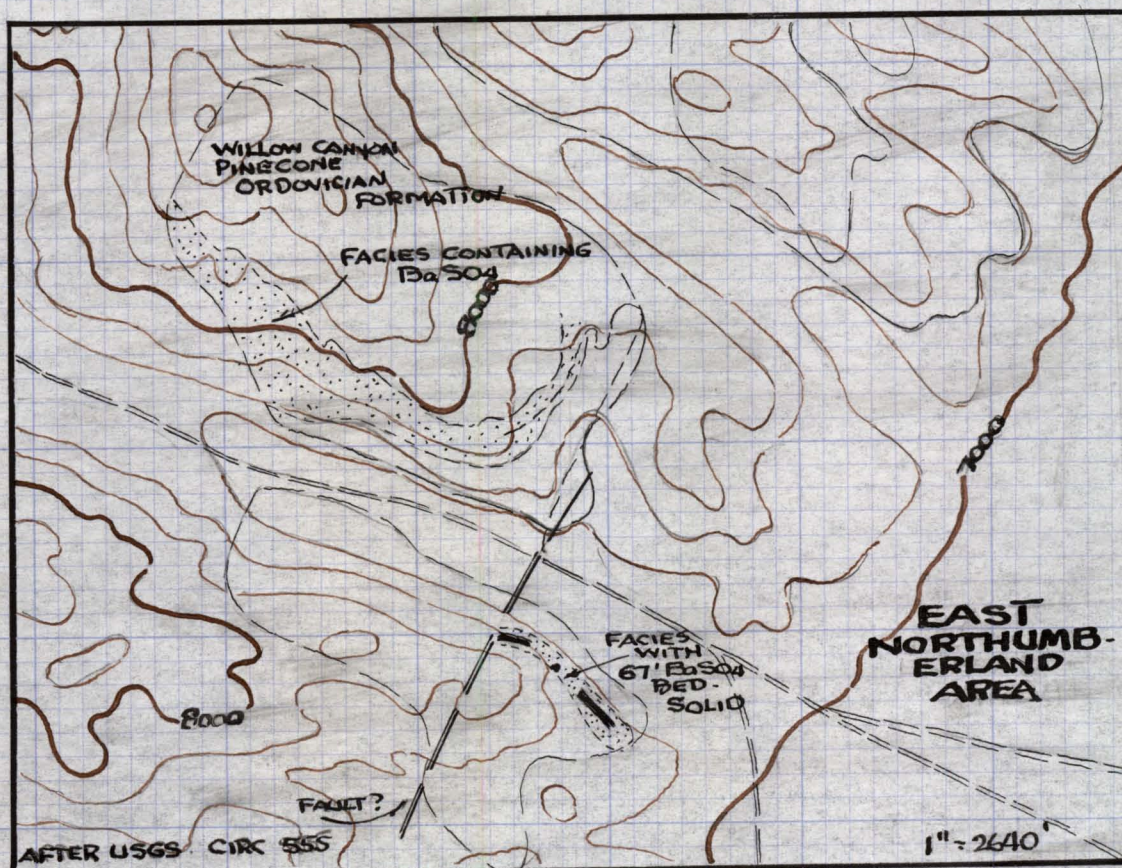


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D. LEVANS

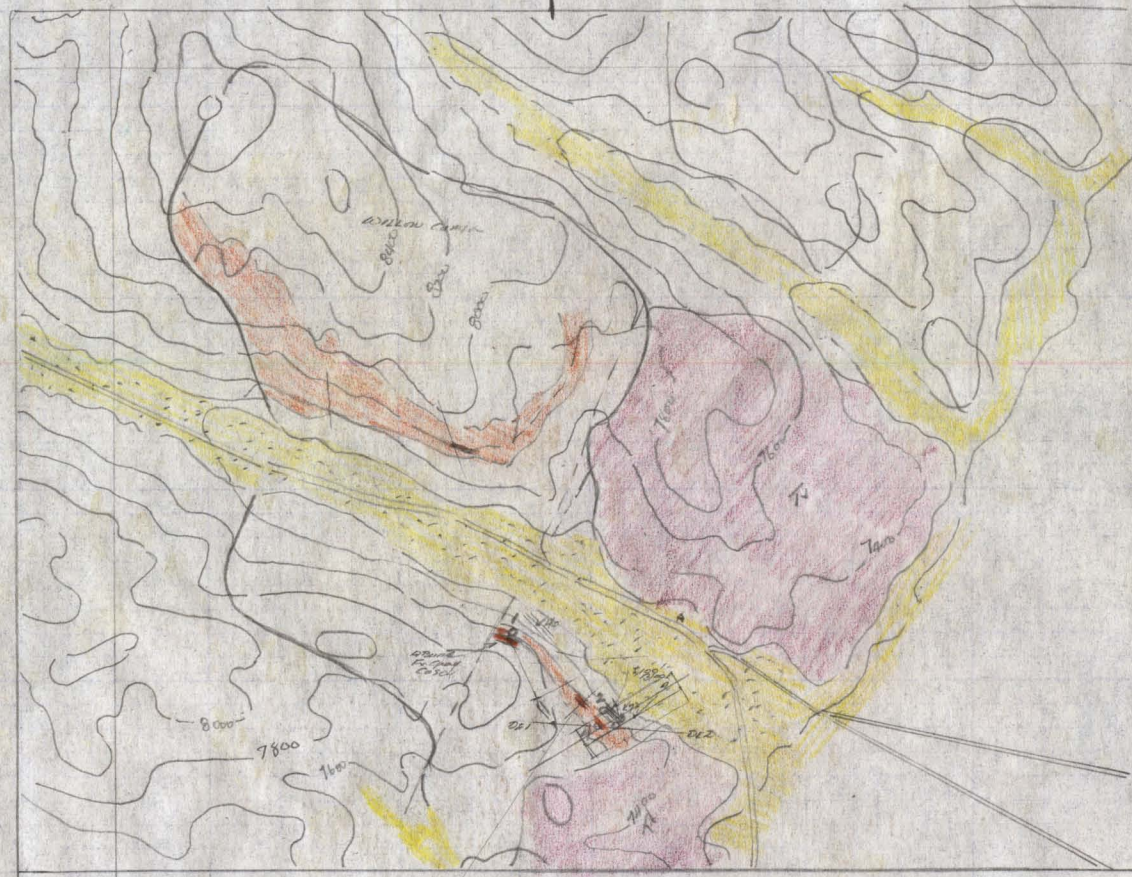


1" = 260'

2040 1500.0

116.50'

55 55



75/10
= 120

2000 x 67 x 100
10
67
20000
1340000 1.30,000

From check

Rafael Massey

Jan Feb
1968

- Dante -

- Three @ Rosamond

- near Mohave -

\$18.50/T

21 - 22 — L.A.

cells cargo

400 mib haul. — 20 —

subjt to report —

S.P. — — \$16 —

\$80 @ mrie —

- Sierra Chamael Bayreij @ 8 —

Leub Papke —

Calico - ASOR —

Rafael Massey in gangue

Oct 4 - Wed -

8.46 Inopah. 48274.35
80.05

13.

- E-on 6 to 8A
Turn h. on 8A 13 to 82.
or to Manhattan.

314.65 -

rt - on 69 - to Manhattan

21.0

Manhattan

12 to Belmont

29.6

Hwy 82 Turn Left -

37.5

Belmont -

60.1 -

Turn left to property 1/4 mile
4 - See USGS map to 4.

61.75

11:20.

62.25

Park

62.6 -

Park at Daisy approach to
2nd Project - (Spot #6)

30.2
37.5
12.7
11.0
9.12.7
11

Return

362.6 - En route area

@ 4:05 -

431.0

68.4 = 76 -

431.7