



## **CONTACT INFORMATION**

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07/07/89

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: BENTONITE MINE

ALTERNATE NAMES:

COCHISE COUNTY MILS NUMBER: 700

LOCATION: TOWNSHIP 17 S RANGE 20 E SECTION 27 QUARTER  
LATITUDE: N 31DEG 51MIN 00SEC LONGITUDE: W 110DEG 14MIN 30SEC  
TOPO MAP NAME: LAND - 7.5 MIN

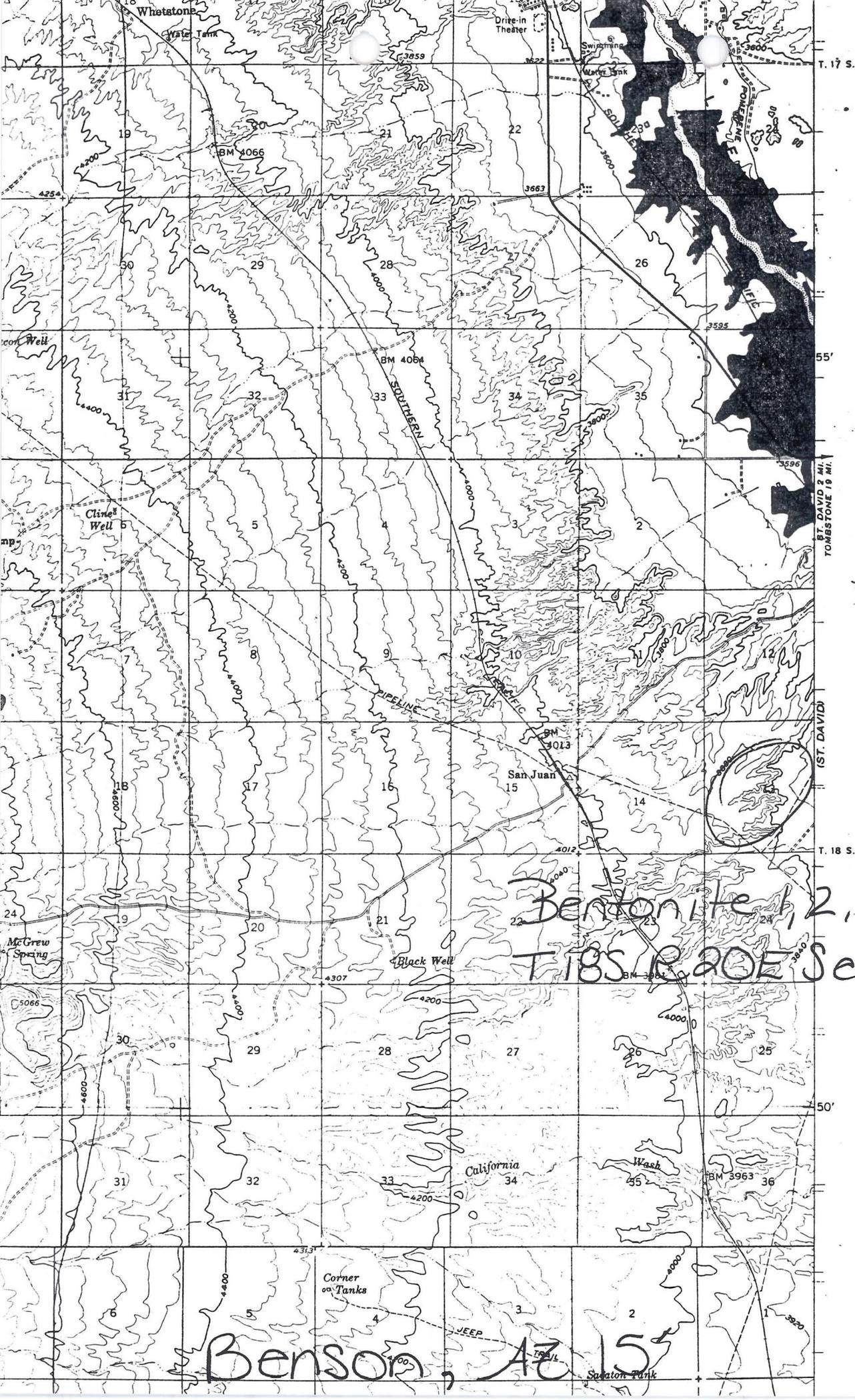
CURRENT STATUS: RAW PROSPECT

COMMODITY:

CLAY BENTONITE

BIBLIOGRAPHY:

ADMMR BENTONITE MINE FILE



Bentonite 1, 2, 3, 4  
T. 18 S. R. 20 E. Sec. 13

Benson, AZ 15

BENTONITE 1,2,3,4

Bentonite

Cochise

2 - 4

S.  
T 17 N, R 20 E

J. L. McNeil, Mesa

'43

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
304 HOME BUILDERS BUILDING  
PHOENIX ARIZONA



JUN 22 1948  
DELIVERED TO ADDRESSEE  
Refused.  
address.  
Left no address  
so mail office is advised

Mr. J. L. McNeil  
Mesa, Arizona

*Bentonite 1, 2, 3, 4*

## FIELD ENGINEERS REPORT

MINE: Land Gypsum

DATE: May 5, 1989

COUNTY: Cochise County (MILS #700)

ENGINEER: Harrison E. Matson

DISTRICT: Whetstone

SUBJECT: Field Visit

LOCATION: SW $\frac{1}{4}$ , Sec.13,T18S,R20E

This site was initially identified in MILS as #639, Bentonite Claims, and as such was visited to document the occurrence. A review of the file data, however, places #639 two (2) miles south of Benson in Sec.27,T17S,R20E. When the area was visited a clay occurrence was found to exist at the site nevertheless. A thick reddish brown clay unit was observed to underlie a 4 to 8 feet thick gypsite bed. The gypsite is med-light tan in color and appears to be quite sandy, containing probably less than 50% gypsum. The underlying clay beds are contaminated with selenite crystals up to several millimeters in size. The clay beds have been explored by a couple of drill holes in the SW $\frac{1}{4}$  of Sec.13. The gypsum is best exposed near the center of Section 13 where it is capped by 40-80 feet of alluvial fan gravels.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

✓  
Mine **Bentonite #1,2,3,4 Mine**

Date **Feb. 15, 1956**

District **Whetstone Mining Dist., Cochise County**

Engineer **Axel L. Johnson**

Subject: **Present Status.**

Location **2 miles S. of Benson, and 1/2 mile W. of Highway.**

Number of Claims **12 unpatented claims.**

Owner **Jess L. McNeil, 154 N 3rd, Mesa, Arizona.**

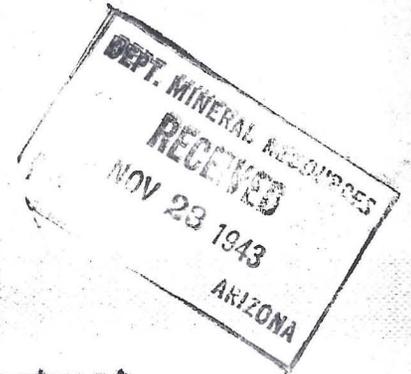
Principal Minerals **Bentonite Clay.**

Status **Some work is reported being done, at times, by the owner, Mr. McNeil.**

C O P Y

November 22, 1943

Mr. Jess L. McNeil  
452 Kimball Street  
Mesa, Arizona



Dear Mr. McNeil:

Mr. J. S. Coupal of the State Department of Mineral Resources has forwarded two samples of yours to us for identification (our file number 21200).

These samples are bentonite, or probably semi-bentonite, as they do not swell when moistened nearly as much as the first-class Wyoming material. They do, however, swell sufficiently to indicate that they may have commercial possibilities, and I would suggest that you have Mr. Coupal forward the samples which he has to the parties who have inquired for bentonite.

We would be interested in knowing the location of your deposit.

Yours very truly,

Robert E. Heineman  
Mineralogist

REH/om

cc: J. S. Coupal

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Bentonite #1,2,3,4 Mine

Date Feb. 15, 1956

District Whetstone Mining Dist., Cochise County

Engineer Axel L. Johnson

Subject: Present Status.

Location 2 miles S. of Benson, and 1/2 mile W. of Highway.

Number of Claims 12 unpatented claims.

Owner Jess L. McNeil, 154 N 3rd, Mesa, Arizona.

Principal Minerals Bentonite Clay.

Status Some work is reported being done, at times, by the owner, Mr. McNeil.

-GYPSUM CLAIMS-

**Situation.**- The Gypsum Claims, namely, Gypsum Nos. 1, 2, 3, 4, 5, 6, 7, 8, and 9, comprise eight full claims of 160 acres each and one of 120 acres, embracing an area of 1400 acres in all, lying on surveyed land in the Whetstone Mining District of Arizona, about 10 miles south of Benson and about a mile south east of San Juan, a station on the main line of the El Paso and South Western Railroad. The deposits lie between the main line of the E.P. & S.W. on the west and the Benson branch of the same on the east. On the latter side there is also a branch of the Southern Pacific a short distance beyond the E.P. & S.W. branch. It is about a mile from the deposits to Land, a station on the E.P. & S.W. branch.

**Topography.**- These deposits outcrop in the low lying hills along the San Pedro River, a short distance to the west of the latter. The surrounding country continues low and rolling, and there are no mountain peaks of any eminence until the Rincon Mountains are reached to the north west and similarly the Santa Ritas to the south. On the other side of the river rise the high mountains of the Dragoon range.

The character of the surface is comparatively rough. There are some small trees, such as, mesquite and iron-wood, but these are not plentiful.

There are a few small arroyos or creeks cutting across the property, but do not furnish any water except, perhaps, during the rainy season. Artesian water may be encountered by sinking wells in the valley on the east side of the property or in any event water may be obtained from the river only a short distance away.

**Geology.**- The structure of the rocks in the vicinity are distinctly stratified. They lie remarkably flat and apparently never have been disturbed by faults or folds. They are of a sedimentary nature, mostly limestones, and a few shales and clays outside of the gypsum deposits themselves. The limestone is of a secondary nature mostly soft, white, and looks like chalk.

The gypsum occurs in beds which outcrop more conspicuously along the border of the San Pedro Valley in a direction, a little east of south. Apparently they form, as one might say, the banks of the valley, terminating abruptly in the form of high benches along its border. The beds vary in width from a small stratum up to a maximum of about 25 ft. An average would be about 12 ft.

The greater part of the material in the deposits is in the form of an aggregate of small gypsum crystals; some of them showing the beautiful pearly lustre of satin spar while others are so minute that they are not distinguishable. It is comparatively light, porous, and spongy, and has a white color, slightly tinged with red when near the surface. Aside from this material which is commonly called gypsite, there are abundant crystals of selenite scattered here and there on the sides of the exposures, that shine like diamonds as

then would be after removing what light overburden that might exist, to scoop it up, dump it into the railroad cars, and ship it to the calcining plant for treatment or wherever needed. With very little expense, a spur from Land can be put in, the ground being practically level and no grading necessary.

**Disposition of Product.**- For land plaster used for fertilizing purposes the product may be taken out and loaded on the cars and shipped direct to the consumer; for building blocks and wall plaster it will have to be calcined, ground, and made up, and the products subsequently sold.

There is a steadily increasing demand for the material in the raw state to be used as a retarder in Portland cement. Heretofore gypsum has been used largely for making wall plasters. There are two general grades of these, one a brown or gray coat and the other a white or tinted finish coat.

A very enterprising scheme has been introduced lately of utilizing the material in making building blocks. These sell at present for 25 cts. each, for straight blocks 8 X 9 X 24 in. and 15 cts. for partition blocks, 4 X 9 X 30 in. Corner blocks bring a little more. They are beginning to be used extensively in building houses and are largely taking the place of lumber. The fact that the blocks are capable of being sawed and nailed they can be used in most every part of the structure and consequently make it fireproof. The blocks build up on the exterior of the house in the manner of stone only of a much nicer appearance. They are said to be produced much cheaper than brick and build up faster. They are said to have a greater crushing strength than either brick or cement products. Besides the building blocks, imitation marble and onyx may be moulded out of the material. It has been suggested that it would do for making tombstones. ~~These experiments have been made along this line with very~~ encouraging results. The white plaster was used and slabs have been moulded having a glossy marble appearance and carrying the figures and letters in bold relief.

**Conclusions.**- By putting in a steam shovel and about a mile of railroad track, the material ought to be put on board the cars at a cost of not more than 5 cts. a ton. This ought to sell as land plaster from 75 cts. to \$1.50 a ton. The material is found over almost the entire area of land. As a matter of estimation, if only 1000 acres out of the 1400 contained gypsum and this at an average depth of 12 ft., there would be in the neighborhood of 30,000,000 tons in the deposit.

Taking everything into consideration, I believe that, with an expenditure of about \$15,000, \$10,000 for the plant and \$5000 for the equipment in handling it at the deposits, the proposition could be handled and in a short time made to yield handsome returns.

Respectfully submitted

Edward Leppien  
Mining Engineer

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
OWNERS MINE REPORT

Date 11/43

1. Mine  BENTONITE 12 claims
2. Mining District & County  Benson Mining District  
Cochise County
3. Former name  Jess L. McNeil
4. Location Benson, Arizona
5. Owner
6. Address (Owner) 452 Kimball St.  
Mesa, Arizona
7. Operator
8. Address (Operator)
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals  Bentonite
14. Men Employed
15. Production Rate
16. Mill: Type & Cap.
17. Power: Amt. & Type
18. Operations: Present None
19. Operations Planned None
20. Number Claims, Title, etc. 12 unpatented
21. Description: Topography & Geography Low rolling foothills--Desert Vegetation
22. Mine Workings: Amt. & Condition Road work and assessment work in open cuts.

23. Geology & Mineralization      Clay beds

24. Ore: Positive & Probable, Ore Dumps, Tailings      -----

24-A Vein Width, Length, Value, etc.      from 6" to 6' in thickness 20 to 50 feet of overburden

25. Mine, Mill Equipment & Flow Sheet      None

26. Road Conditions, Route      2 miles South of Benson on West side of Highway 80--to Tombstone

27. Water Supply      Artesian wells on flat nearby.

28. Brief History      Shipped two tons for beauty shop use.

29. Special Problems, Reports Filed

30. Remarks      Samples of ore filed

31. If property for sale: Price, terms and address to negotiate.  
Will sell or lease

32. Signed.....

33. Use additional sheets if necessary.      Jess L. McNeil

NON METALLICS

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

OWNERS MINE REPORT

Date May 13, 1940

1. Mine Bentonite #1,2,3,4.
2. Mining District & County Whetstone, Cochise Co.
3. Former name
4. Location 2 mi. S. of Benson  
1/2" W. of H'way.
5. Owner J. L. McNeil (partners)
6. Address (Owner) Benson, Arizona
7. Operator same
8. Address (Operator)
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Bentonite
14. Men Employed
15. Production Rate Not established
16. Mill: Type & Cap.
17. Power: Amt. & Type None
18. Operations: Present Assessment work
19. Operations Planned
20. Number Claims, Title, etc. 14 claims placer
21. Description: Topography & Geography Foothills
22. Mine Workings: Amt. & Condition Open cuts - material dissolves water so working will not stand open.

23. Geology & Mineralization Flat lying formation. Bentonite is white and pink. Capped by white decteniaceous earth. Also Fullers earth white and heavy. diatomaceous
24. Ore: Positive & Probable, Ore Dumps, Tailings Overburden of recent wash material. 10'-50' in thickness.
- 24-A Vein Width, Length, Value, etc.
25. Mine, Mill Equipment & Flow Sheet None
26. Road Conditions, Route Highway 80, for 2 miles S of Benson, then West 1/2 mile over good graded road.
27. Water Supply Artesian well belonging to Clarence Post.
28. Brief History Held since 1925. Sold some of pink variety for cosmetics
29. Special Problems, Reports Filed
30. Remarks
31. If property for sale: Price, terms and address to negotiate. Will lease or sell. Good terms to party prepared to develop on worth while scale.
32. Signed..... Jess L. McNeil.....
33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
OWNERS MINE REPORT

B-49

Date May 13, 1940

Mine Bentonite #1-#2-#3-#4.

District Whetstone, Cochise County.

Location 2 mi S. of Benson  
1/2 " W of H'way

Former name

Owner J. L. Mc Neil (partners) ✓

Address Benson, Arizona.

Operator Same

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Bentonite ✓

Men Employed

Production Rate Not established

Mill: Type & Cap.

Power: Amt. & Type None

Operations: Present Assessment work.

Operations Planned

Number Claims, Title, etc. 14 claims placer.

Description: Topog. & Geog. Foothills.

Mine Workings: Amt. & Condition Open cuts- Material dissolves water so working will not stand open.

Geology & Mineralization Flat lying formation. Bentonite is white and pink. Capped by white ~~deposition~~ earth. Also Fullers earth white and heavy.

*diatomaceous*

Date May 12, 1940

Ore: Positive & Probable, Ore Dumps, Tailings Overburden of recent wash material. 10'-50' in thickness.

Mine, Mill Equipment & Flow Sheet None.

Road Conditions, Route Highway 80, for 2 miles S of Benson, then West 1/2 mile over good graded road.

Water Supply Artesian well belonging to Clarence Post.

Brief History Held since 1925. Sold some of pink variety for cosmetics

Special Problems, Reports Filed

Remarks

If property for sale: Price, terms and address to negotiate. Will lease or sell. Good terms to party prepared to develop on worth while scale.

Signed Jess L. Mc Neil

Use additional sheets if necessary.

2113-49

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
MINE OWNER'S REPORT

U.S. Geological Survey

Date Nov. 1943

- 1. Mine *Bentonite 12 Claims*
- 2. Location *Benson Arizona*
- 3. Mining District & County *Benson mining District Cochise Co*
- 4. Former name
- 5. Owner *Jess L. McNeil*
- 6. Address (Owner) *452 Kimbell St  
Mesa Arizona*
- 7. Operator
- 8. Address (Operator)
- 9. President, Owning Co.
- 9A. President, Operating Co.
- 10. Gen. Mgr.
- 14. Principal Minerals *Bentonite*
- 11. Mine Supt.
- 15. Production Rate
- 12. Mill Supt.
- 16. Mill: Type & Cap.
- 13. Men Employed
- 17. Power: Amt. & Type
- 18. Operations: Present *none*
- 19. Operations: Planned *none*
- 20. Number Claims, Title, etc. *12 unpatented*
- 21. Description: Topography & Geography *low rolling foothills -  
desert vegetation*
- 22. Mine Workings: Amt. & Condition *Road work - & assessment work in  
open cuts.*

(over)

23. Geology & Mineralization

Clay beds.

24. Ore: Positive & Probable, Ore Dumps, Tailings

24A. Dimensions and Value of Ore body - from 6" to 6 ft. - in thickness  
20 to 50 feet of ore thickness

25. Mine, Mill Equipment & Flow-Sheet

None

26. Road Conditions, Route

2 miles S of Benson on W side  
of Road Highway 80 - to Tombstone

27. Water Supply

Artesian wells in flat nearby.

28. Brief History

Shipped 2 tons for kauty sleep use.

29. Special Problems, Reports Filed

30. Remarks

Samples of ore - filed -

31. If property for sale: Price, terms and address to negotiate.

Will sell or lease -

32. Signature

Jess L. McNeil.

33. Use additional sheets if necessary.

**DEPARTMENT OF MINERAL RESOURCES**  
**State of Arizona**  
**MINE OWNER'S REPORT**

Date March

1. Mine:  Bentonite Claims Group 1, 2, 3

2. Location: Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ Range \_\_\_\_\_ Nearest Town \_\_\_\_\_  
Distance \_\_\_\_\_ Direction \_\_\_\_\_ Road Condition \_\_\_\_\_

3. Mining District & County: \_\_\_\_\_

4. Former Name of Mine:  \_\_\_\_\_

5. Owner: J. L. McNeil

Address: Benson Arizona (154 N 3rd Mesa)

6. Operator: same

Address: \_\_\_\_\_

7. Principal Minerals: Bentonite clay

8. Number of Claims: 12 Lode \_\_\_\_\_ Placer

Patented \_\_\_\_\_ Unpatented (State Land)

9. Type of Surrounding Terrain: Low Hills

10. Geology & Mineralization: \_\_\_\_\_

11. Dimension & Value of Ore Body: 10' thick by 1 mile x 2400' wide  
270 A.

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

Ore Probable:  
.....  
.....

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
<del>Shafts</del> open cut		
Raises.....		
Tunnels.....		
Crosscuts.....		
Stopes.....		

14. Water Supply:  
.....  
.....

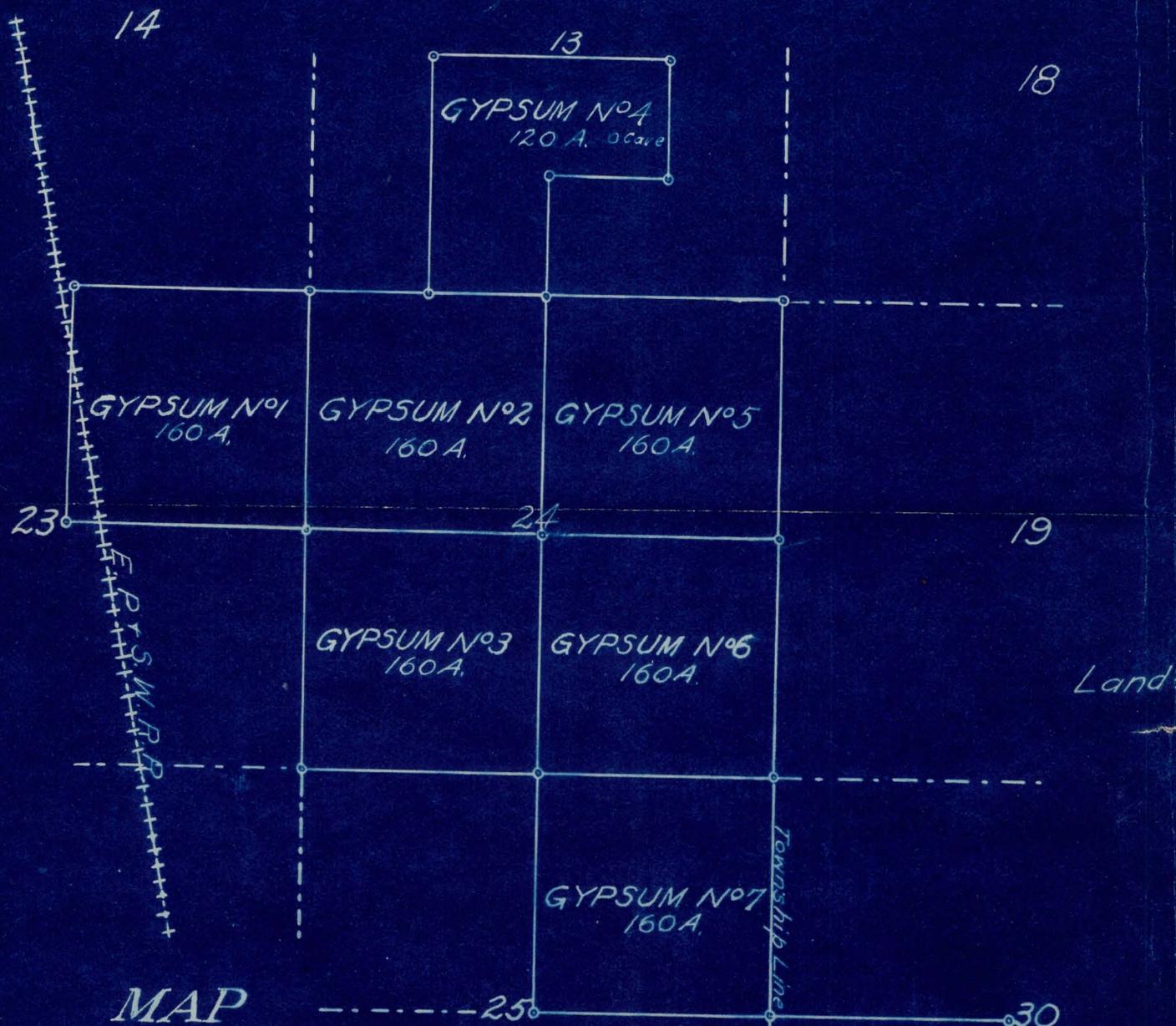
15. Brief History:

would sell either property or product.  
will be reasonable.

Shipped several car loads.  
Sample in office:

16. Signature:

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



MAP

of the

# GYPSUM CLAIMS

LYING IN THE

## WHETSTONE

MINING DISTRICT

ABOUT 10 MILES SOUTH OF BENSON

## ARIZONA

AREA = 1400 ACRES

Scale lin. = 1760 Ft.