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02/11/88

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: FELDMAN QUARRY

ALTERNATE NAMES:

NATIONAL GYPSUM PROPERTY
SAUNDERS PROPERTY
UNION GYPSUM PROPERTY
HARLESS PROPERTY
UNION PLASTER CO. QUARRY

PINAL COUNTY MILS NUMBER: 390B

LOCATION: TOWNSHIP 6 S RANGE 16 E SECTION 27 QUARTER E2
LATITUDE: N 32DEG 52MIN 53SEC LONGITUDE: W 110DEG 41MIN 37SEC
TOPO MAP NAME: SADDLE MTN - 7.5 MIN

CURRENT STATUS: PRODUCER

COMMODITY:

GYPSUM
DIATOMITE

BIBLIOGRAPHY:

ADMMR FELDMAN QUARRY FILE
AZBM BULL 180, 1975., P. 329, 333 & 375
ADMMR U FILE
ADMMR FILES
ADMMR DIR. OF ACTIVE MINES 1980, P. 14-15
ELEVATORSKI, E.A., AZ. INDUSTRIAL MINERALS
1980, P. 54

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

PINAL COUNTY

WINKELMAN AREA

FELDMAN QUARRY

MM#L544

Gypsum

L545

Gypsum

L546

Gypsum

L547

Gypsum

MMS #8905

S. P. A. R.

Feldman Quarry

✓
UNION GYPSUM MINE

PINAL COUNTY

See: ARIZONA BUILDERS & CONTRACTORS
August, 1957.

New calcining plant just started operations -
doubles previous capacity.

See: "MINING WORLD" Jan. 1958, page 85
(1-16-58)

NAME OF MINE: UNION ~~ROCK~~ PLASTER ✓
OWNER:

COUNTY: Pinal
DISTRICT:
METALS: Gypsum

OPERATOR AND ADDRESS		MINE STATUS	
Date: 2/46	Plaster Co. ✓ Union Rock , 16th & R.R. tracks, Phx. Mine - Winkelman Carlton Rogers, Mgr. ✓	Date: 2/46	Grinding

UNION PLASTER COMPANY

Gypsum

Pinal 11-3 S 35 T 6 S R 16 E

Union Plaster Company, Phoenix
Carlton J. Rogers, Manager

8-2-46

Rock 1848 - Phoenix



NATIONAL GYPSUM

PINAL COUNTY

mm # L544 - 7

Mining World Dec. 1962 p. 36

Metal Mining & Processing April 1964 p. 25

Republic news clipping re National Gypsum operations
in ARIZONA GYPSUM CORP. file Oct. 7, 1962

ABM Bull. 180, p. 375

ABSTRACTED FROM ADMMR ACTIVE MINES DIRECTORY, 1992

Pinal County

NATIONAL GYPSUM COMPANY

Gold Bond Building Products Division

P.O. Box 20863, Phoenix, AZ 85036 - Phone 258-9321 - Employees: 100 -
Wallboard plant - Wallboard joint cement plant.

Plant Manager H. E. Skelley

Office Manager J. C. Cassidy

Joint Cement Plant Manager Nick Tuhus

Feldman Quarry T6S R16E Sec. 27

Star Route, Box 3990, Winkelman, AZ 85292 - Phone 357-7180 - Employees: 8 -
Open pit gypsum mine located 12 miles south of Winkelman - Gypsum used in
plaster board.

Quarry Superintendent Dennis Mackovjak

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VIS9.WHI

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Information from: Tim Whitney, Murco Wall Products
2. Address:
3. Phone:
4. Mine or property name: Feldman Quarry
5. ADMMR Mine file: Feldman Quarry
6. County: Pinal
7. MILS number: Pinal County, 390B
8. Operational Status:
9. Summary of information received, comments, etc.:

Amcor's National Gypsum Gold Bond Building Products has filed for Chapter 11 protection under the bankruptcy laws. Reportedly debts exceed assets by \$1 Billion. Suppliers of mineral materials may be affected as to if or how they will be paid for recent and future deliveries.

Date: 11-1-90

Ken A. Phillips

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Feldman Quarry

T6S R16E Sec. 27

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T6S R16E Sec. 27

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Quarry Superintendent Jeff McChesney

FELDMAN GYPSUM QUARRY

PINAL COUNTY

MG WR 2/27/81: Production at the Feldman Gypsum Quarry, operated by the National Gypsum Division, is about 200,000 TPY.

FELDMAN QUARRY

PINAL COUNTY

MG WR 9/16/83: Visited the Feldman Quarry, Pinal County operated by the National Gypsum Company. Production is reaching pre-recession levels; gypsum is mined at a rate of 10-12,000 TPM.

KAP WR 4/12/85: Attended the Symposium on the Geology of Industrial Minerals in Tucson. The program included talks on a number of Arizona properties and field trips to the Feldman Quarries (f) Pinal County.

NJN WR 11/27/87: Jeff McChesney reported that he has replaced Lyle Faith as quarry superintendent at National gypsum's Feldman Quarry (file) Pinal County. McChesney reports that production has been good until the fourth quarter of this year when the building slowdown reduced the need for wallboard which is made from the gypsum they mine.

NJN WR 9/2/88: Rhyne Simpson Jr. of Sante Fe Resources (card) have acquired the Sante Fe Claims which are located at T6S R16E Sec 21, 23, 24, 28, surrounded and may include areas of the Feldman Quarry (file) and Winkleman Gypsum (file) Pinal County which supplies gypsum to National Gypsum Wallboard plant in Phoenix.

RA

Active Mine List Oct. 1969 - 5 men
Active Mine List May 1970 - 5 men - Archie Lee, Supt.
Active Mine List Oct. 1970 - 5 men

To National Gypsum Plant. Interview Archie Lee who said business is better - shipping
2 to 3 cars of gypsum per day. FTJ WR 1-29-71

Directory of Mining - August 1971 - 5 men

National Gypsum and Superior Companies (Arizona Gypsum) produced at their regular rate.
FTJ QR 9/71

Superior Industries gypsum operation and National Gypsums operations were at their
regular rate. FTJ QR 71-72 2nd $\frac{1}{4}$

Went to Feldman to visit National Gypsum plant. Archie Lee has retired as Supt. and
Nelson Cluff replaced him. No changes in operation. FTJ WR 6/16/72

National Gypsum and Superior Companies gypsum plants operated as usual. FTJ QR 3rd $\frac{1}{4}$ '72

National Gypsum at Feldman were producing at their regular rate. Archie Lee, Supt.,
retired and Nelson Cluff replaced him. FTJ 4 $\frac{1}{4}$ '72

Active Mine List - October 1972 - Empl 7

To National Gypsum . They are shipping about 200 tpd and cannot supply demand. Expect to
open new pit area near present workings. FTJ WR 12/15/72

Togypsum plants at Feldman, operations normal. FTJ WR 2/16/73

Went to National Gypsum and Superior Companies plants. FTJ WR 6/14/73

National Gypsum at Feldman was at maximum production. They produced 60,000 tons during
972. FTJ Annual Report 6/28/73

Went to National Gypsum and talked to Nelson Cluff, supt. who said their operation had not
changed. FTJ WR 5-23-74

H/WR 9/17/79 - Mr. Keith W. Waugh, Consultant for National Gypsum Co. He is looking
for gypsum deposits near a railroad.

Active Oct. 1963

Mine Visit and Conference with Archie Lee, Foreman

The National Gypsum Company is now shipping 5 cars of screened gypsum (1-inch plus) per day, to the Phoenix plant. Their business is good at present. A good reserve is opened at the Harliss pit and this looks clean. The new year seemed to hold good promise.
Memo LAS 1-29-64

Visited National Gypsum Co. plant - no activity. EGW WR 4-2-64

Visited National Gypsum pit and plant, Feldman. Active - 8 men working. FTJ WR 10-1-65

Visited National Gypsum mill and quarry - mill idle. Stripping in quarry and preparing to mine about 15' bed of gypsum. FTJ WR 1-28-66

Visit and interview with Archie Lee, pit foreman at National Gypsum, production cut to one shift and 5 days a week. Producing about 10 cars/wk. Building slump held as prime cause for curtailment. FTJ WR 9-30-66

Visited National Gypsum plant - operation below capacity. FTJ WR 1-27-67

Visited National Gypsum quarry and plant - production curtailed. FTJ WR 3-31-67

Active Mine List Nov. 1967 - 4-6 men

Visited National Gypsum plant. Operating about as usual. FTJ WR 1-26-68

Interview with Archie Lee, Supt. of National Gypsum Co. operation. He said business was slow, shipping 5 cars per week. FTJ WR 3-29-68

Active Mine List April 1968 - 5 men

Active Mine List Oct. 1968 - 5 men

Visited the gypsum operations. Operating as during last visit. FTJ WR 11-27-68

Visited National Gypsum shipping 4 cars a week, 5 employed. FTJ WR 1-31-69

Active Mine List April 1969 - 5 men - Archie Lee, Supt.

Visited the Gypsum plants at Feldman - no change in rate of production or personnel.
WR 9-26-69

NATIONAL GYPSUM CO.

SAN PEDRO DISTRICT, PINAL COUNTY

Mr. Leo Hakes, Plant Manager, reported that their business had increased very materially in the past 6 months, due mainly to National Gypsum's marketing organization. 90 men are work/at^{at} Feldman and 85 in the Phoenix plant. The plant is making a larger variety of products.

MEMO - Lewis A. Smith - 2-5-62

AR DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: Lyle L. Faith, Quarry Superintendent
Address: Star Route, Box 90, Winkelman, AZ 85292; Phone 356-7180
2. Mine: Feldman Quarry 3. No. of Claims - Patented _____
Unpatented _____
4. Location: Approx. 13 Miles NW of Mammoth via State Highway 77 (Pinal Co.)
5. Secs 26&27 Tp 6S Range 16E 6. Mining District _____
7. Owner: _____
8. Address: _____
- 9. Operating Co.: National Gypsum Division
10. Address: P.O. Box 20863, Phoenix, AZ 85036; Phone 258-9321
11. President: _____ 12. Gen. Mgr.: _____
- 13. Principal Metals: Gypsum 14. No. Employed: 13
15. Mill, Type & Capacity: _____
16. Present Operations: (a) Down (b) Assessment work (c) Exploration
(d) Production (e) Rate confidential tpd.
17. New Work Planned: _____
18. Miscl. Notes: Mining of gypsum has been carried out for about 35 years in the area.
Currently mine and crush gypsum to minus 6-in. Gypsum is high quality and used for the manufacture of wall board. Gypsum is hauled by truck to rail head at Winkelman and carried by train to Phoenix.
There are two main gypsum beds totaling about 100 feet thick with some interbedded waste.
This quarry is 3/4 to 1 mile north of the gypsum pit operated by Superior Companies.

Date: 2-18-81

M N Greeley
(Signature) (Field Engineer)

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine National Gypsum Quarry Date Sept. 24, 1962
Near Feldman
District San Pedro District - Pinal County Engineer Lewis A. Smith
Subject: Mine Visit

The mine now has three 7 to 8 foot benches. The two principal gypsum beds are separated by 2½ feet of clay and the upper bed has considerable (8-12 feet) of waste overburden. The latter is now being stripped. Some local clay pockets occur within the gypsum. The present operation is on the Saunders-ground which has been core drilled to a depth of 100 feet. The gypsum, along with clay layers and lenses was found to a depth of 90 feet. 5 trucks, 4 active, are being used through a five day operation. The gypsum grade is holding at a very good figure.

A new Michigan-Trout end loader with a 3-yard bucket, has been added to their equipment.

11 men are now employed.

DEPARTMENT OF MINERAL RESOURCES,
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine National Gypsum Mine & Mill +

Date May 18, 1961

District San Pedro District, Gila Co. *Field*
(near Feldman)

Engineer Lewis A. Smith

Subject: Mine visit

National Gypsum (old Union Gypsum) has developed a pit 1000 feet long by 350-400 feet wide on the Saunders property which they lease. Three 10 foot benches have been established. In places on the east side of the pit, considerable clay and gravel overburden must be stripped. The previous drilling revealed 40 to 90 feet of gypsum. The outcrop has indentations of waste projecting down for several feet in places. A yard and one fourth Lima shovel loads the broken gypsum into a 10 yard truck. The gypsum is crushed and screened to remove most of the fine grained waste and gravels. The screening plant yields a product which runs over 90 percent of calcium sulphate. The gypsum is massive in texture.

The operations are now on a 4 day basis after a slack period earlier in the year, when only 3 days were worked per week. This slump was attributed to a drop in the construction rate in Maricopa county.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Union Gypsum Mine Date May 19, 1960
District San Pedro District (near Feldman) Engineer Lewis A. Smith
Pinal Co.
Subject:

Union Gypsum has been taken over by the National Gypsum Co. who have plants in Iowa, Kansas, New York, Texas and Virginia. The head office is at 325 Delaware Ave., Buffalo 2, New York. (Mgr. - M. B. Turner) and plants are at: Fort Dodge, Iowa (Mgr. - J. E. Pitts, Jr.); Medicine Lodge, Kansas (D.C. Chads, Mgr.); 1 mile from Rotan, Fisher County, Texas; and Kimballton, Virginia (Monroe Rule - Mgr.). Union Gypsum is now a subsidiary (of National Gypsum) in which its stockholders received stock in National.

The principal operations are in the old Harless ground, north of Arizona Gypsum's pit. The present pit, as stripped, is about 1000 ft. long by about 450-500 ft. wide. It ranges from 0-30 ft. in depth and the drill holes indicate that the gypsum is 80-90 ft. thick. The average grade is more than 90% CaSO_4 . The mining is done by Lima $\frac{3}{4}$ yard shovel, wagon drills (Chicago pneumatic) operated from a No. 600 Chicago Pneumatic compressor. The pit is also equipped with an RD 8 Cat and a motor blade. The ore is hauled to the screening plant by means of 3 - 10 yard Uclid back dump trucks, 2 large semi's haul the screened product to Winkelman for rail shipment to Phoenix. The screening plant consists of a grizzly, crusher, and screens. The shipped product is around $\frac{1}{2}$ inch to 4 inches.

The haul from pit to the screening plant is about $1\frac{1}{2}$ miles, and from the screening plant to Winkelman is about 11 miles.

Current production is several hundred tons per day.

Saunders-Harless is now owned by Union Gypsum (subsidiary of National Gypsum Co., Buffalo, N.Y.).

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Saunders-Harl~~ass~~ (gypsum) Date November 27, 1957

District Pinal County Engineer Lewis A. Smith

Subject: Information reported by Bill Kessler of ~~Union~~ ^{Arizona} Gypsum

Owners: Robert Saunders and Richard Harl~~ass~~

Location: 9 mi S of Winkelman, adjoining American Gypsum Co property on North (Secs 26-27
(T. 6 S., R. 16 E)

Property drilled and approx. 170' gypsum penetrated. Some trenching was done near surface.

Haul 3 mi to Winkelman-Mammoth Hwy; thence 9 mi to Winkelman

Geology: Lake bed deposition, near top of ancient lake

Grade & Estimated to contain 30,000,000 to 350,000,000 tons

Reserves: The gypsum runs 87-99% CaSO₄ and in places would have to be screened to remove surface detritus. The bulk of the waste can easily be stripped with cat & rooter.

Information reported by Dale Huchison

November 27, 1957

10 placer claims - test holed & trenched to depth of 10-15 feet. Holes show a grade of 87 to 99% CaSO₄ and gypsum depth of 140'. Various estimates indicate a reserve of up to 30,000,000 tons. Stripping ratio would be very small & would be negligible over much of the area. The deposit is 3 miles by dirt road & 9 miles by pavement to Winkelman, or railhead.

September 24, 1957

TO: Mr. Frank P. Knight, Director
FROM: Lewis A. Smith, Field Engineer
Subject: UNION GYPSUM COMPANY, near Feldman, Pinal County

Office: 411 N. Central Ave., Phoenix, Arizona. AL 8-6106

- ✓ Archie Lee is Mine Superintendent.
- ✓ Leo Hicks is Plant Superintendent in Phoenix.

This operation is 11 miles south of Winkelman and 1 mile east of the Winkelman-San Manuel Highway. Mining is done by means of a $1\frac{1}{4}$ yard Northwest Shovel loading into 2 Reo trucks which, in turn, deliver the mine run material to a screening plant over a mile haul. Ten feet of average stripping is required to clear the gypsum bed which is the top phase of an old lake deposit. The waste capping is fan-glomerate. Cats and a ripper are used for stripping. The mine run is screened in shaking trummel screens and the fines discarded. The cleaned gypsum is then crushed to about $3/4$ " to 1" sizes. The shipping product runs from 78 to 96% CaSO_4 , the average being about 90%. The larger Mack Trucks (20-22 tons) haul the gypsum to Winkelman where the ore is loaded on railroad cars for shipment to Phoenix. Shipments range from 250 to 300 tons per day (5 cars) but expansion is anticipated with the completion of a new screening and crushing plant which is now being prepared for erection. This plant will have a capacity of about 500-600 tons daily.

The material is used, in Phoenix, for the making of lathe and wallboard. However, when the new ball mill is added, plaster base will be made. Plaster may require a better grade of gypsum feed and the feed will have to be whiter than the material now being used for board.

Information from MINE INSPECTOR'S OFFICE - August 15, 1957

UNION GYPSUM MINE - PINAL COUNTY
So. of Winkelman, Ariz.

12-20-56

UNION GYPSUM CO., Box 2018, Phoenix
Pres. - McQuarter
Sec. - R. L. Moore, El Paso Nat'l Bank Bldg., El Paso.
Supt - Archie Lee, Mammoth, Ariz.

GYPSUM - 6000 tons - 13 men

L.A.S.

DEPARTMENT OF MINERAL RESOURCES

State of Arizona

MINE OWNER'S REPORT

Date August 2, 1946

1. Mine: UNION PLASTER COMPANY

2. Location: Sec. 35 Twp. 6 S Range. 16 E Nearest Town. Feldman

Distance 2 Direction W Road Condition Good

3. Mining District & County: Mammoth Pinal

4. Former Name of Mine: No

5. Owner: Union Plaster Company

Address: Phoenix, Arizona

6. Operator: Carlton J. Rogers, Manager

Address:

7. Principal Minerals: Gypsum

8. Number of Claims: Lode Placer

Patented Unpatented

9. Type of Surrounding Terrain: Low hills

El. 2350

10. Geology & Mineralization:

11. Dimension & Value of Ore Body:

Pictures of mine in file

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

Ore Probable:

13. Mine Workings—Amount and Condition:

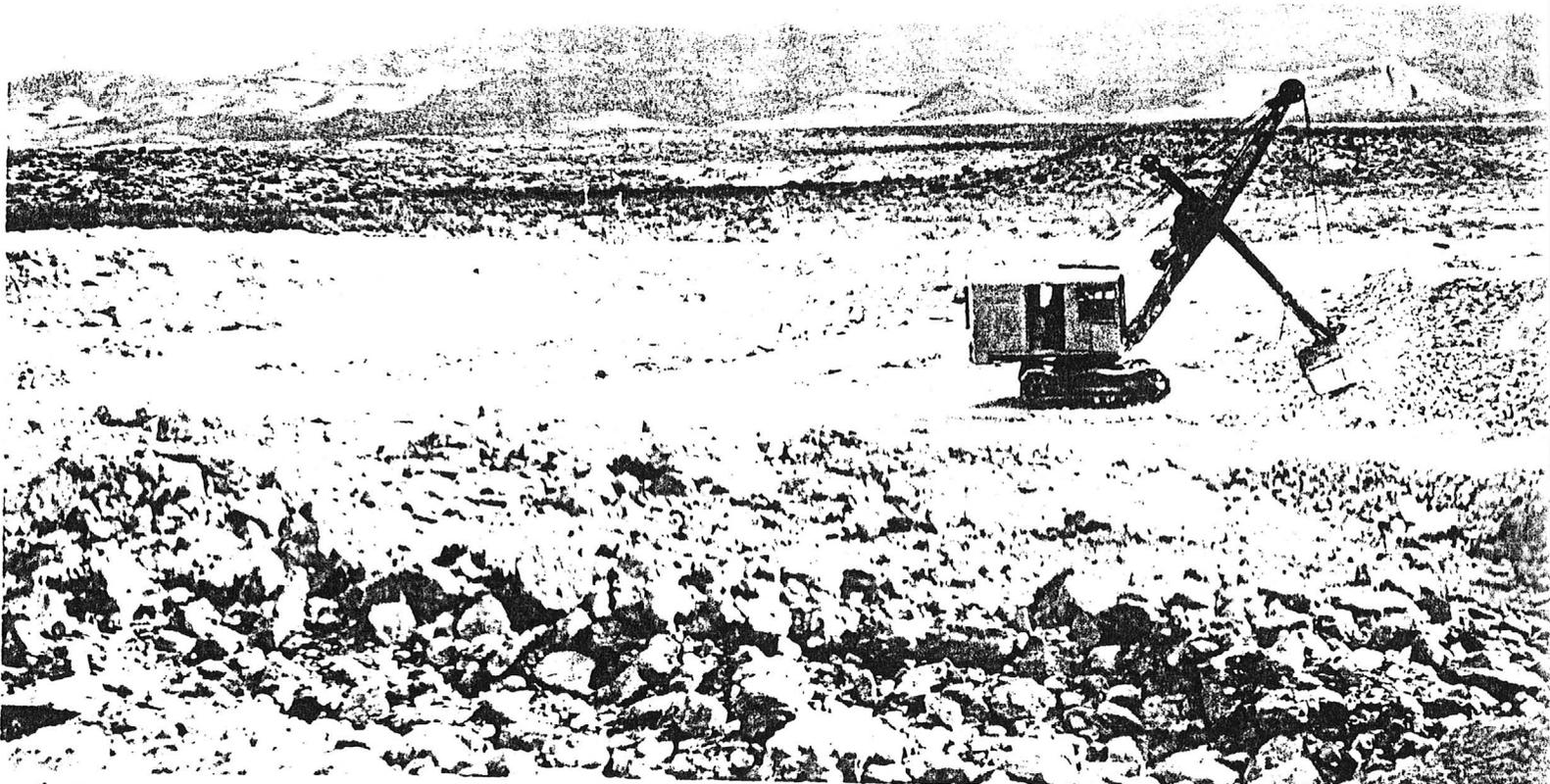
No.	Feet	Condition
Shafts.....		
Raises.....		Open cut
Tunnels.....		
Crosscuts.....		
Stopes.....		

14. Water Supply:

15. Brief History: Ore loaded by diesel elec. shovel hauled to RR at Winkelman
 shipped via rail to Phoenix

16. Signature:

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



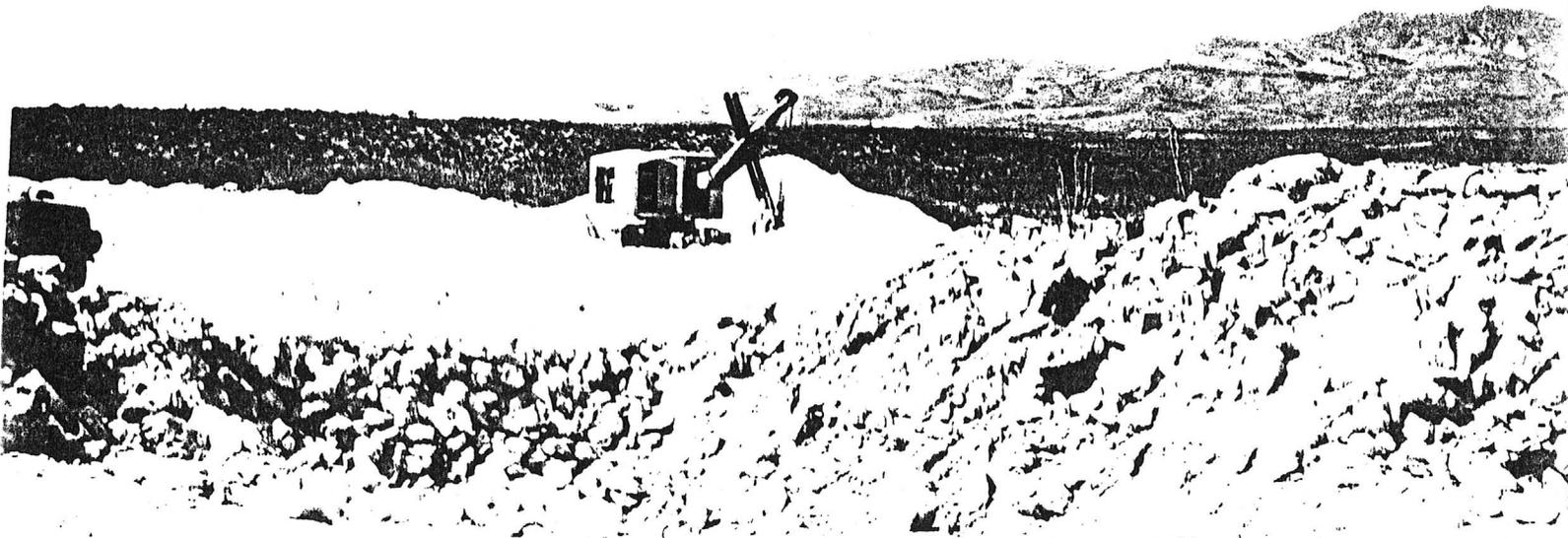
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1946



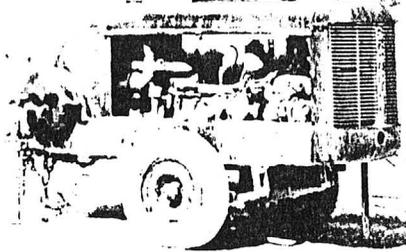
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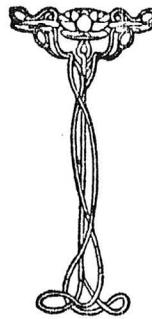




Arizona Gypsum Company

INCORPORATED UNDER THE
LAWS OF THE STATE OF ARIZONA

1917



Office:
28 SOUTH CENTRAL AVE.
MASONIC TEMPLE BUILDING
PHOENIX, ARIZONA

Arizona Gypsum Company

PROPERTY

Location and Description

THE property of the Arizona Gypsum Company comprises forty-one hundred and sixty acres of ground, located in Pinal County, State of Arizona, about six miles in a southerly direction from Winkelman.

The property is pronounced by the United States Geological Survey as being "the largest and most extensive high grade Gypsum deposit in the United States."

DEVELOPMENT

THIS deposit of gypsum lies on top of the ground and is developed by nature by means of three deep washes cutting through the property, exposing solid bodies of gypsum, standing almost perpendicular on either side of the washes, ranging in thickness from 10 to 75 feet. Gypsum is also exposed in the bottom of the washes, but no work has been done to determine how much deeper the mineral occurs.

Wash No. 1 cuts through the Northerly portion of the property; Wash No. 2 is near the center and Wash No. 3 is near the Southerly portion, thus it is an easy matter to determine the quantity and value of the material in sight.

Samples taken from faces exposed in Wash No. 1 analyzed 99.48%.

Samples taken from faces exposed in Wash No. 2 analyzed 99.00%.

Samples taken from faces exposed in Wash No. 3 analyzed 99.47%.

It is estimated that over 50-million tons is exposed to view, blocked out by nature, ready to be mined by quarrying or by steam shovels, and placed on the market at a very low cost.

COMPOSITION

PURE Gypsum is a hydrated calcium sulphate or Calcium mixed with Sulphuric Acid and holding water of crystallization. Chemically pure gypsum when reduced to percentage of weight corresponds to the following composition:

Sulphur Trioxide	46.6
Lime	32.5
Water	20.9

100

Few deposits of gypsum are, however, even as approximately as pure as this. Most of it usually carry varying and often high percentages of such impurities as clay, limestone, magnesium limestone, quartz, iron, oxide, salt, etc.

We are fortunate in this respect as our deposit is practically free from all impurities. Analysis of 20 samples taken from this property gave an average of over 99% pure gypsum.

THE GYPSUM INDUSTRY

THE gypsum industry is a growing one. In the United States there are 18 States producing gypsum as well as Alaska. In all there are 82 deposits being worked. In 1913 there was a production of 2,599,508 tons of raw Gypsum, as against 2,500,757 tons in 1912, an increase of 98,751 tons. The total value of gypsum produced in 1913 was \$6,774,822 as compared with \$6,563,980, in 1912, an increase of \$210,842. In 1914 the total value produced was \$6,895,989, an increase of \$121,167.00 over 1913.

The production of gypsum jumped from 594,452 tons of crude gypsum in 1900 to nearly 2,500,000 tons in 1915.

USES OF GYPSUM

GYPSUM is used in the manufacture of the various plasters, such as Plaster of Paris, molding and casting plaster, stucco, so-called "cement" plaster or hardwall plaster, hard finish plaster, flooring plaster, etc. It is used in manufacturing building material

such as plaster board, solid and hollow blocks and flooring and roofing tiles.

Refined grades of gypsum are used in dental work, in the plate glass industry, for making pottery molds, stereotype molds, molds for rubber stamps, and in various patent cements. The use of Gypsum as a retarder in Portland cement is steadily increasing.

Large quantities of Gypsum are ground without burning and used as land plaster or fertilizer.

The variety "Alabaster" is much used for interior decorations.

The variety "Selenite" (the crystalized form) is in great demand for optical purposes, especially in the manufacture of scientific optical instruments.

To a lesser degree Gypsum is used in the manufacture of paints, wall tints, crayon, paper, imitation meerschaum and ivory, and as an adulterant.

MARKET CONDITIONS

The Use of Gypsum as a Fertilizer

Gypsum when applied to the soil produces the following results:

1. Gypsum has the power of shrinking clay and clay adobe soils and making it more pervious to water and air, by making a large number of crumbs from large sticky masses. Therefore, Gypsum makes clay and clay adobe soils looser, prevents their puddling, packing, baking and cracking, makes plowing and cultivation easier, and, in general, makes the soil, physically, a healthier medium for plant growth.
2. Gypsum serves as the source of the element calcium to plants. Calcium is one of the essential chemical elements to plant growth.
3. Gypsum is the only compound known that will neutralize black alkali (Sodium Carbonate), so prevalent in the soils of the arid west, and make it harmless to plant life. (Black alkali, though a white substance, is so named because in contact with the vegetable matter of wet soil it produces the dark appearance so well and unfavorably known to the irrigation farmer).
4. Gypsum is used to good advantage on alfalfa fields to stimulate the growth of the

plants. This is especially to be remembered in connection with alfalfa fields of several years standing in which bald spots or bare patches are found. An application in such cases, along with fall disking will give striking stimulation to the plants and rejuvenate the field. The reason for this is that Gypsum is a stimulant to the alfalfa plant itself and to the nitrogen gathering bacteria which grow in the nodules on its roots.

5. Gypsum holds moisture and when applied to soils will make less irrigation necessary.

6. Gypsum accelerates the process of nitrification more than any other substance known. Thus an application of Gypsum to the soil releases the nitrogen that is locked up in the insoluble organic matter, and the nitrogen, Phosphoric Acid and Potash combined with the mineral elements of the soil placing these necessary elements at the disposal of plant life.

Recent investigation of the market in and around Los Angeles, Cal., shows that there is a great demand for high grade Gypsum, for use as a fertilizer, in that vicinity, due to the fact that the Gypsum on the market there now is of impure grade and does not produce the best results. The following letter from Mr. Ernest Braunton, a well known soil geologist, and one of the best posted men on soil and plant life of the Southwest, gives the true facts in the matter.

Los Angeles, Cal., May 9, 1917.

Mr. T. M. Drennan,
Phoenix, Arizona.

Dear Sir:—

"Referring to our talk on gypsum will state that I consider the local field one of exceptional opportunity if the material is of high grade.

Some time ago I had a talk on the subject with J. B. Neff, of Anaheim, a wealthy rancher (now traveling in the east or I would write him about it) and the best posted horticulturist I know on field and orchard crops. For many years he was Institute Conductor when I was on the University lecture staff. He said "where can I get some Gypsum? It is all such poor grade that I don't want it. The Agricultural Chemical Works occasionally get some high grade stuff from Utah but are never able to keep any on hand."

I am fully convinced conditions are still the same. The local public no longer makes a strong call for Gypsum for they have learned

they cannot get a constant and sufficient supply of good material and they will no longer buy the low grade ground mixture of clay and marl so common here.

If a high grade article was put on the local market and well advertised I believe the present population alone will in time use a hundred pounds where they now use but one."

Yours truly,

(Signed) ERNEST BRAUNTON.

Upon investigation we find that about 40,000 tons of low grade, impure gypsum is now being consumed, each year, as a fertilizer, by the Los Angeles market alone. This will give some idea of the quantity that would be used in case that market was well supplied with a high grade pure article such as we have. Taking Mr. Braunton's statement as a basis the increase in consumption, providing a constant supply of high grade gypsum was supplied the Los Angeles market, would be 100 fold.

In addition to the Los Angeles market we would be in position to supply, without fear of competition, the Imperial, Perris and other valleys in Southern California reached by the Southern Pacific railroad, also the Yuma, Casa Grande, Salt River and other valleys in Arizona. It would be hard to estimate the quantity of Gypsum that would be used in these localities when it is once put on the market and becomes available for use in each locality. A great amount of land in the valleys mentioned contain alkali in the soil that can only be remedied by the use of gypsum. There is a great amount of clay and clay adobe soil in each locality that can be greatly benefitted by the use of Gypsum. A great amount of Gypsum would be used to advantage to retain moisture in the soil, besides the application of Gypsum to alfalfa fields to stimulate plant growth and rejuvenate the fields would be of considerable importance.

All that is necessary is to place our high grade material on the market in sufficient quantity so that it will be available at all times in the localities where its use will be beneficial to the farmer and let it be known that it can be had at a reasonable price.

Gypsum Used in Making Cement

Gypsum is being more extensively used every year in manufacturing cement. It is used as a retarder and the higher the grade used the

better results obtained. Most of the Gypsum now used by the Southern California cement plants comes from Utah due to the fact that the Gypsum deposits of California carry too much impurities and is too low grade

Recent investigation assures us that we will be able to supply the cement mills of Southern California with a great amount of their requirements just as soon as we are in position to do so.

Use of Gypsum in Making Plaster

Plaster is made out of varying and often times low grade, impure Gypsum. Hard-wall plaster, flooring plaster, hard finish plaster, molding and casting plaster, interior decorations, building material, such as plaster board, solid and hollow blocks, flooring and roofing tiles, etc., must, however, be made of high grade material.

An enormous quantity of high grade material, such as has just been described, is annually used in Los Angeles and Southern California. This class of material commands a high price and we are in position to compete with any concern in the country for this class of business. We will of course have no competition with our Home trade.

Building Material

Gypsum is used extensively in the manufacture of building material, such as plaster board, solid and hollow blocks, flooring and roofing tiles, interior decorations, etc.

Building material made out of Gypsum is absolutely fire-proof and is a non-conductor of sound.

Plaster board can be furnished in any size and thickness desired, and is designed to be nailed directly to the studding.

Blocks and tiles are molded in various sizes, and used for interior partitions, exterior construction, and flooring and roofing.

Gypsum tiles are lighter than clay tiles, are straight and true, can be cut with a hand saw, and because of their lightness and size can be laid very rapidly.

On account of the low cost of mining our material we will be able to furnish the building trade with an article that is superior to any other building material on the market and at less cost.

Mr. W. E. Defty, the well known mining Engineer, of Phoenix, in writing about this property concludes his article as follows:

"After considering the facts in connection with this wonderful deposit of gypsum we are forced to the conclusion that this deposit is one of the most valuable mineral deposits in the southwest and with proper management will develop into one of the largest paying industries in the country. I have personally examined this deposit above referred to and the gypsum is of exceptionally pure quality. The mineral is perfectly soluble in hydrochloric acid. There is no residual matter left whatever."

SUMMARY



Nine Reasons Why the Arizona Gypsum Company is Offering to the Public a First Class and Safe Investment

1. We have the largest and most extensive high grade Gypsum deposit in the United States.
2. A market is already established for Gypsum and Gypsum products throughout the United States.
3. The demand for HIGH GRADE GYPSUM throughout the country far exceeds the supply.
4. We have millions of tons in sight, averaging over 99% pure, blocked out by nature, lying on top of the ground, ready to be mined at the lowest minimum cost.
5. Our deposit of Gypsum is practically free from all impurities which makes it immediately in demand for all purposes.
6. The beneficial effect of Gypsum when applied to the soil immediately creates a demand for it, when placed on the market, in the various agricultural sections of the Southwest.
7. Gypsum is the only compound that will neutralize black alkali and will be the means of reclaiming the alkali lands of the Arid West.
8. The possibilities of Gypsum and Gypsum products is unlimited. It is increasing every year.
9. When proper machinery is placed on this property, and if properly managed, it will be a source of revenue for generations to come.

For the major portion of the statements, facts and figures set forth in this pamphlet, we are indebted to reports, publications and statistics made by the—

United States Geological Survey—Washington.
United States Agricultural Department—Washington.

University of California—Berkeley.

University of Arizona—Tucson.

Prof. Mark Walker—Chemist—Los Angeles.

Prof. Wayland Avery—Chemist—Los Angeles.

Prof. Paul F. Bovard—Government Chemist—San Francisco.

Mr. W. E. Defty—The well known Mining Engineer—Phoenix.

Mr. Ernest Braunton—Soil Geologist—Los Angeles.

Hilgards Book on Soils—recognized authority by the United States Government.

Respectfully submitted,

ARIZONA GYPSUM COMPANY.

PROPOSITION



FOR the purpose of securing sufficient funds to equip the property with necessary machinery and place the material on the market, we have secured permission from the Arizona Corporation Commission to dispose of 75,000 shares of the Treasury stock of the Corporation at 50 cents per share.

The Arizona Gypsum Company is capitalized for only TWO HUNDRED AND FIFTY THOUSAND shares (250,000) par value ONE DOLLAR (\$1.00) per share, of which ONE HUNDRED AND FORTY-FIVE THOUSAND shares (145,000) is in the Treasury.

All stock is fully paid and non-assessable.

As it will not be necessary to dispose of the entire 75,000 shares authorized to be sold, the sale of this stock will continue only until such time as sufficient funds are realized to place the property on an active business basis.

Any further information desired kindly call or address

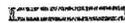
ARIZONA GYPSUM COMPANY

28 S. Central Ave.
Masonic Temple Bldg.,
Phoenix, Arizona.



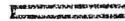
Capital Stock:

250,000 SHARES PAR VALUE \$1.00
PER SHARE
FULLY PAID AND NON-ASSESSABLE



Officers:

J. C. CALLAGHAN - - PRESIDENT
PHOENIX, ARIZONA
F. H. KEDDINGTON - VICE-PRESIDENT
PHOENIX, ARIZONA
T. M. DRENNAN - SEC. AND TREAS.
PHOENIX, ARIZONA



Directors:

J. C. CALLAGHAN F. H. KEDDINGTON
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A. L. MOORE W. L. BARNUM
A. R. TAVERNER C. W. HARTMAN
H. B. WILLSON

