CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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SANTA MARGARITA
MAGNETITE PLACERS

Martinez Mining District
Yavapai County, Arizona

SANTA MARGARITA MAGNETITE PLACERS

Martinez Mining District

Yavapai County, Arizona

INDEX

INTRODUCTION

The subject properties occupy portions of Townships 8, 9 and 10 North, Ranges 5 and 6 West, G. & S.R.B.&M. They comprise some 184 placer mining locations of 160 acres each, made during the period from July 1, 1959 to August 1, 1959. The claims are prominently and adequately staked, and many are developed by test pits, auger holes, and other excavations. The claims are situated near Congress, Arizona, and are traversed by U. S. Highway 89 and the AT&SFRR. A study of title is not included within the scope of this report, and minor conflicts may exist. Established easements and rights of way are recognized.

Examination of these properties was conducted during the period from November 5 to December 10, 1961 at intervals. The examination was made at the request of Gordon G. Howard, and Melvin H. Jones, President and Secretary-Treasurer respectively of Magnet Mining Company, a Nevada Corporation domesticated in Arizona. The examination was conducted for the purpose of determining the possible extent and grade of magnetite placer concentrations within the area, and to provide a basis for recommendations with respect to further development. This report is necessarily preliminary in nature by reason of the brief time spent in the work, lack of systematic development exposures, and present uncertainties as to the market for the

product. Systematic evaluation of this large acreage would require a study over a period of many months, with attendant, sizeable development expenditures.

The properties occupy a broad area of coalescing fans and terraces situated a few miles outward from the Weaver and Date Creek mountain ranges. Elevations range from approximately 2700 to 3200 feet above sea level. The climate is semi arid, and the life zone Upper Sonoran. Temperatures range from a maximum of approximately 120°F. to brief minimums of 20°F. Maximum precipitation occurs during July and August in the form of sporadic torrents. An adequate labor supply is present, and commonly the small mining operations are non union. Pay scales range from $1.75 to $2.50 per hour based on job classifications and skills.

GEOLOGY

The alluvial deposits under consideration have accumulated over a long period of time and widely varying climatic conditions. Almost the entire area of the claims is covered by such deposits, an exception being a minor outcropping of crystalline rocks in the vicinity of U. S. 89, north of Congress which is the toe of the Date Creek range.

The earliest gravels were formed prior to the period of mid and late

Tertiary vulcanism, and may readily be identified by the total absence of material related to this period. For the most part these deposits are buried under more recent accumulations, but they are not uncommon at the present land surface.

Tertiary vulcanism resulted in the formation of broad lava flows, ash falls, and locally, lake beds in the adjacent mountainous areas and following this deposition the erosion was extremely vigorous. Deposits formed at this time show very little sorting of the components. They contain glass shards, volcanic bombs, and boulders of lava and trap rock, in addition to the major, crystalline rock components. This type of erosion and deposition was generally unfavorable for the accumulation of placer concentrations. The well established, pre-volcanic drainage pattern was considerably changed during this period.

At a somewhat later date, probably during Pleistocene times mainly, the area was drained by numerous perennial streams which formed broad sand bars and gravel banks. The stream action was largely degrading and previously deposited bodies were extensively reworked. During recent times the area has become progressively more arid, with intermittent stream flow, and sporadic flood conditions. In places the action has been largely degrading, and in others aggrading. Consequently the present stream beds present marked variations in

sand and gravel types, ranging from poorly sorted, silty mud flows, to sharp and well sorted sands and pea gravels.

Within such a geologic environment it is a natural expectation that placer concentrations will range widely from point to point. Such a condition is amply demonstrated by the wide range of magnetic material present in the samples taken by the writer and others to date. The principal problem lies in determining the extent and degree of concentration present in the more favorable areas.

SAMPLING AND ASSAY PROCEDURE

While these placers are considered primarily from the standpoint of their magnetite content it is worth noting that adjacent areas have produced considerable placer gold, and it is further possible that other placer minerals of some worth may be present. Systematic sampling of the area was not included within the scope of this report, but sufficient sampling was performed to indicate the general range of values that may be present and to indicate at least a few of the areas that warrant more intensive development and sampling.

Individual samples taken by the writer ranged from 6 to 24 lbs. in weight. These samples were then cleaned with a hand magnet, and the magnetic portion submitted for assay by a commercial assayer.

Several samples, after cleaning, were then panned and the heavy pan fraction-examined. A few fine colors of placer gold were noted in the samples from Jones Gulch, and one fine color was present in the Martinez No. 1 sample. Present as minor accessories were zircon, garnet, limonite, and sometimes scheelite.

Among the seven samples taken by the writer the magnetic content ranged from a minimum of 1.06% to a maximum of 10.0%. The lowest grade sample was taken in lower Martinez gulch just below a point where it erodes a sizeable bank of caliche. The best sample was taken in Upper Martinez wash near a point where it is eroding a crystalline rock outcrop. This condition represents one of the most favorable for placer accumulations.

For details of sample locations and grade of product reference is made to the appended map and assay report.

MINERAL RESERVES

In its present undeveloped state it is impossible to accurately assess the total potential. The problem is further complicated by the fact that the total market and realizeable price for the product are not presently known. A previous report refers to some 5,000,000 long tons of proven and probable material containing approximately 4.5

percent magnetics in 1/2 Sec. 21. The writer finds no quarrel with such a figure, but feels that stress should be laid on the total potential which is certainly many times greater. Furthermore, during initial development of the property, emphasis should be placed on those areas containing the best values and it is suggested that a cut-off of 5% total magnetics might be used in outlining reserves, with every effort being made to establish initial reserves with an average grade on the order of 7% magnetic content.

CONCLUSIONS AND RECOMMENDATIONS

Pending extensive studies of possible markets together with detailed cost estimates, it is impossible to project an economic outcome for the properties in question. The magnetite concentrations present are quite extensive, and are of unusually good indicated grade for deposits of this type. Further development of the properties is certainly warranted, provided only that market investigations continue favorably. On a tonnage basis the deposits may be mined at very low costs using modern earth moving equipment, and simple, dry, magnetic concentration. The percentages of available magnetics represented by simple hand magnet removal should closely approximate the recovery by such methods.

Within such a very sizeable acreage it is necessary that steps be taken to close in on the most attractive areas. In addition to a sampling program, it is recommended that geophysical and geologic studies be made hand in hand. A high range magnetometer survey might very well pinpoint higher than average accumulations at surface as well as in depth. Drilling and other excavating should follow this work. As systematic development revealed areas of potential ore a small pilot operation should be undertaken for the purposes of determining possible costs, grade of product, and recovery.

From the sampling and examination work performed to date, it is readily apparent that certain areas on Martinez Wash and in Jones Gulch contain concentrations in the range of 7% total magnetics and upward that deserve immediate development. With additional studies it is most likely that other such areas will be brought to light.

In further development of the more attractive areas drill holes should be on a grid pattern where possible and should be continued to depths of at least 100 feet wherever the concentrations are of good grade. A determination of gold content should be made as a routine matter since it is very likely that some worthwhile concentrations of this metal will be discovered. It is anticipated that with such development in depth a substantial tonnage of material containing in the range of 6 to 8% total magnetics will rapidly be established.

The most speculative aspect of this project at present lies in the uncertainties of total demand and price for the product. With more detailed information available on this subject development could go forward with considerable anticipation of success on a broad scale.

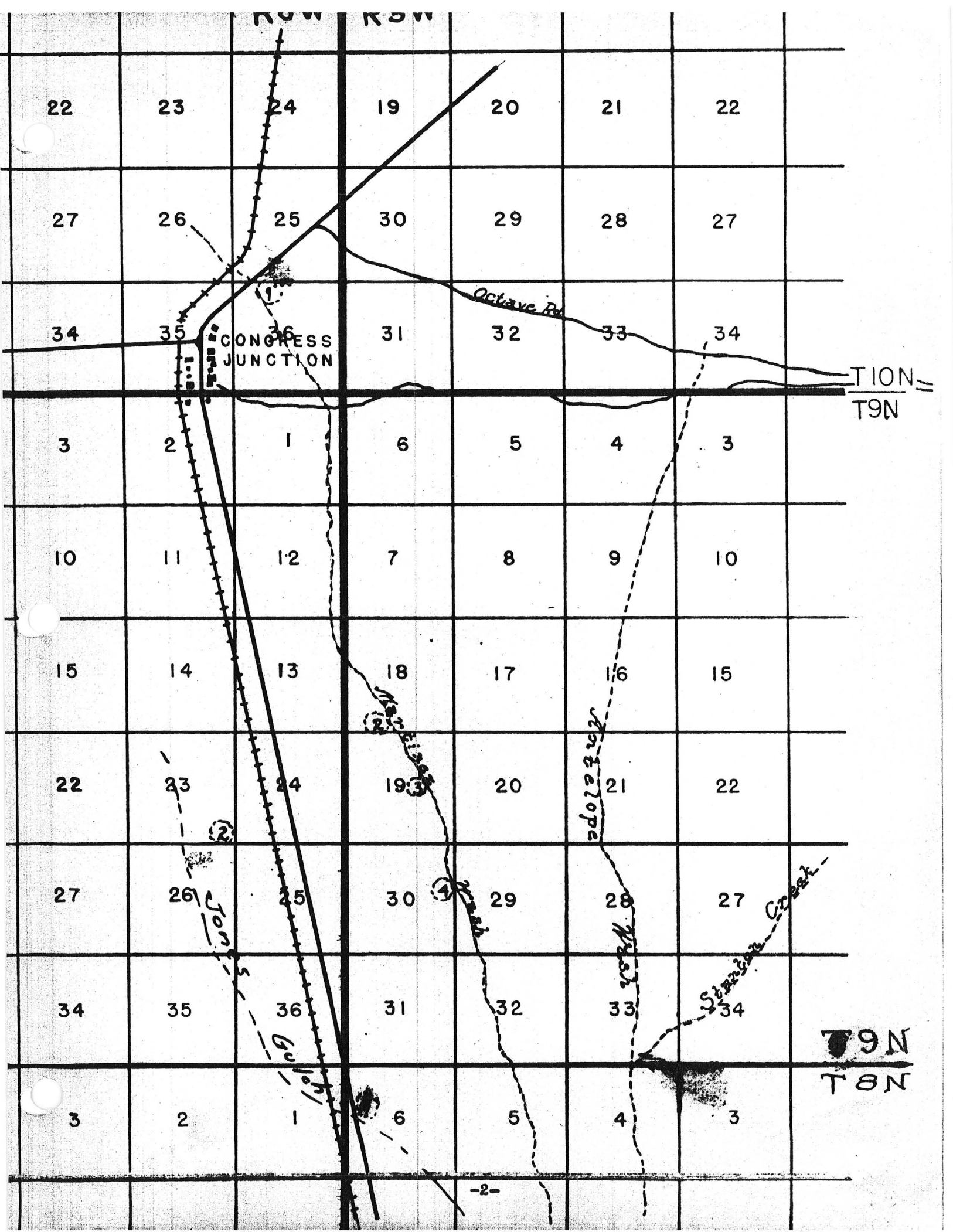
Respectfully submitted,

Mason W. Rankin
Mining Geologist

Peeples Valley, Arizona
December 12, 1961

APPENDIX

1. Photos with description
2. Claim and Sample Map
3. Assay Certificate - Arizona Assay Office
4. Sample Reports, Jones et al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Shop No. 4290 Date 8 DEC 1961

File No. 1217 RA

VALUES
Latest Quotation

1 oz. Gold.....
1 oz. Silver.....
1 lb. Copper.....
1 lb. Lead.....
1 lb. Zinc.....

THIS CERTIFIES
Samples submitted for assay contain as follows:

CHAS. A. DIEHL
(Registered)

Arizona Assay Office

Phone ALpine 3-4001

815 North [illegible] Street
Phoenix, Arizona
P. O. Box 1148

Short Ton ..... 2000 Lbs.
Short Ton Unit ..... 20 Lbs.
Long Ton ..... 2240 Lbs.
Long Ton Unit ..... 22.4 Lbs.

MR. MASON RANKIN
BOX 151
YARNELL ARIZONA

% Magnetics

MARKS	SILVER PER TON Ozs.	SILVER PER TON Tenths	VALUE PER TON	GOLD PER TON Ozs.	GOLD PER TON 100ths	VALUE PER TON	TOTAL VALUE PER TON of Gold & Silver	% PERCENTAGE IRON	% PERCENTAGE SiO_2	REMARKS
Antelope #12			2.1					55.20		
NO TAG			5.2					51.40		
JONES GULCH #1			8.5					60.80		
JONES GULCH #2			7.8					53.60		
MARTINEZ #1			10.9					63.00		
MARTINEZ #2			4.8					63.00		
MARTINEZ #3			5.2					63.00		
MARTINEZ #4			1.06					57.00		
JONES COMPO.									0.02	
MARTINEZ COMPO.									0.08	
			44.7							
			55							

MWR

Charges $ 54.00 PAID

Assayer.....

1M 4-56 Art-Press Printers

Magnet Mining Corporation

FIELD OFFICE — BOX 807, CONGRESS, ARIZONA

3 December 1961

Samples taken from Santa Margarita group by Gordon G Howard and undersigned on 2 December 1961. Separation made with hand magnet, and computation made by Melvin H Jones.

#1	Section 1 T9N R5W 20 ft bank sample on side of Martinez Creek. Channel cut made.	1.5%
#2	Same bank about 100 ft to the North.	5.4%
#3	Wash at foot of above bank in Martinez Creek. 3' hole.	4.3%
#4	Section 21 T9N R5W Antelope Creek. Channel cut on 12' pit.	8.8%

20.0
5.0

MELVIN H JONES
Geologist

Note. Mr. Howard and Mr. Jones(geologist) are both major shareholders in Magnet Mining Company. Samples taken by these individuals are part of their own exploration and development program. These reports are for general information.

MWR

Magnet Mining Corporation

FIELD OFFICE — BOX 807. CONGRESS. ARIZONA

17 November 1961.

Samples taken at locations mentioned, by G Howard and the Undersigned on 16 November 1961.

Sample No.	Location	Percent of Fe_3O_4
1	Wash Sec 6 and 31 (line) T9N R5W 3' augar hole	16.5%
2	Ridge near washes, near center of Sec 31 T9N R5W 3'hole	5.8%
3	Side of wash East center Section 6 T9N R5W 3'hole	5.9%
4	Old bulldozer pit Sec 36 T10N R6W Depth 4'	5.6%

MELVIN H JONES
Geologist.

Magnet Mining Corporation

FIELD OFFICE — BOX 807, CONGRESS, ARIZONA

10 November 1961.

MAGNETITE SAND SAMPLES TAKEN BY M.RANKIN, GORDON HOWARD, AND M. JONES ON 5 NOVEMBER, 1961.

Sample No.	Location	Magnetic Material percentage
1.	Martinez Creek, Section 25 (near highway 91)	10.3%
2.	Martinez Creek, South end section 18	6.9%
3.	Martinez Creek, Center section 19	6.5%
1.	Jones Gulch, Section 24, Center(lower 1/2 of Sec)	8.4%
2.	Jones Gulch, Section 23,(1/2 mile North of #1)	9.7%
3.	Jones Gulch, Section 14 (1/2 mile West of #2)	5.3%
X *	Bank near RR, near Vagabond (Sec 12 - South)	7.3%

Magnetic separations and computations by undersigned. Numbered samples taken to 3 ft depth.

MELVIN H JONES
Geologist

* Mr. Rankin not present when this sample was taken.

Magnet Mining Corporation

FIELD OFFICE — BOX 807. CONGRESS. ARIZONA

October 30 1961

Surface and Test hole samples taken by Gordom G. Howard, Melvin H. Jones and Larry Robinson during period 20 June 1961 to 20 July 1961. Magnetite material percentages run by Robinson, Geology Field Assistant.

Claim Group	Depth	Magnetic material % basically Fe_3O_4.
Hualapai		
Section 34	Surface with hand shovel	4.1 %
Section 18(near highway 93)	25 ft bank	7.5 %
Section 18 (SE area)	Stream bottom	13.2 %
Section 4	4 ft bank	6.8 %
Section 4	Stream bottom up 4 ft bank	5.7 %
Section 4	3 ft hole in wash	22.0 %
Section 4	Up 100 yds from above	19.5 %
	Average	11.2 %
Yucca		
Section 22	Surface (1 foot)	4.9 %
Santa Maria		
Section 8	Surface (1 foot)	5.1 %
Santa Margarita		
Section 24	Augar hole 9 ft	12.0 %
Section 29	" " 5 "	8.7 %
Section 32	" " 12 "	14.6 %
Section 24	" " 9 "	10.7 %
Section 25(near highway 89)	Shovel hole 3 ft	25.03 %
Section 30	" " 3 ft	1.11 %
Section 36	Augar hole 9 ft	6.2 %
Section 36(South)	" " 9 ft	6.0 %
Section 1 (East of Congress)	" " 6 ft	4.95 %
Section 24(North)	" " 9 ft	12.0 %
	Average	10.12 %

MELVIN H JONES
Geologist

Magnet Mining Corporation

FIELD OFFICE — BOX 807, CONGRESS, ARIZONA

15 April 1961

Magnetite sand samples from Santa Margarita Placer property.
Some of these samples were taken from comparative lean locations just to find out what they would show.

Sample No.	Location	Percentages (Magnetic material)
1	South Creek Section 6, T8N R5W	3.221%
2	Martinez Creek Section 32 T9N R5W (bank)	1.992%
3	Martinez Creek Section 29 T9N R5W (bank)	1.663%
4	Martinez Creek (200 yrds West) Sec 1 T9N R6W	2.606%
5	Antelope Creek confluence Sec 33 T9N R5W	3.74%
6	Open pit(used by State Highway for gravel Section 30 T10N R5W	1.25%

MHJ

MAGNETITE

July 3,1961

Title - Magnetite deposits in the placer deposits of Section 6 in the Santa Margarita District of Township 9 North, Range 6 West.

Object - To determine the average percentage of Magnetite in the placer deposits of Section 6. From the average percentage the block tonnage will also be determined.

Data - The following data was determined from channel samples from 16 holes placed in such a manner as to give a true cross- section as to tonnage in this Section. (See map on following page).

(Calculations are placed with the data for ease of understanding.)

# (hole)	Depth	Ore in Sand	Magnetite ore	Per cent
16 Sample #1 -	7 ft.	107.5 gms	6.6 gms	6.1
10 Sample #2 -	9 ft.	212.6 gms	11.8 gms	5.5
12 Sample #3 -	3 ft.	256.4 gms	26.8 gms	10.4
11 Sample #4 -	3 ft.	253.9 gms	24.0 gms	9.4
14 Sample #5 -	7 ft.	201.3 gms	17.1 gms	8.4
5 Sample #6 -	3 ft.	224.8 gms	15.2 gms	6.7
15 Sample #7 -	2 ft.	83.2 gms	1.9 gms	2.2
13 Sample #8 -	10 ft.	127.3 gms	4.5 gms	3.6
1 Sample #9 -	7 ft.	141.6 gms	3.4 gms	2.3
2 Sample #10 -	4 ft.	144.0 gms	6.9 gms	4.7
3 Sample #11 -	4 ft.	174.4 gms	13.3 gms	7.5
8 Sample #12 -	11 ft.	136.7 gms	6.3 gms	4.5
4 Sample #13 -	7 ft.	176.6 gms	7.4 gms	4.1
6 Sample #14 -	9 ft.	173.2 gms	16.9 gms	9.7
9 Sample #15 -	3 ft.	158.2 gms	2.7 gms	1.6
7 Sample #16 -	9 ft.	134.9 gms	9.4 gms	6.9

Results - By averageing the percentages I derived the figure of 6.4%

as the arithmetical average. By using a standard weight of 117.5 pounds per cubic foot as the weight of the sand with the Magnetite ore, I was able to determine that Section 6 to a depth of 5 feet contains approximately 164.3 X 10^8 pounds of sand and ore. Therefore it contains 210.3 X 10^4 tons of Magnetite at the same depth of five feet.

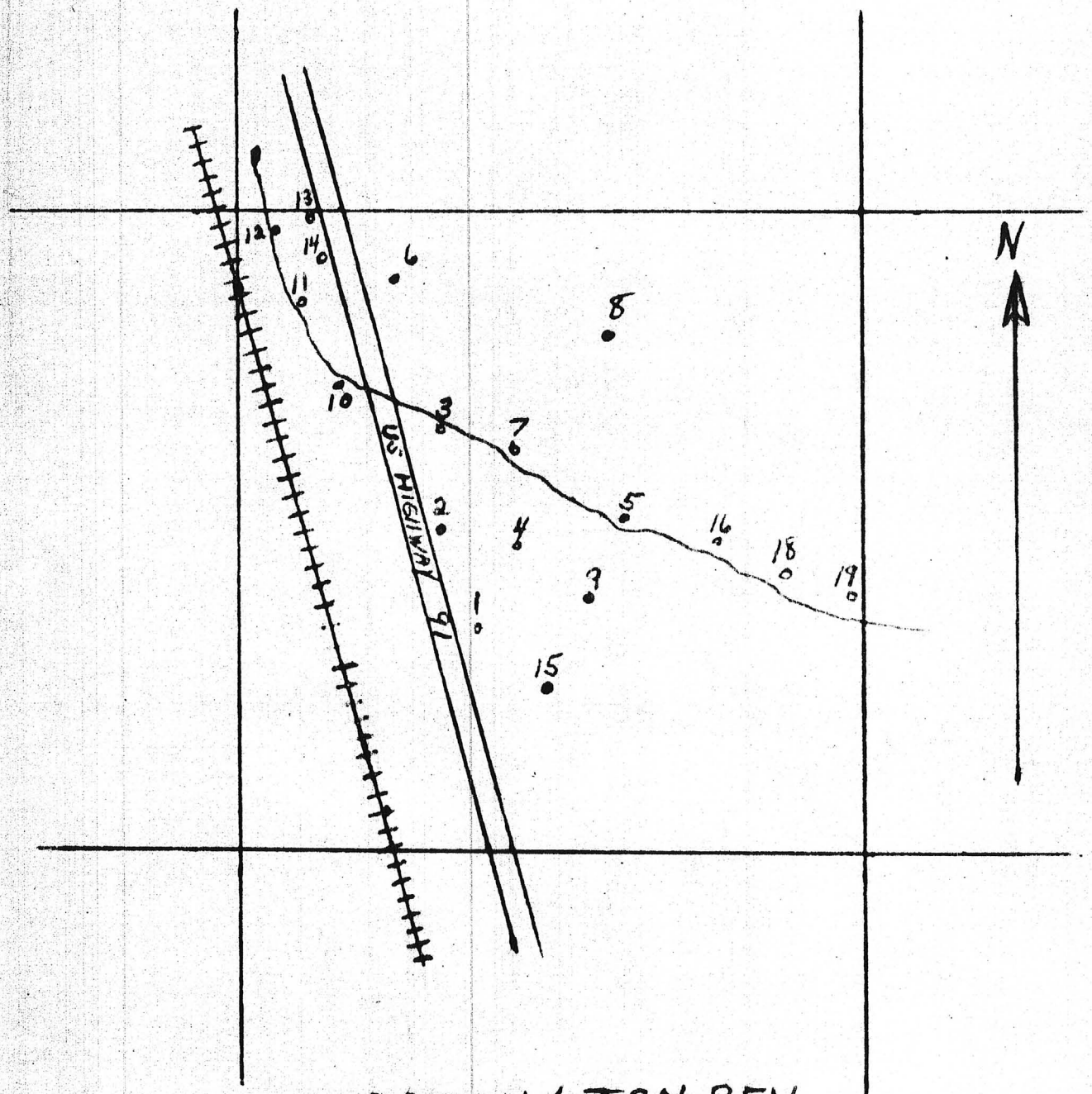
All data was derived by Mr. Gordon Howard, Mr. Melvin M. Jones and Field Assistant Larry Robinson.

SIGNED

LARRY ROBINSON
Field Assistant - Geologist

This report COPIED in its entirety. The original on file at the CHESTERFIELD REALTY 119 North Montezuma Street Prescott, Arizona phone HI 5 3070. I will be most happy to assist anyone interested in the aforesaid at any time.

Very Truly Yours
Lawrence G. Chantler
Lawrence G. Chantler



SECTION 6, T 8N, R 5W

SALT RIVER BASE LINE

March 1961

Magnetic seperation and pin point spectrographic examination of magnetite bearing sands from Congress, Arizona.

32% - 50 mesh
24% - 80 mesh
40% - 100 mesh

Total Iron	69.5%
Silica	1.64%
TiO_2	0.40%
Manganous oxide	0.011%
CO_2	0.09%
P .	0.26%
S	0.008%
AL	Trace
Cu	Trace
Tin	None

Ferric oxide	73.%
Ferrous oxide	22.8%
Ilmenite ($FeTiO_3$)	0.76%
Manganous oxide	0.11%
Silica	1.64%
CO_2	0.09%
Phosphorous pentoxide	0.60%
Total	99.7%

Assay information from Charles W. Sippel, Jr. Metalurgist
1894 31st Averne
San Francisco, California
Phone MO 14623

COPIED By Lawrence G. Chantler CHESTERFIELD REALTY 119 North Montezuma Street Prescott, Arizona Phone HI 5-3070

Lawrence G. Chantler

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Geology File

IRON AND GOLD MINERALIZATION AND SEDIMENTARY FEATURES. CONGRESS STANTON ROAD, ARIZONA. MAGNET MINING COMPANY PLACER CLAIMS.

by M. Jones

MELVIN H. JONES
Mining Geologist
~~Box 1,- Montello, Nevada 89830-~~

May 15, 1975.

IRON AND GOLD MINERALIZATION, AND SEDIMENTARY FEATURES, ALONG CONGRESS-STANTON ROAD, ARIZONA. MAGNET MINING COMPANY MINING CLAIMS.

At the request of Mr. Howard S. Gable, Box 946, Kansas City, Mo.,64161, the undersigned, assisted by Mr. Jack Day, Moab, Utah, made a study of surface iron and gold availability, both qualitive and quanitive, and the sedimentary aspects, along the Congress-Stanton road (Arizona), Yavapai County. This was accomplished between March 2, 1975 and May 13, 1975. Involved in this was sampling, field laboratory work, assaying, examination of the geologic features, and computing the values present. See map, Exhibit A, for sampling locations.

It is to be emphasized that the area covered is only a small portion of the Magnet Mining Company claims. However, it was felt that this study would be of value as an initial guide for future and more comprehensive exploration to determine the commercial practicably of the mentioned property. It is to be pointed out that basically Magnet Mining Company was interested in the magnetite containing sands.

GENERAL GEOLOGY.

The alluvium on which the claims are located are Quarternary exogenetic sedimentary deposits. Immediately to the East and North are the Weaver mountains, composed premarily of the Yavapai series, Pre-Cambrian rocks, which have been age dated at about 1600 million years. These are mostly quartz monsonites, schists and diorites. The alluvium is composed of material that eroded away from mountains which were on top of the present mountains. The East half of the sampled area are alluvial fans (placer bajadas), which grades into colluvium close to the mountain. The West half is mostly an alluvial flood plain which is drainage for the valley to the North going to Hillside (Az.). Significant differences will be found in the respective alluvial depositions, with the desert processes.

In the description of sampling sites (Exhibit B), a variety of the ferruginess and auriferous bearing sands and gravels will be noted. Some are now primarily caliche (yet containing Fe and Au) formed as a result of ancient ground water immersion. Others are

silts to medium dark sand. Others are reddish ferric colored sand. Some have minor amounts of pebbles, cobbles and boulders, as well as coarse sand. Also soil is on the top, in places. It should be understood that this is normal in most alluvial areas. There is usually a series of rich, lean, fine sands, coarse sands and gravels with scattered cobbles and boulders, in lenses. There is a consistancy of variety. If they average good Fe or Au, then such a property is valuable. In the samples taken, less than 6.5% of the material was larger than ¼ inch in size. It should be understood that in other areas of the Magnet Mining properties, a large percentage of large material will be encountered. Computations and sampling results will be covered under the "Conclusions" portion of this report".

SAMPLING.

The samples taken were a measured cubic foot, which was weighed so that it can be converted into tonnage factors, where applicable. All samples were screened into plus 4 mesh fractions and minus 4 mesh fractions. Both fractions were weighed and the plus fraction discorded as values therein would be negliable (the iron and gold are in the 4 minus portion). An efficient power driven dry washer was used to obtain the gold values, and a large hand magnet separation produced the iron concentrates. All of these fractions were weighed on a gram scale, before sending to an assayer.

PERTINENT FACTORS.

In the sampling pattern as outlined on Exhibit A, the sites choosen were, for the most part, old bulldozer pits, which permitted surface sampling without digging an original hole. These pits are a result of annual assessment work of Magnet Mining Company, in the past.

It is to be pointed out, that in order to ascertain ore reserves, a programed drilling operation will have to be accomplished. Or, as an interim measure deep backhoe pits would be helpfull. The surface sampling does not necessarily indicate that there is ore at depth, but it will give a large amount of guidance. At the present sampling vicinity, drilling will indicate whether the alluvium is on a shallow pediment, or has important depth.

Both of the ghost towns immediately to the East, Stanton and Octave, were gold mining centers many years ago, and the operations included placer areas not far from the Magnet Mining claims. Immediately to the North and East of the present sampling area are the Alvarado, Blue Bucket, And Rincon gold (underground mines). As a result of this background, gold sampling was included in this study, along with the principal considered metal, iron.

CONCLUSIONS.

Iron

Assay report, Exhibit C, covering iron, titanium and silica results in computation outlined below. The silica information is important, as background information. See Exhibit D for computation data. It is to be pointed out that the assay report covers the concentrates sent to the assayer, only. This information had to be proportioned for the entire sample. Results follow:

Sample.	Iron.	Titanium.
1.	4.14%	.021%
2.	4.06	.022
3.	5.97	.037
4.	7.21	.0218
5.	6.03	.0185
6.	5.45	.0157
7.	5.05	.017
8.	10.8	.036
9.	5.4	.012
10.	12.5	.039
11.	1.39	.041
12.	2.06	.038
Average	5.84%	.0266%

Based on current Great Lake iron prices, there is about $1.75 Fe in each average ton. It will be noted that the iron samples averaged 5 and 84/100 percent, which is unusually good for alluvial magnetite properties. In an earlier feasibility study, made years ago by a now defunct company (US Magnetite Corporation), a percentage of 02.7 Fe was the cut off point between good and poor alluvial iron. The undersigned neither rejects nor accepts this contention.

It is well to bear in mind that the magnetic mineral magnetite, which is easily recovered by inexpensive magnetic separation, is

composed of 72.4% Fe and 27.6% O. The silica content outlined in Exhibits C and D are quartz particles that adhered to the magnetite, even during magnetic extraction(and adhering to the Ilmenite). Now, if this alluvial iron is mined, it will have to upgraded to at least 51.5 % Fe, for most buyers. This can be cheaply and readily accomplished by putting the magnetic fraction (after screening) thru a rolls crusher, thusly, releasing the magnetite from the quartz or vice versa. Past studies indicate the basic magnetic fraction is 40 to 60 mesh. This laboratory type work should be re-accomplished in determining best recovery processes, for any given area of the Magnet Mining claims.

The titanium(Ilmenite) content is an import/item for most iron buyers. In checking the major iron companies in the past, titanium under 1 % is not a penalty item. In the samples tested, Ti is well below 1 % . However, in the past, some samples from the Magnet Mining claims show about 1 % Ti .

Gold.

Assuming the Curry assay report to be correct, the gold values encountered are a surprise and considerably higher than anticipated, by the undersigned. Assay report, Exhibit F, and computations, exhibit E, disclose the following.

Sample	Gold in milligrams*	Value**
1.	1782/yd	$10.30/yd
2.	540	3.12
3.	405	2.34
4.	378	2.18
5	81	.45
6.	324	1.87
7.	216	1.25
8.	324	1.87
9.	684	3.76
10.	270	1.56
11.	702	4.05
12.	486	2.81
Average	513/yd	$2.96/yd

* 31,103 mg = 1 troy ounce. 31.1 mg = 1 ~~gram~~ oz.(Troy)

**Figured at market price of #163.50 per Troy ounce

I should be understood that the above is primarily free gold, that averages 900 fine. But, some gold is attached to small quartz

particles; however a minus 8 mesh screening results in insignificant losses. The above values includes estimated losses from dry washer recovery. Wet processing will result in a higher recovery, but in this desert country, water is normally not available for this purpose. As placer gold is universally computed in values per cubic yard, this was accomplished in this report. Iron was considered in short ton weights (it is sold at Great Lakes ports in long tons).

General conclusions.

Based on the samples taken at the locations covered in this report, a cubic yard weighs 2187 lbs.

As mentioned earlier, the Eastern portion of the sampled area is in the form of alluvial fans, or what can be called a bajada placer in desert regions. Until significant drilling is done, it is not known as to whether the Eastern sample area is a gravel mantled pediment, or has adequate minable depth.

The flood plain region to the West, appears to carry less iron. Both areas present a variety of alluvial material, in a series of separate lenses. This is a result of fluvial braiding action, sorting and resorting from running water, erosion and deposition from infrequent torrential floods, and cementation by interstitial deposition of mineral matter (such as lime or silica thru infiltrating solutions in some localities). It will be well to mention that the heaviest deposition of gold will normally be on bedrock, or in deposition fluvial lag lines, close to the Weaver mountains.

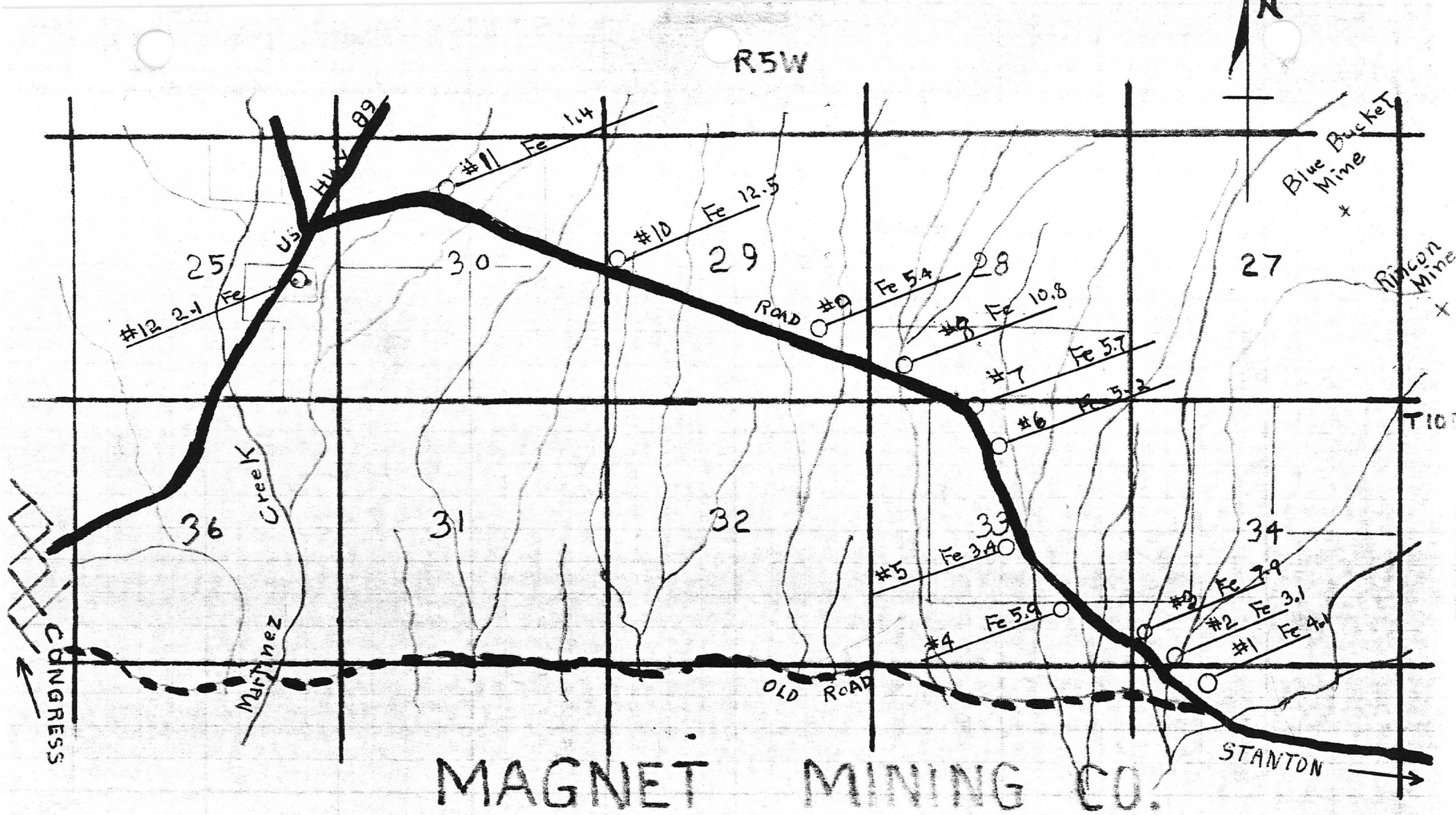
RECOMENDATION

This study reveals there is valuable iron and gold in the area sampled. As these were essentially surface samples, testing at depth is suggested to determine if values are consistant in large ore bodies. And this is necessary to ascertain ore reserves.

An iron mining operation is not feasible unless it is accomplished on a massive scale, and this will require tremendious reserves. The gold could be economically recovered on a much smaller scale.

MELVIN H JONES
Geologist.

Box 406,
Wickenburg, Arizona.



MAGNET MINING CO.

Fe and Au sampling along Congress - Stanton Rd.

○ Sample site

1 mile

Jones '75

SAMPLE INFORMATION.

Sample No.	Description
1.	3 foot channel cut in old bulldozer pit. Located 150 feet North of road junction on Congress-Stanton road and old road direct East from Congress. In section 3, T9N,R5W. Redish sand, with some ferric cementation. 1 cu.ft weighted 93lbs wet(when taken) and 83 lbs dried out. plus ¼" fraction 28 lbs.
2.	3 foot channel cut on bank of old dry wash. North side of Congress-Stanton road 1000 ft NW of site #1. Dark sand with silt. Weight 90 lbs wet,81 lbs dry. plus ¼ fraction 3 lbs.
3.	3½ foot channel cut in old bulldozer pit. Located about 500 ft NW of site #2. Brown sands with silt. 2 lbs plus ¼ inch. Dry weight 97 lbs.
4.	5 ft. channel cut in old pit on South side of road, About 1200 feet NW of site No.3 . Mostly caliche containing sand. Dry weight 81 lbs. 4 lbs plus ¼".
5.	3 foot channel cut in old bulldozer pit on South side of road. About 1000 feet NW of site No.4. Brown sand with silt and caliche. Weight dry 80 lbs. Plus ¼ inch is 1 lb.
6.	3 foot channel cut in old bulldozer pit. Located about 1200 feet NW of site No. 5 on North side of road. Red ferric consolidated clay and sand. Dry weight 79 lbs. Plus ¼ inch 1 lb.
7.	3 foot channel cut in old bulldozer pit on N. side of mentioned road. Located about 1000 feet NW of site #6. Brown sand and silt. Dry weight 80 lbs. plus ¼ inch is 1 lb.
8.	2½' channel cut in old bulldozer pit N. side of road. Located about 1300 feet NW from side #7. Soil and black silt, mostly. Dry weight 90 lbs. 3 lbs plus ¼ inch.
9.	3 foot channel cut in old bulldozer pit. About 1400 feet West of site No.8. Reddish sandstone appearing. Dry weight 87 lbs. plus ¼ mesh 3 lbs.
10.	3½ foot channel cut on side of small stream bed. N. side of road. Located just East of ¼ Section USGS marker Secs. 29-30. Dark brown sand, primarily. Dry weight 93 lbs. plus ¼ inch 2 lbs.
11.	10 foot channel cut in big open cut on N. side of road. Sample taken at East end. Mostly caliche. Dry weight 91 lbs. plus ¼ inch 4 lbs.
12.	Bottom material in cess pool being dung on Arrowhead property (adjoining Dan. Jacobs' new house). Depth was 8 feet. Brown sands, mostly. Some course sand. Weight wet 97lbs. Dry weight 86 lbs. 1 lbs plus ¼ inch mesh (coarse sand and pebbles).

B

OUR MOTTO: — WHAT THERE IS IN IT, NO MORE NO LESS.

EDMUND E. PHILLIPS, VICE-PRES.—GEN. MGR. M. E. PHILLIPS, SECRETARY

THE COLORADO ASSAYING COMPANY

(INCORPORATED)

ASSAYERS AND CHEMISTS

2244 BROADWAY

DENVER, COLORADO 80201 May 8, 1975

REPORT ON DETERMINATIONS MADE FOR — Mr. Howard S. Gable & Mr. Melvin H. Jones
Kansas City, Mo. Wickenburg, Ariz.

SAMPLE MARKS	METALS %	Amount per Ozs. Per Ton	PER CENT	Value per Ton Dollars	Cents
	IRON	TITANIUM	SILICA (silicon dioxide-SiO_2)		
#1	20.55%	1.04%	45.80%		
#2	29.90	1.60	41.46		
#3	39.25	1.80	30.70		
#4	22.35	0.81	47.50		
#5	26.85	0.73	36.14		
#6	26.05	0.63	38.60		
#7	21.75	0.59	44.60		
#8	27.80	0.95	42.20		
#9	33.35	0.74	32.80		
#10	24.50	0.77	47.20		
#11	33.05	0.97	36.40		
#12	39.20	0.73	33.20		

Concentrates

GOLD AT_____ PER OUNCE SILVER AT_____ PER OUNCE

LEAD AT_____ PER UNIT COPPER AT_____ PER UNIT

THE COLORADO ASSAYING COMPANY

By Ed Phillips

C

IRON COMPUTATIONS (by weight)

Sample No.	Percent of magnetics in sample.*	Computed iron content in sample.	Computed Titanium in sample.
1.	12.1 %	4.14%	.021%
2.	9.3	4.06	.022
3.	15.1	5.97	.037
4.	14.5	7.21	.0218
5.	12.2	6.03	.0185
6.	12.1	5.45	.0157
7.	14.6	5.05	.017
8.	15.8	10.8	.036
9.	13.4	5.4	.012
10.	20.5	12.5	.039
11.	4.1	1.39	.041
12.	6.0	2.06	.038
	Average.	5.84%	.0266%

*Includes:Magnetite, Ilmenite, Quartz, Calcite

The samples were a measured one cubic foot from the alluvial material (and they were weighted). Some samples contained much moisture, and they were dried before final weighing.(all computations for the iron, titanium, silica, are based on weight).
The sample was screened and the plus 4 mesh fraction was weighted and discorded (none of the desired elements are in this portion). Then, after carefull mixing, exactly 10% of the initial weight was extracted from the remaining sample material. By the use of a large hand magnet (time consuming) the magnetics were removed from this 10% fraction. These are the concentrates which were weighed, packaged and sent to the assayer.

Where the percentage of magnetics is high, in comparison to Fe and Ti percentages, this means that a large amount of silica and calcite particles are adhering to the Magnetite and Ilmenite, in the assay sample.

When the assay results were received, they were computed to show Fe and Ti content in the entire original sample material, with an electronic computer. Algebra equation A:B :: C:X was used.

Dry washer concentrates.

D. R. Curry, Assayer
14437 Rios Canyon Road
El Cajon, Calif. 92021
(714) 443-1754

ASSAY CERTIFICATE

El Cajon, Calif., 4-29 19 75

I hereby Certify that the samples described below, received from Melvin Jones assay as follows:

OWNER'S MARK AND SAMPLE	GOLD Ozs. Per Ton	GOLD Value Per Ton	SILVER Ozs. Per Ton	SILVER Value Per Ton	TOTAL VALUE PER TON	PERCENTAGE OF Copper	PERCENTAGE OF Lead	PERCENTAGE OF Zinc
No 1 Sample	.66	M.G.	No 7 Sample		.08	M.G.		
No 2 "	.20	" "	No 8 "		.12	" "		
No 3 "	.15	" "	No 9 "		.24	" "		
No 4 "	.14	" "	No 10 "		.10	" "		
No 5 "	.03	" "	No 11 "		.26	" "		
No 6 "	.12	" "	No 12 "		.18	" "		

GOLD at $..... per oz.
SILVER at $..... per oz.
LEAD at c
COPPER at c

Charges Paid.

D. R. Curry
Assayer

E

GOLD COMPUTATIONS(by the yard)

31,103 milligrams equal 1 troy ounce.
Gold was figured at 900 fine (average reported in the area).
Gold was figured at ₱163.50 per ounce for 1000 fine (as of 5 May '75).

Sample No.	Milligrams of gold	Value
1.	1782 /yd	₱10.30 /yd
2.	540	3.12
3.	405	2.34
4.	378	2.18
5.	81	.45
6.	324	1.87
7.	216	1.25
8.	324	1.87
9.	648	3.76
10.	2700	1.56
11.	702	4.05
12.	486	2.81
Average	513 /yd	$ 2.96 /yd

The samples on the assay report are from 1 cubic foot of the auriferous bearing alluvium. Twenty-seven time the assay report results gives the gold in one cubic yard.

The mentioned samples were processed on an efficient power driven dry washer. On this this , the total recovery of all gold is estimated to be 80%. Frequently, the tails from the operation were panned to ascertain good recovery. It should be understood that there is colloidal and extremely fine gold that will not be recovered (it will blow away). Then again, some of the gold adheres to larger sand particles, and is not trapped by this gravity type concentration. Water, when it is available, does a much better concentration job than dry washers. But even so, in areas where there is 'flour' gold, water gravity processing will not make a complete recovery.

In the computations, consideration was given to 900 fineness. this means a 10% reduction in value.

An electronic computer was used to get the above figures.
1 mg (Au)=₱.00578 .

F

MELVIN H. JONES

Mining Geologist

~~Box 1, Montello, Nevada 89830~~

Box 406,
Wickenburg, Az. 85358
15 April 1975.

The Colorado Assaying Co.
Denver, Colo. 80201 Attn. Mr. Ed Phillips

Gentlemen:

Request you assay the attached samples (Magnet Nos. 1 to 12 Incl.) for:

Fe
Ti
Si

Send me the report, with a copy and bill to Mr. Howard S. Gable, Box 946, Kansas City, Mo. 64141 .

Sincerely,

Melvin H Jones

Box 406
Wickenburg, Ariz.
85358
17 April 1975

Dear Curry, Assayer

Here are those samples that I talked over the phone about. What we want is the amount of milligrams of Au. i n each sample.

One way to do it is outlined on the attached paper. But I leave it up to you as to method.

The samples are from a string of backhoe pits between Congress and Stanton, Arizona. Most of them will probably be on the lean side.

I believe I owe you for a lead assay and a couple of Cu's . There are 12 samples in the package, so I am enclosing a check for $65.00.

If there are any problems or questions, give me a buz. Best regards.

April 15

#MAG	5.5 #	123.62 gr
#2	7.7#	257.0 gr.
#3	9.5	211.74 gr.
#4	7.7#	130.0 gr
#5	7.9#	231.62 gr
#6	7.8#	141.28 gr
#7	7.9 #	197.0 gr
#8	8.7 #	103.5 gr
#9	8.4 #	231.63 gr
#10	9.1 #	277.12 gr (+ 256.0 / + 272.0 / 805.12 grams)
#11	8.7 #	93.6 gr
#12	8.0 #	69.1 gr.

approx

1-6 – apron – jean material

6-12 – flood plain from Hellenda

MAG IRON

Assay Fe	May Sample	= grams	grams Magnetics
20.55	lbs 5.5	2494.8	123.62
29.90	7.7	3492.72	257.0
29.53	9.5	4309.2	241.74
22.35	7.7	3492.72	130.00
26.85	7.9	3583.44	231.62
26.055	7.8	3538.08	141.28
21.75	7.9	3583.44	197.0
27.80	8.7	3946.32	103.51
33.35	8.4	3810.24	231.63
24.50	9.1	4127.76	805.12
32.05	8.7	3946.32	93.6
39.20	8.0	3628.8	69.1

Assay Fe% 453.6 grams = 1 lb

A : B :: C : X → % Fe in total

grams in Total sample

grams in Assay Sample

20.55 × 2494.8 = 123.62 = X = 4.14% Fe

20.3 Antelope Wash

20.5 W Road Wash

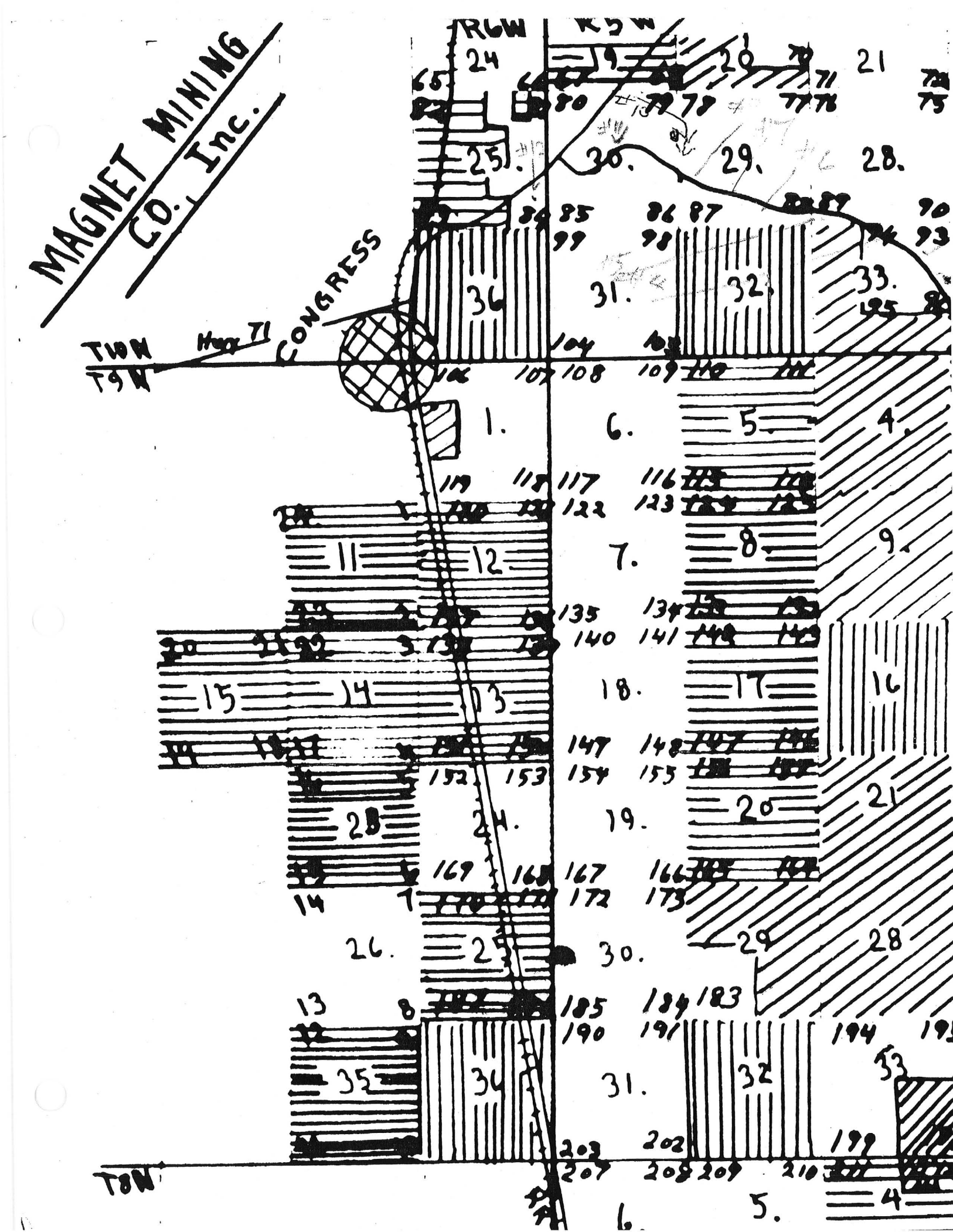
— 82.0

— 82.2

82.7

83.0

83.3


MAGNET MINING CO., Inc.
R6W
R5W
T10N
T9N
Hwy 71
CONGRESS
24
25
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28.
21
36
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32.
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T8N
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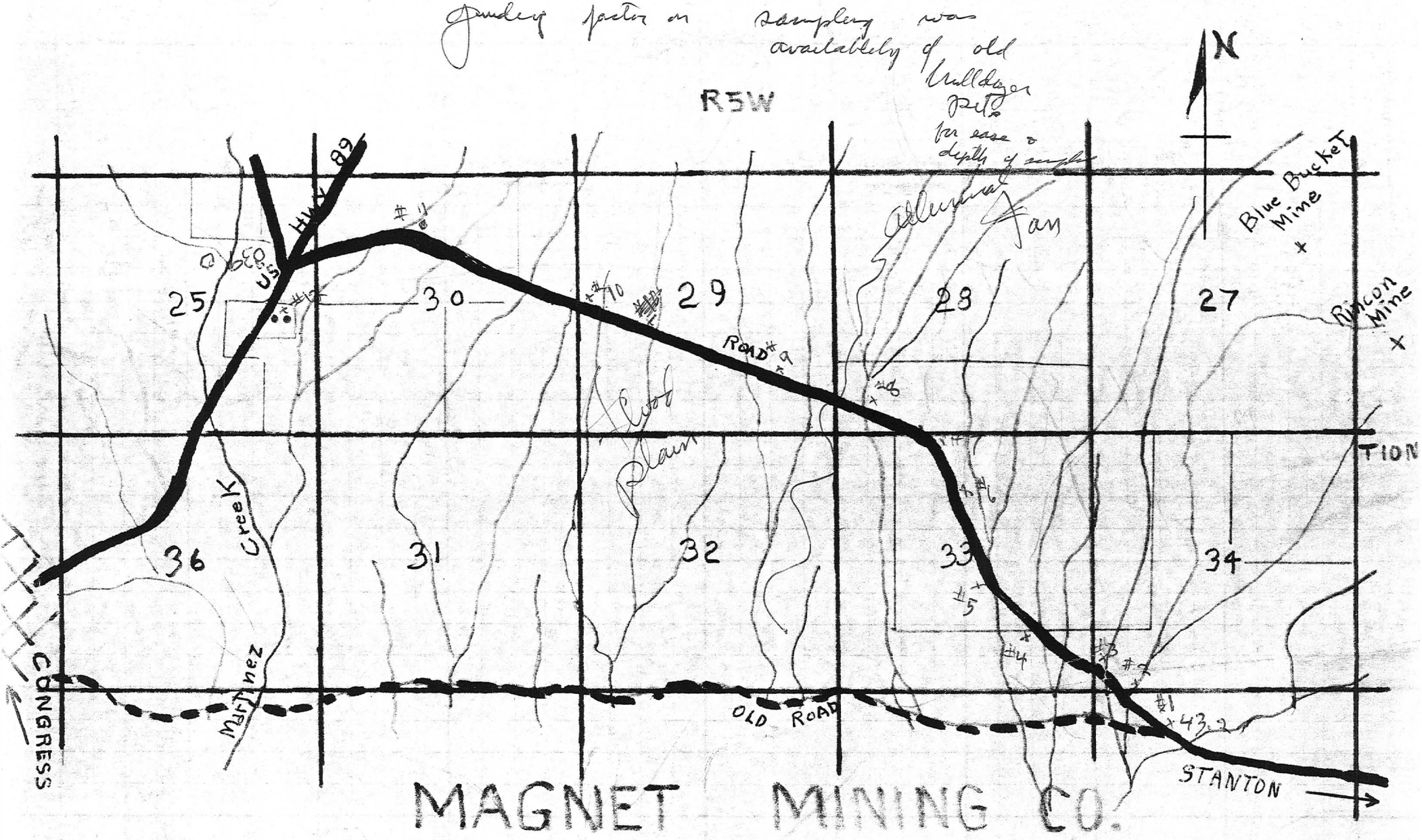
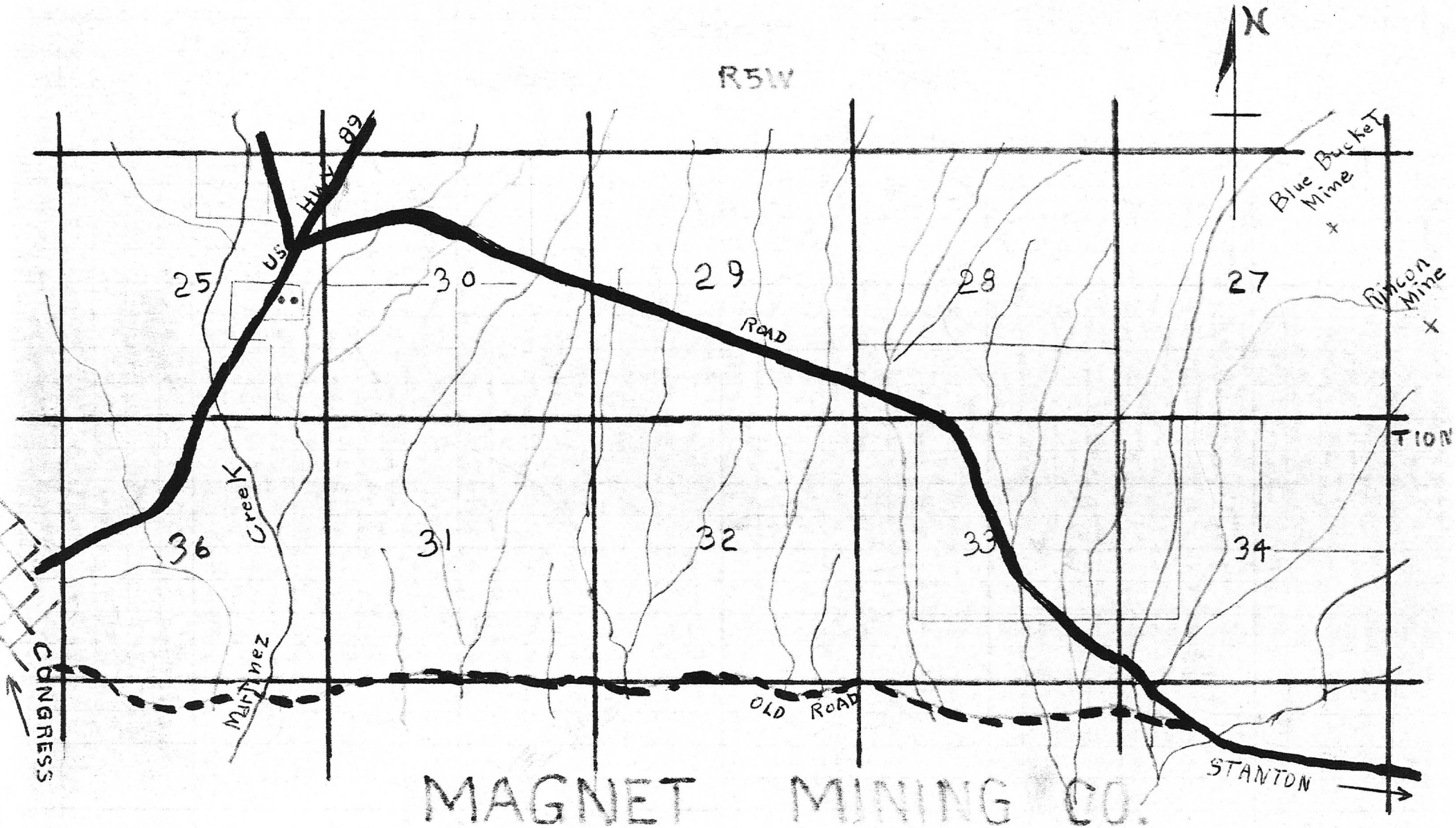


MAGNET MINING CO.

Fe and Au sampling along Congress - STanton Rd.

43.2
39.0
4.2

500
10 / 5000 ft



Fe and Au sampling along Congress - STanton Rd.