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A

GEOLOGIC and EXPLORATION

REPORT

on the

LYDIA COPPER PROPERTY

in

Gila County, Arizona

by

Richard E. Mierits
Mining Consultant
Phoenix, Arizona

July 8, 1974

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Map No. 2, CLAIM MAP, Lydia Property.
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Map No. 4, GEO-CHEM, I. P. MAP, Lydia Property.

INTRODUCTION:

Accompanied by Gerald Weathers, Arizona Registered Geologist, Phoenix, Arizona, the writer visited and re-examined on July 2, 1974, the Lydia group of mining claims located in the Tonto National Forest, Gila County, Arizona. Mrs. George A. Greenlee, Phoenix, Arizona, is the owner of the mining property.

This report has been prepared by the writer and is based on the current examination, on an examination of the property by the writer in May, 1962, as well as on the writers gneral and specific geological knowledge of the property and the general area. Available factual geo-physical data and geo-chemical (rock chip) data were also reviewed and studied by the writer.

PROPERTY, LOCATION AND ACCESSIBILITY:

The property consists of 18 unpatented standard lode mining claims, held by right of location, and located in parts of Sections 34 and 35, T. 1 S., R. 14 E. and Sections 3 and 4 of T. 2 S., R. 14 E., G. & S. R. B. & M., Gila County, Arizona. A long east-west correction exists between T. 1 S. and T. 2 S., consequently the normal position of sections 3 and 4 of one township is not aligned with the normal position of sections 33 and 34 of the township to the north.

The claim names and their legal recording in the County Recorders Office, Globe, Arizona, are as follows:

Claim Name	Date located	Recorded Docket	Recorded Page
Lydia No. 1 through No. 15	4/3/63, Am'd.	181	469 - 483
Jessica No. 10	4/3/63, Am'd.	181	468
Asher No. 1	2/12/71	297	613
Asher No. 2	6/21/71	303	806

Claims of the original property (Lydia No. 1 through No. 15 and Jessica No. 1 through No. 10) were amended and some dropped in April, 1963, to the present group of claims. At the same time they were surveyed by James Yanez, Arizona Registered Land Surveyor, Tucson, Arizona.

The property is within the Tonto National Forest (about seven airline miles southwest of Miami (Globe), Arizona in fairly rough terrain, topography-wise. It is also about 3 airline miles west-southwest of the Morgan-Madera copper property and about six airline miles south of the Carlota copper property, all within the Miami-Globe complex of copper mines.

Access on the property requires use of a four wheel drive vehicle because of the steep grades and the present dis-repair of the roads. Mine access road repair is necessary and even then automobile travel is ques-

tionable due to sharp hairpin turns of steep grades which may not be negotiable.

Shortest access to the property from a paved road (U. S. Highway 60) between Superior and Miami, Arizona, is to travel south on Forest Service Road #349 from its junction with U. S. Highway 60. This junction is known as the Castle Dome junction (northward) and is approximately five miles westerly of Miami-Globe. This northward junction (right) leads to the Carlota property, Cactus property, Pinto Creek property, Castle Dome property, etc., whereas the southward junction (left) leads to the Morgan-Madera property and the Lydia property. (See Map No. 1)

From this junction, travel southward on F. S. R. #349 for 3.9 miles to junction with F. S. R. # 2. A right turn at this junction and southwest travel for 2.0 miles is a junction with F. S. R. #639 (the Lydia mine access road). This junction (on the left) is quite obscure since it actually immediately leads back to the northeast (180°) down a steep hillside. The access road is best entered by travelling 0.15 miles past the junction to where F. S. R. #2 widens at a topographic drainage or small canyon which can be used as a turn-a-round. Approaching the obscure junction from the south, the right arm is then F. S. R. #639 and travel for 4.0 miles bearing to the right at all junctions leads to the cabin located on the Lydia No. 10 claim. (See Map No. 2).

FACILITIES:

No gas or electricity exist on or even near the property. A water well is located just north of the cabin and with proper pump could probably provide sufficient water for diamond drilling. The water should be tested if it is planned to use same for human consumption.

HISTORY, DEVELOPMENT AND PRODUCTION:

The property dates back to the early 1900's when the entire country around the Globe-Miami area was being prospected for gold and silver. Prior to the acquisition by the late George A. Greenlee (present owners husband), the property was known as the Cat Claw. As a result, there are several old time Adits, shallow shafts and surface cuts or trenches. (See Map Nos. 2 and 3).

After acquisition of the property, Mr. Greenlee drove a 300 foot Adit near the shaft south of the cabin on what is now the Lydia No. 10 claim. He also drove or sunk a 200 foot inclined winze at the face of the Adit and in the same direction as the Adit. The writer personally examined these workings in year 1962 but the portal has since caved.

As continuing annual assessment work under the guidance of Gerald Weathers, geo-chemical and geo-physical surveys were conducted. Mr. Weathers completed a geo-chemical (rock chip) survey and Mining Geophysical Surveys completed a 3 line I. P. and Resistivity survey in 1972. (See Map No. 4).

Some exploratory drilling has been done. One vertical percussion hole, near the most southwesterly surface pit on Lydia No. 1 claim, was drilled by Wes Wingfield in 1963 (?), but no information is available. A 201 foot vertical diamond drill hole was drilled between the cabin and the inclined shaft on Lydia No. 10 claim by Weymark Engineering Ltd., Vancouver, B. C. in May, 1968. The same organization recommended additional diamond drilling.

In year 1973, McPhar Geophysics, Tucson, Arizona conducted an I. P and Resistivity survey which was partially completed due to the limited budget available for the work. A probable metal factor responce was obtained about 300 feet further south of the response on line 1 by Mining Geophysical Surveys.

GEOLOGY AND MINERALIZATION:

The Lydia property hosts the rock types and mineralization common to the Miami-Globe complex. The claims cover outcrops of the Madera diorite and Pinal schist with occasional outcroppings of a porphyrytic phase of the Terterary Schults granite. (See Map No. 3).

There are many structures within the property, most of which are decidedly recognisable by the strong presence of live residual limonites ranging in color from yellow - orange - brown - to red and black as well as the presence of moderate to strong silicification. Some of the structures are associated with and part of the porphyrytic rock, whereas others are as pure fractures and associated with silicification and frequently paralleling the schistosity while other structures cut the schistosity. Those structures governed by the porphyrytic rock tend to display observable copper oxide minerals - malachite-azurite -. Sporadic sampling sampling of record by several indicate copper values range from trace to 1.35%, silver values from trace to 35.4 ounces per ton and gold values from trace to 0.80 ounces per ton. Such sampling was limited to the structures at surface or near surface locations.

PROPERTY POTENTIAL:

The potential of the property is the possible existance of a large volume mass of low grade copper mineralisation in two selected areas dictated by all or a combination of the following conditions: (1) local geology, (2) geo-chemical survey and (3) geo-physical survey.

The first of these targets is the cluster of mineralized structures within claims Lydia No. 9, 10, 11 and 13. Here there are northeast, east-west and west-northwest trending structures. Strike and dip measurements for the schist and diorite indicate a possible anticlinal effect which may be a result of the Terterary intrusive porphyrytic phase of the Schults granite which outcrops in the immediate area. Thirdly, the cluster of geo-chemical highs in the area are also quite significant. Significant also, is the fact that sulphides - pyrite and chalcopyrite - are present in the northeast trending Adit which portals on Lydia No. 13 claim and which were also personally observed by the writer in the now caved Adit

driven by George Greenlee prior to 1962. The interior winze at the face of the Adit was full of water and when observed by the writer in 1962, the water had a slight green color or tint. Lastly, the high background response on all three geo-physical lines in the vicinity of the suspected mass and points C-4 on the lines, could well be a reflection of the low grade mass of copper mineralization.

The second target area is centered around Lydia claims No. 1, No. 3 and No. 8. Here are structures trending in three directions, outcrops of the porphyrytic phase of the Schultz granite, evidence of pyrite on the dump of the shaft located on Lydia No. 1 claim and an increasing response of geo-physics on line 2.

The very limited exploratory work to date has not developed, indicated nor inferred an ore reserve. It is not possible at this time, for the writer, to infer an ore reserve, but, if the proposed exploratory drilling is successful as to copper content and thickness of mineralized penetration, then an inferrence of several tens of millions of tons may be feasible.

EXPLORATION REQUIREMENTS - COSTS:

Exploratory diamond drilling to depths of approximately 800 feet or more would be required to test the two target areas. Two holes should be drilled within the framework of the first target and one hole should be drilled within the area of the second target. The mine access road must be repaired and made servicable and two drill sites and accompanying access roads must be constructed.

The following budget is suggested as the first phase of exploration of the property.

Phase I

Repair of Mine access road and construction of drill sites and roads.	$ 6,000.-
2,500 feet diamond drilling, including sampling, assaying and field expenses of personnel @ $22.00/foot.	$ 55,000.-
Project Supervision, including fees, travel expenses, etc., 2 months, 1 full time, 1 at half time.	$ 11,000.-
Total Phase I	$ 72,000.-

If the Phase I program is successful, then continued drilling using diamond core and rotary are justified. A Phase II program budget could require $ 150,000.- or more.

ACKNOWLEDGEMENT:

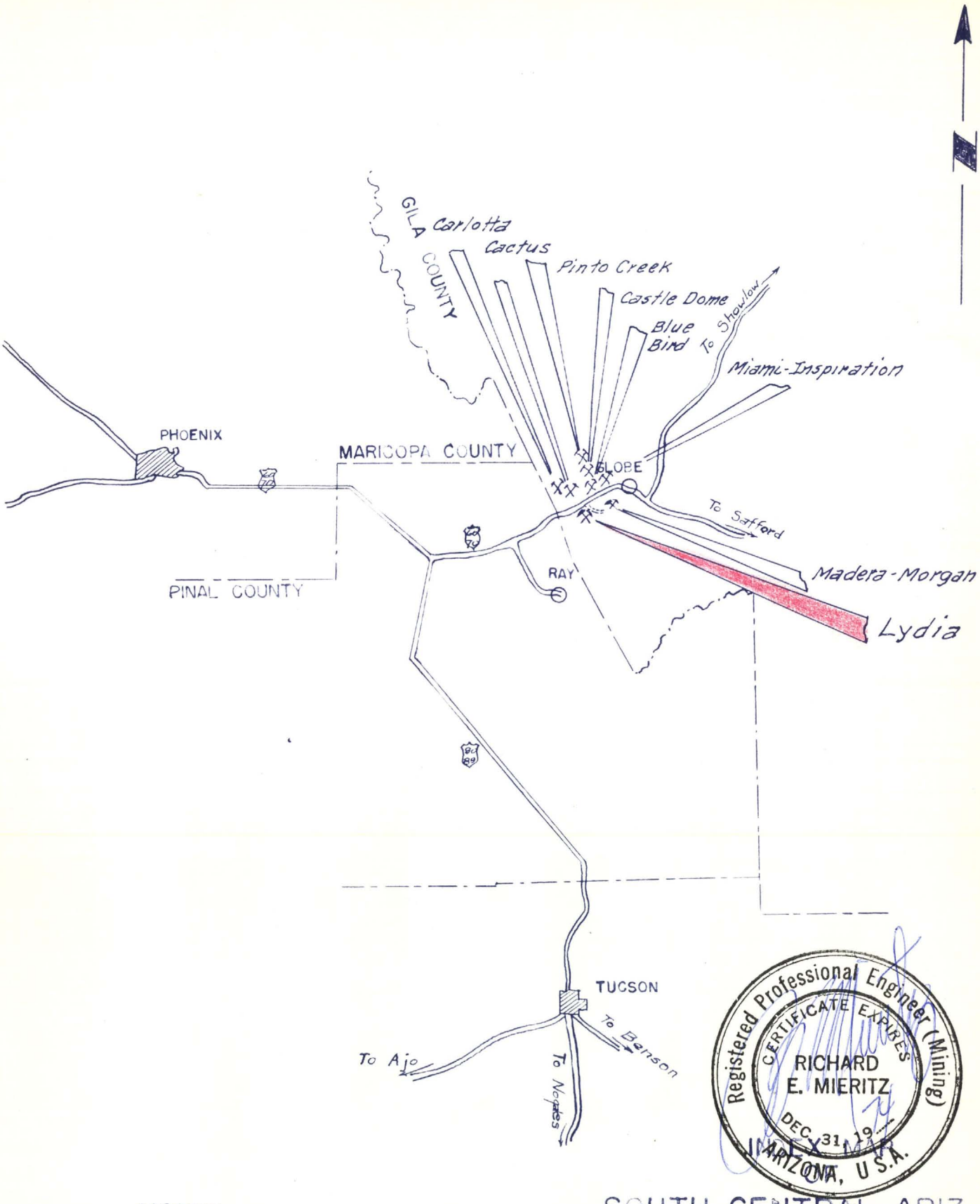
Credit must be given to Gerald Weathers fro having completed the surface

geology mapping as well as providing information on the geo-chemical survey. Factual data as regards the geo-physical surveys was also provided by Mr. Weathers, all of which aided the writer considerably in his preparation of the included Maps. The writer is well acquainted with James Yanez and his professional reputation of land surveying.

Respctfully submitted,

R. E. Mieritz,
Mining Consultant,
Phoenix, Arizona.

July 8, 1974



NOTE:

Federal Highways

Graveled County Roads

SOUTH CENTRAL ARIZ.

SCALE: 1" = 21 MILES

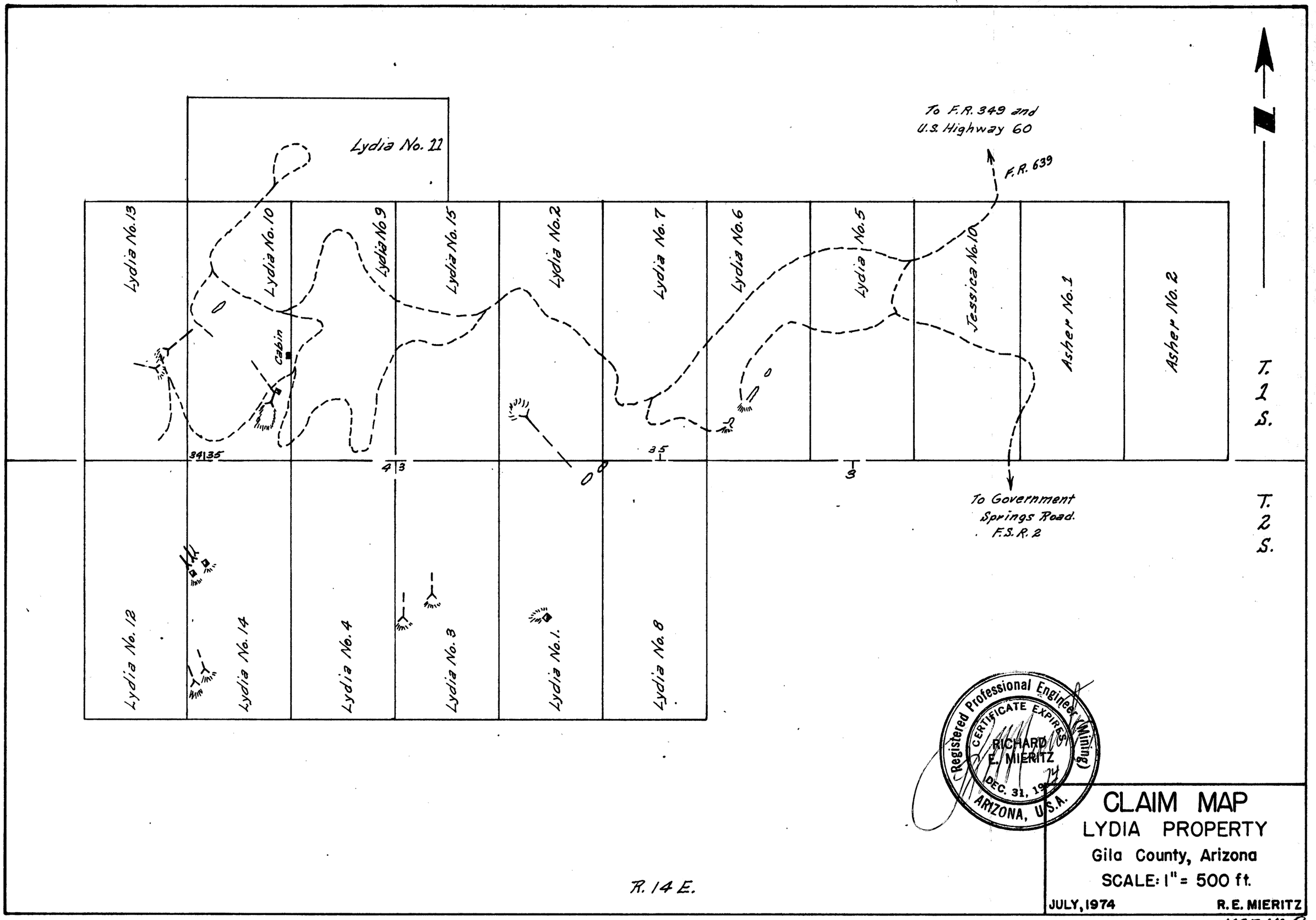
0 10 20 30 40

MAY 1957

R. E. M.

PLATE I

A-16

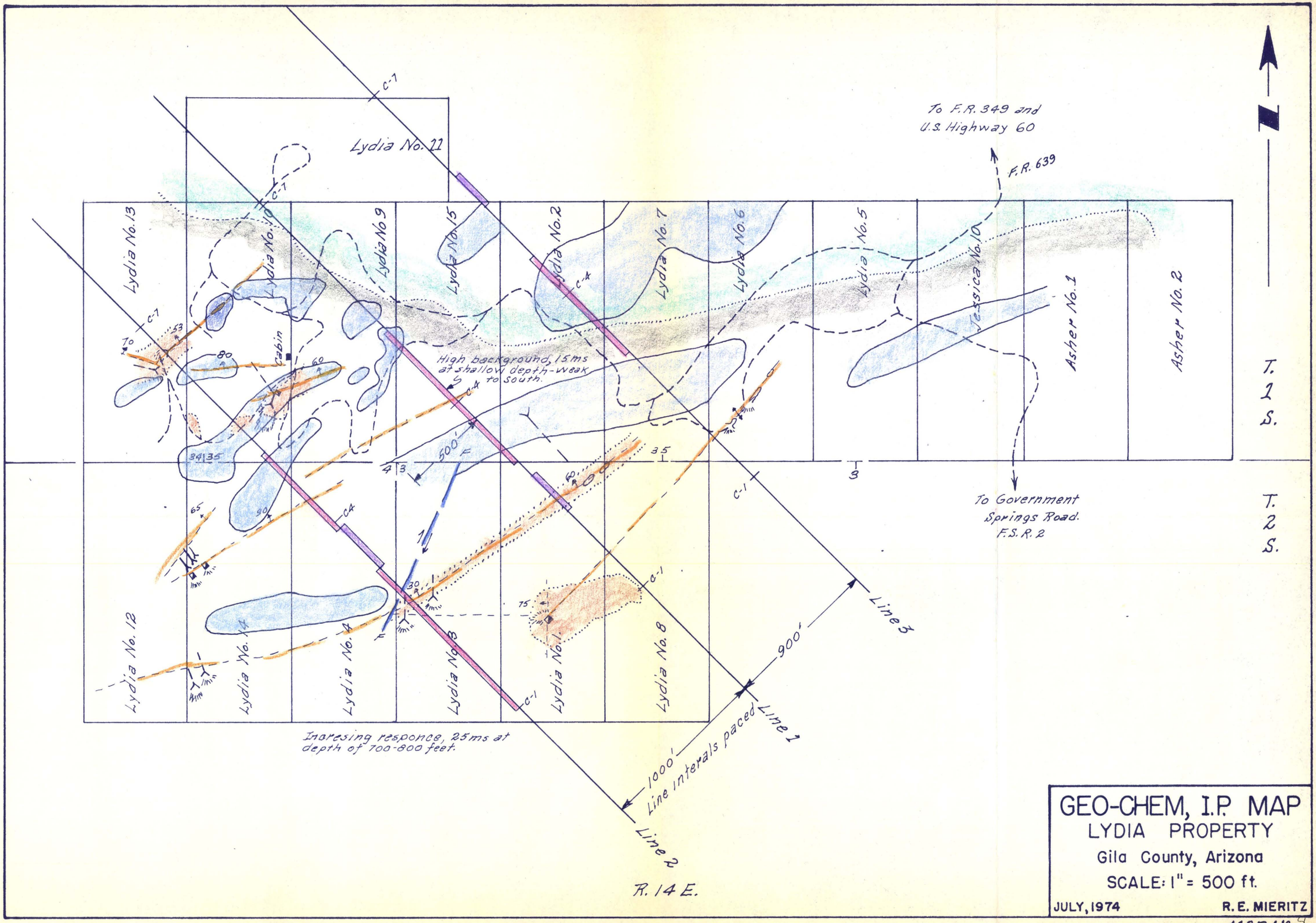


CLAIM MAP
LYDIA PROPERTY
Gila County, Arizona

SCALE: 1" = 500 ft.

JULY, 1974 R. E. MIERITZ

MAP No 2



GEO-CHEM, I.P. MAP

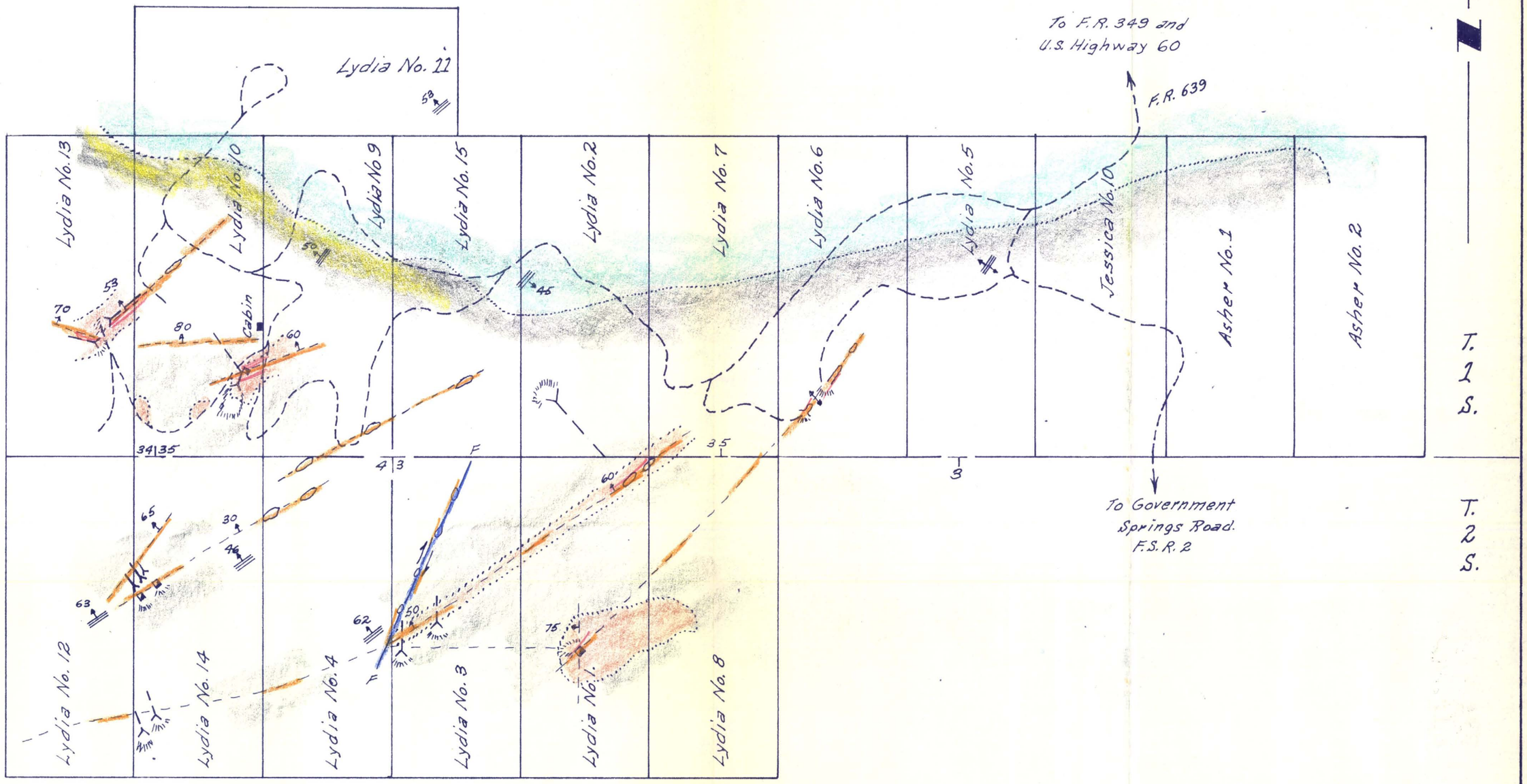
LYDIA PROPERTY

Gila County, Arizona

SCALE: 1" = 500 ft.

JULY, 1974 R. E. MIERITZ

MAP No 9



GEOLOGIC MAP
LYDIA PROPERTY
Gila County, Arizona

SCALE: 1" = 500 ft.

JULY, 1974 R. E. MIERITZ

MAP No. 3