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~~See also map files~~
— 8 maps

AMERICAN SELCO INCORPORATED

SUMMARY REPORT
ON THE
1971-72 EXPLORATION PROGRAM
PYRAMID LAKE (GUANOMI) PROPERTY
PAIUTE INDIAN RESERVATION
WASHOE COUNTY, NEVADA
U.S.A.

January, 1973
Reno, Nevada

John F. Prochnau
Regional Geologist

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MAPS

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PYRAMID LAKE (GUANOMI) PROPERTY
PAIUTE INDIAN RESERVATION
WASHOE COUNTY, NEVADA
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Summary:

The Pyramid Lake property, located on Paiute Indian lands about 25 miles northeast of Reno, Nevada, was acquired in November, 1971 under terms of a lease agreement with the Bureau of Indian Affairs.

Target at Pyramid Lake consists of porphyry molybdenum or porphyry copper-molybdenum mineralization associated with a quartz monzonite stock of Miocene age. Weakly anomalous molybdenum (0.0030%) and copper (0.050%) occurs within extensive zones of pyritization and silicification in intruded volcanic rocks peripheral to the stock. Very low grade copper mineralization is also associated with weakly silicified and potassium-metasomatized quartz monzonite at the west margin of the stock.

The American Selco exploration program consisted of geologic, geochemical and geophysical surveys followed by 5230' of rotary and diamond drilling in 9 holes. The field work was carried out between July, 1971 and July, 1972.

The drill program confirmed widespread, low grade mineralization. However, we discovered nothing approaching economic limits, nor evidence suggesting a major deposit is likely to exist in the area. Although potential targets along the northwest and southeast margins of the stock remain untested by drilling, I don't feel results of our work to date justify continued effort.

Location & Access:

The property is located at the south end of Pyramid Lake about 25 miles northeast of Reno, Washoe County, Nevada (Figure 1 & 2). The lease area comprises 2500 acres covering all or portions of Sections 22, 23, 24, 25, 26, and 27, T23N, R22E and a small part of Section 19, south of State Highway 33, T23N, R23E, MDBM. The American Selco holdings lie wholly within the Paiute Indian Reservation.

The area is easily accessible by travelling northeasterly from Reno for about 40 miles on State Route 33 to the extreme southwest end of Pyramid Lake. Access to the central part of the property is provided by a road up Tom Anderson Canyon to the Morgan pastures and Selco drill sites 7, 8 and 9. An abandoned Southern Pacific Railway line crosses the northeast edge of the lease area but track was removed in early 1971.

The property occupies the lower north slope of Pah Rah Mountain, a rugged terrain with elevations ranging from 3800' at the lake edge to about 6200'. Except for occasional pine and juniper trees, the area is free of vegetation.

Previous Exploration at Pyramid Lake:

The Guanomi mine was developed in the 1930's by Mr. Walter Schmelzer, who still lives at the property, and Thomas W. Foster, a mining engineer now deceased.

The mine workings are now caved but reportedly consist of a 400' adit with 800' of lateral development, and three shafts to depths of 100', 100', and 30'. A few shallow pits have been dug on silicified zones elsewhere on the property. There has been no production.

Scope of the American Selco Program:

The Pyramid Lake property was initially examined in September, 1970 following its submission by the principals in Pan-Nevada. Agreement was subsequently reached in which American Selco acquired the assets of Pan-Nevada including its negotiating position with the BIA; the prospecting permit was granted November 1, 1971.

Figure 1

Location Map
Pyramid Lake Property
Washoe County, Nevada
U.S.A.

1" = 49 mi.

Figure 2

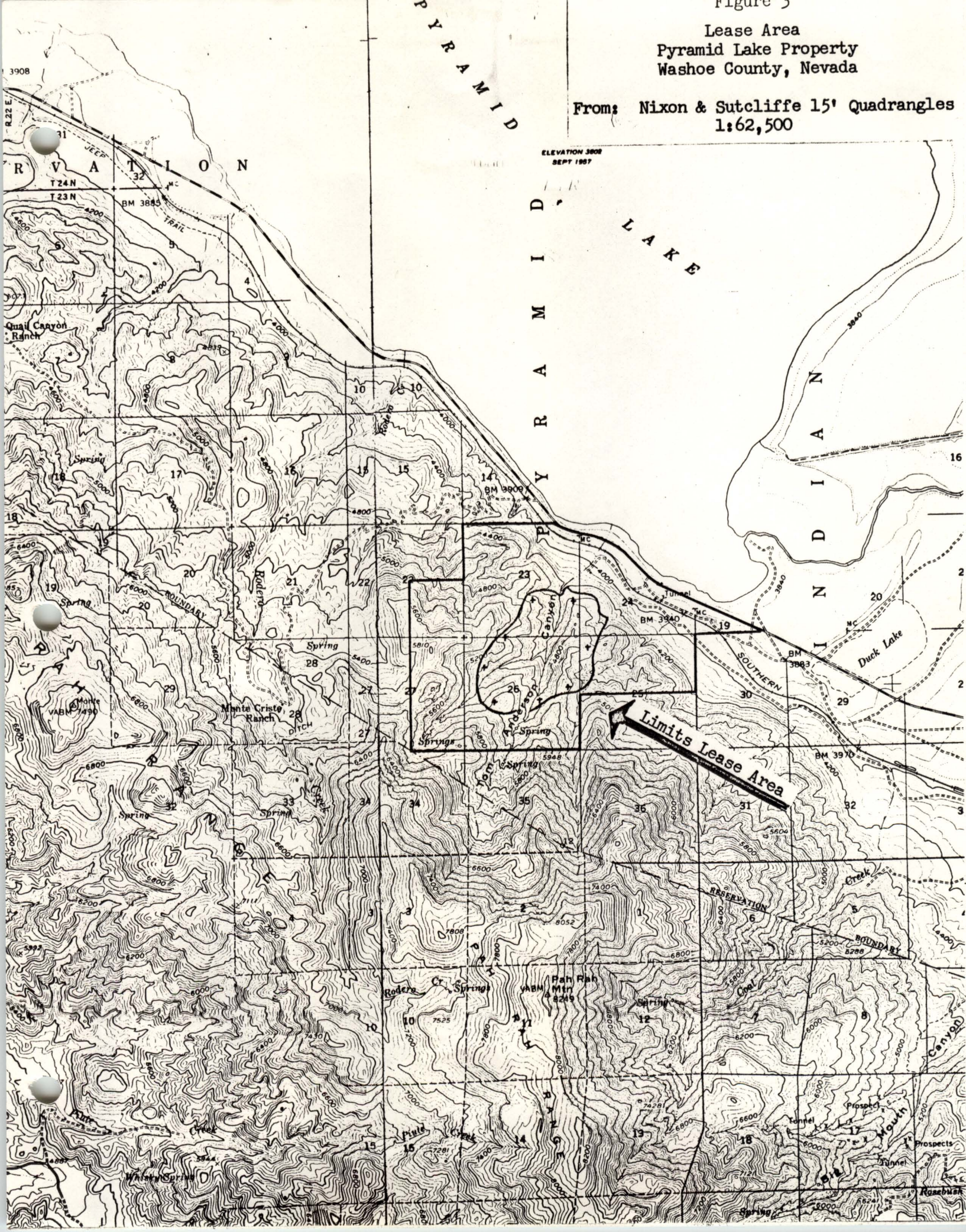
Location Map
Pyramid Lake Property
Washoe County, Nevada U.S.A.

From: Reno AMS Sheet
1:250,000

Figure 3

Lease Area
Pyramid Lake Property
Washoe County, Nevada

From: Nixon & Sutcliffe 15' Quadrangles
1:62,500



The American Selco program was initiated during the summer of 1971, a short time preceeding formal issuance of the permit. Field headquarters were set up at Crosby Lodge in Sutcliffe, a few miles north of the property.

Our technical program consisted of the following phases:

1) Color aerial photography and construction of a topographic map at a scale of 1" = 500' by Spink Corporation of Sacramento.

2) Control surveys by transit-stadia and compass tape to establish a 500' square grid. Thirty-two miles of line were surveyed in this manner, not including a few intermediate lines in areas of critical interest.

3) Geochemical soil surveys over the grid area. 380 samples were collected and analyzed for Cu, Mo, Pb and Zn at our Elko laboratory.

4) Limited mercury vapor test work.

5) Magnetic survey of the grid area.

6) Geologic mapping of the lease area on photographs enlarged to 1" = 500' and concurrent rock geochemical sampling.

7) 40,000' of IP survey on 5 lines contracted by McPhar Geophysics of Tucson. Additional detailed tests were made on two lines over the Guanomi workings.

8) 1145' of rotary drilling in six holes to maximum of depths of 200' in the Guanomi mine area to check contradictory interpretations of the IP data. Contracted by Long Drilling Company.

9) Construction or rehabilitation of 3 1/2 miles of road, and three drill sites, by Worthington Construction Company.

10) A final drilling program consisting of 2995' of rotary drilling and 1090' of diamond drilling in 4 holes, contracted by Long and Justice Core Drilling respectively.

Following our drill program, the U.S.G.S. under the direction of Dr. John Sass of Menlo Park, conducted depth/temperature studies in PDH #9.

Regional Geology:

The Pah Rah Range, and the Pyramid Lake property, are located within a physiographic zone transitional between the Sierra Nevada and Basin and Range provinces. The presumed trace of a major northwest-trending tectonic feature, the "Walker Lane", passes through the Truckee Valley and Pyramid Lake just east of the property. Some geologists believe the Walker Lane to be a major wrench fault system (parallel and of similar origin to the San Andreas fault) which extends along the Nevada-California border connecting with the Las Vegas shear and ultimately the so-called "Texas Lineament" in Arizona.

The Pah Rah Range is underlain predominately by Tertiary volcanics of the Hartford Hill and Pyramid (including Chloropagus) formations. The volcanic units, totalling 12,000' in thickness, regionally strike northwesterly and dip at low angles to the southwest. They overlie Jurassic? metavolcanic and metasedimentary rocks, and Cretaceous intrusives of the Sierra Nevada complex, on the west flank of the range, and are intruded by small granodiorite plugs and dikes, including the Guanomi stock, on the east slope.

Geology of the Property:

The lease area was mapped at a scale of 1" = 500' on enlarged aerial photographs and the data later transferred to the topographic map (Figure 5, Pocket). Mr. Bradshaw mapped most of the northwest half of the property and fringe areas while I was responsible for the central portions including most of the Guanomi intrusive and immediate environs.

Basic elements of Pyramid geology are illustrated on Figure 4. Dominant feature is the Guanomi intrusive complex, an oval-shaped quartz monzonite stock with an exposed surface area of about one square mile. The stock intrudes tuffaceous rhyolite of the Hartford Hill formation which in turn is overlain unconformably by intermediate volcanics of the Chloropagus formation. A shallow veneer of lake sediments covers all bedrock along the northeast margin of the property. All exposed rocks are Miocene or younger.

The Guanomi stock outcrops in the central part of the lease area where it is essentially bisected by Tom Anderson Canyon. It has a slight northeasterly elongation with an exposed length of 6000' and a maximum width of 4000'. An altered apophysis, about 1500' in diameter, outcrops northwest of the main intrusive mass on the opposite side of Chloropagus cover.

The intrusive is composed mainly of a fine to medium grained, slightly porphyritic quartz monzonite. Rhyolite porphyry, massive and foliated quartz latite porphyry, trachyandesite and basalt dikes cut the quartz monzonite

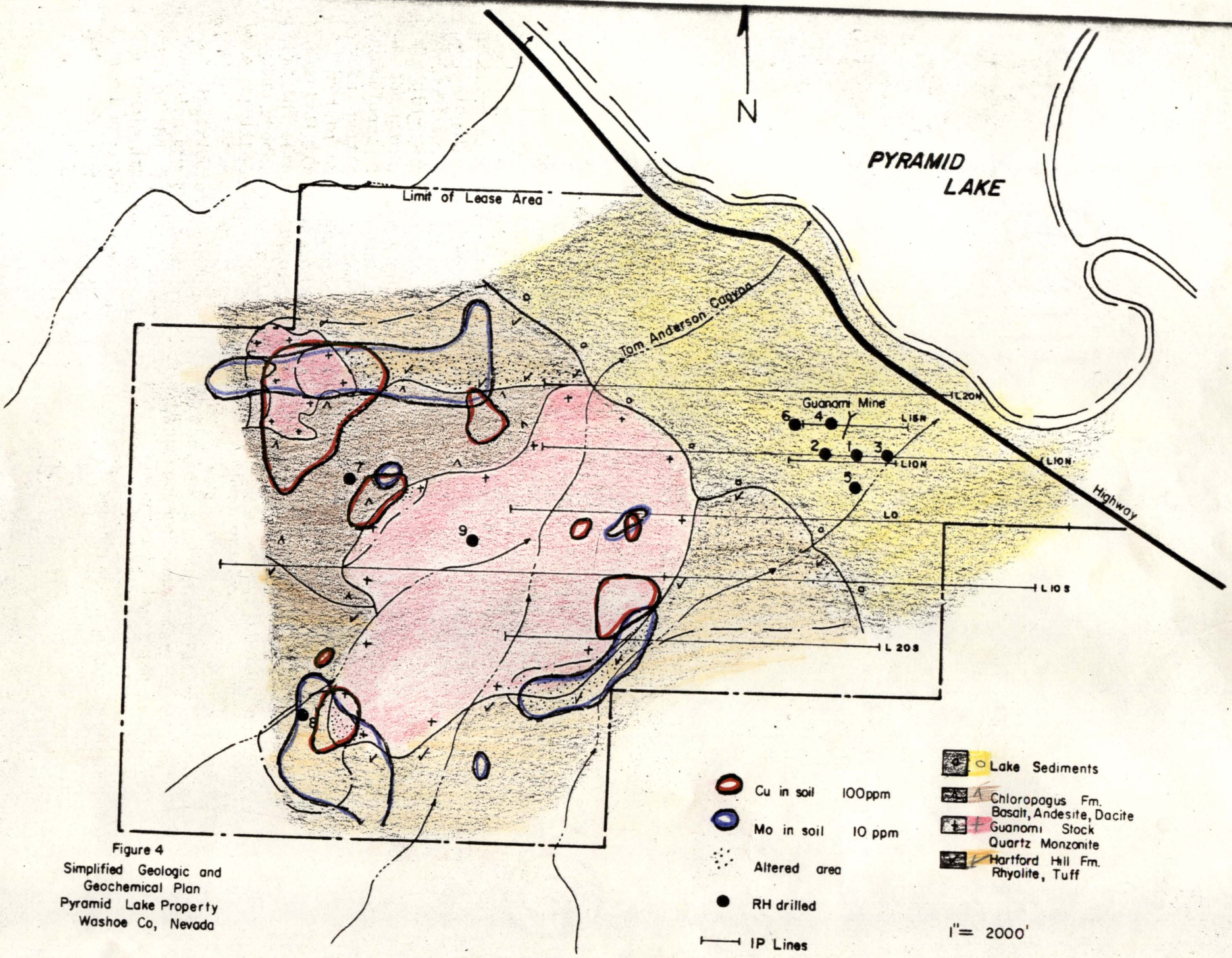


Figure 4
Simplified Geologic and Geochemical Plan
Pyramid Lake Property
Washoe Co, Nevada

T.D. 1625'

Cu 60 Mo 2

phase of the intrusive and range up to 200' wide and 1500' long. The dikes commonly strike near east-west and have steep dips. They exhibit sharp, sometimes chilled contacts with the quartz monzonite and probably represent late-magmatic intrusive pulses.

A mild deuteric alteration has effected all phases of the intrusive complex. This has resulted in alteration of primary hornblende and biotite to chlorite-epidote, and a light sericite-epidote-carbonate "dusting" of the feldspars. Along its north margin the quartz monzonite contains random hair-line stringers of dark quartz, carring traces of oxidized copper minerals. Thin sections of this rock also reveal moderate K-metasomatism indicated by successive replacement of plagiclase by albite and orthoclase.

Hypabyssal textures (development of feldspar phenocrysts in a sometimes granophyric groundmass) suggest a fairly shallow crystallization environment. This is further borne out by unroofing of the intrusive at a presumably high stratigraphic level in the Hartford Hill formation and subsequent burial by the Chloropagus. The interval between these two units, represented by deposition of Alta volcanics in the southern part of Washoe County, is absent in the Pah Rah Range. However, it seems unlikely it could have represented more than 2000'-3000' of additional burial. Stratigraphic position of the Guanomi stocks between the Hartford Hill and Chloropagus formations fixes its age as mid-Miocene or 15-20 my.

Rhyolite flows and tuffaceous rocks of the Hartford Hill formation underlie much of the lease area and have been intruded by the Guanomi stock. The Hartford consists of a monotonous pile of light-colored volcanics pervasively altered to a textureless aggregate of fine-grained quartz and sercite with occasional carbonates, alunite and diaspore. Disseminated pyrite averages 2-5% of the rock by volume. Intensity of alteration, particularly quartz flooding, sericitization alunitization, and pyritization, increases adjacent to the stock. These more heavily altered areas are molybdenum and copper-anomalous. Some question has arisen as to whether the intensively altered rocks, particularly those explored in the Guanomi Mine workings, might actually be part of the Guanomi stock. However, I believe the sharp transition between relatively fresh quartz monzonite and the altered rocks supports the conclusion that they are a part of the intruded Hartford particularly "baked" by proximity to the stock. Weakly altered andesite, dacite and agglomerate units overlie the rhyolite in the northwest corner of the property.

Intermediate volcanic flows of the late Miocene, or Pliocene, Chloropagus formation cap the older rocks along the west and south margins of the property. Much of the bedrock geology is further obscurred by landslide rubble and by Quaternary lake sediments northeast of the range front. Drilling in the Guanomi area has shown that this veneer of sediments is generally less than 50' thick.

The massive nature of the stratified rocks makes overall structure difficult to determine. However, where bedding measurements have tentatively been made, the Hartford volcanics appear to dip at moderate angles away from the intrusive. The younger Chloropagus flows are nearly flat-lying or have gentle north dips. The uneven outcrop line between Chloropagus and older rocks is due in part to original deposition on an undulatory surface, possible mapping of talus rubble as bedrock, and probably more complicated faulting than indicated on Figure 5.

Rocks of the Guanomi intrusive complex exhibit a well developed, high-angle E-W and N-S jointing. Stronger, persistent faults predominately trend near E-W and are indicated by silicified ribs and preferential strike directions of dikes. Radial or concentric patterns, characteristic of the "moly-porphyries", are not evident. Fracturing in the altered and mineralized volcanic rocks adjacent to the stock is intense but random.

Mineralization:

Molybdenum and copper mineralization at Pyramid occur within intensely silicified, sericitized and pyritized volcanic rocks adjacent the Guanomi Stock. Traces of molybdenite are found accompanying pyrite in fine quartz seams in these rocks on the Guanomi mine dumps. Chalcopyrite, with occasional emulsions of sphalerite, has only been identified microscopically in a polished briquette of pyrite concentrate prepared from drill cuttings in the Guanomi area. Some of the chalcopyrite was rimmed by a fine film of covellite but otherwise no secondary copper has been seen in this area. Leaching of copper values is limited to within a few feet of the surface.

Metal values in the drill holes, averaging 0.030%-0.050% Cu and 0.0020%-0.0030% Mo, are remarkably uniform throughout the pyritized rocks. However, copper gradually decreases with depth while molybdenum increases very slightly.

Within the intrusive itself, mineralization is confined to silicified ribs marking fault traces and weakly silicified and potassium-metasomatized quartz monzonite phase along the northwest margin of the stock. Traces of libethenite, an emerald green phosphate of copper identified by X-ray diffraction, and malachite occur in these rocks and account for the copper-anomalous geochemical values there.

The Geochemical Surveys:

Base Metals

A soils geochemical survey was carried out over the entire property. A total of 380 samples were collected on 500' centers and analyzed for Cu, Pb, Zn

and Mo at our Elko laboratory. Rock geochemical samples, mainly from visibly altered outcrops, were collected routinely during geologic mapping and analyzed for the same elements.

Figures 6-9 are contoured plots of the metal values in soil; Figure 11 shows the statistical data in histogram form and the basis for visual estimation of threshold.

Copper and molybdenum levels are not high, but weakly anomalous values (100 ppm Cu and 8 ppm Mo) fringe the Guanomi stock and are generally coincident with the areas of most intense alteration in the intruded Hartford rhyolites. The arcuate patterns of copper and molybdenum anomalism marginal to the stock are particularly well illustrated on plots of Cu/Zn and Cu/Mo ratios (Figure 10).

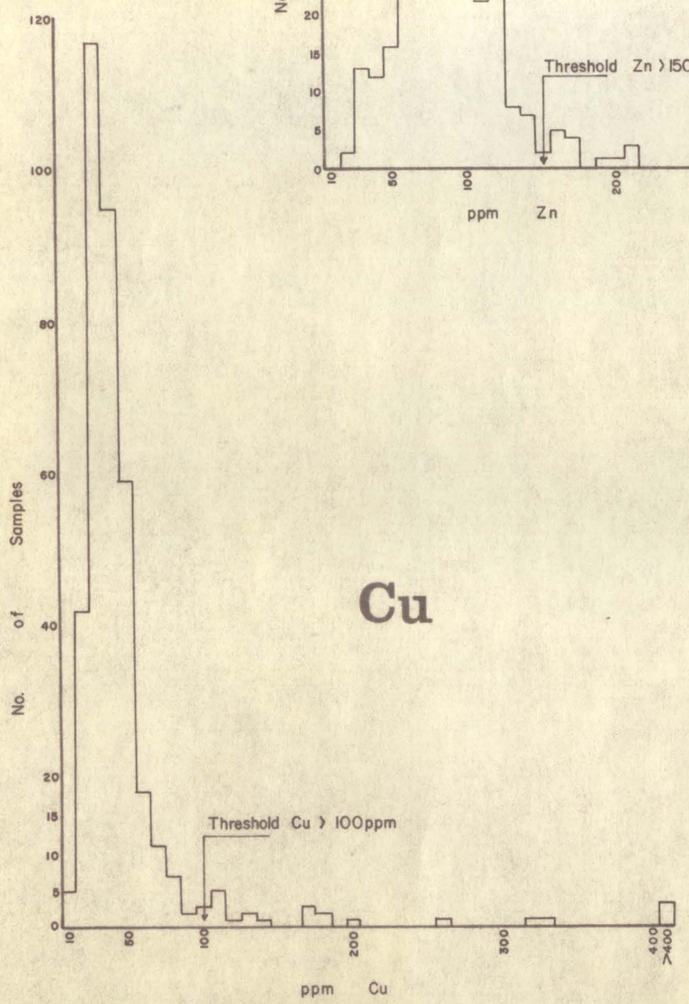
Lead and zinc levels are generally low and distribution non-diagnostic although several one or two-station highs coincide with copper anomalies. Zinc appears to be somewhat concentrated in the drainage sediment of Tom Anderson Canyon.

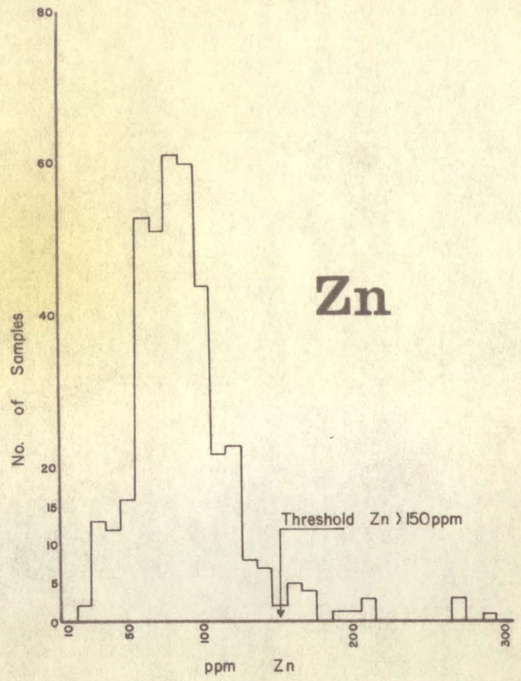
Rock geochemical results (Figure 12) more or less confirm in detail the results of the soil survey. Anomalous copper values are concentrated in the altered quartz monzonite exposed along the base of the Chloropagus cap in the west part of the property where copper oxide minerals are known to occur, and molybdenum values are highest within intensely altered Hartford rhyolites immediately adjacent to the Guanomi stock.

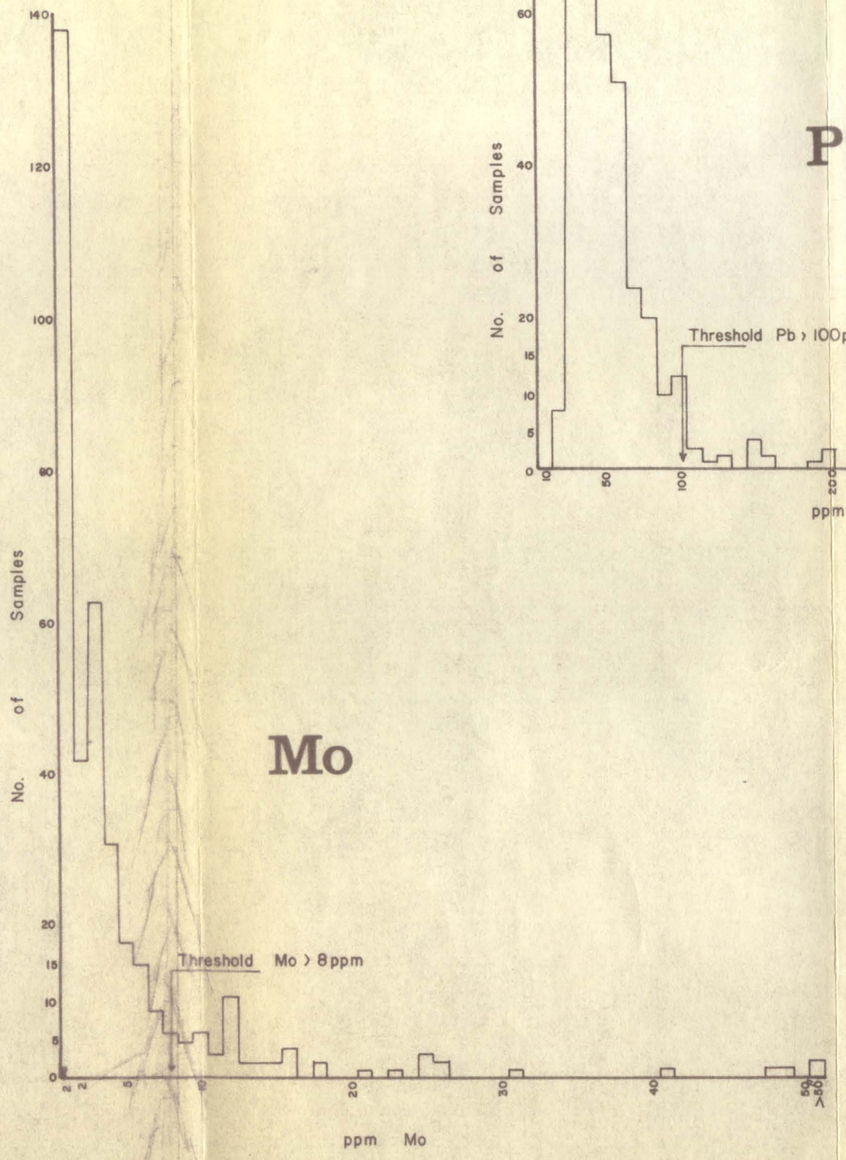
Mercury Vapor

James I. Barnes carried out a limited mercury vapor survey over a part of our grid in the Guanomi mine area during July, 1971. Purpose of the Barnes survey, which was done at his expense, was to test his equipment and techniques over an area of known mineralization and contrast results with the American Selco survey. The Barnes survey defined a northeast-trending anomalous zone, with values of 5-10 times background, southeast of the Guanomi Mine (Figure 13). The anomaly lies just outside the limits of our lease area and, as a result, its significance was not tested.

American Selco also carried out repeated mercury vapor tests over the Guanomi mine area. However, mercury levels were consistently very low (1-2 ppb) and we encountered serious problems of reproducibility. The troubles resulted partly from difficulties "seating" the pump stand in the hard, boulder-littered lake sediments and partly from film deterioration and sensitivity loss, a problem later resolved by Mr. McNerney. Regardless, considering our subsequent work with disseminated base metal deposits in Arizona, it is unlikely useful data would have resulted even under ideal conditions.







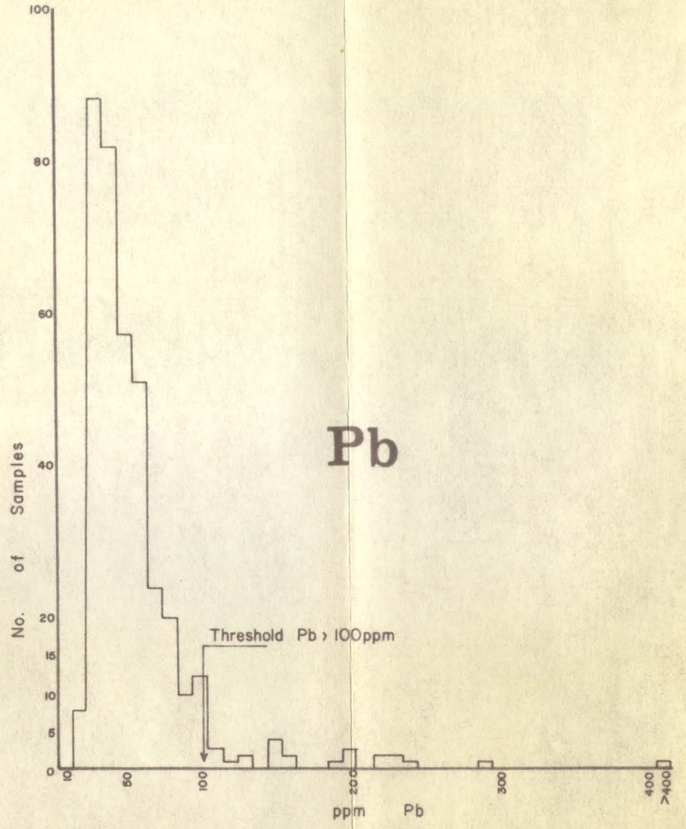


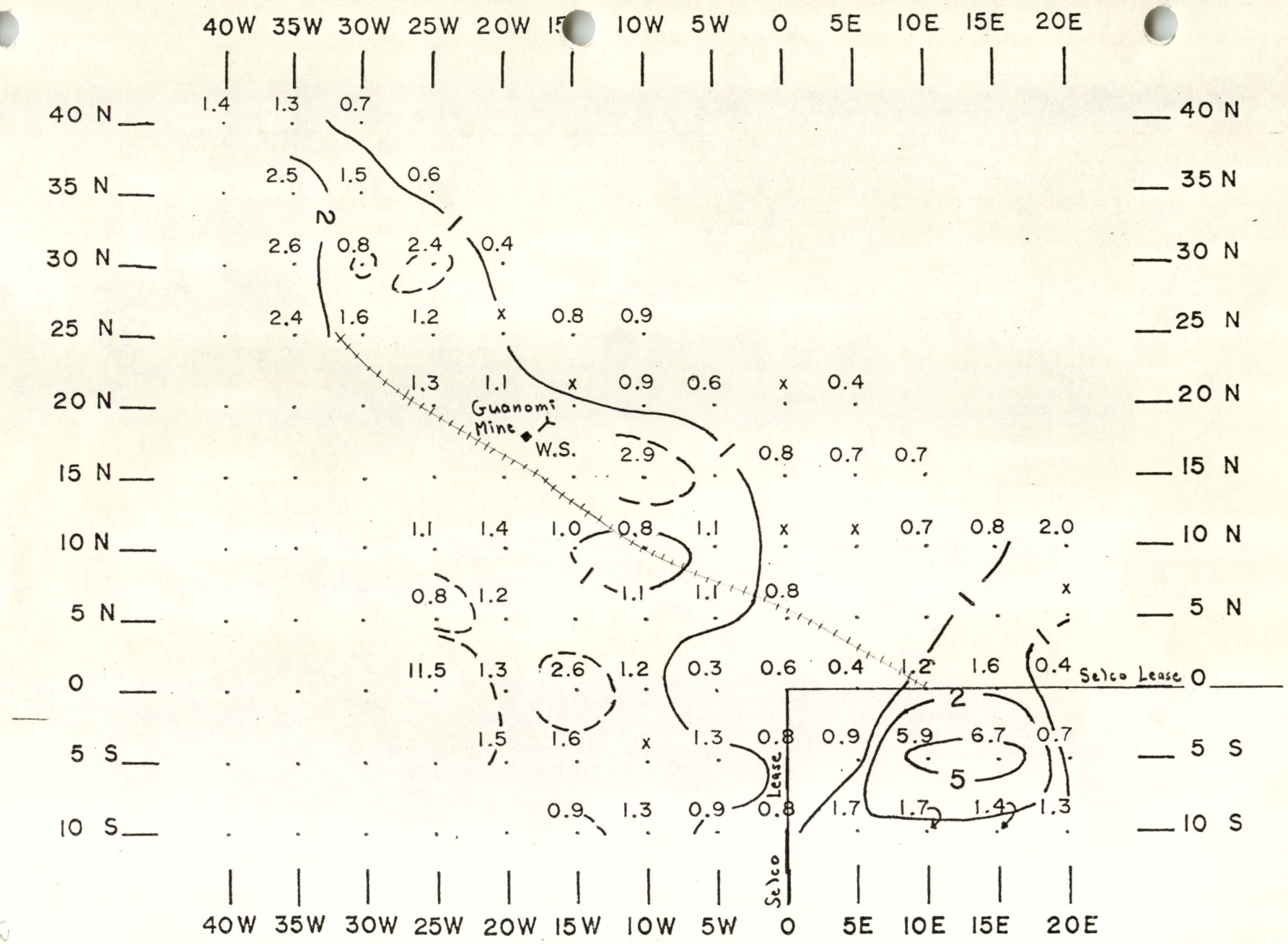
Figure 11

HISTOGRAMS of Cu, Mo, Pb & Zn
Pyramid Lake Project
Washoe County, Nevada
number of samples = 383

PAGE

FILE No.

BY J. I. Barnes DATE Aug. 8, '71



EXPLANATION

. =Point not checked at this time.

x = Valid measurement could not be made.

■ W.S.=Schmelzer house.

Figure 14

GUANOMI MINE AREA

BARNES MERCURY VAPOR SURVEY

July, 1971

Survey July 19-25, '71

The Geophysical Surveys:

Magnetics

A ground magnetic survey was completed over the grid area at Pyramid Lake using our Barringer nuclear precession magnetometer, Model GM-102. The instrument is designed to measure total field with a resolution of about 10 gammas. Figure 14 is a contoured plot of the data.

The most distinctive magnetic feature is the irregular anomalous pattern, characterized by abrupt polarity reversals, in the western part of the lease area. This is clearly coincident with a thin cap of intermediate to basic Chloropagus volcanics and obscures any possible expression of underlying, potentially mineralized rock.

A second anomaly, 200-300 gammas above background, more or less follows the shoreline of Pyramid Lake along the north edge of the property. We interpret this to represent black sand accumulations along the beach at the mouth of the Truckee River.

Restricted, single or double-station anomalies at the south end of the stock have no obvious explanation. There is no basis for attaching any economic implications.

A weak, northeast-trending magnetic linear through the Guanomi mine area is crudely correlative with IP data (Reed, 1971). Coincidence with the northeast-striking rhyolite dike exposed in the workings suggests a possible local structural control for the mineralization at the mine. A second magnetic linear bounds the north margin of the Guanomi stock west of Tom Anderson Canyon. However, this is probably only reflective of a rather steep gradient off the Chloropagus volcanic cover there.

Induced Polarization

Induced polarization surveys, contracted by McPhar Geophysics of Tucson, were carried out over part of the Pyramid Lake property in September, 1971. The IP and resistivity measurements were made in the frequency domain mode of operation at electrode intervals of 500' and frequencies of 0.31 and 2.5 Hz. Six lines, at 1000' intervals, were surveyed in the eastern part of the property. Additional detailed work, at 100' dipoles, was completed over known mineralization in the Guanomi Mine area.

Line locations are shown on Figure 5 and profiled results on Figures 15-21.

Weak IP responses over areas of known disseminated sulfides on the east margin of the stock have resulted in considerable differences in interpretation. However, considering our subsequent drill results in the Guanomi Mine area, where 3-5% disseminated sulfides were intercepted continuously to a depth of 1000', we must assume that the 2-3% frequency effects in the altered volcanics along the southeast margin of the stock indicate significant sulfide concentrations.

Line by line interpretations of the results have been discussed in various memorandums and correspondence, and Mr. Reed's overall comments are included in this report as Appendix A. In addition, the interpretations of Anthony Hauck, McPhar's geophysicist at the time of the survey, are symbolized on the IP profiles.

The survey area was limited to the east contact because our geologic mapping at the time had not been completed. Extension across the copper and molybdenum-anomalous zones on the west contact would initially have been desirable but I believe our subsequent drill tests have eliminated any need for further work there.

The Drilling Program:

A limited program of shallow rotary drilling, contracted by Long Drilling Company of Carlin, was carried out in November-December, 1971. Six holes (PRH 1-6), averaging 200' in depth, were drilled in the Guanomi Mine area to investigate the puzzling IP results. All intercepted silicified Hartford rhyolite with 3-5% disseminated pyrite and anomalous metal values. Graphic sections with assay results are included as Figures 22-27.

A second drill program, designed to investigate the Guanomi area at greater depth and test geologic and geochemical targets elsewhere on the property was initiated in March, 1972. However, problems of penetration with the rotary equipment, and caving, severely hampered and prolonged this program. Long managed to deepen PRH #5 to its target of 1000', and got down to acceptable depths with Holes 7 and 8. However, we eventually found it necessary to complete PDH #9 with coring equipment.

Following are brief descriptions of Holes 5 and 7-9:

PRH #5 - (Figure 26) was deepened from 160'-1000' in order to test the Guanomi mineralization at greater depths. Silicified and

pyritized Hartford volcanics, similar to rock on the mine dumps, were intercepted throughout the length of the hole with average metal values of 0.047% Cu and 0.0021% Mo. Copper content decreases gradually downhole from 0.067% in the upper 100' to 0.036% through the bottom 100' while molybdenum values increase slightly from 0.0013% to 0.0024% over the same intervals. Tungsten and fluorine contents, considered tracer elements to molybdenum mineralization, remain at background levels.

PRH #7 - (Figure 28) was designed to test the copper-anomalous silicified phase of quartz monzonite along the northwest margin of the Guanomi stock. The hole was targeted to a depth of 1000' but was abandoned at 860' after repeated caving. The hole was collared in the post-mineral Chloropagus formation then penetrated weakly pyritized Hartford rhyolites from 180'-210' before entering the silicified quartz monzonite. Metal content for the altered interval between 210' and 350' averages 0.067% Cu and 0.0030% Mo. Beyond 350', the quartz monzonite is considerably less altered and contains low metal values.

PRH #8 - (Figure 29) tested molybdenum-anomalous Hartford volcanics at the south contact of the Guanomi stock. Target depth was 1000' but difficulty of penetration forced its abandonment at 740'. Pyritized and silicified volcanics were intercepted to a depth of 500' after which the hole entered relatively fresh quartz monzonite. Metal values average 0.020% Cu and 0.0032% Mo, with very little variation, to the bottom of the hole.

PRH #9 - (Figure 30) was planned as a deep test in the core of the Guanomi stock. Purpose was to check the "multiple shell" model characteristic of porphyry molybdenum deposits. The hole was hammered to 525' at which point we switched to core and continued to a depth of 1625' where, because of increased caving and absence of significantly increased alteration, it was stopped. The hole remained in quartz monzonite for its entire length. Except for occasional sections of mild argillic alteration, the rocks are essentially fresh and unaltered. Anomalous molybdenum values are restricted to narrow quartz-feldspar or gypsum veinlets at shallow angles to the core axis. There is no evidence in the core that we are approaching significant mineralization.

Conclusions and Recommendations:

Results of our surveys at Pyramid, and subsequent drill tests, confirm copper and molybdenum mineralization in altered and pyritized rocks peripheral to the Guanomi stock. Metal values averaging about 0.050% Cu and 0.003% Mo are remarkably consistent over a widespread area. However, our work has failed to indicate anything approaching economic grades.

The peripheral mineralization is believed to represent anomalous metal associated with an alteration "hood" marginal to the stock. Possibility of a deeper, blind ore shell in the core of the intrusive, along the lines of the Climax or Henderson-Urad molybdenum porphyry models, was tested to a depth of 1625', but neither alteration nor molybdenum tracer elements show any increase downhole and we found nothing suggesting an approach to more significant mineralization.

Based upon our results to date, further testing of either the peripheral mineralization, or potential of blind ore at depth in the core of the stock, is considered of little interest.

Map Coverage & References

Nixon 15' Topographic Quadrangle 1:62,500

Reno AMS Sheet 1:250,000

Bonham, H.F. (1969) "Geology and Mineral Deposits of Washoe and Storey Counties, Nevada" Nevada Bureau of Mines - Bulletin 70, Pages 96-97

Prochnau, J.F.(1970) "Pyramid Lake Prospect - Report of Property Examination" Report to American Selco Incorporated, 3 pp.

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APPENDIX A

SELCO EXPLORATION COMPANY LIMITED

Memorandum to: J.F. Prochnau,
American Selco Incorporated

From: L.E. Reed

Date: October 18, 1971

IP ON SWALES AND PYRAMID PROPERTIES, NEVADA

As noted in our telephone conversation I received copies of the McPhar bill. I agree with the days worked and travelled as well as general expenses. I cannot, however, understand where one hour extra labour and one hour consulting on Swales and 11 hours extra labour and 11 hours consulting on Pyramid come from. There is no indication of its source on the weekly progress report so I would assume it is something dreamed up in Tucson. In any case I don't think we should pay the $246 involved without clarification.

I have been looking at Pyramid and have included a copy of plan contours of both frequency effects and resistivities at shallow and deep readings on the a = 500' array. The resistivities tend to be more descriptive of geology than the IP responses. On a = 500', n = 1, resistivities toward the lake are expectably low while readings in the hills are notably higher. Silicification of rocks is evidenced by higher resistivities notably at line 0, 37+50 West where silicified rhyolites are noted. Resistivity depressions in the hills roughly identify with creek locations with possibly some structure (faults or shears) implied.

On the deeper resistivities (a = 500', n = 4) a northeast lineation through the Guanomi mine is more clearly implied. The resistivity high southeast of this line implies silicification of rocks beneath the near-surface, weathered and saline rocks of the old lake bed. These higher resistivities are clear evidence of the penetration of the instrument beneath the lake sediments.

The implied structure through the mine may indicate that the mineralization has been localized along a fracture zone, although I understand that evidence for this in the workings is not clear. It would appear that the adit moves along this direction.

Interestingly this trend identifies a lineation in the magnetics passing through the mine although rotated about 10° east of the IP lineation. Presumably these are common structures, possibly relating to the dyke noted underground.

The frequency effects have not resolved any outstanding anomalous response. Generally the intrusive rocks provide low induced polarization effects. The volcanics along the east margin provide somewhat higher responses. Responses ranging up to 4% are

..... cont'd./

noted with higher responses on the shallower readings appearing to be quite local while increasing responses with depth appear to be geologic reflecting minor changes in the response of the rocks at depth. No outstanding increase in mineralization is implied.

The shallower (a = 500') readings suggest an erratic distribution of the mineralization noted in the pits. The a = 100' readings tend to confirm this with values to 4.5% being very localized, suggesting several narrow zones of limited vertical dimension.

The deeper readings of the a = 500' array show a broad high area ranging from 2% to 3% frequency effects lying between the lake and the base of the hill. The base of the hill closely corresponds with the edge of the high. This higher area is not considered to be anomalous but due to minor changes in the rock characteristics at depth. Some broad but low grade increase in conductive minerals may be presumed. The peak of 3.8% is enhanced by higher resistivities at this site. The volcanics in the hills toward the southeast generally provide responses above 2% ranging to 3.5% on line 20 South. It would appear that these values are describing a particular phase of the volcanics which may carry somewhat greater metallics than the adjacent intrusive rocks. This should not imply any outstanding mineralization.

The IP survey has not outlined any targets indicative of a large porphyry-type deposit. A difficulty in interpretation might arise however if molydbenite occurs by itself with no associated pyrite. In which case economic amounts might exist and provide only the low grade responses observed. This becomes a longer shot bet however since these low grade responses can be given a more likely explanation in variations in the lithology. This interpretation could be revised given support for the higher frequency effect areas in the geochemistry. The results of rock and soil geochemistry along line 20 South from 20 West to 35 West should be interesting in this regard. The frequency effect response here shows a broad but coherent source.

Reconsideration of the Swales data has not produced anything new. Variations in the response appear to be geologic with no IP effects specifically relating to the areas of geochemical interest.

The response here is seen to be very different from that at Pyramid. While resistivities in the faulted area of the siliceous sediments at Swales are as low as the lake sediments at Pyramid, the frequency effects are much larger at Swales. The resistivities of the Swales quartz-monzonite porphyry are at their low end comparable with the Pyramid quartz-monzonite. The high range at Swales however is about twice as high as that at Pyramid. Frequency effects on both units are low, although Swales is somewhat higher. It is apparent that the quartz porphyry on Swales carries some metallics as it is seen that frequency effects rise over this unit. It is difficult to separate the response from the porphyry from that of the adjacent sediments. The lack of geochemical response leaves these higher values without too much interest. The resistivity response of this unit is similar to that of the volcanics at Pyramid while the frequency effects fall short at Pyramid.

Drilled 11/71

EL 4000

RH-1

Surface

Overburden

Cu 468 Mo 9

Cu 382 Mo 14

Hartford Rhyolite, silicified

3-5% Pyrite

Water Table

Cu 260 Mo 12

Cu 248 Mo 16

T.D. 185'

Cu 455 Mo 10

0 50 100 ft.

Values given in ppm

15 W

Figure 22

AMERICAN SELCO INC.	
PROJECT: Pyramid REGION: Nevada AREA: Hole #1 FUNCTION—ORIGINAL: Sec. View COPIES: North	
Drawn by. Plotted by.	Date. Date.
SCALE: 1"=100'	PLAN No. AS

Drilled 12/71

RH-2

EL 4000

Overburden

Surface

RP

RP

HR(?)

Cu 41 Mo 21

Hartford Rhyolite, silicified

1-3% Pyrite

Cu 89 Mo 8

Water Table

Cu 106 Mo 9

Cu 56 Mo 7

T.D. 220'

0 100 ft.

Values given in ppm

20 W

Figure 23

AMERICAN SELCO INC.	
PROJECT: Pyramid REGION: Nevada AREA: Hole #2 FUNCTION—ORIGINAL: Sec. View COPIES: North	
Drawn by. Plotted by.	Date. Date.
SCALE: 1" = 100'	PLAN No. AS

Drilled 12/71

EL 4000

RH-3

Overburden

Water Table

Surface

Cu 269 Mo 21

Hartford Rhyolite, silicified

Cu 286 Mo 7

3-5 % Pyrite

Cu 275 Mo 12

T.D. 200'

Cu 285 Mo 7

0 100 ft.

Values given in ppm

Figure 24

AMERICAN SELCO INC.	
PROJECT: Pyramid REGION: Nevada AREA: Hole # 3 FUNCTION— ORIGINAL: Sec. View COPIES: North	
Drawn by. Plotted by.	Date. Date.
SCALE: 1"=100'	PLAN No. AS

10 W

Drilled 12/71

EL 4000

RH-4

Overburden

Surface

Leached — Cu 43 Mo 9

Hartford Rhyolite silicified
2-3% Pyrite — Cu 83 Mo 7

Water Table — Cu 182 Mo 16

Cu 115 Mo 14

T.D. 200'

0 100 ft.

Values given in ppm

Figure 25

AMERICAN SELCO INC.	
PROJECT: Pyramid REGION: Nevada AREA: Hole # 4 FUNCTION—ORIGINAL: Sec. View COPIES: North	
Drawn by. Plotted by.	Date. Date.
SCALE: 1" = 100'	PLAN No. AS

20 W

Drilled 0-140 12/71
140-1000 3/72

RH-5

Overburden

Water Table

EL 4000

Surface

Cu 667 Mo 12

Cu 576 Mo 13

Cu 375 Mo 7

Hartford Rhyolite, silicified

3-5 % Pyrite

Cu 499 Mo 13

Cu 558 Mo 12

Cu 498 Mo 15

Cu 458 Mo 11

Cu 450 Mo 16

Cu 477 Mo 20

Cu 534 Mo 22

Cu 437 Mo 24

Cu 350 Mo 25

Cu 320 Mo 31

Cu 363 Mo 36

Cu 357 Mo 34

Cu 347 Mo 28

Cu 336 Mo 30

Cu 347 Mo 24

Cu 312 Mo 20

T.D. 1000'

Cu 345 Mo 27

0 100 ft.

Values given in ppm

Figure 24

AMERICAN SELCO INC.	
PROJECT: Pyramid	
REGION: Nevada	
AREA: Hole # 5	
FUNCTION—ORIGINAL: Sec. View COPIES: North	
Drawn by.	Date.
Plotted by.	Date.
SCALE: 1"=100'	PLAN No. AS

15 W

RH-9

Drilled 5-7/72

Surface

Water Table

1-2% Pyrite

Start of coring

Q-c 0-20° c.a.

EL 4000

Veins, Qtz feldspar 0-20° c.a.

Veins, Qtz feldspar + Gypsum 35-40° c.a.

Mixed Quartz Monzonite

Feldspar Porphyry Phases

Weak Propylitic Alt'n

75 W

T.D. 1625'

Cu 20 Mo ∠1
Cu 13 Mo ∠1
+ (a)
Cu 15 Mo ∠1
Cu 13 Mo ∠1
+ (a)
Cu 14 Mo ∠1
Cu 15 Mo ∠1
Cu 12 Mo 10
Cu 11 Mo 1
Cu 11 Mo 2
Cu 9 Mo 3
Cu 19 Mo ∠1
Cu 15 Mo ∠1
Cu 15 Mo ∠1
+ (a)
Cu 10 Mo ∠1
Cu 15 Mo ∠1
Cu 20 Mo ∠1
Cu 25 Mo ∠1
Cu 10 Mo 2
+ (a)
Cu 10 Mo ∠1
+ (a)
Cu 15 Mo 4
Cu 10 Mo 6
Cu 15 Mo ∠1
Cu 25 Mo 11
Cu 15 Mo ∠1
Cu 15 Mo ∠1
Cu 10 Mo 6
Cu 10 Mo 6
+ (a)
Cu 10 Mo 13
Cu 15 Mo 15
Cu 20 Mo 69
Cu 15 Mo 229
+ (a)
Cu 55 Mo 4
Cu 20 Mo 8
Cu 20 Mo 4
Cu 15 Mo ∠1
Cu 60 Mo 2

Values given in ppm

0 100 ft.

Figure 30

AMERICAN SELCO INC.	
PROJECT: Pyramid	
REGION: Nevada	
AREA: Hole # 9	
FUNCTION—ORIGINAL: Sec. View	
COPIES: North	
Drawn by.	Date.
Plotted by.	Date.
SCALE: 1" = 100'	PLAN No. AS

Drilled 12/71

EL 4000

RH-6

Surface

Overburden

Cu 183 Mo 20

Water Table

Hartford Rhyolite, moderate alteration
1-2% Pyrite

Cu 158 Mo 21

Cu 86 Mo 2

T.D. 200'

Cu 65 Mo 2

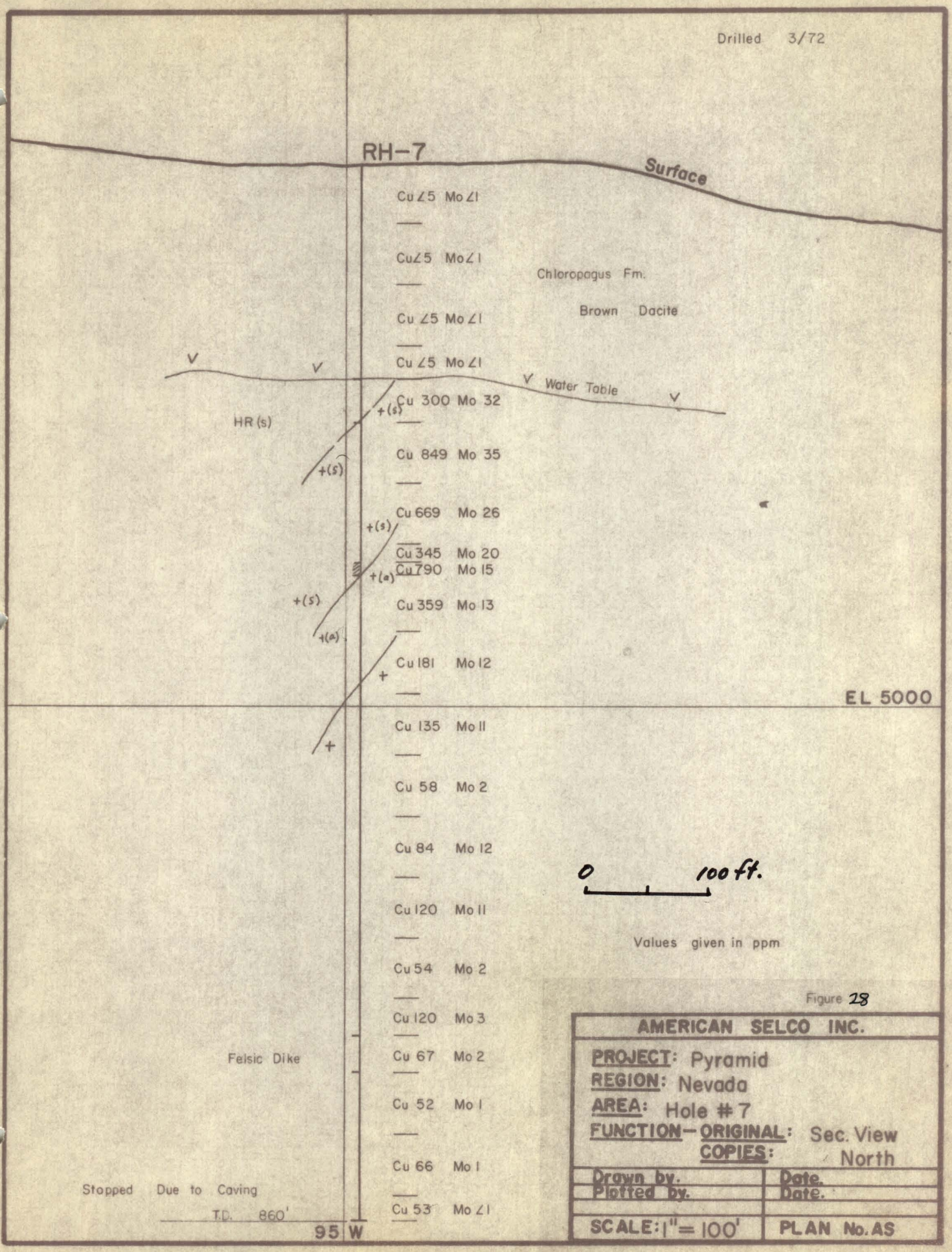
0 100 ft.

Values given in ppm

Figure 27

AMERICAN SELCO INC.	
PROJECT: Pyramid	
REGION: Nevada	
AREA: Hole # 6	
FUNCTION— ORIGINAL: Sec. View COPIES: North	
Drawn by.	Date.
Plotted by.	Date.
SCALE: 1"=100'	PLAN No. AS

25 W


Drilled 3/72
RH-7
Surface
Cu ∠5 Mo ∠1
Cu ∠5 Mo ∠1
Chloropagus Fm.
Brown Dacite
Cu ∠5 Mo ∠1
Cu ∠5 Mo ∠1
Water Table
Cu 300 Mo 32
HR (s)
+(s)
Cu 849 Mo 35
Cu 669 Mo 26
Cu 345 Mo 20
Cu 790 Mo 15
+(a)
Cu 359 Mo 13
Cu 181 Mo 12
EL 5000
Cu 135 Mo 11
Cu 58 Mo 2
Cu 84 Mo 12
Cu 120 Mo 11
Cu 54 Mo 2
Cu 120 Mo 3
Felsic Dike
Cu 67 Mo 2
Cu 52 Mo 1
Cu 66 Mo 1
Stopped Due to Caving
T.D. 860'
Cu 53 Mo ∠1
95 W
0 100 ft.
Values given in ppm
Figure 28
AMERICAN SELCO INC.
PROJECT: Pyramid
REGION: Nevada
AREA: Hole #7
FUNCTION—ORIGINAL: Sec. View
COPIES: North
Drawn by.
Date.
Plotted by.
Date.
SCALE: 1" = 100'
PLAN No. AS

Drilled 4-5/72

RH-8

Surface

Cu 22 Mo 16

Leached

Cu 407 Mo 20

Hartford Rhyolite
moderate-heavy
argillization and
sericitization
3% pyrite

Cu 250 Mo 58

Cu 225 Mo 41

Cu 213 Mo 21

Cu 165 Mo 25

Water Table

Cu 159 Mo 20

Cu 149 Mo 61

EL 5000

Cu 160 Mo 21

Cu 234 Mo 45

Cu 209 Mo 39

Cu 181 Mo 38

Cu 238 Mo 52

? HR(a) Cave ?

Cu 225 Mo 28

T.D. 740'

Cu 213 Mo 35

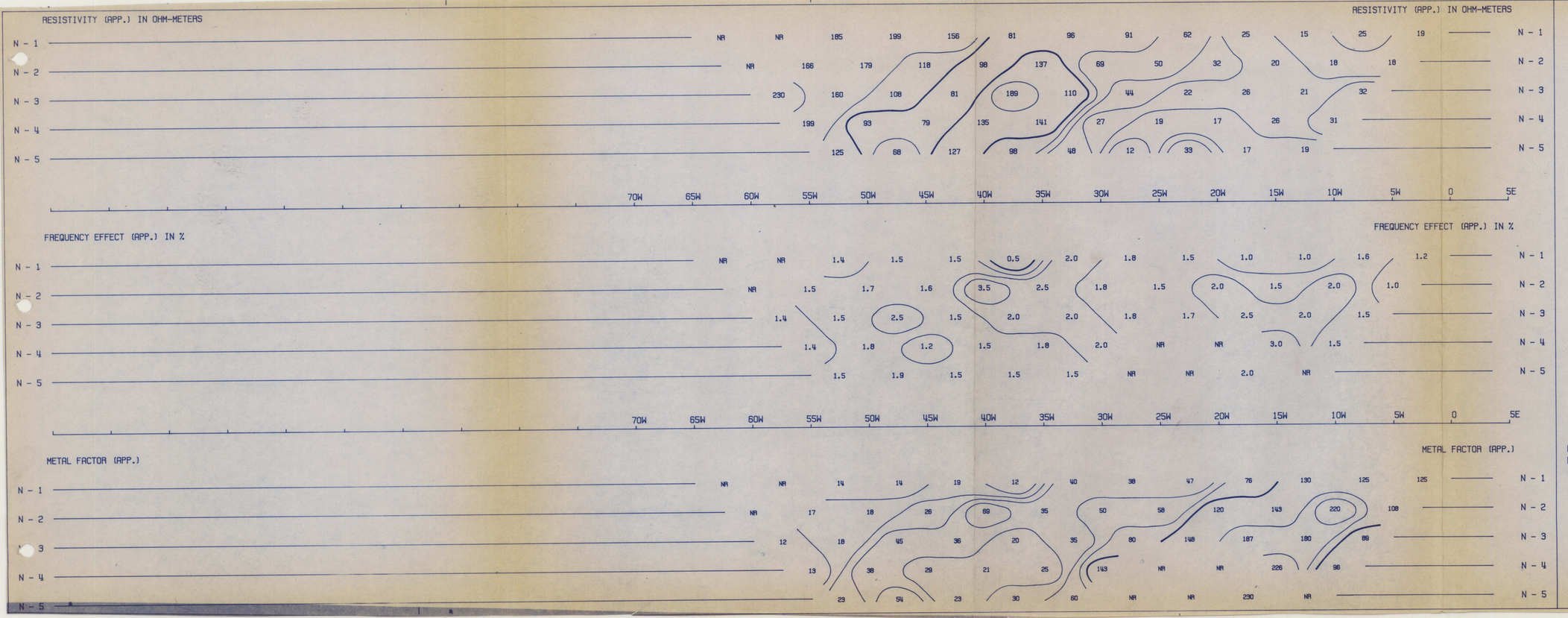
100 W

0 100 ft.

Values given in ppm

Figure 29

AMERICAN SELCO INC.	
PROJECT: Pyramid	
REGION: Nevada	
AREA: Hole #8	
FUNCTION – ORIGINAL: Sec. View COPIES: North	
Drawn by.	Date.
Plotted by.	Date.
SCALE: 1" = 100'	PLAN No. AS



INDUCED POLARIZATION AND RESISTIVITY SURVEY

AMERICAN SELCO INC.

PYRAMID LAKE PROPERTY, NEVADA

LINE NO.- 20N

DIPOLE-DIPOLE ARRAY
A = 500'
CURRENT EAST

NOTE: CONTOURS AT LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

DATE SURVEYED: SEPT '71

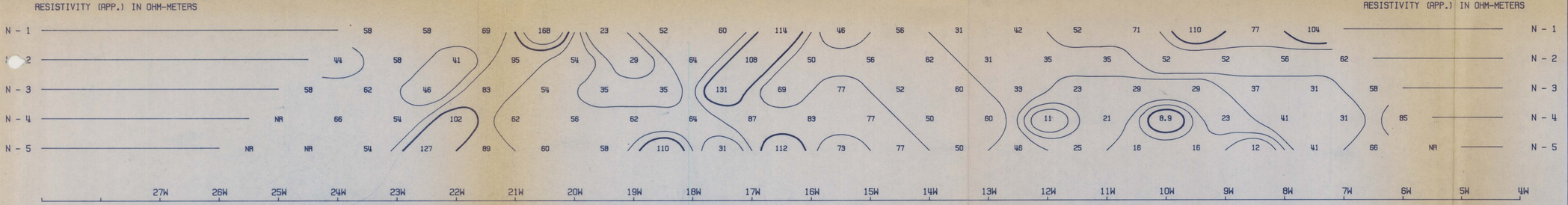
FREQUENCIES: 0.31-2.5 HZ

3720 0001

Figure 15
AS-525

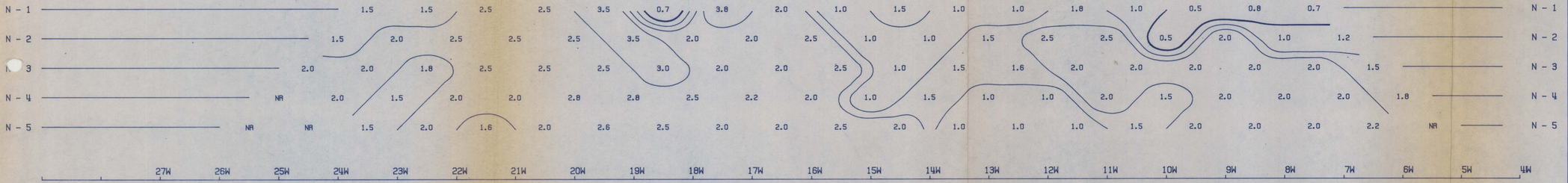
SURVEY CONDUCTED BY MCPHAR GEOPHYSICS SE.737

RESISTIVITY (APP.) IN OHM-METERS



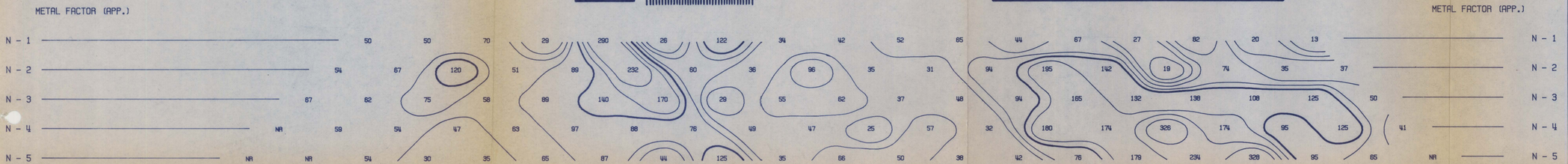
RESISTIVITY (APP.) IN OHM-METERS

FREQUENCY EFFECT (APP.) IN %



FREQUENCY EFFECT (APP.) IN %

METAL FACTOR (APP.)



METAL FACTOR (APP.)

INDUCED POLARIZATION AND RESISTIVITY SURVEY

AMERICAN SELCO INC.

PYRAMID LAKE PROPERTY, NEVADA

LINE NO.- 15N

DIPOLE-DIPOLE ARRAY
A = 100'
CURRENT EAST

Interpretation by MCPHAR: Definite
Probable
Possible

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE SURVEYED: SEPT '71

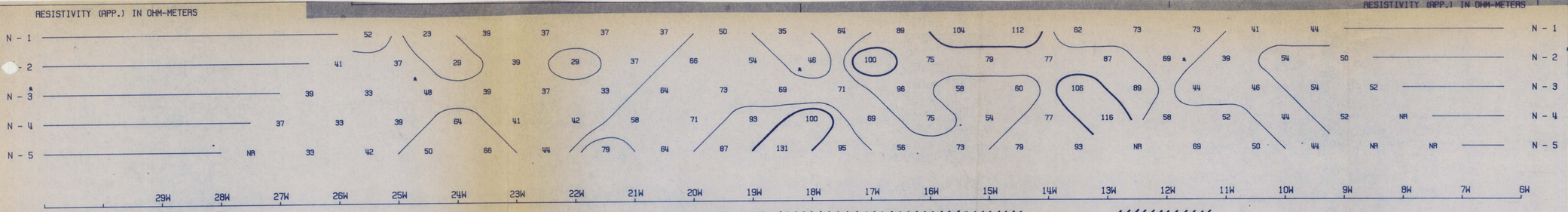
FREQUENCIES: 0.31-2.5 HZ

3720 0001

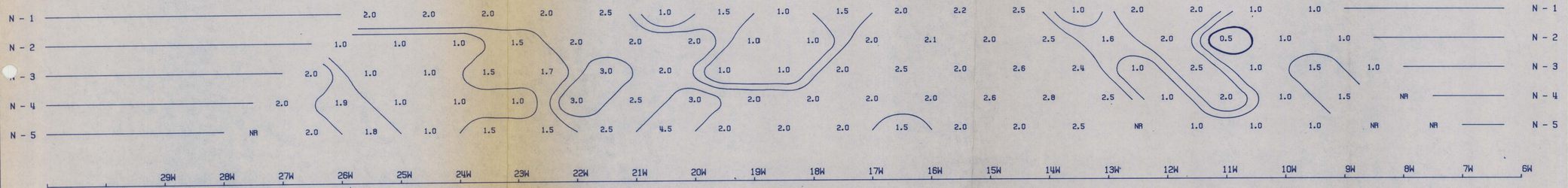
Figure 16
A3-525
SE. 738

SURVEY CONDUCTED BY MCPHAR GEOPHYSICS

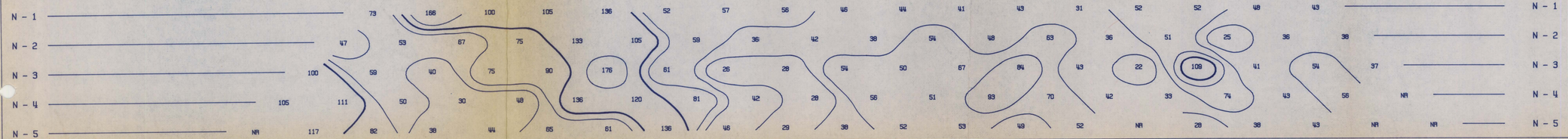
RESISTIVITY (APP.) IN OHM-METERS



FREQUENCY EFFECT (APP.) IN %



METAL FACTOR (APP.)



RESISTIVITY (APP.) IN OHM-METERS

FREQUENCY EFFECT (APP.) IN %

METAL FACTOR (APP.)

INDUCED POLARIZATION AND RESISTIVITY SURVEY

AMERICAN SELCO INC.

PYRAMID LAKE PROPERTY, NEVADA

LINE NO.- 10N

DIPOLE-DIPOLE ARRAY
A = 100'
CURRENT EAST

Interpretation by MCPHAR: Definite
Probable
Possible

NOTE: CONTOURS AT LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

DATE SURVEYED: SEPT '71

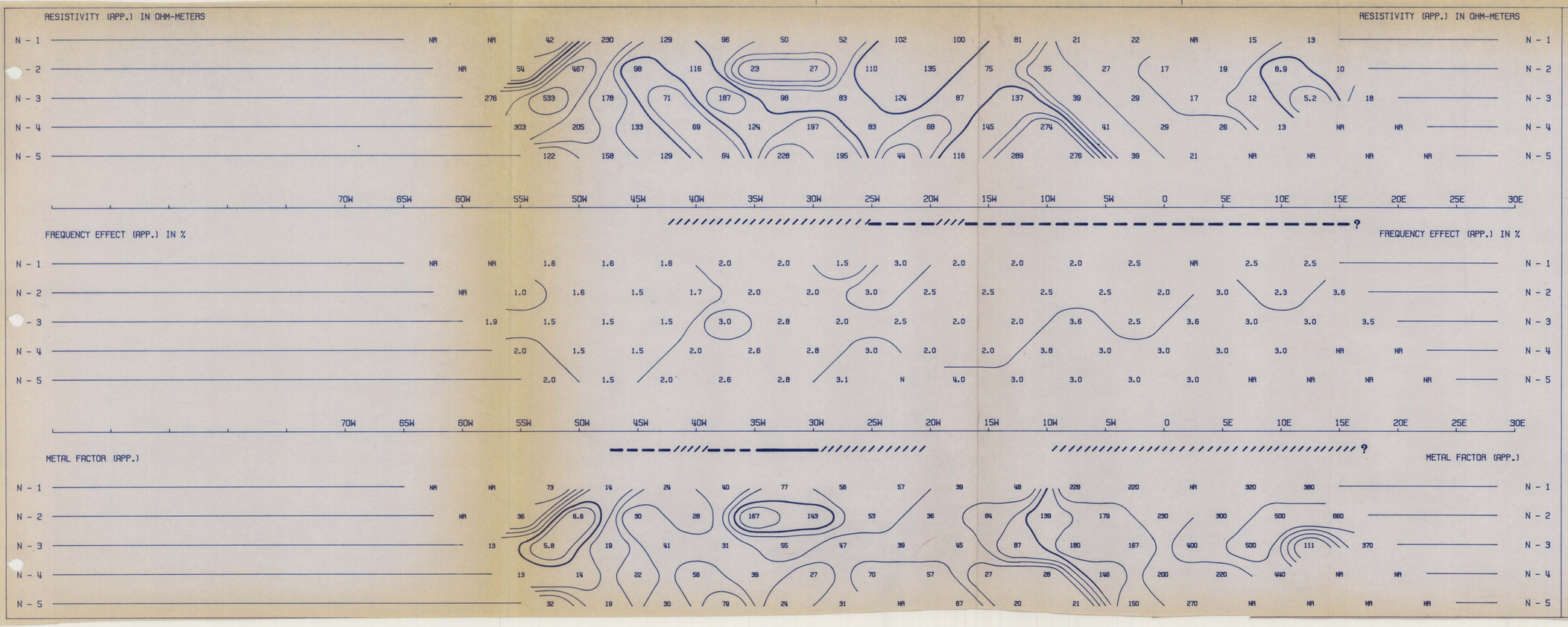
FREQUENCIES: 0.31-2.5 HZ

3720 0001

Figure 17
AS-525

SURVEY CONDUCTED BY MCPHAR GEOPHYSICS

SE. 739



INDUCED POLARIZATION AND RESISTIVITY SURVEY

AMERICAN SELCO INC.

PYRAMID LAKE PROPERTY, NEVADA

LINE NO.- 10N

DIPOLE-DIPOLE ARRAY
A = 500'
CURRENT EAST

Interpretation by MCPHAR: Definite ——— Probable ||||||||||| Possible ////////

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE SURVEYED: SEPT '71

FREQUENCIES: 0.31-2.5 HZ

3720 0001

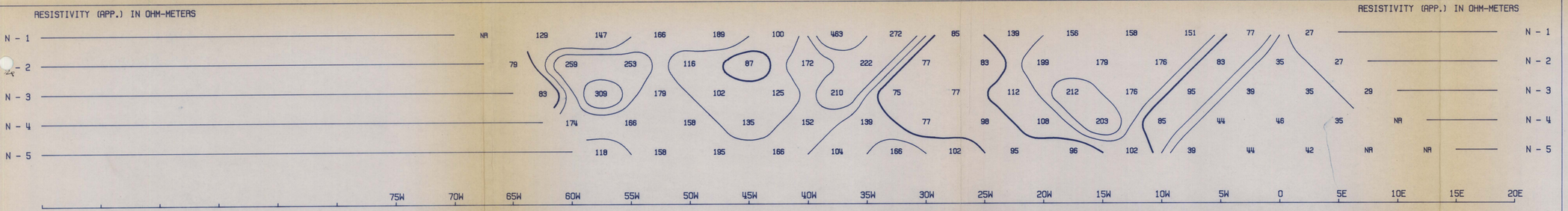
Figure 18

AS-525

SURVEY CONDUCTED BY MCPHAR GEOPHYSICS

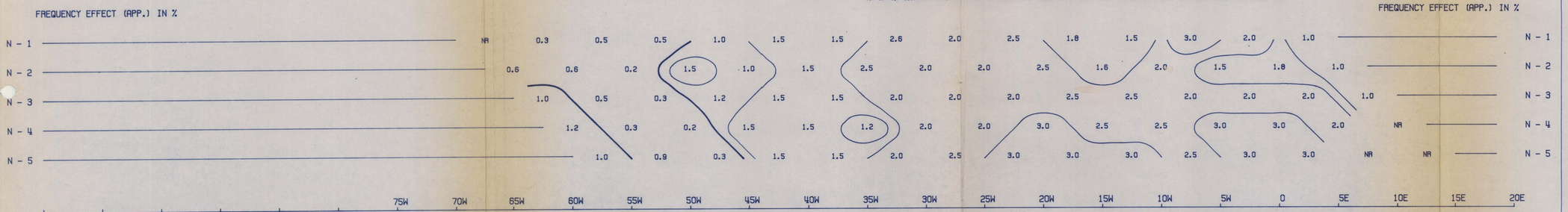
SE. 740

RESISTIVITY (APP.) IN OHM-METERS



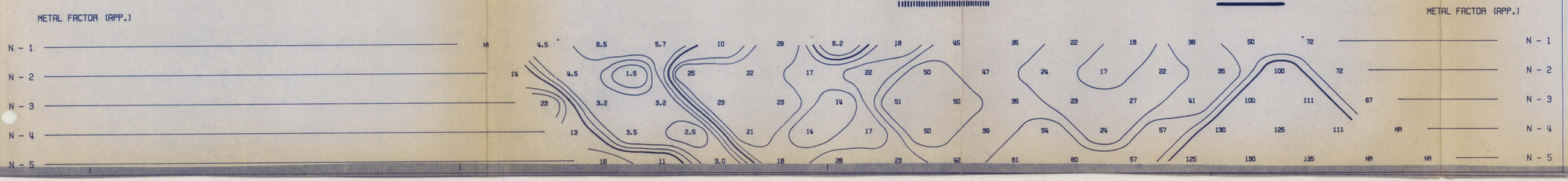
RESISTIVITY (APP.) IN OHM-METERS

FREQUENCY EFFECT (APP.) IN %



FREQUENCY EFFECT (APP.) IN %

METAL FACTOR (APP.)



METAL FACTOR (APP.)

INDUCED POLARIZATION AND RESISTIVITY SURVEY

AMERICAN SELCO INC.

PYRAMID LAKE PROPERTY, NEVADA

LINE NO.- 0

DIPOLE-DIPOLE ARRAY
A = 500'
CURRENT EAST

Interpretation by MCPHAR: Definite
Probable
Possible

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

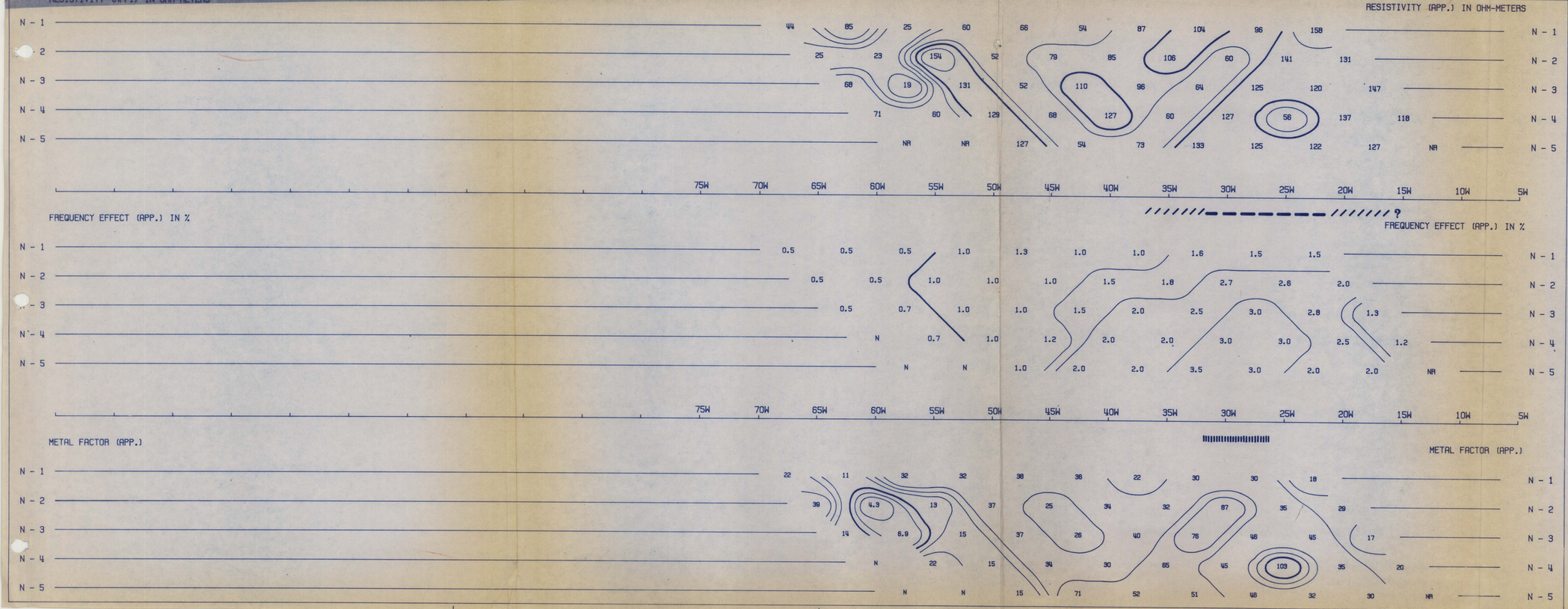
DATE SURVEYED: SEPT '71

FREQUENCIES: 0.31-2.5 HZ

3720 0001

Figure 19
AS-525
SE. 741

SURVEY CONDUCTED BY MCPHAR GEOPHYSICS



INDUCED POLARIZATION AND RESISTIVITY SURVEY

AMERICAN SELCO INC.

PYRAMID LAKE PROPERTY, NEVADA

LINE NO.- 20S

DIPOLE-DIPOLE ARRAY
A = 500'
CURRENT EAST

Interpretation by MCPHAR: Definite
Probable
Possible

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE SURVEYED: SEPT '71

FREQUENCIES: 0.31-2.5 HZ

3720 0001

Figure 21

AS-525

SURVEY CONDUCTED BY MCPHAR GEOPHYSICS SE. 699

Figure 12.

AMERICAN SELCO INC.	
PROJECT: Pyramid Lake	
REGION: Nevada	
AREA: Washoe County	
FUNCTION – ORIGINAL: Rock Geochemistry	
COPY:	
DRAWN BY:	DATE:
PLOTTED BY:	DATE:
CHECKED BY:	DATE:
SCALE 1" = 500'	PLAN No. A-5

319 Item 1

3720 0001g

032-031-0146

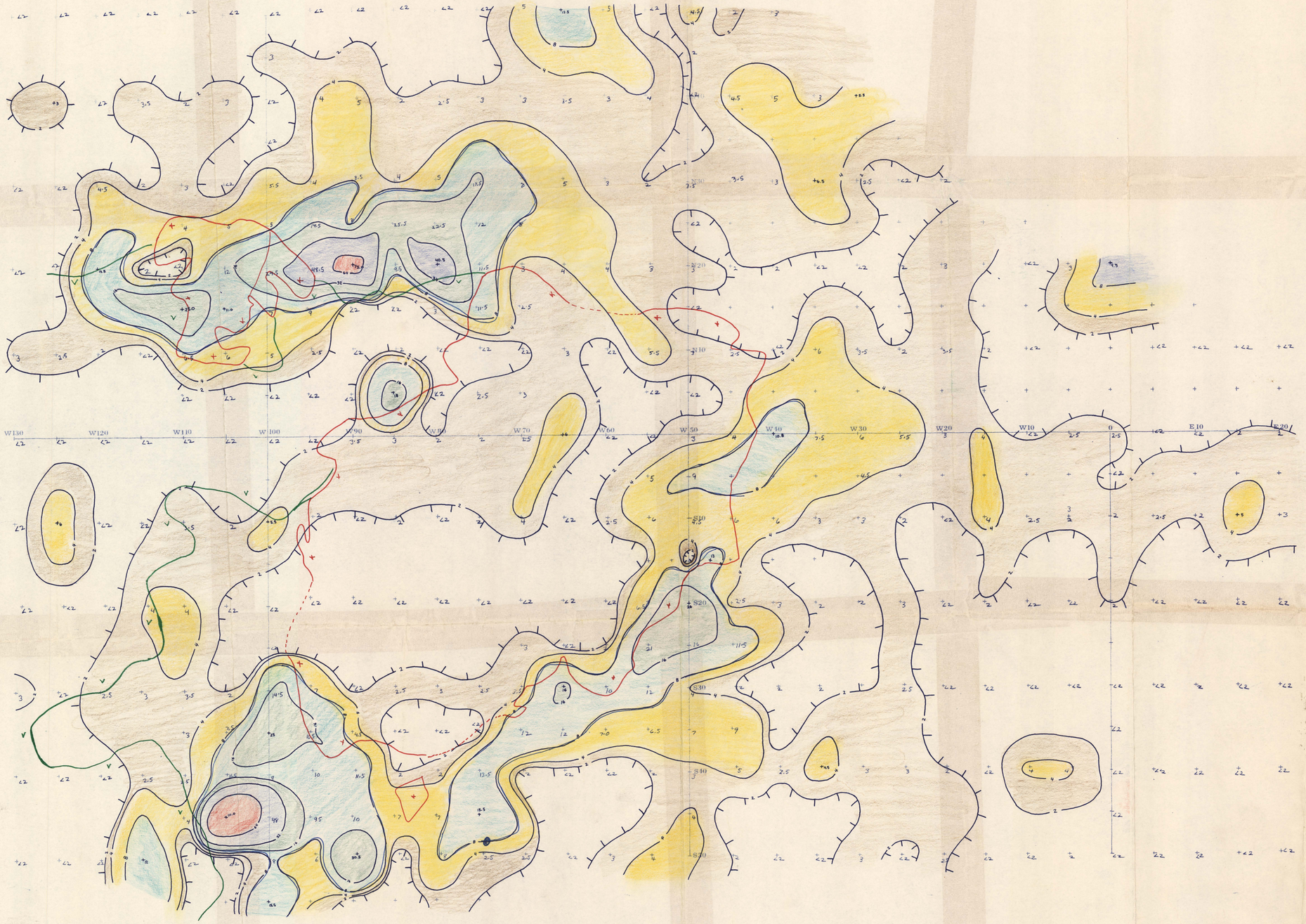


Figure 7

AMERICAN SELCO INC.

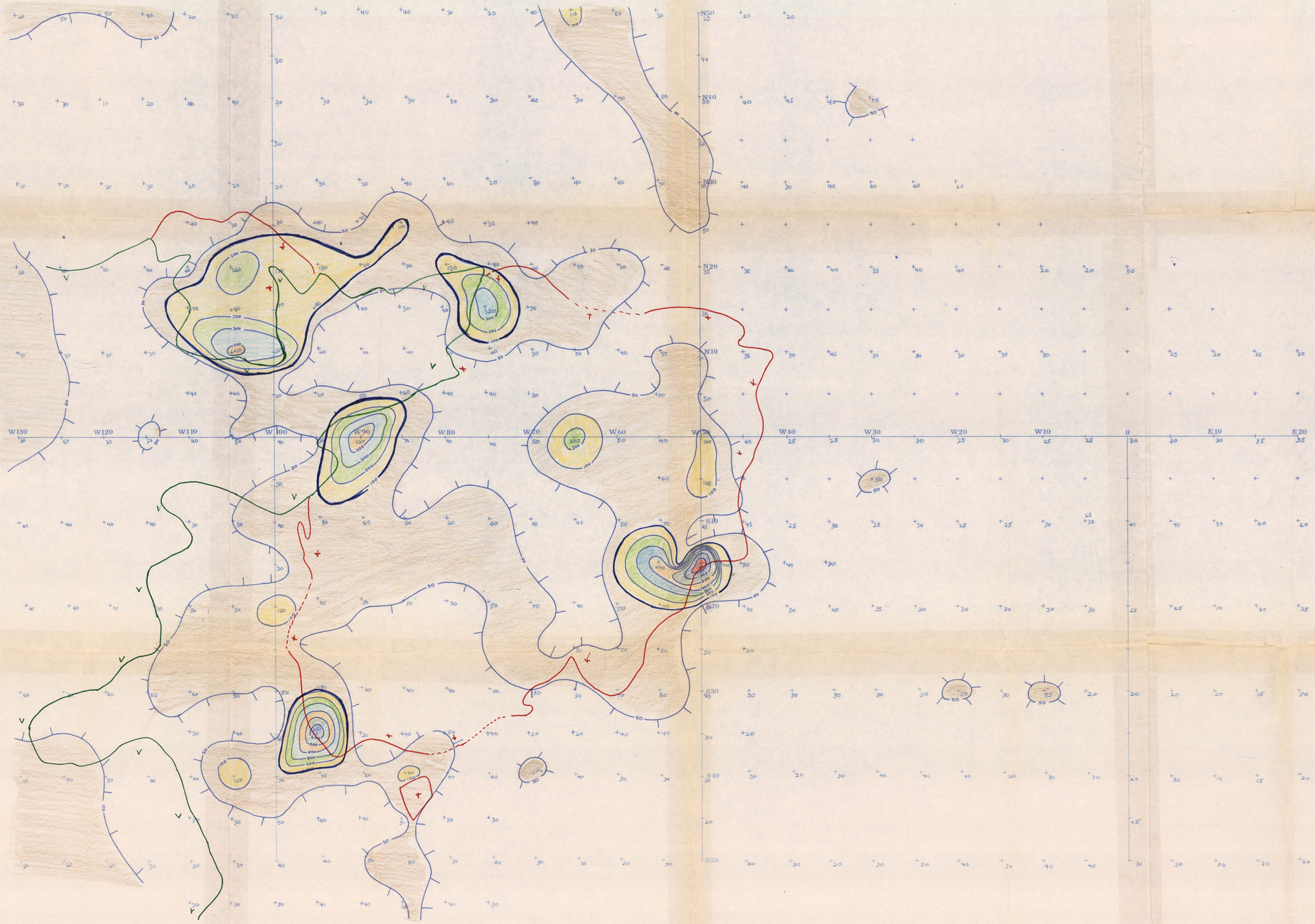
PROJECT Pyramid Lake
REGION Nevada
AREA Washoe Co.
FUNCTION ~~ORIGINAL~~ COPY

Mo

319 item 1

DRAWN BY:	DATE:
PLOTTED BY:	DATE:
CHECKED BY:	DATE:
SCALE 1" = 500'	PLAN No. AS 499

032-031-0146



Threshold Cu > 100

Chloropagus Fm

Guanomi stock

0 500 1000 ft.

Figure 6

AMERICAN SELCO INC.

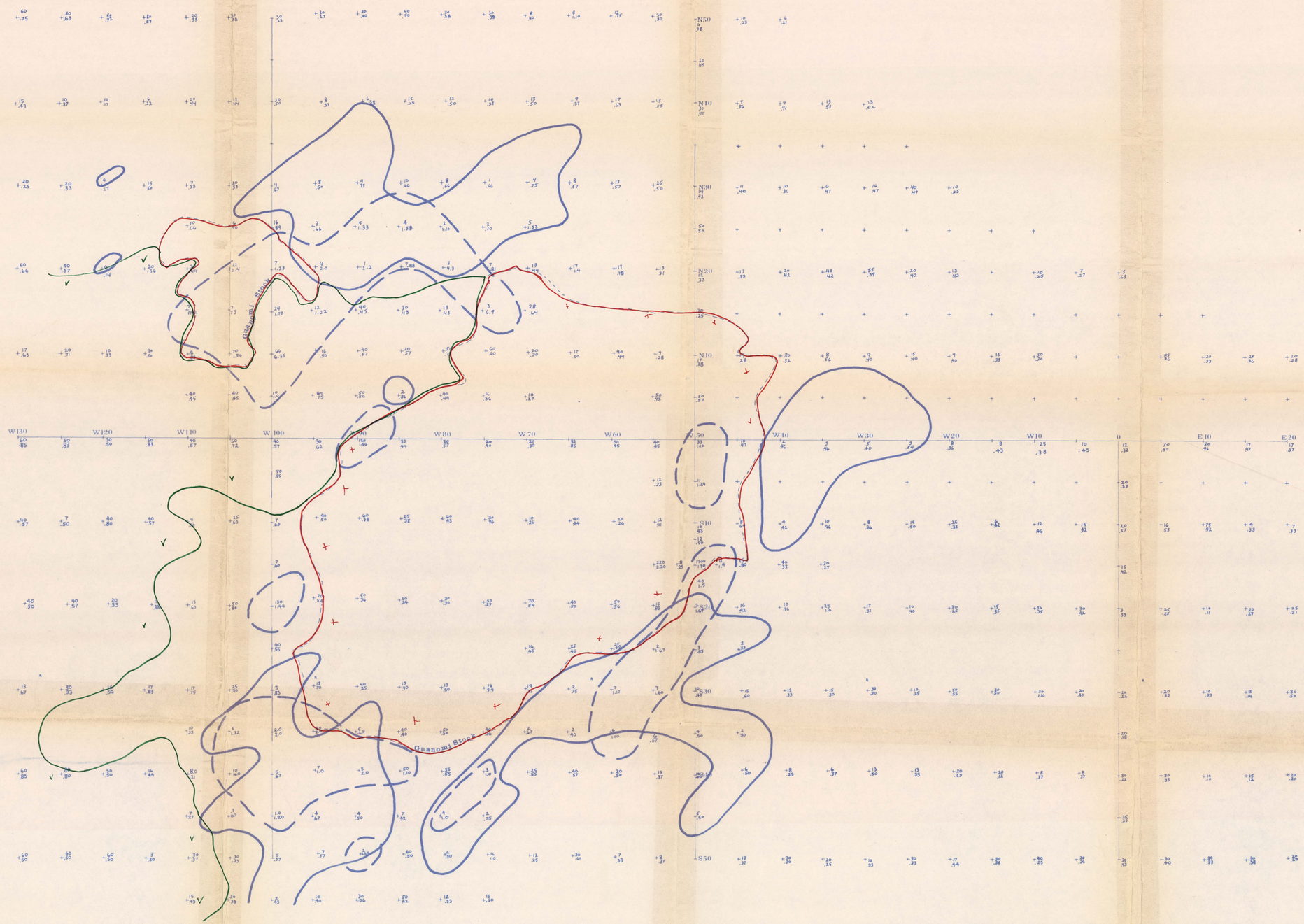
PROJECT: Pyramid Lake
REGION: Nevada
AREA: Washoe Co.
FUNCTION - ORIGINAL COPY: Cu

DRAWN BY:	DATE:
PLOTTED BY:	DATE:
CHECKED BY:	DATE:
SCALE 1" = 500'	PLAN No. AS 500

319
item 1

032-031-0146

3720 0001i



Chloropagus Fm

Guanomi stock

Cu/Mo ratios <6

Cu/Zn ratios >1

0 500 1000 ft.

Figure 10

AMERICAN SELCO INC.	
PROJECT Pyramid Lake	
REGION Nevada	
AREA Washoe Co.	
FUNCTION ORIGINAL Cu/Mo & Cu/Zn ratios	
COPY	
DRAWN BY:	DATE: 3/9
PLOTTED BY:	DATE: item 1
CHECKED BY:	DATE:
SCALE 1" = 500'	PLAN No. A-S

3720 00015

032-031-0196

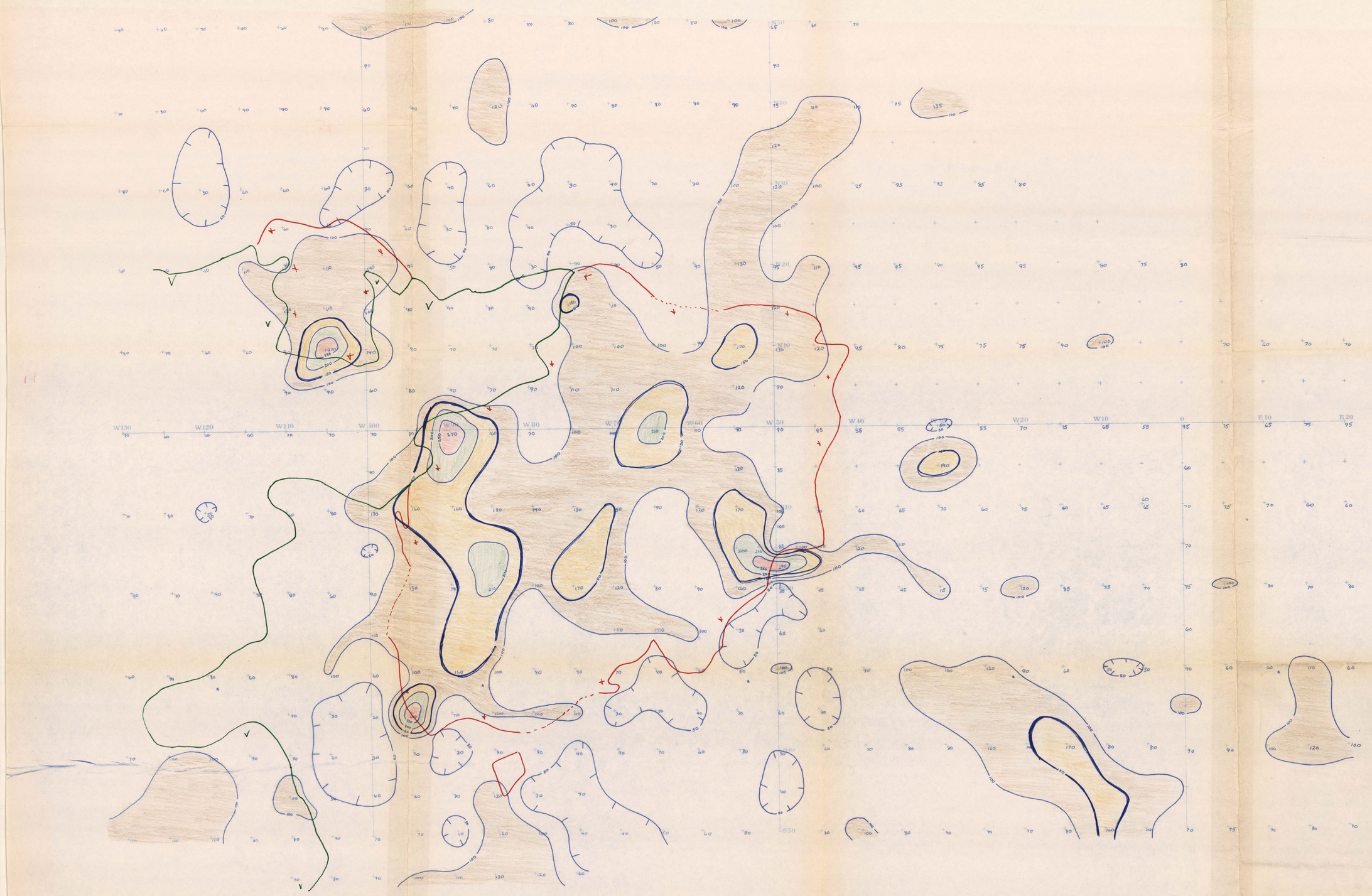


Figure 9

AMERICAN SELCO INC.

PROJECT Pyramid Lake
REGION Nevada
AREA Washoe Co.
FUNCTION ORIGINAL COPY

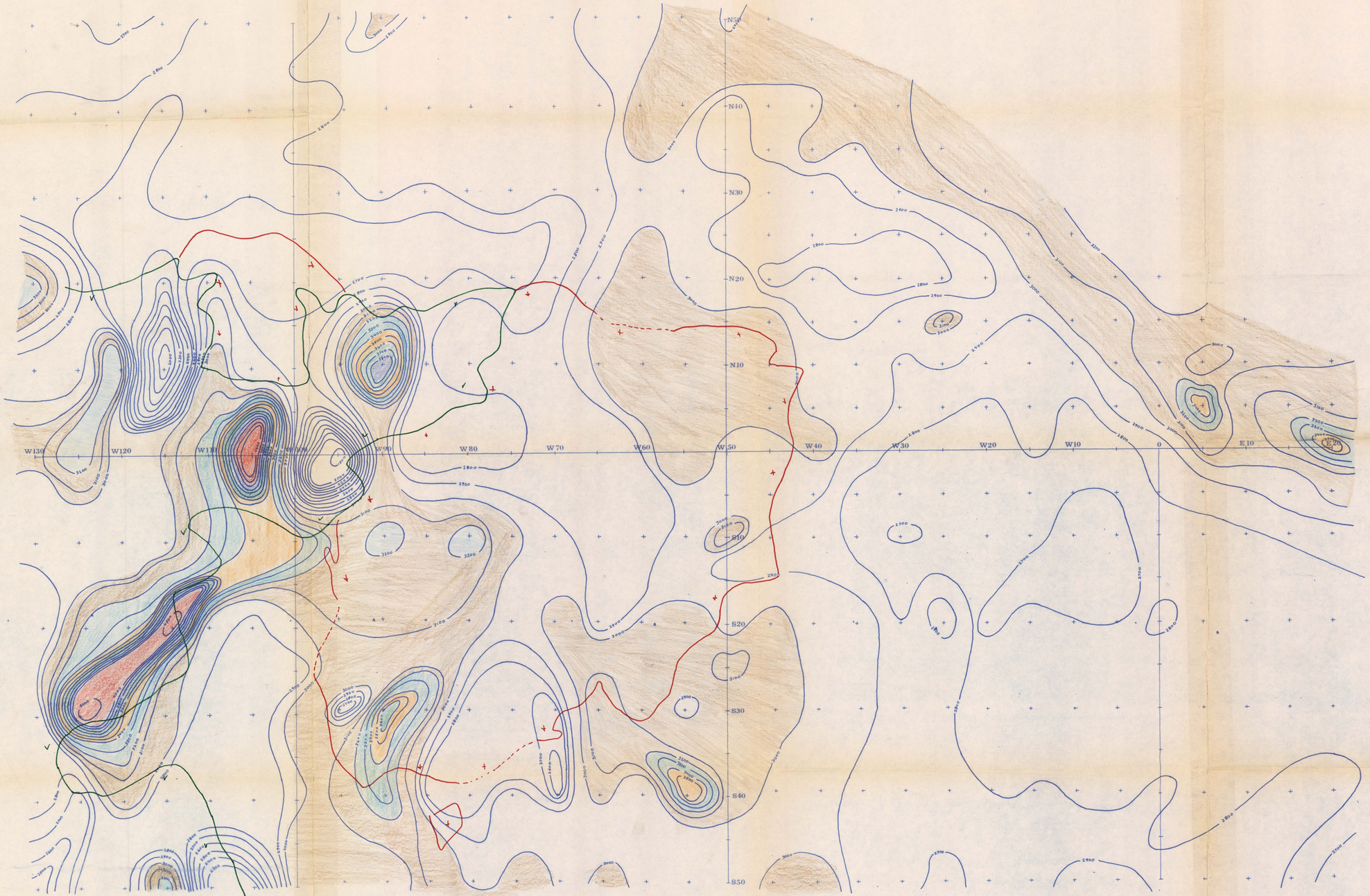
Zn

319 item 1

DRAWN BY:
TRACED BY:
CHECKED BY:
SCALE 1" = 500'

032-031-0146

3720 0001k



Chloropages Fm

Guanomi stock

0 500 1000 ft.

Figure 14

AMERICAN SELCO INC.	
PROJECT: Pyramid Lake	
REGION: Nevada	
AREA: Washoe Co.	
FUNCTION – ORIGINAL COPY: Magnatometer Survey	
DRAWN BY:	DATE:
PLOTTED BY:	DATE:
CHECKED BY:	DATE:
SCALE 1" = 500'	PLAN No. AS 319

032-031-0146

3720 0001L

Item 1

PYRAMID LAKE

ELEVATION 3779 ON JUNE 28th 1971.

Southern Pacific Railroad "Right-of-Way"

Reno 40 mi

Morgan Ranch

Guanomi Mine

Adsorption property

Nixon 10 mi

Section corner

LEASE BOUNDARY

39° 50' 00" N

119° 28' 00" W

RH 1 185'
RH 2 220'
RH 3
RH 4 200'
RH 5 1600'
RH 6 200'
RH 7 860'
RH 8
RH 9 1150'

GEOLOGIC LEGEND

Pleistocene

- Qal — Alluvium, stream deposits
- QT — Lake Lahontan deposits
- QLS — Landslide rubble
- Qcng — Conglomerate, FeOx-cemented

Upper Miocene

CHLOROPAGUS FORMATION

- Vc — Undifferentiated volcanics, chiefly dacite, andesite & basalt flows

Middle Miocene

GUANOMI INTRUSIVE COMPLEX

- B — Basalt; plugs, dikes & irregular masses
- Ta — Trachyandesite; dikes
- FQL — Quartz Latite; dikes, in part strongly foliated & bleached
- Rp — Rhyolite Porphyry; dikes
- Qm — Quartz Monzonite; main body of Guanomi stock, in places aplitic; pervasive weak porpylitic alteration

Lower Miocene

HARTFORD HILL FORMATION

- Rhc — Agglomerate
- Rhb — Rhyodacite
- An — Andesite
- Rh — Rhyolite tuff; pervasive sulfataric alteration

SYMBOLS

- Geologic contact
- Alteration contact, approximated
  - (s) silicification w/subordinate sericitization, (alunitization); heavy limonites
  - (a) sericitization w/subordinate silicification heavy limonites
  - +(s) silicification (k-metosomatism) of Guanomi stock rocks
  - +(a) argillization of Guanomi stock rocks
- Fault
- Quartz vein or silicified zone
- Fracture or joint
- Shear or sheeted zone
- Probable bedding attitude
- Brecciation
- Outcrop
- Rock sample site
- RH 3 — Selco drill hole and depth
- Adit, shaft, prospect pit
- Lease boundary
- Selco baselines
- Selco constructed or rebuilt roads
- Existing road or jeep tracks
- Highway 33
- Railroad "Right-of-Way"

0 500 1000 ft.

Figure 5

AMERICAN SELCO INC.

PROJECT: Pyramid Lake
REGION: Nevada
AREA: Washoe County
FUNCTION – ORIGINAL: Geology
COPY: 319

DRAWN BY:	DATE:
PLOTTED BY:	DATE: Item 1
CHECKED BY:	DATE:
SCALE 1" = 500'	PLAN No. AS 503

3720 0001 M

032-031-0146

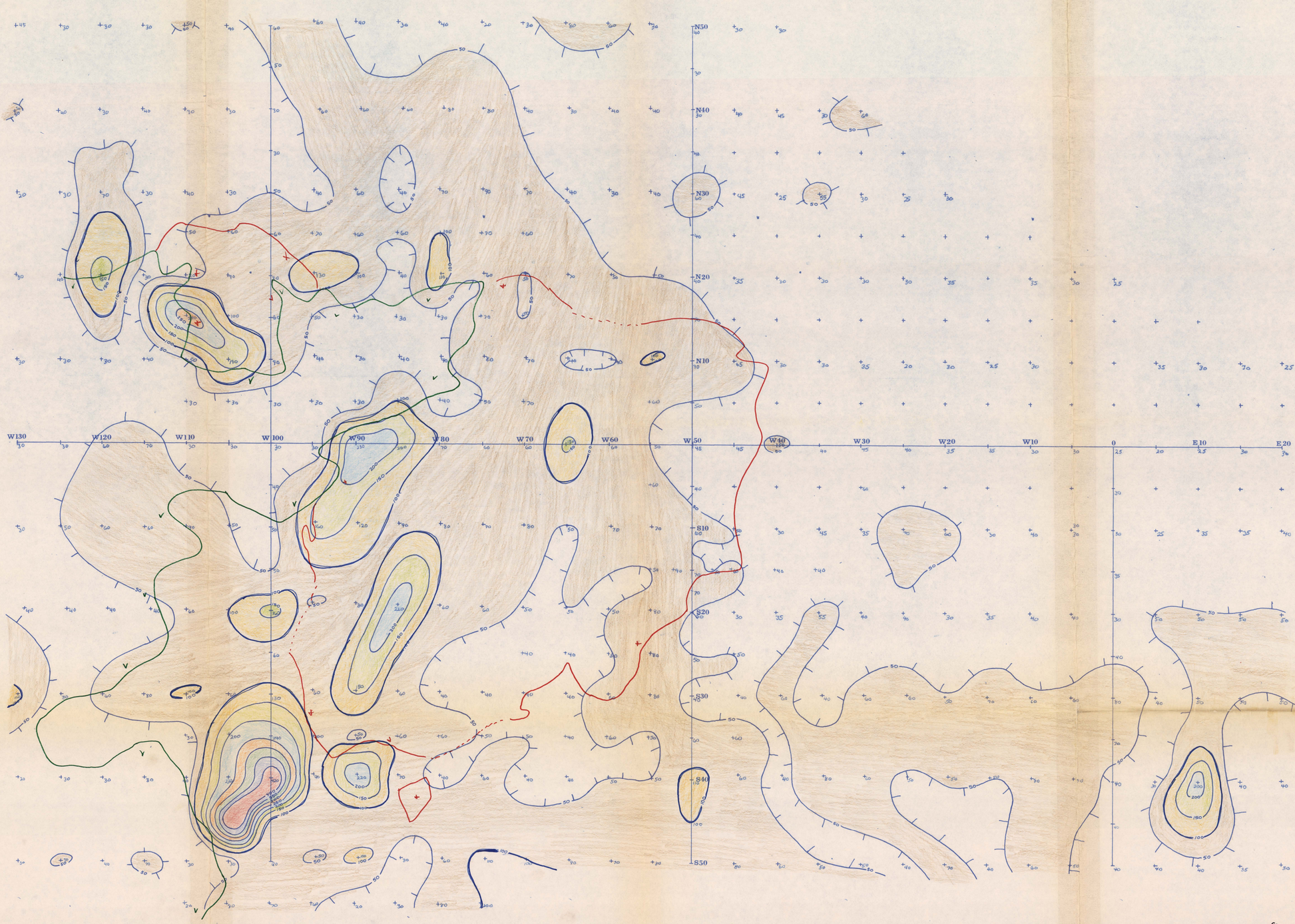


Figure 8

AMERICAN SELCO

PROJECT: Pyramid Lak
REGION: Nevada
AREA: Washoe Co.
FUNCTION – ORIGINAL: Pb
COPY:

319 Hem

DRAWN BY:	DATE:
PLOTTED BY:	DATE:
CHECKED BY:	DATE:
SCALE 1" = 500'	PLAN No.

3720 0001n

032-031-0196