ITEM 44 SEE 17 PLATES

PORPHYRY COPPER-MOLYBDENUM ORE TARGET

PERRY CANYON AREA

PYRAMID MINING DISTRICT

WASHOE COUNTY, NEVADA

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by

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# APPENDIX

- Geochemistry of Veins, Pyramid District, Washoe County, Nevada. Paper by Andy B. Wallace.
- 2. Geochemical Data Sheets.

#### SUMMARY

The Perry Canyon area located in the Pyramid Mining District, 30 miles north of Sparks, Nevada, contains a target for a disseminated and veinlet porphyry copper-molybdenum bulk-tonnage ore body exceeding 100 million tons at grades better than 0.8% copper with significant credits in MoS<sub>2</sub> and gold lying 500 to 3,000 feet below the surface.

The target area is covered by patented and unpatented lode mining claims and fee land. No serious problems are foreseen in consolidating the four properties into a single unit. Work done so far consists of geologic mapping, limonite evaluation, alteration studies and rock-chip geochemical data analyses.

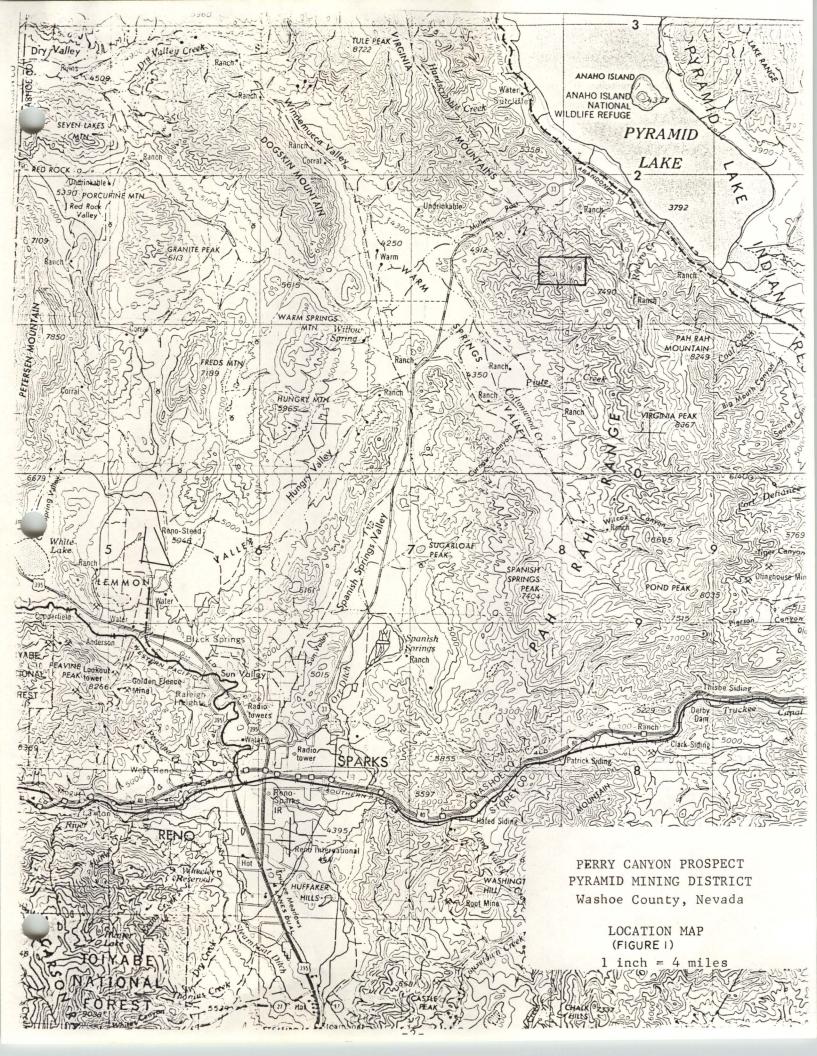
Host rocks for mineralization are rhyolite and quartz-latite tuffs, lavas and sills of Oligocene to Miocene age. Post-mineral andesites of late Tertiary age cover part of the mineralized system. Productive Cu-Ag-Zn-Pb vein mineralization shows a district zoning similar to that at Butte, Montana and suggests a center of Cu-Mo mineralization in the Perry Canyon area. An ore target is defined by co-extensive areas of: (1) strong advanced argillic, clay-sericite and silica flooding alteration; (2) strong pervasive disseminated pyrite as inferred from limonite minerals; (3) mineralized breccia zones similar to high-level breccia pipes in other porphyry systems; and (4) anomalous metal-in-rock values (Cu, Mo, Pb, Au, Ag, Sn, W, F).

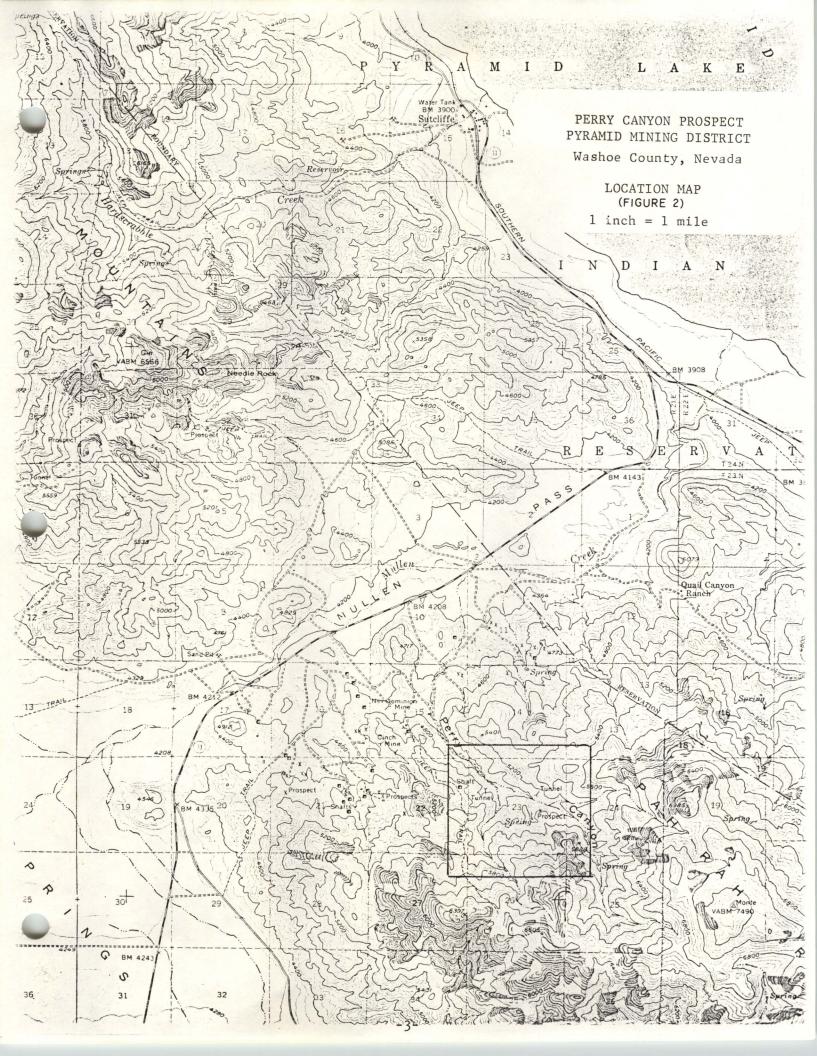
A discovery drilling program is proposed and consists of drilling 3 diamond drill holes each to 3,000 feet in depth. Estimated costs are about \$450,000 which includes contract drilling costs, site preparation, road work, reclamation, salaries, travel and assays.

#### LOCATION AND HISTORY

The Perry Canyon area is located in the Pyramid Mining District, within the Pah Rah Range, about 30 miles north of Sparks, Nevada. Access into the Perry Canyon claim block is by two miles of fair to poor unmaintained dirt road which turns off of State Highway 445 in Mullen Pass near the center of section 10. The location of the area is shown in Figures 1 and 2.

Relief is moderately rugged with elevations from 4,800 to 5,600 feet. Vegetation consists predominantly of sage brush cover with scattered juniper and mohogany. Snow cover in winter is light and year around exploration and development activities are possible.





Mining in the Pyramid District began about 1875 and past production came largely from northwest-trending copper-gold-silver veins which are located to the west and adjacent to the Perry Canyon center of alteration and mineralization. Some uranium was produced from the district in the 1960's. Production figures are imcomplete but indicate less than 100 ounces gold and about 3,000 ounces of silver were produced from copper-rich ores of the Jones-Kincaid and Monarch mines. The district presently is inactive.

#### LAND STATUS

Current ownership and location of unpatented lode mining claims, patented mining claims and fee land is shown in Figure 3 and summarized below.

Perry Canyon claims No.'s 1-43.

Owner: W. T. Probandt

1206 Wilco Building Midland, Texas 79701 Ph: (915) 683-6114

Located: May, 1980 (Assessment due September 1, 1981).

. Fox claims No.'s 1-6.

Owner: Andy B. Wallace

c/o Cordex, Inc. Reno, Nevada 89500 Ph: (702) 825-6731

Located: April, 1980 (Assessment due September 1, 1981).

Patented mining claims sec. 22,23.

Owner: Mark Emerson (AMDEC Corp.)

131 W. 69th Street

New York, New York 10023

Ph: (212) 724-2537

. Patented Fee land, sec. 24.

Owner: David G. and Patricia Pumphry

P.O. Box 250

Minden, Nevada 89423 Ph: (702) 782-2081

The Perry Canyon lode mining claims were staked in May, 1980 to cover open ground over the inferred target area of strong pervasive alteration. Location posts were placed on open ground but these lode claims overlap valid patented and unpatented claims.

Two unpatented lode mining claims (Bee Lost 1-2) in the southeast part of the area apparently are valid, but the present owners are unknown. These claims are outside the principal ore target area. Several patented millsites are present in Perry Canyon. Present owners of these are not known.

At the present time Andy Wallace has agreed to lease his 6 claims for a 10 year period for a 4 to 5% NSR production royalty. A lease agreement is being prepared. Mark Emerson is interested in a JV or lease agreement on the patented claims but he would like an agreement that permits him to explore and develop near surface gold ore potential on at least part of the patented ground. David Pumphry confirms that mineral rights have been deeded to him with surface rights and is very interested in leasing his fee property in section 24.

In summary, no serious land problems are anticipated. All present land owners appear interested in leasing their lands and terms probably will be reasonable. The properties are in an established mining area. No environmental problems are expected which could limit or restrict exploration and development activities.

#### GEOLOGY

Regional geology is described by Bonham in the Washoe County Report (NBM Bull. 70). Detailed district geology and mineralization is described by Andy Wallace in a Ph D. thesis (U. of N., 1975) and later published in Mining Engineering (March 1980). Adjacent areas are being remapped and stratigraphic nomenclature being revised by H. W. Bonham of the Nevada Bureau of Mines and Geology.

The mining district lies in the Pah Rah Range, a northwesterly-trending Basin-range mountain lying between Pyramid Lake and Warm Springs Valley. Bedrocks exposed in the Pyramid district are middle to upper Tertiary in age and rest upon a basement of Mesozoic metasedimentary, metavolcanic and granitic rocks which are exposed several miles from the district. Tertiary volcanic rocks (Fig. 4) are divided into two groups. An Oligocene to Miocene sequence of rhyolite to quartz latite ash-flow tuffs, lavas and breccias are host to mineralization in the Pyramid District. This unit formerly was mapped as Hartford Hill rhyolite and is being remapped and renamed by Bonham. A younger Miocene to Pliocene post-ore sequence of dacite stocks and lavas, basalt lavas and breccias overlap part of the mineralized area. These post-mineral rocks principally are basaltic andesite lavas in the prospect area.

We tentatively correlate mineralized and altered crystal-rich rhyolite tuff in the Perry Canyon area with the Chimney Springs formation mapped by H. W. Bonham several miles south. Vein deposits of the district are in latite tuff which lies above the Chimney Springs rhyolite tuff. All host rocks in the district were formerly mapped as middle to upper Hartford Hill formation, and we estimate the rhyolite tuffs in the Perry Canyon are about 1,000 to 2,000 feet thick.

Wallace (1975, 1980) states that the source vent for the rhyolitic tuff may be within the Pyramid district. This is suggested by rapid thickening of tuff beds, presence of breccia, and clustering of subvolcanic dikes and domes. The Pyramid hydrothermal system may have developed soon after the siliceous volcanism, probably near the vent complex.

The principal rock type exposed in the strongly mineralized and altered area is quartz crystal-rich ryholite tuff of the Chimney Springs formation (Fig. 4). Up to 60 percent of the rock is crystal fragments, mainly quartz, with subordinate sanidine and biotite. Color is variable owing to various degrees of hydrothermal alteration and bleaching superimposed on vaporphase alteration.

The other principal rock type in the mineralized area is green-gray quartz latite to rhyodacite exposed in the Jones-Kinkaid mine area and further west. This rock has abundant plagioclase phenocripts, with local pyroclastic texture. It hosts vein mineralization and pervasive propylitic alteration. We tentatively interpret this rock as a shallow intrusive sill but emphasize that it also may be a tuff, faulted into its present position against quartz-rich rhyolite.

Basaltic andesite lava flows underlie the high ridge to the north of Perry Canyon. This is a dark gray, dense, fine-grained lava that weathers into platy fragments. This unit clearly caps and covers mineralized and altered rocks.

The mineralized rhyolite tuff in Perry Canyon appears to strike eastwest and dip north at 20 to 30 degrees. This dip probably reflects regional tilting associated with faulting. Indeed, much of the present rock distribution patterns is related to complex interplay of Basin-Range vertical faults and right-lateral displacement on faults related to the Walker Lane fault system. Mineralized veins and shears generally trend northwest near the west edge of the claim group and trend east-west or northeast in highly mineralized target area. This northeast structure may reflect a cross-structure or a zone of tensional opening and clearly is not parallel to the dominant northwest trend of most faults in the range.

Mineralized breccia is common in the area of strong alteration. This breccia consists of strongly altered fragments of rhyolite tuff in a fine silicified fragmental matrix. Breccia grades into strongly fractured outcrops and both generally are strongly silicified. The breccia appears very similar in type to that found in large mineralized breccia pipes in other porphyry systems.

#### MINERALIZATION AND ORE DEPOSITS

Mine production has come from narrow veins in west to northwest faults and fractures, most of which cut rhyodacite or quartz latite host rocks. Principal hypogene vein minerals are pyrite, enargite tetrahedrite, sphalerite, galena and chalcopyrite. Gangue minerals are barite and quartz. The productive and developed veins are located west and northwest of the Perry Canyon area and are covered by patented lode claims.

Zoning of ore minerals is evident. Veins in the western outer fringes of the district contain pyrite and galena. Veins in an intermediate zone contain tetrahedrite, galena, sphalerite and chalcopyrite. Veins of the inner zone adjacent to the Perry Canyon target area contain enargite and pyrite. This overall district zoning pattern is similar to that at Butte, Montana.

The inferred center of hydrothermal mineralization and alteration is the Perry Canyon target area in section 23. This is the area of strong hydrothermal alteration, breccia development, silicification and pervasive sulfide mineralization. Limonites (Fig. 5) derived from oxidized sulfides are abundant over an area 6,000 feet northeast by 3,000 feet northwest. The northeast boundary of this limonite cap is not visible and lies concealed beneath post-mineral basaltic andesite. This area of limonite is one of the principal features that defines the Perry Canyon target area.

Limonite abundance and relative amounts of geothite, jarosite and hematite were recorded in a semi-quantitative manner throughout the capping. A large area of the limonite-cap, roughly 2,000 feet wide and 6,000 feet long in a northeast direction, consists of limonite with more than 50 percent jarosite and or hematite (Fig. 6,7). Jarosite is the dominant limonite in this zone with relatively small patches rich in hematite. Jarosite is considered to be the principal limonite derived from oxidation of a high pyrite assemblage and the former pyrite content of this area is estimated at 2 to 3 volume percent or about 5 to 6 weight percent. This is an area of inferred relatively strong supergene leaching and this feature must be taken into account when interpreting rock geochemical data.

A second center of mineralization apparently is present at Guanomi, 6 miles east of Perry Canyon, where Cu-Mo sulfides are disseminated in a quartz monzonite intrusion. The relation of Guanomi mineralization to the Pyramid district is unknown but it may be related to the same deep seated east-west structure that may control some mineralization features at Perry Canyon.

#### HYDROTHERMAL ALTERATION

Propylitic alteration of the district is widespread in rhyolite and quartz latite and is characterized by calcite, epidote, chlorite, clay, albite and adularia. Productive veins of the Pyramid district are encased in envelopes of bleached rock which contains quartz, sericite and pyrite.

Widespread propylitic alteration gives way to pervasive <u>clay-sericite</u> <u>alteration</u> in the Perry Canyon target area (Fig. 8). Rhyolite is bleached to a pale light color; biotite and feldspars are replaced by phyllic minerals (clay and sericite). The original tuffaceous texture generally is preserved.

An inner zone of pervasive advanced argillic alteration is enclosed in the zone of clay-sericite alteration. Advanced argillic alteration is characterized by complete destruction of the original tuffaceous texture which is replaced by a fine granular aggregate of alteration minerals - mainly quartz, pyrophyllite, diaspore, pyrite, rutile and hydromicas (Wallace, 1980). Mineralized breccia is common in this zone and some areas are replaced by vitreous secondary quartz flooding. Advanced argillic alteration extends up to and presumably is covered by post-basaltic andesite.

The zone of advanced argillic alteration coincides with the area of very high original pyrite content as inferred from limonite minerals. This zone is thought to be the center of hypogene hydrothermal alteration and a center of strong hypogene acid leaching of major and minor elements.

#### GEOCHEMISTRY

Rock-chip samples, each weighing two to five pounds, were collected on a grid pattern with 500-foot spacing throughout the principal target area (Fig. 9). Each sample was a representative chip sample of mineralized rock at each locality; attempts were made to chip rock containing disseminated and veinlet limonite. Samples were submitted for geochemical analyses to Hunter Geochemical Inc. in Reno, Nevada and Cone Geochemical Inc. in Lakewood, Colorado. Data sheets are attached. No attempt was made to statistically manipulate results. The geochemical values as obtained from the labs were plotted and contoured by inspection.

# Copper-in-Rock (Fig. 10)

Detection level is 5 PPM and values up to 315 PPM were measured. A coherent copper-in-rock anomaly with values exceeding 75 PPM is about 1,500 feet wide, 3,500 feet long and elongate in a east-northeast direction. It is located in an area of very high sulfide and strong hydrothermal alteration. A small and uneconomic amount of supergene chalcorite may be expected at the base of oxidation in this anomalous area.

# Molybdenum-in-Rock (Fig. 11)

Detection level is 1 PPM and values up to 61 PPM were measured. A long narrow coherent molybdenum-in-rock anomaly with values exceeding 10 PPM, is about 4,500 feet long and 500 to 1,000 feet wide and elongate in a east-northeast direction. This anomaly lies along the axis of strong sulfide mineralization and alteration. It occurs in areas of silicification and brecciation and is partly co-extensive with the copper anomaly.

# Lead-in-Rock (Fig. 12)

Detection level is 5 PPM and values up to 4,000 PPM are recorded. A broad coherent anomaly with values exceeding 100 PPM with local highs up to 400 PPM is at least 7,000 feet long and 1,000 to 4,000 feet wide. The axis of this broad anomaly is east-northeast and lies along the axis of strong sulfide mineralization and alteration. The northeast end of the anomaly is open where mineralized rocks are covered by post-mineral andesites. The lead-in-rock anomaly closely corresponds to the zone of strong limonites, high inferred sulfides and strong alteration.

# Zinc-in-Rock (Fig. 13)

Detection level is 5 PPM and values up to 300 PPM are measured. The area of strong alteration and mineralization is anomalously low in zinc, generally less than 15 PPM. Values increase to 100 PPM in weakly altered and un-mineralized rocks peripheral to the target area. The zinc "geochemical low" probably represents the results of strong leaching in the mineralized area.

## Gold-in-Rock (Fig. 14)

Detection level is 0.1 PPM and values up to 0.6 PPM are measured. All values exceeding 0.1 PPM lie in a belt about 500 feet wide and 4,000 feet long and elongate northeast. This long anomaly lies on axis of strong sulfide mineralization and strong alteration.

#### Silver-in-Rock (Fig. 15)

Detection level is 1 PPM and values up to 37 PPM are recorded. All values exceeding 1 PPM form a coherent anomalous belt about 1,000 feet wide and 5,000 feet long. This anomaly is elongated roughly east-west and appears to be similar in shape and extent to the lead anomaly. The axis of this anomaly also lies along the axis of strong alteration and mineralization.

# Tin-in-Rock (Fig. 16)

Detection level is 5 PPM and values up to 45 PPM are recorded. All anomalous tin values, those exceeding 5 PPM lie in a relatively small tight belt about 5,000 feet long and 500 feet wide. This anomaly is elongated roughly east-west and is closely co-extensive with the molybdenum gold and silver anomalous. It lies in the area of strong mineralization and alteration.

# Tungsten-in-Rock (Fig. 17)

Detection level is 1 PPM and values up to 15 PPM are recorded. Anomalous values in the 5-15 PPM range are scattered through the area of strong alteration and mineralization but no clearly coherent anomalous area was defined.

#### Fluorine-in-Rock (Fig. 18)

Detection level is 100 PPM and values up to 1,200 PPM were measured. No strong coherent anomalies are defined but values that exceed 500 PPM are considered anomalous and these values seem to lie in the area of mineralized breccia and strong advanced argillic alteration.

#### Summary

Distinctly coherent but low level anomalies are defined for copper, molybdenum, lead, gold, silver and tin. Each anomaly is elongated in a east-northeast or east-west direction probably reflecting structural control be veins and fractures. These anomalies are roughly co-extensive and lie along the axis of strong sulfide mineralization (as defined by limonites) and strong advanced argillic alteration. Fluorine and tungsten samples giving weakly anomalous values also are located in same general area as other anomalous metals but no coherent fluorine and tungsten anomalies are defined. Zinc forms a geochemical "low" over the altered and mineralized area.

The most significant feature of the geochemical data is the similar pattern and location for each metal anomaly and the position of anomalies along the east-northeast axis of strong alteration and disseminated sulfide mineralization. The actual metal values within the anomalies are low (except for gold, which is at least 100 times normal gold value in granitic igneous rocks). The low levels may be expected in view of the evidence for strong hypogene leaching indicated by advanced argillic alteration, and evidence for strong supergene leaching indicated by abundant jarosite and hematite limonites. That coherent metal anomalies are detected at all in these strongly leached rocks is surprising and encouraging. Therefore, we conclude that the area of co-extensive coherent metal anomalies (Cu, Mo, Pb, Ag, Au, Sn) defines a target for deep concealed mineralization (Fig. 4).

#### POTENTIAL ORE TARGET

Mineralization and alteration described above and summarized below suggest the target area contains a target for disseminated and veinlet copper-molybdenum mineralization in a large bulk tonnage orebody exceeding 100 million tons at grades better than 0.8% copper with significant credits in  $MoS_2$  and gold, at depths 500 to 3,000 feet below the surface.

The Pyramid Mining District is a very large area of hydrothermal mineralization exceeding 6 square miles in area. It produced copper ores and may be on structural trend with the mineralized quartz monzonite at Guanomi 6 miles east, which contains sub-economic disseminated coppermolybdenum mineralization. The productive Cu-Ag-Zn-Pb vein mineralization is thought to be halo indicators of a major porphyry copper-molybdenum system. District zoning patterns of vein mineralization with peripheral lead, intermediate lead-zinc-silver, and central copper - zoning patterns similar to Butte, Montana - indicate presence of copper-rich hydrothermal center in sections 22 and 23. Geologic mapping, limonite evaluation, alteration studies and geochemical data suggest the present land surface cuts the system at a relatively high structural level. Mineralized breccia, strong advanced argillic alteration, pervasive silica flooding, apparent structural control to anomalous metal values and lack of mineralized intrusive rocks all suggest a relatively nearsurface level to the system in Perry Canyon.

#### RECOMMENDATIONS

A discovery drilling project of 3 deep holes is recommended to test the ore target outlined on the geologic map. Estimated total depth for each hole is 3,000 feet and estimated costs are summarized below:

Drilling 9,000' @ \$40.00 Drilling support preparation,	\$ 360,000
and reclamation Personnel Assaying	30,000 45,000 15,000
	\$ 450,000

#### REFERENCES

- Bonham, H. F. and Papke, K. G., 1969, Geology and mineral deposits of Washoe and Storey Counties, Nevada: Nev. Bur. Mines, Bull. 70.
- Wallace, A. B., 1975, Geology and mineral deposits of the Pyramid District, Southern Washoe County, Nevada: Unpub. PhD dissert., Univ. of Nevada.
- Wallace, A. B., 1980, Geochemistry of polymetallic veins and associated wall rock alteration, Pyramid district, Washoe County, Nevada: Mining Engineering, March 1980, p. 314-320.



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SPARKS, NEVADA 89431

TELEPHONE: (702) 358-6227

# REPORT OF ANALYSIS

Submitted by:

Date: October 10, 1980

NIELSEN GEOCONSULTANTS, INC.

P. O. Box 2093

Evergreen, Colorado 80439

Laboratory Number: 7864

Analytical Method: AA

Colorimetric

Your Order Number:

Report on:

138 samples

Sample Mark:	Copper ppm	Molybdenum ppm	Lead ppm	Zinc ppm	Gold ppm	Silver ppm	
PY Series							
1	105	25	95	10	0.1	2	
2	25	5	45	5	-0.1	-1	
	45	7	110	10	0.1	1	
4	20	1	10	85	-0.1	-1	
5	30	3	20	50	-0.1	-1	
6	10	-1	10	160	-0.1	-1	
7	10	1	5	95	-0.1	-1	
8	5	1	5	65	-0.1	-1	
9	15	1	10	65	-0.1	-1	
10	10	1	10	100	-0.1	-1	
11	15	1	10	100	-0.1	-1	
12	15	4	185	5	-0.1	-1	
13	30	3	160	10	-0.1	-1	
14	110	5	130	10	-0.1	1	
15	135	5	200	25	-0.1	1	
16	90	3	50	15	-0.1	-1	
17	80	2	135	15	-0.1	1	
18	315	1	160	20	0.6	16	
19	45	17	185	15	0.2	14	
	65	3	180	20	-0.1	3	

continued to page 2

ppm = parts per million. oz/ton = troy ounces per ton of 2000 pounds avoirdupois. percent = parts per hundred. fineness = parts per thousand. ppb = 0.001 ppm. Read — as "less than." 1 oz/ton = 34.286 ppm. 1 ppm = 0.0001% = 0.029167 oz/ton. 1.0% = 20 pounds/ton.

Sample Mark:	Copper ppm	Molybdenum ppm	Lead ppm	Zinc ppm	Gold ppm	Silver ppm	
PY Series							
21	75	14	360	10	0.2	2	
22	45	11	105	15	0.1	-1	
23	45	13	145	10	0.2	24	
24	10	2	15	10	-0.1	-1	
25	10	3	10	15	-0.1	-1	
26	5	1	15	45	-0.1	-1	
27	5	2	15	15	0.1	1	
28	5	2	5	25	-0.1	-1	
29	5	2	10	30	-0.1	-1	
30	5	1	90	55	-0.1	-1	
31	10	2	10	75	-0.1	-1	
32	30	2	50	15	-0.1	-1	
	50	3	335	10	-0.1	1	
34	20	3	165	<b>-</b> 5	0.1	1	
35	75	3	85	15	-0.1	1	
36	10	2	25	15	-0.1	-1	
37	5	2	15	15	-0.1	-1	
38	10	2	10	20	-0.1	-1	
39	5	2	15	10	-0.1	-1	
40	30	1	80	15	-0.1	-1	
41	15	8	250	<b>-</b> 5	0.3	2	
42	20	1	10	40	-0.1	1	
43	15	2	10	100	-0.1	-1	
44	25	1	60	25	-0.1	-1	
45	30	2	165	5	-0.1	-1	
46	45	17	455	5	0.1	2	
47	50	21	375	5	0.1	1	
48	55	2	145	25	-0.1	-1	
49	15	1	60	5	-0.1	-1	
	100	11	60	5	-0.1	2	

Sample Mark:	Copper ppm	Molybdenum ppm	Lead ppm	Zine ppm	Gold ppm	Silver
PY Series						
51	5	1	10	40	-0.1	-1
52	10	-1	15	30	-0.1	-1
53	15	1	5	60	-0.1	-1
54	10	1	10	85	-0.1	-1
55	10	2	5	70	-0.1	-1
56	10	2	100	5	-0.1	-1
57	25	9	100	<b>-</b> 5	0.1	1
58	35	-1	110	45	-0.1	3
59	160	10	495	5	0.1	18
60	20	1	10	250	-0.1	-1
61	80	1	470	5	-0.1	1
62	10	1	5	115	-0.1	-1
	170	11	120	10	-0.1	8
64	55	2	5	130	-0.1	-1
65	5	4	10	<b>-</b> 5	-0.1	-1
66	60	7	165	10	-0.1	1
67	30	4	40	5	-0.1	-1
68	<b>-</b> 5	2	15	25	-0.1	-1
69	5	. 2	5	65	-0.1	-1
70	5	2	5	115	-0.1	-1
71	20	2	10	35	-0.1	-1
72	15	3	10	75	-0.1	-1
73	5	2	15	65	-0.1	-1
74	5	5	15	45	-0.1	-1
75	120	61	325	10	0.1	37
76	160	49	0.40%	15	-0.1	11
77	15	2	10	60	-0.1	-1
78	280	3	50	45	-0.1	2
79	10	4	15	10	-0.1	-1

continued to page 4

Sample Mark:	Copper ppm	Molybdenum ppm	Lead ppm	Zinc ppm	Gold ppm	Silver ppm	
PY Series							
80	5	3	10	15	-0.1	-1	
81	5	3	25	40	-0.1	-1	
82	5	2	5	60	-0.1	-1	
83	5	2	10	85	-0.1	-1	
84	5	2	10	80	-0.1	-1	
85	10	2	10	50	-0.1	-1	
86	5	2	10	40	-0.1	-1	
87	5	3	10	195	-0.1	-1	
88	5	5	30	15	-0.1	-1	
89	5	2	10	30	-0.1	-1	
90	5	5	20	45	-0.1	-1	
91	5	1	20	50	-0.1	-1	
	5	2	60	30	-0.1	-1	
93	15	1	75	20	-0.1	1	
94	10	2	25	45	-0.1	-1	
95	40	2	100	5	-0.1	-1	
96	20	3	160	5	-0.1	1	
97	60	3	200	5	-0.1	1	
98	60	5	245	10	-0.1	1	
99	75	2	130	15	-0.1	2	
100	30	2	20	175	-0.1	-1	
101	25	3	135	10	-0.1	2	
102	20	9	300	30	-0.1	2	
103	15	4	180	<b>-</b> 5	-0.1	1	
104	45	2	135	55	-0.1	-1	
105	10	4	100	35	-0.1	-1	
106	5	3	20	20	-0.1	-1	
107	20	3	210	20	-0.1	-1	
108	10	2	95	5	-0.1	-1	
)	15	6	40	15	-0.1	-1	

Sample Mark:	Copper ppm	Molybdenum ppm	Lead ppm	Zinc ppm	Gold ppm	Silver ppm	
	ppiii	Ppii	ppiii	ppiii	ppiii	ppiii	
PY SERIES							
110	25	2	90	50	0.1	-1	
111	10	2	10	20	-0.1	-1	
112	35	8	120	15	-0.1	1	
113	20	5	145	5	-0.1	-1	
114	10	5	200	10	-0.1	-1	
115	30	2	115	5	-0.1	-1	
116	95	4	160	5	0.1	2	
117	45	1	245	10	-0.1	-1	
118	30	1	215	5	-0.1	-1	
119	125	6	205	5	-0.1	1	
120	125	61	140	5	-0.1	-1	
121	85	5	510	5	-0.1	3	
2	15	4	75	10	-0.1	-1	
123	50	2	65	45	-0.1	-1	
124	65	1	25	15	-0.1	-1	
125	85	1	30	145	-0.1	-1	
126	250	1	25	25	-0.1	-1	
127	45	10	15	90	-0.1	-1	
128	60	1	5	215	-0.1	-1	
129	45	1	5	70	-0.1	<b>-1</b>	
130	55	2	5	300	-0.1	-1	
131	10	2	5	70	-0.1	-1	
132	10	1	10	75	-0.1	-1	
133	10	1	10	85	-0.1	-1	
134	10	1	10	75	-0.1	-1	
135	15	1	10	60	-0.1	-1	
136	25	1	20	80	-0.1	-1	
137	10	1	5	65	-0.1	-1	
138	5	1	5	65	-0.1	-1	
					Marta I		

Daly m deckbo

SPARKS, NEVADA 89431 •

TELEPHONE: (702) 358-6227

# REPORT OF ANALYSIS

Submitted by:

Date: September 11, 1980

NIELSEN GEOCONSULTANTS

Mr. R. Nielsen P. O. Box 2093

Evergreen, Colorado 80439

Laboratory Number: 8100

Analytical Method: AA

Colorimetric

Your Order Number:

Report on:

5 samples

Sample Mark:	Copper	Molybdenum ppm	Lead	Zinc ppm	Gold ppm	Silver	
DV 170							
PY - 139	40	3	140	50	-0.1	-1	
140	65	2	65	25	-0.1	-1	
141	60	3	70	10	-0.1	1	
142	35	3	100	10	-0.1	-1	
143	30	1	300	15	-0.1	-1	

HUNTER MINING LABORATORY, INC.

Lary M. Fechko

994 GLENDALE AVENUE

SPARKS, NEVADA 89431

TELEPHONE: (702) 358-6227

# REPORT OF ANALYSIS

Submitted by:

Date:

November 26, 1980

NIELSEN GEOCONSULTANTS, INC.

P. O. Box 2093

Evergreen, Colorado 80439

Laboratory Number:

8833

Analytical Method:

ΛΛ

Colorimetric

Your Order Number:

Report on: 138 samples submitted under Laboratory No.: 7864.

Sample Mark:	Tin ppm	Tungsten ppM	Sample Mark:	Tin ppm	Tungsten W ppm	
PY-1	-5	1	Y-23	8	4	-
2	-5	2	24	<b>-</b> 5	2	
3	-5	-1	25	-5	1	
4	-5	1	26	-5	1	
5	-5	-1	27	-5	1	
6	-5	1	28	-5	-1	
7	-5	-1	29	-5	-1	
8	-5	1	30	-5	1	
9	-5	-1	31	-5	-1	
10	-5	-1	32	-5	-1	
11	-5	-1	33	-5	-1	
12	-5	2	34	-5	1	
13	-5	2	35	-5	-1	
14	-5	1	36	-5	2	
15	-5	-1	37	-5	1	
16	-5	-1	38	-5	1	
17	-5	-1	39	-5	1	
18	45	-1	40	-5	2	
19	30	-1	41	-5	-1	*
20	-5	1	42	-5	1	
21	19	2	43	-5	1	
PY-22	-5	2	PY-44	-5	1	
				0		

continued to page 2

ppm = parts per million. oz/ton = troy ounces per ton of 2000 pounds avoirdupois. percent = parts per hundred. fineness = parts per thousand.

ppb = 0.001 ppm. Read — as "less than." 1 oz/ton = 34.286 ppm. 1 ppm = 0.0001% = 0.029167 oz/ton. 1.0% = 20 pounds/ton.

IELSEN GEOCONSULTANTS, INC.		Tungsten	Tungsten		atory No.: 8833 Tungsten
Sample Mark:	Tin	as W ppm	Sample Mark:	Tin	as W ppm
PY-46		2	PY-76	ppm 5	1
47	5	10	77	6	-1
48	-5	10	78	8	-1
49	-5	1	79	-5	2
50	-5	1	80	-5	2
51	-5	1	81	-5	2
52	-5	1	82	6	2
53	5	1	83	-5	2
54	-5	-1	84	5	1
55	-5	1	85	-5	1
56	5	-1	86	-5	1
57	-5	2	87	6	1
58	-5	-1	88	-5	1
59	9	2	89	-5	3
60	-5	-1	90	-5	-1
61	-5	2	91	-5	1
62	-5	1	92	-5	1
63	-5	1	93	-5	2
64	5	-1	94	-5	-1
65	-5	1	95	8	2
66	-1	1	96	-5	3
67	-5	-1	97	-5	5
68	-5	1	98	-5	7
69	-5	1	99	-5	1
70	6	1	100	15	1
71	-5	1	101	-5	1
72	7	-1	102	-5	2
73	-5	2	103	-5	10
74	-5	2	104	-5	5
PY-75	5	1	PY-105	-5	2

IELSEN GEOCON	ISULTANTS, I	INC. Tungsten	Page 3	Laborato	ry No.: 8833 Tungsten
	Tin	as W		Tin	as W
Sample Mark:	ppm	ppm	Sample Mark:	ppm	ppm
PY-106	-5	1	PY-123	-5	-1
107	-5	2	124	-5	-1
108	-5	2	125	-5	-1
109	-5	1	126	-5	-1
110	-5	2	127	-5	-1
111	-5	2	128	-5	-1
112	-5	1	129	-5	-1
113	-5	30	130	-5	1
114	-5	4	131	-5	1
115	-5	5	132	-5	1
116	-5	5	133	-5	-1
117	-5	2	134	-5	1
118	-5	5	135	-5	-1
119	-5	3	136	-5	-1
120	-5	3	137	-5	-1
121	7	-1	PY-138	-5	-1
PY-122	-5	2	PY-45	-5	-1

H. H. Scales



Job # 1099 08-Jan-81 Pase 1

#### ANALYTICAL REPORT

Mr. R. Nielsen Nielsen Geoconsultants Inc. P.O. Box 2093 Eversreen, CO 80439 PO # Project:

SAMPLE	%	
NUMBER	F	
FY-1	0.03	
PY-2	0.03	
PY-3	0.05	
PY-4	0.07	
PY-5	0.08	
FY-6	0.05	
PY-7	0.06	
PY-8	0.05	
PY-9	0.05	
PY-10	0.07	
FY-11	0.12	
FY-12	0.05	
FY-13	0.05	
PY-14	0.05	
PY-15	0.06	
PY-16	0.05	
PY-17	0.03	
PY-18	0.03	
PY-19	0.03	
PY-20	0.07	
PY-21	0.03	
PY-22	0.07	,
PY-23	0.03	
PY-24	0.04	
PY-25	0.04	
PY-26	0.05	
FY-27	0.04	
PY-28 PY-29	0.02	
PY-30	0.02	
11 37	0.04	
PY-31	0.03	
PY-32	0.03	
PY-33	0.06	
PY-34	0.04	
PY-35	0.04	

METHOD DIGESTION PRECISION Splon Fusin 20%



Job # 1077

Job # 1077

ood, Colorado 80215

32-8371

Job # 1077

OB-Jan-81

Pase 2

(303) 232-8371		Pase 2
	ANALYTICAL REPORT	
Mr. R. Nielsen		PO #
Nielsen Geoconsu	Itants Inc.	Project:
P.O. Box 2093		
Eversreen, CO 8	0439	
SAMPLE	7,	
NUMBER	F	
PY-36	0.01	
FY-37	0.02	
PY-38	0.01	
PY-39	0.01	
PY-40	0.04	
PY-41	0.03	
PY-42	0.04	
PY-43	0.04	
PY-44	0.02	
PY-45	0.05	
PY-46	0.03	
PY-47	0.02	
FY-48	0.04	
PY-49	0.02	
PY-50	0.03	
PY-51	0.04	
PY-52	0.04	
FY-53	0.04	
PY-54	0.04	
PY-55	0.03	
PY-56	0.03	
PY-57	0.06	
PY-58	0.04	
PY-59	0.02	
PY-60	0.04	
PY-61	0.07	
PY-62	0.07	
PY-63	0.05	
PY-64	0.03	
PY-65	0.06	
	VIVW	
PY-66	0.03	
PY-67	0.06	
PY-68	0.03	
	VVV	

0.05

0.06

METHOD	Splon
DIGESTION	Fus'n
PRECISION	20%

FY-69

PY-70



Job # 1099 08-Jan-81 Pase 3

#### ANALYTICAL REPORT

Mr. R. Nielsen Nielsen Geoconsultants Inc. P.O. Box 2093 Eversreen, CO 80439 PO # Project:

SAMPLE	m/ /w
NUMBER	F
7	
PY-71	0.02
FY-72	0.03
PY-73	0.04
PY-74	0.04
PY-75	0.00
1.1-/2	0.00
PY-76 .	0.06
PY-77	0.04
PY-78	0.05
PY-79	0.01
PY-80	0.01
PY-81	0.02
PY-82	0.05
FY-83	0.05
FY-84	0.06
PY-85	0.05
PY-86	0.08
PY-87	0.02
PY-88	0.02
PY-89	0.04
FY-90	0.04
PY-91	0.05
PY-92	0.03
FY-93	0.05
FY-94	0.05
PY-95	0.05
PY-96	0.03
PY-97	0.03
PY-98	0.03
PY-99	0.05
PY-100	0.04
11 11/1	V+V7
FY-101	0.02
FY-102	0.05
PY-103	0.02
FY-104	0.03
PY-105	0.04

METHOD DIGESTION PRECISION

Salon Fusin 20%



Job # 1079 08-Jan-81 Pase 4

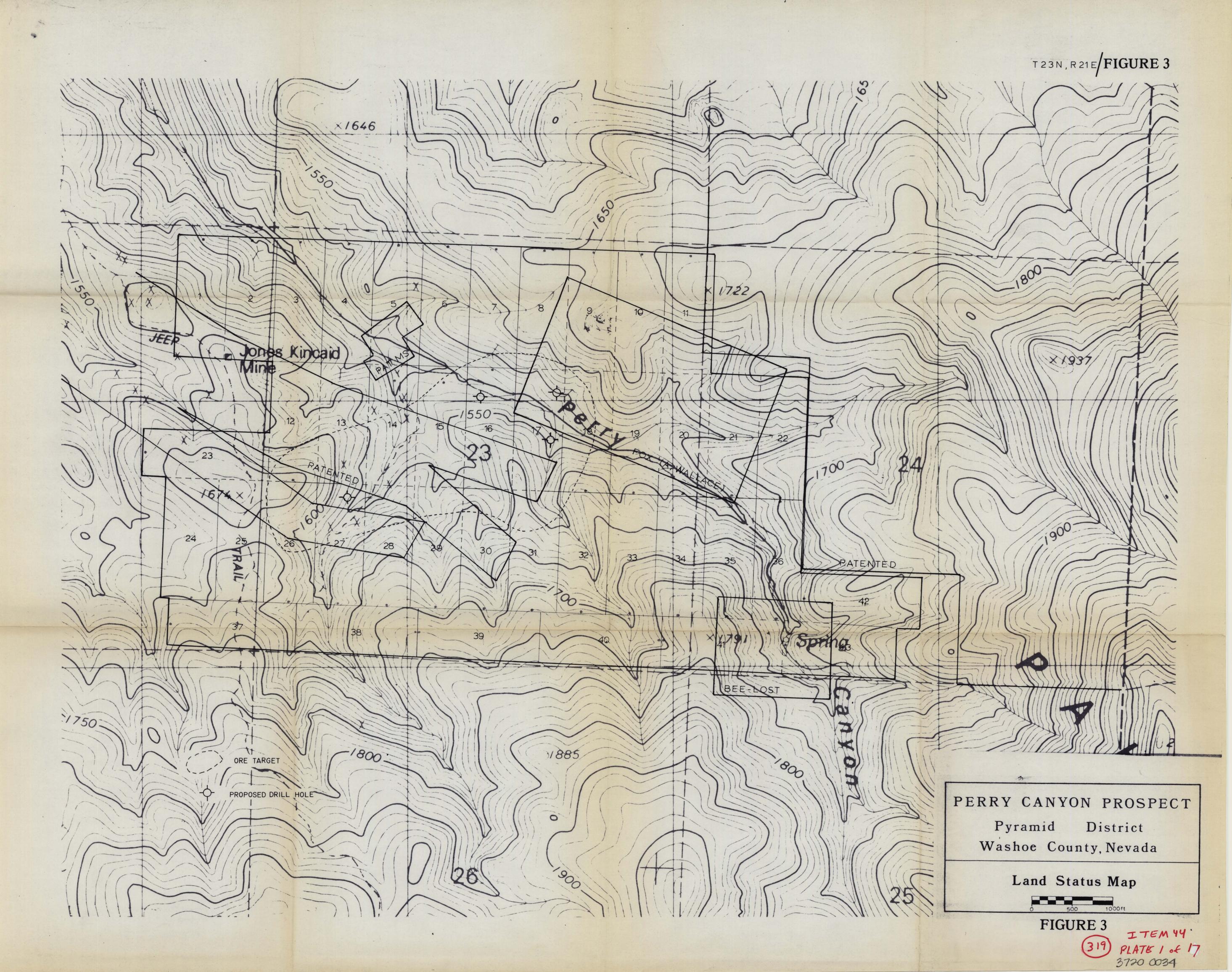
#### ANALYTICAL REPORT

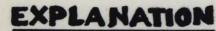
Mr. R. Nielsen Nielsen Geoconsultants Inc. P.O. Box 2093 Eversreen, CO 80439 Project:

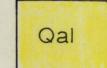
SAMPLE	7/
NUMBER	F
MUMBER	r
PY-106	0.03
PY-107	0.07
PY-108	0.04
FY-109	0.03
PY-110	0.03
FY-111	0.03
PY-112	0.04
	0.02
PY-113	
FY-114	0.03
PY-115	0.03
PY-116	0.02
PY-117	0.04
FY-118	0.03
PY-119	0.03
PY-120	0.02
F1-120	0.02
DV 404	^ ^
PY-121	0.02
PY-122	0.06
PY-123	0.03
PY-124	0.06
PY-125	0.03
PY-126	0.02
PY-127	0.03
PY-128	0.03
FY-129	0.03
PY-130	
FY-130	0.04
BV 474	
FY-131	0.03
PY-132	0.04
PY-133	0.03
PY-134	0.04
PY-135	0.04
PY-136	0.03
PY-137	0.03
PY-138	0.04
1 1 7 11 17	17 7 17 17

METHOD DIGESTION PRECISION

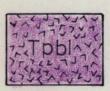
Spion Fusin 20%



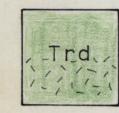




stream gravels, valley fill, and talus



Basaltic Andesite lava flows; post mineralization Pyramid Sequence; thickness varies: 30-250 ft.



Rhyodocite, olive green, pyroclastic texture, crystal rich -hypobyssal decite intrusive sill (?); olive green, dense, relatively fresh, low quartz content.



CHIMNEY SPRINGS FORMATION

crystal rich tuff. 1.) upper, more biotite rich flow,
purplish ground mass. Non bleached (dense).

2) lower, crystal rich (9tz & sanidine) Rhyolite tuff;

ao locally porphyritic (very large feldspar phenocrysts)



coyote Springs Formation (?) - caystal poor tuff, weakly altered

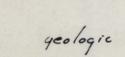


silicification

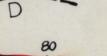
gossanous outerop



mineralized breccie zone



geologic contact, dashed where inferred



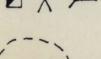
Fault, showing relative displacement, dashed where inferred. mineralized fractures, showing dip, zone of silicification





parallel fracture (sheeted) zone, mineralized and strike and dip of compaction foliation, flow structure, and bedding





X > shaft, prospect, adit



ore target



proposed drill hole



# PERRY CANYON PROSPECT Pyramid District Washoe County, Nevada

Geologic Map

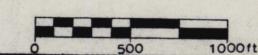
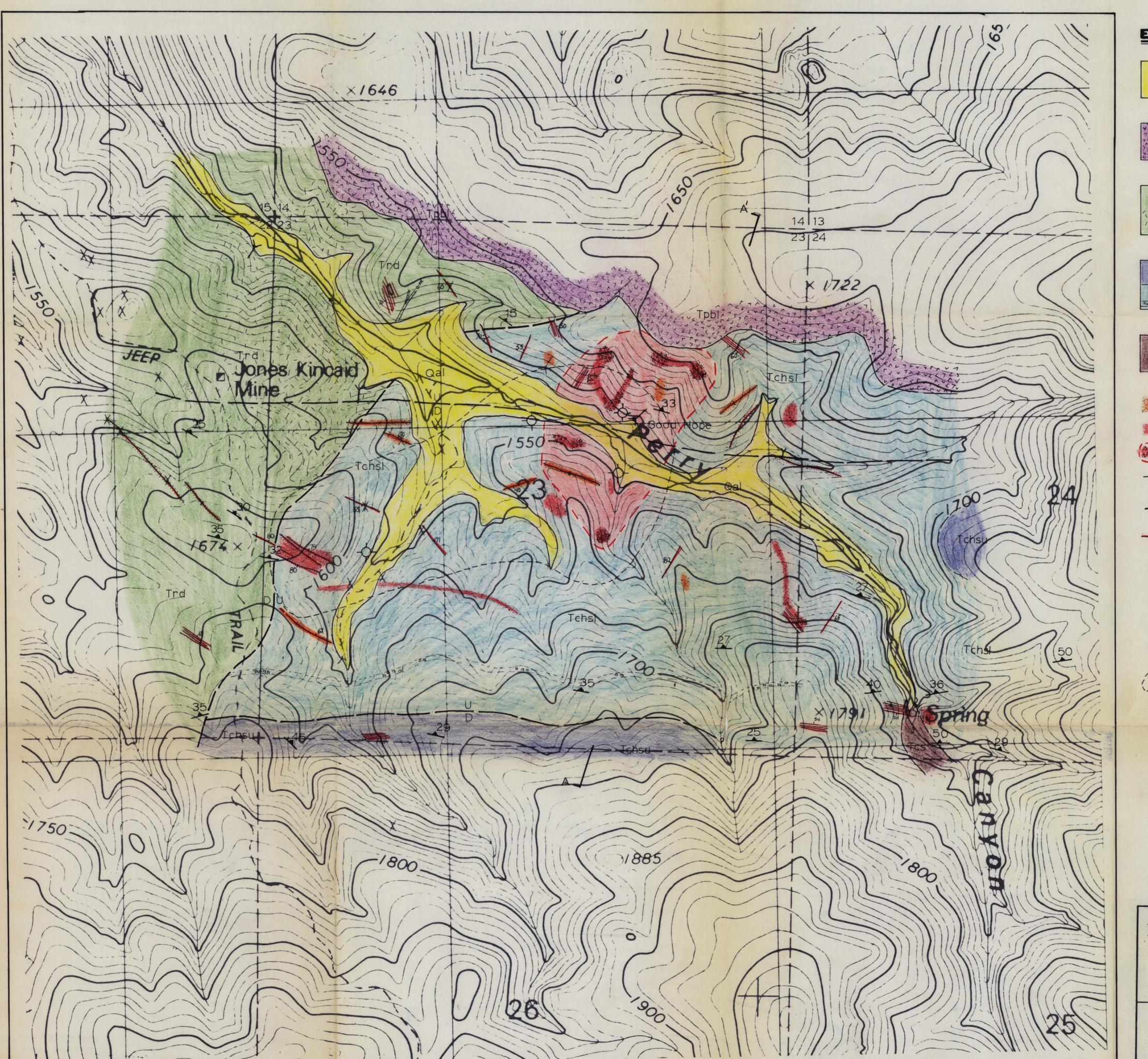
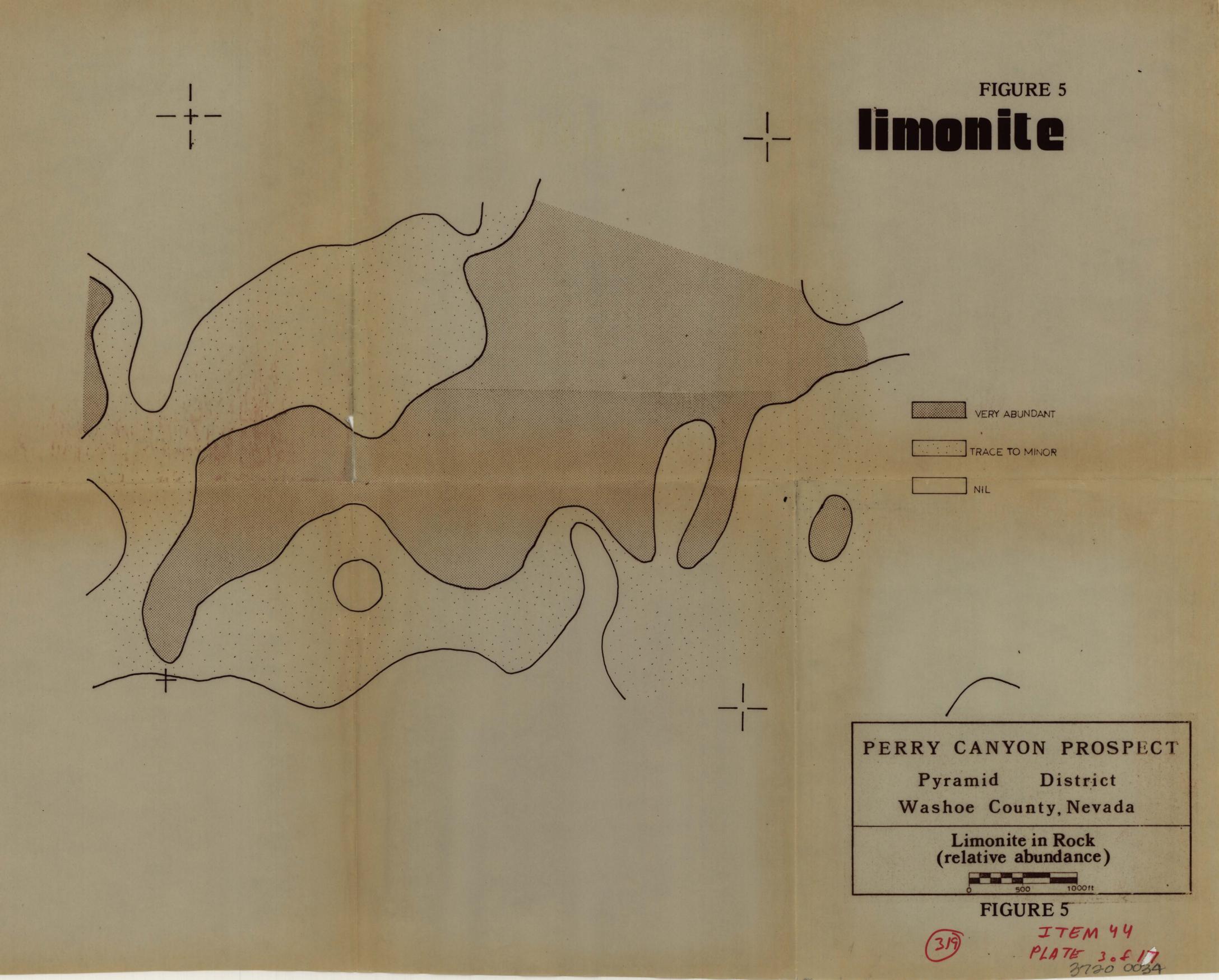


FIGURE 4 ZTEM44 PLATE 2 0 + 17 3720 0034







3720 0034

ZTEM 44 PLA75 4.417

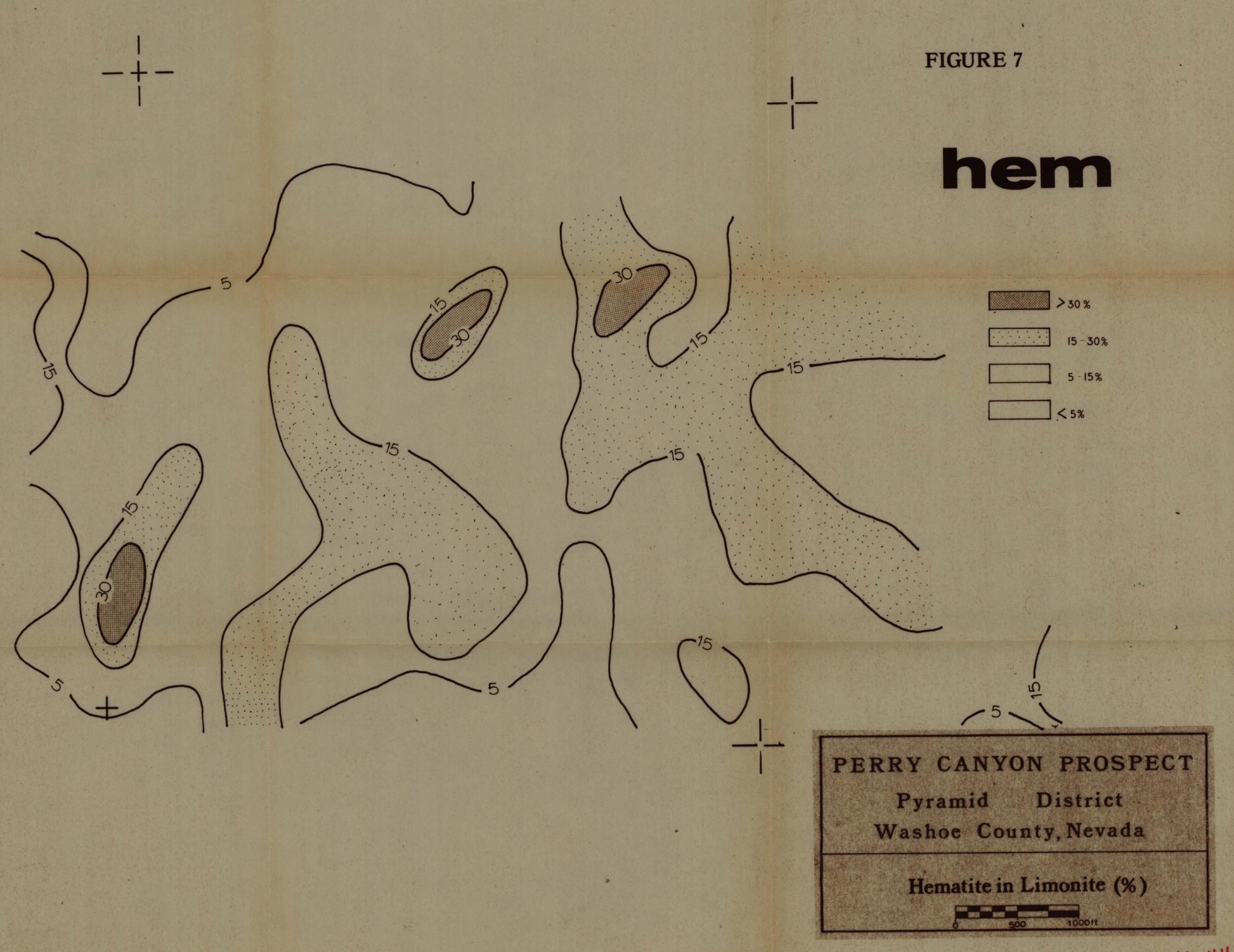
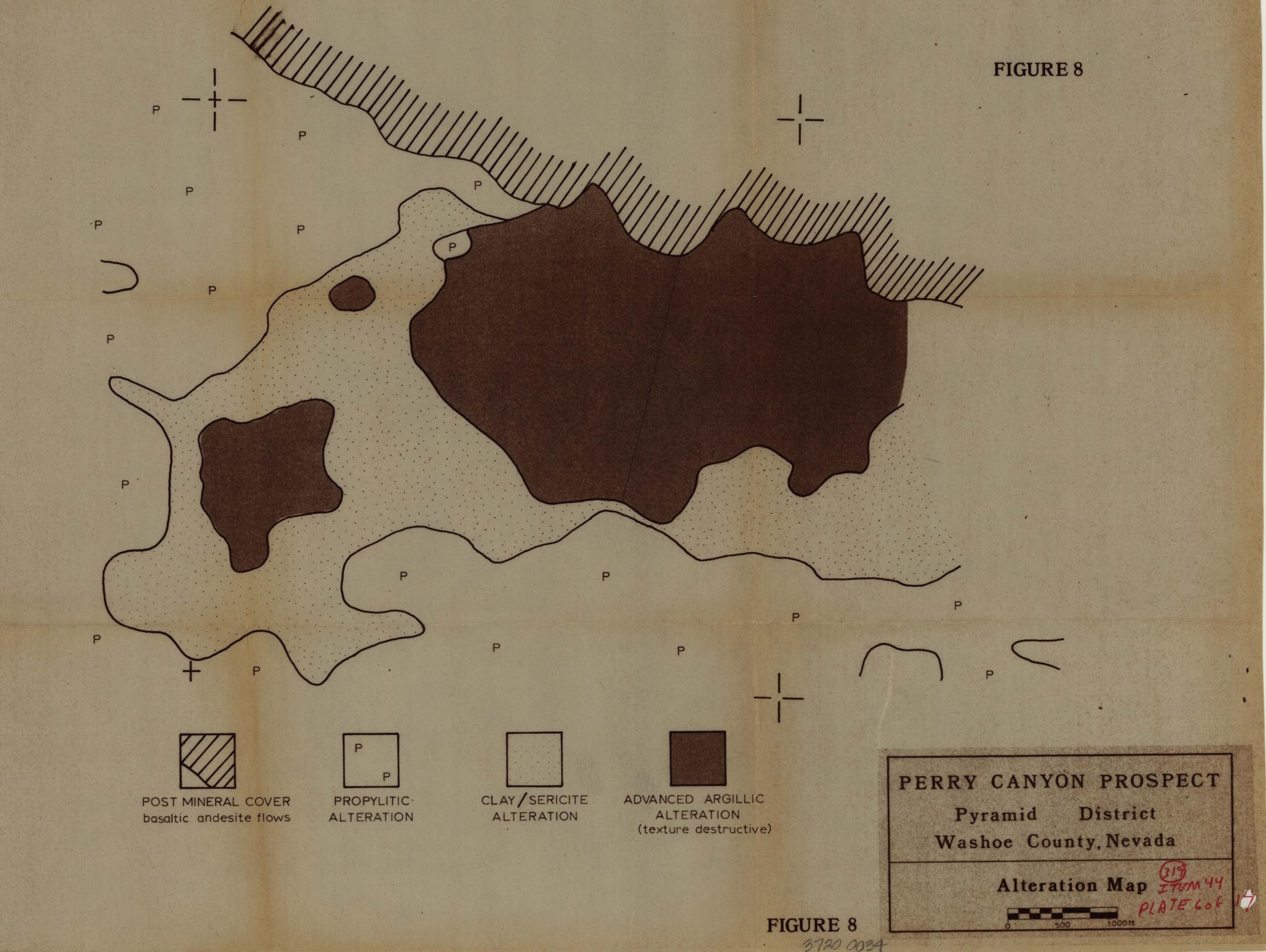


FIGURE 7 (319) ZTEM 44
PLATE 5 of 17



×1646

PY98\_\_

FY84 PY83 PY82

1885

0

1750

PERRY CANYON PROSPECT

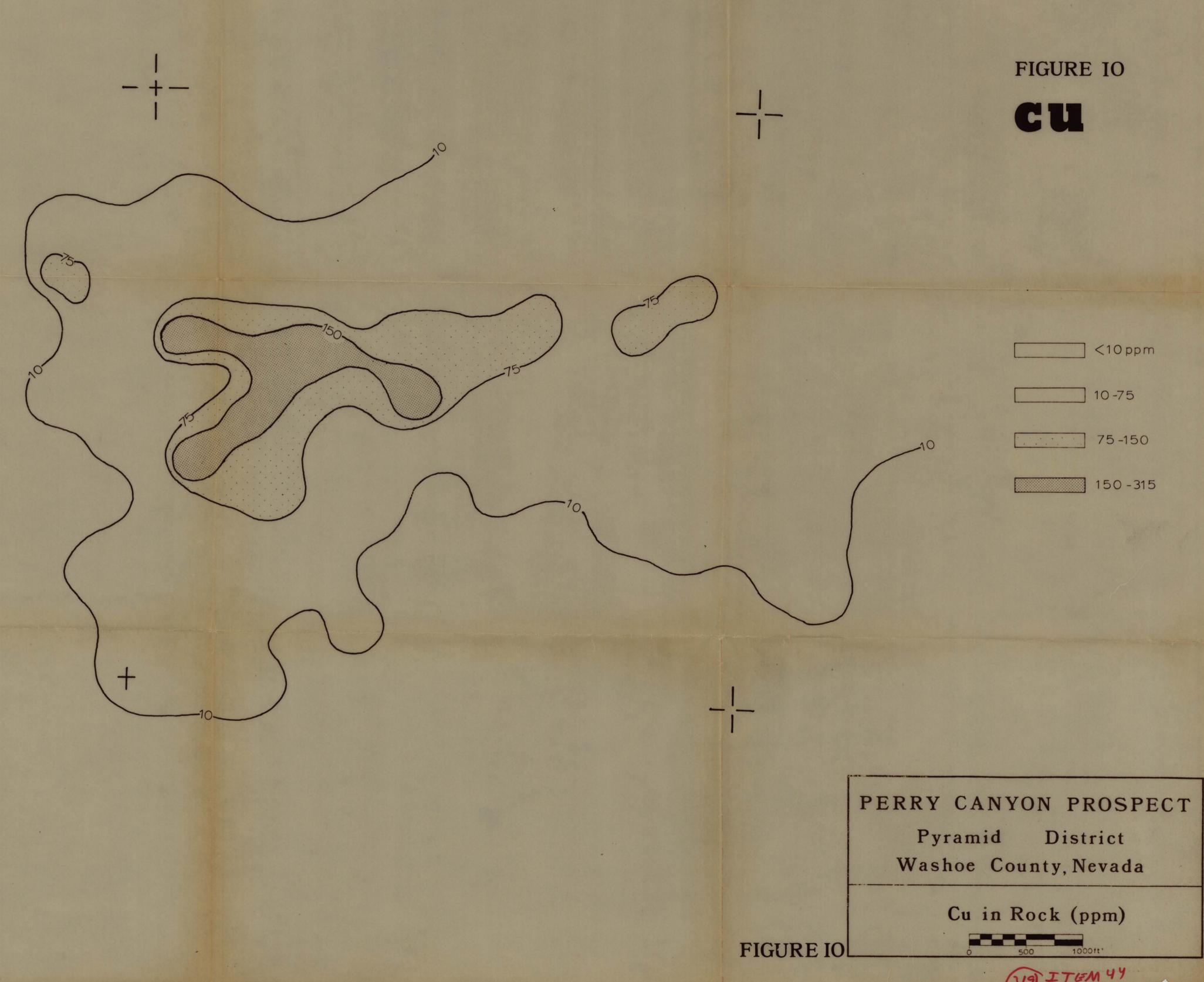
Pyramid District Washoe County, Nevada

Sample Location Map

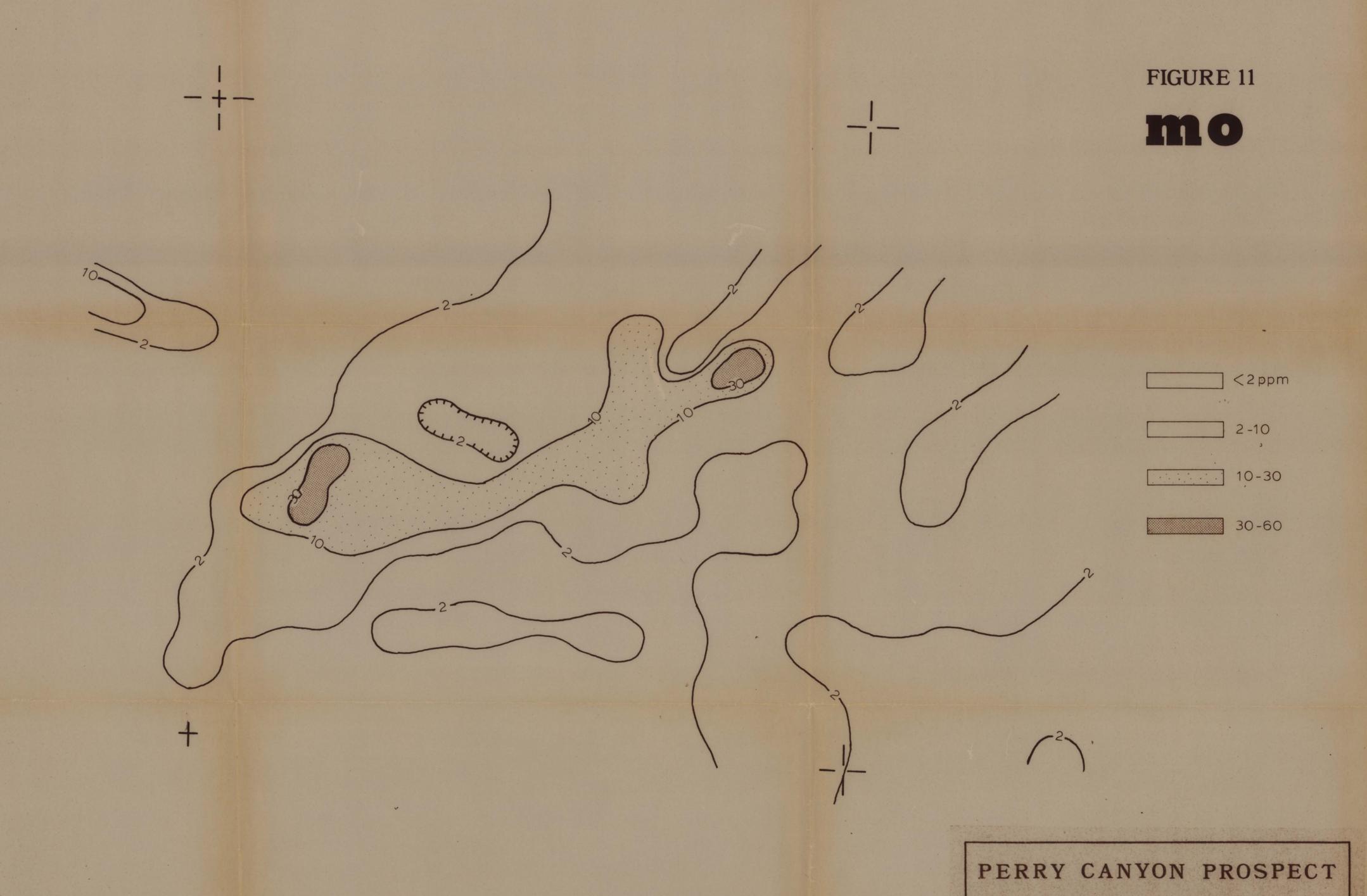


FIGURE 9

319) ITEM44
PLATE 7.417



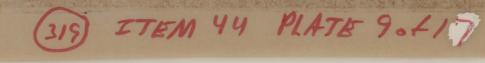
(319) ITEM 47
PLATE 8-41

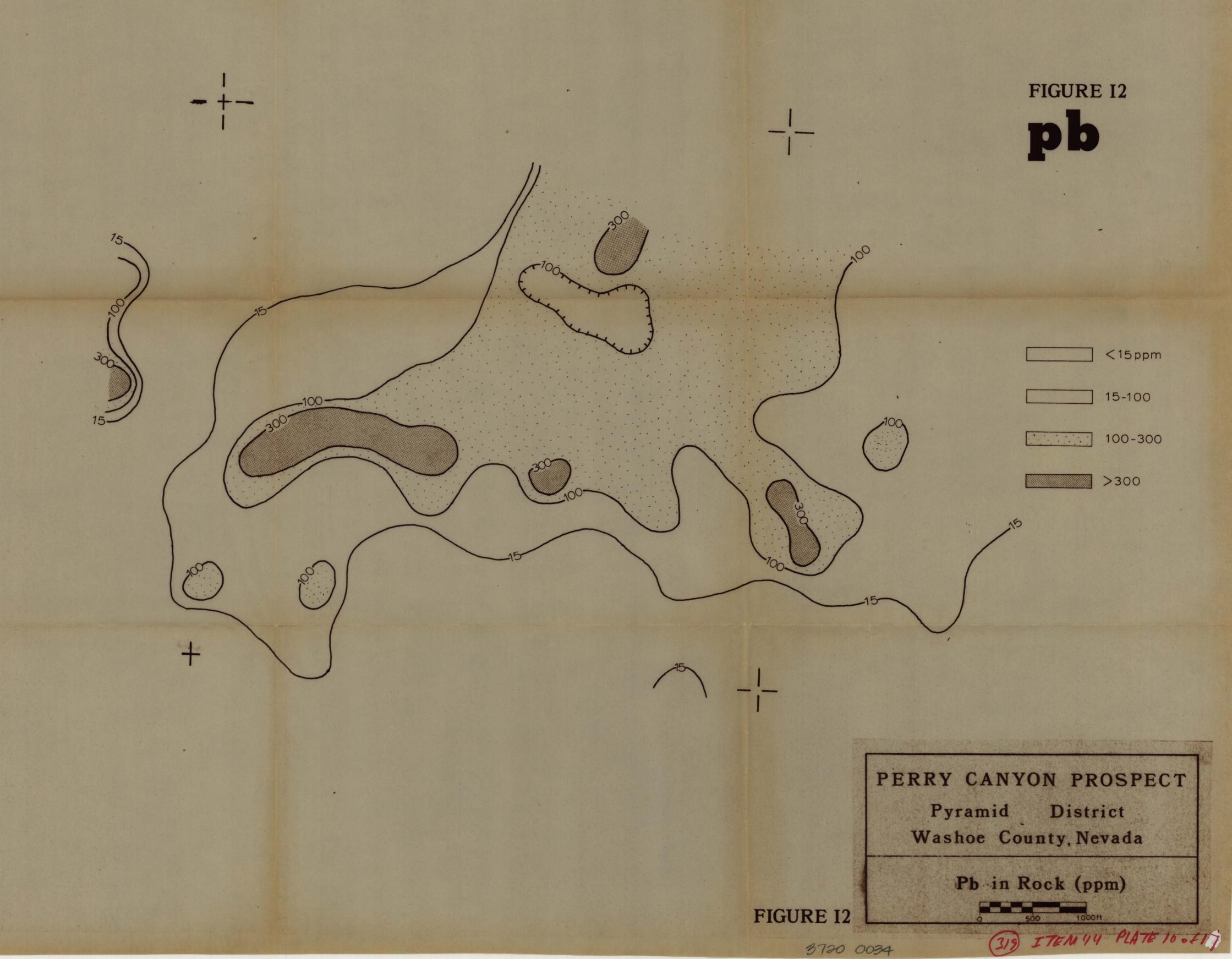


District Pyramid Washoe County, Nevada

Mo in Rock (ppm)

FIGURE 11



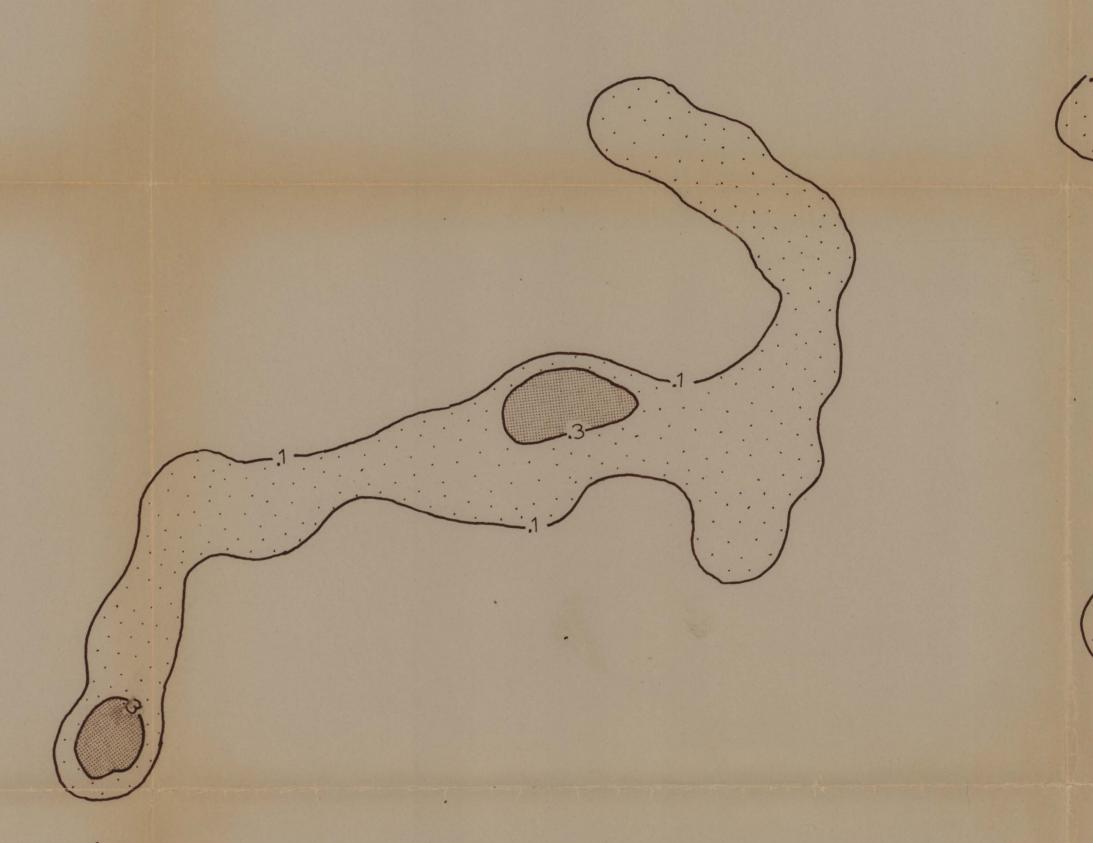


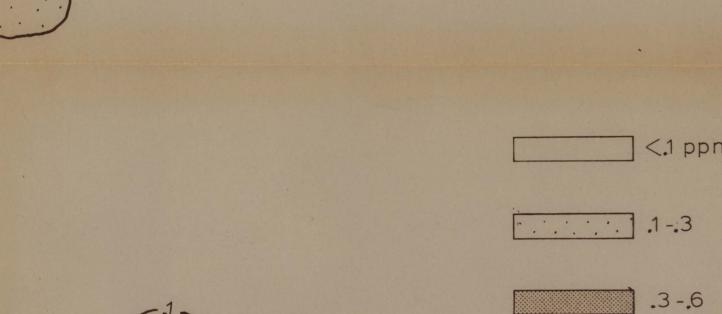


Zn in Rock (ppm)

FIGURE 13

(319) ITEM 44 PLATE 11-F 17





PERRY CANYON PROSPECT

Pyramid District Washoe County, Nevada

Au in Rock (ppm)

FIGURE 14

ITEM 44 PLATE 12.0417

3720 0034e



Ag in Rock (ppm) (19)

219)

219)

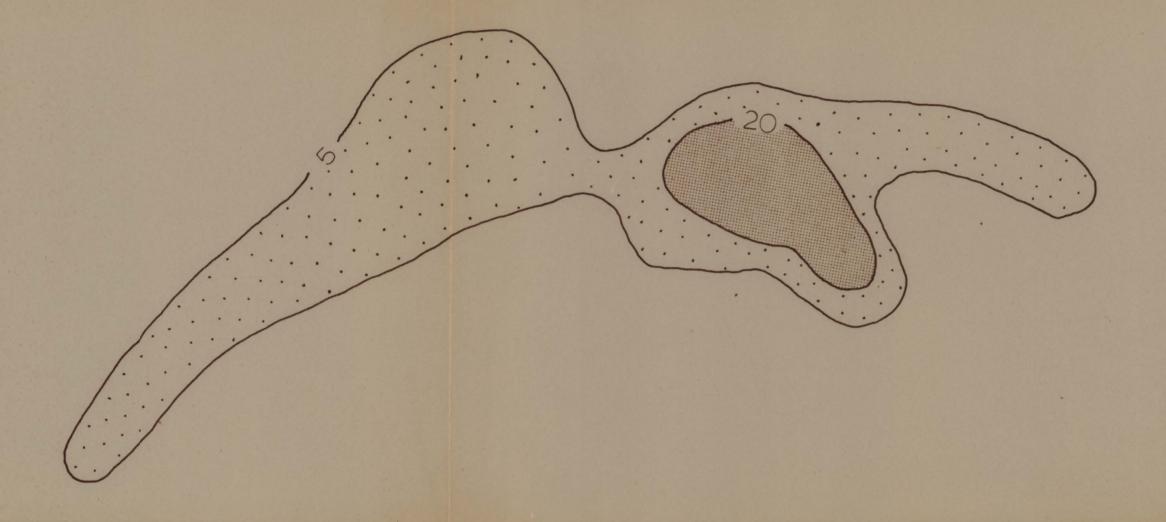
3720 00346



>20 PPM

5-20 PPM

<5 PPM



PERRY CANYON PROSPECT

Pyramid District
Washoe County, Nevada

Sn in Rock (ppm)

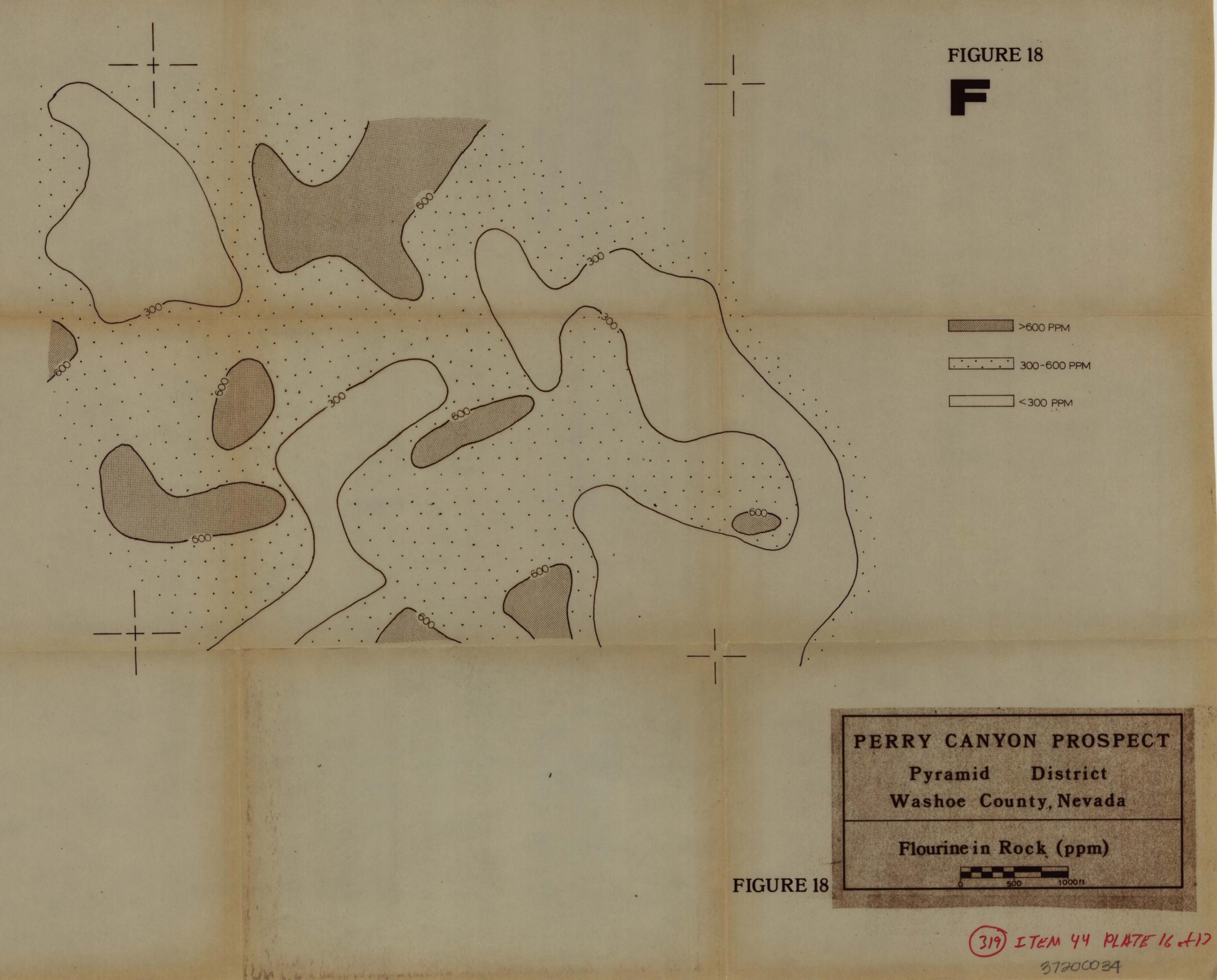
FIGURE 16

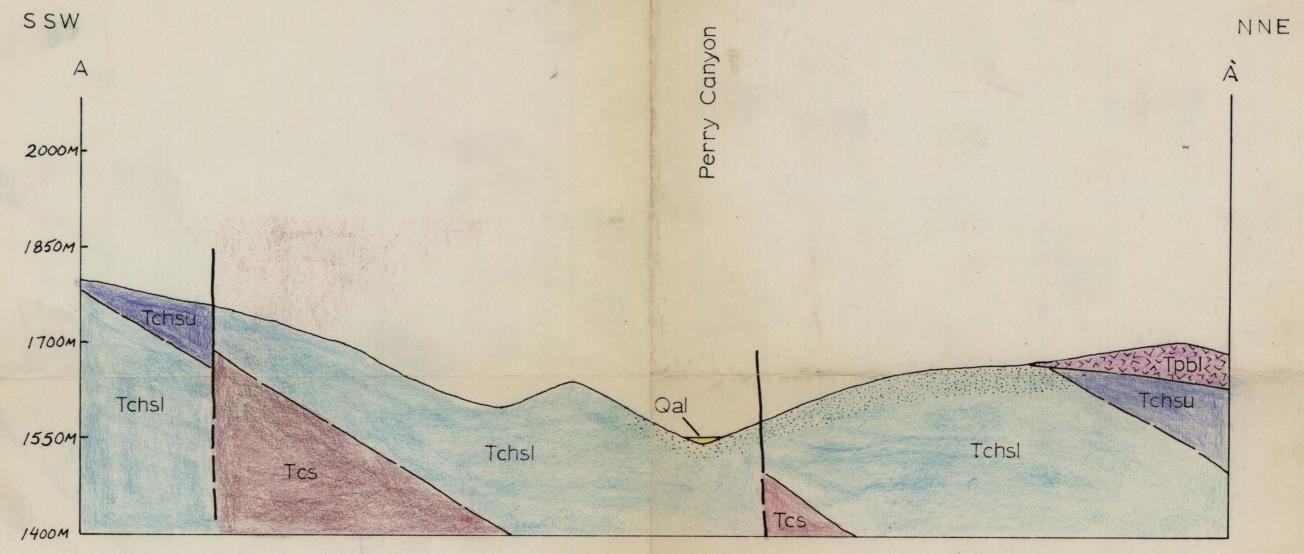
319 ITEM 44 PLATE 140417

FIGURE 17 >5 PPM 2-5PPM 二<2PPM PERRY CANYON PROSPECT Pyramid District Washoe County, Nevada W in Rock (ppm) FIGURE 17

(319) ITEMYY PLATE KOF17

3720 0034h





GEOLOGIC CROSS-SECTION PERRY CANYON PROSPECT

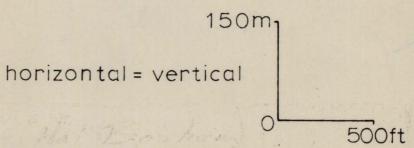


FIGURE 19



I TEM 44 PLATE 17 . 417 3720 0034