A3.1.4.112

E+E MORGAN PROJECT

contiguous (E.) w/ madera ellwood

Location: The E+E Morgan property is situated 3.8 air miles due south of Miami, Gila County, Arizona. Adjacent to Morgan Peak, Sections 18 & 19, T.1S., R.14 1/2E.

Summary: Upon evaluation of the E+E Management drill data, geochemistry, and geophysics, it is possible that a porphyry copper deposit exists S.E. of the drilled area. The approximate location is defined by the intersection of I.P. anomaly C with zone B. The basis for this assumption is that the displacement noted between zone A and B is caused by a fault zone that is delineated by zone C. Surface oxidation is probably absent to the east of zone C due to erosion, while remaining west of zone C. Surface mineralization is present in the Madera Diorite west of zone C, but remains confined to the Pinal Schist east of this zone. Because the schistosity of the Pinal Schist dips steeply to the S., surface oxidation may reflect subsurface mineralization to the south.

Recommendations: Ground magnetic traverses over anomaly B, may reveal the need for more I.P. work in the area.

Access: See Map.

Size: The property consists of 61, unpatented, full size mining claims.

Ownership: E+E Management Corporation
7244 East Indian School, Suite 100
Scottsdale, Arizona 85251
Phone 947-6173

Guide: Wayne Erickson
6702 East Desert Cove
Scottsdale, Arizona
Phone 948-6173

Remarks: Mr. Erickson states that the Ellis Vein is located on a shear zone that runs N-S. He also says that bad air exists within the mine workings.

Development: Drilling on this property is confined to an area within a 1,000 foot radius from the Ellis Vein, (worked in 1940). E+E Management Corporation reports four major drill holes and the following depths: D.D.H.1, 670', D.D.H.2, 787', D.D.H.3, 726', and D.D.H.4, 465 feet deep.

Miami Copper Company completed hole number C.D.H. 304 within the claim area prior to the drilling by E+E Management Corporation. Hole number C.D.H. 303 is adjacent to the E+E Morgan claims and approximately 3,000' to the S.W. Hole C.D.H. 304 is 625 feet deep and C.D.H. 303, 340 feet. Miami drill holes are present farther to the south, see Madera-Ellwood Report, file number A3.1.4.5. Drill hole locations for the above mentioned E+E Management and Miami holes, are shown along with an average total copper content below the oxide zone, see overlay map.

As evident from the map, drilling has failed to uncover significant mineralization. Miami drill hole C.D.H. 304 and E+E Management's holes number D.D.H.4 and D.D.H.3, are within 250' of the Ellis Vein. Higher average total copper values (still not ore grade), are most likely a result of this vein system, and therefore must not be regarded too highly. If one compares hole number C.D.H. 303 and hole number D.D.H.1, a general value ranging from about .060% to .115% total copper exists within the Pinal Schist, extending for at least 4,400 feet, see map.

Production: No significant production from the immediate claim area.

Minerals of interest: Chalcopyrite, chalcocite, pyrite, molybdenite, and other sulfides.

Regional Geology: See Map.

Geophysics: Six N-S, I.P. lines by Heinrichs Geoexploration, with three major anomaly zones are shown on the map in the appendix. A reduced (1"=400') map is included in my report, showing the four E+E Management drill holes along with anomaly areas A,B, and C. Heinrich states in his report that zones A and B give the strongest I.P. response. Between these two he says that zone B is the "best geophysical target" because of its correlation with a self potential low, see overlay map. It is interesting to note that the proposed drill hole number 2 is in actuality substituted for hole D.D.H. 4 just west of the Ellis Vein. In my opinion this hole proposed by Heinrichs should have been drilled. A negative aspect of anomalies A and B, is that they are completely open east and west, and therefore, may represent formational or regional effects lacking sulfide mineralization.

Anomaly C is weaker than A or B and trends N. to N.W. roughly parallel to the Ellis Vein. This anomaly may be the result of a shear or fault zone that is related to the Ellis Vein structure. Drill hole D.D.H. 1 tends to support this, since it is in closer proximity to anomaly C than hole D.D.H. 2

and does reflect higher sulfide-values.

A magnetic lineation is present on Heinrichs Map, and is believed to correlate with the strike of the schist. It is interesting to note that this prominent lineation bends to the south between the seperation of anomaly A and B. In general, Heinrichs states that "poor to fair correlation was found between magnetics and I.P. effects, neutralizing the magnetic survey results as an aid in evaluating the prospect."

Geochemistry: In the report on the Madera-Ellwood Area, E. N. Pennebaker and J. Fowells map a large surface area in the Pinal Schist that contains "metallization", see local geological map. If the reduction of Heinrichs Geophysical map is overlain on the 1"=400' geological map, the above "zone of metallization" clearly ends with the intersection of anomaly zone C. This suggests that zone C may be a fault zone. The area in the Pinal Schist showing surface metallization may continue beneath the Madera Diorite at the intersection of anomaly C with B.

Heinrichs Geoexploration made a general reconnaissance rock chip survey of the area, acquiring samples at 500 foot intervals. (See map). Anomalous copper anomalies (7300 p.p.m.) and molybdenium anomalies (730 p.p.m.) are found N.E. of the Ellis Vein trending parallel to zone C with a large copper anomaly elovgate E-W and N. of the Ellis Vein. This may or may not represent an extension of the Fowell's zone of metallization. However, in comparing Fowell's zone with Heinrichs' Geochemical anomalies, it is perhaps significant to note that Heinrichs large northern and smaller southern copper anomalies both extend into the Madera Diorite. This event also takes place on the Eastern side of the proposed faulted segment. (See overlay version of Heinrichs' Geochemical Map).

Nearby Prospect: The previously referred to Madera-Ellwood Property is located within the claim area, section 19, T.1S., R.14 1/2E., file number A3.1.4.5.

The King Group, is situated about 1/4 mile south of the Warnica Spring, Cherry Flat Recreation Area, section 7, T.1S., R.14 1/2E. Development work consists of two drifts following quartz veins. The country rock is Solitude Granite, see file number A3.1.4.86.

A more significant prospect, the Westlake Tungsten Property, is located just south of the claim area in sections 25 and 30, T.1S., R.14 1/2E. Quartz-pyrite vein mineralization is reported in schist and quartz-diorite, see file number A3.1.4.13.

Local Geology: (See Map 1"=400'). It is apparent that a mineralized zone exists within the Pinal Schist which shows limonitic surface oxidation and is characterized at depth, by a low grade (.06±) copper content. The four E+E Management drill cores do not exhibit alteration (potassic, sparce phyllic, propylitic) assemblages characteristic of porphyry copper deposits. A very slight clay alteration product causing a talc-like powder is present in the Pinal Schist, below 707' in hole D.D.H.3. However, such weak alteration does not warrent deeper drilling. In general, drill cores show high pyrite content within small (.5") quartz vein systems, in Pinal Schist. Dissemination in the entire rock is not visibily present, (hand lens inspection) to any signigicant degree. However, I do believe that an ore body could lie concealed beneath the Madera Diorite, S.E. of the Ellis Vein and centered on Heinrichs I.P. anomaly B. this may represent a faulted segment. If anomaly C is a fault zone that correlates with the Ellis Vein (dipping 60° S.W.), then a horst feature is possible to the E. of anomaly C. Vertical movement on the foot wall will explain the observed anomaly A versis B, lateral displacement, since the schist is dipping to the S. (dip slip dip fault). Therefore, an ore body may exist beneath anomaly B and at a shallow level beneath the Madera Diorite. Traces of surface oxidation may have long since been eroded. This is possible if the mineralization halo migrated up dip along schistosity surfaces.

Field/sample pts: N.A.

Assays: N.A.

References:

Peterson, N. P., 1962, Geology and Ore Deposits of the Globe-Miami District, Arizona: Geological Survey Professional Paper 342 pp. 151, pl. 1.

Peterson, N. P., 1961, Preliminary Geologic Map of the Pinal Ranch Quad., Arizona: U.S. Geological Survey Mineral Investigations Field Studies Map MF-81.

Peterson, N. P., Ransome, F. L., 1959, Geologic Map Gila County, Arizona: Arizona Bureau of Mines, University of Arizona, Tucson, Arizona.

Geological Survey, 1964, Topographic Map of the Pinal Peak Quad., Arizona: U.S. Geological Survey Topographic Quad. Map N11045-W3315/7.5.

Geological Survey, 1948, Topographic Map of the Pinal Ranch Quad., Arizona: U.S. Geological Survey Topographic Quad. Map. N3315-W11052.5/7.5

Geological Survey, 1901, Topographic Map of the Globe Quad., Arizona: U.S. Geological Survey Topographic Quad. Map. N3315-W11045/15.

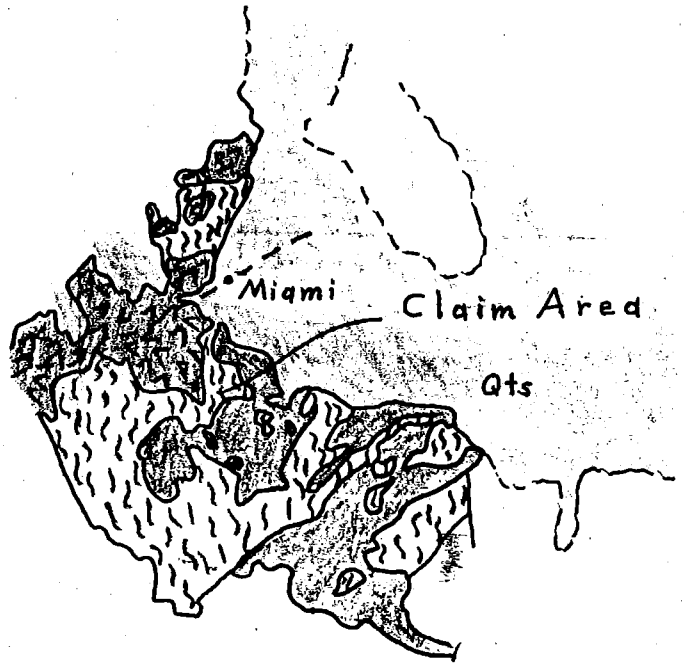
For Cities Service Minerals
Visited/examined 7/8/71 by
Robert C. Moore
George Beaumont

Reported 7/19/71 by
George G. Beaumont

FILE NO.

CITIES SERVICE MINERALS CORPORATION

SCALE 1"=6mi
DATE 7/13/71
DRAWN BY GJB.



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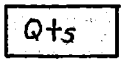
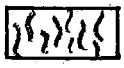


Gravel, sand, & silt - Quaternary


Granite & related intrusives - Laramide
(Includes Schultz Granite)


Granite & related intrusives - Precambrian
(Includes Madera Diorite)


Pinal Schist - Precambrian

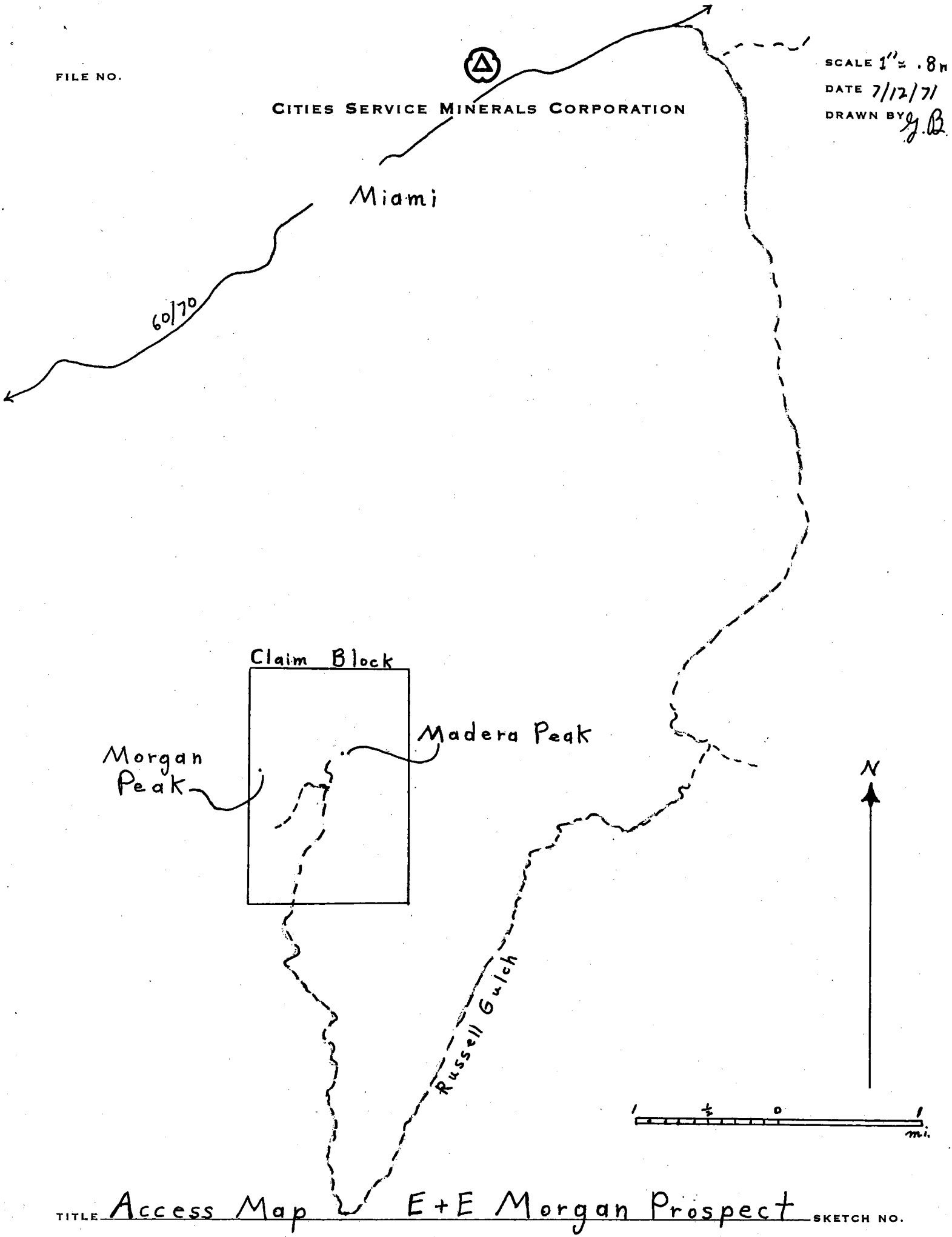
FILE NO.

CITIES SERVICE MINERALS CORPORATION

SCALE 1" = .8 m

DATE 7/12/71

DRAWN BY J.B.



TITLE Access Map E+E Morgan Prospect SKETCH NO.

APPENDIX

1) Drill Core Descriptions (E+E)

Drill Core Notes-E&E Morgan

Hole #1

203.5'-213 = Pinal Schist, pyrite in coarse euhedral Crystals, within quartz-rich veinlets.

386'-396' = Quartz veinlets with pyrite in Pinal Schist Veinlets generally perpendicular to schistosity. No significant dissemination. 394 feet limonite stain noted (oxidation)

573' to 578.5' = Pyrite in quartz veinlets; diorite?

588' to 601' = Fault gauge forming med.-grained sandy zones. Yellow limonite specks noted. Pyrite in quartz seams-Pinal Schist.

660' to 670' = Some dissemination noted: (pyrite) in black fine - grained diorite? Pyrite content increases with quartz content.

Drill Core Notes - E+E Morgan

Hole #2

44' to 48' = Orange limonite within 4mm. veinlets. Rock type resembles oxidized diorite, but most likely Pinal Schist.

154'-162' Very coarse to coarse pyrite in quartz veinlets. Diorite med.-grained, no dissemination of sulfides visible with hand lens.

428'-437' = Diorite? Sparce pyrite dissemination.

552'-562' = Quartz veining with coarse biotite. (Resembles a pegmatite dike within a fine to med.-grained diorite). Sparce moly noted, no signigicant sulfide dissemination.

783'-787' = Fine-grained diorite-fresh, little pyrite.

Drill Core Notes - E+E Morgan

Hole #3

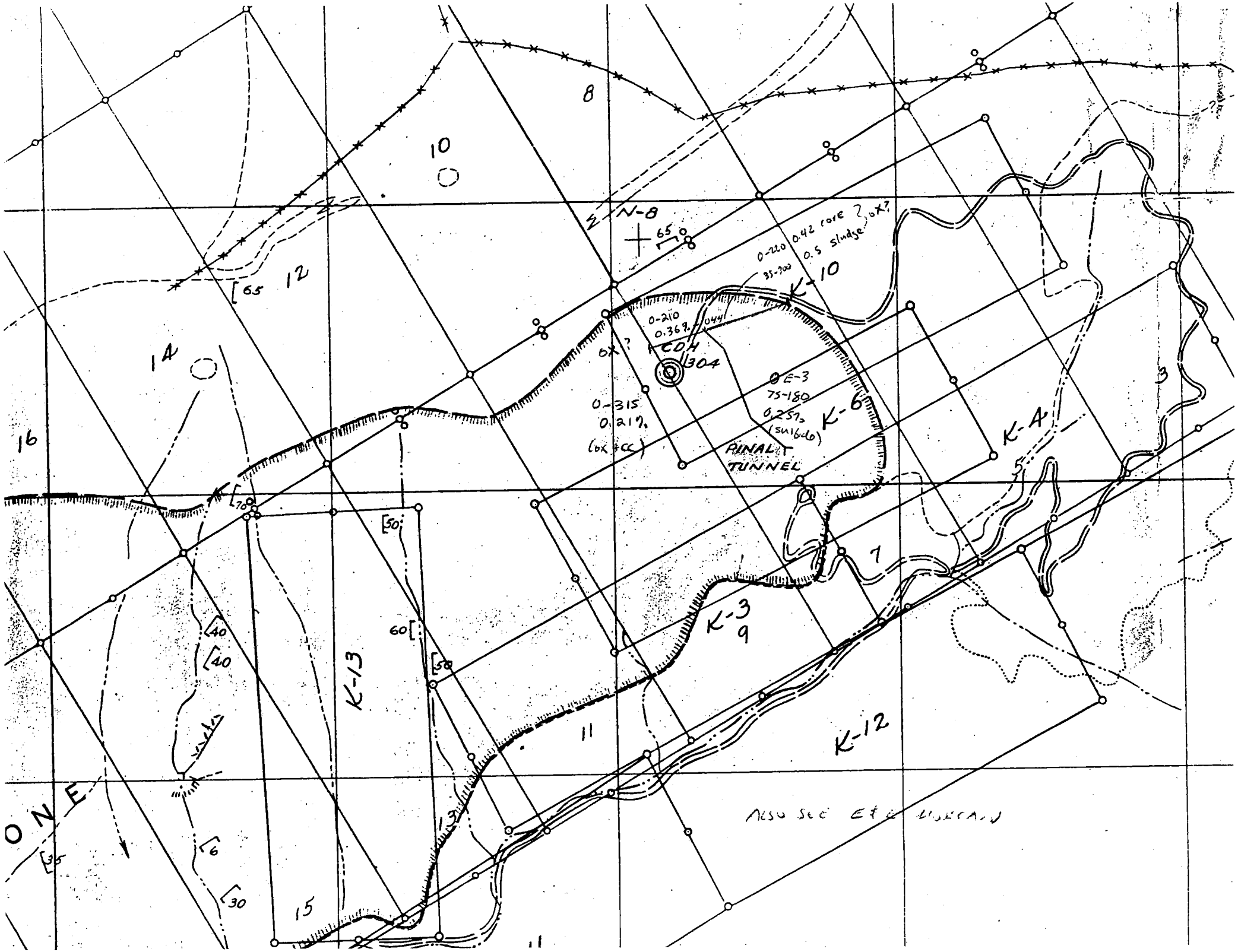
75'-83' = Quartz rich vein disecting Pinal Schist. Biotite, and pyrite noted in proximity to quartz. Schist becomes finer-grained.

206'-216' = Pinal Schist coarse to medium foliation, pyrite in quartz veinlets.

491'-509' = Very fine-grained Pinal Schist with a talc-like feel. (Alteration product). Pyrite sparce, when present in fractures.

707'-721' = Pinal Schist, fine to medium-grained with talc feel. Crumbly near bottom of the section.

721'-723' = Schist crumbly, with talc feel.


8
10
12
65
N-8
65
0-220 0.42 core ? ox?
0.5 sludge
35-200
K-10
0-210
0.36%
044
1A
ox ?
CO4
304
E-3
75-180
0.25%
(sulfide)
K-6
0-315
0.21%
(ox + cc)
FINAL
TUNNEL
K-4
16
3
5
7
70
50
60
40
40
K-3
9
K-13
11
K-12
6
30
15
3
35
ONE
11