DENISON MINES (U. S.) INCORPORATED

PAIUTE

Subject: Fox Range and Big Mouth - Secret Canyon Areas

To: Jerry Harrold

From: Paul Klipfel **Date:** August 4, 1981

Introduction - Interest has been shown by Denison Mines in two large areas as major ventures in terms of exploration targets. They are portions of the Fox Range and the Big Mouth - Secret Canyon areas of the Pah Rah Range, both in Washoe County, Nevada.

The following is a preliminary evaluation report by Paul Klipfel of the two areas. Evaluation is based soley upon skanty field work, literature search, and conversation with Harold Bonham of the Nevada Bureau of Mines and Geology and with Jim Sjoberg of the U.S. Bureau of Mines.

Regional Setting: The regional setting of the Pyramid Lake Basin and surrounding ranges would seem to be ideal for mineralization potential.

Pyramid Lake lies within the Walker Lane and is also the apex of what some geologists call the Mendocino Oroclinal fold. These large scale tectonic features meet at Pyramid Lake. Mineralization and hydrothermal activity around the Pyramid Lake area include; 1) 2 porphyry Cu anomalies - the Guanomi and Pyramid Lake anomalies, 2) Au, Ag mineralization of the Olinghouse district which is possibly related to the Comstock system, 3) Au-Ag mineralization of the Pyramid District, 4) Au,Ag,Pb of the Lakeview mine, 5) Ag, Pb, Zn, Cu of the southern Fox Range, 6) U of the Pyramid District, 7) W from the Nightengale District, 8) abundant tuffa deposits which are the results of aqueous pleistocene hydrothermal emanations.

Both the Fox Range and the Pah Rah Range lie partially within the boundaries of the Pyramid Lake Indian Reservation. The areas of interest though lie peripheral to the reservation.

Each of the areas are geologically mapped at a scale of 1:250,000 and published as the Washoe and Storey County Map. Several theses written by students of the University of Nevada, Reno deal with various disciplines, including geology,mineral deposits, and environmental aspects of the Pyramid Lake Basin.

Fox Range: Poor access to the western Fox Range area has apparently delayed geologic investigation of this area. Printed material on the area includes one M.S. thesis of the Wild Horse Canyon area, the 1:250,000 scale county geologic map, and a U.S. Bureau of Mines report.

Geology: The general geology of the area is best synthesized by Dixon (1977) in his thesis abstract.

> "Rocks in the Wildhorse Canyon area range in age from Early Mesozoic to Recent. The oldest rocks exposed in the area are the Triassic-Jurassic Nightingale sequence composed of metamorphosed, quartz-rich, argillaceous, sandy, fine-grained clastics and intercalated limestones. The Nightingale rocks were regionally metamorphosed, folded, and faulted by late stage Sierran batholithic intrusions in the late-Middle Cretaceous period, and locally further dynamothermally metamorphosed by post-batholithic granodiorite intrusions in the Late Cretaceous. The Nightingale rocks were also intruded by several possible differentiates of the granodiorite magmas during Late Cretaceous time.
>
> The Mesozoic rocks of the canyon area have undergone two episodes of deformation, with each episode resulting in the development of two distinct structural grains. The earliest episode originated and ended in the Late Mesozoic period and developed an east-west and a north-south structural grain. Late Tertiary Basin and Range faulting initiated the latest deformation episode developing a northwest and a northeast structural grain and forming the Fox Range horst.
>
> Continued horsting of the Fox Range fault block along Basin and Range structures has resulted in the folding of local Late Tertiary volcanics into a broad anticline. The axis of the anticline generally parallels the north-north-east trend of the Fox Range fault block.
>
> The Late Cretaceous to Middle Teritary period of erosion and peneplanation is represented locally by a few outcrops of stream channel deposits developed in the peneplaned Nightingale sequence.
>
> Tertiary volcanism in the area began in the lower Oligocene with the eruption and flows of the South Willow formation. The area was volcanically quiescent from the middle of the Oligocene until the lower to middle Miocene when dacite intruded Basin and Range fault planes and related structures. The volcanic flows and sediments of the Pyramid sequence were deposited from the middle Miocene to Mio-Plicocene time.
>
> Erosion has been continuous in the elevated canyon areas since the beginning of the Pliocene epoch. In the adjacent Smoke Creek desert, pluvial lakes formed lacustrine and subaerial deposits in Quaternary time.

Mineralization in the Wild Horse canyon area is limited to gold-quartz veins developed in the post-batholithic Wild Horse mine granodiorite stock."

Mineralization: Known mineralization of the Fox Range is confined to quartz-pyrite veins associated with the granodiorite stocks and shear zones within the metasediments and the granodiorite. These veins have produced minor amounts of silver and gold, along with Cu, Pb, Zn. Minor amounts of Sb and W are also present. Bonham (1969) reports the following results of 3 select grab samples from an ore pile at the Silver Fox prospect.

Pb%	Cu%	Sb%	Au OPT	Ag OPT
1.4	0.9	2.4	0.06	70.68
5.0	0.5	0.7	tr.	7.68
0.7	1.1	0.5	0.16	37.94

Samples from the Wild Horse Mine showed no gold, but contained up to 5 OPT Ag.

A single anomulous Au occurence is reported from a soil sample taken within the reservation boundary of material similar to the shale/carbonate soil found in the Wild Horse Canyon area. Also, selenite crystals occur abundently in this type of soil. Pervasive pea-yellow coloration coats most of the fracture and planar surfaces of the metasediments. Low-grade disseminated mineralization is concievable in this area.

A hornblende gabbro contains disseminated chalcopyrite and other sulfides. Assays of grab samples of this rock type showed traces of U, .18 Cu, but no Au, Ag, or PGM elements. Bonham feels this rock type may contain magmatic sulfides.

Along the western edge of the range, there are several occurences of moderately extensive breccias. These breccias have not been examined in detail, however, Bonhan,(personal communication) indicated that they may be a viable exploration target. One such breccia was visited and sampled by Denison.

Upon further investigation these breccias, if they are the same as what Bonham refered to, are jasperoid breccia in which a rhyolite dike system is breciated and jasperoidized and jasperoid is also brecciated. The rhyolite dike system seems to be related to a paleofault zone (possibly range-front). Rhyolite flows on the present clay surface to the south may be a surface manefestation of this hypabyssal system.

Argillization of volcanics along a range-front fault at the western edge of the range is suggestive of the presence of a small structurally controlled epithermal system. This zone is likely related to the nearby jasperoid.

Land Status: At the present time, there are only a few claim blocks in the Fox Range, each of which contains two to five claims. During the literature search for this writing, a Noranda geologist came to the library also inquiring about the Wild Horse Canyon thesis. She claimed Noranda was investigating a submittal which was likely the Linda claims of section 27.

This area appears to have been staked for the rhyolite.

Dave Iveson, a prospector from Sudcliff, has expanded from 2 claims to 12 claims in section 10. He is interested in dealing with Denison.

Although the Pyramid Lake Indian Reservation is nearby, it is my feeling that there would be no major conflicts with a mining venture as there might be if the reservation was a wilderness area. Dealing with the Paiute tribe is slow and requires diligence. Should a mining venture come about, though it would be in the best interest of all persons to attempt to include the Indians in as many ways as possible; i.e. jobs and cooperating with there needs and desires.

The Western Pacific Railroad runs along the base of the range and could likely provide easily accessible transportation for mining activities. Land surrounding the railroad is all BLM land.

Summary: The Fox Range is a poorly studied range north of the Pyramid Lake Indian Reservation which appears to have a diversity of mineral potential. Targets include:

1) quartz veining assoicated with the intrusion of granodiorite into Nightengale sedimentary rocks, Au, Ag, Cu, Pb, Zn, ±Sb, W.

2) Disseminated mineralization in carbonates, shales, and other related sediments Au, Ag.

3) Epithermal jasperoid breccia system.

4) Dissmeninated magmatic sulfides in hornblende gabbro intrusives.

5) Skarn (?)

Proper evaluation of the Fox Range will demand considerable time and the efforts of individuals with a variety of backgrounds. First appearances (surface coloration, workings, a complex geologic history) lead one to believe that this area can offer quite favorable potential. The rugged nature of the area, present day poor access, and need for a great deal of work to be done place the reality of a mine farther down the road than in other areas.

Recommendations

1. Along with sample data, spend several days in the Range to determine the most favorable areas.

2. Locate several claim blocks on favorable areas.

3. Run a moderately detailed geochem and mapping program over the entire area.

4. Follow-up with geophysical surveys if appropriate 1) the hornblende gabbro should show well with a magnetic survey, 2) utiliza IP and/or VLF to locate hidden structures with potential mineralization.

5. Evaluate and make appropriate discussions with regards to drilling and retention of properties.

Big Mouth/Secret Canyon

Big Mouth and Secret Canyons drain the east side of the Pah Rah Range which is located southwest of Pyramid Lake. The boundary of Pyramid Lake Indian Reservation intersects each Canyon near its mouth. Areas of interest however, lie outside the reservation.

Lithologies of the Big Mouth and Secret Canyon areas consist of the Hartford Hill Rhyolite which is overlain by later andesite flows. One unit within the Hartford Hill rhyolite is of particular interest. It is a propylitized ash flow tuff(?) which has locally been argillized and silicified. Assays of samples from workings within this unit show Au values from .18 to .62 OPT and Ag values from .7 to 2.6 OPT.

Harold Bonham (personal communication) reports native gold along thin "knife blade" quartz veins.

Seven miles to the south lies the Olinghouse district. Production in this district has and still is from Au and Ag in quartz veining. The district is centralized on the northeast trending Olinghouse fault. Mineralization tends to be strongest in the footwall and quartz veining is strongest in the headwall, according to Bonham. A recent analysis by the U.S. Bureau of Mines a high-grade pan concentrate sample shows values up to 2% Ag, .3% Au, 9% Pb, 8% Te, and anomalous amounts of other metals. Production figures from the Olinghouse district are reported to be 11,883 oz lode Au, 405 oz placer Au, and 29,155 oz Ag along with some Cu, Pb, and WO_3.

Extensive placer deposits occur in the valleys that drain the Olinghouse district and in the range-front alluvium. The presence of placer deposits along with the fact that veining in the Olinghouse district is very shallow (200-300 feet) suggests that the Olinghouse system may be largely eroded away.

The age and type of mineralization in the Olinghouse district is similar to that of the Comstock system which suggests likely genetic relationship.

Continuous and pervasive occurrences of silicification argillization, quartz veining and mineralization along the eastern flanks of the Pah Rah Range suggests that the area is underlain by a large system. If this is the case, the Big Mouth and Secret Canyon areas may provide excellent exploration potential.

In my conversation with Harold Bonham, he conceded that the area may be very worthwhile as an exploration target and to his knowledge had not been looked at previously.

Land Status: There was one claim block of three claims filed in 1972, however, proof of labor has not been filed since 1977. Other than this one claim block, the area appears to be completely open.

The proximity of the Pyramid Lake Indian Reservation is not likely to cause difficulties. The Paiute Tribe, however, should be given due consideration and consultation if a mining venture is attempted in the future.

Summary: Sample results and field evidence suggest that the Big Mouth-Secret Canyon area of the Pah Rah Range provides excellent exploration possibilities. In particular, a propylitized ash flow tuff unit is the host for later argillization, silicification, and mineralization. This unit appears to be quite extensive because it outcrops over a large area. Significant portion of the unit (if it is continuous) is beneath later volcanics.

Recommendations

1. Claim appropriate area
2. Compile a detailed map and sample the unit where it is exposed
3. Attempt to delineate extent of unit beneath later volcanics
4. Drill areas where the unit is covered if appropriate
5. Evaluate

The area may be claimed as one large claim block (safest) or two smaller individual blocks (least expensive). A large single claim block containing about 200 claims would probably cover the area of interest until the unit's extent is properly projected beneath overlying volcanics. Two smaller claim blocks (one about 90 claims, the other about 30 claims) would also cover the area of interest but would leave an area open that may be of interest later after more work is done. See map.

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.

REFERENCES

Bibliography of Graduate Theses on Nevada Geology to 1976; Nevada Bur. of M. & G. Report #31.

Bell, E.J. and Slemman, D.B., 1979, Recent crystal Movements in the Central Sierra Nevada - Walker Lane Region of California-Nevada, Tectonophysics 52, 571-583.

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Sales, J.K., 1966, Structural analyses of the Basin Range Province in terms of Wrench Faulting Ph.D. U.N.R.

Oldham, R.L., 1971, Structural Geomorphic Analysis of the Virginia Mountain, Washoe County, Nevada; M.S. theses UNR

Brooks, Howard, 1956, Geology of a Uranium Deposit in the Virginia Mts., Washoe County, Nevada; M.S. Thesis, U.N.R.

DeGuire, M.F., 1974, A study of the Eurtophication of the surface waters of Lake Pyramid; Thesis, U.N.R.

Waggoner, R.R., 1975, Environmental Geology Problems of Pyramid Lake Basin, M.S. Thesis, U.N.R.

Dixon, J.B., 1977, Geology of the Wild Horse Canyon area Fox Range, Washoe County, Nevada, M.S. Thesis; U.N.R.

Cotton wood

2
5
6
9
19

Oiling house-
Whitehouse

1
3
4
~~5~~
7
8
10
11
12
13
14
15
16
17
18
20
21
22
23

1) JEN 1
OLINGHOUSE
sec 21, 28 T21N, R23E
located 5/11/81
Lee Smith : 1735 Belford Rd, Reno, NV. 89509
Robert Rossier : 1735 Plumas St., Reno, NV. 89509

2) LINDA I - V
Cottonwood
sec 27 T30N R 21E
located 6/9/81
Donald T. M'Dowell : 7994 Meadowview Ct. Citrus Heights, Ca. 95610
Reed Atkinson : RT. I Box 703 Sutcliff Creek, Ca.
Gregory M'Dowell : 7994 Meadowview Ct., Citrus Hgts., Ca.

3) Lookout
Olinghouse / Whitehorse
sec 19 + 20 T21N R23E
located 6/2/81
Ken Bryant 2180 Rice Rd. Fallon, NV 89406
remarks: joins Mattie B. patent on south

4) Lode #3 Red Dog
White Horse
assessment complete for 1981 ; dated 6/18/81
sec 28 T21N R23E
Frank Tarantino P.O. Box 6112 Carmel, Ca. 93921

5) Midas 1-4
FOX RANGE
T29N R21E ← located 1/9/81
Del Macedo
Moreno Corp. } 700 Peckham Rd., Reno, NV.

6) Gerlach
Cottonwood
sec 15 T31N R22E
located 4/10/81
CD. Harmon: 23 Bridge St, Mason ?
WE Harmon: 1420 Dunbar Dr, Carson City, NV. 89701

7) ANNA; SLIP + GOLD LEDGE LODE; CANADA; MIDWAY; CABIN LODE; GOLD KING; "V" CLAIM; GREENHILL #1 + #2; GREEN VALLEY
located Oct; 1979
assessment complete for 1981
sec 20, 29, 30, 32 T21N R23E
Olinghouse / Wildhorse
Ted Smith: 555 SUMMER LANE, RENO, NV.
John Heizer: P.O. Box 30, Reno
also: Dennis Smith

8) SLOPPY WEATHER 1-14
Whitehorse
sec 23 T21N R23E
located 7/12/81
Douglas Hamilton: 1777 Howell Mt. Rd Angw.N, Ca. 94508
Gene Sackett: 120 Arrow St., Fernley NV.

9) Bobcat
unknown district
sec 3 T30N R21E
located 5/17/81
David Iveson: Sutcliffe Star Rt. Reno, NV 89510

10) ANNA (repeat)
Olinghaise / Whitehorse
sec 29 T21N R23E
located 7/3/81
Dennis Smith 2385 Camelot Way, Reno
Ted Smith 555 Crummer Reno

11) MATTCO PLACER
Whitehorse
sec 20 T21N R23E
located March 27, 1981
James Matthews: P.O. Box 56, Reno
Carrol Charlot P.O. Box 18034, Steamboat, NV.

12) Sunbeam and Caroline (2 claims)
Whitehorse
sec 20, 21, 28, 29 T21N R23E
assessment complete for 1981
Milton Jacobs 1634 Knox Ave Reno

13) Siwash; Siwash two; Olga Mtn; Cactus Claim and Olga mtn. millsite
Olinghouse
sec 29, 30 T21N R23E
H.L. Murphy 1455 Mallory Lane, Reno
assessment complete for 1981

(14) Karen Placer
Whitehorse.
location?
assessment complete 1981
Melvin Peal
Vernon Erlandson: 350 Sutherland Dr Reno

15) Green Gold
Olinghouse
¼ sec 21, 28 T21N R23E
located 4/29/81
Lee Smith: 1735 Belford Lane Reno
Robert Rossier: 1735 Plumas Dr. Reno

16) Gold Hill
Olinghouse
sec 21, 28 T21N R23E located 5/15/81
Lee Smith:
R. Rossier:
remarks: bordered on north by "JENI"; on ~~east~~ north by
Cardine

17) Gold Fraction Placer
Olinghouse
sec 21, 28, 29 T21N R22E
located ~~6/15~~ 6/14/81 (originally claimed 1964)
Lee Smith
R. Rossier

18) Gold Queen Lode
Olinghouse
sec 20, 21 T21 R23
located 6/26/81
Lee Smith
Ernestine Smith
} 1735 Belford, Reno
remark: bounded on south by Sunbeam, on west by Goldking

19) Wild Horse
Wildhase (For Rq)
sec 2 T29N R21E in For Rq
located 6/9/80
Lee LeResche, Wadsworth

20) Arrowhead
Whitehorse
Sec 33 T21N R22E
located 1/13/81
Harry McNicholas 47 Silver Reef Dr, Reno

21) OLD GOLD
Olinghouse
Sec 25 T21N R23E
located 5/25/81
Lee Smith, 1735 Belford, Reno

22) SUNBEAM EXT.
Olinghouse
Sec 21 T21N R23E
Albert Risley 3111 Idlewild Dr, Reno
Dennis Smith - 2385 Camelot Reno
assessment complete for 1981

23) Tunnel Claim; Silver Wave #1 + #2
assessment complete only through 1977
RH + RI Cowles, Reno, NV.
COWLES

DENISON MINES (U. S.) INCORPORATED

Subject: 1981 Annual Report - Paiute DN24

To: Jerry L. Harrold

From: Paul Klipfel **Date:** January 29, 1982

INTRODUCTION

The Paiute property is located approximately 30 miles northeast of Reno, Nevada and 5 miles south of Pyramid Lake (Figure 1) on the east flank of the Pah Rah Range, (T22N, R23E). Ninety-seven claims were staked during August and September of 1981 in the Big Mouth Canyon area, 7 miles north of the Olinghouse District (Figure 1). Claims are bounded by private ground and ±15 patented claims.

GEOLOGY

The Paiute property is situated in the Pyramid Lake structural basin which possesses strong mineralization potential. The basin marks the intersection of two large tectonic features, the Walker Lane and the Mendocino Oroclinal fold. Several mining districts, at least 2 porphyry anomalies, and abundant current and paleo hydrothermal activity are present within the basin. Precious metals at the nearby Olinghouse District are thought to be related to the large Comstock epithermal system (Figure 1).

The Paiute claims cover a thick sequence of rhyolitic ash-flow tuffs (Hartford Hill Rhyolite) characterized by extensive and pervasive propylitic alteration and silicification. Old workings on the property are reported to have produced a few small shipments of Au and Ag. There are also occurrences of Pb, Te, Cu, and WO_3 in the Olinghouse District.

1981 PROGRAM

Reconnaissance work was directed toward (1) evaluation of this area as a target of interest, (2) reconnaissance mapping and sampling to designate the area of greatest interest, and (3) establishing a land position. Claims were staked to cover areas of most intense argillic alteration and silicification. An aerial photographic /photogrametric survey was also flown to provide imagery for geologic interpretation and production of a suitable topographic map.

DISCUSSION

The structural character, the abundance of mineralized areas, and presence of hydrothermal activity make the Pyramid Lake basin an ideal area for precious metal exploration.

Geochemical results (Table 1) and area geology indicate that the Big Mouth Canyon area possesses potential for significant Au-Ag mineralization in the form of a Comstock or DeLamar or combination type model.

The exploration program for 1982 will include:

(1) Regional and detailed geologic mapping

(2) Orientation survey and grid geochemical sampling

(3) Investigation of geophysical applications

(4) Acquisition of additional land if necessary

(5) Communication with the Paiute Tribe of the Pyramid Lake Indian Reservation

Proximity of the Paiute property to the Pyramid Lake Indian Reservation (Figure 1) is not expected to be problematic. However, positive dialogue with the Indians will be part of the 1982 program.

PDK/sn

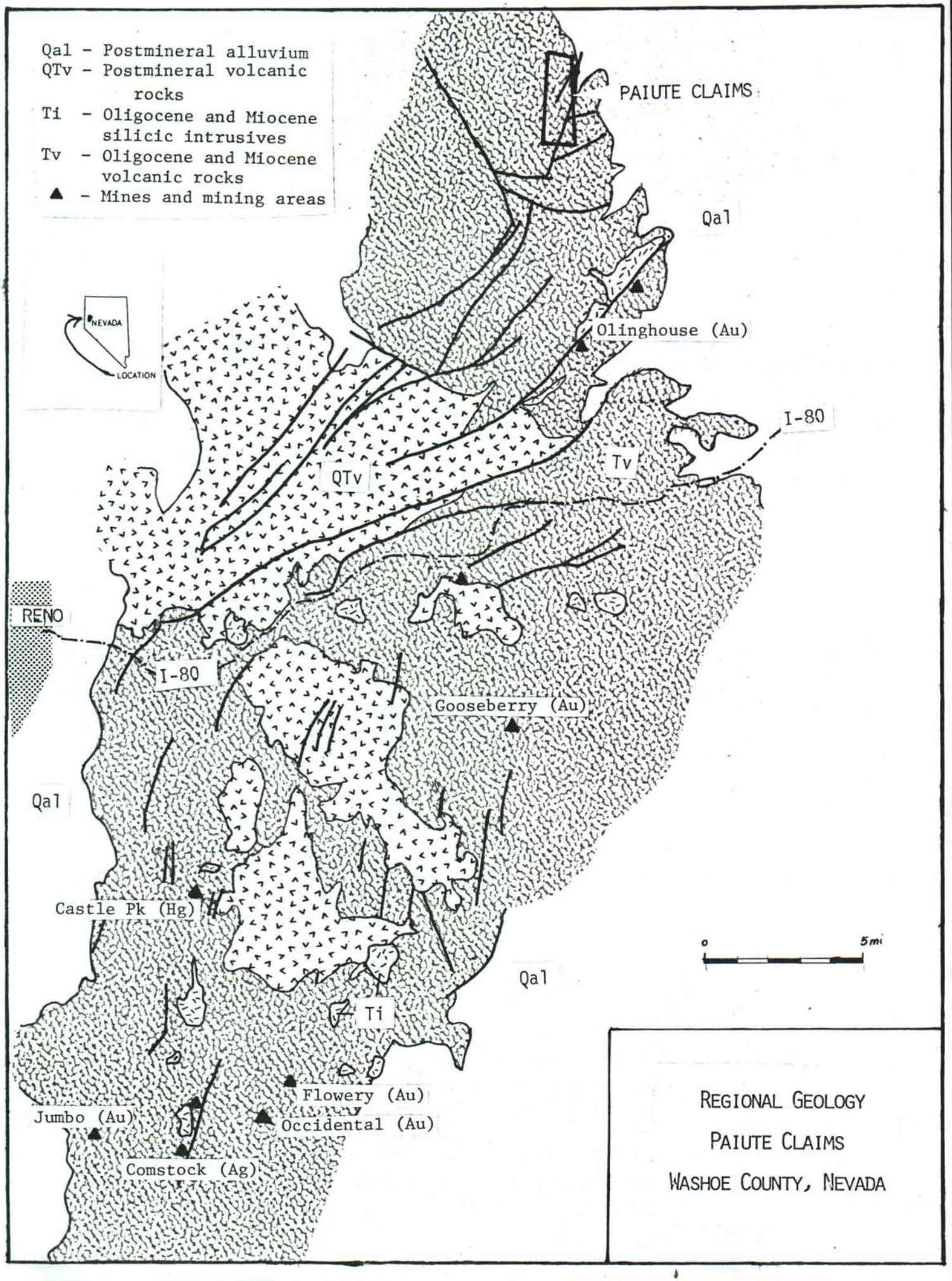

Qal - Postmineral alluvium
QTv - Postmineral volcanic rocks
Ti - Oligocene and Miocene silicic intrusives
Tv - Oligocene and Miocene volcanic rocks
▲ - Mines and mining areas
NEVADA
LOCATION
PAIUTE CLAIMS
Qal
Olinghouse (Au)
I-80
Tv
QTv
RENO
I-80
Gooseberry (Au)
Qal
Castle Pk (Hg)
0
5mi
Qal
Ti
Flowery (Au)
Jumbo (Au)
Occidental (Au)
Comstock (Ag)
REGIONAL GEOLOGY
PAIUTE CLAIMS
WASHOE COUNTY, NEVADA

TABLE 1

PAIUTE

GEOCHEMICAL RESULTS

Sample #	Rock Type	Au	Ag	Hg	As	Sb	Fe	Mn	Cu	Pb	Zn	Mo
3124	Silicified volcanics	.040	2.5	.935	17	37	5500	28	5	22	12	121
3126	Altered volcanics	1.600	5.8	.330	23	49	5000	25	6	32	17	31
3127	Altered volcanics	1.000	4.6	.225	16	58	4000	47	1	34	11	130
3128	Quartz vein	.200	5.6	.160	6	23	16000	118	1	64	27	151
3131	Altered volcanics	1.000	1.9	.215	6	44	7000	40	1	16	12	16
3134	Altered tuff	3.700	3.4	.415	18	75	4500	33	32	30	85	60
3135	Silcified tuff	.065	2.4	.380	12	43	6000	21	13	13	26	117
3222	Calcite vein	<.005	0.3	.800	6	<2			11	30	28	4
3223	Volcanics	.035	0.2	.950	5	<2			5	16	49	1

DENISON MINES (U. S.) INCORPORATED

Subject: Paiute Project Summary

To: J. J. Antony

From: P. E. Kavanagh Date: December 8, 1982

Introduction:

The 97 Paiute lode claims (92 whole, 5 fractions)(Fig. 1) were staked as a result of the 1981 Western Silver reconnaissance program. A number of large scale tectonic features considered to be favorable for mineralization were known to be coincident in the area. Several porphyry copper prospects, numerous small precious metal prospects and generally widespread alteration further demonstrated the potential of the Pyramid Lake area as a whole. Finally, a number of grab samples from Big Mouth Canyon and Secret Canyon were analyzed and found to have extremely high precious metal content. The land was found to be available and staking commenced in September 1981. An airborne photogrammetric survey was flown early in 1982 and color photo coverage is now available at a scale of 1:12,000.

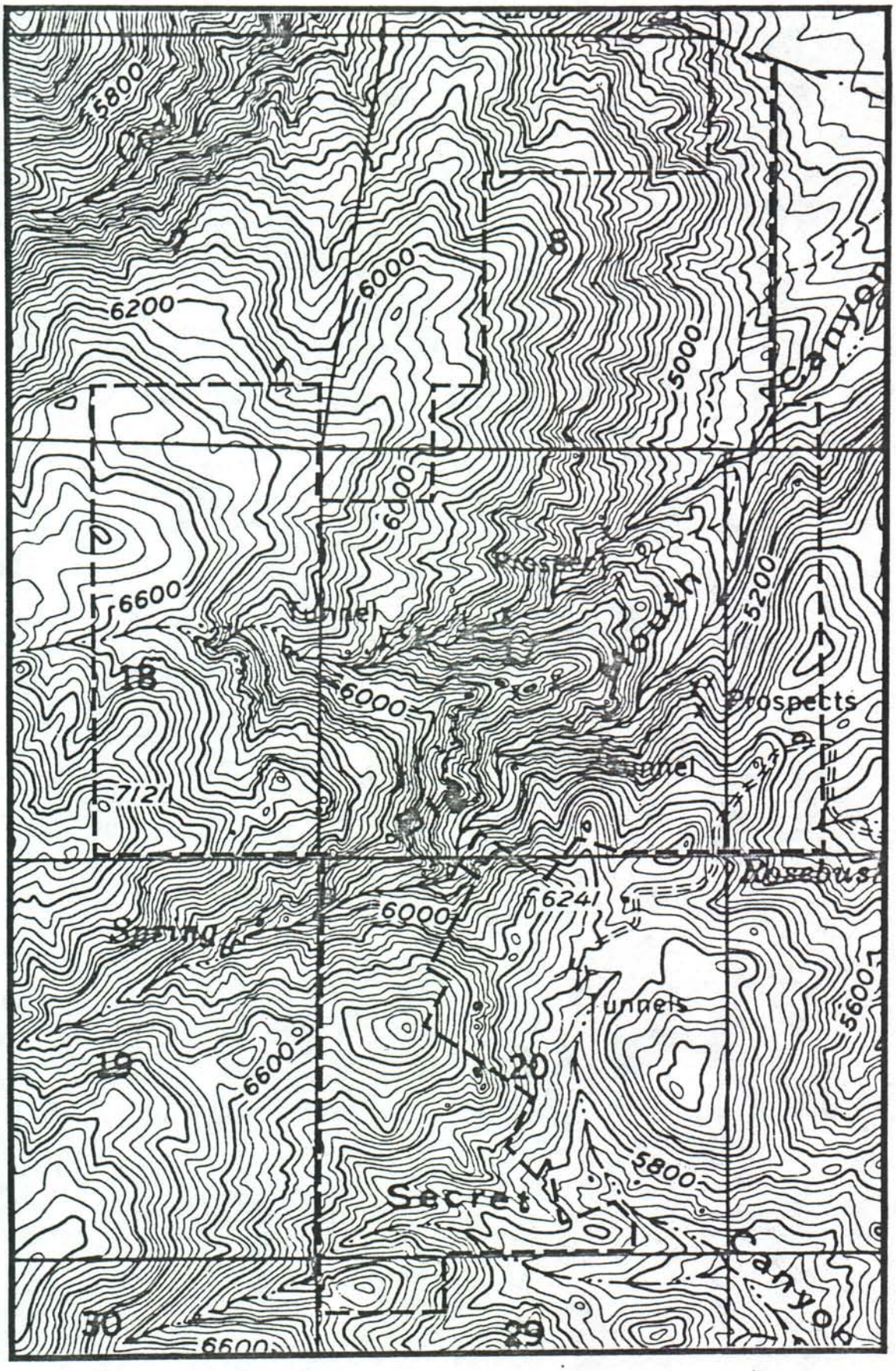
Location:

The claims are located in Washoe County, Nevada, approximately 30 miles northeast of Reno (Fig. 2). They are bounded by patented claims to the south and east and by the Pyramid Lake Indian Reservation (Paiute Tribe) to the north. The area is toward the southern end of the Pah Rah Range and relief on the property is nearly 3,000 feet (Fig. 1). The claims are accessible via 3 miles of dirt road from State Route 34 which runs between Pyramid Lake and Fernley.

Geology:

The majority of the rocks in the claim group belong either to the Lower Miocene Hartford Hill Rhyolite or to the Upper Miocene Pyramid Sequence (Bonham, 1969). Rocks of the Hartford Hill unit generally form canyon walls in the area while the Pyramid unit outcrops at higher elevations to the west (Fig. 3). Minor exposures of Oligocene Pah Rah Formation andesites occur near the bottom of Coal Creek Canyon in the north and a small intrusive rhyolite plug is exposed between Big Mouth and Secret canyons. Beyond the claim group, Tertiary basalts make up the Truckee Range to the east, Cretaceous intrusions and Tertiary fluviatile and lacustrine sediments outcrop to the west, and intermediate to felsic flows and flow breccias of the Tertiary Kate Peak Formation occur to the south.

The Hartford Hill Rhyolite consists largely of rhyolitic to quartz latitic, variably welded ash flow tuffs. Intercalated with the ash flows are thin ash fall deposits and epiclastic sediments. It appears that at least one of the ash flow units in the Big Mouth Canyon area has been extensively propylitized and locally argillized and silicified. The Hartford Hill Rhylolite hosts mineral deposits in the Olinghouse district, seven miles south of the Paiute claims, and numerous workings within the claim block are in altered portions of the unit. The Rhyolite is generally considered to predate mineralization in the region.

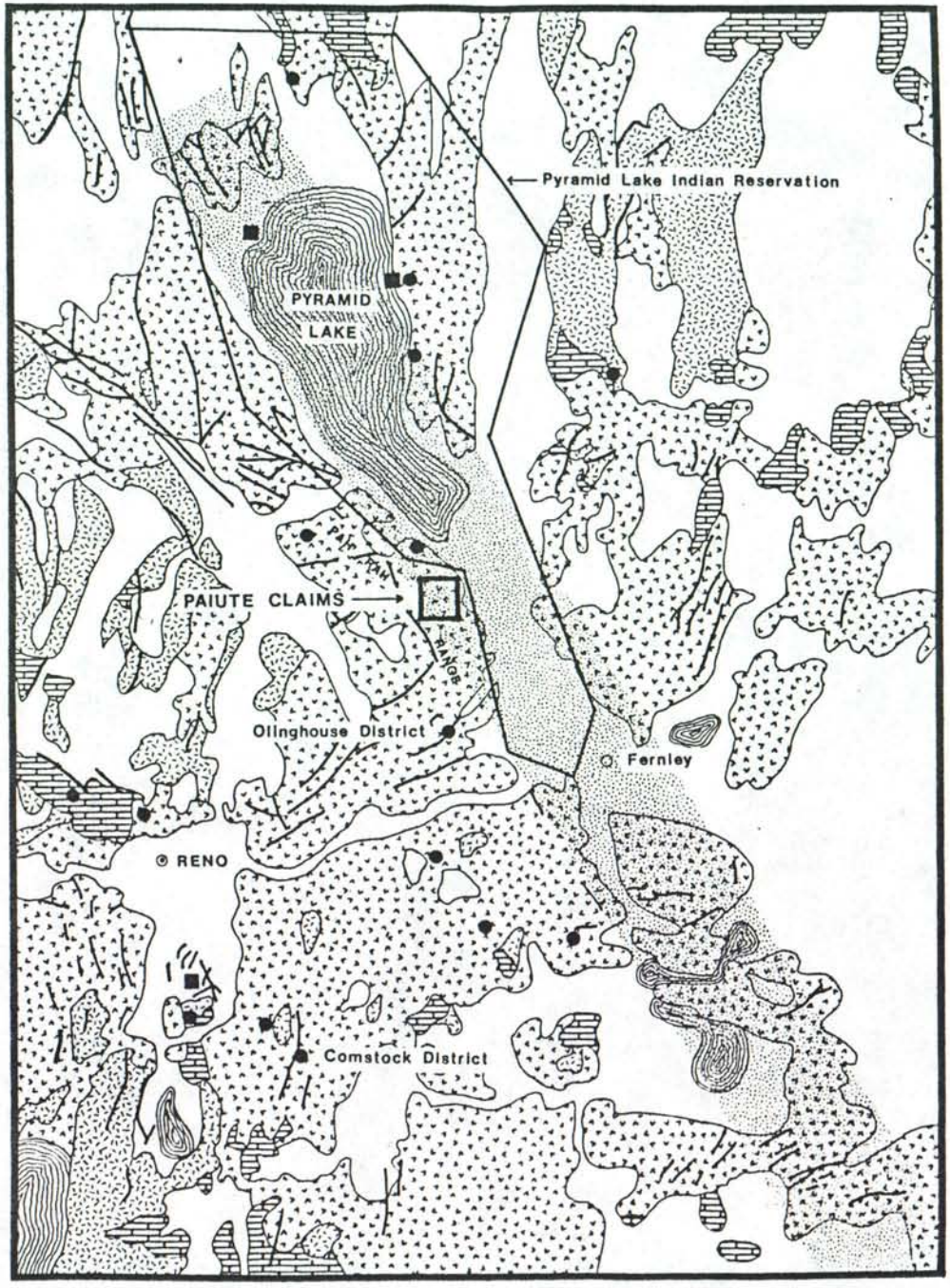


OUTLINE OF THE PAIUTE CLAIMS

T22N, R23E

0 1/2 1 mile

12/81

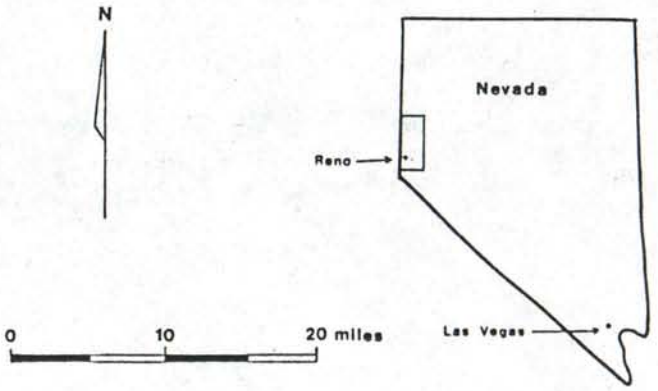


GEOGRAPHIC AND GEOLOGIC SETTING

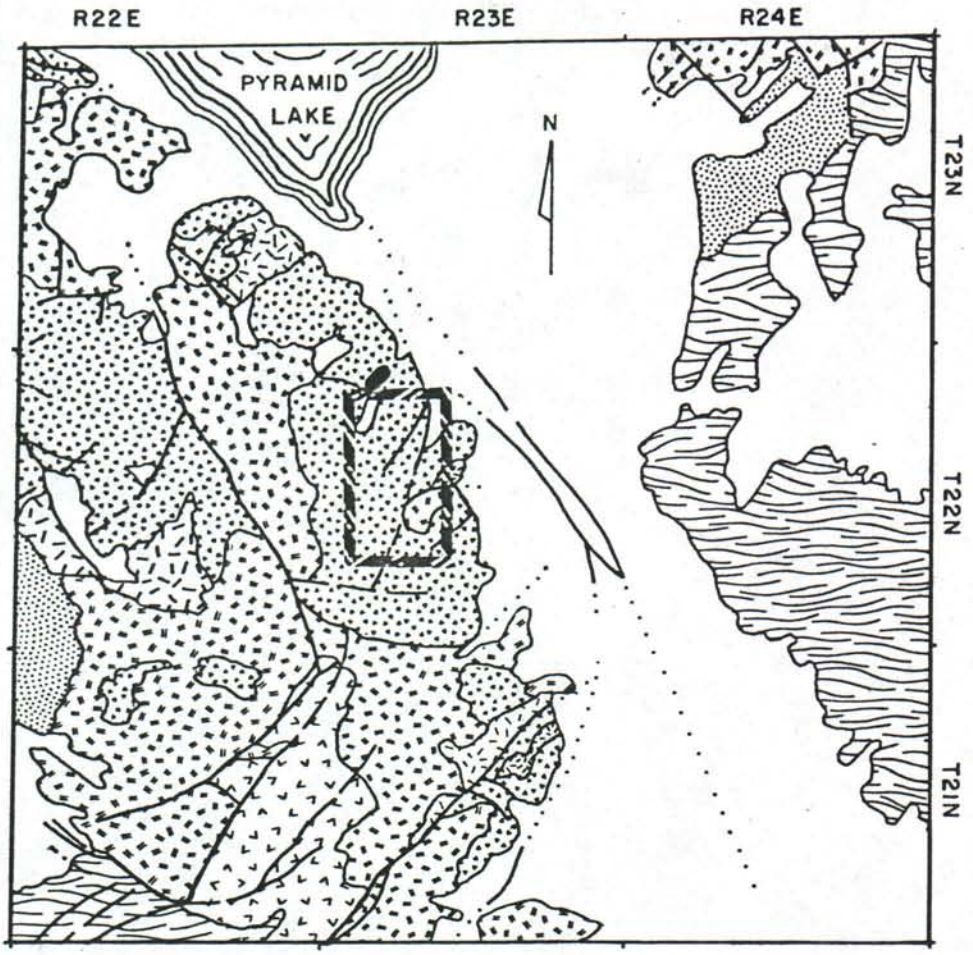
PAIUTE CLAIMS

LEGEND

- Districts
- Major active hydrothermal systems
- Volcanics
- Intrusives
- Sedimentary
- Alluvium
- Walker Lane



REGIONAL GEOLOGY OF THE PAIUTE CLAIMS



Quaternary
Alluvium
Intrusive rhyolite
Andesite and basalt
Sedimentary rocks
Tertiary
Kate Peak Formation
Granitic rocks
Pyramid Sequence
Hartford Hill Rhyolite
Pah Rah Formation
Cretaceous
Intrusive rocks
Area of Paiute claim block

0 5 miles

Geology cont'd

The Pyramid Sequence consists of basic to intermediate flows, flow breccias and tuffs, with minor intercalated waterlain sediments and silicic tuffs. The unit has undergone extensive propylitization, but not the intense degree of alteration common in the Hartford Hill Rhyolite.

The prospects in Big Mouth Canyon and Secret Canyon explore northerly-trending altered and mineralized fault zones in the Hartford Hill Rhyolite (Bonham, 1969). Gold mineralization generally occurs with pyrite in several-foot-wide networks of quartz, adularia and calcite veinlets. Commonly the host rocks are propylitized, brecciated, welded ash flow tuffs.

Geochemistry:

Several samples were collected from adits, dumps and outcrops in the claim block (Figure 4), and were analyzed for a suite of eleven elements. Results are given in Table 1. Samples 3126 and 3127, both high in Au, are dump samples of bleached and silicified material. Sample 3131 is a select grab sample of adit and dump material on the south side of the south fork of Big Mouth Canyon, and sample 3134 is from inside an adit in the north fork of Big Mouth Canyon.

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Bonham, Harold F., 1969, Geology and Mineral Deposits of Washoe and Storey Counties, Nevada: Nevada Bureau of Mines and Geology Bulletin 70, 140 pp.

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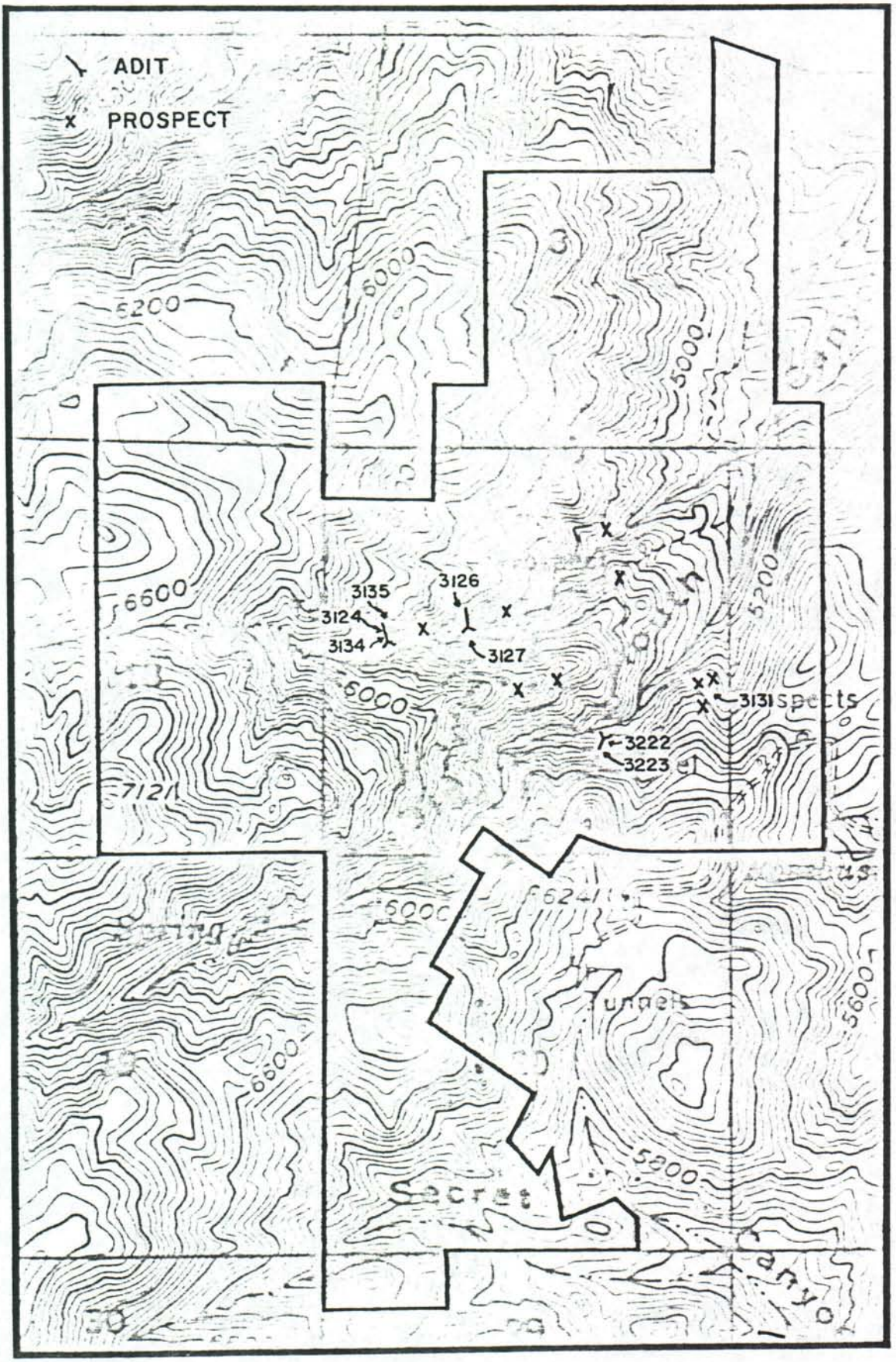

LOCATION OF GEOCHEM SAMPLES
PAIUTE CLAIMS

0 1/2 1 mile

12/81

TABLE 1

PAIUTE

GEOCHEMICAL RESULTS (in ppm)

Sample #	Rock Type	Au	Ag	Hg	As	Sb	Fe	Mn	Cu	Pb	Zn	Mo
3124	Silicified volcanics	.040	2.5	.935	17	37	5500	28	5	22	12	121
3126	Altered volcanics	1.600	5.8	.330	23	49	5000	25	6	32	17	31
3127	Altered volcanics	1.000	4.6	.225	16	58	4000	47	1	34	11	130
3131	Altered volcanics	1.000	1.9	.215	6	44	7000	40	1	16	12	16
3134	Altered tuff	3.700	3.4	.415	18	75	4500	33	32	30	85	60
3135	Silcified tuff	.065	2.4	.380	12	43	6000	21	13	13	26	117
3222	Calcite vein	<.005	0.3	.800	6	<2			11	30	28	4
3223	Volcanics	.035	0.2	.950	5	<2			5	16	49	1

PAIUTE PROJECT
SUMMARY REPORT

DENISON MINES (U.S.) INC.

DENVER, COLORADO

DECEMBER 10, 1982

PAIUTE PROJECT SUMMARY

Introduction:

The 97 Paiute lode claims (92 whole, 5 fractions)(Figure 1) were staked as a result of Denison's 1981 Western Silver reconnaissance program. A number of large scale tectonic features considered to be favorable for mineralization were known to be coincident in the area. Several porphyry copper prospects, numerous small precious metal prospects and generally widespread alteration further demonstrated the potential of the Pyramid Lake area as a whole. Finally, a number of grab samples from Big Mouth Canyon and Secret Canyon were analyzed and found to have extremely high precious metal content. The land was found to be available and staking commenced in September 1981. An airborne photogrammetric survey was flown early in 1982 and color photo coverage is now available at a scale of 1:12,000.

Location:

The claims are located in Washoe County, Nevada, approximately 30 miles northeast of Reno (Figure 2). They are bounded by patented claims to the south and east and by the Pyramid Lake Indian Reservation (Paiute Tribe) to the north. The area is toward the southern end of the Pah Rah Range and relief on the property is nearly 3,000 feet (Figure 1). The claims are accessible via 3 miles of dirt road from State Route 34 which runs between Pyramid Lake and Fernley.

Geology:

The majority of the rocks in the claim group belong either to the Lower Miocene Hartford Hill Rhyolite or to the Upper Miocene Pyramid Sequence (Bonham, 1969). Rocks of the Hartford Hill unit generally form canyon walls in the area while the Pyramid unit outcrops at higher elevations to the west (Figure 3). Minor exposures of Oligocene Pah Rah Formation andesites occur near the bottom of Coal Creek Canyon in the north and a small intrusive rhyolite plug is exposed between Big Mouth and Secret canyons. Beyond the claim group, Tertiary basalts make up the Truckee Range to the east, Cretaceous intrusions and Tertiary fluviatile and lacustrine sediments outcrop to the west, and intermediate to felsic flows and flow breccias of the Tertiary Kate Peak Formation occur to the south.

The Hartford Hill Rhyolite consists largely of rhyolitic to quartz latitic, variably welded ash flow tuffs. Intercalated with the ash flows are thin ash fall deposits and epiclastic sediments. It appears that at least one of the ash flow units in the Big Mouth Canyon area has been extensively propylitized and locally argillized and silicified. The Hartford Hill Rhyolite hosts mineral deposits in the Olinghouse district, seven miles south of the Paiute claims, and numerous workings within the claim block are in altered portions of the unit. The Rhyolite is generally considered to predate mineralization in the region.

The Pyramid Sequence consists of basic to intermediate flows, flow breccias and tuffs, with minor intercalated waterlain sediments and silicic tuffs. The unit has undergone extensive propylitization, but not the intense degree of alteration common in the Hartford Hill Rhyolite.

Geology cont'd

The prospects in Big Mouth Canyon and Secret Canyon explore northerly-trending altered and mineralized fault zones in the Hartford Hill Rhyolite (Bonham, 1969). Gold mineralization generally occurs with pyrite in several-foot-wide networks of quartz, adularia and calcite veinlets. Commonly the host rocks are propylitized, brecciated, welded ash flow tuffs.

Geochemistry:

Several samples were collected from adits, dumps and outcrops in the claim block (Figure 4), and were analyzed for a suite of eleven elements. Results are given in Table 1. Samples 3126 and 3127, both high in Au, are dump samples of bleached and silicified material. Sample 3131 is a select grab sample of adit and dump material on the south side of the south fork of Big Mouth Canyon, and sample 3134 is from inside an adit in the north fork of Big Mouth Canyon.

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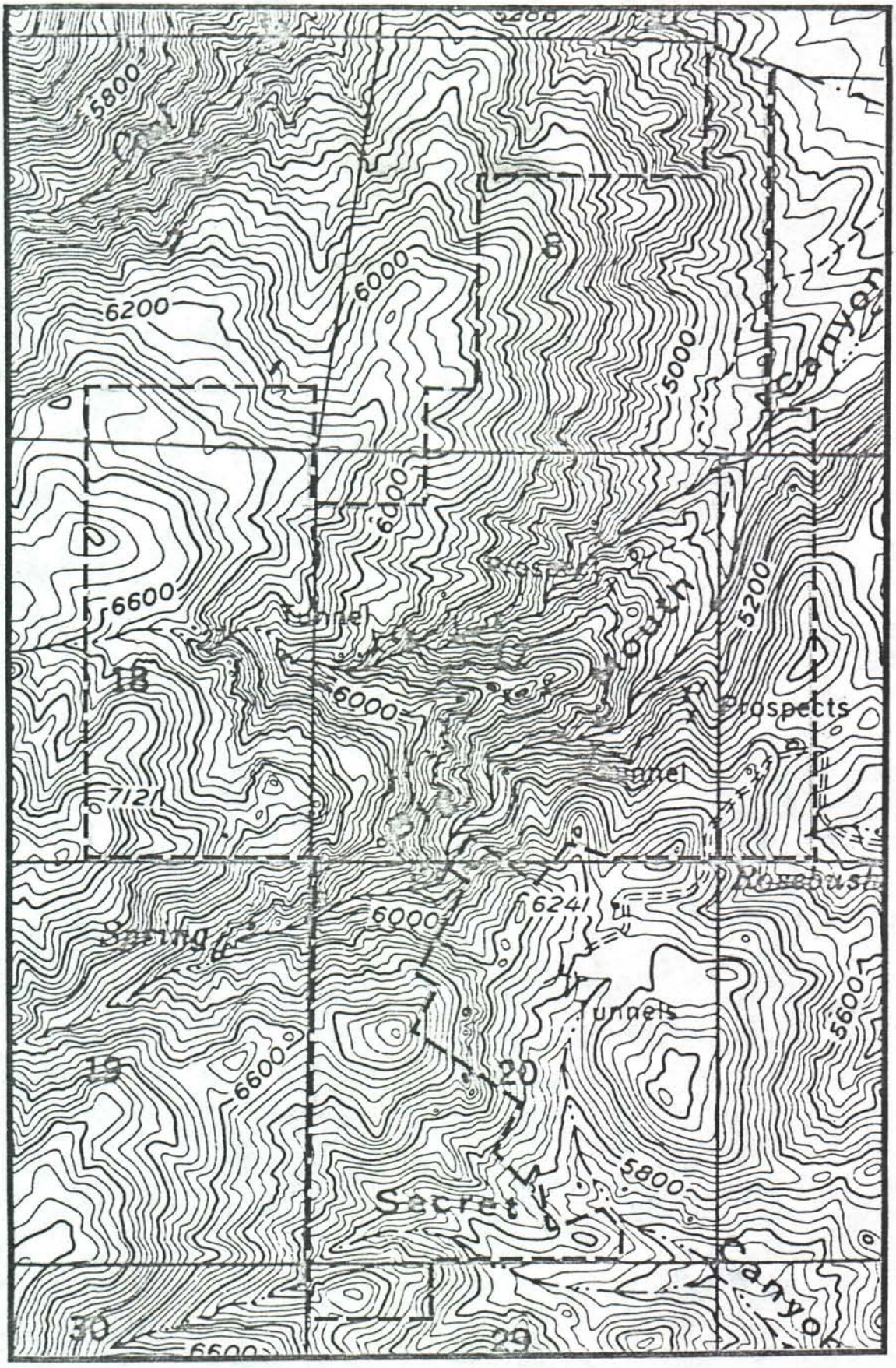


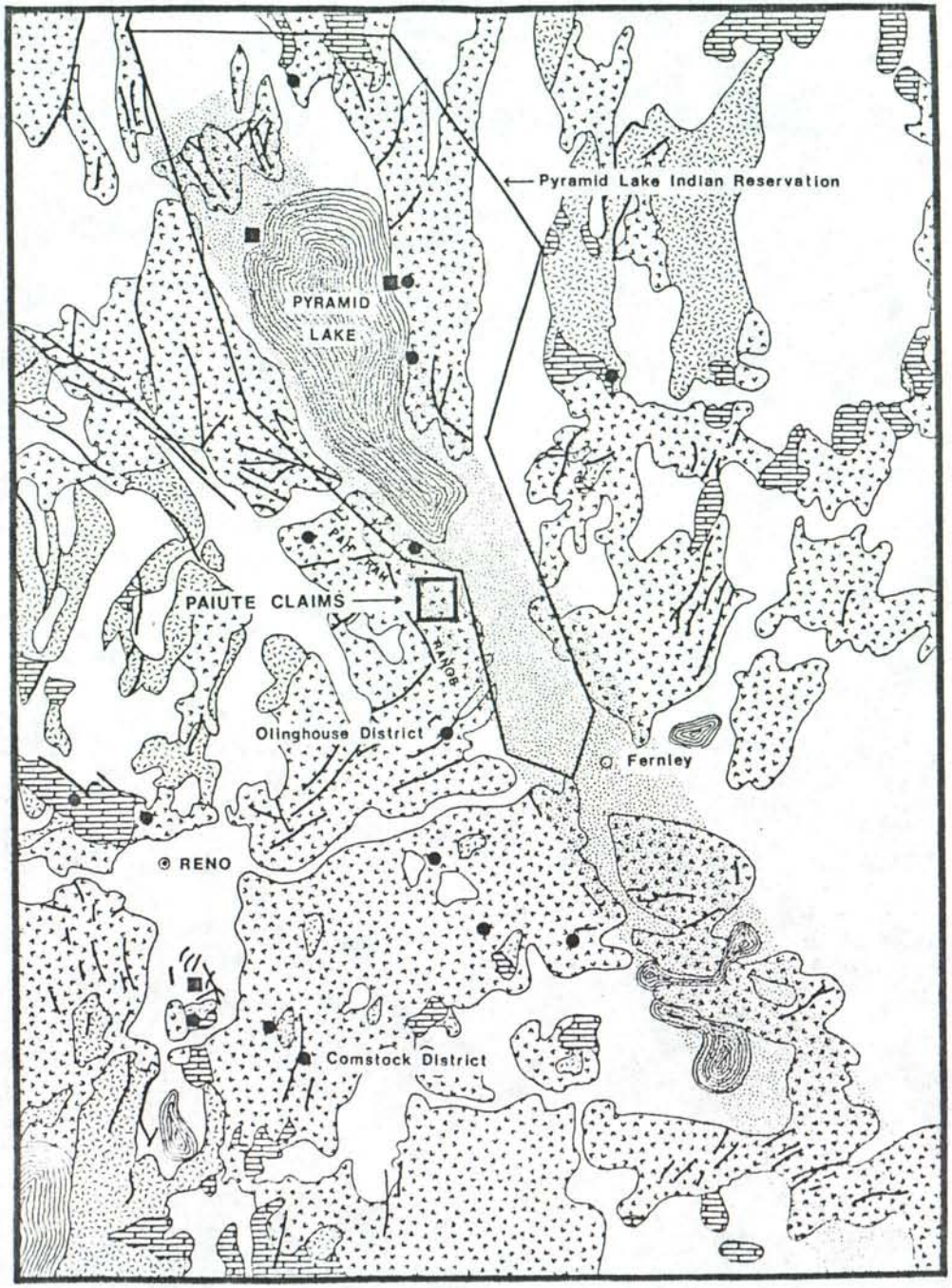
OUTLINE OF THE PAIUTE CLAIMS

T22N, R23E

0 1/2 1 mile

12/81

Figure 1



GEOGRAPHIC AND GEOLOGIC SETTING

PAIUTE CLAIMS

LEGEND

- Districts
- Major active hydrothermal systems
- Volcanics
- Intrusives
- Sedimentary
- Alluvium
- Walker Lane

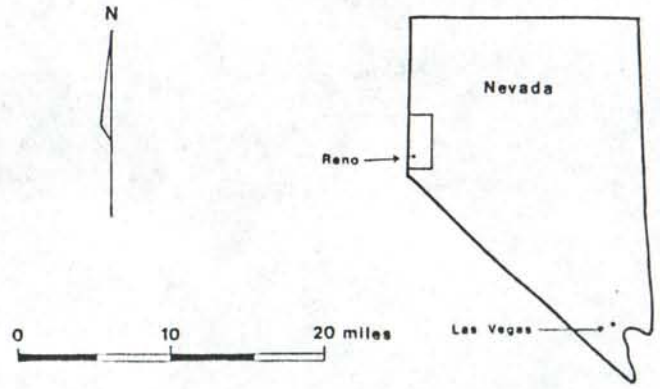
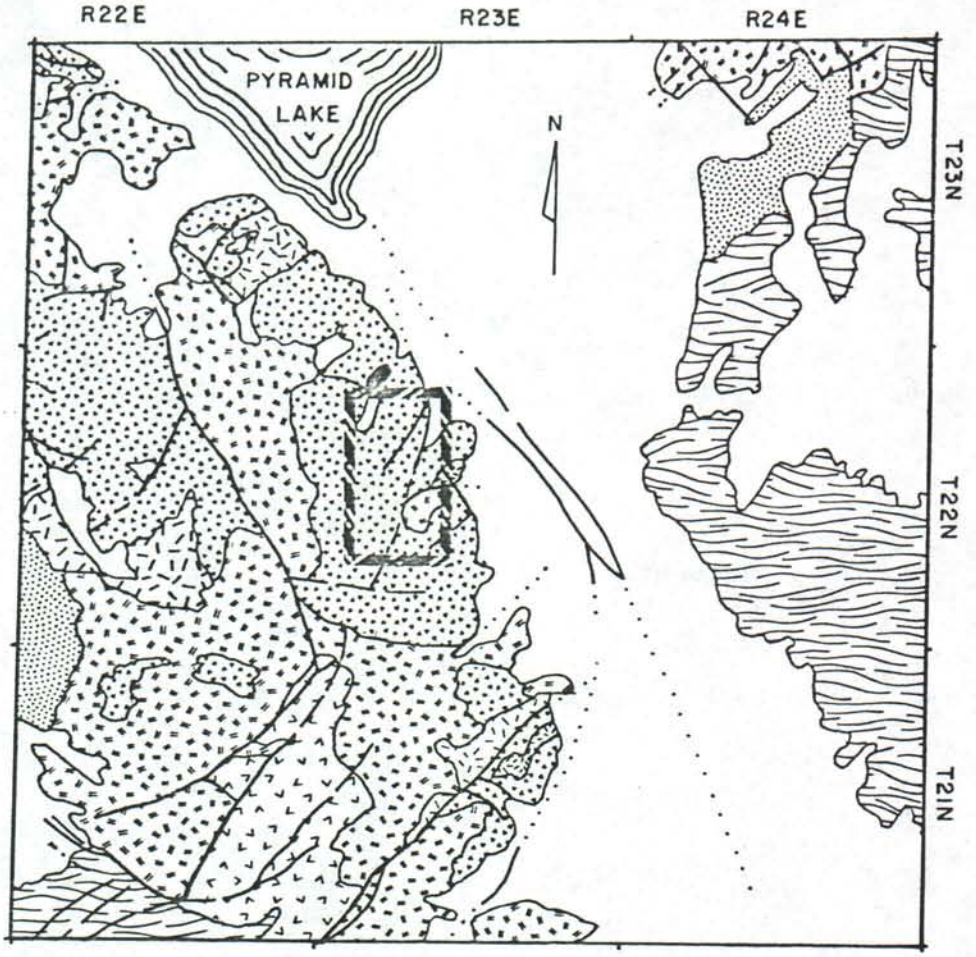


Figure 2

REGIONAL GEOLOGY OF THE PAIUTE CLAIMS

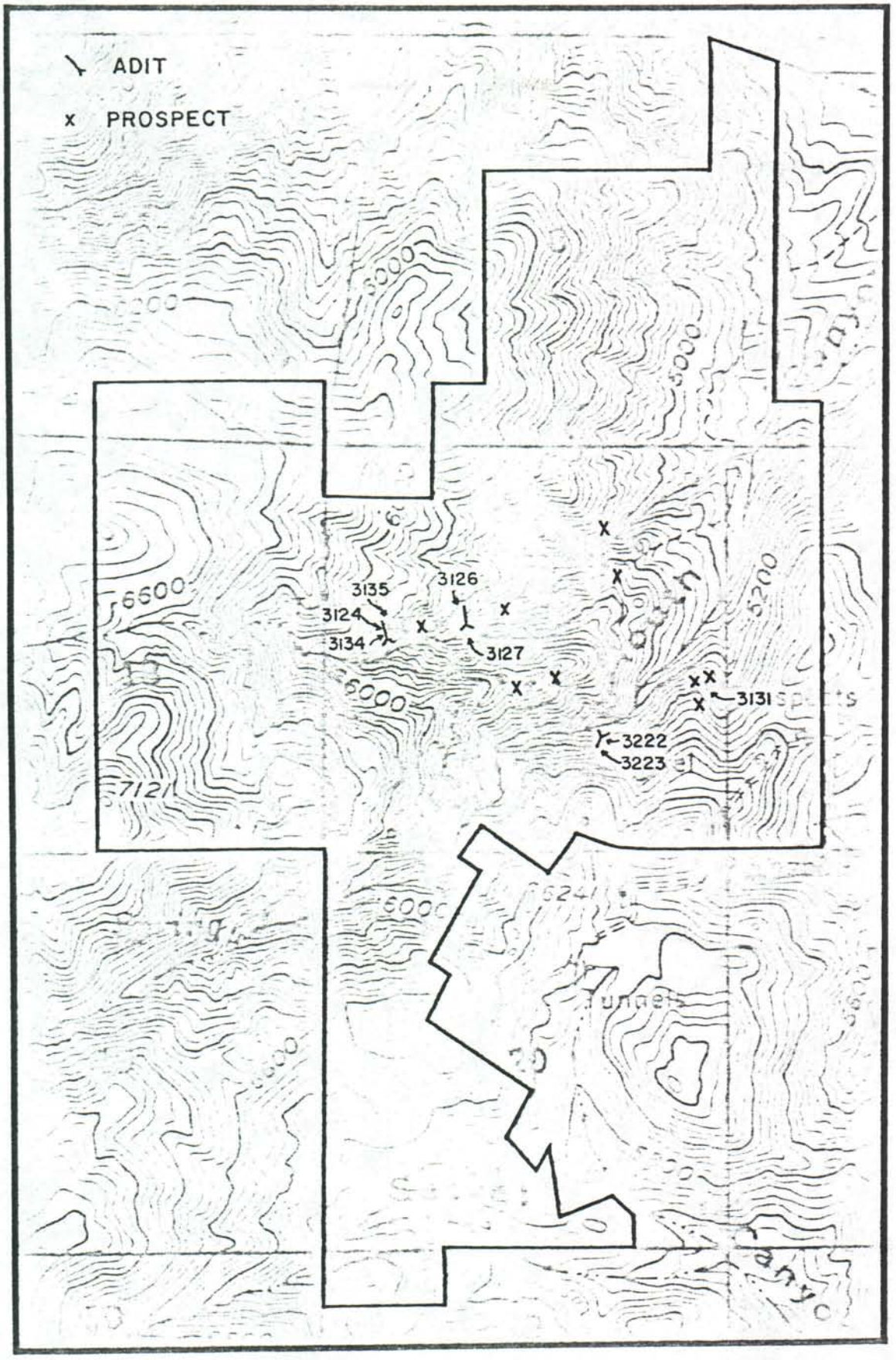


(After Bonham, 1969)

Quaternary
Alluvium
Intrusive rhyolite
Andesite and basalt
Sedimentary rocks
Tertiary
Kate Peak Formation
Granitic rocks
Pyramid Sequence
Hartford Hill Rhyolite
Pah Rah Formation
Cretoceous
Intrusive rocks
Area of Paiute claim block

0 5 miles

Figure 3



LOCATION OF GEOCHEM SAMPLES
PAIUTE CLAIMS

0 1/2 1 mile

12/81

Figure 4

TABLE 1

PAIUTE

GEOCHEMICAL RESULTS (in ppm)

Sample #	Rock Type	Au	Ag	Hg	As	Sb	Fe	Mn	Cu	Pb	Zn	Mo
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PAIUTE PROJECT

DENISON MINES (U.S.) INC.

January, 1985

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Plate III Sample Location Map - 1984 Detailed Rock Geochem

Plate IV Surface and Drill Hole Assay Map - East Zone, Paiute Fault

Plate V Longitudinal Cross Section in the Hanging Wall of the Paiute Fault Zone and Location of Proposed 1985 Drill Holes

SUMMARY

The Paiute claims are located in the Pah Rah Range of northwestern Nevada, approximately thirty miles northeast of Reno. The claims are underlain by a thick sequence of felsic and mafic volcanic rocks of the Tertiary Hartford Hill Rhyolite and Pyramid Formation. Gold and silver mineralization on the Paiute property occurs in a quartz stockwork vein system associated with a prominent east-west trending fault zone.

The target being pursued at Paiute is a low-tonnage, high-grade epithermal vein deposit containing 100,000 to 400,000 ounces of gold, mineable by underground methods.

Exploration work performed during 1984 on the Paiute claims consisted of detailed outcrop sampling over a portion of the Paiute fault zone, and shallow, angle core drilling. The results of the lithogeochemical survey have outlined two areas with the potential for high-grade vein or stockwork mineralization. The first area is at the eastern end of the Paiute fault zone. The 1984 drill project was directed at this area. A 1,700' drill program, composed of six angled core holes, disclosed multiple intercepts of medium to high-grade gold and silver mineralization, with true widths ranging up to 4.3' and grading up to 0.11 OPT gold and 1.06 OPT silver. For a first stage limited drilling program testing only 1/8 of the total strike length of the mineralized zone to 100-150' in depth, the results are considered quite encouraging. The second area is approximately 1,200' west of the 1984 drill target. Both areas are characterized by strong pervasive alteration, quartz stockwork veining and significant gold/silver mineralization over a broad area.

Based on results of the 1984 exploration work, the quartz stockwork vein system on the Paiute Property appears to contain gold/silver mineralization confined to discrete shoots within the vein system. A systematic and detailed geologic study of the vein system will indicate the areas of highest probability for mineable ore shoots.

Proposed work for 1985 includes surface stripping, detailed geologic mapping, further detailed geochemical sampling, structural analysis of the Paiute Fault and a modest follow-up drill program. Pending results of this work, additional drilling may be warranted. The proposed 1985 exploration program will require an expenditure of approximately $125K to $130K.

INTRODUCTION

A literature search and helicopter reconnaissance of the Pyramid Lake area in 1981 initiated Denison's interest in the Pah Rah Range. Several grab samples from prospect pits in Big Mouth Canyon and Secret Canyon yielded significant gold/silver anomalies. The ground was open and claims were staked in September, 1981. Presently, the Paiute claim block is composed of 79 claims.

LOCATION AND ACCESS

The Paiute claim block consists of 79 contiguous lode claims located in sections 7,8,9,16,17 and 18, T22N, R23E; Washoe County, Nevada (fig. 1). The claims lie on the east flank of the Pah Rah Range, approximately thirty miles northeast of Reno. The Pyramid Lake Paiute Indian Reservation is adjacent to the claim block on its north boundary.

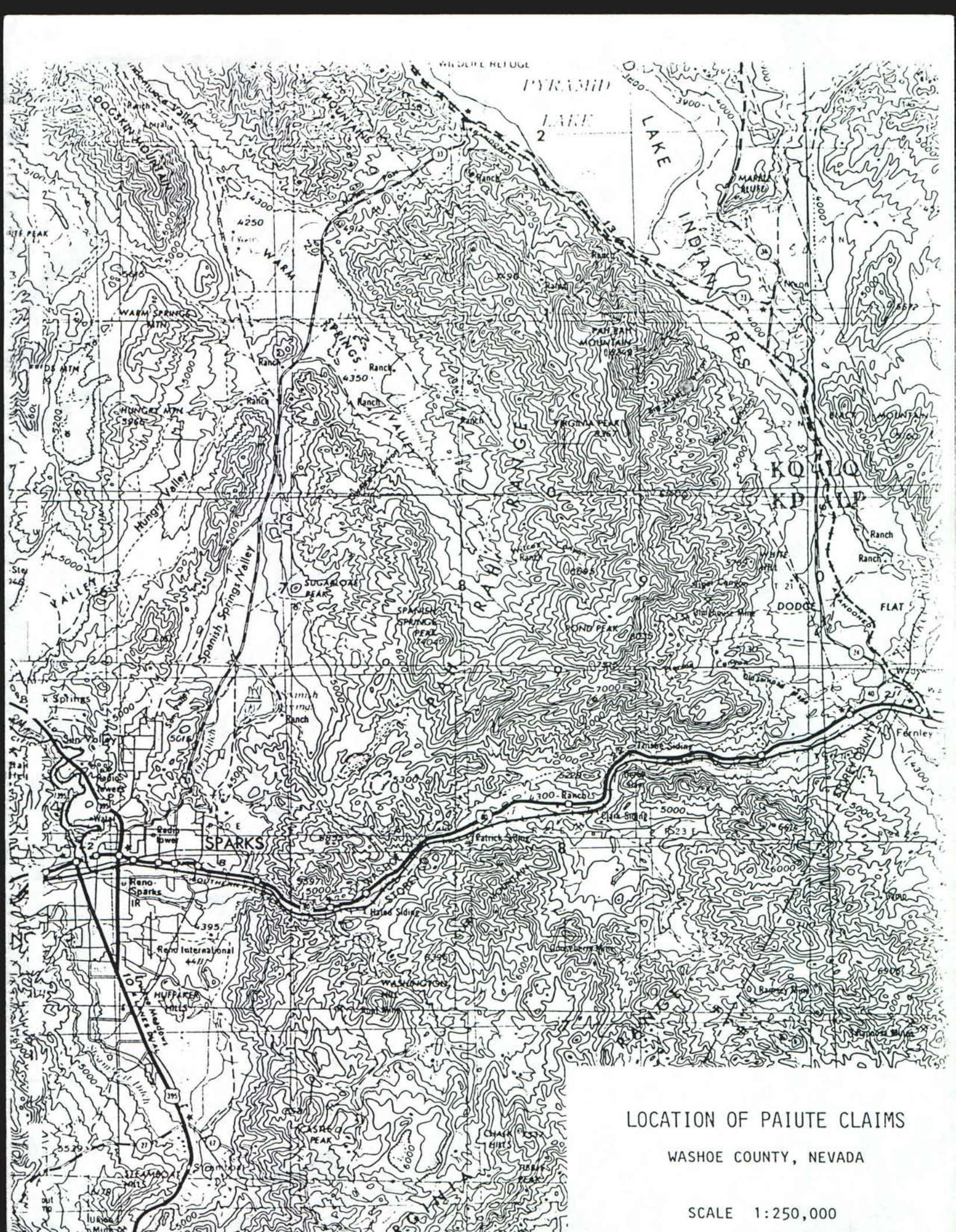
Access from Fernley, Nevada is by Nevada State Route 445, west to Pyramid Lake. Three miles of dirt road, including two miles traversing Paiute Reservation land, connect the property with the highway. All access corridors on reservation land have been secured.

Topographic map coverage is provided by the Nixon 15-minute quadrangle. A photogrammetric survey has been flown and color stereo photographs are available.

GEOLOGY

The Paiute claim block is underlain by the Hartford Hill Rhyolite, excepting a small area on the east boundary which is underlain by the Pyramid Formation. Both units are Miocene in age (fig.2, plate I).

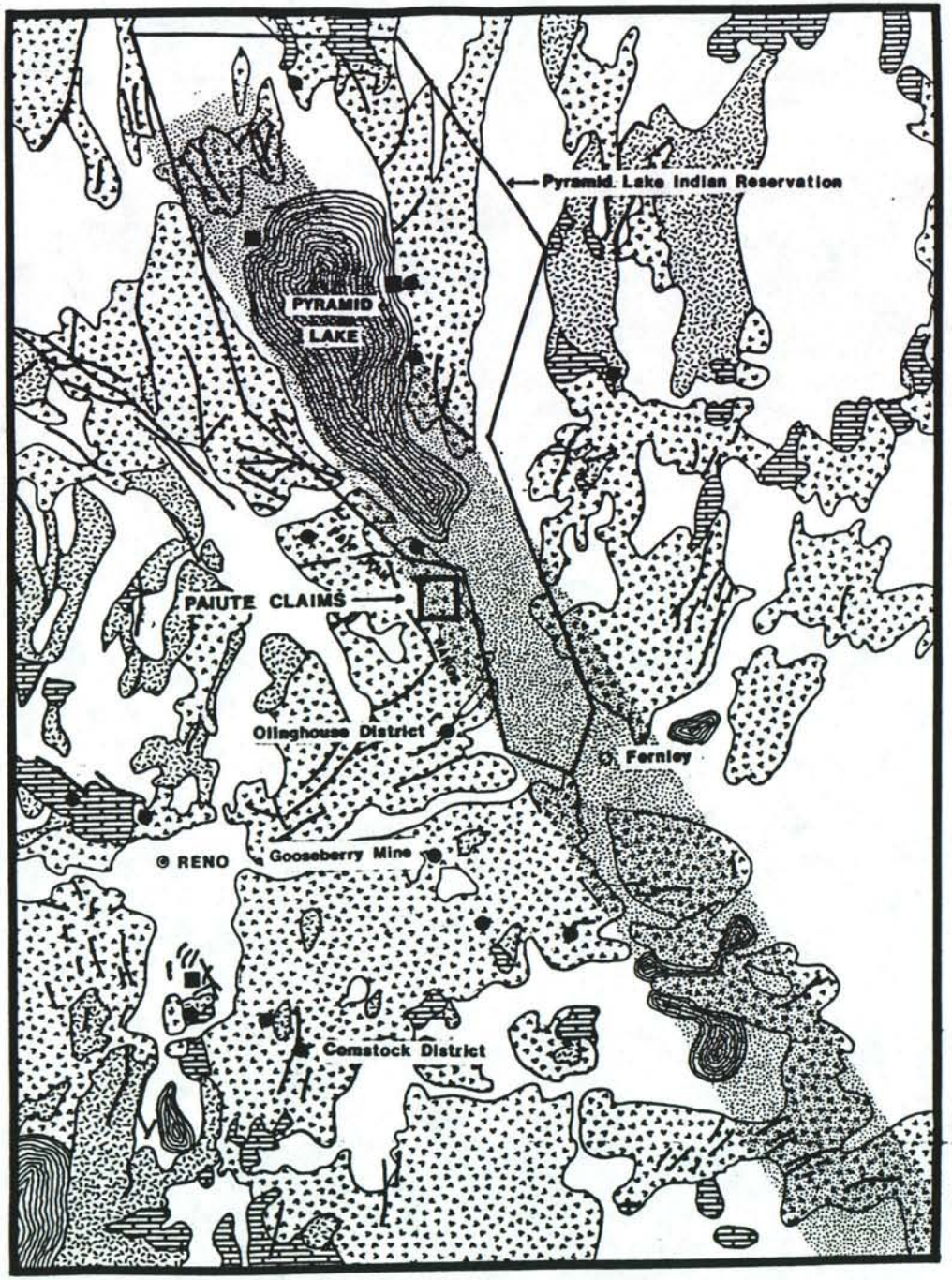
The Hartford Hill Rhyolite can be divided into three members, all of which outcrop on the Paiute claims. The lower member, which hosts the gold/silver mineralization, is a monotonous sequence of welded, gray to purple, felsic lapilli tuff and lithic tuff. The unit contains thin beds of volcanogenic sandstone and conglomerate. A 700' thick section of the lower member outcrops on the claim block. The tuffs of the lower member have undergone pervasive propylitic alteration on the property. The middle member is a welded, gray, crystal tuff of felsic composition overlain by a thin layer of purple lapilli tuff. It is approximately 200' thick. The middle member is commonly bleached and argillized to a white siliceous rock with goethite-stained fractures. The upper member of the Hartford Hill Rhyolite is predominantly purple, welded lapilli tuffs and agglomerate, with intercalations of lithic tuff. The upper member is unaltered. A 500' thick section is exposed on the claim block.



LOCATION OF PAIUTE CLAIMS

WASHOE COUNTY, NEVADA

SCALE 1:250,000

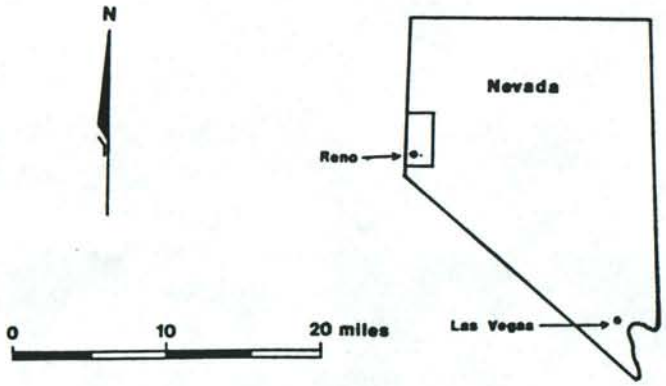


GEOGRAPHIC AND GEOLOGIC SETTING

PAIUTE CLAIMS

LEGEND

- Mining districts
- Major active hydrothermal systems
- Volcanics
- Intrusives
- Sedimentary
- Alluvium
- Walker Lane alteration zone



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The Pyramid Formation unconformably overlies the Hartford Hill Rhyolite along the east boundary of the claim block. The Pyramid Formation consists of unaltered basalt and andesite flows.

A prominent structural feature on the property is the Paiute Fault zone. It is a sinuous, east-west trending zone of roughly parallel normal faults that served as the locus for mineralization on the Paiute property. The fault zone dips approximately 70 degrees north, can be traced over 4,000' on the surface and shows approximately 400' of vertical displacement. The lithic tuffs within the fault zone have undergone variable amounts of silicification, propylitization, argillization, phyllic alteration and quartz stockwork veining.

Geologic mapping on the property indicates three distinct sets of faults. Northeast trending structures appear to be oldest and are offset by east-west faults. The east-west trending faults in turn are offset by younger northwest trending faults.

Past hydrothermal activity is evidenced by a multi-episodic network of complexly cross-cutting quartz stockwork veins and veinlets. The veins occur in lithic tuff that has undergone weak to strong silicification, propylitization, argillization and phyllic alteration. Besides quartz, the veins may contain adularia, calcite, pyrite, hematite, barite, clay or gypsum. Trace amounts of argentite and a fine-grained, dull dark gray, cubic sulfide mineral have been noted.

PROPERTY HISTORY

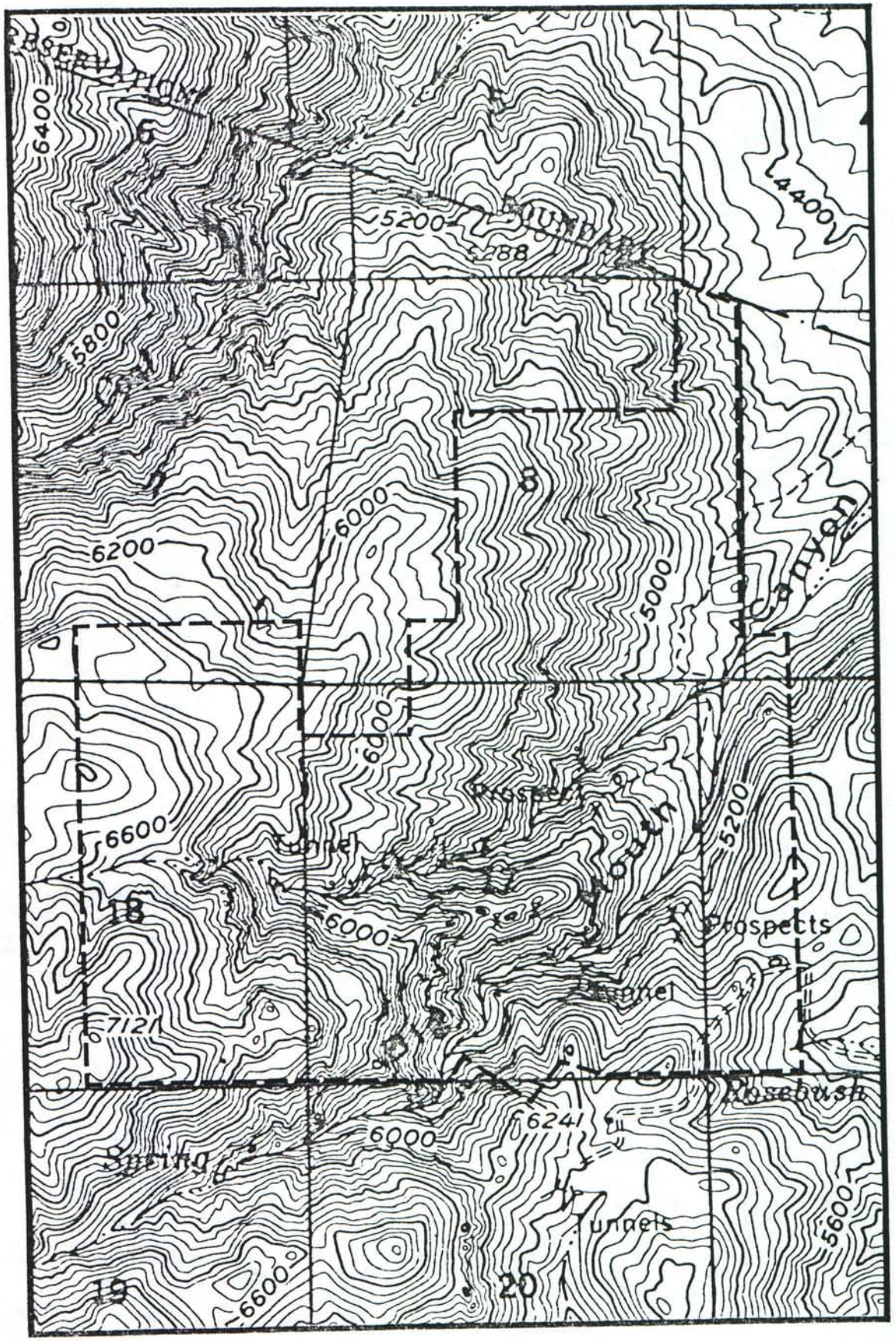
Pre 1981

The original claims in Big Mouth Canyon, now lapsed, were located in 1860. Past production amounted to a few small shipments of gold/silver ore. Old workings exist as prospect pits and shallow adits supposedly worked for high-grade pockets. The prospects in Big Mouth Canyon are considered to be part of the Olinghouse Mining District.

The geology of the Pah Rah Range is discussed in the Nevada Bureau of Mines Bulletin 70, Geology and Mineral Deposits of Washoe and Storey Counties, Nevada by Harold Bonham. The geologic map that accompanies the bulletin is scaled at 1:250,000. The gold/silver prospects in Big Mouth Canyon are briefly mentioned on page 75.

Denison 1981-1982

The Paiute property was staked by Denison Mines (U.S.) Inc. in August and September of 1981 through the Western Precious Metals reconnaissance program (fig.3). Ninety-two claims were staked, based upon widespread alteration in the area in addition to numerous small prospect pits and adits. Eight grab samples from dumps indicated anomalous gold and silver concentrations of up to 0.11 OPT gold and 0.17 OPT silver. No work was performed on the



OUTLINE OF THE PAIUTE CLAIMS

T22N, R23E

0 1/2 1 mile

12/81

property in 1982, and in the latter part of that year it was decided to attempt a farm-out. Perhaps due to the limited exploration work that had been done to date, only slight interest was aroused, and no offers were made. Not wishing to see the property lapse, a minimal program of geologic mapping and sampling was undertaken in late 1983.

Denison 1983

The 1983 exploration program at Paiute indicated that a major east-west trending fault zone hosts the majority of the gold/silver mineralization in the area. Geologic mapping on a scale of 1:6,000 disclosed a strongly altered, quartz-veined zone with maximum apparent dimensions of 5,000' by 700'. The mineralization is associated with an east-west trending zone of normal faults, hereafter referred to as the Paiute Fault zone. One hundred sixty-nine reconnaissance rock chip samples were taken (plate II). Of approximately ninety samples collected specifically along the trend of the Paiute Fault, thirty contained greater than 0.01 OPT gold equivalent, and six contained greater than 0.10 OPT gold equivalent. All samples taken during this program were approximately two pounds in weight and were biased in favor of quartz-veined and altered material.

Thirteen claims at the southern end of the claim block were dropped in 1983.

1984 EXPLORATION PROGRAM

Exploration work performed during the 1984 season consisted of detailed lithogeochemical sampling and shallow angle core drilling. The eastern third of the mineralized trend indentified in 1983 was the target of the 1984 exploration program.

Lithogeochem Sampling Program

The 1984 detailed lithogeochemical sampling program was concentrated in an area of strong gold/silver values identified in the 1983 program. A total of 327 lithogeochemical channel samples were collected along a 1,500' length on the east portion of the Paiute Fault zone (plate III). The width of the quartz stockwork zone in the area varies from 150' on the east to 700' on the west end. The bedrock exposure is good, except in the central portion of the study area. Continuous exposures of mineralized bedrock were channel sampled perpendicular to the strike of the fault zone. In areas of poor exposure, all available mineralized outcrops were sampled.

Exceptionally good exposure yielded four continuous channel samples across the stockwork vein system. At the extreme eastern end, one continuous exposure of bedrock, perpendicular to the strike of the fault, permitted a detailed channel sample across the entire width of the mineralized zone. Two continuous perpendicular traverses were sampled on the west end and one in the

central portion. All available mineralized outcrops in the immediate area of the 1984 drilling project were sampled. All 1983 samples showing significant gold/silver mineralization within the area were channel sampled in detail in 1984.

All samples collected in 1984 were channel rock chip samples of ten to twelve pounds, taken across 5' widths. Care was taken to collect unbiasd material along the channel. Rock chip rather than soil samples were employed due to the lack of soil development. Channel sampling was utilized because of the comparable appearance of barren and mineralized stockwork, the apparent erratically distributed mineralization and the need to collect samples unbiased toward quartz veins.

All surface samples were fire assayed for gold and silver in one assay ton charges by Hunter Lab in Reno.

Lithogeochem Sampling Results

Results of the 1984 rock chip sampling survey disclosed two broad areas of low-grade mineralization with erratic, high-grade gold/silver values throughout. The first area occurs on the far east end of the Paiute fault zone, the second is 1,200' to the west.

The first area of low-grade mineralization averages 150' wide and can be traced 500' on strike where it is then covered by overburden. A continuous channel sample, consisting of thirty-three 5' segments, taken across the entire width of the mineralization, averaged 0.015 OPT gold equivalent (using a Au:Ag ratio of 1:50). Sample 84-015 was a horizontal channel sample perpendicular to strike that assayed 0.33 OPT gold across 3'. A small vein cut in sample 84-015 was selectively sampled; a 1" thick, white quartz vein filling a dilation that cuts the older stockwork veining yielded on assay of 2.9 OPT gold and 2.3 OPT silver.

A broad zone of erratic precious metals mineralization located in the west portion of the area encompasses a 700' width of altered and quartz stockwork-veined rock. This area was delineated by two nearly continuous lines of rock chip channel samples. The sample traverses were spaced 100' to 200' apart, dependent upon availability of outcrop. The second traverse (easternmost) was implemented to determine the strike direction and extent of significant gold/silver values identified by the first traverse. The erratic medium to high-grade assays occur in no obvious recognizable pattern, except for a slight clustering of the values toward the hanging wall portion of the Paiute fault zone. All samples with high-grade gold values have recognizable quartz veins that cut earlier generation stockwork veins. Sample 84-111 is a horizontal channel that assays 0.12 OPT gold, 3.72 OPT silver across 5'. A subsequent field check revealed a white quartz vein, 6" across that cuts all other veins. This vein

appears to be a later stage of quartz than the rest of the quartz stockwork veining. The 191 samples taken in the two lines average 0.007 OPT gold equivalent, including both barren and mineralized stockwork.

Drilling Program

The 1984 drilling program consisted of six angle core holes in a fan array, totaling 1,700'. The program was designed to test a strong gold/silver anomaly and to better determine the character and mode of mineralization at depth (plate IV). The surface anomaly includes 88 samples averaging 0.015 OPT gold equivalent. Two holes were collared on a western pad and four holes on the pad 300' to the east. All six holes were drilled at least 50' past the target zone, based on the continuing presence of quartz veining. Acid tests indicated no significant deviation in the drill holes.

Drilling Results

Results of the 1984 drilling program mirrored the results of the detailed rock geochemistry survey (plate IV). The two programs both demonstrate the existence of a wide, strongly altered and quartz stockwork-veined zone that is generally barren to low-grade, but contains narrow high-grade zones of gold/silver mineralization (appendix I). A composite total of all drill samples in strongly altered and quartz-veined zones averaged 0.014 OPT gold equivalent. A composite assay from 108' to 272' in hole P-84-1 averages 0.019 OPT gold equivalent. A composite assay from 10' to 162' in hole P-84-3 averages 0.010 OPT gold equivalent.

Significant gold values intercepted in drill holes fall into two distinct clusters, one in the hanging wall portion of the fault zone, the other near the footwall portion (Appendix II). The gold/silver mineralization associated with the hanging wall is fairly well-defined and characterized by quartz stockwork veining, pyritization, propylitic and argillic-phyllic alteration and high background precious metals values. The footwall zone of mineralization grades into barren, weakly altered rock. The degree of quartz veining and level of precious metals values are generally lower in the footwall region, as compared to the hanging wall.

Drilling suggests that zones of strong alteration and stockwork veining, when plotted in cross-section, show a decrease in true width with increase in depth. The mineralized zone at the east end of the Paiute Fault is 150' wide on the surface, but narrows with depth. The zone is 85' wide in hole P-84-3 and 46' in P-84-4. Likewise, the zone is 42' wide in hole P-84-6 and 27' in P-84-5. With increasing depth below the surface, there is a notable decrease in the quantity of silicic alteration associated with the quartz stockwork veining.

Table I lists the significant gold/silver mineralization intercepted by drill holes.

TABLE I: SIGNIFICANT MINERALIZED INTERCEPTS - 1984 DRILLING

HOLE	INTERVAL	TRUE WIDTH	Au (OPT)	Ag (OPT)
P-84-1	110-112	1.1'	.021	.02
P-84-1	128-136	4.3'	.111	1.06
P-84-1	134-136	1.1'	.370	1.39
P-84-1	222-224	1.1'	.008	2.85
P-84-1	262-264	0.1'	.111	1.09
P-84-1	266-268	1.1'	.181	11.95
P-84-2	56-58	1.3'	.001	1.37
P-84-2	218-220	1.3'	.046	1.20
P-84-3	36-38	1.7'	.151	6.98
P-84-3	56-58	1.7'	.114	.14
P-84-3	78-80	1.7'	.033	.21
P-84-4	96-98	1.4'	.210	1.05
P-84-4	106-108	1.4'	.018	4.89

The quartz-veined portions of the core were analyzed by fire assay. Field work has shown that significant gold/silver mineralization occurs only in association with quartz-veined rock. The selected portions of the core were sampled in two foot sections. The core was photographed, and then the entire core from each interval was analyzed for gold and silver in one assay ton charges.

INTERPRETIVE GEOLOGY

Characteristics of Productive Vein Systems

Zones of economic gold/silver mineralization in epithermal volcanic-hosted deposits are characterized by multiple episodes of quartz veining, refracturing and cementing; or in the case of a single vein, complexly banded veining. This characteristic indicates economic mineralization is dependent upon episodic plugging of the fracture system and refracturing, enabling the trapped hydrothermal fluids to suddenly be released and allowed to boil, thus precipitating ore minerals (Buchanan, 1981).

Recognition of the characteristics of ore shoots is important in the evaluation of precious metals mineralization in epithermal vein systems. Productive quartz stockwork vein systems are primarily composed of barren or sub-economic pre-ore stage veins superimposed by high-grade ore-stage veins. Ore is typically confined to discrete shoots that occupy only a fraction of the vein system. The ore shoots occur as isolated zones within the vein system, enclosed along strike and dip by low-grade to barren gangue (Buchanan, 1981). Ore shoots in the quartz stockwork vein

system at Oatman (Arizona) are typified by small high-grade stringers carrying up to 100 OPT gold, giving the entire width of the lode a mineable grade (Lausen, p.82). At Guanajuato (Mexico), the quartz stockwork veining outside of the ore shoots averages 0.003 OPT gold (Buchanan, 1979).

The Paiute property exhibits many characteristics similar to other well-known epithermal precious metals-bearing vein systems. In other districts, the ore-stage quartz gangue within ore shoots is commonly very fine-grained, contains significant amounts of adularia and displays platy quartz pseudomorphs after calcite (Buchanan, 1981; Lausen, p.69). All of these characteristics occur in the vein system at Paiute. Field observations imply that gold-silver mineralization at Paiute is confined to quartz veins or gouge zones bordering stockwork zones. The silicified and propylitized wall rocks, exclusive of quartz veins, appear to be barren. Examination of outcrops and drill core indicates that later stage quartz veins carry the significant precious metals values.

Observed characteristics of the mineralization at the Paiute property permit the following interpretations to be made. The Paiute fault zone has localized a broad, multi-episodic network of complexly cross-cutting quartz stockwork veining. A major portion of these veins may represent a wide-spread episode of barren, pre-ore stage silica deposition in open fractures and dilations. There are several episodes of cross-cutting quartz veining due to periodic fault movements. Late stage, high-grade gold-quartz-adularia veins are superimposed over previous stages of veining, filling opened fractures and cementing brecciated veins. During ore stage quartz deposition, where the density of open fractures is high, the density of the high-grade, ore-stage gold-quartz-adularia veinlets can constitute ore. In areas of the fault system where the existence of open fractures during the ore stage mineralization is minimal the low density of the gold-quartz-adularia veinlets will result in erratic, high-grade mineralization that may not make the bulk of the lode commercially mineable.

Vertical Control of Ore Shoots

In epithermal vein districts, the ore shoots occur at specific elevations within the vein system. The ore shoots will commonly have flat tops and bottoms (Buchanan, 1981). Ore deposition at a restricted elevation is related to gold and silver precipitating in the zone of hydrothermal fluid boiling. If post-mineral fault displacements are subtracted, the elevation of a known ore shoot can be a useful exploration tool to indicate the elevation at which other blind ore shoots might occur.

The productive elevation within a vein system can be completely removed if the erosion level is deep. Occurrence of the following characteristics is an indication that the level of erosion is

above the level of boiling: adularia, platy quartz pseudomorphs after calcite, very fine sugary-textured quartz gangue, high precious metal values, advanced argillic alteration and widespread silicic or phyllic alteration halos (Buchanan,1981). All of the above indicators, with the exception of advanced argillic alteration, are present on the Paiute property. This indicates that the level of erosion at Paiute may not be advanced enough to expose the boiling horizon where precious metals would have precipitated.

Erratic narrow zones of high-grade gold/silver mineralization could represent primary upward leakage of ore-stage quartz from a blind ore shoot at depth. Homestake's McLaughlin gold deposit, a blind ore body, is a good example of ore-stage quartz leakage. Low-grade gold values occur with mercury mineralization in the original mine workings. Tiny gold-quartz-adularia veinlets occurred as a primary leakage of ore-stage quartz deposition above the deeper ore. The upward continuation of ore-stage quartz deposition above the deep bonanza ore of the Comstock Lode would appear as erratic, narrow, high-grade gold-quartz-adularia veinlets within barren vein gangue (fig. 4). The erratic, high-grade nature of outcropping mineralization at Paiute may represent primary leakage above deep ore shoots.

The hydrothermal solutions responsible for mineralization leach the wall rocks and deposit silica and pyrite above the productive boiling horizon, resulting in an intense alteration halo overlying the ore shoots. Detailed alteration mapping may indicate intense alteration halos above deep ore shoots, thus being a useful exploration tool. At Republic (Washington), Oatman (Arizona) and Jarbidge (Nevada), prominent silicified outcrops are known to overlie productive ore shoots (Full and Grantham, 1968; Lausen, 1931; Schrader, 1923, p.35,40). Detailed mapping of the types and relative degrees of alteration along the Paiute Fault zone may help define additional drill targets.

The restricted occurrence of ore shoots in epithermal vein systems, coupled with the small chance that the productive elevation within the vein system will be exposed by erosion, indicates the probability for discovery of major lode-type deposits is good. Small exposures of an ore shoot led to the discovery of rich deposits at Tonopah and the Comstock Lode (C.G. Clifton, 1984, pers. comm.). Large ore shoots at Oatman, Mojave (California) and the Gooseberry mine (Nevada) occurred at depth and were discovered by prospect shafts (Clifton et al, 1980). The fissure vein containing the ore shoot at the Cactus Queen mine, Mojave District, was discovered by "interesting looking" float that prompted sinking of a shaft through a thick layer of colluvium (Tucker, 1935).

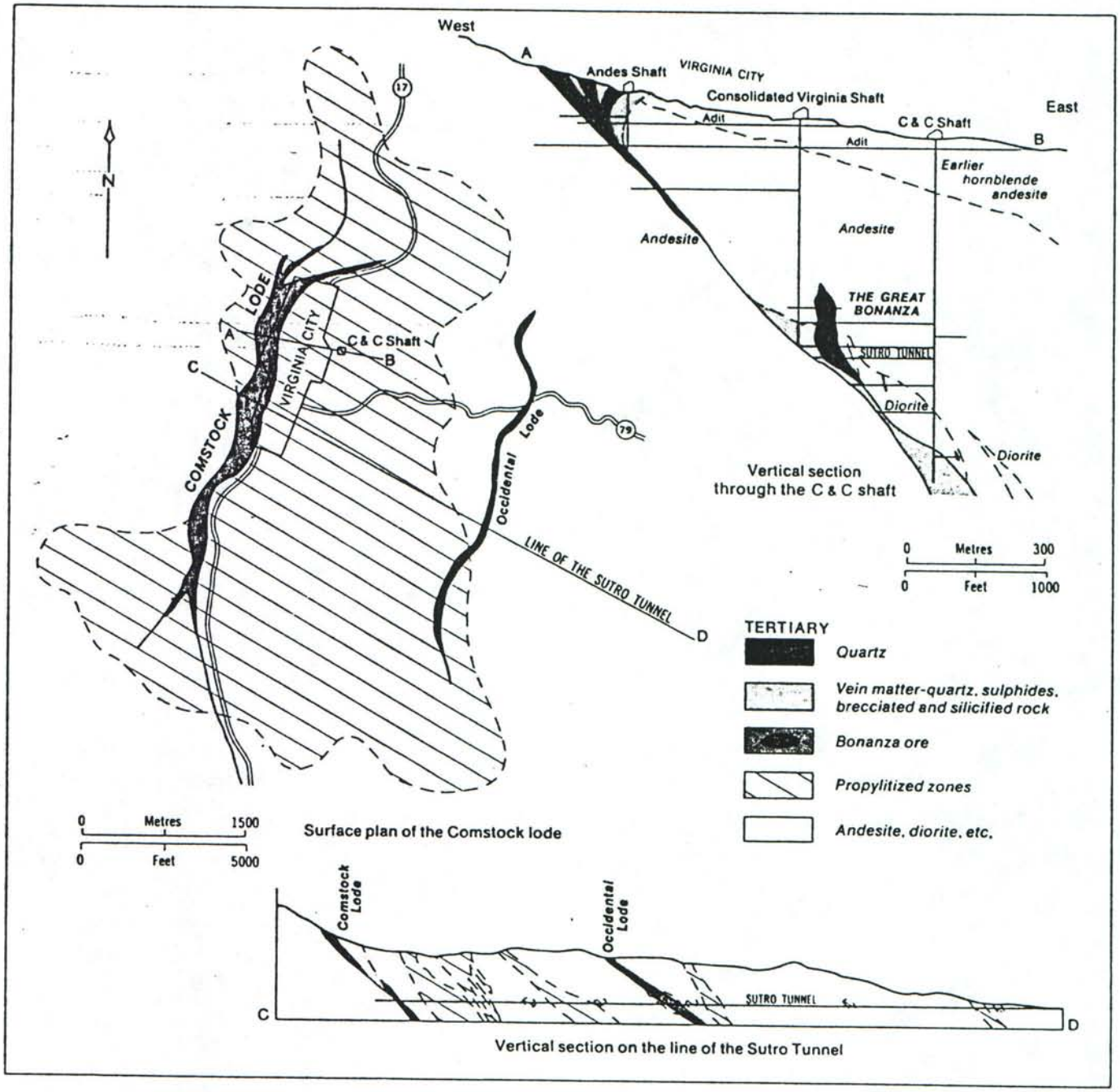


Figure 33. Generalized geological plan and sections of the Comstock Lode, Virginia City, Nevada (modified from Becker, 1882, and others).
(from Boyle, 1979, p. 274)

Figure 4 - Generalized geologic plan and sections of the Comstock lode

Horizontal Control of Ore Shoots

Ore shoots are localized by structural features within the vein system which produce and maintain a high density of open fractures. Ore shoots are related to zones of dilation or intense shattering caused by bends and flexures in fault planes, and vein or pre-mineral fault intersections. Flexures along strike and down-dip in a fault plane result in a relatively high density of fracturing due to localized stress concentrations during fault movement. The deep bonanza ores of the Comstock Lode occur in bodies of crushed quartz localized by bends and flexures in the Comstock Fault, coincident with the intersection of antithetic faults in the hanging wall (see figure 4). In the quartz stockwork vein system at Oatman, the ore shoots formed where faulting and reopening of the pre-ore stage quartz veins occurred (Lausen, 1931, p.76). On the Paiute claims, the Paiute Fault zone appears to have exerted important control over the localization of gold/silver mineralization into discrete shoots. Ore shoots localized by intense shattering may be isolated from one another by long strike lengths of relatively less-fractured, pre-ore stage vein filling (Buchanan, 1979, p.34-36,43). The identification of areas where favorable concentration of stress creates a high density of open fractures in a fault will greatly increase the probability of finding a blind ore shoot.

Pre-ore alteration that imparts a brittle nature to the wall rocks promotes shattering and maintenance of open fissures, both of which are conducive to the formation of an ore shoot. Pervasive silicification, propylitization, alunitization or adularization give the wall rocks the ability to deform brittlely. Argillized rocks, on the other hand, deform ductilely and tend to form tight gouge-filled fissures (C.G. Clifton, 1984, pers. comm.). The ore-stage quartz-adularia veins in the ore shoots at the Las Torres mine (Guanajuato, Mexico) were created during the fracturing of pre-ore silicification and adularization (Buchanan, 1979, p.34-36).

A favorable structural feature in the Paiute fault zone, 1,200' west of drill hole P-84-1, may indicate a zone of high probability for an ore shoot. A 1,200' strike length of the Paiute fault separates hole P-84-1 and a gentle flexure, coincident with a fault intersection, in the Paiute fault. Significant gold/silver values and strong alteration intersected in drilling and anomalous low-grade values on the surface (avg. 0.011 OPT gold equivalent; 19 samples) occur in the area of hole P-84-1. A broad area of quartz stockwork veining 700' wide with significant gold/silver values (avg. 0.007 OPT gold equivalent; 191 samples) and strong silicification and propylitic alteration occur in the area 1,200' west of P-84-1. Outcrop between the two points is poor, but strongly propylitized and silicified outcrops occur. The anomalous mineralization, strong quartz stockwork veining and alteration observed may indicate a 1,200' strike length of the Paiute fault zone with continuous mineralization.

ORE TARGET CONCEPT

The Paiute property is currently being evaluated for deposits of high-grade vein or stockwork mineralization of small tonnage. Ore will probably occur in multiple shoots, mineable by underground methods. Ore grade in the shoots would probably average 0.3 to 0.4 OPT gold, 2 to 5 OPT silver, with grades greater than one ounce per ton gold being possible. A realistic target at Paiute would be a 100,000 to 400,000 ounce reserve of gold. A schematic model of Paiute-type mineralization and Buchanan's conceptual model of epithermal precious metal deposits can be found in figures 5 and 6.

RECOMMENDED 1985 PROGRAM

Based on results of exploration in 1984, continued exploration on the Paiute claim block is warranted. Surface sampling and drilling at Paiute indicate many of the characteristics of Comstock-type high-grade vein-hosted mineralization, including a) a broad zone of propylitized volcanics, b) an extensive, structurally-controlled mineralized zone, c) episodic stockwork quartz-adularia veins and breccias and d) high-grade gold and silver values.

To date, only a small portion of the lateral and vertical extent of the mineralized zone has been tested. Only the upper 150' along a 400' strike length of the vein system has been tested by drilling. The drilling indicates reasonable continuity for gold and silver-bearing structures.

Ore grade mineralization may be restricted to a narrow vertical range within a more extensive vein system. Surface exposures and drilling at Paiute may be testing the upper, non ore-bearing portion of the vein system.

Exploration work along the 1,200' strike length of the Paiute Fault zone west of hole P-84-1 indicates a zone of high probability for an ore shoot. A comprehensive program integrating detailed geologic studies, lithogeochemical sampling and follow-up drilling is recommended in the area west of drill hole P-84-1. It is proposed to step-out from the P-84-1 intercept along strike and down-dip to test for significant changes in the morphology and characteristics of the vein (plate V). Two 500' holes are proposed to test the mineralization 400' below the P-84-1 and P-84-4/P-84-5 intercepts, along with two holes arranged in a vertical fan array 500' along strike to the west.

Further detailed surface sampling is proposed for the extreme western 1,500' strike length of the Paiute Fault zone. Grab samples collected in this area in 1983 returned assays up to 0.100 OPT gold and 0.160 OPT silver. This area, rather than the central part of the fault zone, is proposed due to the relative difficulty of drilling presented by topography in the central portion.

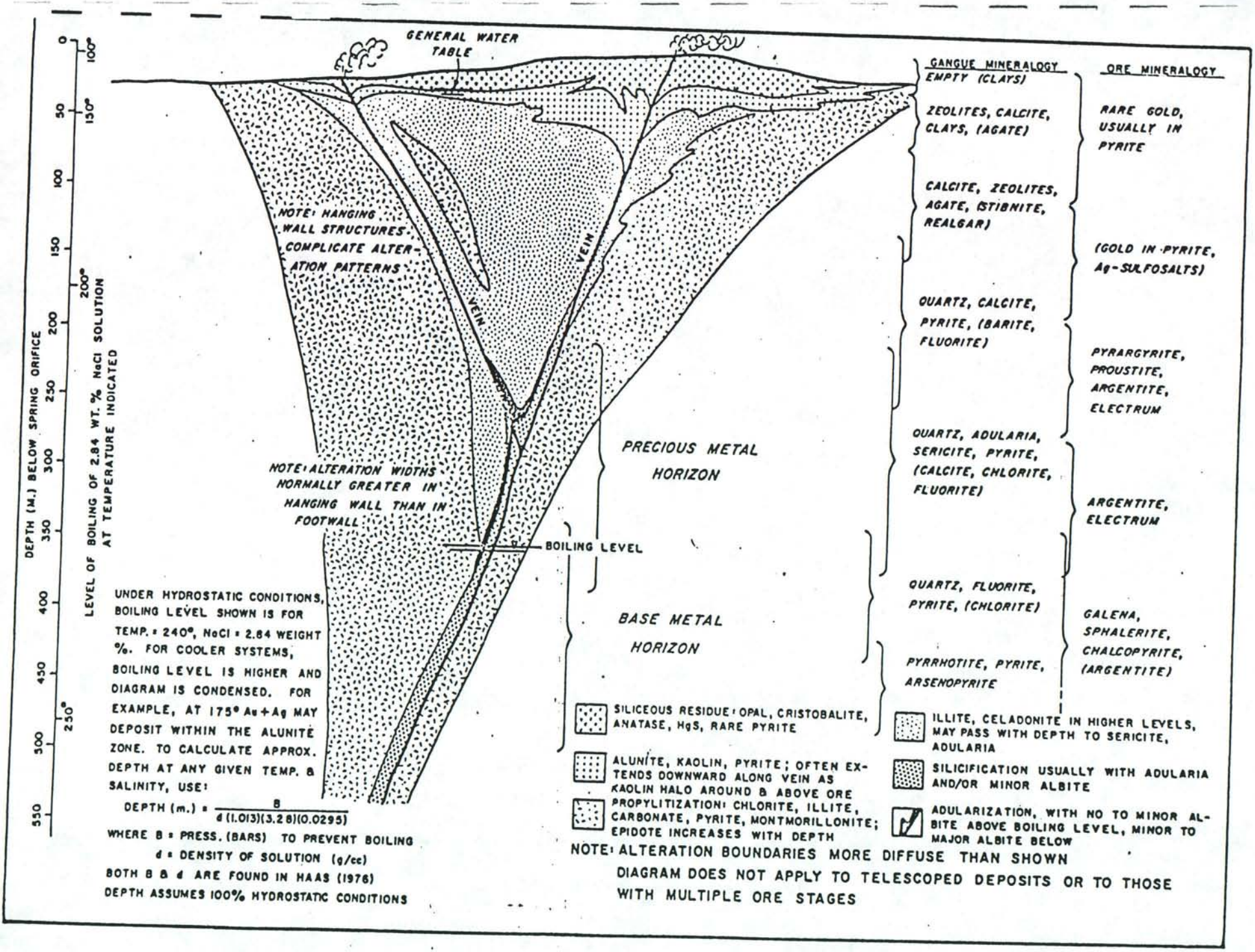
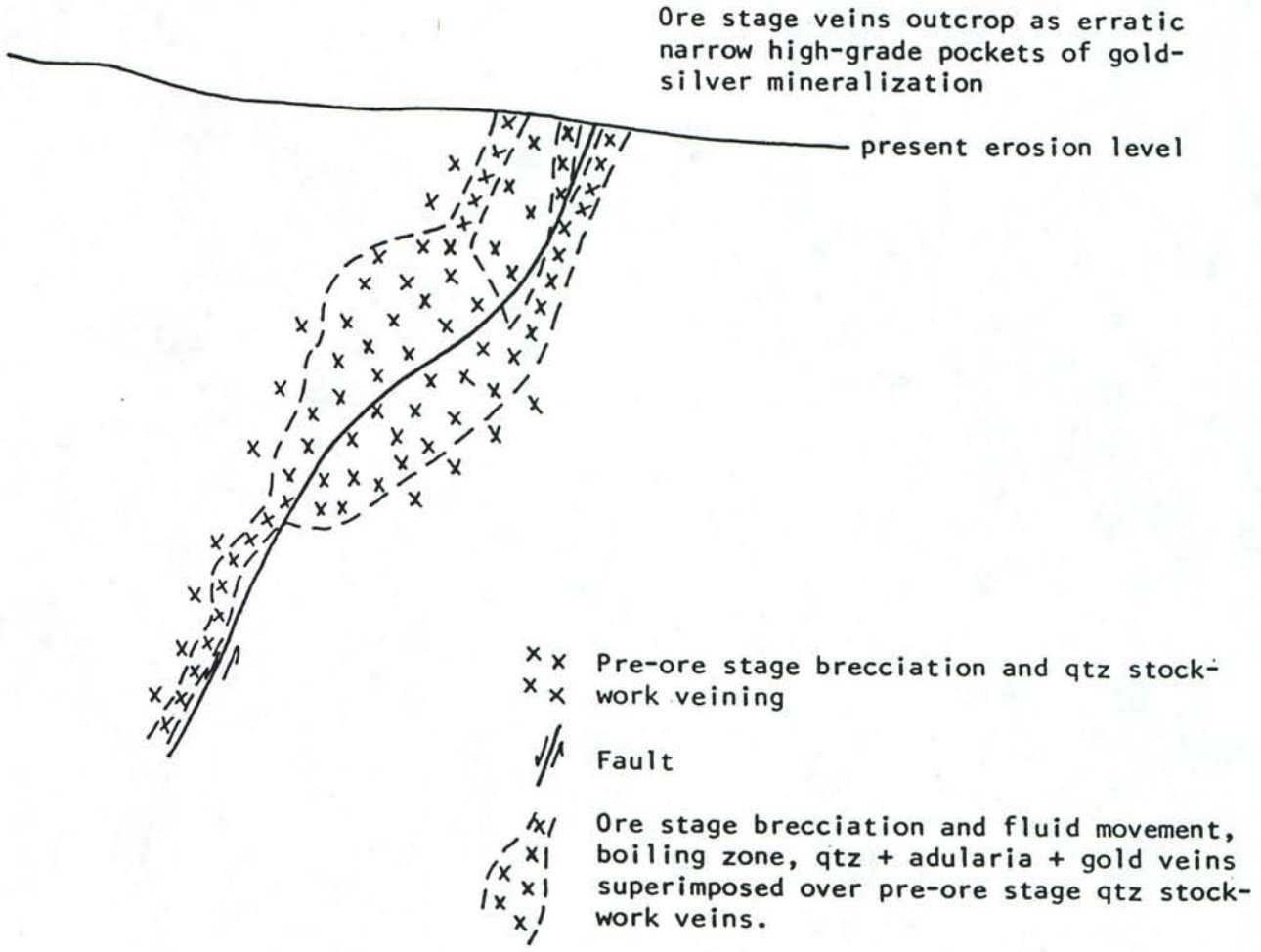


Figure 5 - Buchanan's conceptual model of epithermal precious metals deposits hosted in volcanics (Buchanan, 1981)

CONCEPTUAL MODEL



1) Local intrusive activity; heat source for geothermal convective system.

2) High-angle normal faulting (pre-ore); creates open fractures.

3) Pre-ore stage propylitic alteration. Qtz deposition in fractures effectively seals the plumbing system. Hydrothermal solutions trapped, unable to precipitate ore mineralization because lithostatic pressure greater than hydrostatic pressure. Solutions unable to boil.

4) Subsequent fault movement. Greatest concentration of stress at flexure in fault plane; creates good system of open fractures. Hydrostatic pressure exceeds lithostatic pressure. Hydrothermal fluids move upward, boil, and precipitate ore minerals. Greatest concentration of ore minerals in the areas of best plumbing. Ore shoots thus confined to the area of the greatest concentration of stress on the fault plane. Brecciation along straight portion of fault above ore shoots; poor development of open fractures. Leakage of thin, erratic ore stage qtz + adularia + gold veins, possibly sub-ore grade due to small size and erratic distribution. grades of these veins may reflect grade of mineralization at depth?

A detailed geologic study of the Paiute Fault zone is recommended in order to determine areas of highest probability for ore shoots. Detailed surface mapping of faults, types and intensities of alteration, types and density of quartz veining and the chronology of cross-cutting relations in the veins will help identify additional drill targets.

The suggested program may be implemented for approximately $130K.

PROPOSED 1985 BUDGET

The estimated budget for the proposed program is as follows:

	$000
Drilling - direct cost, 1,650' @$23/foot	37.9
- assaying 500 samples @12.50 each	6.3
Access, trenching	10.0
Geology and Supervision (6 man months)	40.7
Geochemistry - 6 man months	22.2
- assaying 700 samples @$13.00 each	9.1
TOTAL	126.2

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APPENDIX I

1984 PAIUTE DRILLING

DRILL LOG EXPLANATION

VEINING

Qtz veining

Clay veining

Calcite veining

Pyrite veining

Weak stockwork veining

Moderate stockwork veining

Strong stockwork veining

STRUCTURES

Fractures

Flow foliations

Faults

Shearing

Contacts

ALTERATION

Weak

Moderate

Strong

PROJECT: Paiute
LOCATION: Washoe Co. Nv
HOLE NO: P-84-1
SHEET 1 OF 5
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 225°
INCLINATION: -60°
TOTAL DEPTH: 335'
COLLAR COORDINATES: N E
STARTED: 8-29-84
COMPLETED: 8-30-84

ERAT...

COMMENTS:

...E. CORE REC'Y/HOLE:

SECTION	SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING
0						
10						
20						
30						
40						
50						
60						
70						

DESCRIPTIVE GEOLOGY

Set casing with rock bit - no recovery

10.0-66.0', purple, coarsely lithic, welded tuff; latitic. Propylitization on fracts and in lithic frags; weak but increasing slightly with depth. Limon on fracts

26-28', minor sugary qtz veinlets forming wk stkwrk

28 & 32', bleached pale gray, gougy material on borders

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE INTE... Au (opt)		Ag (op...
	0							
	100							
	95							
			9			BD		0.0
			10			BD		0.0
			11			BD		0.0
	100							

PROJECT: Paiute
LOCATION: Washoe Co.
HOLE NO: P-84-1
SHEET 2 OF 5
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 225°
INCLINATION: -60°
TOTAL DEPTH: 335'
COMPLETED: 8-30-84
STARTED: 8-20-84
N
E

COMMENTS:

AVE. CORE REC'Y/HOLE:

SECTION	ALTERATION: SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTIMATED %	CORE SAMPLE INTE Au (opt)		Ag (op
70							66-101.9', gray-grn, welded, coarsely lithic tuff. Pervasive propyl; mostly as chlorite and clay. Soapy grn clay filling fracts.									
80																
90							87.7 to 93.8, strongly fractured, sheared, gougy in appearance. Weak limon and goeth stain on fracts		100							
100																
							101.9-112.0', sharp gradational contact to soapy grn-gray massive clay; locally sheared and gougy									
110											50			BD		0.0
											51			0.021		0.0
							112.0-120.4', sharp gradational contact to gray-grn, welded, coarsely lithic tuff. Pervasively propyl (chlorite + py). Trace hematite on fracts				52			BD		0.1
											53			BD		0.0
											54			BD		0.0
120											55			BD		0.0
							120.4-134.5', same as 112-120' except for weak qtz stkwrk veining with minor SiO_2 flooding along vein margins. Vein qtz is gray, cryptocryst and glassy looking. Mod. goeth, limon, hematite				56			BD		0.0
											57			BD		0.0
											58			BD		BD
							124.0-131.0', silicified patches.				59			0.007		0.2
130											60			0.038		0.6
									85		61			0.022		1.1
											62			0.015		1.0
							134.5-140.3', massive gray py clay (fault fissure?)				63			0.370		1.3
							134.5-138.8', up to 1% dissem py				64			0.009		0.0
140							138.8-140.3', 1-3% dissem py Sharp contacts		100		65			0.001		0.0

PROJECT: Paiute
LOCATION: Washoe Co.
HOLE NO: P-84-1
SHEET 3 OF 5
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 225°
INCLINATION: -60°
TOTAL DEPTH: 335'
COLLAR COORDINATES: N E
STARTED: 8-29-84
COMPLETED: 8-30-84

ALTERATION

SECTION	SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING
140						
150						
160						
170						
180						
190						
200						
210						

COMMENTS

AVE. CORE REC'Y/HOLE:

DESCRIPTIVE GEOLOGY

140.3-146.0', gray-grn, welded, coarsely lithic tuff. Py increasing to 2-3% @ 143.0-145.7'. Wk qtz+hem+py veining of sugary qtz @ 145.7-146.0'. Minor hem filling fracts

146.0-158.7', lt red-brn, welded, coarsely lithic tuff. Zone of wk qtz+hem+py veining, locally forming wk stkwrk. 1-3% dissem py in veins and wall rock. Veins just fill fracts with no brecc. Ladder-type vein @ 153.0'

158.7-168.7', gradation into darker red-brn coarsely lithic, welded tuff. Propyl restricted to lithic frags only.

168.7-179.9', sharp gradation into lt gray-brn, bleached, coarsely lithic, welded tuff. Slight increase in propyl. Hem assoc with wk qtz veining. Wk SiO_2 flooding for 2mm bordering a vein @ 172.0'. 1-2% dissem py with a reddish oxidized cast.

182.8-203.9', unaltered, black, fine-grained basaltic dike cut by minor calcite veinlets. Contacts marked by thin chilled zones. Dike contains traces of fine dissem py, particularly in the chilled zones.

203.9-217.6', med gray-grn, coarsely lithic, welded tuff, wk sugary qtz+hem+py veining from 208.3' onward

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE INT. Au (opt)		A (o
			66			BD		0.0
	100		67			BD		0.0
			68			BD		0.0
			69			0.001		0.0
			70			0.002		0.1
	95		71			0.001		0.1
			72			0.001		0.1
			73			0.001		0.1
			74			BD		0.1
			75			BD		0.1
	93		76			BD		0.1
			77			BD		0.1
			78			0.001		BD
			79			0.001		BD
			80			0.002		0.0
			81			0.002		0.0
			82			0.001		0.0
			83			BD		BD
			84			BD		BD
			85			0.001		BD
			86			0.001		0.0
	100		87			0.001		BD
	98							
			98			0.002		BD
			99			0.001		BD
	100		100			BD		BD

PROJECT: Paiute
LOCATION: Washoe Co. Nev.
HOLE NO: P-84-1
SHEET 4 OF 5
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 225°
INCLINATION: -60°
TOTAL DEPTH: 335'
COLLAR COORDINATES: N E
STARTED: 8-29-84
COMPLETED: 8-30-84

COMMENTS:

AVE. CORE REC'Y/HOLE:

SECTION	ERA: SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% RECY./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE INTE: Au (opt)	Ag (op
210											101			0.012	0.12
									100		102			0.001	0.0
											103			0.002	0.0
220							217.6- 222.5', lt tan-gray welded, coarsely lithic tuff. Minor silica-flooded pyritic patches. Wk qtz+barite veining				104			BD	0.1
											105			BD	0.0
									97		106			BD	0.1
							222.5-224.0', str qtz stkwrk (>25% of rock; 5-10% py				107			0.008	2.8
							224.0-236.7', lt gray to tan welded, coarsely lithic tuff. Minor veinlets of clay+py to 234.5'. Wk qtz+adularia (?) veining, milky white, vuggy, slightly banded. Qtz veins occur from 234.5- 235.2'. Clay+py veins from 235.2-236.7'.				108			BD	0.1
230											109			BD	BD
											110			BD	0.5
											111			BD	BD
											112			BD	0.0
											113			0.001	0.1
							236.7-244.5', gray, welded, coarsely lithic tuff. Gradational contact.				114			BD	0.0
240							240.0-244.5', wk qtz and qtz+hem+barite+py veining, up to ½" thick.				115			BD	0.0
											116			0.001	0.1
							244.5-261.2', lt grn-gray, welded, coarsely lithic tuff.				117			BD	0.1
											118			BD	0.0
											119			0.001	0.0
250							250.5', 1" wide clay-filled fracture parallel to welding and narrow qtz+hem veinlet				120			0.001	0.0
									100		121			0.001	0.0
											122			0.001	0.1
											123			0.001	0.1
											124			0.006	0.2
260											125			0.001	0.1
											126			0.001	0.1
							261.2-266.0', gradational color change to med grn-gray; 262-264, 1" wide qtz+py vein with 1/8-1/4" wide silica-flooded zone on vein margins				127			0.111	1.0
											128			0.002	0.1
							266.0-266.8', dk gray silica-flooded, str vuggy, qtz+py+adularia veining				129			0.181	11.9
270									85		130			0.001	0.1
							266.8-287.3', same as 261-166 except w/o patches of silic. 266.8-271.2' wk qtz+py and clay+py veining. 270', argentite in qtz? 277.5', thin clay+py+goeth fract filling 279.3', 2" dk gray strongly silic patch w/ irreg boundaries				131			BD	0.1
									100						
280									81						

PROJECT: Paiute LOCATION: Washoe Co., NV
CONTRACTOR: Coates HOLE NO: P-84-2
CORE SIZE: NQ SHEET 1 OF 6
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 160°
INCLINATION: -60°
TOTAL DEPTH: 380'
STARTED: 8-30-84
COMPLETED: 8-31-84
COLLAR COORDINATES: N E

SECTION	ALTERATION: SILIC.	ALTERATION: ARGILL.	ALTERATION: PROPYL.	ALTERATION: PYRITIZ..	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTIMATED %	Au [opt]	
0							Set casing with rock bit - no recovery		0						
10							10.0-28.2', dark red-brn, welded, coarsely lithic latitic tuff. Propyl along fracts. Rock typically contains silic lithic frags. (reworked material?)		93						
20							18.7', 1" fracture filling, clay + chlorite		95						
							24.1-28.2', fractures with limon and MnO_2 staining, clay + chlorite fillings								
30							28.2-30.2', tan gouge material		70						
							30.2-31.5', cream-color str bleach, faint tuff text. Mod limon stain on fracts								
							31.5-35.2', sharp gradation to red-brn, welded, coarsely lithic tuff, the same as 10.0-28.2'								
40							35.2-60.2', sharp depositional contact into a similar tuff unit of lighter color. Wk to mod. limon on fracts, abundance of silicified and/or pyritized lithic frags. Calcite veinlets from 58.5-60.2'.		91		178			0.001	
											179			BD	
											180			BD	
											181			0.001	
									90		182			0.001	
50											183			0.001	
											184			BD	
									92		185			0.001	
											186			0.001	
											187			0.001	
											188			0.001	
60							60.2-97.5', sharp gradation to bleached, welded, coarsely-lithic tuff. Lt grn-gray where wkly propyl, med gray-grn where mod, bright blue-grn where strong Limon-stain on fracts. Minor colorless granular qtz vlets, 60.2-61.3'.				189			BD	
									89		190			0.001	
											191			BD	
											192			0.001	
70											193			0.001	

PROJECT: Paiute
LOCATION: Washoe Co. Nv
HOLE NO: P-84-2
SHEET 2 OF 6
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 160°
INCLINATION: -60°
TOTAL DEPTH: 380'
COLLAR COORDINATES: N E
STARTED: 8-30-84
COMPLETED: 8-31-84

SECTION	ERA: SILIC.	ARGILL.	PROPYL.	PYRITIZ..	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	Au (opt)	A (o
70									89						
									100						
80									93						
									96						
90									100						
							97.5-118.2', moderately bleached, welded, coarsely lithic tuff with faint texture. Variable propyl, color is lt grn-gray (wk) to med. gray-grn (mod). 2" thick olive-grn clay + (alunite?) seam parallel to foliation @ 100.5' and a pink (alunite?) patch at 101.1'				209			0.001		B
100															
									98						
110															
							116.6-118.2', tiny glassy looking qtz veinlets				217			0.001		B
120							118.2-138.9', shear zone. Lt to med grn clay gouge containing brn & gray silicified frags of tuff. Patches of massive silica-flooding from 120.8-126.9'. Pink-tinted, sheeted, glassy qtz veins appear at 126.9-132.2 and 133.0-134.0'. Strong silica-flooding cut by str. qtz stockwork veining, and (>25% veins in rock) breccia filling 132.2-133.0' and 134.0-138.9'. Color of rock dk gray where strongly silic.				222			BD		BI
											223			0.001		BI
130											224			0.001		BI
											225			0.012		0.5
											226			0.002		BI
											227			0.001		BI
140									95		228			0.002		0.1

PROJECT: Paiute
LOCATION: Washoe Co., N
HOLE NO: P-84-2
SHEET 3 OF 6
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 160°
INCLINATION: -60°
TOTAL DEPTH: 380'
COLLAR COORDINATES:
N
E
STARTED: 8-30-84
COMPLETED: 8-31-84

COMMENTS:

CORE REC'Y/HOLE:

SECTION	SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING
140						
150						
160						
170						
180						
190						
200						
210						

DESCRIPTIVE GEOLOGY

138.9-157.4', sharp contact into lt brn-gray bleached, welded, coarsely lithic tuff with faint welded text. Wk qtz + py + hem veining throughout with wk stkwk veining at 138.9-143.4', 150.7-151.8' and 153.6-154.2'. Most py occurs dissem at outermost edge of veins. Veins are both granular and glassy types

157.4-158.8', shear zone, hvy lim + clay fract fillings

158.8-188.5', med gray, welded, coarsely lithic tuff, slightly bleached, with propyl lithic frags. Volc text slightly more pronounced. Wk qtz ± hem ± py veining, clay + py veining and qtz + clay + limon veining. Qtz veins predominantly granular textured with only minor glassy veins

188.5-203.7', same as 158-188' except lt gray with grn propyl lithic frags, and increased bleaching. Wk to strongly silicified, dk gray patches w/ 5% py locally. Rock contains ½-1% dissem. py. A shear zone with 1-2% py and sharp contacts @ 191.1-191.4'. Wk granular hairline qtz veins 189.5-191.1' and 198.1-203.7' and wk stkwk 191.4-194.1', incr with depth.

194.1-196.0', dk gray str silic bx zone w str qtz + hem + py + adul stkwk, silic clay-gouge, 2-3% py

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE INTE Au (opt)		A (or
	95		229			0.001		B
			230			0.001		B
	94		231			0.002		B
			232			0.004		B
			233			0.001		0.
			234			0.001		0.
	98		235			0.001		0.
			236			0.001		0.
			237			0.001		B
			240			BD		BI
	100		241			BD		BI
	99		246			0.001		0.
			247			0.001		BI
	100		249			0.004		0.
			250			0.001		BI
	87		253			BD		0.
			254			0.001		0.
			255			0.001		0.
			256			0.016		0.
			257			0.001		0.
			258			0.001		0.
			259			BD		BI
			260			BD		0.
	100		261			0.001	BD	BI
			262			0.010	0.001	BD
			263			BD		0.

PROJECT: Paiute
LOCATION: Washoe Co., N
HOLE NO: P-84-2
SHEET 4 OF 6
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 160°
INCLINATION: -60°
TOTAL DEPTH: 380'
COLLAR COORDINATES: N E
STARTED: 8-30-84
COMPLETED: 8-31-84

COMMENTS:

AVE. CORE REC'Y/HOLE:

ALTERATION

SECTION	SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING
210						
220						
230						
240						
250						
260						
270						
280						

DESCRIPTIVE GEOLOGY

203.7-242.0', lt gray, welded, coarsely lithic tuff with trace dissem py, bleaching and flow foliation. Zone of wk scattered qtz + clay ± hem ± py veins, qtz ± py veins, and clay ± py veins, filling fracts. Wk qtz + py stkwk veining and assoc propyl and silica-flooding @ 225.8-226.6' and 241.5-242.0'. Scattered dk patches of silicification @ 232.7-233.0' and 239.2-239.4'. Gradual color change to med gray 240-242'.

242.0-243.5', fault zone, tr py, str clay stkwk veins

243.5-253.5', med gray, welded, coarsely-lithic tuff w/ tr dissem py. Wk dk gray qtz veining and silic. patches 243.5-244.0'. Wk clay veining @ 244.0-248.9' Clay + qtz + py veinlet @ 253.0'. Gradational contact

253.5-275.7', unaltered, welded, coarsely-lithic tuff; dk gray, with fresh biotite, becoming bleached 263.4-266.9'. Wk py ± qtz veins and thin qtz + clay veins scattered @ 266.0-266.8' and 268.9-275.7'. Zone of med. grn-gray altered tuff from 266.9-268.9'

275.7-284.0', med gray, altered, welded, coarsely lithic tuff with thin, wk qtz + py vlets. Gradat'nl upper contact

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% RECY./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE INT Au (opt)		A (o
			264			0.001		0.
	100		265			0.001		0.
			266			BD		0.
			267			0.001		0.
			268			0.046		1.
	99		269			0.001		0.
			270			0.001		0.
			271			0.001		0.
			272			0.001		0.
			273			0.001		0.
			274			0.003		0.
			275			0.001		0.
	100		276			0.001		0.
			277			BD		0.
			278			BD		B
			279			BD		0.
			280			BD		0.
	97		285			BD		0.
	100		293			0.001		0.
			294			0.001		0.
			295			0.001		0.
			296			0.001		0.

PROJECT: Paiute
LOCATION: Washoe Co., NV
HOLE NO: P-84-2
SHEET 5 OF 6
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5500'
BEARING: 160°
INCLINATION: -60°
TOTAL DEPTH: 380'
COLLAR COORDINATES:
N
E
STARTED: 8-30-84
COMPLETED: 8-31-84

SECTION	SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING
280						
290						
300						
310						
320						
330						
340						
350						

COMMENTS

VE. CORE REC'Y/HOLE:

DESCRIPTIVE GEOLOGY

284.0-289.2', fault, high clay content, volc texture obscured. Horse of unsheared med gray tuff at 287.0-288.3'

289.2-336.0', med gray, altered, welded, coarsely lithic tuff with <1% dissem py. Scattered qtz and qtz + clay veins @ 290.4 (granular qtz), @ 292.8-293.7' (glassy qtz), @ 303.5' (qtz + py), @ 313.7' (qtz + clay + py), @ 315.3" (½ glassy qtz, ¼ banded) @ 328.7' (qtz + hem + py); clay or clay + hem + py veins @ 302.6-336.0'

336.0-337.4', wk shear zone, wk clay vlets

337.4-368.8', same as 289-336' except for zones of dk gray strong silic up to 4" thick parallel to flow foliation of welding. Tr dissem py in rock. Wk yel to gray clay or clay + py vlets from 343.0-368.8'

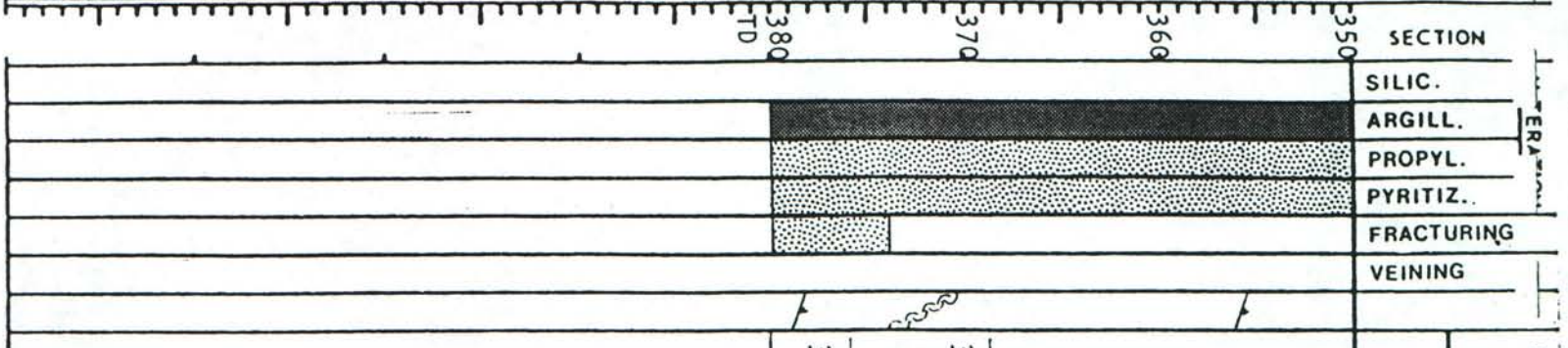
DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE INT. Au (opt)		A (o
			299			0.001		0.
			300			0.001		0.
	100		304			0.001		0.
			305			0.001		0.
	83							
	100							
			317			0.001		0.
	67							
			323			0.002		0.
	100							
	98							

COLLAR COORDINATES: N E
STARTED: 8-30-84
COMPLETED: 8-31-84

ELEVATION: 5500'
BEARING: 160°
INCLINATION: -60°
TOTAL DEPTH: 380'

CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'

PROJECT: Paiute
LOCATION: Washoe Co., NV
HOLE NO: P-84-2
SHEET 6 OF 6



SECTION

SILIC.
ARGILL.
PROPYL.
PYRITIZ.
FRACTURING
VEINING

ERA

DESCRIPTIVE GEOLOGY

368.8-374.0', fault zone; sheared material, same as 289-336'

374.0-380.0', same as 289-336'

COMMENTS

VE. REC'Y/HOLE:

DRILLING INTERVAL

% CORE RECOVERED: 98, 100, 96, 78

CORE SIZE

SAMPLE NUMBER

% REC'Y./ SAMP. INT.

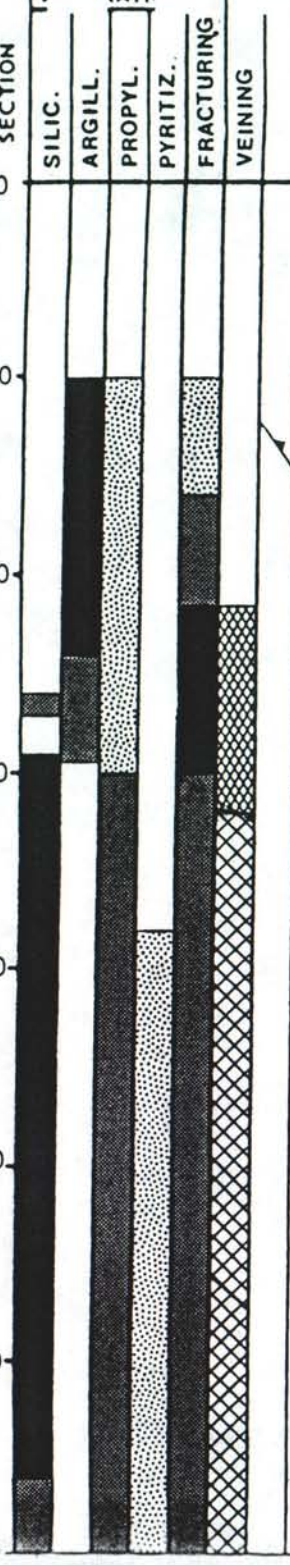
ESTI-MATED %

CORRELATION

Au (opt)

Au (o

PROJECT: Paiute
LOCATION: Washoe Co., NV
HOLE NO: P-84-3
SHEET 1 OF 4
SCALE: 1" = 10'
LOGGED BY: M. H. Payne
CORE SIZE: NQ
CONTRACTOR: Coates
TOTAL DEPTH: 225'
INCLINATION: -25°
BEARING: 226°
ELEVATION: 5370'
STARTED: 8-31-84
COMPLETED: 9-2-84
COLLAR COORDINATES: N E



CONTENTS:

REC'Y/HOLE:

DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	Au (opt)	A (o
Set casing with rock bit - no recovery								
10.0-15.5', gray-grn, bleached, altered, welded, coarsely lithic tuff, wk limon on fracts		99		349			BD	0.(
				350			0.002	0.(
				351			BD	BI
15.5-23.6', sharp contact, gray-grn, massive clay, strong stkwk of massive qtz, 1/8-3" thick, veins slightly vuggy, show signs of brecciation and re-cementing w/ clay + qtz, limon & jaros on fracts		97		352			BD	0.
				353			0.001	0.
				354			0.012	0.
				355			0.006	0.2
23.6-30.4', str qtz stkwk veining in gray-grn, bleached altered, welded, coarsely lithic tuff, sheared and mod silica-flooded @ 26.0-27.0', massive clay @ 29.0-29.6-30.4 silic assoc w/ str stkwk,				356			0.001	0.1
		80		357			0.001	0.(
				358			0.001	BI
30.4-65.8', bright blue-grn, altered, welded, coarsely lithic tuff, volc text very faint, str silic assoc w/ qtz stkwk veining, some adularia in veins, ¼" bleached gray envelope on some vein margins, mod hem, goeth, limon, and jaros on fracts				359			0.001	0.(
				360			0.001	0.(
				361			0.001	0.(
		83		362			0.151	6.9
				363			0.021	0.7
				364			0.002	0.2
				365			0.001	BD
				366			0.003	0.(
		100		367			0.001	0.(
				368			0.003	BD
				369			0.002	0.(
				370			0.001	0.(
		78		371			0.001	0.(
				372			0.114	0.1
				373			0.001	0.0
				374			0.001	0.1
		100		375			0.001	0.1
				376			0.001	0.2
		37		377			CBD	BD
				378			0.001	BD

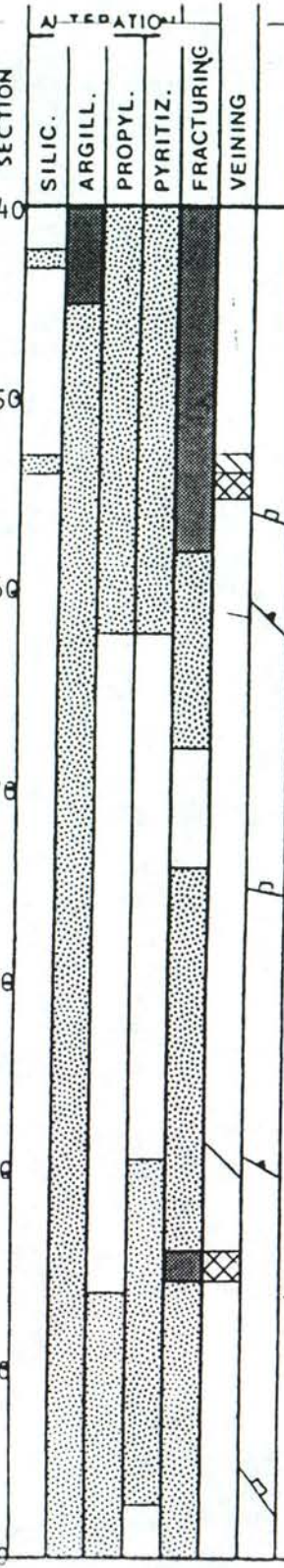
PROJECT: Paiute
LOCATION: Washoe Co.,
HOLE NO: P-84-3
SHEET 2 OF 4
SCALE: 1" = 10'
LOGGED BY: M. H. Payne
CORE SIZE: NQ
CONTRACTOR: Coates
ELEVATION: 5370
BEARING: 226°
INCLINATION: -25°
TOTAL DEPTH: 225'
COLLAR COORDINATES:
N
E
STARTED: 8-31-84
COMPLETED: 9-2-84

COMMENTS:

TYPE CORE
REC'Y/HOLE:

SECTION	ALTERATION: SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	CORE SAMPLE INT. SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	Au (opt)	A (or
70							65.8-84.0', qtz stkwk veining in blue-grn altered, welded, coarsely lithic tuff, volc text preserved; trace dissem py in veins and wall rock, wk hem + clay veining up to 3/8"		37		379			0.001	0.(
											380			0.001	0.1
											381			BD	0.(
											382			0.001	BD
80									80		383			0.033	0.2
											384			0.002	0.1
											385			0.002	BD
											386			0.001	0.(
							84.0-99.8', pale grn-gray, bleached, welded, coarsely lithic tuff. 84-89.3', heavy limon on fracts. 86.7-99.8', tr dissem py in veins & wall rocks. 89.3-99.8', wk to str stkwk, vuggy, granular qtz + adul + py veins up to 1/8" thick. Silicified 1" borders of larger veins and areas of str stkwk veining. Wk clay + limon veins		100		387			0.001	BD
											388			0.001	0.0
90									84		389			0.001	0.0
											390			0.001	0.1
											391			0.001	0.0
											392			0.003	0.1
									100		393			0.008	0.4
											394			0.001	0.0
											395			0.001	0.0
100							99.8-108.5, olive-gray becoming lt grn, bleached, altered, welded, coarsely lithic tuff. 99.8-100.4', minor soapy grn epidote + chlorite on fracts. 100.4-103.3', wk brecc'n of rock, filling by massive gray, tan, grn clay				396			0.002	0.1
									98		397			0.012	0.2
											398			0.003	0.2
											399			0.001	0.0
110							108.5-121.9', lt yell-grn becoming pale gray-grn, bleached, welded, coarsely lithic tuff, volc text oblitereated 108.5-110.0'. Cut by minor qtz veins to mod qtz stkwk. 108.5-110.0', mod clay veining. 110.0-112.4', wk clay veining. 110.0-113.0', str pervasive silica-flooding. 110.1-110.9' & 111.8-112.4', sheared				400			0.012	0.0
											401			0.002	0.0
									90		402			BD	0.0
120											403			0.001	0.1
									65		404			BD	0.3
							121.9-127.6', fault. Silic fault bx with gray & red-brn rounded clasts of massive qtz and silic tuff. 124.6-127.6', bleached, lt gray sheared tuff.		78		405			0.003	0.1
											406			0.008	0.1
							127.6-134.9', sharp contacts, red-brn, altered, welded coarsely lithic tuff, wk propyl on fracts, wk grn and tan clay veining on fracts				407			0.001	0.0
130									67		408			0.001	BD
											409			0.001	0.0
											410			0.001	0.2
							134.9-145.2', gradation to bleached, lt gray, altered, welded, coarsely lithic tuff, volc text more distinct, (cont'd)		73		411			BD	BD
											412			0.001	0.0
140									20		413			0.001	0.0

PROJECT: Paiute
LOCATION: Washoe Co., N
CONTRACTOR: Coates
CORE SIZE: NQ
HOLE NO: P-84-3
LOGGED BY: M. H. Payne
SHEET 3 OF 4
SCALE: 1" = 10'
TOTAL DEPTH: 225'
ELEVATION: 5370'
BEARING: 226°
INCLINATION: -25°
COLLAR COORDINATES: N E
STARTED: 8-31-84
COMPLETED: 9-2-84



COMMENTS:

AVE. CORE REC'Y/HOLE:

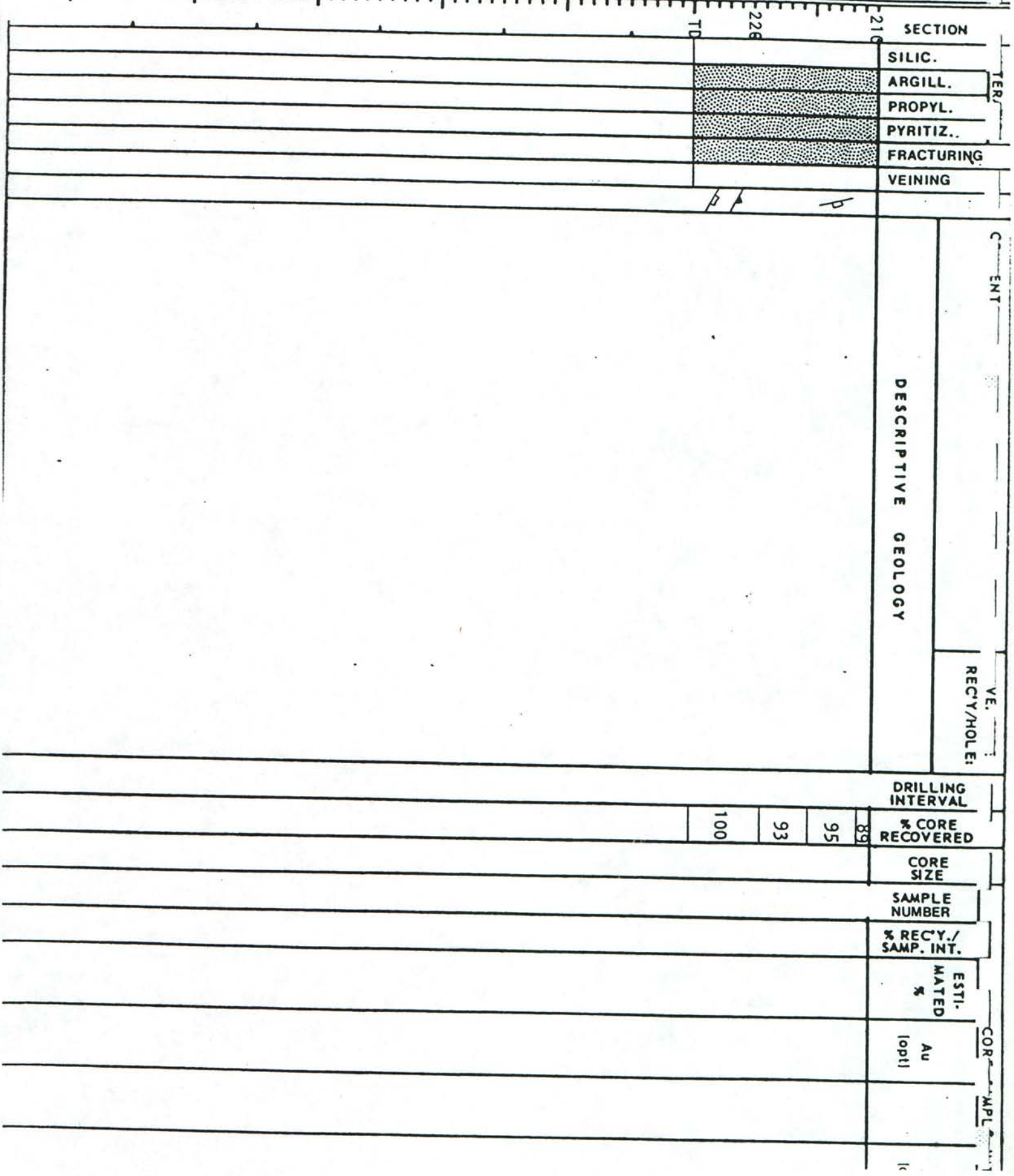
DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE INTS Au (opt)	Au (opt)
134.9-135.7', minor qtz + clay veins w/ wk silic on margins, 142.0-145.2', wk clay veining		20		414			0.008	0.0
				415			0.001	0.1
145.2-158.3', med gray, altered, welded, coarsely lithic tuff. Mod tan clay + py veining. 148.8-149.3', dk gray patch of str silicif. 153.0-155.4', very vuggy, wk to mod qtz + py stkwk veins up to 3/4" thick, 1% py dissem.		94		416			0.001	0.0
				417			0.004	0.0
				418			BD	0.0
				419			BD	0.0
				420			BD	0.0
				421			BD	0.0
				422			0.001	0.3
158.3-162.5', red-brn, altered, welded, coarsely lithic tuff, minor clay veins and qtz veins				423			0.002	0.0
				424			0.01	0.1
162.5-169.7', bleached, lt gray, altered, welded, coarsely lithic tuff; wk qtz + clay + py veining		80						
				427			BD	0.0
				428			0.001	0.0
169.7-174.0', red-brn, altered, welded, coarsely lithic tuff; volc text quite distinct		59						
174.0-179.7', bleached, lt gray tuff same as 162-169' 175.7', clay and lesser qtz vein				431			BD	BD
		98						
179.7-184.0', med gray, altered, welded, coarsely lithic tuff, color change due to incr in hem content								
184.0-196.5', lt gray, altered, welded, coarsely lithic tuff, color change due to decrease in hem content, volc text well-preserved. 188.2-194.5', minor qtz + clay + py veins. 188.9-196.5', tr dissem py in veins and wall rock. 194.5-195.0, mod qtz stkwk veining.		99						
		100						
196.5-225.0', lt grn-gray, altered, welded, coarsely lithic tuff. 196.5-207.0', tr dissem py. 199.7', clay seam, ¼" thick. 209.0-210.0', hem + clay vlets. 215.5-216.5', propyl on fracts only. 224.5', hair-line pyrite veinlets		89						

COLLAR COORDINATES:
N E
STARTED: 8-31-84
COMPLETED: 9-2-84

ELEVATION: 5370'
BEARING: 226°
INCLINATION: -25°
TOTAL DEPTH: 225°

CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'

PROJECT: Paiute
LOCATION: Washoe Co., NV
HOLE NO: P-84-3
SHEET 4 OF 4



PROJECT: Paiute
LOCATION: Washoe Co. NV
HOLE NO: P-84-4
SHEET 1 OF 4
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5370'
BEARING: 226°
INCLINATION: -58°
TOTAL DEPTH: 272'
COLLAR COORDINATES: N E
STARTED: 9-2-84
COMPLETED: 9-3-84

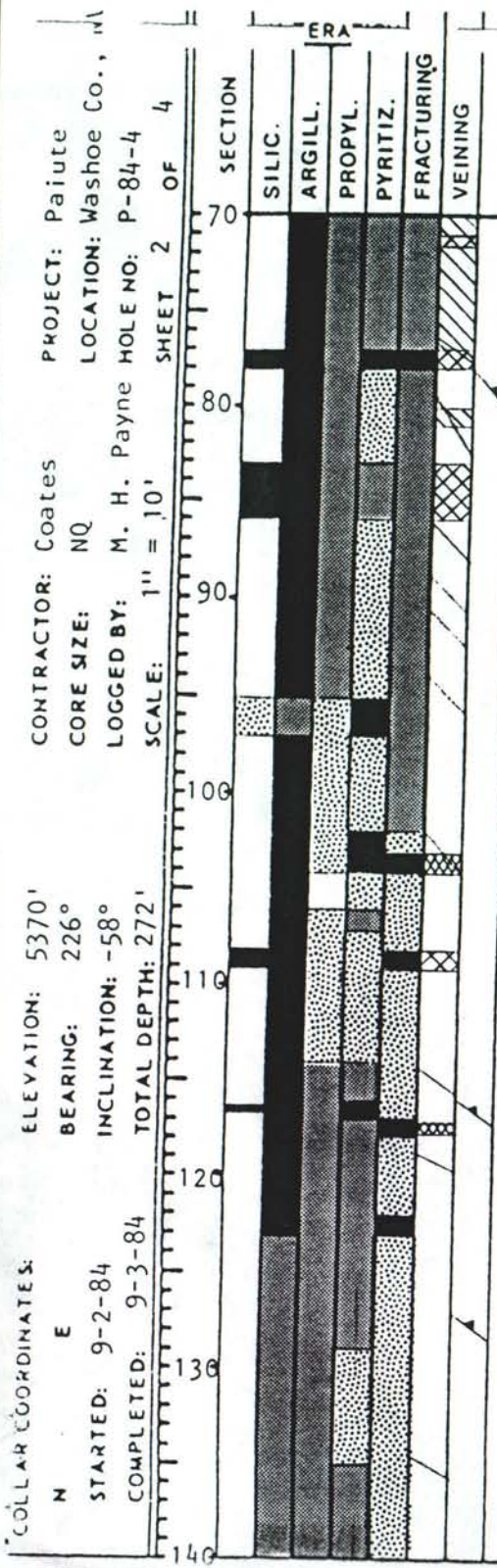
COMMENTS:

REC'Y/HOLE:

SECTION	ALTERATION: SILIC.	ALTERATION: ARGILL.	ALTERATION: PROPYL.	ALTERATION: PYRITIZ.	FRACTURING	VEINING
0						
10						
20						
30						
40						
50						
60						
70						

DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI- MATED %	Au [opt]	
Set casing with rock bit in badly fractured ground - no recovery		0						
21.0-27.0', strongly altered, bleached, welded, coarsely lithic tuff, lt grn-gray, becoming lt gray @ 25'. Mod qtz ± hem stkwk veining, wk clay veining		57		457			0.009	B
				458			0.001	B
				459			0.002	B
27.0-30.0', sharp color change to bright blue-grn. Mod qtz stkwk veining, wk clay veining.				460			0.001	B
				461			0.001	0.
30.0-35.0', color and alteration similar to 21-27' except wk incr to mod py; wk qtz veining @ 34-35', wk clay veining 30-34'		100		462			0.001	0.
				463			0.001	0.
				464			0.004	0.
35.0-57.6', sharp change to variably propylitized, pyritized and silicified, welded, coarsely lithic tuff bright blue-grn (strong propyl) to med gray-grn (mod propyl) color; strong silic 35-39.4', wk patchy silic 39.4-57.6'. Wk qtz stkwk, veins are massive, glassy type to 48.3', then predominantly colorless, vuggy, granular types, with tan clay ± barite filling centers. Wk yellow clay veining. Py < 1% @ 35-39', 1-3% @ 39-57'. 35.5', large broken, gray, glassy, qtz vein 52.5-56.4', heavy limon + hem mud in fracts 57.6', 1/8" qtz + hem + py vein		43		465			0.009	B
				466			0.009	0.
		99		467			0.001	0.
				468			0.003	0.
				469			0.001	0.
				470			0.001	0.
				471			0.001	0.
		91		472			0.001	0.
				473			0.001	0.
				474			BD	0.
57.6-95.0', altered, lt gray=grn, qtz veined, welded, coarsely lithic tuff. Wk patchy silic assoc with qtz stkwk at 76.7-78.1', and 83.0-86.4'. Wk to mod stkwk of banded, vuggy, granular qtz ± adularia ± hem ± py ± clay veins from 64.1-78.1', 80.0-81.0', 83.0-86.4'. Wk qtz ± clay, or clay veins filling parallel fracts throughout the remainder (cont'd)		100		475			0.001	0.
				476			0.002	0.
				477			0.001	0.
				478			0.003	0.1
				479			0.001	0.
				480			0.003	0.
				481			0.001	0.

PROJECT: Paiute
LOCATION: Washoe Co., N
HOLE NO: P-84-4
SHEET 2 OF 4
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5370'
BEARING: 226°
INCLINATION: -58°
TOTAL DEPTH: 272'
COLLAR COORDINATES: N E
STARTED: 9-2-84
COMPLETED: 9-3-84



COMMENTS

RECOVERY/HOLE:

DESCRIPTIVE GEOLOGY

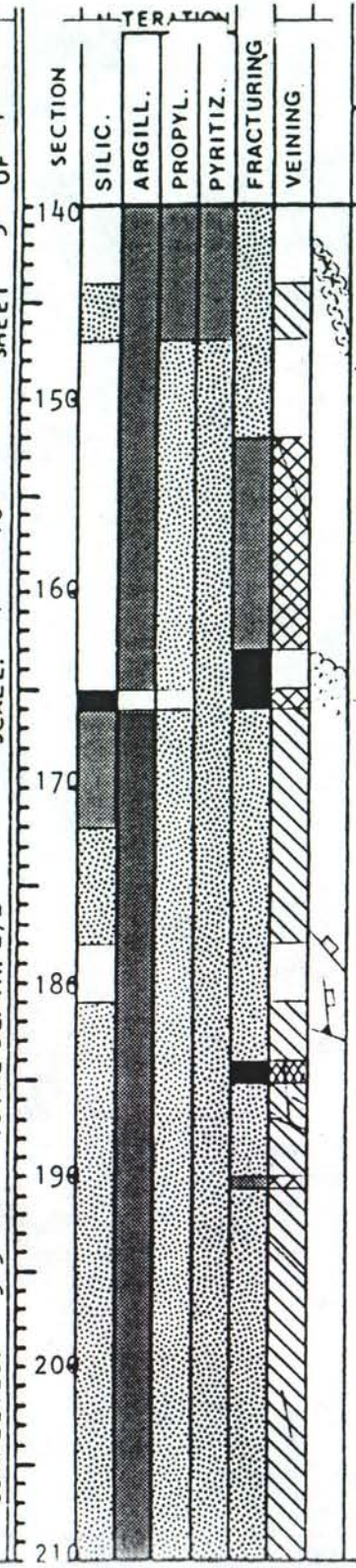
Dissem py occurs both in veins and wall rock
63.5', parallel qtz veins
65.5', larger parallel qtz veins
67.0', qtz + adularia (?) vein
77.5', dk gray qtz vein
81.5', qtz + adularia vein
86.5-95.0', parallel qtz veining

95.0-102.3', altered, welded, coarsely lithic tuff. Mottled lt grn-gray and red-brn. Localized silic and minor granular, vuggy qtz veins 95-97' and 101.6-102.7'. Py variable and inc where veins occur

102.7-148.3', bleached, altered, welded, coarsely lithic tuff. Scattered, wk, qtz veins filling parallel fracts @ 105.8-106.9', 108.7-109.6', 114.1-128.8', 132-133, 139.2-144.0', and 146.5-148.3'. Narrow zones of wk to str qtz stkwk veining and localized silic on vein margins @ 102.7-103.3', 108.1-108.7', 117', 144.0-146.5'. Qtz veins are white to med gray, vuggy, broken. Dissem py incr with intensity of qtz stkwk.
120', vuggy qtz + py vein containing small amounts of a metallic, dk steel-gray, cubic sulfide, with poor cleavage, possibly digenite (Cu_2S) or stromeyerite (CuAgS)?. Zones of shearing @ 121.7-123.0' and 144.0-146.5'
143.5', fault
144.0', fault

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% RECY./ SAMP. INT.	ESTIMATED %	CORE SAMPLE INT. Au (opt)	A (o
			482			0.002	0.
			483			0.004	0.
			484			0.003	0.
			485			0.003	0.
	100		486			0.001	0.
			487			0.003	BD
			488			0.003	0.1
			489			0.002	0.
			490			0.004	0.
			491			0.002	BD
	61		492			0.001	0.
			493			0.002	0.1
			494			0.002	0.
			495			0.210	1.0
	27		496			0.007	0.3
			497			0.002	0.1
	100		498			0.001	0.2
			499			0.003	0.0
			500			0.018	4.8
			501			0.004	0.0
	70		502			BD	BD
			503			0.001	BD
			504			0.002	0.0
			505			0.001	0.1
	100		506			0.004	0.1
			507			0.001	0.0
	93		508			0.002	0.0
			509			BD	0.0
			510			0.017	0.0
	100		511			0.001	0.1
			512			0.001	BD
			513			0.001	0.2
	90		514			0.001	BD
	95		515			0.022	BD
			516			0.001	0.1

PROJECT: Paiute
LOCATION: Washoe Co., NV
HOLE NO: P-84-4
SHEET 3 OF 4
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5370'
BEARING: 226°
INCLINATION: -58°
TOTAL DEPTH: 272'
COLLAR COORDINATES: N E
STARTED: 9-2-84
COMPLETED: 9-3-84



COMMENTS

AVE. CORE REC'Y/HOLE:

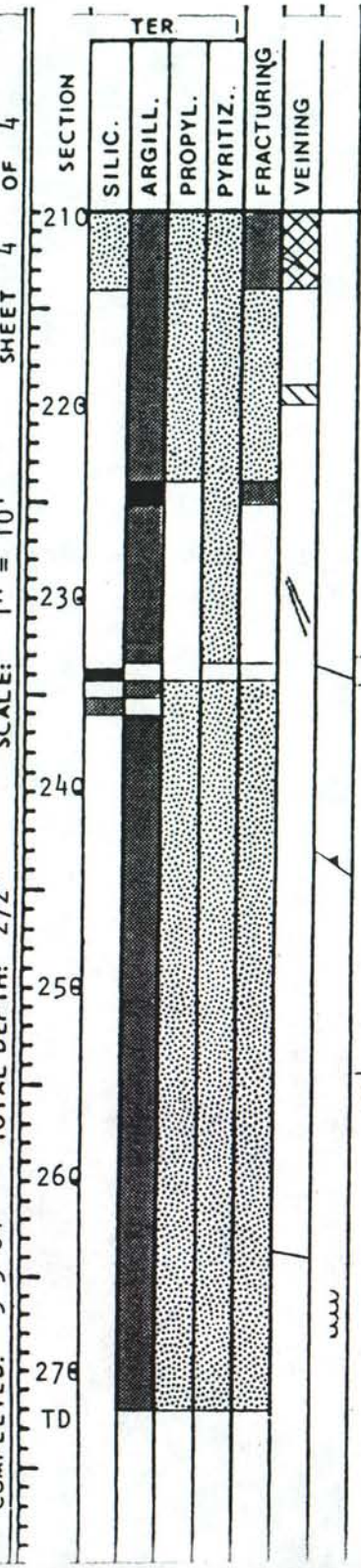
DESCRIPTIVE GEOLOGY

148.3-165.4', med gray, altered, welded, coarsely lithic tuff. Less than 1% dissem py. 148.0-151.8', wk gray, waxy clay veining. 151.8-163.1', mod stkwk veining a) vuggy, white to lt gray, granular qtz + py ± barite, b) thin, qtz + hem + py veins, c) clay > qtz veins, up to 1", minor brecc'n. 163.1-165.4', shear zone, clay gouge with chunks of gray chalced qtz

165.4-214.2', med gray, altered, welded, coarsely lithic tuff, dk grn-gray where silic.
165.4-166.1', dk gray, str silic, brecciated w/ mod qtz stkwk, 1% dissem py
166.1-178.1', wk stkwk of granular, vuggy qtz + py + barite, minor brecc'n of wall rocks and silica-flooding. Locally stkwk becomes mod. Py decreases with depth.
178.1-181.1', wk yellow or tan clay vlets
181.1-214.2', zone of qtz stkwk veining, range from wk to strong, gray to white granular, qtz + adularia + py ± hem ± tan clay veins up to ½" thick with baring filling vugs

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	CORE SAMPLE IN	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTIMATED %	Au (opt)		
				517			0.002		0.
	95			518			0.002		0.
				519			0.001		0.
				520			0.001		0.
				521			0.001		0.
	100			522			0.001		B
				523			0.001		0.
				524			0.001		0.
				525			0.001		0.
	71			526			0.001		0.
				527			0.009		B
				528			0.001		0.
	37			529			0.006		B
				530			0.002		B
				531			0.001		0.
				532			0.001		0.
				533			0.002		B
	100			534			0.001		B
				535			0.001		0.
				537			0.002		0.
				538			BD		0.
				539			0.001		0.
				540			0.001		0.
				541			BD		0.
	94			542			0.002		0.
				543			0.002		0.
				544			0.001		0.
				545			0.001		B
				546			0.001		0.
	100			547			BD		0.
				548			0.001		B
				549			0.001		0.
	98			550			BD		0.
				551			BD		0.

PROJECT: Paiute
LOCATION: Washoe Co., NV
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
HOLE NO: P-84-4
SCALE: 1" = 10'
SHEET 4 OF 4
ELEVATION: 5370'
BEARING: 226°
INCLINATION: -58°
TOTAL DEPTH: 272'
COLLAR COORDINATES: N E
STARTED: 9-2-84
COMPLETED: 9-3-84



ENT
VE.
REC'Y/HOLE:

DESCRIPTIVE GEOLOGY

214.2-232.9', altered, welded, coarsely lithic tuff. Med gray, to dk gray @ 229.5'. Gray gouge zone (fault) and sheared tuff 223.7-225.0'. Wk qtz + clay stkwk stringers @ 218.7-220.2'.
221.8-222.7', wk clay > qtz veins
225.0-225.7', wk clay > qtz veins
229.8', 3/8" clay > qtz + hem vein

232.9-233.5', unaltered black basaltic dike

233.5-254.5', dk gray, welded, coarsely lithic tuff. Localized mod to strong patches of silic up to 4" in diam. Wk calcite stringers

254.5-272.0', sharp gradation to red-brn, welded, coarsely-lithic tuff. Tr dissem py
263.5', 1/16" red hem + clay veinlet
266.1-266.7', gouge zone

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTIMATED %	Au (opt)	
			552			BD	0.
	98		553			0.001	0.
			556			0.001	0.
			557			0.001	0.
	100		559			0.002	0.
	89						
	100						
	92						
	100						

PROJECT: Paiute
LOCATION: Washoe Co. Nv
HOLE NO: P-84-5
SHEET 1 OF 4

CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'

ELEVATION: 5370'
BEARING: 164°
INCLINATION: -58°
TOTAL DEPTH: 266'

COLLAR COORDINATES:
N
E
STARTED: 9-3-84
COMPLETED: 9-3-84

SECTION	ERA: SILIC.	ERA: ARGILL.	ERA: PROPYL.	ERA: PYRITIZ.	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED
0							Set casing with tri-cone bit - no recovery		0
10							11.0-29.5', lt gray-grn, bleached, welded, coarsely lithic tuff with dk gray silic, angular frags and propyl lithic frags to 15.8'. Sheared tuff to 29.2'. Gray gouge zone to 29.5'		66
20									99
30							29.5-32.2', massive white qtz, broken w/ clay + limon + goeth on fracts, str silica-flooding on vein margins		100
							32.2-37.5', lt blue-grn tuff. Sheared 32.2-35.6', gray, glassy qtz veins w/ wk patchy silic on borders. Wk, irreg qtz stkwk 35.6-37.5', wk limon on fracts		77
40							37.5-41.2', gray gouge zone. Wk pervasive limon + jaros stain		66
							41.2-47.1', olive-grn to med gray-grn tuff. Wk to mod stkwk of white, granular qtz veins to 43.6'. Sheared gouge zone 43.6-44.1' with 2-3% py.		93
50							47.1-50.3', bright blue-grn, silic tuff; mod stkwk, 1-3% py, str limon + jaros on fracts		80
							50.3-71.2', Med gray-grn, altered, welded, coarsely lithic tuff. Zone of qtz stkwk veining, wk to str; vuggy, granular, with vug-filling barite or gypsum, up to ½". 60.0-68.1', qtz + clay veins. 68.1-71.2', wk qtz ± barite ± clay veins. Wk limon + goeth on fracts.		89
60							58.3-60.0', 1-3% dissem py in veins and walls. <1% py to 71.2'		
							67.0', dk gray qtz vein cut by white qtz vein		86

CORE SIZE	SAMPLE NUMBER	% RECY./ SAMP. INT.	ESTIMATED %	Au [opt]	A [o
	592			0.001	0.0
	593			0.003	0.0
	594			0.001	BD
	595			0.001	0.0
	596			0.001	BD
	597			0.001	0.0
	598			BD	BD
	599			0.001	0.0
	600			0.007	BD
	601			0.002	BD
	602			0.001	0.0
	603			0.002	0.1
	604			0.025	BD
	605			0.002	0.0
	606			0.009	BD
	607			0.004	0.0
	608			0.004	0.0
	609			0.001	0.0
	610			BD	0.1
	611			0.007	0.0
	612			0.001	0.0

PROJECT: Paiute
LOCATION: Washoe Co. Nv
HOLE NO: P-84-5
SHEET 2 OF 4
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
CONTRACTOR: Coates
CORE SIZE: NQ
ELEVATION: 5370'
BEARING: 164°
INCLINATION: -58°
TOTAL DEPTH: 266'
COLLAR COORDINATES: N E
STARTED: 9-3-84
COMPLETED: 9-3-84

SECTION	ERA: SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% RECY./ SAMP. INT.	ESTIMATED %	Au (opt)		A (o
70							71.2-72.7', sharp irreg contact to tan tuff w/ 2% py		76		613			BD		0.
							72.7-76.2', bleached, lt grn-gray, altered tuff, wk granular qtz veining				614			BD		0.
							76.2-79.3', purple-brn, altered tuff. Tr propyl of lithic frags. Minor white clay veins		98		615			BD		0.
80											616			BD		0.(
							79.3-89.7', sharp gradational contact to lt grn-gray, bleached, altered, welded, lithic tuff. Mod fract'g. Wk clay veining				617			0.001		BI
											618			BD		BI
									95		619			BD		BI
											620			0.001		BI
90							89.7-92.2', zone of massive, yellow-grn clay, locally shows shearing				621			BD		BI
											622			BD		0.(
							92.2-106.0', sharp, gradation to dk purple, mod altered tuff. Wk propyl of lithic frags. Bleached remnants of biotite flakes		92		623			BD		BI
							96.0-96.8', sharp irregular contacts to olive-grn str altered tuff with high clay content				624			0.001		0.(
											625			0.001		0.(
100											626			BD		BI
											627			BD		0.(
									91		628			BD		BI
											629			0.001		0.(
											630			BD		0.(
							106.0-119.5', lt gray, bleached, mod altered, welded, coarsely lithic tuff, with yellow-grn propyl lithic frags. Bleached remnants of biotite flakes in tuff matrix				631			BD		0.(
											632			BD		0.(
110									81		633			BD		0.(
							111.5', cream-colored clay veinlet				634			0.001		0.(
											635			0.001		0.(
											636			BD		BI
											637			0.001		0.2
120							119.5-125.0', sharp contact, med gray, wkly altered tuff. Slightly bleached biotite flakes. Minor yellow clay veins, tr red, clay + hem veins		99		638			0.001		BI
											639			0.001		0.1
											640			0.001		0.(
							125.0-126.3', sharp contacts, fault, hem clay gouge				641			0.001		0.0
							126.3-149.8', med gray, mod alt'd, welded, coarsely lithic tuff. Wk propyl of lithic frags. Wk qtz stkwk veining to 141.5', granular, colorless qtz ± limon ± chlorite. 136-141.5', qtz + clay veins with granul text. 136-149.8', clay veining increases, massive soapy, gray veins. 141.5-149.8', decreasing alter'n and appearance of gray bleached remnants of biotite flakes				642			0.003		0.0
130											643			0.001		0.0
									84		644			BD		0.0
											645			BD		0.0
											646			BD		BD
140									100		647			BD		BD

PROJECT: Paiute
LOCATION: Washoe Co. NV
CONTRACTOR: Coates
HOLE NO: P-84-5
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SHEET 3 OF 4
SCALE: 1" = 10'
ELEVATION: 5370'
BEARING: 164°
INCLINATION: -58°
TOTAL DEPTH: 266'
COMPLETED: 9-3-84
STARTED: 9-3-84
E
N
COLLAR COORDINATES:

ALTERATION | COMMENTS | REC'Y/HOLE:

SECTION	SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE Au (opt)	
140											648			BD	B
									100						
150							149.8-151.6', sharp contacts, fault, gray gouge zone				653			0.001	B
							151.6-152.8', med gray, altered tuff, minor qtz				654			0.001	0.
							152.8-174.6', lt gray, bleached, altered, welded, coarsely lithic tuff				655			BD	0.
							152.8-154.2', wk clay veining				656			BD	0.
160							154.2-159.2', wk yellow and red, clay + qtz + py + FeOx veins		98		657			BD	B
							159.2-162.1', tr qtz + clay, chalcedonic veins				658			BD	0.
							165.9-174.6', wk, thin clay + FeOx veins		87						
170									100						
							174.6-186.0', med gray, wkly altered, welded, coarsely lithic tuff. Becomes med gray-grn at 179.2-186.0'. Wk clay + hem/clay/calcite + adularia veinlets at 186.0'. 1/32" thick, granular qtz veins, 184.0-186.0				665			BD	B
											666			BD	0.
									93		667			BD	0.
180							178.0', calcite + adularia vein				668			BD	0.
							183.0', calcite + adularia vein		92		669			BD	0.
											670			0.001	0.
							186.0-187.3', bleached to lt gray color;				671			0.005	0.
							187.3-188.3', sharp contact, fault, gray gouge				672			0.014	0.
190							188.3-208.7', med gray, str altered, welded, coarsely lithic tuff. Str qtz stkwk and bx filling. Qtz + adularia + py, glassy, chalcedonic to 197.0'. Qtz stkwk decreases to mod at 197-198.3'. Fault with gray gouge 198.3-198.6'. Tiny calcite veinlets 198.6-208.7'.		53		673			BD	0.
											674			0.001	0.
											675			0.001	0.
									88		676			0.003	0.
200											677			0.001	0.
									100						
210							208.7-211.7', sharp gradational contact to (cont'd)								

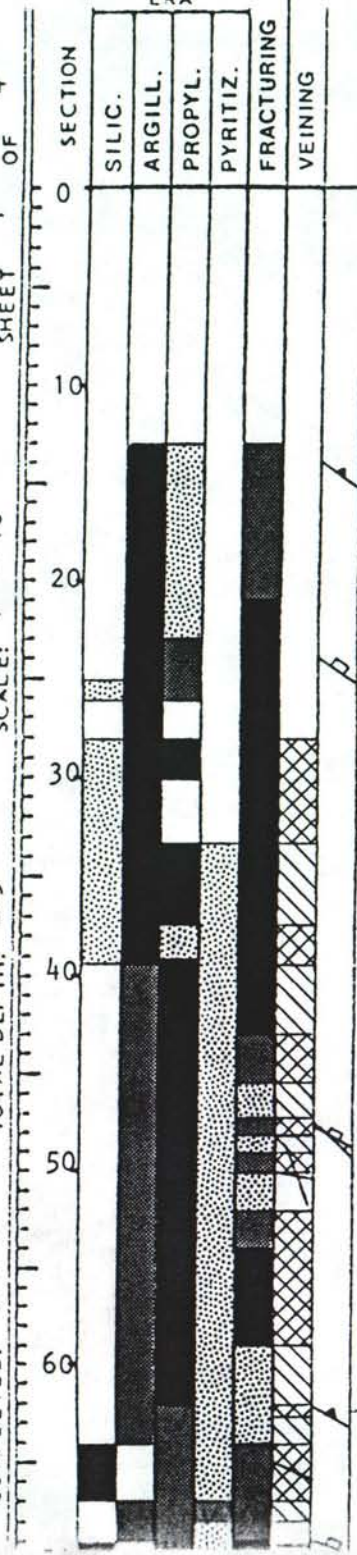
PROJECT: Paiute
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
LOCATION: Washoe Co. NV
HOLE NO: P-84-5
SHEET 4 OF 4

ELEVATION: 5370'
BEARING: 164°
INCLINATION: -58°
TOTAL DEPTH: 266'

COLLAR COORDINATES:
N E
STARTED: 9-3-84
COMPLETED: 9-3-84

SECTION	TERA. SILIC.	TERA. ARGILL.	TERA. PROPYL.	TERA. PYRITIZ.	FRACTURING	VEINING	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% RECY./ SAMP. INT.	ESTI-MATED %	Au (opt)		
210							dk red-brn, altered, welded, coarsely lithic tuff									
							211.7-220.6', same as 188-208, except no veining. Wk local, dk gray patches of silic.		100							
220							220.6-228.2', dk red-brn, mod altered, welded, coarsely lithic tuff with wk propyl of lithic frags. At 225.1' a 1" wide yellow, white and red qtz + clay ± hem ± limon vein, vuggy, glassy, chalcedonic		92		690			BD		0.
									80							
230							228.2-246.4', mde gray, str altered, wkly bleached, same as 188-208', except no veining. Wk local, dk gray silic patches 2-3" wide. Wk clay veining		97							
240									100							
							246.4-266.0', dk red-brn, mod altered, welded lithic tuff same as 220-228'. Bleached remnants of biotite flakes. 262', minor calcite veinlet									
260																
TD																

PROJECT: Paiute
LOCATION: Washoe Co., Nv
HOLE NO: P-84-6
SHEET 1 OF 4
CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'
ELEVATION: 5370'
BEARING: 164°
INCLINATION: -26°
TOTAL DEPTH: 215'
COLLAR COORDINATES: N E
STARTED: 9-4-84
COMPLETED: 9-4-84



DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% RECY./ SAMP. INT.	ESTIMATED %	Au [opt]		A [op
Set casing with rock bit - no recovery		0							
13.0-22.8', lt gray, altered, welded, coarsely lithic tuff, with wk propyl of lithic frags. Wk MnO_2 and limon on fracts. Sheared from 21.3-22.8'.		90							
		93							
22.8-30.2', grades to pale blue-grn, soapy-textured, altered tuff. Wk limon on fracts. Local silic and wk qtz veining at 25.8-26.1'. Fault, gray gouge at 26.1-28.0'				717			0.001		0.1
				718			0.018		0.5
				719			0.004		0.1
		94		720			0.001		0.1
				721			0.001		0.1
				722			0.001		0.1
30.2-32.6', sheared, lt gray, bleached tuff, fract'd				723			0.007		0.3
32.6-37.5', same as 28-30' except tr py, wk jarosite stain on fracts				724			0.006		0.1
				725			0.001		0.0
		98		726			0.007		0.1
				727			0.011		0.1
37.5-38.6', lt grn-gray, sheared, alter'd tuff, tr py				728			0.008		0.0
38.6-62.5', bright blue-grn, altered, welded, coarsely lithic tuff, becomes lt blue-grn with depth, alternating wk to mod qtz stkwk veining, very vuggy, white, granular qtz. 38.6-42.6', heavy clay + lim + hem on fracts 42.6-45.1', qtz veins up to 5/8" thick 51.1', white qtz vein w/ dk grn chlorite inclusions 54.6-59.2', sheared tuff 59.2-61.9', minor qtz veins, up to 1" wide		100		729			0.001		0.0
				730			0.001		0.1
				731			0.005		0.1
				732			0.002		0.1
		94		733			BD		0.0
				734			0.004		0.0
				735			BD		0.0
				736			BD		0.0
62.5-72.2, med grn-gray, alt'd, welded, coarsely lithic tuff, becomes gray-grn at 70.9'. 64.4-66.7' and 69.1-70.9', str bx & silic assoc w/ stkwk. 70.9-72.2, wk clay & hariline qtz veins		100		737			BD		0.0
				738			0.001		0.4
		89		739			BD		0.1

PROJECT: Paiute
LOCATION: Washoe Co., NV
HOLE NO: P-84-6
SHEET 2 OF 4
LOGGED BY: M. H. Payne
CORE SIZE: NQ
CONTRACTOR: Coates
SCALE: 1" = 10'
TOTAL DEPTH: 215'
COMPLETED: 9-4-84
STARTED: 9-4-84
INCLINATION: -26°
BEARING: 164°
E 5370'
N

COMMENTS:

AVE. CORE REC'Y/HOLE:

SECTION	SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING
70						
80						
90						
100						
110						
120						
130						
140						

DESCRIPTIVE GEOLOGY

72.2-82.1', gray-grn sheared tuff. Wk to mod limon on fracts. Bleached to lt gray at 78.0-80.2'. Strongly silica-flooded 79.4-80.2'. Fault w/ sheared gray gouge at 80.2-82.1'

82.1-93.7', sharp contact to med gray to med grn-gray, altered, welded, coarsely lithic tuff. Sheared tuff w/ sharp contacts 85.7-87.5'
87.5-91.5', qtz veins, 3/8", w/ silic assoc, tr py
91.5-93.7', mod goeth and limon on fracts

93.7-96.3', Fault. Lt grn-gray, bleached, weathered-massive clay, mod to hvy lim + goet + MnO_2 on fracts
96.3-99.0', med gray tuff, same as 82.1-93.7' sheared at 97.5-98.3' w/ mod lim + goet + MnO_2 stain

99.0-110.5', grades to bleached, lt grn-gray tuff. Wk limon on fracts. Wk clay veining. Wk stkwk w/ assoc. silic on vein borders at 103.0-104.5. Vuggy, white granular qtz. Single 3/8" gray qtz vein at 109.0'. Tr py to 110.0'.

110.5-118.0', grades to lavender, altered, welded, coarsely lithic tuff. Incr hem in matrix. Grades into bleached, lt gray tuff with wk silic assoc w/ clay > qtz stkwk veins at 112.3-118.0'

118.0-128.8', sharp contact to lavender, altered, welded, coarsely lithic tuff. At 119.1' becomes bleached gray tuff, w/ pervasive wk limon on fracts.
119.1-121.3', minor clay + qtz veins
121.3', pink alunite (?) patch
121.3-128.8', wk clay vein, 127.8', wk qtz veining

128.8-135.1', same bleached, gray tuff as 119-128', except silic and bx assoc w/ mod granular qtz stkwk to 131.3'. 1-2% dissem py in walls and veins

135.1-147.5', same bleached, gray tuff, abrupt appearance of glassy, chalced qtz veins rather than granular, vuggy qtz. 135.1-136.8', 1-2% dissem py (cont'd)

DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	CORE SAMPLE INTERVAL	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTIMATED %	Au (opt)		A (op
	89			740			BD		0.0
				741			BD		0.0
	100			742			BD		0.0
				743			BD		0.0
				744			BD		0.0
	78			745			BD		BD
				746			BD		0.0
				747			BD		0.0
	83			748			BD		0.1
				749			0.001		0.1
				750			0.001		0.0
	91								
	98			756			BD		0.1
				757			0.001		0.0
	97			759			0.001		0.0
				761			BD		0.0
	89			762			BD		0.0
				763			BD		0.1
				764			0.004		0.0
	98			765			BD		0.0
	73								
				768			0.001		0.0
				769			0.008		0.0
				770			0.003		0.1
	94			771			0.001		0.1
				772			0.002		0.0
				773			0.003		0.0
	100			774			BD		0.1

PROJECT: Paiute LOCATION: Washoe Co., N.

CONTRACTOR: Coates CORE SIZE: NQ LOGGED BY: M. H. Payne HOLE NO: P-84-6

ELEVATION: 5370' BEARING: 164° INCLINATION: -26° SCALE: 1" = 10' SHEET 3 OF 4

STARTED: 9-4-84 COMPLETED: 9-4-84 TOTAL DEPTH: 215'

N E

SECTION	ALTERATION: SILIC.	ARGILL.	PROPYL.	PYRITIZ.	FRACTURING	VEINING	COMMENTS:	E. C REC'Y/HOLE:	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE NUMBER	% REC'Y./ SAMP. INT.	ESTI-MATED %	CORE SAMPLE Au (opt)		CORE SAMPLE Ag (op
140									Wk brecc'n and silic assoc w/ mod qtz stkwk 140.5', veining becomes weaker 143.8-147.5', pervasive limon stain on fracts 145.8', 2" thick massive clay seam				775			BD		0.0
													776			BD		0.0
													777			0.001		0.0
											100		778			0.001		0.0
													779			0.001		0.0
150													780			0.001		0.1
													781			0.006		0.0
													782			0.003		0.1
													783			0.002		0.0
											88		784			0.001		BD
													785			0.001		0.0
160													786			BD		0.0
													788			0.001		0.0
											55							
170																		
													791			BD		0.0
													792			0.001		0.0
													793			0.001		BD
									173.0-181.3', Fault. Lt gray gouge zone to 178.1'. 1% dissem py. Sharp contact. 178.1-181.3', dk gray, variably silic, mod bx, str stkwk veined zone w/ 2% py.		62		794			0.004		0.0
													795			0.001		0.0
180																		
									181.3-201.3', unaltered dike, sharp contact, fine-grained, black basaltic dike, str fracts with mod limon stain. Limon becomes heavy on fracts and pervasive in rock at 184.1-192.5'. 184.0', white calcite amygdules and thin vlets 192.5-201.3', dike unstained, fresh		40							
											75							
190											80							
													805			BD		0.0
									201.3-207.7', dk grn-gray, altered, welded, coarsely lithic tuff w/ propyl of lithic frags. 201.3-202.6, mod qtz + hem stkwk veins w/ wk bx textures		100							
200									207.7-211.4', sharp gradation, med gray, alt'd (cont'd		98							

COLLAR COORDINATES:
N E
STARTED: 9-4-84
COMPLETED: 9-4-84

ELEVATION: 5370'
BEARING: 164°
INCLINATION: -26°
TOTAL DEPTH: 215'

CONTRACTOR: Coates
CORE SIZE: NQ
LOGGED BY: M. H. Payne
SCALE: 1" = 10'

PROJECT: Paiute
LOCATION: Washoe Co., NV
HOLE NO: P-84-6
SHEET 4 OF 4

TD 210

SECTION
SILIC.
ARGILL.
PROPYL.
PYRITIZ.
FRACTURING
VEINING

ERA

DESCRIPTIVE GEOLOGY

welded, coarsely lithic tuff w/ wk limon on fracts
211.4-215.0', grades into red-brn, fresh, welded,
coarsely lithic tuff w/ black unalt'd biotite flakes

COMMENTS

RECY/HOLE:

DRILLING INTERVAL

% CORE RECOVERED
98

CORE SIZE

SAMPLE NUMBER

% RECY./ SAMP. INT.

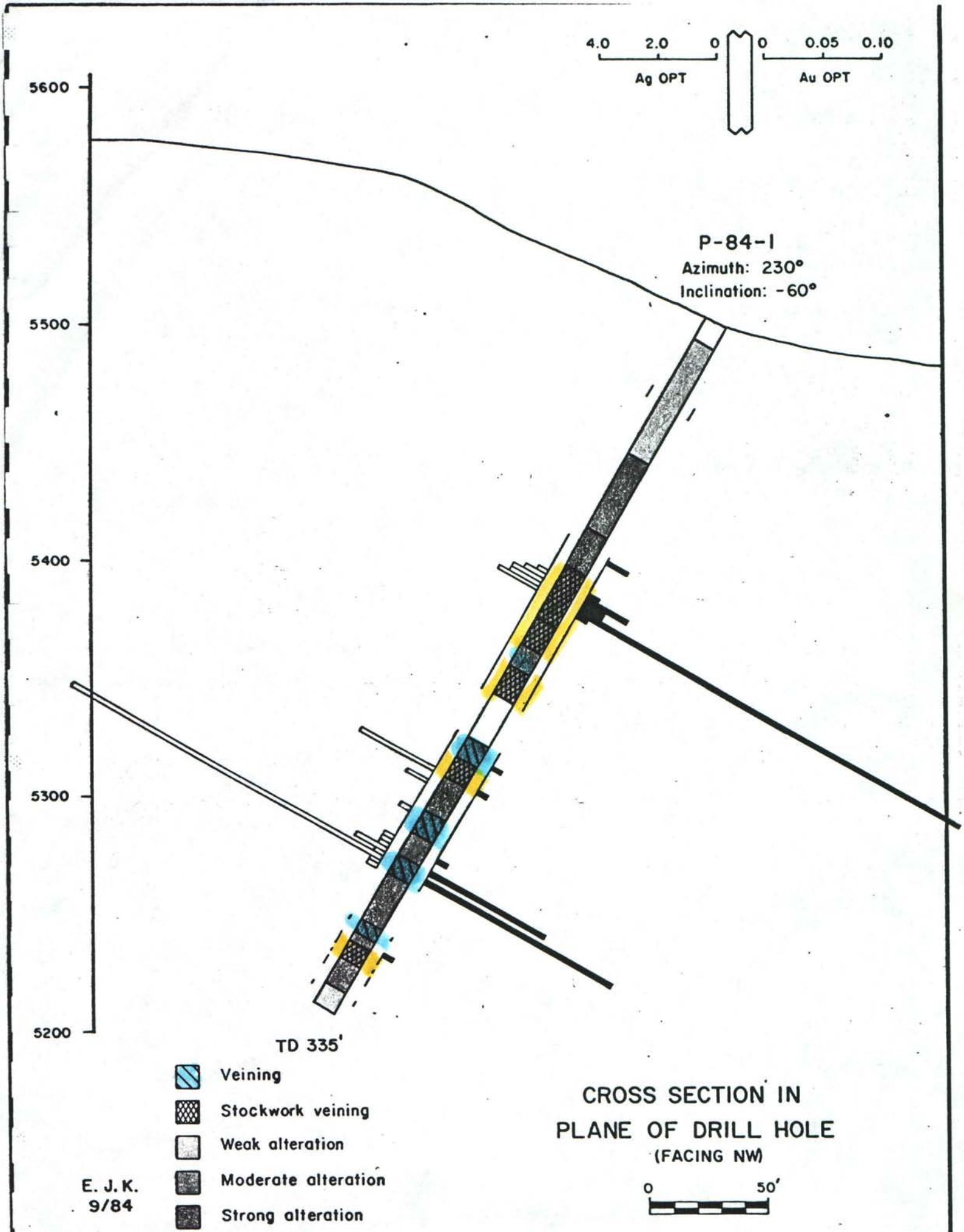
ESTI-MATED %

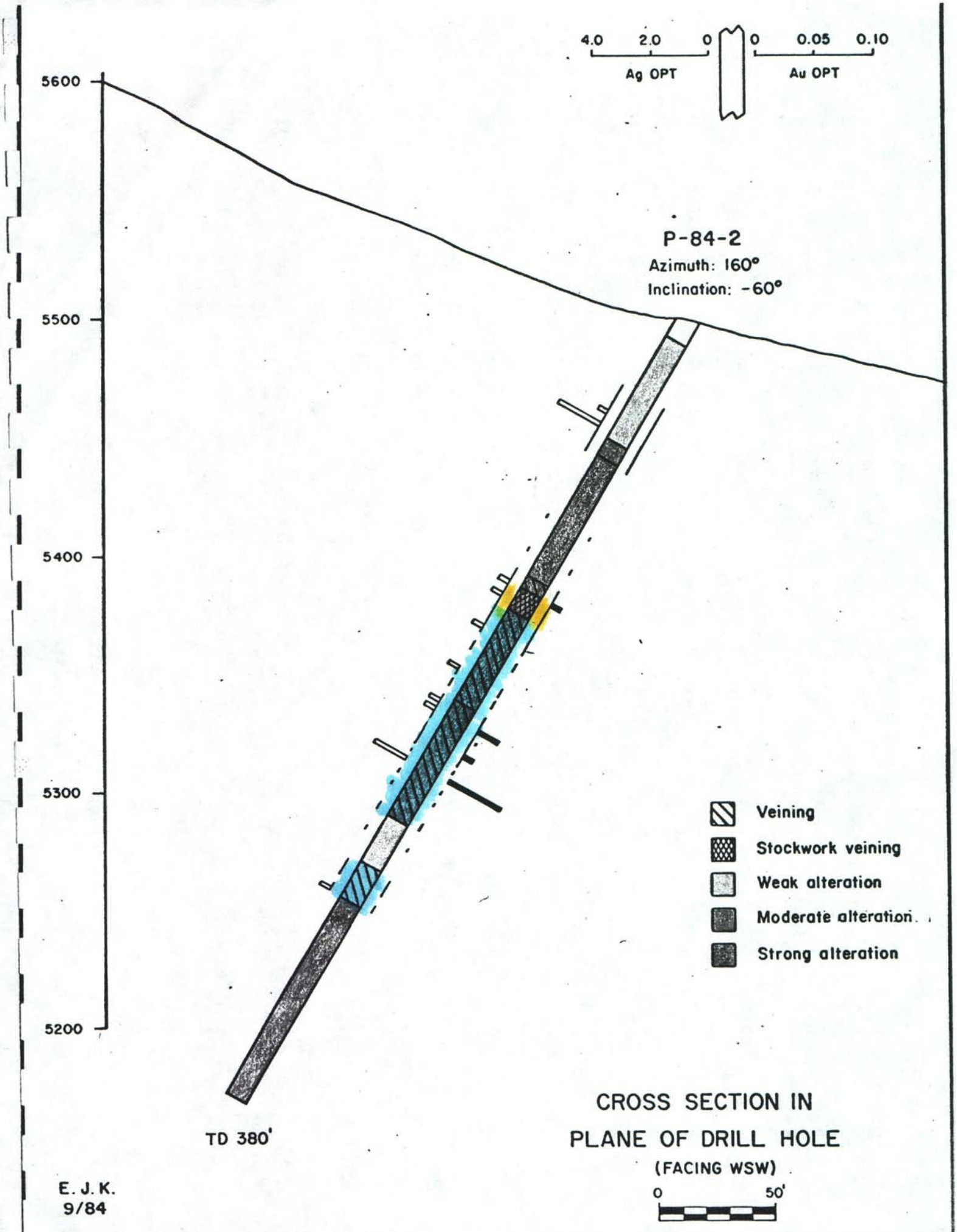
Au [opt]

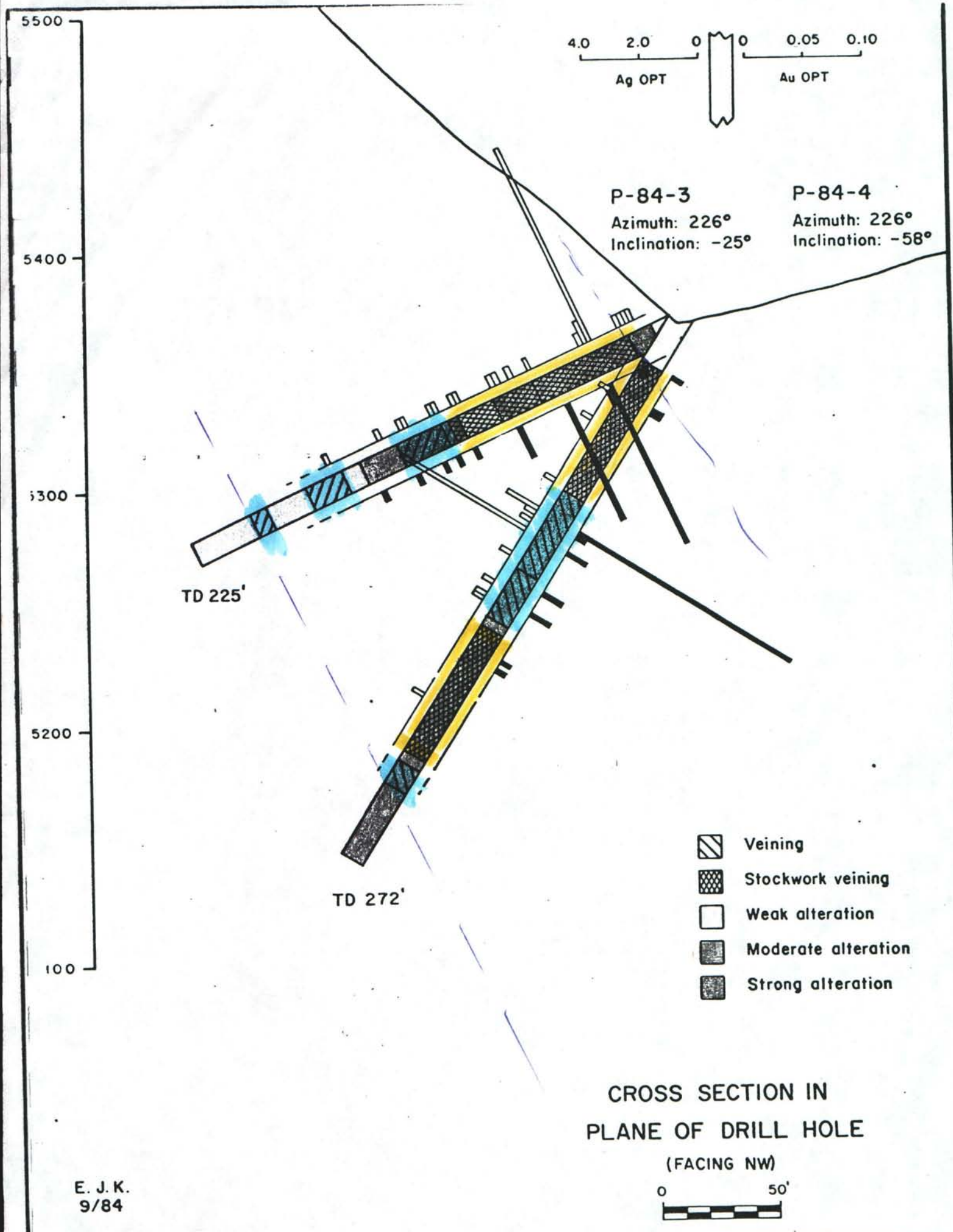
CORE SAMPLE INTE

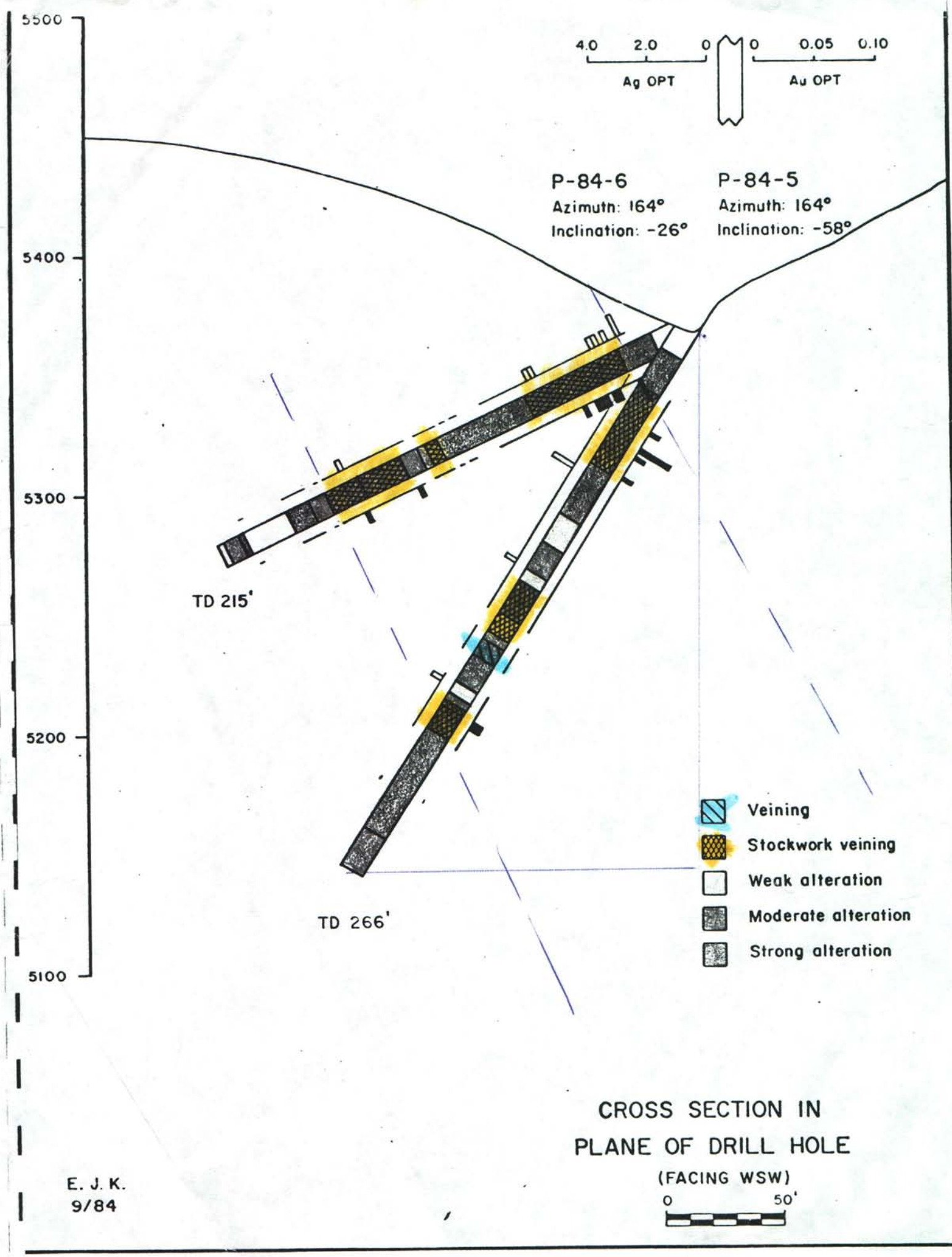
As [op

APPENDIX II


4.0 2.0 0
Ag OPT
0 0.05 0.10
Au OPT
5600
5500
5400
5300
5200
P-84-1
Azimuth: 230°
Inclination: -60°
TD 335'
Veining
Stockwork veining
Weak alteration
Moderate alteration
Strong alteration
E. J. K.
9/84
CROSS SECTION IN
PLANE OF DRILL HOLE
(FACING NW)
0 50'


4.0 2.0 0
Ag OPT
0 0.05 0.10
Au OPT
5600
5500
5400
5300
5200
P-84-2
Azimuth: 160°
Inclination: -60°
Veining
Stockwork veining
Weak alteration
Moderate alteration
Strong alteration
TD 380'
CROSS SECTION IN
PLANE OF DRILL HOLE
(FACING WSW)
0 50'
E. J. K.
9/84


5500
5400
5300
5200
100
4.0 2.0 0
Ag OPT
0 0.05 0.10
Au OPT
P-84-3
Azimuth: 226°
Inclination: -25°
P-84-4
Azimuth: 226°
Inclination: -58°
TD 225'
TD 272'
Veining
Stockwork veining
Weak alteration
Moderate alteration
Strong alteration
CROSS SECTION IN
PLANE OF DRILL HOLE
(FACING NW)
0 50'
E. J. K.
9/84



CROSS SECTION IN
PLANE OF DRILL HOLE
(FACING WSW)

0 50'

E. J. K.
9/84

PAIUTE PROPERTY

Washoe County, Nevada

August 1983

Dennis Forsberg

For

DENISON MINES (U.S.) INC.
Denver, Colorado

TABLE OF CONTENTS

APPENDICES

Maps

SUMMARY AND RECOMMENDATIONS

The Paiute Claims are located on the east flank of the Pah Rah Range approximately thirty miles north of Reno, Nevada. The area is underlain by a thick sequence of felsic to basic volcanic rocks of the Hartford Hill Rhyolite and Pyramid Formation. Gold and silver mineralization on the Paiute property occurs in silicified and argillized tuffs associated with east-west trending and northwest trending faults.

Exploration work conducted during the 1983 field season on the Paiute claim block consisted of geologic mapping and a reconnaissance geochemical survey. The results of this work have outlined two areas with the potential of widespread low grade gold and silver mineralization.

The first area, the Paiute fault zone, is a roughly east-west trending fault that can be traced on the ground for approximately 4,000 feet. In section 17, the intersection of the Paiute fault and northwest trending structures form a pod of argillized and silicified tuffs several thousand feet long and up to six hundred feet wide.

The second area is located on the north ridge of Big Mouth Canyon in section 17. Several parallel northwest trending faults form an argillized and silicified zone in the tuffs approximately 500 feet on a side. Most of the zone is covered.

Both areas are characterized by good structural preparation and by significant gold and silver geochemical anomalies.

Proposed work for 1984 consists of detailed geologic mapping and a 100-foot centered geochemical survey in both areas. A reconnaissance survey of all the gold propsects on the east flank of the Pah Rah Range should be conducted during 1984.

INTRODUCTION

Denison's Paiute claim block is located approximately thirty miles northeast of Reno, Nevada, in Washoe County.

The initial literature search and associated ground reconnaissance of the Pyramid Lake area indicated the potential for large scale precious metal deposits in the altered rhyolite tuffs that underly the area. Several grab samples from prospect pits in Big Mouth Canyon and Secret Canyon contained significant gold and silver anomalies. The ground was open and claim staking commenced in September 1981. Ninety-seven lode claims were staked, covering approximately three square miles.

In 1982, an airborne photogrammetric survey was flown over the area by Denison. Exploration work conducted in 1983 consisted of geologic mapping and a geochemical survey. The work was done by Dennis Forsberg of Spokane, Washington.

The purpose of this report is to summarize the exploration work and results to date and to make recommendations for future work.

LOCATION - ACCESS

The Paiute claim block consists of 97 contiguous lode claims located in sections 7, 8, 9, 16, 17, 18 and 19, T22N, R23 E, Washoe County, Nevada. The claims lie on the east flank of the Pah Rah Range about thirty miles northeast of Reno.

Access from Fernley, Nevada is by Nevada State Highway 34 to Pyramid Lake. Three miles of dirt road connect the Paiute property to Highway 34.

The claims and access roads are covered by the USGS Dixon 15½-minute quadrangle.

PROPERTY

The Paiute claims were staked by Robert N. Caldwell as Agent for Denison Mines. Claim staking commenced on Aug. 12, 1981 and was finished by Sept. 15, 1981.

A total of 97 lode claims were staked, covering approximately three square miles. The claims are 100% owned by Denison.

A list of claims and their respective BLM serial numbers follow this section.

CLAIM SUMMARY

CLAIM NAME	LOCATION DATE	RECORDING DATA DATE	RECEP. NO.	BOOK	PAGE	BLM SERIAL NO.	T 22 N R 23 E ¼	SEC.
Paiute #1	8/29/81	11/5/81	767218	1689	356	N MC 221311	SW	20
							NW	29
Paiute #2	8/29/81	11/5/81	767219	1689	357	N MC 221312	SW	20
Paiute #3	8/28/81	11/5/81	767220	1689	358	N MC 221313	SW	20
							NW	29
Paiute #4	8/28/81	11/5/81	767221	1689	359	N MC 221314	SW	20
Paiute #5	8/27/81	11/5/81	767222	1689	360	N MC 221315	SW	20
							NW	29
Paiute #6	8/27/81	11/5/81	767223	1689	361	N MC 221316	SW	20
Paiute #7	8/29/81	11/5/81	767224	1689	362	N MC 221317	NW	20
							SW	20
Paiute #8	8/29/81	11/5/81	767225	1689	363	N MC 221318	NW	20
Paiute #9	8/29/81	11/5/81	767226	1689	364	N MC 221319	NW	20
							SW	20
Paiute #10	8/29/81	11/5/81	767227	1689	365	N MC 221320	NW	20
Paiute #11	8/12/81	11/5/81	767228	1689	366	N MC 221321	NW	20
							SW	20
Paiute #12	8/12/81	11/5/81	767229	1689	367	N MC 221322	NW	20
Paiute #13	8/30/81	11/5/81	767230	1689	368	N MC 221323	SW	18
							SE	18
Paiute #14	8/30/81	11/5/81	767231	1689	369	N MC 221324	SW	18
							SE	18
							NW	18
							NE	18
Paiute #15	8/30/81	11/5/81	767232	1689	370	N MC 221325	SE	18
Paiute #16	8/30/81	11/5/81	767233	1689	371	N MC 221326	SE	18
							NE	18
Paiute #17	8/30/81	11/5/81	767234	1689	372	N MC 221327	SE	18
Paiute #18	8/30/81	11/5/81	767235	1689	373	N MC 221328	SE	18
							NE	18
Paiute #19	8/30/81	11/5/81	767236	1689	374	N MC 221329	SE	18
Paiute #20	8/30/81	11/5/81	767237	1689	375	N MC 221330	SE	18
							NE	18

CLAIM SUMMARY

CLAIM NAME	LOCATION DATE	RECORDING DATA DATE	RECEP. NO.	BOOK	PAGE	BLM SERIAL NO.	T 22 N R 23 E ¼	SEC.
Paiute #21	8/30/81	11/5/81	767238	1689	376	N MC 221331	SE	18
Paiute #22	8/30/81	11/5/81	767239	1689	377	N MC 221332	SE	18
							NE	18
Paiute #23	8/30/81	11/5/81	767240	1689	378	N MC 221333	SW	17
Paiute #24	8/30/81	11/5/81	767241	1689	379	N MC 221334	SW	17
							NW	17
Paiute #25	8/31/81	11/5/81	767242	1689	380	N MC 221335	SW	17
Paiute #26	8/31/81	11/5/81	767243	1689	381	N MC 221336	SW	17
							NW	17
Paiute #27	8/31/81	11/5/81	767244	1689	382	N MC 221337	SW	17
Paiute #28	8/31/81	11/5/81	767245	1689	383	N MC 221338	SW	17
							NW	17
Paiute #29	9/2/81	11/5/81	767246	1689	384	N MC 221339	SW	17
Paiute #30	9/2/81	11/5/81	767247	1689	385	N MC 221340	SW	17
							NW	17
Paiute #31	9/1/81	11/5/81	767248	1689	386	N MC 221341	SE	17
							SW	17
Paiute #32	9/1/81	11/5/81	767249	1689	387	N MC 221342	SE	17
							SW	17
							NE	17
							NW	17
Paiute #33	8/31/81	11/5/81	767250	1689	388	N MC 221343	SE	17
Paiute #34	8/31/81	11/5/81	767251	1689	389	N MC 221344	SE	17
							NE	17
Paiute #35	8/31/81	11/5/81	767252	1689	390	N MC 221345	SE	17
Paiute #36	8/31/81	11/5/81	767253	1689	391	N MC 221346	SE	17
							NE	17
Paiute #37	9/1/81	11/5/81	767254	1689	392	N MC 221347	SE	17
Paiute #38	9/1/81	11/5/81	767255	1689	393	N MC 221348	SE	17
							NE	17
Paiute #39	9/1/81	11/5/81	767256	1689	394	N MC 221349	SE	17

CLAIM SUMMARY

CLAIM NAME	LOCATION DATE	RECORDING DATA DATE	RECEP. NO.	BOOK	PAGE	BLM SERIAL NO.	T 22 N R 23 E ¼	SEC.
Paiute #40	9/1/81	11/5/81	767257	1689	395	N MC 221350	SE	17
							NE	17
Paiute #41	9/1/81	11/5/81	767258	1689	396	N MC 221351	SW	16
Paiute #42	9/1/81	11/5/81	767259	1689	397	N MC 221352	SW	16
							NW	16
Paiute #43	9/1/81	11/5/81	767260	1689	398	N MC 221353	SW	16
Paiute #44	9/1/81	11/5/81	767261	1689	399	N MC 221354	SW	16
							NW	16
Paiute #45	9/1/81	11/5/81	767262	1689	400	N MC 221355	NW	18
Paiute #46	9/1/81	11/5/81	767263	1689	401	N MC 221356	NW	18
							SW	7
Paiute #47	8/30/81	11/5/81	767264	1689	402	N MC 221357	NE	18
							NW	18
Paiute #48	8/30/81	11/5/81	767265	1689	403	N MC 221358	NE	18
							NW	18
							SE	7
							SW	7
Paiute #49	8/30/81	11/5/81	767266	1689	404	N MC 221359	NE	18
Paiute #50	8/30/81	11/5/81	767267	1689	405	N MC 221360	NE	18
							SE	7
Paiute #51	8/30/81	11/5/81	767268	1689	406	N MC 221361	NE	18
Paiute #52	8/30/81	11/5/81	767269	1689	407	N MC 221362	NE	18
							SE	7
Paiute #53	8/30/81	11/5/81	767270	1689	408	N MC 221363	NE	18
Paiute #54	8/30/81	11/5/81	767271	1689	409	N MC 221364	NE	18
							SE	7
Paiute #55	9/3/81	11/5/81	767272	1689	410	N MC 221365	NW	17
Paiute #56	9/3/81	11/5/81	767273	1689	411	N MC 221366	NW	17
Paiute #57	8/30/81	11/5/81	767274	1689	412	N MC 221367	NW	17
Paiute #58	8/30/81	11/5/81	767275	1689	413	N MC 221368	NW	17
							SW	8

CLAIM SUMMARY

CLAIM NAME	LOCATION DATE	RECORDING DATA DATE	RECEP. NO.	BOOK	PAGE	BLM SERIAL NO.	T 22 N R 23 E ¼	SEC.
Paiute #59	8/30/81	11/5/81	767276	1689	414	N MC 221369	NW	17
Paiute #60	8/30/81	11/5/81	767277	1689	415	N MC 221370	NW	17
							SW	8
Paiute #61	8/31/81	11/5/81	767278	1689	416	N MC 221371	NE	17
							NW	17
Paiute #62	8/31/81	11/5/81	767279	1689	417	N MC 221372	NE	17
							NW	17
							SE	8
							SW	8
Paiute #63	8/31/81	11/5/81	767280	1689	418	N MC 221373	NE	17
Paiute #64	8/31/81	11/5/81	767281	1689	419	N MC 221374	NE	17
							SE	8
Paiute #65	8/31/81	11/5/81	767282	1689	420	N MC 221375	NE	17
Paiute #66	8/31/81	11/5/81	767283	1689	421	N MC 221376	NE	17
							SE	8
Paiute #67	8/31/81	11/5/81	767284	1689	422	N MC 221377	NE	17
Paiute #68	8/31/81	11/5/81	767285	1689	423	N MC 221378	NE	17
							SE	8
Paiute #69	8/31/81	11/5/81	767286	1689	424	N MC 221379	NE	17
							NW	16
Paiute #70	8/31/81	11/5/81	767287	1689	425	N MC 221380	NE	17
							SE	8
							NW	16
Paiute #71	9/1/81	11/5/81	767288	1689	426	N MC 221381	NW	16
Paiute #72	9/1/81	11/5/81	767289	1689	427	N MC 221382	NW	16
							SE	8
Paiute #73	9/1/81	11/5/81	767290	1689	428	N MC 221383	NW	16
Paiute #74	9/1/81	11/5/81	767291	1689	429	N MC 221384	NW	16
							SW	9
Paiute #75	9/2/81	11/5/81	767292	1689	430	N MC 221385	SW	8
Paiute #76	9/2/81	11/5/81	767293	1689	431	N MC 221386	SW	8
							NW	8

CLAIM SUMMARY

CLAIM NAME	LOCATION DATE	RECORDING DATA DATE	RECEP. NO.	BOOK	PAGE	BLM SERIAL NO.	T 22 N R 23 E ¼	SEC.
Paiute #77	9/2/81	11/5/81	767294	1689	432	N MC 221387	SW	8
							SE	8
Paiute #78	9/2/81	11/5/81	767295	1689	433	N MC 221388	NW	8
							SW	8
Paiute #79	9/2/81	11/5/81	767296	1689	434	N MC 221389	SE	8
Paiute #80	9/2/81	11/5/81	767297	1689	435	N MC 221390	NE	8
							SE	8
							NW	8
							SW	8
Paiute #81	9/2/81	11/5/81	767298	1689	436	N MC 221391	SE	8
Paiute #82	9/2/81	11/5/81	767299	1689	437	N MC 221392	NE	8
							SE	8
Paiute #83	9/2/81	11/5/81	767300	1689	438	N MC 221393	SE	8
Paiute #84	9/2/81	11/5/81	767301	1689	439	N MC 221394	NE	8
							SE	8
Paiute #85	9/1/81	11/5/81	767302	1689	440	N MC 221395	SE	8
Paiute #86	9/1/81	11/5/81	767303	1689	441	N MC 221396	NE	8
							SE	8
Paiute #87	9/1/81	11/5/81	767304	1689	442	N MC 221397	SE	8
Paiute #88	9/1/81	11/5/81	767305	1689	443	N MC 221398	NE	8
							SE	8
Paiute #89	9/1/81	11/5/81	767306	1689	444	N MC 221399	NE	8
Paiute #90	9/1/81	11/5/81	767307	1689	445	N MC 221400	NE	8
Paiute #91	9/14/81	11/5/81	767308	1689	446	N MC 221401	NE	8
							SE	5
Paiute #92	9/14/81	11/5/81	767309	1689	447	N MC 221402	SW	20
Paiute #93	9/14/81	11/5/81	767310	1689	448	N MC 221403	SW	20
							NW	20
Paiute #94	9/14/81	11/5/81	767311	1689	449	N MC 221404	SE	20
							SW	20

CLAIM SUMMARY

CLAIM NAME	LOCATION DATE	RECORDING DATA DATE	RECEP. NO.	BOOK	PAGE	BLM SERIAL NO.	T 22 N R 23 E ¼	SEC.
Paiute #95	9/14/81	11/5/81	767312	1689	450	N MC 221405	SE SW	20 20
Paiute #96	9/15/81	11/5/81	767313	1689	451	N MC 221406	SE	20
Paiute #97	9/15/81	11/5/81	767314	1689	452	N MC 221407	SE	20

8/31/83

/jg

PREVIOUS WORK

The geology of the Pah Rah Range is covered in the Nevada Bureau of Mines Bulletin 70, Geology and Mineral Deposits of Washoe and Story Counties, Nevada, by Harold F. Bonham. The geologic map that accompanies the bulletin is scaled at 1:250,000. The gold-siver prospects in Big Mouth Canyon and Secret Canyon are briefly mentioned on page 75.

1983 EXPLORATION

The exploration program for 1983 consisted of geologic mapping and a reconnaissance geochemical survey.

A total of eighteen days were spent in the field. The Paiute property was mapped on a scale of 1:6,000 (Plate E). One hundred sixty-nine rock chip samples were collected on the claims. The sample locations were plotted on the map by topography and the use of an altimeter. Three areas within the claim block were mapped and sampled on a scale of 1:1200 (Plates A, B, C).

REGIONAL GEOLOGY

The Paiute project is located on the east flank of the Pah Rah Rnage, five miles south of Pyramid Lake. Pah Rah Range displays a northeast trend and is complexly faulted.

Small exposures of metamorphic rocks and granodiorite of Mesozoic age are exposed on the west flank of the range. The majority of the mountains are underlain by a thick sequence of volcanic rocks of Tertiary age. The volcanic formations range in age from Oligocene through Pliocene and vary in composition from basalt to rhyolite. Four volcanic formations have been mapped in the project area (Bonham).

The Pah Rah Formation outcrops to the north in Coal Creek Canyon and consists of andesites and mudflow breccias.

The Hartford Hill Rhyolite covers most of the project area. It consists predominately of ash fall and ash flow tuffs of rhyolitic composition.

Basalts and andesites of the Pyramid Formation overlie the Hartford Hill Rhyolite on the eastern boundary of the Paiute property and extend eastward.

The Kate Peak Formation consists of volcanic flows and breccias of felsic to intermediate composition occurs south of the claim block.

A small rhyolite intrusive outcrops in Coal Creek Canyon.

STRATIGRAPHY

The oldest rocks exposed on the Paiute claim block are a thick sequence of tuff and epiclastic rocks of the Hartford Hill Rhyolite. On the property the Hartford Hill Rhyolite has been divided into three members. The lower member consists of moderately welded lithic tuff and lapilli tuff. The middle member consists predominately of crystal tuff and the upper member is composed of welded lapilli tuff and agglomerate. The Hartford Hill Rhyolite is thought to be lower Miocene in age.

Basalt and andesite flows of the Pyramid Formation unconformably overlie the tuffs on the eastern side of the property.

Hartford Hill Rhyolite

Nearly all of the Paiute property is underlain by the Hartford Hill Rhyolite. Lithic tuffs of the fomration are the host rocks of the gold and silver mineralization in the Olinghouse Mining District located about ten miles south of the Paiute claims.

On the Paiute claim block, the Hartford Hill Rhyolite can be divided into three members. The lower member consists of a monotonous sequence of moderately welded, grey to blue-gray, lapilli tuff and lithic tuff of rhyolite composition with intercalated volcanic sandstone and conglomerate. Thin beds of volcanic derived sandstone and conglomerate outcrop in the SW¼ section 17 and near the section line between sections 17 and 18 at 6200 feet in elevation.

The grey tuffs of the lower member contain various amounts of quartz, sanadine and biotite. These tuffs have undergone prevasive propylitic alteration. The biotite and rock fragments in the tuffs have been replaced by chlorite and the sanadine feldspars are frequently altered to clay.

Fine-grained tuff of rhyolite composition outcrops in Secret Canyon in the SE$\frac{1}{4}$ section 20 and appears to be intercalated in the lower member.

Approximately 700 feet of tuffs of the lower member are present on the Paiute claims. The bottom of the unit is not exposed in the project area.

The middle member of the Hartford Hill Rhyolite consists of two units. The lower unit is a welded grey crystal tuff of rhyolite composition. These tuffs contain at least 50% crystals of quartz, sanadine, and biotite and form-resistant outcrops. Additionally, this unit is usually bleached, argillized and goethite-stained. The effect of the alteration is a white silicous rock in which the feldspars are altered to clay. The rock is heavily fractured and the fractures are goethite-stained. Many rock samples were collected from these altered tuffs. None of the samples contained anomalous amounts of gold or silver. The crystal tuff is approximately 140-160 feet thick in the area.

Overlying the crystal tuff, the upper unit of the middle member of the Hartford Hill Rhyolite is a purple lapilli tuff with rock clasts up to

1½-inches in diameter. This unit contains few crystals and frequently is heavily altered like the crystal tuff beneath it. When both the upper and lower units are heavily argillized and iron-stained, they are hard to distinguish from each other. However, the upper unit is usually less altered from the crystal tuff. The lapilli tuff is usually bleached and argillized along fractures and as blotches, even though the crystal tuff beneath it may be completely argillized. The lapilli tuff is approximately four feet thick. The total thickness of the middle member is approximately 200 feet.

In the project area, the upper member of the Hartford Hill Rhyolite is comprised predominantly of purple welded lapilli tuffs and agglomerate with intercalated lithic tuff. All are rhyolitic in composition and are unaltered. Approximately 500 feet of the upper member is exposed on the claim block. The top of the unit lies west of the claims and the total thickness of the upper member is greater than 1,000 feet.

Uncomformably overlying the Hartford Hill Rhyolite in the project area are basalt and andesite flows to the Pyramid Formation of upper Miocene age. The Pyramid Formation outcrops on the far eastern edge of the Paiute claim block in the $SE\frac{1}{4}$ section 17, the $W\frac{1}{2}$ section 16, the $SW\frac{1}{4}SW\frac{1}{4}$ section 9, and the $NE\frac{1}{4}SE\frac{1}{4}$ section 8. The rocks are essentially unaltered in the project area and have a maximum thickness of 500 feet.

Generalized Stratigraphic Column

Thick (ft)	Formation	Symbol
	Quaternary Alluvium	Qal
	Hartford Hill Rhyolite	
500+	upper member	Thu
200+	middle member	Thm
700+	lower member	Thl
300+	Pyramid Formation	Tsv

STRUCTURE

Two major fault systems are present in the Pah Rah Range, an east-northeast trending system and a northwest trending system. The northwest system may be the structural elements of the Walker Lane fault zone (Bonham, page 51). The Teritary rocks in the range generally strike northwest and dip southwest.

The prominent structural feature on the Paiute property is a roughly east-west trending fault that dips to the north approximately 70°. It can be traced from the center of section 18 to the center of section 17. In this report, it will be referred to as the Paiute fault. The fault splits into three roughly parallel structures in section 17. The lithic tuffs between the faults are argillized and display varying amounts of silicification. The fault plane is silicified and explored by prospect pits and tunnels along its entire length (Plate E). The crystal tuffs on the north side of the Paiute fault have been dropped nearly 400 feet compared to the same unit on the south side of the fault. The Paiute fault is terminated by a northwest striking fault in the center of section 17.

The northwest trending faults in section 17 have silicified fault planes and display right lateral movement on the order of a few tens of feet. The northwest trending fault mapped in section 20 does not have a silicified fault plane and its movement is approximately 600 feet left lateral.

Many east-west trending and northwest trending faults cross the ridge in the center of section 17. There are no marker horizons there, so movement cannot be determined with certainity. Each of these faults has a narrow silicified zone associated with it.

An east-west trending fault in the S½ section 8 crosses the crystal tuff of the Hartford Hill Rhyolite and exhibits about 300 feet of lateral movement.

The property is cut by many northeast trending faults and lineaments. The northeast trending fault in the SE¼ section 18 has displaced the crystal tuffs 200 feet vertically and 800 feet laterally. Another northeast trending fault in the SW¼ section 17 has dropped the crystal tuffs on the east side of the fault approximately 400 feet below the tuffs on the west side of the fault. Several of the northeast trending faults in section 17 have silicified and argillic zones associated with them.

The geologic mapping on the property indicates that the northeast trending faults are the oldest. They have been offset by the east-west trending faults and the northwest trending faults. The northwest trending faults offset the east-west trending faults and are probably the youngest structures on the property.

The volcanic units on the claim block display various strikes and dips, but from the geologic map, it is obvious that they trend northwest and dip southwest about 10-20°.

GEOCHEMISTRY

During this year's program, one hundred sixty-nine rock chip samples were collected on the Paiute property. The samples were analyzed for gold and silver by Barringer Resources in Sparks, Nevada. Sample 168 is reported missing on the Barringer Lab report.

Anomaly thresholds for the samples were figured using the mean plus twice the standard deviation. Values representing obvious anomalies (silver >2 ppm, gold >.5 ppm) were not considered in this evaluation.

Gold (values <.5 ppm)	158 samples	
mean	standard deviation	anomaly threshold
.045 ppm	.077 ppm	.20 ppm

Silver (values <2 ppm)	131 samples	
mean	standard deviation	anomaly threshold
.29 ppm	.31 ppm	.91 ppm

All samples collected during this program were reconnaissance samples, about two pounds in weight, and were biased in favor of quartz vein material.

ALTERATION - MINERALIZATION

Two types of alteration are associated with the faults on the Paiute property, argillic alteration and silicification. Silicified rocks along the faults grade outward into a zone of argillic alteration, then into unaltered tuffs. Argillic alteration also occurs along north-northeast trending faults where no silicification is present. The width of the altered areas varies from one foot to several hundred feet.

The argillic altered tuffs on the property appear white because the feldspar in the rocks has been altered to clay and the biotite has been destroyed. The altered tuffs weather brown due to the various amounts of goethite in the rocks. Narrow calcite veins occur in northeast trending structures in two localities, at the tunnel located in the SE¼ section 17 (samples 77 and 78) and the NE¼ section 17.

On the Paiute claims, silicification occurs as stockwork quartz and quartz-pyrite veinlets in argillized tuffs and less frequently as silica replacement of the tuffs. All of the gold and silver geochemical anomalies on the Paiute claim block occur in silicified tuffs and in the argillized rocks adjacent to the silicified tuffs.

Section 18

The Paiute fault in section 18 is silicified and explored by several prospect pits. Rock samples from the dumps of these pits contain

significant gold and silver geochemical anomalies. The silicified zone at the fault consists of stockwork quartz veins and silica replacement of the tuffs and varies from four feet (sample 103) to several hundred feet thick (samples 94-99). On one area, the argillic zone widens to approximately 140 feet and contains some quartz veinlets (sample 106). Table 1 contains a list of the gold and silver geochemical anomalies of the Paiute fault in section 18.

Section 17

The Paiute fault splits into three roughly parallel structures in the center of section 17. The altered zone associated with these faults is several thousand feet long and up to 600 feet wide. This zone contains many significant gold and silver geochemical anomalies, particularly on the west end (Plate A), where several northwest trending and northeast trending faults intersect the Paiute fault. This structural intersection forms a pod of silicified tuffs 600 feet long and 150 feet wide. All of the rock samples from this zone were geochemically anomalous in gold and silver (Table 2). The Paiute fault is cut off on the east, in the center of section 17, by a northwest trending fault.

The rock chip samples from many of the northwest trending faults that cross the north ridge of Big Mouth Canyon contained gold and silver anomalies. In one area the faults are close enough together to form a zone of silicified and argillized tuffs approximately 500 feet long by

500 feet wide (Plate E). Most of the zone is covered. Table 3 is a list of gold and silver geochemical anomalies from this zone.

Further up the ridge to the southwest, other east-west trending and northwest trending faults with narrow silicified zones outcrop. Rock chip samples from these zones also contained gold and silver geochemical anomalies (samples 26, 137, 138, 139, and 140). However, the silicified zones are narrow and may be too far apart for this area of be of importance.

Prospect pits explore three north-south trending silicified faults on the south side of Big Mouth Canyon in the NE¼SE¼ section 17. Two high graded dump samples from the prospect pits contained gold and silver geochemical anomalies (Plate B). Sample 66, collected across the narrow silicified zone of one fault, contained 18.9 ppm silver and .02 ppm gold. Samples across the other faults did not have anomalous amounts of gold and silver.

PROPOSED WORK

Geologic mapping and reconnaissance geochemical sampling conducted during 1983 on the Paiute claims have outlined two areas with the potential of widespread low grade gold and silver mineralization. The first area is the Paiute fault zone in sections 17 and 18. The second area is the northwest trending system on the northern ridge of Big Mouth Canyon in section 17.

The proposed work consists of detailed geologic mapping at a scale of 1:2400 coupled with a 100-foot center geochemical survey over both areas, and a general reconnaissance of the precious metal prospects on the east flank of the Pah Rah Range.

If a new topographic base map of the claim block can be made from the 1982 photogrammetric survey flown over the area, it should be done. If not, then the grid for the proposed geochemical surveys would provide an adequate base for geologic mapping.

A ground reconnaissance of all the gold prospects on the east flank of the Pah Rah Range should be conducted. Other prospects with the potential for widespread gold and silver mineralization may exist in the rugged terrain of the Pah Rah Range.

TABLE 1

PAIUTE FAULT - SECTION 18

Gold and Silver Geochemical Anomalies

Sample Number	Ag ppm	Au ppm	Description
94	2.2	.14	Silica stockwork in argillized tuffs, pyrite on fractures, goethite-stained, 20-ft grab
95	2.2	.04	Same as #94
96	5.6	<.02	Same as #94
98	1.4	<.02	Same as #94
99	.9	<.02	Same as #94
101	2.3	<.02	Dump, silicified tuffs
102	1.1	.02	Silica breccia, goethite-stained, 8-10 ft grab
103	5.5	3.45	Dump, silicified tuffs
105	4.0	1.91	Dump, silicified tuffs
106	4.0	2.32	Argillized tuffs with silica veins, 140-ft wide, geothite-stained, grab sample

TABLE 2

PAIUTE FAULT - SECTION 17

Gold and Silver Geochemical Anomalies

Sample Number	Ag ppm	Au ppm	Description
108	33.5	.56	Quartz-pyrite stockwork, 15-ft grab
109	9.8	<.02	2-ft silicified zone above adit
110	2.0	<.02	Dump, silicified-argillized tuffs
111	7.7	.16	Same as #108
112	22.8	.38	Silicified, goethite-stained tuffs
113	18.7	.28	Same as #112
114	28.0	.74	Same as #112
115	2.4	.44	Dump, argillized tuffs
116	4.6	4.24	Heavily argillized, goethite-stained tuffs, some quartz veins
120	2.7	<.02	Stockwork quartz veins, intersection Big Mouth Canyon fault and northwest trending fault
122	44.0	.48	Dump, argillized tuffs, some quartz veins
123	1.5	.36	Quartz stockwork, geothite-stained
124	4.7	.04	Dump, quartz stockwork, goethite-stained
125	5.1	.08	Quartz stockwork, by adit
130	1.9	.06	Intersection Big Mouth Canyon fault and northeast trending fault, quartz stockwork
142	4.1	<.02	Argillized tuffs with some quartz veins, 50-ft wide, grab sample
143	2.5	<.02	Same as #142, zone is 20-ft wide, grab sample
144	2.2	<.02	Same as #142, dump of prospect pit
148	164.0	1.54	3-ft quartz vein, goethite-stained
151	38.5	.54	100-ft-plus quartz stockwork in argillized tuffs, grab sample
154	13.1	.04	Hanging wall Big Mouth Canyon fault, quartz stockwork in argillized tuffs
155	2.2	<.02	Same as #154, less quartz
156	2.2	<.02	Same as #155
157	30.6	.22	20-ft quartz-pyrite stockwork zone
160	1.9	<.02	Quartz-pyrite stockwork in argillized tuffs

TABLE 3

NORTHWEST TRENDING FAULT SYSTEM - SECTION 17

Gold and Silver Geochemical Anomalies

Sample Number	Ag ppm	Au ppm	Description
33	15.4	3.2	Silicified-argillized tuffs on northwest trending fault
80	4.8	.04	12-ft zone, argillized tuffs with quartz stockwork
81	6.2	6.33	Same as #80
83	1.1	<.02	Same as #80, zone is 200-ft wide, grab sample
84	46.5	2.67	Same as #83

REFERENCES

Bonham, Harold F., 1969, Geology and Mineral Deposits of Washoe and Story counties, Nevada: Nevada Bureau of Mines and Geology, Bulletin 70, 140 pp.

APPENDIX 1

Geochemical Results

BARRINGER RESOURCES INC.
OFFICES & MINERALS
LABORATORY:
1455 DEMING WAY, SUITE 15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158

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DENISON MINES, INC.
1776 LINCOLN ST.
DENVER, CO
80203

ATTN: DENNIS FORSLY

WORK ORDER: 1430R-83

*** FINAL REPORT ***

GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM	AU PPM
83: 1 -PS	0.1	<0.02
83: 2 -PR	<0.1	<0.02
83: 3 -PR	<0.1	<0.02
83: 4 -PR	0.1	<0.02
83: 5 -PR	<0.1	<0.02
83: 6 -PR	0.1	<0.02
83: 7 -PR	0.4	<0.02
83: 8 -PR	0.1	<0.02
83: 9 -PR	0.1	<0.02
83: 10 -PR	<0.1	<0.02
83: 11 -PR	0.1	<0.02
83: 12 -PR	0.1	<0.02
83: 13 -PR	0.1	<0.02
83: 14 -PR	0.1	<0.02
83: 15 -PR	<0.1	<0.02
83: 16 -PR	0.2	<0.02
83: 17 -PR	<0.1	<0.02
83: 18 -PR	0.1	<0.02
83: 19 -PR	<0.1	<0.02
83: 20 -PR	0.1	<0.02
83: 21 -PR	0.1	<0.02
83: 22 -PR	<0.1	<0.02
83: 23 -PR	0.1	<0.02
83: 24 -PR	0.3	<0.02
83: 25 -PR	0.1	<0.02
83: 26 -PR	0.6	0.32
83: 27 -PR	0.1	<0.02
83: 28 -PR	0.9	0.22
83: 29 -PR	<0.1	<0.02
83: 30 -PR	7.2	0.08

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OFFICES & MINERALS
LABORATORY:
1455 DEMING WAY, SUITE 15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158

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GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM	AU PPM
83: 31 -PR	0.3	<0.02
83: 32 -PR	0.3	<0.02
83: 33 -PR	15.4	3.2
83: 34 -PR	0.3	<0.02
83: 35 -PR	0.3	<0.02
83: 36 -PR	0.1	<0.02
83: 37 -PR	0.1	<0.02
83: 38 -PR	<0.1	<0.02
83: 39 -PR	0.1	<0.02
83: 40 -PR	<0.1	<0.02
83: 41 -PR	<0.1	<0.02
83: 42 -PR	<0.1	<0.02
83: 43 -PR	0.1	<0.02
83: 44 -PR	<0.1	<0.02
83: 45 -PR	<0.1	<0.02
83: 46 -PR	<0.1	<0.02
83: 47 -PR	0.1	<0.02
83: 48 -PR	<0.1	<0.02
83: 49 -PR	0.1	<0.02
83: 50 -PR	0.2	<0.02
83: 51 -PR	<0.1	<0.02
83: 52 -PR	0.1	<0.02
83: 53 -PR	0.2	<0.02
83: 54 -PR	0.1	<0.02
83: 55 -PR	0.1	<0.02
83: 56 -PR	0.1	<0.02
83: 57 -PR	0.1	<0.02
83: 58 -PR	0.1	<0.02
83: 59 -PR	0.8	0.1
83: 60 -PR	0.7	<0.02

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OFFICES & MINERALS
LABORATORY:
1455 DEMING WAY, SUITE 15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158

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DENISON MINES, INC.
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DENVER, CO
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GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM	AU PPM
83: 91 -PR	0.1	<0.02
83: 92 -PR	0.1	<0.02
83: 93 -PR	0.2	<0.02
83: 94 -PR	2.2	0.14
83: 95 -PR	2.2	0.04
83: 96 -PR	5.6	<0.02
83: 97 -PR	0.7	<0.02
83: 98 -PR	1.4	<0.02
83: 99 -PR	0.9	<0.02
83: 100 -PR	<0.1	<0.02

SIGNED: _____
James R. Lee,
LABORATORY MANAGER

FOOTNOTES:
P=QUESTIONABLE PRECISION; *=INTERFERENCE; TR=TRACE; ND=NOT DETECTED;
IS=INSUFFICIENT SAMPLE; NA=NOT ANALYZED; MS=MISSING SAMPLE

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OFFICES & MINERALS
LABORATORY:
1455 DEMING WAY, SUITE 15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158

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AUTHORITY:WILLIAM MITCHELL

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1924 WEST NORA
SPOKANE, WASHINGTON
99205

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GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM	AU PPM
83: 101 -PR	2.3	<0.02
83: 102 -PR	1.1	0.02
83: 103 -PR	5.5	3.45
83: 104 -PR	0.2	<0.02
83: 105 -PR	4.0	1.91
83: 106 -PR	4.0	2.32
83: 107 -PR	0.4	<0.02
83: 108 -PR	33.5	0.56
83: 109 -PR	9.8	<0.02
83: 110 -PR	2.0	<0.02
83: 111 -PR	7.7	0.16
83: 112 -PR	22.8	0.38
83: 113 -PR	18.7	0.28
83: 114 -PR	28.0	0.74
83: 115 -PR	2.4	0.44
83: 116 -PR	4.6	1.24
83: 117 -PR	0.4	0.04
83: 118 -PR	0.7	0.04
83: 119 -PR	0.6	0.04
83: 120 -PR	2.7	<0.02
83: 121 -PR	0.7	0.08
83: 122 -PR	44.0	0.48
83: 123 -PR	1.5	0.36
83: 124 -PR	4.7	0.04
83: 125 -PR	5.1	0.08
83: 126 -PR	0.3	0.02
83: 127 -PR	0.2	<0.02
83: 128 -PR	0.6	<0.02
83: 129 -PR	0.9	<0.02
83: 130 -PR	1.9	0.06

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LABORATORY:
1455 DEMING WAY, SUITE 15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158

BARRINGER RESOURCES

AUTHORITY:WILLIAM MITCHELL

18-AUG-83

COPY: 3 OF 3
C O P Y

DENNIS FORSBERG
1924 WEST NORA
SPOKANE, WASHINGTON
99205

WORK ORDER: 1453R-83

*** FINAL REPORT ***

GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM	AU PPM
83: 131 -PR	0.6	<0.02
83: 132 -PR	0.2	<0.02
83: 133 -PR	0.2	<0.02
83: 134 -PR	0.2	<0.02
83: 135 -PR	0.1	<0.02
83: 136 -PR	0.7	0.08
83: 137 -PR	3.3	<0.02
83: 138 -PR	2.7	0.08
83: 139 -PR	1.4	<0.02
83: 140 -PR	13.5	0.48
83: 141 -PR	0.4	0.08
83: 142 -PR	4.1	<0.02
83: 143 -PR	2.5	<0.02
83: 144 -PR	2.2	<0.02
83: 145 -PR	0.1	<0.02
83: 146 -PR	0.8	<0.02
83: 147 -PR	0.4	<0.02
83: 148 -PR	164.0	1.54
83: 149 -PR	0.3	0.06
83: 150 -PR	0.4	<0.02
83: 151 -PR	38.5	0.54
83: 152 -PR	0.3	<0.02
83: 153 -PR	0.9	<0.02
83: 154 -PR	13.1	0.04
83: 155 -PR	2.2	<0.02
83: 156 -PR	2.2	<0.02
83: 157 -PR	30.6	0.22
83: 158 -PR	0.6	<0.02
83: 159 -PR	0.2	<0.02
83: 160 -PR	1.9	<0.02

BARRINGER RESOURCES INC.
OFFICES & MINERALS
LABORATORY:
1455 DEMING WAY, SUITE 15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158

BARRINGER RESOURCES

12-AUG-83
PAGE: 3 OF 4
COPY: 1 OF 2

AUTHORITY:DENNIS FORSLY

DENISON MINES, INC.
1776 LINCOLN ST.
DENVER, CO
80203

ATTN: DENNIS FORSLY

WORK ORDER: 1130R-83

*** FINAL REPORT ***

GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM	AU PPM
83: 61 -PR	0.4	0.12
83: 62 -PR	81.0	2.12
83: 63 -PR	0.7	<0.02
83: 64 -PR	2.9	0.28
83: 65 -PR	0.8	0.06
83: 66 -PR	18.9	<0.02
83: 67 -PR	0.2	<0.02
83: 68 -PR	<0.1	<0.02
83: 69 -PR	0.1	<0.02
83: 70 -PR	0.1	<0.02
83: 71 -PR	0.1	<0.02
83: 72 -PR	0.3	0.08
83: 73 -PR	2.0	0.08
83: 74 -PR	0.4	0.08
83: 75 -PR	<0.1	<0.02
83: 76 -PR	<0.1	<0.02
83: 77 -PR	0.4	0.12
83: 78 -PR	0.2	<0.02
83: 79 -PR	1.2	<0.02
83: 80 -PR	4.8	0.04
83: 81 -PR	6.2	6.33
83: 82 -PR	0.7	<0.02
83: 83 -PR	1.1	<0.02
83: 84 -PR	46.5	2.67
83: 85 -PR	0.9	<0.02
83: 86 -PR	0.2	<0.02
83: 87 -PR	0.1	<0.02
83: 88 -PR	0.1	<0.02
83: 89 -PR	<0.1	<0.02
83: 90 -PR	<0.1	<0.02

BARRINGER RESOURCES INC.
OFFICES & MINERALS
LABORATORY:
1455 DEMING WAY, SUITE 15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158

BARRINGER RESOURCES

18-AUG-83
PAGE: 3 OF 3
COPY: 3 OF 3
C O P Y

AUTHORITY:WILLIAM MITCHELL

DENNIS FORSBERG
1924 WEST NORA
SPOKANE, WASHINGTON
99205

WORK ORDER: 1453R-83

*** FINAL REPORT ***

GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM	AU PPM
83: 161 -PR	0.4	<0.02
83: 162 -PR	<0.1	<0.02
83: 163 -PR	<0.1	<0.02
83: 164 -PR	0.2	<0.02
83: 165 -PR	<0.1	<0.02
83: 166 -PR	0.2	<0.02
83: 167 -PR	<0.1	<0.02
83: 168 -PR	MS	MS
83: 169 -PR	0.1	<0.02

SIGNED: James R. Lee

James R. Lee,
LABORATORY MANAGER

ORIGINAL TO:
DENISON MINES, INC.
DENVER, CO
WILLIAM MITCHELL

FOOTNOTES:
P=QUESTIONABLE PRECISION; *=INTERFERENCE; TR=TRACE; ND=NOT DETECTED;
IS=INSUFFICIENT SAMPLE; NA=NOT ANALYZED; MS=MISSING SAMPLE

APPENDIX 2

Sample Descriptions

SAMPLE DESCRIPTIONS

Sample Number	Sample Description
1	Soil above argillized rock, float is purple welded tuff
2	Transition zone - purple, blotchy, welded lithic tuff with argillized zones and rims around fractures, goethite on fractures
3	Bleached zone - welded lithic tuff, clasts to 1/2", same as 2 only completely argillized, goethite on fractures
4	Same as 3 - slightly silicified
5	Same as 4
6	Bottom of argillized zone, slightly silicified, same rock as 2
7	Transition zone - same as 2, blotchy
8	Purple, lithic tuffs, platy, unaltered
9	Green-purple lithic tuffs, propylitic alteration, fine grained with 1/8" feldspar phenocrysts, feldspars are argillized
10	Same as 9
11	Bleached and silicified tuffs, goethite on the fractures
12	Same as 11, few 1/4' calcite veins along fractures
13	Welded tuffs, argillized (blotchy) zones along fractures with few 1/16" qtz veins, goethite stained
14	Same as 13, with calcite on some fractures
15	Welded tuff, bleached, argillized, slightly silicic, heavily fractured with goethite
16	Same as 15
17	Same as 15 only less altered
18	Same as 15
19	Argillized lithic tuff, clasts to 1/4"
20	Platy, grey lithic tuffs, friable, propylitic alteration, frags to 1/4"→ chlorite

Sample Number	Sample Description
21	Lithic tuff, argillized, goethite on fractures
22	Same
23	Same
24	Red grey platy lithic tuffs, jointed N30°E, 75°E, with green rock frags, 1/2 - 1 1/2", in very fine grained tuff matrix (agglomerate)
25	Grey lithic tuff
26	1-2' silicic ledge in saddle on NW fault, goethite stained
27	Same as 25
28	2-3' silicic zone, 8' argillic zone, N70°W, 4' pit, dump sample
29	Same as 25
30	Same as 28, silicic zone 1' wide
31	Argillized tuffs with few qtz veins (1/8"), goethite on fractures
32	Argillized-silicic tuffs N70-75°W faults
33	Same as 32
34	Argillized tuff on NW fault
35	Bleached argillized tuff on N15°E fault, some silica replacement
36	Same
37	Same
38	Same
39	Same
40	Same
41	Fault zone - spherulites forming
42	Argillized lithic tuffs
43	Same as 42, goethite on fractures
44	Same as 43

Sample Number	Sample Description
45	Slightly argillized, purple, welded tuffs
46	Lithic tuff, platy, argillized, goethite stained
47	Massive argillized, goethite stained tuffs
48	Same
49	Same
50	Same
51	White rhyolite tuffs, goethite on fractures
52	Purple lithic tuff, feldspars argillized
53	Same - on fault
54	Same, less altered
55	Lithic tuffs, propylitic alteration
56	Lithic tuffs, bleached, argillized, goethite on fractures
57	Same as 56, hematite and goethite - N30°W shear zone
58	Same as 57, strong N10°E-vertical, joints, pyrolusite on fractures
59	10' shear zone, N10°W-vertical, argillized, lithic tuffs, 2' zone of qtz stringers - This sample of qtz stringers
60	Same of argillized zone in 59
61	Argillized lithic tuff
62	Dump sample, qtz vein and breccia material in argillized tuffs
63	12' of silicic vein material on fault, goethite and pyrolusite, argillized tuffs w/ qtz veinlets
64	Dump sample, qtz vein material with goethite stains
65	Argillized tuffs above caved adit
66	4' sample across fault above caved adit in argillized tuffs, silicic zone 1' wide with goethite
67	Argillized tuffs, goethite on fractures
68	Bleached, argillized, lithic tuffs, geothite on fractures, feldspars → adularia

Sample Number	Sample Description
69	Purple lithic tuff
70	Lithic tuffs, argillized, goethite on fractures, strong N30°E, 75°E joint pattern
71	Same
72	Same
73	20' argillized tuffs with comb qtz, qtz veinlets, goethite stained
74	Same as 73, fewer veins
75	Argillized, lithic tuffs w/ goethite on fractures
76	Lithic tuffs
77	Dump - unaltered lithic tuffs with some calcite veinlets, some qtz vein material also on dump.
78	Above adit, several N17°E, 70°E fractures, with thin calcite veinlets
79	12' argillic tuffs with stockwork qtz veins, goethite stained along fault - some pyrite
80	Same
81	Same
82	Same
83	Silicic zone widens to 200', same
84	Same as 83
85	Argillized tuff with qtz veinlet stockwork
86	Argillized lithic tuffs, heavily fractured with goethite
87	Same
88	Same
89	Slightly argillized tuffs
90	White bleached argillized tuffs, goethite on fractures
91	Same
92	Same

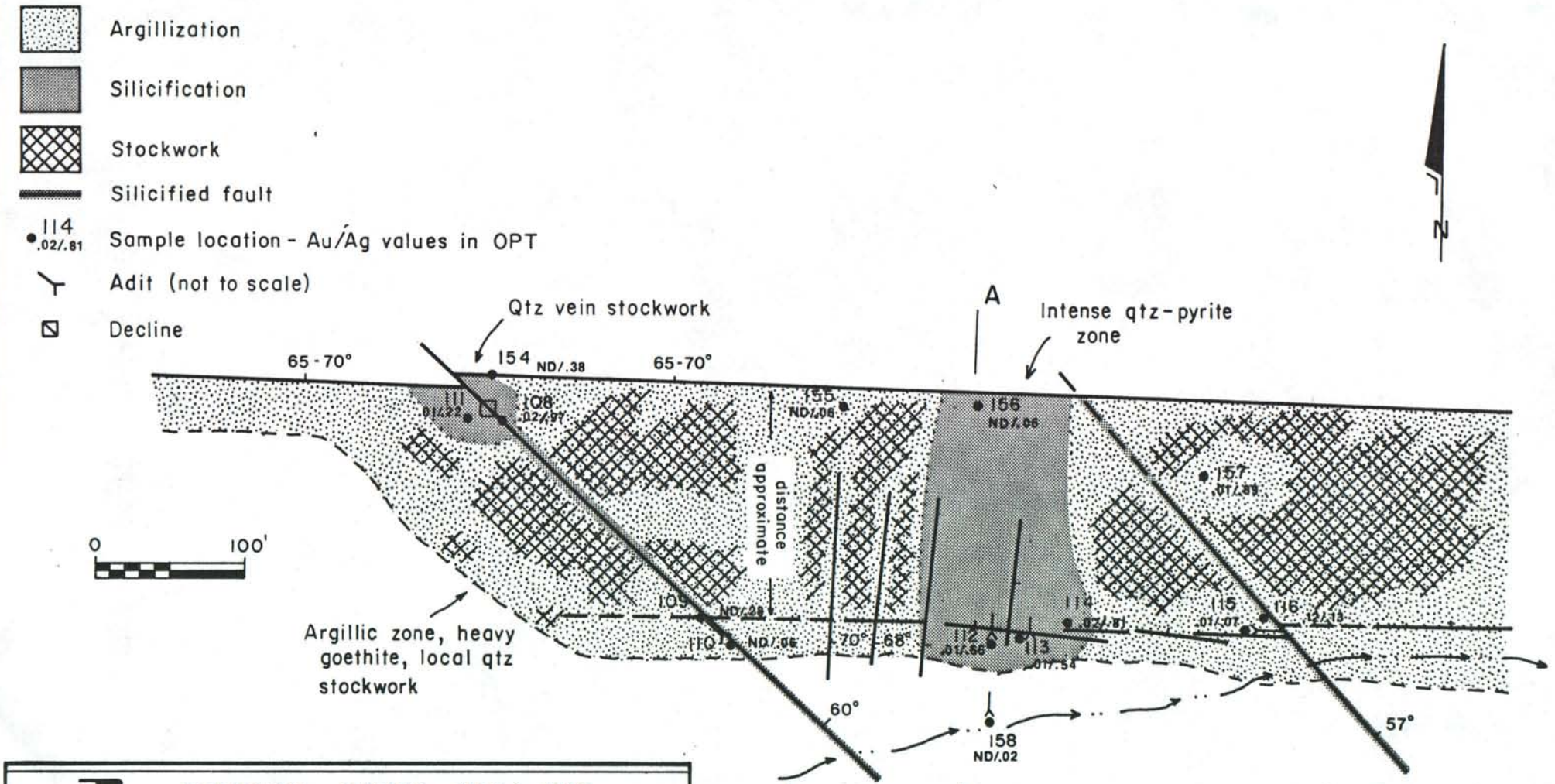
Sample Number	Sample Description
93	Same
94	20' grab, silicic stockwork zone in argillized tuffs, pyrite on fractures, heavy goethite stains
95	20' grab, same
96	20' grab, same
97	20' grab, same
98	20' grab, same
99	20' grab, same
100	Argillized tuffs, geothite on fractures
101	Dump - silicic tuffs, heavy goethite, comb qtz on fractures
102	8-10' across, silicic-breccia zone in fault plane, comb qtz and much goethite
103	Dump - 4' wide silicic, 8' argillic on fault
104	Argillized fault zone with qtz veins, goethite on fractures 8-12' wide
105	Dump - argillized and silicic rocks from fault zone
106	Grab 140' wide argillized zone, fractures with qtz and goethite
107	30' argillized zone, no qtz, goethite on fractures
108	15' wide silicic zone with qtz vein stockwork and pyrite
109	Above adit, 2' silicic zone with goethite
110	Dump - silicic vein material and argillized tuffs
111	Same as 108
112	Grab, silicic, goethite stained tuffs
113	Same
114	Same
115	Dump - argillized, silicified tuffs, goethite stained
116	Heavily argillized, goethite stained, some qtz veins

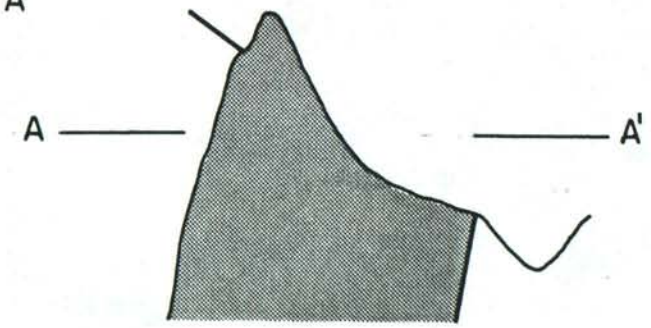
Sample Number	Sample Descriptions
117	Argillized tuff, goethite on fractures, stockwork qtz veins, pyrite with qtz
118	Same as 117, grab of talus
119	Strong N40°W, 80°N, Zone in silicic area, some qtz veins
120	Intersect E-W and NW fault, argillized tuffs with stockwork qtz veins
121	Same as 120
122	Dump - structure not evident, argillized and some silica veins, highly fractured, goethite on fractures
123	Grab, qtz stockwork in argillized tuffs with goethite on fractures
124	Dump - qtz stockwork in argillized tuffs, goethite on fractures
125	By adit, qtz stockwork in argillized tuffs, goethite on fractures
126	Dump sample, slightly argillized tuffs, some qtz veins, goethite stained
127	Argillized, goethite stained tuffs, in front of adit
128	Argillized, goethite stained tuffs
129	Same, from E-W fault
130	Intersection of NE fault and E-W fault, argillized, goethite stained lithic tuffs, some qtz veins
131	Argillized tuffs, hematite stained
132	Same
133	Same
134	Same
135	Same, prospect pit
136	Above adit, fault N50°W, dips south, 3" qtz vein with hematite
137	E-W fault, dips N-vertical, 6-8' silicic zone, qtz stockwork in argillized tuffs, 6' grab across silicic zone and N10°E conjugate set

Sample Number	Sample Description
138	Dump sample of the above, hematite, goethite
139	Silicified, stockwork zone, N45°W→N, 6-8' wide, goethite stained
140	3' silicified fault plane, E-W→N, prospect pit, dump sample
141	100' wide silicic zone with sporatic qtz stockwork, on E-W fault
142	50' wide, same as 141
143	Same fault as 142, zone is 20' wide, goethite stained
144	Same as 143, dump of prospect pit
145	150'+ zone argillized tuffs, goethite stained, very few qtz veins
146	20'+ argillized tuffs, goethite stained on E-W fault
147	50'+ argillized tuffs, some qtz veins, goethite stained
148	3' qtz vein in argillized tuffs, heavy goethite stained
149	20'+ N15°E→E, with stockwork qtz veins
150	100'+ qtz stockwork in argillized tuffs, heavy goethite
151	Same
152	Muck in back of adit, N30°W→S, argillized tuffs, some qtz veins, geothite stained
153	Dump of adit in 152
154	Grab of hanging wall, argillized tuffs, qtz stockwork + pervasive silicic alteration, goethite stained
155	Same, less silica
156	Same as 155
157	20' pyritized, qtz stockwork zone
158	Face of adit, qtz stockwork in argillized volcanics with goethite
159	Argillized, goethite stained tuffs

Sample Number	Sample Description
160	Pyritized, qtz stockwork in green chloritic, argillized tuffs, goethite stained
161	8' silicic E-W zone in argillic tuffs
162	Argillized and bleached tuffs
163	Same - hematite stained
164	Same - hematite stained
165	Same - hematite stained
166	Same - hematite stained
167	5' grab - N10°E fault, geothite stained, argillized, slightly silicic
168	12' grab near 167, calcite on fractures
169	Argillized tuffs on fault

MAPS





DENISON MINES (U.S.) INC.
DENVER, COLORADO

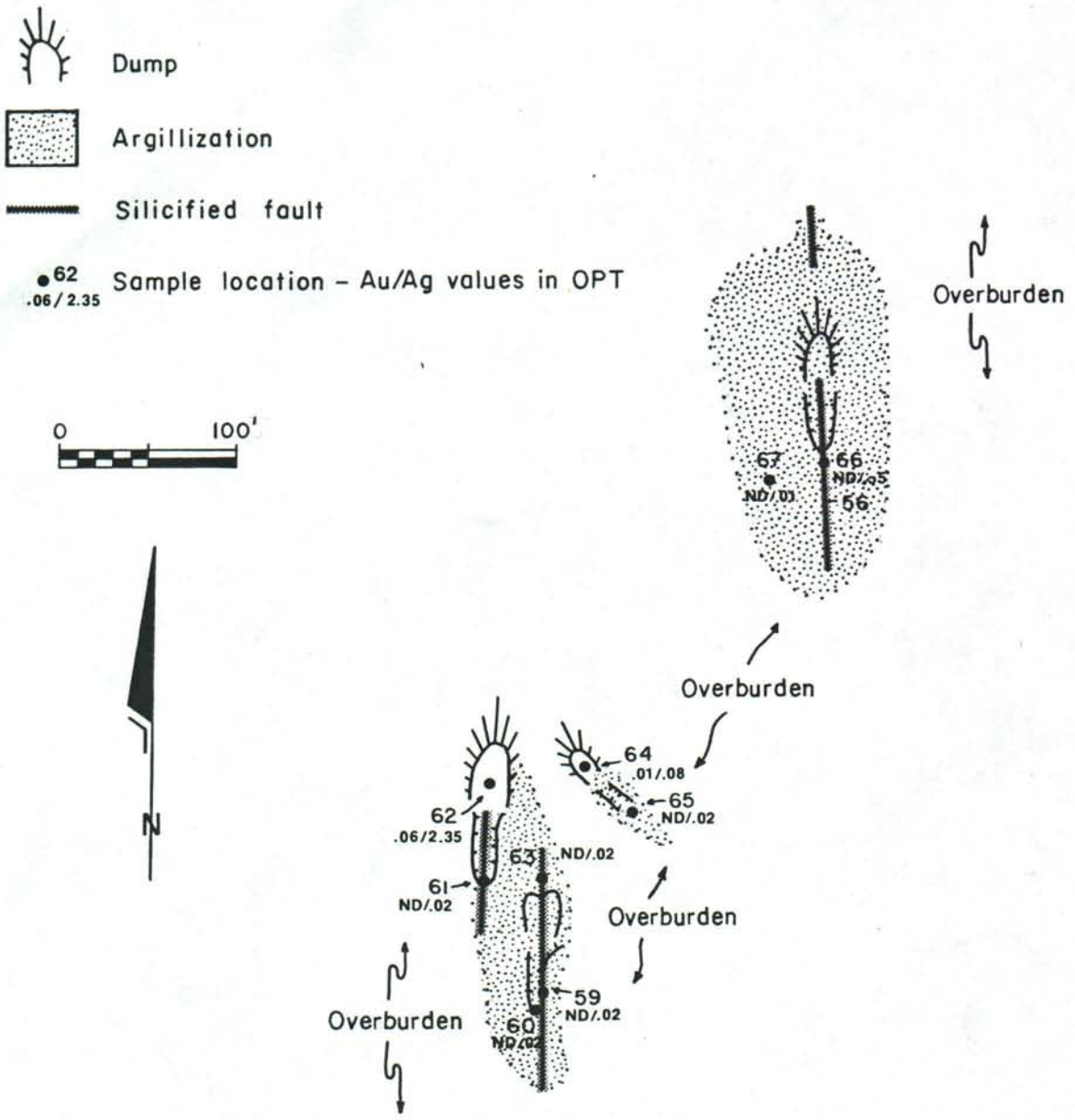
ALTERATION AND GEOCHEMICAL RESULTS

DETAIL AREA A

Project Name: PAIUTE		DN24
Geology: D. FORSBERG	Date: 8/31/83	Drawn by: E.J.K.
Approved by: P.E.K.	Date: 8/31/83	Drawing No:

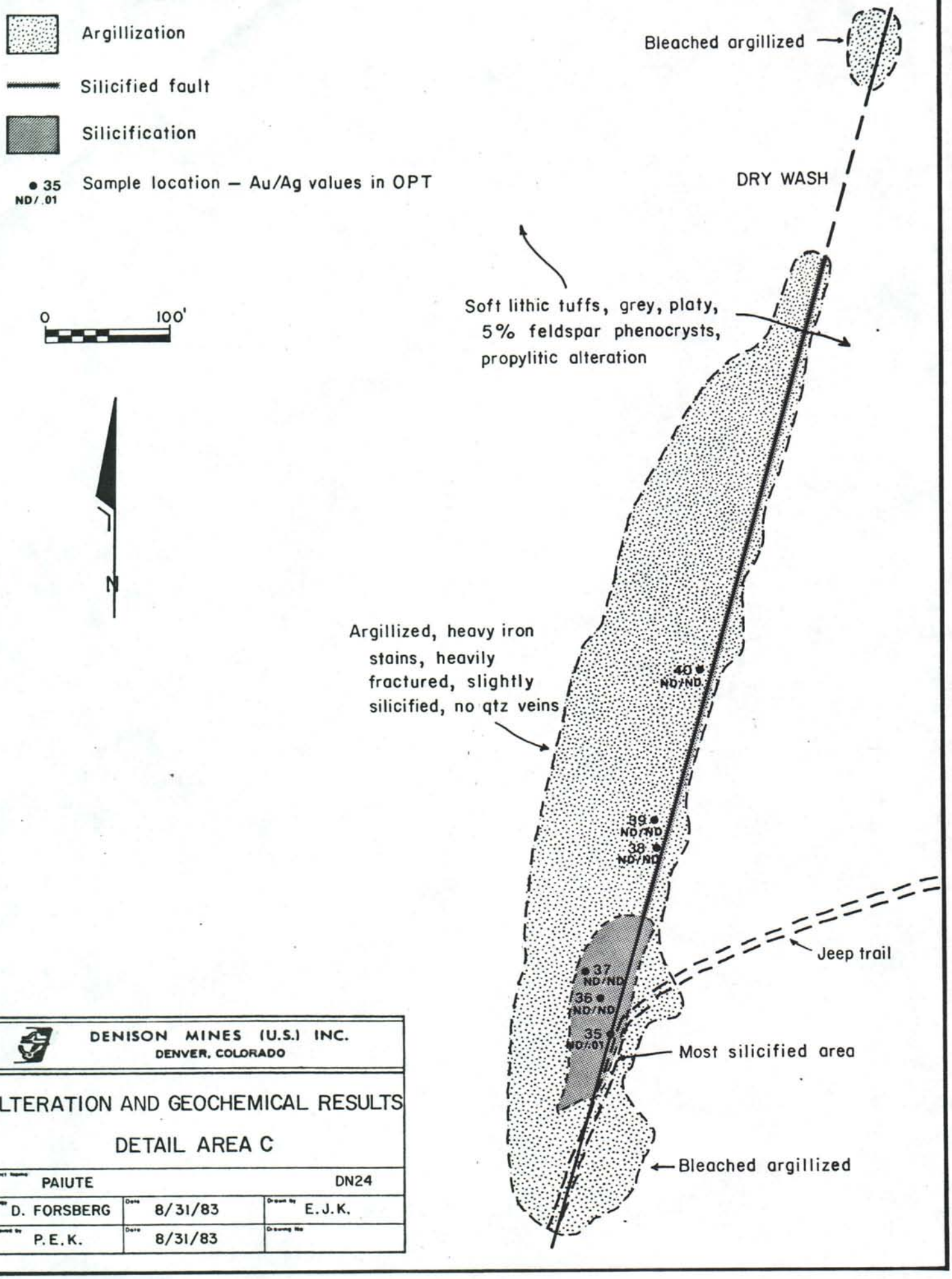
PLATE A

PLATE B



DENISON MINES (U.S.) INC. DENVER, COLORADO		
ALTERATION AND GEOCHEMICAL RESULTS DETAIL AREA B		
Project Name: PAIUTE		DN24
Geology: D. FORSBERG	Date: 8/31/83	Drawn by: E.J.K.
Approved by: P.E.K.	Date: 8/31/83	Drawing No:

PLATE C



DENISON MINES (U.S.) INC.
DENVER, COLORADO

ALTERATION AND GEOCHEMICAL RESULTS
DETAIL AREA C

Project Name: PAIUTE		DN24
Drawn: D. FORSBERG	Date: 8/31/83	Drawn by: E.J.K.
Approved by: P.E.K.	Date: 8/31/83	Drawing No: