EHOLT PROJECT

DIAMOND DRILLING PROGRAM
1995

Greenwood Mining District
British Columbia

1995 REPORT
DIAMOND DRILLING PROGRAM
EHOLT PROPERTY

Greenwood Mining Division
British Columbia

NTS 82E/2E
Latitude 49°10' N
Longitude 118°32' W

Ian Thomson

Doyle Albers

Orvana Minerals Corp.

May 1996

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SUMMARY

A 1000m diamond drill program was initiated at Eholt in May 1995. Three holes were drilled in the Eholt Mtn area, and one hole was drilled 800m west in the Dead Honda area. Holes E95-1 and E95-2 intercepted two zones of sulfide-rich mineralization 10's of meters thick, trending NE. Hole E95-4 at Dead Honda intercepted significant Au-Cu mineralization.

A second phase of drilling was planned after the results of the first phase were analyzed. An additional 2000m program was planned, and after permitting was completed, drilling resumed in September 1995. Eleven additional holes were drilled, bringing the total to 15, for a cumulative distance of 3083m. Several auriferous intercepts in garnet-pyroxene skarn containing chalcopyrite were drilled in the Dead Honda area. A table of the major intercepts is plotted below:

Major Mineralized Intercepts at Dead Honda

Hole #	From (m)	To (m)	Width (m)	Au-Grade	Cu Percent
E95-4	74.2	85.7	11.5	1.4 ppm Au	0.32%
E95-4	109.4	137.1	27.7	2.7 ppm Au	0.27%
E95-6	90.8	92.4	1.6	2.0 ppm Au	0.12%
E95-6	211.1	215.5	4.4	2.4 ppm Au	0.17%
E95-6	255.4	261.5	6.1	3.2 ppm Au	0.23%
E95-6	275.8	281.2	5.4	5.1 ppm Au	0.30%
E95-7	76.4	77.9	1.5	1.5 ppm Au	0.01%
E95-7	156.0	167.9	11.9	1.3 ppm Au	0.06%

These and other anomalous Au-zones at Dead Honda have a N35°-40°E trend, and dip steeply to the NW. Drilling to date has demonstrated 250m of strike length along this NE auriferous zone. Approximately 1 km of untested strike length along a NE topographic linear exists to the NE of the present drilling. This linear trend has some Au-Cu soil geochemical anomalies along it, but most of the area is covered with a layer of glacial till. Abundant garnet-pyroxene skarn outcrops approximately 500m north of the present drilling. The mineralization and alteration at Dead Honda is believed to be hosted in volcaniclastic sediments of lower Brooklyn stratigraphy.

The sulfide-rich mineralization in holes E95-1 and E95-2 at Eholt Mtn is associated with garnet-pyroxene skarn. This mineralization has a NE trend comparable to the Dead Honda zone; this coincident NE trend is considered very significant in this portion of the district. The alteration and mineralization at Eholt Mtn is hosted by volcaniclastic sediments within greenstones of the Brooklyn Volcanics. Attempts to off-set sulfide-rich mineralization seen in holes E95-1 and E95-2 failed to intercept significant mineralization along strike.

Exploration potential exists at Eholt, particularly in the Dead Honda area where significant Au-grades have been intercepted. Substantial unexplored strike length, strong alteration, and significant mineralization provide good opportunities for further discoveries. Continued exploration at Eholt Mtn, and near the magnetic dipole to the immediate east, offer potential for discovery of a substantial mineral deposit.

INTRODUCTION

The Eholt Project is located approximately 16 km northwest of Grand Forks, British Columbia (Fig. 1). The property is in the northeast portion of the Phoenix-Greenwood Mining Camp, which has been a significant producer of Cu-Au ores from skarn deposits. The largest deposit discovered thus far in the district was at Phoenix (approximately 6km SW), where almost 27 million tonnes of ore grading 0.85% Cu and 1.1 grams/tonne Au were mined earlier this century. The Eholt property is underlain by a stratigraphic sequence of rocks similar to that in the Phoenix camp. The site of Eholt, an abandoned railway switching station, presently comprises a small community of approximately 10 homes.

PROPERTY

The Eholt property consists of several contiguous mineral claims totaling 99 units. Four 4-post mineral claims, and one 2-post mineral claim comprising 59 units are held under option by Orvana Mineral Corporation from Mr. Herman Hoehn of Grand Forks, B.C. The remaining 40 units are 4-post mineral claims staked by Orvana Minerals Corporation (see Fig 2 for claim map). Pertinent claim information is summarized below:

Claim Name	No. of Units	Tenure No.	Expiry Date
Pt. Eholt	6	214340	Oct. 9, 2003
Eholt	12	215004	Mar. 26, 2003
Eholt #1	20	215014	Apr. 29, 2003
Eholt #2	20	215015	Apr. 29, 2003
Packrat	1	214605	Sep. 29, 2005
Rathful #1	20	216173	Apr. 10, 2002
Rathful #2	20	216174	Apr. 10, 2001

LOCATION AND ACCESS

The Eholt property is located 11 km NE of Greenwood and 16 km NW of Grand Forks, B.C. at latitude 49°10'N, longitude 118°32'W. The property is accessed from a series of logging roads which intersect B.C. Hwy 3, at the Kettle Valley Railroad siding of Eholt. Two old abandoned railroad grades also provide access to the claims near Eholt.

PHYSIOGRAPHY AND CLIMATE

The Eholt property is characterized by relatively subdued, low-lying, mountainous terrain. Elevations range 800-1200 meters. Relief is generally mild, though a few bluffs do occur immediately south of Eholt Mtn. Most of the property is forested, with some brush and grassland on south facing slopes.

The climate is moderate. Precipitation is typically low during the summer and fall, and moderate during the rest of the year.

Snow cover during December-February averages 0.5-1.5 m. Annual temperature range is approximately -20° to 35°C.

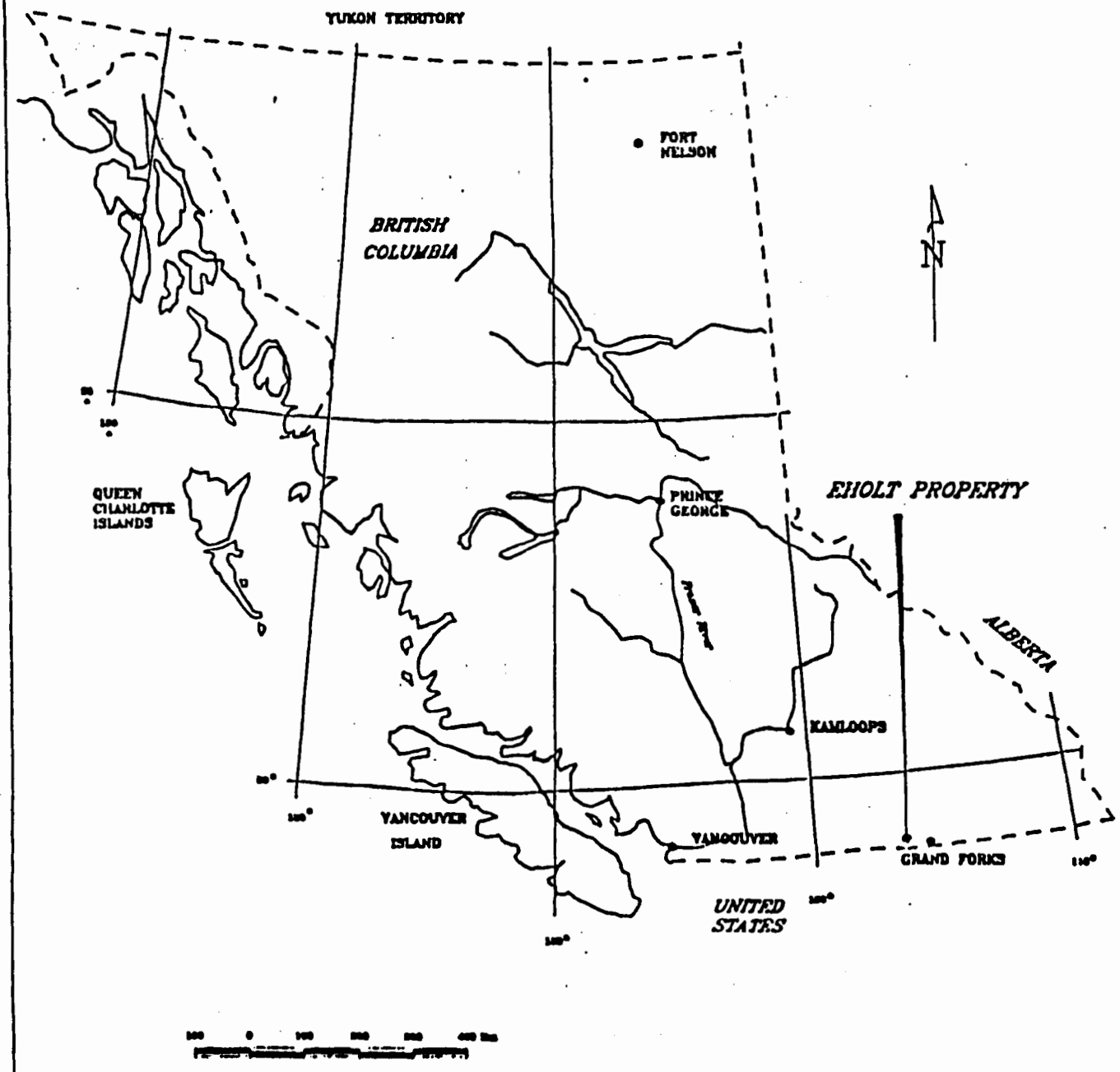

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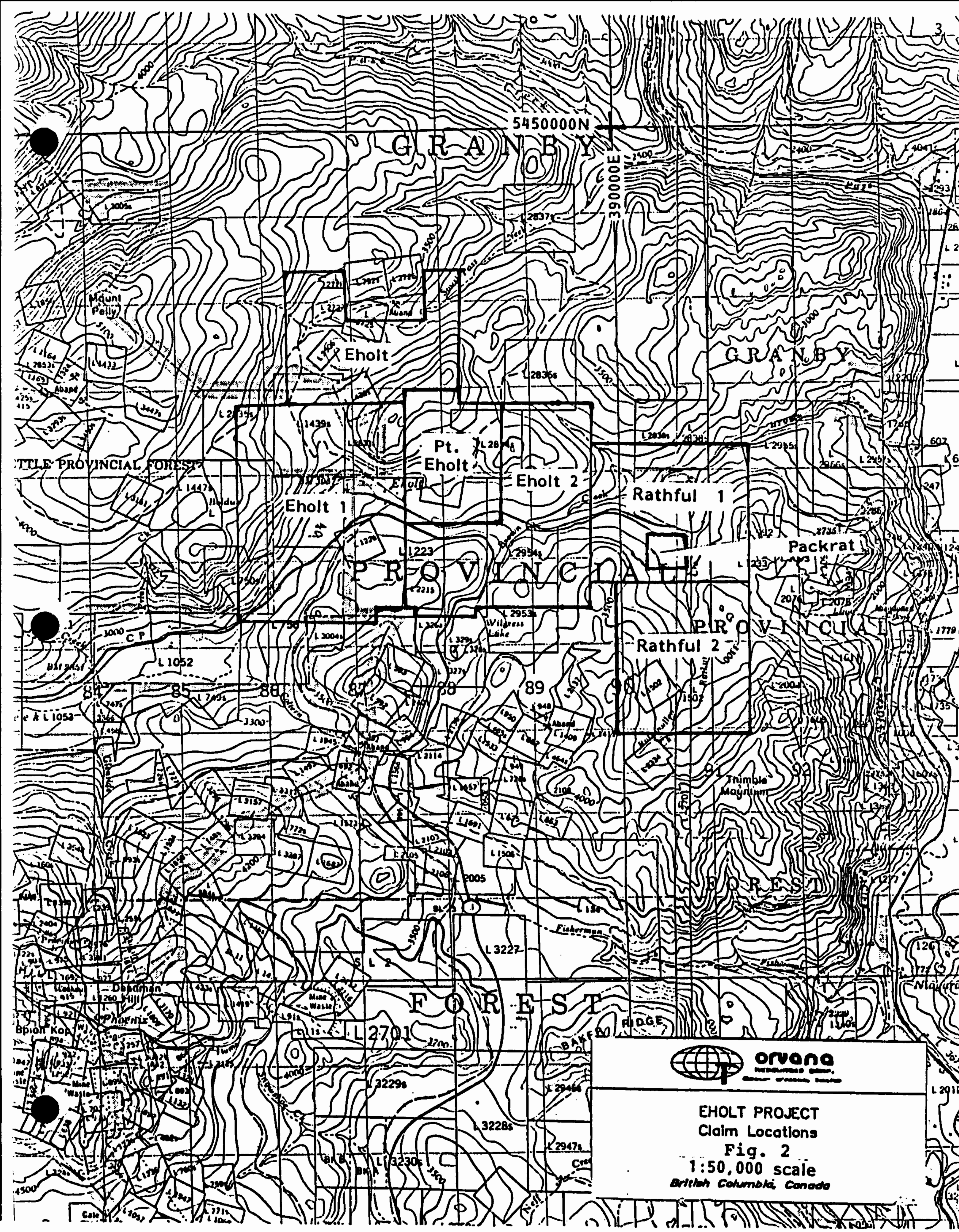
Fig. 1

LOCATION MAP

Northeastern Washington and southern British Columbia

Oct. 87


5450000N
390000E
GRANBY
Eholt
Pt. Eholt
Eholt 2
Eholt 1
Rathful 1
Rathful 2
Packrat
PROVINCIAL
FOREST
Thimble Mountain
Fisherman
BAKER RIDGE
Phoenix
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EHOLT PROJECT
Claim Locations
Fig. 2
1:50,000 scale
British Columbia, Canada

PREVIOUS WORK

Mining and exploration in the Eholt area began around the turn of the century. Production during this period is estimated at several hundred thousand tons of ore grading approximately 1% Cu and 0.02 oz/ton Au from the Oro Denoro and Emma mines located 3 km south of Eholt. Numerous old shallow shafts, short adits, and prospect pits, probably dating from this same period, occur on the Eholt property. This work was primarily exploratory, and no known production has occurred on the property.

Some small core drilling programs have reportedly been carried out on the property by Mr. Herman Hoehn and others of Grand Forks, but these programs are apparently undocumented. Recent, documented exploration on the Eholt property was conducted by Golden Kootenay Resources Inc. from May 1987 to January 1989. This work included grid installation, soil geochemistry, and diamond drilling (3 holes). VLF-EM measurements were collected over the grid, and a ground magnetometer survey was conducted over part of the grid.

Orvana installed 37.5 km of additional grid and conducted soil sampling during 1991 and 1992. Orvana also conducted a ground magnetic survey, VLF-EM survey, and an I.P. survey during the 1991-1992 field season. This work is documented in an assessment report filed May 17, 1993. The ground magnetic survey delineated a substantial dipole anomaly east of Eholt Mountain. Three diamond drill holes were completed in this area in 1993. None of these holes appeared to intersect rocks with sufficient magnetic minerals to cause the anomaly, and only weak Cu-Au mineralization was intersected. An additional NQ diamond drill hole was completed on this magnetic anomaly during December 1994. This hole also failed to intersect an obvious source of the magnetic anomaly. The 1994 program is documented in an assessment report filed February 3, 1995.

PROPERTY GEOLOGY

The Eholt property is underlain by sedimentary and volcanic rocks of the Permian Knob Hill and Triassic Brooklyn Formations. Each of these formations is comprised of fine to coarse-grained interbedded volcaniclastics, greenstone, and limestone, typical of an island arc-back arc sequence. In general, the Knob Hill rocks are in the western most portion of the property, and the Brooklyn rocks underlie most of the claim block to the east. The Knob Hill rocks on the property are comprised of quartzite, fine-grained quartz-rich biotite schist, massive greenstone, and minor pyroxene-epidote skarn. The Brooklyn Formation includes: a basal sharpstone conglomerate, which is often intensely silicified where it has been drilled; fine to medium grained carbonate-rich volcaniclastics, commonly altered to garnet-pyroxene skarn; fine grained silts, with a moderate tuffaceous component; marbleized limestones; and massive to dominantly fragmental tuff and volcanic breccias of dacititic composition. In general, both formations strike north to northeast, and dip steeply to the east.

These rocks are intruded by a variety of intermediate felsic mesothermal rocks and higher level potassium-rich alkalic rocks of Cretaceous and Tertiary age. The Cretaceous rocks are mostly granites and quartz monzonites which outcrop north of the Eholt property. The younger intrusive rocks are more common on the property, and they are mostly pulaskite dikes and sills, with some alkalic rocks grading toward monzonites in composition. Some monzonite dikes, sills, and small stocks may be Tertiary in age, as some lack alteration and contain clasts of pulaskite. Extrusive Tertiary volcanic rocks, dominantly latite flows and fragmentals, cover some older rocks in the central portion of the property.

During the Permian and Triassic, numerous tuffaceous pyroclastics were erupting, and dacite sub-volcanic dikes and sills were intruding this area. A back-arc basin margin facies of mixed

clastics and carbonates was deposited along an active continental margin trending approximately north-south. Pyrite, pyrrhotite, magnetite and chalcopyrite mineralization hosted by skarn alteration within this environment has been the focus of Orvana's recent exploration.

1995 PROGRAM

A two-phase diamond drilling program was completed on the Eholt property during 1995. The phase one program began in May and consisted of four holes totaling 1000m. These holes tested targets near showings on Eholt Mountain and Dead Honda. Based on the results of this first phase, a second phase was planned during the summer of 1995. The second phase was designed to extend and delineate the mineralization discovered in the first phase program, and to test two additional targets. Upon completion of the necessary permits, the second phase of drilling began in September 1995. Eleven additional holes totaling 2083m were drilled during the second phase, bringing the total for 1995 to fifteen holes comprising 3083m (see Plate 1 for drill hole locations). Pertinent drill hole information is presented in Table 1.

TABLE 1

1995 EHOLT DRILL HOLE DATA

				UTM Coordinates	
Hole #	Depth (m)	Azimuth	Inclination	Easting	Northing
E95-1	257.6	265°	-49°	387710	5446715
E95-2	221.2	267°	-50°	387745	5446775
E95-3	278.8	266°	-49°	387680	5446600
E95-4	242.4	126°	-50°	387000	5447015
E95-5	182.7	126°	-50°	387075	5446960
E95-6	312.7	126°	-75°	387000	5447015
E95-7	256.1	126°	-50°	386905	5446975
E95-8	190.9	126°	-50°	387025	5447055
E95-9	264.5	306°	-50°	387160	5447030
E95-10	63.9	306°	-50°	386955	5446860
E95-11	119.1	126°	-50°	387045	5447095
E95-12	116.1	305°	-50°	387860	5446850
E95-13	124.5	305°	-50°	387535	5446620
E95-14	330.0	275°	-45°	387655	5446260
E95-15	122.1	290°	-50°	387940	5445885

The first three holes of the first phase were drilled near the top of Eholt Mtn, to test a coincident soil geochem (Cu, Au), VLF-EM, and magnetic anomaly with some associated skarn alteration along a N-S structure. Holes E95-1 and E95-2 intercepted significant sulfide mineralization hosted by garnet, pyroxene, tremolite skarn, with zones of massive pyrite and pyrrhotite several meters in thickness (see drill logs in Appendix for details). Geochemical assays from these zones of sulfide mineralization reported anomalous gold and copper values, but no ore grade intercepts. Hole E95-3 failed to intercept any significant mineralization. During the second phase, two additional holes were drilled to test the NE and SW strike extensions of the zone intersected in holes E95-1 and E95-2. Hole E95-12 was drilled approximately 120m NE of E95-2, and hole E95-13 was drilled approximately 200m SW of E95-1. Neither hole intersected significant mineralization.

Hole E95-4 was drilled in the south fork of South Pass Creek drainage, near a showing called the Dead Honda. Several old shallow pits and shafts in the area expose strong sulphide mineralization, but most of the area is covered with glacial till. This hole was drilled to test a

soil geochemical anomaly (Cu-Au), with a coincident VLF-EM and I.P. anomaly. E95-4 intercepted some very significant gold mineralization in a garnet-pyroxene skarn. Two distinct zones of mineralization are present in this hole (see drill log for details). These and other significant intercepts are presented in Table 2.

TABLE 2

Major Mineralized Intercepts at Dead Honda

Hole #	From (m)	To (m)	Width (m)	Au-Grade	Cu Percent
E95-4	74.2	85.7	11.5	1.4 ppm Au	0.32%
E95-4	109.4	137.1	27.7	2.7 ppm Au	0.27%
E95-6	90.8	92.4	1.6	2.0 ppm Au	0.12%
E95-6	211.1	215.5	4.4	2.4 ppm Au	0.17%
E95-6	255.4	261.5	6.1	3.2 ppm Au	0.23%
E95-6	275.8	281.2	5.4	5.1 ppm Au	0.30%
E95-7	76.4	77.9	1.5	1.5 ppm Au	0.01%
E95-7	156.0	167.9	11.9	1.3 ppm Au	0.06%

During the second phase of drilling, seven additional holes were drilled in the Dead Honda area. This drilling was designed to test both dip and strike extensions of the mineralization discovered in E95-4. Hole E95-6 intersected what are likely the same zones down-dip of those intercepted in E95-4. Hole E95-7 appears to have intersected the same zone approximately 90m along strike to the SW of E95-4 and E95-6. Holes E95-8 and E95-9 seem to have intersected the same zone, although with weaker mineralization, approximately 50m and 100m along strike to the NE of E95-4 and E95-6. The lower Brooklyn stratigraphy around the Dead Honda showing is extensively altered to garnet pyroxene skarn. Pyrite, pyrrhotite, and chalcopyrite are commonly associated with the skarn; they remain open to the northeast and at depth. The area between the Dead Honda and Eholt Mountain is mostly covered, and has not been explored. It is not known if the alteration and mineralization at these two showings is spacially related to the same hydrothermal system, but the indication is that the system responsible for the known alteration and mineralization is relatively large.

Hole E95-14 was drilled on the south side of Eholt Mountain. The hole was drilled to test favorable Brooklyn Formation stratigraphy south along strike of Dead Honda and Eholt Mountain, and coincident geophysical (magnetic and I.P.) and soil geochem anomalies. The hole intersected the lower Brooklyn stratigraphy, and continued into the underlying Knob Hill Formation. The core shows weak to moderate alteration to pyroxene, amphibole, epidote skarn containing pyrrhotite and pyrite, and anomalous in Au and Cu.

Hole E95-15 was drilled approximately 500m SE of Eholt Mountain. The hole targeted a carbonate member of the Brooklyn Formation, which is weakly altered to skarn with pyrite, magnetite, and chalcopyrite as seen in some surface prospects. A coincident VLF-EM anomaly contributed to the target. The hole intersected relatively weak alteration and mineralization, with some silicification, but no significant Au or Cu values. This hole is southwest of the magnetic dipole, but along strike in a fairly continuous carbonate unit which projects under Tertiary volcanic cover to the NE.

ALTERATION

Regional greenschist facies metamorphism is present in much of the volcanic stratigraphy, producing greenstones throughout the district. Alteration includes propyllitic, potassic, and calc-silicate skarn. Petrographic studies have shown a strong, early stage of potassic

alteration, followed by several periods cataclastic brecciation, and a later calc-silicate skarn event. Potassic alteration is evident by localized potassic flooding within the dacite volcanic breccias; in the development of biotite hornfels in the siltstones of the Knob Hill Formation; and as potassium feldspar veinlets in the pulaskites. Calc-silicate skarn is especially well developed at Dead Honda, and on Eholt Mountain. The skarn tends to be pyroxene dominant, with locally massive zones of garnet. Lesser amounts of tremolite, actinolite, epidote, calcite, quartz, and chlorite are common. Pyroxene retrograded to tremolite is evident in several of the auriferous zones of holes E95-4 and E95-6, and in some of the sulfide-rich skarn zones of hole E95-2.

The protolith for many of these skarns is believed to be fine grained calcareous beds, and interbedded tuffaceous-volcaniclastic sediments. This is most evident in the bottom of hole E95-6, and in upper portions of hole E95-4. Interlayered fine grained marbles and waterlain tuffaceous sands and silts are adjacent to the highest grade intercept near the bottom of hole E95-6. Relict sedimentary structures, including bedding at 70°-90° to the core axis, are commonly preserved in portions of holes E95-4 and E95-6. Fine grained siliceous sediments are also present in the lower portion of E95-4; petrographic studies of these rocks indicate they are derived from dacite volcanic tuffs and breccias, similar in composition to the multiple zones of volcanic tuffs and breccias intercepted in holes E95-3 and E95-5. These volcanic sediments lack significant Au-mineralization, indicating they may be a less desirable host than the calcareous beds, but they do exhibit strong potassic alteration. Zones of endoskarn are indicated in some of the early drill logs; however, these rocks are now considered clasts of sub-volcanic intrusives within the volcanic breccia that have been skarn altered.

Propyllitic alteration producing chlorite and epidote is wide-spread, and locally abundant within the greenstones. The propyllitized rocks commonly have several percent pyrite and pyrrhotite, and they often contain anomalous Au and Cu. No obvious causative intrusive or endoskarn has been identified thus far.

MINERALIZATION

Gold mineralization is associated with chalcopyrite, and less so with pyrrhotite and pyrite. The higher grade auriferous zones commonly contain 3-5% chalcopyrite (locally 5-7%), which is often within, or closely associated with, garnet-rich portions of the skarn. Petrographic studies have shown chalcopyrite also occurs in quartz-garnet-pyrite-pyrrhotite-opaque veins, and dolomite-chalcopyrite-pyrite-opaque veins within the skarn; however, it is not known if gold is associated with each of these chalcopyrite occurrences. Polished section studies have revealed textures of chalcopyrite replacing pyrrhotite, and pyrite replacing pyrrhotite, indicating an early pyrrhotite event.

The auriferous skarn zones usually contain 0.2-0.3% Cu; however, some gold zones do not contain elevated copper, suggesting multiple phases of gold mineralization, and/or remobilization of gold. Some skarn zones are enriched in gold near the contacts with alkalic dikes and sills, indicating a possible Tertiary gold event, and/or remobilization. Late-stage, possibly epithermal, blue chalcedonic quartz is also present, filling small vugs and veins in portions of the auriferous skarn, but it is not known if this event contains gold.

Petrographic studies done on the first phase of drilling (E95-1 through E95-4) show the skarn zones in E95-1,2 + 4 also contain dolomite, rutile, titanite, sphene, apatite, and clinozoisite (Petrographic descriptions are included in the Appendix). The dacite volcanic breccias and sub-volcanic intrusives in E95-3 contain up to 4% tourmaline.

STRUCTURE

The stratigraphic section generally strikes north-northeast and dips steeply to the east; however, relict bedding at 70°-90° to the core axis in holes E95-4 and E95-6 indicate the auriferous volcaniclastic sediments dip moderately west. The massive pyrrhotite-pyrite lenses intercepted at Eholt Mtn in holes E95-1 and E95-2 are believed to be sulfide-replacement zones of tuffaceous-calcareous sediments within the volcanics, similar to those in the Dead Honda area, but the dip of these sediments is not known.

There is a prominent N-S structure trending through the skarn zone on Eholt Mtn. This structure was one of the targets tested during the first phase of drilling. How this structure relates to the mineralization is not yet known, but the intersections of N-S and NE structures are considered very important locales for mineralization. A 50m tectonic breccia zone trends through the Knob Hill rocks near the top of hole E95-7. The regional trend of this structure is not known, but it was not intercepted in any others holes at Dead Honda; therefore, a N-S trend is a likely possibility.

The Au-mineralization in the Dead Honda area has a distinct N35°-40°E trend, and it seems to dip steeply NW. The sulfide-rich zones on Eholt Mtn have a N40°E trend, and they may dip NW. This sympathetic NE strike of gold and sulfide mineralization is considered important in this portion of the district. These NE structures, and perhaps many similar ones, are likely one of the avenues or conduits for skarn alteration, sulfide mineralization, and gold deposition.

CROSS SECTIONS

Generalized geologic cross sections have been digitized and included in the text to serve as graphic summaries for the drilling at Eholt. A drill plan map showing the relative location of the sections is included as Figure 3 (note the scale is 1:10,000). There are essentially two sets of cross sections: 1) Figures 4A-4E are from the Dead Honda area, each looking N35°E, beginning with hole E95-10 (the southern most drill site), and moving north at 50-100m intervals. The second group is for the Eholt Mtn area and south Eholt Mtn. This set is comprised of Figures 4F-4L , all of which look to the north, but at varying angles. Comments about individual cross sections are in outlined Table 3.

Also included is an interpretive cross section (Fig. 4m) for the drilling completed at the magnetic dipole in 1993 and 1994. The upper portion of the section is based on available drill data, and the lower portion is a hypothetical situation to explain the spectacular magnetic anomaly to the east of Eholt Mtn. It is worthy to note that the garnet-pyroxene skarn zone drilled in E95-15 is trending NE toward the dipole. The presence of carbonate stratigraphy striking NE in the Eholt area may be a good locale for Au-mineralization.

CONCLUSIONS

The drilling that has been done to date at the Eholt Project has identified good mineralization in two of the three tested areas. These two areas include the Dead Honda, and Eholt Mountain, located 800m apart. Both of these areas feature strong calc-silicate skarn alteration and sulphide mineralization. Zones of massive pyrrhotite and pyrite trending NE were intercepted on Eholt Mtn. Two zones 10's of meters thick contain anomalous, but sub-ore Au-Cu mineralization. Ore grade Au-Cu mineralization has been intercepted at Dead Honda in a zone trending NE and dipping steeply NW. This zone remains open along strike in both directions and down-dip. Over 1 km of strike length along a NE trending topographic linear with soil geochem anomalies exists north of the present drilling at Dead Honda. Together,

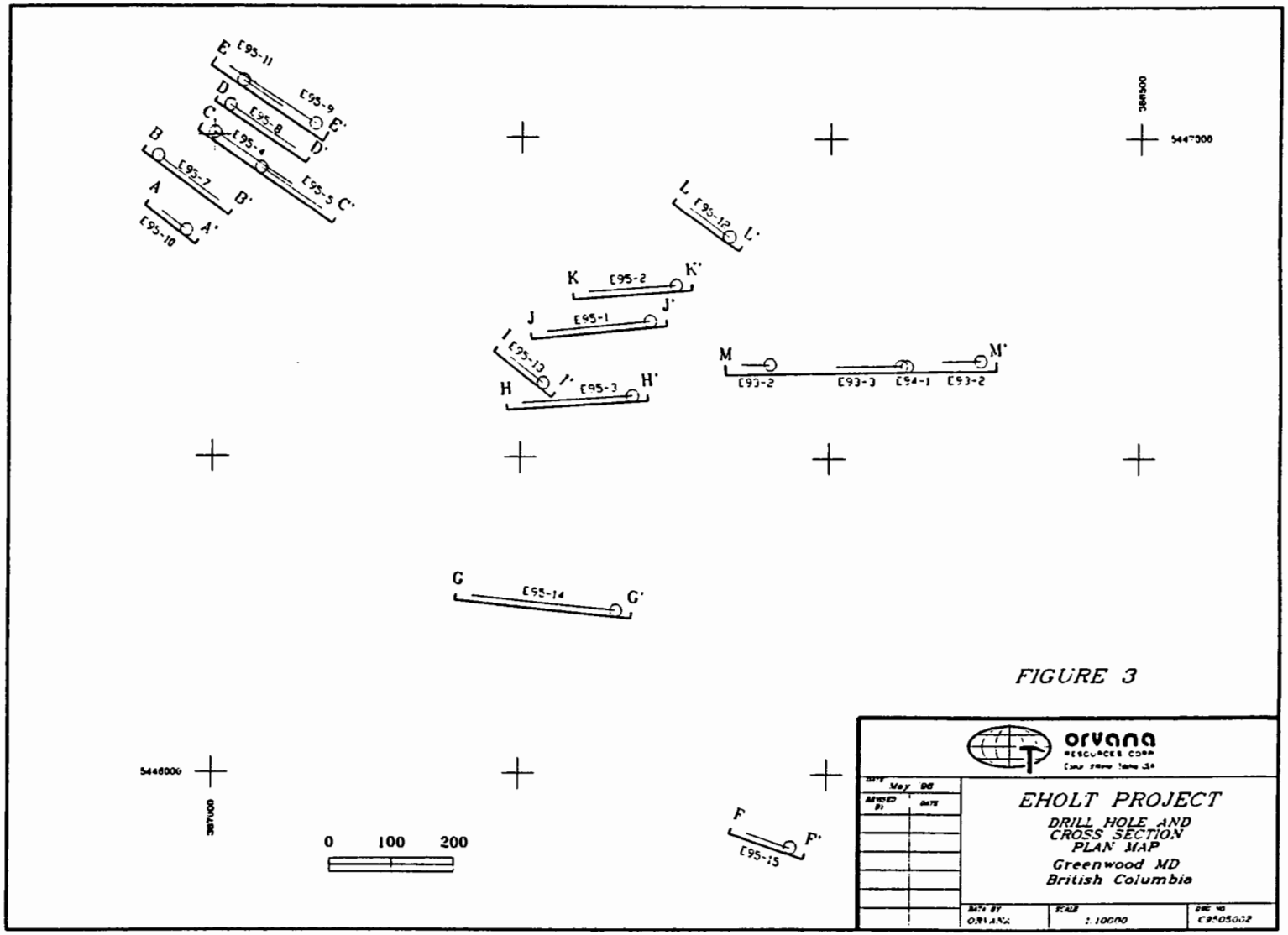

FIGURE 3

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EHOLT PROJECT

DRILL HOLE AND CROSS SECTION PLAN MAP

Greenwood MD
British Columbia

DATE	May 98
REVISED BY	DATE
DRN BY	ORVANA
SCALE	1:10000
DRG NO	C9505002

TABLE 3

Comments and Notes on Generalized Cross Sections A-A' through M-M'

DEAD HONDA AREA

A-A' Mineralization in old workings along stratigraphic contact; note the Knob Hill/Brooklyn contact dipping 75° east.

B-B' 70m NE of A-A', hole collared in Knob Hill Fm and drilling up section; Au-mineralization near contact and at depth. Auriferous zone in C-C' projected 90m SW; note the abundance of skarn in the lower Brooklyn stratigraphy.

C-C' 90m NE of B-B', discovery hole E95-4 shows three distinct Au zones in skarn. E95-5 collars in similar rocks, but are non-auriferous. Moderately altered, but less favorable host rocks were intercepted at depth in E95-5; note other skarn zones down-hole. E95-6 intercepts abundant skarn and four distinct Au-zones, three of which correlate with the broadest zone in E95-4; note the broad zone of prograde skarn to the west, and that all holes collar in Brooklyn Fm.

D-D' 50m NE of C-C', E95-8 intercepts small skarn zones and minor Au along N35°E trend, but dominant rock type is less favorable host; note Plate 1 shows Knob Hill/ Brooklyn contact striking NW; therefore, this hole is up stratigraphic section from C-C'.

E-E' 50m NE of D-D', both holes collar in monzonite (possible dike or sill), but drill out into breccia and skarn. Skarn drilled mostly at depth; note E95-9 has skarn near end of hole; may be should have continued drilling to Permian/Triassic contact?

SOUTH EHOLT MTN AREA

F-F' Carbonate bed mostly altered to skarn with 3-5% py and po, but weak Au-mineralization; note east dipping stratigraphy.

G-G' Good prograde skarn with 3-5% py and po below monzonite near Knob Hill/Brooklyn contact, but weak Au-mineralization; note east dipping stratigraphy.

EHOLT MTN AREA

H-H' Dominantly dacite breccia with multiple phases of cataclasis + strong potassic alteration; note monzonite at end of hole.

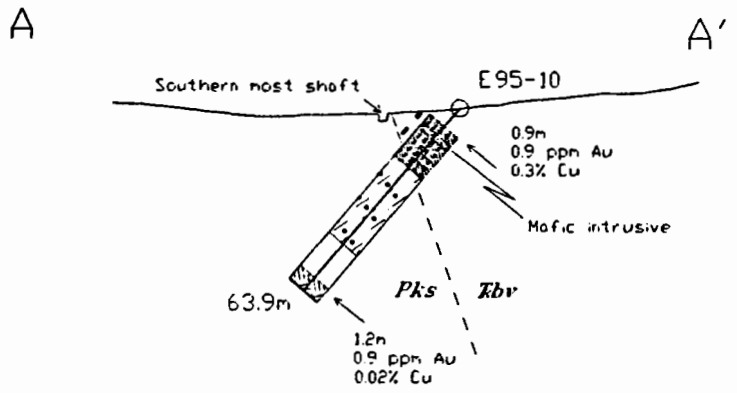
I-I' Test of VLF crossover from J-J' and K-K'; note possibly correlation with mafic intrusive or magnetic syenite.

J-J' 200m NE of I-I', Interlayered greenstone and sulfide-rich skarn, with zones of massive py and po, and anomalous Au-mineralization; some sulfide may be of exhalative origin.

K-K' 80m NE of J-J', abundant increase in skarn relative to greenstone in comparison to J-J', also a slight increase in Au-Cu values; note hole ends in greenstone.

L-L' 120m NE of K-K', test of VLF crossover extended from J-J' and K-K'.

M-M' Through mag-dipole with conceptual idea of sulfide-rich skarn down-dropped along graben fault, and/or replacing zones along structure; note scale changed to 1:5000.



EXPLANATION

- Garnet-pyroxene skarn
- Biotite hornfels
- Greenstone
- Syenite
- Mafic intrusive
- Sulfide-rich zone

Looking N35° E

FIGURE 4A

orvana RESOURCES CORP. Coeur d'Alene, Idaho USA

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CROSS SECTION A-A' DEAD HONDA AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO.
ORVANA	1:2000	C9505002A

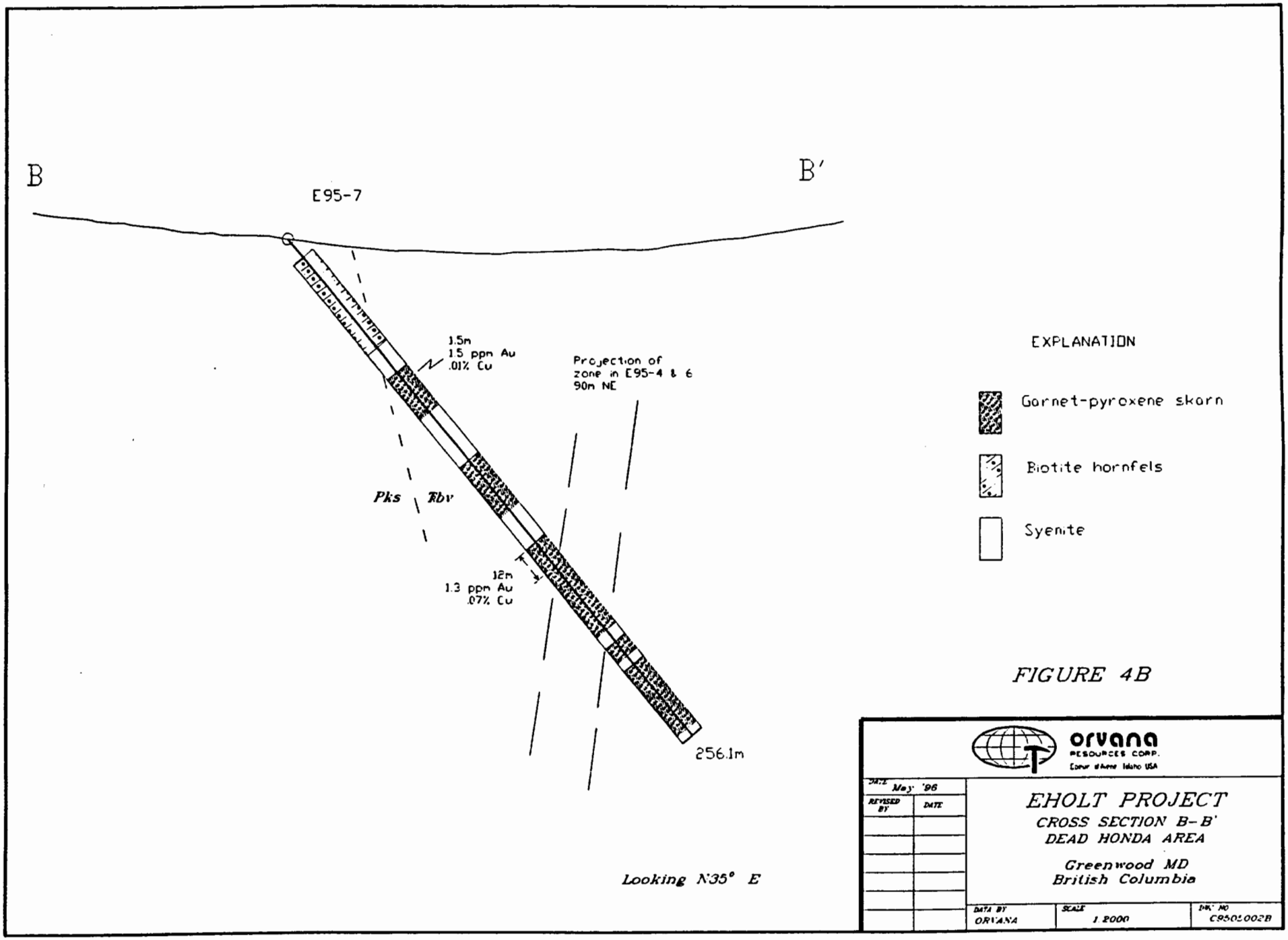


FIGURE 4B

orvana RESOURCES CORP. Coeur d'Alene Idaho USA

DATE	May '96
REVISED BY	DATE

EHOLT PROJECT
CROSS SECTION B-B'
DEAD HONDA AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1:2000	C9505002B

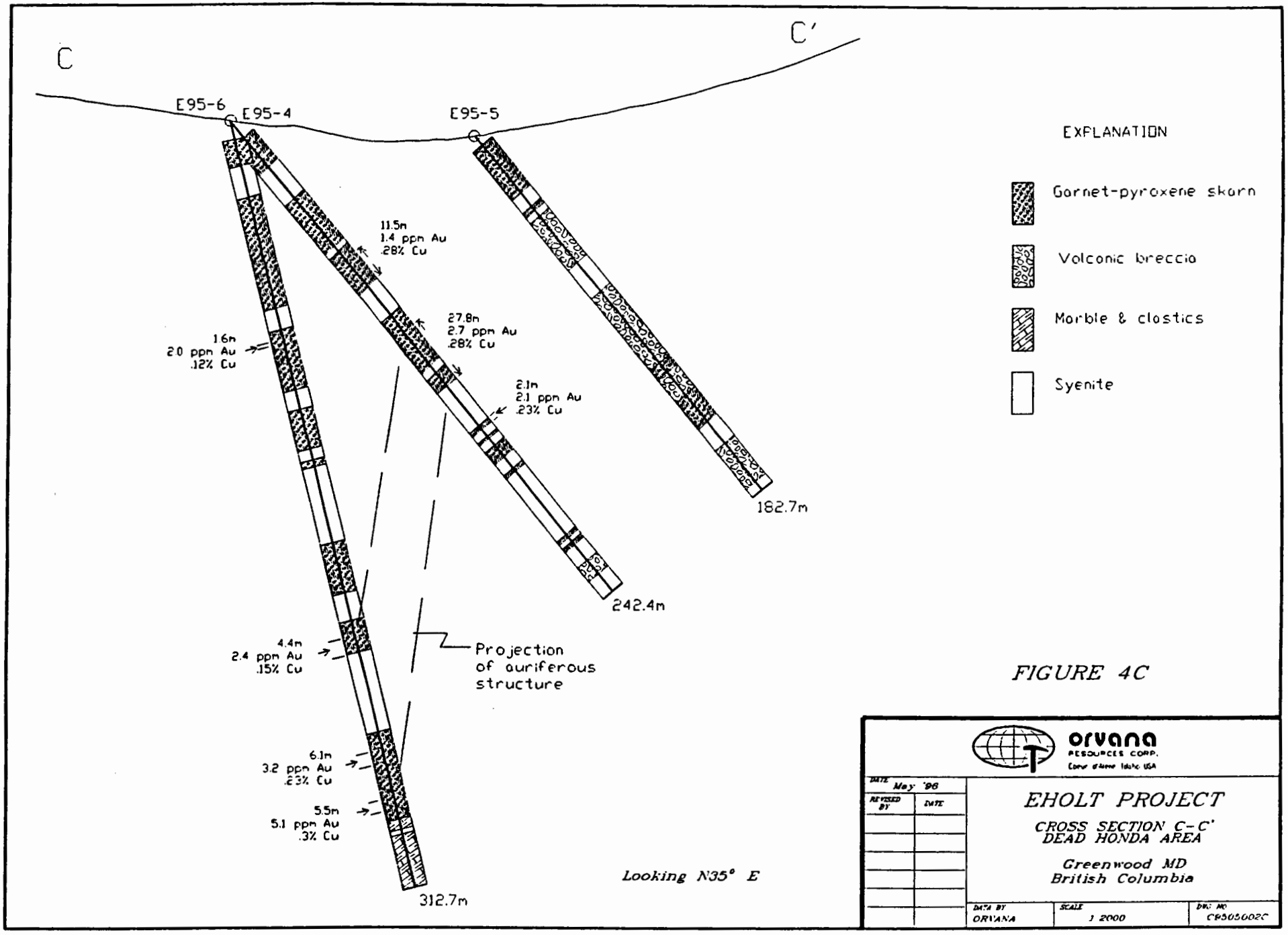


FIGURE 4C

orvana RESOURCES CORP. Coeur d'Alene Idaho USA

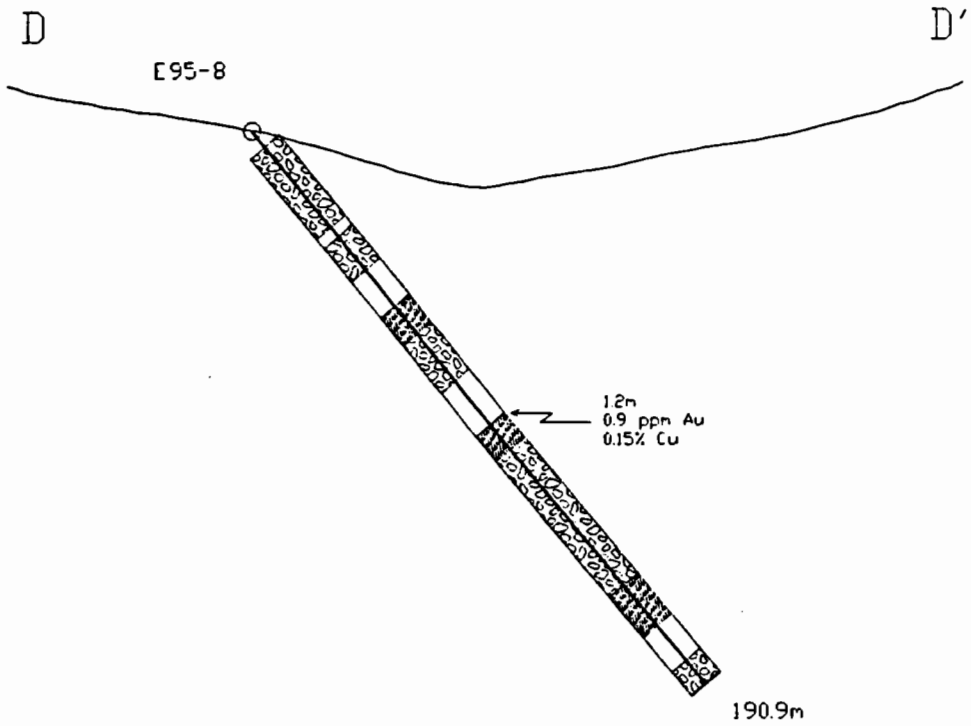
DATE	May '96
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION C-C'
DEAD HONDA AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1 2000	CR5050020



EXPLANATION

Garnet-pyroxene skarn

Volcanic breccia

Syenite

Looking N35° E

FIGURE 4D

orvana RESOURCES CORP. Coeur d'Alene, Idaho, USA

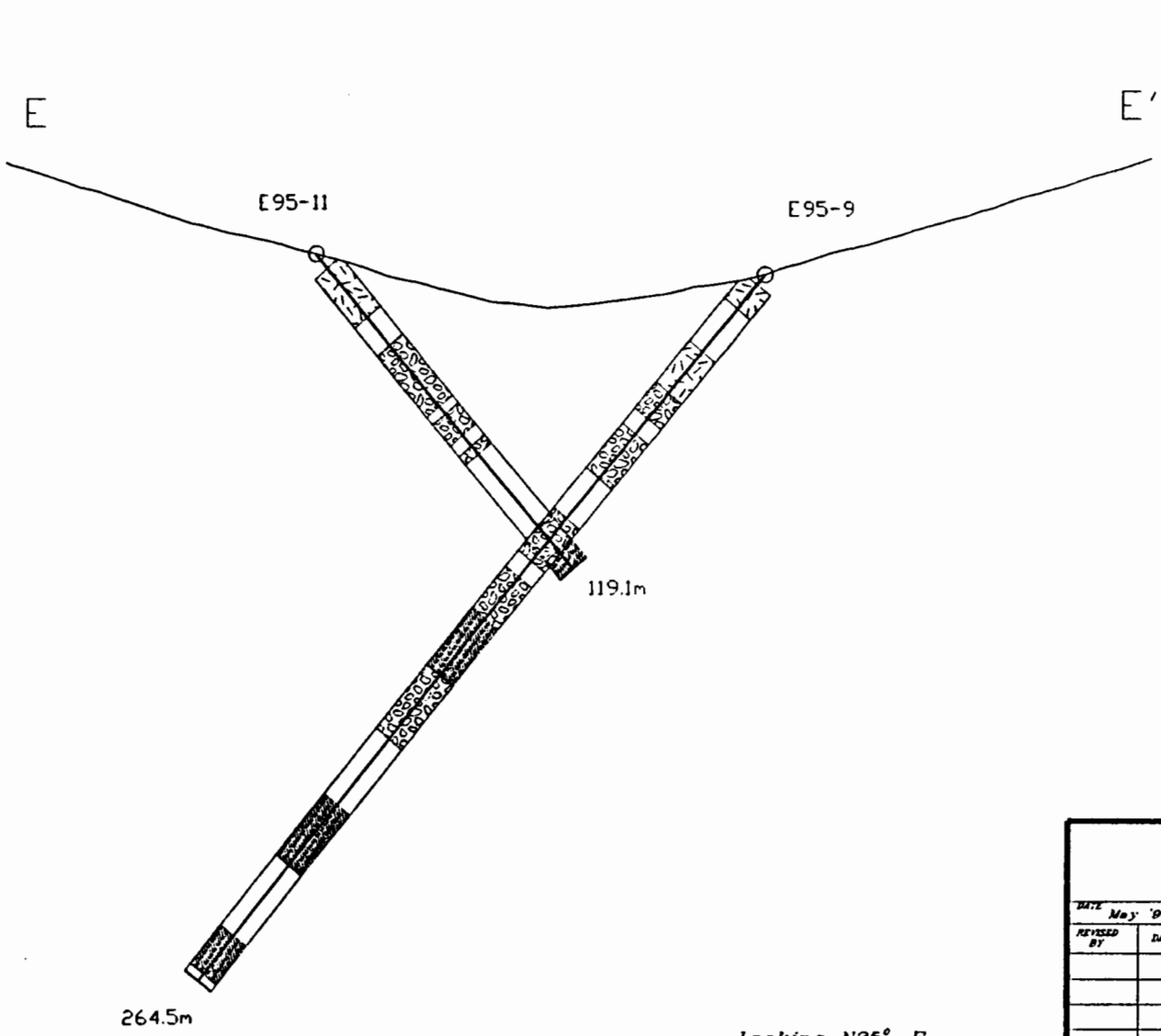
DATE	May '96
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION D-D'
DEAD HONDA AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1:2000	C95050021



EXPLANATION

- Garnet-pyroxene skarn
- Volconic breccio
- Monzonite
- Syenite

FIGURE 4E

orvana RESOURCES CORP. Coeur d'Alene, Idaho USA

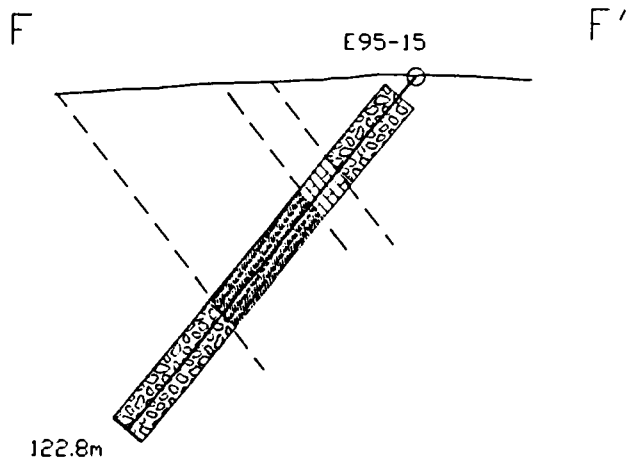
DATE	May '98
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION E-E'
DEAD HONDA AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1 2000	CP505002E



EXPLANATION

- Garnet-pyroxene skarn
- Volcanic breccia
- Syenite
- Marble

Looking N20° E

FIGURE 4F

orvana RESOURCES CORP. Coeur d'Alene, Idaho, U.S.A.

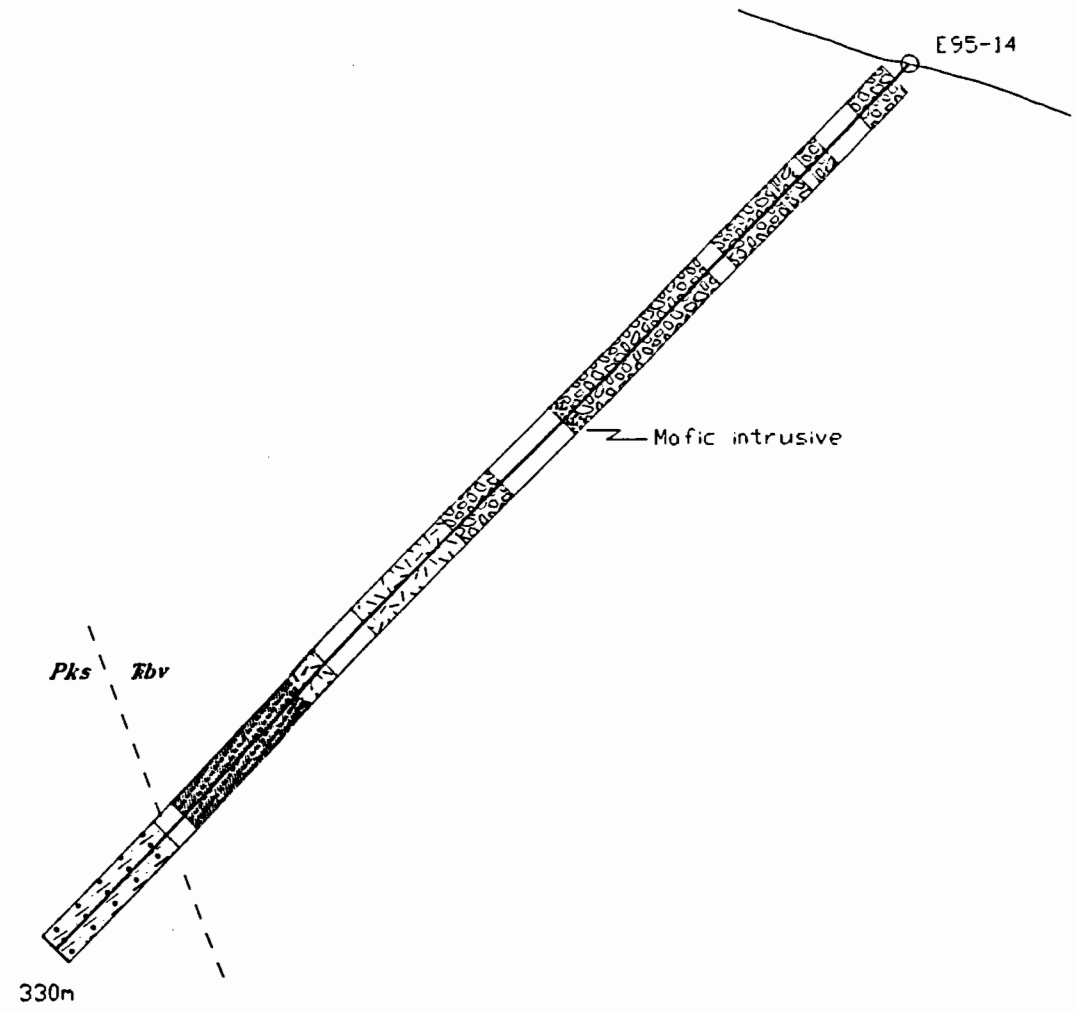
DATE	May '96
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION F–F'
S. EHOLT MTN AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1: 2000	CP505002F



EXPLANATION

- Garnet-pyroxene skarn
- Volcanic breccia
- Biotite hornfels
- Monzonite
- Syenite
- Mafic intrusive

Looking N5° E

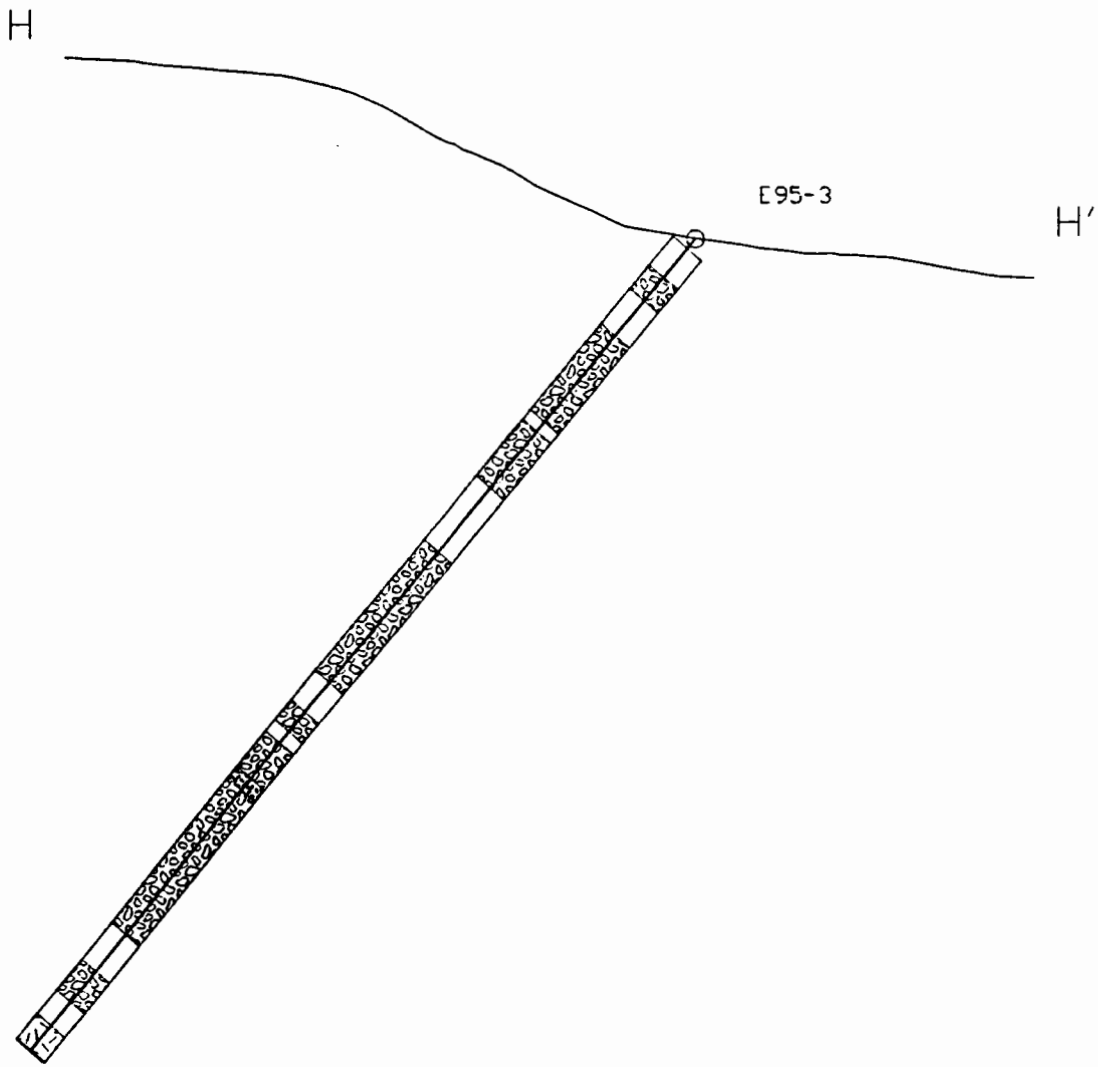
FIGURE 4G

orvana RESOURCES CORP. Coeur d'Alene, Idaho USA

DATE	May '98
REVISED BY	DATE

EHOLT PROJECT
CROSS SECTION G-G'
S. EHOLT MTN AREA
Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1:2000	C95050026



EXPLANATION

- Volcanic breccia
- Monzonite
- Syenite
- Mafic intrusive

Looking N4° W

FIGURE 4H

orvana RESOURCES CORP. Coeur d'Alene Idaho USA

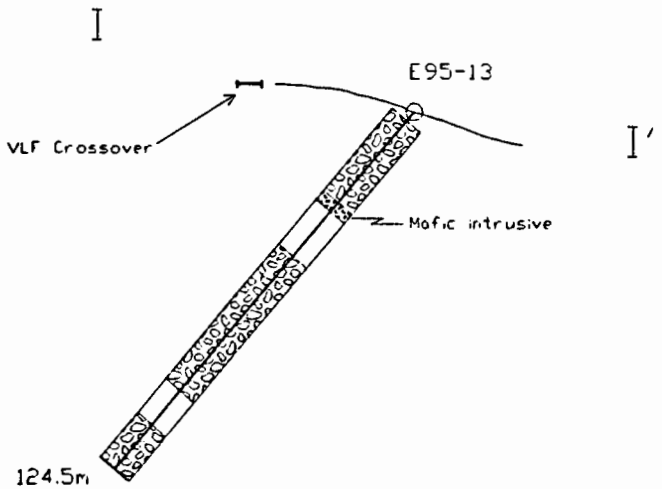
DATE	May '98
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION H-H'
EHOLT MTN AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1:2000	CR5050021H



EXPLANATION

Volcanic breccia

Syenite

Mafic intrusive

FIGURE 41

Looking N35° E

orvana RESOURCES CORP. Coeur d'Alene, Idaho USA

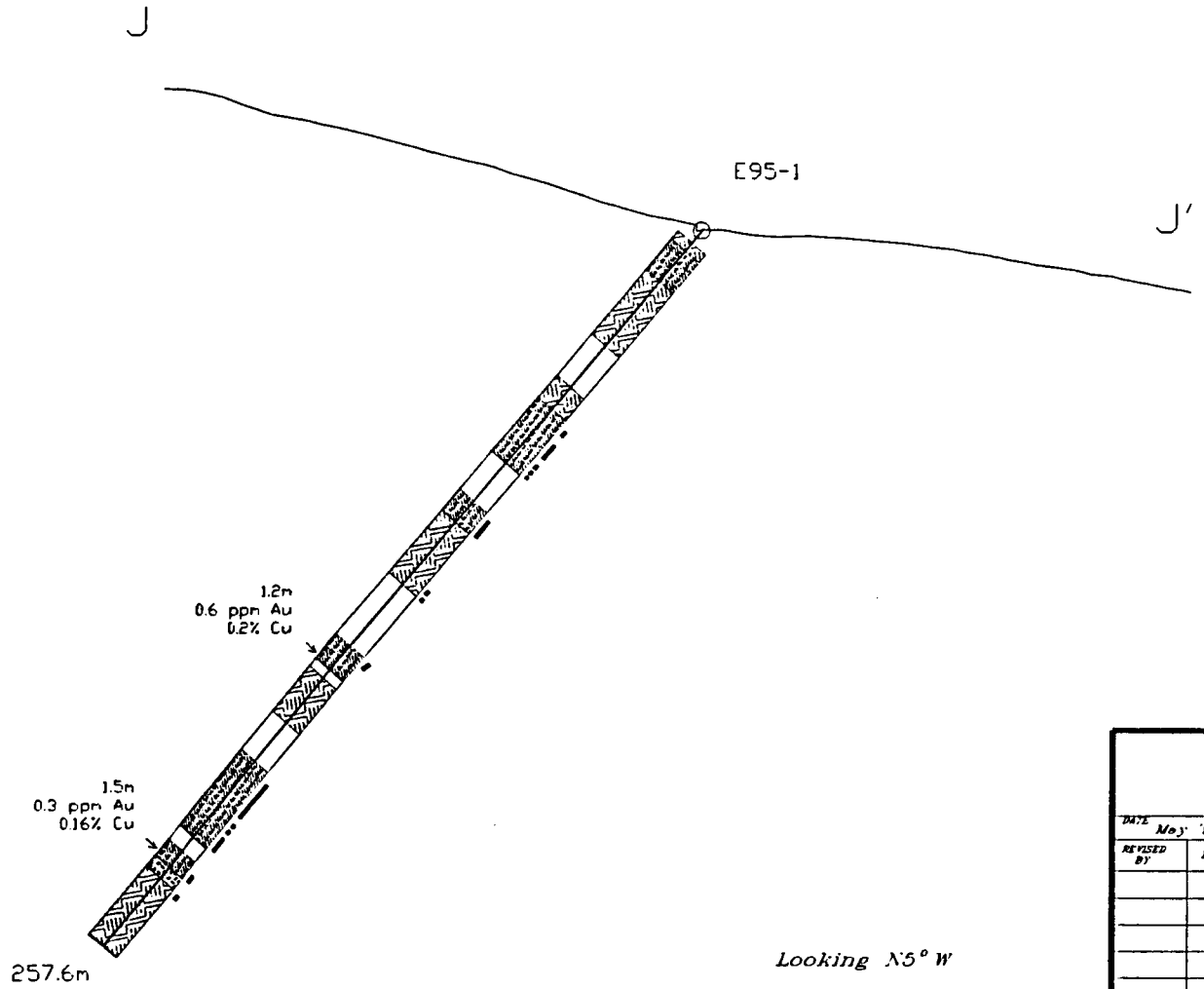
DATE May '96	
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION I-I'
EHOLT MTN AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1:2000	C95050021



EXPLANATION

- Garnet-pyroxene skarn
- Syenite
- Greenstone
- Mafic intrusive
- Sulfide-rich zone

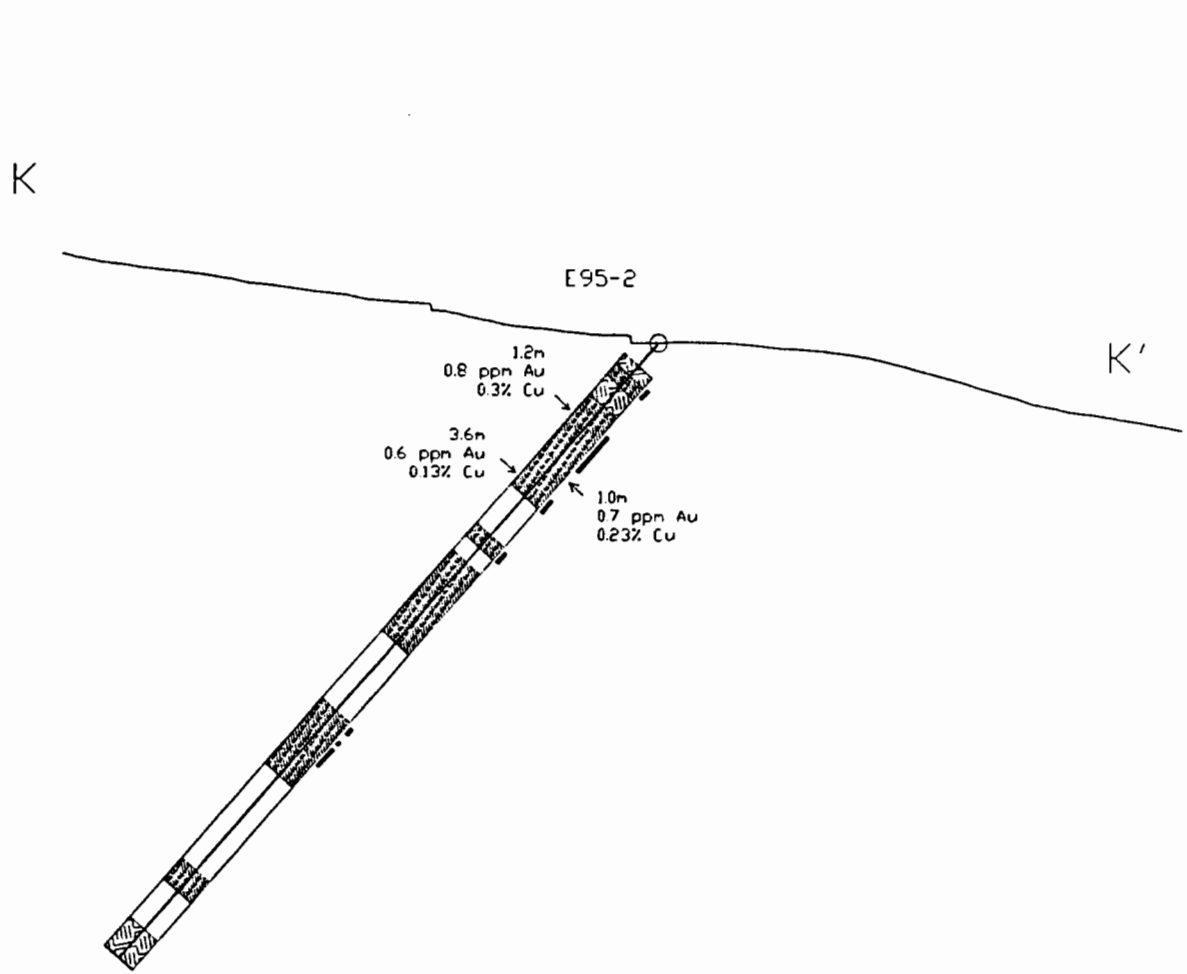
FIGURE 4J

orvana RESOURCES CORP. Coeur d'Alene, Idaho, USA

DATE	May '96
REVISED BY	DATE

EHOLT PROJECT
CROSS SECTION J-J'
EHOLT MTN AREA
Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1:2000	C95050021



EXPLANATION

- Garnet-pyroxene skarn
- Syenite
- Greenstone
- Sulfide-rich zone

Looking N5° W

FIGURE 4K

orvana RESOURCES CORP. Coeur d'Alene Idaho USA

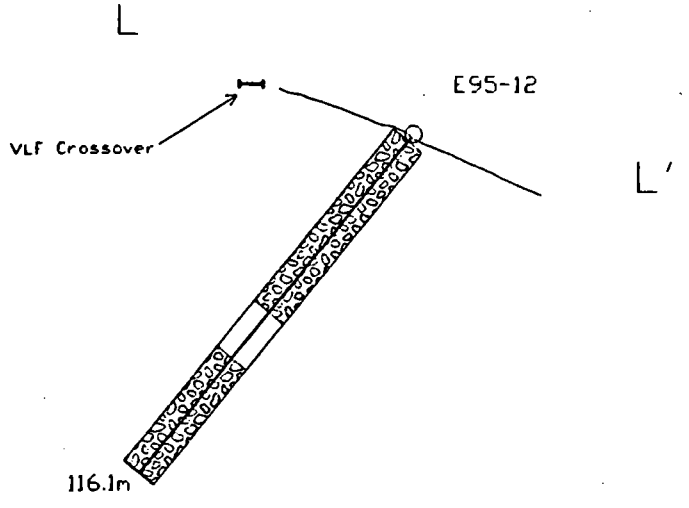
DATE	May '96
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION K-K'
EHOLT MTN AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DRG NO
ORVANA	1:2000	C9505004K



EXPLANATION

Volcanic breccia

Syenite

FIGURE 4L

Looking N35° E

orvana RESOURCES CORP. Coeur d'Alene, Idaho USA

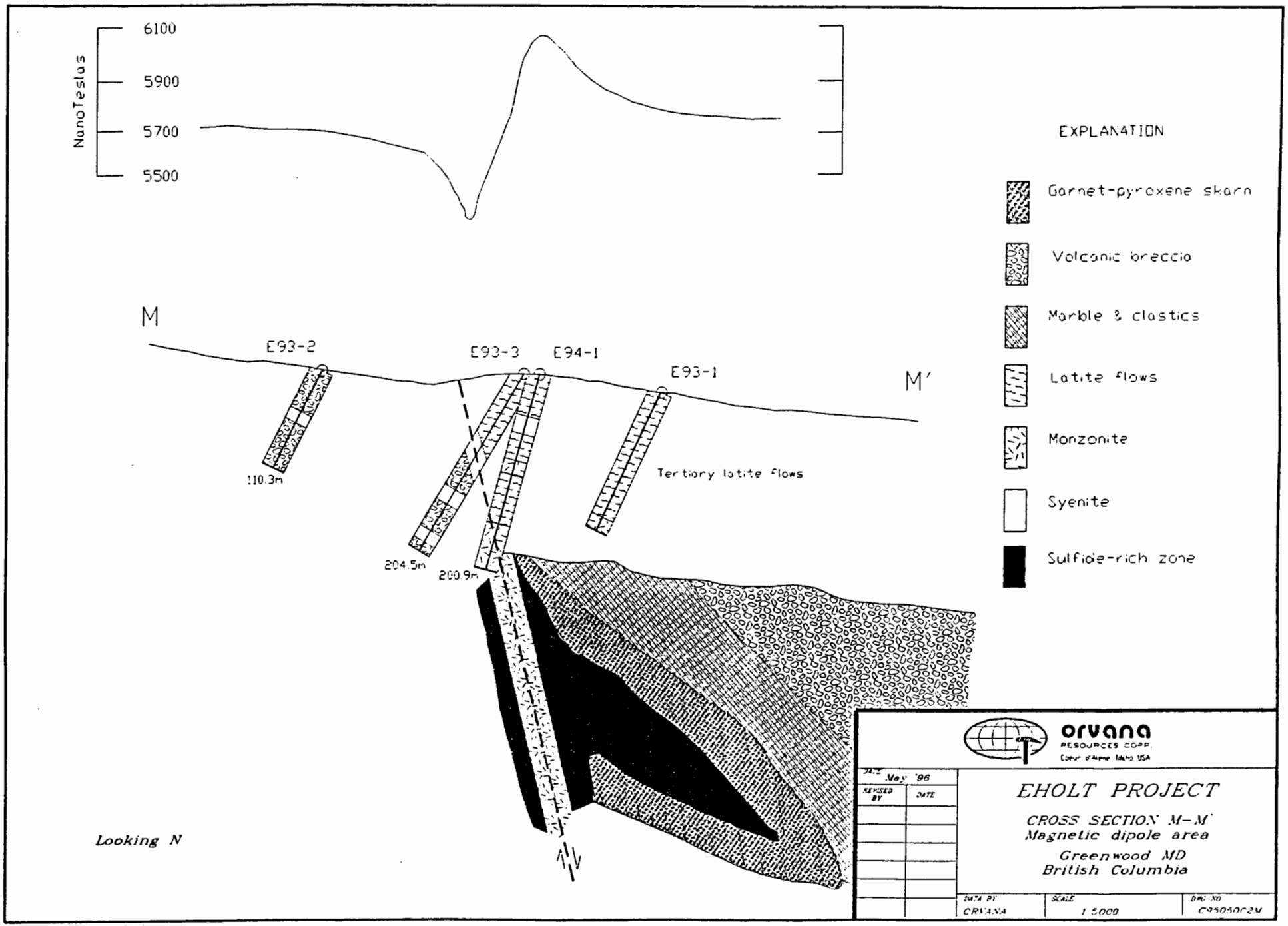
DATE	May '98
REVISED BY	DATE

EHOLT PROJECT

CROSS SECTION L-L'
EHOLT MTN AREA

Greenwood MD
British Columbia

DATA BY	SCALE	DWG NO
ORVANA	1:2000	C95050(12L


NanoTeslas
6100
5900
5700
5500
M
M'
E93-2
E93-3
E94-1
E93-1
110.3m
204.5m
200.9m
Tertiary latite flows
EXPLANATION
Garnet-pyroxene skarn
Volcanic breccia
Marble & clastics
Latite flows
Monzonite
Syenite
Sulfide-rich zone
Looking N
orvana
RESOURCES CORP.
Coeur d'Alene Idaho USA
DATE May '96
REVISED BY
DATE
EHOLT PROJECT
CROSS SECTION M-M'
Magnetic dipole area
Greenwood MD
British Columbia
DATA BY
ORVANA
SCALE
1:5000
DWG NO
C95050C2V

Eholt Mtn and Dead Honda may represent a relatively small portion of a large system of mineralization. There is good potential for a deposit similar to Phoenix at Eholt.

Holes E95-14 and E95-15 tested conceptual targets with weak alteration and mineralization. These holes intercepted limited garnet-pyroxene skarn with 3-5% sulphide, indicating they may be more on the periphery of a larger zone of mineralization. Au-Cu mineralization may exist at greater depths, or to the north of this area.

RECOMMENDATIONS

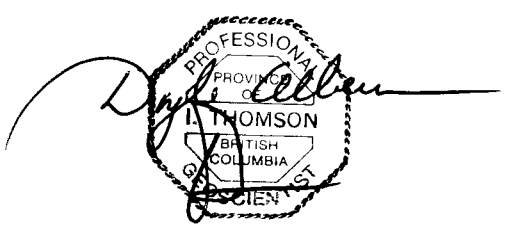
The results of the 1995 drill program are considered very encouraging. The Dead Honda target remains open along strike and at depth. More drilling should be done to better define this mineralization, particularly to the NE, where over 1 km of potential strike length remains untested. The Knob Hill/Brooklyn contact is a favorable host and should be further tested in the Dead Honda area; this could be accomplished by drilling to the E-SE from the same pads as E95-8 and E95-11.

At Eholt Mountain, the alteration and mineralization appears to continue to the northeast, although it may be offset by a fault. While the Au and Cu values are sub-ore grade, the sulfide mineralization is very significant. The VLF projection of the zone to the northeast of E95-12 should be further tested. Additionally, the mineralization is open at depth, and metal values could conceivably increase with depth. The dip component warrants some drilling to test this possibility, and to better define the shape and extent of the mineralization.

Finally, the magnetic dipole potentially represents a large body of magnetite or pyrrhotite mineralization. The dipole has not been explained satisfactorily by the drilling to date. Some additional drilling is warranted, possibly north of the previous drilling, along strike of the dipole; and may be some deeper holes to test a large buried target as suggested in cross section M-M'.

STATEMENT OF COSTS

Drilling	
Mob-Demob, set-up, plus 3083 meters NQ	$ 176,656
Road Construction	3,000
Laboratory Assays	16,134
Petrographic Analyses	3,800
Salaries	
Geologist: 6 months @ $5000/mon	30,000
Geotechnician: 300 hrs @ $12.50/hr	3,750
Room and Board: 150 days @ $60/day	9,000
Vehicles/Transportation	6,200
Field Supplies	4,300
Drafting and Computer Plots	1,700
TOTAL	$254,540



STATEMENT OF QUALIFICATIONS

I, Doyle F. Albers, of Sagle, Idaho, U.S.A., certify that:

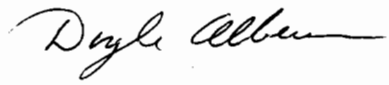
1. I am a geologist employed by Orvana Minerals Corporation, 710 - 1177 West Hastings Street, Vancouver, B.C., V6E 2K3, in their office located at 1755 Silver Beach Loop Coeur d'Alene, Idaho 83814 U.S.A.

2. I am a graduate of the University of Idaho, Moscow, Idaho, and hold a M.S. degree in Geology.

3. I have been practicing my profession for the past nineteen years.

4. This report is based on information that I and others under my supervision obtained while on the Eholt property during the period May through December, 1995.

Doyle F. Albers
Geologist, Orvana Minerals Corporation.



STATEMENT OF QUALIFICATIONS

I, Ian Thomson of 1628 West 66 Avenue, Vancouver, British Columbia, V6P 2S2, do hereby certify that:

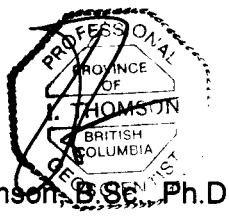
1. I am a graduate (1967) of the University of London, England, with a Bachelor of Science degree in Geology and a graduate (1971) of the University of London, England, with a doctor of Philosophy degree in Applied Geochemistry.

2. I am a registered Professional Geoscientist in the Province of British Columbia.

3. I have been continuously employed as a geologist-geochemist involved with mineral exploration for 25 years.

4. I hold the position of Chief Geologist with Orvana Minerals Corp.

5. This report is based on information obtained by others working under my guidance and from analytical data obtained from commercial laboratories.



Ian Thomson, B.Sc., Ph.D., P.Geo.
Orvana Minerals Corporation

REFERENCES

Church, B.N., 1986, Geologic Setting and Mineralization in the Mount Attwood - Phoenix Area of the Greenwood Mining Camp, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1986-2 65 pp.

Fyles, J.T., 1990, Geology of the Greenwood-Grand Forks Area, British Columbia, NTS 82E/1,2, British Columbia Geological Survey Open File 1990-25.

McLeod, J.W., 1988, Report on the Eholt Property, Unpublished Assessment Report #17488.

McLeod, J.W., 1991, Report on the Eholt Property, Unpublished Report on behalf of Golden Kootenay Resources, Inc.

EHOLT PROSPECT

Petrographic Report #EAQ

September 21, 1995

for

Doyle Albers
Orvana Resources Corp.
1755 Silver Beach Loop
Coeur d'Alene, ID 83814

by

Michael DePangher, Ph.D.
Spectrum Petrographics, Inc.

EHOLT PROSPECT

Petrographic Report #ECT

October 6, 1995

for

Doyle Albers
Orvana Resources Corp.
1755 Silver Beach Loop
Coeur d'Alene, ID 83814

by

Michael DePangher, Ph.D.
Spectrum Petrographics, Inc.

Comments

General Features:

-- Fine grained dacite porphyry and equivalent cataclastic breccia are common rock types. Alteration is dominantly involves characterized by secondary K-feldspar + FeMg silicate.

-- Altered fine grained dacite (?) volcaniclastic rocks are common. Alteration is dominantly involves characterized by secondary K-feldspar + FeMg silicate.

-- Garnet-clinopyroxene calc-silicate rocks are common.

-- Early pyrrhotite is commonly variably altered to pyrite.

Key to Petrographic and Photomicrographic Descriptions

Clay minerals common in altered rocks must often be identified by X-ray diffraction either because their optic properties are not diagnostic or because they are too fine grained to be reliably identified by optical methods. The term "clay" is used herein to denote fine grained phyllosilicates in general. Under ideal conditions, it is often possible to optically discriminate between 4 major groups: kaolinite, smectite, mica (including illite), and chlorite. This is done whenever conditions permit.

The term "sericite" is applied to fine grained colorless phyllosilicates that show upper 2nd order maximum interference colors. These could include muscovite, illite, paragonite, lepidolite, margarite, clintonite, pyrophyllite, and talc. The term "intermediate clay" is applied to fine grained very pale or colorless phyllosilicates that show upper 1st order maximum interference colors. These are probably dominated by chlorite, smectite, and mixed-layer illite/smectite.

The term "opaques" is used to refer to all materials opaque (and sometimes semi-opaque) to transmitted light. The term "FEOH" is herein used to indicate fine grained, yellowish to reddish brown, earthy materials of varying opacity in transmitted light. FEOH is probably mostly Fe oxy-hydroxides but may sometimes include sphalerite, realgar, orpiment, jarosite, a number of Mn oxy-hydroxides, and organic matter.

Particle size distributions are given as (A-B-C μm), where A, B, and C are the smallest, median, and largest particle sizes, respectively, in microns. A question mark (?) in the position of A, B, or C indicates that the value of A, B, or C was indeterminate, probably because of excessively large or small particle size or statistically insignificant numbers of particles.

Mineral abundances are visual estimates. For multi-lithologic materials (cuttings, etc...), mineralogy, textures, and alteration are described only for the dominant lithology.

Section preparation codes are as follows: (1) Format: 27 x 46 mm, 51 x 76 mm, or 1" round; (2) Finish: standard lapping (STD) or polished (POL); (3) Stains: sodium cobaltinitrite (SCN), alizarin red S (ARS), potassium ferricyanide (PF), and barium chloride + potassium rhodizonate (BCPR); and (4) Cover: none, permanent Loctite acrylic (PLA), or removable Canada Balsam (RCB).

Photomicrograph captions/labels contain the following items of information in consecutive order separated by forward slashes: (1) sample identification, (2) film roll number, (3) frame number, (4) type of illumination, (5) field of view (FOV) or the magnification on the color print, which is given as the number of times actual size (ie., 32X), and (6) the job identification number. "PPL" indicates plane-polarized light; "XPL indicates cross-polarized light. "R" indicates reflected light. "550" means that a 550 nanometer wavelength plate was inserted to highlight features of extremely low birefringence. "C" indicates that the substage condenser was in (sometimes used for Fe-oxides). "O" indicates substage condenser in an oblique position. These various illuminations can be combined. "CON" indicates conoscopic illumination. For normal photography of hand specimens, the focal length of the lens used is given rather than the magnification. POL means that a polarizing filter was used with the lens, and DAY means the sample was photographed in diffused daylight.

Features on photomicrographs can be located by overlaying the accompanying orthogonal plastic grid. A block of squares is marked by referencing the uppermost left and lowermost right corners of the block, ie. A6-E15. Linear features are marked by designating the extent of the feature from beginning to ending points, ie. B6 to L19.

Key to Petrographic and Photomicrographic Descriptions

Clay minerals common in altered rocks must often be identified by X-ray diffraction either because their optic properties are not diagnostic or because they are too fine grained to be reliably identified by optical methods. The term "clay" is used herein to denote fine grained phyllosilicates in general. Under ideal conditions, it is often possible to optically discriminate between 4 major groups: kaolinite, smectite, mica (including illite), and chlorite. This is done whenever conditions permit.

The term "sericite" is applied to fine grained colorless phyllosilicates that show upper 2nd order maximum interference colors. These could include muscovite, illite, paragonite, lepidolite, margarite, clintonite, pyrophyllite, and talc. The term "intermediate clay" is applied to fine grained very pale or colorless phyllosilicates that show upper 1st order maximum interference colors. These are probably dominated by chlorite, smectite, and mixed-layer illite/smectite.

The term "opaques" is used to refer to all materials opaque (and sometimes semi-opaque) to transmitted light. The term "FEOH" is herein used to indicate fine grained, yellowish to reddish brown, earthy materials of varying opacity in transmitted light. FEOH is probably mostly Fe oxy-hydroxides but may sometimes include sphalerite, realgar, orpiment, jarosite, a number of Mn oxy-hydroxides, and organic matter.

Particle size distributions are given as (A-B-C μm), where A, B, and C are the smallest, median, and largest particle sizes, respectively, in microns. A question mark (?) in the position of A, B, or C indicates that the value of A, B, or C was indeterminate, probably because of excessively large or small particle size or statistically insignificant numbers of particles.

Mineral abundances are visual estimates. For multi-lithologic materials (cuttings, etc...), mineralogy, textures, and alteration are described only for the dominant lithology.

Section preparation codes are as follows: (1) Format: 27 x 46 mm, 51 x 76 mm, or 1" round; (2) Finish: standard lapping (STD) or polished (POL); (3) Stains: sodium cobaltinitrite (SCN), alizarin red S (ARS), potassium ferricyanide (PF), and barium chloride + potassium rhodizonate (BCPR); and (4) Cover: none, permanent Loctite acrylic (PLA), or removable Canada Balsam (RCB).

Photomicrograph captions/labels contain the following items of information in consecutive order separated by forward slashes: (1) sample identification, (2) film roll number, (3) frame number, (4) type of illumination, (5) field of view (FOV) or the magnification on the color print, which is given as the number of times actual size (ie., 32X), and (6) the job identification number. "PPL" indicates plane-polarized light; "XPL indicates cross-polarized light. "R" indicates reflected light. "550" means that a 550 nanometer wavelength plate was inserted to highlight features of extremely low birefringence. "C" indicates that the substage condenser was in (sometimes used for Fe-oxides). "O" indicates substage condenser in an oblique position. These various illuminations can be combined. "CON" indicates conoscopic illumination. For normal photography of hand specimens, the focal length of the lens used is given rather than the magnification. POL means that a polarizing filter was used with the lens, and DAY means the sample was photographed in diffused daylight.

Features on photomicrographs can be located by overlaying the accompanying orthogonal plastic grid. A block of squares is marked by referencing the uppermost left and lowermost right corners of the block, ie. A6-E15. Linear features are marked by designating the extent of the feature from beginning to ending points, ie. B6 to L19.

SAMPLE # E95-1 692' October 6, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary K-feldspar + brown clay (probably chlorite) + intermediate clay + calcite + quartz + sphene + rutile + apatite + pyrite + ferroan calcite) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS K-feldspar (49%) + brown clay (probably chlorite) (15%) + intermediate clay (10%) + calcite (10%) + quartz (10%) + sphene (2%) + rutile (2%) + apatite (1%) + pyrite (1%) + ferroan calcite (<1%).

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (75%) are subangular to subround, 200-600-18,000 μm lithic fragments of fine grained dacite porphyry (75%). Contacts between breccia clasts are floating to curved.

Matrix (15%) is composed of the altered comminuted equivalent of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

Cement (10%) is composed of calcite + ferroan calcite + brown clay + pyrite.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) veins of calcite + brown clay + quartz; (2) cataclastic brecciation; and (3) veins and cement of calcite + ferroan calcite + brown clay + pyrite. The following alteration features are present but of indeterminate relative ages: (1) plagioclase completely altered to K-feldspar + brown clay + intermediate clay + pyrite; (2) hornblende (?) completely altered to brown clay + sphene + rutile + pyrite; and (3) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-1 692'/95038/01/DAY/3X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance of hand specimen.

E95-1 692'/95042/11/XPL/28X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance (same view as 95042/12).

E95-1 692'/95042/12/PPL+R/28X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance with pyrite (O14) in veins and cement (same view as 95042/11).

Spectrum Petrographics, Inc. 499 Dillard Gardens Road, Suite 2 · Winston · OR · 97496 · USA Phone (800) 625-2476

Comments

Samples E95-2 142' and E95-2 504.8' show that pervasive secondary K-feldspar formed in the dacite before cataclastic brecciation and that calc-silicate formation (actinolite and/or chlorite) occurred after cataclastic brecciation. The dacite body was therefore apparently not the source of calc-silicate alteration. Potassic alteration in the dacite predates cataclasis and calc-silicate alteration.

SAMPLE # E95-2 142' October 6, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary K-feldspar + actinolite + intermediate clay + quartz + sphene + calcite + rutile + chlorite + pyrite + chalcopyrite) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS Plagioclase (36%) + K-feldspar (25%) + actinolite (18%) + intermediate clay (10%) + quartz (5%) + sphene (3%) + calcite (2%) + rutile (1%) + chlorite (<1%) + zircon (<1%) + pyrite (<1%) + chalcopyrite (<1%).

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (ind%) are subangular to subround, ?-?-8000 μm lithic fragments of fine grained dacite porphyry (all%). Contacts between breccia clasts are floating to curved.

Matrix/Cement (ind%) is composed of the altered comminuted equivalent (dominantly actinolite) of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) pervasive secondary K-feldspar; (2) cataclastic brecciation; and (3) veins calcite + pyrite. The following alteration features are present but of indeterminate relative ages: (1) plagioclase moderately altered to K-feldspar + intermediate clay; and (2) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 142'/95038/02/DAY/3X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance of hand specimen.

E95-2 142'/95042/13/XPL/28X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance.

E95-2 142'/95042/14/PPL/28X/ECT ALTERED DACITE PORPHYRY BRECCIA showing K-rich (stained yellowish; J15, G27) breccia fragments that show secondary K-feldspar truncated at clast boundary (C28), showing that secondary K-feldspar predates cataclastic brecciation.

SAMPLE # E95-2 158.5′ October 6, 1995

ROCK NAME ALTERED GARNET CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism and hydrothermal alteration (secondary garnet + K-feldspar + clinopyroxene + intermediate clay + calcite + quartz + epidote + chlorite + actinolite + pyrite + chalcopyrite) of a dacite porphyry cataclastic breccia (?) precursor.

MINERALS Plagioclase (20%) + garnet (20%) + K-feldspar (15%) + clinopyroxene (15%) + intermediate clay (13%) + calcite (5%) + quartz (4%) + epidote (2%) + chlorite (2%) + actinolite (2%) + pyrite (1%) + chalcopyrite (1%).

TEXTURES Texture-destructive alteration/cataclasis prevents complete characterization of framework components and matrix. The rock appears to have been a dacite porphyry cataclastic breccia with superimposed calc-silicate alteration/metasomatism.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) cataclasis (?); (2) veins of calcite + pyrite; (3) veins of chlorite + calcite + chalcopyrite; (4) clinopyroxene moderately altered to calcite; and (5) plagioclase strongly altered to intermediate clay.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 158.5′/95038/03/DAY/3X/ECT ALTERED GARNET CALC-SILICATE showing typical appearance of hand specimen.

E95-2 158.5′/95042/15/XPL/28X/ECT ALTERED GARNET CALC-SILICATE showing typical appearance.

E95-2 158.5′/95042/16/PPL+R/114X/ECT ALTERED GARNET CALC-SILICATE showing typical appearance of pyrite (I15) + chalcopyrite (F15).

SAMPLE # E95-2 169' September 21, 1995

ROCK NAME ALTERED MASSIVE SULFIDE -- probably formed by hydrothermal precipitation (secondary pyrrhotite + pyrite + calcite + colorless mica + sphalerite-/tetrahedrite (?) + brown clay (probably chlorite) + chalcopyrite + quartz + clinozoisite (?)) of an indeterminate protolith.

MINERALS Pyrrhotite (45%) + pyrite (27%) + calcite (10%) + colorless mica (7%) + sphalerite/tetrahedrite (?) (6%) + brown clay (probably chlorite) (3%) + chalcopyrite (2%) + quartz (<1%) + clinozoisite (?) (<1%).

TEXTURES Granoblastic pyrrhotite moderately altered to pyrite dominates the texture.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) precipitation of pyrrhotite; (2) pyrrhotite moderately altered to pyrite; and (3) veins of calcite + [colorless mica weakly altered to brown clay] + [clinozoisite (?) moderately altered to brown clay].

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 169'/95034/11/DAY/3X/EAQ ALTERED MASSIVE SULFIDE showing typical appearance of hand specimen.

E95-2 169'/95038/10/PPL+R/114X/EAQ ALTERED MASSIVE SULFIDE showing typical appearance of chalcopyrite (R16) + [pyrrhotite (I16) moderately altered to pyrite (J23)].

E95-2 169'/95038/11/PPL+R/227X/EAQ ALTERED MASSIVE SULFIDE showing typical appearance of sphalerite (?) (H8, I15, J23) surrounded by chalcopyrite (H17) surrounded by [pyrrhotite (F18) moderately altered to pyrite (K4)].

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SAMPLE # E95-2 233.2' October 6, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary K-feldspar + actinolite + clay + quartz + clinopyroxene + magnetite + sphene + rutile + ferroan calcite + brown clay (chlorite ?) + clinozoisite + apatite) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS Plagioclase (40%) + K-feldspar (30%) + actinolite (15%) + clay (5%) + quartz (4%) + clinopyroxene (3%) + magnetite (2%) + sphene (1%) + rutile (<1%) + ferroan calcite (<1%) + brown clay (chlorite ?) (<1%) + clinozoisite (<1%) + apatite (<1%).

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (ind%) are subangular to subround, ?-?-? μm lithic fragments of fine grained dacite porphyry (all%). Contacts between breccia clasts are indeterminate.

Matrix/Cement (ind%) is composed of the altered comminuted equivalent (dominantly actinolite) of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclastic brecciation; and (2) veins of calcite + ferroan calcite + clinozoisite + brown clay. The following alteration features are also present but of indeterminate relative ages: (1) plagioclase strongly altered to K-feldspar + clay; (2) hornblende (?) completely altered to actinolite + magnetite + ferroan calcite; and (3) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 233.2'/95038/04/DAY/3X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of hand specimen.

E95-2 233.2'/95042/17/XPL/28X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance.

SAMPLE # E95-2 268.4' September 21, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary ferroan calcite + K-feldspar + ferroan chlorite + quartz + colorless clay + pyrite + brown clay + chalcopyrite) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS Plagioclase (40%) + ferroan calcite (18%) + K-feldspar (15%) + ferroan chlorite (15%) + quartz (14%) + colorless clay (4%) + pyrite (1%) + brown clay (<1%) + zircon (<1%) + chalcopyrite (<1%).

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (60%) are angular to subround, 200-800- >5200 μm lithic fragments of fine grained dacite porphyry (60%). Contacts between breccia clasts are curved.

Matrix/Cement (40%) is composed of the altered comminuted equivalent of the clasts (ferroan calcite + K-feldspar + ferroan chlorite + quartz), suggesting a dominantly cataclastic mechanism of brecciation.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclastic brecciation; (2) veins of ferroan calcite + quartz + pyrite; and (3) veins of ferroan calcite. The following alteration features are present but of indeterminate relative ages: (1) plagioclase moderately altered to K-feldspar + colorless clay + ferroan calcite; and (2) hornblende (?) completely altered to ferroan calcite + ferroan chlorite + quartz + K-feldspar + pyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 268.4'/95034/12/DAY/3X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of hand specimen.

E95-2 268.4'/95038/12/XPL/28X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance.

E95-2 268.4'/95038/13/PPL+R/114X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of pyrite (K21) + chalcopyrite (O22).

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SAMPLE # E95-2 437.2' October 6, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA (?) -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary clinopyroxene + actinolite + clay + sphene + quartz + pyrite + K-feldspar + ferroan calcite + chalcopyrite) of a fine grained dacite porphyry cataclastic breccia or possibly volcaniclastic precursor.

MINERALS Clinopyroxene (33%) + plagioclase (25%) + actinolite (25%) + clay (10%) + sphene (3%) + quartz (2%) + pyrite (2%) + K-feldspar (<1%) + ferroan calcite (<1%) + chalcopyrite (<1%).

TEXTURES Texture-destructive alteration/cataclasis prevents complete characterization of framework components and matrix. The sample has a weakly directed fabric.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclasis (?); and (2) veins of clinopyroxene + pyrite + chalcopyrite + quartz with broad selveges in which actinolite is strongly altered to clinopyroxene. The following alteration features are also present but of indeterminate relative ages: (1) veins of clinopyroxene; (2) veins of ferroan calcite + pyrite; (3) plagioclase strongly altered to clay; (4) actinolite moderately altered to clinopyroxene; (5) hornblende (?) completely altered to [actinolite moderately altered to clinopyroxene] + sphene + pyrite; and (6) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 437.2'/95038/05/DAY/3X/ECT ALTERED DACITE PORPHYRY BRECCIA (?) showing typical appearance of hand specimen with dark colored (J11) actinolite-rich areas and lighter colored (G19) clinopyroxene-rich selveges around a vein (C19 to L29).

E95-2 437.2'/95042/18/XPL/57X/ECT ALTERED DACITE PORPHYRY BRECCIA (?) showing typical appearance of actinolite-rich area away from the vein of clinopyroxene + pyrite + chalcopyrite + quartz.

E95-2 437.2'/95042/19/XPL/57X/ECT ALTERED DACITE PORPHYRY BRECCIA (?) showing typical appearance of altered selvege around vein of clinopyroxene + pyrite + chalcopyrite + quartz in which actinolite is strongly altered to clinopyroxene.

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SAMPLE # E95-2 456.5' September 21, 1995

ROCK NAME ALTERED GARNET CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism and retrograde hydrothermal alteration (secondary garnet + brown clay (probably chlorite) + ferroan calcite + calcite + quartz + K-feldspar + clinozoisite + actinolite + colorless mica) of an indeterminate calcareous protolith.

MINERALS Garnet (79%) + brown clay (probably chlorite) (10%) + ferroan calcite (5%) + calcite (2%) + quartz (2%) + K-feldspar (1%) + clinozoisite (1%) + actinolite (<1%) + colorless mica (<1%).

TEXTURES Massive granoblastic texture dominated by subhedral to euhedral garnets with interstitial ferroan calcite + calcite + clinozoisite + chalcopyrite + pyrite + colorless mica. Primary textures indicative of protolith are absent.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) veins of ferroan calcite + calcite + chalcopyrite + pyrite; and (2) veins of ferroan calcite. The following alteration features are present but of indeterminate relative ages: (1) actinolite, clinozoisite, and garnet variably altered (retrograde hydrothermal alteration ?) to brown clay (probably chlorite).

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 456.5'/95034/13/DAY/3X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of hand specimen.

E95-2 456.5'/95038/14/PPL/28X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance dominated by massive garnet with vein and interstitial ferroan calcite + calcite + chalcopyrite + pyrite.

E95-2 456.5'/95038/15/PPL+R/114X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of chalcopyrite (H17) + pyrite (J15) in vein.

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SAMPLE # E95-2 463' September 21, 1995

ROCK NAME ALTERED GARNET CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism, cataclasis, and retrograde hydrothermal alteration (secondary dolomite + pyrite + brown clay (probably chlorite and possibly some biotite) + garnet + pyrrhotite + quartz + ferroan calcite + chalcopyrite + apatite) of an indeterminate calcareous protolith.

MINERALS Dolomite (25%) + pyrite (25%) + brown clay (probably chlorite and possibly some biotite) (16%) + garnet (13%) + pyrrhotite (10%) + quartz (5%) + ferroan calcite (5%) + chalcopyrite (1%) + apatite (<1%).

TEXTURES Massive granoblastic texture dominated by subhedral to euhedral garnets with superimposed local cataclastic texture. Primary textures indicative of protolith are absent.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclasis; and (2) veins of dolomite + ferroan calcite. The following alteration features are present but of indeterminate relative ages: (1) garnet moderately altered (retrograde hydrothermal alteration ?) to brown clay (probably chlorite); and (2) pyrrhotite strongly altered to pyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 463'/95034/14/DAY/3X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of hand specimen.

E95-2 463'/95038/16/PPL/28X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance dominated by massive [garnet moderately altered to brown clay] and abundant secondary dolomite (J28).

E95-2 463'/95038/17/PPL+R/114X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of chalcopyrite (H10) + [pyrrhotite (K17) strongly altered to pyrite (F17)].

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SAMPLE # E95-2 472′ September 21, 1995

ROCK NAME ALTERED CLINOPYROXENE-GARNET CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism and retrograde hydrothermal alteration (secondary garnet + clinopyroxene + pyrrhotite + pyrite + vesuvianite + brown clay (probably chlorite) + calcite + chalcopyrite + apatite + ferroan calcite + epidote + unknown opaque) of an indeterminate calcareous protolith.

MINERALS Garnet (45%) + clinopyroxene (30%) + pyrrhotite (10%) + pyrite (4%) + vesuvianite (3%) + brown clay (probably chlorite) (3%) + calcite (2%) + chalcopyrite (2%) + apatite (<1%) + ferroan calcite (<1%) + epidote (<1%) + unknown opaque (<1%).

TEXTURES Massive granoblastic texture dominated by subhedral to euhedral garnets with patches of clinopyroxene + vesuvianite. Primary textures indicative of protolith are absent.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) veins of calcite + pyrite + ferroan calcite + unknown opaque; (2) pyrrhotite weakly altered to pyrite; (3) clinopyroxene and garnet weakly altered to brown clay (retrograde hydrothermal alteration ?).

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 472′/95034/15/DAY/3X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of hand specimen.

E95-2 472′/95038/18/PPL/28X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance dominated by [clinopyroxene (L8-P11) and garnet (J20)] weakly altered to brown clay.

E95-2 472′/95038/19/PPL+R/114X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing radial colloform pyrite overgrown on bladed unknown opaque (K13).

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SAMPLE # E95-2 472' continued September 21, 1995

PHOTOS E95-2 472'/95038/20/PPL+R/114X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of chalcopyrite (G5) + [pyrrhotite (L21) weakly altered to pyrite (L15)].

SAMPLE # E95-2 504.8′ October 6, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary ferroan calcite + K-feldspar + quartz + chlorite + calcite + rutile + pyrite + sphene) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS Ferroan calcite (30%) + K-feldspar (20%) + quartz (20%) + chlorite (11%) + plagioclase (10%) + calcite (3%) + rutile (2%) + pyrite (2%) + sphene (1%).

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (ind%) are subangular to subround, ?-?-10,000 μm lithic fragments of fine grained dacite porphyry (all%). Contacts between breccia clasts are indeterminate.

Matrix/Cement (ind%) is composed of the altered comminuted equivalent (dominantly actinolite) of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) pervasive secondary K-feldspar; (2) cataclastic brecciation; (3) veins of ferroan calcite + pyrite; and (4) veins of calcite + quartz. The following alteration features are also present but of indeterminate relative ages: (1) plagioclase strongly altered to ferroan calcite + K-feldspar; (2) hornblende (?) completely altered to ferroan calcite + chlorite + rutile; and (3) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-2 504.8′/95038/06/DAY/3X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance of hand specimen.

E95-2 504.8′/95042/20/XPL/28X/ECT ALTERED DACITE PORPHYRY BRECCIA showing typical brecciated appearance.

E95-2 504.8′/95042/21/PPL/28X/ECT ALTERED DACITE PORPHYRY BRECCIA showing secondary K-feldspar (stained yellowish) truncated at clast boundary, showing that secondary K-feldspar predates cataclastic brecciation.

SAMPLE # E95-3 364' September 21, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary actinolite + K-feldspar + quartz + clay + ferroan calcite + sphene + pyrite + epidote + chlorite + apatite + tourmaline + sphalerite + chalcopyrite + rutile) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS Plagioclase (43%) + actinolite (17%) + K-feldspar (15%) + quartz (5%) + clay (5%) + ferroan calcite (4%) + sphene (3%) + pyrite (3%) + epidote (2%) + chlorite (2%) + apatite (1%) + tourmaline (<1%) + sphalerite (<1%) + zircon (<1%) + chalcopyrite (<1%) + rutile (<1%).

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (90%) are 120-?-10,800 μm lithic fragments of fine grained dacite porphyry (90%). Contacts between breccia clasts are curved.

Matrix (5%) is composed of the altered comminuted equivalent of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

Cement (5%) is composed of ferroan calcite + quartz + pyrite + sphalerite.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclastic brecciation; and (2) veins and cement of ferroan calcite + quartz + pyrite + sphalerite. The following alteration features are present but of indeterminate relative ages: (1) plagioclase moderately altered to K-feldspar + clay + ferroan calcite + tourmaline + epidote; and (2) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-3 364'/95034/16/DAY/3X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of hand specimen.

E95-3 364'/95038/22/PPL+R/28X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of pyrite (K17) + sphalerite (M7-O9) in breccia cement.

SAMPLE # E95-3 458' September 21, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary K-feldspar + clay + chlorite + ferroan calcite + tourmaline + pyrite + apatite + sphene + rutile + chalcopyrite) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS Plagioclase (51%) + K-feldspar (20%) + quartz (5%) + clay (5%) + chlorite (5%) + ferroan calcite (5%) + tourmaline (4%) + pyrite (4%) + apatite (1%) + sphene (<1%) + rutile (<1%) + chalcopyrite (<1%).

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (60%) are 200-?-18,000 μm lithic fragments of fine grained dacite porphyry (60%). Contacts between breccia clasts are floating to curved.

Matrix (37%) is composed of the altered comminuted equivalent of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

Cement (3%) is composed of ferroan calcite + pyrite.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclastic brecciation; and (2) veins and cement of ferroan calcite + pyrite. The following alteration features are present but of indeterminate relative ages: (1) plagioclase strongly altered to K-feldspar + clay + tourmaline; (2) hornblende (?) completely altered to ferroan calcite + chlorite + tourmaline + sphene + rutile; and (3) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-3 458'/95034/17/DAY/3X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of breccia texture in hand specimen.

E95-3 458'/95038/23/XPL/28X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical cataclastically brecciated appearance.

E95-3 458'/95038/24/PPL+R/28X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical cataclastically brecciated appearance with pyrite (K14).

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SAMPLE # E95-3 692′ September 21, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary K-feldspar + actinolite + clay + chlorite + ferroan calcite + sphene + pyrite + tourmaline + rutile + apatite + epidote + sphalerite + chalcopyrite) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS Plagioclase (43%) + K-feldspar (20%) + actinolite (20%) + quartz (5%) + clay (5%) + chlorite (3%) + ferroan calcite (2%) + sphene (1%) + pyrite (1%) + tourmaline (<1%) + rutile (<1%) + apatite (<1%) + epidote (<1%) + sphalerite (<1%) + chalcopyrite (<1%). Sphalerite shows chalcopyrite disease.

TEXTURES Cataclastically brecciated; non-directed fabric.

Breccia Clasts (60%) are 200-2200-13,000 μm lithic fragments of fine grained dacite porphyry (60%). Contacts between breccia clasts are floating to curved.

Matrix/Cement (40%) is composed of the altered comminuted equivalent of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclastic brecciation; and (2) veins of ferroan calcite. The following alteration features are present but of indeterminate relative ages: (1) plagioclase strongly altered to K-feldspar + clay + epidote + ferroan calcite; (2) hornblende (?) completely altered to actinolite + quartz; and (3) an indeterminate reaction relationship between sphene and rutile.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-3 692′/95034/18/DAY/3X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of cataclastic breccia texture in hand specimen.

E95-3 692′/95038/25/XPL/28X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical cataclastically brecciated appearance.

E95-3 692′/95038/26/PPL+R/114X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical cataclastically brecciated appearance with pyrite.

SAMPLE # E95-3 916.5′ September 21, 1995

ROCK NAME ALTERED QUARTZ MONZONITE -- probably formed by hydrothermal alteration (secondary chlorite + ferroan calcite + magnetite + clay + actinolite + pyrite) of a fine grained quartz monzonite intrusion.

MINERALS Plagioclase (35%) + K-feldspar (25%) + quartz (10%) + clinopyroxene (10%) + biotite (10%) + chlorite (5%) + ferroan calcite (5%) + magnetite (5%) + clay (3%) + actinolite (2%) + apatite (<1%) + pyrite (<1%). K-feldspar occurs as rims on finer grained plagioclase and appears to be of late magmatic origin.

TEXTURES Phaneritic, holocrystalline, seriate, hypidiomorphic, fine grained, non-directed fabric.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) plagioclase weakly altered to clay; and (2) clinopyroxene weakly altered to chlorite + sphene + magnetite + apatite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-3 916.5′/95034/19/DAY/3X/EAQ ALTERED QUARTZ MONZONITE showing typical appearance of hand specimen.

E95-3 916.5′/95038/27/XPL/28X/EAQ ALTERED QUARTZ MONZONITE showing typical appearance.

E95-3 916.5′/95038/28/PPL+R/114X/EAQ ALTERED QUARTZ MONZONITE showing typical appearance of magnetite.

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SAMPLE # E95-4 76.5′ September 21, 1995

ROCK NAME ALTERED CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism (secondary clinopyroxene + clay + apatite + rutile + K-feldspar + biotite + tremolite + dolomite + pyrite) from a fine grained calcareous volcanic sandstone precursor derived from a dacitic source.

MINERALS Clinopyroxene (47%) + quartz (18%) + plagioclase (18%) + clay (8%) + apatite (5%) + rutile (4%) + K-feldspar (<1%) + biotite (<1%) + tremolite (<1%) + dolomite (<1%) + pyrite (<1%).

TEXTURES Dominated by fine granoblastic clinopyroxene + quartz + plagioclase with relict fine bedding that defines a strongly directed fabric.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) veins of dolomite; and (2) plagioclase weakly altered to clay.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 76.5′/95034/20/DAY/3X/EAQ ALTERED CALC-SILICATE showing typical appearance of relict fine bedding in hand specimen.

E95-4 76.5′/95038/29/XPL/28X/EAQ ALTERED CALC-SILICATE showing typical finely bedded appearance of dacitic volcaniclastic rock.

E95-4 76.5′/95038/30/XPL/114X/EAQ ALTERED CALC-SILICATE showing closeup appearance of fine granular secondary clinopyroxene.

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SAMPLE # E95-4 255.5′ September 21, 1995

ROCK NAME ALTERED CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism (secondary clinopyroxene + K-feldspar + actinolite + clinozoisite + pyrite + chalcopyrite + ferroan calcite + apatite) from a fine grained calcareous volcanic sandstone (?) precursor derived from a dacitic source. This sample was probably like E95-4 76.5′ but has secondary hydrothermal K-feldspar + actinolite.

MINERALS Clinopyroxene (35%) + K-feldspar (25%) + quartz (18%) + actinolite (12%) + clinozoisite (5%) + pyrite (2%) + chalcopyrite (1%) + ferroan calcite (1%) + apatite (1%).

TEXTURES Dominated by fine granoblastic texture with relict fine bedding that defines a moderately directed fabric.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) clinopyroxene moderately altered to actinolite; (2) plagioclase (?) completely altered to K-feldspar; (3) veins of ferroan calcite + pyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 255.5′/95034/21/DAY/3X/EAQ ALTERED CALC-SILICATE showing typical appearance of relict fine bedding in hand specimen.

E95-4 255.5′/95038/31/XPL/28X/EAQ ALTERED CALC-SILICATE showing typical fine volcaniclastic texture (same view as 95038/32).

E95-4 255.5′/95038/32/PPL/28X/EAQ ALTERED CALC-SILICATE showing typical fine volcaniclastic texture with abundant secondary K-feldspar (stained yellowish) (same view as 95038/31).

SAMPLE # E95-4 255.5' continued September 21, 1995

PHOTOS E95-4 255.5'/95038/33/PPL+R/114X/EAQ ALTERED CALC-SILICATE showing typical appearance of chalcopyrite (L15) + pyrite (I19).

SAMPLE # E95-4 258.3′ October 6, 1995

ROCK NAME ALTERED CLINOPYROXENE CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism (secondary quartz + clinopyroxene + chalcopyrite + garnet + pyrite + dolomite + clinozoisite + unknown opaque "A" + brown clay + sphalerite + pyrrhotite) of an indeterminate calcareous protolith.

MINERALS Quartz (32%) + clinopyroxene (27%) + chalcopyrite (15%) + garnet (8%) + pyrite (8%) + dolomite (5%) + clinozoisite (2%) + unknown opaque "A" (2%) + brown clay (1%) + sphalerite (<1%) + pyrrhotite (<1%). Unknown opaque "A" is isotropic, medium gray, bladed habit.

TEXTURES Massive granoblastic; non-directed fabric.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) veins of pyrite + chalcopyrite; (2) veins of quartz + garnet + pyrite + chalcopyrite + opaque "A" + pyrrhotite; (3) veins of dolomite + chalcopyrite + pyrite + opaque "A"; (4) veins of dolomite + brown clay; (5) veins of dolomite; (6) clinopyroxene weakly altered to brown clay + clinozoisite + quartz on walls of vein #2 above; and (7) pyrrhotite strongly altered to chalcopyrite + pyrite (first lamellar, then euhedral).

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 258.3′/95038/07/DAY/3X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing typical appearance of hand specimen.

E95-4 258.3′/95042/22/XPL/57X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing typical appearance of granoblastic clinopyroxene precursor (F21-T30) weakly altered to brown clay + clinozoisite (C26) + quartz adjacent to a vein (A1-T14) of quartz + garnet + pyrite + chalcopyrite + opaque "A" + pyrrhotite.

SAMPLE # E95-4 258.3' continued October 6, 1995

PHOTOS E95-4 258.3'/95042/23/PPL + R/114X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing typical appearance of pyrrhotite strongly altered to chalcopyrite + pyrite (first lamellar (K8-M11), then euhedral (A1-D5)).

E95-4 258.3'/95042/24/PPL + R/227X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing typical appearance of bladed opaque "A" (J16) surrounded by chalcopyrite (L11).

SAMPLE # E95-4 340.2' September 21, 1995

ROCK NAME ALTERED CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism (secondary K-feldspar + actinolite + quartz + clinopyroxene + clay + calcite + ferroan calcite + ferroan chlorite + sphene + pyrite + chalcopyrite + apatite) of a fine grained calcareous volcanic sandstone (?) precursor derived from a dacitic source. This sample was probably like E95-4 76.5' but has secondary hydrothermal K-feldspar + actinolite (like E95-4 255.5').

MINERALS K-feldspar (25%) + actinolite (25%) + quartz (25%) + clinopyroxene (10%) + plagioclase (5%) + clay (5%) + calcite (1%) + ferroan calcite (1%) + ferroan chlorite (1%) + sphene (1%) + pyrite (1%) + chalcopyrite (<1%) + apatite (<1%).

TEXTURES Dominated by fine granoblastic texture with relict fine bedding that defines a moderately directed fabric.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) clinopyroxene strongly altered to actinolite; (2) plagioclase (?) strongly altered to clay; (3) veins of ferroan calcite + calcite (with actinolite weakly altered to ferroan chlorite along vein margins); (4) veins of K-feldspar + [actinolite strongly altered to calcite]; (5) veins of quartz + [actinolite strongly altered to calcite] + pyrite + chalcopyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 340.2'/95034/22/DAY/3X/EAQ ALTERED CALC-SILICATE showing typical appearance of hand specimen.

E95-4 340.2'/95038/34/XPL/28X/EAQ ALTERED CALC-SILICATE showing typical appearance of fine bedding (same view as 95038/35).

E95-4 340.2'/95038/35/PPL/28X/EAQ ALTERED CALC-SILICATE showing typical appearance of fine bedding with abundant secondary K-feldspar (stained yellowish) (same view as 95038/34).

SAMPLE # E95-4 340.2′ continued September 21, 1995

PHOTOS E95-4 340.2′/95038/36/PPL+R/227X/EAQ ALTERED CALC-SILICATE showing typical appearance of pyrite (K10) + chalcopyrite (H24).

SAMPLE # E95-4 365.5′ September 21, 1995

ROCK NAME ALTERED CALC-SILICATE BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary clinopyroxene + chalcopyrite + calcite + garnet + clinozoisite + brown clay + pyrite + quartz + pyrrhotite) of a garnet-clinopyroxene calc-silicate precursor.

MINERALS Clinopyroxene (50%) + chalcopyrite (12%) + calcite (10%) + garnet (9%) + clinozoisite (8%) + brown clay (7%) + pyrite (3%) + quartz (1%) + pyrrhotite (<1%).

TEXTURES Granoblastic with superimposed cataclastic brecciation; non-directed fabric.

Breccia Clasts (60%) are angular to round, 200-?- >20,000 μm lithic fragments of garnet-clinopyroxene calc-silicate (60%). Contacts between breccia clasts are floating to curved.

Matrix (10%) is composed of the altered comminuted equivalent of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

Cement (30%) is composed of [pyrrhotite strongly altered to [pyrite strongly altered to chalcopyrite]] + brown clay + calcite + quartz.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) calc-silicate metasomatism; (2) cataclastic brecciation; and (3) veins and cement of chalcopyrite + brown clay + calcite + quartz. The following alteration features are present but of indeterminate relative ages: (1) [pyrrhotite strongly altered to [pyrite strongly altered to chalcopyrite]]; (2) and clinopyroxene weakly altered to clinozoisite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 365.5′/95034/30/DAY/3X/EAQ ALTERED CALC-SILICATE BRECCIA showing typical appearance of hand specimen.

E95-4 365.5′/95039/01/XPL/28X/EAQ ALTERED CALC-SILICATE BRECCIA showing typical brecciated appearance of garnet (dark) + clinopyroxene.

E95-4 365.5′/95039/02/PPL+R/57X/EAQ ALTERED CALC-SILICATE BRECCIA showing typical appearance of [pyrrhotite (L18) strongly altered to [pyrite (L21) strongly altered to chalcopyrite (R8)]].

SAMPLE # E95-4 374.7′ September 21, 1995

ROCK NAME ALTERED GARNET-CLINOPYROXENE CALC-SILICATE -- probably formed by cataclasis and hydrothermal alteration (secondary clinopyroxene + tremolite/actinolite + calcite + chalcopyrite + garnet + pyrite + quartz + K-feldspar + sphene + sphalerite) of a garnet-clinopyroxene calc-silicate precursor.

MINERALS Clinopyroxene (55%) + tremolite/actinolite (15%) + calcite (15%) + chalcopyrite (9%) + garnet (5%) + pyrite (1%) + quartz (<1%) + K-feldspar (<1%) + sphene (<1%) + sphalerite (<1%). Sphalerite shows chalcopyrite disease.

TEXTURES Granoblastic with superimposed cataclasis; non-directed fabric.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) veins of K-feldspar + quartz; (2) veins of calcite + quartz; (3) cataclasis (?); (4) clinopyroxene moderately altered to tremolite/actinolite; and (5) pyrite strongly altered to chalcopyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 374.7′/95034/29/DAY/3X/EAQ ALTERED GARNET-CLINOPYROXENE CALC-SILICATE showing typical appearance of hand specimen.

E95-4 374.7′/95039/03/XPL/28X/EAQ ALTERED GARNET-CLINOPYROXENE CALC-SILICATE showing typical appearance.

E95-4 374.7′/95039/04/PPL+R/57X/EAQ ALTERED GARNET-CLINOPYROXENE CALC-SILICATE showing typical appearance of pyrite (E4) strongly altered to chalcopyrite (N22).

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SAMPLE # E95-4 380.6' September 21, 1995

ROCK NAME ALTERED CLINOPYROXENE-GARNET CALC-SILICATE -- probably formed by calc-silicate metasomatism and hydrothermal alteration (secondary garnet + clinopyroxene + tremolite/actinolite + calcite + quartz + pyrite + chalcopyrite) of an indeterminate calcareous protolith.

MINERALS Garnet (40%) + clinopyroxene (26%) + tremolite/actinolite (26%) + calcite (5%) + quartz (3%) + pyrite (<1%) + chalcopyrite (<1%).

TEXTURES Porphyroblastic, medium grained, non-directed fabric.

Porphyroblasts (50%)

Garnet (50%) -- subhedral to euhedral, 1500-4500-7000 μm. These garnets commonly have dark brown cores and very pale yellowish - brown rims.

Matrix (50%) has a granoblastic texture and is composed of [clinopyroxene moderately altered to tremolite/actinolite].

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) veins of calcite + quartz + [pyrite strongly altered to chalcopyrite]; (2) and [clinopyroxene moderately altered to tremolite/actinolite].

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 380.6'/95034/28/DAY/3X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of garnets surrounded by [clinopyroxene moderately altered to tremolite/actinolite (whitish areas; P10) in hand specimen.

E95-4 380.6'/95039/05/PPL/28X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of a color-zoned garnet surrounded by clinopyroxene.

E95-4 380.6'/95039/06/XPL/28X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of clinopyroxene (J19) moderately altered to tremolite/actinolite (E1-M16).

SAMPLE # E95-4 395.3′ October 6, 1995

ROCK NAME ALTERED CLINOPYROXENE CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism (secondary clinopyroxene + chalcopyrite + pyrite + pyrrhotite + calcite + ferroan calcite + brown clay + unknown opaque "A" + quartz + actinolite) of an indeterminate calcareous protolith.

MINERALS Clinopyroxene (77%) + chalcopyrite (9%) + pyrite (6%) + pyrrhotite (2%) + calcite (2%) + ferroan calcite (2%) + brown clay (1%) + unknown opaque "A" (1%) + quartz (<1%) + actinolite (<1%).

TEXTURES Massive granoblastic; non-directed fabric.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclasis; and (2) mineralized cataclastic structures of ferroan calcite + calcite + brown clay + pyrite + opaque "A". The following alteration features are also present but of indeterminate relative ages: (1) veins of quartz + calcite; (2) clinopyroxene weakly altered to actinolite; and (3) pyrite moderately altered to chalcopyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 395.3′/95038/08/DAY/3X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing typical appearance of hand specimen.

E95-4 395.3′/95042/25/XPL/28X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing typical appearance of granoblastic clinopyroxene precursor (A19-L30) cut by a mineralized cataclastic structure.

SAMPLE # E95-4 395.3′ continued October 6, 1995

PHOTOS E95-4 395.3′/95042/26/PPL + R/227X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing pyrite + unknown opaque "A" in a mineralized cataclastic structure.

E95-4 395.3′/95042/27/PPL + R/227X/ECT ALTERED CLINOPYROXENE CALC-SILICATE showing chalcopyrite (F10) + pyrrhotite (Q8) + pyrite (I20) + unknown opaque "A" (?) (J24).

SAMPLE # E95-4 403' September 21, 1995

ROCK NAME ALTERED GARNET CALC-SILICATE -- probably formed by calc-silicate metasomatism and hydrothermal alteration (secondary garnet + calcite + clinopyroxene + chalcopyrite + pyrite + pyrrhotite + quartz + actinolite) of an indeterminate calcareous protolith.

MINERALS Garnet (80%) + calcite (11%) + clinopyroxene (3%) + chalcopyrite (2%) + pyrite (1%) + pyrrhotite (1%) + quartz (1%) + actinolite (1%).

TEXTURES Granoblastic, medium grained, non-directed fabric. Texture is dominated by subhedral to euhedral garnets that are zoned from dark brown cores to pale yellowish brown rims.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) veins of quartz + actinolite + calcite; (2) clinopyroxene weakly altered to actinolite; and (3) pyrite strongly altered to chalcopyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 403'/95034/27/DAY/3X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of zoned garnets in hand specimen.

E95-4 403'/95039/07/PPL/28X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of a color-zoned garnet.

E95-4 403'/95039/08/PPL+R/57X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of pyrite (K25) strongly altered to chalcopyrite (I20).

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SAMPLE # E95-4 413.2′ October 6, 1995

ROCK NAME ALTERED CLINOPYROXENE-GARNET CALC-SILICATE -- probably formed by calc-silicate metasomatism and hydrothermal alteration (secondary garnet + clinopyroxene + calcite/ferroan calcite + chalcopyrite + pyrrhotite + pyrite) of an indeterminate calcareous protolith.

MINERALS Garnet (50%) + clinopyroxene (36%) + calcite/ferroan calcite (10%) + chalcopyrite (3%) + pyrrhotite (1%) + pyrite (<1%).

TEXTURES Porphyroblastic, medium grained, non-directed fabric.

Porphyroblasts (50%)

Garnet (50%) -- subhedral to euhedral, 2000-4000-7000μm. These garnets do not show any color zonation.

Matrix (50%) has a granoblastic texture and is composed of clinopyroxene + ferroan calcite.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclasis; and (2) veins of calcite. The following alteration features are also present but of indeterminate relative ages: (1) an indeterminate reaction relationship between garnet and clinopyroxene.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 413.2′/95038/09/DAY/3X/ECT ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of garnet porphyroblasts (N17) in hand specimen.

E95-4 413.2′/95042/28/XPL/28X/ECT ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of the diffuse zone between a garnet porphyroblast (A1-G8) and surrounding granoblastic matrix (A22-T30) of clinopyroxene + ferroan calcite.

E95-4 413.2′/95042/29/PPL+R/114X/ECT ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of chalcopyrite (D20) + pyrrhotite (R24) + pyrite (F16)

SAMPLE # E95-4 428.8′ September 21, 1995

ROCK NAME ALTERED GARNET CALC-SILICATE -- probably formed by calc-silicate metasomatism, multiple cataclasis, and hydrothermal alteration (secondary garnet + calcite + ferroan calcite + clinopyroxene + brown clay + actinolite + pyrrhotite + chalcopyrite + pyrite + unknown opaque) of an indeterminate calcareous protolith.

MINERALS Garnet (63%) + calcite (10%) + ferroan calcite (10%) + clinopyroxene (5%) + brown clay (5%) + actinolite (2%) + pyrrhotite (2%) + chalcopyrite (2%) + pyrite (1%) + unknown opaque (<1%).

TEXTURES Granoblastic, medium grained, non-directed fabric. Multiple cataclasis has been superimposed. Garnets have a pale yellowish brown color and are unzoned.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) early main cataclastic brecciation; (2) veins of calcite + brown clay + indeterminate opaque; (3) minor cataclasis; (4) cement and mineralized cataclastic structures of calcite + pyrrhotite + chalcopyrite + unknown opaque; (5) minor cataclasis; and (6) veins and mineralized cataclastic structures of calcite + ferroan calcite + quartz. The following alteration features are also present but of indeterminate relative ages: (1) clinopyroxene weakly altered to actinolite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 428.8′/95034/26/DAY/3X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of hand specimen.

E95-4 428.8′/95039/09/PPL/28X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of multiple superimposed cataclastic textures.

E95-4 428.8′/95039/10/PPL+R/227X/EAQ ALTERED GARNET CALC-SILICATE showing typical appearance of a mineralized cataclastic structures of calcite + pyrrhotite (A1) + chalcopyrite (P11) + unknown opaque (L15).

SAMPLE # E95-4 450.8′ September 21, 1995

ROCK NAME ALTERED CLINOPYROXENE-GARNET CALC-SILICATE -- probably formed by calc-silicate metasomatism and hydrothermal alteration (secondary garnet + clinopyroxene + calcite + pyrite + chalcopyrite + quartz + brown clay + apatite + pyrrhotite) of an indeterminate calcareous protolith.

MINERALS Garnet (40%) + clinopyroxene (40%) + calcite (10%) + pyrite (5%) + chalcopyrite (3%) + quartz (1%) + brown clay (1%) + apatite (<1%) + pyrrhotite (<1%).

TEXTURES Granoblastic, medium grained, non-directed fabric. Garnets have a pale yellowish brown color and are unzoned except for a single garnet that shows a dark brown core and pale yellowish-brown rim.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclasis; and (2) multiple sets of crosscutting veins of calcite + quartz + chalcopyrite + [pyrrhotite moderately altered to pyrite]. The following alteration features are also present but of indeterminate relative ages: (1) garnet moderately altered to clinopyroxene.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 450.8′/95034/25/DAY/3X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of large zoned garnets in hand specimen.

E95-4 450.8′/95039/11/XPL+150/28X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of unzoned garnets (A7-F14) and clinopyroxene (A18-N26).

E95-4 450.8′/95039/12/PPL+R/114X/EAQ ALTERED CLINOPYROXENE-GARNET CALC-SILICATE showing typical appearance of chalcopyrite + [pyrrhotite (K12) strongly altered to pyrite (K20)].

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SAMPLE # E95-4 558.5′ September 21, 1995

ROCK NAME ALTERED DACITE PORPHYRY BRECCIA -- probably formed by cataclastic brecciation and hydrothermal alteration (secondary K-feldspar + clinopyroxene + clay + actinolite + dolomite + epidote + apatite + pyrite) of a fine grained dacite porphyry flow or shallow intrusion.

MINERALS K-feldspar (40%) + clinopyroxene (25%) + plagioclase (20%) + clay (5%) + actinolite (3%) + dolomite (3%) + quartz (2%) + epidote (2%) + apatite (<1%) + pyrite (<1%).

TEXTURES Cataclastically brecciated; non-directed fabric. Dacite fragments have seriate to porphyritic textures.

Breccia Clasts (ind%) are ?-?-? μm lithic fragments of fine grained seriate to porphyritic dacite (all%). Contacts between breccia clasts are curved.

Matrix/Cement (ind%) is composed of the altered comminuted equivalent of the clasts, suggesting a dominantly cataclastic mechanism of brecciation.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) cataclastic brecciation; and (2) veins of dolomite. The following alteration features are present but of indeterminate relative ages: (1) plagioclase moderately altered to K-feldspar + clinopyroxene + clay + dolomite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 558.5′/95034/24/DAY/3X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of hand specimen.

E95-4 558.5′/95039/13/XPL/28X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of secondary K-feldspar (stained yellowish; A1-K15) (same view as 95039/14).

E95-4 558.5′/95039/14/PPL/28X/EAQ ALTERED DACITE PORPHYRY BRECCIA showing typical appearance of secondary K-feldspar (stained yellowish; A1-K15) (same view as 95039/13).

SAMPLE # E95-4 721′ September 21, 1995

ROCK NAME ALTERED CALC-SILICATE -- probably formed by contact metamorphism and/or metasomatism (secondary K-feldspar + quartz + ferroan calcite + calcite + chlorite + apatite + sphene + rutile + pyrite + chalcopyrite) of a fine grained calcareous volcanic sandstone (?) precursor derived from a dacitic source. This sample was probably like E95-4 76.5′ but has secondary hydrothermal K-feldspar + carbonate.

MINERALS K-feldspar (50%) + quartz (20%) + ferroan calcite (16%) + calcite (5%) + chlorite (5%) + apatite (1%) + sphene (1%) + rutile (1%) + pyrite (1%) + chalcopyrite (<1%).

TEXTURES Dominated by fine granoblastic texture with relict fine bedding that defines a moderately directed fabric.

ALTERATION Alteration features in relative chronological order from oldest to youngest are: (1) veins of quartz + pyrite; (2) cataclasis; and (3) veins and mineralized cataclastic structures of ferroan calcite + calcite + chlorite + pyrite + chalcopyrite. The following alteration features are also present but of indeterminate relative ages: (1) plagioclase (?) completely altered to K-feldspar; (2) actinolite (?) completely altered to ferroan calcite + calcite + chlorite; and (3) sphene + rutile in an indeterminate reaction relationship.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA
Format: 27 x 46 mm Finish: POL Stains: none Cover: none

PHOTOS E95-4 721′/95034/23/DAY/3X/EAQ ALTERED CALC-SILICATE showing typical appearance of hand specimen.

E95-4 721′/95039/15/XPL/28X/EAQ ALTERED CALC-SILICATE showing typical appearance with abundant secondary K-feldspar (same view as 95039/16).

E95-4 721′/95039/16/PPL/28X/EAQ ALTERED CALC-SILICATE showing typical appearance with abundant secondary K-feldspar (stained yellowish) (same view as 95039/15).

SAMPLE # E95-4 763.5′ September 21, 1995

ROCK NAME ALTERED DACITE MICROPORPHYRY BRECCIA (?) -- probably formed by cataclastic brecciation (?) hydrothermal alteration (secondary K-feldspar + actinolite + intermediate clay + quartz + chlorite + calcite/ferroan calcite + pyrrhotite + sphene + apatite + pyrite + epidote + chalcopyrite) of a dacite microporphyry flow or shallow intrusion.

MINERALS K-feldspar (50%) + actinolite (15%) + intermediate clay (12%) + plagioclase (6%) + quartz (5%) + chlorite (3%) + calcite/ferroan calcite (3%) + pyrrhotite (3%) + sphene (2%) + apatite (1%) + pyrite (1%) + epidote (<1%) + chalcopyrite (<1%).

TEXTURES Aphanitic, holocrystalline, sparsely microporphyritic, fine grained, non-directed fabric. Hand specimen appearance strongly suggests that this sample is a breccia (see photo).

Phenocrysts (3%) subhedral, whole, isolated, 280-600-1200 μm.

Plagioclase (3%) -- strongly altered to K-feldspar + intermediate clay + chlorite.

Groundmass (97%) has a fine granoblastic texture and is composed of [plagioclase strongly altered to K-feldspar + intermediate clay + chlorite].

Vesicles (0%) and Xenoliths (0%) were not observed.

ALTERATION The following alteration features are present but of indeterminate relative ages: (1) veins of actinolite; (2) veins of calcite + chlorite + pyrrhotite; veins of calcite + pyrite; and (4) pyrrhotite weakly altered to pyrite.

SECTIONING Format: 27 x 46 mm Finish: STD Stains: SCN + ARS + PF Cover: PLA

PHOTOS E95-4 763.5′/95034/31/DAY/3X/EAQ ALTERED DACITE MICROPORPHYRY showing typical brecciated (?) appearance of hand specimen.

E95-4 763.5′/95039/17/XPL/57X/EAQ ALTERED DACITE MICROPORPHYRY BRECCIA (?) showing typical appearance (same view as 95039/18).

E95-4 763.5′/95039/18/PPL/57X/EAQ ALTERED DACITE MICROPORPHYRY BRECCIA (?) showing typical appearance with secondary K-feldspar (stained yellowish) (same view as 95039/17).

SAMPLE # E95-4 763.5' continued September 21, 1995

PHOTOS E95-4 763.5'/95039/19/PPL + R/114X/EAQ ALTERED DACITE MICROPORPHYRY BRECCIA (?) showing typical appearance of chalcopyrite (L23) + [pyrrhotite (H17) weakly altered to pyrite (Q12).

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50090
Sample Receipt : 5/08/95
Date of Report : 5/17/95
No. of Samples : 53 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-1:15-20		<5	.1	11	<10	7	23	18	<2
E95-1:20-25		5	.3	27	<10	17	36	41	<2
E95-1:25-30		20	.5	18	<10	15	50	89	<2
E95-1:30-34.5		21	.5	15	<10	9	54	84	5
E95-1:34.5-37.0		45	1.0	140	<10	21	120	55	3
E95-1:37-40		6	.2	15	<10	3	16	32	<2
E95-1:40-43.5		12	.4	<10	<10	10	45	58	<2
E95-1:43.5-46.5		22	.4	<10	<10	6	38	55	<2
E95-1:46.5-50		35	.5	<10	<10	7	44	45	<2
E95-1:50-54		8	1.4	11	<10	10	44	33	<2
E95-1:54-59		25	.5	22	<10	10	33	33	<2
E95-1:59-64		20	.2	<10	<10	6	11	92	<2
E95-1:73-78		15	.5	26	<10	19	91	32	<2
E95-1:92-97		192	1.2	<10	<10	27	360	35	<2
E95-1:97-102		26	.5	<10	<10	11	160	20	<2
E95-1:107-112		18	.4	<10	<10	14	96	20	<2
E95-1:127.6-130		9	.4	29	<10	11	92	34	<2
E95-1:218-223		8	.8	<10	<10	9	320	39	<2
E95-1:223-228		40	1.2	59	<10	12	460	41	<2
E95-1:228-233		12	.9	41	<10	32	200	31	<2
E95-1:233-238		42	2.1	<10	<10	25	520	42	<2
E95-1:238-243		192	4.9	<10	<10	290	1400	76	<2
E95-1:243-248		90	2.5	<10	<10	39	660	68	<2
E95-1:248-253		13	1.1	<10	<10	19	330	93	<2
E95-1:253-258		<5	.2	<10	<10	6	57	59	2
E95-1:258-263		54	2.5	<10	<10	62	1200	110	<2
E95-1:263-270		<5	.2	<10	<10	5	77	42	<2
E95-1:270-275		207	3.8	<10	<10	82	830	99	<2
E95-1:275-278.1		35	1.4	<10	<10	50	770	74	<2
E95-1:278.1-283.3 EXTRA		5	<.1	<10	<10	9	32	42	<2
E95-1:283.3-285.6		61	.7	<10	<10	22	210	57	<2
E95-1:321.4-325		29	.1	<10	<10	8	67	81	<2
E95-1:330-335		<5	.2	<10	<10	7	91	73	<2
E95-1:335-340		<5	.1	<10	<10	5	27	110	<2
E95-1:340-343		82	.7	<10	<10	22	270	140	<2
E95-1:343-347		580	5.6	200	<10	110	1900	87	<2
E95-1:347-352		<5	.1	<10	<10	6	57	40	<2
E95-1:640-645		21	.7	48	<10	27	290	24	<2
E95-1:645-650		29	1.8	68	<10	17	530	43	<2
E95-1:650-655		135	2.6	110	<10	34	830	46	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50090
Sample Receipt : 5/08/95
Date of Report : 5/17/95
No. of Samples : 53 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : / Units : / Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-1:655-660		19	.8	31	<10	15	350	22	<2
E95-1:660-665		41	1.9	22	<10	28	760	29	<2
E95-1:665-670		77	2.1	<10	<10	23	780	27	<2
E95-1:670-675		52	2.9	59	<10	39	990	44	<2
E95-1:675-680		47	1.5	52	<10	21	490	39	<2
E95-1:680-685		23	1.6	45	<10	27	680	40	<2
E95-1:685-690		19	1.0	22	<10	30	300	35	<2
E95-1:690-695		120	1.7	19	<10	24	690	36	<2
E95-1:695-700		56	1.5	39	<10	37	460	42	<2
E95-1:700-705		49	1.4	55	<10	77	340	31	<2
E95-1:705-710		257	5.6	38	<10	27	1600	32	<2
E95-1:710-715		59	1.9	43	<10	25	440	26	<2
E95-1:715-717		28	1.0	38	<10	17	440	32	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50090
Sample Receipt : 5/08/95
Date of Report : 5/17/95
No. of Samples : 53 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-1:15-20	36	16
E95-1:20-25	67	13
E95-1:25-30	87	23
E95-1:30-34.5	73	23
E95-1:34.5-37.0	130	17
E95-1:37-40	67	32
E95-1:40-43.5	74	30
E95-1:43.5-46.5	52	18
E95-1:46.5-50	60	20
E95-1:50-54	49	12
E95-1:54-59	52	11
E95-1:59-64	56	11
E95-1:73-78	33	8
95-1:92-97	40	18
E95-1:97-102	26	12
E95-1:107-112	25	16
E95-1:127.6-130	63	27
E95-1:218-223	55	23
E95-1:223-228	64	16
E95-1:228-233	78	14
E95-1:233-238	46	13
E95-1:238-243	70	9
E95-1:243-248	60	20
E95-1:248-253	49	21
E95-1:253-258	26	29
E95-1:258-263	46	14
E95-1:263-270	41	28
E95-1:270-275	54	18
E95-1:275-278.1	48	36
E95-1:278.1-283.3 EXTRA	47	18
E95-1:283.3-285.6	60	46
E95-1:321.4-325	57	50
E95-1:330-335	81	28
E95-1:335-340	96	25
E95-1:340-343	90	28
E95-1:343-347	79	7
E95-1:347-352	73	20
E95-1:640-645	43	20
E95-1:645-650	40	24
95-1:650-655	59	27

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50090
Sample Receipt : 5/08/95
Date of Report : 5/17/95
No. of Samples : 53 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-1:655-660	26	14
E95-1:660-665	35	10
E95-1:665-670	38	12
E95-1:670-675	65	11
E95-1:675-680	40	11
E95-1:680-685	64	7
E95-1:685-690	71	15
E95-1:690-695	83	20
E95-1:695-700	79	22
E95-1:700-705	58	16
E95-1:705-710	92	5
E95-1:710-715	42	6
E95-1:715-717	44	15

Reviewed By: Carol Williams Date: 5/17/95 Charges : $1,043.04

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50097
Sample Receipt : 5/15/95
Date of Report : 5/25/95
No. of Samples : 43 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-1:352-357		16	.3	<10	<10	4	75	29	<2
E95-1:357-362		52	.3	<10	<10	6	44	36	<2
E95-1:362-367		15	.2	<10	<10	4	50	21	<2
E95-1:367-372		9	.2	<10	<10	2	20	28	<2
E95-1:372-377		7	.1	<10	<10	<2	10	22	<2
E95-1:377-382		<5	<.1	<10	<10	<2	8	18	<2
E95-1:382-387		<5	.1	<10	<10	5	45	26	<2
E95-1:387-392		<5	.1	<10	<10	<2	7	17	<2
E95-1:392-397		64	.8	<10	<10	29	170	60	<2
E95-1:397-402		300	1.0	<10	<10	23	280	48	<2
E95-1:402-407		31	.3	<10	<10	5	110	45	<2
E95-1:407-410		190	1.2	<10	<10	43	370	83	<2
E95-1:410-415		24	.4	<10	<10	9	85	42	<2
E95-1:415-420		201	1.0	<10	<10	22	280	55	<2
E95-1:420-422		<5	.2	<10	<10	6	36	38	5
E95-1:494.5-500		31	.5	<10	<10	18	170	35	2
E95-1:500-505		47	.6	<10	<10	21	240	42	14
E95-1:505-510		<5	<.1	23	<10	<2	6	16	<2
E95-1:510-515		<5	.1	<10	<10	3	9	15	<2
E95-1:515-520		<5	.1	<10	<10	2	5	16	<2
E95-1:520-525		<5	<.1	<10	<10	2	2	13	<2
E95-1:736.5-740		46	2.4	55	<10	34	770	40	<2
E95-1:740-745		106	4.9	<10	<10	68	1500	46	<2
E95-1:745-750		50	1.5	21	<10	87	540	41	<2
E95-1:750-755		15	1.3	17	<10	35	380	22	<2
E95-1:755-757		48	1.5	<10	<10	57	460	23	<2
E95-2:39-44		195	5.7	<10	<10	120	950	50	<2
E95-2:44-48		57	4.2	<10	<10	33	990	56	<2
E95-2:87.5-90		56	8.8	240	<10	190	2400	69	<2
E95-2:90-95		247	8.1	25	<10	53	2700	69	<2
E95-2:95-100		224	8.5	<10	<10	87	3000	49	<2
E95-2:100-104		54	1.8	<10	<10	85	560	73	<2
E95-2:104-108		767	8.0	120	<10	150	3200	72	<2
E95-2:108-112.5		20	1.8	<10	<10	9	710	35	<2
E95-2:112.5-116		191	5.3	<10	<10	76	1800	42	<2
E95-2:116-121.2		230	6.6	<10	<10	170	2700	73	<2
E95-2:121.2-126.5		7	.3	<10	21	6	120	66	<2
E95-2:126.5-130		58	6.2	<10	<10	57	2200	51	<2
E95-2:130-133		731	7.3	<10	<10	9	2300	28	<2
E95-2:133-138		25	4.0	<10	<10	14	1200	66	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50097
Sample Receipt : 5/15/95
Date of Report : 5/25/95
No. of Samples : 43 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-2:138-143		<5	.6	33	<10	11	180	44	<2
E95-2:143-148		21	1.1	110	<10	11	300	53	<2
E95-2:148-153		<5	.6	18	<10	4	200	54	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50097
Sample Receipt : 5/15/95
Date of Report : 5/25/95
No. of Samples : 43 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-1:352-357	74	26
E95-1:357-362	47	50
E95-1:362-367	33	45
E95-1:367-372	38	32
E95-1:372-377	23	33
E95-1:377-382	23	35
E95-1:382-387	28	77
E95-1:387-392	25	37
E95-1:392-397	51	60
E95-1:397-402	43	35
E95-1:402-407	46	46
E95-1:407-410	73	46
E95-1:410-415	49	48
E95-1:415-420	60	36
E95-1:420-422	58	37
E95-1:494.5-500	45	44
E95-1:500-505	52	54
E95-1:505-510	38	33
E95-1:510-515	36	36
E95-1:515-520	40	32
E95-1:520-525	34	23
E95-1:736.5-740	64	6
E95-1:740-745	63	4
E95-1:745-750	85	10
E95-1:750-755	35	9
E95-1:755-757	34	23
E95-2:39-44	100	5
E95-2:44-48	120	17
E95-2:87.5-90	110	7
E95-2:90-95	120	14
E95-2:95-100	130	22
E95-2:100-104	59	46
E95-2:104-108	110	7
E95-2:108-112.5	72	21
E95-2:112.5-116	77	2
E95-2:116-121.2	80	4
E95-2:121.2-126.5	140	180
E95-2:126.5-130	96	14
E95-2:130-133	93	4
E95-2:133-138	95	15

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50097
Sample Receipt : 5/15/95
Date of Report : 5/25/95
No. of Samples : 43 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-2:138-143	53	25
E95-2:143-148	42	22
E95-2:148-153	35	19

Reviewed By: Carol Williams Date: 5/25/95 Charges : $720.25

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50105
Sample Receipt : 5/25/95
Date of Report : 6/09/95
No. of Samples : 47 Conc.
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-2:153-158		<5	.5	43	<10	4	200	85	<2
E95-2:158-164.5		291	3.5	29	<10	5	1600	79	<2
E95-2:164.5-170		871	3.4	140	<10	46	910	100	<2
E95-2:170-175.5		187	3.3	110	<10	99	1400	100	<2
E95-2:175.5-181		88	1.4	130	<10	30	520	77	<2
E95-2:226.5-231		109	2.8	110	<10	29	720	75	<2
E95-2:231-235.5		<5	<.1	16	<10	<2	25	38	<2
E95-2:235.5-240		92	2.2	96	<10	20	700	86	<2
E95-2:240-244		<5	1.1	45	<10	12	410	60	<2
E95-2:258.6-264		<5	.5	41	<10	9	120	52	<2
E95-2:264-270		8	.2	16	<10	7	67	38	<2
E95-2:270-275		<5	.2	21	<10	5	62	40	<2
E95-2:275-280		<5	.1	18	<10	9	60	33	<2
95-2:280-285		<5	.2	23	<10	9	160	45	<2
E95-2:285-290		12	.2	24	<10	14	110	37	<2
E95-2:290-295		23	.3	37	<10	42	110	42	<2
E95-2:295-300		20	.3	39	<10	18	200	51	<2
E95-2:300-305		21	.4	36	<10	15	210	40	<2
E95-2:305-310		44	.9	49	<10	24	510	44	<2
E95-2:310-315		14	.3	28	<10	9	150	37	<2
E95-2:315-320		7	.1	19	<10	8	79	36	<2
E95-2:320-325		<5	<.1	17	<10	4	60	33	<2
E95-2:325-330		<5	.1	19	<10	4	64	33	<2
E95-2:330-335		<5	.1	18	<10	5	55	36	<2
E95-2:335-340		<5	.1	10	<10	4	45	32	<2
E95-2:340-345		<5	<.1	12	<10	<2	21	33	<2
E95-2:345-350		<5	<.1	17	<10	<2	8	30	<2
E95-2:350-355		<5	.1	19	<10	<2	17	34	<2
E95-2:355-357		20	.6	240	<10	12	170	65	<2
E95-2:366-369		55	1.0	34	<10	33	500	48	<2
E95-2:430.2-436		91	2.9	110	<10	57	1200	66	<2
E95-2:436-441.4		<5	.2	34	<10	3	59	62	<2
E95-2:441.4-446.5		20	.6	30	<10	28	300	52	<2
E95-2:446.5-451		12	.5	23	<10	11	230	51	<2
E95-2:451-455.5		96	1.1	45	<10	33	550	60	<2
E95-2:455.5-460		270	2.9	57	<10	30	1400	45	<2
E95-2:460-465		54	1.3	110	<10	69	790	61	<2
E95-2:465-470		134	2.7	110	<10	41	1300	71	6
E95-2:470-474		216	2.8	120	<10	65	1100	74	<2
95-2:474-479		<5	<.1	<10	<10	3	18	29	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

.L Job Number :X50105
ample Receipt : 5/25/95
Date of Report : 6/09/95
No. of Samples : 47 Conc.
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : / Units : / Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-2:479-484		<5	<.1	<10	<10	<2	46	19	<2
E95-2:484-489		<5	<.1	<10	<10	<2	16	22	<2
E95-2:489-494		<5	<.1	<10	<10	2	9	28	<2
E95-2:494-500		<5	<.1	12	<10	4	10	34	<2
E95-2:500-505.9		<5	<.1	19	<10	4	7	35	<2
E95-2:547-551.9		<5	1.6	56	<10	51	690	46	<2
E95-2:593-596.5		<5	.5	62	<10	34	150	46	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50105
Sample Receipt : 5/25/95
Date of Report : 6/09/95
No. of Samples : 47 Conc.
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-2:153-158	50	10
E95-2:158-164.5	74	18
E95-2:164.5-170	63	13
E95-2:170-175.5	68	26
E95-2:175.5-181	39	58
E95-2:226.5-231	58	26
E95-2:231-235.5	33	32
E95-2:235.5-240	71	29
E95-2:240-244	53	29
E95-2:258.6-264	67	28
E95-2:264-270	44	12
E95-2:270-275	34	19
E95-2:275-280	28	15
E95-2:280-285	38	12
E95-2:285-290	33	12
E95-2:290-295	29	14
E95-2:295-300	39	11
E95-2:300-305	31	11
E95-2:305-310	43	12
E95-2:310-315	30	8
E95-2:315-320	30	12
E95-2:320-325	49	12
E95-2:325-330	40	12
E95-2:330-335	57	8
E95-2:335-340	23	19
E95-2:340-345	22	19
E95-2:345-350	14	16
E95-2:350-355	25	17
E95-2:355-357	53	18
E95-2:366-369	31	12
E95-2:430.2-436	78	5
E95-2:436-441.4	40	9
E95-2:441.4-446.5	40	3
E95-2:446.5-451	39	4
E95-2:451-455.5	42	5
E95-2:455.5-460	67	3
E95-2:460-465	72	4
E95-2:465-470	95	4
E95-2:470-474	70	3
95-2:474-479	20	11

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50105
Sample Receipt : 5/25/95
Date of Report : 6/09/95
No. of Samples : 47 Conc.
P.O. No. :SKARN
Page 4 of 4

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-2:479-484	12	12
E95-2:484-489	10	14
E95-2:489-494	22	12
E95-2:494-500	39	15
E95-2:500-505.9	46	11
E95-2:547-551.9	62	28
E95-2:593-596.5	49	33

Reviewed By: Carol Williams Date: 6/9/95 Charges : $787.25

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50177
Sample Receipt : 7/14/95
Date of Report : 7/28/95
No. of Samples : 54 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-1:560-565		<5	<.1	11	<10	3	63	<5	<2
E95-1:565-570		<5	<.1	14	<10	3	28	<5	<2
E95-1:570-575		33	.3	31	<10	16	110	5	<2
E95-1:575-580		<5	<.1	11	<10	3	13	<5	<2
E95-1:630-635		<5	<.1	16	<10	6	13	<5	<2
E95-1:635-640		24	.1	23	<10	6	36	<5	<2
E95-2:615.5-620		<5	<.1	19	<10	5	18	5	<2
E95-2:620-625		<5	<.1	11	<10	4	4	<5	<2
E95-2:625-630		<5	<.1	<10	<10	4	3	<5	<2
E95-3:186-191		<5	.2	21	<10	11	19	7	<2
E95-3:191-197		<5	.1	22	<10	10	17	9	<2
E95-3:197-202		<5	.1	16	<10	10	19	7	<2
E95-3:202-206.7		<5	.2	33	<10	17	36	14	<2
E95-3:215.9-220		<5	.1	41	<10	13	33	13	<2
E95-3:220-225		<5	.1	21	<10	9	33	10	<2
E95-3:225-230		<5	<.1	13	<10	5	15	6	<2
E95-3:230-234		<5	<.1	17	<10	5	13	8	<2
E95-3:234-240		<5	.2	19	<10	8	25	10	<2
E95-3:240-245		<5	.2	19	<10	13	29	10	<2
E95-3:245-250		<5	.1	16	<10	8	19	6	<2
E95-3:250-255		<5	.1	18	<10	6	18	6	<2
E95-3:255-260		<5	.1	11	<10	8	31	<5	<2
E95-3:260-265		<5	.1	16	<10	9	32	6	<2
E95-3:265-270		6	.1	19	<10	11	42	6	<2
E95-3:270-275		<5	.1	15	<10	8	31	<5	<2
E95-3:275-280		<5	.1	26	<10	12	30	9	<2
E95-3:280-285		<5	.2	24	<10	13	32	9	<2
E95-3:359-365		<5	.2	24	<10	12	32	10	<2
E95-3:365-370		80	.3	34	<10	12	36	14	<2
E95-3:370-375		11	.4	26	<10	11	33	9	<2
E95-3:375-380		<5	.7	28	<10	10	34	50	<2
E95-3:380-385		<5	.4	26	<10	10	32	22	<2
E95-3:385-390		<5	.3	25	<10	10	31	15	<2
E95-3:390-395		<5	.3	32	<10	11	36	50	<2
E95-3:395-400		<5	.3	25	<10	10	34	33	<2
E95-3:400-405		<5	.2	26	<10	13	38	17	<2
E95-3:405-410		<5	.2	21	<10	11	43	10	<2
E95-3:410-415		<5	.3	18	<10	11	44	12	<2
E95-3:415-420		<5	.3	25	<10	14	60	11	<2
E95-3:420-425		5	.4	39	<10	15	71	16	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50177
Sample Receipt : 7/14/95
Date of Report : 7/28/95
No. of Samples : 54 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-3:425-430		20	.3	31	<10	12	87	9	<2
E95-3:430-435		6	.3	36	<10	13	64	14	<2
E95-3:435-440		<5	.1	27	<10	15	31	8	<2
E95-3:440-445		<5	.2	66	<10	18	52	11	<2
E95-3:445-450		<5	.3	28	<10	12	49	12	<2
E95-3:450-455		8	.4	30	<10	9	43	9	<2
E95-3:455-459.5		<5	.4	38	<10	12	54	14	<2
E95-3:464-469		<5	.4	38	<10	12	43	13	<2
E95-3:469-474		<5	.3	23	<10	10	32	8	<2
E95-3:474-479		<5	.1	18	<10	7	16	6	<2
E95-3:479-484		<5	.1	17	<10	5	14	<5	<2
E95-3:484-489		<5	.2	17	<10	6	16	7	<2
E95-3:489-493.7		<5	<.1	18	<10	12	19	6	<2
95-3:498.8-507		<5	.1	21	<10	6	20	6	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50177
Sample Receipt : 7/14/95
Date of Report : 7/28/95
No. of Samples : 54 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-1:560-565	29	24
E95-1:565-570	25	23
E95-1:570-575	27	31
E95-1:575-580	21	31
E95-1:630-635	42	46
E95-1:635-640	51	37
E95-2:615.5-620	32	27
E95-2:620-625	13	26
E95-2:625-630	15	31
E95-3:186-191	28	5
E95-3:191-197	37	6
E95-3:197-202	45	7
E95-3:202-206.7	63	6
95-3:215.9-220	43	14
E95-3:220-225	35	11
E95-3:225-230	33	8
E95-3:230-234	35	7
E95-3:234-240	25	7
E95-3:240-245	36	6
E95-3:245-250	29	8
E95-3:250-255	29	9
E95-3:255-260	20	9
E95-3:260-265	21	9
E95-3:265-270	21	9
E95-3:270-275	20	11
E95-3:275-280	27	11
E95-3:280-285	32	10
E95-3:359-365	39	18
E95-3:365-370	43	15
E95-3:370-375	49	15
E95-3:375-380	21	16
E95-3:380-385	35	12
E95-3:385-390	31	10
E95-3:390-395	33	13
E95-3:395-400	43	30
E95-3:400-405	35	10
E95-3:405-410	26	12
E95-3:410-415	27	13
E95-3:415-420	25	23
95-3:420-425	32	30

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50177
Sample Receipt : 7/14/95
Date of Report : 7/28/95
No. of Samples : 54 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-3:425-430	27	13
E95-3:430-435	38	18
E95-3:435-440	57	26
E95-3:440-445	69	22
E95-3:445-450	46	13
E95-3:450-455	50	13
E95-3:455-459.5	66	16
E95-3:464-469	46	16
E95-3:469-474	35	17
E95-3:474-479	26	15
E95-3:479-484	23	13
E95-3:484-489	23	24
E95-3:489-493.7	33	20
95-3:498.8-507	25	22

Reviewed By: C Williams Date: 7/28/95 Charges : $904.50

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50129
Sample Receipt : 6/14/95
Date of Report : 6/27/95
No. of Samples : 55 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS
Additional results for E95-4:519.5-526.3:
Au - .080/.074 oz/t

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-4:27-30		<5	<.1	12	<10	4	27	17	4
E95-4:30-35		14	<.1	11	<10	6	19	19	3
E95-4:35-40		18	<.1	11	<10	4	13	20	9
E95-4:40-45		219	.5	35	<10	18	220	18	<2
E95-4:45-50		83	.2	17	<10	5	160	13	19
E95-4:50-56		18	.1	12	<10	3	44	14	3
E95-4:56-61.5		32	.1	32	<10	6	36	30	4
E95-4:61.5-63.7		6	<.1	22	<10	2	8	43	<2
E95-4:63.7-70		103	.6	130	<10	30	140	66	16
E95-4:70-75		28	<.1	12	<10	<2	8	13	12
E95-4:75-80.2		13	<.1	11	<10	4	17	15	13
E95-4:128.5-133.5		19	<.1	29	<10	3	18	18	7
E95-4:133.5-138.5		<5	<.1	26	<10	3	11	14	6
E95-4:138.5-144		205	.2	20	<10	3	39	6	5
E95-4:144-150		156	.1	14	<10	<2	22	8	<2
E95-4:150-155		170	.1	15	<10	<2	34	<5	<2
E95-4:155-160		107	.2	18	<10	3	96	8	47
E95-4:160-165		49	<.1	16	<10	2	28	13	30
E95-4:165-170		26	.1	17	<10	3	45	15	14
E95-4:170-175		25	<.1	22	<10	2	9	18	11
E95-4:175-180		35	.1	19	<10	4	64	13	6
E95-4:180-185		10	.1	13	<10	3	29	14	7
E95-4:185-190		<5	<.1	<10	<10	3	12	25	<2
E95-4:190-195		<5	<.1	<10	<10	<2	7	8	<2
E95-4:195-200		<5	.1	17	<10	5	59	21	16
E95-4:200-205		<5	.1	13	<10	3	22	17	5
E95-4:205-210		<5	.1	13	<10	10	97	19	<2
E95-4:210-214		<5	.2	21	<10	10	170	22	<2
E95-4:214-217.5		29	.2	15	<10	10	140	15	3
E95-4:217.5-225.5		41	.1	13	<10	4	9	35	<2
E95-4:225.5-230		8	.1	15	<10	5	62	17	<2
E95-4:230-235		5	.2	14	<10	5	81	15	<2
E95-4:235-241		<5	.2	22	<10	4	130	18	11
E95-4:241-245		329	1.1	20	<10	5	690	10	<2
E95-4:250.5-253		16	.2	<10	<10	3	100	33	<2
E95-4:264-265.8		14	.1	12	<10	3	15	29	<2
E95-4:274.2-275.3		7	.2	14	<10	2	99	27	<2
E95-4:423.6-428.5		<5	<.1	19	<10	<2	32	24	3
E95-4:519.5-526.3		2088	5.9	55	<10	11	2300	43	<2
E95-4:526.3-533		22	.2	19	<10	<2	67	26	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

L Job Number :X50129
Sample Receipt : 6/14/95
Date of Report : 6/27/95
No. of Samples : 55 Core
P.O. No. :SKARN

client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS
Additional results for E95-4:519.5-526.3:
Au - .080/.074 oz/t

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-4:533-539.7		10	.1	14	<10	3	54	18	<2
E95-4:539.7-543		14	.2	20	<10	5	37	34	12
E95-4:543-551		6	.1	19	<10	4	15	41	<2
E95-4:551-555		30	.2	20	<10	7	120	25	5
E95-4:555-560		15	.2	15	<10	3	70	17	3
E95-4:560-565		62	.6	17	<10	8	290	20	<2
E95-4:565-570		8	.4	20	<10	8	170	26	<2
E95-4:570-575		31	.5	40	<10	10	240	28	<2
E95-4:575-583		6	<.1	14	<10	2	12	17	<2
E95-4:583-591		13	<.1	16	<10	<2	16	36	2
E95-4:591-597		31	.4	52	<10	14	230	38	<2
E95-4:597-602.5		23	.4	34	<10	10	190	26	<2
E95-4:602.5-605		18	.1	17	<10	2	15	50	2
E95-4:716.3-720		5	.4	59	<10	16	170	31	<2
E95-4:720-724.5		8	.6	35	<10	14	140	52	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50129
Sample Receipt : 6/14/95
Date of Report : 6/27/95
No. of Samples : 55 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS
Additional results for E95-4:519.5-526.3:
Au - .080/.074 oz/t

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-4:27-30	28	26
E95-4:30-35	31	18
E95-4:35-40	40	12
E95-4:40-45	23	10
E95-4:45-50	18	12
E95-4:50-56	26	14
E95-4:56-61.5	39	15
E95-4:61.5-63.7	76	14
E95-4:63.7-70	97	31
E95-4:70-75	16	13
E95-4:75-80.2	28	13
E95-4:128.5-133.5	35	11
E95-4:133.5-138.5	25	7
E95-4:138.5-144	10	6
E95-4:144-150	8	8
E95-4:150-155	10	5
E95-4:155-160	130	4
E95-4:160-165	39	10
E95-4:165-170	34	4
E95-4:170-175	25	7
E95-4:175-180	24	7
E95-4:180-185	24	6
E95-4:185-190	53	11
E95-4:190-195	16	4
E95-4:195-200	39	8
E95-4:200-205	30	10
E95-4:205-210	30	7
E95-4:210-214	46	7
E95-4:214-217.5	24	11
E95-4:217.5-225.5	57	79
E95-4:225.5-230	35	15
E95-4:230-235	24	13
E95-4:235-241	30	12
E95-4:241-245	41	7
E95-4:250.5-253	68	75
E95-4:264-265.8	66	59
E95-4:274.2-275.3	39	36
E95-4:423.6-428.5	53	12
E95-4:519.5-526.3	200	15
E95-4:526.3-533	67	14

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50129
Sample Receipt : 6/14/95
Date of Report : 6/27/95
No. of Samples : 55 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS
Additional results for E95-4:519.5-526.3:
Au - .080/.074 oz/t

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-4:533-539.7	42	12
E95-4:539.7-543	71	29
E95-4:543-551	65	140
E95-4:551-555	55	48
E95-4:555-560	31	42
E95-4:560-565	44	36
E95-4:565-570	44	43
E95-4:570-575	39	28
E95-4:575-583	49	8
E95-4:583-591	140	8
E95-4:591-597	73	29
E95-4:597-602.5	55	38
E95-4:602.5-605	66	20
E95-4:716.3-720	52	64
E95-4:720-724.5	75	18

Reviewed By: C Williams Date: 6/27/95 Charges : $921.25

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50110
Sample Receipt : 5/31/95
Date of Report : 6/09/95
No. of Samples : 33 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS
*Additional results for E95-4:257-259:
Au-.342/.302 Ag-1.06/1.09 oz/t

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-4:245-250.5		2434	5.7	31	<10	5	2800	31	<2
E95-4:253-257		1245	4.8	29	<10	5	2400	29	4
E95-4:257-259		10224	>25	49	<10	35	19700	35	<2
E95-4:259-264		242	1.3	15	<10	4	700	31	<2
E95-4:265.8-270		312	3.0	32	<10	9	1400	36	<2
E95-4:270-274.2		920	4.6	19	<10	6	2000	29	<2
E95-4:275.3-279.5		1206	8.5	31	<10	8	3900	36	<2
E95-4:279.5-282.8		1240	4.6	19	<10	5	2100	46	<2
E95-4:328-333		494	3.3	21	<10	8	1500	47	8
E95-4:333-338		60	1.4	14	<10	6	600	32	<2
E95-4:338-342		<5	.2	14	<10	8	180	29	<2
E95-4:342-347		6	.3	13	<10	10	240	34	<2
E95-4:347-353		134	1.0	14	<10	5	630	38	98
E95-4:353-358		710	5.2	38	<10	19	3300	50	10
E95-4:358-361		20	.2	11	<10	7	180	35	3
E95-4:361-366		6448	8.4	20	<10	5	5700	24	<2
E95-4:366-371		2029	6.3	19	<10	3	3300	23	<2
E95-4:371-376		8806	9.7	33	<10	7	6100	22	<2
E95-4:376-380		278	1.1	31	<10	4	500	34	2
E95-4:380-384		95	.3	13	<10	<2	160	28	2
E95-4:384-389		280	1.2	26	<10	3	480	33	<2
E95-4:389-394		442	2.2	19	<10	3	940	23	<2
E95-4:394-399		2548	12.6	31	<10	12	7200	29	<2
E95-4:399-404		1690	5.3	21	<10	7	2300	24	<2
E95-4:404-409		1317	5.0	17	<10	4	2100	21	<2
E95-4:409-414		6102	8.5	15	<10	5	3100	22	<2
E95-4:414-419		3492	7.9	50	<10	12	3200	27	<2
E95-4:419-423.6		745	2.9	19	<10	7	1400	24	<2
E95-4:428.5-433		2190	5.8	27	<10	8	2900	29	<2
E95-4:433-438		2485	7.7	28	<10	9	3600	29	2
E95-4:438-443		2191	4.2	23	<10	6	1900	25	3
E95-4:443-448		4932	8.9	21	<10	7	3400	26	<2
E95-4:448-452.3		4122	8.2	27	<10	6	3000	32	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50110
Sample Receipt : 5/31/95
Date of Report : 6/09/95
No. of Samples : 33 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS
*Additional results for E95-4:257-259:
Au-.342/.302 Ag-1.06/1.09 oz/t

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP	Au-ck oz/t FA	Ag-ck oz/t FA
E95-4:245-250.5		100	14		
E95-4:253-257		94	16		
E95-4:257-259		600	11	.262	1.10
E95-4:259-264		51	29		
E95-4:265.8-270		66	18		
E95-4:270-274.2		73	6		
E95-4:275.3-279.5		150	5		
E95-4:279.5-282.8		80	5		
E95-4:328-333		96	23		
E95-4:333-338		40	21		
E95-4:338-342		24	18		
E95-4:342-347		29	14		
E95-4:347-353		51	9		
E95-4:353-358		83	3		
E95-4:358-361		29	13		
E95-4:361-366		130	6		
E95-4:366-371		99	3		
E95-4:371-376		160	5	.214	
E95-4:376-380		71	6		
E95-4:380-384		31	6		
E95-4:384-389		50	7		
E95-4:389-394		41	3		
E95-4:394-399		180	3	.078	
E95-4:399-404		65	2		
E95-4:404-409		55	<2		
E95-4:409-414		75	2	.116	
E95-4:414-419		81	3		
E95-4:419-423.6		41	3		
E95-4:428.5-433		79	4		
E95-4:433-438		94	3		
E95-4:438-443		60	2		
E95-4:443-448		110	4	.166	
E95-4:448-452.3		110	5		

Reviewed By: Carol Williams Date: 6/9/95 Charges : $649.44

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50141
Sample Receipt : 6/20/95
Date of Report : 7/07/95
No. of Samples : 27 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

Page 1 of 2

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Au Units : ppb Method: FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-3:43.1-50.3	<5	<.1	19	<10	10	53	12	<2
E95-3:51.6-55	<5	.1	10	<10	7	31	11	<2
E95-3:55-60	<5	.1	15	<10	8	20	7	<2
E95-3:60-65	<5	<.1	13	<10	11	24	8	<2
E95-3:65-68.7	<5	<.1	16	<10	9	17	7	<2
E95-3:109.8-116	6	.1	33	<10	10	42	11	<2
E95-3:116-121	<5	.2	18	<10	13	43	8	<2
E95-3:121-126	<5	.1	17	<10	15	33	7	<2
E95-3:126-131	<5	.1	13	<10	9	21	5	<2
E95-3:131-136	<5	.1	12	<10	7	19	6	<2
E95-3:136-141	<5	.1	13	<10	5	10	<5	<2
E95-3:141-146	<5	<.1	11	<10	6	12	6	<2
E95-3:146-151	<5	<.1	16	<10	6	10	9	<2
E95-3:151-156	<5	<.1	<10	<10	5	6	6	<2
E95-3:156-161	<5	<.1	<10	<10	6	5	5	<2
E95-3:161-166	<5	<.1	18	<10	9	3	5	<2
E95-3:166-171	10	<.1	13	11	11	8	6	<2
E95-3:171-176	<5	<.1	22	13	6	10	10	<2
E95-3:176-181	<5	.1	24	<10	6	10	10	<2
E95-3:181-186	10	.2	18	<10	12	18	8	<2
E95-4:752-755	<5	.3	23	<10	9	85	18	<2
E95-4:755-760	11	1.0	29	<10	14	330	20	<2
E95-4:760-765	<5	.5	20	<10	12	200	12	<2
E95-4:765-770	<5	.2	17	<10	10	82	9	<2
E95-4:770-774.6	<5	.1	13	<10	8	44	10	<2
E95-4:774.6-784.2	<5	<.1	20	<10	<2	13	9	<2
E95-4:784.2-788.2	<5	.4	25	<10	8	130	14	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50141
Sample Receipt : 6/20/95
Date of Report : 7/07/95
No. of Samples : 27 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn	Ba
	Units : ppm	ppm
	Method: ICP	ICP
E95-3:43.1-50.3	62	13
E95-3:51.6-55	40	17
E95-3:55-60	23	12
E95-3:60-65	20	22
E95-3:65-68.7	23	32
E95-3:109.8-116	41	27
E95-3:116-121	14	19
E95-3:121-126	19	17
E95-3:126-131	22	10
E95-3:131-136	15	12
E95-3:136-141	18	8
E95-3:141-146	20	9
E95-3:146-151	29	11
E95-3:151-156	30	12
E95-3:156-161	28	17
E95-3:161-166	31	12
E95-3:166-171	41	15
E95-3:171-176	44	12
E95-3:176-181	39	10
E95-3:181-186	37	12
E95-4:752-755	45	88
E95-4:755-760	52	88
E95-4:760-765	34	44
E95-4:765-770	19	44
E95-4:770-774.6	21	43
E95-4:774.6-784.2	24	9
E95-4:784.2-788.2	50	50

Reviewed By: C Williams Date: 7/7/95 Charges : $452.25

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50278
Sample Receipt :10/04/95
Date of Report :10/18/95
No. of Samples :117 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-5:0-10		67	.2	55	<10	6	72	7	<2
E95-5:10-15		160	.1	68	<10	6	51	<5	<2
E95-5:15-20		6	<.1	32	<10	7	46	<5	5
E95-5:20-25		6	<.1	33	<10	6	27	<5	<2
E95-5:25-30		45	.1	27	<10	9	78	<5	4
E95-5:30-35		29	.3	43	<10	23	180	<5	4
E95-5:35-40		16	.3	44	<10	17	170	<5	6
E95-5:40-45		11	.1	36	<10	11	95	<5	9
E95-5:45-50		<5	.1	52	<10	9	67	<5	3
E95-5:50-55		<5	.1	40	<10	12	100	<5	5
E95-5:55-60		9	.2	34	<10	18	99	<5	7
E95-5:60-65		15	<.1	26	<10	9	63	<5	3
E95-5:65-70		41	.1	38	<10	35	97	<5	3
E95-5:70-75		25	.1	38	<10	12	36	<5	<2
E95-5:75-80		30	<.1	30	<10	7	45	<5	<2
E95-5:80-83		33	<.1	33	<10	6	28	<5	<2
E95-5:83-88		103	1.3	45	<10	41	1200	<5	<2
E95-5:88-93		203	2.0	61	<10	37	1600	<5	6
E95-5:93-99		38	.2	52	<10	12	150	<5	<2
E95-5:117-122		890	.2	28	<10	8	110	<5	5
E95-5:122-127		21	.2	25	<10	9	170	<5	6
E95-5:127-129.5		9	<.1	22	<10	5	27	<5	2
E95-5:129.5-133		<5	<.1	12	<10	<2	7	<5	3
E95-5:133-138		<5	.1	25	<10	10	94	<5	<2
E95-5:138-143		156	.1	23	<10	10	64	<5	<2
E95-5:143-148		110	<.1	14	<10	5	27	<5	5
E95-5:148-153		11	<.1	16	<10	3	23	<5	<2
E95-5:153-158		6	.2	20	<10	10	150	<5	<2
E95-5:158-163		14	.2	17	<10	11	150	<5	<2
E95-5:163-168		16	<.1	24	<10	10	56	<5	<2
E95-5:168-173		68	.1	18	<10	14	97	<5	<2
E95-5:384-390		36	.6	23	<10	17	360	<5	<2
E95-5:390-395		863	.4	23	<10	5	37	<5	<2
E95-5:395-400		309	.2	26	<10	9	60	<5	<2
E95-5:400-405		39	<.1	23	<10	5	16	<5	11
E95-5:438.5-443		19	.6	18	<10	7	220	12	<2
E95-5:443-448		19	.3	19	<10	5	95	<5	<2
E95-5:448-453		48	<.1	34	<10	5	27	<5	<2
E95-5:453-458		65	.3	28	<10	8	160	<5	4
E95-5:458-463		38	.2	18	<10	6	140	<5	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50278
Sample Receipt :10/04/95
Date of Report :10/18/95
No. of Samples :117 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-5:463-468		<5	<.1	21	<10	<2	26	<5	<2
E95-5:468-473		26	<.1	28	<10	<2	8	<5	4
E95-5:473-478		<5	<.1	28	<10	2	23	<5	<2
E95-5:478-483		33	.3	46	<10	8	150	<5	<2
E95-5:483-486.8		<5	<.1	28	<10	5	8	<5	6
E95-6:129-134		107	1.2	28	<10	13	290	17	4
E95-6:134-139		<5	.1	16	<10	<2	14	26	<2
E95-6:139-144		6	.3	22	<10	4	140	<5	10
E95-6:164-169		6	.1	21	<10	4	85	<5	3
E95-6:169-174		30	<.1	15	<10	3	65	<5	5
E95-6:174-179		71	.3	23	<10	5	180	<5	7
E95-6:179-184		134	.2	23	<10	6	95	<5	6
E95-6:184-189		10	<.1	17	<10	<2	20	<5	4
E95-6:189-194		53	1.0	26	<10	10	600	<5	12
E95-6:194-199		101	.8	30	<10	16	940	<5	7
E95-6:199-204		75	.2	24	<10	6	190	<5	<2
E95-6:204-209		69	.2	25	<10	6	190	<5	6
E95-6:209-215.6		134	.3	38	<10	9	280	<5	9
E95-6:215.6-220.8		<5	<.1	<10	<10	4	11	22	<2
E95-6:220.8-226		89	.3	36	<10	9	270	<5	11
E95-6:226-231		30	<.1	19	<10	3	39	<5	9
E95-6:231-236		29	<.1	14	<10	<2	13	<5	7
E95-6:236-242.2		90	.1	17	<10	4	130	<5	16
E95-6:242.2-246.2		11	.1	14	<10	3	49	<5	<2
E95-6:246.2-251		28	.3	20	<10	5	220	<5	38
E95-6:251-255.1		35	.1	28	<10	4	51	<5	4
E95-6:281.8-287		345	.3	24	<10	4	130	<5	32
E95-6:287-292		98	.5	27	<10	10	290	<5	8
E95-6:292-295		269	.6	49	<10	10	280	<5	12
E95-6:295-299.8		16	<.1	15	<10	2	7	<5	3
E95-6:299.8-305		2032	2.2	41	<10	7	1200	<5	11
E95-6:305-310		134	.2	53	<10	4	100	<5	11
E95-6:310-315		16	.2	24	<10	3	71	<5	11
E95-6:315-320		12	.1	14	<10	<2	22	<5	7
E95-6:320-325		48	.2	20	<10	4	65	<5	15
E95-6:325-330		19	.2	17	<10	<2	38	<5	3
E95-6:330-335		27	.2	16	<10	<2	26	<5	2
E95-6:335-340		14	.3	21	<10	3	18	<5	3
E95-6:340-345		14	.2	13	<10	<2	12	<5	2
E95-6:345-350		8	.1	18	<10	2	9	<5	9

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50278
ample Receipt :10/04/95
Date of Report :10/18/95
No. of Samples :117 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-6:350-355		22	.1	34	<10	5	33	<5	<2
E95-6:355-360		162	.3	47	<10	8	190	<5	12
E95-6:360-363.2		43	.2	56	<10	9	150	<5	6
E95-6:694-696.5		212	.7	31	<10	12	540	<5	<2
E95-6:696.5-701		499	.9	24	<10	4	730	<5	3
E95-6:701-706		5796	5.9	26	<10	6	3300	<5	4
E95-6:706-711		613	1.2	20	<10	3	1100	<5	11
E95-6:711-716		207	.2	22	<10	2	280	<5	6
E95-6:716-721		20	<.1	22	<10	<2	31	<5	5
E95-6:820-824		14	.2	38	<10	14	220	<5	<2
E95-6:824-828		43	.2	29	<10	12	230	<5	<2
E95-6:828-833		294	.6	34	<10	10	370	<5	5
E95-6:833-838		242	.9	34	<10	10	670	<5	<2
E95-6:838-843		283	.5	26	<10	3	370	<5	8
95-6:843-848		1438	4.1	18	<10	2	1500	<5	3
E95-6:848-853		4774	6.4	33	<10	4	2300	<5	<2
E95-6:853-858		3996	7.9	21	<10	3	3000	<5	<2
E95-6:858-863		2601	5.9	22	<10	5	2500	<5	9
E95-6:863-868		88	.6	26	<10	8	490	<5	10
E95-6:868-873		116	1.2	40	<10	26	1200	<5	31
E95-6:873-877		29	.3	37	<10	16	300	<5	21
E95-6:877-881.3		20	.1	22	<10	5	110	<5	4
E95-6:881.3-886		22	.1	22	<10	5	83	<5	5
E95-6:886-891		26	<.1	18	<10	<2	12	<5	7
E95-6:891-896		75	.2	21	<10	4	130	<5	28
E95-6:896-899.5		67	.4	29	<10	13	310	<5	14
E95-6:899.5-903		24	.2	23	<10	5	140	<5	5
E95-6:903-910		39	.3	30	<10	9	130	<5	32
E95-6:910-913.3		574	.6	33	<10	4	320	<5	21
E95-6:913.3-918		1471	3.8	24	<10	8	1700	16	9
E95-6:918-923		86	.4	22	<10	6	230	<5	<2
E95-6:923-928		16389	15	33	<10	12	8600	<5	<2
E95-6:928-933.5		89	.6	26	<10	7	310	<5	7
E95-6:933.5-939.7		272	1.7	34	<10	36	1300	<5	13
E95-6:939.7-945.8		6	.1	14	<10	6	110	<5	<2
E95-6:945.8-951.6		533	.5	81	<10	110	4600	14	47
E95-6:951.6-956		31	.5	42	<10	17	270	<5	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50278
Sample Receipt :10/04/95
Date of Report :10/18/95
No. of Samples :117 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP
E95-5:0-10		91	30
E95-5:10-15		91	49
E95-5:15-20		54	43
E95-5:20-25		51	44
E95-5:25-30		43	13
E95-5:30-35		57	26
E95-5:35-40		44	18
E95-5:40-45		39	20
E95-5:45-50		70	22
E95-5:50-55		60	19
E95-5:55-60		110	27
E95-5:60-65		71	30
E95-5:65-70		59	22
E95-5:70-75		56	18
E95-5:75-80		78	74
E95-5:80-83		87	30
E95-5:83-88		62	9
E95-5:88-93		190	10
E95-5:93-99		64	9
E95-5:117-122		38	31
E95-5:122-127		43	19
E95-5:127-129.5		43	32
E95-5:129.5-133		48	11
E95-5:133-138		57	18
E95-5:138-143		54	24
E95-5:143-148		35	9
E95-5:148-153		39	43
E95-5:153-158		33	40
E95-5:158-163		26	22
E95-5:163-168		36	21
E95-5:168-173		33	22
E95-5:384-390		27	4
E95-5:390-395		59	4
E95-5:395-400		110	4
E95-5:400-405		89	7
E95-5:438.5-443		100	3
E95-5:443-448		270	3
E95-5:448-453		45	<2
E95-5:453-458		42	6
E95-5:458-463		29	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50278
Sample Receipt :10/04/95
Date of Report :10/18/95
No. of Samples :117 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP
E95-5:463-468		25	2
E95-5:468-473		38	5
E95-5:473-478		41	11
E95-5:478-483		56	19
E95-5:483-486.8		83	32
E95-6:129-134		160	<2
E95-6:134-139		960	2
E95-6:139-144		140	<2
E95-6:164-169		23	14
E95-6:169-174		13	10
E95-6:174-179		24	5
E95-6:179-184		15	3
E95-6:184-189		17	6
E95-6:189-194		25	3
E95-6:194-199		23	9
E95-6:199-204		36	6
E95-6:204-209		13	6
E95-6:209-215.6		35	5
E95-6:215.6-220.8		74	54
E95-6:220.8-226		36	5
E95-6:226-231		19	8
E95-6:231-236		15	8
E95-6:236-242.2		27	11
E95-6:242.2-246.2		55	50
E95-6:246.2-251		25	11
E95-6:251-255.1		31	5
E95-6:281.8-287		27	11
E95-6:287-292		44	16
E95-6:292-295		60	8
E95-6:295-299.8		47	9
E95-6:299.8-305		79	14
E95-6:305-310		18	6
E95-6:310-315		13	4
E95-6:315-320		14	9
E95-6:320-325		46	7
E95-6:325-330		13	10
E95-6:330-335		11	4
E95-6:335-340		29	7
E95-6:340-345		13	3
E95-6:345-350		22	8

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50278
Sample Receipt :10/04/95
Date of Report :10/18/95
No. of Samples :117 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP
E95-6:350-355		45	2
E95-6:355-360		72	9
E95-6:360-363.2		75	9
E95-6:694-696.5		16	28
E95-6:696.5-701		32	2
E95-6:701-706		160	<2
E95-6:706-711		90	<2
E95-6:711-716		16	<2
E95-6:716-721		22	<2
E95-6:820-824		30	39
E95-6:824-828		28	49
E95-6:828-833		33	21
E95-6:833-838		25	26
E95-6:838-843		95	<2
95-6:843-848		67	<2
E95-6:848-853		130	<2
E95-6:853-858		200	<2
E95-6:858-863		230	<2
E95-6:863-868		33	4
E95-6:868-873		46	7
E95-6:873-877		22	5
E95-6:877-881.3		19	15
E95-6:881.3-886		30	15
E95-6:886-891		16	8
E95-6:891-896		19	8
E95-6:896-899.5		22	5
E95-6:899.5-903		11	11
E95-6:903-910		22	2
E95-6:910-913.3		17	11
E95-6:913.3-918		99	<2
E95-6:918-923		15	3
E95-6:923-928		350	3
E95-6:928-933.5		28	27
E95-6:933.5-939.7		36	9
E95-6:939.7-945.8		59	170
E95-6:945.8-951.6		120	7
E95-6:951.6-956		44	9

Reviewed By: Williams Date: 10/18/95 Charges : $1,959.75

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50297
ample Receipt :10/16/95
Date of Report :10/27/95
No. of Samples :116 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-6:389-394		78	.4	28	<10	5	230	<5	20
E95-6:394-399		19	.2	18	<10	4	130	<5	13
E95-6:399-404		23	.3	15	<10	7	290	<5	80
E95-6:404-409		11	<.1	11	<10	2	61	<5	35
E95-6:409-414		8	.1	13	<10	3	120	<5	9
E95-6:414-419		15	.1	12	<10	<2	93	<5	63
E95-6:419-424		6	.2	12	<10	<2	160	<5	14
E95-6:424-429		68	.1	12	<10	<2	100	<5	5
E95-6:429-434		164	.1	12	<10	<2	87	<5	21
E95-6:434-439		40	.3	18	<10	4	200	<5	12
E95-6:439-444		143	.6	21	<10	4	240	<5	5
E95-6:444-446.7		470	.7	18	<10	<2	200	<5	2
E95-6:446.7-450.4		<5	<.1	13	<10	<2	5	<5	3
E95-6:450.4-456		13	.3	23	<10	4	150	<5	4
95-6:456-461		<5	<.1	<10	<10	<2	21	<5	10
.95-6:461-466		7	.5	25	<10	3	50	<5	9
E95-6:499.2-504		14	.1	18	<10	3	52	<5	13
E95-6:504-509.9		<5	.1	14	<10	2	49	<5	16
E95-6:548-554		117	.3	34	<10	7	230	<5	13
E95-6:554-560		278	.3	26	<10	5	290	<5	4
E95-6:560-569		53	<.1	15	<10	5	15	<5	<2
E95-6:569-574		<5	.1	13	<10	<2	97	<5	7
E95-6:574-579		6	.1	18	<10	7	67	<5	14
E95-6:579-584		9	.1	11	<10	5	55	<5	<2
E95-6:584-589		9	<.1	15	<10	<2	11	<5	14
E95-6:589-594		8	.1	13	<10	9	120	<5	10
E95-6:594-599		6	.1	22	<10	5	56	<5	8
E95-6:599-604		15	.3	23	<10	19	150	<5	14
E95-7:228.7-232		128	.9	68	<10	170	380	17	22
E95-7:232-237		70	.7	34	<10	61	240	<5	13
E95-7:237-242		48	.5	32	<10	46	170	<5	12
E95-7:242-247		163	.9	21	<10	60	210	7	<2
E95-7:247-252		93	.5	19	<10	22	110	<5	<2
E95-7:252-257		1510	1.0	24	<10	38	140	10	<2
E95-7:257-262		63	.4	35	<10	21	100	9	<2
E95-7:262-267		99	.5	24	<10	24	150	<5	3
E95-7:267-272		36	.4	29	<10	19	100	<5	<2
E95-7:272-277		55	.9	39	<10	58	320	14	<2
E95-7:277-282		185	.6	31	<10	39	120	5	110
E95-7:282-287		97	.2	22	<10	19	61	<5	5

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50297
Sample Receipt :10/16/95
Date of Report :10/27/95
No. of Samples :116 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-7:287-294		11	.1	24	<10	12	42	<5	11
E95-7:388-393		7	.2	18	<10	9	86	<5	<2
E95-7:393-398		29	.3	23	<10	14	98	<5	<2
E95-7:398-403		49	.3	22	<10	10	86	<5	3
E95-7:403-408		40	.3	20	<10	7	73	<5	7
E95-7:408-413		7	.5	23	<10	6	100	<5	<2
E95-7:413-420.2		<5	.2	13	<10	4	57	<5	<2
E95-7:420.2-425		18	.6	47	<10	24	150	<5	<2
E95-7:425-430		16	.7	35	<10	23	160	<5	<2
E95-7:514.8-519		1820	1.7	36	<10	29	550	11	<2
E95-7:519-524		1016	3.6	59	<10	44	1800	20	<2
E95-7:524-529		715	1.3	35	<10	28	670	10	58
E95-7:529-534		3127	3.0	47	<10	51	1300	16	<2
E95-7:534-539		349	.5	20	<10	8	190	<5	11
E95-7:539-544		54	2.3	24	<10	16	340	8	3
E95-7:544-549		276	1.8	22	<10	11	290	6	10
E95-7:549-554		2857	1.1	20	<10	16	220	7	<2
E95-7:554-559		282	.9	26	<10	14	85	<5	2
E95-7:559-564		17	.6	17	<10	3	30	<5	5
E95-7:564-569		55	.7	23	<10	14	130	<5	19
E95-7:569-574		193	1.1	47	<10	61	240	<5	18
E95-7:574-579		27	.5	30	<10	2	19	8	4
E95-7:579-584		14	.2	24	<10	4	39	<5	11
E95-7:584-589		16	.5	13	<10	2	21	<5	18
E95-7:589-594		59	.1	15	<10	3	30	<5	<2
E95-7:594-600.5		19	.2	47	<10	5	21	<5	6
E95-7:772-777		59	.7	24	<10	8	120	<5	<2
E95-7:777-782		22	.6	36	<10	9	160	<5	41
E95-7:782-787		34	1.4	36	<10	26	410	<5	<2
E95-7:787-792		13	.4	24	<10	8	91	<5	<2
E95-7:792-797		9	.4	26	<10	12	88	<5	<2
E95-7:797-802		21	.3	26	<10	11	52	<5	9
E95-7:802-807		37	.6	41	<10	23	130	<5	27
E95-7:807-812		41	.6	30	<10	21	87	<5	6
E95-7:812-817		48	.4	35	<10	27	91	<5	<2
E95-7:817-822		82	.6	53	<10	55	59	<5	<2
E95-7:822-827		44	.5	38	<10	55	36	<5	<2
E95-7:827-833.5		37	.5	54	<10	23	120	<5	<2
E95-8:272.5-278		12	.2	31	<10	5	110	<5	2
E95-8:278-283		87	.4	21	<10	5	270	<5	4

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50297
Sample Receipt :10/16/95
Date of Report :10/27/95
No. of Samples :116 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : / Units : / Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-8:328-331		27	.3	48	<10	11	130	<5	8
E95-8:331-335		923	5.4	41	<10	16	1500	<5	<2
E95-8:335-340		68	.4	14	<10	2	58	<5	<2
E95-8:340-345		76	.5	13	<10	2	240	<5	<2
E95-8:345-350		44	.4	17	<10	3	260	<5	<2
E95-8:350-355		50	.3	14	<10	2	120	<5	<2
E95-8:355-360		16	.3	13	<10	<2	120	<5	<2
E95-8:360-365		114	.5	22	<10	4	480	<5	<2
E95-8:365-370		5	.1	13	<10	4	72	<5	7
E95-8:519-524		13	.1	13	<10	<2	16	<5	2
E95-8:524-529		25	.2	13	<10	<2	17	<5	<2
E95-8:529-534		36	.3	16	<10	2	150	<5	<2
E95-8:534-539		9	.2	15	<10	<2	74	<5	<2
E95-8:539-544		40	<.1	13	<10	<2	9	<5	51
E95-8:544-549		69	1.4	22	<10	12	350	20	<2
E95-8:549-554		25	.2	17	<10	<2	52	<5	<2
E95-8:554-559		9	.1	21	<10	<2	25	<5	<2
E95-8:559-563.5		105	2.6	61	<10	12	950	<5	<2
E95-8:563.5-565.9		<5	.2	15	<10	3	45	<5	<2
E95-9:426-430		19	.2	26	<10	4	110	<5	4
E95-9:430-435		89	.4	21	<10	11	280	<5	<2
E95-9:435-440		67	.7	28	<10	10	380	<5	<2
E95-9:440-445		12	.5	16	<10	5	110	<5	<2
E95-9:445-450		31	.2	17	<10	2	78	<5	<2
E95-9:450-453.5		10	.1	58	<10	4	46	6	<2
E95-9:453.5-457		<5	.1	28	<10	17	25	<5	<2
E95-9:457-462		94	.1	25	<10	5	38	<5	9
E95-9:462-467		7	.2	18	<10	4	68	<5	17
E95-9:467-473		22	.2	20	<10	3	44	<5	18
E95-9:472-477		18	.4	19	<10	2	21	<5	<2
E95-9:477-482		<5	<.1	17	<10	<2	31	<5	<2
E95-9:482-487		7	.2	16	<10	4	110	<5	<2
E95-9:487-492		8	.1	12	<10	<2	35	<5	<2
E95-9:492-497		13	.1	12	<10	2	36	<5	<2
E95-9:497-502		15	.2	15	<10	2	150	<5	<2
E95-10:10-20		189	.9	100	<10	200	2100	35	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50297
Sample Receipt :10/16/95
Date of Report :10/27/95
No. of Samples :116 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP
E95-6:389-394		46	38
E95-6:394-399		28	10
E95-6:399-404		28	5
E95-6:404-409		14	7
E95-6:409-414		46	6
E95-6:414-419		23	2
E95-6:419-424		75	10
E95-6:424-429		17	4
E95-6:429-434		13	<2
E95-6:434-439		24	7
E95-6:439-444		27	10
E95-6:444-446.7		31	2
E95-6:446.7-450.4		42	7
E95-6:450.4-456		49	19
E95-6:456-461		17	8
E95-6:461-466		39	7
E95-6:499.2-504		16	6
E95-6:504-509.9		14	10
E95-6:548-554		52	16
E95-6:554-560		37	4
E95-6:560-569		58	160
E95-6:569-574		19	11
E95-6:574-579		23	16
E95-6:579-584		19	9
E95-6:584-589		18	10
E95-6:589-594		23	10
E95-6:594-599		31	14
E95-6:599-604		32	12
E95-7:228.7-232		24	2
E95-7:232-237		34	18
E95-7:237-242		22	2
E95-7:242-247		21	5
E95-7:247-252		23	4
E95-7:252-257		19	5
E95-7:257-262		25	6
E95-7:262-267		23	7
E95-7:267-272		19	3
E95-7:272-277		33	2
E95-7:277-282		17	2
E95-7:282-287		23	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50297
Sample Receipt :10/16/95
Date of Report :10/27/95
No. of Samples :116 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP
E95-7:287-294		49	20
E95-7:388-393		27	4
E95-7:393-398		16	9
E95-7:398-403		30	23
E95-7:403-408		25	7
E95-7:408-413		26	<2
E95-7:413-420.2		17	3
E95-7:420.2-425		31	37
E95-7:425-430		34	30
E95-7:514.8-519		35	6
E95-7:519-524		97	3
E95-7:524-529		32	3
E95-7:529-534		54	2
E95-7:534-539		31	5
E95-7:539-544		56	6
E95-7:544-549		58	3
E95-7:549-554		43	5
E95-7:554-559		68	5
E95-7:559-564		16	4
E95-7:564-569		43	18
E95-7:569-574		160	17
E95-7:574-579		310	<2
E95-7:579-584		36	12
E95-7:584-589		80	11
E95-7:589-594		16	5
E95-7:594-600.5		150	8
E95-7:772-777		21	2
E95-7:777-782		38	12
E95-7:782-787		48	6
E95-7:787-792		25	<2
E95-7:792-797		15	3
E95-7:797-802		25	10
E95-7:802-807		43	11
E95-7:807-812		35	4
E95-7:812-817		31	<2
E95-7:817-822		21	2
E95-7:822-827		17	<2
E95-7:827-833.5		25	5
E95-8:272.5-278		54	18
E95-8:278-283		63	15

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50297
Sample Receipt :10/16/95
Date of Report :10/27/95
No. of Samples :116 Core

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-8:328-331	84	29
E95-8:331-335	96	9
E95-8:335-340	24	3
E95-8:340-345	29	2
E95-8:345-350	30	4
E95-8:350-355	22	3
E95-8:355-360	23	<2
E95-8:360-365	46	5
E95-8:365-370	62	13
E95-8:519-524	22	6
E95-8:524-529	16	11
E95-8:529-534	130	3
E95-8:534-539	130	3
E95-8:539-544	22	5
95-8:544-549	89	5
95-8:549-554	58	6
E95-8:554-559	67	13
E95-8:559-563.5	110	4
E95-8:563.5-565.9	71	10
E95-9:426-430	60	7
E95-9:430-435	20	6
E95-9:435-440	22	7
E95-9:440-445	16	3
E95-9:445-450	76	3
E95-9:450-453.5	81	7
E95-9:453.5-457	62	26
E95-9:457-462	40	10
E95-9:462-467	63	9
E95-9:467-473	40	3
E95-9:472-477	17	4
E95-9:477-482	22	5
E95-9:482-487	17	12
E95-9:487-492	8	2
E95-9:492-497	8	2
E95-9:497-502	20	6
E95-10:10-20	130	41

Reviewed By: C Williams Date: 10/27/95 Charges : $1,943.00

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50309
Sample Receipt :10/24/95
Date of Report :11/05/95
No. of Samples : 31 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-9:655.2-660		23	.1	23	<10	9	94	<5	5
E95-9:660-665		17	.2	20	<10	10	200	12	13
E95-9:665-670		<5	<.1	16	<10	3	46	<5	5
E95-9:670-675		10	<.1	16	<10	3	5	<5	6
E95-9:675-682		<5	<.1	14	<10	5	53	<5	3
E95-9:682-687		18	.1	18	<10	4	79	<5	<2
E95-9:687-692		32	.1	18	<10	4	73	<5	<2
E95-9:692-697		24	<.1	<10	<10	<2	24	<5	3
E95-9:697-702		38	.3	15	<10	7	170	<5	6
E95-9:702-707		14	.1	16	<10	7	180	<5	5
E95-9:707-712		64	.2	16	<10	6	110	<5	2
E95-9:712-717		89	.4	22	<10	12	180	<5	3
E95-9:717-722		9	.2	14	<10	5	130	<5	<2
E95-9:722-727		15	.6	23	<10	18	310	<5	3
E95-9:727-731		6	.5	20	<10	12	180	<5	<2
E95-9:814.5-820		12	.6	51	<10	10	450	<5	<2
E95-9:820-825		5	.2	18	<10	6	130	<5	4
E95-9:825-830		11	.1	<10	<10	3	85	9	<2
E95-9:830-837		9	<.1	<10	<10	<2	38	<5	<2
E95-9:837-842.5		8	.2	17	<10	9	170	<5	4
E95-9:842.5-848		5	.1	12	<10	3	130	<5	3
E95-9:848-853		7	.1	12	<10	3	68	<5	4
E95-9:853-858		8	.1	<10	<10	3	99	<5	3
E95-9:858-865		15	.2	20	<10	3	96	<5	2
E95-10:20-23		927	5.5	100	<10	120	3000	36	13
E95-10:23-32		16	<.1	18	<10	16	29	<5	<2
E95-10:32-37		51	.6	45	<10	25	220	41	4
E95-10:37-42		543	>25	51	<10	38	640	10700	<2
E95-10:42-47		72	3.5	68	<10	64	1700	160	<2
E95-10:47-53		166	.5	30	<10	9	190	33	<2
E95-10:53-58.7		147	.4	33	<10	10	130	<5	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50309
Sample Receipt :10/24/95
Date of Report :11/05/95
No. of Samples : 31 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP	Ag oz/t FA
E95-9:655.2-660		25	15	
E95-9:660-665		24	21	
E95-9:665-670		24	18	
E95-9:670-675		65	9	
E95-9:675-682		47	8	
E95-9:682-687		34	5	
E95-9:687-692		44	40	
E95-9:692-697		17	9	
E95-9:697-702		20	7	
E95-9:702-707		20	7	
E95-9:707-712		14	9	
E95-9:712-717		20	8	
E95-9:717-722		20	11	
E95-9:722-727		26	10	
E95-9:727-731		58	9	
E95-9:814.5-820		130	14	
E95-9:820-825		25	48	
E95-9:825-830		15	8	
E95-9:830-837		7	4	
E95-9:837-842.5		55	61	
E95-9:842.5-848		16	11	
E95-9:848-853		45	34	
E95-9:853-858		45	10	
E95-9:858-865		31	15	
E95-10:20-23		200	11	
E95-10:23-32		62	280	
E95-10:32-37		740	15	
E95-10:37-42		14300	12	1.14
E95-10:42-47		7900	7	
E95-10:47-53		94	4	
E95-10:53-58.7		63	5	

Reviewed By: C Williams Date: 11/5/95 Charges : $526.45

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50326
Sample Receipt :11/06/95
Date of Report :11/17/95
No. of Samples : 33 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-7:47-51		32	.1	21	<10	16	87	<5	<2
E95-7:157.5-160		26	.2	44	<10	34	120	<5	<2
E95-7:185-186.2		208	1.1	200	<10	38	340	8	68
E95-7:296.2-297.7		85	.2	27	<10	16	93	<5	4
E95-7:314.7-317.1		6	.4	27	<10	35	240	11	<2
E95-7:382-388		10	.2	41	<10	15	150	<5	3
E95-7:430-437		6	.2	46	<10	18	110	13	<2
E95-7:442-447		<5	.1	15	<10	9	75	<5	<2
E95-7:447-452		125	1.2	32	<10	40	360	17	<2
E95-7:452-457		169	.2	13	<10	4	34	<5	2
E95-7:457-459.5		10	<.1	15	<10	3	33	<5	3
E95-7:459.5-462		54	.4	53	<10	12	130	27	<2
E95-7:600.5-605		79	.8	37	<10	26	220	<5	<2
E95-7:605-610		40	.6	31	<10	21	200	<5	4
E95-7:610-615		13	.1	21	<10	9	41	<5	8
E95-7:615-619.5		15	.2	27	<10	17	39	<5	23
E95-7:682.1-685		6	.1	52	<10	10	36	<5	12
E95-7:685-690		30	.6	50	<10	30	150	<5	18
E95-7:690-695.2		49	.8	43	<10	35	200	<5	<2
E95-7:754-758		13	.3	20	<10	11	130	<5	<2
E95-10:58.7-65.5		<5	<.1	48	<10	15	33	<5	<2
E95-10:88-89.5		18	.1	22	<10	20	33	<5	<2
E95-10:93-94		<5	.1	13	<10	13	73	<5	<2
E95-10:113-118		<5	.2	35	<10	17	120	<5	<2
E95-10:118-121.5		11	.1	23	<10	9	48	<5	9
E95-10:196-200		871	.5	37	<10	19	170	9	<2
E95-10:200-205		104	.3	24	<10	13	170	<5	<2
E95-10:205-211		54	.5	24	<10	12	170	<5	<2
E95-11:369-374		43	.5	63	<10	8	280	47	<2
E95-11:374-379		<5	.1	37	<10	6	81	6	<2
E95-11:379-384		25	.1	29	<10	5	68	<5	<2
E95-11:384-389		28	.3	24	<10	7	270	<5	<2
E95-11:389-393		92	.3	40	<10	11	380	<5	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50326
Sample Receipt :11/06/95
Date of Report :11/17/95
No. of Samples : 33 Core
P.O. No. :SKARN
Page 2 of 2

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-7:47-51	24	37
E95-7:157.5-160	48	200
E95-7:185-186.2	24	26
E95-7:296.2-297.7	38	17
E95-7:314.7-317.1	40	10
E95-7:382-388	44	40
E95-7:430-437	34	22
E95-7:442-447	14	12
E95-7:447-452	29	7
E95-7:452-457	24	20
E95-7:457-459.5	44	22
E95-7:459.5-462	110	79
E95-7:600.5-605	52	13
E95-7:605-610	60	12
E95-7:610-615	38	11
E95-7:615-619.5	42	24
E95-7:682.1-685	77	27
E95-7:685-690	50	20
E95-7:690-695.2	50	18
E95-7:754-758	21	6
E95-10:58.7-65.5	51	58
E95-10:88-89.5	40	80
E95-10:93-94	10	22
E95-10:113-118	43	18
E95-10:118-121.5	37	25
E95-10:196-200	37	14
E95-10:200-205	35	22
E95-10:205-211	33	15
E95-11:369-374	91	13
E95-11:374-379	53	9
E95-11:379-384	46	4
E95-11:384-389	38	5
E95-11:389-393	62	5

Reviewed By: C Williams Date: 11/17/95 Charges : $552.75

E hole

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X60079
Sample Receipt : 3/19/96
Date of Report : 3/29/96
No. of Samples : 56 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
E95-6:23-25		58	1.5	<10	<10	83	1100	23	<2
E95-6:162-164		23	.3	12	<10	7	220	<5	6
E95-6:609-611		46	.5	<10	<10	9	400	<5	<2
E95-6:624-629		46	.5	<10	14	26	350	<5	<2
E95-6:629-634		<5	.3	<10	11	18	150	<5	<2
E95-6:758-762		<5	.3	<10	21	14	190	<5	<2
E95-6:762-769		29	.7	<10	39	39	490	<5	<2
E95-6:769-776.5		13	.2	<10	<10	17	210	<5	<2
E95-8:30-32		12	.4	<10	<10	20	44	<5	<2
E95-8:38-43		9	.4	<10	<10	20	43	<5	3
E95-8:43-48		11	.3	<10	<10	23	45	<5	<2
E95-8:48-54		12	.3	<10	<10	23	41	<5	<2
E95-8:212-215		34	.3	<10	<10	4	140	<5	<2
E95-8:390-391		49	.3	<10	<10	5	200	<5	23
E95-8:476.5-477.5		45	.3	<10	<10	6	180	<5	15
E95-8:489-494		30	.2	<10	<10	16	110	<5	<2
E95-11:149-154		19	.5	<10	<10	12	43	8	5
E95-11:154-159		28	.3	<10	<10	10	30	6	<2
E95-11:159-164		17	.3	<10	<10	10	26	8	3
E95-12:65-70		53	.3	<10	13	20	61	<5	<2
E95-12:70-75		28	.2	<10	11	17	45	<5	<2
E95-12:75-80		17	.3	<10	<10	18	59	<5	<2
E95-12:80-85		25	.2	<10	<10	14	47	<5	<2
E95-12:85-90		20	.1	<10	<10	9	31	7	<2
E95-12:105-110		12	.4	<10	<10	19	67	<5	<2
E95-12:110-115		14	.3	<10	<10	16	55	<5	<2
E95-12:143-148		<5	.1	<10	<10	8	13	<5	2
E95-12:163-168		22	1.5	<10	17	16	95	<5	<2
E95-13:65-70		7	.6	<10	<10	20	59	<5	<2
E95-13:70-75		<5	.2	10	<10	10	41	<5	<2
E95-14:565-570		<5	.3	30	<10	14	64	<5	<2
E95-14:570-575		8	.5	<10	<10	12	20	<5	<2
E95-14:575-578		17	.4	<10	<10	11	37	<5	<2
E95-14:777.4-783		<5	.1	48	<10	18	64	<5	<2
E95-14:783-788		<5	.2	<10	<10	14	54	<5	<2
E95-14:788-794		19	.3	<10	<10	6	60	<5	<2
E95-14:794-800		<5	.3	13	<10	17	66	11	<2
E95-14:800-805		12	.5	14	<10	14	36	<5	<2
E95-14:805-810		34	.6	<10	13	15	170	<5	<2
E95-14:810-815		13	.3	<10	<10	6	180	5	13

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X60079
Sample Receipt : 3/19/96
Date of Report : 3/29/96
No. of Samples : 56 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Au	Ag	As	Bi	Co	Cu	Pb	Mo
	Units : ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Method: FA+AA	FA+AA	ICP	ICP	ICP	ICP	ICP	ICP
E95-14:815-820	19	.4	<10	<10	11	46	<5	<2
E95-14:820-825	11	.4	12	10	10	53	<5	<2
E95-14:858.5-863.5	<5	.3	16	<10	5	18	<5	<2
E95-14:863.5-868	8	.3	<10	<10	8	13	<5	<2
E95-14:868-872	10	.6	34	<10	12	52	<5	<2
E95-15:190-195	<5	.1	12	<10	5	<2	<5	<2
E95-15:195-200	6	.1	<10	<10	7	7	<5	<2
E95-15:200-205	<5	.1	<10	<10	10	9	<5	<2
E95-15:205-210	16	.3	<10	<10	12	22	5	<2
E95-15:210-215	14	1.1	<10	<10	11	47	<5	3
E95-15:239-244	18	.2	<10	<10	25	76	<5	<2
E95-15:244-249	35	.3	<10	<10	19	110	<5	<2
95-15:249-254	41	1.0	<10	<10	18	330	8	<2
95-15:254-258	33	1.9	<10	<10	13	500	<5	2
E95-15:296-302	41	1.0	<10	<10	23	330	11	<2
E95-15:330-332	81	1.5	<10	<10	27	260	<5	<2

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

VL Job Number :X60079
Sample Receipt : 3/19/96
Date of Report : 3/29/96
No. of Samples : 56 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Zn Units : ppm Method: ICP	Ba ppm ICP
E95-6:23-25	49	54
E95-6:162-164	26	18
E95-6:609-611	46	15
E95-6:624-629	34	18
E95-6:629-634	29	35
E95-6:758-762	35	140
E95-6:762-769	43	160
E95-6:769-776.5	48	130
E95-8:30-32	67	92
E95-8:38-43	84	65
E95-8:43-48	81	110
E95-8:48-54	120	160
E95-8:212-215	28	22
E95-8:390-391	66	8
E95-8:476.5-477.5	26	14
E95-8:489-494	27	8
E95-11:149-154	370	43
E95-11:154-159	720	36
E95-11:159-164	220	30
E95-12:65-70	53	9
E95-12:70-75	52	13
E95-12:75-80	65	17
E95-12:80-85	42	9
E95-12:85-90	38	12
E95-12:105-110	45	9
E95-12:110-115	54	8
E95-12:143-148	50	8
E95-12:163-168	34	13
E95-13:65-70	200	8
E95-13:70-75	66	32
E95-14:565-570	100	28
E95-14:570-575	94	13
E95-14:575-578	94	13
E95-14:777.4-783	32	15
E95-14:783-788	33	13
E95-14:788-794	93	19
E95-14:794-800	45	14
E95-14:800-805	25	16
E95-14:805-810	32	41
E95-14:810-815	28	15

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X60079
Sample Receipt : 3/19/96
Date of Report : 3/29/96
No. of Samples : 56 Core
P.O. No. :SKARN

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP
E95-14:815-820		27	8
E95-14:820-825		28	18
E95-14:858.5-863.5		40	130
E95-14:863.5-868		69	63
E95-14:868-872		160	91
E95-15:190-195		77	13
E95-15:195-200		100	9
E95-15:200-205		130	45
E95-15:205-210		86	90
E95-15:210-215		71	220
E95-15:239-244		120	75
E95-15:244-249		91	140
E95-15:249-254		240	41
E95-15:254-258		4700	83
E95-15:296-302		100	28
E95-15:330-332		90	44

Reviewed By: C Williams Date: 3/29/96 Charges : $938.00

DIAMOND DRILL HOLE LOG

Company Oruana Resources

Property	Eholt	Hole No.	E93
Location	Eholt Mtn - East side on Road 150' south of last switchback	Bearing at Collar	265°
		Inclination at Collar	-49°
Coord. - Collar N	Local Grid 9853N E 10770E	UTM 5446715N 387710E	
Elev. - Collar	1163 m	Length	850'
Date started	5-1-95	Core Size	NQ
Completed	5-7-95	Logged by	Doyle Albers

LEGEND

Pyroxene		Sulfides	X
Garnet		Calcite	
Epidote		Quartz	
Chlorite	F.	Endoskarn	/
Amphibole		Syenite	

SURVEY

Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC Lith. LOG Alt. Fxs Vnlts	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au (ppb)	Cu (ppm)			Mag. sus.	BOX
	10			15											
15.0-26.0 Medium to dk green, mottled volcanic RX.; clastic txt with fragments up to 3.0 cm, possibly a volc bx. metamorphosed to a greenstone with abundant chl, feld, calc, epd + possibly some qtz + pyx. Broken core 23-25'	20		15.0-26.0 - 3-5% finely dissem py with some vein + frac-filling. Abundant calc, both as vnlts + within the matrix	20	5.0	4.8	96	15-20	5.0	45	23			0.3	15
								20-25	5.0	5	36			0.4	
26.0-31.5 Grades to a lighter green pyx-rich zone with some chlorite, epd, and garnet. Broken core 26-31'			26.0-28.5 - 1/8" oxidized vnlt sub-parallel to core axis		10.0	10.0	100	25-30	5.0	20	50			0.3	1
	30		28.5-34.5 3-5% finely dissem py with some vein + frac-filling - becoming slightly more abundant @ depth	30											
31.5-35.0 Pyx-gar-rich zone with abundant calc, and some chl + epd. Possibly some K-spar? alteration.								30-34.5	4.5	21	54			0.2	32.5
35.0-37.0 Garnet-rich zone, banded @ 25° to core axis; py vnlts sub-parallel to banding; x-cutting calc vnlts.			34.5-37.0 - 5-7% py assoc with banded garnet zone. py banded; sub-parallel to gar some x-cutting vnlts abundant calc veining		10.0	10.0	100	34.5-37	2.5	45	120			0.5	
37.0-44.0 Pyx-gar-rich zone, possibly minor endoskarn @ 42'; some clots of epd throughout.	40			40				37-40	3.0	6	16				
44.0-47.0 - Fractured zone with possible endoskarn; igneous-like txt in 2 zones (42', 44', + 46'), all within a pyx-gar skarn; epd assoc with margins of endoskn.			37.0-43.5 - 3-5% dissem py with some qtz vnlts, pland, some silicification of the matrix - 0.5cm. py vnlt, @ 40° to core axis @ 42.0', also some clots of po.					40-43.5	3.5	12	45			0.6	2
					10.0	10.0	100	43.5-46.5	3.0	22	38			1.2	
47-50 - Blotchy pyx-gar skn - with clots of gar + epd.	50		43.5-46.5 - Possibly some endoskarn zones with po replacing mafics. igneous txt ~ 5% py + po	50				46.5-50	3.5	35	44			2.8	51.0
			46.5-50 3-5% dissem po + minor py												

LITHOLOGY, ALTERATION, MISC.

50-60 Dominantly f.g. pyx-rich skarn with some minor chl. Possibly 2 small zones of endoskarn @ 54.' + 60.5'. Grades to a more chloritic greenstone below 60'

@54'+61' possible endoskarn - med. grained holoxilline intensive Rx with minor garnet, mafics altered to chl, epd, some minor pyx.

60-120 Grades to dk green f.g. meta volc rock (greenstone). Abundant calcite veinlets; 3-4% dissem py, with some py vnlts. minor po

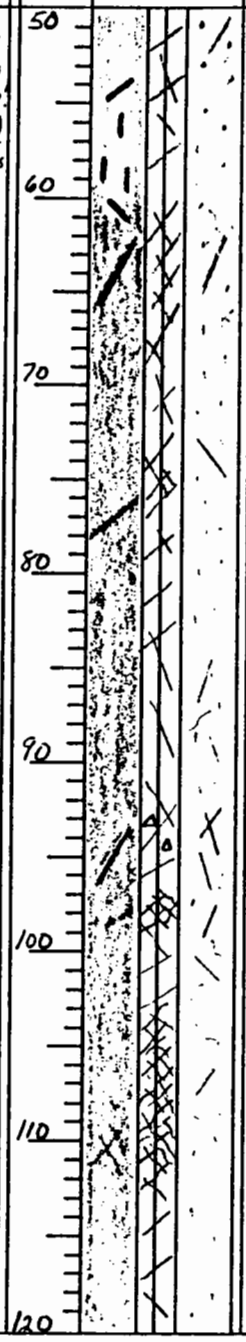
77' - small (0.5cm) garnet-rich band at ~50° to core axis. Very limited alteration

91.5' 1-2cm pyx band @ 30° to core axis with some v f.g. garnet closely assoc Small zone also is enriched in py with some actmolite, + chl

103-112 Very broken core

108-112 minor epd veining.

FT. / GRAPHIC LOG



MINERALIZATION

50-60 3-5% dissem po in pyx skn - minor py. Moderate to Light calc vnlts (more intense near endoskn zones). Qtz-po vnlt @45° to core axis (50.5')

60-120 3-5% dissem py + po w some py vnlts. Po more common 110'-120', near contact with syenite Calc vein + Fx filling throughout

RECOVERY

Run	Run length	Core	%
60	10.0	10.0	100
70	10.0	10.0	100
80	10.0	10.0	100
88	8.0	8.0	100
93	5.0	5.0	100
100	7.0	7.0	100
110	10.0	10.0	100
120	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus	BOX
50-54	4.0	8	44			1.2	51.0
54-59	5.0	25	33			0.6	3
59-64	5.0	20	11				
						0.4	
						0.2	67.0
73-78	5.0	15	91			0.4	4
						0.3	
						0.8	84.0
						0.3	
						0.9	
92-97	5.0	192	360			0.2	5
97-102	5.0	26	160			0.6	101.5
						0.2	
107-112	5.0	18	96			0.4	6
						1.5	116.7
						0.8	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag sus	BOX
120.1 - 127.5 - Pink, F.g. porphyritic syenite dike; 5-10% phenos of feld in an aphanitic matrix - trace dissem py.	120													0.1	
					10.0	10.0	100							.04	
128-129 Garnet-pyx skarn zone with 5-7% sulfides (py, po, + minor cpy)	130		128-129 - 5-7% py, po, + cpy assoc with small zone of banded gar-pyx skn.	130				127.6-130	2.4	9	92			0.2	7
129-139.5 Quickly grades back to porphyritic volcanic greenstone with 3-5% py + po. Increased calcite veining near lower contact														1.2	134.5
					10.0	10.0	100							1.4	
139.5 - 188.5 Porphyritic syenite. K-spar dominant with 3-5% biotite and 15-20% albite? Minor calc filled fxs - weakly magnetic	140			140										1.1	
					10.0	10.0	100							2.2	8
	150			150										5.9	
					10.0	10.0	100							3.2	153
	160			160										1.9	
					10.0	10.0	100							5.3	9
	170			170										7.4	172
					10.0	10.0	100							6.5	
	180			180										4.2	
					10.0	10.0	100							1.0	10
	190			190										0.2	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag sus.	BOX
188.4'-218' Dk grey-green fine grained volc Rx. (greenstone) Chlorite-Rich, possibly some pervassive silicification (200'-218') Highly fxd with some calc fx-fill. 2-3% dissem py + minor py vnlts. Grades to a pyx-gar skn below 218'. Rock is often fractured, but not altogether broken	190		190-218 3-5% sulfides, mostly py with some po; both dissem, w py filled fxs common	200	10.0	10.0	100							1.6	191
	200			207	7.0	7.0	100							0.4	11
	210			217	10.0	10.0	100							0.5	206
218- Protolith appears to change to a tuffaceous Rock, possibly a pyroclastic or waterlain tuff. Fine grained, banded with numerous clasts This Rock becomes strongly replaced by sulfides below 218.8 and garnet-Rich with abundant calcite.	220		218.8' Massive sulfide replacement of tuffaceous? bx? begins. Paragenesis seems to be py-po-cpy-py-hem. Initial py clots are surrounded by po with some v minor cpy along the outer margins of po. Late-stage py vnlts x-cut most other sulfides.	227	10.0	10.0	100	218-223	5.0	8	320			6.5	12
														1.1	
								223-228	5.0	40	460			0.5	224
233'- skarn becomes more pyx dominant below 233'	230			237	10.0	10.0	100							0.5	
								228-233	5.0	12	200			0.9	
								233-238	5.0	42	520			3.6	13
	240		238-245 40-60% sulfides of which ~65% po; ~30% py <1% cpy and 3-5% hem.	240	3.0	3.0	100							15.0	
								238-243	5.0	192	1400			45.0	241.6
				250	10.0	10.0	100	243-248	5.0	90	660			4.8	
Below 250' skarn grades back to dominantly greenstone with some po + py Rich zones.	250							248-253	5.0	13	330			1.5	
														0.7	14
								253-258	5.0	<5	57			1.8	
	260		po-py	260	10.0	10.0	100	258-263	5.0	54	1200			12.2	259.7

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			Mag sus.	BOX
	260							258-263	5.0	54	1200			15.2	
263-268 - Light colored bx zone; possible structure with some hydrothermal bxn? Numerous vole clasts in a qtz-calc-sphene matrix - part crackle/hydro fx bxn. weak skarn alteration. 268-270 grades back to grnst.			Abundant calc with some qtz.		10.0	10.0	100	263-270	7.0	<5	57			0.3	15
271-273 Very broken core - abundant blk chl along fxs.	270		massive po, some later py+cpy	270											
275-277 Very broken core - abundant black chl. Breccia zone similar to above @ dike contact.					7.0	7.0	100	270-275	5.0	207	830			180.0	
278.1-283.4 Fine grained slightly porphyritic K-spar rich intrusive with 10-15% mafics weak to moderately magnetic	277			277										64.0	275
	280		massive po with some py+cpy		10.0	10.0	100	275-278.1	3.1					0.3	
285.5-321.4 Alkalic intrusive similar to above (seems to have more mafics than most syenites in this area).										5	32			14.5	
				287										67.5	
	290			290	3.0	3.0	100	283.3-285.6	2.3	41	210			1.5	16
														16.0	293
					10.0	10.0	100								
	300			300										15.5	17
					10.0	10.0	100								
	310			310										18.0	311.8
					10.0	10.0	100								
321.5-330 Dominantly dark green grnst. Hyp-vole Rf v. weak alteration.	320			320										12.6	18
325.5 secondary biotite? epd.			2-3% py+po		10.0	10.0	100	321.4-325	3.6	29	67				
	330			330				325-330	5.0					0.5	330

LITHOLOGY, ALTERATION, MISC.

330 - 350 Generally f.g. volcanic Rocks with abundant sulfide mineralization from 340 - 347. Relatively weak skarn alteration; possibly some secondary bio. Partly altered intrusive? (monzonite?) @ 331'. V fractured with secondary veining - weak alteration - sec. bio?

350-400 Generally porphyritic dark green hypabyssal volc. with 20-30% phenos of feld and 2-3% mafics, (mostly altered to chl.). Phenos are subhedral to euhedral - partly bakn and partly alt to epd. - pervassive greenschist facies meta. calcite veining throughout 3-5% sulfides, mostly py.

367-390 - Partly bleached and fractured zone with some silicification. No significant mineralization.

FT. / GRAPHIC LOG

330
340
350
360
370
380
390
400

MINERALIZATION

massive po with cross-cutting py vnlts.

generally 3-5% sulfides, mostly py.

RECOVERY

Run	Run length	Core	%
330			
	10.0	10.0	100
340			
	10.0	10.0	100
350			
	10.0	10.0	100
360			
	10.0	10.0	100
370			
	10.0	10.0	100
380			
	10.0	10.0	100
390			
	7.0	7.0	100
397			

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus	BOX
							330
330-335	5.0	<5	91			0.3	
335-340	5.0	<5	27			0.5	19
340-343	3.0	82	270				
343-347	4.0	580	1900			62.0	
347-352	5.0	<5	57			1.2	348.7
352-357	5.0	16	75			0.5	
357-362	5.0	52	44			0.4 4.2	20
362-367	5.0	15	50			0.3	367
367-372	5.0	9	20			0.3	
372-377	5.0	7	10			0.2	
377-382	5.0	<5	8			0.3	21
382-387	5.0	<5	45			0.4	385.8
387-392	5.0	<5	7			1.2	
392-397	5.0	64	170			1.5	22
397-402	5.0	300	280			0.7	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag Sus.	BOX
400-421.8 Porphyritic volcanic similar to above with increasing sulfide near syenite contact (dominantly po with some py)	400							397-402	5.0	30	280			0.9	22-
					10.0	10.0	100								403.8
	410		py - po	407				402-407	5.0	31	110			0.4	
				410	3.0	3.0	100	407-410	3.0	190	370			1.0	
								410-415	5.0	24	85			1.3	23
					10.0	10.0	100								
	420		po, py (70% po - 30% py) some secondary silica flooding	420				415-420	5.0	201	280			0.4	
														5.2	
421.8 - 467 Fine grained slightly porphyritic syenite - dominantly K-spar with 3-5% mafics (mostly bio).								420-422	2.0	<5	36			0.2	421
					10.0	10.0	100							0.3	
	430			430											
														0.3	24
					10.0	10.0	100							0.2	
	440			440										0.2	440
			breccia zone with qtz, sericite + calc cement					440-444	4.0						
			sericite fx-fill		10.0	10.0	100							0.4	
	450			450										0.5	25
														0.6	
					10.0	10.0	100								
457-494.5 More xlline and more porphyritic syenite than above; 5-10% mafics and 10-20% albite; still K-spar dominant.	460			460										0.4	459
														0.3	
					10.0	10.0	100								26
	470			470										0.4	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			Mag Sus	BOX
	470													6.2	26
					10.0	10.0	100							1.5	
														4.5	478
	480			480										1.5	
														2.1	
					10.0	10.0	100							4.6	
														0.9	27
	490			490										0.5	
														0.8	
494.5-496 Lt grey-green silica flooded sub-volc? intrusive? possibly endoskarn with some garnet, and epd.					10.0	10.0	100	494.5-500	5.5	31	170			3.2	497
496-505 F.g. blk volc rock with abundant sulfide bands. Weak alteration	500		po, py mostly as clots + vnlts, with some dissem adjacent to veins.	500										4.7	
								500-505	5.0	47	240			0.8	
505-525 Mostly xlline intrusive? Rock with pervassive silica flooding and possibly some potassic alteration. Possible endoskarn with chl-epd, actinolite alteration minerals - Protolith may have been qtz-diorite? Rock does contain bx frags of similar intrusive rock, and some blk f.g volc RX			silica flooding Potassic Alt? 2-3% py+po.		10.0	10.0	100							0.2	
	510			510				505-510	5.0	<5	6			0.2	28
								510-515	5.0	<5	9			0.2	
					10.0	10.0	100								515.5
	520			520				515-520	5.0	<5	5				
								520-525	5.0	<5	2			0.2	
525-534.3 Porphyritic syenite; K-spar dominant with 10-20% albite? and 5-10% mafics															
	530			530										5.8	29
					10.0	10.0	100							8.9	
534.3 - 587.9															533.5
														0.2	
	540			540										0.1	30

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag sus.	BOX
534.3 - 587.9 Sub volcanic breccia with clasts of intrusive rock; F g. black volc Rx, cherty pebbles (some with secondary bio) all in a crystal-rich volc matrix with 30-35% feld phenos 2-3% qtz eyes, 5-10% mafics (all → chl). 550 - 560 some bxn + brkn core	540		generally 2-3% py												
				550	10.0	10.0	100							0.3	30
														0.3	552.1
			calc veining more abundant in areas of brkn core.	560	10.0	10.0	100							0.2	
	560													0.2	
								560 - 565	5.0	<5	63				31
			560 - 580 some silicification and secondary biotite. py, minor po	570	10.0	10.0	100	565 - 570	5.0	<5	28			0.3	570
	570							570 - 575	5.0	33	110			0.5	
				580	10.0	10.0	100	575 - 580	5.0	<5	13			0.3	32
slightly finer grained below 580'	580													0.1	
														0.3	587.5
587.9 - 630 Porphyritic syenite.				590	10.0	10.0	100							2.9	
	590													5.0	
														6.8	
				600	10.0	10.0	100							6.7	33
	600														
														6.8	606
				610	10.0	10.0	100								
	610													7.9	

LITHOLOGY, ALTERATION, MISC.

630 - 640 Dk green med-coarse grained volcaniclastic? with siliceous pebbles in a bio-pyx-chl matrix with 2-3% dissem po

640-680

Rock changes to carbonate-rich garnet skarn with abundant sulfides. Locally coarse grained marble and massive garnet (massive zones mostly andradite, but other areas show mixed andrad. + grossularite). Garnet-rich zones are inter mixed with pyx dominant skarn, all of which are sulfide-rich

FT. 610, 620, 630, 640, 650, 660, 670, 680

GRAPHIC LOG

MINERALIZATION

po - 2-3% dissem

640-680 Generally 10-20% sulfides, dominantly py mostly as med-coarse grained clots comprising 60-80% of the total sulfide

Po is finely dissem to lightly clotty and appears to be after the py. Po comprises 15-20% of the total sulfide.

cpy is fairly f.g. and usually assoc w the py+po The cpy appears to be later stage and comprises 1-3% of the total sulfide.

Also some areas of late stage qtz veining + silicification 650-660

RECOVERY

Run	Run length	Core	%
620	10.0	10.0	100
630	10.0	10.0	100
640	10.0	10.0	100
650	10.0	10.0	100
660	10.0	10.0	100
670	10.0	10.0	100
680	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus.
						8.8
						7.6
						5.2
						6.5
						4.2
						3.7
630-635	5.0	<5	13			0.3
635-640	5.0	24	36			0.2
640-645	5.0	21	290			2.3
645-650	5.0	29	530			1.8
650-655	5.0	135	830			4.8
655-660	5.0	19	350			7.9
						12.2
660-665	5.0	41	760			11.6
665-670	5.0	77	780			6.4
670-675	5.0	52	990			11.7
675-680	5.0	47	490			4.8

BOX

34, 625, 35, 643.5, 36, 662, 37, 680

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag sus.	BOX
680-690 garnet-pyx skarn, Rich in calcite similar to above; Locally massive gar.	680		680-717 Generally 5-15% sulfide, dominantly py with some po and minor cpy. py is clotty and banded with some veining. It comprises 65-80% of the sulfide. Po is more dissem to finely clotted, and comprises 15-20% of the sulfide. Cpy seem Late stage, f.g. and comprises 1-3% of the sulfide					680-685	5.0	23	680			1.5	
					10.0	10.0	100							12.5	
688-693 Looks Like a zone of intrusive Rock (possibly endoskarn) It is Lt grey-green; fractured, but well cemented w/ calcite. It shows pervassive silicification with mafics altered to chl; tr garnet, and 2-3% dissem sulfide, mostly py. The 688' area shows a reaction rim adjacent to the intrusive of chl-epd-gar.	690			690				685-690	5.0	19	300			0.5	38
					10.0	10.0	100							0.4	
								690-695	5.0	120	690			0.8	
693-717 - weakly banded gar-pyx skarn with abundant retrograde? alt to chl. Generally Lt Red garnet + f.g. green pyx.; chl is green to blk. Sulfide percentage varies, but generally 5-15%, mostly py.	700			700				695-700	5.0	56	460			0.6	698.5
					10.0	10.0	100							0.8	
								700-705	5.0	49	340			50.0	
	710			710				705-710	5.0	257	1600			4.5	39
					10.0	10.0	100							1.0	
								710-715	5.0	59	440			12.0	
717-719.5 Dk grey to black mafic dike. 10-20% phenos of augite? in a blk f.g. matrix. Partly alt → chl.								715-717	2.0	28	440			0.4	717.5
	720			720				717-719.5	2.5						
719.5-736.5 Buff colored porphyritic syenite? Latite? dike, dominantly K-spar with 3-5% mafics, and 15-20% phenos of albite?			minor bxn + weak silicification											0.2	
					10.0	10.0	100							0.1	40
	730			730										-0.1	736
736.5-757 Slightly more banded garnet-pyx skn than above - calcite-Rich with abundant veining (both qtz + calc)			736.5-757 Locally abundant sulfides particularly 740-745 - Mostly clotty py with some finely dissem po + minor cpy					736.5-740	3.5	46	770			0.7	
					10.0	10.0	100							5.2 (1.2)	
	740			740				740-745	5.0	106	1500				41
745-750 - some silicification + hydro frac angular clasts with a silica matrix														0.5	
					10.0	10.0	100	745-750	5.0	50	540			12.5	
	750			750											

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag Susc.	BOX
	750							750-755	5.0	15	380			0.5	
			py + po; minor cpy		10.0	10.0	100							12.5	755
757-766.8								755-757	2.0	48	460				
DK grey-blk porphyritic mafic dike, 15-20% phenos of augite? partly altered to chl+epd in a f.g. blk matrix; 1-2% sulfides	760	mafic dike	1-2% dissem py + po	760				757-762	5.0					16.0	
					10.0	10.0	100							15.2	42
766.8-850 Primarily a dark green volcanic breccia; locally crystal-rich; pervassive alteration to gnst. weak skarn alteration and some tectonic bxn in the upper 20'. Volcanic bx is heterolithic with chert, intrusive + volcanic clasts. Also locally abundant calcite veining								762-766.8	4.8					14.5	
	770		py + po; minor cpy otherwise 1-2% py throughout to 850'	770				766.8-770	3.2					0.4	771
					10.0	10.0	100	770-775	5.0					10.5	
	780			780											
					10.0	10.0	100							9.6	43
														8.7	790
	790			790				790-795	5.0					6.8	
					10.0	10.0	100							4.9	44
	800		hem	800											
					10.0	10.0	100							3.6	808.5
	810			810											
					10.0	10.0	100							4.7	45
	820			820											

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL							BOX
				Run	Run length	Core	%	Sample	Interval					mag sus	
	820														45
					10.0	10.0	100							7.4	827
	830			830											
								830-835	5.0					6.9	
					10.0	10.0	100							8.3	46
	840			840											
														9.2	
					10.0	10.0	100								846
	850	T.D.		850											47
															850

DIAMOND DRILL HOLE LOG

Company: Orvana Resources

Property: Eholt	Hole No.: E9[illegible]2
Location: Eholt Mtn - Just east of last switch back (200' NE of 95-1)	Bearing at Collar: 267°
	Inclination at Collar: -49.5°
Coord. - Collar N Local 9910N UTM 5446775N	
E Grid 10783.E 387745E	Length: 730'
Elev. - Collar: 1172m	Core Size: NQ
Date started: 5-7-95	
Completed: 5-11-95	Logged by: Doyle Albers

LEGEND

SURVEY

Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC ALT LOG Lith fgs Miner	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			Mag sus.	BOX
	10														
	20	Till													
25-75 Generally a dark green crystal-Rich volcanic bx with clasts of intrusive RX, f.g. vole RX, and minor chert in a xlline volcanic matrix with 2-5% sulfide.	30		py - 2-5%	25											25
				30	5.0	4.5	90							0.3	
					8.0	8.0	100							0.3	1
				38										0.3	
39-48 Sulfide-rich gar-pyx skarn with 30-60% sulfide. Po+Py are approx equal % with minor cpy. Pyx and gar are generally v. f.g. minor epd.	40		po, py + cpy Locally massive po + py with minor cpy - sulfides commonly fxd with blk chl? Fx filling some minor late stage gtz												40.3
					9.0	9.0	100	39-44	5.0	195	950			200.0	
				47										120.0	
								44-48	4.0	57	990			30.0	
														1.2	2
	50			50	3.0	3.0	100							0.5	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag sus	BOX
	50		50-75 Generally 1-3% py with minor po. Mostly dissem with some vnlts Calcite fx filling comm.											0.3	2
					10.0	10.0	100							0.4	57.8
	60			60											
					10.0	10.0	100							0.8	
	70			70										0.2	3
					10.0	10.0	100							0.3	75
75-87.5 Lt to med green volc Rx similar to above, with increasing skarn alteration at depth. Abundant calcite veining, some qtz veining, and silicification. Assoc dpd alteration and some garnet both as clots and as vnlts.	80		78-85 Some qtz veining + localized silicification assoc w increased Fxs above sulfide zone.	80										0.5	
					10.0	10.0	100							0.6	4
87.5-181 Generally a Lt green pyx dominant skarn, rich in sulfides and carbonate, with localized areas of garn. Some small areas of coarse grained marble. Also local areas of retrograde? alteration to blk chl (particularly assoc with heavy sulfide, and Fxd zones) Also some blotchy areas of secondary biotite adjacent to pyx skn	90		87.5-181 - Numerous areas of heavy sulfide mineralization (>50%) ie 88-90; 95-100; 104-108; 112.5-121, 126-130, 165-170 Dominant sulfide is po (60-70%) with py comprising 25-30% of sulfide and cpy 1-3% Some minor qtz-py vnlts appear to be late stage (@92')	90				87.5-90.0	2.5	56	2400			45.0	
					10.0	10.0	100	90-95	5.0	247	2700			25.0 0.8	92.8
	100			100				95-100	5.0	224	3000			40.0 20.0	
					10.0	10.0	100	100-104	4.0	54	560			0.8 16.4	5
								104-108	4.0	767	3200			19.5 48.0	
	110			110											111
					10.0	10.0	100	108-112.5	4.5	20	710			0.5	
								112.5-116	3.5	191	1800			20.0 140.0	
	120			120				116-121.2	5.2	230	2700			120.0 85.5	6

LITHOLOGY, ALTERATION, MISC.

140-143 Possible intrusive Rock (endo skarn) not strongly altered, but with some garnet and bounded by zones of bio hornfels? (128'-155') Although not massive the zone about this intrusive contains some secondary bio.

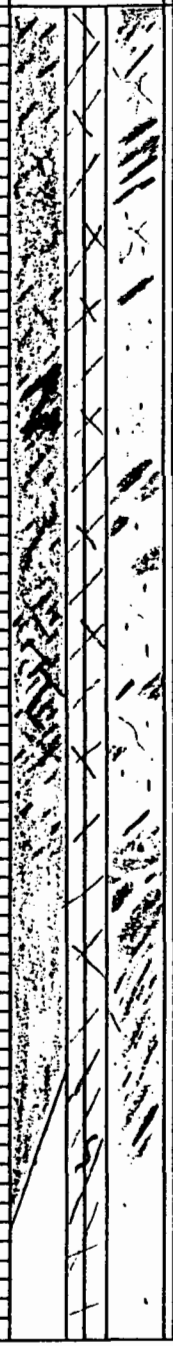
152-160 Another zone of possible endoskarn with bio hFL overprinting? gar-pyx skn.

181-226.5 Buff to pink porphyritic syenite; Kspar dominant with 15-20% albite and 3-5% mafics.

FT.

120
130
140
150
160
170
180
190

GRAPHIC LOG



MINERALIZATION

Po-Rich zones

128-155
Some secondary silicification assoc with intrusive? Rock @ 140-143. Possibly an overprinting of alteration (ie prograde pyx then bio hFL.)

Some qtz flooding 160-164 actinolite?

164.5-181 Sulfide-Rich zones become more banded @ depth and "veins" are 20°-30° to core axis near contact with syenite.

RECOVERY

Run	Run length	Core	%
130	10.0	10.0	100
140	10.0	10.0	100
150	10.0	10.0	100
160	10.0	10.0	100
170	10.0	10.0	100
177.5	7.5	7.5	100
187	9.5	9.5	100
190	3.0	3.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus.
						80.4
121.2-126.5	5.3	7	120			0.5 1.2
126.5-130	3.5	58	2200			79.0 26.0
130-133	3.0	731	2300			9.5
133-138	5.0	25	1200			2.5
138-143	5.0	<5	180			0.2
143-148	5.0	21	300			40.0 0.3
148-153	5.0	<5	200			0.5
153-158	5.0	<5	200			2.1
158-164.5	6.5	291	1600			0.5 2.5
164.5-170	5.5	871	910			56.0 145.0
170-175.5	5.5	187	1400			0.5 85.0
175.5-181	5.5	88	520			4.6
						0.3 0.5

BOX

6
130.4
7
147.7
8
156.3
9
184

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag sus	BOX
	190			190										0.3	
					10.0	10.0	100								10
	200			200										0.4	203
					10.0	10.0	100							5.5	
	210			210										5.0	11
					10.0	10.0	100							4.5	
	220			220										3.3	221.3
			226.5-244 massive po-Rich zones with "bulkshot" py near the upper contact and @ 239', otherwise sulfide zones tend to be mixed py + po. They vary from massive to units with generally 50-60% po and 40-50% py with minor cpy. Carbonate units throughout		10.0	10.0	100							0.3	
226.5-244 Zone is colored as skarn, but closer examination shows it to be more like a diorite? Med-dk grey equigranular with dissem po + py (locally massive). Rock is not strongly altered, but overall contains 10-20% sulfide. Blk chl common along Fxs.	230	Diorite		230				226.5-231	4.5	109	720			64.5 6.4	
					10.0	10.0	100	231-235.5	4.5	<5	25			4.6	12
	240			240				235.5-240	4.5	92	700			50.5 6.5	239.5
					10.0	10.0	100	240-244	4.0	<5	410			5.2	
244-258.6 Buff to Pink, weakly porphyritic syenite 10-15% phenos of Feld + bio. in a F.g. matrix	250			250										0.3	
					10.0	10.0	100							0.6	13
	260			260										0.3	258
258.6								258.6-264	5.4					0.8	

LITHOLOGY, ALTERATION, MISC.

268.4' - petrographic sample (volc bx w/intrusive frags?)

258.6-357 Med grey, med grained, mostly xlline volcanic bx? (subvolcanic intrusive?) with numerous intrusive clasts (up to 5 cm). Generally weak alteration (chl + epd) with local areas of garnet. Some questionable areas of intrusive (endoskarn) @ 268

FT. 260, 270, 280, 290, 300, 310, 320, 330

GRAPHIC LOG

MINERALIZATION

258.6-357 generally 2-3% sulfide, mostly py with some po + minor cpy; locally up to 5% sulfide.

po, py

py

secondary bio

317-330 Potassic alt?, minor intrusive. (mon'z) with some silicification.

RECOVERY				ANALYTICAL							BOX
Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm			Mag Sus	
260				258.6-264	5.4	<5	120			0.4	
	10.0	10.0	100	264-270	6.0	8	67			0.4 0.2	14
270											
				270-275	5.0	<5	62			12.1 0.2	
	10.0	10.0	100	275-280	5.0	<5	60			2.2 0.2	277
280											
				280-285	5.0	<5	160			3.6	
	10.0	10.0	100	285-290	5.0	12	110			0.3	15
290											
				290-295	5.0	23	110			0.2 0.3	293.5
	10.0	10.0	100	295-300	5.0	20	200			1.2 0.3	
300											
				300-305	5.0	21	210			0.2	16
	10.0	10.0	100	305-310	5.0	44	510			0.4 0.2	
310											
				310-315	5.0	14	150			0.2	311
	10.0	10.0	100	315-320	5.0	7	79			0.2	
320											
				320-325	5.0	<5	60			0.2	17
	10.0	10.0	100	325-330	5.0	<5	64			0.2	
330											329

LITHOLOGY, ALTERATION, MISC.

330-357
Volcanic breccia similar to above with some silicification + qtz veining Local gar assoc with veining + in clasts. Epd is more pervassive Generally weak alteration.

357-366 - Lt grey slightly porphyritic syenite with 5-7% phenos of feld and 3-5% phenos of biotite (partly alt→chl) in a f.g. groundmass. Broken core w numerous calc vnlts.

Clast of above diorite? with some weak skarn alteration.

369-430.2 Pinkish grey slightly porphyritic syenite similar to above, but with 10-15% mafics. This rock is cross-cut by more porphyritic syenite with fewer mafics from 391.5 to 413

392.8-397.5 much less potassic intrusive than surrounding RX. Possibly monzonite, but likely Tertiary.

FT. / GRAPHIC LOG

330
340
350
360
370
380
390
400
Monz?

MINERALIZATION

330-357 Some qtz veining and silica flooding with generally weak alteration Local areas of garnet, with wider spread epd. Generally 2-3% sulfide, mostly py with some po + minor cpy.

py

RECOVERY

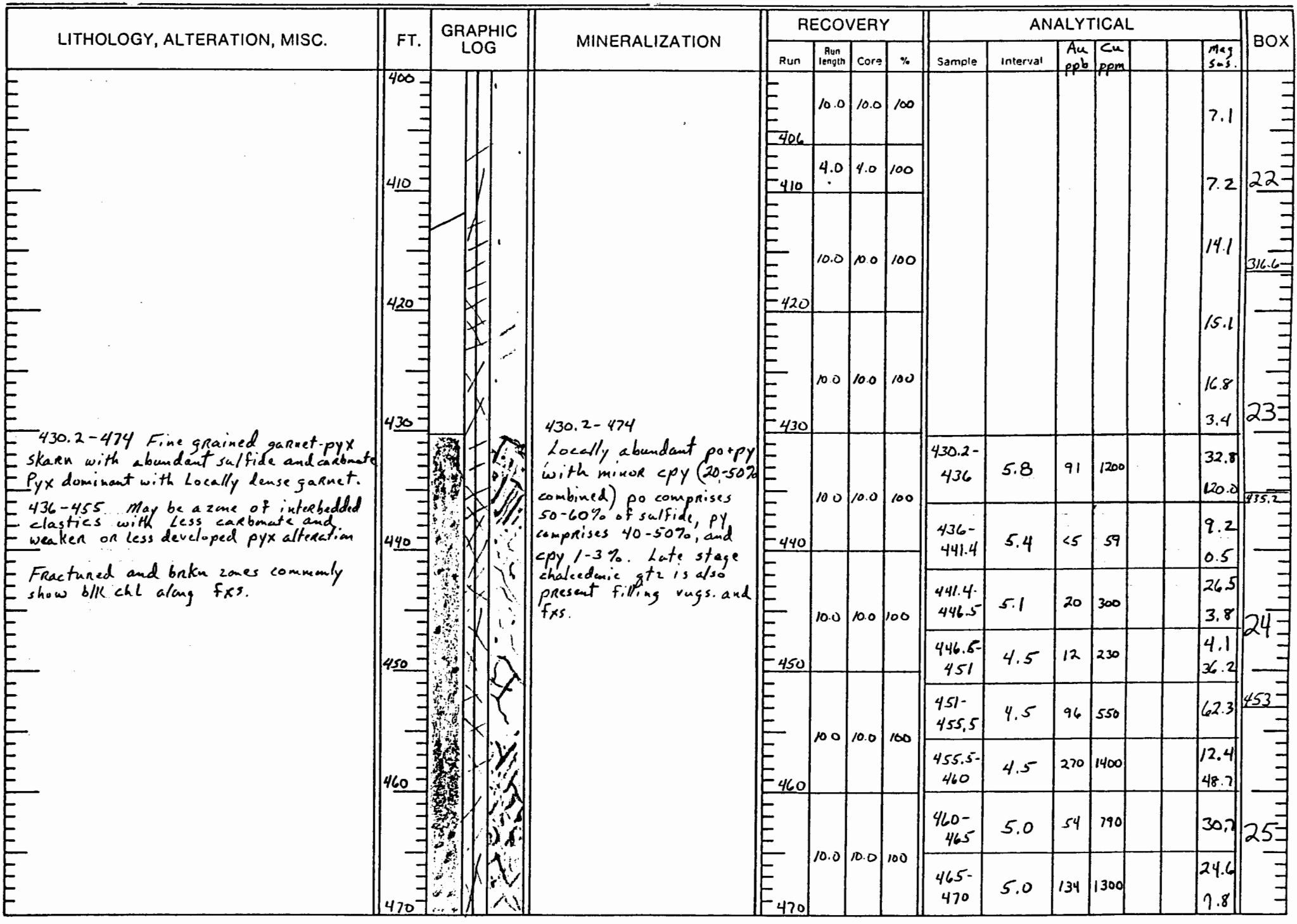
Run	Run length	Core	%
	8.0	8.0	100
338			
	9.0	9.0	100
347			
	3.0	3.0	100
350			
	10.0	10.0	100
360			
	6.0	6.0	100
366			
	10.0	10.0	100
376			
	10.0	10.0	100
386			
	10.0	10.0	100
396			
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus.
330-335	5.0	<5	55			0.2
335-340	5.0	<5	45			0.2
340-345	5.0	<5	21			0.2
						0.5
345-350	5.0	<5	8			0.3
350-355	5.0	<5	17			1.2
						0.6
355-357	2.0	20	170			0.5
						2.7
						14.5
						16.2
366-369	3.0	55	500			1.2
						4.9
						14.8
						15.5
						15.0
						15.8
						14.9
						12.7
						7.3

BOX

18
346.5
19
362
20
379.5
21
398



LITHOLOGY, ALTERATION, MISC.

430.2-474 Fine grained garnet-pyx skarn with abundant sulfide and carbonate. Pyx dominant with Locally dense garnet.

436-455 May be a zone of interbedded clastics with less carbonate and weaker or less developed pyx alteration

Fractured and brkn zones commonly show blk chl along fxs.

FT.

400
410
420
430
440
450
460
470

GRAPHIC LOG

MINERALIZATION

430.2-474
Locally abundant po+py with minor cpy (20-50% combined) po comprises 50-60% of sulfide, py comprises 40-50%, and cpy 1-3%. Late stage chalcedonic qtz is also present filling vugs. and fxs.

RECOVERY				ANALYTICAL							BOX
Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm			Mag Sus.	
406	10.0	10.0	100							7.1	
410	4.0	4.0	100							7.2	22
420	10.0	10.0	100							14.1	316.6
430	10.0	10.0	100							15.1	
440	10.0	10.0	100	430.2-436	5.8	91	1200			16.8 3.4 32.8 120.0	23 435.2
450	10.0	10.0	100	436-441.4	5.4	<5	59			9.2 0.5	
460	10.0	10.0	100	441.4-446.5	5.1	20	300			26.5 3.8	24
470	10.0	10.0	100	446.6-451	4.5	12	230			4.1 36.2	453
				451-455.5	4.5	96	550			62.3	
				455.5-460	4.5	270	1400			12.4 48.7	
				460-465	5.0	54	790			30.7	25
				465-470	5.0	134	1300			24.6 7.8	

LITHOLOGY, ALTERATION, MISC.

474-505.7 Med-dk green, mostly xlline volcanic bx with numerous intrusive clasts up to 6 cm. This zone shows relatively weak skarn alt, but some secondary biotite is present.

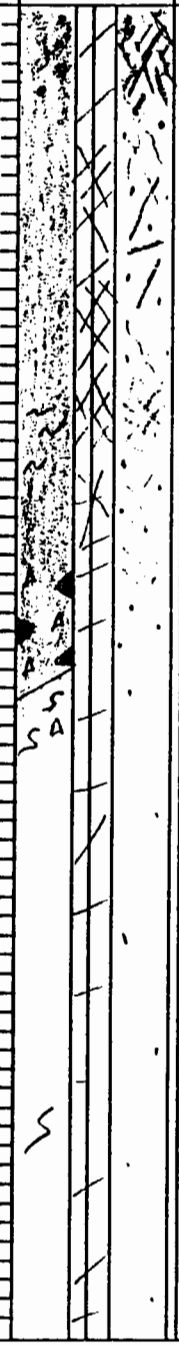
500-505.9 This zone shows abundant breeciation + bleaching w some silica flooding. (endoskn?)

505.9-547 Buff to pink porphyritic syenite with 10-15% phenos, mostly feld, with some biotite. Minor bxn + calc Fx-filling.

FT.

470
480
490
500
510
520
530
540

GRAPHIC LOG



MINERALIZATION

474-505.9 Limited mineralization, generally 2-3% dissem py and minor po. Abundant calcite veins + fx-fill.

small bx zone

RECOVERY

Run	Run length	Core	%
470			
	10.0	10.0	100
480			
	8.0	8.0	100
488			
	9.0	9.0	100
497			
	10.0	10.0	100
507			
	10.0	10.0	100
517			
	10.0	10.0	100
527			
	10.0	10.0	100
537			

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus.
470-474	4.0	216	1100			65.7 76.2
474-479	5.0	<5	18			0.5
479-484	5.0	<5	46			0.4
484-489	5.0	<5	16			0.2
489-494	5.0	<5	9			0.2
494-500	6.0	<5	10			0.6
500-505.9	5.9	<5	7			0.3 0.3
						-0.1 0.2 0.3 0.4 0.3 0.5

BOX

470.4
26
489
27
508
28
527
29

LITHOLOGY, ALTERATION, MISC.	MINERALIZATION
547-551.9 - Prograde - med-grained garnet-pyx skn with 10-15% sulfide. Appears to be a clast within the syenite.	10-15% sulfides, mostly py+po (60-40) with some <py (1-2% mt.)
551.9-593 - Grey to mostly pink porphyritic syenite, dominantly K-spar with 10-20% albite? and 5-7% bio. weak-mod magnetic; some potassium-Rich vn/ts - v. little calcite veining.	
593-596.5 Clast of volcanoclastic? rock with weak skn alt; mostly epd+ chl with 3-5% sulfide;	3-5% py+po (60-40)
596.5-615.5 Porphyritic syenite similar to above.	

FT.	GRAPHIC LOG
540	
550	
560	
570	
580	
590	
600	
610	

RECOVERY			
Run	Run length	Core	%
547	10.0	10.0	100
557	10.0	10.0	100
567	10.0	10.0	100
577	10.0	10.0	100
587	10.0	10.0	100
597	10.0	10.0	100
607	10.0	10.0	100

ANALYTICAL						
Sample	Interval	Au ppb	Cu ppm			Mag. Sus.
547-551.9	4.9	<5	690			0.4
						0.5
						16.5
						7.2
						8.4
						9.1
						10.2
						12.5
						9.8
						10.0
						11.2
						6.8
593-596.5	3.5	<5	150			0.9
						4.5
						7.5
						8.9
						7.4

BOX
546
30
564.5
31
583
32
602
33

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
615.5 - 639.8 Generally a med-dk green mostly crystalline volcanic bx with numerous intrusive clasts. The upper portion of this zone is weakly skarn altered with abundant epd (especially near qtz veins) Some qtz veins carry garnet and seem to have minor assoc potassic alt. Grades to a grnst @ depth. 639.8 - 683.5 Grey to mostly pink porphyritic syenite with 10-20% phenos of feld and 3-5% bio in a pink K-spar matrix.	610 620 630 640 650 660 670 680		615.5 - 639.8 1-3% dissem sulfides with minor vnlts. Mostly py with minor po. Some sulfide assoc w qtz vnlts, and weak potassic alt. py

RECOVERY				ANALYTICAL							BOX
Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm			Mag Sus.	
										7.1	
	10.0	10.0	100							4.2	
617				615.5-620	4.5	<5	18			0.3	33
	10.0	10.0	100								621
627				620-625	5.0	<5	4			0.4	
										0.6	
				625-630	5.0	<5	3			0.4	
	10.0	10.0	100								34
637										0.4	
										1.2	639.3
	10.0	10.0	100							5.1	
647										9.3	
										10.5	35
	10.0	10.0	100								
657										9.2	658
										9.1	
	10.0	10.0	100								
667										8.8	
											36
	10.0	10.0	100							9.3	
677											
										8.9	676.5
680	3.0	3.0	100							6.1	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Mag Sus	BOX
683.5 - 730 Dominantly a grey-green crystal-rich volcanic bx with numerous heterolithic clasts of intrusive and volc Rx. Generally weak alt (chl) with some epd + py assoc w minor qtz veining	680		Generally 1-2% py mostly dissem with some minor vults; Some assoc of py w epd. @ 712	680							
					10.0	10.0	100			4.2	
	690			690						0.8	37
										2.0	
										8.5	
					10.0	10.0	100			6.9	695
										3.2	
										0.1	
	700			700						0.05	
										0.1	
					10.0	10.0	100			-0.2	
										0.4	38
	710			710						0.05	
											713.5
					10.0	10.0	100			1.1	
										0.08	
	720			720							
										1.3	39
					10.0	10.0	100				
	730	T.D.		730						6.6	

DIAMOND DRILL HOLE LOG

Company ORvana

Property Eholt	Hole No. E95-.
Location Eholt Mtn	Bearing at Collar 266°
400' South of E95-1 UTM	Inclination at Collar -49
Coord. - Collar N Local grid 9742N	5446600N
E 10217E	387680E Length 920'
Elev. - Collar 1150m	Core Size NQ
Date started 5-12-95	
Completed 5-17-95	Logged by Doyle Albers

LEGEND

SURVEY

Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	Mag. Sus	BOX
	0												
10 - 14.6 DK grey-green f.g. volcanic bx with 20-30% lithic clasts in a f.g. dacite? matrix - generally chloritic with weak potassic alteration	10		Lim-hem - 1-2% py both dissem + as vnlts.	10								6.3	
14.6 - 24.1 Porphyritic Syenite weakly magnetic.			weakly magnetic		10.0	10.0	100					6.2	
	20			20								8.1	
24.1 - 28.9 - DK grey - f.g. volc. Rx, similar to above, but moderately magnetic with few bx clasts.			1-2% py 2-3% magnetite.		10.0	10.0	100					5.8	1
28.9 - 43.2 Grey to pink F.g. porphyritic syenite; much less xline than above. weakly magnetic.	30			30								30.0	
					10.0	10.0	100					41.2	
	40			40								16.5	
					10.0	10.0	100					15.8	2
												12.6	
43.2 - 50.3 DK grey-green f.g. volc bx; abundant cataclasis with numerous small heterolithic bx clasts. weak potassic alt.	50		1-2% py, mostly dissem with some vnlts, tr cpy.	50	10.0	10.0	100	43.1 - 50.3	7.2	<5	53	25.3 1.3 0.4	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			Mag. Sus.	BOX
50.3 - 51.6 - Syenite	50			50										3.5	
51.6 - 68.7 - Grey - green Volcanic bx with 60-70% heterolithic clasts in a f.g. dacite? matrix - clasts marked as endo skarn on log may be sub volcanic intrusive - Moderate alteration to epd as clots or fragmental clasts, other clasts show strong potassic alteration.			Generally 1-2% py + 1-3% po as clots + dissem with some veining.		10.0	10.0	100	51.6-55	3.4	<5	31			0.4	3
	60			60				55-60	5.0	<5	20			0.3	
			py		10.0	10.0	100	60-65	5.0	<5	24			0.4	
68.7 - 109.8 Porphyritic syenite, weakly magnetic.								65-68.7	3.7	<5	17			0.6	
	70			70										4.2	4
					10.0	10.0	100							6.8	
	80			80										8.3	
					10.0	10.0	100							8.5	
	90			90											
					10.0	10.0	100							7.8	5
	100			100										5.8	
					10.0	10.0	100								
	110		109.8 - 206.7	110										4.1	
109.8 - 206.7 - DK grey - green volcanic bx generally 40-60% heterolithic clasts in a f.g. dacite? matrix. Locally weak garnet alteration with some minor pyroxene. Moderate to pervassive potassic flooding commonly replacing plag. Locally abundant shearing + cataclasis (esp 135°-160°). some minor gtz			1-3% py, mostly dissem, but with some veins 0-2% po mostly dissem with some veins tr cpy. calcite veins pervassive throughout.		10.0	10.0	100	109.8-116	6.2	6	42			0.8 0.5	6
	120			120				116-121	5.0	<5	43			0.4	

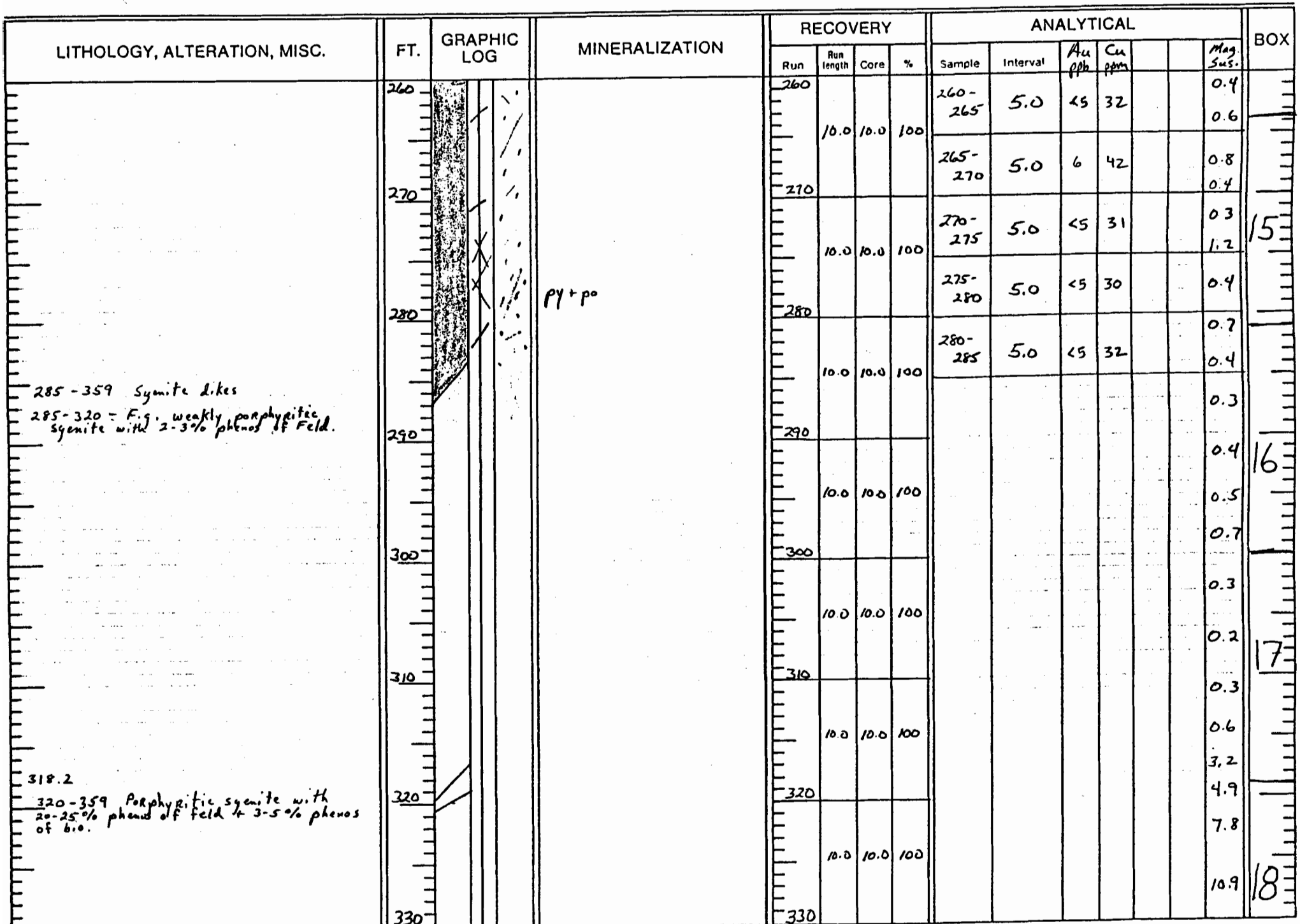
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
Paragenesis about garnet shows a small garnet band (<1cm wide) with some assoc retrograde alt to actinolite + epidote, moving out into pyroxene (~2cm wide) and still further out into strong potassic alteration (1-2cm wide), grading outward into moderate potassic alteration (4-6cm wide), with less altered rock further out → gar-pyx 135-160 - Strong cataclasis zone with 70-80% heterolithic clasts in a f.g. volcanic matrix - clasts marked as endoskarn on log may be sub volcanic intrusive. gar-	120 130 140 150 160 170 180 190		py + tr < py py + po hem hem hem py + po

RECOVERY			
Run	Run length	Core	%
120			
	10.0	10.0	100
130			
	10.0	10.0	100
140			
	10.0	10.0	100
150			
	10.0	10.0	100
160			
	10.0	10.0	100
170			
	10.0	10.0	100
180			
	10.0	10.0	100
190			

ANALYTICAL							BOX
Sample	Interval	Au ppb	Cu ppm			Mag. Sus.	
121-126	5.0	<5	33			0.4	7
126-131	5.0	<5	21			0.5	
131-136	5.0	<5	19			0.4	
136-141	5.0	<5	10			0.4	
141-146	5.0	<5	12			0.8	8
146-151	5.0	<5	10			0.3	
151-156	5.0	<5	6			0.6	
156-161	5.0	<5	5			0.3	
161-166	5.0	<5	3			0.3	9
166-171	5.0	10	8			0.6 1.2	
171-176	5.0	<5	10			0.5	
176-181	5.0	<5	10			1.1 1.4	
181-186	5.0	10	18			0.4	10
186-191	5.0	<5	19			0.3	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			Mag Sus.	BOX
	190		py + po	190				191-197	6.0	<5	17			0.5	
					10.0	10.0	100								
	200		hem	200				197-202	5.0	<5	19			0.4	
			hem												
					10.0	10.0	100	202-206.7	4.7	<5	36			0.5	11
206.7-215.9 Porphyritic Syenite weakly magnetic	210			210											
								NS						7.4	
					10.0	10.0	100							8.2	
														6.8	
218.3-219.2 Syenite			py					215.9-220	4.1	<5	33			4.2	
	220		219.2-285 Generally 1-3% py mostly dissem + some units w 0-2% po usually dissem. tr cpy. calcite veining pervassive throughout.	220										0.6	
219.2-285 DK grey-green volcanic bx with 60-80% clasts in a f.g. matrix. Fold phenos comprise 20-25% of the rock but it seems they are often clasts, moderate cataclasis txt similar to petrographic samples collected Loper in hole (364' + 458') Generally weak chl alt'n with moderate potassic alt + some qtz veining					10.0	10.0	100	220-225	5.0	<5	33			0.5	12
			hem Minor Fault Zone 225-235					225-230	5.0	<5	15			0.3	
	230		py+po	230				230-234	4.0	<5	13			0.4	
					10.0	10.0	100								
								234-240	6.0	<5	25			0.3	13
	240		py	240											
								240-245	5.0	<5	29			0.3	
					10.0	100	100							0.6	
			Minor Fault Zone 245-255					245-250	5.0	<5	19			0.5	
	250		py + po	250											
Coarse grained calcite filling open spaces + fxs in fault zone								250-255	5.0	<5	18			0.3	14
					10.0	10.0	100								
	260			260				255-260	5.0	<5	31			0.6	

E 95-3
Pg 5 14


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Au ppb
Cu ppm
Mag. Sus.
BOX
260
270
280
290
300
310
320
330
py + po
285 - 359 Syenite dikes
285 - 320 = F.g. weakly porphyritic syenite with 2-3% phenos of Feld.
318.2
320 - 359 Porphyritic syenite with 20-25% phenos of feld & 3-5% phenos of bio.
260 - 265 5.0 <5 32 0.4 0.6
265 - 270 5.0 6 42 0.8 0.4
270 - 275 5.0 <5 31 0.3 1.2
275 - 280 5.0 <5 30 0.4
280 - 285 5.0 <5 32 0.7 0.4
0.3 0.4 0.5 0.7 0.3 0.2 0.3 0.6 3.2 4.9 7.8 10.9
10.0 10.0 100
15
16
17
18

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			Mag Sus.	BOX
	330			330										12.1	
					10.0	10.0	100								
	340			340										12.8	
														13.2	
					10.0	10.0	100							12.8	
	350			350											19
														11.6	
					10.0	10.0	100							8.9	
														7.5	
357.8														16.2	
	360			360										4.7	
359 - 459.5 DK grey-green volcanic bx with 70-80% clasts in a f.g. vole matrix. 20-25% phenos of feld - generally pervasive chl alt with minor garnet + epd + actin. Potassic alt commm, increasing with depth.			359 - 459.5 Generally 1-3% py thru out; Locally up to 5%. 0-2% po; all generally disseminated as clots with some vnlts. Pervasive calcite veining throughout.					358-365	6.0	<5	32			0.3	
					10.0	10.0	100							0.4	
Petrography describes a dacite bx with abundant cataclasis. 60-90% clasts in a dacite matrix.	370			370											
			← e.g. calcite filling open spaces in fxs.					365-370	5.0	80	36			0.2	20
					10.0	10.0	100	370-375	5.0	11	33			0.2	
	380			380				375-380	5.0	<5	34			0.3	
					10.0	10.0	100	380-385	5.0	<5	32			0.3	21
	390			390				385-390	5.0	<5	31			0.3	
					10.0	10.0	100	390-395	5.0	<5	36			0.3	
minor garnet - epd + qtz →	400			400				395-400	5.0	<5	34			0.3	22

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			mag Sas	BOX
	400			400				400-405	5.0	<5	38			0.2	
					10.0	10.0	100							0.5	22
			py					405-410	5.0	<5	43			0.2	
	410			410										0.3	
					10.0	10.0	100	410-415	5.0	<5	44			0.2	
				420				415-420	5.0	<5	60			0.2	23
Originally considered an endoskarn, this may be a large sub-vole clast. →	420				10.0	10.0	100	420-425	5.0	5	71			0.3	
				430				425-430	5.0	20	87			0.2	
	430				10.0	10.0	100	430-435	5.0	6	64			0.1	
				440				435-440	5.0	<5	31			0.2	
	440													0.6	24
Potassic alteration increases dramatically below 444' (clast size also seems to increase). This was originally thought to be related to endo skarn, but may be strongly altered subvolcanic clasts enriched in K-feld			3-5% py as clots + veins		10.0	10.0	100	440-445	5.0	<5	52			0.3	
	450			450				445-450	5.0	<5	49			0.2	
					10.0	10.0	100	450-455	5.0	8	43			0.2	
				460				455-459.5	4.5	<5	54			0.3	25
459.5-464 Syenite	460							NS						5.2	
					10.0	10.0	100	464-469	5.0	<5	43			0.2	
	470			470											

LITHOLOGY, ALTERATION, MISC.

464 - 493.7 - Dk grey, green porphyritic volcanic bx with 40-50% volcanic clasts. Clasts + matrix are more crystalline (30-35% phenos) than above volcanic bx. Several clasts show moderate replacement by epidote. Matrix and clasts seem more like gdb volc intrusive than other volc bx. Abundant cataclasis with assoc epd alt. Minor pyx near base of interval. Moderate potassic alteration throughout.

493.7 - 498.8 . Syenite - weakly magnetic

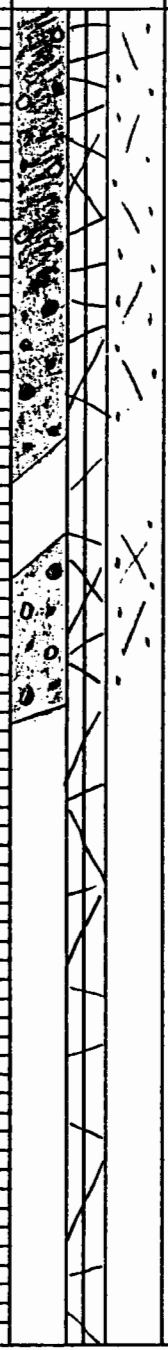
498.8 - 507 Volcanic bx, similar to above.

507 - 542.4 Porphyritic Syenite - mostly xl line weakly magnetic

FT.

470
480
490
500
510
520
530
540

GRAPHIC LOG



MINERALIZATION

464 - 493.7 Generally 1-2% py, mostly dissem with some py veinlts. 0-2% po - mostly dissem + as clots.

1-3% py + po

RECOVERY

Run	Run length	Core	%
470			
	10.0	10.0	100
480			
	10.0	10.0	100
490			
	10.0	10.0	100
500			
	10.0	10.0	100
510			
	10.0	10.0	100
520			
	10.0	10.0	100
530			
	10.0	10.0	100
540			

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus.
469-474	5.0	<5	32			0.2
474-479	5.0	<5	16			0.2
479-484	5.0	<5	14			0.3
484-489	5.0	<5	16			0.2
489-493.7	4.7	<5	19			0.2
						-.7
NS						6.5
498.8-507	8.2	<5	20			0.4
						0.6
						2.4
						3.5
						6.4
						8.3
						8.2
						6.9
						8.5
						7.3
						4.1

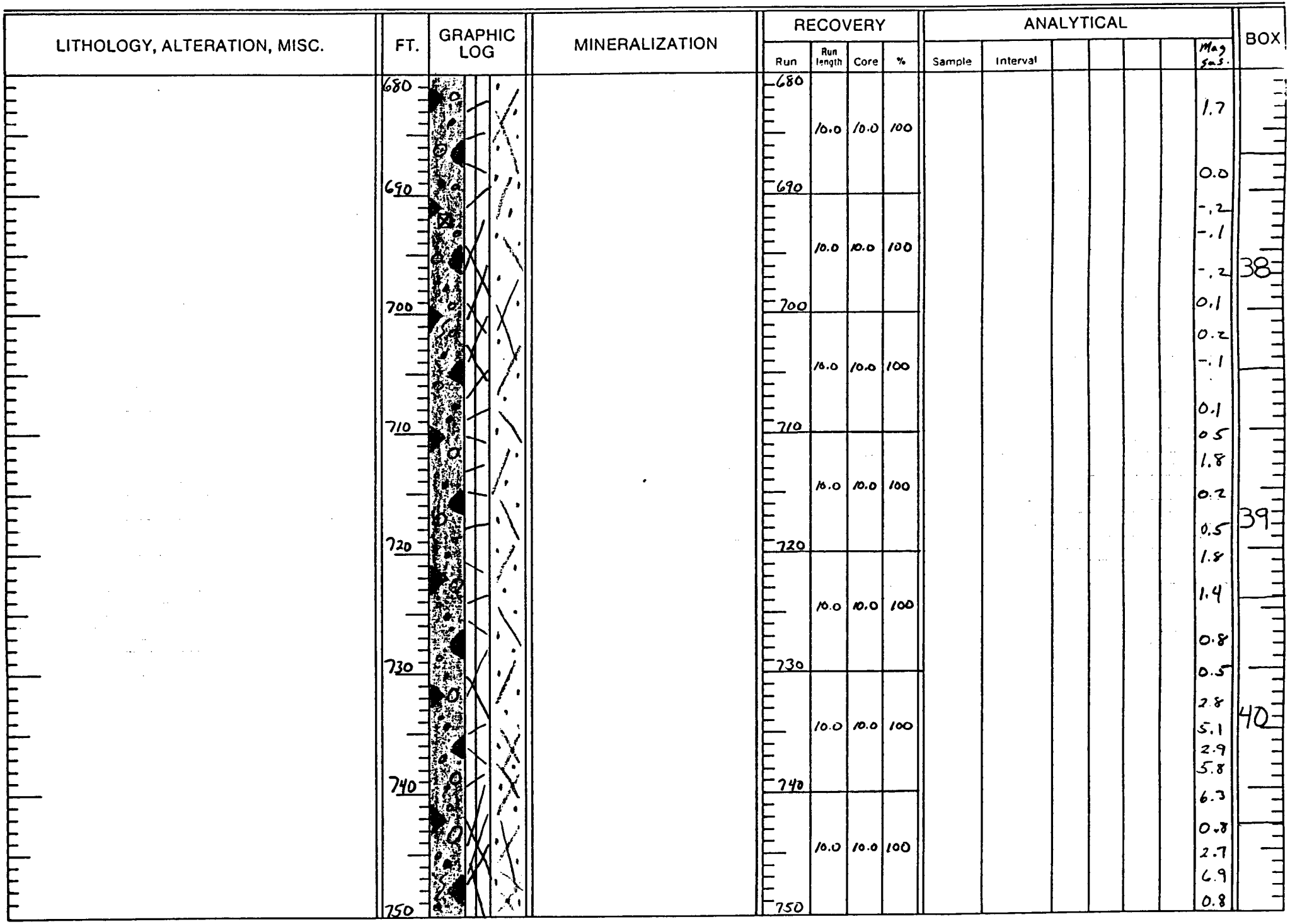
BOX

26
27
28
521
29
540

E95-3
Pg 9 of 11

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Mag Sus	BOX
542.4-565 DK grey-green volcanic bx with 40-50% clasts, generally <1cm in diam. in a crystalline f.g. volcanic matrix. Pervasive chl alt with some epd + minor pyx. Clasts percentage increases w depth.	540		1-3% dissem py + po + calcite vnlts throughout.	540						3.1	540
					10.0	10.0	100			0.4	
										10.2	
	550			550						0.9	30
										2.4	
					10.0	10.0	100			3.8	
										1.2	
	560			560							
565 - 576.4 - Syenite - weakly magnetic.										2.2	
					10.0	10.0	100			3.9	
										1.4	
	570			570						2.9	31
										3.3	
					10.0	10.0	100			2.1	
576.4 - 618.2 Dark grey-green volc bx with numerous heterolithic clasts up to 10cm across in a crystal tuffaceous matrix. Several clasts appear to be intrusive (subvolcanic) txt. Pervasive chl alteration / Localized pyx + epd alt with very minor garnet. Epd common with py + po clots + blebs. Clasts comprise 60-70% of core.			576.4 - 618.2 Generally 1-3% dissem + clots of py - locally 3-5% py. 0-2% po, mostly dissem + as clots, often w py. some hem along fxs.	580						0.4	
					10.0	10.0	100			0.8	
	590			590						2.3	32
										10.5	
										3.7	
					10.0	10.0	100			1.5	
										3.9	
	600			600						2.8	
										0.2	33
					10.0	10.0	100				
										0.3	
	610			610							

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	mag. Sus.	BOX
618.2 - 629.2 DK grey to black augite porphyry dike with 10-15% phenos of augite partly altered to chl	610			610						0.2	
					10.0	10.0	100			0.7	
	620	mafic dike		620						11.8	
										12.6	34
					10.0	10.0	100			8.7	
				630						13.8	
629.2 - 792.7 Med-DK grey-green volcanic bx with 60-70% heterolithic clasts in a volcanic matrix. ~50% of the clasts have a sub-volcanic intrusive txt. Moderate potassic alt, with pervasive chl + actinolite	630		629.2 - 792.7 Generally 1-3% py often as clots and blebs, with 0-2% po usually dissem, + 0%-tr cpy.							0.9	
					10.0	10.0	100			0.1	
Clasts are up to 10 cm in diam. and sub-angular to sub-rounded. Petrography indicates strong cataclasis in a dacite volc bx with clasts + matrix of equivalent dacitic composition but clasts throughout are definitely heterolithic.	640			640						0.02	35
					10.0	10.0	100			0.1	
	650			650						0.2	
										2.2	
										1.2	
					10.0	10.0	100			0.6	
										0.03	36
	660			660						0.01	
										0.3	
					10.0	10.0	100			0.2	
	670			670						0.7	
										0.8	
					10.0	10.0	100			1.2	37
	680			680						0.8	


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Mag Susc.
BOX
680
690
700
710
720
730
740
750
10.0 10.0 100
1.7
0.0
-.2
-.1
-.2
0.1
0.2
-.1
0.1
0.5
1.8
0.2
0.5
1.8
1.4
0.8
0.5
2.8
5.1
2.9
5.8
6.3
0.8
2.7
6.9
0.8
38
39
40

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Mag. Sus.	BOX
	750			750						1.2	
					10.0	10.0	100			2.0	41
										0.8	
	760			760						2.3	
										1.5	
					10.0	10.0	100			2.1	
	770			770						2.4	
										1.8	
					10.0	10.0	100			3.7	42
										2.6	
777 - 792.7 - Similar to above volc bx, but with increased skarn alteration.	780		3-5% sulfides, mostly py as dissem + clots, with some po + tr of cpy.	780				777-780	3.0	0.8	
										0.5	
					10.0	10.0	100	780-785	5.0	0.2	
										1.2	
	790			790				785-790	5.0	1.2	43
										3.3	
792.7 - 834.8 Porphyritic Syenite mostly crystalline; mod magnetic 5-7% fine/med grained garnet; 12-15% epidote; 3-5% actinolite, and increased calcite/fx-fill + vnlts.								790-792.7	2.7	2.8	
					10.0	10.0	100			2.4	
	800			800						6.8	
										10.1	
					10.0	10.0	100			7.1	
	810			810						7.5	44
										7.6	
					10.0	10.0	100			5.2	
	820			820						4.7	
										3.5	
										1.7	

E 95-3
Pg 15 1

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Mag. Sus.	BOX
834.8 - 867 DK grey-green volc bx, similar to above, but with fewer clasts. Clots of epidote + actinolite + assoc py. Moderate potassic alteration + some qtz vnlts. Pervassive chl alt.	820		834.8 - 867 1-3% py mostly as clots, blebs, + small vnlts. commonly assoc with epidote + actinolite. 0-1% po. generally dissem.	820						4.9	
					10.0	10.0	100			7.1	
	830			830						9.3	45
										5.8	
					10.0	10.0	100			2.5	
	840			840				834.8 - 840	5.2	0.5	
										0.2	
					10.0	10.0	100	840 - 845	5.0	0.3	46
										0.2	
	850			850				845 - 850	5.0	0.4	
										0.2	
					10.0	10.0	100	850 - 855	5.0	0.8	
f.g. monzmite? →										1.5	
	860			860				855 - 860	5.0	0.5	
										1.0	
					10.0	10.0	100	860 - 867	7.0	2.6	47
867 - 895.6 Porphyritic Syenite										3.8	
15-20% Feld. phenos in a f.g. pink matrix; weakly magnetic.	870			870						0.6	
										1.8	
					10.0	10.0	100			0.3	
										0.2	
	880			880						1.6	
											48
					10.0	10.0	100			1.5	
										1.1	
	890			890						0.2	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Mag sus	BOX
895.6 - 920 Med grey, med grained slightly porphyritic monzonite with 50-60% feld, 25-30% biotite, + maybe 5% qtz. This intrusive contains a few clasts of syenite, indicating it may be younger than the syenite. (T-monz). - Moderately magnetic Fresh rock - no alteration.	890		Little to no sulfide	890						1.2	
					10.0	10.0	100			0.9	
	900			900						10.8	49
		Monz			10.0	10.0	100			12.7	
										11.7	
	910			910						12.1	
916.5' Petrographic sample - syenite xenolith (pink) w/in porphyritic biotite-rich monzonite.					10.0	10.0	100			12.9	50
	920			920						13.3	
		T.D.									

DIAMOND DRILL HOLE LOG

Company

Property Eholt	Hole No. E95-1
Location Dead Honda Showing	Bearing at Collar 126°
	Inclination at Collar -50
Coord. - Collar N 5447015	
UTM E 387000	Length 800'
Elev. - Collar 1073m	Core Size NQ
Date started 5-17-95	
Completed 5-23-95	Logged by

LEGEND

SURVEY

Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm			Mag Sus	BOX
	10														
	20														
		Till													
27-40 Lt grey Fine-med grained clastic? Rock; weak-moderate alt; mostly chl-epd with some f.g. garnet and/or? bio + - f.s. pyx. (relict bedding?) 60-70° to core axis. Possibly some minor K-spar?	30		27-40 1-2% sulfide, dominantly po with some py, both dissem + as vnlts. Some veining, dominant calc with some qtz	27 30	3.0	3.0	100	27-30	3.0	<5	27			0.2	
								30-35	5.0	14	19			0.2	1
					10.0	10.0	100	35-40	5.0	18	13			0.2	
40-53 Garnet-pyx skn with abundant calcite and some qtz. Garnet generally f.g. but clotty sometime "wispy" masses in a f.g. pyx-rich matrix - Possibly relict pebble conglt xt? Calc is dissem and clotty, Locally abundant	40		broken core py, po + minor cpy	40				40-45	5.0	219	220			2.3	41.5
														0.8	
			2-3% py, po + minor cpy		10.0	10.0	100	45-50	5.0	83	160			3.6	2
	50			50										0.7	

LITHOLOGY, ALTERATION, MISC.

53 - 61.5 Varied skarn - pyx dominant with similar pebble txt to above zone, but generally less garnet. 58-60 is good gar-pyx skarn, but otherwise it is pyx-dominant with some banding 60-70% to core axis. Locally chl + epd rich. Abundant calc veining with some qtz.

61.5 - 63.7 - Latite? Syenite? porphyry dike 5-10% phenos, mostly feld with minor bio in a lt grey f.g. matrix.

63.7 - 80.2 Mostly lt green, f.g. gar-pyx skarn, thinly banded (relict beds?) 70-80° to core axis.

80.2 - 128.5 Lt grey to pink Fine-med grained slightly porphyritic syenite - K-spar dominant with 10-12% phenos of plag?; 5-7% phenos of bio in a K-spar rich matrix - minor chl and/or epd. weakly magnetic.

FT.

50, 60, 70, 80, 90, 100, 110, 120

GRAPHIC LOG

MINERALIZATION

py, po
broken core
53 - 61.5 Generally 2-3% po + py (roughly equal amts) mostly dissem with minor vnlts.

63.7 - 80.2 Generally 1-2% py + po; locally 3-5%, dominantly py, both dissem + as vnlts.

broken core

80.2 - 128.5
generally <1% dissem py
minor calc veining.

RECOVERY

Run	Run length	Core	%
60	10.0	10.0	100
68	8.0	8.0	100
73	5.0	5.0	100
80	7.0	7.0	100
90	10.0	10.0	100
100	10.0	10.0	100
110	10.0	10.0	100
120	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag. Sus.
50-56	6.0	18	44			0.6 0.4
56-61.5	5.5	32	36			0.5
61.5-63.7	2.2	6	8			0.6
63.7-70	6.3	103	140			5.7 0.3
70-75	5.0	28	8			0.4
75-80.2	5.2	13	17			0.4
						2.8 3.2
						5.5
						8.2
						6.4
						7.5

BOX

2 (57.5) 3 (72.5) 4 (89.5) 5 (107) 6

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
128.5 - 138.5 Dk grey f.g. pyx dominant skn with abundant chl, mostly b/k, and some minor garnet. Looks like a volcanoclastic sed. with some v. F.g beds. possibly some minor secondary bio. 138.5 - 180 Beautifully banded garnet-pyx skarn, with most banding @ 70-90° to core axis, except 153 - 165 where some banding is along core axis. Roughly 30% garnet and 50-60% pyx. 165 - 180 - Thinly banded gar-pyx skn with bands ~ 90° to core axis. 180-217.5 Lt-med grey-green pyx dominant skarn, fairly siliceous, with some intense qtz and calcite veining. Highly fractured & sheared and broken zone (particularly 185'-205') Some zones of thin relict bedding still preserved, but generally obscured by fracturing + veining.	120 130 140 150 160 170 180 190		128.5 - 190 - Generally 1-2% dissem sulfide po + py (Roughly equal), Locally 2-3% sulfide. Abundant calc + qtz veining Numerous qtz veins @ ~ 30° to core axis - some open space filling as blue chalcedony (particularly 128.5 - 137.5)

RECOVERY			
Run	Run length	Core	%
130	10.0	10.0	100
137	7.0	7.0	100
146	9.0	9.0	100
150	4.0	4.0	100
160	10.0	10.0	100
170	10.0	10.0	100
180	10.0	10.0	100
190	10.0	10.0	100

ANALYTICAL							
Sample	Interval	Au ppb	Cu ppm			Mag. Sus.	BOX
						5.8	124.5
						4.2	
128.5-133.5	5.0	19	18			1.2	7
						0.4	
133.5-138.5	5.0	<5	11			0.2	
138.5-144	5.5	205	39			0.7	142.2
144-150	6.0	156	22			0.8	
150-155	5.0	170	34			0.5 3.1	8
155-160	5.0	107	96			0.6	158.1
160-165	5.0	49	28			0.5	
165-170	5.0	26	45			1.2 0.2	9
170-175	5.0	25	9			0.7	174.4
175-180	5.0	35	64			1.6	
180-185	5.0	10	29			0.8 0.2	10
185-190	5.0	<5	12			0.2	

LITHOLOGY, ALTERATION, MISC.	FT.	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	mag Sus.	BOX
190 - 217.6 Dominantly pyx. skn v. broken + sheared 185-205'.	190	slicken sides										191.4
				10.0	10.0	100	190-195	5.0	<5	7	0.1	
							195-200	5.0	<5	59	0.3	
	200		200								0.1	
				10.0	10.0	100	200-205	5.0	<5	22	0.3	11
							205-210	5.0	<5	97	0.2	
	210	po	210									209.2
				10.0	10.0	100	210-214	4.0	<5	170	0.3	
217.6 - 225.5 Lt grey - pink, porphyritic K-spar dominant intrusive with 10-15% phenos of plag and 2-3% phenos of bio in a K-spar matrix - minor chl - weakly magnetic, possibly some late stage qtz?							214-217.5	3.5	29	140	0.5	
											1.2	
	220		220								4.8	12
				10.0	10.0	100	217.5-225.5	8.0	41	9	8.2	
		py, po									4.7	
225.5 - 230 Lt green, banded pyx dominant skarn; moderately siliceous; relict bedding 70-80° to core axis. Locally f.g. secondary biotite		225.5 - 241 2-3% dissem po - py - (50-50)										226
							225.5-230	4.5	8	62	0.4	
230 - 241 Greenish-grey somewhat banded pyx dominant skn with locally abundant blk chl, and some garnet. Relict bedding often distorted by brecciation (esp 235-240)	230		230									
				8.0	8.0	100	230-235	5.0	5	81	0.4	13
		Some qtz veining + minor open space filling.										
			238				235-241	6.0	<5	130	0.6	
	240	241-245 sulfides become more po dominant and locally clotty also increasing to 3-4% py, po										
				9.0	9.0	100	241-245	5.0	329	690	9.5	243
241-250.5 Reddish green f.g. partly banded gar-pyx skarn, some small siliceous zone (relict beds?) @ 250'. Abundant qtz and calc veining throughout - one qtz-py vein @ 242.5		245-250.5 - Sulfides become dominantly po + cpy (~50-50) increasing to 4-5% cpy, po	247								0.7	
							245-250.5	5.5	2434	2800	6.3	
	250											
250.5 - 253.0 - Lt grey porphyritic alkalic intrusive with 10-15% phenos, mostly feld with some bio in an aphanitic matrix		253 - 259 - Increasing sulfide generally 4-5%, locally up to 10% po + cpy (~50-50)					250.5-253	2.5	16	100	3.2	
				10.0	10.0	100	253-257	4.0	1245	2400	0.6	14
253 - 259 Lt-mod green thinly banded gar-pyx skn. Locally abundant blk chl along fxs.			257									
		cpy, po (253-259 up to 10% sulfide ~ 5% po + 5% cpy)					257-259	2.0	10224	19700	12.5	
	260										0.5	

LITHOLOGY, ALTERATION, MISC.

259-264 Greenish grey thinly banded pyx. dominant skn, banding @ 70-80° to core axis. some siliceous zones (beds?) minor garnet

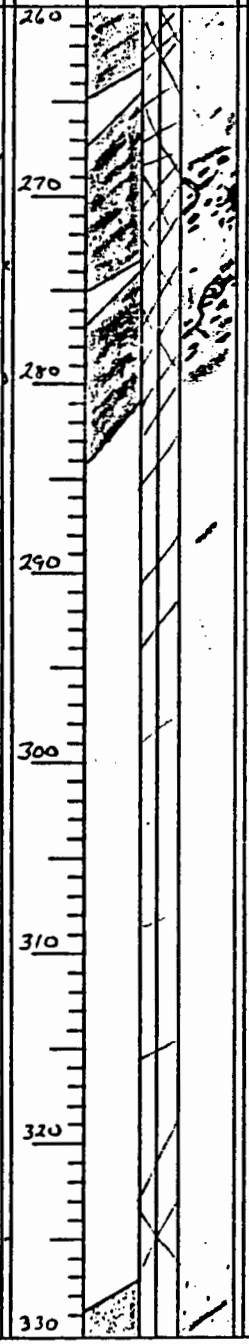
264-265.8 Porphyritic alkalic intrusive 5-7% phenos of feld + bio in a grey matrix.

265.8-282.8 Dominantly reddish green weakly banded to blotchy gar-pyx skn - generally 5-7% sulfide dominantly po ± mt ± cpy some late qtz.

274.2-275.3 Porphyritic qtz-latite? intrusive 5-7% phenos of feld + qtz in a green aphanitic matrix - some alt -

282.8-328.0 Buff to pink weakly porphyritic alkalic intrusive 7-10% phenos of feld, 1-2% phenos of bio in a buff matrix.

FT. / GRAPHIC LOG



MINERALIZATION

py, po 1-2%, some qtz and calcite veining

5-7% sulfides, dominantly po with some mt + minor cpy

cpy, po + mt Magnetite zones flank small qtz latite? intrusive

5-7% sulfides dominantly po with some mt + cpy Some late stage qtz + py vnlts.

py

RECOVERY

Run	Run length	Core	%
267	10.0	10.0	100
277	10.0	10.0	100
287	10.0	10.0	100
290	3.0	3.0	100
300	10.0	10.0	100
310	10.0	10.0	100
320	10.0	10.0	100
330	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus
259-264	5.0	242	700			0.3
264-265.8	1.8	14	15			1.5
265.8-270	4.2	312	1400			0.6
270-274.2	4.2	920	2000			0.8 off scale
274.2-275.3	1.1	7	99			2.5
275.3-279.5	4.2	1206	3900			312.0
279.5-282.8	3.3	1240	2100			7.5
						4.5
						0.10
						0.01
						0.04
						0.02
						0.02
						0.01
329-333	5.0	494	1500			0.5

BOX

261
15
278.6
16
297.3
17
316
18

LITHOLOGY, ALTERATION, MISC.

328-342 Thinly bedded to foliated siliceous Rx (sed?) with some skarn alt to pyx; minor garnet (Knob Hill Fm.?) Broken core, mod. alteration some secondary qtz + calc veins cherty fragments.

342-360 DK grey to blk very broken + sheared zone. Local areas of pyx, skarn, some areas of med grained clastics with some intrusive fragments? Abundant black chl along fxs. Some silicification and qtz veining, possibly some chert fragments.

360-400 Dominantly gar-pyx skarn often med-coarse grained, some garnets up to 1cm across locally massive garnet zones @ 377, 396. Skarn is pyx dominant with some calcite rich zones 370-384. Retrograde alteration to tremolite also present 370-384. Abundant qtz and calcite veining throughout. Black chl comm along fxs.

FT.

330
340
350
360
370
380
390
400

GRAPHIC LOG

MINERALIZATION

328-342
py, cpy + po - generally 2-3% mostly

broken core
342-360

broken core
cpy

py, po + cpy
qtz veins

361-376 - Generally 3-5% sulfides, possibly several stages of mineralization
2 stages of py - early c.g. + ü qtz
2 stages of po - early c.g. + late fg. cpy usually within skarn, esp calcite
2 stages qtz - vein ü py + chalcedony

cpy
Qtz veins

371-384 - Carbonate-rich retrograde zone with alt to tremolite. Local areas of round garnets in a white trem-calc matrix

376-392 - Generally 1-2% sulfide, good alteration and qtz veining but limited mineralization

broken core

392-400 - Generally 3-5% sulfides, better cpy zones within skarn, esp massive gar

py, po + cpy
broken core

RECOVERY

Run	Run length	Core	%
340	10.0	10.0	100
350	10.0	10.0	100
356	6.0	6.0	100
366	10.0	10.0	100
370	4.0	4.0	100
380	10.0	10.0	100
390	10.0	10.0	100
400	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			Mag Sus
328-333	5.0	494	1500			0.3
333-338	5.0	60	600			0.3
338-342	4.0	<5	180			0.4
342-347	5.0	6	240			0.3
347-353	6.0	134	630			0.4
353-358	5.0	710	3300			0.6
358-361	3.0	20	180			0.4
361-366	5.0	6448	5700			0.8 7.4
366-371	5.0	2029	3300			1.2 0.9
371-376	5.0	8806	6100			0.5
376-380	4.0	278	500			0.8
380-384	4.0	95	160			0.5
384-389	5.0	280	480			2.8
389-394	5.0	442	940			1.9
394-399	5.0	2548	7200			12.6 7.9

BOX

334.2
19
349.5
20
366
21
383.4
22

E 95-4
Pg 7

LITHOLOGY, ALTERATION, MISC.

400 - 423.6 Dominantly gar-pyx skarn, med to coarse grained with garnets up to 1 cm in diam. Locally massive groups of gar @ 401-402, 403, 408, 411, 416-417, 419, 421-422, Otherwise, pyx dominant skarn; abundant qtz + calc veining throughout. sheared and bxd zone 414-420

423.6 - 428.5 - Syenite lt-med grey porphyritic syenite with 10-12% phenos of feld and 1-2% mafic phenos in a grey f.g. ground mass some alt to sericite and minor chl.

423.6 - 452.3 Dominantly gar-pyx skarn med-coarse grained; similar to above, but more garnet rich. Zones of massive garnet 428.5-430; 431.5-433.5; 434-436.6; 438; 442; 443; 445, 446 448-449 451-452. This may be a more proximal skarn that has been intruded by Late stage Tertiary syenite dikes (or sills)

452.3 - 519.5 Syenite

FT.

400
410
420
430
440
450
460
470

GRAPHIC LOG

MINERALIZATION

400 -

broken core

po + cpy

sheared + bxd zone (414-420)

po, cpy

Some sulfide zones in the garnet dominant skarn have actinolite closely assoc. (partly alt → chl) actinolite, po, cpy + mt.

RECOVERY

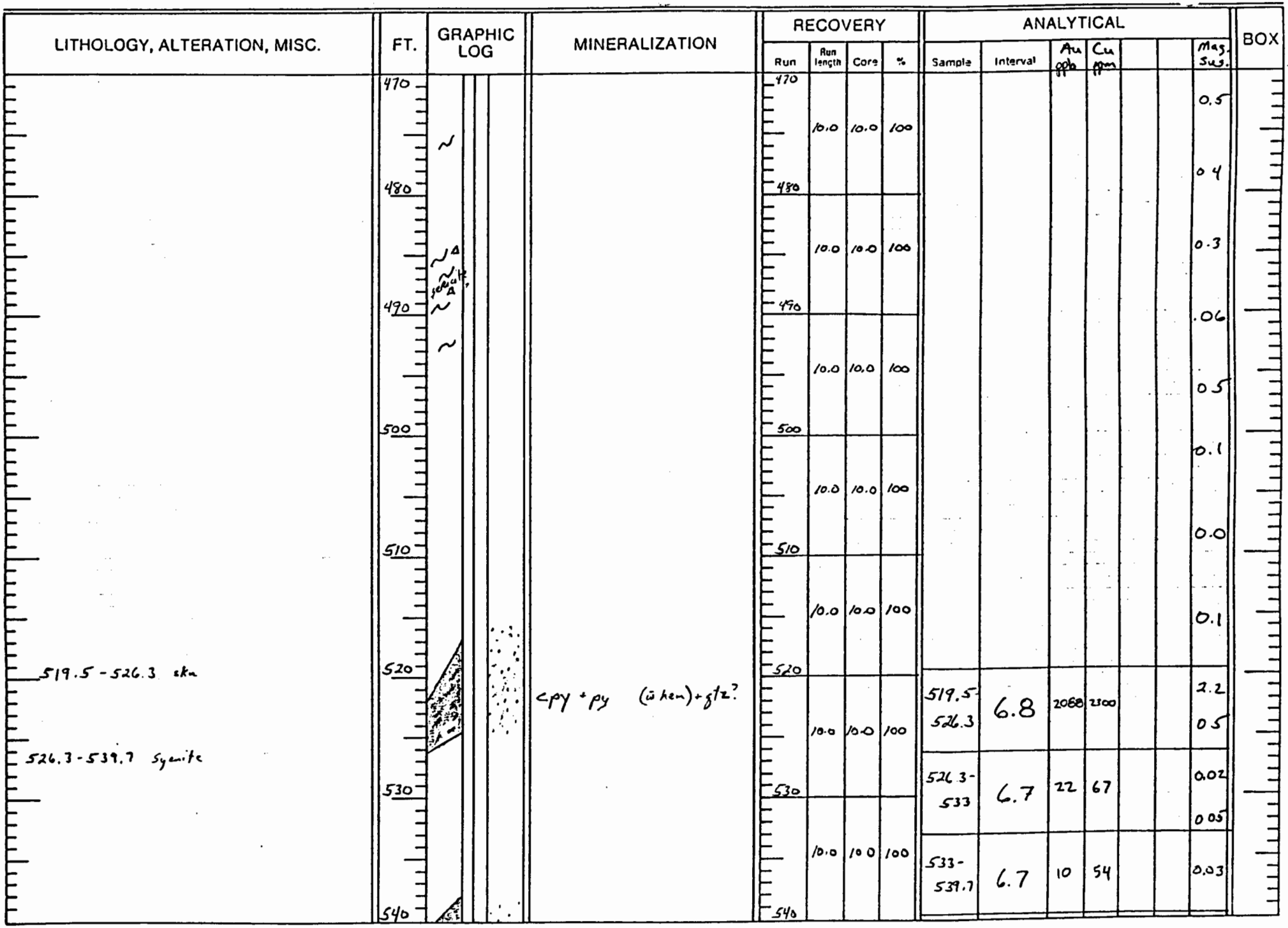
Run	Run length	Core	%
406	6.0	6.0	100
	10.0	10.0	100
416			
	10.0	10.0	100
426			
	5.0	5.0	100
431			
	6.0	6.0	100
437			
	10.0	10.0	100
447			
	10.0	10.0	100
457			
460	3.0	3.0	100
	10.0	10.0	100
470			

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm			mag sus
399-404	5.0	1690	2300			7.9
						3.2
404-409	5.0	1317	2100			2.3
409-414	5.0	6102	3100			2.8
						0.7
414-419	5.0	3492	3200			2.1
						14.8
419-423.6	4.6	745	1400			6.5
						2.2
423.6-428.5	4.9	<5	32			0.3
						0.2
428.5-433	4.5	2190	2900			9.2
433-438	5.0	2485	3600			4.8
						18.2
438-443	5.0	2191	1900			7.8
						2.5
443-448	5.0	4932	3900			4.9
						20.4
448-452.3	4.3	4122	3000			18.9
						7.8
						0.85
						3.6
						1.2
						1.6
						1.2

BOX

400.5
23
417
24
434.2
25
452.5

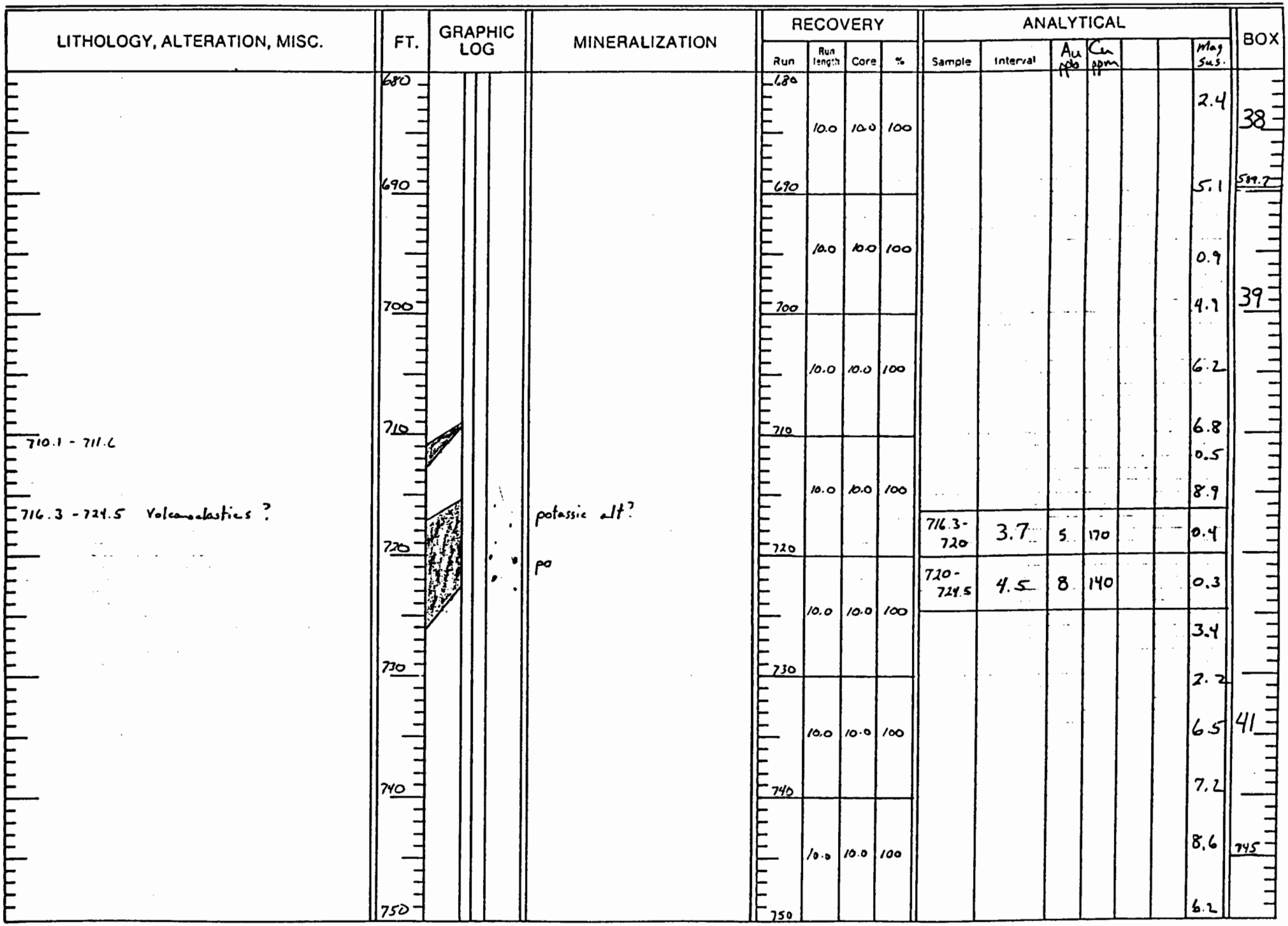

LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Au ppb
Cu ppm
Mag. Sus.
BOX
470
480
490
500
510
520
530
540
519.5 - 526.3 skn
526.3 - 539.7 Syenite
<py + py (ū hem) + gtz?
10.0 10.0 100
519.5-526.3 6.8 2088 2300 2.2 0.5
526.3-533 6.7 22 67 0.02 0.05
533-539.7 6.7 10 54 0.03

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
543 - 551 syenite	540		py
	550		py + po
	560		
	570		po
575 - 591 syenite	580		
	590		py
596 - 599.5 - Latite ? dike/set @ 20° to core axis			po
	600		
604 - Latite ? dike.	610		

RECOVERY			
Run	Run length	Core	%
540			
	10.0	10.0	100
550			
	10.0	10.0	100
560			
	10.0	10.0	100
570			
	10.0	10.0	100
580			
	10.0	10.0	100
590			
	10.0	10.0	100
600			
	10.0	10.0	100
610			

ANALYTICAL							BOX
Sample	Interval	Au ppb	Cu ppm			Mag Sus	
539.7-543	3.3	14	37			0.3	
543-551	8.0	6	15			2.3	
						1.5	
551-555	4.0	30	120			0.2	
555-560	5.0	15	70			0.1	
560-565	5.0	62	290			0.5	
565-570	5.0	8	170			0.3	
570-575	5.0	31	240			0.8	32
575-583	8.0	6	12			6.5	
						4.2	
583-591	8.0	13	16			2.1	33
						0.7	
591-597	6.0	31	230			0.5	
						7.2	
597-602.5	5.5	23	190			0.4	
602.5-605	2.5	18	15			5.4	
						6.5	

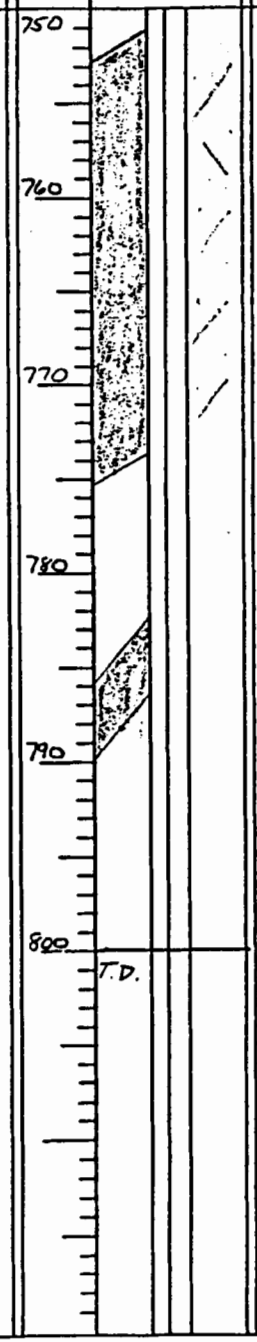
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL							BOX
				Run	Run length	Core	%	Sample	Interval					Mag Sus	
	610			610	10.0	10.0	100							8.1	
	620			620	10.0	10.0	100							7.2	
	630			630	10.0	10.0	100							4.1	
	640			640	10.0	10.0	100							2.9	
	650			650	10.0	10.0	100							2.5	
	660	~A~ A		660	10.0	10.0	100							1.6	
	670			670	10.0	10.0	100							0.8	
	680			680	10.0	10.0	100							1.9	
														0.8	
														0.6	
														0.4	
														0.9	
														1.5	


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Au ppb
Cu ppm
Mag Sus.
BOX
680
690
700
710
720
730
740
750
10.0
10.0
100
710.1 - 711.6
716.3 - 724.5 Volcaniclastics ?
potassic alt?
py
716.3-720
3.7
5
170
720-724.5
4.5
8
140
2.4
5.1
0.9
4.1
6.2
6.8
0.5
8.9
0.4
0.3
3.4
2.2
6.5
7.2
8.6
6.2
38
589.7
39
41
745

752-774.6 Volcanic bx

774.6-784.2 Syenite

784.2-788.2 similar to above



potassic alt?

dissem py + vnlts.

Run	Run length	Core	%
750			
	10.0	10.0	100
760			
	10.0	10.0	100
770			
	10.0	10.0	100
780			
	10.0	10.0	100
790			
	10.0	10.0	100
800			

Sample	Interval	Au ppb	Cu ppm			Mag Sus
						5.5
752-755	3.0	<5	85			0.2
755-760	5.0	11	330			3.5
760-765	5.0	<5	200			2.4
765-770	5.0	<5	82			1.9
770-774.6	4.6	<5	44			1.6
774.6-784.2	9.6	<5	13			0.2
						0.2
784.2-788.2	4.0	<5	130			0.6
						0.8
						7.5
						8.6

DIAMOND DRILL HOLE LOG

Company ORVANA RESOURCES CORP

Property	Eholt -	Hole No.	E95-3
Location	Dead Honda Showing	Bearing at Collar	126°
		Inclination at Collar	-50°
Coord. - Collar N	5446960		
UTM E	387075	Length	603 Feet
Elev. - Collar	1065m	Core Size	NQ
Date started	9-27-95		
Completed		Logged by	Doyle Albers

LEGEND

pyroxene		sulphide	
garnet		calcite	
epidote		quartz	
chlorite		syenite	

Δ - breccia o - clasts (Fragmental)

SURVEY

Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.

0-15' overburden

15-99' Fragmental cherty metavolcanic. Mottled, med. green / grey (minor orgblem to pinkish tan (chert fragments). Colorless tends to be red - dk green - pyx +/- chlorite alteration of more matic material (volcanic). Clasts tend to be chert or siliceous tuff. Common blotches of med brown (oxidized) fg. garnet that is heavily disseminated. Some of these gt. zones are parallel bedding - calcareous beds? Beds are on mm to 10cm scale, + are disrupted / mod. brecciated. Bedding & to core axis varies from 60-10°. Dissem. calcite is ubiquitous; calcite veins are common. Alt. is mod. pyx > K-spar >> gt/chlorite skarn. Petrography indicates that this rock is a volcanic / clastic (fine sandstone) derived of detritic material. Some beds + fragments that look cherty may actually be devitrified tuff or sediment derived from tuff. Faint grey-pink color may indicate K-spar flooding as seen in petrog.

Kinked, bent + offset veins are common. Seems mod. contorted w/ brittle deformation ranging from wk-stg.

chlorite slicks

FT. / GRAPHIC LOG

0, 10, 20, 30, 40, 50

MINERALIZATION

Very minor dissem. py, more on fx w/ veinlets + shitty replacements. Highly fx w/ calcite + qtz-calcite veinlets. Not very mineralized in general.

5% dissem py assoc. w/ gt zone (more than in pyx-alt° zone)

rubble

RECOVERY

Run	Run length	Core	%
15			
23	8.0	8.0	100
33	10.0	10.0	100
43	10.0	9.5	95
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
0-10	10.0	67	72
10-15	5.0	160	51
15-20	5.0	6	46
20-25	5.0	6	27
25-30	5.0	45	78
30-35	5.0	29	180
35-40	5.0	16	170
40-45	5.0	11	95
45-50	5.0	<5	67

BOX

15.0

1

33.6

2

LITHOLOGY, ALTERATION, MISC.

Brecciated
Same - dacitic fragmental volcaniclastic w/ mod. pyroxene > k-spar >> garnet skarn. Garnet gets a little more common w/ depth. Highly brecciated, bedding fades + clast size increases, appearance becomes more massive w/ depth. Rock is all wk-mod. magnetic w/ both diffuse + vnts of mt.

70' - "Charty" fragments decrease + rock becomes more green - cpyx > garnet skarn (less k-spar), w/ some 1-5' zones becoming gt > pyx skn. Gt is dull brown + f.g.

73' - "blue" banded chalcedony filling fx in gt skn

Gt > pyx skn - note elevated Cu, Au - w/gt ?

84-99' spotty chalcedony-filled fx ("blue gtz")

Brecciation even in semi massive po replacement.

99-117' Pink porphyritic syenite / pulaskite. Gradational drill margin over ~1'. Weakly fx w/ gtz-chlorite veinlets.

114-115 Rawlith or later dike of v.f.g. equigranular monzonite / latite.

FT.

50, 60, 70, 80, 90, 100, 110, 120

GRAPHIC LOG

MINERALIZATION

65' - bleached hematite diffuse in matrix along fx.

72' - magnetite veinlets in gt > pyx skarn

83-92' strong diffuse / replacement sulphides. Po ~ 8%, mostly replacing Py ~ 5% assoc. w/ fx (alt. selvages of black chlorite), but also replace. 1% cpy replacing py. Po is strongly magnetic.

RECOVERY

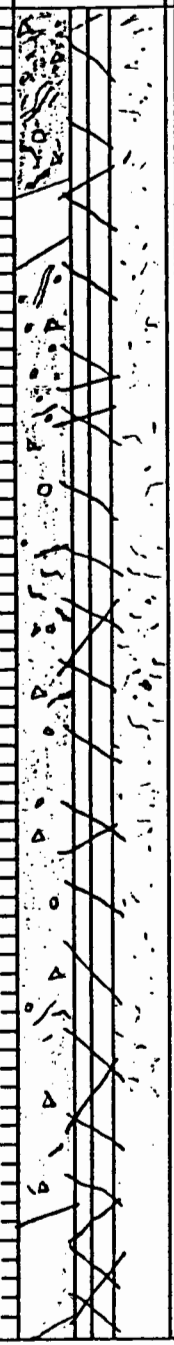
Run	Run length	Core	%
53			
	10.0	10.0	100
63			
	8.0	8.0	100
71			
	10.0	10.0	100
81			
	10.0	10.0	100
91			
	11.0 ?	11.0	100
102			
	10.0	10.0	100
112			

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
50-55	5.0	<5	100
55-60	5.0	9	99
60-65	5.0	15	63
65-70	5.0	41	97
70-75	5.0	25	36
75-80	5.0	30	45
80-83	3.0	33	28
83-88	5.0	103	1200
88-93	5.0	203	1600
93-99	6.0	38	150
NS	18.0		
117-122	5.0	890	110

BOX

52.8 — 3 — 70.9 — 4 — 88.3 — 5 — 106.5 — 6

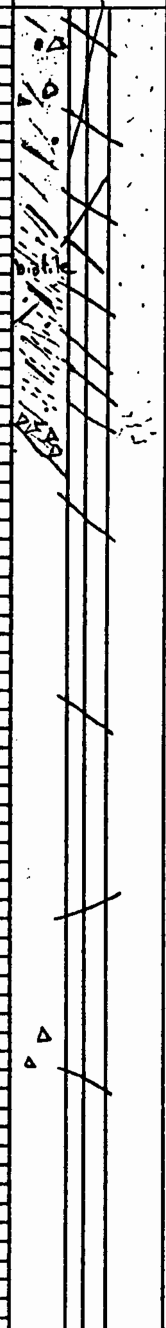
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
Mixed garnet = pyroxene skarn alteration of fragmental brecciated volcanic. Mottled red-dk green + red-brown (gt). Bedding @ 125' is brecciated but intact enough to see.	120		Pyrite replacement strong w/ Px. Overall, grade weak.
130-133' Latite. Porphyritic/aphanitic red. gray to brown. Brecciated.	130		
134-142' Pebble-granule size breccia w/ no large cobble size clasts. Granules are k-spar alt? (lt. tan color). Matrix is more Px altered (green)	140		
142-184' Brecciated fragmental volcanic as before w/ pebble-small cobble size fragments. Stg. pervasive red-dk green Px alteration w/ chlorite selvages + skins on some Fx. Some zones w/ pinkish clasts - K-spar alt? Minor wk bedding @ 60° to core axis. No obvious gt.	150		143-144 cloty of dissem blood-red hematite
K-spar alt. of frags gets more common 158'-184'	160		Px + py clots (replac.)
	170		Clotty Py
Chlorite skins	180		
184-189.5' Porphyritic pink syenite. Groundmass is f.g. feldspar phenos 2-4 mm	190		

RECOVERY			
Run	Run length	Core	%
122			
	10.0	10.0	100
132			
	8.0	8.0	100
140			
	11.0	11.0	100
151			
	7.0	7.0	100
158			
	10.0	10.0	100
168			
	6.0	6.0	100
175			
	4.0	4.0	100
179			
	5.0	5.0	100
184			
	9.0	9.0	100

ANALYTICAL			
Sample	Interval	Au ppb	Cu ppm
117-122	5.0		
122-127	5.0	21	170
127-129.5	2.5	9	27
129.5-133	3.5	<5	7
133-138	5.0	<5	94
138-143	5.0	156	64
143-148	5.0	110	27
148-153	5.0	11	23
153-158	5.0	6	150
158-163	5.0	14	150
163-168	5.0	16	56
168-173	5.0	68	97

BOX
124.2
7
141.0
8
159
9
177.4
10

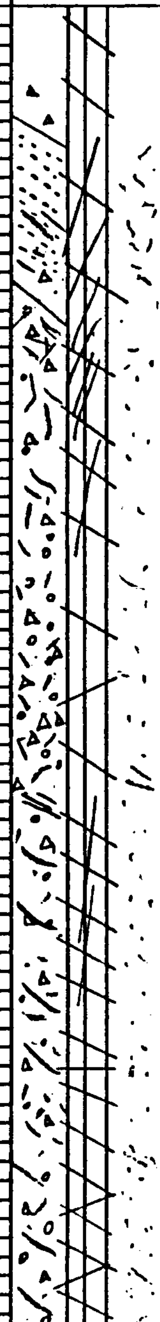
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
189.5 - 200' - Fragmental volcanic. Brecciated. Mod. bedded w/ parallel biotite crystals. Fragments are granule to large pebble size. Mod. med-dk green px alt. grades to more biotite (k-spar) w/ depth (200-228'), which is lt-med. brown. Far less calcite relative to rocks above, + more igneous texture.	190		189.5 - 213.4' 1-2% dissem. fg. clots of po > py. Minor py on fx. Clots seem to parallel schistosity further down. Minor qtz/epidote selvages along fx.
Gradational contact @ 200'. Less bx, more bedded, could actually be schistosity, as biotite is parallel (10-20%) + imparts s? fabric. Could be called biotite schist? Goes from chloritic schistose to biotite w/ depth. Very hard + siliceous. Protolith probably dirty volcanic qtzite sandstone w/ minor granules. - Knob Hill Fm?	200		
Contact very weakly gougy; calcite - Fault	210		Up to 5% schistosity parallel pyrite.
213.4 - 266.2' Porphyritic syenite. Fine-grained groundmass w/ 5% 2-4mm feldspar phenos. Some alt. green w/ actinolite. Biotites are fresh. Broad (~2-3') chill margins			
	220		minor qtz veinlets and pink k-spar veinlets
The schistose fabric both H.W. + F.W. to this syenite may indicate that it intrudes a major old structure?			
	230		
	240		
	250		
	260		



RECOVERY				ANALYTICAL		BOX
Run	Run length	Core	%	Sample	Interval	
193						193.5
200	7.0	7.0	100			
209	9.0	8.8	98			11
219	10.0	10.0	100			211.4
229	10.0	10.0	100			12
233	4.0	3.6	92			230
243	10.0	10.0	100			13
253	10.0	10.0	100			249
	10.0	10.0	100			14

E95-5
Pg 5 of 9

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
266.2 - 275.3 - F.g. volcanic/clastics w epd + secondary biotite. Probable dacitic volcanic source. Fragments are granule size. wk schistosity parallel bedding. Rock is mottled/streaked med. grey/green & brown. Irregular black streaks of chlorite starting ~ 272' + going down.	260–270		Weakly mineralized: pyrite replacement clots assoc. w/ chlorite fx + pervasive chlorite ↓
Gradational contact (Fragmental greenstone) 275.3 - 334 Vol bx - f.g. pyx; amph/chlorite, K-spar alt. Matrix supported? w/ subrounded clasts granule-pebble size. Very heterolithic - pinkish aphanitic siliceous frags (dacite?) are most visible; various green frags. less so. Very little calcite in matrix; minor of fx increases w/ depth. Alteration is composed of minor to mod. dk green pyx w/ fairly str. retrograding to chlorite (dk grn to black) > epidote. Minor blebs of f.g. 2ndary biotite. Chlorite skins very common. Mod. fractured.	275–285		
Breccia is matrix supported.			
No qtz veining.	290		Py, Po
Pinkish/grey dacite frags may indicate potassic alt.			
wk bedding	300		
This whole unit is pretty brecciated + chewed up, but healed w/ black chlorite. Could be major structure?	310		
	320		
	330		



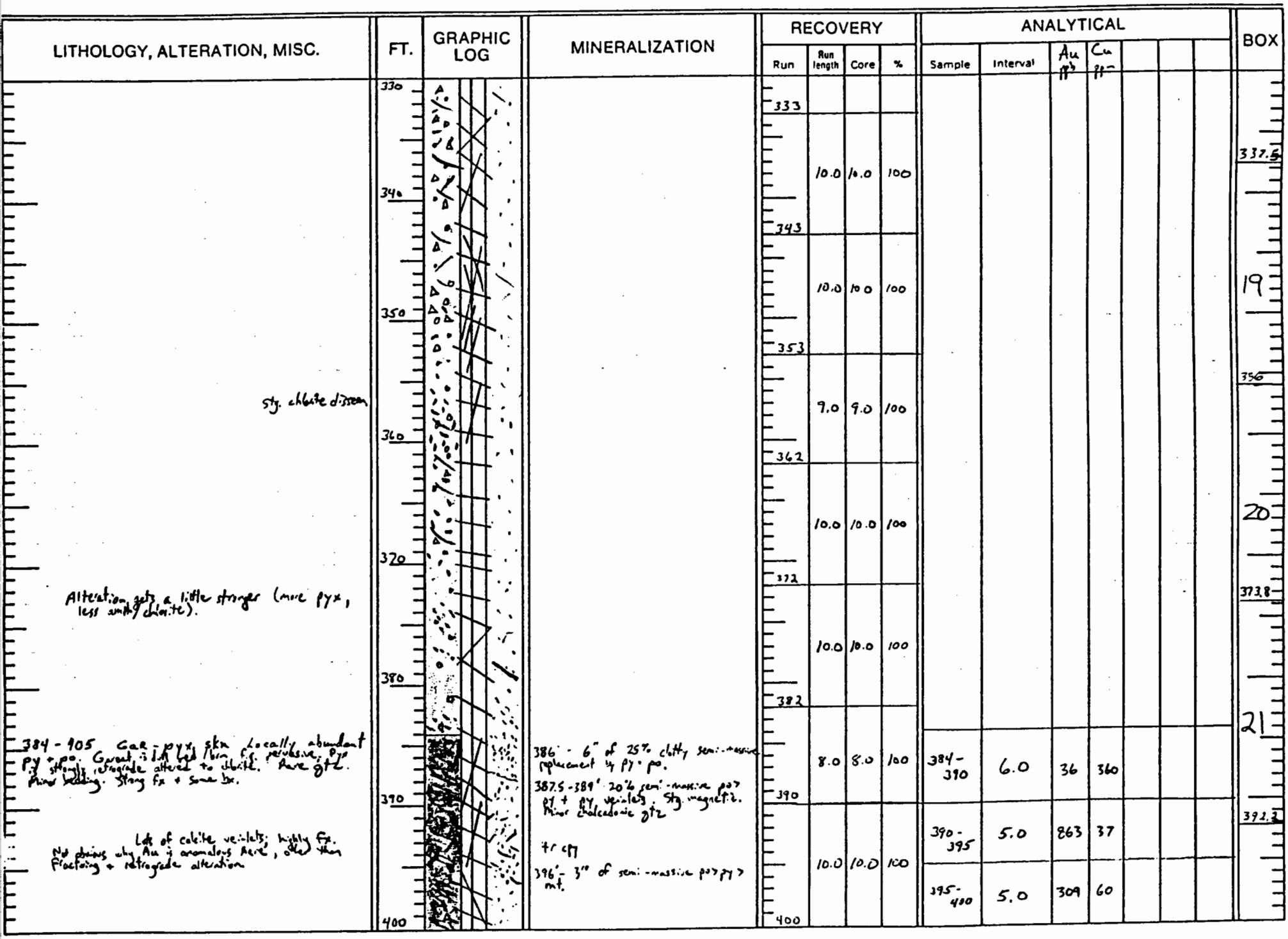
Run	Run length	Core	%
263			
273	10.0	10.0	100
283	10.0	10.0	100
290	7.0	7.0	100
300	10.0	10.0	100
310	10.0	10.0	100
318	8.0	8.0	100
328	10.0	10.0	100

ANALYTICAL

Sample	Interval					

BOX

Box	Depth
14	268
15	285.5
16	302.7
17	320.0
18	


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Au ppb
Cu ppm
BOX
330
340
350
360
370
380
390
400
333
343
353
362
372
382
390
400
10.0
10.0
100
10.0
10.0
100
9.0
9.0
100
10.0
10.0
100
10.0
10.0
100
8.0
8.0
100
10.0
10.0
100
sty. chlorite dissem
Alteration gets a little stronger (more pyx, less earthy chlorite).
384 - 405 Gar-pyx skn. Locally abundant py + po. Generally retrograde altered to chlorite. Rare qtz. Minor bedding. Strong fx + some bx.
Lots of calcite veinlets; highly fx. No obvious why Au is anomalous here, other than fracturing + retrograde alteration
386' - 6" of 25% clotty semi-massive replacement py · po.
387.5 - 389' 20% semi-massive po> py + py veinlets; sty. magnetic. Minor chalcedonic qtz
tr cpy
396' - 3" of semi-massive po> py > mt.
384-390
6.0
36
360
390-395
5.0
863
37
395-400
5.0
309
60
337.5
19
356
20
373.8
21
392.3

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
405 - 416' Fault zone - ground up lateritic fragmental greenstone (dacite bx) w/ chloritic limy matrix.	400				6.0	6.0	100	400-405	5.0	39	16	22
				406								
	410				7.0	7.0	100					410.5
				413								
416 - 438.5 Heterolithic fragmental greenstone/ metavolcanic, mottled green, brn, pink. Matrix supported. Clasts are subangular, include pinkish tan dacite (looks "cherty" w/o hand lense) and mafic volcanic fragments same as matrix. Generally mod. pyx alt. (pervasive) w/ minor patches of gt. Common chlorite, minor epidote + actinolite. Wk-mod calcite in matrix + vtts.	420		wk. scattered clots + blebs of py.		10.0	10.0	100					23
				423								
					10.0	10.0	100					429
	430			433								
					10.0	10.0	100					24
438.5 - 486.8 Garn-pyx skn. Banded, med. dull brown fg. garnet w/ med dk green pyx. Thin to med. bedded ½ - 20cm thick. Bedding @ 70-80° to core axis. Sft chlorite skins on fx. Protolith was fg calcareous sediment ± volcanic material. Moderately calcareous, both dissem + veinlets. Not very py (minor zones). Gt-rich zone (60-80%) 438.5 - 470'	440							438.5-443	4.5	19	220	
				443								
					10.0	10.0	100	443-448	5.0	19	95	446.7
No qtz veining (= no metal?) (blue or otherwise)	450		448-450' 5-10% magnetite as replacement clots assoc. w/ bx in gt skn	453				448-453	5.0	48	27	25
			453-454 10%-20% py > mt >>> cpy as clots of replacement and veinlets in gt > pyx skn.									
					10.0	10.0	100	453-458	5.0	65	160	
	460		460' - 3cm zone w/ 10% py>po >>> cpy	463				458-463	5.0	38	140	464
			466' - tr dk grey, soft sulphide (ga?) as distinct mg. bleb.					463-468	5.0	<5	26	
	470				10.0	10.0	100					

LITHOLOGY, ALTERATION, MISC.	MINERALIZATION
thin bedding 2 generations present: dk brownish (faint red), + lt. pinkish brown. Occur separately or together. When together, light pink/brn seems generally later.	Extremely wk - tr py or rare occurrence.
482' - small fault w/ chlorite, calcite gouge (low ∠).	
486.8 - 521.5 Porphyritic pink syenite 5-10% feldspar phenos 3-10mm, some w/ black cores (edges of actinolite?). Fine-grained pink groundmass. Minor pink K-spar veinlets or alteration selvages.	
523.0 - 575.5' Fragmental metavolcanic / greenstone. Varies from fine-grained (tuff) sediment to pebble conglomerate. Green color - varies from light (epidote) med. (pervasive laminae +/- actinolite) to dk green to black (chlorite). Weakly - mod. limy (pervasive w/ coarser calcite veinlets) minor scattered patches of lt-med. brown garnet replacement (r.g.). Very common black chlorite skins on fx.	several qtz / pyrite / calcite veinlets - late, as the crosscut chlorite selvages along fx. Weakly mineralized (py).

FT.	GRAPHIC LOG
470	
480	
490	
500	
510	
520	
530	
540	

RECOVERY			
Run	Run length	Core	%
473			
	10.0	10.0	100
483			
	10.0	10.0	100
493			
	10.0	10.0	100
503			
	10.0	10.0	100
513			
	10.0	10.0	100
523			
	10.0	10.0	100
533			
	10.0	10.0	100

ANALYTICAL							BOX
Sample	Interval	Au ppb	Cu ppm				
468-473	5.0	26	8				26
473-478	5.0	<5	23				
478-483	5.0	33	150				481.4
483-486.8	3.8	<5	8				
							27
							499
							28
							518
							29
							536

E 45-5
Pg 9

LITHOLOGY, ALTERATION, MISC.	FT.	MINERALIZATION
Vague bedding between pebble conglomerate + volcanic seds / tuffs @ 70-80° to core axis - good angle.	540	very little. very minor Tr py on fx + w/ calcite veinlets w/or chlorite selvages.
"Cherty" pebble conglomerate (lt. grey pebbles look cherty or like f.g. qtzite) 551.5-563.0' Matrix is volcanic - mixed mottled med-dk green (pyx, amph, chlorite).	550	
	560	
v.f.g. garnet or lt. pink/tan k-spar flooded tuff bed @ low ∡ (10°) to core axis.	570	
575.5-577.0 Porphyritic/aphanitic latite - probable quick chilled syenite.		
577-592' Volcaniclastic (greenstone). med. green pyroxene altered fragmental heterolithic w/ probable dacitic protolith. Common chlorite skins on fx + some pervasive chlorite (black). Minor clots of med. brown garnet (faint red). wk dissem. calcite in places; mod. calcite vlts.	580	
592.0-603' Syenite. Pink, porphyritic (feldspar phenos) w/ f.g. grdmass. Chilled margins	590	
	600	

GRAPHIC LOG

RECOVERY

Run	Run length	Core	%
543			
	8.0	8.0	100
551			
	2.0	2.0	100
553			
	10.0	10.0	100
563			
	5.0	5.0	100
568			
	5.0	5.0	100
573			
	10.0	10.0	100
583			
	10.0	10.0	100
593			
	10.0	10.0	100
603			

ANALYTICAL

Sample	Interval					

BOX
30
552.5
31
570.5
32
588.0
33
603.0
E.O.H.

DIAMOND DRILL HOLE LOG

Company Orvana Resources Corporation

LEGEND

SURVEY

Footage	Bearing	Inclination

Property Ehalt - Dead Honda
Location same pad as E95-4
Coord. - Collar N 5447015
UTM E 387000
Elev. - Collar 1073m
Date started 9-24-95
Completed 9-28-95

Hole No. E95-5
Bearing at Collar 126°
Inclination at Collar -75°
Length 1032'
Core Size NQ
Logged by Lance Senter & Doyle Albers

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
16'-50.8' lt-med. grnte ll-dk brn pyx-gar-chl±epi skarn w/relict f.g.-m.g. poorly sort'd clastics ll/w volc-clastics (grnst) text locally ghost'g by replacement of pyx-rich skarn'g; wk-mod fx'd, wk-med. calcite vnlt'g & patches, (protolith possibly is f.g.-m.g. poorly sort'd clastics ll/w volc-clastics - grnst perv. calc/sils alter'd but now overprint'd by pyx-rich skarn'g), fx's coat'd w/ limonite ± hematite from 16'-21.5' so. oxide/reduc'd zone is @ 21.5' relict foliat'n or relict bedd'g locally @ 17.5'-17.7' broken rubble zn @ 27'-28' rx shows foliat'n or bedd'g text ~/30°∠ to C.A. @ 30'-31' broken rubble zn @ 31'-32' rx shows foliat'n or bedd'g text w/ ≈0°∠ to C.A. (parallels C.A.) @ 37'-38' foliat'n or bedd'g text w/40°∠ to C.A. @ 41.5'-42.5' foliat'n or bedd'g text ~/50°∠ to C.A. @ 42.5'-43.5' broken rubble zn	0 10 20 30 40 50		16'-50.8' tr-1% diss, vnlts, & core blebs of po ± py, w/very minor diss cpy, ± msv. l'ns of sulfides locally @ 23.7'-24.3' is ≈ 75% msv po w/very minor diss cpy along msv po margins & w/in po, this sulfide zn is also fill'd w/ calcite & could be a fx filling of a structure? @ 46.3'-47' = 1½-2% stringers & diss py, po w/very minor cpy w/in calcite bleb or patch	16 24 34 44 54	8.0 10.0 10.0 10.0	8.0 10.0 10.0 10.0	100 100 100 100	23-25	2.0	58	1100	16 1 34 2 52.3

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
50.8'-52.3' dk grn-dk grey aphanitic-f.g. porphyritic syenite dike(s) w/75°∠ to C.A. upper contact & 60°∠ to C.A. lower contact; assemb'd 52.3'-62.5' med-dk grn to dk brn pyx-gar-chl skarn w/ relict text protolith of f.g.-m.g. poorly sort'd clastic &/or vole-clastic (grnst) locally; same as rx unit @ 16'-50.8'; @ 59.5'-62.5' rx unit becomes more calcareous w/abdt calcite patches & increase of garnet from 5% to 30% of rx unit @ 58.3'-58.5' shear zn w/70°∠ to C.A. w/tectonic bx heal'd w/ clay gouge	50		50.8'-52.3' tr diss py throughout unit; rx wkly magnetic 52.3'-tr-1% diss & rare blebs of py w/very minor po	54	10.0	10.0	100			2 52.3
62.5'-101' pink f.g. porphyritic syenite dike? or intrusive; Kspar dominant groundmass w/10%-15% 2mm-10mm euhedral phenos of white-clear plagioclase? (albite?) mostly argillic'd; w/3%-5% <1mm-3mm euhedral phenos of black biotite; wk sericite; wkly magnetic w/finely diss magnetite; wk calcite vns & vnlts w/in rx & filling fxs; wkly fx'd w/predominant 50°∠ to 70°∠ to C.A. & minor 30%∠ to C.A.; very minor diss py; aphanitic porphyritic text. chill margins of dike? or intrusive for 2' wide; upper contact is 60°∠ to C.A & lower contact is 70°∠ to C.A.; minor chlorite along fxs locally; some plagioclase phenos replac'd by white clay (orgilliz'd) & some replac'd by chlorite rims & inside of xtals still unaltered	60		62.5'-101' very minor tr diss py throughout unit	64	10.0	10.0	100			3
	70			74	10.0	10.0	100			71
	80			84	10.0	10.0	100			4
	90			94	10.0	10.0	100			89.5 5
101'-103' dk brn-dk grn gar-pyx-chl skarn; w/abdt calcite patches & vnlts; mod fx'd; lower contact is 50°∠ to C.A. 103'-108' dk-med grn to dk-med brn pyx-gar-chl skarn w/ ≈ 20% gar zns w/in pyx-rich skarn; abdt calcite patches & vnlts; mod fx'd; lower contact = 60°∠ to C.A.	100		101'-103' tr-1% blebs & diss po & py w/very minor late py vnlts 103'-108' tr-1% blebs & diss po w/minor py	104	10.0	10.0	100			
108'-129' lt-med grn to med-dk brn pyx-gar-chl skarn; pyx rich w/wk garnet; relict foliat'n or bedd'g text. locally; wk-med calcite vnlts w/minor calcite patches; mod fx'd @ 113'-113.5' relict foliat'n &/or bedd'g text w/40°∠ to C.A. @ 117.5'-118' relict foliat'n &/or bedd'g text w/40°∠ to C.A.	110		108'-129' tr-1% diss & minor blebs of po w/minor diss py	114	10.0	10.0	100			108 6
	120									

LITHOLOGY, ALTERATION, MISC.	MINERALIZATION
@122'-122.5' relict foliat'n f/or bedd'g w/40°∠ to C.A. @122.5' broken rubble zn @125.8'-128' broken rubble zn @127'-128' is dk grn f.g.-m.g. poorly sort'd clastics f/or volc-clastics (grnst) w/perv calc/silc alter'n; str fx'd; 60°∠ to C.A. contacts f intercalat'd w/in pyx-rich skarn 129'-141.3' white-lt to med grn-dk brn tremolite-pyx-gar-chl-ept skarn; w/rare relict f.g.-m.g. poorly sort'd tuffaceous clastics f/or volc-clastic (grnst) text rarely f ghost'g locally; tremolite = 30%-90% of rx unit in pyx-rich skarn; contacts = 70°∠ to C.A.; abdt calcite patches f vnlts; rx mod fx'd 141.3'-215.6' med-dk grn to med-dk brn pyx-gar-chl skarn w/zns of perv calc/silc alter'd f.g.-m.g. poorly sort'd clastics f/or volc-clastics (grnst) w/pyx-rich skarn flood'g protolith; garnet content stronger in zns w/in the pyx-rich skarn locally; calcite patches f vnlts mod to wk locally; rx mod-str fx'd locally @143'-144' broken rubble zn @144'-145' calc/silc alter'd clastic f/or volc-clastic (grnst) zn w/ relict foliat'n or bedd'g text w/40°∠ to C.A.; foliat'n w/45°∠ to C.A. @148.5'-149.3' calc/silc alter'd clastics f/or volc-clastics (grnst) zn w/70°∠ to C.A. contacts @149.5'-158' minor garnet w/in pyx-rich skarn @151'-154' broken rubble zn @158'-162' garnet increases w/in pyx-rich skarn @164.5' broken rubble zn @166'-166.2' is shear or flt zn w/tectonic bx heal'd w/ calcite w/60°∠ to C.A. @173'-174' broken rubble zn	@127'-128' = 1%-2% py f po late vnlts f diss of both sulfides 129'-141.3' tr-1% blebs, diss f semi-msv py locally; blebs f diss po w/minor cpy w/in pz zn @132' = 5%-7% diss f blebs of po w/minor diss cpy w/in po zn @132.8'-133' semi-msv zn of c.g. py = 25% of rx unit in this short zn 141.3'-215.6' tr-2% diss f in blebs of py f po throughout unit; minor diss cpy @149.5' very minor diss cpy w/ po w/in clastic f/or volc-clastic (grnst) zn @160' = 2% diss po w/in unit f increase in garnet in skarn alter'n @163'-163.2' small blebs f diss cpy w/minor po to = 1%-2% cpy @170.5' bleb of diss po w/very minor diss cpy associat'd w/po diss @175'-175.3' = 2%-3% diss, blebs f vns of cpy w/in f associat'd w/po mineralizat'n in garnet-rich zn in skarn @179.2'-179.5' large bleb to semi-msv cpy w/minor po w/in gar-rich zn f fx filled w/calcite; = 45% of interval is cpy-po sulfides

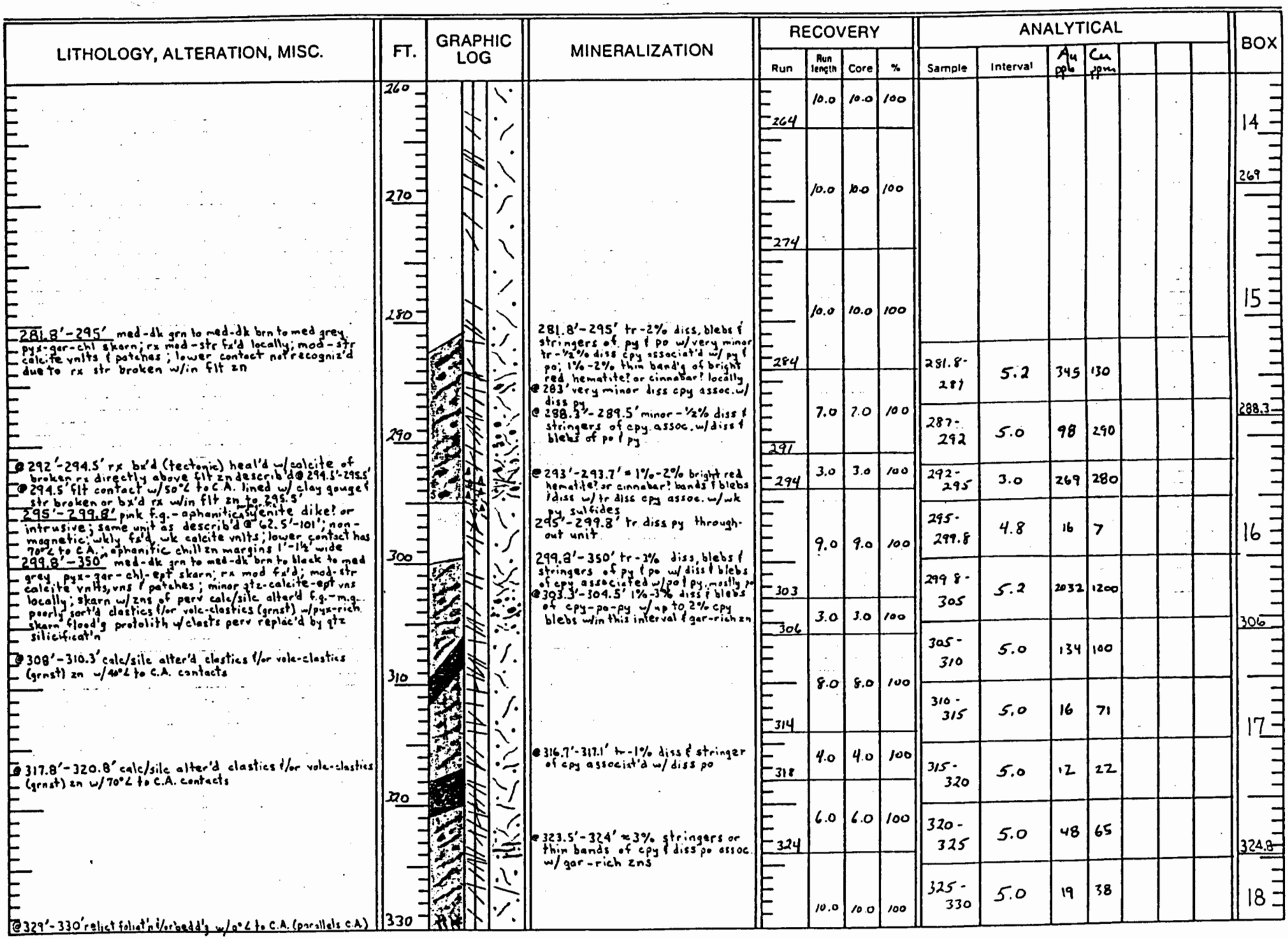
RECOVERY			
Run	Run length	Core	%
124	10.0	10.0	100
134	10.0	10.0	100
144	10.0	10.0	100
152	8.0	8.0	100
158	6.0	6.0	100
164	6.0	6.0	100
174	10.0	10.0	100
184	10.0	10.0	100
	10.0	10.0	100

ANALYTICAL			
Sample	Interval	Au ppb	Cu ppm
129-134	5.0	107	290
134-139	5.0	<5	14
139-144	5.0	6	140
162-164	2.0	23	220
164-169	5.0	6	85
169-174	5.0	30	65
174-179	5.0	71	180
179-184	5.0	134	95
184-189	5.0	10	20

BOX: 6, 125.8, 7, 144.5, 8, 161.5, 9, 177.7, 10

LITHOLOGY, ALTERATION, MISC.	MINERALIZATION
@ 192.5'-193' broken rubble zn	@ 191' diss grain of silver sulfide (aspy?)
@201'-202' broken rubble zn @ 202' is shear or flt zn w/tectonic bx heal'd w/calcite w/40°∠ to C.A. @203.1' is shear of flt zn w/tectonic bx heal'd w/ calcite ∥ w/40°∠ to C.A. @ 203.7'-204.5' broken rubble zn	@ 193'-193.5' large blebs to semi-msv cpy w/minor po w/in gar-rich zn: ≈ 15%-20% of interval is cpy-po @ 194.5'-197' = 10% of interval consists of blebs, stringers ∥ diss of po ∥ cpy of which 3%-5% of sulfides is blebs ∥ diss of cpy @ 197.3'-197.5 diss ∥ late vnlt of py w/minor diss po; ≈ 1%-2% sulfide content in this interval
@203'-208.5' relict foliat'n ∥/or bedd'g w/75°∠ to C.A.	@ 206'-206.7' 1%-2% diss ∥ blebs of po w/ tr-½% diss ∥ blebs of cpy associat'd w/po
@ 212'-212.1' broken rubble zn	@ 210' 1%-2% blebs ∥ diss of po w/ minor diss cpy associat'd w/po @ 214.5'-215.6' ≈ 2%-3% diss, blebs ∥ late vnlts of py w/minor po ∥ ≈ ½% vnlt of cpy w/minor po w/in interval
215.6'-220.8' pink f.g. porphyritic syenite dike? or intrusive; same unit as describ'd @ 62.5'-101'; wkly magnetic; wkly fx'd; wk calcite vnlts; upper contact has 70°∠ to C.A. ∥ lower contact has 80°∠ to C.A.; aphanitic text chill margins ¼'-1' wide	215.6'-220.8' tr diss py throughout unit
220.8'-242.2' med-dk grn to med-dk brn pyx-gar-chl skarn w/ zns of perv calc/silc alter'd f.g.-m.g. poorly sort'd clastics ∥/or vole-clastics (grnst) w/pyx-rich skarn flood'g protolith; calcite patches ∥ vnlts locally wk-mod; rx mod-str fx'd locally; @ 224.5' relict foliat'd text. w/80°∠ to C.A. @225'-226' calc/silc alter'd clastics ∥/or vole-clastics (grnst) zn w/80°∠ to C.A. contacts	220.8'-242.2' tr-2% diss ∥ blebs of py ∥ po w/diss ∥ blebs of up to 1% cpy locally @ 222.2'-224.5' ≈ 1%-2% blebs, diss ∥ stringers of cpy associat'd w/ po diss ∥ blebs ∥ minor late py vnlts ∥ diss
@230'-231' calc/silc alter'd clastics ∥/or vole-clastics (grnst) zn w/90°∠ to C.A. contacts	
@ 233.5'-235.5' calc/silc alter'd clastics ∥/or vole-clastics (grnst) zn w/80°∠ to C.A. contacts @235.5'-236' broken rubble zn @ 236.7'-237' is a shear or broken rubble zn w/ tectonic bx heal'd w/calcite w/80°∠ to C.A. shear contact	@ 237.6' is ≈ 1% bleb ∥ diss cpy w/ minor diss po ∥ py
242.2'-246.2' pink f.g.-aphanitic syenite dike? or intrusive; same unit as described @ 62.5'-101'; non-magnetic; wkly fx'd; wk calcite ∥ calcite-ep vnlts; upper ∥ lower contacts are 75°∠ to C.A.; porphyritic text. 246.2'-255.1' med-dk grn to med-dk brn pyx-gar-chl skarn w/zn of perv calc/silc alter'd f.g.-m.g. poorly sort'd clastics ∥/or vole-clastics (grnst) w/pyx-rich skarn flood'g protolith w/clasts perv replac'd by qtz (silicif'd) @ 249.7'-250.2'; rx unit mod fx'd, unit has wk-mod calcite patches ∥ vnlts; lower contact is 30°∠ to C.A.	242.2'-246.2' tr diss py throughout unit 246.2'-255.1' tr-1% diss ∥ stringers of po ∥ py w/ minor cpy locally @ 247' tr-½% diss ∥ stringer of cpy associat'd w/very minor diss po
255.1'-281.8' pink f.g. porphyritic syenite dike? or intrusive; same unit as describ'd @ 62.5'-101'; non-magnetic; wkly fx'd; wk calcite vnlts; upper contact has 30°∠ to C.A. ∥ lower contact has 65°∠ to C.A.; aphanitic text chill margins 6"-1' wide	@ 254.1' ≈ 1% bleb ∥ diss cpy associat'd w/very minor diss py 255.1'-281.8' tr diss py throughout unit

RECOVERY				ANALYTICAL				BOX
Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm	
194	10.0	10.0	100	189-194	5.0	53	600	10
				194-199	5.0	101	940	195.8
202	8.0	8.0	100	199-204	5.0	75	190	
205	3.0	3.0	100	204-209	5.0	69	190	11
	9.0	9.0	100	209-215.6	6.6	134	280	212.5
214								
	10.0	10.0	100	215.6-220.8	5.2	<5	11	
224				220.8-226	5.2	89	270	12
	8.0	8.0	100	226-231	5.0	30	39	230.7
232				231-236	5.0	29	13	
	9.0	9.0	100	236-242.2	6.2	90	130	13
241								
	7.0	7.0	100	242.2-246.2	4.0	11	49	
248				246.2-251	4.8	28	220	249.7
	6.0	6.0	100	251-255.1	4.1	35	51	
254								14
	10.0	18.0	100					


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Au ppb
Cu ppm
BOX
260
270
280
290
300
310
320
330
264
274
284
291
294
303
306
314
318
324
14
269
15
288.3
16
306
17
324.8
18
281.8'-295' med-dk grn to med-dk brn to med grey pyx-gar-chl skarn; rx mod-str fx'd locally; mod-str calcite vnlts & patches; lower contact not recogniz'd due to rx str broken w/in flt zn
@ 292'-294.5' rx bx'd (tectonic) heal'd w/calcite of broken rx directly above flt zn described @ 294.5'-295.5'
@ 294.5' flt contact w/50°∠ to C.A. lined w/ clay gouge & str broken or bx'd rx w/in flt zn to 295.5'
295'-299.8' pink f.g.-aphanitic syenite dike? or intrusive; same unit as described @ 62.5'-101'; non-magnetic; wkly fx'd, wk calcite vnlts; lower contact has 70°∠ to C.A.; aphanitic chill zn margins 1'-1½' wide
299.8'-350' med-dk grn to med-dk brn to black to med grey pyx-gar-chl-ept skarn; rx mod fx'd; mod-str calcite vnlts, vns & patches; minor qtz-calcite-ept vns locally; skarn w/zns of perv calc/silc alter'd f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) w/pyx-rich skarn flood'g protolith w/clasts perv replac'd by qtz silicificat'n
@ 308'-310.3' calc/silc alter'd clastics &/or volc-clastics (grnst) zn w/40°∠ to C.A. contacts
@ 317.8'-320.8' calc/silc alter'd clastics &/or volc-clastics (grnst) zn w/70°∠ to C.A. contacts
@ 329'-330' relict foliat'n &/or bedd'g w/0°∠ to C.A. (parallels C.A.)
281.8'-295' tr-2% diss, blebs & stringers of py & po w/very minor tr-½% diss cpy associat'd w/py & po; 1%-2% thin band'g of bright red hematite? or cinnabar? locally
@ 283' very minor diss cpy assoc. w/diss py
@ 288.3'-289.5' minor-½% diss & stringers of cpy assoc. w/diss & blebs of po & py
@ 293'-293.7' ≈ 1%-2% bright red hematite? or cinnabar? bands & blebs & diss w/tr diss cpy assoc. w/wk py sulfides
295'-299.8' tr diss py throughout unit
299.8'-350' tr-3% diss, blebs & stringers of py & po w/diss & blebs of cpy associated w/po & py, mostly po
@ 303.3'-304.5' 1%-3% diss & blebs of cpy-po-py w/up to 2% cpy blebs w/in this interval & gar-rich zn
@ 316.7'-317.1' tr-1% diss & stringer of cpy associat'd w/diss po
@ 323.5'-324' ≈ 3% stringers or thin bands of cpy & diss po assoc. w/gar-rich zns
Run 264: 10.0 / 10.0 / 100
Run 274: 10.0 / 10.0 / 100
Run 284: 10.0 / 10.0 / 100
Run 291: 7.0 / 7.0 / 100
Run 294: 3.0 / 3.0 / 100
Run 303: 9.0 / 9.0 / 100
Run 306: 3.0 / 3.0 / 100
Run 314: 8.0 / 8.0 / 100
Run 318: 4.0 / 4.0 / 100
Run 324: 6.0 / 6.0 / 100
10.0 / 10.0 / 100
281.8-287: 5.2 | 345 | 130
287-292: 5.0 | 98 | 290
292-295: 3.0 | 269 | 280
295-299.8: 4.8 | 16 | 7
299.8-305: 5.2 | 2032 | 1200
305-310: 5.0 | 134 | 100
310-315: 5.0 | 16 | 71
315-320: 5.0 | 12 | 22
320-325: 5.0 | 48 | 65
325-330: 5.0 | 19 | 38

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@330'-331' relict foliat'n &/or bedd'g w/20°∠-30°∠ to C.A.	330			334	10.0	10.0	100	330-335	5.0	27	26	
@338'-338.5' broken rubble zn @338.5'-339.5' calc/silc alter'd clastic &/or volc-clastic (grnst) zn w/70°∠ to C.A. contacts @339.6'-341' broken rubble zn @341.5'-342' broken rubble zn			@335.5'-335.8' ≈ ½% diss cpy assoc. w/very minor diss py & wk garnet skarn flood'g	342	8.0	8.0	100	335-340	5.0	14	18	18
@348'-349.5' relict foliat'n &/or bedd'g w/30°∠-40°∠ to C.A.	340							340-345	5.0	14	12	3433
350'-353.5' med-dk brn to med-dk grn gar-pyx-chl skarn; rx. mod fx'd; mod str calcite vnlts, vns & patches			@349.8' very minor diss cpy assoc. w/ very minor diss py	352	10.0	10.0	100	345-350	5.0	8	9	
353.5'-363.2' med-dk grn to med-dk brn to black to lt grey pyx-gar-chl skarn; rx mod-str fx'd & bx'd locally; mod-str calcite vns, vnlts & patches @355'-358' is flt or shear zn w/20°∠ to C.A. hang'g wall & ft wall w/rx str broken & bx'd & heal'd w/calcite	350		350'-353.5' tr-½% diss py; @350.8' & @351.8'-352.2' = 1% stringers of bright red hematite? or cinnabar? 353.5'-363.2' tr-1% diss, small blebs & stringers of py w/very minor diss po; minor diss cpy assoc. w/diss py locally; stringers of bright red hematite? or cinnabar locally					350-355	5.0	22	33	19
@362'-363.2' is flt or shear zn w/60°∠ to C.A. hang'g wall & ft wall w/rx str bx'd & heal'd w/calcite			@354.2' tr diss cpy-/py; @357.2' tr diss cpy w/diss py; @359.5' ≈ ½% diss & stringers of cpy assoc. w/diss py; @360.3-360.5' minor blebs & diss cpy w/diss py	362	10.0	10.0	100	355-360	5.0	162	190	
363.2'-389' pink f.g.-aphanitic syenite dike? or intrusive; same unit as described @ 25-101'; non-magnetic; wkly-mod fx'd; wk calcite vnlts; upper contact has 60°∠ to C.A. & lower contact has ≈ 80°∠ to C.A.; aphanitic chill zn margins ≈ 1'-2' wide; wk chl-calcite vnlts; porphyritic text			@354.5' & 359' bright red diss-string hematite?					360-363.2	3.2	43	150	361.5
@373.5'-374 broken rubble zn	360		363.2'-389' tr diss py throughout unit	372	10.0	10.0	100	NS				20
@376'-377' mod broken rubble zn												
389'-442' med-dk grn to med-dk brn to black to med grey pyx-gar-chl-ept skarn; rx mod-str fx'd; mod-str calcite vnlts, vns, & patches; minor qtz-calcite-ept vns locally; skarn w/zns of perv calc/silc alter'd f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) w/pyx-rich & gar-poor skarn flood'g protolith w/ clasts perv replac'd by qtz silicificat'n; relict foliat'n or bedd'g text locally @389'-389.7' calc/silc alter'd clastic &/or volc-clastic (grnst) zn w/≈ 30°∠ to C.A. contacts @390'-390.8' broken rubble zn @395.5' is thin 1" wide flt of shear zn str bx'd & heal'd w/ calcite; @395.7'-398.2' broken rubble zn & also @399.5'-399.9'	380		389'-442' tr-1% diss, small blebs & thin stringers of po & py; tr diss cpy associat'd w/po & gar zns	382	10.0	10.0	100					380
	390			392	10.0	10.0	100	389-394		78	250	21
	400							394-399		19	130	398.2 22

LITHOLOGY, ALTERATION, MISC.

@ 400.5'-401' relict foliat'n t/or bedd'g text w/40°∠ to C.A.
@ 402'-402.5' broken rubble zn
@ 404.5'-406' relict foliat'n t/or bedd'g w/30°∠-40°∠ to C.A.

@ 411'-411.5' relict foliat'n t/or bedd'g w/40°∠ to C.A.

@ 421.5'-422' calc/silc alter'd clastics t/or volc-clastics (grnst) zn w/40°∠ to C.A. contacts
@ 423'-423.5' broken rubble zn

@ 425'-426' calc/silc alter'd clastics t/or volc-clastics (grnst) zn w/40°∠ to C.A. contacts

@ 431'-432' broken rubble zn

@ 434.3'-435' is garnet-rich zn
@ 435'-436.5' broken rubble zn
@ 436.5'-437' calc/silc alter'd clastics t/or volc-clastics (grnst) zn w/40°∠ to C.A. contacts
@ 438'-439.5' relict foliat'n t/or bedd'g w/50°∠ to C.A.

@ 439'-439.5' calc/silc alter'd clastics t/or volc-clastics (grnst) zn w/50°∠ to C.A. contacts
442'-446.7' med-dk brn to med-dk grn gar-pyx-chl skarn; rx mod fx'd; mod calcite vnlts, vns & patches; upper contact has 40°∠ to C.A.; lower contact has 60°∠ to C.A.
@ 446.4'-446.7' relict foliat'n t/or bedd'g w/50°∠ to C.A.
446.7'-450.4' pink f.g.-aphanitic syenite dike? or intrusive; same unit as deserib'd @ 62.5'-101'; non-magnetic; wkly fx'd; wk calcite vnlts; upper contact has 60°∠ to C.A. & lower contact has 70°∠ to C.A.; porphyritic text.
450.4'-454.7' med-dk brn to med-dk grn gar-pyx-chl skarn; rx wkly fx'd; mod calcite vnlts, vns & patches; upper & lower contacts are 70°∠ to C.A.

454.7'-466.1' med-dk grn to med-dk brn to black to med grey pyx-gar-chl skarn; rx mod-str fx'd; mod-str calcite vns, vnlts & patches; relict foliat'n t/or bedd'g text locally
@ 454.7'-455.2' relict foliat'n t/or bedd'g text w/30°∠ to C.A.

@ 458'-459' broken rubble zn
@ 459.3'-460' broken rubble zn
@ 461.5'-462.5' broken rubble zn

@ 464'-465' relict foliat'n t/or bedd'g text. w/30°∠ to C.A.
465'-466.1' flt zn str bx'd & hea'd w/calcite w/30°∠ to C.A.
466.1'-499.2' pink f.g.-aphanitic syenite dike? or intrusive; same unit as deserib'd @ 62.5'-101'; non-magnetic; wkly fx'd; wk calcite vnlts; upper contact very irregular & lower contact ≈ 80°∠ to C.A.; aphanitic chill zn margins ≈ ½" wide, wk calcite-chl vnlts; porphyritic

FT. / GRAPHIC LOG

400
410
420
430
440
450
460
470

MINERALIZATION

@ 403.8' very minor diss cpy assoc. w/ minor diss po w/in gar zn

@ 409.3' tr-½% diss cpy assoc. w/minor diss po w/in gar-pyx zn

@ 420' very minor diss cpy assoc. w/ very minor diss po w/in pyx-rich zn

@ 425' tr-¼% diss & small bleb of cpy assoc. w/diss po w/in gar-rich zn
@ 427.5' tr-½% diss & stringer of cpy assoc. w/ po & w/in gar-rich zn & calcite bleb

@ 438'-438.3' ≈ 2% stringers, small blebs & diss cpy assoc. w/diss po & w/in gar & pyx zns

442'-446.7' tr-½% stringers, small blebs & diss py w/minor diss cpy
@ 442.2' stringer of py
@ 443.5' & @ 445.3 minor diss cpy w/py
446.7'-450.4' tr diss py throughout unit

450.4'-454.7' tr-¼% diss & stringers of py & po w/minor diss cpy
@ 452.7' tr diss & stringers of cpy assoc. w/diss po & w/in gar-rich zn
454.7'-466.1' tr-¼% diss & stringers of py & very minor po; very minor cpy diss & stringers
@ 455' tr diss cpy assoc. w/diss & small blebs of po & py w/in pyx-rich zn

@ 461.5' tr-¼% stringer of cpy assoc w/diss py w/in gar-rich zn

@ 465.3' ¼% diss & small blebs of cpy w/in chl-rich zn
466.1'-499.2' tr diss py throughout unit

RECOVERY

Run	Run length	Core	%
402			
	11.0 ?	11.0	100
413			
	10.0	10.0	100
423			
	10.0	10.0	100
433			
	8.0	8.0	100
441			
444	3.0	3.0	100
	10.0	10.0	100
454			
	7.0	7.0	100
461			
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
399-404	5.0	23	290
404-409	5.0	11	61
409-414	5.0	8	120
414-419	5.0	15	93
419-424	5.0	6	160
424-429	5.0	68	100
429-434	5.0	164	87
434-439	5.0	40	200
439-444	5.0	143	240
444-446.7	2.7	470	200
446.7-450.4	3.7	45	5
450.4-456	5.6	13	150
456-461	5.0	<5	21
461-466.1	5.1	7	50

BOX

22
416.3
23
433.8
24
450.3
25
467.8
26

LITHOLOGY, ALTERATION, MISC.

499.2'-509.9' med-dk grn to med-dk brn to black to med grey pyx-gar-chl skarn; rx mod fx'd; mod calcite vns, vnlts & patches; skarn w/zn of pere calc/silc alter'd fg.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) w/pyx-rich skarn flood'g protolith w/clasts pervy replac'd by qtz silicification @ 500'-500.6'; relict foliat'n &/or bedd'g text locally
@ 500'-500.6' calc/silc alter'd clastics &/or volc-clastics (grnst) zn w/70°∠ to C.A.
@ 499.8'-500.6' relict foliat'n &/or bedd'g text. w/30°∠ to C.A.
@ 509.9' lower contact has 50°∠ to C.A.

509.9'-548.5' pink f.g.-aphanitic syenite dike? or intrusive; same unit as describ'd @ 62.5'-101'; wkly magnetic; wkly fx'd; wk calcite & calcite-chl vnlts aphanitic chill zn margins ≈ 1" wide; upper contact has 50°∠ to C.A & lower contact has 60°∠ to C.A.; porphyritic text.

FT. 470, 480, 490, 500, 510, 520, 530, 540

GRAPHIC LOG

MINERALIZATION

499.2'-509.9' tr-¼% diss & stringers of py & po w/local diss & stringers of cpy
@ 499.8' very minor stringer & diss cpy assoc. & replac'g py w/in pyx-rich zn
@ 501.1 very minor diss cpy w/in gar-rich zn
@ 507' tr diss cpy assoc. w/diss po w/in pyx-rich zn
@ 508.5'-508.8' ½%-1% diss & stringers of py w/cpy assoc. w/py w/in stringers & diss w/in pyx-rich zn
509.9'-548.5' tr diss py throughout unit

RECOVERY

Run	Run length	Core	%
471			
	10.0	10.0	100
481			
484	3.0	3.0	100
	10.0	10.0	100
494			
	10.0	10.0	100
504			
	5.0	5.0	100
509			
	5.0	5.0	100
514			
	10.0	10.0	100
524			
	10.0	10.0	100
534			
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
499.2-504	4.8	14	52
504-509.9	5.9	<5	49

BOX 26, 486.6, 27, 505.6, 28, 524, 29

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
	540											29
				544				NS				544
548.5'-554.5' med-dk grn to black to lt brn pyx-chl-gar skarn; rx mod-str fx'd, str calcite vns, vnlts & patches; relict foliat'n &/or bedd'g text locally; lower contact has 60°∠ to C.A. @ 549.5'-550' relict foliat'n &/or bedd'g w/ 40°∠ to C.A. @ 551'-552.5 flt or shear zn w/ str broken & bx'd rx heal'd w/ calcite; @ 552.7'-554.5' relict foliat'n w/ 60°∠ to C.A.	550		548.5'-554.5' tr-2% diss, stringers & small blebs of po, py & cpy; possible marcasite? diss locally @ 549'-550' 1%-2% stringers, diss & small blebs of cpy assoc. w/ po @ 552.5' small blebs of marcasite? assoc. w/ diss py w/in pyx-chl rich zn		10.0	10.0	100	548.5-554	5.5	117	230	
554.5'-560' med-dk grn to med-dk brn to black pyx-gar-chl skarn; rx mod fx'd, mod calcite vns, vnlts & patches; lower contact has 70°∠ to C.A. (⊥ to C.A.)			554.5'-560' tr-1% diss, small blebs & stringers of po, py & cpy @ 555'-557' ½%-1% diss, small blebs of cpy assoc. w/ po & wk py w/in gar-rich zns @ 558' minor vnlts of chalcedonic blue qtz	554								30
560'-569' pink f.g.-aphanitic syenite dike? or intrusive; same unit as describ'd @ 62.5'-101'; magnetic; wkly fx'd; wk calcite & calcite-chl vnlts; aphanitic chill zn margins = 6" wide; upper contact has 90°∠ to C.A. & lower contact has irregular angle from 30°∠-80°∠ to C.A. @ 566' shear zn w/ 30°∠ to C.A.; porphyritic text.	560		560'-569' tr diss py throughout unit		10.0	10.0	100	554-560	6.0	278	290	
				564								562.8
								560-569	9.0	53	15	
569'-583.5' dk grey-lt to dk grn-lt to dk brn f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) perv calc/silic alter'd w/ zns of pyx & gar or pyx-gar-chl skarn flood'g locally; rx str fx'd, mod-str calcite vnlts & calcite-chl vnlts; relict foliat'n &/or bedd'g locally @ 572.5'-576' is pyx-gar-chl skarn flood'd zn @ 571'-572' relict foliat'n &/or bedd'g w/ 70°∠ to C.A. @ 576.5'-581.3' relict foliat'n &/or bedd'g w/ 70°∠ to C.A.			569'-583.5' tr-¼% diss & stringers of py, po & very minor cpy locally		10.0	10.0	100					
				574				569-574	5.0	<5	97	
@ 573.7' ¼% stringers & diss cpy assoc. w/ diss py w/in pyx-rich zn												31
@ 578'-580.9' flt or shear zn w/ rx str broken to a broken rubble zn; possible hang'g wall contact is 30°∠ to C.A. & ft wall contact is 50°∠ to C.A. @ 581.9'-583' rx str broken w/ broken rubble zn @ 583'-583.4' relict foliat'n &/or bedd'g w/ 50°∠ to C.A.			@ 575.5' is siliceous patches w/in pyx-gar-chl skarn flood'd zn		5.0	5.0	100	574-579	5.0	6	67	
	580			579								
					3.0	3.0	100	579-582	5.0	9	55	580.9
583.5'-589' med-dk grn to med-dk brn-black pyx-gar-chl skarn; rx str fx'd, mod calcite vns, vnlts & patches; upper contact has ≈ 60°∠ to C.A. & lower contact has 80°∠ to C.A.			583.5'-589' tr-¼% diss & stringers of py, po & very minor cpy locally @ 587.5' diss bright red hem? or cinnabar? @ 587.7' diss & small blebs of cpy assoc. w/ diss py & gar-rich zn									
					9.0	9.0	100	584-589	5.0	9	11	
589'-637.5' dk grey-lt to dk grn-lt to dk brn f.g.-m.g. poorly sort'd tuffaceous clastics &/or volc-clastics (grnst) perv calc/silic alter'd w/ zns of pyx & gar or pyx-gar-chl skarn flood'g locally; rx str fx'd; mod-str calcite vnlts, vns & calcite-chl vnlts; relict foliat'n &/or bedd'g locally @ 589'-590.7' relict foliat'n &/or bedd'g w/ 20°∠ to C.A. @ 594.5'-596' relict foliat'n &/or bedd'g w/ 50°∠ to C.A. @ 596'-598' relict foliat'n &/or bedd'g w/ 20°∠-30°∠ to C.A. @ 598'-599' relict foliat'n &/or bedd'g w/ 50°∠ to C.A.	590		589'-637.5' tr-1% diss & stringers of po & py, w/ very minor cpy locally @ 589.2' very minor diss cpy assoc w/ diss py @ 590' minor stringer of cpy assoc w/ po stringer	591								32
					10.0	10.0	100	589-594	5.0	8	120	
								594-599	5.0	6	56	599.5
@ 601'-603' relict foliat'n &/or bedd'g w/ 30°∠ to C.A. @ 602'-606.5' broken rubble zn	600		@ 599.7' = 2% bleb of py w/in wk gar-pyx rich zn	601				599-604	5.0	15	150	
@ 605'-608' relict foliat'n &/or bedd'g w/ 30°∠ to C.A.			@ 604.5' = 2% stringers & diss py w/ very minor diss cpy assoc. w/ py		5.0	5.0	100					33
@ 608'-609.7' broken rubble zn @ 609'-609.7' foliat'n &/or bedd'g w/ 30°∠ to C.A.				606				NS				
	610				5.0	5.0	100	609-611	2.0	46	400	

LITHOLOGY, ALTERATION, MISC.

@610' minor blue calcedonic qtz silicificat'n along fx
@611'-613.5' mod pyx-gar skarn flood'g unit
@613.7'-614.7' relict foliat'n &/or bedd'g w/30°∠ to C.A.

@615.5'-617' mod pyx-gar skarn flood'g unit
@616.7'-619.2' relict foliat'n or bedd'g w/30°∠ to C.A.

@619.5'-623' pyx skarn'g or flood'g

@623.5'-624' broken rubble zn

@626'-627' pyx skarn'g or flood'g

@629.5'-633' relict foliat'n or bedd'g w/30°∠ to C.A.
@629.7'-630.5' pyx skarn'g or flood'g

@635'-635.5' relict foliat'n or bedd'g w/20°∠ to C.A.
@635.5'-636' pyx skarn'g or flood'g
@637.5' lower contact w/55°∠ to C.A.

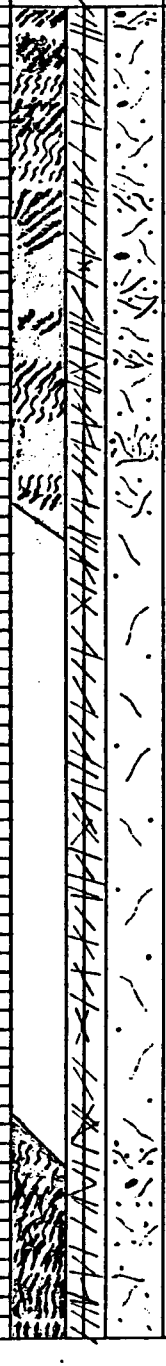
637.5'-670' pink f.g.-aphanitic syenite dike? or intrusive; same unit as describ'd @ 62.5'-101'; magnetic; wk'ly fol'd; wk calcite ± calsite-chl vnlts; aphanitic chill zn margins = 1'-2' wide; upper contact has 55°∠ to C.A. & lower contact has 45°∠ to C.A.; porphyritic text.

670'-694' dk grey-H to dk grn to lt to dk brn f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) perv calc/silic alter'd w/ zns of pyx ± gar or pyx-gar-chl skarn flood'g locally; rx mod-str fol'd; mod-str calcite vns, vnlts ± calsite-chl vnlts; relict foliat'n &/or bedd'g locally
@670'-676.4' relict foliat'n &/or bedd'g w/30°∠ to C.A.
@672.5'-676.4' mod pyx-gar skarn flood'g unit
@676.4'-679.5' str pyx-gar skarn flood'g unit
@679.5'-681' mod pyx-gar skarn flood'g unit w/ relict foliat'n &/or bedd'g w/20°∠ to C.A

FT.

610
620
630
640
650
660
670
680

GRAPHIC LOG



MINERALIZATION

@610'-611' ≈ 4%-5% stringers, blebs ± diss of po w/ ≈ 2%-3% of sulfide content being cpy assoc. w/ po

@615.5' diss or bleb of cpy assoc. w/ diss po

@620'-620.3' ≈ 5% stringers, vnlts ± diss py w/ minor diss cpy w/ py
@623.5' 1% bleb of po w/ diss cpy w/in po
@624'-625.5' ≈ 1½%-2% vnlts, stringers ± diss po w/ wk py ± diss/stringers of cpy ≈ ½ of sulfides

@628.3'-628.6' ≈ 5% stringers ± diss cpy w/ minor diss po assoc. w/ pyx-rich zn
@632.5'-634' ≈ 5%-7% vns, vnlts ± diss py ± marcasite? w/ ≈ 1%-2% of sulfides diss ± vnlts of cpy assoc. w/ py ± marcasite?

637.5'-670' tr diss py throughout unit

670'-694' tr-2% diss ± stringers of po ± py w/ very minor cpy locally
@670'-670.5' ≈ ½% diss py ± po w/ very minor diss cpy w/ py mostly
@673' ± @675' ≈ 1% diss po along foliat'n w/ tr diss cpy assoc. w/ diss po ± pyx floodg

RECOVERY

Run	Run length	Core	%
611			
614	3.0	3.0	100
	10.0	10.0	100
624			
	10.0	10.0	100
634			
	10.0	10.0	100
644			
	10.0	10.0	100
654			
	10.0	10.0	100
664			
	10.0	10.0	100
674			
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
609-611	2.0		
NS			
624-629	5.0	46	350
629-634	5.0	<5	150

BOX

33
615.7
34
634.6
35
652.4
36
670.3
37

LITHOLOGY, ALTERATION, MISC.

@681'-682' wk-mod pyx-gar skarn flood'g unit

@685'-691' relict foliat'n &/or bedd'g w/10°∠-30°∠ to C.A.
@685'-686' broken rubble zn

@693.5'-694' mod pyx skarn flood'g unit

@694' lower contact has ≈ 75°∠ to C.A.
694'-717' lt-med grn to med-dk brn to black pyx-gar-chl-ept skarn; rx mod fx'd, mod calcite vns, vnlts & patches; upper contact ≈ 75°∠ to C.A. but irregular & lower contact has gradational contact to C.A.
@696.5' qtz silica vnlts cutt'g rx unit

@700'-700.5' broken rubble zn

@708.3'-708.6' broken rubble zn
@709'-710.5' ≈ 5%-10% of rx unit has tremolite w/in skarn as patches

717'-721' lt-med grn to med-dk brn tg white to black tremolite-pyx-gar-chl skarn; ≈ 30% of unit is tremolite patches; rx mod fx'd, mod calcite vns, vnlts & patches; upper contact gradational & lower contact has 70°∠ to C.A.
721'-758' pink fg.-aphanitic syenite dike? or intrusive; same unit as describ'd @ 62.5'-101'; magnetic; wkly fx'd; wk calcite & calcite-chl vnlts; aphanitic chill zn margins ≈ 1½'-2' wide; upper contact has 70°∠ to C.A. & lower contact has irregular contact but is logg'd w/70°∠ to C.A.; rx unit has porphyritic text. but shows holocrystalline or equigranular text. @ 724'-752'

FT. / GRAPHIC LOG

680
690
700
710
720
730
740
750

MINERALIZATION

@693' ≈ 2% diss po w/tr diss cpy assoc. w/diss po

694'-717' tr-1% diss & blebs of py & po w/very minor diss cpy? assoc. w/diss py locally; diss po content strongest @ 694'-696'

@703.3'-703.8' possible minor diss cpy? assoc. w/diss & blebs of py w/ ≈ ½%-1% sulfide content in rx unit

@709'-710.5' = 5%-10% of unit has tremolite w/in skarn
@711.6'-711.8' possible minor diss cpy assoc. w/diss py w/ = ¼% sulfide content in rx unit

717'-721' tr-¼% diss py w/in skarn unit

721'-758' tr diss py throughout unit

RECOVERY

Run	Run length	Core	%
684			
694	10.0	10.0	100
702	8.0	8.0	100
712	10.0	10.0	100
721	9.0	9.0	100
731	10.0	10.0	100
734	3.0	3.0	100
744	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
694-696.5	2.5	212	540
696.5-701	4.5	499	730
701-706	5.0	5796	3300
706-711	5.0	613	1100
711-716	5.0	207	280
716-721	5.0	20	31

BOX

37
689.3
38
707
39
725.1
40
743.6
41

LITHOLOGY, ALTERATION, MISC.

758'-777.5' med-dk grey to black to med grn f.g.-m.g. poorly sort'd tuffaceous clastics f/or volc-clastics (arrst) perv calc/silic alter'd w/minor zns of pyx skarn flood'g, locally; rx mod-str fx'd; mod-str calcite vns, vnlts f calcite-chl vnlts; relict foliat'n f/or bedd'g locally; upper contact irregular w/lower contact which has 60°∠ to C.A.
@758'-761' relict foliat'n f/or bedd'g w/20°∠ to C.A.
@ 761'-762.4' broken rubble zn (@ 765'-765.8' also
@ 760.5'-761' pyx skarn flood'g unit
@ 768'-768.5' broken rubble zn
@ 768.5'-772' mod pyx skarn flood'g unit locally along wk relict foliat'n f/or bedd'g w/20°∠ to C.A.

@ 773'-777' relict foliat'n f/or bedd'g w/30°∠ to C.A.

777.5'-820' pink f.g.-aphanitic porphyritic syenite dike? or intrusive; same unit as describ'd @ 62.5'-101'; magnetic; wkly fx'd; wk calcite f calcite-chl vnlts; aphanitic chill zn margins 1½'-2' wide; text. almost holocrystalline w/in central portion of unit; upper contact has 60°∠ to C.A. f lower contact has 70°∠ to C.A.

FT. / GRAPHIC LOG

750
760
770
780
790
800
810
820

MINERALIZATION

758'-777.5' 1%-10% diss, stringers f blebs to semi-msv zns of py w/ 1%-5% of the sulfide content being diss cpy? assoc. w/ py
@758'-762.5' tr-2% stringers, blebs f diss py
@ 762.5'-776.5' abdt sulfides; 1%-10% stringers f blebs to semi-msv zns of py w/1%-5% of sulfide content being diss cpy? assoc. w/py (@765'-765.8'= 10% semi-msv blebs f diss py f cpy w/50% each sulfide) (@ 767'-767.5'=10% blebs f diss py f cpy w/50% of ea. sulfide (@775'-776.5'= 5%-7% blebs, stringers f diss py f cpy w/50% of ea. sulfide)

777.5'-820' tr diss py throughout unit

RECOVERY

Run	Run length	Core	%
752			
	10.0	10.0	100
762			
	7.0	7.0	100
769			
	7.0	7.0	100
776			
	8.0	8.0	100
784			
	10.0	10.0	100
794			
	10.0	10.0	100
804			
	10.0	10.0	100
814			
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
758-762	4.0	<5	190
762-769	7.0	29	490
769-776.5	7.5	13	210

BOX

41
762
42
779
43
798.2
44
817.2
45

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
820'-828' med-dk grey to black to med grn f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) perv calc/silic alter'd w/minor zns of pyx skarn flood'g locally; rx mod-str fx'd; mod-str calcite vns & vnlts & calcite-chl vnlts; relict foliat'n &/or bedd'g text locally; upper & lower contacts are 60°∠ to C.A.; relict foliat'n &/or bedd'g @ 20°∠ to C.A. @822.2'-822.6' debris flow bx text w/in unit 827.2'-828' = pyx	820		820'-828' = 1% stringers, vnlts, diss & blebs of py w/minor diss cpy assoc. w/py mostly throughout unit @ 821.7' = 2% blebs & diss py w/vnlt & diss cpy & = 1% of sulfides cuprite? bleb @ 825'-827' minor diss cpy assoc. w/py	824	10.0	10.0	100	820-824	4.0	14	220	45
828'-877' med-dk grn to med-dk brn to black pyx-gar-chl ± ept skarn; rx mod-str fx'd; mod-str calcite vns, vnlts & patches; upper contact w/60°∠ to C.A. & lower contact w/80°∠ to C.A.	830		828'-877' tr-2% diss, blebs & stringers of py & po w/diss & blebs of cpy assoc w/po & generally gar-rich zns	834	10.0	10.0	100	824-828	4.0	43	230	
@ 831.9'-832.2' broken rubble zn			@ 832.2'-833' = 2% blebs & diss po w/ cpy assoc. together w/50% of ea. sulfide & minor red cuprite? w/in blebs					828-833	5.0	294	370	
@ 834.9'-835.1' broken rubble zn			@ 834'-834.7' = 1% blebs & diss cpy & po assoc. together w/ cpy>po w/in gar-rich zns @ 836.3'-838' = 5% blebs, stringers & diss po assoc w/cpy & w/in gar.-rich zn & = 3% of 5% sulfides is cpy					833-838	5.0	242	670	836
@ 838'-838.4' broken rubble zn @ 839.5'-841' shear or flt zn w/ tectonic bx heal'd w/calcite w/hang'g wall of 55°∠ to C.A. & ft wall w/70°∠ to C.A.	840		@ 839.3' = 2% blebs & diss po w/tr diss cpy assoc. w/po w/in gar-rich zn		10.0	10.0	100	838-843	5.0	283	370	
@ 843'-843.5' broken rubble zn			@ 844.5' tr diss py & po w/tr diss cpy w/ both sulfides	844				843-848	5.0	1438	1500	46
@ 848'-850.5' abdt calcite patches			@ 846'-847.7' = 1%-2% diss, blebs & stringers of py & minor po w/ cpy & cpy = 50% of sulfides w/in pyx-gar zns					848-853	5.0	4774	2300	
@ 850.5' patches of silica-calcite	850		@ 851.5'-853.2' 1%-2% blebs & diss py & po w/ = 50% of sulfides cpy assoc w/both sulfides & w/in pyx-gar-rich zns		10.0	10.0	100					854
@ 856'-862' abdt calcite patches @ 857' zn of ept flood'g w/in pyx-gar-chl skarn @ 858'-858.5' perv silicification w/calcite patches				854				853-858	5.0	3996	3000	
@ 860'-861.5' broken rubble zn	860		@ 856' diss py w/minor diss cpy assoc. w/ py @ 858.5'-859' = ¼% diss py w/very minor diss cpy assoc. w/py & pyx-rich zn @ 860.5'-863.1' = ½% diss py w/very minor diss cpy assoc. w/py		10.0	10.0	100	858-863	5.0	2601	2500	47
@ 863.2'-863.5' & lt or shear zn w/80°∠ to C.A. w/ tectonic bx heal'd w/calcite & chl			@ 863.5'-865' = 5% blebs, stringers & diss of po w/ cpy assoc. & w/in gar-rich znt cpy = 50% of sulfide content	864								
@ 865'-868' rx str broken almost to a rubble zn			@ 867'-877' = 5%-7% blebs, stringers & diss po & cpy w/ cpy 50%-60% of sulfide content & assoc. w/ gar-rich zns mostly but also w/ pyx zns		10.0	10.0	100	863-868	5.0	88	490	
877'-887.7' med-dk grey to black to med grn f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) perv calc/silic alter'd w/minor zns of pyx ± gar skarn flood'g locally; rx mod-str fx'd; med calcite vns, vnlts & calcite-chl vnlts; relict foliat'n &/or bedd'g locally; upper & lower contacts have 80°∠ to C.A.	870			874				868-873	5.0	116	1200	872
@ 878.5'-888.5' pyx-gar-chl skarn zn @ 880'-881' relict foliat'n &/or bedd'g w/20°∠ to C.A. @ 883'-883.7' pyx-gar chl skarn zn @ 886.5'-887 bx'd flt or shear zn heal'd by calcite & chl (text.)			877'-887.7' = 1% diss & stringers of py w/pyx-rich zns w/ = 2% blebs, stringers & diss cpy & po locally @ 879.2'-879.5' pyx-rich zn w/ = 2% stringers, blebs & diss cpy & po assoc. w/ 70% of sulfides is cpy @ 885.4' = 1% blebs of cpy & po w/ = 2% sulfide content cpy & assoc. w/pyx zn		10.0	10.0	100	873-877	4.0	29	300	
887.7'-915' med-dk grn to med-dk brn to black pyx-gar-chl skarn; rx mod-str fx'd; mod-str calcite vns, vnlts & patches; upper contact has 80°∠ to C.A.; relict f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) text. w/perv calc/silic	880			884				877-881.3	4.3	20	110	
								881.3-886	4.7	22	83	48
			877.7'-915' tr-7% blebs, stringers & diss po w/cpy assoc. together w/50%-70% of sulfide content being cpy & assoc. w/gar-rich zns generally		10.0	10.0	100	886-891	5.0	26	12	
	890											

936'-938.2' [illegible] le/msv magnetite/garnet + msv po±cpy/pyroxene + weak po±cpy/garnet + [illegible] n ± cpy/msv magnetite/marble
Zonation of sk[illegible] ng & sulfides when in contact with marble

Pg 14[illegible]

LITHOLOGY, ALTERATION, MISC.	FT.	MINERALIZATION
alter'n protolith locally	890	@ 899.7-894 tr-minor diss po & cpy
@ 892.5-893' relict f.g.-m.g. poorly sort'd clastic &/or volc-clastic (grnst) w/ perv calc/silic alter'n text. protolith w/ clasts perv replac'd by qtz silicificat'n		@ 894'-899.5' 1%-7% blebs, stringers, diss cpy & po w/ definite assoc. w/ each other & cpy content 50%-70% of sulfides usually assoc. w/ gar-rich zn
@ 895' blue calcedonic qtz-calcite ± py vn (late stage)		
@ 896.5'-897' tectonic bx flt or shear zn w/ 65° to C.A. & heal'd w/ chl & calcite		
@ 897' blue calcedonic qtz-calcite ± py vn (late stage)		
@ 899' blue calcedonic qtz-calcite ± py vn (late stage)		
@ 899.5'-901' calc/silc alter'd f.g.-m.g. poorly sort'd clastic &/or volc-clastic (grnst) text protolith w/ clasts perv replac'd by qtz silicificat'n; irregular contacts & relict foliat'n w/ 30° to C.A.	900	
		@ 903.3'-904' ≈ ½% blebs & diss cpy w/ minor diss po assoc. together
		@ 905' small bleb & diss silver sulfide (as py?) w/ diss cpy assoc. together w/in gar-rich zn
@ 907'-907.5' broken rubble zn		@ 905.5'-909.5' diss py throughout unit & tr-1%
		@ 909.7'-910' ≈ 25%-30% blebs to semi-msv, stringers & diss cpy assoc w/ po & 75% content of sulfides is cpy & assoc. w/ gar-rich zn
@ 911'-911.7' broken rubble zn	910	@ 910'-915' tr-1% diss py w/ very minor cpy
@ 911.5'-912' zn of calc/silc alter'd calcst f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) text protolith		915'-926.5' ≈ 1%-2% blebs, stringers & diss py & po w/ very minor diss cpy assoc w/ po & py & very local
@ 915' lower contact irregular contact to unit below		@ 916.5'-917.5' ≈ 1% blebs & diss of po only - no py w/in this zn
915'-926.5' white - lt to med grn - dk brn tremolite-pyx-gar-chl skarn; tremolite ≈ 30%-50% of rx unit in pyx-rich skarn; upper contact irregular & lower contact has 80° to C.A.; abdt calcite patches & vns & vnlts; rx mod fx'd		
@ 916'-917.5' abdt calcite patches w/in tremolite-rich skarn	920	
@ 923.5'-924.7' abdt calcite patches w/in tremolite-rich skarn		@ 923.6'-923.3' ≈ 2%-3% blebs & diss of po & py w/ ½% diss cpy assoc. w/ both po & py
926.5'-928.3' dk brn-med grn gar-pyx-chl skarn; mod fx'd; mod calcite vns, vnlts & patches; lower contact 70° to C.A.		@ 924.7'-924.9' 3%-5% blebs of po & py
@ 927.5'-928' flt or shear zn w/ tectonic bx heal'd w/ calcite; 80° to C.A.		926.5'-928.3' ≈ 2%-3% blebs & diss of po & py mix, w/ ≈ 1% diss cpy w/in sulfides
928.3'-933.8 med-dk grey to black to med grn & dk brn f.g.-m.g. poorly sort'd clastics (or volcaniclastics/grnst) perv calc/sil alter'd w/ minor zns of pyx ± gar skarn flood'g locally; rx mod fx'd; mod calcite vns & vnlts & calcite-chl vnlts; relict foliat'n &/or bedd'g locally @ 35° to C.A. lower contact	930	928.3'-933.8 tr diss py except locally
		@ 930.7' ≈ 3% large bleb of po w/ ≈ 30% diss cpy assoc. w/ po & w/in bleb
		@ 931.7 ≈ 1% stringers or vnlts of cpy & po w/ 75% of vnlts being cpy
933.8'-936' white c.g. marble w/ minor chl vnlts; lower contact 75° to C.A.		933.8'-936' tr diss py w/in marble
936'-938.2' dk brn-med grn-black magnetite-gar-pyx-chl skarn; rx mod fx'd; mod calcite vns, vnlts & patches; str sulfides & zonation of magnetite to gar to pyx (marble → magnetite → garnet → pyx) see top of page		936'-938.2' ≈ 20%-30% locally blebs to semi-msv po & cpy assoc. together & w/in gar-rich zn & 40% of sulfides cpy; ≈ 10% msv mag.
938.2'-939' white c.g. marble w/ minor chl vnlts; lower contact 70° to C.A.		938.2'-939' 4% msv blebs po w/ 1% diss cpy
939'-939.7' dk grn-dk brn magnetite-gar-pyx-chl skarn	940	939'-939.7' 20% msv blebs po/cpy 50% ea.
939.7'-945.3' pink f.g.-aphanitic porphyritic syenite dike? or intrusive; same unit as descrb'd @ 62.5'-101'; magnetic; wkly fx'd; wk calcite & calcite-chl vnlts; upper contact has 75° to C.A. & lower contact has 30° to C.A.; chill zn marginal wid[illegible]		939.7'-945.3' tr diss py throughout unit
945.8'-951.6' dk-med brn to med grn gar-pyx-chl skarn; rx wkly fx'd; mod calcite vns, vnlts & patches; upper contact has 70° to C.A. & lower contact is a flt contact w/ 40° to C.A.		945.3'-951.6 ≈ 20%-30% sulfides throughout unit w/ blebs to semi-msv patches or clots & diss po w/ cpy assoc. w/ po clots & both sulfides assoc. w/ gar-rich skarn; ≈ 40% of sulfides is cpy; "hot sulfide zn"
951.6'-966.5' med-dk grey to black to med grn & dk brn f.g.-m.g. poorly sort'd tuffaceous clastics &/or volc-clastics (grnst) perv calc/silc alter'd w/ minor zns of pyx ± gar skarn flood'g locally; thin dirty marble inter-beds locally; upper contact is major flt zone w/ 40° to C.A. displac'g skarn above in hang'g wall w/ clastics below in ft wall; rx str fx'd & foliat'd due to flt shear'g; [illegible] calcite vns & vnlts heal'g tectonic flt bx	950	951.6'-966.5 tr-1% stringers, blebs & diss py w/ minor diss cpy assoc w/ py locally
@ 951.6'-956' is major flt zn descrb'd above; flt wall w/ 40° to C.A.		@ 954'-954.4' ≈ 1%-2% stringers & diss py w/ 2% diss cpy w/in sulfide content & assoc. w/ [illegible]
@ 951.6'-953.8' str foliat'n w/ 40° to C.A. due to flt shear'g [illegible]		@ 954.9' & 955.4' ≈ 1%-2% stringers & diss py & cpy assoc. together w/ cpy ≈ 30% of sulfide content & w/in gar ± pyx skarn & bad'g on both margins of marble interbed
@ 954.8'-955.4' dk grey m.g. marble interbed w/ 60° to C.A.		
@ 953.6'-957.2' dk grey m.g. marble interbed w/ 50° to C.A.	960	@ 957.2' ≈ 3% blebs & semi-msv po w/ minor diss cpy w/in po & assoc. w/ pyx-rich zn in contact w/ marble interbed
@ 955.4'-958.6' relict foliat'n &/or bedd'g w/ 35°-50° to C.A.		

GRAPHIC LOG

RECOVERY

Run	Run length	Core	%
894	10.0	10.0	100
904	10.0	10.0	100
913	9.0	9.0	100
923	10.0	10.0	100
933	10.0	10.0	100
943	10.0	10.0	100
953	10.0	10.0	100
	7.0	7.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
891-896	5.0	75	130
896-899.5	3.5	67	310
899.5-903	3.5	24	140
903-910	7.0	39	130
910-913.3	3.3	574	320
913.3-918	4.7	1471	1700
918-923	5.0	86	230
923-928	5.0	16389	8600
928-933.5	5.5	89	310
933.5-939.7	6.2	272	1300
939.7-945.8	6.1	6	110
945.8-951.6	5.8	533	4600
951.6-956	4.4	31	270
NS			

BOX

48 (893.7)
49
909.3
50
928
51
945.5
52

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
@961'-966.5' relict foliat'n t/or bedd'g w/ 10°-30° to C.A.	960		@961.2'-961.4' = 3% large bleb, diss t stringers of py w/minor diss cpy assoc. w/ py stringers t bleb	960						52
@966.5' lower contact of rx unit has 60° to C.A.										963.2
966.5'-972' med grey t lt grn f.g.-m.g. marble w/stylolites of irregular shaped interbeds of f.g.-m.g. poorly sort'd clastics t/or volc-clastics perv calc/silc alter'd (grnst); lower contact has ≈80° to C.A.; stylolites ¼"-3" wide, rx mod fx'd; mod calcite vns t vnlts			966.5'-972' tr-¼% diss t stringers of py w/minor diss po t cpy locally		10.0	10.0	100			
	970	mb	@969.5' small patch ≈ ¼% diss py, po t cpy assoc. together w/in marble	970				NS		
972'-973.5' lt-dk grn f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) perv calc/silc alter'd; mod fx'd; wk calcite vnlts, lower contact irregular t relict foliat'n t/or bedd'g very irregular			972'-973.5' tr-½% diss t stringers of py t po w/minor blebs							
973.5'-982' med grey t lt grn f.g.-m.g. marble w/stylolites of irregular shaped interbeds ½"-6" wide of f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) w/ perv calc/silc alter'n; mod fx'd; mod calcite vns t vnlts			973.5'-982' = 1% diss, stringers t minor blebs of py w/very minor po; usually occurring along margins of stylolites t only ½" wide		10.0	10.0	100			
@975'-975.4' broken rubble zn										
@982' irregular shaped contact	980		@981.7'-982' = 5% blebs, stringers t diss py along margins of stylolites	980						980
982'-985' lt-dk grn f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) perv calc/silc alter'd; mod fx'd; mod calcite vns t vnlts; lower contact irregular t relict foliat'n t/or bedd'g text. very irregular			982'-985' = ½%-1% stringers, blebs t diss py mostly along margins of unit		8.0	8.0	100			
985'-993' med grey t lt grn f.g.-m.g. marble w/stylolites of irregular shaped interbeds ½"-3" wide of f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) w/ perv calc/silc alter'n; mod fx'd; mod calcite vns t vnlts			985'-993' = tr-1% stringers, blebs t diss py usually occurr'g along margins of stylolites	988						
@990' is flt or shear zn w/tectonic bx healed w/calcite t has 30° to C.A.	990	mb	@990' = 2% diss t stringers of py along flt or shear zn contacts		6.0	6.0	100			54
993'-996.5' lt-dk grn to lt brn f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) perv calc/silc alter'd; mod-str fx'd, mod calcite vns t vnlts; irregular lower contact, irregular relict foliat'n t/or bedd'g text.; wk garnet flood'g @ 993'-993.5', volc bx text @ 996'-996.5'			993'-996.5' = tr-1% stringers, blebs t diss py w/in gar-rich zn t w/in unit	994						
996.5'-1003.6' med grey t lt grn f.g.-m.g. marble w/stylolites of irregular shaped interbeds ½"-8" wide of f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) w/perv calc/silc alter'n; mod fx'd; mod calcite vns t vnlts			@996' = 1% diss t blebs of py							
@1000.5'-1001.5' mostly clastic t/or volc-clastic (grnst) text. w/abdt marble patches includ'd w/in it	1000	mb	996.5'-1003.6' tr-1% stringers, blebs t diss of py		10.0	10.0	100			
1003.6'-1014' lt-dk grn to black f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) perv calc/silc alter'd; mod-str fx'd, mod-str calcite vns t vnlts; irregular to ≈ 60° to C.A. lower contact (gradational); irregular relict foliat'n t/or bedd'g text. locally			@1003'-1003.5 = 5% blebs, stringers t diss py as approach'g rx unit below							
@1005'-1006' relict foliat'n t/or bedd'g text. w/20° to C.A.			1003.6'-1014' tr-1% stringers, blebs t diss py throughout unit; w/ bleb of diss po t cpy locally	1004						
@1008.5'-1009' broken rubble zn										
@1009'-1009.5' relict foliat'n t/or bedd'g text. w/30° to C.A.	1010	mb	@1009.5' 1" wide bleb ≈ 3% of diss po t cpy w/ ≈ 60%-75% of bleb is cpy assoc. w/po		10.0	10.0	100			55
@1010'-1010.8' broken rubble zn										
@1012'-1014' relict foliat'n t/or bedd'g text. w/ 10° to C.A.			1014'-1018.8' tr diss py throughout unit	1014						
1014'-1018.8' med grey t lt grn f.g.-m.g. marble w/ wk stylolites of irregular shaped interbeds ½"-1" wide of f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst) w/perv calc/silc alter'n, mod fx'd; mod calcite vns t vnlts; siliceous band locally			@1016.3'-1017.3' perv siliceous band cutt'g unit w/ 20° to C.A.							1015.5
1018.8'-1032' med-dk grn to black f.g.-m.g. poorly sort'd tuffaceous clastics t/or volc-clastics (grnst) w/perv calc/silc alter'n; str fx'd t bx'd; mod-str calcite t calcite-chl ± py vns t vnlts; contact @ 1018.8' slightly irregular but ≈ 40° to C.A. (slightly gradational); irregular relict foliat'n t/or bedd'g text. locally; flt tectonic bx'n locally; perv pyx skarn'g t/or flood'g locally	1020	mb	1018.8'-1032' ½%-1% stringers, vnlts, blebs t diss throughout t help'g heal bx'n t calcite locally; very minor diss cpy assoc w/py locally		10.0	10.0	100			56
@1018.8'-1020' perv pyx skarn flood'g rx unit			@1024'-1025' = 1% stringers t vnlts of py w/very minor diss cpy assoc w/ py vnlts	1024						
@1020.8'-1024' relict foliat'n t/or bedd'g w/ 20°-20° to C.A.			@1027.5'-1028.4' = 2%-3% stringers, vnlts, blebs t diss of py w/ diss cpy of ≈ ½% of sulfide content assoc w/in py		8.0	8.0	100			
@1022'-1023' broken rubble zn t @ 1024'-1029' rx bx'd above flt zn										
@1024'-1031' relict foliat'n t/or bedd'g w/ 10°-20° to C.A.										
@1029'-1032' major flt zn w/ str bx'n heal'd by calcite vns t vnlts ± chl ± py w/ hang'g wall w/ 20° to C.A contact t hole ends still w/in flt (flt bx); @ 1031'-1032' broken rubble zn	1030			1030						
@1032' T.D. = E.O.H.	1032			7032						1032

DIAMOND DRILL HOLE LOG

Company Orvana Resources Corporation

Property Ehult - Dead Horse	Hole No. E95
Location 50m N 36° E of E95-4	Bearing at Collar 126°
	Inclination at Collar -50°
Coord. - Collar N 5446975	
E 386905	Length 845'
Elev. - Collar 1074m	Core Size NQ
Date started 9-28-95	Logged by Lance Senter & Dayle Albers
Completed 10-2-95	

LEGEND

SURVEY

Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
30'-186.2 dk brn-med to dk grey-med grn biotite hornfels w/ perv sec. bio & f.g. sericite alter'n & calc/silc alter'n; zns of f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) w/ perv. calc/silc. alter'n - this indicates unit could be v.f.g.-m.g. poorly sort'd clastics &/or volc-clastics w/ perv alter'n, stated above throughout unit; rx mod to str. fx'd & bx'd locally; fxs mostly 50°-70° to C.A.; broken rubble zn locally; wk-mod calcite vns & vnlts; minor sulfides; dk grn.-black chl coat'g. fxs, wk qtz vns & vnlts @ 34'-36' broken rubble zn @ 38.5'-47' fault or shear zn w/ str broken zn w/ fxs coat'd w/ dk grn-black chl & cc & hanging wall contact has possible 20° to C.A. @ 47'-51' f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) w/ perv calc/silc alter'n, no relict bedd'g or foliat'n could be recogniz'd	0 10 20 30 40 50	bio hnfls	30'-186.2 tr-1% diss po & py throughout unit; hairline stringers of py & po also @ 47'-51' 1%-3% diss & stringers of po & py	30 35 40 43 47	5.0 5.0 3.0 4.0 8.0	3.5 5.0 2.7 4.0 8.0	70 100 90 100 100	47-51	4.0	32	87	30 1 47.5 2

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
								47-51	4.0	
	50			55	8.0	8.0	100			2
@ 57'-82' fault zn w/ abdt. bx'n heal'd w/chl, clay gouge, epi, & calcite vnlt'g & vns as matrix between bx clasts; hang'g wall & ft wall contacts w/ 20°∠ to C.A.; flt or tectonic bx		bio hnfls	@ 57'-82' very wk tr diss py							
@ 61'-65' same rx type as @ 47'-51' w/ relict bedd'g or foliat'n @ 40°∠ to C.A. locally w/in flt zn	60			65	10.0	10.0	100			64
	70	bio hnfls		75	10.0	10.0	100			3
				81	6.0	6.0	100			81
@ 82'-83.5' same rx type as @ 47'-51' w/ conglomeritic text. also	80		@ 82'-83.5' tr diss & stringers of py							
@ 87.5'-89.5' broken rubble zn		bio hnfls		91	10.0	10.0	100			4
@ 89.5'-97' same rx type as @ 47'-51' w/ conglomeritic text. & flt zn w/ abdt broken rx & local bx'n heal'd w/ calcite vns & vnlt'g, wk clay gouge & abdt chl & wk ept.; hang'g wall & ft wall contacts w/ 20°∠ to C.A.; tectonic bx	90		@ 89.5'-97' tr - ½% diss py & po							
@ 89.5-91' broken rubble zn				101	10.0	10.0	100			99
@ 98'-100' broken rubble zn	100									
@ 101'-105.5' fault zn w/ abdt bx'n heal'd w/ chl, calcite vns & vnlts, & wk clay gouge & ept.; hang'g wall & ft wall contacts w/ 30°∠ to C.A.; flt or tectonic bx			@ 101'-105.5' tr diss & stringers of Py							
		bio hnfls		110	9.0	9.0	100			5
@ 109'-110' broken rubble zn	110			112	2.0	2.0	100			113
				115	3.0	3.0	100			
	120				10.0	10.0	100			6

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@ 122'-124.5' siliceous flood'g follow'g relict foliat'n w/ 10°∠ to C.A. w/in bio. hnfls	120	bio hnfls	@123'-124' 1%-2% diss po along siliceous foliat'n	125	10.0	10.0	100					6
				130	5.0	5.0	100					130.5
@ 137.5' shear zn w/in bio hnfls @ 30°∠ to C.A. w/wk clay gouge w/in 2" wide zn	130		@135'-145' 1% diss f stringers of py f po	135	5.0	5.0	100					7
@142'-143' broken rubble zn	140	bio hnfls		143	8.0	8.0	100					
@ 147'-148' broken rubble zn				148	9.0	8.0	100					148
@155.5'-156' broken rubble zn	150			152	6.0	6.0	100					8
@162.5' wk garnet flood'g along calcite vns/vnlts @ 163.2'-164' siliceous flood'g w/in calc/sile alter'n w/in bio hnfls unit	160		@157.5'-160' 1%-2% diss f stringers of po f py w/ minor cpy	158				157.5-160	2.5	26	120	
@168'-168.3' is ½" wide pyx-calcite vn w/ 20°∠ to C.A.		bio hnfls		165	7.0	7.0	100					165
@170'-170.5' dk grn aphanitic porphyritic syenite dike w/ 70°∠ to C.A. contacts cutting bio hornfels	170			175	10.0	10.0	100					9
		bio hnfls	@183.5 tr cpy f py along calcite vnlt	185	10.0	10.0	100					183.7
186.2'-228.7' pink f.g. porphyritic syenite dike? or intrusive; K-spar dominant groundmass w/ 10%-15% 2mm-10mm euhedral phenos of white-clear plagioclase? (albite?) mostly argillic'd w/ 3%-5% <1mm-3mm euhedral phenos of black biotite; wk diss sericite;	180		@185'-184.2' 2%-3% diss f blebs cpy f py @186.2'-228.7' very minor (tr) diss py throughout unit					185-186.2	1.2	208	340	10
	190			10.0	10.0	100						

LITHOLOGY, ALTERATION, MISC.

wkly magnetic w/ finely diss magnetite; wk calcite vns & vnlt's w/in rx & filling fxs; wkly fx'd w/ predominant 50° ∠ to 60° ∠ to C.A. & wk 30° ∠ to C.A.; very minor diss py; aphanitic porphyritic text chill zns on margins of dike? or intrusive for 2' wide; upper & lower contacts are 60° ∠ to C.A.; minor chlorite along fxs locally; some plagioclase phenos replac'd by white clay (argillic'd) & some replac'd by chlorite in center of xtals & outside margins still unalter'd

228.7'-232' dk brn-med grn gar-pyx-chl skarn w/relict text. of f.g.-m.g.-conglomeritic poorly sort'd clastics & / or volc-clastics (grnst) protolith w/clasts replac'd by qtz (silicification); wk cc fx'g

232'-235.8' med grn-dk brn-dk grey pyx-gar-chl skarn; w/relict text. of f.g.-conglom. poorly sort'd clastics & / or volc-clastics (grnst) protolith w/silicif'd clasts, wk cc, str fx'd w/chl coat'g surfaces; unit str broken

235.8'-240' Same rx unit as describ'd @ 228.7'-232'; gar-pyx-chl skarn; wk cc vnlt'g; rx str fx'd locally @ 235.8'-238'

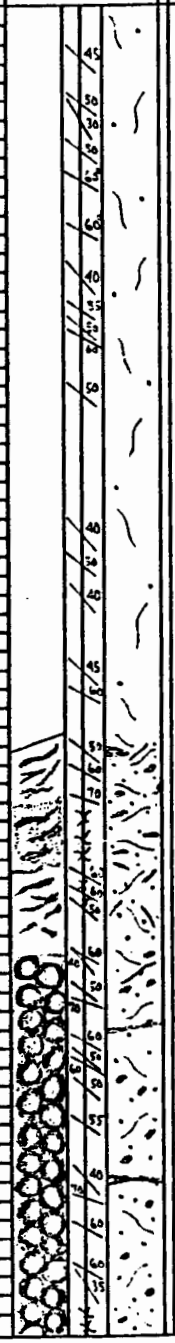
240'-270' dk grey-dk brn-med grn c.g.-conglomeritic poorly sort'd clastics & / or volc-clastics (grnst) w/clasts replac'd by perv silicification; matrix between clasts consists of 10%-50% of the rx unit & is a gar-pyx-chl skarn (difficult not to call this rx unit a gar-pyx-chl skarn); sulfides make up matrix also w/ 1%-5% & msv locally; rx mod fx'd, wk calcite vns & vnlt'g; conglomeritic silicif'd clasts sub-round'd to round'd & 2mm-12mm in size

@ 258.5'-260' broken zn

FT.

190, 200, 210, 220, 230, 240, 250, 260

GRAPHIC LOG



MINERALIZATION

228.7'-232' 10%-20% msv to blebs to diss po, py & cpy; 2%-5% of the sulfides are blebs & diss cpy w/in po

232'-235.8' 2%-10% msv to blebs to diss po, py & cpy; 1% of sulfides are diss cpy w/in po; late py vnlts cut other sulfides & rx unit

235.8'-240' 2%-10% msv to blebs to diss po & minor py

240'-270' 1%-5% diss & blebs of po & py w/ tr-2% cpy w/in str po zns; msv po-py-cpy zns locally; late py vnlts cut msv po zns

@ 243.7'-244.2' 75% - msv po & py -/ tr diss cpy

@ 252.7'-253.1' msv po w/diss py & cpy & late py vnlts

RECOVERY

Run	Run length	Core	%
195	10.0	10.0	100
205	10.0	10.0	100
215	10.0	10.0	100
225	10.0	10.0	100
235	10.0	10.0	100
245	10.0	10.0	100
252	7.0	7.0	100
	8.0	8.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
228.7-232	3.3	128	380
232-237	5.0	70	240
237-242	5.0	48	170
242-247	5.0	163	210
247-252	5.0	93	110
252-257	5.0	1510	140
257-261	5.0	63	100

BOX

10, 202.5, 11, 221.5, 12, 240, 13, 258.5, 14

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
	260		@264.5' thin late cpy vnlt cutting rx unit	265	5.0	5.0	100	262-267	5.0	99	150	
@267' & 268' thin broken rubble zns												
270'-278' dk brn-dk grn gar-pyx-amph skarn; wk calcite vns & vnlts; rx mod fx'd w/predominant 50°∠-60°∠ to C.A.	270		270'-278' 2%-5% diss, blebs & bands of po & py w/wk diss & late vnlts of cpy (vnlts are calcite-po-cpy @ 273' is ½"-1" wide msv po band w/30°∠ to C.A.	275	10.0	10.0	100	267-272	5.0	36	100	14
								272-277	5.0	55	320	
278-280' white-dk brn-med grn tremolite?-gar-pyx-amph endoskarn; possible monzonite protolith?, wk fx'd, wk cc 280'-294' same rx unit as described @ 228.7'-232'; gar-pyx-amph skarn w/relict c.g.-conglomeritic poorly sort'd clastic &/or volc-clastic text locally; wk calcite vns & vnlt's; mod fx'd w/predominant 60°∠-70°∠ to C.A. & minor 40°∠ to C.A.; wk qtz vnlts; lower contact w/45°∠ to C.A. w/next rx unit	280		278'-280' tr diss py & minor diss silver sulfide (aspy?) w/in white trem? 280'-294' tr-3% diss & blebs of po, py & very minor cpy; tr diss silver sulfide (aspy?) locally	285	10.0	10.0	100	277-282	5.0	185	120	277
								282-287	5.0	97	61	15
@291'-291.5 broken rubble zn	290		@287.5' 1%-2% blebs of cpy & po w/in pyx-rich skarn zn @288.9'-290.3' tr diss silver sulfide (aspy?) w/in gar-rich skarn zn	295	10.0	10.0	100	287-294	7.0	11	42	
294'-296.2' pink f.g.-aphanitic porphyritic syenite dike? or intrusive; same as unit @ 186.2'-228.7'; non-magnetic; abdt calcite & calcite-ept vnlts; wk fx'd			294'-296.2' tr diss py throughout unit									295
296.2'-297.7' dk grn-dk brn pxy-gar-amph skarn; contacts w/∠ to C.A.; mod calcite vnlts			296.2'-297.7' tr-½% diss po & py					296.2-297.7	1.5	85	93	
297.7'-314.7' pink f.g. porphyritic syenite dike? or intrusive; same unit as @ 186.2'-228.7'; wkly magnetic; wkly fx'd, wk calcite vnlts	300		297.7'-314.7' tr diss py throughout unit	305	10.0	10.0	100					16
	310			315	10.0	10.0	100					313.3
314.7'-317.1' dk brn-dk grn gar-pyx-amph skarn w/wk relict c.g.-conglomeritic poorly sort'd clastic &/or volc-clastic (grnst) text. locally; contacts 70°∠ to C.A.; mod calcite vns & vnlts			314.7'-317.1' 2%-5% blebs, clots & diss po w/wk py; clasts perv silicif'd					314.7-317.1	2.4	6	240	
317.1'-376.7' pink f.g. porphyritic syenite dike? or intrusive; same unit as @ 186.2'-228.7'; non-magnetic; wkly fx'd; wk calcite vnlts; thin calcite-ept vnlts locally, wk chl-calcite vnlts locally @319.5'-320' rx is bx'd & heal'd w/white clay matrix & ept matrix	320		317.1'-376.7' tr diss py throughout unit	325	10.0	10.0	100					17
	330				10.0	10.0	100					

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
	330				10.0	10.0	100					17
				335								332.7
	340				10.0	10.0	100					
@ 342.2'-342.5' xenolith? of f.g.-m.g. poorly sort'd clastic f/or volc-clastic (grnst) w/wk gar-pyx skarn's (tuffaceous volc-clastic?)			@ 342.2'-342.5' = 1% diss py w/in xenolith	345								18
	350				10.0	10.0	100					350.0
@ 355'-359' rx str broken w/wk chl & calcite coat'g fxs; predominant fx is 40°∠ to C.A. in this broken zn				355								
@ 359'-359.2' xenolith? of calc/silc f.g.-m.g. poorly sort'd clastic f/or volc-clastic (grnst)			@ 359'-359.2' only tr diss py w/in xenolith	358	3.0	3.0	100					19
	360				7.0	7.0	100					
				365								367.5
	370				10.0	10.0	100					
@ 373'-374' rx w/in broken zn w/20°∠ to C.A. predominant fx's				375								
376.7'-379' med-dk grn f.g.-m.g. poorly sort'd tuffaceous clastics f/or volc-clastics w/volc-bx text. @ 376.7'-377.3' upper & lower contacts w/ 50°∠ to C.A.; rx perv calc/silc alter'd; mod fx'd; wk calcite vnlts; (grnst)			376.7'-379' tr-1% f.g. diss py									20
379'-382' pink f.g. porphyritic syenite dike? same as unit @ 196.2'-228.7'; contacts w/ 50°∠ to C.A.; str fx'd w/ 70°∠ to C.A.	380		379'-382' tr diss py throughout unit		10.0	10.0	100					
382'-388' dk grey-dk grn f.g.-m.g. poorly sort'd tuffaceous clastics f/or volc-clastics perv calc/silc alter'd; lower contact w/ 70°∠ to C.A.; rx mod fx'd w/predominent 50°∠-60°∠ to C.A. mod calcite vnlt'g; (grnst) @ 383'-384' broken rubble zn			382'-388' 1%-3% finely diss py & thin py vnlts; tr diss po	385				382-388	6.0	10	150	
388'-393' dk brn-dk grn gar-pyx-chl skarn w/patches & vnlts of calcite; mod fx'd w/ predominate 50°∠-60°∠ to C.A.			388'-393' 1%-3% diss & blebs of po, py & minor cpy		10.0	10.0	100	388-393	5.0	7	86	385.0
393'-398' med grn-dk brn pyx-gar-chl skarn; mod fx'd w/ 50°∠-60°∠ to C.A. mostly; wk calcite vnlts	390		393'-398' 2%-5% diss & blebs of po, cpy & py @ 394' & @ 397' are two zns of ≈ 2%-3% cpy mix'd w/ po & py	395				393-398	5.0	29	98	
398'-400' dk brn-black bio hnfls w/perv calc/silc alter'n; @ 398.8'-399.3' broken rubble zn	400	bio hnfls	398'-400' 1%-2% diss & blebs & vnlts of py & cpy; minor diss po		10.0	10.0	100					21

LITHOLOGY, ALTERATION, MISC.

400'-414' med grn-med brn pyx-gar-chl skarn; mod fx'd w/60°∠-70°∠ to C.A. mostly; wk calcite patches & vnlts

@ 407'-407.5' broken rubble zn

414'-420.2' dk brn-med grn gar-pyx-chl skarn; mod fx'd w/60°∠-70°∠ to C.A. mostly; wk calcite patches & vnlts; lower contact not recogniz'd
@ 414.5'-415' rx fx'd w/90°∠ to C.A.

420.2'-437' med grn-dk brn-black pyx-gar skarn (minimal gar) w/abdt bio hnfls mixture & minimum relict text f.g.-m.g. poorly sort'd clastic &/or volc-clastic (grnst) w/perv calc/silc alter'n w/in pyx-gar skarn; rx mod fx'd w/50°∠-60°∠ to C.A. mostly & 30°∠ to C.A.; broken rubble zns locally; fxs coat'd w/black chl; wk-mod calcite patches & vnlts
@ 427'-427.5' broken rubble zn

@ 429'-430' broken rubble zn

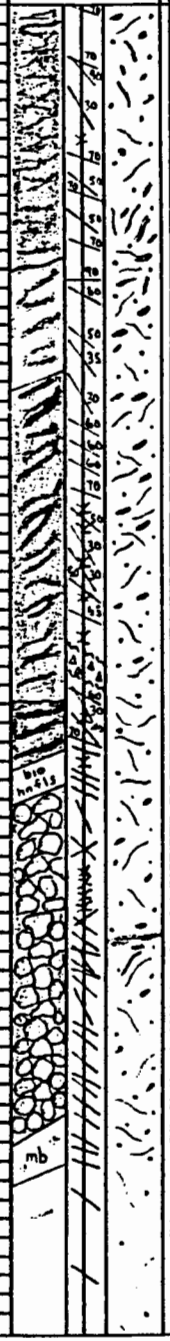
@ 431'-432' broken rubble zn

@ 433.3'-434' broken rubble zn
@ 434'-435' rx shear'd or flt'd w/tectonic bx'n heal'd w/calcite

437'-440' dk-med grey f.g. poorly sort'd clastics &/or volc-clastics (grnst) w/ pyx flood'g locally; rx mod-str fx'd; mod calcite vnlts; rx unit perv calc/silc alter'd
440'-442' dk brn-black biotite hornfls w/perv calc/silc alter'n & pyx flood'g; rx str fx'd & mod calcite vnlts
442'-459.5' med grn-med brn-dk grey pyx-gar-chl skarn replac'g a c.g.-conglomeritic poorly sort'd clastics &/or volc-clastics (original protolith was grnst) w/ clasts subround'd to round'd 2 mm-12 mm in size (clasts perv replac'd by silicification; matrix between clasts consists of 70%-90% of rx unit & is pyx-gar-chl skarn; sulfides make up matrix also w/ 1%-5% & msv locally; rx mod fx'd; wk calcite vns & vnlt's; lower contact is 60°∠ to C.A.
@ 446'-448' broken rubble zn

459.5'-462' dk grey dirty marble w/abdt chl vnlt's; wk gar-pyx skarn flood'g locally; wkly fx'd & wk calcite vnlt's; lower contact is 70°∠ to C.A.
462'-514.8' pink f.g.-sphanitic porphyritic syenite dike? or intrusive; same unit as describ'd @ 186.2'-228.7'; slightly magnetic; wkly fx'd, wk-mod calcite & calcite-ept vnlts; ≤ 2' wide aphanitic text. chill margins @ contacts
@ 463.7'-464' is gar-calcite skarn xenolith w/in rx unit w/ tr diss po & py

FT. / GRAPHIC LOG



MINERALIZATION

400'-414' 1%-5% diss & blebs of po & cpy w/ minor py
@ 400.7' blebs = 3% cpy

@ 403.5' blebs = 1% cpy

@ 411.5' diss & blebs = ½% cpy

@ 413' calcite vns w/ py-po selvages
414'-420.2' tr-2% diss & blebs of po, py & cpy

@ 419.7' blebs = 1% cpy
420.2'-437' 1%-2% diss, blebs & vnlts of po, py & cpy

@ 425'-426' = 1%-2% blebs & late vnlts of cpy
@ 427'-428' = 1%-2% blebs & late vnlts of cpy

@ 435.5' = ½%-1% diss & blebs of cpy w/in pyx-gar zn
437'-440' tr-1% diss & vnlts of py; broken rubble zn @ 437'-438'

440'-442' tr-1% diss & vnlts of py & po; broken rubble zn @ 440.5'-441'
442'-459.5' 1%-5% diss, blebs & vnlts of po, py & very minor cpy diss

@ 449'-450' = 5%-7% msv-diss po & py replac'g matrix of conglom. text; wk tr diss cpy
@ 451' is ¼" wide po vn w/ wk diss cpy w/ 20°∠ to C.A.

459.5'-462' ≈ 1%-2% diss & blebs of po & py; very minor diss cpy

462'-514.8' tr diss py throughout unit

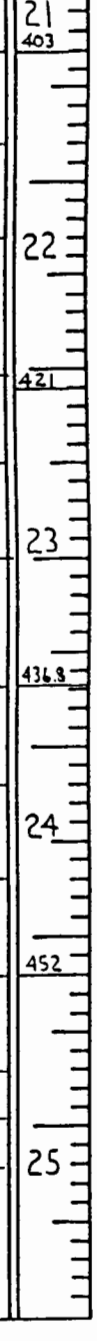
RECOVERY

Run	Run length	Core	%
405	10.0	10.0	100
415	10.0	10.0	100
425	10.0	10.0	100
432	7.0	7.0	100
438	6.0	6.0	100
443	5.0	5.0	100
450	7.0	7.0	100
453	3.0	3.0	100
463	10.0	10.0	100
464	1.0	1.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
398-403	5.0	49	86
403-408	5.0	40	73
408-413	5.0	7	100
413-420.2	7.2	<5	57
420.2-425	4.8	18	150
425-430	5.0	16	160
430-437	7.0	6	110
442-447	5.0	<5	75
447-452	5.0	125	360
452-457	5.0	169	34
457-459.5'	2.5	10	33
459.5'-462	2.5	54	130

BOX



LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
	470			474	10.0	10.0	100					25 470.5
	480			484	10.0	10.0	100					26 488.6
	490			494	10.0	10.0	100					
	500			502	8.0	8.0	100					27 507.1
	510			512	10.0	10.0	100					
@514.3' is pyx-gar-chl xenolith w/wk diss po 514.8'-518' med grn-med brn-black magnetite-pyx-gar-chl skarn; ≈ 15% magnetite w/cpy rimming magnetite locally; wk calcite vnlt'g; wkly fx'd; msv po locally w/wk py 518'-520' med grn-med brn pyx-gar-ept-chl skarn; wkly fx'd, wk calcite vnlt'g; msv blebs of po w/cpy rimming po 520'-526' white-dk brn-med grn-dk grey tremolite-gar-pyx-amph skarn; abt tremolite ≈ 40% of rx unit; abdt patches of calcite ± marble; msv po w/wk py ± cpy locally, wkly fx'd, ± wk calcite vnlts	520	trem trem	@514.3' tr diss po w/in skarn xenolith 514.8'-518' ≈ 15% magnetite w/msv po locally; ≈ 2%-10% msv, blebs ± diss po w/wk py; ≈ tr-2% cpy rimming magnetite locally 518'-520' ≈ 2%-10% msv, blebs ± diss po w/wk py; ≈ 1%-3% cpy rimming po 520'-526' ≈ 1%-30% msv, blebs ± diss po w/wk py ± tr diss cpy w/in po zns	522	10.0	10.0	100	514.8-519	4.2	1820	550	28
526'-534' gar-pyx-amph skarn; wk calcite vnlts ± patches; mod fx'd rx w/broken rubble zn @ 530'-531'	530		526'-534' ≈ 2%-20% msv, blebs ± diss po w/wk py; diss ± blebs of cpy up to 1%-5% w/in po zns locally	530	8.0	8.0	100	519-524	5.0	1016	1800	
								524-529	5.0	715	670	525.5
534'-535' pyx-amph skarn w/wk calcite vnlts; fx zn locally 535'-548' gar-pyx-amph skarn; mod calcite patches ± vnlts; rx mod fx'd; broken rubble zn @ 535.5'-536'			534'-535' diss po ± py 535'-548' tr-10% blebs ± diss po ± py w/ tr-3% diss to small blebs cpy w/in po-py zns locally po-py-cpy @ 539'-540'	535	5.0	5.0	100	529-534	5.0	3127	1300	29
	540				10.0	10.0	100	534-539	5.0	349	190	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@ 541'-542' broken rubble zn @ 543.5'-544.3' gar skarn shows possible relict m-g poorly sorted clastic f/or volc-clastic (grnst) text.? @ 547.5'-548' rx str broken 548'-566' med grn-lt brn pyx-gar-chl skarn; wk-mod calcite patches f vnlts; unit mod fx'd; wkly mineraliz'd by sulfides f mineraliz'd zns are sporadic @ 556.8'-557.2' broken rubble zn @ 559'-563.5' garnets w/in pyx skarn show a gar rim around a pyx replac'd center??	540 550 560		@ 545.8' po blebs = 10% w/wk-1% diss cpy @ 546.8' is 1" bleb mostly cpy w/po 548'-566' tr-5% blebs f diss po, py f cpy locally @ 550' = 5% bleb f diss po w/wk py f minor diss cpy @ 551' = 5% blebs f diss py w/wk diss po w/in py @ 552'-552.5' = 3% blebs f diss po w/wk py f minor-½% diss cpy w/in po-py zns @ 557.5'-558' = 2%-3% blebs f diss of cpy w/wk diss po w/pyx selvages surround'g sulfide blebs	545 555 565	10.0 10.0 10.0	10.0 10.0 10.0	100 100 100	539-544 544-549 549-554 554-559 559-564	5.0 5.0 5.0 5.0 5.0	54 276 2857 282 17	340 290 220 85 30	29 543.5 30 5619
566'-574' med grn-lt brn-med grey pyx-gar-chl skarn replac'g a m-g-conglomeritic poorly sort'd clastics f/or volc-clastics (original protolith was grnst) w/clasts subround'd-round'd 2mm-12mm in size f clasts replac'd by silicificat'n w/matrix replac'd by skarn f sulfides; text also exhibits relict foliat'n or bedd'g @ = 0°∠ to C.A. (parallels C.A.) @ 567.5'-572.5'; rx wkly fx'd f wk calcite vnlts f patches 574'-600.5' med grn-lt brn-med grey pyx-gar-chl skarn w/relict foliat'n or bedd'g replac'd by skarn = 0°∠ to C.A (parallels C.A.) locally; wk sulfides; abdt. calcite patches (vnlts; wkly fx'd @ 574'-575.5' relict foliation or bedd'g = 0°∠ to C.A. @ 580.3'-583' relict foliat'n or bedd'g = 0°∠ to C.A.	570 580		566'-574' = 1%-20% blebs, wk mod zn f diss po, cpy f py throughout unit @ 566.2'-566.5 = 10% blebs f diss po f cpy (5% each) w/wk py @ 572.5'-574' = 30%-40% blebs, wk msv zns f diss of po, cpy f py = ½ of sulfides being po (¼ ea. cpy f py) 574-600.5' tr-½% diss py f po w/ very minor diss cpy; diss sulfides are mostly py from 574'-589.5' f becomes mostly po from 589.5'-600.5'	575 585	10.0 10.0	10.0 10.0	100 100	564-569 569-574 574-579 579-584	5.0 5.0 5.0 5.0	55 193 27 14	130 240 19 39	31 580.3
@ 588'-596.5' garnet w/in pyx-rich skarn becomes "spotty" or oval in shape ½"-2" round in size w/ most centers being calcite @ 596'-596.2' broken rubble zn @ 600.5 lower contact has 50°∠ to C.A. 600.5'-619.5' dk grey-dk grn-dk brn f.g.-m.g. poorly sort'd clastics f/or volc-elastics perv calc/silic alter'd w/zns of garnet f pyx skarn flood'g locally; rx mod-str fx'd; abdt calcite vnlts, str chl vnlts f blebs @ 604' is shear zn w/wk clay gouge zn w/70°∠ to C.A. @ 605' gar skarn flood'g (grnst) @ 605.5'-607' wk pyx skarn flood'g @ 605.5'-607 broken rubble zn @ 608.8'-609.2' gar sk flood'g	590 600 610		@ 590.5' very minor diss cpy along w/po w/in garnet "spot" w/in skarn 600.5'-619.5' = 1%-3% blebs, diss, vns, f vnlts of py throughout unit	595 605	10.0 10.0	10.0 10.0	100 100	584-589 589-594 594-600.5 600.5-605 605-610	5.0 5.0 6.5 4.5 5.0	16 59 19 79 40	21 30 21 220 200	32 598.5 33

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@610'-613.5' rx str bx'd w/in possible flt zn w/ tectonic bx heal'd by calcite vnlts @ 612.5-613.5 perv pyx skarn flood'g	610				10.0	10.0	100	610-615	5.0	13	41	33
@617' fx w/30°∠ to C.A. w/slicks ⊥ to C.A.	615											615.8
619.5'-628.5' lt-med grey marble w/silty-chl zns locally; apt-gar-pyx zn w/tr diss py @ 622'-623.5'; lower contact has 30°∠ to C.A; mod-str fx'd; mod calcite vnlt'g	620	mb	619.5'-628.5' tr-1% diss & blebs of py @619.5'-622' w/in silty chloritic portion of unit is = 1%-2% blebs & diss py @622'-623.5' tr diss py w/in apt-pyx-gar skarn alter'd zn		10.0	10.0	100	615-619.5	4.5	15	39	
@626'-629' rx str broken @627'-628.5' wk garnet flood'g w/in marble locally 628.5'-645' dk-lt grey-lt grn-lt brn f.g.-m.g. poorly sort'd clastics f/or vole-clastics w/perv calc/silc alter'n w/pyx-gar skarn locally throughout unit; wk-mod. fx'd; wk-mod calcite vnlts; lower contact not recognz'd (grnst) @631' is bx'd flt or shear zn w/tectonic bx heal'd by calcite vnlts @633'-645' pyx-gar skarn flood'g throughout unit	625	mb	628.5'-645' tr-1% diss py		10.0	10.0	100					34
	630											633.5
	635				10.0	10.0	100					
	640				10.0	10.0	100					35
645'-663.5' lt grn-med brn pyx-gar-chl skarn; wkly fx'd, wk calcite vnlts	645		645'-663.5' tr-½% diss py									
	650				10.0	10.0	100					651.3
	655											
	660				10.0	10.0	100					36
@662' broken rubble zn 663.5'-664.7' dk brn f.g.-m.g. tuffaceous poorly sorted clastics f/or vole-clastics (grnst) w/perv calc/silc & gar skarn alter'n 664.7'-682.1' pink f.g.-aphanitic porphyritic syenite dike? or intrusive; same unit as described @ 186.2'-228.7'; slightly magnetic; wkly fx'd; wk calcite & calcite-apt. vnlts; ≤ 6"-1' wide aphanitic text. chill margins @ contacts; upper contact has 80°∠ to C.A. & lower contact has 55°∠ to C.A.	665		663.5'-664.7' tr-½% diss py 664.7'-682.1' tr diss py throughout unit									
	670				10.0	10.0	100					669.3
	675											37
	680											

LITHOLOGY, ALTERATION, MISC.

682.1'-695.2' dk-med grn-med brn-dk grey-black f.g.-m.g. tuffaceous poorly sort'd clastics f/or volc-clastics(grnst) w/pers calc/sil alter'n overprint'd locally w/ pyx-gar-skl skarn alter'n throughout unit; wk-mod fx'd; mod calcite vnlts; lower contact has 70° to C.A.

@688.5'-689' is relict thin bedd'g or foliat'n text. w/50° to C.A.

695.2'-708.5' med-dk grn to lt-dk brn pyx-garnet-chl skarn; wk calcite patches & vnlts; mod fx'd

@702.5'-703.5' is flt bx zn (tectonic bx) heal'd by chlorite

708.5'-720' pink f.g.-aphanitic porphyritic syenite dike? or intrusive; same unit as describ'd @ 186.2'-228.7'; slightly magnetic; wkly fx'd; wk calcite vnlts; = 8"-1' wide aphanitic text. chill margins @ contacts; upper & lower contacts have 50° to C.A.

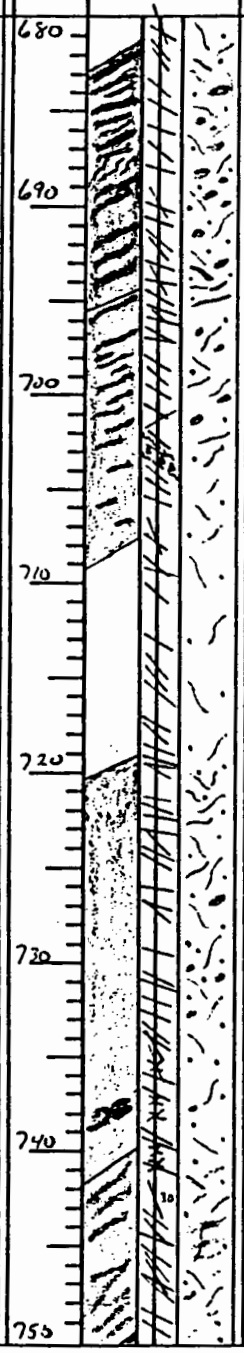
720'-741.6' dk grey-dk grn f.g.-m.g. poorly sort'd clastics f/or volc-clastics (grnst) w/pers calc/sil alter'n; rx mod-str fx'd; str. chl fx fillings & vnlts; wk calcite vnlts; lower contact @ 50° to C.A.

@735'-735.5' broken rubble zn
@736.5'-738 broken rubble zn

@738'-738.3' minor gar-pyx-chl skarn w/minor diss py
@739'-741' broken rubble zn

741.6'-750.3' med grn-med brn-med grey pyx-gar-chl skarn; mod-abt calcite patches & vnlts; mod fx'd; lower contact w/60° to C.A.
@743' is fx w/30° to C.A. w/chl coat'g fxs & slicks

FT. / GRAPHIC LOG



MINERALIZATION

682.1'-695.2' 1%-5% blebs-slightly msv, diss po w/wk py & very minor diss cpy locally

@687'-687.5' = 5% blebs & diss po, wk py & ½% diss cpy w/po grains
@689.5'-690' = 5%-7% blebs & diss po w/py w/minor diss cpy w/in po

695.2'-708.5' tr diss & vnlts of py & very minor po

708.5'-720' tr diss py throughout unit

720'-741.6' = 1%-2% blebs & diss po & py w/ late py & calcite-py vnlts

741.6'-750.3' tr diss & vnlts of py & very minor tr diss po

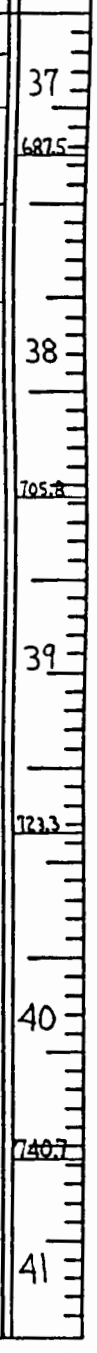
RECOVERY

Run	Run length	Core	%
	10.0	10.0	100
685			
	10.0	10.0	100
695			
	10.0	10.0	100
705			
	10.0	10.0	100
715			
	10.0	10.0	100
725			
	10.0	10.0	100
735			
	6.0	6.0	100
741			
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
682.1-685	2.9	6	36
685-690	5.0	30	150
690-695.2	5.2	49	200

BOX



LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
750.3'-754' dk grey-dk grn f.g.-m.g. poorly sort'd clastics f/or volc-clastic (grnst) w/perv calc/silic alter'n; rx mod fx'd; wk-med calcite vnlts; lower contact 60°∠ to C.A.; foliat'd locally 754'-758' med grn-dk brn pyx-gar-chl skarn; wk calcite vnlts & patches; mod fx'd; lower contact w/ 60°∠ to C.A.	750		750.3-754' ≈1%-2% blebs & diss py & very minor po w/ late py vnlts 754'-758' tr-2% blebs & diss po & wk py w/ very minor diss cpy w/ in po; late py vnlts locally	751	10.0	10.0	100	754-758	4.0	13	130	41
758'-767.5' dk grey-dk grn f.g.-m.g. poorly sort'd clastics f/or volc-clastics (grnst) w/perv calc/silic alter'n; pyx & gar skarn flood'g locally; rx mod fx'd; med-str calcite vnlts & vns; lower contact has 60°∠ to C.A. @ 767.5'-769.2' broken rubble zn	760		758'-767.5' ≈1% diss & small blebs of py & po	761 762	1.0	1.0	100					758.2
@765' broken rubble zn												
767.5'-777.8' med brn-med grn gar-pyx-chl skarn; mod-abdt calcite patches & vnlts; rx mod fx'd; lower contact has ≥ 50°∠ to C.A.			767.5'-777.8' tr-2% diss & wk blebs of po & py w/ minor diss cpy w/ po blebs or vns		10.0	10.0	100					42
@771'-772' broken rubble zn	770		@771.8'-773.2' tr-2% diss to small blebs of =py associat'd w/ po & is equal to or greater than po content	772								
777.8'-784' med grn-med brn pyx-gar-chl skarn replac'g a m.g.-c.g. poorly sort'd clastics f/or volc-clastics (grnst original protolith) w/clasts replac'd by silicificat'n w/matrix replac'd by skarn & sulfides; text. also exhibits relict foliat'n or bedd'g @ 30°∠ to C.A.; rx mod fx'd & mod calcite vns & vnlts			777.8'-784' tr-2% small blebs & diss of po & py w/ diss & small blebs of cpy associat'd w/ po vns (some cpy vns up to 2%)		8.0	8.0	100	772-777	5.0	59	120	775.5
@779'-780' broken rubble zn	780		@783.4'-783.6' ≈ 2% diss cpy associat'd w/ lesser amount of po	780				777-782	5.0	22	160	
784'-802' med brn-med grn gar-pyx-chl skarn; wk-mod. calcite patches & vns & vnlts; rx mod fx'd; places gar & pyx content is 50/50; lower contact ≈ 60°∠ to C.A.			784'-802' tr-2% small blebs & diss po & py w/ diss & late vnlts of cpy associat'd w/ po vns		5.0	5.0	100					
@796'-797' broken rubble zn	790		@784.5'-787.2' diss to blebs & late vnlts of cpy up to 2% & @ 785.3' is bleb of cpy rimm'd by po!!	785				782-787	5.0	34	410	43
			@793' ≈ 5% of unit is c.g. bleb & diss po & py		10.0	10.0	100	787-792	5.0	13	91	792
				795				792-797	5.0	9	88	
802'-808.3' lt grn-buff f.g.-m.g. poorly sort'd clastics f/w volc-clastics (grnst) w/unit bu'd & heal'd w/hairline qtz vnlts & bx is a crackle bx & possible & lt bx!!; unit well foliat'd w/30°∠ to C.A. @ 806'-807' & w/80°∠ to C.A. @ 807'-808.3'; unit perv calc/silic alter'd & minor garnet skarn flood'g locally; mod-str calcite vns & vnlts; rx mod fx'd	800		@801.8' is large 1" wide bleb w/≈ 3% of unit consists of ≈ g. cpy 802'-808.3' 1%-5% diss, blebs & vnlts-vns of py throughout unit		10.0	10.0	100	797-802	5.0	21	52	44
808.3'-833.5' med brn-med grn gar-pyx-chl skarn; locally the pyx to gar % is 50/50; wk-mod calcite patches & vns & vnlts; rx mod fx'd; lower contact is 60°∠ to C.A.				805				802-807	5.0	37	130	
	810		808.3'-833.5' 1%-5% blebs, vnlts & diss py & po w/ minor or tr to 5% of unit consists of small blebs to diss of cpy w/ py & po associations locally @ 810'-812' ≈ 3%-5% of unit is blebs vnlts & diss, cpy w/ po & py associat'n @ 812'-823' ≈ 1%-5% of unit is blebs, vnlts & diss po, py & cpy w/ cpy accounting to 1%-3% of the sulfide content locally		10.0	10.0	100	807-812	5.0	41	87	811
				815				812-817	5.0	48	91	45
	820				10.0	10.0	100	817-822	5.0	82	59	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@ 820'-820.5' broken rubble zn	820		@ 823'-833.5' 1%-3% blebs, vnlts, f diss py w/very minor diss po f cpy		10.0	10.0	100	817-822	5.0			
				825				822-827	5.0	44	36	45
@ 831'-831.5' black f.g.-m.g. poorly sort'd tuffaceous clastic (or volc-clastic (grust) w/perv calc/silic alter'n w/debris flow bx f @ 833'-833.5'	830				10.0	10.0	100	827-833.5	6.5	37	120	827.8
833.5'-845' pink f.g.-aphanitic porphyritic syenite dike? or intrusive; same unit as describ'd @ 180.2'-228.7'; slightly magnetic; wkly fx'd; wk calcite vnlts; = 2½' wide aphanitic chill margin @ contact @ 833.5' w/ 60° t.c.a.			833.5'-845'	835								
	840				10.0	10.0	100					46
@ 845' T.D. - E.O.H.	845	T.D.		845								845

DIAMOND DRILL HOLE LOG

Company Orvana Resources Corporation

Property Eholt	Hole No. E95-8
Location 50m N36°E of E95-4	Bearing at Collar 126°
	Inclination at Collar -50°
Coord. - Collar N 5447055	
UTM E 387025	Length 630'
Elev. - Collar 1075m	Core Size NQ
Date started 10-2-95	Logged by Lance E. Senter & Doyle Albers
Completed 10-4-95	

LEGEND

SURVEY

Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
0'-21' Alluvium - no recovery.	0											
	10											
	20			21								21
21'-23.5' white - lt grey coarse xtalline qtz heal'g or fill'g flt w/ ftwall @ 23.5' w/ 38° to C.A., min. clay gouge along flt contact 23.5'-114' lt-med gente lt-med grey f.g.-m.g. poorly sorted tuffaceous clastics f/ar volc-clastics (grngt); perv calc/silc alter'd; local foliat'n text.; c.g. - conglomeritic text. locally; volcanic bx text locally; pyx & gar skarn flood'g locally; rx. med - str fx'd locally; calcite & calcite-chl vns & vnlts mod - str throughout unit; broken rubble zns; unit calcareous; Adh. begins in reduc'd zn - no oxides even along fxs @ 23.5' foot wall of major flt zn heal'd f/or fill'd w/ c.g. qtz from start of beds @ 21' to 23.5' w/ 30° to C.A. flt contact @ 23.5'-37' rx is bx'd from flt above & heal'd w/ calcite & pyx flood'g & unit is foliat'd from flt movement w/ 20° to 30° to C.A. from 23.5'-31' (pyx flood'g from 23.5'-28') @ 23.9'-24.9' rx str broken w/ minor clay gouge from above flt @ 36'-37' broken rubble zn @ 44.3'-52' relict foliat'n &/or bedd'g text. w/ 40° to C.A.	30	qtz	21'-23.5' tr-½% diss & blebs of py w/in qtz filling flt zn 23.5'-114' 1%-2% stringers, vnlts, blebs & diss. py @ 29'-30.5' = 5%-7½ blebs, stringers vnlts & diss py @ 38.8'-39.5' = 5%-7% blebs, stringers vnlts & diss py @ 42.5'-45.7' = 3%-5% stringers, vnlts, blebs & diss py @ 45' = 3%-5% vns, vnlts, blebs & diss py	23	2.0	2.0	100					
					10.0	10.0	100	30-32	2.0	12	44	1
	40			33								37.5
					10.0	10.0	100	38-43	5.0	9	43	
				43				43-48	5.0	11	45	2
	50				10.0	10.0	100	48-54	6.0	12	41	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
	50		@ 50.5' ≈ 3% blebs, vnlts, stringers & diss py	53				48-54	6.0	12	41	2
					10.0	10.0	100					55.9
@ 62.3' pyx flood'g w/in unit	60			63								
@ 65'-65.5' broken rubble zn					10.0	10.0	100					3
@ 68'-69.5' flt zn w/60°∠ to C.A.; str tectonic bx heal'd w/ med grn chl? & minor clay gouge												
@ 69.5'-114' rx text changes to a relict e.g. to conglomeritic heterolithic volcanic conglom. or volc. bx or sediment w/ clasts f.g.-m.g.-2" in size & sub-angular to round'd & most clasts replac'd by silica w/ mod. amount of clasts replac'd by epidote	70			73								73.2
					10.0	10.0	100					
@ 79.3'-80.4' flt or shear zn w/ broken rubble & 30°∠ to C.A.				83								4
@ 81.4'-82.8' flt or shear zn w/ broken rubble & clay gouge w/ 50°∠ to C.A.	80											
					10.0	10.0	100					
@ 91.7' shear zn w/ 30°∠ to C.A. & minor clay zn	90			93								90.3
			@ 96'-97' ≈ 3%-5% blebs, stringers & diss py		10.0	10.0	100					5
@ 97.3'-97.7' flt or shear zn w/ clay gouge heal'g broken rx rubble & has 40°∠ to C.A.				103								
@ 98.2'-98.7' broken rubble zn	100											
@ 102'-103' rx mod broken					6.0	6.0	100					
@ 106.8'-109' flt or shear zn w/ 20°∠-30°∠ C.A. & rx str broken or rubble w/in zn w/ minor clay gouge				109								108.3
	110											
@ 112.5'-114' broken rubble zn w/ clay gouge & shear contact @ 114' w/ unit below w/ 30°∠ to C.A.					9.0	9.0	100					6
114'-120.4' dk grey-dk grn aphanitic-f.g. porphyritic syenite dike? or intrusive; Kspar? dominant groundmass w/ 10%-15% 2mm-10mm euhedral phenos of white plagioclase (albite?) w/ center of xtal replac'd by chl; w/ 2%-3% <1mm-3mm euhedral phenos of black biotite; non-magnetic; rx mod-str fx'd; wk calcite & calcite-chl vnlts; aphanitic chill margin text; upper & lower contacts w/ 30°∠ to C.A. & shear zn @ ea. contact w/ clay gouge & broken rx rubble zns	120		114'-120.4' tr diss py throughout unit	118								

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
120.4'-158' lt-med grn to lt-med gray f.g.-m.g. poorly sort'd tuffaceous clastics f/or volc-clastic (grnst) w/ relict c.g.-conglomeritic heterolithic volcanic conglomerate or volc. bx or sediment? w/ same description as rx unite 23.5'-114' (c.g. volc. conglom. or volc bx or sed.? from 120.4'-155.8') @120.4'-120.9' broken rubble zn w/ clay gouge from shear'g along contact w/ syenite @ 120.4' @123.4'-123.9' thin apophysis of syenite dike w/ 20°∠-40°∠ to C.A. contacts cutting rx unit @124'-124.5' broken rubble zn @132'-133.5' wk relict foliat'n f/or bedd'g w/ 40°∠ to C.A. @144' wk pyx skarn flood'g locally @152.8'-153.3' wk garnet skarn flood'g locally @155.8'-156.5' broken rubble zn @155.8'-158' f.g.-m.g. poorly sort'd tuffaceous clastics f/or volc-clastic (grnst) perv calc/silc alter'd text. @158' lower contact of rx unit has 55°∠ to C.A. 158'-168' dk grn-dk grey-dk pink v.f.g.-f.g.-aphanitic slightly porphyritic syenite dike or intrusive (f.g. equivalent of typical syenite unit); Kspar deminant groundmass w/ 3%-5% 1mm-2mm euhedral plagioclase phenos f 3%-5% 1mm-2mm euhedral mafic phenos replac'd by sec. bio.; finely diss magnetite w/ wkly magnetic; upper contact is 55°∠ to C.A. f lower contact has ≈ 80°∠ to C.A.; rx wkly fx'd f mod calcite vnlts -- This dike is above f below the porphyritic syenite unit immediately below this unit @ 168'-196.2' so the sequence shows a dike w/in a dike!! intrusion. 168'-196.2' pink f.g. porphyritic syenite dike? or intrusive; Kspar deminant groundmass w/ 10%-15% 2mm-10mm euhedral phenos of white plagioclase? (albite?) mostly argillic'd f alter'd to white clay w/ 3%-5% <1mm-3mm euhedral phenos of black biotite; wk sericite; this unit is non-magnetic; wkly fx'd except locally; wk calcite vnlts f vns f filling fxs; aphanitic porphyritic text. chill zn margins of dike? or intrusive w/ 6" wide chill margins; upper contact is ≈ 80°∠ to C.A. f lower contact has ≈ 80°∠ to C.A. @181' broken rubble zn @185'-186' broken rubble zn @187.8'-191' broken rubble zn	120 130 140 150 160 170 180 190		120.4'-158' 1%-2% stringers, vnlts, blebs f diss py @123.4'-123.9' only tr diss py w/in syenite dikelet @152.2' ≈ 3% blebs, stringers f diss py @154.2'-155' = 3%-4% stringers, blebs f diss py 158'-168' tr diss py throughout unit 168'-196.2' tr diss py throughout unit	123 133 143 153 163 173 183	5.0 10.0 10.0 10.0 10.0 10.0 10.0 8.0	5.0 10.0 10.0 10.0 10.0 10.0 10.0 8.0	100 100 100 100 100 100 100 100			6 123.4 7 140.7 8 158 9 176.4 10

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@192.8'-193.2' broken rubble zn @193.9'-194.2' broken rubble zn 196.2'-199.6' dk grn-dk grey-dk pink v.f.g.-f.g.-aphanitic slightly porphyritic syenite dike? or intrusive ? same rx unit as described @ 158'-168' ? is the underside of the dike @158'-168' in the dike w/in a dike sequence--two pulses!! 199.6'-209.5' dk grn-dk grey-lt brn f.g.-m.g. poorly sort'd clastics (/or vole-clastics (grnst) w/ perv calc/silic alter'n w/ relict possible volcanic bx text. locally; garnet skarn flood'g locally; rx wkly fx'd; abdt. calcite vns ? vnlts; upper contact w/ dike is 30°∠ to C.A. ? lower contact is 60°∠ to C.A. @206.5'-209.5' is volcanic bx text. possibly? 209.5'-222.1' med-dk grn to med-dk brn to black pyx-gar-chl skarn w/ minor zns of f.g.-m.g. poorly sort'd clastics (/or vole-clastics (grnst) (original protolith -/ f.g.-m.g. clasts perv. silicif'd ? surround'd by pyx-rich skarn locally); rx mod-str fx'd; wk-mod calcite vns ? vnlts; upper contact has 60°∠ to C.A. ? lower contact has 50°∠ to C.A. @220.6'-221.2' broken rubble zn 222.1'-234.8' dk grey to black-med grn-med brn fg.-m.g. poorly sort'd tuffaceous clastics (/or vole-clastics (grnst) w/perv calc/silic alter'n; pyx ? gar skarn flood'g locally; rx med-str fx'd, wk-mod calcite vns ? vnlts @222.2'-223.2' broken rubble zn @225'-225.5' broken rubble zn @229'-230.5' rx str broken @231.5'-232' shear or flt zn bx'd ? heal'd w/calcite ? 30°∠ to C.A. @234.8' lower contact is irregular but ≈ 80°∠ to C.A. 234.8'-240.8' pink f.g.-aphanitic porphyritic syenite dike? or intrusive w/ same descript'n as @ 168'-196.2'; w/ aphanitic chill zn margins 1/4' wide; upper contact irregular but ≈ 80°∠ to C.A. ? lower contact w/ 30°∠ to C.A., rx mod fx'd; wk calcite vnlts, wkly magnetic @239.5'-240.8' broken rubble zn 240.8'-259.7' dk grey to black-med grn-med brn f.g.-m.g. poorly sort'd tuffaceous clastics (/or vole-clastics (grnst) w/perv calc/silic alter'n; very minor pyx ? gar skarn flood'g locally; rx mod fx'd; mod-str calcite vns ? vnlts; upper contact has 30°∠ to C.A. ? lower contact has 70°∠ to C.A. @247.5'-248.5' broken rubble zn 259.7'-264.3' pink f.g.-aphanitic porphyritic syenite dike? or intrusive; same descript'n as @ 168'-196.2'; wkly	190 200 210 220 230 240 250 260		196.2'-199.6' tr diss py throughout unit 199.6'-209.5' tr diss ? small blebs of py throughout unit 209.5'-222.1' tr-1% diss ? stringers ? small blebs of py w/ very minor diss cpy assoc. w/ py; very locally 3%-4% blebs, diss ? stringers of po-cpy @ 213.8'-214.2' ≈ 3%-4% blebs diss ? stringers of cpy-po assoc. together w/ ≈ 60% cpy w/in sulfide content 222.1'-234.8' tr diss ? stringers of py 234.8'-240.8' tr diss py throughout unit 240.8'-259.7' tr diss ? minor stringers of py ? po, but not assoc together 259.7'-264.3' tr diss py throughout unit	191 20 211 212 222 227 231 241 251	10.0 10.0 1.0 10.0 5.0 4.0 10.0 10.0	10.0 100 1.0 10.0 5.0 4.0 10.0 10.0	100 100 100 100 100 100 100 100	212-215	3.0	34	140	10 192.2 11 211 12 228.3 13 244.3 14

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX 14
magnetic; upper contact has 70°∠ to C.A. & lower contact has 60°∠ to c.A.; rx wkly fx'd; wk calcite vns & vnlts; aphanitic margin chill zn = 6" wide 264.3'–283.3' dk grey-black to med-dk brn to med grn f.g.-m.g. poorly sort'd tuffaceous clastics &/or volc-clastics (grnst) w/perv calc/silc alter'n; gar & pyx & gar-pyx-chl skarn flood'g locally; relict foliat'n &/or bedd'g locally; rx mod fx'd; mod-str calcite vns & vnlts; upper contact has 60°∠ to C.A. & lower contact has 70°∠ to C.A. @ 268.5' relict foliat'n &/or bedd'g w/ 70°∠ to C.A. @ 271'–273' relict foliat'n &/ bedd'g w/70°∠ to c.A.	260 270		264.3'–283.3' tr–1% diss & stringers of py; tr of diss & blebs of po & cpy locally @ 272'–273.5' = 1%–2% diss & stringers of py	261 271	10.0	10.0	100					261.3
@ 275.5'–276.5' flt or shear zn w/ 6" core missing; possible flt contact w/30°∠ to C.A.; flt zn w/abdt. clay gouge; beneath flt wall of flt from 276.5'–278' tectonic bx heal'd w/ chl & calcite vns & vnlts @ 276.5'–278' relict foliat'n &/or bedd'g w/70°∠ to C.A. @ 278'–280 str gar-pyx flood'g & minor lt blue calcedonic qtz vnlts cutting skarn @ 280'–293.3' relict foliat'n &/or bedd'g w/70°∠ to C.A.	280		@ 281'–282' is = 2% blebs, stringers & diss po & py w/minor stringers of cpy assoc w/ py & w/in gar-rich zn	281	10.0	9.4	94	272.5–278	5.5	12	110	
283.3'–328' pink f.g.-aphanitic porphyritic syenite dike? or intrusive? w/same descript'n as @ 168'–196.2'; w/aphanitic chill zn margins 1'–1½' wide; non-magnetic; upper contact has 70°∠ to C.A. & lower contact has 80°∠ to C.A.; rx wkly fx'd; wk calcite vns & vnlts	290		283.3'–328' tr diss py throughout unit & very minor py vnlts locally	282 293	1.0 10.0	1.0 10.0	100 100	278–283.3	5.3	87	270	279.7
@ 311.7'–315.7' rx is mod-str broken & vuggy w/vugs (bx) follow'g fx pattern & heal'd w/ chl); tensional broken zn, broken rubble zn @ 314.7'–315.7' @ 317'–319' rx is bx'd & heal'd w/ chl & calcite but is still = broken rubble zn	300 310			301 305 310 319	8.0 4.0 5.0 9.0	8.0 4.0 5.0 9.0	100 100 100 100					296 312.2
328'–331' dk grey-med grn f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst) w/perv calc/silc alter'n; pyx skarn flood'g locally; rx mod fx'd; mod-str calcite vns & vnlts; lower	320 330		328'–331' 2%–3% stringers, vnlts & diss py	329	10.0	10.0	100	328–331	3.0	27	130	328

LITHOLOGY, ALTERATION, MISC.

contact has 70°∠ to C.A. & upper contact has 80°∠ to C.A.
331'-337.5' dk brn to med-dk grn gar-pyx-chl skarn; mod fx'd; mod calcite vns, vnlts & patches; wk lt blue calcedonic qtz vns & vnlts show'g silicificat'n @ 331.6'-332', 333' & 337'; irregular lower contact

337.5'-364.7' med grn to med-dk brown to black pyx-gar-chl skarn; mod fx'd; mod calcite vns, vnlts & patches; wk lt blue calcedonic qtz vns & vnlts show'g silicificat'n locally; lower contact has 70°∠ to C.A.
@337.7'-337.9' wide lt blue calcedonic qtz vn 2" wide & lined w/stringers of py - show'g silicificat'n
@ 342.3' & 342.8' thin lt blue calcedonic qtz vns & vnlts show'g silicificat'n

@ 348' lt blue calcedonic qtz vn show'g silicificat'n

@ 350.5' lt blue calcedonic qtz vnlt show'g silicificat'n

@352.8' lt blue calcedonic qtz vnlts show'g silicificat'n & diss po & cpy assoc. w/this qtz

@362' lt blue calcedonic qtz vn show'g silicificat'n
@363.2'-363.6' broken rubble zn

364.7'-519' med-dk grey to med grn to med brn f.g.-m.g. poorly sorted tuffaceous clastics (/or volc-clastics (grnst) w/ perv calc/silc alter'd; pyx & garnet skarn flood'g locally; relict foliat'n &/or bedd'g locally; unit grades to relict e.g. -conglomeritic heterolithic volcanic conglomerate or volcanic bx or sediment? text. for wide zns also & conglomeritic clasts are sub-angular to round'd & ⅛"-1" in size & mostly replac'd by silica; rx mod-str fx'd; rx mod-str calcite vns & vnlts; upper contact has 70°∠ to C.A. & lower contact irregular but w/≈ 70°∠ to C.A.
@364.7'-365.2' relict foliat'n &/or bedd'g w/80°∠ to C.A.
@ 368.7'-369.7' relict foliat'n &/or bedd'g w/70°∠-80°∠ to C.A.
@ 371.4'-374' relict foliat'n &/or bedd'g w/70°∠ to C.A.
@ 378.8'-390' is relict volcanic conglomerate or sediment? text.

@ 385'-387' flt or shear zn w/rx str broken, wkly bx'd, heal'd w/calcite & chl & has 30°∠ to C.A. contacts

@ 388.5'-389' broken rubble zn

@ 392'-394.5' is shear or flt zn w/10°∠-20°∠ to C.A. wkly bx'd but str foliat'd @ same angle between contacts, heal'd w/chl & calcite
@ 394.5'-396' rx is bx'd beneath flt or shear above @ 392'-394.5'; this bx heal'd w/calcite

@ 398.5'-399.5' relict foliat'n &/or bedd'g w/70°∠ to C.A.

FT. / GRAPHIC LOG

330
340
350
360
370
380
390
400

MINERALIZATION

331'-337.5' tr-½% diss & stringers of py w/hi-grade po-cpy zn locally @ 333'-334.3' = 10% blebs to semi-msv, stringers & diss po w/≈ 3% of sulfide content as cpy assoc. w/po, tr-sp py
337.5'-364.7' tr-1% diss, stringers & blebs of po, py & cpy throughout unit w/ local zns of cpy assoc w/py & po
@ 337.7'-337.9' = 2% stringers of py lining calcedonic blue qtz vn

@ 343.4'-343.6' = 2% diss & small blebs of cpy & py w/ 60% of sulfide content being cpy assoc w/diss py assoc w/gar & pyx skarn

@ 348.4'-349.2' = 2%-3% small blebs, stringers & diss po & cpy assoc together w/ 50% content of ea. sulfide & assoc w/gar-rich zn
@ 350' = 1%-2% diss & stringers of po & cpy w/ 50% of ea. sulfide together w/in pyx-rich zn
@ 352.8' = 1½% diss & stringers of po & cpy assoc. together along lt blue calcedonic qtz vnlt
@ 357.8'-358.3' = 1½% small blebs, stringers & diss po w/minor cpy assoc. together & w/in pyx-rich zn
@ 360.7'-364.7' = 1%-3% diss, small blebs & stringers of po & py w/ ≈ 25% of sulfide content being cpy assoc w/ po mostly w/in pyx zn
364.7'-519' tr-1% diss, blebs & stringers of py throughout unit
@ 364.7'-366.6' = 2% diss, stringers & small blebs of py

@ 376'-376.2' = 1½% blebs & diss py

@ 390.4'-390.6' = 5%-7% blebs to semi-msv cpy w/ minor diss po & py stringers

RECOVERY

Run	Run length	Core	%
333	4.0	4.0	100
	10.0	10.0	100
343			
	10.0	10.0	100
353			
	10.0	10.0	100
363			
	6.0	6.0	100
369			
371	2.0	2.0	100
	9.0	9.0	100
380			
	10.0	10.0	100
390			
	10.0	10.0	100
400			

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
331-335	4.0	923	1500
335-340	5.0	68	58
340-345	5.0	76	240
345-350	5.0	44	260
350-355	5.0	50	120
355-360	5.0	16	120
360-365	5.0	114	480
365-370	5.0	5	72
390-391	1.0	49	200

BOX

19
344.8
20
361.9
21
378.3
22
394.5
23

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
@ 400.5'-401.5' relict folist'n t/or bedd'g w/80°∠ to c.A.	400									23
@ 407.2'-431' is relict volcanic conglomerate or sediment? text.					10.0	10.0	100			412.3
@ 411.5'-412.2' flt or shear zn str broken & heal'd w/chl w/30°∠ to c.A.	410			410						
@ 414.3'-414.5' broken rubble zn										
@ 416.7'-417' broken rubble zn					10.0	10.0	100			24
@ 419'-420' broken rubble zn	420			420						429
@ 425'-426' broken rubble zn					10.0	10.0	100			
@ 432' is shear zn w/chl & wk clay gouge along 1" wide shear w/70°∠ to c.A.	430			430						25
@ 438.4' is shear zn w/60°∠ to c.A. w/clay gouge along shear					10.0	10.0	100			
@ 443.2'-457.5' is relict volcanic conglomerate or sediment? text.	440			440						447
					10.0	10.0	100			
	450			450						26
@ 457.7'-457.9' shear zn w/80°∠ to c.A. w/shear heal'd w/clay gouge & mod broken rubble zn					10.0	10.0	100			
@ 461'-463.3' wk-mod perv sec. bio. w/in rx unit; not str. enough to be a bio. hnfls	460	sec. bio		460						465
@ 465.5'-519' is relict volcanic conglomerate or sediment? text.					10.0	10.0	100			
	470			470						27

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@ 476.5'-477' broken rubble zn @ 479.3'-480.7' is blk-dk grey aphanitic-v.f.g. porphyritic mafic dike; 10%-15% 1mm-3mm hornblende phenos (sub to euhedral) replac'd by sec. bio + in mafic-chl groundmass; wk calcite vnlt'g; mod fx'd, upper + lower contacts 50° to C.A @ 485.5' shear zn w/ 40° to C.A. w/clay gouge lining shear + shear foliat'n @ 485'-485.5' w/ same angle to C.A.	470 480 490		@ 477' is ≈ 3% sulfide zn w/ blebs, diss + stringers of cpy + po assoc. together ≈ 60% sulfide content is cpy + assoc w/ pyx-rich zn @ 479.3'-480.7' mafic dike w/ tr diss py throughout unit @ 489.5' ≈ 3% sulfide zn w/ blebs + diss po + cpy assoc. together ≈ 50%, sulfide content is cpy @ 489.5' to bottom of this rx unit is increase of diss + blebs of po + minor cpy but still ≈ 1% of rx unit @ 493.8' diss + bleb of cpy + po	10.0 10.0 10.0	10.0 10.0 10.0	100 100 100	476.5-477.5 489-494	1.0 5.0	45 30	180 110	27 483 28
@ 513' shear zn w/ 20° to C.A. heal'd w/ uk clay gouge + lined w/ gar skarn + stringers of py @ 514.5'-515.5' rx str broken rubble zn 519'-529' med-dk brn to med-dk grn gar-pyx-chl skarn; relict f.g.-m.g. poorly sort'd clastic (or vole-clastic text. locally (original protolith was grnst) + clasts replac'd by silica; mod fx'd; mod calcite vns, vnlts + patches; upper contact irregular but w/ 70° to C.A. mostly + lower contact irregular @ 519.2'-519.7' broken rubble zn 529'-560' med-dk grn to med-dk brn to black, pyx-gar-chl skarn; relict f.g.-c.g. poorly sort'd clastic + / or vole-clastic text. locally (original protolith was grnst) + clasts replac'd by silica; mod fx'd; mod calcite vns, vnlts + patches; upper contact irregular + lower contact has 50° to C.A.	500 510 520 530 540		@ 508' diss + stringers of ≈ 1½% cpy w/ minor diss py 519'-529' tr diss py throughout unit 529'-560' tr - ½% diss + stringers of py + po w/ very minor cpy locally @ 529.5' ≈ 2% stringers + diss of cpy + po w/ cpy ≈ 75% of sulfide content; both sulfides assoc together w/ in gar-rich zns	10.0 10.0 10.0 10.0	10.0 10.0 10.0 10.0	100 100 100 100	519-524 524-529 529-534 534-539	5.0 5.0 5.0 5.0	13 25 36 9	16 17 150 74	518.9 30 537.5 31

LITHOLOGY, ALTERATION, MISC.

@ 546'-546.4' broken rubble zn
@ 547'-554.8' relict c.g.-conglomeritic poorly sort'd clastic t/or vole-clastic (grnst) original protolith text.

@ 556' lt blue calcedonic qtz vn show'g silicificat'n

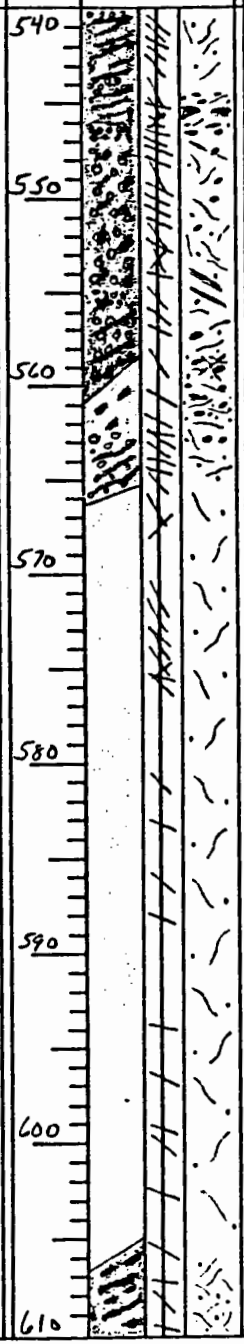
@ 559'-560' is debris flow bx text.? & also blebs of lt blue calcedonic qtz show'g silicification

560'-565.9' med-dk brn to dk grn to blk gar-pyx-chl skarn; relict f.g.-c.g. poorly sort'd clastics t/or vole-clastics text. locally (original protolith was grnst) & clasts replac'd by silica; mod fx'd; mod calcite vns, vnlts & patches; upper contact has 50°∠ to C.A. & lower contact 70°∠ to C.A.

565.9'-606.1' pink f.g.-aphanitic porphyritic syenite dike? or intrusive w/ same descript'n as @ 168'-196.2'; w/ aphanitic chill zn margins 1'-1½' wide; very wkly magnetic; upper contact has 70°∠ to C.A. & lower contact is 60°∠ to C.A.; rx wkly fx'd; wk calcite vns & vnlts

606.1'-611.7' dk grey-blk to dk grn to dk brn f.g.-m.g. poorly sort'd clastics t/or vole-clastics (grnst) w/ perv calc/silic alter'n; pyx & gar skarn flood'g locally; lower contact has 30°∠ to C.A.; rx mod fx'd; str calcite vns & vnlts

FT. / GRAPHIC LOG



MINERALIZATION

@ 544.5'-546' = 3%-10% blebs to semi-msv, stringers & diss po w/ cpy locally; cpy ≈ 10% of sulfide content & cpy assoc w/ po & both w/in gar-rich zns

@ 559.2'-560' = 7% blebs, stringers & diss po w/ very minor diss py

560'-565.9' tr blebs, stringers & diss py w/ hi-grade py locally
@ 560'-561.6' = 7%-10% blebs, stringers & diss py - calcedonic qtz vn @ 560.2'

565.9'-606.1' tr diss py throughout unit

606.1'-611.7' tr-1% diss & stringers of py w/ very minor diss po & cpy locally
@ 608.2' tr diss po & cpy occurr'g together assoc w/ in gar-rich zn

RECOVERY

Run	Run length	Core	%
550	10.0	10.0	100
560	10.0	10.0	100
570	10.0	10.0	100
580	10.0	10.0	100
590	10.0	10.0	100
600	10.0	10.0	100
603	3.0	3.0	100
	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
539-544	5.0	40	9
544-549	5.0	69	350
549-554	5.0	25	52
554-559	5.0	9	25
559-563.5	4.5	105	750
563.5-565.9	2.4	<5	45

BOX

31
555.5
32
574.4
33
593
34

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX 34
611.7'-630' lt-med grn to med-dk brn to dk grey to blk pyx-gar-chl skarn w/ relict f.g.-m.g. poorly sort'd clastics f/or vole-clastics text still apparent w/ minor zns of clastic f/or vole-clastic unit locally (original protolith was grnst) f clasts replac'd by silica; mod fx'd; str calcite vns, vnlts & patches; upper contact 30°∠ to C.A.	610		611.7'-630' tr-½% disf wk stringers of py throughout unit	613						611.4
					7.0	7.0	100			
	620			620						35
					10.0	10.0	100			
@630' T.D. - E.O.H.	630	T.D.		630						630

DIAMOND DRILL HOLE LOG

Company Orvana Resources Corporation

LEGEND

SURVEY

Footage	Bearing	Inclination

Property Eholt — Hole No. E95-

Location 100 m N36°E of E95-5 — Bearing at Collar 306

Inclination at Collar -50°

Coord. - Collar N 5447030

UTM E 387160 — Length 873'

Elev. - Collar 1065m — Core Size NQ

Date started 10-4-95

Completed 10-10-95 — Logged by Lance E. Senter & Doyle Albers

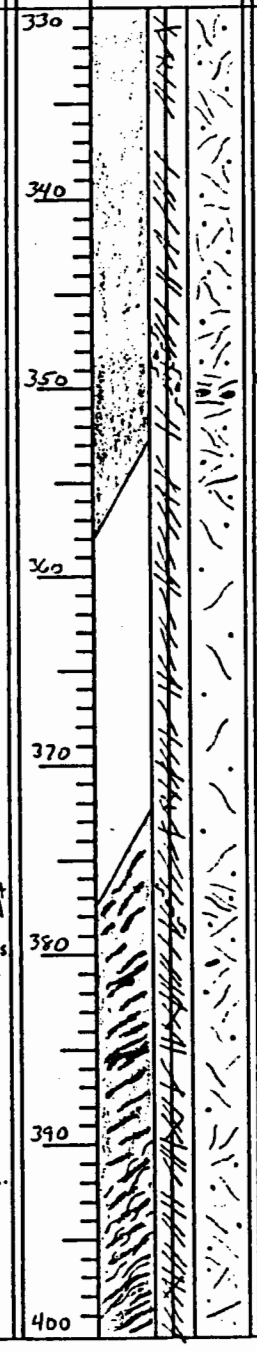
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
0'-20' Alluvium - no recovery	0									
	10									
	20			20						20
20'-44' med grey to med grn monzonite w/holocrystalline equigranular text. w/ medium grain size of ≈ equal amounts of alkali feldspar (pink Kspar) subhedral to euhedral 1mm-2mm in size & blade w/ euhedral 2mm-4mm clear-white plagioclase (labradorite? or albite?) (feldspars ≈ 65% of rx unit; ≈ 30% subhedral to euhedral mafic xtals (augite &/or hornblende) now alter'd &/or replac'd by chlorite; ≈ 5% 1mm-2mm euhedral biotite xtals; little or no qtz; granular text. w/ plagioclase xtals & mafic xtals bord'd by fine-grain'd Kspar feldspar; perv finely diss magnetite throughout rx, rx str fx'd & fxs coat'd w/ hematite & ilmenite Fe-stain'g so w/in oxide zn; med calcite vns & vnlts; lower contact has 50° to C.A. -- monzonite intrusive? or sill? @ 20'-34.5' rx str broken to rubble zn locally	30	monz	20'-44' tr diss py throughout unit	23	3.0	3.0	100			
				25	2.0	2.0	100			1
					8.0	8.0	100			
				33						33.9
	40	monz			10.0	10.0	100			
				43						2
44'-95.9' pink f.g. aphanitic porphyritic syenite dike? or intrusive; Kspar dominant groundmass w/ 10%-15% 2mm-10mm euhedral phenos of white-clear plagioclase? (albite?) mostly argilliz'd & alter'd to white clay w/ some plagioclase? phenos replac'd w/ chl centers; w/ 3%-5% <1mm-3mm euhedral phenos of black biotite replac'd w/ wk-mod sec. bio; wk sericite; unit is slightly magnetic w/ finely diss magnetite; rx wk-mod	50		44'-95.9' tr diss py throughout unit		10.0	10.0	100			
				53						51

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX 2
fx'd except locally; wk calcite ± chl vnlts & vns & fx fillings; aphanitic porphyritic text. chill zn margins of dike? or intrusive w/ 1" wide chill margins; upper contact has 50°∠ to C.A. & lower contact has 30°∠ to C.A.; mod amount of fxs are limonitic-hematitic Fe-stain'd or coat'd so unit still w/in oxide zn @ 53'-54.2' broken rubble zn	50			53	10.0	10.0	100			51
@ 59.5'-61' broken rubble zn.	60			61	8.0	8.0	100			3
				63	2.0	2.0	100			67.2
	70			73	10.0	10.0	100			4
	80			83	10.0	10.0	100			84.7
	90			93	10.0	10.0	100			5
95.9'-107' med grey to med grn monzonite w/equigranular text. w/same descript'n as @ 20'-44'; perv finely diss magnetite throughout unit; rx mod fx'd w/wk limonite & hematite coat'g fxs (still w/in oxide zn) except locally; mod. calcite vnlts & vns; upper contact has 30°∠ to C.A. & lower contact has 40°∠ to C.A. -- monzonite intrusive? or sill? @ 95.9'-97.5' broken rubble zn	100	monz	95.9'-107' tr diss py throughout unit	103	10.0	10.0	100			102.7
107'-111.5' dk grn-pink f.g. aphanitic porphyritic syenite dike? w/same descript'n as @ 44'-95.9' w/upper & lower contacts of 40°∠ to C.A.; wkly fx'd & calcite vnlts; @ 109.5'-110 are xenoliths of equigranular monz. show's syenite is younger & cuts monz. unit	110	monz dyke	107'-111.5' tr diss py throughout unit	113	10.0	10.0	100			6
111.5'-147' med grey to med grn monzonite w/equigranular text. w/same descript'n as @ 20'-44'; perv finely diss magnetite throughout unit; rx mod fx'd w/wk limonite & hematite coat'g fxs (still w/in oxide zn) except locally; mod calcite vnlts & vns; upper contact has 40°∠ to C.A. & lower contact has 35°∠ to C.A. -- monzonite intrusive? or sill?	120	monz	111.5'-147' tr diss py throughout unit		10.0	10.0	100			

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
@131.4'-133' broken rubble zn	120	monz		123						6 121
@135.5'-136' broken rubble zn	130	monz		133	10.0	10.0	100			7
@139.5'-140' broken rubble zn		monz			10.0	10.0	100			139.5
@141'-141.5' broken rubble zn	140	monz		143						8
@145'-145.5' broken rubble zn					7.0	7.0	100			
147'-179' lt-med grn to lt-med grey to blk v.f.g.-f.g.-m.g.-conglomeritic poorly sort'd (tuffaceous locally) clastics f/or vole-clastics (grnst); perv calc/silic alter'd w/ wk pyx f gar skarn flood'g locally; c.g.-conglomeritic text. f/or volc bx text. locally w/heterolithic clasts f.g.-m.g.-1" in size f sub-angular to round'd f most clasts replac'd by silica w/minor calcite f ept. replacement; rx. mod-str fx'd locally; mod-str calcite f calcite-chl vnlts f vns w/calcite patches locally; upper contact has 35°∠ to C.A.; lower contact has 45°∠ to C.A.; rx foliat'd locally	150		147'-179' tr-1% diss f stringers of py f po w/semi-msv zns of py w/ minor py f cpy locally	150						
@147.5'-156' conglomeritic to c.g. text as describ'd above					8.0	8.0	100			
@151.5'-153.5' foliat'd f/or relict bedd'g w/45°∠ to C.A.				158						
@148'-149' broken rubble zn.	160		@158.6' = 7%-10% semi-msv f blebs f diss po w/minor diss py							
@157'-158' broken rubble zn			@160'-160.5' = 2%-3% stringers, blebs f diss of po w/minor diss cpy f py w/in po f assoc. w/in silica zns	163	5.0	5.0	100	158-161	3.0	9
@168.5'-177.5 conglomeritic to c.g. text as describ'd above					7.0	7.0	100			
@169'-170' broken rubble zn.	170			170						170.5
@170' is oxidation/reduc'd contact; fxs above 170' locally have limonite-hematite coat'g fxs					10.0	10.0	100			
179'-195.8' pink f.g.-aphanitic porphyritic syenite dike? w/same descript'n as @ 44'-95.9'; w/6"-1' wide aphanitic chill zn margins; wkly magnetic w/ f.g. diss magnetite; rx mod fx'd; wk calcite vns f vnlts; upper contact has 45°∠ to C.A. f lower contact has 40°∠ to C.A.			@176.5'-177.5' = 3%-5% blebs of finely diss py					176-179	3.0	
@181.5'-182' broken rubble zn			@177.5'-179' = 3%-5% stringers f diss po							
@183'-185' broken rubble zn	180		179'-195.8' tr diss py throughout unit	180						10
@186'-187' fxs have slicks show'g movement					4.0	4.0	100			
@189'-190' broken rubble zn				184						188
	190				9.0	9.0	100			11

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
	190			193						
195.8'-253.1' lt-dk grey to lt-med grn f.g.-m.g.-c.g. conglomeritic calcareous poorly sort'd clastics &/or volc-clastics (grnst); perv calc/silic alter'd; c.g.-conglomeritic &/or volcanic bx text. w/ heterolithic clasts f.g.-m.g.-1" in size, sub-angular to rounded, most clasts replac'd by silica w/ minor ept & Kspar replacement; rx foliat'd &/or relict bedd'g locally; rx mod-str fx'd; med calcite &/or calcite-chl vnlts & vns; upper contact has 45°∠ to C.A. & lower contact has 75°∠ to C.A.; v.f.g. matrix around clasts alter'd to sec. bio locally			195.8'-253.1' tr-½% diss w/ very minor stringers of py								
@ 199'-200.5' flt or shear zn w/ 40°∠ to C.A. w/ str foliat'n & tectonic bx heal'd w/ wk clay gouge & chl & calcite	200				10.0	10.0	100			11
@ 200.5'-253.1' c.g.-conglomeritic &/or volc-bx text. as describ'd above				203						
@ 200.5'-205.3' rx foliat'd &/or relict bedd'g w/ 40°∠ to C.A.										205.1
@ 210.5'-211' broken rubble zn	210				8.0	8.0	100			
@ 213'-216' broken rubble zn				211						
					5.0	5.0	100			12
@ 217'-217.5' broken rubble zn				216						
@ 218'-219.5' broken rubble zn										
@ 220'-234.5' rx foliat'd &/or relict bedd'g w/ 40°∠ to C.A.	220				10.0	10.0	100			221.5
@ 221.2' fx w/ 45°∠ to C.A. w/ slicks show'g movement										
@ 224'-225.5' broken rubble zn				226						
			@ 227.6' = 3%-5% blebs & stringers of py							
@ 230'-231' broken rubble zn	230		@ 229.2' stringers of py		7.0	7.0	100			13
@ 231.5' shear zn w/ clay gouge w/ 30°∠ to C.A.				233						
					10.0	10.0	100			237.5
@ 237'-237.5' broken rubble zn										
	240			243						
@ 244.8'-247.5' pink f.g.-aphanitic porphyritic syenite dike? or dikelet? cutting unit; same descriptn as @ 44'-95.9'; upper contact has 60°∠ to C.A. & lower contact has 30°∠ to C.A.					10.0	10.0	100			14
@ 249'-253.1' rx foliat'd &/or relict bedd'g w/ 60°∠ to C.A.	250			253						
253.1-303' pink f.g.-aphanitic porphyritic syenite dike? or intrusive? w/ same descriptn as @ 44'-95.9' w/ aphanitic chill zn margins 3/4' wide; non-magnetitic; rx wk-mod fx'd; wk calcite vns & vnlts; upper contact has 75°∠ to C.A & lower contact has 50°∠ to C.A.			253.1'-303' tr diss py throughout unit		10.0	10.0	100			255.4
	260									15

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
@ 268.5'-270.8' broken rubble zn.	260			263						15
	270				10.0	10.0	100			272.5
				273						
	280				10.0	10.0	100			16
				283						
	290				10.0	10.0	100			290.2
				293						
	300				10.0	10.0	100			17
303'-356.1' lt-med grey to lt-med grn f.g.-m.g.-c.g. conglomeritic calcareous poorly sorted clastics f/or volc-clastics (grnst); perv calc/silic alter'd; c.g.-conglomeritic f/or volcanic bx text. w/ heterolithic clasts f.g.-m.g.-1" in size & sub-angular to round'd & most clasts replac'd by silica w/ mod epidote replacement locally; wk pyx skarn flood'g locally; wkly foliat'd f/or relict bedd'g locally; rx mod-str. fx'd; mod-str calcite f/or calcite-chl vnlts & vns; v.f.g. matrix around clasts alter'd to ept. & sec. bio. locally; upper contact has 50°∠ to C.A. f/lower contact has 30°∠ to C.A.			303'-356.1' tr-2% diss w/ minor stringers & blebs of py						
@ 303'-319.7' c.g.-conglomeratic f/or volc-bx text as describ'd above			@ 303'-319.7' 1%-2% diss & stringers w/ wk blebs of py w/in conglomeritic f/or volc-bx text.							
@ 303'-305.5' rx poorly foliat'd f/or relict bedd'g w/ 70°∠ to C.A. & str epidote replacement of rx matrix										
@ 305.5' shear or flt zn w/ tectonic bx heal'd w/ calcite & has 20°∠ to C.A.										
@ 306'-309.5 wk pyx skarn flood'g										
@ 310'-319.7' str ept flood'g of rx matrix										
@ 319'-319.5' broken rubble zn	310			303						308.5
					10.0	10.0	100			
				313						
	320		@ 319.7'-356.1' tr-1% diss & stringers of py w/in f.g.-m.g. clastic f/or volc-clastic text.							18
				323	10.0	10.0	100			326.1
	330									19

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
@ 332.3'-333' broken rubble zn	330			333						
@ 348.5'-350' flt or shear zn w/20°∠ to C.A. w/ br'n f broken rx heal'd by wk clay gouge ∓ calcite	340				10.0	10.0	100			19
	350		@ 350'-350.4' = 5%-7% blebs ∓ stringers of py beneath ftwall of shear or flt zn	343						3433
350.1'-375.5' dk pink f.g.-aphanitic slightly porphyritic syenite dike? or intrusive? w/ same descript'n as @ 44'-95.9' but w/ plagioclase? phenos only ≈ 5% of unit ∓ only 2mm-3mm in size; aphanitic chill zn margins ≈1' wide; str magnetic w/ finely diss magnetite; rx mod fx'd; wk-mod calcite vnlts ∓ vns; upper ∓ lower contacts have 30°∠ to C.A.					10.0	10.0	100			20
	360		350.1'-375.5' tr diss py throughout unit	353						
@ 371.8'-372.5' broken rubble zn					10.0	10.0	100			3603
375.5'-425.5' lt-dk grey to lt-med grn to blk to lt-med brn v.f.g.-f.g.-m.g. poorly sort'd clastics ∓/or vole-clastics (grnst); perv calc/silc alter'd; mod-sbdt pyx ± gar skarn flood'g throughout unit; wkly foliat'd ∓/or relict bedd'g locally; rx mod-str fx'd; mod calcite ∓ calcite-chl vns ∓ vnlts; upper ∓ lower contacts have 30°∠ to C.A.				363						21
@ 377.5' is shear zn w/30°∠ to C.A. heal'd w/ clay gouge	370				10.0	10.0	100			
			375.5'-425.5' tr-1% diss ∓ stringers of py w/ very minor diss cpy assoc. w/ py locally	373						3785
@ 392'-398.5' wk foliat'n ∥/or relict bedd'g w/20°∠ to C.A.	380				10.0	10.0	100			
				383						22
	390				10.0	10.0	100			
				393						3966
	400				10.0	10.0	100			23

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@ 402'-411.5' wk foliat'n t/or bedd'g w/20°∠ to c.A.	400		@ 402.8'-403' = 1% stringers & diss py w/minor diss cpy assoc. w/ py	403								
@ 407'-409' broken rubble zn				409	6.0	6.0	100					23
@ 411.5' shear zn. w/30°∠ to c.A. heal'd w/clay gouge	410			413	4.0	4.0	100					413
@ 422'-425.3' broken rubble zn @ 425'-425.5' wk foliat'n t/or bedd'g w/30°∠ to c.A.				423	10.0	10.0	100					24
425.5'-499.8' lt-med grn to lt-dk brn to dk grey pyx-gar-chl skarn; w/relict f.g.-m.g. poorly sort'd clastics t/or vole-clastics (grnst) text locally & ghost'g by replacement of pyx-rich skarn'g; wk-mod fx'd; mod calcite vns, vnlts & patches; (protolith possibly? is a f.g.-m.g. poorly sort'd clastics t/or vole-clastics-grnst perv calc/sile alter'd but now overprint'd by pyx-rich skarn'g); upper contact has 30°∠ to c.A. & lower contact has 55°∠ to c.A.			425.5'-499.8' tr-1% diss, stringers & minor blebs of po & minor py w/ diss. cpy w/in po zns (up to 50% cpy assoc. w/po) & sulfides mostly assoc. w/ gar-rich zns; 5%-10% zns of semi-msv po-cpy-py blebs or clots locally w/in skarn & assoc. w/ gar-rich zns mostly	425	2.0	2.0	100					
@ 426'-426.5' broken rubble zn	430		@ 430'-443.6' = 5%-10% blebs, clots, stringers, diss & semi-msv zns of po w/ cpy making up from 10%-60% of po zns & w/minor py w/in po zns; sulfide zns mostly assoc w/ gar-rich zns	433	8.0	8.0	100	426-430	4.0	19	110	429.6
				443	10.0	10.0	100	430-435	5.0	89	280	
	440							435-440	5.0	67	380	25
				453	10.0	10.0	100	440-445	5.0	12	110	
								445-450	5.0	31	78	447.5
	450							450-453.5	3.5	10	46	
@ 453.5'-457' is mafic dike w/50°-60°∠ to C.A. cutt'g skarn unit; dk grey-dkgrn-blk w/aphanitic-f.g. porphyritic text; 10%-20% 1mm-6mm euhedral hornblende? phenos alter'd & sec. bio w/in aphanitic-f.g. chl-mafic groundmass; rx str fx'd; mod calcite vns & vnlts; no sulfides w/in unit		mafic dike		463	10.0	10.0	100	453.5-457	3.5	45	25	
@ 459'-466.5' obdt. relict f.g.-m.g. poorly sort'd clastic t/or vole-clastic (grnst) text. w/in pyx-rich skarn	460							457-462	5.0	94	38	26
								462-467	5.0	7	68	465.5
@ 468.4'-468.7' broken rubble zn	470				10.0	10.0	100	467-472	5.0	22	44	27

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@ 471'-472.5' broken rubble zn	470			473								
@ 474.2'-474.4' bx zn heal'd w/garnet ± calcite w/possible 40°∠ to C.A. contacts												
@ 476'-477' broken rubble zn					10.0	10.0	100	472-477	5.0	18	21	27
@ 478'-478.5' broken rubble zn								477-482	5.0	<5	31	
@ 480'-480.5' broken rubble zn	480			483								482.4
			@ 482.5'-483' = 3%-5% blebs, stringers ± diss. of py w/ = 20% diss cpy w/in py ± assoc. w/ gar-rich zns					482-487	5.0	7	110	
					10.0	10.0	100	487-492	5.0	8	35	28
				493								
			@ 595.5'-597.7' = 3%-5% blebs, clots, stringers ± diss of po w/ = 50%-60% disshsemi-msv cpy surround'g po (indicat'g late stage?) ± sulfides assoc. w/gar-rich zns					492-497	5.0	13	36	
			499.8'-573.8' tr-1% diss ± stringers of py ± po w/very minor diss cpy assoc. w/ po ± py locally		10.0	10.0	100					
499.8'-573.8' lt-dk grey to lt-med grn to blk to lt-med brn v.f.g.-f.g.-m.g. poorly sort'd clastics ± vole-clastics (arnst); perv calc/silc alter'd; mod-abdt pyx ± gar skarn flood'g throughout unit; wk-mod foliat'd ± relict bedd'g locally; rx mod-str fx'd; mod calcite ± calcite-chl vns ± vnlts; upper contact has 55°∠ to C.A. ± lower contact has 50°∠ to C.A.				503				497-502	5.0	15	150	499
@ 499.8'-514' wk relict foliat'n ± or bedd'g w/40°∠ to c.A.			@ 504'-506' = 5%-7% clots blebs, stringers ± diss po w/ = 40%-50% cpy assoc w/ po ± minor diss py; sulfides assoc. w/in pyx-rich zn					502-507.5	5.5			
	510		@ 508.5'-509' 3% diss ± stringers of py		10.0	10.0	100					29
			@ 513.5' 2%-3% bleb ± or clot of diss py w/in pyx-rich zn.	513								
					10.0	10.0	100					
	520			523								515.2
@ 522'-523' relict foliat'n ± or bedd'g w/50°∠ to c.A.												30
			@ 528' 2% diss ± bleb of py		10.0	10.0	100					
	530			533								533.5
@ 537.5'-538.5' relict foliat'n ± or bedd'g w/50°∠ to C.A.												31
			@ 536'-536.5' = 1% diss py w/in chl-rich zn		10.0	10.0	100					
	540											

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
@ 541'-545.5' relict foliat'n t/or bedd'g w/ 50°∠ to C.A.	540			543						31
@ 548.5'-549.2' broken rubble zn			@ 546.5' 1% blebs t diss of py w/in pyx-rich zn		10.0	10.0	100			548
	550			553						
@ 556.4'-558.2' is qtz-Kspar vn cutt'g rx unit w/ 30°∠ to C.A. w/ tr diss py w/in vn					9.0	9.0	100			32
	560			562						566
@ 569'-567' shear zn w/ 10°∠-20°∠ to C.A. str bx'd t heal'd w/ coarse calcite			@ 568.5'-568.1' ≈ 3%-5% blebs, stringers t diss po w/in wk gar-rich zns		10.0	10.0	100			
@ 566'-569.5' relict foliat'n t/or bedd'g w/ 50°∠ to C.A.	570		@ 571.5'-573.8' 1%-3% blebs, stringers t diss py assoc. w/ gar-rich zns ≈ 50% of the time	572						33
573.8'-655.2' pink f.g.-aphanitic porphyritic syenite dike? or intrusive? w/ same description as @ 44'-45.9' w/ aphanitic chill zn margins 1'-1½' wide; non-magnetic; rx wk-mod fx'd; wk calcite t calcite-chl vns t vnlts; upper contact has 50°∠ to C.A. t lower contact has 45°∠ to C.A.			573.8'-655.2' tr diss py throughout unit		9.0	9.0	100			
@ 575.2'-575.8' flt or shear zn str broken t bx'd t heal'd w/ calcite t has 50°∠ to C.A. contacts	580			581						
@ 579.5-580.5' broken rubble zn					10.0	10.0	100			583.2
@ 585.3'-595.5' is same pink f.g.-aphanitic porphyritic syenite dike? or intrusive? as describ'd above @ 573.8'-655.2' (non-magnetic) w/ 40°∠ to C.A. upper t lower contacts; so occurrence of this syenite is a dike w/in a dike	590			591						34
@ 594.8'-595.5' broken rubble zn					10.0	10.0	100			
	600			601						601
					10.0	10.0	100			35
	610									

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@625.5'-626' shear or flt bx zn heal'd w/chl ± wk calcite w/50°∠ to C.A.	610			611	10.0	10.0	100					35
	620			621	10.0	10.0	100					619
	630			631	10.0	10.0	100					36
	640			641	10.0	10.0	100					637.5
	650			651	6.0	6.0	100					37
655.2'-671.2' lt-med grn to lt-dk brn to dk grey pyx-gar-chl skarn; w/relict f.g.-m.g. poorly sort'd clastics ±/or volc-clastics (grnst ± possible original protolith) text. locally ± ghost'g by replacement of pyx-rich skarn'g; mod fx'd mod calcite vns, vnlts ± patches; upper ± lower contacts have 45°∠ to C.A. @655.5'-657' broken rubble zn @662'-662.5' relict f.g.-m.g. poorly sort'd clastic ±/or volc-clastic (grnst) text. w/in pyx-rich skarn			655.2'-671.2' tr-1% diss, stringers ± minor blebs of po ± py w/minor diss cpy assoc. w/po zns (up to 50% cpy assoc. w/po) ± sulfides mostly assoc. w/gar-rich zns; 3%-10% zns of semi-msv po-cpy-py blebs or clots locally w/in skarn ± assoc. w/gar-rich zns mostly @655.6'-656.5'=3%-5% blebs, clots, stringers ± diss of po w/cpy making up ≈ 40%-50% of po zns w/minor diss py w/in po zns; mostly assoc. w/gar @663.9'-664.9'=10% blebs, clots, stringers, diss ± semi-msv po zns w/ cpy making up ≈ 50% of po zns w/minor py w/in po zns; assoc. w/gar-rich zns 671.2'-682' tr-1% diss ± stringers of py	657	6.0	6.0	100	655.2-660	4.8	23	94	656
	660			663	10.0	10.0	100	660-665	5.0	17	200	38
								665-670	5.0	<5	46	
				673				670-675	5.0	10	5	673
	670											
671.2'-682' lt-dk grey to lt-med grn to blk to lt-med brn v.f.g.-f.g.-m.g. poorly sort'd clastics ±/or volc-clastics (grnst); perv calc/silc alter'd; mod-abdt pyx ± gar skarn flood'g throughout unit; wkly foliat'd ±/or relict bedd'g locally; rx mod-str fx'd; mod-str calcite ± calcite-chl vns ± vnlts; upper contact has 45°∠ to C.A. ± lower contact not able to determine @673'-674' foliat'n ±/or relict bedd'g w/20°∠ to C.A.	680				10.0	10.0	100	675-682	7.0	<5	53	39

LITHOLOGY, ALTERATION, MISC.

@680'-682' str broken rubble zn
682'-731' lt-med grn to lt-dk brn to dk grey pyx-sec-chl skarn; w/relict f.g.-m.g. poorly sort'd clastics (/or volc-clastics (grnst.) possible original protolith) text. locally ghosty by replacement of pyx-rich skarn'g; mod-str fx'd, mod calcite vns, vnlts & patches; upper contact not able to recognize, lower contact has 80°∠ to C.A.
@687.4'-688.3' is syenite dike w/45°∠ to C.A. cutt'g skarn; w/tr diss & stringers of py & cpy!!--must be very late sulfide mineralizatn!!!
@686'-687.4' flt or shear zn str bx'd & heal'd w/calcite & has 30°∠ to C.A. hang'g wall w/45°∠ foot-wall in contact w/ syenite dike described above @ 687.4'-688.3'
@690.7'-731' relict f.g.-m.g. poorly sort'd clastics (/or volc-clastics (grnst) text. w/in pyx-rich skarn. w/ foliat'n (/or relict bedd'g locally
@695'-695.5 broken rubble zn
@696'-697' broken rubble zn

@701'-704' broken rubble zn

@706'-719.8' foliat'n (/or relict bedd'g w/60°∠ to C.A.

@714'-715.5' broken rubble zn

@722.5'-729' foliat'n (/or relict bedd'g w/70°∠ to C.A.

@725'-726' broken rubble zn

731'-814.5' pink f.g. - aphanitic porphyritic syenite dike? or intrusive? w/ same description as @ 44'-95.9' w/aphanitic chill zn margins 1' wide @ 731'-767' unit is non-magnetic but from 767'-814.5' unit is slightly magnetic (w/in same syenite dike); wk-mod fx'd; wk calcite & calcite-chl vns & vnlts; upper contact has 80°∠ to C.A. & lower contact has 25°∠ to C.A.

FT.

680
690
700
710
720
730
740
750

GRAPHIC LOG

MINERALIZATION

682'-731' tr-1% diss, stringers & minor blebs of po & py w/minor diss cpy assoc. w/both po & py zns (up to 50% cpy assoc. w/po) & sulfides mostly assoc. w/gar-rich zns; 2%-10% blebs, clots, stringers & diss of po-cpy-py w/cpy making up 50% of sulfide zns locally w/in skarn & assoc. w/ gar rich zns mostly
@689'-689.1' = 3%-5% blebs, clots, stringers & diss of po & very minor py w/cpy making up = 50% of po-py zns; assoc. w/gar-rich zns

@697.5'-697.9' = 1%-2% stringers, blebs & diss of po & py w/cpy making up = 50%-60% of sulfide zns (assoc. w/in pyx-rich zns
@699.5'-699.7' = 1%-2% blebs & diss of po & py w/cpy making up = 50%-60% of sulfide zns assoc. w/in pyx-rich zns
@ 700.8'-701.2' = 10% blebs, stringers & diss po & py w/cpy making up = 50%-60% of sulfide zns assoc. w/in pyx-rich zns
@ 704'-704.2' = 1%-2% diss py w/in pyx-rich zns
@707.2'-708.6' = 2% blebs, stringers & diss po & py w/ cpy mak'g up = 25% of sulfide zns w/in gar & pyx-rich zns
@ 712'-712.8' = 2% stringers, diss & minor blebs of po & py w/cpy mak'g up = 50% of sulfides w/in pyx-rich zn
@720.5'-720.8' = 3%-5% blebs, stringers & diss of py & minor po w/ cpy, mak'g up = 60% of sulfide zn
@721.5'-731' = 2% diss & stringers of py (po w/py > po) & very minor diss cpy assoc. w/po zns locally
@726'-726.7' = 4% py vnlts & stringers abdt w/in this sulfide zn

731'-814.5' tr diss py throughout unit; sulfide (po-py-cpy) zns w/in xenoliths w/in this unit.

RECOVERY

Run	Run length	Core	%
683		-	-
693	10.0	10.0	100
696	3.0	3.0	100
698	2.0	2.0	100
703	5.0	5.0	100
713	10.0	10.0	100
723	10.0	10.0	100
733	10.0	10.0	100
743	10.0	10.0	100

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
675-682	7.0		
682-687	5.0	18	79
687-692	5.0	32	73
692-697	5.0	24	24
697-702	5.0	38	170
702-707	5.0	14	180
707-712	5.0	64	110
712-717	5.0	89	180
717-722	5.0	9	130
722-727	5.0	15	310
727-731	4.0	6	180

BOX

39
680.7
40
705.5
41
720.8
42
738
43

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
@ 751.8'-753.4' dk grn to dk grey xenolith w/in syenite dike of f.g.-m.g. poorly sort'd clastic t/or volc-clastic (grnst) w/ perv calc/silc alter'n & abdt pyx skarn flood'g, contacts irregular	750		@751.8'-753.4' tr of diss py; but @ 752.8'-753' = 5% diss, blebs to semi-msv po w/minor py & = 25% cpy w/in po zns	753	-			751.8-753.4	2.2			43
@ 758.2'-761.5' dk grey to blk to dk grn xenolith w/in syenite dike of f.g.-m.g. poorly sort'd clastic t/or volc-clastic (grnst) w/ perv calc/silc alter'n & abdt pyx skarn flood'g; contacts irregular.	760		@758.2'-761.5' tr-1% diss & stringers of po & py	763	10.0	10.0	100					755.9
	770			773	10.0	10.0	100					44
	780			783	10.0	10.0	100					774.3
	790			793	10.0	10.0	100					45
	800			803	10.0	10.0	100					792.6
	810			813	10.0	10.0	100					46
814.5'-825' lt-dk grn to black to lt-dk brn pyx-chl-gar skarn; w/relict f.g.-m.g. poorly sort'd clastics t/or volc-clastics (grnst & possible original protolith) text. locally & ghost'g by replacement of pyx-rich skarn'g; mod-str fol'd; mod calcite vns, vnlts & patches; upper contact has 25°/to C.A. lower contact has 60°/ to C.A.	820		814.5'-825' tr-1% diss, stringers & minor blebs of po & py w/very minor diss & stringers of cpy assoc. w/po; minor hematite assoc. w/sulfides from 814.5'-817'		10.0	10.0	100	814.5-820	5.5	12	450	810.8 47

E 75-4
PS 13 β

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
825'-837' med-dk brn to lt-med grn gar-pyx-chl skarn; rx mod-str fx'd & broken; mod. calcite vns, vnlts & patches; upper contact has 60°∠ to C.A. & lower contact not able to recognize but possible 60°∠ to C.A.	820		825'-837' tr-1% diss f stringers of po & py w/minor diss cpy assoc w/po locally; minor diss PbS locally @826.1'-826.5' = 1% diss py & PbS & PbS replac'g py xtals @827.7'-827.9' = 2% diss & stringers of po w/minor diss py & PbS replac'g py xtals	823				820-825	5.0	5	130	47
@831.5'-836.5' major flt or shear zn w/50°∠ to C.A. & rx is a rubble & str broken zn	830				10.0	10.0	100	825-830	5.0	11	85	828
837'-842.5' dk gray to med-dk grn v.f.g.-f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst); perv calc/gile alter'd; mod pyx skarn flood'g throughout unit; rx mod fx'd; wk-mod calcite & calcite-chl ves & vnlts; upper contact questionable & lower contact has 40°∠ to C.A.			837'-842.5' = ½%-1% blebs stringers & diss py w/very minor diss cpy assoc w/py locally	833				830-837	7.0	9	38	
842.5'-865' lt-med grn to lt-dk brn to blk pyx-gar-chl skarn; w/relict f.g.-m.g. poorly sort'd clastics &/or volc-clastics (grnst & possible original protolith) text. locally & chest'g by replacement of pyx-rich skarn'g; mod-str fx'd; mod calcite vns, vnlts & patches; band'g &/or foliat'n &/or relict bedd'g locally; upper contact has 40°∠ to C.A. & lower contact has 30°∠ to C.A.	840		842.5'-865' tr diss py & po throughout unit w/stringers of cpy assoc. w/diss po locally		10.0	10.0	100	837-842.5	5.5	8	170	48
@843.8'-844.3' band'g &/or foliat'n &/or relict bedd'g 70°∠ to C.A.				843								
@845.8'-847.8' broken rubble zn (possible structure?)					7.0	7.0	100	842.5-848	5.5	5	130	848.9
@848'-851' wk foliat'n &/or relict bedd'g w/80°∠ to C.A.	850		@849.7'-850.3' = 2% diss, stringers & minor blebs of po & minor py w/cpy making up = 25% of sulfide zns w/in clastic &/or volc-clastic (grnst)	850				848-853	5.0	7	68	
@856.9'-856.8' foliat'n &/or relict bedd'g w/70°∠ to C.A.					10.0	10.0	100	853-858	5.0	8	99	49
@860.5'-861.5' band'g &/or foliat'n &/or relict bedd'g w/70°∠ to C.A.	860		@859.2' = 1½% stringers & diss po & cpy w/cpy making up = 25% of sulfide zn assoc. w/gar-rich zn @864.2'-864.4' = 1½% diss, blebs & stringer of po w/cpy assoc. w/po & mak'g up = 50% of sulfide zn	860								860.5
865'-873' pink f.g.-aphanitic, porphyritic syenite dike? or intrusive? w/same descript'n as @ 44'-95.9' w/aphanitic chill zn margin 1' wide; magnetic w/finely diss magnetite @866.3'-867.4' dk grey-blk xenolith w/in syenite dike of f.g.-m.g. poorly sort'd clastic &/or volc-clastic (grnst); perv calc/sils alter'd & pyx-rich skarn flood'g; contacts irregular. @871.6'-872.7' dk grn-dk brn xenolith w/in syenite dike of pyx-gar-chl skarn w/irregular contacts			865'-873' tr diss py throughout unit; tr-1% diss py & po w/in xenoliths w/in this unit @866.3'-867' tr-1% diss & stringers of po w/very minor diss py		10.0	10.0	100					50
@873' T.D. - E.O.H.	870		@871.6'-872.7' tr diss po w/in gar-rich zn	870				858-865	7.0	15	96	
	873	T.D.		873	3.0	3.0	100					873

DIAMOND DRILL HOLE LOG

Company Orvana Resources Corporation

LEGEND

SURVEY

Footage	Bearing	Inclination

Property Eholt — Hole No. E95-10

Location Just South of southern-most shaft. — Bearing at Collar 306

Inclination at Collar -50

Coord. - Collar N 5446860N

UTM E 386955E — Length 211'

Elev. - Collar 1070m — Core Size NQ

Date started 10-11-95 — Logged by Lance Senter / Doyle Albers

Completed 10-12-95

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
	0											
	10							10-20	10.0	189	2100	
	20			20								20
20'-23' pyx-gar skarn w/wk relict text of f.g.-m.g. poorly sort'd clastics f/gr vole-clastics (grnst), med-dk grn, abt chl, wk calcite vns & patches; wk fx'd (grnst-scotalith).			45%-50% msv po w/3% diss & late vnlts of py, tr diss cpy @ 20'-23'					20-23	3.0	927	3000	
23'-32' blk-dk grey, f.g.-aphanitic porphyritic mafic dike; 10%-20% 1mm-3mm hoenblende phenes (euhedral) & 3%-5% 1mm-3mm euhedral feldspar phenes replac'd by calcite w/in a f.g.-aphanitic chl-mafic-feldspar groundmass; wk calcite vnlts & patches; unit mod-str fx'd, broken rubble zn @ 30.4'-31.8', fxs mostly w/50°-60° to C.A. & minor 25° to C.A.; lower contact of dike has 50° to C.A. fxs, coat'd w/ hematite-limonite f oxidation/reduction zn @ 26.5'	30	mafic dike	tr-1% diss py, mafic dike unit perv magnetic w/ v. f.g. diss magnetite @ 23'-32'					23-32	9.0	16	29	1
32'-47' dk grn-dk grey f.g.-c.g. conglomeritic poorly sort'd clastics f/gr volcaniclastics (grnst), abt wk pyx-gar skarn znsf pyx-gar replac'g matrix between clasts locally, chl replac'g matrix silic, sulfides strongest in skarn znsf, wk calcite vns, vnlts & patches, rx mod fx'd w/fxs - mostly w/50°-60° to C.A. & minor 20° to C.A., broken rubble zns @ 28.5'-31' & 40.5'-41', pyx-gar-chl skarn zn @ 32.5'-33.3' & 45.2'-46.4'; lower contact of unit has 60° to C.A., str dk grn-black chl along fx surfaces throughout unit, unit perv calc/silic alteration throughout	40		10% - 15% diss & msv po, py & tr cpy @ 32'-42'					32-37	3.0	51	220	37.4
			39.5'-42.2' tr diss silver sulfide (as py?) w/in other sulfides					37-42	5.0	543	640	
			42.2'-45.5' 40%-50% diss & msv po, py & tr cpy					42-47	5.0	72	1700	2
47'-53.5' med grn-med brn pyx-garnet-chl skarn, mod fx'd w/ 45°-55° to C.A. w/str dk grn-black chl coat'g fxs; wk calcite vns & vnlts ± chl ± po ± py (sulfides occur as selvages along calcite vns & vnlts), broken rubble zn @ 52.8'-53.5'	50		47'-53.5' 3%-5% diss & blebs of po, very minor py					47-53	6.0	166	170	
				53								

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
	50			53				47-53	6.0			2
53.5'-58.7' med brn-med grn gar-pyx-chl skarn; mod fx'd w/ 50°∠-60°∠ to C.A. w/str dk grn-black chl coat'g fxs; abd calcite vns & vnlts ± chl ± po ± py w/sulfides occurring as selvages along calcite vns & vnlts, lower contact of unit has 50°∠ to C.A.			53.5'-58.7' 3%-5% diss & blebs of po, very minor py; ½" wide cc vn + chl + po w/45°∠ to C.A.; 1½" wide cc vn + chl + po + py w/40°∠ to C.A @ 56.3' & 57' respectively		10.0	10.0	100	53-58.7	5.7	197	130	553
58.7'-65.5' dk grey-dk grn-dk brn f.g.-m.g. poorly sorted clastics &/or volcaniclastics (grnst); perv calc/silc alter'n, chl & sec. bio replac'g matrix between clasts, wk pyx flood'g or skarn'g locally; rx mod fx'd w/ predominate 50°∠ to C.A.; broken rubble zn @ 61.5'-62'; wk-mod black chl coat'g fxs; mod calcite vnlts & vns; rx laminated or foliat'd w/ 60°∠ to C.A. @ 64.5'-65.5'; lower contact 50°∠ to C.A.	60		58.7'-65.5' tr-2% diss & stringers of po & py, late stage po vnlts locally	63				58.7-65.5	6.8	<5	33	
65.5'-113' dk brn-med to dk grey biotite hornfels w/ perv sec. bio alter'n; zns of f.g.-m.g. poorly sorted clastics &/or volcaniclastics (grnst) w/ perv calc/silc alter'n &/or pyx-gar flood'g or skarn'g locally - this indicates unit could be v.f.g.-m.g. poorly sorted clastics &/or volc-clastics w/ alter'n from sec. bio to calc/silc to pyx-gar skarn'g perv throughout unit; rx mod fx'd w/ predominate fxs @ 40°∠-60°∠ to C.A. w/ minor fxs @ 10°∠ & 30°∠ to C.A.; in local zns relict bedd'g or foliation @ 50°∠ to C.A. w/in f.g.-m.g. poorly sort'd clastic &/or volc-clastic (grnst); broken rubble zns locally wk calcite vns or vnlts; wk qtz vns & vnlts; minor sulfides; dk grn-black chl coat'g fxs		bio hnfls	65.5'-113' tr.-1% diss pot py throughout unit; up to 1% in calc/silc & pyx-gar alter'd zns	73							3
@ 71'-72' f.g.-m.g. poorly sort'd clastics &/or volc-clastics w/ calc/silc alter'n; relict bedd'g @ 60°∠ to C.A., minor qtz vnlts, possible actinolite?	70		@ 71'-72' 1% diss po w/ tr py									70
@ 74.5'-75.5' same rx type as at 71'-72'			@ 74.5'-75.5' 1% diss & stringers of po w/ tr py									
@ 77.5'-79' broken rubble zn				83								4
@ 82'-82.5' broken rubble zn	80	bio hnfls										
@ 84.5'-86.5' same rx type as @ 71'-72' w/ relict bedd'g 50°∠ to C.A.			@ 84.5'-86.5' 1% diss py w/ tr po									
@ 88'-89' pyx-gar flood'd or skarn'd zn		bio hnfls	@ 88'-89' 1% diss py w/ tr po		10.0	10.0	100	93-89.5	1.5	18	33	
@ 92'-93' same rx type as @ 71'-72' w/ relict bedd'g 60°∠ to C.A.	90	bio hnfls	@ 92'-93' 1% diss po w/ tr py									91
@ 93'-94' pyx flood'd or skarn'd zn			@ 93'-94' 1% diss po w/ tr py	93				93-94	1.0	<5	73	
		bio hnfls										5
					10.0	10.0	100					
@ 100'-100.2' blebs of garnet	100		@ 100'-100.2' 1% diss py									
@ 101' blebs of garnet			@ 101' 1% diss & stringers of py	103								
		bio hnfls										
@ 107'-108' broken rubble zn			@ 106'-106.3' qtz vn'g & flood'g w/ wk apt & black chl w/ 3%-5% blebs of po		10.0	10.0	100					109.5
@ 109.5'-110.5' rx foliat'd w/ 40°∠ to C.A.	110											
113'-121.5' lt grn-med grey f.g.-m.g. equigranular alkalic? intrusive (monzonite? or qtz diorite?) w/ relict text. due to perv calc/silc alter'n; @ 113'-115.8' rx str broken w/ wk clay gouge & calcite coat'g fxs which is probably a flt zn w/ unrecognis'd contact relat's; mod fx'd otherwise w/ 50°∠ to C.A. & minor 30°∠ to C.A. fxs; minor diss & stringers of py; mod calcite vns & vnlts w/ wk apt & gar as selvages lining calcite vns, mafics replac'd by sec bio & chl; lower		intrus	113'-121.5' minor tr-½% diss & stringers of py	113							6
			@ 113'-115.8' flt or shear zn w/ str broken rx & minor tr-½% diss & stringers of py		10.0	10.0	100	113-118	5.0	<5	120	
	120							118-121.5	3.5	11	48	

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
contact very steep w/= 20°/ - 30°/ to C.A. possible dike? 121.5'-158.7' biotite hornfels w/ same description as above @ 65.5'-113'; lower contact is 70°/ to C.A. @123.2'-124' same rx type as @ 71'-72' w/relict bedd'g 50°/ to C.A. (med grn due wk pyx flood's locally	120	intrus bio hnfls	121.5'-158.7' tr - 1% diss pc (py throughout unit; up to 1% in calc/silic (pyx alter'd zns @ 123.2'-129' ½% diss (stringers of py	123				119-121.5	3.5	6
										125.8
	130	bio hnfls			10.0	10.0	100			
				133						7
@ 134.5'-140' are 1' to several inches wide same rx type as @ 71'-72' w/relict bedd'g 50°/ to C.A. (zns of congl. text w/clasts replac'd w/qtz (epi. @ 135'-135.5' broken rubble zn		bio hnfls	@ 134.5'-140' tr-½% diss py		10.0	10.0	100			
	140			143						143
		bio hnfls			10.0	10.0	100			
	150			153						8
@ 151.6'-151.9' rx foliat'd w/ 70°/ to C.A.		bio hnfls			10.0	10.0	100			
@ 159.5 wk pyx flood's 158.7'-194' pink f.g. porphyritic syenite; Kspar dominant groundmass w/ 13%-15% euhedral phenos of white-clear plagioclase? (albite?) 2mm-10mm in size w/ 3%-5% euhedral phenos of black biotite <1mm-3mm in size; wk diss sericite; wkly magnetic; wk calcite vns (vnlt's w/in rx (filling fxs; wkly fx'd w/ poss. dominant 50°/-60°/ to C.A.; very minor diss py; aphanitic porphyritic text chill zns on margins of dike? or intrusive for 2'-3' wide; upper contact is 70°/ to C.A. (lower contact is 70°/ to C.A.; minor black chlorite along fxs locally; some plagioclase phenos replac'd by chlorite in center of xtals, outside margins still unalter'd	160		158.7'-194' very minor (tr) diss py throughout unit		10.0	10.0	100			157.7
				163						
	170				10.0	10.0	100			9
				173						
	180				10.0	10.0	100			178.5
				183						10
	190				10.0	10.0	100			

LITHOLOGY, ALTERATION, MISC.

194'–196' biotite hornfels w/ same description as above @ 65.5'–113'; lower contact is 50°∠ to C.A., mod fx'd, qtz vns/loc.

196'–211' dk grey–dk grn f.g.–c.g.–conglomeritic, poorly sorted clastics f/gr volc-clastics (grnst) w/ sec bio f chl –/ very minor gar f pyx replac'g matrix between clasts locally; unit perv calc/silic alter'd, mod fx'd w/ predominate 50°∠–60°∠ to C.A.; mod calcite vns f/vnlts filling fxs; clasts predominate replac'd by qtz f ept.

@198.5'–199' is diss garnet blebs w/ diss po zn

@205.7' is diss garnet blebs

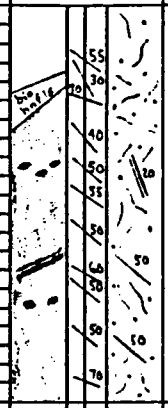
@208' is 1½ wide calcite vn w/50°∠ to C.A.

@211' T.D. – E.O.H.

FT.

190, 200, 210, 211

GRAPHIC LOG



MINERALIZATION

194'–196' tr–3% diss f stringers of py throughout unit

196'–211' 1%–3% diss f stringers of po f py

@198.5'–199' is 1" wide calcite-chl-ept-py vn w/20°∠ to C.A. cutt'g gar alter'd zn

@204' is ½" wide chl-py vn w/50°∠ to C.A.

RECOVERY

Run	Run length	Core	%
193	10.0	10.0	100
	10.0	10.0	100
203			
	8.0	8.0	100
211			

ANALYTICAL

Sample	Interval	Au ppb	Cu ppm
196–200	4.0	871	170
200–205	5.0	104	170
205–211	6.0	54	170

BOX

10, 197.2, 11, 211

DIAMOND DRILL HOLE LOG

Company Orvana Resources Corporation

Property	Ehalt	Hole No.	E95-9
Location	50m N36°E of E95-8	Bearing at Collar	12°
		Inclination at Collar	-50°
Coord. - Collar N	5447095		
UTM E	387045	Length	393'
Elev. - Collar	1076 m	Core Size	NQ
Date started	10-12-95	Logged by	Lance E. Senter & Doyle Albers
Completed	10-14-95		

LEGEND

SURVEY

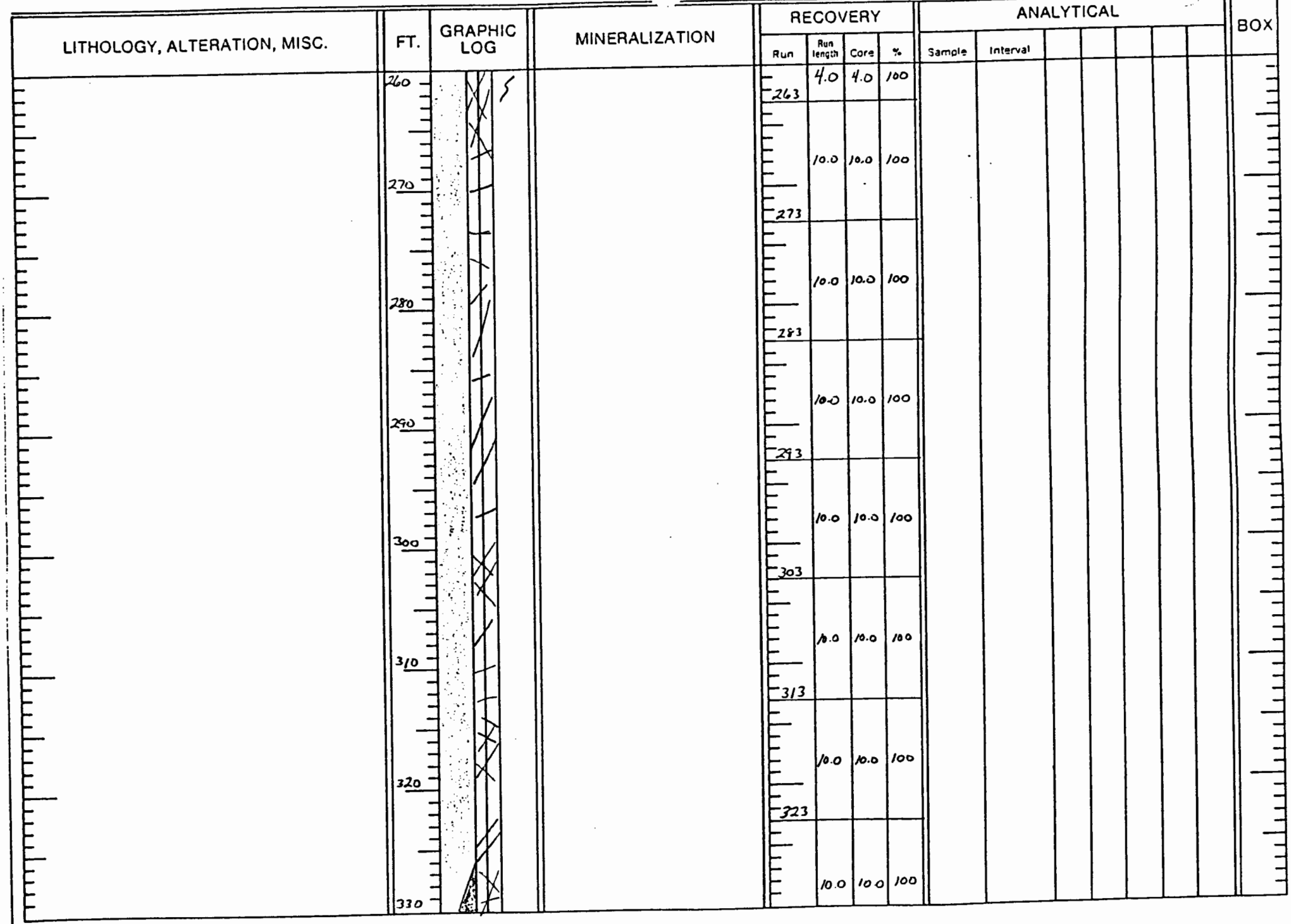
Footage	Bearing	Inclination

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
0'-27' Alluvium - no recovery	0									
	10									
	20			27						27
27'-77.5' med grey to med grn monzonite intrusive? or sill? w/ holocrystalline or equigranular text. w/ med gr size of = equal amounts of alkali feldspar (pink Kspar) subhedral to euhedral 1mm-2mm in size & shape w/ euhedral 2mm-6mm, clear-white plagioclase (labradorite? or albite?) & feldspars ≈ 65% of rx unit; ≈ 30% subhedral to euhedral mafic xtals (augite &/or hornblende) now alter'd &/or replac'd by chlorite; ≈ 5% 1mm-2mm euhedral biotite xtals; little or no qtz; granular text. w/ plagioclase xtals & mafic xtals bond'd by fine-grain'd Kspar feldspar; perv finely diss magnetite throughout rx; rx mod-str fx'd & fxs coat'd w/ hematite & limonite Fe-stain'g to 77.5' (77.5' is the oxide/reduced zone contact); wk-mod calcite vns & vnlts; lower contact is a fault contact & very probably is 60° to C.A. @ 27'-29' broken rubble zn @ 32'-33' broken rubble zn	30	monz	27'-77.5' tr diss py throughout unit	33	6.0	6.0	100			1
	40	monz		40	7.0	7.0	100			42.2
	50	monz		49	9.0	9.0	100			2

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
@76.3'-77.5' flt or shear zn w/ 60°∠ to C.A. w/str tectonic bx flt zn heal'd by calcite ∱ chl; some bx clasts are pyx skarn'd ∱ some mb (volc.intrusive bx?)	50	monz								2
77.5'-114.5' pink f.g.-aphanitic porphyritic syenite dike? or intrusive?; Kspar dominant groundmass w/10%-15% 2mm-10mm euhedral phenos of white-clear plagioclase? (albite?) mostly chloritiz'd ∥or argilliz'd ∱ alter'd to white clay w/ some plagioclase? phenos replac'd w/ chl centers or totally; w/ 3%-5% <1mm-3mm euhedral phenos of black biotite replac'd w/wk-mod sec. bio.; wk sericite; unit is non-magnetic; rx mod-str fx'd; wk calcite ∱ calcite-chl vnlts, vns ∱ fx fillings; aphanitic porphyritic text. chill zn margins 3' wide; upper contact is possibly 60°∠ to C.A. ∱ lower contact has 50°∠ to c.A.	60				11.0 ?	11.0	100			60
@77.5'-78.5' broken rubble zn	70	monz		70	10.0	10.0	100			3
@78.5'-80.5' broken rubble zn	80	monz	@76.3'-77.5' = 1% diss py w/in clasts ∱ matrix of flt bx zn	80	10.0	10.0	100			77.5
@80' is shear zn w/ 40°∠ to C.A. w/clay gouge filling shear zn	90		77.5'-114.5' tr diss py throughout unit	90	10.0	10.0	100			4
@95.5'-96.5' broken rubble zn	100			100	10.0	10.0	100			93.7
@108.7'-111' flt or shear zn w/20°∠ to C.A. w/abdt. fxs w/slicks ∱ flt bx heal'd w/ clay gouge	110		@108.7'-111' = 1% finely diss py w/in flt or shear zn	107	7.0	7.0	100			5
114.5'-189.1 lt-med grey to lt-med grn v.f.g.-f.g.-m.g.-c.g.-conglomeritic poorly sort'd (ash-tuff locally) clastics ∥or volc-clastics (grnst); perv calcareous; perv calc/silc alter'd w/wk pyx ∱ gar skarn flood'g locally; c.g.-conglomeritic text. ∥or volc-bx text largely w/ heterolithic clasts f.g.-m.g -1" in size ∱ sub-angular to round'd ∱ most clasts replac'd by silica w/calcite ∱ pt. replac'g matrix ∱	120		114.5'-189.1 tr-2% diss, stringers ∱ blebs of py w/in rx ∱ locally replac'g matrix	113	6.0	6.0	100			108.7
					10.0	10.0	100			6

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
sometimes clasts; rx mod-str fx'd, mod-str calcite ± calcite-chl vnlts ± vns w/calcite patches locally; upper contact has 50°∠ to C.A.	120			123								6
@ 115'-118' med grn v.f.g.-m.g. ash flow tuff text.												
@ 117.8'-118' shear of filt zn w/ 30°∠ to C.A. heal'd w/clay gouge												
@ 125'-125.2' broken rubble zn					10.0	10.0	100					
	130			133								
					10.0	10.0	100					
	140			143								
					10.0	10.0	100					
Clasts grading to c.g. txt below 150'	150		2-3% py - assoc w/ silica Rple zns	153								
					10.0	10.0	100	149-154	5.0	19	43	
				163				154-159	5.0	28	30	
	160				10.0	10.0	100	159-164	5.0	17	26	
					10.0	10.0	100					
	170			173								
					10.0	10.0	100					
	180			183								
					10.0	10.0	100					
189.1-198.8 Syenite	190											127.3

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
189.1 - 249.3 Tuff bx similar to above with numerous syenite dikes/sills intruding strata. Some potassic alteration/enrichment? in tuff.	190			193						
					10.0	10.0	100			
	200			203						
					8.0	8.0	100			
	210			211						
211.3 - 216.8 Syenite					10.0	10.0	100			
	220			221						
					10.0	10.0	100			
226.9 - 239.2 Syenite	230			231						
					10.0	10.0	100			
	240			241						
					10.0	10.0	100			
249.3 - 330 - Syenite	250			251						
					8.0	8.0	100			
	260			259						


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
260
270
280
290
300
310
320
330
263
273
283
293
303
313
323
4.0 4.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
340.6-369 Dark grey-olive green porphyritic Latite? dike/sill. 10-20% phenos of dominantly feld with some bio. Moderately magnetic, no sulfides	330			333								
	340				10.0	10.0	100					
	350	Latite		343								
					10.0	10.0	100					
	360			353								
					10.0	10.0	100					
369-393 Lt-med green f.g. pyx dominant skarn with minor garnet Numerous blk (chl?) coated fxs of varying orientations -	370		369-393 <1% finely dissem py + cpy. Abundant x-cutting calc-filled fxs.	363								
					10.0	10.0	100					
	380			373								
					10.0	10.0	100	369-374	5.0	43	280	
				383				374-379	5.0	<5	81	
					10.0	10.0	100	379-384	5.0	25	68	
Hole was called while I was sick in bed - Decision was based in part on footage - should have kept drilling based on alteration / mineralization is minor, but present	390			393				384-389	5.0	28	270	
		T.D	393.					389-393	4.0	92	380	
	400											

DIAMOND DRILL HOLE LOG

Company

LEGEND

SURVEY

Footage	Bearing	Inclination

Property Eholt — Hole No. E95-7

Location 100m NE of E95-2 — Bearing at Collar 305°

Eholt Mtn — Inclination at Collar -50°

Coord. - Collar N 5446850N

E 387860E — Length 383'

Elev. - Collar 1172m — Core Size NQ

Date started 10-15-95

Completed 10-17-95 — Logged by

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
8-12 med-dk grey f.g. porphyritic dike/sill with 15-20% phenos of mostly Feld with some bio, moderately magnetic. Brkn lower contact. (calcite)	0									
	10			8	5.0	5.0	100			
12-55.6 Dk grey-green f.g. porphyritic crystal-lithic tuff with 3cm heterolithic clasts, up to 2 cm. Weak alteration to chl + epd; from regional greenstone metamorphic event.			12-55.6 0.5-1.0% py both disseminated as veins	13	10.0	10.0	100			
	20			23	10.0	10.0	100			
	30			33	10.0	10.0	100			
	40			43	10.0	10.0	100			
	50			53						

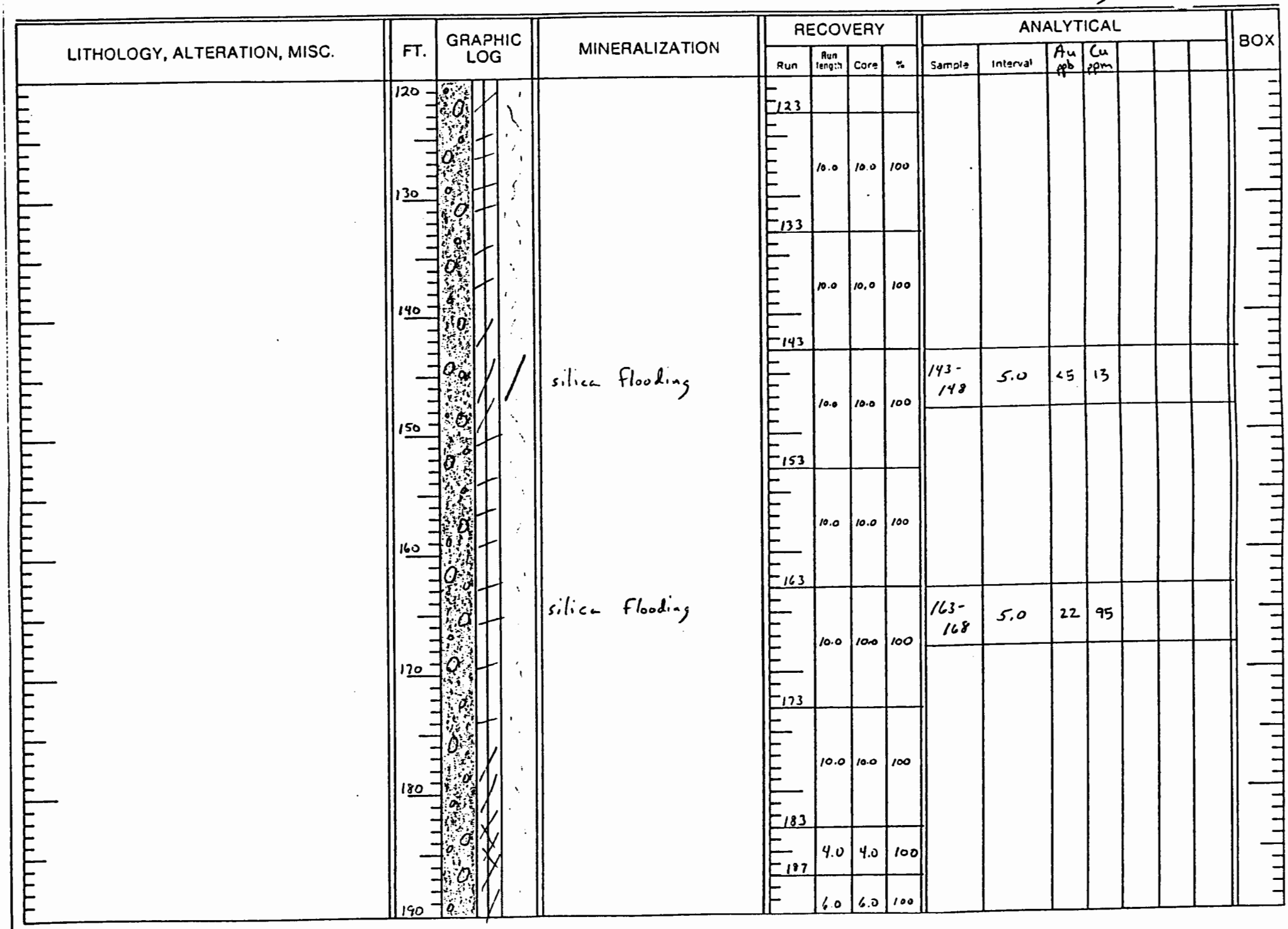
55.6 - 62 DK grey porphyritic latite? dike/sill similar to above (8-12') moderately magnetic; no sulfides.

62 - 202.6 Med - dk grey crystal - Lithic tuff with numerous clasts up to 5 cm. Locally intense silica flooding. Minor calc-silicate alt mostly as epidote. - Regional greenstone overprint.

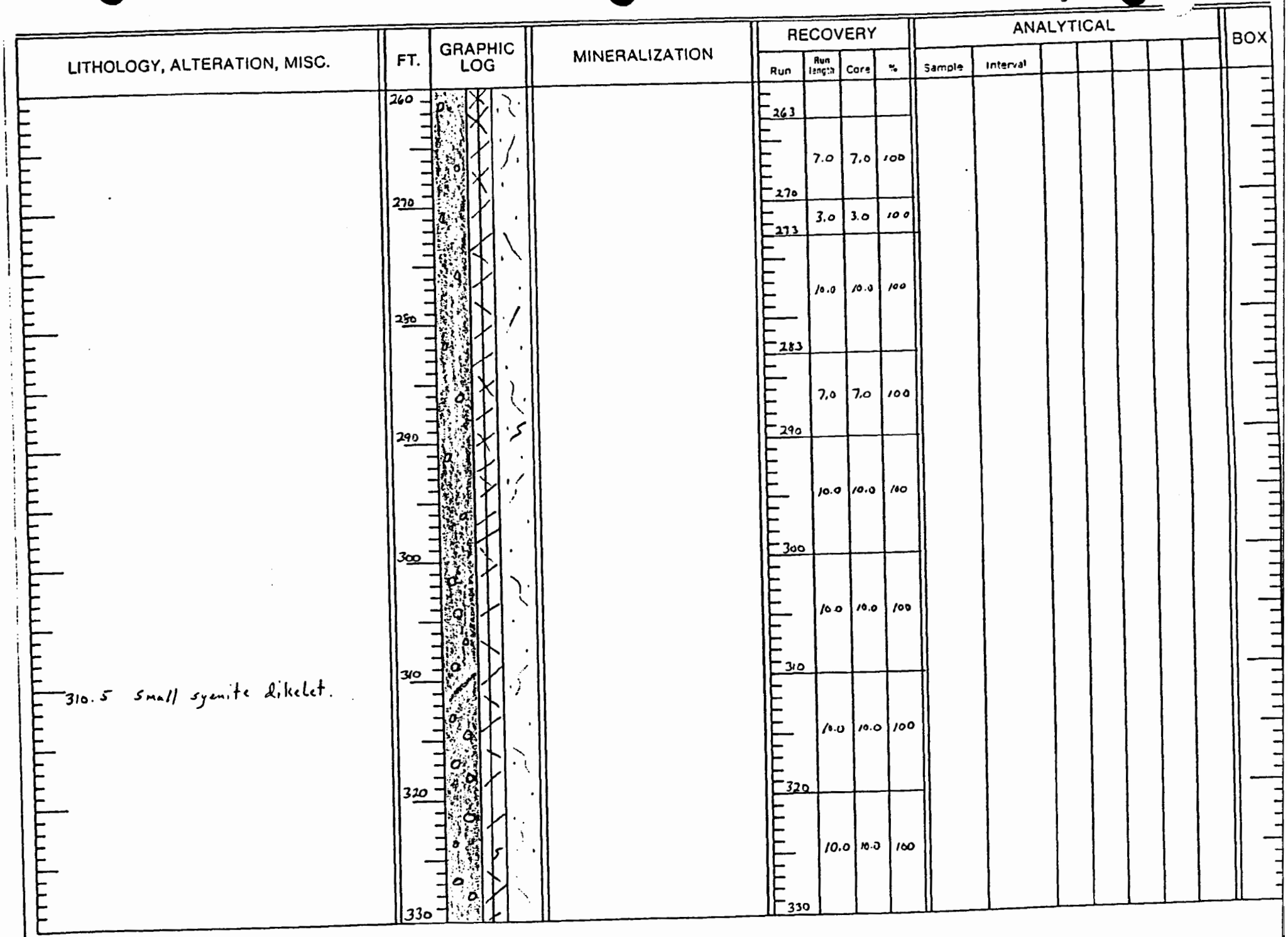
62 - 202.6 Generally 0.5 - 1.0% py - Locally 2-3% py, both disseminated as veinlets.

FT.	GRAPHIC LOG
50	
60	
70	
80	
90	
100	
110	
120	

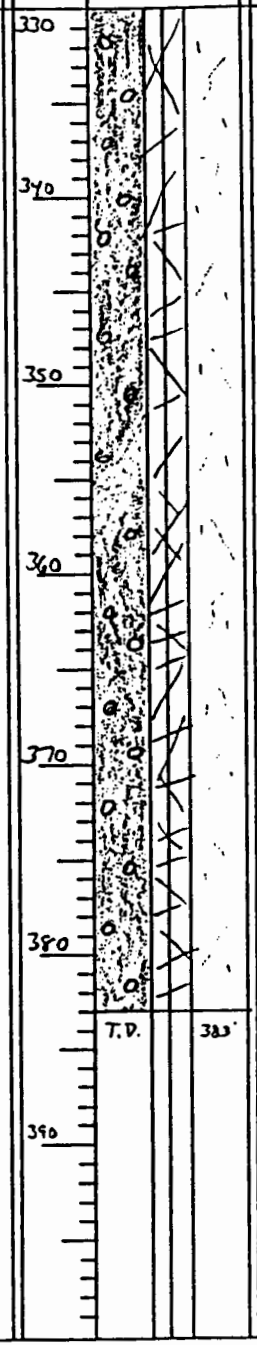
RECOVERY				ANALYTICAL							BOX
Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm				
53											
	10.0	10.0	100								
63											
	9.0	9.0	100	65-70	5.0	53	61				
72											
	6.0	6.0	100	70-75	5.0	28	45				
78											
	9.0	9.0	100	75-80	5.0	17	59				
87											
	6.0	6.0	100	80-85	5.0	25	47				
93											
	10.0	10.0	100	85-90	5.0	20	31				
103											
	10.0	10.0	100	105-110	5.0	12	67				
113											
	10.0	10.0	100	110-115	5.0	14	55				


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Au ppb
Cu ppm
BOX
120
130
140
150
160
170
180
190
123
133
143
153
163
173
183
187
silica flooding
silica flooding
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
4.0 4.0 100
4.0 4.0 100
143-148 5.0 <5 13
163-168 5.0 22 95

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
202.6-252.7 Porphyritic syenite.	190			193	6.0	6.0	100			
	200			203	10.0	10.0	100			
	210			213	10.0	10.0	100			
	220			223	10.0	10.0	100			
	230			233	10.0	10.0	100			
	240			243	10.0	10.0	100			
	250			253	10.0	10.0	100			
252.7-383 Generally med-dk green crystal lithic tuff similar to above with some increase in calc-silicates. F.g. pyx + garnet present @ depth with some slight increase in silica flooding + potassic alt. Overall greenschist facies metamorphism.	260		252.7-383 generally 0.5-1.0% dissem + vnlts of py with 1-2% locally.							


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
260
270
250
290
300
310
320
330
263
270
273
283
290
300
310
320
330
7.0
7.0
100
3.0
3.0
100
10.0
10.0
100
7.0
7.0
100
10.0
10.0
100
10.0
10.0
100
10.0
10.0
100
310.5 small syenite dikelet.

353.5 - 356 Porphyritic Syenite



LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
				340	10.0	10.0	100			
				350	10.0	10.0	100			
				360	10.0	10.0	100			
				363	3.0	3.0	100			
				368	5.0	5.0	100			
				378	10.0	10.0	100			
				383	5.0	5.0	100			

DIAMOND DRILL HOLE LOG

Company

LEGEND			

SURVEY

Footage	Bearing	Inclination

Property: Eholt — Hole No.: E95-1

Location: Just south of Eholt Mtn Peak. — Bearing at Collar: 305°

Inclination at Collar: -50°

Coord. - Collar N: 9760 N UTM 5446620N

Local Grid E: 10565E 387535E

Length: 411

Elev. - Collar: 1202m — Core Size: NQ

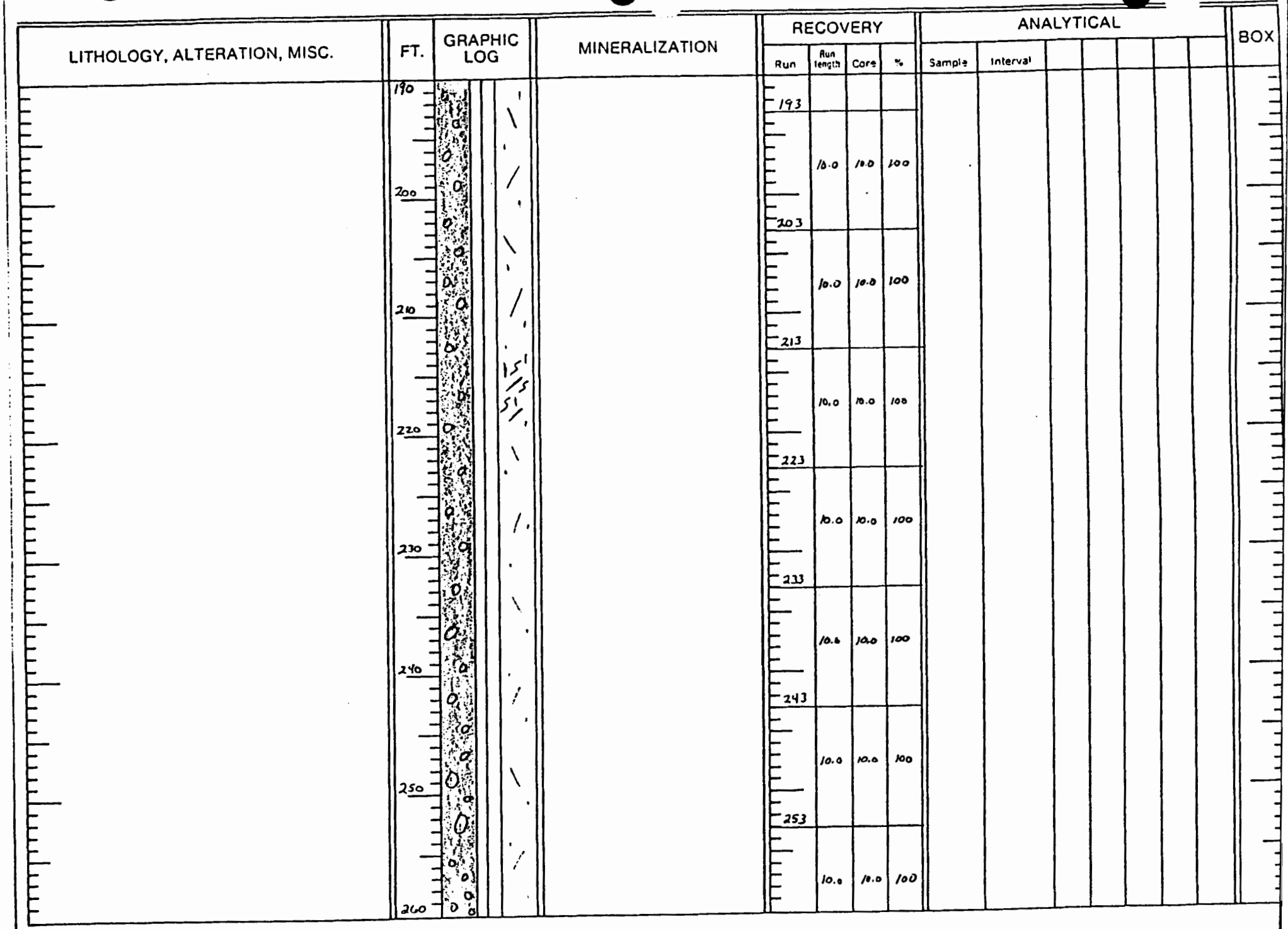
Date started: 10-17-95

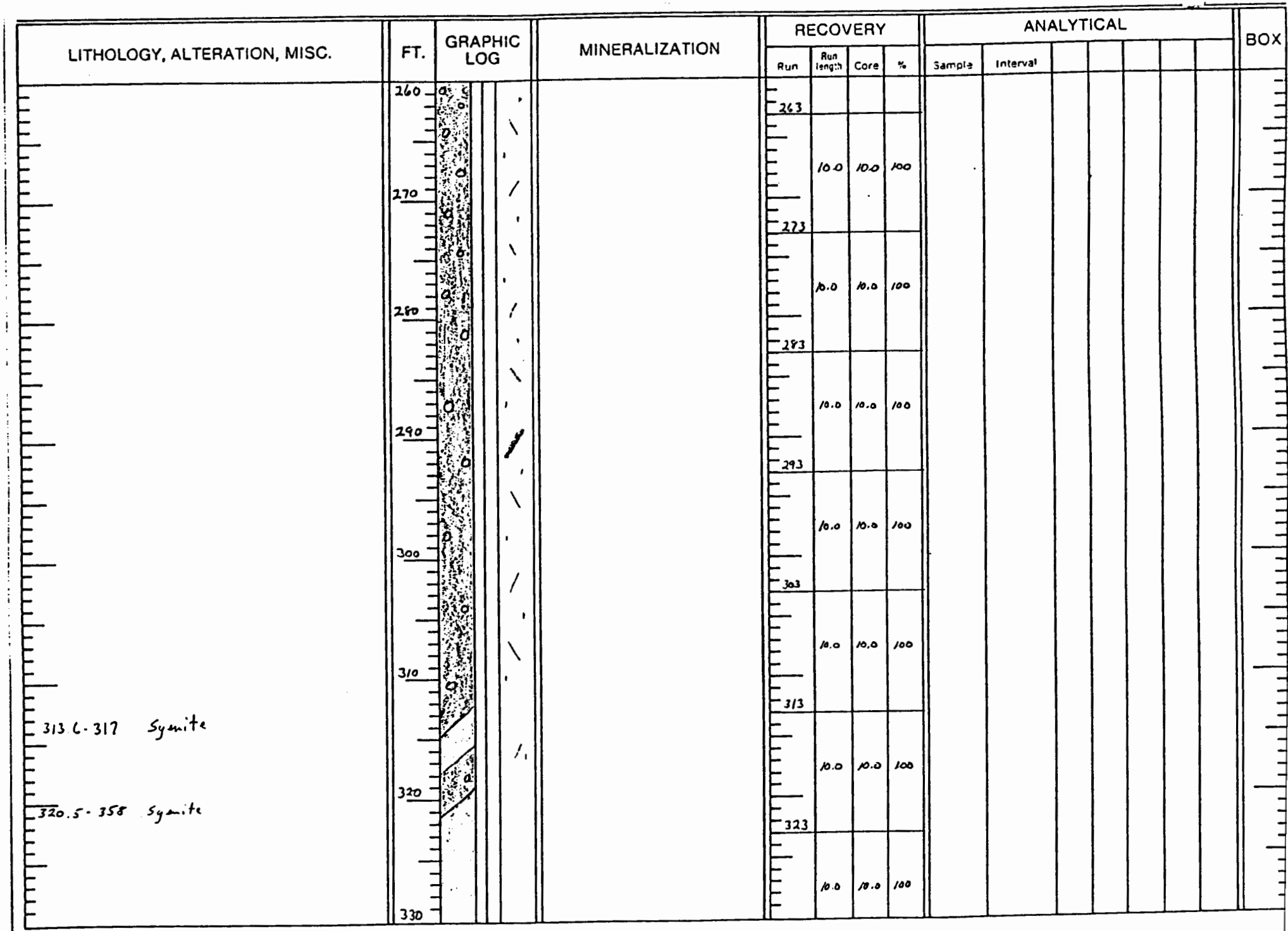
Completed: 10-19-95 — Logged by

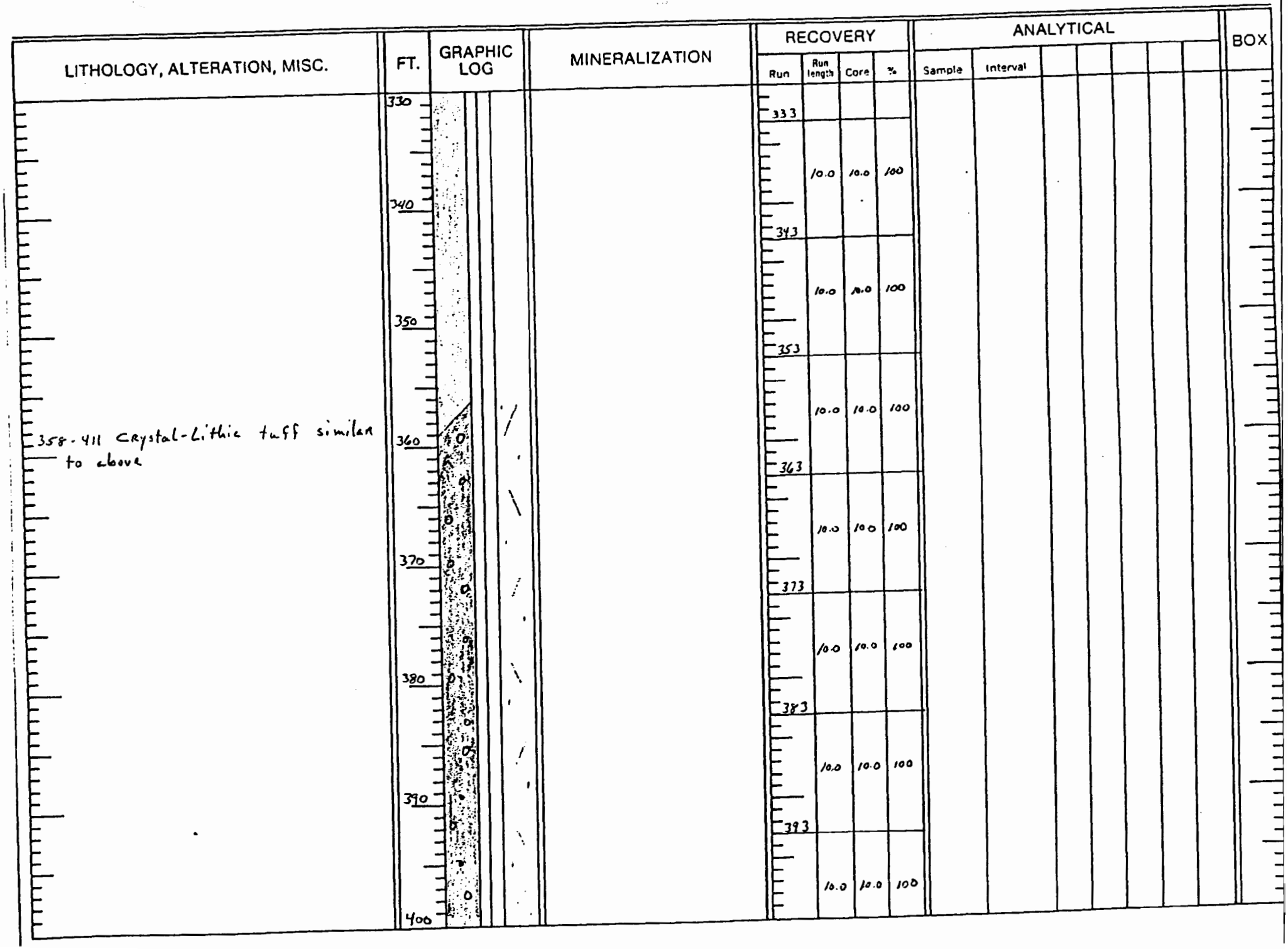
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
8-102 Med gray-green xl-Lithic tuff with clasts up to 8.0 cm in diameter. 1-2% dissem py - Pervasive greenschist facies metamorphism - abundant calc in matrix + as Fr fill here common along fnx. Some silica flooding + Local calc-silicate alteration (dominantly pyx).	0		8-102 Generally 0.5-1.0% py - Locally 1-2% both dissem + as vnlts.	8						
	10			13	5.0	4.5	90			
	20			23	10.0	10.0	100			
	30			33	10.0	10.0	100			
	40			43	10.0	10.0	100			
	50			53	10.0	10.0	100			

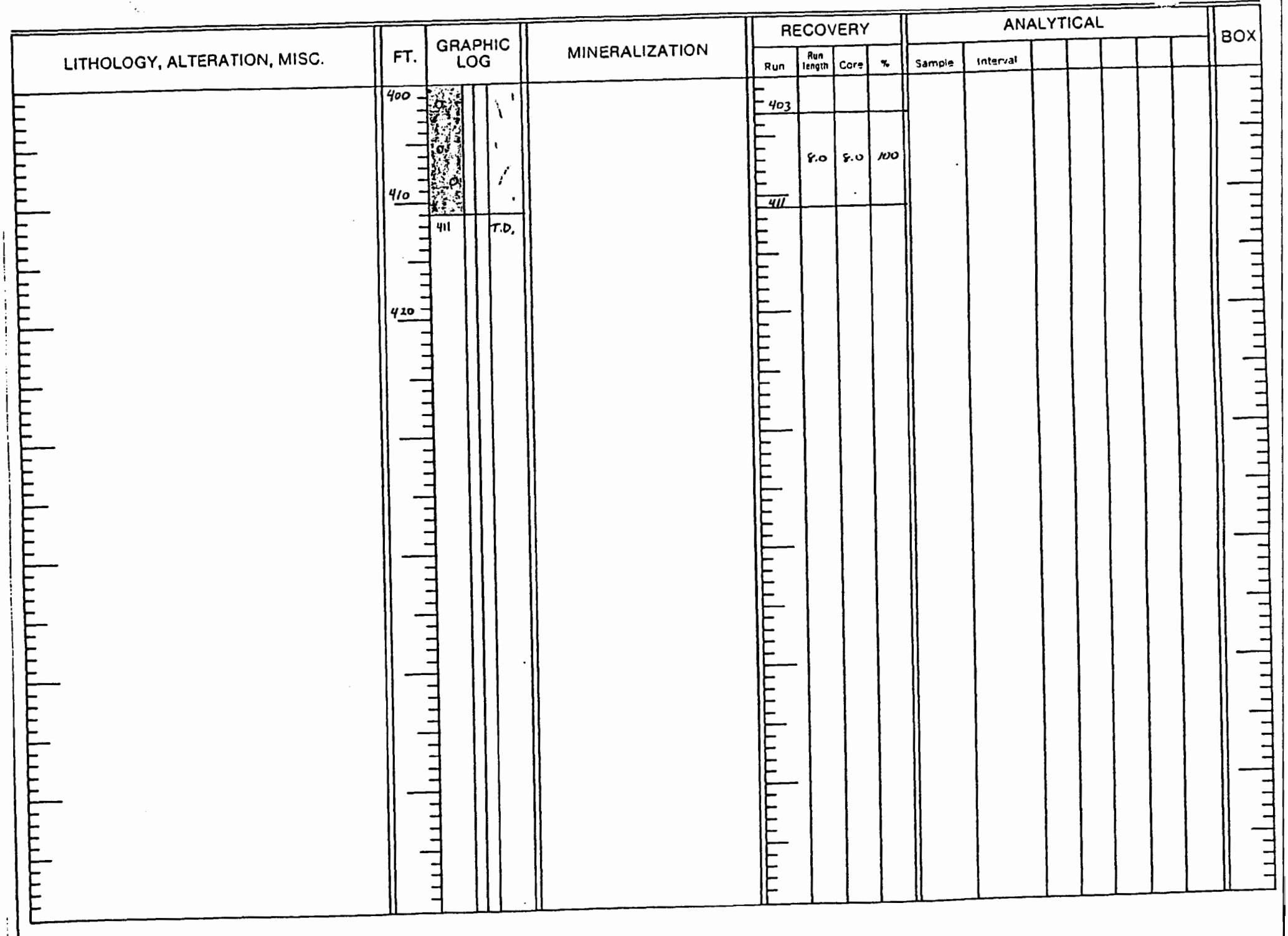
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL							BOX
				Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm				
	50			53											
					10.0	10.0	100								
	60			63											
					10.0	10.0	100	65-70	5.0	7	59				
	70			73											
					10.0	10.0	100	70-75	5.0	<5	41				
	80			83											
					10.0	10.0	100								
	90			93											
					10.0	10.0	100								
102-112 Dk grey to black mafic dike; 5-10% phenos of augite + hbl in a fg. black matrix.	100			103											
			mafic dike		10.0	10.0	100								
	110			113											
112-163 Syenite with some monzonite? + minor mafic dike similar to above.					10.0	10.0	100								
	120														

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
	120			123						
	130			133	10.0	10.0	100			
	140			143	10.0	10.0	100			
	150	mafic dike		153	10.0	10.0	100			
	160			163	10.0	10.0	100			
163 - 320.5 med-dk grey-green crystal-Lithic tuff with 15-20% phenos of feld in a f.g. matrix with clasts up to 4.0 cm. weak-mod silica flooding; weak calc-silicate alteration (epd+ pyx) Pervassive greenschist facies metamorphism. - Calcite fx-fill,	170		163 - 320.5 generally 0.5 - 1.0% py, locally 1-2% both dissem + as vn/fs.	173	10.0	10.0	100			
	180			183	10.0	10.0	100			
	190				10.0	10.0	100			


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
190
193
200
203
10.0
10.0
100
210
213
10.0
10.0
100
220
223
10.0
10.0
100
230
233
10.0
10.0
100
240
243
10.0
10.0
100
250
253
10.0
10.0
100
260


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
260
270
280
290
300
310
320
330
263
273
283
293
303
313
323
10.0
10.0
100
313 C-317 Syenite
320.5-358 Syenite


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
358-411 Crystal-Lithic tuff similar to above
330
340
350
360
370
380
390
400
333
343
353
363
373
383
393
10.0
10.0
100


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
400
410
411
T.D.
420
403
8.0
8.0
100
411

DIAMOND DRILL HOLE LOG

Company Orvana

Property Eholt	Hole No. E95-
Location South side of Eholt Mtn	Bearing at Collar 275
	Inclination at Collar -45
Coord. - Collar N 5446260	
UTM E 387655	Length 1089'
Elev. - Collar 1102m	Core Size NQ
Date started 10-19-95	
Completed 10-24-95	Logged by Doyle Albers

LEGEND

SURVEY

Footage	Bearing	Inclination

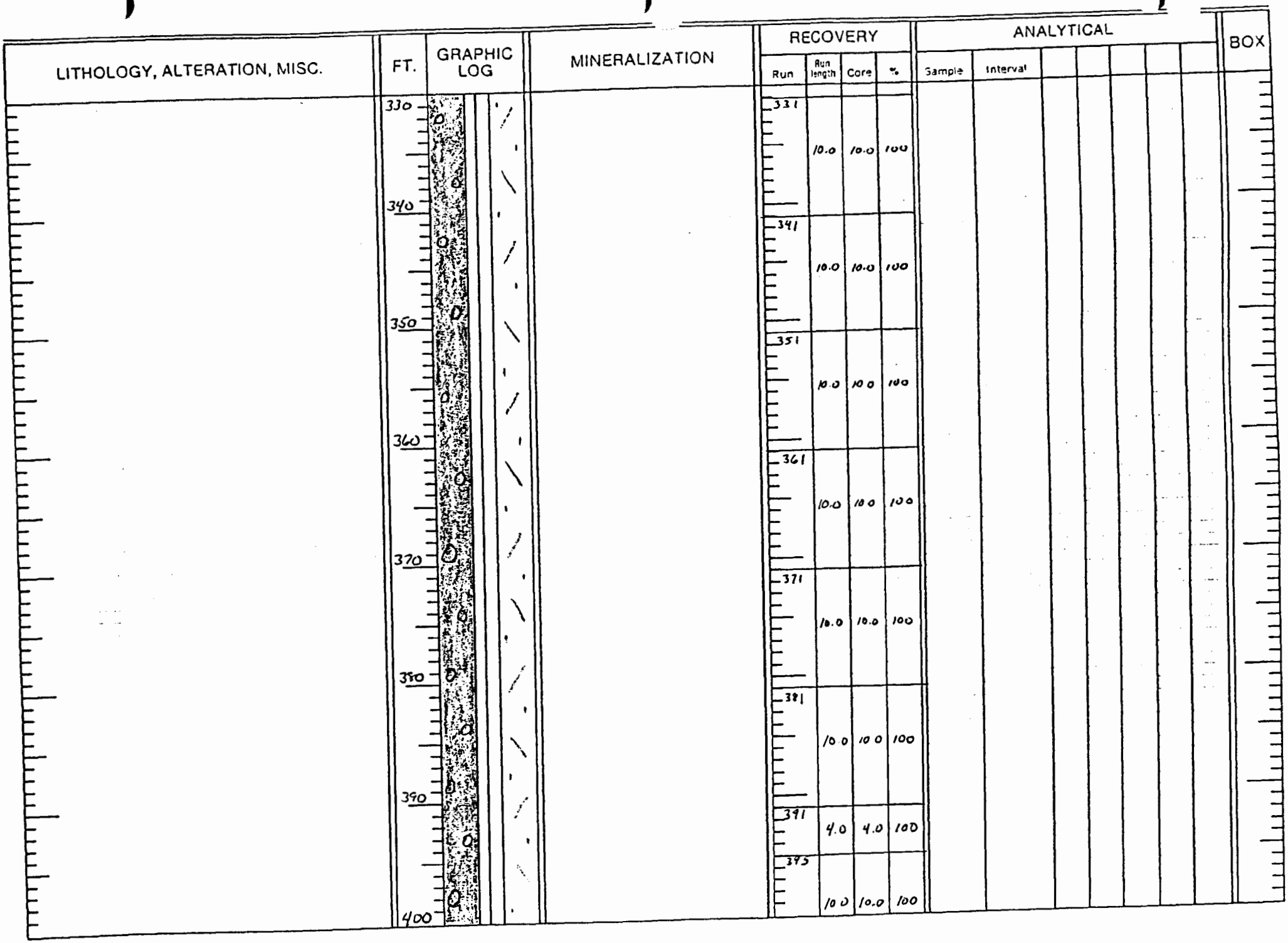
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
20-65.3 DK grey-green f.g. vole tuff? 5-10% phenos, mostly feld. in a dk matrix - weak to moderate alteration to epidote. Pervassive greenschist facies metamorphism.	0, 10, 20, 30, 40, 50		20-65.3 <1.0% py, mostly dissem with minor veins.	20	5.0	4.5	90			
				25	10.0	10.0	100			
				35	10.0	10.0	100			
				45	10.0	10.0	100			

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
65.3 - 108.3 Porphyritic syenite	50			55	10.0	10.0	100			
	60			65	10.0	10.0	100			
	70			75	10.0	10.0	100			
	80			85	10.0	10.0	100			
	90			95	10.0	10.0	100			
	100			105	10.0	10.0	100			
108.3 - 129.7 Dk grey-green volcanic rock with weak-mod alt to epidote; similar to above.	110			115	10.0	10.0	100			
	120				10.0	10.0	100			

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
129.7 - 140.5 Porphyritic Syenite	120			125	10.0	10.0	100			
	130			135	10.0	10.0	100			
140.5 - 162.5 DK grey-green f.g. vole Rx - similar to above; grading to a crystal - Lithic tuff @ depth.	140			143	8.0	8.0	100			
	150			151	8.0	8.0	100			
				155	4.0	4.0	100			
	160			163	8.0	8.0	100			
162.5 - 167.5 Porphyritic Syenite.										
167.5 - 235 DK grey - green crystal - Lithic tuff with 15-20% phenos of Feld in a f.g. matrix with clasts (heterolithic) up to 5 cm. Weak to moderate calc-silicate alteration (mostly epd, with minor pyx + tr gar) Pervassive greenschist facies meta.	170			173	10.0	10.0	100			
	180			183	10.0	10.0	100			
					10.0	10.0	100			
	190									

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
	190			193						
	200			203	10.0	10.0	100			
	210			213	10.0	10.0	100			
				214	1.0	1.0	100			
	220			224	10.0	10.0	100			
	230			234	10.0	10.0	100			
235-258.5 Porphyritic Syenite(s)				239	5.0	5.0	100			
	240			245	6.0	6.0	100			
	250			255	10.0	10.0	100			
	260				7.0	7.0	100			

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
258.5 - 426.5 DK grey - green crystal - Lithic tuff with heterolithic clasts up to 5.0cm in f.g. matrix with 10-15% phenos of mostly feld + minor hbl + bio Generally weak to locally moderate alteration to epidote + pyx, with trace of garnet. Pervassive green schist facies metamorphism.	260			262						
					10.0	10.0	100			
	270			272						
					10.0	10.0	100			
	280			282						
					10.0	10.0	100			
	290			292						
					10.0	10.0	100			
	300			302						
					10.0	10.0	100			
	310			312						
					10.0	10.0	100			
	320			322						
					9.0	9.0	100			
	330									


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
330
340
350
360
370
380
390
400
331
10.0
10.0
100
341
10.0
10.0
100
351
10.0
10.0
100
361
10.0
10.0
100
371
10.0
10.0
100
381
10.0
10.0
100
391
4.0
4.0
100
395
10.0
10.0
100

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
	400				10.0	10.0	100			
				405						
	410				10.0	10.0	100			
				415						
	420				10.0	10.0	100			
				425						
426.5 - 441.5 DK grey - blk porphyritic intrusive with 10-15% phenos of augite and hbl in a f.g. blk matrix. Moderately magnetic.	430	mafic dike		430	5.0	5.0	100			
				435	5.0	5.0	100			
442.7 - 450.7 Porphyritic syenite.	440			445	10.0	10.0	100			
450.7 - 464 - Crystal-Lithic Tuff, similar to above.	450			455	10.0	10.0	100			
	460			465	10.0	10.0	100			
464 - 517 Porphyritic Syenite	470									

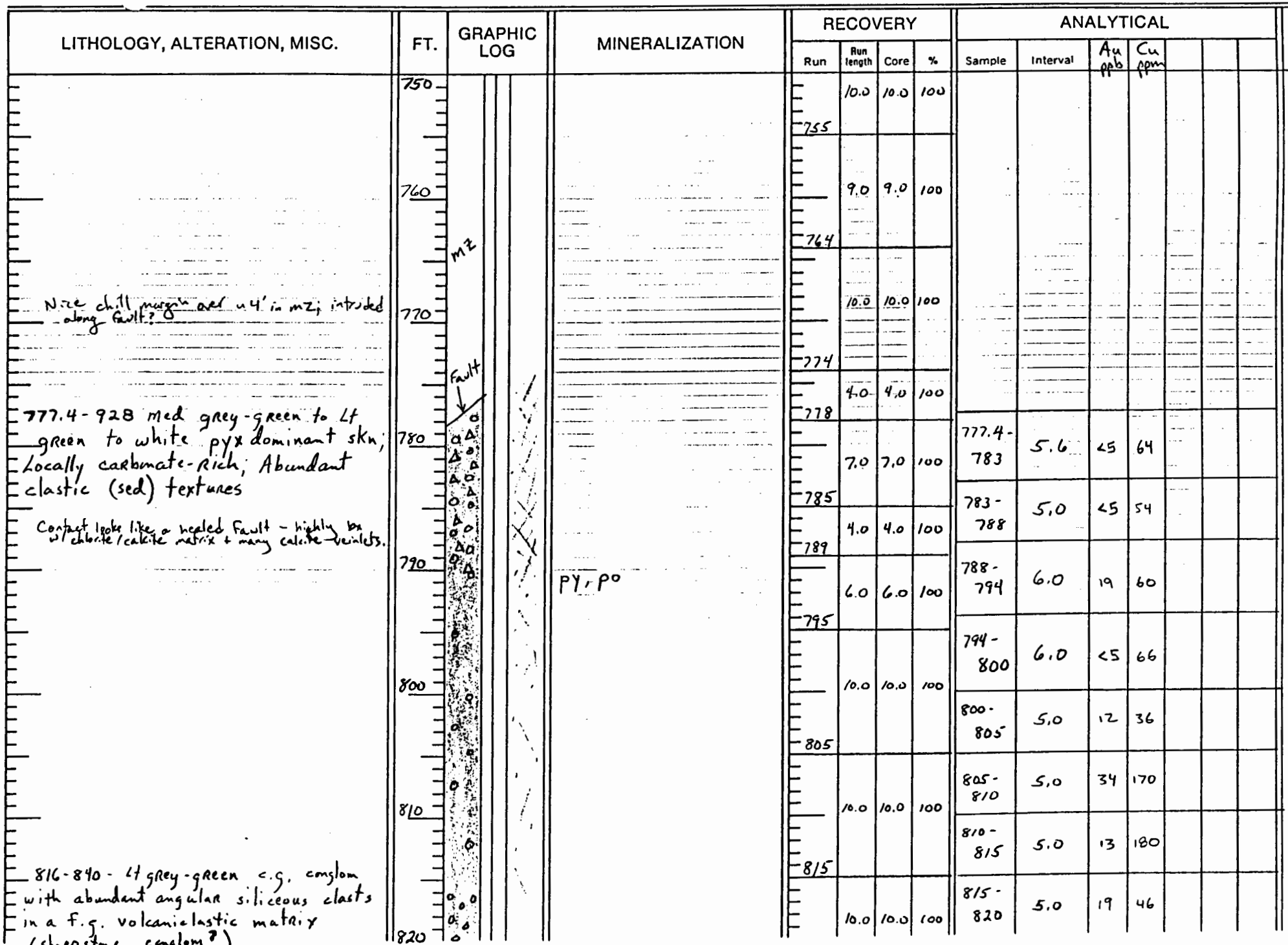
LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
	470				10.0	10.0	100			
	475									
					5.0	5.0	100			
	480									
					10.0	10.0	100			
	490									
					10.0	10.0	100			
	500									
					10.0	10.0	100			
	510									
					10.0	10.0	100			
517-562 DK grey-green crystal-lithic tuff with heterolithic clasts similar to above.	520									
					10.0	10.0	100			
	530									
					9.0	9.0	100			
	540									

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	Au ppb	Cu ppm	BOX
562-578 Grades to a dk grey-green tuff with 40-60% carbonate clasts in a fg. vole matrix.	540			545	6.0	6.0	100					
	550			552	7.0	7.0	100					
				555	3.0	3.0	100					
	560			565	10.0	10.0	100					
	570			575	10.0	10.0	100	565-570	5.0	<5	64	
								570-575	5.0	8	20	
								575-578	3.0	17	37	
578-688.5 med grey, med grained, holocrystalline monzonite? intrusive. Approximately 60% feld (ortho + plag) with 30-35% hbl + bio; moderately magnetic - tr py.	580			581	6.0	6.0	100					
				587	6.0	6.0	100					
	590			594	7.0	7.0	100					
	600			604	10.0	10.0	100					
	610				10.0	10.0	100					

MONZONITE

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL							BOX
				Run	Run length	Core	%	Sample	Interval						
	610			614	10.0	10.0	100								
	620	MONZONITE		623	9.0	9.0	100								
	630			633	10.0	10.0	100								
	640			640	7.0	7.0	100								
	650			650	10.0	10.0	100								
	660			659	9.0	9.0	100								
	670			669	10.0	10.0	100								
	680			678	9.0	9.0	100								

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval
688.5 - 738 Porphyritic Syenite	680	MZ		685	7.0	7.0	100		
	690			695	10.0	10.0	100		
	700			705	10.0	10.0	100		
	710			715	10.0	10.0	100		
	720			725	10.0	10.0	100		
	730			735	10.0	10.0	100		
738 - 777.4 - Monzonite similar to above.	740			745	10.0	10.0	100		
	750	MZ							


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
Au ppb
Cu ppm
750
760
770
780
790
800
810
820
MZ
Fault
Nice chill margin over ~4' in mz; intruded along fault?
777.4 - 928 med grey-green to lt green to white pyx dominant skn; Locally carbonate-rich; Abundant clastic (sed) textures
Contact looks like a healed Fault - highly bx w/ chlorite/calcite matrix + many calcite veinlets.
py, po
816 - 840 - lt grey-green c.g. conglom with abundant angular siliceous clasts in a f.g. volcaniclastic matrix (sharpstone conglom?)
755
764
774
778
785
789
795
805
815
10.0 10.0 100
9.0 9.0 100
10.0 10.0 100
4.0 4.0 100
7.0 7.0 100
4.0 4.0 100
6.0 6.0 100
10.0 10.0 100
10.0 10.0 100
10.0 10.0 100
777.4 - 783 5.6 <5 64
783 - 788 5.0 <5 54
788 - 794 6.0 19 60
794 - 800 6.0 <5 66
800 - 805 5.0 12 36
805 - 810 5.0 34 170
810 - 815 5.0 13 180
815 - 820 5.0 19 46

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION

848-872 Interbedded + partly brecciated volcaniclastics + $CaCO_3$ with abundant pyx and some garnet. minor sulfide.

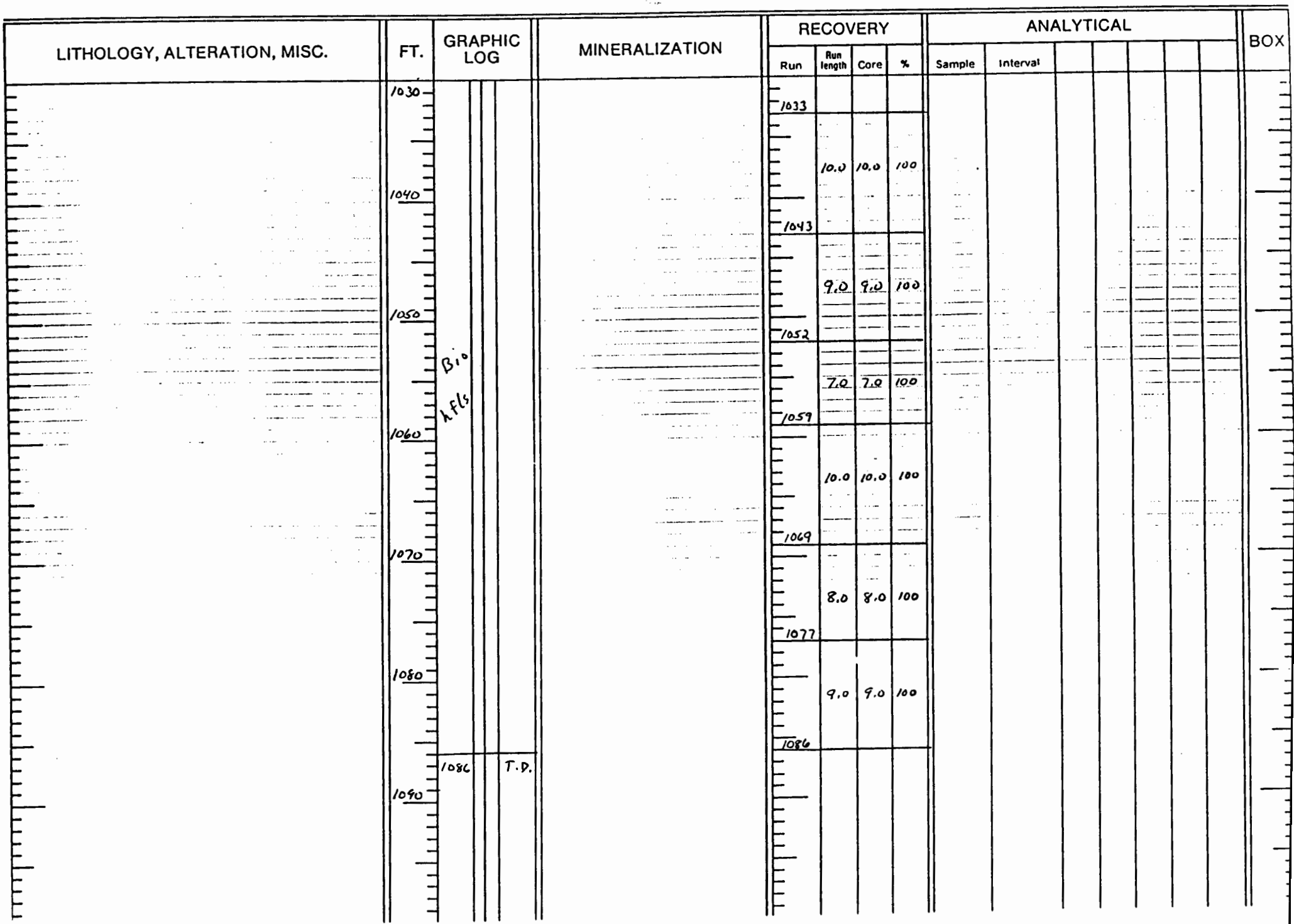
878-910 Lt grey-green carbonate-rich zone with abundant calc-silicate flooding as f.g. pyx. Locally clastic sed txt.

RECOVERY				ANALYTICAL							BOX
Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm				
	10.0	10.0	100	820-825	5.0	11	53				
825											
	4.0	4.0	100								
829											
	6.0	6.0	100								
835											
	10.0	10.0	100								
845											
	10.0	10.0	100								
855											
	10.0	10.0	100	858.5-863.5	5.0	<5	18				
865				863.5-868	4.5	8	13				
	10.0	10.0	100	868-872	4.0	10	52				
875											
	10.0	10.0	100								
885											
	10.0	10.0	100								

E95-14
Pg 5

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
	890				10.0	10.0	100			
	895									
	900				10.0	10.0	100			
	905									
	910				10.0	10.0	100			
	915									
	920				10.0	10.0	100			
928-947.5 Porphyritic Syenite	925									
	930				10.0	10.0	100			
	935									
	940				10.0	10.0	100			
	945									
947.5-1086 Dominantly fine-med grained, medium brown biotite hornfels; often broken with minor calcite veins. <1.0% Py+po. Probably Knob Hill Fm. - some mixed e.g. clastic seds.	950	Bio hfls			10.0	10.0	100			
	955									
	958				3.0	3.0	100			
	960									

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
	960			965	7.0	7.0	100			
	970	Bio		972	7.0	7.0	100			
		hfls		975	3.0	3.0	100			
	980			980	5.0	5.0	100			
				985	5.0	5.0	100			
	990			995	10.0	10.0	100			
	1000			1004	9.0	9.0	100			
	1010			1013	9.0	9.0	100			
	1020			1023	10.0	10.0	100			
	1030				10.0	10.0	100			


LITHOLOGY, ALTERATION, MISC.
FT.
GRAPHIC LOG
MINERALIZATION
RECOVERY
Run
Run length
Core
%
ANALYTICAL
Sample
Interval
BOX
1030
1040
1050
1060
1070
1080
1090
Bio
hFls
1086
T.D.
1033
1043
1052
1059
1069
1077
1086
10.0
10.0
100
9.0
9.0
100
7.0
7.0
100
10.0
10.0
100
8.0
8.0
100
9.0
9.0
100

DIAMOND DRILL HOLE LOG

Company

LEGEND

SURVEY

Footage	Bearing	Inclination

Property Ehult — Hole No. E-95-5

Location Brown Cr — Bearing at Collar 290°

Inclination at Collar -50°

Coord. - Collar N 5445885

UTM E 387940 — Length 403'

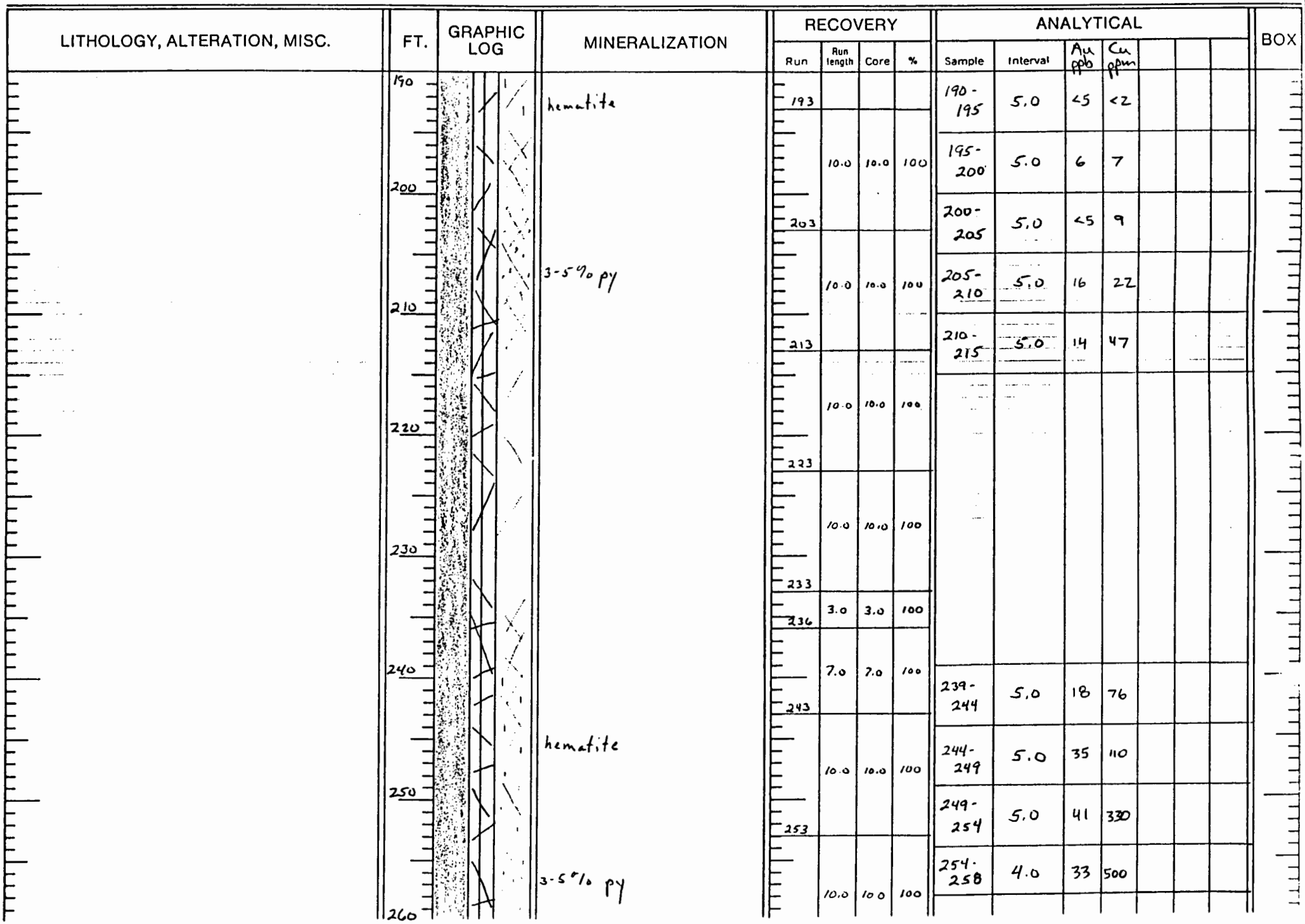
Elev. - Collar 997m — Core Size NQ

Date started 10-25-95

Completed 10-26-95 — Logged by Doyle Albers

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY Run	Run length	Core	%	ANALYTICAL Sample	Interval	BOX
20-107 Dk grey-green f.g. crystal-lithic tuff with clasts up to 4.0cm. Pervassive greenschist facies metamorphism. Weak calc-silicate (epd) alteration.	0		20-107 generally 0.5-1.0% py - mostly disseminated with some veins.							
	10									
	20			20						
				23	3.0	3.0	100			
				28	5.0	5.0	100			
	30			33	5.0	5.0	100			
				43	10.0	10.0	100			
	40			46	3.0	3.0	100			
				49	3.0	3.0	100			
	50			53	4.0	4.0	100			

E 75-13
Pg 6



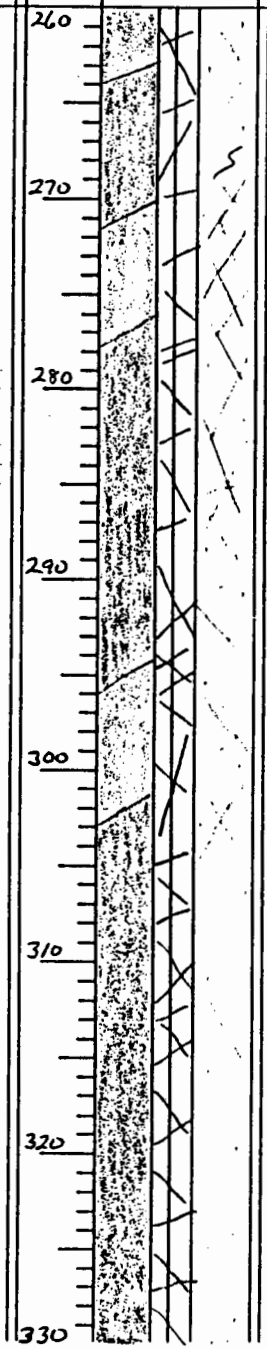
RECOVERY			
Run	Run length	Core	%
193			
	10.0	10.0	100
203			
	10.0	10.0	100
213			
	10.0	10.0	100
223			
	10.0	10.0	100
233			
236	3.0	3.0	100
	7.0	7.0	100
243			
	10.0	10.0	100
253			
	10.0	10.0	100

ANALYTICAL							BOX
Sample	Interval	Au ppb	Cu ppm				
190-195	5.0	<5	<2				
195-200	5.0	6	7				
200-205	5.0	<5	9				
205-210	5.0	16	22				
210-215	5.0	14	47				
239-244	5.0	18	76				
244-249	5.0	35	110				
249-254	5.0	41	330				
254-258	4.0	33	500				

263.5 - 403

271 - 277 Weak pyx-epd skarn (minor shear zone?)

295 - 302 Weak pyx-epd skarn similar to above.

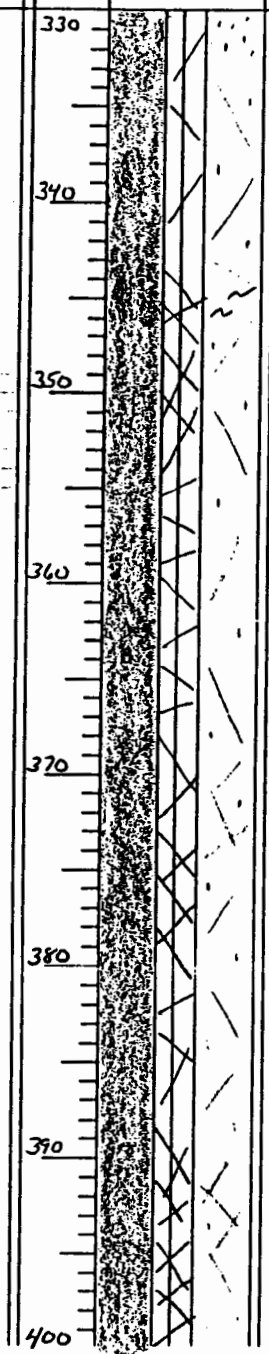


Run	Run length	Core	%
263			
	10.0	10.0	100
273			
	10.0	10.0	100
283			
	10.0	10.0	100
293			
	7.0	7.0	100
300			
	10.0	10.0	100
310			
	3.0	3.0	100
313			
	8.0	8.0	100
321			
	6.0	6.0	100
327			

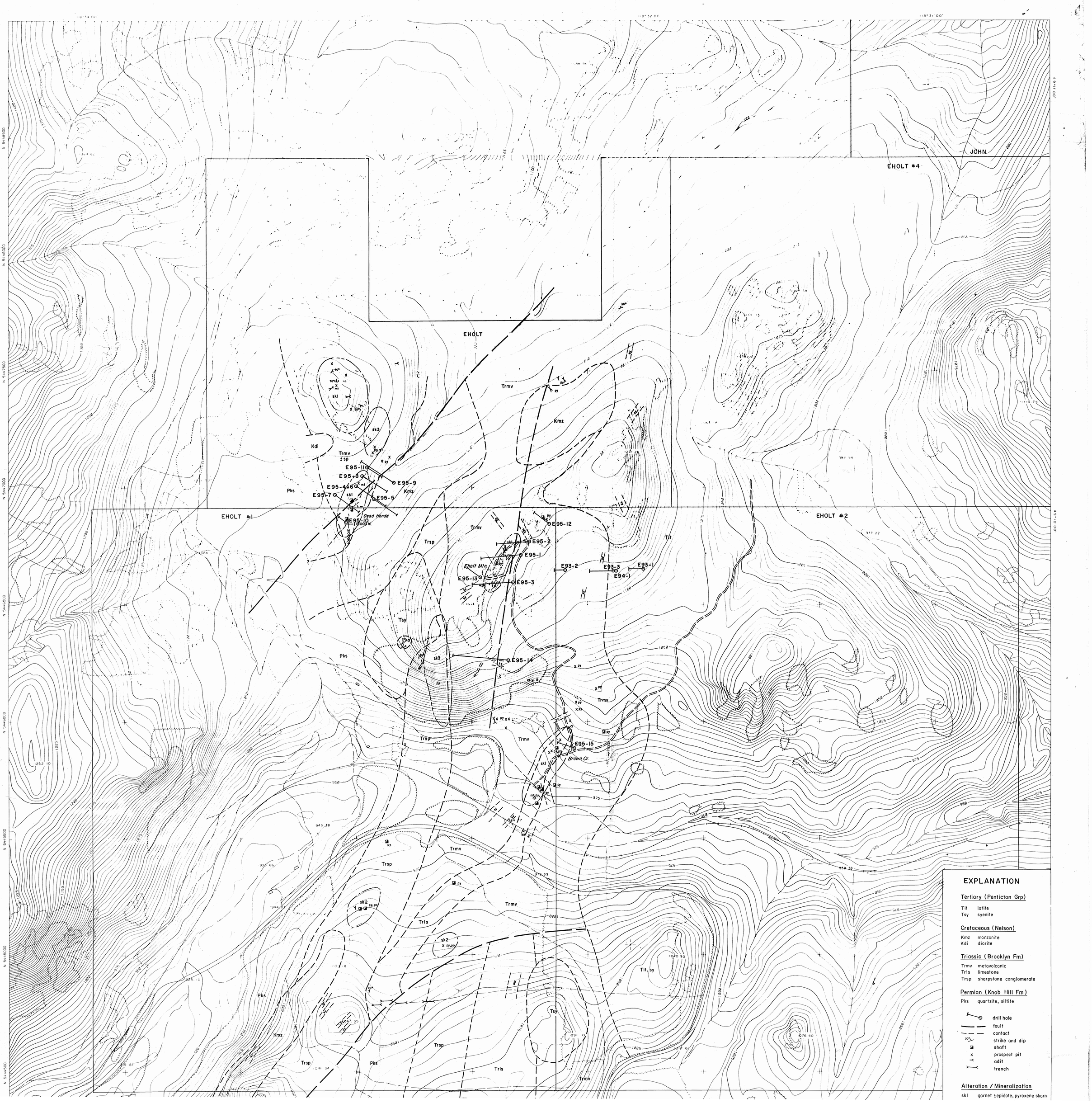
Sample	Interval	Au ppb	Cu ppm
296-302	6.0	41	330

C 75-75

Pg

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION
	330		5-7% py
	340		
	350		
	360		
	370		
	380		
	390		
	400		
	403' T.D		

RECOVERY				ANALYTICAL				BOX
Run	Run length	Core	%	Sample	Interval	Au ppb	Cu ppm	
332	5.0	5.0	100	330-332	2.0	81	260	
342	10.0	10.0	100					
350	8.0	8.0	100					
355	5.0	5.0	100					
363	8.0	8.0	100					
372	9.0	9.0	100					
378	6.0	6.0	100					
383	5.0	5.0	100					
390	7.0	7.0	100					
400	10.0	10.0	100					
↓ 403	3.0	3.0	100					


118° 14' 00"
118° 32' 00"
118° 31' 00"
49° 11' 00"
N. 5448500
N. 5448000
N. 5447500
N. 5447000
N. 5446500
N. 5446000
N. 5445500
N. 5445000
EHOLT
JOHN
EHOLT #4
EHOLT #1
EHOLT #2
Eholt Mtn.
Dead Horse
Brown Cr.
E95-11
E95-6
E95-446
E95-7
E95-9
E95-5
E95-10
E95-12
E95-2
E95-1
E95-13
E95-3
E95-14
E95-15
E93-2
E93-3
E93-1
E94-1
Trmv
Kmz
Kdi
Pks
Trsp
Trls
Tsy
Tlt
sk1
sk2
sk3
py
mt
EXPLANATION
Tertiary (Penticton Grp)
Tlt latite
Tsy syenite
Cretaceous (Nelson)
Kmz monzonite
Kdi diorite
Triassic (Brooklyn Fm)
Trmv metavolcanic
Trls limestone
Trsp sharpstone conglomerate
Permian (Knob Hill Fm)
Pks quartzite, siltite
drill hole
fault
contact
strike and dip
shaft
prospect pit
adit
trench
Alteration / Mineralization
skl garnet ±epidote, pyroxene skarn