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MINING PROPERTIES
MINING EQUIPMENT

PHONE
520/632-7320

RICKS BROTHERS ENTERPRISES, INC.
P.O. BOX 351
MAYER, ARIZONA 86333

September 24, 1997

Mr. Randy Moore
Cambior, Inc.
230 Rock Blvd., Suite 23
Reno, Nev. 89502

Dear Randy,

I was glad to get your phone call. This saves sending these reports to Canada.

Prior to Inco, drilling was done on the Copper Queen by Cominco and Conoco-Santa Fé Pacific. Their drill results were inconclusive.

Lac Minerals drilled on the Pentland-Upshot property. Phelps Dodge has also done extensive investigation on the property and also on the Copper Queen.

I hope this Inco data will be of interest to you.

Sincerely,

Rex Ricks

Rex Ricks

PentDDH96

1996 ARIZONA SURFACE DIAMOND DRILLING

3/20/97

HOLE #	AREA	NORTH	EAST	EL	AZM	INCL	DPTH	DRILLER	RIG	SIZE	START	COMPLETE	FX START	FX END
83663	Pentland	5600	8700	4780	270	-50	1004	Brt-Lngyr	Lyr 44	NQ	10/11/96	10/30/96	546407	546431

NOTES:

83663 High IP chargeability trend, w/ high alt and metals, North of Hackberry mine on Pentland horizon.
IP related to seicite, chlorite, pyrite alteration, with abundant stringer pyrite throughout the Pentland horizon

BOREHOLE LOG

BOREHOLE : 83663
PROJECT : Fentland
PROPERTY NAME : Fentland
MINE :

DATE PRINTED: 04/16/97

COUNTRY : U. S. A.
PROV/STATE : Arizona
NTS/QUADRANGLE : Sec. 17, T12N, R1E.
TWP/COUNTY : Yavapai
SEC, T, R, :
CLAIM NAME :
GRID NAME :
UTM COORDINATES :
ANOMALY # :

LEVEL : Surface
HEADING :
SECTION :
BASELINE AZIMUTH :

ASSAYED FOR :

NORTHING : 5600.00
EASTING : 8700.00
ELEVATION : 4780.00
BOREHOLE BEARING :
INCLINATION :
HOLE LENGTH : 1004.00
ATTITUDE TEST METHOD: Eastman Single-shot

LOGGED BY : David Oliver
LOGGING STARTED :
LOGGING COMPLETED :
DRILLED BY : Boart-Longyear
DRILL TYPE :
CORE SIZE : NQ
HOLE SIZE :
STARTED : 10/11/96
COMPLETED : 10/30/96

COMMENTS:**********
High magnetic gradient affects compass and magnetic survey tool.
****

DEVIATION RECORDS

DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
0.00	276.00	-50.00	100.00	277.50	-50.00	200.00	277.00	-48.00
300.00	281.50	-44.50	400.00	283.50	-42.50	500.00	285.50	-40.00
600.00	287.50	-39.00	700.00	288.50	-36.50	800.00	289.50	-34.50
900.00	289.50	-33.50	1000.00	291.50	-32.50			

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
0.00	3.00	OVERBURDEN Dirt''	0.00	3.00	NS	-	-	-	-
3.00	23.20	BASALT Dark green, Oxn & hrfl altn, Foln mod 40, Qtz vn 40, 8 b/Ft, Bslt, mod oxn, lim on frac, Minor qtz vnlts, Hornfels w/ mt, chlr, Bslt is banded, green & light layers on a mm's scale. Mod mtc, mod amygs.	3.00	23.20	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
23.20	42.00	BASALT Dark green. Hrfl altn. foln mod 45. Qtz vn 45. 2-3 b/ft. Bslt. Hrfls. Minor qtz vnlts. Assr mt chlr. px? Bslt is banded w/ dark green & light green layers. Mod amygs. Tr py w/ qtz vnlts & diss. Mod mtc. Assr tr py.	23.20	42.00	NS	-	-	-	-
42.00	43.20	BASALT Dark green. Hrfl. Foln mod 45. 1 b/ft. As 23.2-42ft w/ minor dark chlr layers w/ sx & possible vv f VG. Minor qtz banding. Assr tr py.	42.00	43.20	FX546407	91	<2	72	<0.005
43.20	64.50	BASALT Dark green. Foln mod 40. Qtz vn 40. As 23.2-42ft. Qtz vnlts & clots, some w/ v fg py. Assr .5% py.	43.20	64.50	NS	-	-	-	-
64.50	66.30	BASALT Brown-green. Oxn & hrfl altn. Foln strong 35. Bslt as 23.2-42ft w/ high strain. Minor lim. Deformed qtz boudins.	64.50	66.30	NS	-	-	-	-
66.30	73.10	BASALT Dark green Hrfl altn. Foln mod 45. Qtz vn 45. Bslt as 23.2-42ft. Mod-aboundant qtz vnlts. Assr tr py.	66.30	73.10	NS	-	-	-	-
73.10	79.70	BASALT Tan. Oxn & hrfl altn. Foln strong 40. Qtz vn 40. Bslt as above w/ v strong oxn. Lim gouge 76.8-77.4ft. aboundant qtz vnlts.	73.10	79.70	NS	-	-	-	-
79.70	82.60	BASALT Green-tan. Oxn & hrfl altn. Foln mod 40. Qtz vn 40. Bslt w/ mod oxn & abundant qtz vnlts.	79.70	82.60	NS	-	-	-	-
82.60	84.40	QUARTZ VEIN White. Chlr altn. Qtz vnlt w/ chlr & lim.	82.60	84.40	NS	-	-	-	-
84.40	96.10	BASALT Dark green. Hrfl altn. Foln mod 40.	84.40	96.10	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		Qtz vn xx, 2 b/ft, Bslt as 23.2-42ft, Assr tr py.							
96.10	98.30	QUARTZ VEIN White, Chlr altn, Qtz vnlt as 82.6-84.4ft,	96.10	98.30	NS	-	-	-	-
98.30	98.30	BASALT Dark green, Hrfl & lim altn, Foln mod 40, Qtz vn 40, Bslt as 23.2-42ft, Mod to abundant qtz vnlts,							
98.30	101.60	QUARTZ VEIN White, Qtz vn w/ bslt inclusions,	98.30	100.00	NS	-	-	-	-
			100.00	101.60	NS	-	-	-	-
101.60	130.00	BASALT Dark green, Hrfl altn, Foln mod 40, Qtz vn 40, 2 b/ft, Bslt as 23.2-42ft, Minor lim on frac, Assr tr py,	101.60	130.00	NS	-	-	-	-
130.00	132.60	GOUGE Tan, Lim altn, xx b/ft, Bslt w/ lim gouge & chop, Mod oxn,	130.00	132.60	NS	-	-	-	-
132.60	148.30	BASALT Dark green, Hrfl altn, Foln mod 40, Qtz vn 40, 2 b/ft, Bslt as 23.2-42ft,	132.60	148.30	NS	-	-	-	-
148.30	187.80	BASALT Dark green, Hrfl altn, Foln mod 45, Qtz vn 45, 2 b/ft, Bslt as 23.2-42ft w/ very few amygs, Abundant fg epiclastic/tuff/bslt mix, Mod-strong mtc, Mod qtz vnlts,	148.30	187.80	NS	-	-	-	-
187.80	190.00	BASALT Dark green, Hrfl altn, Foln mod 45, Qtz vn 45, Bslt as 148.3-187.8ft w/ py & cpy diss & associated w/ qtz vnlts, Au? Assr min: .5% py, tr cp,	187.80	190.00	FX546408	100	2	92	<0.005
190.00	196.70	BASALT Dark green, Hrfl altn, Foln mod 45, Qtz vn 45, 2 b/ft, Bslt as 148.3-187.8ft, Assr tr py,	190.00	196.70	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
196.70	210.00	BASALT Dark green, Hrfl altn, Foln mod 45, Qtz vn 45, 2 b/ft, Bslt as 23.2-42ft, More abundant amygs than 148.3-187.8ft, Assr tr py.	196.70	210.00	NS	-	-	-	-
210.00	210.30	GOUGE Gray, Clay altn, CA 50, xx b/ft, Gouge w/ clay & cal.	210.00	210.30	NS	-	-	-	-
210.30	221.20	BASALT Dark green, Hrfl altn, Foln mod 40, Qtz vn 40, 2 b/ft, Bslt as 148.3-187.8ft, Assr min; tr py, tr sph.	210.30	221.20	NS	-	-	-	-
221.20	255.00	BASALT Dark green, Foln mod 45, Qtz vn xx, 2 b/ft, Bslt, Non-mtc, Non hrfl or much lesser hrfl, Mixed flows, tuffs, epiclastics, Parts amygs, Parts plag phyric, Parts fg, Probably 2 phase folding w/ foln @ 40deg & 20deg @ high angles to each other, Well developed foln, Mod foln parallel & irregular qtz vnlts.	221.20	255.00	NS	-	-	-	-
255.00	257.10	ANDESITE Green, Sern & chlr altn, Foln mod 40, Qtz vn xx, 2 b/ft, Ands fg flow or tuff, Part plag phyric, Diss & foln parallel Sx, Very minor qtz vnlts & boudins, Very weak sern, minor chlr, minor slcfd or cherty clasts to 1cm, Gouge 257.1-257.2ft, Assr min; 4% py, tr cp, .5% sph.	255.00	257.10	FX546409	339	8	104	<0.005
257.10	269.70	ANDESITE Green, Sern & chlr altn, Foln mod 45, Qtz vn xx, 2 b/ft, Ands as 255-257.1ft, Assr min; 3% py, tr cp, tr sph.	257.10	269.70	NS	-	-	-	-
269.70	270.20	CHLORITE SCHIST Black, Chlr altn, Foln strong 45, Chlorite altn, w/ about 40% Sx- py, cpy, sph, Assr min; 30% py, 6% cp, 4% sph,	269.70	270.20	FX546411	11900	24	320	0.27

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
270.20	276.50	ANDESITE							
		Green. Sern & chlr altn. Foln mod 45. Qtz vn xx. 2 b/ft. Ands as 255-257.1ft. Assr min: 4% py, tr cp, tr sph.	270.20	276.50	FX546412	388	20	328	0.04
276.50	282.70	ANDESITE							
		Green. Sern & chlr altn. Foln mod 45. Qtz vn xx. 2 b/ft. Ands as 255-257.1ft. Assr min: 2% py, tr cp, tr sph.	276.50	282.70	FX546413	73	82	262	0.01
282.70	291.80	ANDESITE							
		Green. Sern & chlr altn. Foln mod 45. Qtz vn xx. 1 b/ft. Ands as 255-257.1ft. Assr min: 5% py, tr cp, tr sph.	282.70	291.80	FX546414	171	14	50	0.03
291.80	297.00	ANDESITE							
		Green. Sern & chlr altn. Foln mod 45. 1 b/ft. Ands as above w/ stronger sern & chlr altn. Minor siln. Assr min: 5% py, tr cp, tr sph.	291.80	297.00	FX546415	110	64	340	0.02
297.00	297.30	GOUGE							
		Grav. Clay altn. Clay gouge.	297.00	297.30	NS	-	-	-	-
297.30	302.20	ANDESITE							
		Green. Sern & chlr altn. Foln mod 45. 1 b/ft. Ands as 255-257.1ft. Assr min: 4% py, tr cp, tr sph.	297.30	302.20	FX546416	177	6	50	0.015
302.20	303.80	ANDESITE							
		Grav. Sern & siln altn. Foln strong xx. Qtz vn xx. Contact alt zone. Alt ands w/ strong sern, mod siln & 25% total sulphides. Very strong foln, distorted. Assr chlr. Assr min: 20% py, 2% cp, 3% sph.	302.20	303.80	FX546417	182	796	1610	0.05
303.80	309.00	DIKE							
		White. Siln altn? CA 20. Foln 20-55? Dike, Laramide?, rhy dike. Cherty chill margins. Feld & qtz vv minor py. Minor lim staining. Pseudo foln layering. As 303.8-309ft. Irregular contacts. Assr tr py.	303.80	309.00	FX546418	4	26	72	<0.005

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
309.00	315.80	ANDESITE Gray. Sern & siln altn. Foln strong xx. As 302.2-303.8ft. Assr min: 20% py. 2% cp, 3% sph.	309.00 314.40	314.40 315.80	FX546419 FX546420	<1 121	18 28	32 110	<0.005 <0.005
315.80	319.80	ANDESITE Green. Sern & siln altn. Foln mod 45. Qtz vn 45. Ands as 255-257.1ft. Assr min: 3% py, tr cp, tr sph.	315.80	319.80	FX546421	39	6	126	<0.005
319.80	324.50	ANDESITE Green. Sern & siln altn. Foln mod 45. Qtz vn 45. Ands a 255-257.1ft. Assr min: 5% py, tr cp, tr shp.	319.80	324.50	FX546422	72	12	510	<0.005
324.50	330.70	ANDESITE Brown-green. Biot altn. Foln mod 45. Ands, Fg. Biotite altn. Pervasive v fg biotite w/ brown-red cast. Foln parallel Sx. Minor feld phenos. Assr min: 2% py, tr cp, 1% sph.	324.50	330.70	FX546423	59	8	208	0.005
330.70	350.10	ANDESITE Green. Sern altn. Foln mod 45. 2 b/ft. Ands as 255-257.1ft. Assr min: 1% py, tr cp, tr sph.	330.70	350.10	NS	-	-	-	-
350.10	351.20	ANDESITE Green. Sern, siln & chlr altn. Qtz vn 45. Ands. Mod sern, siln, chlr w/ mod foln parallel qtz vnlts & Sx vnlts. Au? Assr min: 10% py, 1% cp, 3% sph.	350.10	351.20	FX546424	246	84	3760	0.05
351.20	374.40	ANDESITE Green. Sern, siln & chlr altn. Foln mod 40. Qtz vn 40. Ands a 255-257.1ft. Assr min: 2% py, tr cp, tr sph.	351.20	374.40	NS	-	-	-	-
374.40	381.00	ANDESITE Green. Biot, siln altn. Foln mod 50. Qtz vn xx. Ands, Fg. Minor biotite altn. Abundant qtz vnlts w/ chlr, biot, tour, py, cp, sph. Vnlts are clotty & irregular. Assr min: 3% py, 1% cp, 2% sph.	374.40	381.00	FX546425	69	36	558	0.015
381.00	394.90	ANDESITE							

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		Green-brown. Biot, sern altn. Foln mod 45. Qtz vn xx. Ands. Fg. Mod biotite altn, minor sern. Minor irregular qtz vnlts. Diss & vnlt Sx. Assr min; 1% py, tr cp, tr sph.	381.00	394.90	NS	-	-	-	-
394.90	400.10	ANDESITE							
		Brown. Biot altn. Foln mod 45. Qtz vn 45. Ands as 324.5-330.7ft. Assr min; .5% py, tr cp, tr sph.	394.90	400.10	NS	-	-	-	-
400.10	409.20	ANDESITE							
		Green. Sern altn. Foln mod 45. Ands as 255-257.1ft.	400.10	409.20	NS	-	-	-	-
409.20	423.00	ANDESITE							
		Green-brown. Biot & sern altn. Foln mod 45. Qtz vn 45. 2 b/ft. Assr .5% py.	409.20	423.00	NS	-	-	-	-
423.00	430.00	ANDESITE							
		Brown. Biot altn. Foln mod 50. Qtz vn 50. Ands as 324.5-330.7ft. Assr.5% py.	423.00	430.00	NS	-	-	-	-
430.00	436.00	ANDESITE							
		Light green. Sern altn. Foln mod 45. Qtz vn 45. 3 b/ft. Ands. Fg. Mod sern, wk siln. Diss py. Gouge at 434ft. Assr min; .5% py, tr cp.	430.00	436.00	NS	-	-	-	-
436.00	450.50	ANDESITE							
		Green. Sern altn. Foln mod 50. Qtz vn 50. Ands. Fg. Minor sern, mod qtz vnlts. Diss & vnlt Sx. Gouge at 437.5 & 445ft. TFrs? Assr min; 1% py, tr cp.	436.00	450.50	NS	-	-	-	-
450.50	456.00	ANDESITE							
		Brown. Biot altn. Foln mod 50. Qtz vn xx. Ands as 324.5-330.7ft. Strong high angle vnlts. Assr .5% py.	450.50	456.00	NS	-	-	-	-
456.00	468.30	ANDESITE							
		Green-brown. Biot & sern altn. Foln mod 50. Qtz vn xx. Ands as 381-394.9ft. Strong high angle vnlts. Assr .5% py.	456.00	468.30	NS	-	-	-	-
468.30	474.00	ANDESITE							
		Green-brown. Biot, sern & siln altn.	468.30	474.00	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		Foln wk 50,Qtz vn 50, Ands. Abundant plag phyric. Strong qtz replacement of feld. Minor biotite & sern altn. Minor qtz vnlts. Foln parallel Sx. Assr .5% py.							
474.00	484.20	ANDESITE							
		Green. Sern altn. Foln wk 45. Qtz vn xx. 3 b/ft. Ands. Fg. Mod qtz vnlts, irregular angles. Minor sern. Very minor biotite. Assr tr py.	474.00	484.20	NS	-	-	-	-
484.20	486.90	ANDESITE							
		Brown. Biot altn. Foln mod 45. Qtz vn xx. Ands as 324.5-330.7ft. Assr .5% py.	484.20	486.90	NS	-	-	-	-
486.90	503.10	ANDESITE							
		Green. Sern altn. Foln mod 50. Qtz vn xx. Ands. Fg. Mod sern. Minor irregular qtz vnlts. Fg diss Sx. Assr .5% py.	486.90	503.10	NS	-	-	-	-
503.10	504.10	CHLORITE SCHIST							
		Black. Chlr altn. Foln mod 50. Chlrorite altn. V strong chlr altd ands? Minor rhyolitic layers about 5mm thick. Foln parallel deformed Sx. Assr min: 4% py. tr cp, tr sph.	503.10	504.10	FX546426	95	162	282	0.015
504.10	513.80	RHYODACITE							
		Gray. Sern altn. Foln mod 45. Rdct tuff. Mod qtz eyes & deformed qtz eyes. Overall uniform fg w/ some larger flattened clasts. Monolithic. Minor plag phyric diss Sx. Assr min: 1% py, tr cp.	504.10	513.80	NS	-	-	-	-
513.80	524.10	RHYODACITE							
		Gray. Sern altn. Foln mod 50. Qtz vn xx. As 504.1-513.8ft, w/ mod qtz boudins & more abundant Sx. Assr min: 4% py, .5% cp, tr sph.	513.80	524.10	FX546427	410	98	510	0.025
524.10	534.40	ANDESITE							
		Gray-green. Sern altn. Foln mod 50. Ands-Dac tuff. Fg. Minor qtz vnlts, foln parallel. Diss Sx. Minor frags.	524.10	534.40	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		Assr min: .5% py, tr cp.							
534.40	539.00	ANDESITE							
		Brown-green, Biot & sern altn, Foln mod 45, Qtz vn xx, Ands as 381-394.9ft, Assr .5% py,	534.40	539.10	NS	-	-	-	-
539.00	566.50	ANDESITE							
		Gray-green, Sern altn, Foln mod 45, Qtz vn xx, Ands, Fg, Flow or tuff, Partly plag phyric, Diss & foln parallel Sx, Wk sern, V minor biotite, Minor qtz vnlts & boudins, largely foln parallel, Assr .5% py,	539.10	566.50	NS	-	-	-	-
566.50	569.50	GOUGE							
		Green, Clay altn, CA 45, xx b/ft, Clay rich gouge w/ ands chop,	566.50	569.50	NS	-	-	-	-
569.50	577.50	ANDESITE							
		Green, Sern altn, Foln mod 50, Qtz vn xx, Ands as 539.1-566.5ft, Assr .5% py,	569.50	577.50	NS	-	-	-	-
577.50	578.00	GOUGE							
		Grav, Clay altn, CA 60, Gouge as 566.5-569.5ft,	577.50	578.00	NS	-	-	-	-
578.00	579.90	ANDESITE							
		Green, Sern altn, Foln strong 60, Qtz vn xx, Ands as 539.1-566.5ft, Assr .5% py,	578.00	579.90	NS	-	-	-	-
579.90	582.40	ANDESITE							
		Gray, Sern & siln altn, Foln strong xx, Qtz vn xx, Ands contact altn zone as 302.2-303.8ft w/ lesser sulphides, Assr .5% py,	579.90	582.40	NS	-	-	-	-
582.40	593.30	DIKE							
		Tan, Silh? Felsic dike as 303.8-314.4ft, Assr tr py,	582.40	593.30	NS	-	-	-	-
593.30	595.90	ANDESITE							
		Gray, Sern & silh altn, Foln strong xx, Qtz vn xx, As 579.9-582.4ft, Assr 1% py,	593.30	595.90	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
595.90	600.80	ANDESITE Green. Sern altn. Foln mod 60. Qtz vn xx. Ands. Largely plag phyric. Mod irregular qtz vnlts & boudins. Minor chlr altn. Wk sern. Diss & foln parallel Sx vnlts. Assr 3% py.	595.90	600.80	NS	-	-	-	-
600.80	604.50	DACITE Green. Sern altn. Foln mod 60. Dac tuff. Fg. Minor fragments. Diss & foln parallel Sx. Minor chlr altn. Mod-strong sern. Almost tuffite. Assr min: 3% py, tr cp, tr sph.	600.80	604.50	FX546428	18	2	24	0.015
604.50	608.10	ANDESITE Green. Sern altn. Foln mod 50. Ands. Fg. Wk sern. Diss & foln parallel Sx. Assr 2% py.	604.50	608.10	NS	-	-	-	-
608.10	610.00	ANDESITE Gray. Sern & siln altn. Foln strong 60. Ands. Contact altd zone. Kink folds AF 35deg. Mon sern, siln. As 579.9-582.4ft. Assr .5% py.	608.10	610.00	NS	-	-	-	-
610.00	610.80	QUARTZ VEIN White. CA 60. Qtz vn w/ minor felsic dike material. Assr 3% py.	610.00	610.80	NS	-	-	-	-
610.80	611.20	DIKE Gray. Siln & sern. CA 45. Felsic dike as 303.8-314.4, w/ assimilated andesite. Assr .5% py.	610.80	611.20	NS	-	-	-	-
611.20	618.00	BASALT Dark green. Hrfl altn. Foln mod 45. Bslt. Hrfls. Diss lg (to 1cm) py cubes & fg diss & foln parallel py. Largely plag phyric. Mid chlr. Non mtc. Assr 2% py.	611.20	618.00	NS	-	-	-	-
618.00	624.60	ANDESITE Gray-green. Sern & siln altn. Foln mod 55. Ands & bslt tuff w/ minor flattened frags. Mid sern, mid siln. minor chlr. Diss & foln parallel py. Some epiclastic seds? Assr min: 4% py,	618.00	624.60	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		tr cp, tr sph.							
624.60	627.30	GOUGE Gray-green. Sern & clay altn. Foln strong 40. xx b/ft. Gouge & ser altd ands? chop.	624.60	627.30	NS	-	-	-	-
627.30	631.70	ANDESITE Gray-green. Sern & siln altn. Foln mod 45. Ands heterolithic as 618-624.6 ft. Possible soft sed deformed structures. Assr min: 4% py, tr cp, tr sph.	627.30	631.70	FX546429	78	2	44	0.02
631.70	642.30	RHYODACITE Gray-green. Sern & siln. Foln mod 50. Rdct, fg. Possible tuffes w/ mod flattened rdct frags. Mod sern, mod siln altn. Diss & foln parraliel py. Minor qtz vnlts. Assr min 3% py, tr cp, tr sph.	631.70	642.30	FX546431	3	2	6	<0.005
642.30	647.40	ANDESITE Green. Sern altn. Foln mod 45. Ands dominant het frgl. Ands, bslt rdct. Flattened frags to 1.5cm. Mod sern altn. Diss & foln parallel py. Minor gouge @ 642.5ft. Possible soft sed deformed structure. Assr min; 3% py, tr cp, tr sph.	642.30	647.40	NS	-	-	-	-
647.40	651.00	BASALT Green. Hrfl altn. Foln wk 50. Bslt, hrfls as 611.2-618ft. Assr 2% py.	647.40	651.00	NS	-	-	-	-
651.00	663.20	ANDESITE Green. Sern altn. Foln mod 55. Ands dominant het. As 642.3-647.4ft. Assr min; 2% py, tr cp, tr sph.	651.00	663.20	NS	-	-	-	-
663.20	674.40	BASALT Dark green. Hrfl altn. Foln wk 60. Bslt frfls as 611.2-618ft. Core loss due to mislatch? Assr 2% py.	663.20	674.40	NS	-	-	-	-
674.40	679.00	BASALT Dark green. Hrfl altn. CA 55. Foln wk 55. Qtz vn xx. Mafic tuff. Fg bsltic.	674.40	679.00	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		Mod irregular qtz vnlts. Minor diss py. Assr .5% py.							
679.00	692.50	ANDESITE							
		Gray-green. Sern altn. Foln mod 55. Ands dominant heterolithic frgl. Ands. dac. rdct. very minor bslt. Minor irregular qtz vnlts. Diss & vnlt py. Highly tectonized. Tfcs matrix? Assr .5% py.	679.00	692.50	NS	-	-	-	-
692.50	693.40	ANDESITE							
		Green. Chlr altn. Foln strong 70-75. Qtz vn xx. Chloite rich ands? Foln hinge. Abundant deformed qtz boudins. Fold AP 60 & 40. Assr tour & py. Assr 3% py.	692.50	693.40	NS	-	-	-	-
693.40	713.50	ANDESITE							
		Gray-green. Sern altn. Foln mod 55. Ands dominant het frgl. As 679-692.5ft. Assr .5% py.	693.40	713.50	NS	-	-	-	-
713.50	720.30	ANDESITE							
		Green. Foln mod 55. Ands. Fg. Flow or tuff. Very minor irregular qtz vnlts. Minor diss & foln parallel vnlt py. Assr .5% py.	713.50	720.30	NS	-	-	-	-
720.30	734.00	MAFIC TUFF							
		Dark green. CA 55. Foln mod 55. Qtz vn xx. Bslt tuff. Assr chlr. Minor layered looking sern. Minor irregular qtz vnlts. Minor diss & foln parallel py. Assr .5% py.	720.30	734.00	NS	-	-	-	-
734.00	753.20	BASALT							
		Dark green. Hrfl altn. Foln strong 55. Qtz vn 55. Bslt hrfl as 23.2-42ft.	734.00	753.20	NS	-	-	-	-
753.20	765.30	BASALT							
		Dark green. Hrfl altn. Foln strong 55. Bslt hrfl. Irregular blotchy mt. Very minor qtz vnlts. Diss py. Weak layering of hrfl. Assr .5% py.	753.20	765.30	NS	-	-	-	-
765.30	774.40	BASALT							
		Dark green. Hrfl altn. Foln wk 60.	765.30	774.40	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		Bslt hrfl, Pervasive fg mt, Mod-strong mtc. Massive bslt, Minor feld phyric.							
774.40	774.70	QUARTZ VEIN							
		White, CA 60, Qtz vn w/ chlr.	774.40	774.70	NS	-	-	-	-
774.70	782.40	BASALT							
		Dark green, Hrfl altn, Foln mod 60, Qtz vn 60, Bslt hrfl as 765.3-774.4ft w/ minor layering & minor qtz vnlts, Mod mtc.	774.70	782.40	NS	-	-	-	-
782.40	791.70	BASALT							
		Dark green, Biot & chlr altn, Foln wk 60, Bslt, biot & chlr altn, Blotchy cottage cheese texture, irregular, Altn varioles? Gabboric porphyritic Texture? non-mtc.	782.40	791.70	NS	-	-	-	-
791.70	814.90	BASALT							
		Dark green, Hrfl altn, Foln wk 55, Qtz vn 55, Bslt as 774.7-782.4ft, Mod mtc, Assr min: tr py, tr cp.	791.70	814.90	NS	-	-	-	-
814.90	815.80	BASALT							
		Dark green, Hrfl altn, Foln mod 55-15, Bslt as above folded AF 80.	814.90	815.80	NS	-	-	-	-
815.80	821.10	BASALT							
		Dark green, Foln wk 60, Qtz vn 60, Bslt, Fg, very minor plag phyric, Minor qtz vnlts, Pervassive fg mt, Mod mtc, Flows & tuffs, Assr tr py.	815.80	821.10	NS	-	-	-	-
821.10	830.80	BASALT							
		Dark green, Foln wk 55, Qtz & cal vn 55, Bslt, Mod palg phyric, Mod qtz & cal vnlts, Non mtc, Possible weak hrfls, Probably flow, Some qtz vns look cherty, Assr tr py.	821.10	830.80	NS	-	-	-	-
830.80	840.30	BASALT							
		Dark green, Foln wk 50, Qtz & cal vn 50, Bslt as above w/ fg mt, Mod mtc.	830.80	840.30	NS	-	-	-	-
840.30	858.10	MAFIC TUFF							
		Dark green, Hrfl altn, Foln strong 55, Qtz & cal vn 55, Bslt tuff &	840.30	858.10	NS	-	-	-	-

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		epiclastics. #Layered# hrfl. Non mtc. Mod qtz cal vnlts. Fg.							
858.10	869.90	BASALT							
		Dark green. Hrfl altn. Foln mod 55. Qtz & cal vn 55. Bslt. Parts plag phyric. Coarse & v fg mt. Mod mtc. Minor qtz. cal vnlts. Flows, tuffs, minor epiclastics.	858.10	869.90	NS	-	-	-	-
869.90	874.70	BASALT							
		Dark green. Chlr altn. Foln wk 60. Qtz vn xx. Bslt. Parts plag phyric. Mod irregular qtz vnlts & boudins. Mod-abundant fg chlr. metamorphic. Minor diss Sx associated w/ qtz. Minor contorted folds. Assc tr py.	869.90	874.70	NS	-	-	-	-
874.70	875.10	QUARTZ VEIN							
		White-black. CA 60. Qtz, tour, epid vn.	874.70	875.10	NS	-	-	-	-
875.10	880.10	BASALT							
		Green. Qvn altn. Foln mod 65. Bslt flow & tuff. Part plag phyric. Minor chlr, lim w/ frac & tour.	875.10	880.10	NS	-	-	-	-
880.10	880.50	GOUGE							
		Tan. Clay altn. Lim gouge.	880.10	880.50	NS	-	-	-	-
880.50	902.50	MAFIC TUFF							
		Green. Chlr altn. Foln strong 80. Qtz vn xx. Bslt, tuff & eliclastics. Very Layered. Mod chlr. Very fg contorted & kink folds. AP 30 & 50. Spotty magnetics. Minor zones look like mt BIF. Mod irregular & folded qtz vnlts.	880.50	919.10	NS	-	-	-	-
902.50	909.10	MAFIC TUFF							
		Green. Chlr altn. Foln mod 0-90. Qtz vn xx. As 880.5-902.5ft. Very abundant folds. AP's 35-40 & 50-60.							
909.10	920.00	GOUGE							
		Gray. Clay altn. Gouge w/ clay & chlr.	919.10	920.00	NS	-	-	-	-
920.00	933.50	MAFIC TUFF							

FROM ft	TO ft	DESCRIPTION	FROM ft	TO ft	SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Au PPM
		Green, Chlr altn, Foln mod 75, Qtz vn xx, As 800.5-902.5ft, Very minor kinks,	920.00	933.50	NS	-	-	-	-
933.50	945.40	BASALT							
		Green, Chr & biot altn, Foln wk 60, Qtz vn 60, Bslt flow, Plag phyric, Uniform, massive,	933.50	945.40	NS	-	-	-	-
945.40	963.60	MAFIC TUFF							
		Green, Chlr altn, Foln strong xx, Qtz vn xx, As 902.5-919.1ft,	945.40	963.60	NS	-	-	-	-
963.60	978.50	BASALT							
		Green, Foln wk 75, Bslt, Parts plag phyric, parts fg, Fairly uniform, Irregular blotchy mt spotty mtc's,	963.60	978.50	NS	-	-	-	-
978.50	987.40	BASALT							
		Dark green, Hrfl altn, Foln wk 70, Qtz & cal vn xx, Bslt hrfl, Secondary lath plag, Assr chlr, mt, cal, Plag to 8mm, Mod mtc, Minor biot, minor qtz cal vnlts,	978.50	987.40	NS	-	-	-	-
987.40	1004.00	BASALT							
		Dark green-black, Hrfl altn, Foln wk 75, Qtz & cal vn xx, Bslt hrfl, Part plag phyric, Minor qtz, cal vnlts, Biot, mt, chlr, Mod mtc, Flows & tuff, EOH,	987.40	1004.00	NS	-	-	-	-

Chemex Labs, Inc.

Analytical Chemists * Geochemists * Registered Assayers

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AMERICAN COPPER & NICKEL CO.

1040 SANDRETTO DR.
PRESCOTT, ARIZONA
86301

A9640493

Comments: ATTN: DAVID OLIVER CC: PHIL RUSH

CERTIFICATE A9640493

(DRP) - AMERICAN COPPER & NICKEL CO.

83663

Project: 303603
P.O. #:

Samples submitted to our lab in Sparks, NV.
This report was printed on 5-DEC-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	25	Pulp; prepped on other workorder

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
902	25	Al2O3 %: XRF	XRF	0.01	100.00
906	25	CaO %: XRF	XRF	0.01	100.00
2590	25	Cr2O3 %: XRF	XRF	0.01	100.00
903	25	Fe2O3 %: XRF	XRF	0.01	100.00
908	25	K2O %: XRF	XRF	0.01	100.00
905	25	MgO %: XRF	XRF	0.01	100.00
1989	25	MnO %: XRF	XRF	0.01	100.00
907	25	Na2O %: XRF	XRF	0.01	100.00
909	25	P2O5 %: XRF	XRF	0.01	100.00
901	25	SiO2 %: XRF	XRF	0.01	100.00
904	25	TiO2 %: XRF	XRF	0.01	100.00
910	25	LOI %: XRF	XRF	0.01	100.00
2540	25	Total %	CALCULATION	0.01	105.00
2891	25	Ba ppm: XRF	XRF	5	50000
2067	25	Rb ppm: XRF	XRF	2	50000
2898	25	Sr ppm: XRF	XRF	2	50000
2973	25	Nb ppm: XRF	XRF	2	50000
2978	25	Zr ppm: XRF	XRF	3	50000
2974	25	Y ppm: XRF	XRF	2	50000

83663 - XRF's WR

Chemex Labs, Inc.

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To: AMERICAN COPPER & NICKEL CO.

1040 SANDRETTO DR.
PRESCOTT, ARIZONA
86301

Project : 303603
Comments: ATTN: DAVID OLIVER CC: PHIL RUSH

Page Number :1
Total Pages :1
Certificate Date: 05-DEC-96
Invoice No. :I9640493
P.O. Number :
Account :DRP

83663

CERTIFICATE OF ANALYSIS A9640493

SAMPLE	PREP CODE		Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	MgO % XRF	MnO % XRF	Na2O % XRF	P2O5 % XRF	SiO2 % XRF	TiO2 % XRF	LOI % XRF	TOTAL %	Ba ppm	Rb ppm	Sr ppm	Nb ppm	Zr ppm	Y ppm
FX546407	299	--	15.52	9.90	< 0.01	8.33	0.83	2.68	0.19	2.36	0.33	52.88	0.94	4.62	98.58	295	20	296	6	108	24
FX546408	299	--	16.81	8.06	0.01	9.88	1.95	2.71	0.17	1.84	0.28	51.88	0.94	4.29	98.82	405	36	308	6	117	18
FX546409	299	--	14.74	1.99	< 0.01	15.09	1.66	5.94	0.17	0.54	0.25	48.87	0.87	8.45	98.57	570	30	48	6	114	20
FX546410 STD	299	--	13.35	6.04	< 0.01	13.99	1.58	4.88	0.17	2.16	0.16	54.05	0.91	1.90	99.19	525	64	248	8	204	30
FX546411	299	--	12.12	0.27	< 0.01	36.36	0.33	8.39	0.30	< 0.01	0.15	20.35	0.56	16.05	94.88	60	6	12	2	48	16
FX546412	299	--	14.70	0.41	< 0.01	13.87	1.48	8.10	0.28	0.13	0.16	52.09	0.67	7.05	98.94	265	22	30	4	93	16
FX546413	299	--	14.58	0.52	< 0.01	8.80	1.81	7.25	0.24	0.19	0.17	59.18	0.57	5.58	98.89	310	26	38	6	132	20
FX546414	299	--	15.06	0.44	< 0.01	16.08	1.74	8.49	0.20	0.14	0.18	46.46	0.65	9.27	98.71	245	26	40	6	114	20
FX546415	299	--	16.44	0.79	< 0.01	13.63	1.25	9.90	0.29	0.38	0.20	46.78	0.69	8.54	98.89	190	20	48	6	129	22
FX546416	299	--	13.04	0.39	< 0.01	13.95	1.61	6.53	0.18	0.09	0.13	54.16	0.53	8.07	98.68	195	26	70	4	96	24
FX546417	299	--	11.77	2.97	< 0.01	19.58	3.07	2.48	0.12	0.63	0.12	40.51	0.38	15.43	97.06	380	58	244	4	93	16
FX546418	299	--	13.33	1.36	< 0.01	0.96	3.99	0.34	0.06	3.28	0.02	72.83	0.10	2.79	99.06	1025	82	300	10	108	10
FX546419	299	--	13.60	1.36	< 0.01	0.90	3.95	0.18	0.06	3.18	0.03	72.12	0.10	2.70	98.18	1070	86	314	12	111	10
FX546420	299	--	15.19	1.95	< 0.01	9.43	3.67	3.34	0.16	1.59	0.12	54.25	0.48	8.70	98.88	555	74	290	6	93	14
FX546421	299	--	15.77	0.54	< 0.01	10.04	2.51	6.00	0.20	0.19	0.21	56.67	0.63	6.58	99.34	405	38	52	6	144	22
FX546422	299	--	14.55	1.35	< 0.01	9.06	1.76	5.72	0.26	0.62	0.18	59.00	0.55	5.66	98.71	330	28	52	6	135	18
FX546423	299	--	17.08	4.40	< 0.01	8.14	2.19	3.67	0.25	1.99	0.19	57.22	0.64	3.76	99.53	515	40	102	6	144	20
FX546424	299	--	14.35	4.76	< 0.01	15.79	1.22	9.43	0.51	0.65	0.18	41.17	0.65	10.34	99.05	155	28	40	4	102	20
FX546425	299	--	15.09	2.24	< 0.01	11.87	1.45	8.63	0.35	0.49	0.17	51.56	0.63	6.58	99.06	255	32	46	4	111	18
FX546426	299	--	15.98	0.57	< 0.01	9.88	2.99	5.81	0.16	0.15	0.26	56.28	0.86	5.86	98.80	280	62	24	4	129	24
FX546427	299	--	16.21	0.96	< 0.01	9.38	3.42	5.43	0.12	0.32	0.33	55.09	0.87	6.21	98.34	350	70	30	8	144	28
FX546428	299	--	17.53	0.50	< 0.01	9.36	3.46	2.86	0.03	0.74	0.30	55.99	1.04	6.69	98.50	2960	54	102	8	147	28
FX546429	299	--	15.60	0.47	< 0.01	8.24	2.99	3.97	0.07	0.45	0.27	59.32	0.92	5.81	98.11	865	48	60	8	135	26
FX546430 STD	299	--	10.94	0.76	< 0.01	2.35	8.03	0.47	0.05	0.55	0.03	74.47	0.26	1.23	99.14	830	130	22	24	390	140
FX546431	299	--	16.57	0.46	< 0.01	2.24	2.80	0.11	0.01	1.37	0.27	70.66	0.89	2.99	98.37	4890	38	220	8	150	12

CERTIFICATION: Hart Bichler

ACNC DRILL HOLE DEVIATION REPORT

HOLE NO.	83663	INCLINATION	-50	PROJ. NAME	Pentland
NORTHING	5600	AZIMUTH	270	PROJ. NO.	303603
EASTING	8700	HOLE DEPTH	1000	STATE	AZ
COLLAR ELEV.	4780	DRILL METHOD	Core	COUNTY	Yavapai

DEPTH	INCL.	BEARING MAG.	BEARING TRUE	AZMIM.
0	-50			276 Deg
100	-50 40	S84W		277.5
200	-48 42	S83.5W		277
300	-44.5 45.5	S88W		281.5
400	-42.5 47.5	S90W		283.5
500	-40 50	N88W		285.5
600	-39 51	N86W		287.5
700	-36.5 53.5	N85W		288.5
800	-34.5 55.5	N84W		289.5
900	-33.5 56.5	N84W		289.5
1000	-32.5 57.5	N82W		291.5

DEPTH	INCL.	BEARING MAG.	BEARING TRUE	AZMIM.

High mtc gradient @ Pentland influences magnetic survey tool. Deg

Chemex Labs, Inc.

Analytical Chemists * Geochemists * Registered Assayers

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TO: AMERICAN COPPER & NICKEL CO.

1040 SANDRETTO DR.
PRESCOTT, ARIZONA
86301

A9640492

Comments: ATTN: DAVID OLIVER CC: PHIL RUSH

83663

CERTIFICATE A9640492

(DHP) AMERICAN COPPER & NICKEL CO.

Project 303609
P.O. #:

Samples submitted to our lab in Sparks, NV.
This report was printed on 27-NOV-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
208	23	Assay ring to approx 150 mesh
294	23	4-7 Kg crush and split
225	2	Run as received
229	25	ICP - AQ Digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
494	25	Au g/t: Fuse 30 g sample	FA-AAS	0.005	12.00
2118	25	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2120	25	As ppm: 32 element, soil & rock	ICP-AES	2	10000
2123	25	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2128	25	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2131	25	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2136	25	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2140	25	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
2141	25	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2149	25	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

83663 - ICP 9g

Chemex Labs, Inc.

Analytical Chemists * Geochemists * Registered Assayers

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To: AMERICAN COPPER & NICKEL CO.

1040 SANDRETTO DR.
PRESCOTT, ARIZONA
86301

Project : 303603
Comments: ATTN: DAVID OLIVER CC: PHIL RUSH

Page Number :1
Total Pages :1
Certificate Date: 27-NOV-96
Invoice No. : I9640492
P.O. Number :
Account :DRP

*PLEASE NOTE 83663

CERTIFICATE OF ANALYSIS A9640492

SAMPLE	PREP CODE		Au g/t FA+AA	Ag ppm	As ppm	Bi ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
FX546407	208	294	< 0.005	< 0.2	< 2	2	91	< 1	1	< 2	< 2	72
FX546408	208	294	< 0.005	< 0.2	18	2	100	< 1	1	2	< 2	92
FX546409	208	294	< 0.005	0.2	90	6	339	< 1	5	8	< 2	104
FX546410 STD	225	229	0.110	1.2	6	4	495	< 1	1	734	< 2	822
FX546411	208	294	0.270	5.4	260	Intf*	>10000	< 1	14	24	< 2	320
FX546412	208	294	0.040	0.2	190	2	388	< 1	2	20	< 2	328
FX546413	208	294	0.010	0.2	36	< 2	73	< 1	2	82	< 2	262
FX546414	208	294	0.030	0.2	246	2	171	< 1	6	14	< 2	50
FX546415	208	294	0.020	0.2	90	< 2	110	< 1	3	64	< 2	340
FX546416	208	294	0.015	0.2	148	2	177	< 1	5	6	< 2	50
FX546417	208	294	0.050	0.6	376	6	182	< 1	21	796	< 2	1610
FX546418	208	294	< 0.005	< 0.2	2	< 2	4	< 1	26	26	< 2	72
FX546419	208	294	< 0.005	< 0.2	< 2	< 2	< 1	< 1	< 1	18	< 2	32
FX546420	208	294	< 0.005	< 0.2	52	2	121	< 1	4	28	< 2	110
FX546421	208	294	< 0.005	< 0.2	44	< 2	39	< 1	1	6	< 2	126
FX546422	208	294	< 0.005	< 0.2	22	2	72	< 1	3	12	< 2	510
FX546423	208	294	0.005	< 0.2	16	< 2	59	< 1	1	8	< 2	208
FX546424	208	294	0.050	0.2	58	2	246	< 1	5	84	< 2	3760
FX546425	208	294	0.015	< 0.2	56	< 2	69	< 1	2	36	< 2	558
FX546426	208	294	0.015	0.2	284	2	95	< 1	1	162	< 2	282
FX546427	208	294	0.025	0.2	74	2	410	< 1	1	98	< 2	510
FX546428	208	294	0.015	< 0.2	6	4	18	< 1	1	< 2	< 2	24
FX546429	208	294	0.020	< 0.2	22	2	38	< 1	3	2	< 2	44
FX546430 STD	225	229	< 0.005	< 0.2	2	< 2	< 1	< 1	3	2	< 2	46
FX546431	208	294	< 0.005	< 0.2	2	< 2	3	< 1	11	2	< 2	6

* INTERFERENCES: Cu on Bi

CERTIFICATION Stuart Bichler

Chemex Labs, Inc.

Analytical Chemists * Geochemists * Registered Assayers

994 Glendale Ave., Unit 3, Sparks
Nevada, U.S.A. 89431
PHONE: 702-356-5395 FAX: 702-355-0179

To: AMERICAN COPPER & NICKEL CO.

1040 SANDRETTO DR.
PRESCOTT, ARIZONA
86301

A9641843

Comments: ATTN: DAVID OLIVER CC: PHIL RUSH

CERTIFICATE A9641843

(DRP) - AMERICAN COPPER & NICKEL CO.

Project: 303603
P.O. # :

Samples submitted to our lab in Sparks, NV.
This report was printed on 6-DEC-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
301	1	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

83663 - over limits

The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geologic materials collected by the prospective investor or by a qualified person selected by him/her and based on an evaluation of all engineering data which is available concerning any proposed project

Statement required by Nevada State Law NRS 519

Chemex Labs, Inc.

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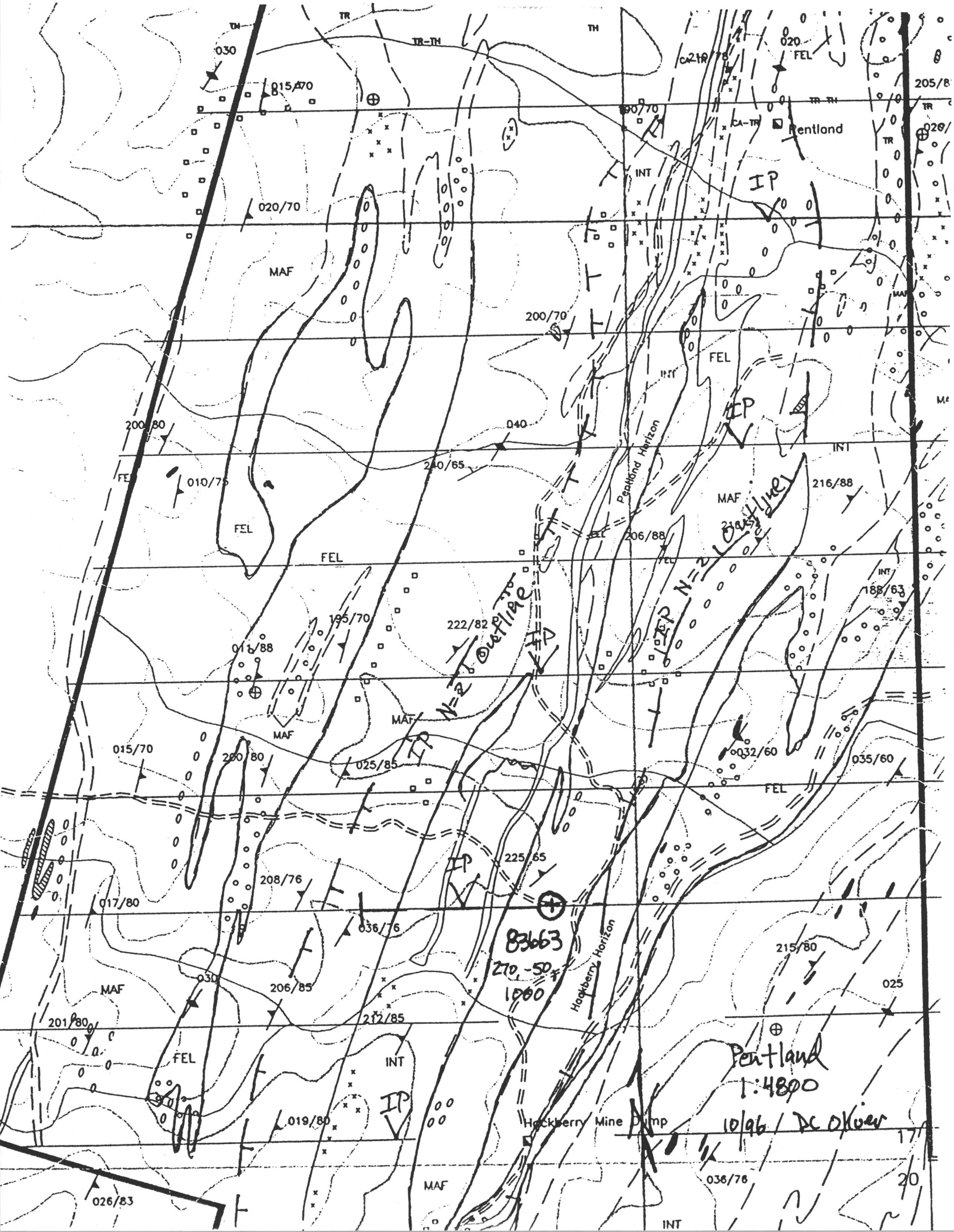
Page Number :1
Total Pages :1
Certificate Date: 06-DEC-96
Invoice No. :I9641843
P.O. Number :
Account :DRP

CERTIFICATE OF ANALYSIS A9641843

SAMPLE	PREP CODE		Cu %									
FX546411	244	--	1.19									

CERTIFICATION: Stuart Bichler


TR
TH
TR-TH
030
015/70
020/70
MAF
FEL
Pentland
CA-TR
190/70
020
INT
IP
200/70
200/80
010/75
040
240/65
Pentland Horizon
216/88
206/88
IP N-2 Outline
195/70
222/82
011/88
188/63
015/70
025/85
032/60
035/60
225/65
208/76
017/80
036/76
83663
270, -50
1000
Hackberry Horizon
215/80
025
206/85
212/85
201/80
019/80
Hackberry Mine Dump
Pentland
1:4800
10/96 / DC Olivier
026/83
036/76
17
20

1040 Sandretto Dr. Suite E Prescott, AZ. 86301
Phone & Fax 520-778-6942, Modem 520-717-0514

American Copper & Nickel Company, Inc.

Fax

To: Phil Resch **From:** David Oliver

Fax: **Pages:** ~~4~~ 4

Phone: **Date:** 2/11/97

Re: BH 83666 Assays. **CC:**

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

• **Comments:** Sulphide horizon yields:

0.16 % Cu, 0.35 % Pb, 3.64 % Zn, 0.45 ppm Au, 7.9 ppm Ag

15.4 ft (1068.8 - 1084.2)

high values w/in this zone.

5010 ppm Cu / 4.0
7700 ppm Pb / 4.0
9.49 % Zn / 4.0 ft
1.07 ppm Au / 2.4 ft
17 ppm Ag / 4.0 ft

elevated As + Hg w/in zone. The sulphide horizons in holes 83655 + 83666 associated w/ Carbonate exhalite, (Note high Ca, Mg)
Elevated Cu, Pb, Zn, Au, Ag + Sb values bracket the sulphide horizon.

X-S 1:2400

X-S long @ 1:1200
Plan

BOREHOLE LOG

BOREHOLE : 83655
PROJECT : Copper Queen
PROPERTY NAME : Copper Queen
MINE :

DATE PRINTED: 04/25/97

COUNTRY : USA
PROV/STATE : Arizona
NTS/QUADRANGLE : Section 6, T12N, R2E
TWP/COUNTY : Yavapai
SEC. T. R. :
CLAIM NAME :
GRID NAME :
UTM COORDINATES :
ANOMALY # :

LEVEL : Surface
HEADING :
SECTION :
BASELINE AZIMUTH :

ASSAYED FOR : WRA & ICP Metals

NORTHING : 22930.00
EASTING : 2490.00
ELEVATION : 4560.00
BOREHOLE BEARING :
INCLINATION :
HOLE LENGTH : 1104.00
ATTITUDE TEST METHOD: Eastman Single Shot

LOGGED BY : David Oliver
LOGGING STARTED :
LOGGING COMPLETED :
DRILLED BY : Boart Longyear
DRILL TYPE : Skip 44
CORE SIZE : NQ
HOLE SIZE :
STARTED : 7/8/96
COMPLETED : 7/26/96

COMMENTS:##########

DEVIATION RECORDS

DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
0.00	250.00	-50.00	400.00	247.50	-47.50	500.00	245.50	-45.50
900.00	254.50	-36.50	1000.00	255.50	-33.50	1100.00	256.50	-31.00

FROM FT	TO FT	DESCRIPTION
0.00	10.00	OVERBURDEN Dirt & rocks.
10.00	28.00	TUFF Gray-green. Oxn. Foln wk 45. 3 b/ft. Ands tuff w/ very minor fled phenos, very minor hem. FeOx & minor oxn on frac. Mod weathered/oxn. Minor Fe clay on fracs. Fg.
28.00	31.00	GOUGE Red-brown. Oxn. Foln mod 45. 15 b/ft. Chop. Ands tuff contact chop w/ dike.

FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
0.00	43.50	NS	-	-	-	-

55

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
31.00	51.50	LAMPROPHYRE Dark gray. Oxn. Dike. K-T. Non fotd. Sanidine + px phenos to 3cm. Glassy frags to 1cm. Mod FeOx.	43.50	44.50	FX546269	0.005	0.2	49	110
			44.50	250.50	NS	-	-	-	-
51.50	62.30	TUFF Gray-green. Wk oxn. Foln mod 35. 3 b/ft. Ands tuff fg. Fotd. Minor mm qtz vnlts. FeOx, MnOx on frac. Minor feld phenos.							
62.30	105.90	ANDESITE Green. foln wk 35. Qtz vn xx. Ands, mg. FeOx on frac. Plag & amph phenos. Very monotonous for a flow, oss pt dike. Very minor qtz vnlts.							
105.90	113.00	ANDESITE Brown-green. Mod Oxn. Fonl mod 35. Cal vn 50, 25. 2 b/ft. Ands oxidized w/ 3, 2-5mm cal, qtz vnlts/ft, minor faulting of vnlts, mm to 3cm displacement. Lim along frac, faults & s vnlts.							
113.00	123.70	QUARTZ Gray-green. Siln. Foln mod 35. 3 b/ft. Aphanitic sherty looking replacement of ands & veining along fault? or q/ in fold hinge? Assr min; chlr, lim, cal.							
123.70	133.80	ANDESITE Gray-green. Foln wk 30. Cal vn 60, 80. Qtz vn 20. 1 b/ft. Ands to ands bslt. 4 cal, cal-qtz vnlts/ft about 3mm thick. Minor possible qtz flattened amygs. Assr min chlr + amph.							
133.80	134.90	ANDESITE Gray-green. Foln wk 40. 1 b/ft. Amyg ands to ands bslt. Poss amyg rich flow top. Very minor qtz vnlts. Assr min; feld, chlr.							
134.90	145.80	ANDESITE							

		DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Gray-green. Foln wk 35. Cal vn 70, 30. q b/ft. Ands-bslt. Minor cal amygs. 4 cal vnlts/ft about 3mm thick. Assr min; feld, chlr, amph.							
145.80	155.00	ANDESITE Gray-green. Foln wk 40. Cal vn, qtz vn xx. 1 b/ft. Ands w/ some frags of darker amyg ands to ands-bslt. 3 vnlts cal/ft w/ clotty qtz-cal deformed boudins. Minor fault displaced vnlts (to about 3cm) w/ younger tension gash vnlts.							
155.00	156.30	ANDESITE Gray-green. CA 60. Foln wk 35. Cal vn xx. 1 b/ft. As 133.8-134.9							
156.30	161.90	ANDESITE Gray-green. CA 55. Foln wk 40. Cal vn 70. Ands w/ ands tuff. 3 cal vnlts/ ft about 3mm, minor (1cm) fault displacement of vnlts. Minor flattened cal amygs.							
161.90	171.00	TUFF Gray-green. Siln. Cal vn, qtz vn xx. Ands tuff or fg ands. Abundant qtz, cal deformed boudins w/ spec hem. 4 cal qtz vnlts/ft to 1cm. Looks like deformed boudins in hinge of fold or near fault. Assr min; .5% spec hem. Minor fold axpl at 50deg.							
171.00	179.00	ANDESITE Gray-green. Foln wk 45. Cal vn, qtz vn xx. Fg ands. 4-5 cal vnlts/ft to 1cm thick.							
179.00	192.50	ANDESITE Gray-green. CA 15? Foln wk 15. Cal vn, qtz vn 75. 1 b/ft. Fg ands + ands tuff possible minor fg epiclastic seds. Very shallow foln + possible bedding. Faulting of vnlts, 4 cal qtz vnlts/ft. Minor hematitic qtz clots/boudins.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
192.50	202.50	ANDESITE Gray-green. Cal vn, qtz vn 65. amyg ands-bslt. 3 cal, qtz vnlts/ft to 1cm thick. Qtz, cal amygs. Minor spec hem. Possible stretched frags.							
202.50	228.80	ANDESITE Gray-green. Foln wk 30. Cal vn, qtz vn xx. Fg ands + ands tuff + epiclastics. Very minor amygs. 3 cal qtz vnlts/ft to 1cm. Assr min; hem + chlr.							
228.80	236.30	ARKOSE Brown-gray. CA 60. Qtz vn, cal vn xx. 1 b/ft. Very coarse sed; chert, qtz, feld, chlr, cal. Clasts to 5mm, looks like an intrusive. No thermal contact effects. 3 qtz cal cnlts/ft to 1cm. Some clotty qtz, epid, hem boudins. Xls & lithics.							
236.30	237.50	ARKOSE Green. CA 50. Foln mod 50. cal vn, qtz vn 70. 1 b/ft. Arkosic sed. Sstone, argl + cgl w/ some clasts to 5cm. 3 cal qtz vnlts to 1.5cm thick. Volc + sed clasts. XLS + lithics.							
237.50	239.00	CONGLOMERATE Gray-green. CA 50. Foln mod 50. Very immature cgl, flattened clasts to 5cm. Clasts of black chert, argl, + volcanic, feld, qtz, chlr, cal lithics & authigenic minerals. Reverse graded bedding (fining downhole). Possible over turned sequence. XLS & lithics.							
239.00	251.40	ARKOSE Brown-green. CA 50. Foln mod 40. 1 b/ft. Coarse to very coarse ark sand-Stone. 1 large clast of volcanic (4cm). Possible uphole graded bedding, fled, qtz, chlr, cal to 2mm. Very minor cla qtz vnlts. XLS & lithics.	250.50 251.00	251.00 369.00	FX546271 NS	<0.005 -	<0.2 -	42 -	66 -

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
251.40	253.40	SEDIMENT Brown-green. CA 50. Foln wk 50. Very coarse arkose w/ minor lithic flattened frags. Chert & argl lithics to 1cm. Ark mineralogy as 239-251.4ft. XLS & lithics.							
253.40	265.80	CONGLOMERATE Brown-green. CA 55. Foln wk 55. Very coarse arkose w/ aboundant lithic clasts, most flattened. Chert, argl + volc clasts to 7cm. Ark matrix mineralogy as 239-251.4. XLS & lithics.							
265.80	267.50	CHERT Gray. CA 50. Cal vn xx. Dark gray chert. Some chlr. Minor cal vnlts, minor hem.							
267.50	271.50	CONGLOMERATE Brown-green. CA 50. Foln mod 50. Same as 253.4-265.8.							
271.50	281.50	ARKOSE Brown-green. Foln mod 35. Cal vn xx. Very coarse ark sed. Very minor lithic clasts, minor cal vnlts to 5mm. Feld, qtz, cal, chlr. Xls & lithics.							
281.50	286.20	SEDIMENT Brown-green. Foln wk 30. Same as 251.4-253.4ft.							
286.20	288.80	ARKOSE Brown-green. Foln wk 40. Same as 271.5-281.5ft.							
288.80	290.00	CONGLOMERATE Gray-green. CA 30. Foln mod 20. Argillite matrix cgl, flattened volc + chert clasts to 2cm.							
290.00	300.00	ARKOSE Brown-green. Foln mod 20-40. Cal vn xx. As 271.5-281.5ft.							
300.00	312.80	CONGLOMERATE							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Brown-green. CA 20-40. Cal vn xx. As 253.4-265.8ft. 3 cal vnlts/ft to 1cm thick, clasts to 6cm.							
312.80	313.30	CHERT Gray. Tightly folded chert, axpl about 20deg.							
313.30	318.70	SEDIMENT Gray-green. Foln mod 25-40. Cal vn 30. As 251.4-253.4ft. 2 cal vnlts/ft to 1cm. Lim altn through rock & around vnlts.							
318.70	320.50	ARKOSE Brown-green. Hem & oxn. Foln mod 20. Cal vn xx. As 271.5-281.5ft. Pervasive hem staining. Open fold axpl about 75deg. 2 cal vnlts/ft to 8mm.							
320.50	329.20	ARKOSE Brown-green. Foln mod 30-50. Cal vn xx. As 271.5-281.5ft. Minor cal vnlts. Possible uphole fining graded bedding.							
329.20	331.80	SEDIMENT Brown-green. Foln wk 0-35. Cal vn 45. As 251.4-253.4ft. 2 cal vnlts/ft to 1cm, clasts to 3cm. Minor hem. Minor fold, axpl about 70deg.							
331.80	339.30	ARKOSE Brown-green. Foln wk 35. Cal vn xx. As 271.5-281.5ft. 2 cal vnlts/ft to 8mm. Minor lim.							
339.30	351.40	CONGLOMERATE Brown-green. CA 35. Foln mod 20-35. Cal vn 35. As 253.4-265.8ft. 1 cal vnlt/ft to 9mm. Very coarse ark matrix. XLS & lithics.							
351.40	365.30	ARKOSE Brown-green. Foln mod 20-40. Cal vn xx. As 271.5-281.5ft. Very coarse ark. 2 upward fining (graded) sequences. Minor clasts to 4cm. 2 cal vnlts/ft.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
365.30	377.40	ARGILLITE Gray-green. CA 20-40. Foln mod 35. Cal vn 50-70. Fg-vfg argillite. Bedded mm's to 1cm. Minor chert beds. Minor ark beds, folded axpl about 30deg. Graded sequence fining downhole. 3 cal vnlts/ft to 1cm, minor qtz vnlts. Transposed bedding along foln.	369.00 375.00	375.00 446.70	FX546272 NS	<0.005 -	<0.2 -	11 -	10 -
377.40	379.10	ARKOSE Gray-brown. CA 30-45. Cal vn xx. Arkose w/ argl interbeds. 3 cal vnlts/ft to 1cm.							
379.10	381.50	ARGILLITE Green-gray. CA xx. Foln mod xx. Cal vn xx. As 365.3-377.4ft. Deformed soft ded features? Contorted folds. Possible fold hinge.							
381.50	384.20	ARKOSE Brown-green. Foln 30. Cal vn xx. As 377.4-379.1ft.							
384.20	389.60	ARGILLITE Gray-green. CA 10-40. Foln mid 15-35. Cal vn xx. As 365.3-377.4ft. Contorted folds.							
389.60	392.00	ARKOSE Gray-green. Foln mod 20. As 377.4-397.1ft.							
392.00	394.00	ARGILLITE Gray-green. Foln mod 25. Cal vn xx. As 365.3-377.4ft. Cal ankerite vnlts, some vnlts folded axpl about 35deg.							
394.00	397.70	FLOWTOP BRECCIA Dark green. CA 45. Foln wk 45. Cal vn xx. 3 b/ft. Mixed bslt flow top bx, epiclastic seds. Some bslt w/ cal amygs. Some folded seds, axpl about 35deg. Some bslt tuff.							
397.70	403.60	BASALT							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Dark green. Foln wk 20-45. Cal vn xx. Fg bslt flow core.							
403.60	418.80	BASALT							
		Dark green. foln mod 10-50. Cal vn xx. Bslt flows + flow top bx's. Some of the flow top bx liik like some felsic frags. 3 cal vnlts/ft. Minor shear cal qtz vnlts. Minor cal amygs.							
418.80	434.70	DACITE							
		Green. Sern. Foln mod 10-50. Cal vn xx. 3 b/ft. Dac flows & tuff. Very minor qtz eyes. Wk ser altn. 3 cal vnlts/ft. Minor zones of dac frgl.							
434.70	446.70	BASALT							
		Dark green. Foln wk 30. Cal vn xx. As 403.6-418.8ft.							
446.70	449.00	TUFFITE							
		Light green. Sern, oxn. CA 40. Cal vn xx. Dac tuffite. Very fg, layered mm's to 1cm. Minor cal vnlts to 1cm. Ser & lim sheared looking 448.6-449ft, poss tectonic contact? Tr py. Minor siln.	446.70	449.00	FX546273	0.005	<0.2	71	4
449.00	462.00	DACITE							
		Green. Sern. CA 30. Foln mod 30. Qtz vn, cal vn xx. Dac fragmental, frags about 1cm. Mod sern, minor chlr altn of matrix. Monomict. Very minor qtz eyes. 2 cal vnlts/ft. Minor cal vnlts. 1 qtz vnlt 1.5inches thick.	449.00	535.20	NS	-	-	-	-
462.00	497.00	DACITE							
		Green. Sern. CA 25. Foln mod 15-40. Cal vn xx. Dac w/ minor fragmental. Mod-strong sern. 2 cal vnlts/ft. Very minor qtz eyes. Very uniform.							
497.00	519.20	ARGILLITE							
		Gray-green. CA 10-35. Foln mod 10-35. Cal vn xx. Dominantly arg bedded mm's to 1cm. Subordinate fg sandstone beds. Many hematitic arg layers. 3 cal vnlts/ft. Some ankerite in vnlts.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
519.20	523.50	BRECCIA White-green. Siln. Foln mod 25, 2 b/ft. Dominantly qtz arg bx. Old fault zone w/ qtz veining & further bxn. Qtz, arg, jspd, cal, lim. Annealed.							
523.50	525.00	RHYOLITE Black-green. Sern, siln. Foln string 25. rhy fragmental, abundant strong dark sern. Rhy frags to 4cm. Matrix talcose text. Very strong foln.							
525.00	535.20	RHYOLITE Yellow-tan. Sern, siln. Foln strong 30. Qtz vn xx. Qtz eye rhy. Very strong sern, possible pyrophyllite & siln. Very strong foln, probably faulted, qtz eyes to 5mm. 535.535.2 dominant qtz veining. Overall about 30-35% qtz.							
535.20	543.80	RHYOLITE Gray-green. Sern & siln. Foln strong 10-30. Qtz vn xx. 2 b/ft. Qtz, ser py sch. Qtz eye rhy w/ very strong ser, siln & py altn. About 25% qtz. Qtz eyes to 6mm. Very strong foln. Very very fg py about .5%. Assr min .5% py.	535.20	543.80	FX546274	0.03	0.6	23	372
543.80	556.70	BRECCIA White-red. Siln, oxn. Foln mod 45-90. Qtz vn xx. 2 b/ft. Mixed rhy chert qtz bx. Old fault annealed by qtz veining. Ser altn of rhy, hem chert & lim on frac & vnlts.	543.80	636.90	NS	-	-	-	-
556.70	568.00	RHYOLITE White-light green. Sern, siln. Foln strong 10-45. Qtz vn xx. Qtz eye rhy. Very strong siln & sern, possible pyrophyllite. Very strong foln. Qtz eyes to 6mm. 25% qtz veining.							
568.00	570.00	QUARTZ White-red. Siln. Qtz, hem ser, epid							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		vn.							
570.00	590.30	RHYOLITE White-light green. Sern, siln. Foln strong 20-60. As 556.7-568ft.							
590.30	620.00	RHYOLITE White-light green. Ser, py, siln altn. Foln strong 30-50. Qtz vn, py vn xx. 3 b/ft. Qtz eye rhy, w/ ser, silica, py altn. 25-30% qtz veining. Discreet py & qtz-py vnlts to 2cm. Qtz eyes to 8mm. Very strong ser altn w/ possible pyrophyllite. Assr min .5% py.							
620.00	627.10	RHYOLITE Light green. Sern. Foln mod 45. Qtz vn xx. Qtz eye rhy. Mod ser altn. Monor qtz veining. Qtz eyes to 8mm. Minor tr py. Plag phyric.							
627.10	629.00	QUARTZ VEIN White. Siln. CA 35. Qtz vn. White qtz vn. Minor rhy replacement textures.							
629.00	636.90	RHYOLITE Light green. Sern. Foln mod 40. As 620-627.1.							
636.90	637.90	RHYOLITE White. Siln, sern. CA 45. Foln 50. Qtz py vn 45. 60% qtz eye rhy w/ ser, silica, py altn, 40% qtz py vnlt possible tr sph. Stringer vnlt. Assr min; 5% py, tr sph.	636.90	637.90	FX546275	0.035	0.8	153	62
637.90	641.70	RHYOLITE White. Siln, sern. Foln mod 45. Py vn 45. Qtz eye rhy w/ strong sern. Minor py vnlts. Qtz eyes to 8mm. Plag phyric. Assr min .5% py.	637.90	642.00	NS	-	-	-	-
641.70	647.40	RHYOLITE Light green. Hem, sern. Foln mod 35. As 620-627.1. Hem, epid replacement clot at 644ft. FX546276 lith sample	642.00 642.80	642.80 658.00	FX546276 NS	0.005 -	0.2 -	33 -	<2 -

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		642-642.8ft.							
647.40	658.50	RHYOLITE							
		Gray-green. Hem, sern. Foln mod 40. Qtz vn, cal vn xx. Qtz eye rhy w/ ser hem altn. Minor qtzvnlts. Very minor cal vnlts. Mod hem vnlts. Unit is rather maroon, poss Mn? Qtz eyes to 8mm. Mod sern. FX546277 lith sample at 658-658.8ft. Plag phyric.	658.00	658.80	FX546277	<0.005	<0.2	6	6
658.50	682.00	RHYOLITE							
		Gray-green. Sern, hem. Foln mod 35. Qtz eye rhy. Hem chert inclusions, qtz eyes to 8mm. Minor epid. Wk sern. Minor plag.	658.80	682.00	NS	-	-	-	-
682.00	688.40	RHYOLITE							
		Pink-maroon. Sern, hem. Foln mod 40. Qtz eye rhy. Mod sern, hem, distinct maroon- ppl cast poss Mn altn. Same frags of rhy, qtz eyes to 8mm. Plag phyric.	682.00	688.40	FX546278	0.005	<0.2	6	2
688.40	697.80	RHYOLITE							
		White. Sern, siln. Foln mod 35. As 682-688.4 w/ strong sern & no Mn?/ hem altn.	688.40	697.80	NS	-	-	-	-
697.80	703.40	RHYOLITE							
		Gray-white. Sern, pyc. Foln mod 35. Fragmental qtz eye fhy. Ser, py altn. Py in foln parallel vnlts. Streched clasts to 4cm. qtz eyes to 8cm. Assr min .5% py.	697.80	703.40	FX546279	0.02	1.2	29	176
703.40	704.00	GOUGE							
		White. Qtz eye rhy gouge.	703.40	704.00	NS	-	-	-	-
704.00	710.00	MASSIVE SULFIDE							
		White-black. Sulph. CA 25-45. Foln wk 30. Qtz vn xx. Semi massive sulphide. Py, sph, cp, minor ga layered w. chert, cal & barite? Sulphide is in coloform bands. Sulphide layers are not conductive. Mod younger qtz veining. Strataform sulphide. sulphides fg. Assr min; 20% py, 2% cp,	704.00	710.00	FX546280	1.52	139.5	4910	>10000

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		18% sph, tr gal.							
710.00	715.20	TUFFITE							
		White-green. Siln. Foln mod 40. Qtz vn, cal vn xx. Mixed tuffite, sulphidic chert, & rhy w/ abundant qtz, cal vnlts. Sulphides banded in cherts, & as foln parallel clotty accumulations. Minor qtz eyes in rhy units. Chloritic.	710.00	715.20	FX546281	2.15	130	15600	5400
715.20	720.60	TUFFITE							
		Green. Siln. CA 40. Foln mod 40. Qtz vn xx. Mixed chloritic tuffite, qtz vnlts, minor qtz eye rhy. Assr min; tr py, tr cp.	715.20	720.60	FX546282	0.42	3	396	46
720.60	722.10	QUARTZ VEIN							
		White, gray, green. Siln. Foln wk 45. Qtz vn 40. Qtz vein & si replacement of tfft. Assr min tr py.	720.60	722.10	FX546283	0.295	21.6	3950	1870
722.10	728.60	TUFFITE							
		Green. Chlr. Foln mod 50. Qtz vn xx. As 715.2-720.6ft. Assr min; .5% py, tr cp, tr sph.	722.10	728.60	FX546284	0.545	51.2	5310	1270
728.60	735.30	TUFFITE							
		Green-red. Hem, siln. CA 50. foln mod 50. qtz vn xx. As above felsic tuffites w/ minor (about .2 thick) hem rich cherts(3). Fault gouge at 729.3-729.5ft. Assr min tr py.	728.60	735.30	FX546285	0.28	4.6	1415	38
735.30	735.70	CHERT							
		Hem, chlr. Foln mod 40. Mixed pyritic, hematitic chert & chlc tfft. Assr min; 3% py, tr cp.	735.30	735.70	FX546286	2.43	25.6	7970	2150
735.70	738.70	RHYOLITE							
		Green. Ser, chlr. Foln wk 45. Qtz vn xx. Mixed qtz eye rhy & lesser rhy tuffite. Assr min tr py.	735.70	738.70	FX546287	0.07	5.2	277	110
738.70	739.10	GOUGE							
		Green. CA 45. Qtz & cal vn xx. Gouge & fault bx. Tuffite & masu frags.	738.70	739.10	FX546288	2.56	14.2	1910	4180

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Masulayered py w/ mi cp & sph. Masu frags 4cm x 6cm. Assr min; 30% py, 1% cp, 2% sph.							
739.10	743.80	RHYOLITE Green. Ser, chlr. Foln wk 40. Qtz vn xx. As 735.7-738.7ft. Assr min; .5% py, tr cp.	739.10	743.80	FX546289	1.05	22.4	1575	674
743.80	753.10	RHYOLITE White. Sern, siln. foln mod 45. Qtz vn xx. Qtz eye rhy. Strong foln & sern. Mod-strong siln. Qtz eyes to 5mm. Minor hem, plag.	743.80	822.00	NS	-	-	-	-
753.10	753.90	QUARTZ VEIN White-light green. Siln. CA 35. Qtz vn w/ lim & chlr.							
753.90	761.00	RHYOLITE Gray. Siln. Foln strong 30. Qtz vn 30. Qtz eye rhy w/ strong foln & siln w/ abundant foln parallel qtz vns. Assr min tr py.							
761.00	780.00	RHYOLITE Gray-green. Sern. Foln mod 40. Qtz vn 40. Qtz eye rhy. As 620-627.1. Assr min; tr py.							
780.00	798.70	RHYOLITE Tan-green. Sern, pyc. Foln mod 40. Qtz eye rhy. Mod sern, disseminated & fotd parallel vnlts. Qtz eyes to 8mm. Assr min; 1% py, tr sph.							
798.70	799.30	GOUGE Gray-white. Clay. Foln strong 40. Qtz eye rhy & py gouge. Assr min 4% py.							
799.30	805.40	RHYOLITE Green. Sern, pyc. Foln mod 40. Qtz vn 40. As 780-798.7ft. Assr min; 1% py, tr sph.							
805.40	840.30	RHYOLITE White. Sern. Foln strong 45-25. Qtz vn 30. Qtz eye rhy w/ very strong	822.00 827.30	827.30 921.90	FX546291 NS	<0.005 -	0.2 -	69 -	22 -

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		ser altn & abundant foln parallel py bnlts to 5mm. Qtz eyes to 8mm. Minorqtz vnlts. Poss pyroph. Assr min; 5% py, tr sph.							
840.30	841.50	QUARTZ VEIN White-gray. Siln, pyc. Foln wk 50. Qtz vn 50. Qtz replacement of qtz eye rhy. Webby py. Minor chlr. Assr min; 3% py.							
841.50	850.00	RHYOLITE White. Sern, siln. Foln strong 35. Qtz eye rhy w/ very strong sern, siln altn. Qtz eyes to 8mm. Minor diss cubic py. Assr min; tr py.							
850.00	871.00	RHYOLITE White-gray. Sern, siln. Foln mod 30. Qtz vn 30. Qtz eye rhy mod sern & siln. Minor foln parallel sx vnlts. Mid qtz veining. Qtz eyes to 8mm. Assr min; .5% py.							
871.00	875.30	RHYOLITE Green. Sern. Foln mod 30. Qtz vn 30. Qtz eye rhy. Wk sern. Minor qtz vnlts. Fairly fresh looking.							
875.30	889.30	RHYOLITE White-green. Sern, siln. Foln mod 40. Qtz vn 45. As 850-871ft.							
889.30	897.70	RHYOLITE Gray-white. Sern, siln, pyc. Foln mod 45. Qtz vn xx. As 805-840.3ft. Minor qtz vnlts. Assr min 1-2% py.							
897.70	898.20	GOUGE Gray. Clay. CA 45. Rhy gouge.							
898.20	904.90	RHYOLITE Green. Siln. Foln wk 50. Qtz vn xx. qtz eye rhy. V slfd. Webby py vnlts. Assr min; 2% py, tr sph.							
904.90	914.30	RHYOLITE Green. Sern. Foln mod 45. As							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		871-875.3ft.							
914.30	921.90	RHYOLITE White. Siln. Foln mod 45. As 841.5-850ft. Minor py vnlts. Assr min .5% py.							
921.90	927.00	RHYOLITE White. Foln mod 40. Qtz vn xx. Qtz eye rhy w/ very strong sern, siln, py altn. Abundant foln parallel py vnlts. Qtz eyes to 8mm. Minor epid. Assr min; 8% py, tr sph.	921.90	927.00	FX546292	<0.005	<0.2	36	22
927.00	1004.60	RHYOLITE White-gray. Sern, siln. Foln mid 35-50. Qtz vn 60. Qtz eye rhy. Strong sern, siln altn w/ foln parappel py vnlts. Minor qtz vnlts. Qtz eye to 8mm. Abundant plag phyric. Assr min 3% py.	927.00	1099.00	NS	-	-	-	-
1004.60	1017.20	RHYOLITE Pink-gray. Siln, sern. Foln mod 45. Qtz vn 60. 5 b/ft. Qtz eye rhy w/ very strong siln, some pink si replacement of rhy. Gouge 1009.5-1013ft. Foln parallel py vnlts. Plag altn to kaolin. Assr min 2% py.							
1017.20	1031.70	RHYOLITE White-gray. Sern, siln. Foln mod 40-50. Qtz vn 60. As 927-1004.6ft. Assr min 1% py.							
1031.70	1040.50	RHYOLITE Pink-gray. Siln. Foln mid 50. Qtz vn 60. As 1004.6-1017.2ft. Assr min 2% py.							
1040.50	1058.80	RHYOLITE White-gray. Sern, siln. Foln mod 45. Qtz vn 60. As 927-1004.6ft. Assr min 2% py.							
1058.80	1070.30	RHYOLITE Pink-gray. Siln. Foln mod 50. Qtz vn 60. As 1004.6-1017.2ft.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
1070.30	1087.00	RHYOLITE Gray-white. Sern, siln. Foln strong 45. Qtz vn 60. 1 b/ft. As 927-1004.6ft. Stronger foln. Assr min 1% py.							
1087.00	1095.40	RHYOLITE Pink. Siln. foln mod 55. Qtz vn 70. 2 b/ft. As 1004.6-1017.2ft. Strong qtz veins w/ cal, & up to .4ft thick. Minor gouge zone at 1087.4ft. Assr min 1% py.							
1095.40	1104.00	RHYOLITE White-gray. Sern, siln. Foln mod 55. Qtz vn xx. 2 b/ft. As 927-1004.6ft. Assr min 1% py. EOH.	1099.00	1100.00	FX546293	<0.005	<0.2	17	8
			1100.00	1104.00	NS	-	-	-	-

BOREHOLE LOG

BOREHOLE : 83657
PROJECT : Copper Queen
PROPERTY NAME : Copper Queen
MINE :

DATE PRINTED: 04/25/97

COUNTRY : USA
PROV/STATE : Arizona
NTS/QUADRANGLE : Section 6, T12N, R2E
TWP/COUNTY : Yavapai
SEC. T. R. :
CLAIM NAME :
GRID NAME :
UTM COORDINATES :
ANOMALY # :

LEVEL : Surface
HEADING :
SECTION :
BASELINE AZIMUTH :

ASSAYED FOR : WRA & ICP Metals

NORTHING : 18680.00
EASTING : 3350.00
ELEVATION : 4360.00
BOREHOLE BEARING :
INCLINATION :
HOLE LENGTH : 954.00
ATTITUDE TEST METHOD: Eastman Single Shot

LOGGED BY : David Oliver
LOGGING STARTED :
LOGGING COMPLETED :
DRILLED BY : Boart Longyear
DRILL TYPE : Skip 44
CORE SIZE : NQ
HOLE SIZE :
STARTED : 7/29/96
COMPLETED : 8/15/96

COMMENTS:##
##

DEVIATION RECORDS

DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
0.00	260.00	-50.00	100.00	258.50	-48.00	200.00	260.50	-45.00
300.00	264.00	-40.00	400.00	263.50	-35.00	500.00	264.50	-32.00
600.00	267.50	-29.50	700.00	268.50	-28.00	940.00	286.50	-23.00

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
0.00	13.00	OVERBURDEN Dirt & rocks.	0.00	238.50	NS	-	-	-	-
13.00	14.00	CHERT Red. Oxn. CA 40. Qtz vn xx. 4 b/ft. Ferrignous chert. Hem. Minor qtz vnlts.							
14.00	17.00	BASALT Brown. Oxn. Foln mod 40. Bslt to bslt ands. Lim. Strong oxn. Minor qtz amygs.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
17.00	21.20	BASALT Dark green. Oxn. Foln mod 45. 4 b/ft. bslt to bslt-ands. Lim. Mod oxn. Mod qtz cal amygs.							
21.20	22.50	SEDIMENT Gray-green. CA 50. Qtz vn, cal vn xx. 3 b/ft. Epiclastic sed w/ minor (<0.1ft red chert). F-mg. Minor lim. Minor qtz cal vnlts.							
22.50	32.30	BASALT Dark green. Foln 45. Qtz vn, cal vn xx. 3 b/ft. Bslt to bslt-ands w/ minor coarse epiclastic seds. Minor amygs. Possible streched frags. Minor lim on frac. Mod qtz cal vnlts. Tr chert. Chert & seds between flows.							
32.30	32.60	CHERT Red. CA 50. Qtz vn xx. As 13-14ft.							
32.60	34.30	BASALT Dark green. Foln mod 40. 2 b/ft. As 17-21.2ft.							
34.30	34.70	CHERT Maroon-red. Qtz vn 50, cal vn. Dark maroon ferruginous chert. Mod-abundant qtz cal vnlt.							
34.70	47.30	BASALT Tan-dark green. Oxn. CA 60. Foln mod 60. Qtz vn, cal vn xx. As 22.5-32.3ft.							
47.30	47.60	CHERT Maroon-red. CA 60. As 34.3-34.7ft.							
47.60	51.10	BASALT Dark green. Foln wk 60. Qtz vn, cal vn xx. As 17-21.2ft. Very abundant qtz cal vnlts.							
51.10	51.40	QUARTZ VEIN White. Qtz cal chlr vn.							
51.40	61.00	BASALT							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Dark green. Foln wk 55. Qtz vn, cal vn xx. As 22.5-32.3ft. Abundant qtz cal vnlts.							
61.00	61.30	CHERT Maroon. CA 60. As 34.3-34.7ft.							
61.30	76.00	SEDIMENT Dark green. CA 50. Foln mod 45. Qtz vn, cal vn xx. Mg epiclastic sed. Minor chert. Mod qtz cal ankerite vnlts. Bslt & bslt tuff sed. Grbd.							
76.00	77.60	CHERT Maroon. CA 55. 3 b/ft. Dominant chert w. subordiante epiclastic sed.							
77.60	85.70	BASALT Dark green. Foln mod 40. Qtz cn, cal vn xx. 3 b/ft. As 22.5-32.3ft.							
85.70	86.00	CHERT Maroon. CA 65. As 34.3-34.7ft.							
86.00	90.10	BASALT Dark green. CA 50. Foln wk 40. Qtz vn, cal vn xx. 1 b/ft. As 22.5-32.3ft. Mod qtz cal vnlts.							
90.10	91.50	CHERT Red. CA 50. As 13-14ft.							
91.50	101.10	BASALT Dark green. Foln wk 35. Qtz vn, cal vn xx. 2 b/ft. As 22.5-32.3ft.							
101.10	101.40	CHERT Maroon. CA 40. As 34.3-34.7ft.							
101.40	102.70	BASALT Dark green. CA 40. Foln wk 35. Qtz vn, cal vn xx. As 22.5-32.3ft.							
102.70	103.00	CHERT Red. CA 45. As 13-14ft.							
103.00	109.20	BASALT Dark green. Foln wk 40. Qtz vn, cal vn							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		xx. 1 b/ft. As 22.5-32.3.							
109.20	109.50	CHERT Red. CA 40. As 13-14ft.							
109.50	118.50	BASALT Dark green. CA 40. Foln wk 40. 1 b/ft. As 22.5-32.3ft.							
118.50	118.90	CHERT Maroon. CA 40. As 34.3-34.7ft.							
118.90	124.00	BASALT Dark green. Foln wk 35. Qtz vn, cal vn xx. As 22.5-32.3ft.							
124.00	124.50	CHERT Maroon. As 34.3-34.7ft.							
124.50	138.00	BASALT Dark green. Foln wk 40. Qtz vn, cal vn xx. As 22.5-32.3ft.							
138.00	143.50	BASALT Tan. Oxn. Foln wk 35. Qtz vn, cal vn xx. 2 b/ft. Bslt? Very strong oxn rock is all limonite & carbonate.							
143.50	148.40	TUFFITE White-tan. Oxn, siln. Foln mod 35. Cal vn xx. Rhy tuffite? Fine laminations, looks like oxidized, siln sern rhy tfft. Very strong oxn. Cal, ankerite vnlts.							
148.40	149.70	QUARTZ VEIN White-tan. Oxn. Cal vn xx. Qtz vn w/ minor cal ankerite vnlts.							
149.70	153.40	RHYOLITE White-tan. Oxn. Foln mod 25. Cal vn xx. 2 b/ft. Looks like frgl rhy w/ siln. Very strong oxn. Frags to 4cm.							
153.40	154.20	RHYOLITE Light green. Oxn. Foln wk 25. 2 b/ft. Fresher looking aphyric rhy.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
154.20	155.60	QUARTZ VEIN White-tan. Oxn. 4 b/ft. Qtz vn w/ lim vnlts.							
155.60	156.80	TUFFITE White. Siln. Foln mod 25. Slcfd aphanitic rhy or rhy tfft mi lim vnlts.							
156.80	159.80	SEDIMENT Dark green. Oxn. CA 45. Foln wk 40. Qtz vn, cal vn xx. Epiclastic sed w/ mod qtz, cal, lim vnlts.							
159.80	160.00	GOUGE Orange. Oxn. Limonite gouge.							
160.00	177.20	BASALT Dark green. Foln wk 40. Qtz vn, cal vn xx. Bslt. Massive & amyg bslt w/ mod, abundant qtz cal vnlts. No cherts. Minor spec hem along vnlts. Amyg rich members probable flow tops.							
177.20	177.40	QUARTZ VEIN White-pink. CA 45. Qtz, cal feld vn w/ minor spec hem.							
177.40	223.50	BASALT Dark green. Foln wk 45. Qtz vn, cal vn xx. As 160-177.2ft.							
223.50	223.90	QUARTZ VEIN White-pink. CA 45. As 177.2-177.4ft.							
223.90	228.00	BASALT Dark green. Foln wk 50. Qtz vn, cal vn xx. As 160-177.2ft.							
228.00	228.30	GOUGE Brown. Oxn. Gouge along qv.							
228.30	244.70	BASALT Dark green. Foln wk 45. As 160-177.2. Very thin 2 cm mafic dike at 235ft.	238.50 239.00	239.00 250.80	FX546294 NS	<0.005 -	<0.2 -	73 -	<2 -
244.70	251.50	HORNFELS Pink-red. hem. Foln wk 50. Qtz vn xx. Bslt as above w/ pervasive pink hem,	250.80 251.40	251.40 284.00	FX546295 NS	<0.005 -	<0.2 -	91 -	<2 -

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		lim altn. Minor ser. Minor spec hem. Young altn.							
251.50	260.90	BASALT Green-pink. Hrfl. Foln wk 50. Qtz vn, chlr vn xx. Weakly hrfl bslt as 160-177.2. Wk pervasive hem lim altn.							
260.90	262.40	QUARTZ VEIN White-pink. Siln. CA 50. Qtz vn w/ inclusions of slcfd rhy? grntc. Sern on margins. Minor spec hem feld?							
262.40	263.20	CHLORITE SCHIST Green. Chlr. Foln mod 45. Qtz vn 40. Chlr schist- altn proximal tp qv.							
263.20	263.50	QUARTZ VEIN White. siln. CA 50. Qtz vn w/ white fg feld?							
263.50	265.60	HORNFELS Pink. Hem. Foln wk 50. As 244.7-251.5.							
265.60	266.00	QUARTZ VEIN White. Siln, chlc. CA 50. Qtz chlr vn.							
266.00	270.00	BASALT Green-pink. Hrfl. Foln wk 45. Qtz vn 50. As 251.5-260.9 mod qtz, chlr vnlts.							
270.00	272.20	SEDIMENT Green. CA 45. Foln wk 45. Qtz vn xx. Mg epiclastic sed. Wk hrfls.							
272.20	273.00	QUARTZ VEIN White-green. Siln, chlc. CA 50. Qtz chlr vn.							
273.00	277.40	HORNFELS Green-black. Mtc. Foln 50. Qtz vn 45. Mod-strong hrnfs epiclastic sed. Mod magnetic 276-227.4. Mod qtz vnlts.							
277.40	286.80	LAMPROPHYRE Black. Mtc. CA 50. Qtz vn xx. Lamprophyre dike & intrusive bx. Lg px &	284.00 284.60	284.60 403.00	FX546296 NS	<0.005 -	<0.2 -	36 -	<2 -

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		sanidine xls to 4cm. Inclusions of blu-green ultramafics?, granitics? & slcfd rhy? Younger gr & siln. Very sharp fw & hw contacts. Mt xls to 1cm. This dike is on the Copper Queen mtc high running N-S. Mod-strong mtc.							
286.80	288.90	HORNFELS Green. Hrfl. Foln wk 55. Qtz vn xx. Hrnfls bslt. Mod qtz vnlts. Mod mtc.							
288.90	320.60	BASALT Green. Foln wk 50. Qtz vn, cal vn xx. Bslt. Massive & amyg. Minor thin epiclastic seds. Mod qtz, cal vnlts. Amyg members probable flow tops. Epiclastics at breaks between flows.							
320.60	341.50	ANDESITE Green. Sern. foln wk 50. Qtz vn, cal vn xx. Ands to bslt ands. Abundant plag phyric to 3mm. Minor ser altn. Minor qtz cal vnlts. Minor chlr.							
341.50	351.70	MYLONITE Green. Hem. Foln strong 50. Qtz vn xx, cal vn xx. Mylonite. Mixed ands, chert, epiclastic- tfcs seds. Very strong fabric. Sern, young qtz & cal vnlts.							
351.70	354.60	SEDIMENT Green. CA 50. Foln mod 50. Epliclastic ands tfcs sed. Mod spec hem. Fg-mg.							
354.60	363.50	MYLONITE Gray-green. Hem. Foln strong 40. Qtz vn xx, cal vn xx. Mylonite mixed epiclastic sed, chert, hem argl, ands. Very strong fabric. Sern.							
363.50	364.00	CHERT Red. Qtz vn xx. Hematitic chert.							
364.00	368.40	MYLONITE Gray-green. Hem. Foln strong 45. Qtz vn xx, cal vn. As 354.6-363.5ft.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
368.40	369.70	ANDESITE Green. Foln mod 55. As 320.6-341.5ft.							
369.70	378.60	MYLONITE Tan-gray. Hem. Foln strong 45. Qtz vn xx, cal vn. As 354.6-363.5ft.							
378.60	380.50	ANDESITE Pink-green. Hem. Foln mod 50. Qtz vn xx. Plag phyric ands w/ hem ser altn.							
380.50	384.20	MYLONITE Tan. Hem. Foln strong 45. Qtz vn xx, cal vn xx. Myl, ands w/ hem sern & mod qtz vnlts.							
384.20	388.50	ANDESITE Pink. Hem, sern. Foln strong 50. Qtz vn xx. Plag phyric ands w/ pervasive hem, ser altn.							
388.50	393.00	ANDESITE Green. Foln mod 40. Qtz vn xx. Plag phyric ands w/ minor qtz vnlts.							
393.00	430.20	RHYOLITE White. Sern. Foln mod 50. Qtz vn xx. Rhy qtz & plag phyric. Mod-strong sern altn. Plag to 2mm, qtz to 5mm, minor qtz vnlts.	403.00 403.50	403.50 528.80	FX546297 NS	<0.005 -	<0.2 -	19 -	<2 -
430.20	430.70	QUARTZ VEIN White. CA 50. Qtz vn w/ minor sern.							
430.70	435.90	RHYOLITE Tan-white. Sern, siln. Foln mod 50. Qtz vn xx. As 393-430.2ft w/ mod siln.							
435.90	436.80	QUARTZ VEIN White. CA 50. As 430.2-430.7ft.							
436.80	439.30	RHYOLITE Tan-white. Sern, siln. Foln mod 50. Qtz vn xx. As 430.7-435.9ft.							
439.30	439.70	QUARTZ VEIN White. CA 40. As 430.2-430.7ft.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
439.70	443.10	RHYOLITE Tan-white. Sern, siln. Foln mod 45. Qtz vn xx. As 430.7-435.9ft.							
443.10	448.20	ANDESITE Tan. Sern, siln. Foln wk 50. Qtz vn xx. 4 b/ft. Ands w/ sern, siln, hem altn. Abundant qtz vnlts.							
448.20	448.70	QUARTZ VEIN White. Qtz vein w/ minor hem.							
448.70	450.60	ANDESITE Tan. Sern, siln. Foln wk 50. Qtz vn xx. As 443.1-448.2ft.							
450.60	460.00	ANDESITE Green. Sern. Foln wk 45. Qtz vn xx. Ands, plag phyric. Wk sern. Mod to abundant qtz vnlts.							
460.00	463.10	CHERT White-rhy. Hem. Qtz vn xx. Hematitic chert w/ abundant qtz veins.							
463.10	463.60	ANDESITE Green. Foln wk 40. Ands tuff or epliclastic sed. Wk sern.							
463.60	482.00	CHERT White-red. Hem. Qtz vn xx. Hematitic chert w/ abundant qtz vnlts (30%). Minor spec hem.							
482.00	489.70	MYLONITE Tan-brown. Sern. Siln. Foln strong 45. Qtz vn xx. Mylonite, dom ser altn & fresh rhy. Fragmetnal w/ very abundant qtz vnlts 30%. Siln.							
489.70	490.90	QUARTZ VEIN White-pink. Foln 60. Qtz vn w/ minor ser altd rhy inclusions.							
490.90	492.50	ANDESITE Green. Siln.Foln strong 50. Qtz vn 50. Ands w/ very abundant (30%) qtz veins. Mod-strong siln. Minor chlr.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
492.50	493.70	QUARTZ VEIN White-green. CA 60. As 489.7-490.9ft.							
493.70	499.20	RHYOLITE Brown. Sern. siln. Foln strong 45. Qtz vn xx. Rhy-rhyodacite. Wkly plag & qtz phyric. Abundant qtz vnlts. Strong siln. Mod-strong sern.							
499.20	499.80	CHERT Red. Qtz vn xx. Mixed hematitic chert & qtz veins. Minor rhy inclusions.							
499.80	500.80	RHYOLITE Brown. Sern, siln. Foln strong 50. Qtz vn xx. As 493.7-499.2ft.							
500.80	502.00	CHERT Red. Qtz vn xx. As 499.2-499.8ft.							
502.00	503.50	RHYOLITE Brown. Sern, siln. Foln strong 50. Qtz vn xx. As 493.7-499.2ft.							
503.50	507.20	MYLONITE Brown-black. Sern, siln. Foln strong 55. Qtz cn xx. Mylonite. Dominant sr altd rhy, w/ minor chert & abundant qtz veins (20%), strong chlr altn.							
507.20	512.70	RHYOLITE Brown. Sern. Foln mod 50. Qtz vn xx. Rhy-rhyodacite. Wkly qtz & plag phyric. Strong sern. Minor qtz veins.							
512.70	514.60	MYLONITE White-brown. Siln, sern. Foln strong 55. Qtz vn xx. Mylonite, rhyolite? grunge & very abundant (40%) qtz vns. Rhy is ser & silica altd.							
514.60	514.80	CHERT Pink. Hemm. Ca 50. Qtz vn xx. As 499.2-499.8ft.							
514.80	518.90	MYLONITE							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Brown-gray. Sern, siln. Foln strong 60. Qtz vn xx. Mylonite. Dominate rhy, rhy, wkly qtz phyric w/ dark mineral intergrowths & rims developed w/ in & around qtz eyes. Strong sern. Strong siln. Minor qtz vnlts.							
518.90	519.60	CHERT							
		White-pink. Hem. As 499.2-499.8ft.							
519.60	523.00	MYLONITE							
		Brown-gray. Sern, siln. Foln strong 55. Qtz vn xx. As 514.8-518.9ft.							
523.00	523.40	CHERT							
		Red-white. Qtz vn xx. As 499.2-499.8ft.							
523.40	528.80	RHYOLITE							
		Gray-brown. Sern. Foln mod 55. Qtz vn xx. Rhy. Aphyric & wkly plag & qtz phyric. Strong sern, mod qtz vnlts w/ minor tour.							
528.80	534.80	RHYOLITE							
		Gray-green. Sern. Foln strong 55. Qtz vn 60. Rhy. Very wkly phyric. Very strong sern. Possible pyrophyllite. Mod qtz vnlts q/ minor tour. Diss & py vnlts. Assr min 1% py.	528.80	534.80	FX546298	<0.005	<0.2	64	<2
534.80	536.40	QUARTZ VEIN							
		White-black. CA 55. Qtz tourmaline vn w/ minor plag, layered & cut by younger qv. Clotty py.	534.80	536.40	FX546299	0.02	0.2	55	4
536.40	538.80	RHYOLITE							
		Gray. Sern. CA 55. Foln mod 55. Qtz vn 50. Rhy grgl. Fining upward. Rhy frags w/ differant textures & phyric units. Py between frags & crosscutting other frags. Some chert frags. Minor qtz vnlts. Tr-1/2% sph. Poss rhy frags w/ in felsic tuffite-exhalite. Assr min; 8% py, .5% sph.	536.40	538.80	FX546300	0.08	0.2	37	146
538.80	539.30	QUARTZ VEIN							
		White. CA 50. Qtz vn w/ minor tour.	538.80	539.30	FX546301	0.045	0.6	10	8

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
539.30	542.40	RHYOLITE Green. Sern, siln, chlr. Foln mod 60. Qtz vn xx. rhy-rhyodacite frgl. Frags to 4cm. Very stronge pocked, buckshot & vermiform textures, py cores to the pocked altn of spherules or phenos? py around some frags. Mod qtz vnlts. Minor-mod sern, siln. Minor chlr altn. Flattened frags.	539.30	542.40	FX546302	0.015	0.2	14	2
542.40	543.10	QUARTZ VEIN White. Qtz vein.	542.40	546.90	FX546303	0.005	<0.2	9	2
543.10	544.60	RHYOLITE Green. Sern, chlr. Foln mod 55. Qtz vn 55. As 539.3-542.4ft. Assr min 2% py.							
544.60	545.20	QUARTZ VEIN White. CA 55. As 542.4-543ft.							
545.20	546.90	RHYOLITE Green. Sern, chlr. Foln mod 55. Qtz vn xx. As 539.3-542.4ft. Assr min 2% py.							
546.90	551.80	CHLORITE SCHIST Black-green. Chlr, pyc. Foln mod 55. Qtz vn xx. Chlr schist. Very very chlr altn. Protolith unknown. Very strong texture w/ vermiform & blebby buckshot pattern of qtz replacement w/ py cores. Mod-abundant qtz vnlts. Assr min 3% py.	546.90	551.80	FX546304	<0.005	0.4	131	2
551.80	552.40	QUARTZ VEIN White. CA 55. Qtz vn xx. Qtz vn w/ some chlr & blebby py. Assr min 6% py.	551.80	555.90	FX546305	<0.005	0.2	40	<2
552.40	555.50	CHLORITE SCHIST Black-green. Chlr, pyc. Foln mod 40. Qtz vn xx. As 546.9-551.8ft. Protolith possibly plag phyric dacite? Assr min 2% py.							
555.50	555.90	QUARTZ VEIN White. As 551.8-552.4ft. Assr min 4% py.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
555.90	563.60	CHLORITE SCHIST Black-green. Chlr, pyc. Foln mod 50. Qtz vn xx. As 546.9-551.8ft. Protolith possilby felsic frgl. Lesser blebby & vermiform textures. Minor qtz vnlt. Assr min 2% py.	555.90	563.60	FX546306	<0.005	<0.2	26	<2
563.60	566.10	SEDIMENT Gray-green. CA 55. Foln mod 55. Qtz vn 55. Epiclastic mafic- intermediate sed. Mg fairly uniform, minor clasts to 3mm. Diss & vnlt py. Minor qtz vnlts. Assr min 1.5% py.	563.60	577.20	NS	-	-	-	-
566.10	566.40	QUARTZ VEIN White. CA 50. Qtz vein, very large qtz xls.							
566.40	577.20	DEBRIS FLOW Dark green-black. Sern, chlr. Foln mid 50. Qtz vn xx. Heterolithic dbfl. Compromised of bslt, rhy, argillite, ands & chert clasts w/ epliclastic seds & minor ands flows. Grbd. Clasts to 6cm. Flattened clasts. Possible barite clasts. Mid chlr & ser altn. Sulphide clasts & sulphide rims. Assr min; .5% py.							
577.20	583.00	DEBRIS FLOW Dark green. Sern, chlr. Foln mod 45. Qtz vn xx. As 566.4-577.2ft. Minor abundant py. Assr min 4% py.	577.20	583.00	FX546307	<0.005	0.6	8	<2
583.00	597.20	DEBRIS FLOW Dark green-black. Sern, chlr. CA 50. Foln mid 50. Qtz vn xx. As 566.4-577.2ft. Assr min 1% py.	583.00	597.20	NS	-	-	-	-
597.20	601.60	DEBRIS FLOW Dark green-black. Sern, chlr. Foln mod 45. Qtz vn xx. As 566.4-577.2ft. More abundant sx & sulphide clasts. Assr min 5% py.	597.20	601.60	FX546308	<0.005	<0.2	275	2
601.60	614.20	DEBRIS FLOW Dark green-black. sern, chlr. Ca 45. Foln mod 50. Qtz vn xx. As 566.4-	601.60	648.60	NS	-	-	-	-

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		577.2ft. Assr min .5% py.							
614.20	616.70	DACITE Green. Sern. Foln wk 50. Qtz vn 45. aphyric dac. Wk srn. Minor qtz vnlts.							
616.70	617.00	QUARTZ VEIN White. CA 40. White qtz vein w/ minor chlr.							
617.00	619.90	DACITE Green. Sern. Foln wk 45. Qtz vn 45. As 614.2-616.7ft.							
619.90	620.60	QUARTZ VEIN White. CA 45. As 616.7-617ft.							
620.60	622.20	ANDESITE Green. Siln. Qtz vn xx. Plag phyric ands w/ siln near qtz vnlts.							
622.20	622.80	QUARTZ VEIN White. As 616.7-617ft.							
622.80	633.80	ANDESITE Green. Siln. Qtz vn xx. As 620.6-622.2ft.							
633.80	648.60	RHYOLITE Green. Siln. Foln wk 50. Qtz vn xx. Fragmental rhy. Mod-abundant vnlts. Mod siln. Minor py, sph cp vnlts. Wkly phyric. Assr min; .5% py, tr cp, tr sph.							
648.60	655.20	RHYOLITE Green. Siln. Foln wk 50. Qtz vn xx. As 633.8-648.6ft. More abundant sx vnlts. Assr min; 2% py, 1% cp, 2% sph.	648.60	655.20	FX546309	0.03	1	540	20
655.20	661.00	RHYOLITE Green. siln. Foln wk 40. Qtz vn xx. As 633.8-648.6ft. Assr min; .5% py, .5% cp, 1% sph.	655.20	684.40	NS	-	-	-	-
661.00	664.40	ANDESITE Dark green. Foln mid 45. Ands w/ minor							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		rhy interbeds.							
664.40	674.50	RHYOLITE Green. Siln. Foln mod 45. Qtz vn xx. Rhy, aphyric, mod siln, convoluted forms. Mod qtz, epid vnlts. Assr tr py.							
674.50	683.10	ANDESITE Green. Foln mod 45. Qtz vn 45. Ands or ands-bslt. Minor qtz vnlts w/ minor siln areound vnlts. Convoluted folded slcfd zones. Assr min 1% py.							
683.10	684.40	ANDESITE Tan. Sern. Foln mod 45. Qtz vn 45. Ands. Strong sern. Py vnlts. Assr min; 1% py.							
684.40	689.80	RHYOLITE Green-tan. Sern, siln. Foln mid 45. Qtz vn 45. Rhy. Wkly qtz phyric. Strong sern, minor siln. Minor qtz vnlts, & sph, cp, py vnlts. Assr min; .5% py, 1% cp, 2% sph.	684.40	689.80	FX546310	<0.005	0.4	253	18
689.80	693.10	ANDESITE Green. Sern. CA 45. Foln mod 45. Ands. Minor sern.	689.80	729.10	NS	-	-	-	-
693.10	695.30	RHYOLITE Tan. siln. Foln wk 50. Qtz vn 50. Rhy. Aphyric, slfd. Minor qtz vnlts. Assr min tr py.							
695.30	714.30	RHYOLITE Tan. Sern, siln. Foln mod 45. Qtz vn xx. Qtz eye rhy. Mod-strong sern, mod siln. qtz eyes to 5mm. Minor qtz vnlts, very minor py vnlts. Assr min tr py.							
714.30	714.70	QUARTZ VEIN White. CA 60. Qtz vn w/ minor ser.							
714.70	729.10	RHYOLITE Tan. Siln, sern. Foln mod 50. Qtz vn 60. Rhy. Slcfd & ser altn. Minor py							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		vnlts, minor qtz epid vnlts. Assr min 1% py.							
729.10	732.90	RHYOLITE Tan. Sern, siln. Foln wk 50. Qtz vn xx. Rhy. Strong ern, mod siln. Py, sph, cp vnlts, minor qtz epid vnlts. Tr aspy? Assr min; 2% py, .5% cp, 1% sph.	729.10	732.90	FX546311	0.015	7.6	1280	48
732.90	737.30	RHYOLITE Tan. Sern, siln. Foln wk 45. Qtz vn xx. As 729.1-732.9ft. Assr min; 1% py, tr sph.	732.90	737.30	NS	-	-	-	-
737.30	742.30	QUARTZ VEIN White-gray. Sern, sx. Dominantly qtz vn w/ about 30% rhy, abundant sx vnlts & sph, py, cp & aspy? Assr min 2% py, 1% cp, 3% sph.	737.30	742.30	FX546312	0.46	34.8	3420	228
742.30	743.20	RHYOLITE Tan. Sern, siln. As 729.1-732.9ft. Assr min tr py.	742.30	744.00	NS	-	-	-	-
743.20	744.00	QUARTZ VEIN White. Sern. CA 55. Qtz, epid, ser vnlt.							
744.00	746.60	RHYOLITE Tan. Sern. Foln wk 30. Qtz vn xx. rhy as 729.1-732.9ft w/ abundant qtz vn (35%) w/ py, sph & cp. Assr min; 5% py, .5% cp, 1% sph.	744.00	746.60	FX546313	0.03	4.2	624	106
746.60	753.40	RHYOLITE Tan. Sern. Foln mod 25. Qtz vn xx. As 729.1-732.9ft.	746.60	768.20	NS	-	-	-	-
753.40	753.60	QUARTZ VEIN White. CA 35. Qtz epid vn.							
753.60	766.40	RHYOLITE Tan. Sern. Foln mod 25-50. Qtz vn xx. As 729.1-732.9ft. Possible fold hinge. 15% qtz. Assr min; .5% py, tr sph, tr gal.							
766.40	766.80	QUARTZ VEIN							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		White. CA 50. Qtz vn w/ minor ser.							
766.80	768.20	RHYOLITE Tan. Sern. As 729.1-732.9ft. Assr min; .5% py.							
768.20	771.10	RHYOLITE Tan. Sern. Foln mod 25. Qtz vn xx. As 729.1-732.9ft. Minor abundant sx sx vnlts. Assr min; 4% py, 1% sph.	768.20	771.10	FX546314	0.055	11.4	2860	2280
771.10	774.40	RHYOLITE Tan. Sern. Foln mod 25-40. As 729.1-732.9ft. Assr min tr py.	771.10	821.60	NS	-	-	-	-
774.40	776.10	QUARTZ VEIN White. Qtz vn w. mod ser altd rhy.							
776.10	777.70	RHYOLITE Tan. Sern. Foln mod 35. As 729.1-732.9ft. Assr min tr py.							
777.70	778.70	QUARTZ VEIN White. Qtz vn w/ minor ser rhy & tour.							
778.70	779.40	RHYOLITE Tan. Sern. Siln. Rhy as 729.1-732.9 w/ very abundant strong siln.							
779.40	780.50	QUARTZ VEIN White. CA 60. Qtz tour vein.							
780.50	806.40	RHYOLITE Tan. Sern, siln. Foln mod 45. As 729.1-732.9ft.							
806.40	821.60	RHYOLITE Tan-white. Siln, sern. Foln mod 45. Qtz vn xx. Rhy, minor qtz phyric. Very strong siln. Mid sern. Minor blebby & vnlt sulphides. Assr min; tr py, tr sph.							
821.60	823.30	RHYOLITE Tan. Siln, sern. Foln wk 45. Qtz vn xx. As 806.4-821.6ft. More abundant sx vnlts. Assr min; 2% py, 1% cp, 2% sph, 2% gal.	821.60	823.30	FX546316	<0.005	5.4	849	616

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
823.30	824.80	RHYOLITE Tan. Siln, sern. Foln wk 50. Qtz vn xx. As 806.4-821.6ft. Assr min; tr py.	823.30	866.20	NS	-	-	-	-
824.80	842.00	RHYOLITE Tan-green. Sern. Foln mid 50. Qtz vn 60. Rhy, minor qtz & plag phyric. Mod sern. Minor zones w/ chlr altn. Minor zones w/ wk siln. Very minor qtz vnlts. Assr min; tr py.							
842.00	851.80	BASALT Green. Siln, sern. Foln mod 45. Qtz vn xx. Bslt frgl. Abundant qtz vnlts. Zones of siln peripheral to qtz vns. Chlr altn of some frags.							
851.80	853.20	QUARTZ VEIN White. Chlc. Qtz chlr vnlt. Assr min tr py.							
853.20	859.50	CHLORITE SCHIST Green. Chlc, siln. Foln strong 50. Qtz vn xx. Het frgl, bslt & rhy. Strong chlr altn of many frags. Siln around qtz vnlts. Qtz veins 15%. Flattened frags. Assr min; .5% py.							
859.50	862.00	CHLORITE SCHIST Green-black. Chlc. Foln strong 40. Qtz vn xx. Chlr sch. Very strong chlr altn. Some rhy preserved. Minor qtz vnlts. Overall unknown protolith. Flattened outline of frags. Assr min; .5% py.							
862.00	866.20	DEBRIS FLOW Green. Siln, chlc. Foln wk 45. Qtz vn xx. Het frgl. Rhy dominant w/ some bslt & mid abundant qtz vnlts. Mod-strong siln & some chlr altn. Assr min; 1% py, 2% cp, 1% sph, 1% aspy.							
866.20	869.80	DEBRIS FLOW Green. Siln, chlc. CA 45. Qtz vn xx. As 862-866.2ft, w/ blebby & veinlet	866.20	869.80	FX546317	0.035	4	3180	644

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		sulphides. Cp vnlts conductive.							
869.80	880.20	DEBRIS FLOW Green. Siln, sern, chlc. Foln mid 40. Qtz vn xx. Rhy dominant het frgl w/ lesser bslt & intermed tuff. Abundant contorted qtz veins. Contorted foln- probable fold. Mid strong siln. Mod sern. Minor chlr.	869.80	933.20	NS	-	-	-	-
880.20	881.80	CONGLOMERATE Green. Sern, chlc. CA 65. Foln mod 60. Very coarse het sed. Flattened clasts to 3cm. Interved, bslt & rhy frags. More fg than het frgl above & below.							
881.80	885.80	DEBRIS FLOW Green. Siln, sern. Foln wk 50. Qtz vn 60. As 869.8-880.2ft, w/ only minor vnlts.							
885.80	894.30	CONGLOMERATE Green. Sern. Foln mid 50. Qtz vn xx. As 880.2-881.8ft, w/ epliclastic or tuff at base.							
894.30	898.60	RHYOLITE Green. Siln. Qtz vn xx. Rhy? Very strong siln. Relict phyric plag outlines. Minor qtz vnlts. Assr min; .5% py.							
898.60	899.50	SEDIMENT Green. CA 55. Foln mod 55. Very coarse epiclastic het sed. Clasts to 2cm- flattened.							
899.50	901.60	ANDESITE Green. Foln mod 55. Ands. Mod plag phyric.							
901.60	902.10	JASPEROID Red. Siln. Silica replaced ands? Rhy? Mod hem. Assr min tr py.							
902.10	904.30	ANDESITE Green. Foln mod 25-45. Qtz vn 60. Ands							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		as 899.5-901.6ft, w/ monor ser altn vnlts.							
904.30	913.00	ANDESITE Tan-green. Sern, siln. Foln 20-45. Qtz vn xx. Ands dominant het unit. Some bslt & rhy frags. Mid sern. Some siln. Abundant qtz vnlts to 4cm.							
913.00	917.20	ANDESITE Green. Foln mod 45. Qtz vn xx. Ands tuff or epiclastic sed, Very minor qtz vnlts. Assr min; tr py.							
917.20	933.20	BASALT Green. Foln mod 45. Qtz vn xx. Bslt. Mod amygs. Minor qtz vnlts. Diss & vnlt su;phides. Assr min; tr py, .5% cp, tr sph, tr aspy.							
933.20	935.20	MYLONITE Tan. Siln, epid, sern. Foln strong 40. Qtz vn xx. Protolith? Rhyodacite? flaser structures., lamination paralled sx. Mid qtz vnlts. Very strong foln.	933.20	935.20	FX546318	<0.005	0.8	265	166
935.20	944.00	RHYODACITE Green. Sern, siln. Foln mod 40. Qtz vn xx. Rhyodac, wkly plag phyric. Abundant qtz vnlts. Minor sern, epid, siln.							
			935.20	954.00	NS	-	-	-	-
944.00	947.60	BASALT Green. Sern. Foln mod 40. Qtz vn xx. Bslt. Wk sern. Mod-abundant qtz vnlts, chlr around vnlts. Assr min; tr py.							
947.60	948.80	QUARTZ VEIN White. Chlc. CA xx. Qtz chlr vnlts. 25% chlr.							
948.80	954.00	BASALT Foln mod 55. Qtz vn xx. Bslt or blst ands. Mod-abundant qtz vnlts, flattened amygs. Partly tuff. Py vnlt. Assr min; .5% py. EOH.							

BOREHOLE LOG

BOREHOLE : 83666
PROJECT : Copper Queen
PROPERTY NAME : Copper Queen
MINE :

DATE PRINTED: 04/25/97

COUNTRY : USA
PROV. STATE : Arizona
NTS/QUADRANGLE : Section 6, T12N, R2E
TWP/COUNTY : Yavapai
SEC. T. R. :
CLAIM NAME :
GRID NAME :
UTM COORDINATES :
ANOMALY # :

LEVEL : Surface
HEADING :
SECTION :
BASELINE AZIMUTH :

ASSAYED FOR : WRA & ICP Metals

NORTHING : 22910.00
EASTING : 2500.00
ELEVATION : 4565.00
BOREHOLE BEARING :
INCLINATION :
HOLE LENGTH : 1271.50
ATTITUDE TEST METHOD: Eastman Single Shot

LOGGED BY : David Oliver
LOGGING STARTED :
LOGGING COMPLETED :
DRILLED BY : Boart Longyear
DRILL TYPE : Skip 44
CORE SIZE : NQ
HOLE SIZE :
STARTED : -
COMPLETED : -

COMMENTS:##########
none
##########

DEVIATION RECORDS

DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
0.00	260.00	-60.00	100.00	257.50	-58.50	200.00	257.50	-58.50
300.00	258.50	-57.50	400.00	259.00	-56.50	500.00	258.50	-56.00
600.00	258.50	-54.50	700.00	258.50	-53.00	800.00	259.50	-52.50
900.00	260.50	-50.50	1000.00	259.50	-49.50	1100.00	262.50	-47.50
1271.00	261.50	-43.50						

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
0.00	15.00	OVERBURDEN Dirt & rocks	0.00	226.50	NS	-	-	-	-
15.00	24.00	TUFF Brown-green. Oxn altn. Foln wk 30. Qtz vn 35. 5 b/ft. Ands tuff. Strong oxn. Abundant lim on frac. Minor qtz vnlts. Mg. Fairly uniform.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
24.00	33.00	TUFF Brown. Oxn & clay altn. Foln wk 30. 10 b/ft. Ands as above. More abundant clay, lim oxn & frac. Peripheral contact altn next to lamp dike.							
33.00	43.00	CLAY Yellow-brown. Oxn & clay altn. xx b/ft. Clay after lamp dike. Lamp dike chill margin w/ strong oxn. Recognizable phenos.							
43.00	59.80	LAMPROPHYRE Black. Oxn. 4 b/ft. Lamprophyre dike. K-T age. Non foln. Px, sanidene, & glassy inclusions & phenos to 3cm. Mod-strong mtc. Parts fg.							
59.80	69.00	TUFF Green. Oxn altn. Foln wk 30. Qtz vn 35. 3 b/ft. Ands tuff as 15-24ft w/ lesser oxn. Very minor qtz vnlts.							
69.00	134.70	ANDESITE Green. Foln wk 30-15. Qtz & cal vn xx. 3 b/ft. Ands. Mg. Parts plag phyric. Very minor flat amygs. Mod qtz, cal vnlts @ irregular angles. Minor amph phenos. Quite monotonous. Strong FeOx on frac. Minor fg tuff or epiclastics.							
134.70	136.00	QUARTZ VEIN White-yellow. Lim on frac. Qtz lim vn. Mod-strong oxn.							
136.00	153.10	ANDESITE Green. Foln wk 30. Ands as 69-134.7ft. More abundant qtz, cal vnlts. Micro faults up to 1cm displacement.							
153.10	164.00	ARKOSE Green-tan. Oxn altn. CA 15-30. Foln wk 0-30. Qtz & cal vn xx. Very coarse sed. Looks like intrusive. Abundant feld xls. Chert, qtz, feld lithics. Minor fg ss-argl beds. Clasts to 4mm. No thermal contact effects. Mod							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		irregular qtz-cal vnlts. Mod oxn. Lim xls & lithics. Dacitic overall compostion. Minor gouge zones w/ cal cement.							
164.00	165.70	ANDESITE Green. Foln wk 30. Qtz vn xx. Ands fg. As 69-134.7ft.							
165.70	166.80	ARKOSE Green-brown. Oxn altn. Foln wk 25. Qtz vn xx. 3 b/ft. Ark as 153.1-164ft w/ more abundant qtz & lim vnlts. Mod oxn.							
166.80	168.50	GOUGE Brown. Lim & clay altn. xx b/ft. Gouge w/ clay & chop.							
168.50	172.00	RHYODACITE Maroon-brown. Oxn & sern altn. Foln mod 35. Qtz vn xx. 2 b/ft. Rdct mix w/ minor sed. Mod irregular qtz vnlts. Strong oxn. Mod sern. Minor qtz eyes. Hem & lim. Strongly tectonized.							
172.00	215.80	ARKOSE Green. Foln mod 15-35. Qtz & cal vn xx. Ark as 153.1-164ft.							
215.80	220.30	LAMPROPHYRE Black. Lamprophyre dike as 43-59.8ft.							
220.30	230.00	RHYODACITE Pink. Foln mod 30. Qtz & cal vn 80. Rdct? very feld rich, qtz eyes to 8cm. Lenses of fg sed or tuff. Some cal cement. Strong oxn.	226.50 227.00	227.00 490.20	FX546503 NS	<0.005 -	<0.02 -	36 -	4 -
230.00	242.00	SEDIMENT Green-brown. Oxn-sern altn. Foln mod 0-20. Qtz & cal vn 80. Mixed sed. Argl dominant w/ ark, chert & feldic tuff. CA 0-20. Mod high angle qtz cal vnlts. Mod oxn.							
242.00	243.40	QUARTZ VEIN White. Qtz, cal lim vn w/ inclusions							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		of sed.							
243.40	248.00	SEDIMENT Green. Foln mod 20-40. Qtz & cal vn 80. Sed mix as 230-242 w/ more abundant qt cal vnlts.							
248.00	248.40	QUARTZ VEIN White. CA 75. Qtz vnlt w/ minor cal.							
248.40	251.50	ANDESITE Green. Foln wk 25. Qtz & cal vn 75. Ands-dac feld xl rich tuff. Minor oxn. Mod-abundant qtz & qtz cal vnlts.							
251.50	254.00	QUARTZ VEIN White-tan. Oxn altn. Qtz vnlt w/ minor cal, limonite & inclusions of chlr & xl tuff.							
254.00	257.70	ANDESITE Brown. Oxn altn. Foln mod 0-20. Qtz & lim vn xx. Ands-dac as 248.4-251.5ft w/ more abundant oxn & qtz lim vnlts. Close fold w/ AP 30.							
257.70	262.10	CONGLOMERATE Gray-green. Oxn altn. CA 15-30. Foln wk 15-30. Qtz & cal vn 70. Fine cgl w/ clasts of chert, sed & volc clasts to 8mm- flattened. Minor qtz cal vnlts. Mod lim.							
262.10	285.20	SEDIMENT Tan-maroon. Oxn altn. CA 0-30. Foln wk 0-30. Qtz vn xx. Mixed unit. Dominantly argl w/ rdct, chert & qtz vnlts. Mod oxn. Folded w/ AP about 70 & contorted folding too. Mod to highly tectonized.							
285.20	286.10	QUARTZ VEIN White. Qtz vn w/ light green chlr.							
286.10	309.40	SEDIMENT Tan-maroon. Oxn altn. CA 10-40. Foln strong 10-40. Qtz & lim vn xx. 3 b/ft.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Mixed unit as 262.1-285.2ft w/ stronger tectonization. Approx myl. Strong oxn, abundant lim. Dominantly maroon argl w/ much less qtz eye rdct.							
309.40	315.20	GOUGE Tan-maroon. Oxn-clay altn. Foln strong 0-40. Qtz vn xx. xx b/ft. Gouge of above unit.							
315.20	320.40	MYLONITE Maroon-tan. Oxn altn. Foln strong 0-25. Qtz vn xx. Myl. Highly tectonized Version of sed as 286.1-309.4ft. Mod-abundant contorted qtz vnlts. Mod oxn-lim.							
320.40	324.20	GOUGE Tan-red. Clay & oxn altn. xx b/ft. Clay rich gouge.							
324.20	353.80	MYLONITE Tan-maroon. Oxn altn. Foln strong 0-40. Qtz vn xx. 3 b/ft. Myl as 315.2-320.4ft w. minor gouge zones.							
353.80	355.80	QUARTZ VEIN White. Lim altn. Qtz vn w/ minor myl.							
355.80	357.20	MYLONITE Maroon. Foln strong 40. Qtz vn 40. Myl as 315.2-320.4ft w/ lesser oxn. Dom arg.							
357.20	358.40	QUARTZ VEIN White. Qtz vn w/ mod arg myl.							
358.40	364.70	MYLONITE White-maroon. Foln strong 0-30. Qtz vn xx. 5 b/ft. Myl. Very highly tectonized mix of hem argl & qtz vnlts.							
364.70	365.50	QUARTZ VEIN White. Qtz vn w/ minor myl inclusions.							
365.50	367.00	MYLONITE							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		White-pink. Sern altn. Foln strong 30. Qtz vn 30. 5 b/ft. Myl w/ qtz vnlts.							
367.00	369.00	DIKE Gray. Clay altn. Cal vn xx. Mafic dike. Minor plag phenos. Wk-mod clay altn. Mod-abundant irregualr mm scale cal vnlts. Cal replacement of sanidine? phenos.							
369.00	373.00	RHYODACITE Pink. Sern altn. Foln strong 25. Qtz vn xx. Rdct. Very highly tectonized. Mod qtz phyric. Minor sern.							
373.00	373.50	QUARTZ VEIN White-pink. Qtz vn or boudins w/ minor hem.							
373.50	387.30	SEDIMENT Yellow-maroon. Oxn altn. CA 0-40. Foln strong 0-20. Qtz vn xx. Sed. Hematitic argillite dominant mixed unit w/ minor ands, ands tuff. Contorted S+Z buckle folds. AP 30-40. Minor faults parallel to core.							
387.30	403.90	ANDESITE Green. Oxn altn. Foln mod 20-40. Qtz vn xx. 3 b.ft. Ands dominant unit w/ minor green argl. Mod contorted qtz vnlts. Minor lim on frac. Wk oxn. Minor contorted folds, AP 30.							
403.90	410.50	ARGILLITE Green-maroon. Oxn altn. CA 0-20. Qtz vn xx. 5 b/ft. Arg. Green & maroon. Abundant irregular qtz vnlts. Contorted folds. Mod lim on frac.							
410.50	415.40	DIKE Brown. Clay altn. Cal vn xx. Dike as 367-369ft.							
415.40	418.60	ARGILLITE Maroon. CA 30. Cal vn xx. Hematitic argillite. Minor cal, qtz, lim vnlts							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		& clots.							
418.60	425.30	DIKE Brown. Clay altn. Cal vn xx. Dike as 367-369ft. Wkly mtc.							
425.30	426.30	ARGILLITE Maroon. CA 40. Cal vn xx. Arg as 415.4-418.6ft.							
426.30	431.90	ANDESITE Green. Oxn altn. CA 10-40. Qtz vn xx. As 387.3-403.9ft.							
431.90	453.80	ARGILLITE Maroon. CA 0-30. Cal & qtz vns xx. Arg as 415.4-418.6ft. Open folding AP 80-90ft.							
453.80	455.10	QUARTZ VEIN White. Oxn altn. CA 20. Qtz lim vnlt. Minor boxworks.							
455.10	456.20	ARGILLITE Maroon. CA 25. Cal vn xx. Arg as 415.4-418.6ft.							
456.20	459.90	MYLONITE Yellow-pink. Oxn altn. Foln strong 20-40. Qtz vn 40. Myl. Tectonized mix of argl, qv, dac. Mod oxn.							
459.90	465.90	SEDIMENT Maroon, orange & yellow. Oxn altn. CA 35. Foln mod 30-40. Mixed sed. Dominantly coarse qtz rich volcani-clastic w/ lesser hematitic argl. Strong tectonized. Minor siln-sern, mod-strong oxn. Minor qtz & cal vnlts.							
465.90	466.50	QUARTZ VEIN White. Oxn altn. CA 40. Qtz vn w/ lim.							
466.50	478.80	RHYOLITE Orange-green. Oxn-sern altn. Foln mod 0-35. Qtz vn xx. Rhy. Wkly qtz phyric. Strong-mod oxn. Part rhy							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		mylonite. Contorted wavy open folds. Mod-abundant contorted qtz lim vnlts. Mod sern.							
478.80	482.10	GOUGE Green-orange. Oxn & clay altn. Foln xx. Qtz vn xx. 8 b/ft. Chop of rhy, qtz sed ands. Mod oxn. Mod clay gouge.							
482.10	485.50	QUARTZ VEIN White-green. Chlr & oxn altn. Qtz vn xx. 3 b/ft. Qtz vn dominant (75%) w/ chlr, green sed & ands. Mod oxn Contorted qtz vnlts w/ minor cal. Minor gouge.							
485.50	490.20	ANDESITE Green-brown. Oxn altn. Foln mod 30. Qtz & cal vn 35-45. Ands w/ minor argl. Wkly plag phyric. Minor-mod oxn. Qtz & qtz cal vnlts. Wk blotchy sern. Assr min tr diss py.							
490.20	494.00	QUARTZ VEIN Green-white. Oxn & chlr altn. Foln wk 40. Qtz & cal vnlt xx. 3 b/ft. Qtz & qtz cal clots in chlr matrix. Minor oxn. Assr lim, spec hem, tremolite. Multi phase qtz & cal.	490.20	494.00	FX546504	-	-	-	-
494.00	494.70	ARGILLITE Red, green & maroon. CA 30. Qtz & cal vn xx. Argl. w/ mod irreg qtz vnlts.	494.00	510.00	NS	-	-	-	-
494.70	496.10	QUARTZ VEIN White. CA 45. Qtz vn w/ minor cal & chlr.							
496.10	503.40	ARGILLITE Green-maroon. Oxn altn. Foln mod 20-40. Qtz & cal vnlt. Argl dominant (60%) unit w/ abundant contorted qtz, cal vnlts & boudins. Contorted open folds. Minor chlr. Green-maroon argl. Minor lim oxn.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
503.40	505.40	CARBONATE Pink-green. Carb altn? CA 35. Foln mod 35. Carbgonate dominant unit w/ minor ser altn tuffite. Carb exhalite? Minor qtz, abundant cal, minor lim.							
505.40	510.00	ANDESITE Green. Oxn altn. Foln mod 30. Cal & qtz vn xx. Andesite epiclastic. Fg, abundant contorted cal qtz vnlts. Mod lim.							
510.00	512.50	CARBONATE Pink. CA 35. Foln mod 35. As 503.4-505.4ft w/ lesser tuffite.	510.00	512.50	FX546505	<0.005	<0.2	185	10
512.50	518.70	ANDESITE Green. Oxn altn. Foln mod 10-35. Cal & qtz vnlts xx. Ands as 505.4-510ft w/ more abundant cal qtz vnlts & stronger oxn.	512.50	542.50	NS	-	-	-	-
518.70	528.20	MYLONITE Orange. Oxn altn. Foln mod 20-35. Cal & qtz vnlts xx. Myl. Strong oxn. Minor cal qtz vnlts. Mix of argl & tuffite?							
528.20	530.70	GOUGE Orange. Oxn & clay altn. xx b/ft. Clay & lim rich gouge.							
530.70	544.20	ARGILLITE Maroon. CA 10-35. Cal & qtz vn xx. Maroon hematitic, Mn rich? Argillite. Minor cal qtz vnlts.	542.50 543.30	543.30 832.60	FX546506 NS	<0.005 -	<0.2 -	1 -	2 -
544.20	555.30	ANDESITE Green. Foln mod 10-30. Cal & qtz vn xx. Ands. Wkly plag phyric. Wkly frgl. Possible arkozic epiclastic? Mod cal qtz vnlts. Minor argl.							
555.30	563.90	ARGILLITE Green-maroon. CA 5-25. Foln mod 5-25. Cal & qtz vn xx. Mixed unit. Arg dominant w/ lesser felsic tuffite &							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		ands-ands epiclastic. Mod irreg cal qtz vnlts. Contorted folds & intertounging facies or tectonic? contacts. Tectonized.							
563.90	571.90	ARGILLITE Maroon. CA 0-30. Foln wk 0-30. Qtz & cal vn xx. Arg. Maroon-green w/ minor coarser interbeds. Mod to abundant qtz, cal contorted vnlts. Contorted folds. Tectonized.							
571.90	573.50	QUARTZ VEIN White-maroon. CA 20-60. Qtz, cal vns w/ interstitial argl.							
573.50	579.00	ARGILLITE Maroon. CA 20-30. Cal & qtz vn xx. Arg. Maroon & green w/ minor coarser interbeds. Minor irregular cal qtz vnlts w/ minor lim. Minor contorted folds.							
579.00	591.40	ARGILLITE Maroon. CA 10-30. Qtz & cal vn xx. Arg as 563.9-571.9ft. Tr spec hem.							
591.40	600.20	ARGILLITE Maroon. CA 5-40. Cal & qtz vn xx. Arg as 573.5-579ft. Possible soft sed deformed. Rip up clasts fo arg in coarse interbeds.							
600.20	609.30	ARGILLITE Maroon-green. CA 0-25. Cal & qtz vn xx. Arg as 563.9-571.9ft w/ lesser vnlts.							
609.30	611.80	ARGILLITE Maroon. CA 10-25. Cal & qtz vn xx. Arg maroon & green. V fg. Minor cal qtz vnlts & boudins. Contorted folds. Grbd. Possible isoclinal folded sequence. AP 30.							
611.80	629.40	QUARTZ VEIN White-green. Chlr altn. Foln wk 35.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Qtz vnlts. Clotty boudins w/ interstitial argl, ands & chlr. (75-80% qtz cal).							
629.40	635.00	ARGILLITE Green-maroon. CA 20-40. Foln wk 35. Qtz & cal vn xx. Arg dominant mixed. unit. Arg, qtz cal vnlts, clots, boudins(30%) + very minor ands.							
635.00	641.20	ARGILLITE Green. CA 20-50. Qtz & cal vn xx. 3 b/ft. Arg. F-mg. Minor felsic tuffite? interbeds. Minor-mod irregular qtz cal vnlts.							
641.20	658.00	ANDESITE Green. CA 30-40. Foln mod 30-40. Qtz & cal vn xx. 3 b/ft. Ands. Wkly plag phyric. Mod-abundant irregualr qtz cal vnlts. Minor arg interbeds. Minor contorted folds. Minor gouge. Some epiclastics.							
658.00	668.60	ARGILLITE Maroon-green. CA 35-50. Qtz & cal vn xx. 2 b/ft. Arg. Maroon & green. Tectonized. Mod irregular qtz cal vnlts. Styolites. Rip up clasts.							
668.60	671.00	MYLONITE Brown. Sern altn. Foln mod 30. Qtz & cal vn xx. 5 b/ft. Mylonite. Ser altd ands? Kinks.							
671.00	676.00	ANDESITE Green. Foln wk 35. Qtz & cal vn xx. Ands wkly plag phyric. Minor qtz cal vnlts. Quite uniform.							
676.00	678.10	MYLONITE Brown. Sern altn. Foln mod 45. Qtz & cal vn xx. xx b/ft. Myl as 668.6-671ft.							
678.10	693.00	ANDESITE Green. Foln mod 20-40. Qtz & cal vn xx. 3 b/ft. Ands as 641.2-658ft.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
693.00	700.20	MYLONITE Brown. Oxn altn. Foln mod 25. Qtz vn xx. 4 b/ft. Myl. Strong oxn. Possible Felsic volcanic.							
700.20	703.90	GOUGE Orange. Lim & clay altn. xx b/ft. Gouge. Strong oxn. Abundant lim & clay.							
703.90	708.80	TUFF Green. CA 20. Qtz & cal vn xx. Felsic tuff w/ minor black-maroon argl interbeds. Minor qtz, cal, lim vnlts.							
708.80	710.50	QUARTZ VEIN White. Lim altn. Qtz cal lim vnlt.							
710.50	713.10	GOUGE Brown. Oxn altn. xx b/ft. Gouge. Qtz vn & flesic volc? w/ lim.							
713.10	714.80	TUFF Green. CA 30. Qtz, cal & lim vn xx. Tuff as 703.9-708.8ft.							
714.80	725.80	ARGILLITE Maroon-green. CA 20-35. Qtz & cal vn xx. 2 b/ft. Arg. Maroon-green. Fg-mg. Mod cal qtz vnlts @ irregular angles. Minor limonitic gouge.							
725.80	749.80	ARGILLITE Green. CA 0-35. Qtz & cal vn xx. 2 b/ft. Arg dominant w/ much lesser fg ss. Possible high felsic tuff component to arg. Minor-mod qtz cal lim vnlts- irregular. Rip up clasts.							
749.80	754.00	MYLONITE Green-brown. Foln strong xx. Qtz & cal vn xx. Myl. Highly tectonized mix of arg, qtz vnlts & felsic tuff? Contorted foln. Mod abundant qtz cal lim vnlts.							
754.00	763.40	GOUGE							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Brown. Qtz vn xx. Gouge & chop of arg & qtz vnlts.							
763.40	764.00	QUARTZ VEIN Brown. Lim vn xx. 3 b/ft. Qtz lim vnlt.							
764.00	780.30	ARGILLITE Gray-maroon. CA 0-20. Qtz & cal vn xx. 2 b/ft. Arg. Minor coarser interbeds. Minor-mod irregular qtz cal vnlts & tension gashes. Minor contorted folding @ goug contact.							
780.30	782.90	MYLONITE Maroon. Siln altn. Foln mod xx. Qtz vn xx. Tectonic mix of arg & felsic volc. Very contorted mix mod-strong siln.							
782.90	790.10	MYLONITE Tan-green. Sern, siln & oxn altn. Foln strong 40. Qtz vn xx. Tectonized ser altd felsic volc w/ some siln. Mod irregular qtz vnlts. Minor oxn. Minor gouge. Minor lim. Kinks.							
790.10	791.10	QUARTZ VEIN White. CA 60. Qtz vn w/ some silicified argl.							
791.10	792.10	ARGILLITE Tan. Siln & sern altn. CA 50. Foln wk 50. Arg w/ minor sern & siln.							
792.10	801.30	ARGILLITE Maroon. Siln altn. Ca 20-40. Qtz vn xx. Arg. Minor irregular qtz vnlts. Minor coarser interbeds. Irregular zones w/ minor siln. Tuff component w/ minor small flattened qtz eyes. Minor drag folds & faults.							
801.30	802.30	QUARTZ VEIN White. CA 30. Qtz vn w/ minor arg & chlr.							
802.30	832.60	ARGILLITE							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Maroon. CA 20-45. Qtz & cal vn xx. Arg maroon w/ minor green. Mod irregular qtz cal vnlts & tension gashes. Minor chert interbeds. Tectonized. Very minor ands tuff. Minor coarser interbeds.							
832.60	836.20	SEDIMENT							
		Maroon-green. Foln mod 40. Qtz & cal vn xx. Sed. Mix of arg, ands tuff, ferruginous chert. Tectonized. Minor qtz cal vnlts & boudins.	832.60	837.40	FX546507	<0.005	<0.2	12	2
836.20	836.70	CHERT							
		Red. Qtz vn xx. Ferruginous chert w/ minor qtz vnlts.							
836.70	837.40	ANDESITE							
		Green. Qtz vn xx. Ands. Probably tuff. Minor chert interbeds. Minor irregular qtz vnlts.							
837.40	845.00	CHERT							
		Red-maroon. CA 40. Qtz vn 65. Ferruginous chert w/ mod qtz vnlts. Minor arg interbeds. Tr diss py. Hem. Assr min tr py.	837.40	845.00	FX546508	0.04	2.2	1455	<2
845.00	847.30	ARGILLITE							
		Maroon. CA 30. Qtz vn 80. Arg mixed w/ ferruginous chert. Abundant qtz vnlts.	845.00	847.30	FX546509	<0.005	<0.2	1	<2
847.30	850.60	CHERT							
		Red-maroon. Qtz vn 75. Chert as 837.4-845ft.	847.30	850.60	FX546510	3620	5	3620	<2
850.60	855.60	RHYOLITE							
		Brown-green. Siln & sern altn. Foln mod 35. qtz vn xx. Rhy dominant mix. Qtz phyric rhy. Ferruginous chert, argl, ands. Minor sern & siln.	850.60	855.60	FX546511	<0.005	<0.2	7	<2
855.60	876.50	RHYOLITE							
		Tan. Sern & siln altn. Foln mod 35. Qtz vn xx. 3 b/ft. Rhy. Mod abundant Qtz eyes to 4mm. Mod sern & siln.	855.60	876.50	NS	-	-	-	-

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Minor hematitic inclusions. Parts frgl w/ flattened frags to 4cm. Minor gougezones. Minor qtz vnlts.							
876.50	883.30	RHYOLITE Tan-gray. Sern, siln & pyc altn. Foln mod 30-55. Rhy. Abundant qtz & plag phyric. Qtz eyes to 5mm. Minor qtz vnlts. Diss & foln parallel py. Mod strong sern & siln. Assr 2% py.	876.50	883.30	FX546512	<0.005	0.8	31	90
883.30	894.70	RHYOLITE Tan-gray. Sern, siln & pyc altn. Foln mod 45. Rhy as 876.5-883.3ft. Assr min .5% py.	883.30	939.00	NS	-	-	-	-
894.70	898.40	RHYOLITE Tan. Sern, siln & pyc altn. Rhy as 855.6-876.5ft. Assr min tr py.							
898.40	908.60	RHYOLITE Gray-green. Sern & pyc altn. Foln mod 20-45. Qtz vn xx. 3 b/ft. Rhy. Plag & very wkly qtz phyric. Minor open -S- folds, AP 45. Minor Irregular qtz vnlts. Mod strong sern. Diss & deformed vnlt py. Very possible pyrophyllite. Assr min .5% py.							
908.60	909.10	QUARTZ VEIN White. CA 50. Qtz vnlt.							
909.10	910.00	RHYOLITE Gray-green. Sern & pyc altn. Foln mod 20. Rhy as 898.4ft. Assr min .5% py.							
910.00	917.80	RHYOLITE Tan. Sern altn. Foln mod 30. Qtz vn xx. Rhy as 894.7-898.4ft.							
917.80	921.60	RHYOLITE Tan-gray. Foln mod 0-50. Qtz vn xx. Rhy as 876.5-883.3ft. Minor open folds AP 90. Assr min tr py.							
921.60	939.00	RHYOLITE Tan. Sern & siln altn. Foln mod 35. Qtz vn xx. Rhy as 894.7-898.4ft.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
939.00	941.70	RHYOLITE Tan-gray. Sern & siln altn. Foln mod 35. Qtz vn 35. As 876.5-883.3ft. Assr min 2% py, tr cp, tr sph.	939.00	941.70	FX546513	<0.005	0.2	20	14
941.70	942.50	QUARTZ VEIN White. CA 60. Qtz vnlt.	941.70	945.70	NS	-	-	-	-
942.50	945.70	RHYOLITE Gray. Siln altn. Foln mod 35. Rhy. Frgl. Strongly qtz phyric. Mod plag phyric. Wk siln. Flattened frags to about 4cm. Qtz eyes to 5mm.							
945.70	952.30	RHYOLITE Gray. Siln altn. Foln mod 15-30. Qtz vn xx. Rhy as 942.5-945.7ft w/ mod qtz vnlts. Minor diss & vnlt py. Assr min 1% py.	945.70	952.30	FX546514	0.005	1.6	40	78
952.30	956.00	RHYOLITE Gray. Siln & sern altn. Foln strong 20. Qtz vn 60. Rhy, qtz phyric. Mod tectonized, part frgl. Diss & foln parallel py. Wk siln, mod sern. Assr min; 2% py, tr sph.	952.30	956.00	FX546516	0.035	2.6	22	248
956.00	962.00	RHYOLITE Gray. Siln & sern altn. Foln strong 20. Rhy as 952.3-956ft. Assr min; 1% py, tr sph, tr gal.	956.00	962.00	FX546517	0.02	1.6	16	74
962.00	968.00	RHYOLITE Gray. Siln & sern altn. Foln strong 15. Qtz vn 15. Rhy as 952.3-956ft. Assr min; 2% py, tr cp, tr sph, tr gal.	962.00	968.00	FX546518	0.01	1.4	11	62
968.00	974.00	RHYOLITE Gray. Siln & sern altn. Foln strong 12. Qtz vn 12. Rhy as 952.3-956ft. Assr min; 1% py, tr cp, tr sph, tr gal.	968.00	974.00	FX546519	0.01	1.4	10	58
974.00	980.00	RHYOLITE Gray. Siln & sern altn. Foln strong	974.00	980.00	FX546520	0.025	2.4	21	54

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		0-40. Rhy as 952.3-956ft. Open & drag folds, AP 45. Assr min; .5% py, tr cp, tr sph.							
980.00	986.00	RHYOLITE Gray. Siln & sern altn. Foln strong 0-40. Rhy as 974-980ft w/ same folding. Assr min; .5% py, tr sph, tr gal.	980.00	986.00	FX546521	0.02	2.2	15	102
986.00	992.00	RHYOLITE Gray. Siln & sern altn. Foln strong 15. Qtz vn 50. Rhy as 952.3-956ft. Kinks AP 40. Assr min 1% py, tr cp, tr sph, tr gal.	986.00	992.00	FX546522	0.035	3	30	134
992.00	998.00	RHYOLITE Gray. Siln & sern altn. Foln strong 15-20. Rhy as 952.3-956ft. Minor clay gouge. Assr min; 2% py, tr cp, tr sph. tr gal.	992.00	998.00	FX546523	0.125	9.2	152	910
998.00	1004.00	RHYOLITE Gray. Siln & sern altn. Foln strong 20. Rhy as 952.3-956ft. Minor gouge. Stringer tect. Assr min; 2% py, tr cp, tr sph, tr gal.	998.00	1004.00	FX546524	0.07	4	68	1300
1004.00	1006.40	RHYOLITE Gray. Siln & sern altn. Foln strong 25. Qtz vn 25. Rhy as 952.3-956ft w/ minor abundant qtz vnlts. Assr min; 1% py, tr cp, tr sph, tr gal.	1004.00	1010.00	FX546525	0.105	7.2	266	1380
1006.40	1007.60	QUARTZ VEIN White. CA 55. Qtz vn w/ rhy inclusions. Assr min tr py.							
1007.60	1010.00	RHYOLITE Gray. Siln & sern altn. Foln strong 0-40. Qtz vn 30. Rhy as 952.3-956ft w/ contorted folding AP about 45. Assr min; .5% py, tr sph, tr gal.							
1010.00	1018.50	RHYOLITE Gray. Sern altn. Foln mod 25-50. Qtz vn xx. 2 b/ft. Rhy, rhy tuffite. Wkly qtz phyric. Mod irregular qtz vnlts. Part frgl part tuffite. Diss & vnlt	1010.00	1018.50	FX546526	0.095	6.4	199	2480

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Sx. Mod sern. Assr min; .5% py, tr cp, .5% sph, 1% gal.							
1018.50	1021.30	RHYOLITE Gray-green. Sern altn. Foln mod 35. Rhy frgl, & rhy tuffite. Wkly plag & qtz phyric. Minor layered Sx. Minor tectonized. Minor fresh rhy. Mod sern. Assr min; 1% py, tr cp, .5% sph, .5% gal.	1018.50	1021.30	FX546527	0.105	4	196	362
1021.30	1027.00	RHYOLITE Green. Foln mod 30. Qtz vn xx. Rhy, frgl. Mod qtz phyric. Flattened frags. Minor irregular qtz vnlts. Fresh rhy.	1021.30	1027.00	FX546528	0.05	1.6	90	20
1027.00	1027.40	QUARTZ VEIN White. CA 40. Qtz vnlt w/ diss py & minor py & minor rhy. Assr min .5% py.	1027.00	1060.80	NS	-	-	-	-
1027.40	1028.40	RHYOLITE Green. Foln mod 35. Rhy as 1021.3-1027ft.							
1028.40	1029.00	QUARTZ VEIN White. CA 50. Qtz vnlt.							
1029.00	1060.80	RHYOLITE Green. Foln mod 40. Qtz & cal vn xx. 2 b/ft. Rhy as 1021.3-1027ft w/ very minor sern. Minor irregular qtz, cal vnlts.							
1060.80	1068.00	TUFFITE Brown,green & white. Foln mod 35. Cal & qtz vn 35. Rhy tuffite dominent unit. Brown, green, gray rhy tuffite w/ minor qtz eyes about 55%. Mod sern. Cal qtz vnlts or meta exhalite. Tr diss py & gal.	1060.80	1068.00	FX546529	0.045	2.4	60	544
1068.00	1068.80	CHLORITE SCHIST Black-green. Chlr altn. Foln mod 45. Chlorite altn. Very strong chlr replacement. Blebby & vnlt or layered cal. Assr min tr gal.	1068.00	1068.80	FX546530	0.045	1.4	15	696
1068.80	1071.70	CHLORITE SCHIST							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Black, green & white. Chlr & sern altn. Foln mod 35. Cal & qtz vn 35. Mixed unit. Csch & cal qtz vnlts/meta exhalite. Clotty cal qtz altn or deformed vnlts/meta exhalite. -Cal eyes- in csch. Assr min; 1% py, tr cp, 1% sph, 2% gal.	1068.80	1071.70	FX546531	0.195	6.6	274	2790
1071.70	1073.50	VEIN							
		White, pink & green. Chlr altn. Qtz vn xx. Mixed unit. Pink-gray green chert w/ brecciated, vermiform textured cal, qtz, chlr, Sx vnlt/meta exhalite. Contorted texture w/ minor younger irregular qtz vnlts. Sx as diss & frag? inclusions in vn bx. Assr min; tr py, tr sph, tr gal.	1071.70	1073.50	FX546532	0.07	0.2	18	326
1073.50	1076.30	CHLORITE SCHIST							
		Black, green & white. Chlr & sern altn. Foln mod 35. Qtz vn 10. Csch dominant unit w/ abundant layers/deformed foln parralel vnlts of cal, qtz. Blebby rhy inclusions. Vermiform texture. Deformed layers/vnlts Sx. Minor young qtz vnlts. Assr min; .5% py, tr sph, tr gal.	1073.50	1076.30	FX546533	0.175	3	322	736
1076.30	1078.70	MASSIVE SULFIDE							
		Black, gray & white. Chlr altn. CA 25-45? Foln mod 25-45. Cal & qtz vn xx. Semi massive sulphide (35%) layered w/ chlr & cal vnlts/meta exhalite. Wk to strong conductivity along Sx layers. Non to mod conductivity across Layers. (Mod up to 2.5inches apart- across layers). Fg Sx py, gal, sph, cp, tetra. Assr min; 15% py, 2% cp, 8% sph, 10% gal, tr tetra.	1076.30	1078.70	FX546534	1.07	8.8	924	4740
1078.70	1080.20	VEIN							
		White & black. Chlr altn. Foln wk 30-40. Bx, veriform, clotty cal, qtz vnlt/meta exhalite w/ clotty chlr & diss & deformed vnlt/layers of Sx.	1078.70	1080.20	FX546536	0.155	3.2	434	636
1080.20	1084.20	MASSIVE SULFIDE							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		White, black & brown. Chlr altn. CA 30-45. Foln mod 30-45. Cal & qtz vn 40. Semi massive sulphides (50%) layered w/ chlr & cal qtz vnlts/meta exhalite. Wk-mod conductivity along Sx layers. Non to mod conductivity across layers. Assr min; 20% py, 4% py, 15% sph, 10% gal 1% teta.	1080.20	1084.20	FX546537	0.73	17	5010	7700
1084.20	1090.00	RHYODACITE							
		Gray-green. Sern & chlr altn. Foln mod 35. Qtz & cal vn 50. Rhyodacite. Minor qtz eyes. Minor plag phyric fairly fresh. Wk sern & chlr. Minor qtz cal vnlts. Very minor diss py.	1084.20	1090.00	FX546538	<0.005	0.2	108	18
1090.00	1097.70	RHYODACITE							
		Gray-green. Sern & chlr altn. Foln mod 30. 2 b/ft. Rdct as 1084.2-1090ft. No qtz cal vnlts.	1090.00	1097.70	NS	-	-	-	-
1097.70	1102.70	RHYODACITE							
		Gray-green. Chlr altn. Foln mod 35. Rdct as 1090-1097.7ft. More frgl. More abundant chlr. Flattened Sx lenses, clasts? to 3cm. Assr min; .5% py, tr cp, tr gal.	1097.70	1102.70	FX546539	0.11	0.8	1715	172
1102.70	1110.00	RHYODACITE							
		Gray-green. Sern altn. Foln mod 30. Rdct. Very minor qtz eyes, part frgl. Wk sern. Minor diss & vnlt Sx. Assr min; tr py, tr sph, tr gal.	1102.70	1119.80	NS	-	-	-	-
1110.00	1119.80	RHYODACITE							
		Gray-green. Sern altn. Foln mod 25. Rdct as 1102.7-1110ft. Very minor diss py. Stronger but weak sern. Tectonized, shattered qtz eyes. Assr min tr py.							
1119.80	1126.40	RHYOLITE							
		Gray. Sern altn. Foln mod 25. Rhy. Mod sern. Mod qtz phyric. Mix of rhy & rhy tuffite? Diss & vnlt Sx- very minor. Assr min; tr py, tr sph, tr gal.	1119.80	1126.40	FX546540	0.02	0.6	34	26
1126.40	1132.00	RHYOLITE							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Gray. Sern altn. Foln mod 30. Rhy as 119.8-1126.4ft w/ more abundant Sx & qtz eyes. Assr min; 2% py, tr sph, tr gal.	1126.40	1132.00	FX546541	0.075	1.6	106	78
1132.00	1136.10	RHYOLITE							
		Gray. Sern altn. Foln mod 35. Qtz vn 35. Rhy as 119.8-1126.4ft. Minor qtz vnlts. Assr min; .5% py, tr sph, tr gal.	1132.00	1136.10	FX546542	0.06	1.6	139	410
1136.10	1139.60	RHYOLITE							
		Gray. Sern altn. Foln mod 35. Qtz vn 35. Rhy as 1126.4-1132ft, w/ minor qtz vnlts. Assr min; 2% py, tr cp, tr sph, tr gal.	1136.10	1139.60	FX546543	<0.005	3	191	932
1139.60	1148.30	RHYODACITE							
		Gray-green. Sern altn. Foln mod 30. Qtz vn xx. Mixed unit. Dominantly rdct (55%). Wkly qtz & plag phyric. Abundant irregular deformed qtz vnlts. Wk sern.	1139.60	1172.90	NS	-	-	-	-
1148.30	1166.20	RHYODACITE							
		Gray. Sern altn. Foln mod 20. Rdct. Mod sern. Wk plag & qtz phyric. Minor diss py. Assr min tr py.							
1166.20	1172.90	RHYODACITE							
		Gray. Sern altn. Foln mod 30. Qtz vn 45. Rdct as 1148.3-1166.2 w/ minor Qtz vnlts & more abundant sern. Assr min tr py.							
1172.90	1179.00	RHYOLITE							
		Gray. Sern altn. Foln mod 25-40. Qtz vn xx. Rhy. Wk qtz & plag phyric. Mod sern. Minor to mod irregular qtz vnlts. Very minor sporadic contorted folds. Diss & foln parallel Sx. Assr min 2% py.	1172.90	1179.00	FX546544	0.055	3.2	141	360
1179.00	1182.50	RHYOLITE							
		Gray. Sern altn. Foln mod 25-35. Rhy as 1172.9-1179ft. No qtz vnlts or folds. Assr min 1% py.	1179.00	1182.50	FX546545	0.035	1	27	438

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
1182.50	1188.20	RHYOLITE Gray. Sern altn. foln mod 35. Qtz vn 45. Rhy as 1172.9-1179ft. Assr min 4% py.	1182.50	1188.20	FX546546	0.125	3.2	100	726
1188.20	1194.00	RHYOLITE Gray. Sern altn. Foln mod 30. Qtz vn 30. Rhy as 1172.9-1179ft. Assr min; 2% py, tr sph, tr gal.	1188.20	1194.00	FX546547	0.045	1.2	21	190
1194.00	1200.00	RHYOLITE Gray. Sern altn. Foln mod 30. Qtz vn 35. rhy as 1172.9-1179ft. Assr min; 1% py.	1194.00	1200.00	FX546548	0.055	1.2	30	204
1200.00	1206.00	RHYOLITE Gray. Sern altn. Foln mod 25-40. Qtz vn 35. Rhy as 1172.9-1179ft. Assr min; 3% py, tr gal.	1200.00	1206.00	FX546549	0.125	2	62	1215
1206.00	1212.50	RHYOLITE Gray. Sern altn. Foln mod 15-25. Qtz vn 50. Rhy as 1172.9-1179ft. Assr min; 3% py, tr gal.	1206.00	1212.50	FX546550	0.14	1.4	30	430
1212.50	1212.80	QUARTZ VEIN White. CA 80. Qtz vnlt.	1212.50	1218.00	FX546551	0.16	1.6	38	620
1212.80	1218.00	RHYOLITE Gray. Sern altn. Foln mod 25. Qtz vn xx. Rhy as 1172.9-1179ft. Assr min; 4% py, tr sph, tr gal.							
1218.00	1224.00	RHYOLITE Gray. Sern altn. Foln mod 0-40. Qtz vn xx. Rhy as 1172.9-1179ft. Open fold AP 70. Assr min; 3% py, tr sph, tr gal.	1218.00	1224.00	FX546552	0.185	1.8	33	374
1224.00	1251.20	RHYOLITE Gray. Sern altn. Foln mod 25-50. Rhy as 1172.91179ft. No qtz vnlts. Assr min .5% py.							
1251.20	1258.30	RHYOLITE Gray. Siln & sern altn. Foln mod 40.							

FROM FT	TO FT	DESCRIPTION	FROM FT	TO FT	SAMPLE#	Au PPM	Ag PPM	Cu PPM	Pb PPM
		Qtz vn xx. Rhy as 1172.9-1179ft w/ more abundant qtz eyes & patchy mod siln. Assr min .5% py.							
1258.30	1271.50	RHYOLITE Gray. Foln mod 30. Rhy as 1172.9-1179ft. Very wk sern. Fairly fresh. Assr min .5% py. EOH.							

HOLE NO. 83663 ACNC DRILL LOG SHEET

AREA:

PROPERTY: Pentland CLAIM: LEVEL: Surface SEC: 17 TWP: 12N RNG: 1E COUNTY: Yavapai CONTRACTOR: Bot Longyear

DRILL: Longyear 44

STATE: AZ CORE SIZE: NQ

DATE STARTED: 10/11/96

DATE COMPLETED: 10/30/96

COLLAR COORDINATES	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH
N. 5600 E. 8700	4780	270	-50	1004.0 DC Oliver

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	FOLN	VEIN	B/FT	DESCRIPTION	Py	Cpy	Sph	Gal		Cu ppm	Zn ppm	Pb ppm	Au ppm	Ag ppm
	0	3.0	3.0	0	OB							alluvium										
	3.0	23.2	20.2	18.0	Bslt	dk gm	Qtz Hrfl		M40	Q40	5	Bslt. mod oxn. lim on frac. mi qtz vnlts. Hornfels w/ wt chlr. Bslt is banded, grn + light layers on a wkns scale. mod wtc. mod amygs										
	23.2	42.0	18.8	18.8	Bslt	dk gm	Hrfl		M45	Q45	2-3	Bslt. Hrfls. mi qtz vnlts. assr wt chlr ox?. Bslt is banded w/ dk grn + light grn layers. mod amygs. tr py w/ qtz vnlts + dissem. mod wtc.	tr									
fx546407	42.0	43.2	1.2	1.2	Bslt	"	"		"		1	as 23.2-42 w/ mi dk chlr lenses w/ sx + poss VV fine VG. Minor qtz banding	tr					91	72	<2	<.005	<.2
	43.2	64.5	21.3	21.3	Bslt	"	"		M40	Q40		as 23.2-42. qtz vnlts + clots. s w/ v f gr py	1/2									
	64.5	66.3	1.8	1.8	Bslt	brn-grn	oxn Hrfl		S35			Bslt as 23.2-42 w/ high strain. mi lim. Deformed qtz banding.										
	66.3	73.1	6.8	6.8	Bslt	dk gm	Hrfl		M45	Q45		Bslt as 23.2-42. mod-ab qtz vnlts.	tr									
	73.1	79.7	6.6	6.6	Bslt	tn	Oxn Hrfl		S40	Q40		Bslt as above w/ v strg oxn. lim gouge 76.8-77.4. ab qtz vnlts.										
	79.7	82.6	2.9	2.9	Bslt	grn-tn	Oxn Hrfl		M40	Q40		Bslt w/ mod oxn + ab qtz vnlts.										
	82.6	84.4	1.8	1.8	QV	wh	chlr					Qtz vnlt w/ chlr + lim										
	84.4	96.1	11.7	11.7	Bslt	dk gm	Hrfl		M40	Qxx	2	Bslt as 23.2-42	tr									
	96.1	98.3	2.2	2.2	QV	wh	chlr					Qtz vnlt as 82.6-84.4										

NOTES: 0-10' HQ core
J under vein = calcite

SHEET NO. 1 OF 11

HOLE NO. 83663 ACNC DRILL LOG SHEET

AREA: _____ DRILL: _____ DATE STARTED: _____ DATE COMPLETED: _____

PROPERTY: _____ CLAIM: _____ LEVEL: _____ SEC: _____ TWP: _____ RNG: _____ COUNTY: _____ CONTRACTOR: _____

STATE: _____ CORE SIZE: _____

COLLAR COORDINATES		COLLAR ELEV	AZIMUTH	INCLN	TOTAL DEPTH
N	E				

DCO

SAMPLE NO	FOOTAGE FROM	FOOTAGE TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	LAYERING POLN	LAYERING VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal	ASSAY Cu	Zn	Pb	Au	Ag
	98.3	100.0	1.7	1.7	Bslt	dk grn	Hrfl		M40	Q40		Bslt as 23.2-42 mod- abs qtz vnlts.									
	100.0	101.6	1.6	1.0	QV	wht						Qtz vn w/ bslt inclusions									
	101.6	130.0	28.4	28.4	Bslt	dk grn	Hrfl		M40	Q40	2	Bslt as 23.2-42. wk lim on frac	tr								
	130.0	132.6	2.6	2.0	Goug	tn	lim				XX	Bslt w/ lim gouge + clays. Mod Oxn									
	132.6	148.3	15.7	15.7	Bslt	dk grn	Hrfl		M40	Q40	2	Bslt as 23.2-42									
	148.3	187.8	39.5	39.5	Bslt	dk grn	Hrfl		M45	Q45	2	Bslt as 23.2-42 w/ v few amygs. ab v fav Massive Hrfl bslt or lavas ab fav epiclastic/tuff/bslt mix. mod -stng mtc. mod qtz vnlts.	tr								
fx546408	187.8	190.0	2.2	2.2	Bslt	dk grn	Hrfl		M45	Q45		Bslt as 148.3-187.8 w/ py + cpy dissem + assoc w/ qtz vnlts. Au?	1/2	tr			100	92	2	K.005	K.2
	190.0	196.7	6.7	6.7	Bslt	dk grn	Hrfl		M45	Q45	2	Bslt as 148.3-187.8	tr								
	196.7	210.0	13.3	13.3	Bslt	dk grn	Hrfl		M45	Q45	2	Bslt as 23.2-42 (m abs amygs than 148.3-187.8)	tr								
	210.0	210.3	0.3	0.3	Goug	gy	clay	50			XX	Gouge w/ clay + cal.									
	210.3	221.2	10.9	10.9	Bslt.	dk grn	Hrfl		M40	Q40	2	Bslt as 148.3-187.8. tr sph	tr		tr						
	221.2	255.0	33.8	33.8	Bslt	dk grn			M45	QXx	2	Bslt. non mtc. Non Hrfl or much lesser hrfl. Mixed flows tuffs, epiclastics. Parts amyg. Parts plag plumic. Parts fav. Prob 2 phase folding w/ folds @ ~ 40° + 20° @ high ∠°									

NOTES:

HOLE NO. B3663 ACNC DRILL LOG SHEET

AREA: _____

PROPERTY: _____ CLAIM: _____ LEVEL: _____ SEC: _____ TWP: _____ RNG: _____ COUNTY: _____ CONTRACTOR: _____

DRILL: _____

DATE STARTED: _____

COLLAR COORDINATES		COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH
N	E				

STATE: _____ CORE SIZE: _____

DATE COMPLETED: _____

Des

SAMPLE NO	FOOTAGE FROM	FOOTAGE TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	LAYERING POLN	LAYERING VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal		ASSAY Cu	Zn	Pb	Au	Ag
												to each other. well developed foln. Mod foln ∥ + irreg qtz vnlts.										
fx546409	255.0	257.1	2.1	2.1	Andes.	grn	serichlr		M40	Qxx	2	Andes fgr flow or tuff, part plag phyric. Dissem + foln ∥ Sx. V mi qtz vnlts + boudins. V wk serich. mi slcfd felsic or chrty clasts to 1 cm. gouge 257.1 - 257.2	4	tr	1/2			339	104	8	∠.005	.2
	257.1	269.7	12.6	12.6	Andes	grn	serichlr		M45	Qxx	2	Andes as 255-257.1	3	tr	tr							
fx546411	269.7	270.2	0.5	0.5	CSCH	blk	chlr		S45			Chlorite altn. U ~ 40% Sx py, cpy, spln	30	6	4			11,900 1.19%	320	24	.270	5.4
fx546412	270.2	276.5	6.3	6.3	Andes	grn	serichlr		M45	Qxx	2	Andes as 255-257.1	4	tr	tr			388	328	20	.040	.2
fx546413	276.5	282.7	6.2	6.2	Andes	grn	"		M45	Qxx	2	Andes as 255-257.1	2	tr	tr			73	262	92	.010	.2
fx546414	282.7	291.8	9.1	9.1	Andes	"	"		"	"	1	Andes as 255-257.1	5	tr	tr			171	50	14	.030	.2
fx546415	291.8	297.0	5.2	5.2	Andes	grn	serichlr silic.		M45		1	Andes as above w/ stronger seric + chlr altn. mi silic	5	tr	tr			110	340	64	.020	.2
	297.0	297.3	0.3	0.3	Gouge	gg	clay					Clay gouge.										
fx546416	297.3	302.2	4.9	4.9	Andes	grn	serichlr		M45	Qxx	1	Andes as 255 - 257.1	4	tr	tr			177	50	6	.015	.2
fx546417	302.2	303.8	1.6	1.6	Andes	gg	sericsilic		S45	Qxx		Contact alt zone. Alt andes w/ strg seric, mod silic + 25% total sulphides Vstvg foln, distorted. over chlr.	20	2	3			182	1610	796	.050	.6

NOTES: fx546410 STD

HOLE NO. 83663 ACNC DRILL LOG SHEET

AREA:

PROPERTY: CLAIM: LEVEL: SEC: TWP: RNG: COUNTY: CONTRACTOR: DRILL:

STATE: CORE SIZE: DATE STARTED:

DATE COMPLETED:

COLLAR COORDINATES N	E	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH
					Deo

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal		ASSAY Cu	Zn	Pb	Au	Ag
fx546418	303.8	309.0	5.2	5.2	Dike	wh	sil?	20	?20/55			Dike. Laramide?, rhy dike. cherty chill margins. fold + qtz vv mi dis. Mi lim staining. pseudo foln banding.	tr					4	72	26	<.005	<.2
fx546419	309.0	314.4	5.4	5.4	Dike	wh	"	"	"			as 303.8-309 irreg contacts.	tr					<1	32	18	<.005	<.2
fx546420	314.4	315.8	1.4	1.4	Ands	gy	seri silic		Sxx			as 302.2-303.8	20	2	3			121	110	28	<.005	<.2
fx546421	315.8	319.8	4.0	4.0	Ands	gn	seri silic		M45	Q45		Ands as 255-257.1	3	tr	tr			39	126	6	<.005	<.2
fx546422	319.8	324.5	4.7	4.7	Ands	"	"		"	"		Ands as 255-257.1	5	tr	tr			72	510	12	<.005	<.2
fx546423	324.5	330.7	6.2	6.2	Ands	brn gn	biot		M45			Ands. fine gr. biotite altn. pervasive	2	tr	1			59	208	8	.005	<.2
												vfgr biot. w/ cm-rd cast, foln ||										
												Sx mi fold shears										
	330.7	350.1	19.4	19.4	Ands	gn	seri		M45		2	Ands as 255-257.1	1	tr	tr							
fx546424	350.1	351.2	1.1	1.1	Ands	gn	seri silic chlr		M45	Q45		Ands. mod seri, silic, chlr w/ mod	10	1	3			246	3760	84	.050	.2
												foln ll qtz vnlts + Sx vnlts. Au?										
	351.2	374.4	23.2	23.2	Ands	gn	seri silic chlr		M40	Q40		Ands as 255-257.1	2	tr	tr							
fx546425	374.4	381.0	5.6	5.6	Ands	gn	biot silic		M50	Qxx		Ands. fine gr. mi biot altn. Abs qtz	3	1	2			69	558	36	.015	<.2
												vnlts w/ chlr, biot, tour, py, cp, silic.										
												Vnlts are clotty + irregular										
	381.0	394.9	13.9	13.9	Ands	gn brn	biot seri		M45	Qxx		Ands. f gr. mod biot altn mi seri,	1	tr	tr							
												Mi irreg qtz vnlts. dissem + vnlt Sx										
	394.9	400.1	5.2	5.2	Ands	brn	biot		M45	Q45		Ands as 324.5-330.7	1/2	tr	tr							
	400.1	409.2	9.1	9.1	Ands	gn	seri		M45			Ands as 255-257.1										

NOTES:

HOLE NO. B3663 ACNC DRILL LOG SHEET

AREA: _____

PROPERTY: _____ CLAIM: _____ LEVEL: _____ SEC: _____ TWP: _____ RNG: _____ COUNTY: _____ CONTRACTOR: _____

DRILL: _____

COLLAR COORDINATES		COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH
N	E				Dco

STATE: _____ CORE SIZE: _____ DATE STARTED: _____ DATE COMPLETED: _____

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal	ASSAY Cu	Zn	Pb	Au	Ag
	409.2	423.0	13.8	13.8	Andes	gm bm	biot sern		M45	Q45	2	Andes as 381-394.9	1/2								
	423.0	430.0	7.0	7.0	Andes	brn	biot		M50	Q50		Andes as 324.5 - 330.7	1/2								
	430.0	436.0	6.0	6.0	Andes	lgm	sern		M45	Q45	3	Andes, fgr mod sern · wk silic.	1/2	tr							
												disseм py. gouge @ 434.									
	436.0	450.5	14.5	14.5	Andes	gm	sern		M50	Q50		Andes fgr. mi sern. mod qtz vnlts.	1	tr							
												Dissem + vnlt Sx. Gouge @ 437.5, +									
												445 TICs?									
	450.5	456.0	5.5	5.5	Andes	brn	biot		M50	QXX		Andes as 324.5 - 330.7 - S high Δ	1/2								
												qtz vnlts.									
	456.0	468.3	12.3	12.3	Andes	gm brn	biot sern		M50	QXX		Andes as 381-394.9. S high Δ	1/2								
												qtz vnlts.									
	468.3	474.0	5.7	5.7	Andes	gm brn	biot sern		W50	Q50		Andes. Ab plag dusted. S qtz rplcmnt	1/2								
												of fold. mi biot + sern. mi qtz									
												vnlts. foln ∥ Sx									
	474.0	484.2	10.2	10.2	Andes	gm	sern		W45	QXX	3	Andes fgr. mod Qtz vnlts, irreg	tr								
												angles. mi sern. V mi biot.									
	484.2	486.9	2.7	2.7	Andes	brn	biot		M45	QXX		Andes as 324.5-330.7	1/2								
	486.9	503.1	16.2	16.2	Andes	gm	sern		M50	QXX		Andes fgr. mod sern. mi irreg	1/2								
												qtz vnlts. f gr dissem Sx.									
6x546426	503.1	504.1	1.0	1.0	Csch	blk	chl		M50			Chlorite alt. V stng chl alt andes?	4	+	tr		95	282	162	.015	.2
												mi rhyolitic lapilli ~ 5 mm fm.									
												foln ∥ deformed Sx									

NOTES:

SHEET NO. 5 OF 11

HOLE NO. 83663 ACNC DRILL LOG SHEET

AREA: ______

PROPERTY: ______ CLAIM: ______ LEVEL: ______ SEC: ______ TWP: ______ RNG: ______ COUNTY: ______ CONTRACTOR: ______ DRILL: ______

COLLAR COORDINATES		COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH
N	E				

DW

STATE: ______ CORE SIZE: ______ DATE STARTED: ______

DATE COMPLETED: ______

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal		ASSAY Cu	Zn	Pb	Au	Ag
	504.1	513.8	9.7	9.7	Rdct	gy	ser.		M45			Rdct tuff. mod qtz eyes + deformed qtz eyes. Overall uniform fg w/ a larger flattened clasts. Monomict. mi plag phyric dissem py	1	tr								
Fx546427	513.8	524.1	10.3	10.3	Rdct	gy	ser		M50	Qxv		Sx as 504.1-513.8. w/ mod qtz boudins + m al Sx	4	1/2	tr			410	510	98	.025	.2
	524.1	534.4	10.3	10.3	Ands	gy grn	ser		M50	Qxx		Ands-Dac tuff. fgr. mi qtz vnlts, foln ll. dissem Sx. mi frags	1/2	tr								
	534.4	539.1	4.7	4.7	Ands	brn grn	biot ser		M45	Qxx		Ands as 381-394.9.	1/2									
	539.1	566.5	27.4	27.4	Ands	gy grn	ser		M45	Qxx		Ands. fgr flow or tuff. partly plag phyric. dissem + foln ll Sx. wk ser v mi biot. mi qtz vnlts + boudins, largely foln ll.	1/2									
	566.5	569.5	3.0	3.0	Goug	grn	clay	45			xx	Clay rich gouge w/ Ands clasts										
	569.5	577.5	8.0	8.0	Ands	grn	ser		M50	Qxx		Ands as 539.1-566.5	1/2									
	577.5	578.0	0.5	0.5	Goug	gy	clay	60				Gouge as 566.5-569.5										
	578.0	579.9	1.9	1.9	Ands	grn	ser		S60	Qxx		Ands as 539.1-566.5	1/2									
	579.9	582.4	2.5	2.5	Ands	gy	ser sil		Sxx	Qxx		Ands contact altn zone as 302.2-303.8 w/ lesser sulphides	1/2									
	582.4	593.3	10.9	10.9	Dike	tn	sil					Felsic dike as 303.8-314.4	tr									
	593.3	595.9			Ands	gy	ser sil		Sxx	Qxx		as 579.9-582.4	1									

NOTES:

SHEET NO. 6 OF 11

HOLE NO. 83663 ACNC DRILL LOG SHEET

PROPERTY: ______ CLAIM: ______ LEVEL: ______ SEC: ____ TWP: ____ RNG: ____ COUNTY: ______ CONTRACTOR: ______

AREA: ______

DRILL: ______

DATE STARTED: ______

STATE: ______ CORE SIZE: ______

DATE COMPLETED: ______

COLLAR COORDINATES		COLLAR ELEV	AZIMUTH	INCL'N	TOTAL DEPTH
N	E				Deo

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	% EST. Py	Cpy	Sph	Gal		ASSAY Cu	Zn	Pb	Au	Ag
	595.9	600.8	4.9	4.9	Ands	gr	sem.		M60	QXX		Ands. locally plag dyke, mod irreg qtz vnlts + boudins. mi chlr altn. wk sem, dissem + foln ll Sx vnlts.	3									
fx546428	600.8	604.5	3.7	3.7	Dac	gn	Sem		M60			Dac tuff. fine gr. mi fragments. dissem + foln ll Sx. mi chlr alt. mod-stg sem, almost talcite	3	tr	tr			18	24	<2	.015	<.2
	604.5	608.1	3.6	3.6	Ands	gn	Sem.		M50			Ands. fgr. wk sem. dissem + foln ll Sx.	2									
	608.1	610.0	1.9	1.9	Ands	gy	sem sil		S60			Ands. Contact alt zone. Kink folds AP 35°. mod sem, sil. As 579.9-582.4.	1/2									
	610.0	610.8	0.8	0.8	QV	wh		60				Qtz vn w/ mi felsic dike material. dissem + vnlt py	3									
	610.8	611.2	0.4	0.4	Dike	gy	sil sem	45				felsic dike as. 303.8-314.4, w/ assimilated andesite.	1/2									
	611.2	618.0	6.8	6.8	Bslt	dk grn	Hufl		M45			Bslt. Hufls, dissem lg (to 1cm) py cubes + fgr dissem + foln ll py. largely plag phenoc. mod chlr. non mft.	2									
	618.0	624.6	6.6	6.6	Ands	gy grn	sem sil		M55			Ands + Bslt tuff w/ mi flattened frags. mod sem, mod sil, mi chlr. dissem + foln ll py. s epiclastic seds?	4	tr	tr							
	624.6	627.3	2.7	2.7	Goug	gy grn	sem clay		S40		XX	Gouge + Ser alt ands? clay										

NOTES:

SHEET NO. 7 OF 11

HOLE NO. B3663 ACNC DRILL LOG SHEET

AREA:

PROPERTY: CLAIM: LEVEL: SEC: TWP: RNG: COUNTY: CONTRACTOR: DRILL:

COLLAR COORDINATES		COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH
N	E				

STATE: CORE SIZE: DATE STARTED:

DATE COMPLETED:

Des

SAMPLE NO	FOOTAGE FROM	FOOTAGE TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	LAYERING POLN	LAYERING VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal	ASSAY Cu	Zn	Pb	Au	Ag
fx546429	627.3	631.7	4.4	4.4	Andes	gy grn	serm & silic		M45			Andes heterolithic as 618 - 624.6. poss soft sed defm structures.	4	tr	tr		38	44	2	.020	<.2
fx546431	631.7	642.3	10.6	10.6	Rdct.	gy grn	serm & silic		M50			Rdct. f gr. poss tuffs w/ mod flattened rdct frags. mod serm mod silic	3	tr	tr		3	6	2	<.005	<.2
												dissem + Colin || py. mi qtz eyes. V mi inject qtz vnlts									
	642.3	647.4	5.2	5.2	Andes	grn	serm		M45			Andes dominant het frgl. Andes, bslt rdct. flattened frags to 1.5 cm.	3	tr	tr						
												mod serm. dissem + Colin || py. mi									
	647.4	651.0	3.6	3.6	Bslt	grn	Hrfl		W50			gouge @ 642.5. poss soft sed fault? Bslt. hrfls. as 611.2 - 618	2								
	651.0	663.2	12.2	12.2	Andes	grn	serm		M55			Andes dominant het. as 642.3 - 647.4	2	tr	tr						
	663.2	674.4	11.2	5.0	Bslt	dk grn	Hrfl		W60			Bslt Hrfls as 611.2 - 618. Core loss due to mudstone?	2								
	674.4	679.0	4.6	4.6	Bslt	dk grn	Hrfl	55	W55	Qxx		Mafic tuff. f gr bsltic. mod irreg qtz vnlts. vfi dissem py	1½								
	679.0	692.5	13.5	13.5	Andes	gy grn	serm		M55			Andes dominant Heterolithic frgl. Andes Dec - rdct. v mi bslt. mi irreg qtz vnlts. dissem + vnlt py. highly fractured. Fes mtx?	1½								
	692.5	693.4	0.9	0.9	Andes	grn	chlr	5 TO 25	Qxx			Chlorite rich tuff? fold hinge. Ab dismem qtz boudins. fold AP 160 + 40	3								

NOTES: fx546430 STD

HOLE NO. 83663 ACNC DRILL LOG SHEET

AREA: ______ DRILL: ______ DATE STARTED: ______ DATE COMPLETED: ______

PROPERTY: ______ CLAIM: ______ LEVEL: ______ SEC: ____ TWP: ____ RNG: ____ COUNTY: ______ CONTRACTOR: ______ STATE: ______ CORE SIZE: ______

COLLAR COORDINATES N	E	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH

DCO

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	Py	Cpy	Sph	Gal	Cu	Zn	Pb	Au	Ag
												assv Tour + Py									
	693.4	713.5	20.1	20.1	Ands	gy grn	Ser		M55			Ands dominant lot fogl. as 679-692.5	1/2								
	713.5	720.3	6.8	6.8	Ands	grn			M55			Ands. f.g.v. flow or tuff. v mi	1/2								
												irreg qtz vnlts. mi dissem + foln ll									
												vnlt py.									
	720.3	734.0	13.7	13.7	Mutff	dk grn		55	M55	Bxx		Bslt tuff. assv chlr. un layered	1/2								
												looking sem. mi irreg qtz vnlts.									
												mi dissem + foln ll py.									
	734.0	753.2	19.2	19.2	Bslt	dk grn	Hrfl		S55	Q55		Bslt Hrfl as 23.2 -42	tr								
	753.2	765.3	12.1	12.1	Bslt	"	"		S55			Bslt Hrfl. irreg blotchy mt. v mi	1/2								
												qtz vnlts. dissem py. WK layering									
												of hrfl.									
	765.3	774.4	9.1	9.1	Bslt	dk grn	Hrfl		W60			Bslt Hrfl pervasive f gr mt. mod-									
												strg mtc. Massive bslt. mi feld xtals									
	774.4	774.7	0.3	0.3	QV	wh		60				Qtz vn w/ chlr									
	774.7	782.4	7.7	7.7	Bslt	dk grn	Hrfl		M60	Q60		Bslt Hrfl as 765.3-774.4 w/ mi									
												layering + mi qtz vnlts. mod mtc									
	782.4	791.7	9.3	9.3	Bslt	dk grn	biot chlr		W60			Bslt. biot + chlr alt. Blotchy "cottage									
												cheese" texture, irrg. Alt variolec?									
												Gabbroic? Glomeroporphyritic text?									
												non mtc.									

NOTES:

HOLE NO. B3663 ACNC DRILL LOG SHEET

PROPERTY: ____ CLAIM: ____ LEVEL: ____ SEC: ____ TWP: ____ RNG: ____ COUNTY: ____ CONTRACTOR: ____ AREA: ____

DRILL: ____

STATE: ____ CORE SIZE: ____ DATE STARTED: ____

DATE COMPLETED: ____

COLLAR COORDINATES N	E	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH

DCO

SAMPLE NO	FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	CA	POLN	VEIN	B/FT	DESCRIPTION	Py	Cpy	Sph	Gal		Cu	Zn	Pb	Au	Ag
	791.7	814.9	23.2	23.2	Bslt	dk grn	Hcfl		W55	Q55		Bslt as 774.7 - 782.4 mod mtc	tr	tr								
	814.9	815.8	0.9	0.9	Bslt	"	"		H 55-15			Bslt. as above folded AP 80°										
	815.8	821.1	5.3	5.3	Bslt	dk grn			W60	Q60		Bslt. f gr. v mi plag phyric. mi qtz vnlts. [illegible] fgr mt. mod mtc. flows + tuffs.	tr									
	821.1	830.8	9.7	9.7	Bslt	dk grn			W55	Q55		Bslt. mod plag phyric. mod qtz+cal vnlts. non mtc. poss wk Hcfls. [illegible] flow. c qtz vns [illegible]	tr									
	830.8	840.3	9.5	9.5	Bslt	dk grn			W50	Q50		Bslt as above w/ f gr mt. mod mtc.										
	840.3	858.1	17.8	17.8	Maftf	dk grn	Hcfl		S55	Q55		Bslt tuffs + epiclastics. "layered" Hcfl. non mtc. mod qtz cal vnlts. f gr.										
	858.1	869.9	11.8	11.8	Bslt.	dk grn	Hcfl		M55	Q55		Bslt. parts plag phyric. crs + v fgr mt. mod mtc. mi qtz cal vnlts. flows, tuffs, mi epiclastics.										
	869.9	874.7	74.8	74.8	Bslt	dk grn	chlr.		W60	Qxx		Bslt. parts plag phyric. mod [illegible] qtz vnlts + [illegible] mod - ab fgr chlr [illegible]. mi dissem Sx [illegible] w/ qtz. mi contorted folds.	tr									
	874.7	875.1	0.4	0.4	QV	wh blk		60				Qtz, tour, epid vn.										

NOTES:

SHEET NO. 10 OF 11

HOLE NO. 83663 ACNC DRILL LOG SHEET

AREA: _____ DRILL: _____ DATE STARTED: _____ DATE COMPLETED: _____

PROPERTY: _____ CLAIM: _____ LEVEL: _____ SEC: _____ TWP: _____ RNG: _____ COUNTY: _____ CONTRACTOR: _____ STATE: _____ CORE SIZE: _____

COLLAR COORDINATES N	E	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH
					Deo

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal		ASSAY Cu	Zn	Pb	Au	Ag
	875.1	880.1	5.0	5.0	Bslt	gm	oxn		M65			Bslt flow + tuff. part plag phyric.										
												mi chlr. lim wf frac + fol										
	880.1	880.5	0.4	0.4	Goug	tn	clay					Lim gouge.										
	880.5	902.5	22.0	22.0	Maftf	gm	chlr.		S80	Qxx		Bslt. tuff + epiclastics. v layered.										
												mod chlr. v f gr. contorted + kink										
												folds AP 30 +50. spotty										
												magnetics. mi zones look like										
												mt BIF. mod irreg + folded qtz vnlts.										
	902.5	919.1	16.6	16.6	Maftf	gm	chlr		M90	Qxx		as 880.5 - 902.5 v ch folds.										
												APs 35-40 + 50-60										
	919.1	920.0	0.9	0.9	Goug	gy	clay					Gouge w/ clay + chlr.										
	920.0	933.5	13.5	13.5	Maftf	gm	chlr		M75	Qxx		as 880.5 - 902.5. v mi Kinks										
	933.5	945.4	11.9	11.9	Bslt	gm	chlr carb+		W60	Q60		Bslt flow. plag phyric. uniform, massive.										
	945.4	963.6	18.2	18.2	Maftf	gm	chlr		S xx	Qxx		as 902.5 - 919.1										
	963.6	978.5	14.9	14.9	Bslt	gm			W75			Bslt. parts plag phyric parts fgr.										
												fairly uniform. Irreg blotchy mt										
												spotty mtcs.										
	978.5	987.4	8.9	8.9	Bslt	dk gm	Hrfl		W70	Qxx		Bslt hrfl. secondary later plag.										
												assv chlr mt, refl plag to gmm.										
												mod mtc. mi biot, mi qtz cal vnlts										
	987.4	1004.0	16.6	16.6	Bslt	dk gm	Hrfl		W75	Qxx		Bslt Hrfl. part plag phyric. mi qtz cal vnlts.										
						blk						biot, mt chlr. mod mtc. flows + tuff.										

NOTES: EOH

SHEET NO. 11 OF 11

DRILL HOLE #	FROM	TO	THICKNESS	ACNC SAMPLE #	FA+AA ppm Au	ppm Ag	ppm As	ppm Bi	ppm Cu	ppm Hg	ppm Mo	ppm Pb	ppm Sb	ppm Zn	XRF Al2O3 %	XRF CaO %	XRF Cr2O3 %	XRF Fe2O3 %	XRF K2O %
83663	42.0	43.2	1.2	FX546407	<.005	<.2	<2	2	91	<1	1	<2	<2	72	15.52	9.9	<.01	8.33	0.83
83663	187.8	190.0	2.2	FX546408	<.005	<.2	18	2	100	<1	1	2	<2	92	16.81	8.06	0.01	9.88	1.95
83663	255.0	257.1	2.1	FX546409	<.005	0.2	90	6	339	<1	5	8	<2	104	14.74	1.99	<.01	15.09	1.66
83663	STD	STD		FX546410	0.110	1.2	6	4	495	<1	1	734	<2	822	13.35	6.04	<.01	13.99	1.58
83663	269.7	270.2	0.5	FX546411	0.270	5.4	260	Intf*	11900	<1	14	24	<2	320	12.12	0.27	<.01	36.36	0.33
83663	270.2	276.5	6.3	FX546412	0.040	0.2	190	2	388	<1	2	20	<2	328	14.7	0.41	<.01	13.87	1.48
83663	276.5	282.7	6.2	FX546413	0.010	0.2	36	<2	73	<1	2	82	<2	262	14.58	0.52	<.01	8.8	1.81
83663	282.7	291.8	9.1	FX546414	0.030	0.2	246	2	171	<1	6	14	<2	50	15.06	0.44	<.01	16.08	1.74
83663	291.8	297.0	5.2	FX546415	0.020	0.2	90	<2	110	<1	3	64	<2	340	16.44	0.79	<.01	13.63	1.25
83663	297.3	302.2	4.9	FX546416	0.015	0.2	148	2	177	<1	5	6	<2	50	13.04	0.39	<.01	13.95	1.61
83663	302.2	303.8	1.6	FX546417	0.050	0.6	376	6	182	<1	21	796	<2	1610	11.77	2.97	<.01	19.58	3.07
83663	303.8	309.0	5.2	FX546418	<.005	<.2	2	<2	4	<1	26	26	<2	72	13.33	1.36	<.01	0.96	3.99
83663	309.0	314.4	5.4	FX546419	<.005	<.2	<2	<2	<1	<1	<1	18	<2	32	13.6	1.36	<.01	0.9	3.95
83663	314.4	315.8	1.4	FX546420	<.005	<.2	52	2	121	<1	4	28	<2	110	15.19	1.95	<.01	9.43	3.67
83663	315.8	319.8	4.0	FX546421	<.005	<.2	44	<2	39	<1	1	6	<2	126	15.77	0.54	<.01	10.04	2.51
83663	319.8	324.5	4.7	FX546422	<.005	<.2	22	2	72	<1	3	12	<2	510	14.55	1.35	<.01	9.06	1.76
83663	324.5	330.7	6.2	FX546423	0.005	<.2	16	<2	59	<1	1	8	<2	208	17.08	4.4	<.01	8.14	2.19
83663	350.1	351.2	1.1	FX546424	0.050	0.2	58	2	246	<1	5	84	<2	3760	14.35	4.76	<.01	15.79	1.22
83663	374.4	381.0	6.6	FX546425	0.015	<.2	56	<2	69	<1	2	36	<2	558	15.09	2.24	<.01	11.87	1.45
83663	503.1	504.1	1.0	FX546426	0.015	0.2	284	2	95	<1	1	162	<2	282	15.98	0.57	<.01	9.88	2.99
83663	513.8	524.1	10.3	FX546427	0.025	0.2	74	2	410	<1	1	98	<2	510	16.21	0.96	<.01	9.38	3.42
83663	600.8	604.5	3.7	FX546428	0.015	<.2	6	4	18	<1	1	<2	<2	24	17.53	0.5	<.01	9.36	3.46
83663	627.3	631.7	4.4	FX546429	0.020	<.2	22	2	38	<1	3	2	<2	44	15.6	0.47	<.01	8.24	2.99
83663	STD	STD		FX546430	<.005	<.2	2	<2	<1	<1	3	2	<2	46	10.94	0.76	<.01	2.35	8.03
83663	631.7	642.3	10.6	FX546431	<.005	<.2	2	<2	3	<1	11	2	<2	6	16.57	0.46	<.01	2.24	2.8

ACNC SAMPLE #	XRF MgO %	XRF MnO %	XRF Na2O %	XRF P2O5 %	XRF SiO2 %	XRF TiO2 %	XRF LOI %	% TOTAL	ppm Ba	ppm Rb	ppm Sr	ppm Nb	ppm Zr	ppm Y	CHEMEX BATCH NUMBERS ICP9g	XRF A4123	HIGH SULPHIDE	OVERLIMITS
FX546407	2.68	0.19	2.36	0.33	52.88	0.94	4.62	98.58	295	20	296	6	108	24	A9640492	A9640493		
FX546408	2.71	0.17	1.84	0.28	51.88	0.94	4.29	98.82	405	36	308	6	117	18	A9640492	A9640493		
FX546409	5.94	0.17	0.54	0.25	48.87	0.87	8.45	98.57	570	30	48	6	114	20	A9640492	A9640493		
FX546410	4.88	0.17	2.16	0.16	54.05	0.91	1.9	99.19	525	64	248	8	204	30	A9640492	A9640493		
FX546411	8.39	0.3	<.01	0.15	20.35	0.56	16.05	94.88	60	6	12	2	48	16	A9640492	A9640493		A9641843
FX546412	8.1	0.28	0.13	0.16	52.09	0.67	7.05	98.94	265	22	30	4	93	16	A9640492	A9640493		
FX546413	7.25	0.24	0.19	0.17	59.18	0.57	5.58	98.89	310	26	38	6	132	20	A9640492	A9640493		
FX546414	8.49	0.2	0.14	0.18	46.46	0.65	9.27	98.71	245	26	40	6	114	20	A9640492	A9640493		
FX546415	9.9	0.29	0.38	0.2	46.78	0.69	8.54	98.89	190	20	48	6	129	22	A9640492	A9640493		
FX546416	6.53	0.18	0.09	0.13	54.16	0.53	8.07	98.68	195	26	70	4	96	24	A9640492	A9640493		
FX546417	2.48	0.12	0.63	0.12	40.51	0.38	15.43	97.06	380	58	244	4	93	16	A9640492	A9640493		
FX546418	0.34	0.06	3.28	0.02	72.83	0.1	2.79	99.06	1025	82	300	10	108	10	A9640492	A9640493		
FX546419	0.18	0.06	3.18	0.03	72.12	0.1	2.7	98.18	1070	86	314	12	111	10	A9640492	A9640493		
FX546420	3.34	0.16	1.59	0.12	54.25	0.48	8.7	98.88	555	74	290	6	93	14	A9640492	A9640493		
FX546421	6	0.2	0.19	0.21	56.67	0.63	6.58	99.34	405	38	52	6	144	22	A9640492	A9640493		
FX546422	5.72	0.26	0.62	0.18	59	0.55	5.66	98.71	330	28	52	6	135	18	A9640492	A9640493		
FX546423	3.67	0.25	1.99	0.19	57.22	0.64	3.76	99.53	515	40	102	6	144	20	A9640492	A9640493		
FX546424	9.43	0.51	0.65	0.18	41.17	0.65	10.34	99.05	155	28	40	4	102	20	A9640492	A9640493		
FX546425	8.63	0.35	0.49	0.17	51.56	0.63	6.58	99.06	255	32	46	4	111	18	A9640492	A9640493		
FX546426	5.81	0.16	0.15	0.26	56.28	0.86	5.86	98.8	280	62	24	4	129	24	A9640492	A9640493		
FX546427	5.43	0.12	0.32	0.33	55.09	0.87	6.21	98.34	350	70	30	8	144	28	A9640492	A9640493		
FX546428	2.86	0.03	0.74	0.3	55.99	1.04	6.69	98.5	2960	54	102	8	147	28	A9640492	A9640493		
FX546429	3.97	0.07	0.45	0.27	59.32	0.92	5.81	98.11	865	48	60	8	135	26	A9640492	A9640493		
FX546430	0.47	0.05	0.55	0.03	74.47	0.26	1.23	99.14	830	130	22	24	390	140	A9640492	A9640493		
FX546431	0.11	0.01	1.37	0.27	70.66	0.89	2.99	98.37	4890	38	220	8	150	12	A9640492	A9640493		

: 1200.00
270.00 ,FROM: 0.00

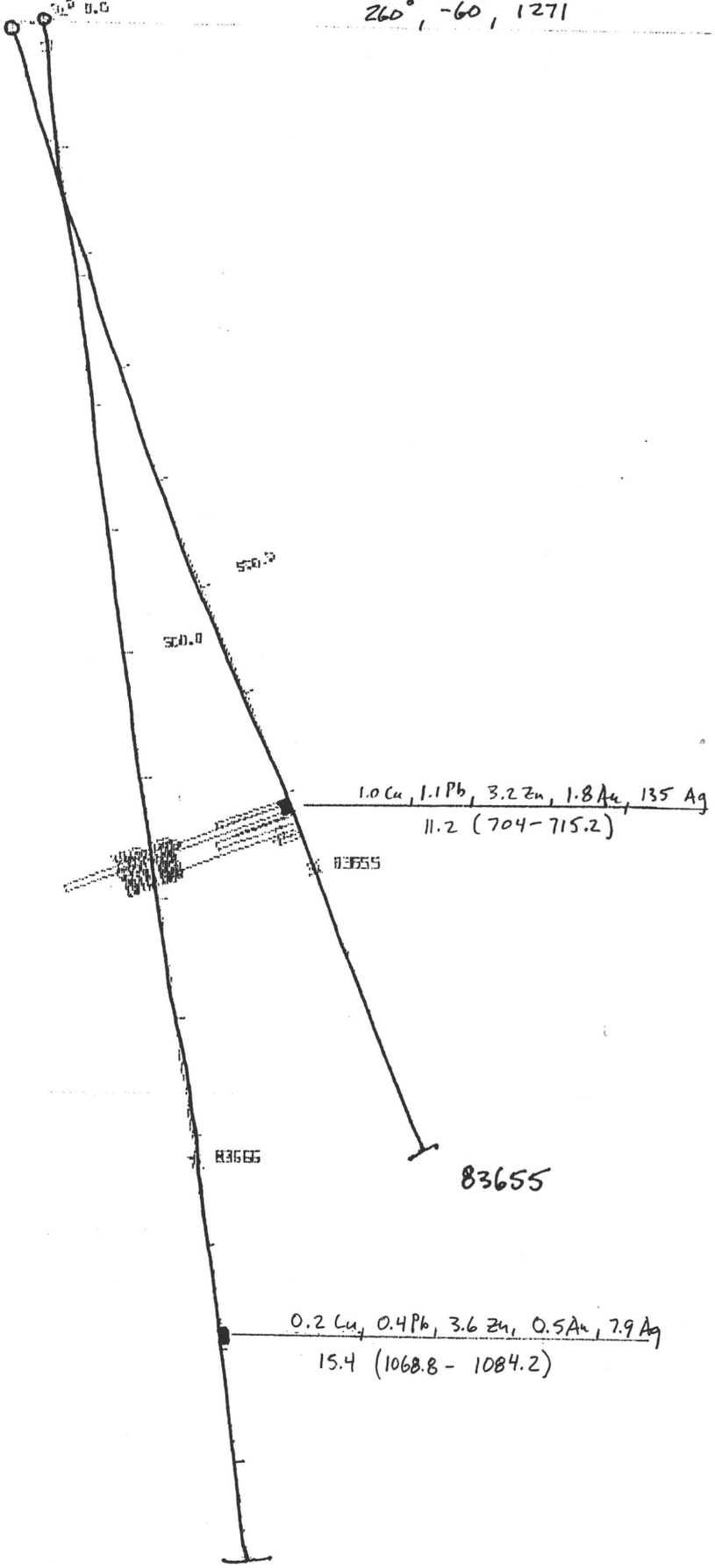
1:1200 Long-section

83655
250°, -50°, 1104'

83666
260°, -60°, 1271'

N

S



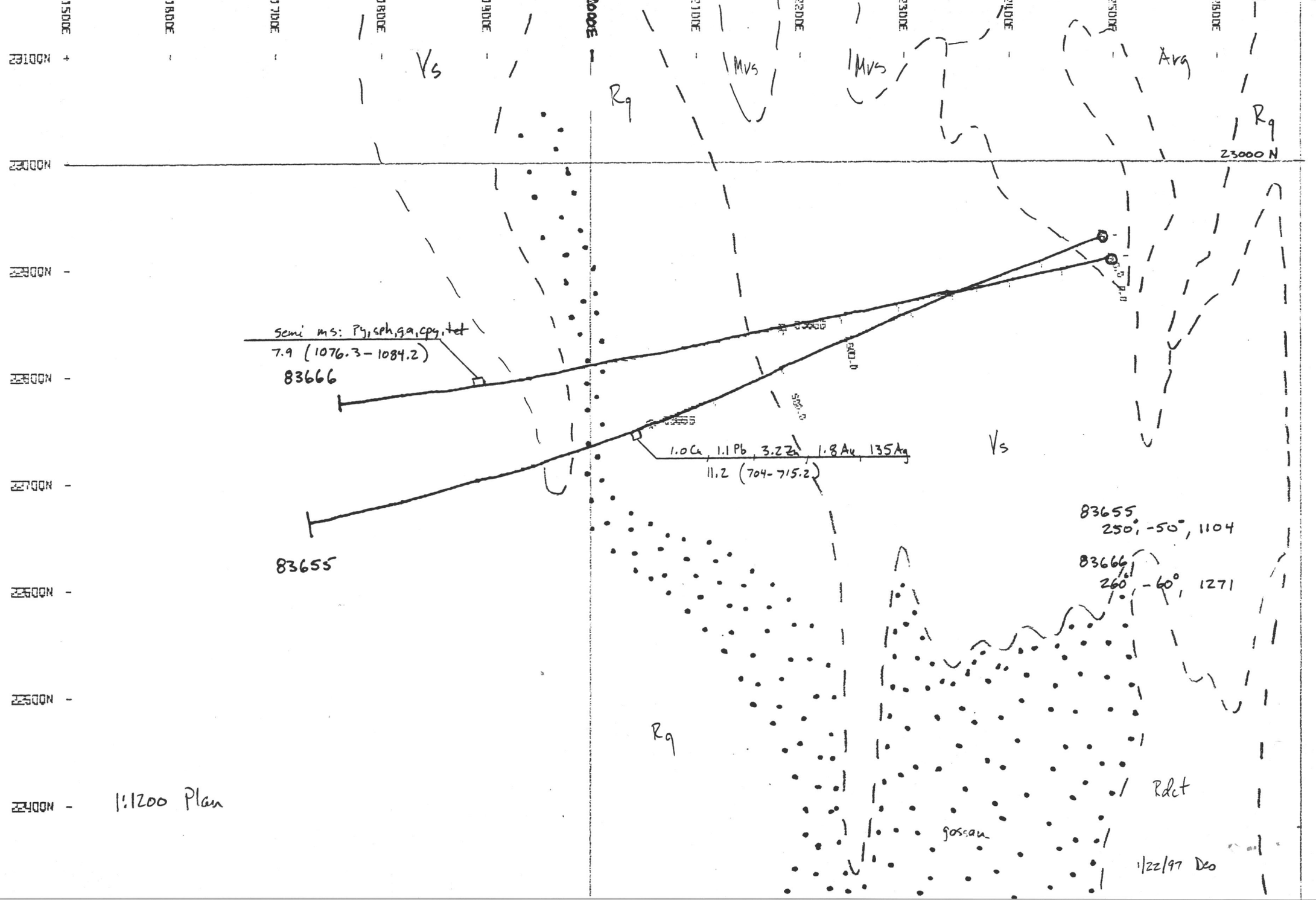
1.0 Cu, 1.1 Pb, 3.2 Zn, 1.8 Au, 135 Ag
11.2 (704 - 715.2)

83655

0.2 Cu, 0.4 Pb, 3.6 Zn, 0.5 Au, 7.9 Ag
15.4 (1068.8 - 1084.2)

83666

2/11/97 DG


15000E
16000E
17000E
18000E
19000E
20000E
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24000E
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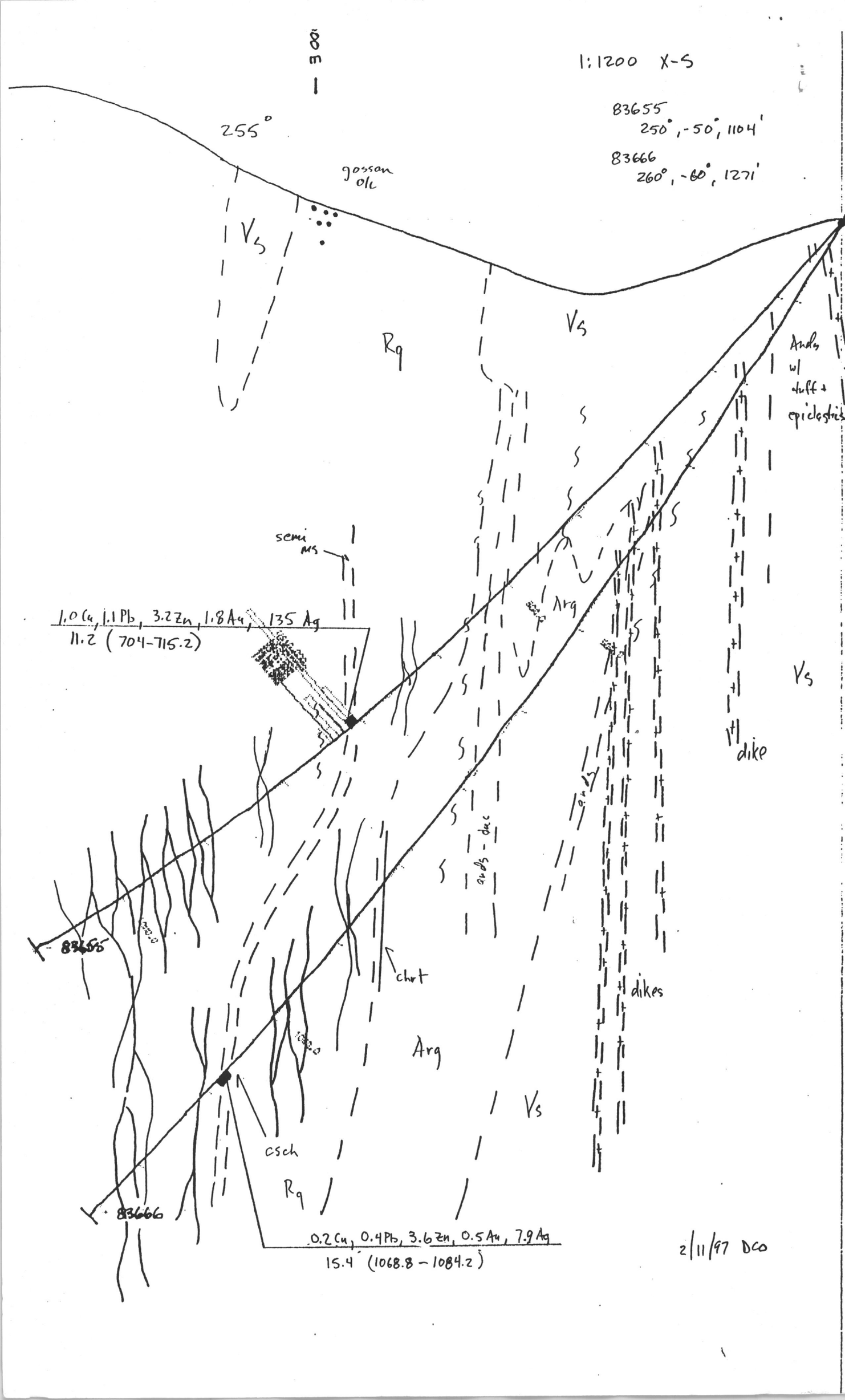
27000E
28000E
29000E
30000E
31000E
23100N
23000N
22900N
22800N
22700N
22600N
22500N
22400N
Vs
Rq
Mvs
Mvs
Arg
Rq
23000 N
semi ms: Py, sph, ga, cpy, tet
7.9 (1076.3 - 1084.2)
83666
1.0 Cu, 1.1 Pb, 3.2 Zn, 1.8 Au, 135 Ag
11.2 (704 - 715.2)
Vs
83655
250°, -50°, 1104
83666
260°, -60°, 1271
Rq
Rdct
gossan
1:1200 Plan
1/22/97 Deo


1:1200 X-S
83655
250°, -50°, 1104'
83666
260°, -60°, 1271'
255°
gossan
o/c
Vs
Rq
Vs
Andes
w/
tuff +
epiclastics
semi
ans
Arg
1.0 Cu, 1.1 Pb, 3.2 Zn, 1.8 Au, 135 Ag
11.2 (704-715.2)
Vs
dike
andes - dac
chrt
dikes
Arg
Vs
csch
Rq
83655
83666
0.2 Cu, 0.4 Pb, 3.6 Zn, 0.5 Au, 7.9 Ag
15.4 (1068.8 - 1084.2)
2/11/97 DCO

HOLE NO. 83655 **ACNC DRILL LOG SHEET**

AREA: Cu Qn N
DRILL: LY-44

PROPERTY: Copper Queen **CLAIM:** ______ **LEVEL:** Surface **SEC:** 36 **TWP:** 13N **RNG:** 1 1/2E **COUNTY:** Yavapai **CONTRACTOR:** Boart-Longyr. **DATE STARTED:** 7/8/96

STATE: Arizona **CORE SIZE:** NQ **DATE COMPLETED:** 7/26/96

COLLAR COORDINATES		COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH	
N 2293.0	E 249.0	4560	250	-50	1104	DC Oliver

SAMPLE NO	FOOTAGE FROM	FOOTAGE TO	FOOTAGE FT	FOOTAGE REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	LAYERING POLN	LAYERING VEIN	B/FT	DESCRIPTION	% EST. Py	% EST. Cpy	% EST. Sph	% EST. Gal		ASSAY (ppm) Cu	ASSAY Zn	ASSAY Pb	ASSAY Au	ASSAY Ag
	0	10	10	0	OB							dirt + rx										
	10	28	18	16	Tuff	gy grn	oxn		W45		3	Ands tuff w/ v mi feld phenos. V mi hem FeOx + MnOx on frac. Mod wthrd/oxn. Mi fe clay on frac. fg										
	28	31	3	1.5	Goug	rd brn	oxn		M45		15	Chop Ands tuff contact chop w/ dike										
fx 546 269	31	51.5	20.5	16	Lamp	dk gy	oxn					Dike, K-T, non fol. Sanidine + px phenos to 3 cm. Glassy frags to 1 cm! Mod FeOx mtx						49	232	110	.005	0.2
	51.5	62.3	10.8	10.8	Tuff	gy grn	wk oxn		M35	Qxx	3	Ands tuff fg fol. mi mm qtz vnlts. FeOx MnOx on frac. mi feld phenos.										
	62.3	105.9	43.6	40	Ands	grn			W35	Qxx		Ands, mg. FeOx on frac. Plag + amph phenos. V monotonous for a flow, poss pt dike. V mi mm qtz vnlts.										
	105.9	113.0	7.1	5	Ands	drk grn	mod oxn		M35	J 50 25	2	Ands oxidized w/ 3, 2-5 mm cal, qtz vnlts /ft. mi faulting of vnlts. mm to 3 cm displacement. lim along frac, faults + s vnlts.										
	113.0	123.7	10.7	10.7	Qtz	lt gy-grn	silr		M35		3	Aphanitic cherty looking replacement of ands + veining along fault? or w/in fold hinge? occr chlr lim. cal										

NOTES: fx 546269 43.5 - 44.5 sample J in veining = cal
fx 546270 STD

SHEET NO. 1 **OF** 16

HOLE NO. 83655 ACNC DRILL LOG SHEET

PROPERTY: ______ CLAIM: ______ LEVEL: ______ SEC: ______ TWP: ______ RNG: ______ COUNTY: ______ CONTRACTOR: ______ AREA: ______ DRILL: ______ DATE STARTED: ______ DATE COMPLETED: ______ STATE: ______ CORE SIZE: ______

COLLAR COORDINATES N	E	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH

DCO

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal		ASSAY Cu	Zn	Pb	Au	Ag
	123.7	133.8	10.1	10.1	Ands	gy grn			W30	J 60, 80; Q 20	1	Ands to ands bslt. 4 cal, cal qtz vnlts/ft ~3 mm th. mi poss qtz flattened amygs. assr chlr, + amph.										
	133.8	134.9	1.1	1.1	Ands	gy grn			W40		1	Amyg ands to ands bslt. poss amyg rich flow top. v mi qtz vnlts. assr feld, chlr										
	134.9	145.8	10.9	10.9	Ands	gy grn			W35	J 20, 30	1	Ands-bslt mi cal amygs. 4 cal vnlts/ft ~3 mm th. assr feld, chlr, amph										
	145.8	155.0	9.2	9.2	Ands	gy grn			W40	J Q xx	1	Ands w/ 5 fragments of darker amyg ands to ands-bslt. 3 vnlts cal/ft. w/ clotty qtz-cal deformed boudins. Mi fault displaced vnlts (to ~2 cm) w/ younger tension gash vnlts.										
	155.0	156.3	1.3	1.3	Ands	gy grn		60	W35	J xx	1	as 133.8 - 134.9										
	156.3	161.9	5.6	5.6	Ands	gy grn		55	W40	J 70		Ands w/ ands tuff, 3 cal vnlts/ft ~3 mm mi (1 cm) fault displacement of vnlts. mi flattened cal amygs.										

NOTES:

SHEET NO. 2 OF 16

HOLE NO. 83655 ACNC DRILL LOG SHEET

PROPERTY: ______ CLAIM: ______ LEVEL: ______ SEC: ______ TWP: ______ RNG: ______ COUNTY: ______ CONTRACTOR: ______ AREA: ______

DRILL: ______ DATE STARTED: ______ STATE: ______ CORE SIZE: ______ DATE COMPLETED: ______

COLLAR COORDINATES N	COLLAR COORDINATES E	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH

DCO

SAMPLE NO	FOOTAGE FROM	FOOTAGE TO	FOOTAGE FT	FOOTAGE REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	LAYERING POLN	LAYERING VEIN	B/FT	DESCRIPTION	% ESTIMATES Py	Cpy	Sph	Gal		ASSAY Cu	Zn	Pb	Au	Ag
	161.9	171.0	9.1	9.1	Tuff	gy grn	Siln			⅝ xx		Ands tuff or fg ands. Ab qtz, cal deformed boudins w/ spec hem. 4 cal qtz vnlts / ft to 1cm. Looks like deformed boudins in hinge of fold or near fault. assr ½% spec hem. Mi fold ap @ 50°.										
	171.0	179.0	8.0	8.0	Ands	gy grn			W45	⅝ xx		fg ands. 4-5 cal qtz vnlts / ft to 1cm th.										
	179.0	192.5	13.5	13.5	Ands	gy grn		15?	W15	⅝ 75	1	fg ands + ands tuff poss mi fg epiclastic seds. V shallow folia + poss bdg. Faulting of vnlts. 4 cal qtz vnlts / ft. Mi hematitic qtz clots / boudins.										
	192.5	202.0	9.5	9.5	Ands	gy grn				⅝ 65		Amyg ands - 6s/ft. 3 cal qtz vnlts / ft to 1cm th. Qtz cal amygs, mi spec hem. poss stretched frags.										
	202.0	228.8	26.8	26.8	Ands	gy grn			W30	⅝ xx		fg ands + ands tuff + epiclastics. V mi amygs. 3 cal qtz vnlts / ft to 1cm. Assr hem + chlr										

NOTES:

HOLE NO. 83655 ACNC DRILL LOG SHEET

AREA:
DRILL:
DATE STARTED:
DATE COMPLETED:

PROPERTY: CLAIM: LEVEL: SEC: TWP: RNG: COUNTY: CONTRACTOR:
STATE: CORE SIZE:

COLLAR COORDINATES N	E	COLLAR ELEV	AZIMUTH	INCLN.	TOTAL DEPTH

DCO

SAMPLE NO	FOOTAGE FROM	TO	FT	REC	ROCK TYPE	COLOR	ALTER	LAYERING CA	POLN	VEIN	B/FT	DESCRIPTION	Py	Cpy	Sph	Gal		Cu	Zn	Pb	Au	Ag
	228.8	236.3	7.5	7.5	Ark	brn gry		60		gxv	1	V crs sed. chrt, qtz, feld, chlr, cal. Clasts to 5mm, looks like an intrusive. No thermal contact affects. 3 qtz cal vnlts/ft to 1 cm. Some clotty qtz epid bion boudins. Xlst lithics										
	236.3	237.5	1.2	1.2	Ark	gry		50	M50	5 & 70	1	Arkosic sed. ss, argl + cgl w/ s clasts to 5 cm. 3 cal, qtz vnlts/ft to 1.5 cm th. Volc + sed clasts. XLs + lithics.										
	237.5	239.0	1.5	1.5	Cgl	gy grn		50	M50			V immature cgl. flattened clasts to 5 cm. Clasts of blk chert argl + volc. feld, qtz, chlr, cal lithics + authigenic minerals. Reverse graded bdg. (fining downhole). Possible overturned sequence. Xls + lithics										
	239.0	251.4	12.4	12.4	Ark	brn gry		50	M40		1	crs to v crs Ark ss. 1 lg clast of										
fr 546271	250.5	251										volc (4cm). Possible upside graded bedding. feld qtz, chlr, cal to 2mm. V mi cal qtz vnlts.						42	114	66	<.005	<0.2
												Xls + lithics										

NOTES: If not for the flattened chert argl volc bion argl clasts. This entire course sed section would easily look like a phaneritic intrusive w/ feld, qtz, chlr, + cal. No thermal contact affects.

SHEET NO. 4 OF 16