

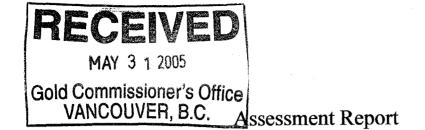
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[ARIS11A] **ARIS Summary Report** Regional Geologist, Smithers **Date Approved:** 2005.08.16 **Off Confidential:** 2005.12.21 ASSESSMENT REPORT: 27703 Mining Division(s): Omineca **Property Name:** Palomino **NAD 27** Latitude: 54 34 26 126 24 42 UTM: Longitude: 09 6050240 667309 Location: NAD 83 Latitude: 54 34 26 126 24 48 09 Longitude: UTM: 6050452 667196 093L09W NTS: 093L058 BCGS: Camp: 043 **Babine Range** Claim(s): Palomino 10 Bell, Steve Operator(s): Bell, Steve Author(s): **Report Year:** 2005 No. of Pages: 33 Pages Commodities Searched For: Copper, Gold DRIL General Work Categories: Work Done: Drilling DIAD Diamond surface (1 hole(s);BQ) (72.2 m) Keywords: Jurassic, Hazelton Group, Telkwa Formation, Andesites, Tuffs, Pyrite, Chalcopyrite Statement Nos.: 3222138 MINFILE Nos.: 093L 019 04760, 13845, 16071, 26005, 26641, 27051, 27424 **Related Reports:**

Ministry of Energy and Mines

1



For The

2004 Diamond Drilling Program

On The

Palomino Mineral Property

Omineca Mining Division

NTS 93L/09

Latitude: 54 degrees, 34 minutes, 26.6 seconds Longitude: 126 degrees, 24 minutes, 48.5 seconds

> Owned by: Steve Bell Operator: Steve Bell

> Report By: Steve Bell

May 2005

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1.0 Summary

The Palomino property may host porphyry style copper-gold and structurally controlled shear/vein copper-gold mineralization. This potential was determined by diamond drill testing of a geophysical feature when sulphide-bearing propylytically altered bedrock was intersected.

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2.0 Introduction

The following is a record of the diamond drill program performed between September 18 and October 10, 2004 on the Palomino mineral claim group under work permit # SMI-2004-0200557-0910.

2.1 Purpose

The purpose of the drilling program was to test bedrock and to determine the cause of a previously located electromagnetic anomaly.

2.2 Location and Access

The Palomino group of claims consists of 43 tenure cells located approximately 6 km northeast of Perow in west-central British Columbia. The claims are centred at 54 degrees 34 minutes' latitude and 126 degrees 24 minutes' longitude within the 93L/9E NTS map sheet. Access is made to the Palomino claim group from the Johnny David forest service road in the Morice forest District.

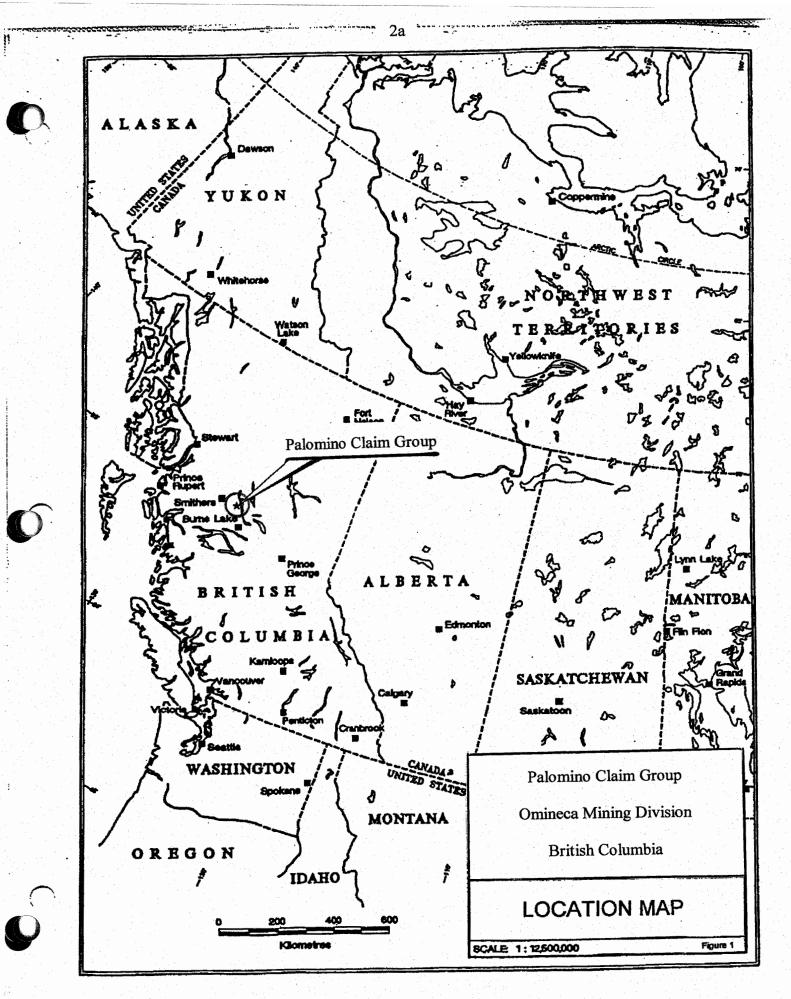
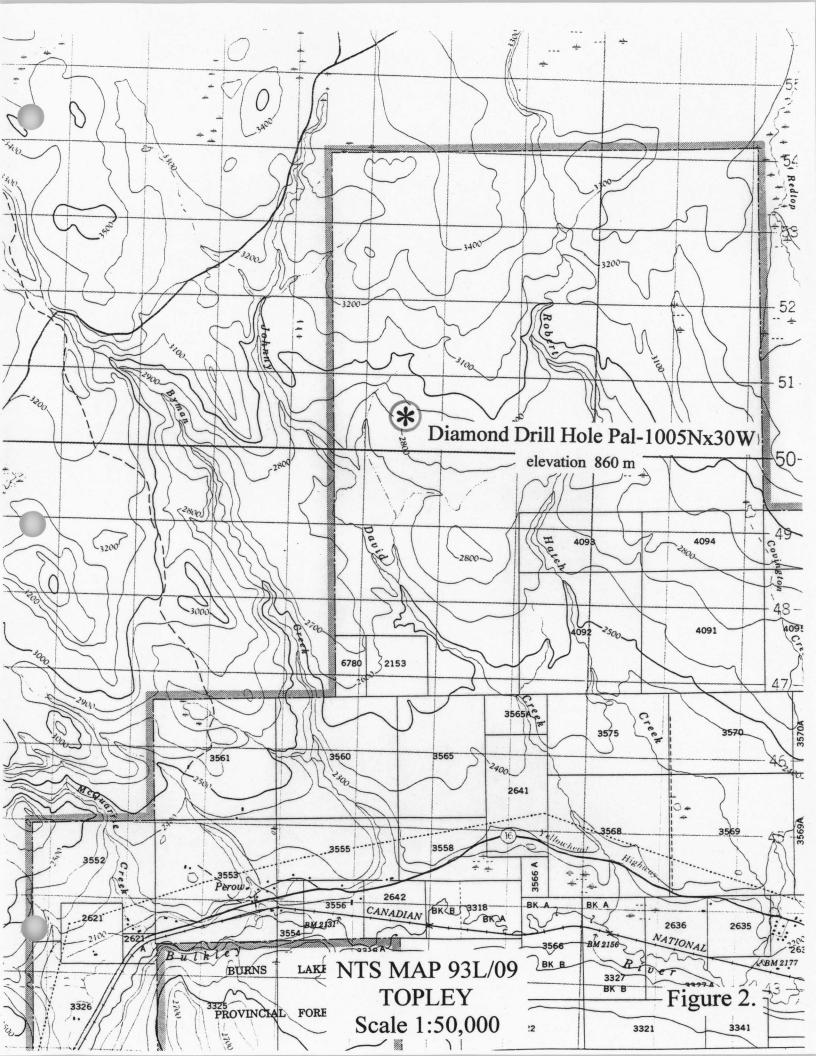


Fig. 1



2.3 Physiography, Vegetation and Climate

The claims are located on gently rolling topography typical of the Nechako plateau at an elevation of about 900 meters. Glacial features in the overlying till suggest that the overburden varies in thickness from a few meters on the tops of small hills to tens of meters in the low areas. Branch streams of Johnny David creek, which enter the terrain from the north and east, have eroded deep gulches that have exposed the underlying bedrock at several locations. The soil is fairly thin in most places except where the drainage is poor and the organic matter tends to accumulate. Pines largely forest the property on the drier ridges while alder and spruces are found in the lower wetter areas. On the edge of the stream valley there are small open meadows broken by groves of aspen. A large portion of the property has been recently logged. Winters are moderate to cold with typical snow accumulations of about 1 meter and the area is generally free from snow pack between May and October.

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2.4 Claim Ownership

The Palomino Claim group is owned and operated by S. Bell of Houston, British Columbia. The property is comprised of 43 tenure cells with tenure # 503560 located in the Omineca Mining Division.

2.5 History of Work

Mine file occurrence Jack Rabbit 93L019 is a 4-meter wide copper/gold/silver bearing shear zone that was discovered in 1927 outcropping on the south bank of an east/west tributary of Johnny David creek. Early efforts to trace the zone on surface were

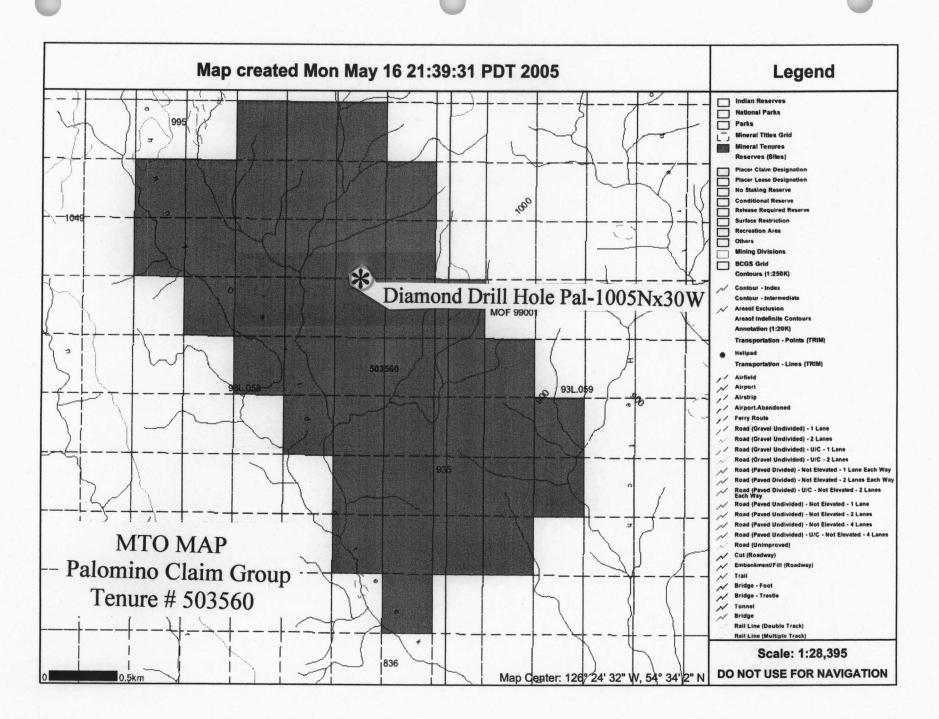
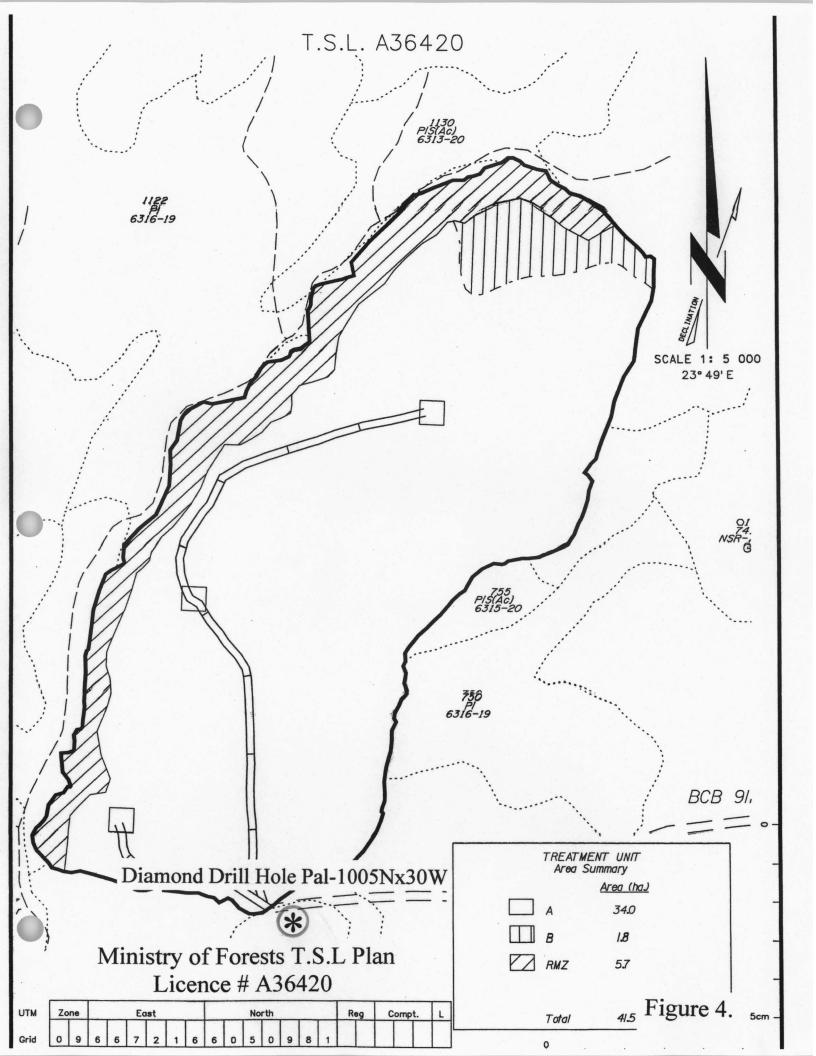


Figure 3.



hampered by excessive overburden so a short adit was driven in 1928 to test the mineralization. In the 1960's the property was examined for porphyry style mineralization and a chalcopyrite bearing quartz feldspar dyke located adjacent to the shear was stripped and sampled. Phelps Dodge corporation conducted a magnetometer survey in 1973 over the Jack Rabbit shear zone to define lithologic trends as an aid to mapping the underlying bedrock (Assessment report #2738) and in 1985 Ogyzlo mapped the geology in the vicinity of the original mineral showings (Assessment report #13845). The property was subsequently optioned to Rosalie Resources who performed a combined magnetometer and VLF-EM survey on a grid over the known mineralization (Assessment report #16071). In 1998 Bell performed a self-potential survey over the shear zone and analyzed 129 till samples (Assessment report #26005). The original adit that was driven in 1928 to explore the shear zone was excavated in 2001 and sampled to confirm the high-grade nature of the sulphide mineralization (Assessment report #26641). Bell located a previously unreported outcrop of quartz feldspar porphyry and further prospecting revealed the presence of chalcopyrite in andesite porphyry boulders in till (Assessment report #27051). In 2003 Bell conducted 39.46 km of ground based

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3.0 Regional Geology

The Perow area lies within the Stikina terrain, which is composed of late Triassic to Eocene age volcanic and sedimentary rocks. Within this sequence the Jurassic Hazelton group, which has been widely exposed by uplift and erosion provides a geologic

electromagnetic/magnetic surveys in the vicinity of the mineralized float.

Setting favourable to mineral exploration. The mainly subaerial Telkwa formation, the lowest unit of the group is host to structurally controlled precious metals and volcanogenetic massive sulphide prospects occur in the overlying oceanic sedimentary rocks. Cretaceous to Tertiary volcanic rocks of the Kasalka, Ootsa Lake and Endako groups are not as prospective however important porphyry style mineralization is related to the emplacement of intrusions within the Jurassic/Cretaceous pile. The capping Eocene Newman formation volcanic rocks are largely barren. MacIntyre described the regional geological framework in the British Columbia Ministries Report of Geological Fieldwork for 1995.

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3.1 Property Geology

Bedrock exposures indicate that a sequence of volcanic and sedimentary rocks, which belong to the Telkwa formation underlie the claim group. The most abundant rock types are andesite porphyry, volcanic breccias, tuff and quartz feldspar porphyry. These rocks appear in outcrop near the Jack Rabbit shear zone (Minfile occurrence 93L019). The Jack Rabbit occurrence is a 4-meter wide pyrite/chalcopyrite bearing shear zone which strikes at 340 degrees and dips toward the west at 70 degrees. The shear zone is exposed on the south bank of an east to west flowing tributary of Johnny David creek. In 1928 a sample collected across a 0.4-meter width of the zone assayed 42.5g/t Au, 171.4 g/t Ag and 9.4% Cu. A quartz feldspar porphyry dyke which outcrops 20 meters east of the shear and assays 0.1% copper over 20 meters could be related to the Jack Rabbit mineralization. The dyke strikes in the same direction as the shear and cuts the volcanic host rock at a steep angle. Andesitic rock adjacent to the dyke contains a propylytic

alteration mineral assemblage, which includes abundant epidote, calcite, anhydrite, albite, magnetite and minor chalcopyrite. Near the headwaters of another drainage 1.5 km to the northwest, quartz feldspar porphyry is exposed on both sides of a steep gully. This dyke is interpreted to be the northwest extension of the quartz feldspar porphyry located adjacent to the Jack Rabbit shear zone. At the northwest occurrence both the dyke and the andesitic host rock exhibit a greater degree of alteration. Abundant quartz carbonate veins are present and the host rock has been bleached to a beige/buff colour. Bedding in sedimentary rocks which outcrop in an "S" bend of a north south tributary of Johnny David creek indicates that the local stratigraphy strikes in a northwest direction and dips gently toward the northeast.

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3.2 2004 Diamond Drill Program

A Boyles BBS-1 surface drill was mobilized and set up at diamond drill hole location Pal-1005Nx30W, where one vertical hole was drilled through 34 meters of till and 38 meters of BQ size core was extracted from the underlying bedrock. The core was placed in wooden core boxes and taken to storage at Houston B.C. The drill was then demobilized and the site rehabilitated. A treated wooden post was placed to mark the location of the collar. Diamond drill hole Pal-1005Nx30W encountered propylytically altered andesite and minor chalcopyrite mineralization. A drill log is included in the appendix of this report that, describes each rock unit encountered. Depth below collar is indicated in meters. No samples were sent for assay.

4.0 Lithology

Lithology is restricted to fine grained green/grey andesitic flows with minor tuffaceous andesite. There are three cooling units, each of which may consist of more than one flow.

4.1 Stratigraphy

The Lithology is consistent with lower to middle Hazelton group Telkwa formation feldspar phyric andesite flows with minor ash air-fall tuff.

4.2 Structure

There are distinct flow tops marked by ash-tuff at 54.3 m and 68.0 m, which dip at 60 degrees. Within the flows are intervals of increased fracture density with patchy to pervasive chlorite and epidote alteration possibly indicative of cooling unit tops.

4.3 Alteration

A hydrothermal mineral assemblage including epidote, chlorite, carbonate, albite, magnetite, hematite, clay and quartz characterizes the alteration. The intensity of the propylitization diminishes toward the bottom of the hole where the green groundmass can be attributed to the development of secondary chlorite and epidote related to post volcanic processes associated with cooling rather than hydrothermal processes.

4.4 Mineralization

Overall sulphide content is low and is confined to fracture controlled and disseminated pyrite and chalcopyrite. Quartz/carbonate veins at the top of the hole host the bulk of the pyrite. Chalcopyrite decreases in abundance toward the bottom of the hole.

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5.0 Discussion

The hole was drilled to test a north trending east dipping electromagnetic conductor defined by a vertical loop cross over. The electromagnetic anomaly lies on the flank of a magnetic feature the peak of which is located 200 meters north of the drill hole. Since the vertical hole was collared directly over the electromagnetic anomaly it is possible that the hole missed the full width of the conductor and intersected an associated alteration zone. The mineralization could also be related to a weak porphyry system.

6.0 Conclusions and Recommendations

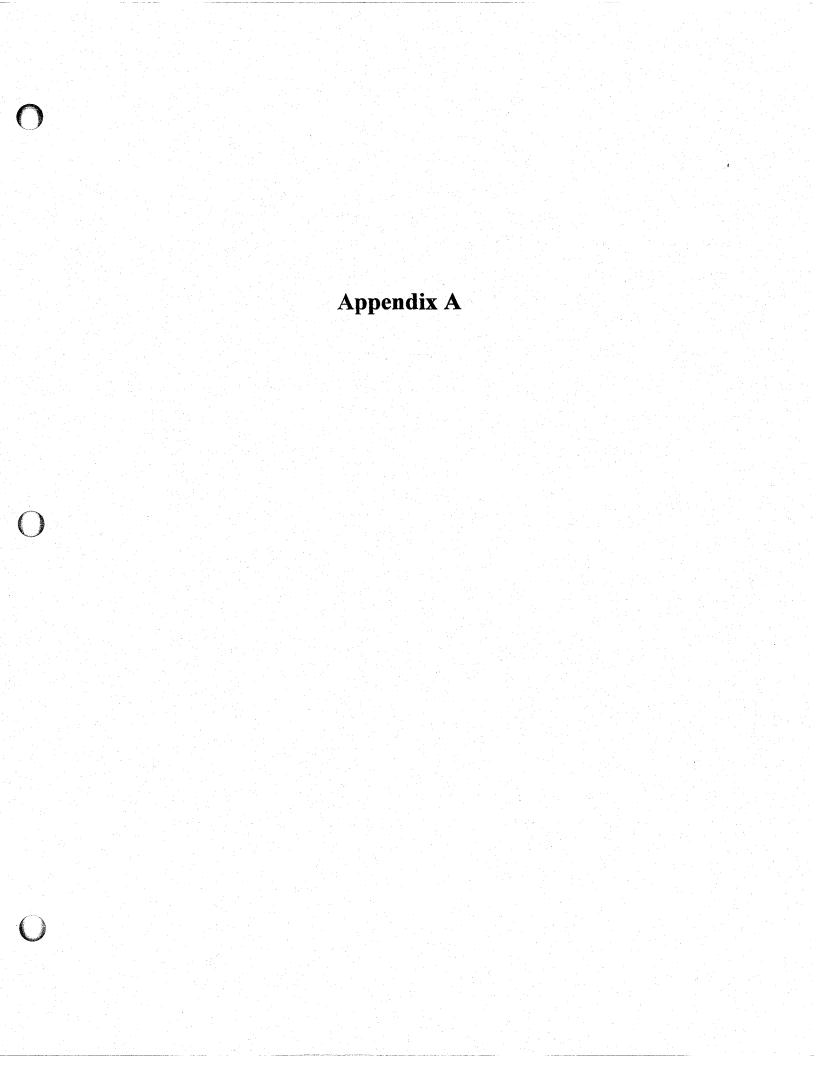
Drilling encountered propylytically-altered rock that could be related to undiscovered sulphide mineralization and further drill testing is warranted. Two more diamond drill holes should be drilled to test the property for structurally controlled and porphyry style mineralization. Hole #1 should be located to test the magnetic feature that could be the locus of porphyry style mineralization. Hole #2 to be collared 85 meters east of Pal-1005Nx30W to test the full width of an east dipping conductive zone.

Statement of Qualifications

This is to certify that I am a graduate of Queen's University at Kingston, Ontario, with a Bachelor of Science degree in Mining Engineering (1985). I am currently employed in the mineral exploration industry.

> Steve Bell Mining Engineer May 16, 2005

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Palomino Diamond Drill Program 2004

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Hole #	PAL-1005Nx	30W
Map sheet	93L09	
Collar	Latitude : Longitude :	54 degrees, 34 minutes, 26.6 seconds 126 degrees, 24 minutes, 48.5 seconds
Туре	Core	
Size	BQ	
Diameter	1 7/16 in.	
Orientation	Vertical	
	Feet	Meters

	Feet	Meters	
Depth	237	72.24	
Overburden	112	34.14	
Interval cored	125	38.1	

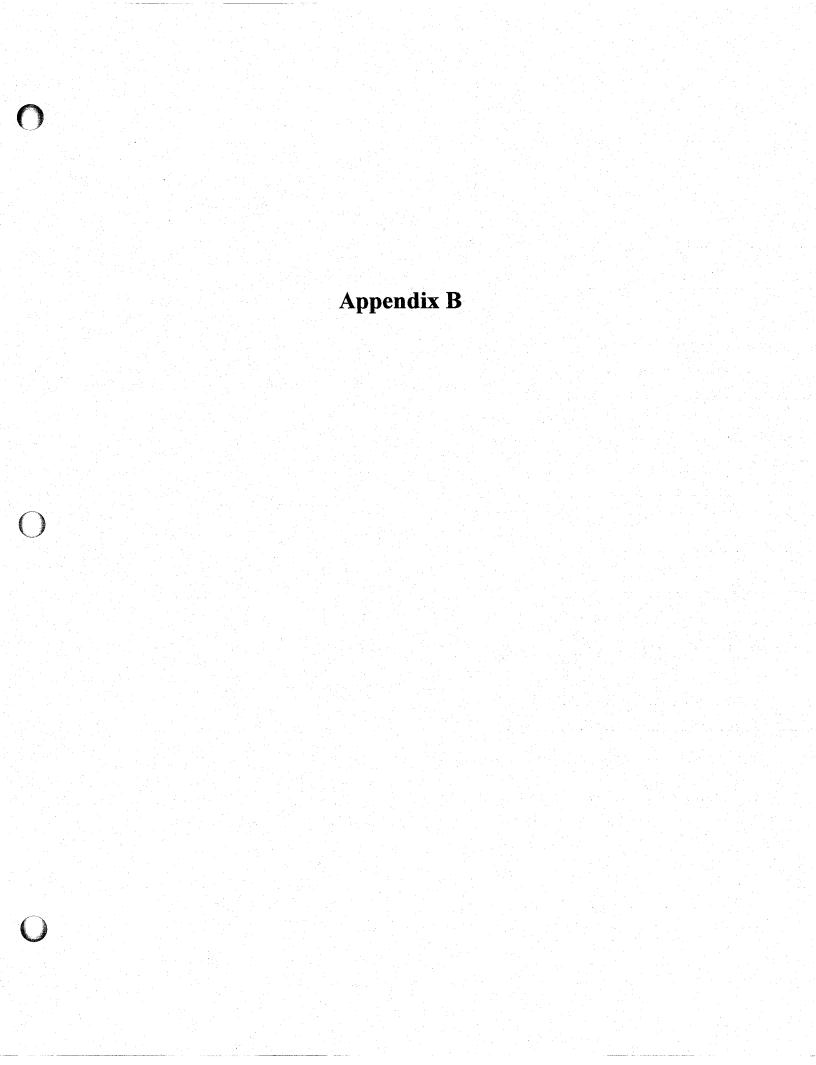
Summary of Costs

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Item	Hours	Rate	Sub-total
Hyab Labour Casing Travel	14 50 56 46	\$85.00 \$30.00 \$90.00 \$20.00	\$1,190.00 \$1,500.00 \$5,040.00 \$920.00
	Feet	Rate	\$920.00
Coring	125	\$30.00	\$3,750.00
	Days	Rate	1
Pick-up	23	\$100.00	\$2,300.00
Report			\$1,000.00
Total		. <u>I </u>	\$15,700.00

Date	Activity	Hyab	Labour	Casing	Trave
Sept 18	Mobilized drill	8	6		2
Sept 19	Mobilized supply pump and hose		6		2
Sept 20	Mobilized drill pump, leveled drill, built staging, Installed 5' of casing		6	2	2
Sept 21	Installed 29' casing to 34'			8	2
Sept 22	Installed 10' casing to 44' Drilled past block with BQ coring tools			8	2
Sept 23	Pulled BQ rod Changed casing bit and replaced casing Installed 6' casing to to 50'			8	2
Sept 24	Mobilized casing		4		
Sept 25	Installed 20' casing to 70'			8	2
Sept 26	Installed 27' casing to 96' Installed BQ rod to core block			8	2
Sept 27	Thawed frozen pumpline Pulled BQ rod to retrieve overshot Replaced BQ rod and cored though block to 108'		4	4	2
Sept 28	Cored ahead of casing to 115' Pulled BQ rod Installed 14' casing to 110'			8	2
Sept 29	Replaced supply pump Installed 2' casing to 112'			2	2
Sept 30	Cored 10' with #6 bit				2
Oct 1	Cored 30' to 40'				2
Oct 2	Cored 4' to 44' Lost core 44' to 65' (pyritic green sand) Pulled rod changed to #7 bit				2
Oct 3	Cored 20' to 85'				2
Oct 4	Cored 40' to 125'				2
Oct 5	Pulled BQ rod De-mobilized BQ rod		6		2
Oct 6	Pulled casing		6		2
Oct 7	De-mobilized pumps and hose		6		2
Oct 8	De-mobilized casing			-	4
Oct 9	De-mobilize drill	6	4		2
Oct 10	Site rehab		2		2
	Date Sept 18 Sept 19 Sept 20 Sept 21 Sept 22 Sept 23 Sept 23 Sept 24 Sept 25 Sept 25 Sept 26 Sept 27 Sept 28 Sept 28 Sept 29 Sept 29 Sept 30 Oct 1 Oct 2 Oct 3 Oct 3 Oct 4 Oct 5 Oct 6 Oct 7 Oct 8	Sept 18 Mobilized drill Sept 19 Mobilized supply pump and hose Sept 20 Mobilized drill pump, leveled drill, built staging, Installed 5' of casing Sept 21 Installed 29' casing to 34' Sept 22 Installed 10' casing to 44' Drilled past block with BQ coring tools Sept 23 Pulled BQ rod Changed casing bit and replaced casing Installed 6' casing to 50' Sept 24 Mobilized casing Sept 25 Installed 20' casing to 70' Sept 26 Installed 27' casing to 96' Installed BQ rod to cere block Sept 27 Thawed frozen pumpline Pulled BQ rod to cere block Sept 28 Cored ahead of casing to 115' Pulled BQ rod Installed 14' casing to 110' Sept 29 Replaced supply pump Installed 14' casing to 110' Sept 30 Cored 10' with #6 bit Oct 1 Cored 30' to 40' Oct 2 Cored 4' to 44' Lost core 44' to 65' (pyritic green sand) Pulled rod changed to #7 bit Oct 3 Cored 20' to 85' Oct 4 Cored 40' to 125'. Oct 5 Pulled Q rod De-mobilized pumps and hose Oct 7 De-mobilized pumps and hose </td <td>DateActivityHyabSept 18Mobilized drill8Sept 19Mobilized supply pump and hose</td> <td>DateActivityHyabLabourSept 18Mobilized drill86Sept 19Mobilized supply pump and hose6Sept 20Mobilized drill pump, leveled drill, built staging, Installed 5' of casing6Sept 21Installed 29' casing to 34'-Sept 22Installed 10' casing to 44' Drilled past block with BQ coring tools-Sept 23Pulled BQ rod Changed casing bit and replaced casing Installed 6' casing to 50'-Sept 24Mobilized casing to 50'-Sept 25Installed 20' casing to 70'-Installed 20' casing to 70'Sept 26Installed BQ rod core block-Sept 27Thawed frozen pumpline Pulled BQ rod and cored though block to 108'-Sept 28Cored ahead of casing to 115' Pulled BQ rod Installed 14' casing to 110'-Sept 29Replaced Supply pump Installed 14' casing to 110'-Sept 30Cored 10' with #6 bitOct 1Cored 30' to 40'Oct 2Cored 4' to 44' Lost core 44' to 65' (pyritic green sand) Pulled BQ rod Cored 40' to 125'Oct 3Cored 20' to 85'Oct 4Cored 40' to 125'Oct 5Pulled BQ rod De-mobilized pumps and hose66Oct 8De-mobilized casing-6</td> <td>Date Activity Hyab Labour Casing Sept 18 Mobilized drill 8 6 </td>	DateActivityHyabSept 18Mobilized drill8Sept 19Mobilized supply pump and hose	DateActivityHyabLabourSept 18Mobilized drill86Sept 19Mobilized supply pump and hose6Sept 20Mobilized drill pump, leveled drill, built staging, Installed 5' of casing6Sept 21Installed 29' casing to 34'-Sept 22Installed 10' casing to 44' Drilled past block with BQ coring tools-Sept 23Pulled BQ rod Changed casing bit and replaced casing Installed 6' casing to 50'-Sept 24Mobilized casing to 50'-Sept 25Installed 20' casing to 70'-Installed 20' casing to 70'Sept 26Installed BQ rod core block-Sept 27Thawed frozen pumpline Pulled BQ rod and cored though block to 108'-Sept 28Cored ahead of casing to 115' Pulled BQ rod Installed 14' casing to 110'-Sept 29Replaced Supply pump Installed 14' casing to 110'-Sept 30Cored 10' with #6 bitOct 1Cored 30' to 40'Oct 2Cored 4' to 44' Lost core 44' to 65' (pyritic green sand) Pulled BQ rod Cored 40' to 125'Oct 3Cored 20' to 85'Oct 4Cored 40' to 125'Oct 5Pulled BQ rod De-mobilized pumps and hose66Oct 8De-mobilized casing-6	Date Activity Hyab Labour Casing Sept 18 Mobilized drill 8 6

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Palomino claims, DDH # Pal-1005Nx30W Dip Vertical BQ hole drilled by S.Bell, Logged by S.Bell, May 2005

From	То	Description
Collar	34.137	casing
34.137	35.197	broken and ground core (magnetic)
	Rock Unit	Medium Green Andesite
	Texture	fine grained, phyric
	Minerals	chlorite, epidote, calcite, hematite
	Phenocrysts	<1 mm long white subhedral plagioclase laths are evenly distributed thoughou and make up approximately 25% of the rock matrix.
	Fabric	1-2% selective replacement of the rock matrix by dull white calcite and massive light green epidote. Numerous randomly oriented fractures host <1mm wide white calcite veinlets. Fracture envelopes are coated with dull red massive hematite.
	Sulphides	chalcopyrite, pyrite <1% pyrite occurs throughout the matrix as discrete subhedral xtals with minor chalcopyrite bearing microveinlets.
	Comments	The fine grained matrix and grey/green groundmass favor naming this rock ar extrusive andesite. Calcite is genetically late cutting sulphide bearing micro veinlets. Patchy bleaching of the groundmass suggests minor clay mineral alteration. Core recovery is poor at 25% due to the blocky nature of the ground near the till bedrock interface.
35.197	35.497	rock fragments up tp 4cm dia. (magnetic)
	Rock unit	Medium Green Andesite
	Texture	fine grained, phyric
	Minerals	calcite, chlorite, hematite, clay
	Phenocrysts	<1mm long white subhedral translucent plagioclase laths
	Fabric	White calcite with light green chlorite fills fractures and partings with red/brown hematite stain.
	Sulphides	pyrite, chalcopyrite Rare 1-2 mm growths of fine subheral pyrite with one short 1 mm wide chalcopyrite veinlet.
	Comments	Greyish color of the groundmass indicates more pervasive clay mineral alteration. Poor core recovery at 30% due to blocky ground caused by a multitude of cohesionless microfractures.

Palomino claims, DDH # Pal-1005Nx30W Dip Vertical BQ hole drilled by S.Bell, Logged by S.Bell, May 2005

From To		m To Description		
35.497	36.262	solid core (altered non-magnetic)		
	Rock unit	Greenish Grey Andesite		
	Texture	fine grained, phyric		
	Minerals	calcite, chlorite, clay, carbonate, quartz		
	Phenocrysts	<1mm long translucent to chalky dark grey subhedral plagioclase laths		
	Fabric	Pervasive replacement of groundmass by white calcite, light green aphanitic chlorite and light grey clay. Selective replacement of feldspar by clay. Seve 2-5 mm wide, steeply dipping 60-75 deg. white quartz and white/purple carbonate veins cut this section. These are cut by numerous randomly oriented white calcite microveinlets causing minor displacement.		
	Sulphides	pyrite, chalcopyrite < 2 sqcm patches of disseminated subhedral pyrite with rare chalcopyrite in bleached groundmass. Chalcopyrite also replaces rare 1mm dia. sperulites		
	Comments	Zone of increased veining with calcite microveinlets genetically late after quartz carbonate. Groundmass is relatively soft and effervesses violently w acid. Sulphide mineralization is controlled by the quartz carbonate veins an occurs in the groundmass near the veining where the groundmass is more siliceous.		
36.262	36.542	solid core (non-magnetic)		
	Rock unit	Greyish Green Andesite		
	Texture	fine grained, phyric		
	Minerals	calcite, epidote, quartz		
	Phenocrysts	<1 mm long dark grey translucent subhedral plagioclase laths		
	Fabric	White calcite fills numerous microveinlets and partings. Epidote forms selective pseudomorphic replacements after plagioclase.		
	Sulphides	pyrite Approximately 1% pyrite appears in microveinlets and <1 mm subhedral xtals throughout the matrix.		
11 - E	Comments	Chlorite poor unit		

Palomino claims, DDH # Pal-1005Nx30W Dip Vertical BQ hole drilled by S.Bell, Logged by S.Bell, May 2005

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From	То	Description
		d angle fragmente up to Dam dia (non magnetia)
36.542	36.852	ground rock fragments up tp 2cm dia. (non-magnetic)
	Rock unit	Grey Green Andesite
	Texture	fine grained, phyric
	Minerals	chlorite, calcite, clay
	Phenocrysts	<1mm long dark grey translucent subhedral plagioclase laths
	Fabric	Unit is cut by numerous cohesionless dark green chlorite and white calcite filled fractures. Fine grained groundmass selectively altered to grey coloured clay.
	Sulphides	pyrite <1% subhedral disseminated pyrite in 1-2 mm patches.
	Comments	Possible sheared zone
36.852	37.445	solid core (non-magnetic)
	Rock unit	Light Grey Andesite
	Texture	fine grained, phyric
	Minerals	calcite, chlorite, quartz, hematite, clay
	Phenocrysts	< 1mm long dark grey translucent subhedral plagioclase laths
	Fabric	2-3 mm quartz carbonate veins dipping @ 75 deg., hosting fine disseminate specular hematite cut this unit. The quartz carbonate veins are cut by random <2 mm wide white calcite veinlets. Dark green chlorite forms vein envelopes and appears on fracture surfaces with clay.
	Sulphides	pyrite 2-3% subhedral massive and disseminated pyrite flanks quartz carbonate veins and occurs thoughout the matrix.
	Comments	Possible sheared zone
37.445	37.675	broken and ground core (magnetic)
	Rock unit	Light Grey Andesite
	Texture	fine grained, porhyritic
	Minerals	calcite, chlorite, clay

Palomino claims, DDH # Pal-1005Nx30W Dip Vertical BQ hole drilled by S.Bell, Logged by S.Bell, May 2005

rom	То	Description
	Phenocrysts	<1 mm long dark grey translucent subhedral plagioclase laths
	Fabric	Plagioclase laths make up 25% of the matrix 1% of these selectively altered to clay minerals. White calcite and dark green chlorite appear as thin fracture coatings on numerous randomly oriented fracture surfaces.
I	Sulphides	pyrite Rare <1 mm subhedral pyrite xtals thoughout matrix
	Comments	Highly fractured unit
.675	38.822	solid core (magnetic)
	Rock unit	Greyish Green Andesite
	Texture	fine grained, porhyritic
	Minerals	calcite, chlorite, epidote, quartz, albite, magnetite, hematite, clay
	Phenocrysts	<1 mm long white plagioclase laths make up approximately 25% of the ma
	Fabric	The groundmass is a light greenish grey color with numerous lighter grey to tan bleached patches. White calcite forms microveinlet fill in a multitude of slips and partings throughout this unit. Dark green chlorite appears as thin vein envelopes with calcite and minor red/brown massive hematite on the more well developed fractures which cross the full width of the core. Less well developed fractures tend to be randomly oriented and discontino 3% of the plagioclase phenocrysts have been psuedomorphically replaced by light green epidote and irregular <0.5 cmsq patches of matrix have been selectively replaced by white microcrystalline quartz/carbonate. Rare salmo pink <1 mm wide albite microveinlets with albitized selvages cut this unit at steeply dipping angles and the groundmass beyond the selvage has been bleached to a light tan or buff color. Discrete <1 mm dia. subhedral magne xtals are distributed throughout the matrix but appear more frequently with the bleached patches. The magnetite has a hackly appearance and may be partially replaced by specular hematite.
	Fractures	Primarily chlorite/calcite coated fractures @ 45,36,65,36,30,45 and 45 deg
	Sulphides	pyrite, chalcopyrite Rare discrete subhedral xtals of pyrite are found on fracture surfaces and within the matrix. Fine grained pyrite and chalcopyrite form microveinlets with albite.
	Comments	Overall light green color indicates fairly pervasive chloritization of groundm Hardness of bleached patches suggests selective siliceous replacement of the matrix controlled by albitized fractures. First appearence of significant chalcopyrite.

Palomino claims, DDH # Pal-1005Nx30W Dip Vertical BQ hole drilled by S.Bell, Logged by S.Bell, May 2005

From	То	Description
at	37.850	<1 mm wide white calcite microveinlet @ 45 deg.
at 📘	37.915	8 mm wide siliceous/albitized lens shaped patch with white microcrystalline quartz and minor disseminated subhedral pyrite xtals.
at	37.985	irregular siliceous patch with salmon pink albite/chalcopyrite microveinlet @ 45 deg.
at	38.085	1 cm wide bleached siliceous patch with minor disseminated subhedral magnetite, pyrite, and chalcopyrite @ 70 deg.
at	38.245	1 cmsq siliceous patch with minor disseminated chalcopyrite.
at 📘	38.275	minor disseminated subhedral pyrite/chalcopyrite with light green massive epidote adjacent to 1 cmsq siliceous patch with white massive calcite.
at	38.355	1 mm wide chalcopyrite bearing albite veinlet @ 30 deg. which is cut by 3 calcite, epidote and hematite veinlets @ 55 deg.
at	38.505	1 mm wide chalcopyrite bearing ablite veinlet @ 40 deg.
34.137	38.605	1 mm wide chalcopyrite/pyrite/quartz/albite/chlorite veinlet
38.822	40.233	solid core (magnetic)
	Rock unit	Grayish Green Andesite
	Texture	fine grained, porhyritic
	Minerals	chlorite, epidote,calcite magnetite, albite, quartz
	Phenocrysts	<2 mm long corroded slightly greenish stained subhedral plagioclase laths make up approximately 25% of the matrix.
	Fabric	Numerous dark green chlorite filled fractures with minor white calcite cut this section. Light green massive epidote selectively replaces irregularly shaped 2-3 mm dia. patches of the matrix. These patches increase in size where they occur near mineralized albite/quartz microveinlets. The matrix has also been selectively bleached light grey/buff in color in 0.5-1.0 cmsq patches adjacent to the albite/quartz microveinlets. Plagioclase phenocrysts have been 20-30% psuedomorphically replaced by massive light green epidote.
	Fractures	Primarily chlorite, calcite and epidote filled, hematite stained fractures @ 45, 45, 30, 70, 45, 45, 65, 80, 35, 5, 45 deg.
	Sulphides	pyrite, chalcopyrite Minor pyrite and chalcopyrite in <2 mmsq disseminations and discrete subhedral xtals occur thoughout the matrix and in albite/quartz microveinlets

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From	То	Description
	Comments	The overall softness of the matrix and its greenish color suggests fairly pervasive chloritization of this unit. Epidote is also more common with fewer calcite filled fractures. Localized bleaching appears to be controlled by mineralized microveinlets.
at	38.822	5 mm wide quartz/epidote veinlet with minor disseminated pyrite, chalcopyrite
at	38.892	albite/chalcopyrite microveinlet @ 15 deg.
at	38.932	2 mmsq patch of disseminated subhedral pyrite
at	39.072	20 cm long albite/chalcopyrite microveinlet @ 90 deg.
at	39.222	albite/chalcopyrite microveinlet @ 80 deg. cut by albite/chalcopyrite microveinlet @ 35 deg.
at	39.382	albite/chalcopyrite microveinlet @ 10 deg.
at	39.492	albite microveinlet @ 50 deg.
at	39.552	albite/chalcopyrite microveinlet @ 60 deg.
at	39.572	albite/chalcopyrite microveinlet @ 80 deg.
at	39.692	albite microveinlet @ 10 deg.
at	39.697	albite/chalcopyrite microveinlet @ 12 deg.
at	39.742	quartz/albite/chalcopyrite microveinlet @ 15 deg.
at	39.812	pyrite/ chlorite microveinlet @ 80 deg.
at	39.852	1 cm long chalcopyrite microveinlet in friable chloritized host rock
at	40.122	minor disseminated chalcopyrite in 1 cmsq patch of massive green epidote
40.233	41.757	solid core (magnetic)
	Rock unit	Grayish Green Andesite
	Texture	fine grained, phyric
	Minerals	chlorite, calcite, epidote, hematite, quartz, albite, magnetite
	Phenocrysts	rare <1 mm long flesh colored plagioclase laths
	Fabric	The fine grained grayish green matrix of this unit is broken by light tan colore fracture controlled patches. Most fractures and partings have dark green chlorite developed on fracture surfaces with or without a thin coating of calcite and or red/brown hematite. Other fractures host guartz, carbonate,

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From	То	Description		
		albite and sulfides. Replacement of the matrix by massive green epidote is more pervasive and coinsides with an overall decrease in calcite. Magnetite occurs as <2 mm suhedral xtals and disseminations within the matrix and sulphide bering veinlets. Phenocrysts are less abundant.		
	Fractures	Primalily chlorite filled fractures with minor hematite stain @ 5, 45, 10, 65, 25 35, 30, 45, 65, 30, 70, 30, 45		
	Sulphides	pyrite, chalcopyrite Sulphides are present in equal proportions and are most abundant in numerous narrow fractures which range in width from hairline to 2 mm. Pyrite is found in the larger fractures commonly with quartz and carbonate. Chalcopyrite appears in the groundmass as discrete grains with epidote and in small discontinuous microfractures and veinlets. The veinlets commonly host albite and quartz.		
	Comments	While the overall green color indicates some chloritization of the matrix there is a subtle increase in the dark or opaque component. The unit is also harder which is related to a decrease in calcite and an increase in siliceous groundmass. Genetically, sulphide and quartz/carbonate veinlets cut epidote patches and albite micro veinlets cut quartz/carbonate. Chlorite filled fractures are latest. Increasing epidotization of the unit toward the end of the interval.		
at	40.303	2.5 mm wide white quartz veinlet @ 65 deg., chalcopyrite in hairline fracture with no alteration envelope @ 5 deg.		
at	40.413	minor fine grained subhedral pyritic dissemination in slightly bleached groundmass with a fine pyritic microveinlet.		
at	40.533	salmon pink/ white quartz microveinlet with minor pyrite and chalcopyrite @ 60 deg. adjacent to light green to tan bleached patch with significant 1-2 mm dia. subhedral grey magnetite.		
at	40.783	1 mm wide albite and chalcopyrite veinlet @ 15 deg.		
at	40.787	hairline fracture with chalcopyrite @ 15 deg.		
at	40.853	2 mm wide pyrite/chalcopyrite veinlet		
at	40.993	0.5 cmsq salmon pink albitic replacment of matrix		
at	41.113	barren quartz/carbonate microveinlet @ 85 deq. with minor chalcopyrite in adjacent microveinlet, 1.5 cmsq patch of light green masive epidote.		
at	41.233	3 mm wide barren quartz vein cuts 1.5 cmsq patch of light green epidote, cuts albite/chlacopyrite microveinlet @ 25 deg. and second albite/chalcopyrite micro veinlet at 30 deg.		
at	41.333	chalcopyrite microveinlet @ 90 deg.		

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From	То	Description
at	41.473	minor disseminated chalcopyrite, pyrite and magnetite with carbonate/hematite microveinlet @ 35 deg., albite/quartz/chalcopyrite microveinlet.
at	41.573	1mm wide albite/quartz/chalcopyrite microveinlet @ 5 deg.
41.757	43.281	solid core (magnetic)
	Rock unit	Greyish Green Andesite
	Texture	fine grained, aphyric
	Minerals	calcite, quartz, chlorite, epidote, magnetite, albite, hematite
	Phenocrysts	largely absent, rare <1 mm long faded white translucent plagioclase laths
	Fabric	White calcite and quartz appear in fractures and as replacements with patchy to pervasive light green massive epidote. Chlorite filled fractures cut this unit with less frequent albite/quartz/carbonate filled veinlets. Matrix hosts < 2 mm subhedral grey magnetite/hematitie.
	Fractures	Primarily chlorite with hematite stained fractures @ 45, 25, 45, 45, 15, 46, 45, 35, 25, 45, 15, 45 deg.
	Sulphides	pyrite, chalcopyrite Fracture controlled sulphides with albite, quartz and calcite
	Comments	Competant unit with selective to pervasive carbonate/quartz and epidote alteration. Sulphide mineralization and albitic fractures less frequent toward bottom of interval.
at	41.797	2 mm wide quartz/albite vein with minor chalcopyrite @ 65 deg.
at	41.907	network of fine pyrite/chalcopyrite microveinlets
at	41.957	20 cm long 1 mm wide chalcopyrite veinlet @ 85 deg.
at	42.257	1 mm wide salmon pink albite veinlet with minor chalcopyrite
at 📕	42.337	albite microveinlet @ 65 deg., 3-4 mm wide calcite veinlet with red/brown hematite envelope and minor chalcopyrite cuts albite microveinlet @ 35 deg. adjacent 2-3 cmsq patch of epidotized hostrock with fine calcite filled fractures
at	42.557	albite microveinlet @ 45 deg.
at 📕	42.697	ragged 10 cmsq light green patch of massive epidote cut by numerous quartz/ albite/chalcopyrite microveinlets
at	42.957	minor disseminated subhedral pyrite
at	43.037	albite/chalcopyrite microveinlet @ 35 deg.

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From	То	Description
9.04	9.144	pervasive to patchy epidote altered unit with minor calcite and rare albite microveinlets with pyrite
43.281	44.805	solid core (magnetic)
	Rock unit	Greyish Green Andesite
	Texture	fine grained, semi phyric
	Minerals	chlorite, epidote, calcite, quartz, magnetite, hematite, minor albite
	Phenocrysts	<2 mm long faded to distinct subhedral white to salmon pink plagioclase laths
	Fabric	Blocky with signifcant fractures of the chlorite/calcite/hematite type cutting uniform greyish green groundmass. Epidote selectively replaces individual matrix xtals and the larger plagioclase phenocrysts.
	Fractures	Primarily chlorite filled fractures @ 45, 55, 45, 35, 60, 65, 45, 30, 35, 45, 25, 25, deg.
	Sulphides	pyrite, chalcopyrite Scarce disseminations associated with local increases in fracture density and minor quartz flooding.
	Comments	The groundmass is blocky but more uniform with less bleaching. Sulphide bearing veinlets lack alteration selvages. Decreasing sulphide content with increasing py/cpy ratios.
at	43.401	1.5 cmsq patch of light green massive epidote with 1mm wide quartz/carbonate veinlet @ 50 deg.
at	43.841	1 mm wide quartz/abite veinlet @ 35 deg.
at	43.881	1mm wide quartz/carbonate/pyrite veinlet @ 85 deg.
at	44.031	quartz/albite/chalcopyrite veinlet @ 15 deg. cut by quartz microveinlet with quartz flooding and minor fine disseminated chalcopyrite and pyrite.
at	44.341	quartz/albite/chalcopyrite veinlet @ 45 deg.
at	44.347	2 mmsq clot of disseminated chalcopyrite in 0.5 cmsq patch of white quartz
44.805	47.853	solid core (magnetic)
	Rock unit	Green Andesite
	Texture	fine grained, phyric
	Minerals	chlorite, epidote, minor calcite, quartz, albite, magnetite and hematite

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From	То	Description
	Phenocrysts	<1 mm long faded white subhedral plagioclase laths make up approximately 1-2% of the matrix.
	Fabric	Uniform light green matrix with numerous dark green chlorite filled fractures Epidote and chlorite as minor matrix replacements. Less siliceous groundmass with minor calcite as microveinlet fill and coatings.
	Fractures	Primarily dark green chlorite filled fractures @ 35, 60, 55, 45, 25, 45, 5, 45, 50, 20, 30, 25, 20, deg.
	Sulphides	pyrite, chalcopyrite Rare sulphides with albite, quartz and calcite
	Comments	Epidote decreases toward bottom of unit and dark green chlorite filled fractures increase friability. Low sulphide content. Lack of bleaching contributes to the uniform green color.
at	46.229	1mm wide quartz veinlet with minor chalcopyrite
at	46.549	<1 mm wide gash with albite and chalcopyrite
at	47.069	1 mm wide quartz/albite/chlorite veinlet with chalcopyrite @ 45 deg.
at	47.259	chlorite/pyrite microveinlet
47.529	47.853	heavily fractured loose and broken core
47.853	53.949	lost core (magnetic)
	Rock unit	pyritic green sand
	Fabric	< 1mm dia. rock cuttings with minor very fine sulphide
	Comments	Soft friable unit. Cuttings consist primarily of fine green sand with minor white calcite and quartz. Fine sulphide (pyrite) is visible with magnification. Has magnetic fraction.
47.853	53.949	solid core (slightly magnetic)
	Rock unit	Green Andesite
	Texture	fine grained massive
	Minerals	chlorite, epidote, hematite, clay, quartz
	Phenocrysts	absent
	Fabric	extremely soft and friable, pervasively altered to 90% dark green massive chlorite with clay and minor calcite and quartz

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From	То	Description
	Fractures	abundant dull red/brown hematite coated fractures
	Sulphides	absent
	Comments	possible equivalent of above unit.
54.319	54.499	solid core (weakly magnetic)
	Rock unit	Tuffaceous Andesite
	Texture	massive
	Minerals	hematite, chorite, epidote
	Phenocrysts	absent
	Fabric	5cm thick tuffaceous unit consisting of an upper dark reddish grey aphanitic
		volcanic ash ? overlying dark green wispy lithic ash ? with thin grey ash layers. Upper ash layer is hematized and the lithic ash tuff is altered to green chorite and epidote.
	Fractures	distinct parting between upper and lower unit @ 60 deg.
	Sulphides	absent
	Comments	Appears to be an oxidized flow top.
54.499	56.003	solid core (magnetic)
	Rock unit	Greenish Grey Andesite
	Texture	fine grained phyric
	Minerals	chlorite, hematite, calcite, clay
	Phenocrysts	<1-3 mm long faded to distinct subhedral salmon pink plagioclase laths make up 3-4% of the matrix.
	Fabric	Matrix cut by cohesionless, white calcite, reddish/brown dull hematite and grey clay coated fractures.
	Fractures	Primarily chlorite, hematite, calcite and clay filled fractures @ 60, 45, 45, 60, 20, 50, 25, 40, 30 deg.
	Sulphides	absent
	Comments	Very fractured easily broken in several directions. Matrix effervesses with acid possibly due to a multitude of calcite coated hairline fractures. Phenocrysts may be iron stained or slightly hematized. Light grey groundmass suggests

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De	pth	Meters

From	То	Description
		decreasing amounts of chlorite.
56.003	57.397	solid core (magnetic)
	Rock unit	Greenish Grey Andesite
	Texture	fine grained, phyric
	Minerals	chlorite, calcite, epidote, hematite, albite ?
	Phenocrysts	1-2 mm long subhedral salmon plagioclase laths make up 1-2% of the groundmass.
	Fabric	Similar to upper unit with selective to pervasive epidote alteration and the addition of quartz and albite. Metallic grey hematite on selected fractures.
	Fractures	Fractures @ 10, 20, 55, 10, 55, 30, 30 deg.
	Sulphides	pyrite, chalcopyrite Rare disseminated subhedral pyrite and chlalcopyrite within patches of epidote and quartz/albite alteration.
	Comments	Transitional interval between lower aphyric flow and upper phyric flow.
56.003	56.343	pervasive alteration of plagioclase to light green dull epidote and groundmass to epidote and chlorite. White translucent quartz and pink albite ? occur in patches of epidote with rare disseminated fine chalcopyrite.
56.343	57.397	solid core (weakly magnetic)
	Rock unit	Quartz Epidote Alterered Andesite
	Texture	aphanitic
	Minerals	epidote, quartz, calcite,chlorite
	Phenocrysts	absent
	Fabric	mottled mixture of 80% light green dull massive epidote and 20% white translucent quartz/calcite and dark green chorite.
	Sulphides	rare <1 mm dia. subhedral pyrite
	Comments	Change in flow. Possibly related to flow top.
58.567	67.665	solid core (magnetic)
	Rock unit	Light Green Andesite

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From	То	Description	
	Texture	very fine grained, aphyric	
	Minerals	chlorite, epidote, quartz, hematite, calcite	
	Phenocrysts	absent	
	Fabric	Chorite to a lesser extent in the groundmass but is well developed when replacing selected patches of the matrix with or without epidote and quartz. Dark green chlorite with white calcite and rediddish brown hematite and clay o ubiquious fractures.	
	Fractures	Fractures @ 15, 2, 45, 15, 10, 35, 15, 35, 40, 25, 35, 20, 30, 45, 15, 35, 45, 15, 25, 15, 25, 35, 60, 15, 35, 15, 25, 35, 30, 45, 30, 20, 40 deg.	
	Sulphides	pyrite, chalcopyrite Rare discrete subhedral grains with epidote and quartz	
	Comments	Groundmass is relatively fresh. Development of chlorite is related to fracture density.	
58.571	59.795	chlorite rich, epidote poor interval	
59.795	61.719	patches of light green dull massive epidote up to 0.5 cmsq, < 5% total epidotization of matrix	
61.719	62.089	selective to pervasive epidote, calcite, and quartz altered interval. Up to 5% patchy light green dull massive epidote controlled by calcite filled fractures	
62.089	62.343	blocky chlorite rich interval	
62.343	62.963	70% pervasive epidote alteration with minor albite ? A thin albitic envelope encloses a selected relic of host rock within the epidotized matrix	
62.963	67.665	very fine grained massive light green andesite moderately fractured with fine <1 mm wide white calcite veinlets	
at	64.217	3 cmsq epidotized and bleached patch with albitic margins	
at	64.487	2 cmsq epidotized patch with fine disseminated pyrite	
68.065	70.913	solid core (magnetic)	
	Rock unit	Light Green Andesite	
	Texture	fine grained, phyric	
	Minerals	chlorite, epidote, hematite, albite	
	Phenocrysts	1-2 mm long subhedral salmon plagioclase laths make up to 5% of the matrix	

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From To		Description	
	Fabric	Unit is broken by intervals of minor chlorite and epidote alteration of the rock matrix with chlorite rich sections coinciding with increased fracture density. Epidotized patches have charateristic 2-3 mm wide albitized ? margins.	
		At the top of the section is a thin wispy layer of reddish grey tuff?	
	Fractures	Fractures @ 60, 30, 2, 10, 45, 20, 30, 45, 45, 10, 35, 45, 35, 25, deg.	
	Sulphides	pyrite, chalcopyrite Rare subhedral fine disseminated sulphide within epidotized patches	
	Comments	Transitional interval from lower aphyric to upper phyric unit.	
68.065	68.165	oxidized flow top ? wispy layering of dull reddish grey hematized tuff with massive dull green chorite and epidote.	
	68.165	3 cmsq epidotized patch	
	68.565	pervasive epidote and chlorite	
68.065	68.565	chlorite rich interval with increased fracture density	
	68.825	3 each 1-2 cmsq epidotized patches	
69.189	70.913	transitional lower aphyric to upper pyric	
70.913	72.237	solid core (magnetic)	
	Rock unit	Light Green Andesite	
	Texture	very fine grained, massive, aphric	
	Minerals	chlorite, calcite, hematite	
	Phenocrysts	absent	
	Fabric	Fine grained crowed x-tal groundmass cut buy thin white calcite filled fracture commonly stained with reddish brown hematite.	
	Fractures	Fractures @10, 55, 45, 30, 20, 40, 20, 45, 50, deg.	
	Sulphides	absent	
	Comments	A neutral barren unit.	