

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 22.90	«CASING»					
22.90 TO 25.70	«POLY CONG» Polymictic Conglomerat	Colour: Grey, hematitic staining Grain size: Coarse grained poorly sorted subrounded to rounded clasts in medium grained well sorted sandy matrix Small interbeds of sandstone to 5cm thick Bedding Dips 76E Microfaulting Dips east	50 50	Surface weathering along fractures, giving brownish staining Trace carb		Some clasts are fuchsitic Size range 1cm-5cm Microfaulting parallels bedding in most cases clasts:matrix ~65:35
25.70 TO 29.30	«POLY CONG»	Colour: Grey Grain size: Medium to coarse grained Poorly to moderately sorted, subrounded to rounded clasts in finer matrix well sorted Microfaulting	10	Trace carb Possibly brown sericite or dolomite Late talc along some microfractures Fuchsitic fragments	27.2-28.0% «tr-1% py» Trace to 1% sx as replacement of matrix assoc with ser (?) and/or dol (?) alt'n	Sense of micro faulting is both sinistral and dextral Clasts vary from chert to mafic, occ. granitic Some fuchsite Clasts:matrix varies 85:15 to 65:35 Fining upwards indicating right way up
29.30 TO 31.10	«FLT GOUGE»	Colour: Grey white Broken fragmented core possibly gouge	90	Tr talc Trace carb Graphitic		
31.10 TO 43.10	«POLY CONG»	Colour: Grey Grain Size: Pebble to cobble Varying degrees of poorly to moderately sorted subrounded to rounded clasts in well sorted sandy matrix		10% talc Possible trace sericitic alt of matrix Weak carb		Clasts cherty, mafic, sst, slst, fspar porphyry Clast:matrix varies 95:5 to 65:35 No dominant preferred orientation/imbrication Some clasts (rare) completely altered to fuchsite (mariposite)/chl **Some clasts of brecciated mafic volc. indicating this is later**
43.10 TO 44.84	«SST»	Colour: Grey Grain Size: Sand 1-2mm Well sorted subangular mafic and felsic clasts 43.5-43.6m Small shear 20deg CW		Trace talc		

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44.84 TO 45.50	«POLY CONG»	Colour: Grey Grain Size: Pebble to cobble 45.5m contact/bedding 40 deg CCW Varying degrees of poorly to moderately sorted subrounded to rounded clasts in well sorted sandy matrix		Trace talc Very weak carbonate alteration		
45.50 TO 46.50	«SST»	Colour: Grey Grain Size: Sand 1-2mm Well sorted mafic and felsic clasts..		Trace carbonate alteration		
46.50 TO 49.20	«POLY CONG»	Colour: Grey Grain Size: Pebble to cobble Poorly sorted subrounded clasts of varying lithology incl. chert frags, fsp altered frags, bx mafic frags in well sorted sandy matrix 46.5-47.9m Clast size increases with depth 47.9-49.2m Extremely well indurated pebble conglomerate with little matrix material (15%)		Possible weak dol alt of matrix	Matrix has been replaced by semimassive to massive sx (py) to 15% 47.9-49.2m «smx mtrx repl. to 15%»	Mineralization appears assoc with dolomitic alteration front moving away from lower fault contact
49.20 TO 49.90	«GRPH FLT G OUGE»	Colour: Black Grain Size: Fine grained Extremely graphitic gouged material Lower contact 50 deg CCW			Tr vfg py	
49.90 TO 51.40	«MYL CONG»	Colour: Pinkish grey Grain size: Variable Possible mylonitic conglomerate displaying compositional banding Notated clasts (CW) and pressure shadows Microfaulting at 90 deg to CA	90	Tr fuchsite Possible dol Tr hematite		Mylonitic texture indicated tectonic activity
51.40 TO 55.70	«ALT SED»	Colour: Dark grey to light brown grey S fabric, mylonitic(?) 40 deg CCW Stretched, flattened fragments		51.4-52.5m Extreme talc, chl, clay almost 100% 52.5-52.7m Dol? and/or ser?		Possible extremely altered cong although resembles tuff in places, some clasts still visible Talc stringers and lenses

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		52.8-53.0m Graphitic fault gouge Schistosity/fol 53.4m 3cm flt gouge 54.0m 2cm flt bx on hydraulic bx 20 deg CW Stckwrk fracturing with talc veining pervasive 20 deg CW 55.7m Contact	90	52.7-55.7m Primarily clay(chl) with talc, again pervasive almost complete alteration		
55.70 TO 56.30	«ALT SST/CO NG»	Colour: Brown grey with pink hue Grain size: Sand to pebble angular to subrounded clasts up to 3cm diam in fine poorly sorted matrix Stockwork fractures		Trace hematite Primarily kaolinization, and talc but not overprinting (15-20%) Possible sericite mm scale qvns filling fractures		Similar to mylonitic cong but not as textonized
56.30 TO 61.60	«ALT SST/SL ST»	Colour: Dark grey to beige Grain Size: Sand to S.H. Stockwork fractures with occ tension gashes aligned parallel to core axis Obvious hydrothermal/hydraulic fracturing and brecciation followed by talc, chl alt and some fracture filling qvn 58.0-58.1m Graphitic fault gouge 34 deg CCW 58.4-58.6m Gouge 38 deg CCW		Talc graph and clay (chl) with some qvn fracture fillings Occasional dolomitic alteration		Possibly extremely altered sandstone but resembles tuff in areas
61.60 TO 64.80	«ALT CONG»	Colour: Dark grey to beige locally Grain Size: to 3cm diam Stockwork fractured with quartz talc filled tension gashes parallel to core axis 63.1m Fault gouge 64.4 - 64.8m Fault gouge		Possible dol veins at low angle to core axis Talc clay (chl) graph	«tr-1% py» diss	Looks like altered mafic volcani-clastics but occasional clasts are seen
64.80 TO 66.40	«ALT SST»	Colour: Light grey buff beige Grain Size: Fine to medium grained Weak foliation 40 deg CCW Not as extensively fractured Some mm scale qvns parallel to CA 66.4m Fault contact 42 deg CCW		Dolomitized/sericitized Occ qtz/carb vns Primarily clay alteration (talc) Minor Fe staining along fractures		Again appears tuffaceous

HOLE NUMBER: LC-1

MINNOVA INC.
DRILL HOLE RECORD

DATE: 17-April-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
66.40 TO 67.00	«FLT BX & G OUGE»	Colour: Yellow grey Brecciated material from previous interval (alt sst)		Clay Graphite (1cm) at bottom		
67.00 TO 68.60	«SST»	Colour: Brownish grey Grain Size: Medium grained Moderately sorted sandstone containing occ subrounded frags 68.6m Contact 70 deg CCW		Talc along fractures Hematitic staining along fractures		Not as well sorted as sst at top of hole
68.60 TO 69.90	«POLY CONG»	Colour: Brownish grey Grain Size: Pebble to 3cm diam Fragments have more orientation than before, also are flattened more Possibly more angular than before Matrix is not well sorted Some imbrication is present 69.9m Contact 62.2 deg CCW		Hematitic staining Possibly dolomitization		
69.90 TO 73.70	«SST»	Colour: Grey Grain Size: Sand to pebble Poorly sorted sandstone		Moderate calcite		
73.70 TO 75.10	«POLY CONG»	Colour: Grey Grain Size: Pebble Well indurated polyolithic conglomerate Subangular to subrounded frags Fractured Matrix poorly sorted		Occ hematite frags mod to strong qtz carb		Core is broken Clasts:Matrix 85:15
75.10 TO 75.60	«ALT SST»	Colour: Dark grey Grain size: Sand to pebble Mylonitic fabric, weakly developed	64	Clay and possible dolomitic overprinting		This is very similar to altered rocks (seds) or 56.3-61.6m but lesser degree of alteration

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DRILL HOLE RECORD

LOGGED BY: C.J. CLAYTON

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75.60 TO 89.50	«POLY CONG»	Colour: Grey, brown/grey Grain size: Pebble Poorly sorted subangular to subrounded frags in moderately sorted matrix		Moderate carbonate Some Fe staining around some fragments may indicated weathered pyrite Some frags show concentric alteration zonation possibly dol Dolomitic matrix	Tr py	matrix: Frag ratio varies throughout Sharp contact with volcanics at bottom Coarse pebbles at bottom
89.50 TO 94.60	«FLOW TOP B X»	Colour: Red/grey Grain Size: Variable to 2cm 89.5m Strat contact with overlying fracturing 70 deg CCW		Dolomitic stockwork fractures Strong clay/talc alteration (red) Weak sericite alteration Trace fuchsite Hematitic matrix		Weakly magnetic
94.60 TO 95.40	«CRACKLED B X»	Colour: Red/grey Grain size: Variable Extremely hydraulically fractured High density stockwork veining of no preferred orientation Angular to rounded clasts		Hematitic Trace fuchsite Clay (ser) rich Quartz and dolomite veining and replacement Chalcedony interstices	Tr py	Weakly magnetic
95.40 TO 96.70	«FLOW BX»	Colour: Red/brown Grain Size: Variable Angular to rounded mafic clast in hematitic fine grained matrix Cross cut by mm scale quartz veins		Trace fuchsite Hematitic matrix Lesser clay alteration		
96.70 TO 101.70	«CRACKLE BX »	Colour: Red brown/ red grey Description: See 94.6-95.4m Higher density fractures and more phreatic 98.5-98.9m Fault CW 30 99.7-100.1 «Qz-dol vn» CW 05 100.7-100.9m Fault CW 03		Chalcedonic, dolimitic and talcic interstices Hematitic matrix Weak clay alt except in faults		
101.70 TO 102.70	«FSPAR PORP H»	Colour: Red grey Grain Size: 2mm 101.7m Contact CW 40 Anhedral fspar phenos in fg matrix		Weak clay alteration		

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		102.7m Contact CW	40			
102.70 TO 106.30	«CRACKLE BX»	Colour: Light grey to beige Strongly fractured and brecciated by quartz dol veins ‡105.4-105.8‡«qz-dol vn» CW 106.3m Contact CW	05 30	Qtz dol alteration Tr-1% fuchsite locally Weak to moderate clay alt	Tr diss py	Very strong hydraulic fracturing
106.30 TO 107.90	«FLOW BX»	Colour: Reddish brown Grain Size: Variable flow brecciated clasts in hematitic matrix 107.9m Contact CCW	40	Minor clay Some silica u/c small veinlets Hematitic	Tr py	
107.90 TO 108.20	«QTZ/DOL VN»	Colour: Buff Grain Size: Fine grained Massive quartz dol vein CCW	40	Minor clay		
108.20 TO 114.50	«MAF FLOW B X»	Colour: Grey/reddish grey Grain Size: Variable Competant, angular to subrounded clasts in finer grained slightly hematitic matrix 109.9-110.2m Crackle bx with up to 1% py with vns 113.9-114.3m Crackle bx 114.5m Contact CCW	40	Weak to moderate hematite Also dark purple staining mineral Qtz dol veins	‡109.9-110.2‡«to 1% py in vnlt»	Weak to moderate magnetism
114.50 TO 115.20	«FSPAR PORP H INT»	Colour: Light grey Anhedral to subhedral plag (2mm) in fg fspar matrix CCW	40	Very weak clay Tr fuchsite Crosscutting Qvns (mm scale)		Possible a flow since doesn't cut stratigraphy

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115.20 TO 123.40	«FLOW BX»	Colour: red\grey to grey Grain Size: Variable Flow brecciated angular to rounded clasts in fine grained hematitic matrix 115.7-116.0m Crackle bx 120.7-121.2m Crackle bx 121.7-121.9m Fault	40 90	Weak calcite Hematite Quartz vein fracturing Tr py in veins minor clay alt Clay alt Minor talc	Tr fg py with qz veinlets	
123.40 TO 123.60	Dol vein «QZ/DOL VN»	Colour: Beige Grain Size: Fine grained Stockwork fractured vn	40	Dol (60%) Also purple staining alteration Clay/talc at top and bottom contact		
123.60 TO 127.90	«CRACKLE BX »	Colour: Grey Grain Size: Variable High density stockwork fracturing		Occ chloritic alt of smoe clasts Weak to mod silicification Dol veining		
127.90 TO 153.80	«FLOW BX»	Colour: Grey Grain Size: Variable Angular to rounded clasts in finer grained matrix Occasional mm scale qtz veins ‡131.7-132.7‡«qz/qz dol vns» 140.7m Hydraulic fracturing and brecciation increase 141.2-141.8m Flt gouge and bx 142.0-142.4m Flt gouge and bx 142.6m Fspar porph flow hydraulically bx 147.3-148.0m fg mafic to intermed flow mm scale qvns cross cutting bx 153.8m Contact	60 30 30	Weak clay/talc Weak sericite Increasing clay 141.3-141.5m Flt bx with tr-1% py, cpy Tr fuchsite 142.6m Wk dol alt and strong Fe rich calcite Tr chlorite deeper	Tr pyrite ‡141.3-141.5‡«tr-1% py,cpy» as late replacement 141.3-141.5m py, cpy occur as late stage replacement or cavity filling	

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153.80 TO 158.40	«INT-MAF FL OW»	Colour: Light grey green Grain Size: Fine grained Basaltic or andesitic flow 154-154.8m Minor stock work hydraulically fractured quartz veining 1584.m Fault contact		Minor talc on fracture surfaces hematitic staining on fractures	Trace pyrite stringers along quartz carb fractures at 30 deg to CA	
158.40 TO 159.50	«FLT»	Colour: Dark grey green black Grain Size: Varies Fracuted broken core fragments		Fe rich calcitè alteration		
159.50 TO 160.50	«INT-MAF FL OW»	Colour: Light grey green Grain Size: Fine grained Basaltic or andesitic flow		Strong reddish clay alteration		
160.50 TO 171.10	«FLOW BX»	Colour: Grey Grain Size: Coarse grained, fine grained matrix Angular to rounded grey to dark grey mafic fragments (to 2cm) in finer grained matrix Occasional carbonate veins cross cutting core at low anlge to CA	30	Hematitic/aknkeritic staining on fracture surfaces Trace fuchsite, chlorite Moderate carbonate alteration	Trace pyrite in association with quartz veins and fractures	Moderately magnetic
171.10 TO 172.90	«INT FLOW»	Colour: Light grey green Grain Size: fine grained Calcareous intermediate flow		Moderate carbonate alteration Trace epidote Talc along fracture surfaces		
172.90 TO 173.70	«FLT GOUGE & BX»	Colour: Reddish brown Grain Size: Variable Calcareous fault gouge and breccia 173.7m Fault contact	36	Moderate to strong carbonate alteration		

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173.70 TO 174.50	«BX VOLC»	Colour: Green to reddish brown Grain size: Variable Chloritic, calcareous contact brecciated volcanics Strongly fractured		Chloritic Strong carbonate alteration	173.7m tr-1% py in fractures	
174.50 TO 175.10	«FSP PORPH, MAF FLOW»	Colour: Light grey green Grain Size: Fine grained Fine grained anhedral feldspar porphyritic mafic flow Stockwork fracturing		Stockwork carb veining along fractures Chloritic, weakly hematitic Calcareous matrix		
175.10 TO 194.50	«FLOW BX» EOH	Colour: Reddish grey green Grain Size: variable Flow breccia with angular to rounded fragments of variable size 177.8-178.2m Grey green fine grained chloritic flow 180.4-181.8m Crackle breccia and quartz carb stringers 186.9m Minor fault *****END OF HOLE*****		Strong chloritic Trace epidote Clay alteration along fractures ‡189.3-194.5‡«St ep alt» Replacement and veining		Moderately to strongly magnetic

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0.00 TO 18.60	«CASING»					
18.60 TO 30.00	«POLY CONG/ SST» Polymictic Cong/ Sandstone Interbedded	<p>18.6-19.3m Polymictic conglomerate Grey coloured Pebble to cobble grain size (to 10cm), rounded and subrounded Sandy moderately to well sorted matrix Fragments: chert, quartz, mafic, felsic Poorly imbricated</p> <p>19.3m Contact/bedding CCW</p> <p>19.3-20.2m Sandstone Grey coloured Sand grain size Moderately to well sorted Lithic arenite</p> <p>‡20.2-20.3‡«flt gouge» small, clay rich, dark grey to black in colour</p> <p>20.3-27.6m Polymictic conglomerate Grey coloured Pebble to cobble grain size (description, see 18.6-19.3)</p> <p>27.6-27.8m Sandstone See description 19.3-20.2m</p> <p>27.8-28.2m Polymictic conglomerate See description 18.6-19.3m</p> <p>‡28.2-28.4‡«flt gouge» graphitic</p> <p>28.4-29.6m Sandstone See description 19.3-20.2m</p> <p>29.6-30.0m Polymictic conglomerate See description 18.6-19.3m</p> <p>30.0m Fault contact</p>	55		<p>18.6-19.3m Trace pyrite</p> <p>20.3-27.6m Trace pyrite in matrix and up to 1% in occasional quartz clasts</p> <p>29.6-30.0m Sulphides (diss py) increase to 1% near contact with fault 30.0m 1% diss py</p>	<p>18.6-19.3m Occasional late quartz veins (2mm width) brecciating some clasts</p> <p>20.3-27.6m Sharp change in dip</p>

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30.00 TO 35.10	«FLT GOUGE»	Colour: Balck Grain size: Variable Extremely graphitic Well comminute fault gouge CCW	50	Clay Graphite		Occasional faulted altered (argillic) seds
35.10 TO 40.00	«SST»	Colour: Light brown/grey Grain Size: Fine grained 35.1-37.7m Altered sandstone Weakly broken 35.4-35.5m Small fault mm scale quartz veining along fractures 37.1-40.0m Well sorted, fine grained (<1mm) sandstone with graphitic laminae CCW Cross cut by occasional mm scale quartz veins	90 60	‡35.1-37.7‡«clay, ser? alt» Clay, possibly brown sericite alt.	35.1-37.7m to 1% diss py 37.7-40.0m trace py	
40.00 TO 53.90	«POLY CONG»	Colour: Grey Grain Size: Pebble to cobble Poorly sorted, rounded to subangular fragments of varying lithologies in moderately to poorly sorted sandy matrix ‡47.9-53.4‡«gouge»		Weak clay alteration Some pebbles show concentric alteration zonation		
53.90 TO 55.20	«FSPAR PORP H»	Colour: Light grey Grain Size: Medium Unoriented white feldspar grains (euhedral to anhedral) in finer matrix		Silicified at contact Dolomitized Weak clay	‡54.9-55.1‡«py stringers» pyrite stringers in with mm scale quartz veins	
55.20 TO 64.20	«FLOW BX»	55.2-63.2m Colour: reddish brn/grey (Volcaniclastic debris flow??) 55.2-56.6m Extremely stockwork fractured and quartz veined ‡57.4-57.6‡«flt gouge» Angular to subrounded fragments in finer grained hematitic matrix Hydraulic fracturing and veining throughout 63.2-63.9m Colour: Pinkish grey Grain Size: 1mm to 3cm Angular, possible feldspar altered fragments in		55.2-63.2m Silicified 56.6-57.2m Extreme silicification 57.2m Alteration frond 5 deg to CA hematitic 63.2-63.9m Felspar alteration	63.2-63.9m tr-1% py stringers locally	not similar to P1

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		finer grained matrix 65.0m Alteration front? CCW	50			
		63.9-64.2m Flow breccia (volcaniclastic debris flow) See description 55.2-63.2m				
64.20 TO 81.60	«FSP PORPH FLOW/BX»	64.2-66.2m Feldspar porphyry Colour: Pinkish grey Grain Size: Up to 3cm Euhedral laths to anhedral crystals of feldspar in finer hematitic matrix 64.7m Chloritic gouge 65.7m Quartz vein fracturing	50	64.2-66.2m Clay, calcareous veinlets		
		66.2-67.6m Flow breccia Colour: Light red brown to grey green Grain Size: Variable Stockwork fractured and brecciated feldspar porphyry to mafic flows		66.2-67.6m Chloritic in places Strongly bleached Locally dolomitic ‡66.2-67.6‡«local dol» Quartz carb stringers	66.2-67.6m Trace pyrite	
		‡67.6-69.2‡«flt» gouge and bx Colour: grey green to red/brown Brecciated and gouged volcanics		67.6-69.2m Abundant clay		
		69.2-77.9m Feldspar porphyry flow Colour: reddish brown Grain Size: 3mm euhedral to anhedral feldspar grains in aphanitic matrix		69.2-77.9m Hematitic Quartz carb stringers Chloritic alteration abundant Minor talc	69.2-77.9m Trace sulphide along fractures	
		77.9-78.3m Quartz carb vein Colour: White Grain Size: Sugary Sugary textured vn in hydraulically fractured volcanics Vuggy in places	24	‡77.9-78.3‡«qtz-carb vn» clay alteration Carbonate alteration of wallrock		
		‡78.3-79.6‡«flt gouge» Colour: Reddish brown Grain Size: Variable Gouged and fractured volcanics Stockwork fractuing and quartz carb veining		78.3-79.6m Talc, clay, chloritic; quartz carb stringers	78.3-79.6m Trace pyrite occurring with stringers	
		79.6-81.3m Feldspar Porphyry		79.6-81.3m chlorite, hematite		

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		Colour: Reddish brown Grain Size: 3mm phenos in fine grained matrix Description: see 69.2-77.9m 80.0-80.9m Brecciated ¶81.3-81.6¶«flt gouge» Mylonite/fault gouge Colour: green/white Grain Size: Variable Fragmented core	18	Feldspar(K) flooding 80.0-80.3m Qtz veins at 36 deg from CA 80.8-81.3m Bleached Clay	80.0-80.1m phenos/amygdules with pyritic cores	
81.60 TO 138.40	«MAF VOLC»	Colour: Generally grey to green, some areas of reddish brown 81.6-88.1m Fine grained (1mm) mafic flow Some fractures at CCW Some equant euhedral to subhedral fine grained 88.1-89.4m Flow breccia Colour: grey to dark green Grain Size: Cobbles Angular grains of variable dimensions in fractured ground mass 89.4m Contact CW 89.4-90.5m Felspar porphyry Colour: green/grey green Grain Size: 2mm euhedral to anhedral (2mm) feldspar phenocrysts in aphanitic ground mass 90.5-90.8m Flow breccia Colour: Reddish grey Grain Size: Fine to medium ¶90.8-91.2¶«flt bx» Colour: Reddish brown Grain Size: Variable Quartz and flow bx fragments in gouge CW 91.2-91.5m Feldspar porphyry Colour: Green/grey green Grain Size: 2mm Description: See 89.4-90.5m	20 28 20	81.6-88.1m Occasional quartz carb vns Talc/clay along fractures 81.6-83.9m hematitic Strong carb alt Qtz carb veining throughout Epidote alteration 88.1-89.4m Stockwork quartz veining 88.6-89.3m Extremely chloritic with quartz carb stringers 89.4-90.5m Talc, chl 90.5-90.8m Quartz carb stringers Hematitic 90.8-91.2m Clay	88.1m tr pyrite filling amygdules at contact 88.6-89.3m Trace pyrite with quartz carb stringers 89.4-90.5m Trace pyrite 90.5-90.8m Trace pyrite	

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		91.5-91.8m Mylonite Colour: Light green to brown Compositionally banded	30	91.5-91.8m Hematite, chlorite		
		91.8-97.6m Flow breccia Colour: Dark grey, reddish grey Grain Size: Variable Angular to subrounded unoriented grains in fine grained groundmass 96.4-96.8m Quartz carb veining with compositionally banded appearance	CW 14	91.8-97.6m Quartz carb stringers Weak chlorite Hematite Ankerite? 96.4-96.8m qtz carb veining Talc		
		97.6-101.7m Amygdaloidal flow Colour: Grey green Grain Size: 2mm amygdules in fine grained groundmass Amygdaloidal mafic to intermediate flow Calcite filled amygdules	60	98.0-98.3m Epidote veining Carbonate pervasive Moderately silicified 100.6m Dol alt front: beige colour		
		101.7-103.0m Crackle breccia Colour: Pink/white Grain Size: Variable Hydraulically brecciated and quartz veined		101.7-103.0m Weak carbonate and clay		
		103.0-106.1m Flow breccia Description: see 91.8-97.6m Stockwork fractures 106.1m Contact	CCW 34 76	103.0-106.1m Carbonate abundant in matrix Carbonate vein 2cm wide		103.0-106.1m Magnetite content increases with depth
		106.1-109.6m Amygdule flow Colour: Grey green Description: see 97.6-101.7m Calcite filled amygdules occasionally being replaced by epidote		106.1-109.6m Carbonate pervasive Moderate silicification Epidote replacing amygdules		
		109.6-138.4m Flow Breccia Colour: Grey Grain Size: Variable Angular to subrounded brecciated fragments in finer ground matrix Fractures filled with quartz carbonate 130.0-134.0m Increased fracturing and brecciation		123.4m Increasing epidote alteration as veins and replacement of fragments Quartz carbonate stringers abundant 130.0-134.0m Increased carbonate alteration as stringers and as pods 134.0m 35% hematite		109.6-138.4m Magnetite content increases with depth
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		Colour: grey Grain Size: Medium Well sorted sand sized grains (1mm) 62.0-111.9m Polymictic Conglomerate Colour: Grey Grain Size: Variable to 3cm Description: See 28.2-32.2m †64.6-64.9m †«gouge» 65.8-70.5m Interbeds of sandstone to 50cm thick 71.0-71.3m Sandstone bed 75.15-75.75m Sandstone bed 79.1-79.8m Well compacted, well indurated conglomerate 88.4-88.7m Gouge and vertical fault breccia 93.6m Bedding 108.5-108.7m Gouge material 111.9-112.4m Mudstone Colour: Grey Grain Size: Fine grained Very fine grained siltstone or mudstone	24 56 50 30 54	62.0-111.9m Minor clay Strong Fe dol and Fe poor calcite, trace talc 88.4-88.7m Slightly graphitic 101.1-102.0m Moderate Fe dol alt 110.3-110.4m Strong silicification 111.6-111.9m Moderate Fe dol of clasts and matrix 111.9-112.4m Clay rich	72.1m tr-1% locally disseminated py 73.2m Trace pyrite 79.1-79.8m Trace pyrite †101.1-102.0m †«5% py matrix rplcmnt» Sulphide replacement of matrix sulphides form rims around pebbles to 5% of matrix; matrix:clasts->15:85 †111.6-111.9m †«10% SMSX rplcmnt» Semi massive sulphide replacement; matrix ~15%, sulphide replacement ~10%	-----> Same horizon as LC-1 at 50m
112.40 TO 121.00	«FLT GOUGE»	Colour: Black Grain Size: Fine grained Well communitated fault gouge with extremely graphitic horizon shear Foliation Vertical fault	30	Extremely graphitic		Same fault zone as P-1 ~52m
121.00 TO 137.20	«POLY CONG/ SST»	121.0-122.0m Mylonitic conglomerate Colour: Dark grey Grain Size: Variable Fragments rotated compositional bands 122.0-124.1m Sandstone Colour: Dark grey Grain Size: Medium grained Well sorted		122.0-124.1m Minor quartz carbonate veining Dolomitic Graphitic partings	122.0-124.1m Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Occasional graphitic interbeds ‡123.1-123.0‡«flt gouge/bx» 124.1m contact	30			
		124.1-137.2m Polymictic conglomerate Colour: Grey Grain Size: Variable Grey, poorly sorted polymictic conglomerate with interbeds of well to moderately sorted sandstone 131.9m Minor fault 137.2m Contact	50	124.1-137.2m Fe poor calcite alt of matrix Some clasts show concentric zoning of Fe poor calcite and Fe rich dol Minor clay Fe poor calcite very strong at contact	124.1-137.2m Trace pyrite	
137.20 TO 282.00	«MAF FLOW»	137.2-145.7m Flow breccia Colour: Pinkish brown Grain Size: Variable Angular to rounded fragments in fine grained matrix Abundant stockwork -veining and fractures ie crackle breccia similarity to P1 ‡137.8-138.4‡«flt gouge» 140.0-140.8m Stockwork fractured and veined flow breccia 145.0-145.6m Stockwork fractured and veined flow breccia 145.7m Contact	40	137.2-145.7m Fe poor calcite/quartz veining Silicification Hematitic		
		145.7-147.0m Amygdaloidal flow Colour: Red/grey Grain Size: 3mm Unoriented amygdules and fspar laths to 3mm in fine grained matrix Mafic flow		145.7-147.0m Hematitic Fspar veining??? Clay		
		147.0-182.2m Flow breccia Angular to subrounded fragments in finer grained matrix 149.5m Gouge 149.6-150.4m Amygdaloidal Flow 149.6-149.8m Broken core, possible fault bx 152.9-157.9m Hydraulically fractured and veined crackle breccia CCW 164.9m Stockwork fractured veined (qtz) 165.8-168.0m Stockwork fracturing and quartz veining	60	147.0-182.2m Hematitic Minor clay alteration 163.0m Epidote veining Silicification near quartz veins		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		179.3-179.6m Quartz veining and fracturing 182.2m Contact (strat?)	30 34			
		182.2-190.6m Mafic amygdaloidal flow Colour: Grey/green Grain size: 3mm amygdules Greyish green feldspar? filled amygdules in fine grained matrix; no preferred orientation 183.0-183.3m Quartz veining and brecciation 184.8-185.1m Fault 190.6m contact	30 70	182.2-190.6m Possibly Fe free dolomite ‡182.2-187.5‡«dol alt/vn» 187.5m alteration front at 90 deg to contact 187.5-188.1m Carb alt of matrix 188.6m Quartz carb veins perpendicular and at 30 deg to CA 190.3-190.6m Bleaching	‡184.3-184.4‡«tr-1% diss cinn» as disseminations and veinlets Trace sulphides	
		‡190.6-190.8‡«Felsic Int» Colour: Grey green Grain Size: Variable Greyish green, anhedral to 2mm euhedral laths in fine grained matrix 5% mafic minerals				
		190.8-192.6m Mafic amygdaloidal flow Colour: Grey/green Grain Size: 3mm amygdules Description: See 182.5-190.6m 192.4-192.6m Fractured and brecciated				
		192.6-196.0m Flow breccia colour: Pinkish grey Grain Size: Variable Description: See 147.0-182.2m		192.6-196.0m Hematitic Occasional quartz veining		
		196.0-199.2m Amygdaloidal flow Colour: Buff green grey Description: See 182.5-190.6m 199.2m Contact	30	196.0-199.2m Strong clay alteration Trace fuchsite Bleached		196.0-199.2m Possible altered flow breccia? Possibly whersire????????????????
		199.2-234.5m Flow breccia Colour: Pinkish grey Grain Size: Variable Description: 147.0-182.2m 204.8-205.6m Extremely hydraulically fractured crackle breccia 208.5-209.07m Crackle breccia		199.2-234.5m Hematitic Occasional quartz veining Chalcedonic 204.8-205.6m Interfragmental is chalcedonic, quartz carb veining 208.5-209.07m As 204.8-205.6m, also some chloritic alteration 119.2-216.5m Weakly hematitic 216.5-217.7m Weakly chloritic 217.7-220.7m Hematitic		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		220.7-220.9m Hematitic gouge 221.5-221.9m Hematitic gouge 223-223.4m Buff coloured dolomitic, Fe poor calcite vein 224.2-224.7m Dolomite vein 224.7-224.8m Fault gouge 225.7-226.2m Fault gouge 230.9-231.2m Stockwork fractured and veined bx 234.5m Contact	30 90 30	224.2-224.7m «dol vm» 224.7-224.8m Extremely clay rich 227.4-228.5m Chlorite/fuchsite and minor veinign and strong dolomite 230.5-230.7m qtz dol pooling 230.9-231.21m Quartz dol veining	230.5-230.7m Trace sulphides assoc. with quartz/chlorite lenses and veining (possible chalcopyrite)	
		234.5-236.1m Amygdaloidal flow Colour: Green grey Grain Size: 3mm amygdules in fine matrix Semi spheroidal calcite filled amygdules in finer matrix		234.5-236.1m Carbonate veinig Fe rich calcite Fe dolomite Also present in matrix (15%) Some chlorite	234.5-236.1m vfg diss py to 1% of matrix	234.5-236.1m May be intrusive
		236.1-241.3m Flow breccia Colour: Reddish grey Angular to subrounded fragments in finer matrix Lower density fracturing filled with qtz carb veining 241.3m Contact	80	236.1-241.3m Hemtitic along fractures and in matrix Carbonate veining		236.1-241.3m Weakly magnetic
		241.3-246.7m Mafic flow Colour: Green grey Grain Size: Fine grained Massive flow 241.3-241.6m amygdaloidal 242.0m Small shear Pyroxene phyric 246.6m >2cm wide quartz carbonate veining (Fe poor calcite) 246.7m Contact	80 30	241.3-241.6m Fe free dol/qtz veining and brecciation 242.0m Hematitic clay gouge Chloritic/clay		
		246.7-252.0m Flow breccia Colour: Reddish grey to greenish grey Grain Size: Variable Angular to subrounded fragments in fine matrix 247.0-247.2m Quartz carb vein 248.4m Minor fault gouge 248.9-249.2m Fractured with calcite lenses 251.1-251.2m Hematitic clay rich fault gouge	30	246.7-247.3m Quartz carb veining alt hematitic 248.6m Less hematitic Abundant clay, chlorite, fuchsite?	248.9m Tr pyrite with calcite	246.7-247.3m Weakly magnetic
		252.0-254.1m Mafic flow		252.0-254.1m Hematitic fractures, clay		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<p>Colour: Green grey Grain Size: Fine grained Fine grained massive chloritically and clay altered mafic flow 254.1m Contact</p> <p>254.1-257.9m Flow breccia Colour: Reddish grey and greenish grey Description: See 147.0-187.2m 254.2-254.7m Gouge material 254.6-254.8m Fractured core</p>	50	<p>rich fractures Chloritic Quartz carb veining and carb alt of matrix</p> <p>254.2-254.7m Hematitic 254.6-254.8m Hematitic fractures</p> <p>‡254.9-257.3‡«ep vns to 5%»</p>	<p>253.9-254.2m Up to 1% diss pyrite in matrix and as veinlets</p> <p>254.2-254.7m tr-1% py 254.6-254.8m tr-1% py, veinlets as open space fillings proximal to carb veins</p>	<p>Moderate to strong magnetite</p> <p>257.9-259.8m Non magnetic</p>
		<p>257.9-259.8m Amygdaloidal flow Colour: Grey green Grain Size: 3mm amygdules Calcite and epidote filled amygdules in fg matrix</p>	50	<p>257.9-259.8m Strong (30-40%) carb alt Quartz carb veining ‡257.9-259.8‡«30-40% carb alt»</p>		
		<p>259.8-261.2m Flow breccia Colour: Reddish grey Grain Size: Variable Angular, blocky to subrounded fragments in fine matrix Fractured and flow brecciated 261.2m Contact</p>		<p>259.8-261.2m Epidote and chloritic lenses Hematitic fracture surfaces Carbonate veinlets Chloritic</p>	<p>261.9-261.2m Sulphide veinlets in fractures, py</p>	
		<p>261.2-266.2m Mafic flow Colour: Green Grain Size: 3mm phenos Fine to medium grained mafic flow Euhedral to subhedral phenocrysts, increase in size with depth to 5mm 265.4-265.8m Flow breccia, hydraulically fractured and veined; resembles infection bx 265.8-266.2m Amygdaloidal flow 1mm amygdules replaced by calcite 266.2m Contact</p>	58	<p>261.2-266.2m Chloritic Carbonate replacement of phenos and matrix Epidote replacement carbonate veining at 30 deg to CA Hematitic fractures 264.63-265.43m Increasing epidote as lenses replacing larger phenocrysts 265.4-265.8m Carb veinlets; possible Fe free dol alteration</p>	<p>‡265.4-265.8‡«1% py strnger» in fractures assoc with carb veins</p>	<p>261.2-266.2m Weakly magnetic</p>
		<p>266.2-274.9m Flow breccia Colour: Green with brown/red tint Angular, blocky to subrounded fragments in finer matrix 266.2-267.5m Low density stockwork fracturing</p>		<p>266.2-267.5m Low density epidote and calcite stockwork veining</p>		<p>274.6-274.9m Moderately magnetic Carbonate veinlets at contact Increasing mag with depth More fracturing at lower contact</p>

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		and veining 268.1-268.3m High density quartz carb fracturing and injection brecciation 273.7-273.8m Possible gouge 274.9m Contact 274.9-275.6m Mafic flow/stockwork pyrite stringer zone ¶274.9-275.6¶«py stringer zn» Colour: Green Grain Size: Fine grained Massive but stockwork fractured Stratigraphic h 275.6-282.0m Flow breccia Colour: Green, brown/green Grain Size: Variable Angular, blocky to subrounded fragments in finer grained matrix 275.6-276.9m Stockwork fractured and carb veined	30 30 50	261.8-268.3m Quartz carb veining Hematitic staining along fractures Increasing chlorite with depth Fe dolomitic veining 274.9-275.6m Fe dol and Fe rich calcite stockwork veining and alt of host rock 275.6-282.0m Hematitic fractures Epidote veining and replacement of some fragments 275.6-276.9m Stockwork carb veining Chloritic minor Weak dol throughout	274.6-274.9m Tr py as stringers along fractures with carbonate ¶274.9-275.6¶«15-20% py stringers» Stockwork fractured pyrite stringer zone 15-20% Pyrite veining along fractures and associated with carbonate injection Possible sphalerite (Zn stink) Predominant orientation at 30 deg to CA ¶275.6-276.9¶«to 2% py stringers» 280.0-280.4m tr sx (py) as stringers	274.9-275.6m Sent for assay Stringers to 4mm wide 275.6-282.0m Moderate to strongly magnetic
*****		*****END OF HOLE*****	**	*****	*****	*****