LARA 092B/13

DDH Logs 89-255 to 827732
89-269

HOLE NUMBER: 89-255

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: LARA
CLAIM NUMBER:
LOCATION: NTS 92 B/13

PLOTTING COORDS GRID: MINE
NORTH: 10437.50N
EAST: 11900.00W
ELEV: 705.50

ALTERNATE COORDS GRID: MINE
NORTH: 104+37N
EAST: 119+ 0W
ELEV: 705.50

COLLAR DIP: -52° 0' 0"
LENGTH OF THE HOLE: 230.70m
START DEPTH: 0.00m
FINAL DEPTH: 230.70m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 208° 0' 0"

DATE STARTED: May 30, 1989
DATE COMPLETED: June 20, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: YES
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: FRONTIER DRILLING
CASING: 18.3M
CORE STORAGE: CHEMAINUS

PURPOSE: EXPLORATION HOLE TESTING A STRONG IP CHARGEABILITY HIGH

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
38.70	-	-52° 0'	ACID	OK	
81.40	-	-52° 0'	ACID	OK	
163.70	-	-51° 0'	ACID	OK	
206.30	-	-51° 0'	ACID	OK	
228.60	207° 0'	-51° 0'	SING.SHOT	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 18.30	OVERBURDEN «OB»					
18.30 TO 22.40	QUARTZ EYE FELSIC TUFF «F TUFF,QP»	colour: orangish cream grain: fi. gr. -3-5% <1mm rounded quartz eyes. Weakly foliated, moderate surface oxidation. Faulted lower contact Foliation: 20.3	35	«W SER»	1% py	
22.40 TO 25.00	FAULT ZONE «FAULT»	colour: med. brown -brown oxidized clay fault gouge with 1-2% <1 cm felsic fragments.				-strong surface oxidation.
25.00 TO 27.30	DIORITE «DIOR»	-colour: dark green -grain: fi.gr. -pervasive speckled appearance by 20 - 25% 1mm white, orange white specks of feldspar, weak surface oxidation. Gougy brown oxidized lower contact.		«M CHL» -moderate chlorite alteration of groundmass.		
27.30 TO 29.35	FELSIC LITHIC TUFF «F. LITH TUFF»	colour: light/orange brown grain: fi. gr. -weak to moderately foliated accented by moderate surface oxidation. 3-5% 1-2mm grey felsic lithic grains in a finer grained groundmass. Foliation: 28.9	50	-Moderate surface oxidation over-printing alteration. «Weak Sericite?»		
29.35 TO 30.10	DIORITE «DIOR»	colour: med. green grain: fi.gi. -feldspar porphyritic, brecciated with chlorite quartz veining stockwork.		«Chl qtz hs»		
30.10 TO 50.00	FELSIC - INTERMED-IATE FP CRYSTAL LITHIC TUFF «FP F-I TUFF»	colour: med. green grain: coarse ash -15-20% 1-2mm whitish grey rounded granules of mainly weakly sericitized, weakly epidotized feldspars and 3-5% greyish felsic lithic granules. Weakly biotitic groundmass 33.5-44.2 moderate surface oxidation, brownish discolouration. lower contact rubbly core, minor gouge. Foliation: 38.4	50	«W ser, ep, biot» weak sericite/epidot alterations of feldspars, weak brotite within ground-mass.	<1% py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
50.00 TO 52.90	FELSIC TUFF «F TUFF»	colour: light grey grain: fi. gr. -weakly foliated, very rare quartz eyes, mainly aphyric. Patchy brown discoloration. Foliation: 50.6	35	«W ser»	« 1-2% py»	
52.90 TO 60.50	INTERMEDIAT TUFF «I TUFF»	colour: med. green grain: fi. m. ash -fine granular appearance of 7-8% 1mm whitish green weakly epidotized grains, possible feldspars and 4-1% grey siliceous felsic granules. Weakly foliated/indistinctly bedded. Foliation 56.0 57.9 - 58.4; felsic tuff, light grey minor brown oxidation.	50	«W ser»	«1% po, <1% py» 1% finely disseminated pyrrhotite ┤57.9 - 60.5├«1% po, 4% py» «1% sp, tr cpy» 4% finely disseminated wispy sphalerite, parallel with foliation. 58.5 2mm wide spahlerite layer, minor chalcopyrite.	-very reworked looking.
60.50 TO 87.80	DIORITE «DIOR»	colour: dark green grain: m. gr. -Feldspar porphyritic becoming weakly equigranular towards core of intrusive. ┤70.7 - 71.4├«F. ASH, CHERT» felsic ash and chert: light grey, finely bedded, some distorted bedding. Bedding: 71.3	45	«Patchy qtz - chl vns»	┤70.7 - 71.4├«<1% py <0.5% sp.tr cpy» 4% py, <0.5% sphalerite, and trace chalcopyrite disseminated parallel to bedding.	
87.80 TO 93.85	FELSIC TUFF «F. TUFF»	colour: light grey green grain: fi. gr. -Distinctly layered with creamy grey, darker green banding at <1cm 89.4 2 1/2 cm brecciated chert unit. Sharp lower contact to mineralized interval at 89.4m Below 91.3 unit becoming mottled light green - indistinctly fragmental with 3% 2-3mm round grey quartz grains.		«W ser, W-Msil» -weakly sericitic and silicified. Moderately silicified below 91.3m	«1% py, tr po, cpy» 88.9 - 89.4 3-5% py, 1-2% pyrrhotite, <1% chalcopyrite disseminated and as 1-2mm layers. 90.95 - 91.3 10% pyrrhotite, 2-3% pyrite, trace chalcopyrite. Pyrite finely disseminated at top of interval.	
93.85 TO 108.30	DIORITE «DIOR»	colour: dark green grain: fi. gr. -Massive, feldspar porphyritic with 5-7% 2-4mm white ragged feldspar crystals. Minor oxidation along fracture planes.				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
108.30 TO 115.40	FELSIC TUFF, LAPILLI, TUFF «F TUFF, LAP? TUFF»	colour: light grey grain: fi. gr. -108.3 - 111.9 banded appearance = fragments <1cm. Layering at 50-65: 111.9 3cm possible chert or very silicified ash. -Below 111.9 core takes on a streaky appearance due ot green 1mm X 1-2cm sericite wisps. Some interval generally aphyritic. sharp lower contact	60	«Patchy W sil» -weakly silicified mainly below 111.9.	tr py.	
115.40 TO 129.20	DIORITE «DIOR»	colour: dark green grain: fi. m. gr. -massive, feldspar porphyritic with 2-3% feldspars near contacts to 15-20% fsp and very weakly equigrandor at core of interval. First 1.5m leucoxene phyric.		-Rare quartz, chlorite, carbonate veins.		
129.20 TO 150.70	INTERMEDIAT LAPILLI TUFF «ILAP TUFF»	colour: med. to dark grey grain: c. gr. -Flattened <1-9cm, light grey fine grained felsic fragments in a dark grey green speckled intermediate tuff groundmass with 1-2mm moderately epidotized feldspars. 135.4- 138.0: minor groundmass, predominantly felsics = large fragments. 139.0 - 143.5 Lacking epidotized feldspars and only occasional felsic fragments. Layering: 139.6 143.5 - 150.7: groundmass move andesitic looking, dark green 10-15% epidote grains. Gradational lower contact over 25-30cm.	40	«Patchy M ep» -Patchy epidote as altered feldspars.	«<1% py» -<1% pyrite -intervals as follows with weak base metal mineralization. 133.5 - 134.0: 2% disseminated pyrite trace chalcopyrite and sphalerite. 1mm sphalerite layers (veinlets) at 139.6, 140.2, 141.6.	
150.70 TO 163.50	FELSIC TUFF, LAPILLI TUFF? «F TUFF, LAP? TUFF»	colour: light green grain: fi. gr. -weakly foliated fine grained tuff wiht patchy zones of indistinctly outlined possible fragments giving core a weak mottled coloration. Numerous zones of distorted foliations. Rubbly lower contact. Foliation: 153.5	45	«W ser» -weakly sericitic	«<1% py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
163.50 TO 203.20	ANDESITE TUFF «AND TUFF»	colour: green grain: fi. gr. -10-15% 1-2mm moderately epitotized feldpars and occasional <1cm epidotized fragments. ┤167.25 - 171.1├«F. LAP TUFF» -Felsic lapilli tuff 4mm - 4cm felsic fragments in a ffelsic and argillaceous groundmass. First 8cm pyritic mud, argillite layers at 65 to core axis. 170.6 - 171.0 mainly a pyritic mud matrix. Minor mixing of felsic and andesite from 171.0 - 171.1 Bedding: 171.1 — 65 Contact: 171.4 — 65 -Felsic dykes as follows with blue white quartz eyes and green epidote grains. 173.05 - 175.2 Contact: 175.2 — 55 175.3 - 177.8 Contact: 177.8 — 60 180.3 - 182.2 177.8 - 180.3 3-5% 0.5 - 2 cm epidotized fragments in a weak to moderately chloritic groundmass. 182.2 - 184.5: Mafic dyke. Dark green, fi. gr. weakly sheared, leucoxent phyric. 184.5 - 192.3: 5-7% whitish green, weakly epidotized feldspars. 192.3 unit becoming weakly foliated/sheared. 195.1 - 200.8 moderately sheared and brecciated mnor fault gouge. 200.8 - 203.2: Fault gouge: creamy grey, dark grey and green clay fault gouge with andesite fragments and in last 40cm felsic fragments.		«Patchy M ep» -Patchy epidote as altered feldspars and fragments.	<1% py ┤167.25 - 171.1├«5% py» 5% finely disseminated pyrite. Argillaceous rich zones may contain mor pyrite but too fine to see. 177.8 - 180.3 3-4% disseminated pyrite.	
203.20 TO 213.80	FELSIC TUFF «F TUFF»	colour: light green grian: fi. gr. -fine aphyric tuff, strongly silicified, strongly brecciated with minor fault gouge and occasional calcite gash fillings. Faulted lower contact.		«S sil» strongly silicified.	tr py	-similar to felsic tuff in DDH 162 from 14 - 25 m
213.80 TO 214.40	FAULT ZONE «FAULT»	colour: light grey -Brecciated and fragmented grey fine grained felsic tuff in a light green weakly gougy groundmass. 3 cm black gougy arillite (Nanaimo) at top of interval and 1 cm at base.				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
214.40 TO 223.00	MAFIC DYKE «M DYKE»	colour: dark green grain: fi. gr. -massive, moderately brecciated with abundant calcite veinlets. 2-3% mmm leucoxene sheared upper contact from 214.4 - 215.2		«calc vns»		somewhat similar to finer grained phase of mafic dyke in DDH 162.
223.00 TO 230.70	NANAIMO ARGILLITE «NANAIMO»	colour: black grain fi. gr. -weakly foliated, carbunaceous portings, weak calcite veinlets. First 20cm gougy core, occasional fine grained light grey sandstone interbeds. Bedding: 227.8	50			

Sample	From (m)	To (m)	Length (m)	ESTIMA Cu ppm	ASSAYS Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	Cu %	Pb %	Zn %	Ag oz/t	Ag g/T	GEOCHEMICAL Au oz/t	Au g/T	Ba %	SG SG	NSR NSR	SUL %		COMMENTS
13146	50.30	52.90	2.60	201	19	332	1.1	5											0.0			
13147	57.90	58.40	0.50	364	14	690	1.4	34											0.0			
13148	58.40	59.40	1.00	448	20	2800	1.2	4											0.0			
13149	59.40	60.50	1.10	259	16	1480	1.4	3											0.0			
13150	70.70	71.40	0.70	183	9	620	1	2											0.0			
13178	87.80	88.90	1.10	92	10	62	0.6	2											0.0			
13179	88.90	89.40	0.50	1900	14	84	1.3	19											0.0			
13180	89.40	90.95	1.55	408	12	101	1	14											0.0			
13181	90.95	91.30	0.35	1110	17	42	1.4	24											0.0			
13182	139.30	140.55	1.25	53	13	880	0.9	2											0.0			
13183	140.55	141.80	1.25	447	14	2600	1.1	3											0.0			
13184	167.25	168.50	1.25	36	11	51	0.6	2											0.0			
13185	168.50	169.80	1.30	20	10	34	0.6	2											0.0			
13186	169.80	171.40	1.60	51	12	36	0.5	4											0.0			
ALT.AVG.	57.90	60.50	2.60	351.88	17.154	1835.8	1.32	9.3462														
ALT.AVG.	139.30	141.80	2.50	250.00	13.500	1740.0	1.00	2.5000														

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17214	18.30	22.40	4.10	14.33	0.162	1.91	3.49	2.57	0.75	0.04	3.04	0.01	67.98		0.28		0.08	94.64	0.5	1	34	22	10	1	19	10
17215	44.20	46.60	2.40	16.98	0.052	7.48	8.81	1.87	5.29	0.22	2.36	0.07	52.33		0.63		0.08	96.18	1.1	25	145	108	50	3	102	5
17216	110.50	113.30	2.80	13.82	0.072	1.36	2.81	2.07	1.32	0.08	3.8	0.01	70.98		0.32		0.12	96.76	0.5	10	92	36	24	1	37	10
17217	137.20	139.30	2.10	14.67	0.129	3.15	4.92	3.14	2.19	0.2	2.52	0.01	64.8		0.39		0.36	96.48	0.8	8	93	125	30	1	112	5
17218	152.10	155.10	3.00	14.26	0.122	1.05	3.44	3.12	2.53	0.12	2.43	0.01	66.21		0.3		0.28	93.87	0.6	19	117	24	39	1	61	5
17219	188.70	191.70	3.00	14.27	0.039	4.55	6.36	0.51	4.89	0.29	3.33	0.02	61.7		0.46		0.03	96.45	1.1	34	178	305	53	4	144	5
17220	204.20	207.20	3.00	13.4	0.022	1.48	2.44	0.98	1.82	0.03	5.02	0.01	69.88		0.23		0.16	95.48	0.4	16	40	10	27	1	27	5

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER:
LOCATION: NTS 92 B/13W

PLOTTING COORDS GRID: Mine
NORTH: 10916.00N
EAST: 10474.00W
ELEV: 750.00

ALTERNATE COORDS GRID:
NORTH: 0+ 0
EAST: 0+ 0
ELEV: 0.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 168.86m
START DEPTH: 0.00m
FINAL DEPTH: 168.86m

COLLAR GRID AZIMUTH: 180° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 208° 0' 0"

DATE STARTED: October 10, 1989
DATE COMPLETED: October 11, 1989
DATE LOGGED: October 11, 1989

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling Ltd.
CASING:
CORE STORAGE: Chemainus

PURPOSE: To test extent of Zn mineralization intersected inholes 214 - 216.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
35.66	-	-59° 0'	ACID	OK		-	-	-	-	-	
101.50	-	-57° 0'	ACID	OK		-	-	-	-	-	
145.39	-	-57° 0'	ACID	OK		-	-	-	-	-	
168.86	-	-57° 0'	ACID	OK		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.60	«OB»					
3.60 TO 56.46	Felsic to Inter. Qtz Feldspar Porphyry Tuff «QFP TUFF»	Colour: Medium grey green Grain Size: Medium Thickly bedded; moderately foliated 2-3% Quartz eyes to 2mm; 5% wh to ghosty (very indisticnt shapes) feldspar crystals to 1mm 6.90 - 8.00m Fault at 35 to 40 Very strong sheared with abundant gouge seams 8.44 - 10.35m Andesite Ash; (dyke ?); dark green; very fine grained; appears to be finely laminated or bedded Between 9.18 and 9.50m minor shearing and gouge seams CAF at 11.70m 28 14.50 - 15.10m Abundant quartz veins, with minor shearing 18.25 - 18.93m 100% quartz veins in a section that may have been an Andesitic Ash 18.93 - 18.95m Fault 50 24.88 - 26.98m Andesite Ash to Lithic Tuff (Diorite ?); below 25.95m the interval contains abundant quartz grains and has a very clastic appearance 29.15 - 29.28m Andesite Ash upper contact 40 lower contact 40 36.85 - 41.63m Andesite Ash CAB at 39.85m 40 CAB at 41.63m 45		Weak to moderate chlorite and sericite development on foliation surfaces Has a distinctive veiny or patchy chloritic development Also, patchy bleaching, silicification Between 3.60 and 8.44m abundant iron carbonate staining Weakly calcareous, moderate to strong on upper contact Well developed chlorite on foliation surfaces; moderate to locally strongly calcareous; abundant patchy carbonate Moderate to strongly calcareous	Trace disseminated pyrite, also possible very rare chalcopyrite Locally very finely laminated pyrite Trace to 1% disseminated, weakly laminated fine grained pyrite Trace disseminated pyrite to locally 1% Weakly laminated	Interval has a pseudobreccia like texture as a result of the chlorite development and the patchy silicification; locally it has a very granular look Between 19.20 - 24.88m, the interval has a more distinctive fragmental look Interval locally disrupted by minor quartz veining Locally very clastic looking

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		48.45 - 48.50m Shear				
		49.18 - 49.20m Andesite Ash CAB at 49.20	30			
		49.20 - 56.46m Rare white felsic ash fragments to 2cm			Trace to 0.5% disseminated, patchy, minor stringers of fine to medium grained pyrite	
		50.99 - 51.00m Shear	15			
		55.32 - 55.69m Andesite Ash CAB 55.32m CAB 55.69m	50 50	Moderate to strongly calcareous		
		56.29 - 56.46m Andesite Ash				
		56.40 - 56.42m Shear	50			
56.46 TO 114.90	Felsic Quartz Porphyry «QFP TUFF»	Colour: Light grey green Grain Size: Medium grained Thick bedded, massive; moderately foliated; 2-3% Quartz eyes to 1mm, rare to 4mm 5% to locally 10% medium green litho frags? to 1mm, rare to 4mm (speckled look) 2-3% Clay - weak epidote altered feldspar crystals to 0.5mm Grdm very fine grained to aphanitic and siliceous		Moderate developed sericite and chlorite, weakly calcareous Local patchy bleaching and patchy chlorite development	Trace disseminated pyrite	Has a very gritty, granular look Very hard to distinguish any feldspars Interval becomes coarser grained down hole
		58.65 - 58.72m Felsic Tuff	45			Possible Zone Horizon
		73.80 - 74.15m Andesite Ash		Moderate to strongly calcareous		
		74.15 - 114.90m Quartz eyes 5-10%, 1-3mm, commonly 5-7%				
		77.43 - 80.70m 1% light grey to white felsic ash, fragments to				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		1cm				
		CAF at 78.75m	39			
		90.30 - 91.30m Minor Shearing	40			
		94.55 - 99.60m		Common patchy silicification and bleaching Common Chlorite veining and patchy development Local intense silicification	Local patchy medium to coarse grained pyrite, up to 2% over narrow intervals	The alteration effects give this interval a fragmental look
		99.60 - 101.52m Intermediate ash; dark grey green, fine to medium grained Contains minor lapilli to 5mm		Well developed chlorite on foliation surfaces; local moderate calcareous	2-3% disseminated patchy medium to coarse grained pyrite, trace sphalerite on upper contact	Has a muddy appearance This interval looks more like the zone in 214 (216)
		101.52 - 114.90m		Local intense bleaching and silicification Moderate to well developed sericite and minor chlorite on foliation surfaces		
		108.10 - 108.50m Intense sheared, minor gouge	40			
		108.50 - 111.80m Fault			Rare trace sphalerite	Between 108.80 and 111.80m, <50% recovery; core very rubbly, minor gouge
		111.80 - 113.25m Fault Intermediate Ash, very fine grained			2-3% disseminated patchy, fine to medium grained pyrite	Lower contact unclear, <40% recovery between 111.80m and 116.40m; "This looks like zone in 214"
		113.25 - 114.90m Fault			Trace disseminated pyrite	Core very Broken and rubbly
114.90 TO 116.40	Felsic Tuff «F TUFF»	Colour: Light grey green Grain Size: Fine to medium grained Thin to moderate bedded Moderate to strongly foliated No distinctive textures		Well developed sericite on foliation surface	114.90 - 115.42m 5% pyrite diss., laminated, fine to medium grained, trace chalcopyrite, possible sphalerite	
		114.90 - 114.96m Fault 115.15 - 115.20m Fault 115.31 - 115.32m Fault	75 80 85			
		115.42 - 116.40m Intensely sheared, abundant gouge		Well developed sericite and chlorite on	<1% disseminated pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		5% medium green lithic fragments, pumice?		foliation surfaces		
116.40 TO 124.51	Felsic Tuff «F TUFF»	Colour: White to light grey, weak green cast Grain Size: Fine to medium grained Thick bedded massive, weak to moderate foliated 3-5% quartz eyes, <1mm to 3mm Feldspars very indistinct, locally clay alt <0.5mm 2-3% locally 5 medium to dark green lithic frags (pumice ?) giving the core a speckled appearance 116.40 - 116.70m Fault Intensely sheared, abundant gouge 117.28 - 117.37m Fault 118.40 - 118.41m Fault 119.63 - 119.64m Fault 119.76 - 119.81m Mafic Dyke 119.81 - 119.82m Fault 120.30 - 120.34m Fault 122.10 - 122.20m Fault 122.20 - 124.26m Andesite Ash to Lithic Tuff, medium grained, abundant small lithic fragments to 2mm 122.47 - 122.70m Fault Strongly sheared, abundant gouge	 29 45 65 55 77 10 80 70	Well developed sericite and chlorite on foliation surfaces	Trace to 0.5% disseminated minor patches fine to medium grained pyrite 2-3% laminated, disseminated, patchy, fine to meduim grained pyrite, local trace chalcopyrite	May be a silicified equivalent of the lower interval
124.51 TO 127.60	Felsic Tuff «F TUFF»	Colour: Light grey green Grain Size: Medium Grained Moderately bedded, moderately foliated <1% Quartz eyes, <1mm Feldspars are very indistinct 2-3%, locally 5% dark green lithic fragments to 3cm,generally <1cm flattened parallel to foliation (pumice ?) 124.51 - 124.55m Andesite Ash 127.05 - 127.60m Andesite Ash		Moderate to well developed sericite and chlorite on foliation surfaces	Trace disseminated pyrite 1-2% dissseminated, patchy, fine to medium grained pyrite, also trace chalcopyrite and pyrrhotite in	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		CAB at 127.60m	36		stringers	
127.60 TO 186.86	Felsic Tuff «F TUFF»	Colour: White to light grey Grain Size: Fine to medium grained Thick bedded, massive, weakly foliated 1% Quartz eyes <<1mm Feldspars are very indistinct <1% dark green lithic fragments, pumice?, generally <1cm x 1mm		Patchy bleaching and silicification Moderate to well developed sericite and chlorite of foliation planes	Trace disseminated pyrite	
		135.47 - 135.52m Fault	60			
		136.27 - 141.30m Moderate sheared local gouge seams				
		141.30 - 141.70m		patchy chlorite alteration		
		141.70 - 142.70m Andesite Tuff; intensely sheared				
		142.70 - 168.86m			Locally 1% disseminated, laminated patchy fine to medium grained pyrite, rare to trace chalcopyrite	
		142.70 - 144.70m		Patchy and veiny chlorite; locally these appear to be frags, 5-10%		
		145.72 - 145.90m Fault	70			
		148.70 - 149.30m			Minor chalcopyrite stringers	
		CAF at 156.57	20			
		160.60 - 162.00m			Minor quartz veins containing patchy chalcopyrite	
		166.10 - 168.86m		A weak pervasive epidote and chlorite alteration	A very bronze coloured pyrite with the chlorite sections; not magnetic	
		CAF at 167.00m	20			
	168.86 EOH					

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13207	59.20	60.20	1.00	30	1380	1900	1.2	2													
13208	99.60	100.49	0.89	120	190	910	1.4	5	2650												
13209	100.49	101.52	1.03																		
13210	108.50	111.80	3.30	20	118	450	0.5	1													
13211	111.80	113.25	1.45	120	108	1620	1	2													
13212	113.25	114.90	1.65	105	103	274	0.6	2													
13213	114.90	115.42	0.52																		
13214	115.42	116.40	0.98	75	113	228	1	4													
13215	122.20	123.40	1.20	240	71	230	1.4	3													
13216	142.70	143.80	1.10	205	55	144	0.6	1													
13217	148.70	149.30	0.60	125	215	262	0.4	3													

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17251	10.50	13.50	3.00	12.03	0.04	4.82	3.03	1.17	2.21	0.16	4.08	0.15	64.6		0.18		0.46	92.92	0.5	24	43	6	22	4	42	5
17252	35.70	38.70	3.00	14.12	0.07	2.92	2.7	2.04	1.86	0.08	3.16	0.11	67.74		0.26		0.02	95.09	0.6	6	76	14	17	1	49	5
17253	66.10	69.10	3.00	14.63	0.08	1.96	1.94	2.53	1.07	0.05	3.19	0.08	70.64		0.22		0.13	96.52	0.5	14	114	3	6	1	35	10
17254	96.60	99.60	3.00																							
17255	132.30	135.30	3.00	12.87	0.075	2.34	2.51	1.51	1.13	0.06	3.61	0.08	71.24		0.23		0.04	95.69	0.5	20	106	107	10	1	33	5
17256	157.20	160.20	3.00	14.25	0.06	1.7	2.38	1.86	1.01	0.04	4.2	0.07	70.31		0.27		0.03	96.2	0.2	1	85	5	11	1	28	5

HOLE NUMBER: 89-257

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: T.L
LOCATION: NTS 92B/13

PLOTTING COORDS GRID: Mine
NORTH: 11035.00N
EAST: 10274.00W
ELEV: 800.00

ALTERNATE COORDS GRID: Mine
NORTH: 110+35N
EAST: 102+74W
ELEV: 800.00

COLLAR DIP: -65° 0' 0"
LENGTH OF THE HOLE: 281.90m
START DEPTH: 0.00m
FINAL DEPTH: 281.90m

COLLAR GRID AZIMUTH: 188° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 216° 0' 0"

DATE STARTED: October 11, 1989
DATE COMPLETED: October 14, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling
CASING: 3.0
CORE STORAGE: Chemainus

PURPOSE: 100m step out east of the 214 - 216 trench

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
92.40	-	-62° 0'	ACID		water in tube 3/4 etch
136.20	-	-62° 0'	ACID	OK	
186.50	-	0° 0'	ACID		bad etch
242.00	-	-60° 0'	ACID	OK	
278.90	-	-57° 0'	ACID	OK	
77.70	212° 0'	-62°30'	SING.SHOT	OK	
271.30	210° 0'	-59° 0'	SING.SHOT	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	Overburden «OB»					
3.00 TO 11.70	QFP Tuff «QFP TUFF»	Colour: Light green grey Grain Size: Fine grained 2% <1-2mm round quartz eyes and up to 5% whitish feldspars Weakly foliated 3.0 - 6.6m Surface oxidation 7.2m Foliation irregular lower contact	42	Weakly sericitic along foliation planes 9.85 - 10.5m Quartz chlorite carbonate veining	1% disseminated pyrite	
11.70 TO 15.40	Mafic Ash «M ASH»	Colour: Dark green Grain Size: Very fine grained ash Irregular weak foliation from 0 deg to 40-50 deg to core axis Aphyric Lower contact rubbly, minor clay gouge, contact angle?		Moderate to strong carbonate alteration in the form of thin veinlets and larger carbonate quartz chlorite veins. Moderate pervasive chlorite alteration	1% brassy pyrite as <1cm aggregates	
15.40 TO 28.40	QFP Tuff, FP Tuff, Fel Tuff «QFP, FP TUFF»	Colour: Light green grey Grain Size: Fine Grained Zones of QFP mixed with feldspar rich zone and zones lacking quartz eyes or feldspars QFP's with 2% 1-2mm quartz eyes and 2-3% feldspars Distinctive white speckled colour 15.4 - 16.8m Strong brecciated texture, minor iron, oxidation = fault zone 16.8 - 22.0m Occassional gougy zones as follows: 17.4m, 18.9m, 20.4m, 21.9m; no orientations available on gouge zones, rubbly core 15.4 - 20.4m QFP 20.4 - 28.4m Felsic Tuff lacking quartz eyes and only occassional fine feldspars. Same interval strong brecciated appearance and abundant sericite chlorite.		Weak to moderate green sericite/ chlorite along foliation planes 20.4 - 28.4m Moderate sericite/ chlorite along foliation plane	Trace wispy pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		20.8m Foliation	43			
28.40 TO 40.10	QFP Crystal Tuff «QFP TUFF»	Colour: Meduim green Grain Size: Fine grained 2-3%, locally 5%, 1-3mm rounded shattered quartz eyes, and 3-5% and locally only 1% up to 7% whitish ratty feldspar crystals. Distinctive streaky green-white colouration. Foliations 28.6m 29.8m 39.1m 33.9 - 34.9m Mafic Ash Dark green, fine grained, aphyric Sharp upper and lower contacts Lower contact somewhat irregular Upper Contact Lower Contact Gradation contact to main rock unit marked by decrease in carbonate and a change in colour to light creamy green	 43 46 43 12 75	Strong streaky carbonate alteration Moderate sericite/chlorite alteration Weak patchy carbonate veining and veinlets Strongly chloritic	Trace pyrite	
40.10 TO 56.50	(Q)FP Crystal Tuff «(Q)FP TUFF»	Colour: Light creamy green Grain Size: Fine grained 1% 1mm and locall 2-3% 1-2mm shattered quartz eyes and up to 7-10% Whitish moderately clay altered feldspars. Distinctive light creamy green bleached appearance Weakly foliated Foliation 42.0m 49.3 - 50.3m Mafic Ash Dark green, fine grained Abundant fragments of carbonate vein material (brecciated veins). Minor fragments of quartz Very shallow irregular upper contact, lower contact possibly at 55 deg	 45	Weakly sericitic. Noticeably bleached appearance 46.7 - 49.0m minor 1-2cm quartz veins Moderate to strongly chloritic alt	Trace disseminated pyrite 1% disseminated pyrite 51.05m 1-2cm stringer of mainly a steel grey flaky metallic mineral, 7-10% pyrite and trace galena and	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
					chalcopyrite	
		51.25 - 52.15m Mafic Ash Dark green, fine grained Sheared appearance at 15 deg to core axis. Abundant brecciated vein and fragments of carbonate +/- quartz veins Lower contact marked by CS thrust fault fabric Bounding faults at 40 degrees to core axis				Mafic Ashes acting as zones of weakness for faulting.
		51.25m contact	47			
		54.1m CS Fabric Fault	50			
		Gradational lower contact marked colour change to a light green				
56.50 TO 80.50	(Q)FP Crystal Tuff «(Q)FP TUFF »	Colour: Light green Grain Size: Fine grained <1-1%, locally 1-2% 1mm quartz eyes and 5-7mm white feldspar specks Rock has a noticeably more siliceous (fresher) appearance		Weakly sericitic along foliation planes	Trace pyrite	
		57.3 - 57.4m Mafic Ash				
		Contacts at 57.3m	45			
		57.4m	40			
				61.3 - 62.9m Bleached with brecciated quartz veins		
					62.9 - 63.35m 2% pyrite as mm stringers	
		65.15 - 65.25m Mafic Ash with brecciated quartz veining				
		Contacts at 65.15m	26			
		Contacts at 65.25m	30			
		Rare 0.5cm grey felsic fragments from 65.7 - 66.1m				
		Foliation at 66.7m	45			
				67.5 - 68.3m Bleached core, abundant brecciated carbonate quartz veining with strong sericite alteration		
		70.65 - 80.5m Unit becoming greener in colour, feldspars decreasing by 2-3%. Rock taking on a patchy silicified/fragmental appearance		79.2 - 80.5m Moderate quartz carbonate veining		
		Lower contact in rubble				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
80.50 TO 85.40	Felsic Tuff Flow? «F TUFF,FLOW»	Colour: Light green Grain Size: Fine grained Pervasive silicified look, aphyric, weak streaky green, rubbly core Base of unit brecciated or fragmental appearance over 1m		Strongly silicified, probably a primary feature	Nil	Looks very similar to fragments mentioned up hole and to fragments in hole 216 at 97.5m
85.40 TO 87.75	QFP Tuff «QFP TUFF»	Colour: Light green Grain Size: Fine grained Weakly foliated 5-7% white mm feldspar <1-1% 1-2mm quartz eyes Foliation at 86.1m	50	Weakly sericitic	Nil	
87.75 TO 89.30	Felsic Tuff Flow? «F TUFF»	Colour: Light green Grain Size: Fine grained Patchy mottled and patchy green speckled appearance from 1-2mm Dark green sericite/chlorite clots		Strong pervasive silicification -primary feature	Nil	
89.30 TO 94.80	QFP Crystal Tuff «QFP TUFF»	Colour: Light green Grain Size: Fine grained <1-2% 1-2mm quartz eyes 2-3% whitish altered feldspar Patchy crystal poor zones		Weak Sericite	Nil	
94.80 TO 96.10	QFP Lapilli Tuff «QFP LAP TUFF»	Colour: Light green Grain Size: Fine grained Similar crystal tuff as above but with 1 x 4cm fine grained aphyric siliceous felsic fragments Matrix supported, <10% fragments 95.5 - 95.9m Crystal poor, weakly foliated tuff				
96.10 TO 118.30	QFP Crystal Tuff «QFP TUFF»	Colour: Light green Grain Size: Fine grained 5% 1mm irregular and rounded quartz eyes and 10-15% mm white, very fresh looking feldspars Feldspar and quartz contents increase down hole,		Patchy rare quartz carbonate veining with minor bleaching adjacent to veins	Nil	The fresh appearance of feldspar crystals differentiates this QFP from previous QFP units

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		especially quartz content. Quartz eyes increase to 2-3mm below 111.65m				
		Foliations at 97.5m	40			
		100.0m	35			
		106.3m	25			
		109.5 - 111.65m Mafic Dyke? Tuff? Dark green, fine grained, weakly foliated, minor fine disseminated carbonate, very fine disseminated tan leucoxene				
		Foliation at 111.0m	45			
		Sharp lower contact	50			
		Massive QFP below mafic unit				
		Sharp lower contact at 118.3m	40			
118.30 TO 134.20	Mafic Dyke «M DYKE»	Colour: Dark green Grain Size: Fine grained Weakly foliated, patchy Very fine disseminated tan leucoxene Weak streaky appearance from pervasive calcite and minor quartz carbonate veinlets		Moderate pervasive chlorite Weak carbonate veining, minor pervasive calcite; weakly streaky	Trace pyrite	
		Foliations at 121.1m	30			
		124.3m	25			
		125.0 - 125.2m Screen of QFP Tuff				
				130.9 - 131.75m Quartz carbonate chlorite veining		
		Sharp lower contact	40			
134.20 TO 155.20	QFP Crystal Tuff «QFP TUFF»	Colour: Creamy grey green Grain Size: Fine grained <1-1% locally 1-2% mm rounded shattered quartz eyes and 3-5% whitish clay altered feldspars Weakly foliated		Weakly sericitic Minor very patchy quartz/carbonate veinlets	Trace pyrite	
		136.75 - 137.3m Gougy broken core				
		138.25 - 138.45m Chloritic ash, Mafic Dyke?? Brecciated by carbonate veining				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Foliation at 139.9m	45			
		142.1 - 146.7m Mafic Ash Dark green, fine grained, weakly foliated Minor gouge at broken upper contact		Pervasive fine calcite and fine calcite veinlets Moderately chloritic		
		Foliation at 143.2m 145.2m	25 40	Increasing tan sericite towards lower contact		
		144.4 - 145.0 QFP Fragments up to 5cm				
		Contact at 146.7m	40			
		146.7 - 148.1m Mafic Dyke Dark green, fine grained Pervasive carbonate alteration producing white streaky appearance, much more noticeable than above unit				
		Lower contact at 148.1m	70			
		Gradational indistinct lower contact to main rock unit				
155.20 TO 181.50	Felsic Tuff «F TUFF»	Colour: Light grey Grain Size: Fine grained		Weakly sericitic along foliation planes	Nil	
		Weakly foliated, very fine granular texture, patchy mottled appearance. <1% <1mm shattered quartz grains Occassional zones with 3-4% white feldspar crystals				
		158.6 - 159.1m Chloritic mafic ash Dark green, fine grain, strongly chloritic				
		Foliation at 162.0m	40			
		Chloritic ash screens as follows: 164.45 - 164.7m 165.0 - 165.2m				
		Contacts at 164.45m 164.7m 165.0m	40 20 20			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		165.2m Foliation at 167.0m 168.0m Below 168m quartz eye content may reach 2-3% Foliation at 172m 180.5 - 181.5m Rubbly broken core	35 55 55 40			
181.50 TO 185.35	Mafic Ash? Flow? «M ASH»	Colour: Dark green Grain Size: Fine grained Moderately foliated Very distinctive unit characterized by 1-2mm round green spots and 2-3% 2-6mm vesicles? filled with white calcite and rimmed by silver hematite and chlorite Rubbly broken core		Moderate to strongly chloritic Streaky Strong sericite towards end of unit	Trace pyrite Trace chalcopyrite associated with 2cm quartz carbonate vein	
185.35 TO 199.60	Felsic Tuff «F TUFF»	Colour: Light grey Grain Size: Fine grained Very fine <0.5cm whitish specks, weak pervasive silicified appearance, <1% mm shattered quartz eyes 192.0 - 198m Indistinct mottled fragmental appearance with 0.5-1cm possible whitish frags 193.5 - 194.6m Fault Zone. Gougy core, very poor recovery		Weakly sericitic 198.2 - 199.6m Weak to moderately sericitic	<1% disseminated pyrite	
199.60 TO 201.80	Mafic Ash «M ASH»	Colour: Dark green Grain Size: Fine grained Moderately foliated, foliations distorted, folded, various orientations -fault zone within soft ashes bordered by more massive felsics Fine wispy appearance, aphyric, minor brecciated veining. Gougy core from 199.6 - 200.8m Irregular lower contact		Stong sericite and chlorite to 200.8m, strong chlorite 200.8 - 201.8m	<1% pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
201.80 TO 279.70	Felsic Tuff «F TUFF»	Colour: Creamy light green, creamy grey Grain Size: Fine grained Very weakly foliated, <1-1% <1mm shattered quartz eyes Patchy creamy grey and light green mottling giving core a fragmental appearance. Some green patches possible fiamee. Disinctive bleached appearance		Moderately sericitic, weak epidote as fine grains	1-2% pyrite disseminated and in concentrated <1cm patches. Trace chalcopyrite Green mottled pseudofragments often contain 2-3% disseminated pyrite	
		Foliations at 212.0m 226.2m 232.3m 236.6m 239.4m	43 35 40 43 25			
		238.9m Gougy broken core			Below 241m pyrite content drops to trace pyrite except zones as follows	
		243.1 - 244.0m Muddy Andesitic Ash Silvery grey green, fine grained Streaky fine white carbonate parallel to moderate foliation Irregular upper contact. Rubbly lower contact		243.1 - 244.0m Moderate to strongly sericitic. Strong pervasive streaky carbonate	243.1 - 244.0m 1% fine pyrite as weak veinlets. Trace chalcopyrite and galena	
		Foliation at 243.5m	27			
		249.3m 4cm gougy core Fault	33			
		250.05 - 250.13m More chloritic possibly an andesitic ash with 2-3mm quartz/felsic grains Sharp upper contact at	47	250.05 - 250.5m Weak to moderately chloritic	250.5 - 250.13m 20% very fine dark pyrite as intergrown patches and rare wisps. 2-3% chalcopyrite and approximately 0.25% fine red sphalerite grains 250.13 - 250.3m 1% pyrite <0.5% cpy	
		256.2m Rubbly gougy core. Fault				
		258.0 - 272.5m Stong mottled texture, creamy green and light green Indistinct fragmental appearance				
		Foliation at 265m	45			
		270.7 - 271.0m Chloritic mafic ash				
		Foliation at 273.7m	40			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		274.4 - 279.7m Losing patchy mottled look becoming massive and siliceous looking				
279.70 TO 281.90	Mafic Dyke, Diorite «DIOR»	Colour: Dark green Grain Size: Fine grained 279.7 - 281.3m Fine mafic dyke with abundant streaky pervasive carbonate. Fine grained phase grading into feldspar phyric diorite at 281.1m Irregular upper contact 281.3 - 281.9m Diorite 281.3m contact between weakly feldspar phyric and stronger feldspar phyric diorite (separate pulses)				
	E.O.H.	Contact at 281.3m	53			

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13218	49.30	50.30	1.00	50	47	337	1	19													
13219	50.30	51.25	0.95	125	63	109	0.5	24													
13220	51.25	52.15	0.90	75	31	271	1	17													
13221	243.10	244.00	0.90	180	73	155	1.3	1													
13222	250.05	250.30	0.25	5000	72	735	3	86	1770												

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17257	6.80	9.80	3.00	14.69	0.08	2.06	2.23	2.92	1.3	0.08	2.37	0.09	69.16		0.23		0.06	95.27	0.5	16	82	5	17	2	30	10
17258	36.30	39.30	3.00	13.58	0.055	7.4	4.89	2.27	2.95	0.14	2.19	0.21	54.46		0.35		0.02	88.52	1.1	19	85	60	41	5	67	5
17259	44.80	46.40	1.60	13.75	0.055	2.97	2.03	2.49	1.97	0.08	2.42	0.11	67.92		0.21		0.17	94.18	0.6	27	63	4	23	3	35	5
17260	74.40	77.30	2.90	14.81	0.08	2.35	2.61	2.06	1.32	0.07	4.02	0.1	68.26		0.22		0.14	96.03	0.7	30	99	11	12	1	40	5
17261	102.70	105.50	2.80	14.3	0.07	2.03	2.14	1.47	1.45	0.06	4.64	0.1	69.67		0.23		0.05	96.21	0.6	20	134	3	16	2	35	5
17262	121.60	124.60	3.00	18.03	0.06	5.22	13.25	1.74	5.1	0.13	2.26	0.24	43.63		2.06		0.54	92.27	1.1	1	68	64	35	1	138	5
17263	149.40	152.40	3.00	15.99	0.08	1.9	2.61	2.62	1.13	0.06	3.62	0.08	67.44		0.24		0.08	95.85	0.4	12	98	5	9	1	39	5
17264	174.10	177.10	3.00	14.44	0.055	2.26	2.49	1.98	1.14	0.08	3.87	0.1	69.9		0.22		0.02	96.56	0.5	5	73	4	7	1	44	5
17265	194.70	197.70	3.00	13.82	0.075	2.65	3.38	2.09	1.14	0.12	3.41	0.1	67.6		0.27		0.24	94.89	0.5	9	112	27	10	1	82	5
17266	216.40	219.40	3.00	13.9	0.07	2.34	3.33	1.91	1.34	0.07	3.54	0.1	68.01		0.26		0.27	95.15	0.5	21	81	38	14	2	43	5
17267	246.00	249.00	3.00	13.94	0.065	3.07	3.15	2.28	1.58	0.05	2.12	0.11	68.33		0.27		0.06	95.04	0.7	21	73	10	19	1	41	5
17268	270.40	273.40	3.00	14.66	0.12	2.65	3.53	2.32	1.42	0.06	3.41	0.11	66.23		0.29		0.11	94.91	0.9	19	149	443	16	2	58	10

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: T.L
LOCATION: NTS 92 B/13

PLOTTING COORDS GRID: Mine
NORTH: 11075.00N
EAST: 10475.00W
ELEV: 775.00

ALTERNATE COORDS GRID: Mine
NORTH: 110+75N
EAST: 104+75W
ELEV: 775.00

COLLAR DIP: -70° 0' 0"
LENGTH OF THE HOLE: 292.30m
START DEPTH: 0.00m
FINAL DEPTH: 292.30m

COLLAR GRID AZIMUTH: 186° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 214° 0' 0"

DATE STARTED: September 14, 1989
DATE COMPLETED: September 18, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling
CASING: 3.0m
CORE STORAGE: Chemainus

PURPOSE: To test the 214/216 trend down dip of hole 89-256

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
16.50	-	-69° 0'	ACID	OK		-	-	-	-	-	
82.90	-	-68° 0'	ACID	OK		-	-	-	-	-	
126.50	-	-67° 0'	ACID	OK		-	-	-	-	-	
169.20	-	-68° 0'	ACID	OK		-	-	-	-	-	
202.70	-	-66° 0'	ACID	OK		-	-	-	-	-	
273.40	-	-64° 0'	ACID	OK		-	-	-	-	-	
228.60	217° 0'	-65° 0'	SING.SHOT	OK		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	Overburden «OB»					
3.00 TO 9.50	QFP Crystal Tuff «QFP TUFF»	Colour: Light green Grain Size: Fine grained 1-2% 2-4mm rounded quartz eyes and 3-5% 1-2mm whitish fairly fresh feldspar crystals Feldspar content decreasing below 5.3m. Weakly foliated 5.1-5.3m and 6.6=6.9m Andesite Ash screens Foliation at 6.3m Contact at 6.9m 9.5m	 52 45 50			
9.50 TO 14.00	Mafic Dyke «M DYKE»	Colour: Dark green Grain Size: Fine grained Massive to weakly foliated. Rare mm whitish feldspars, otherwise aphyric. Rubbly core Sharp upper and lower contacts, no chill margins Contact at 14.0m	 45	Rare carbonate and quartz veining		
14.00 TO 17.70	QP Crystal Tuff «QP TUFF»	Colour: Light grey geen Grain Size: Fine grained Up to 5% 2-4mm round shattered quartz eyes. Feldspar possibly present but very indistinct Weakly foliated		Weakly sericitic, minor quartz carbonate veinlets near top of unit	Trace pyrite	
17.70 TO 40.30	Intermed. Tuff, Lapilli Tuff «I TUFF,LAP TUFF»	Colour: Medium green Grain Size: Fine grained 17.7 - 20.9m Strongly chloritized QFP fragments 3-4cm and up to 10cm. Rounded, flattened parallel to foliation. Groundmass supported -groundmass fine granular lithic tuff with abundant 1mm grains of translucent feldspars and siliceous felsic grains		Weak chlorite, epidote	Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		20.9 - 25.8m 10% 3mm-1.5cm weakly epidotized rounded fragments 26.5 - 40.3m 2-5cm silicified QFP fragments flattened parallel to foliation. 1-2% Fragments 27.4 - 27.95 Mafic Dyke 34.4 - 40.3m Groundmass containing up to 3-5% 2-3mm quartz eyes Pervasive whitish streaky appearance to entire unit 37.75 - 37.9m Mafic Dyke Foliations at 20.4m 40 25.1m 45 26.5m 45 30.4m 32 36.1m 35 38.1m 55 Lower contact 55			
40.30 TO 55.80	Felsic Lapilli Tuff «F LAP TUFF »	Colour: Striped creamy grey, light green Grain Size: Fine grained 1-2cm and up to 4cm creamy grey green stretched and flattened QP, Q(F?)P fragments in a light green QP groundmass Fragment outlines very indistinct. Characteristic striped appearance 41.3 - 41.6m Mafic ash Dark green, fine grained Contacts at 41.3m 55 41.6m 50 49.1 - 49.4m Mafic ash, Dyke? 51.9 - 52.8m Mafic ash Dark green, fine grained, fairly massive Abundant <1mm felsic grains, translucent grains Foliation at 42.2m 55			Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Gradational lower contact				
55.80 TO 93.30	QP Tuff, Lithic Tuff «QP TUFF»	Colour: Light grey green Grain Size: Fine grained <1-3% and locally 5% <1-1mm shattered quartz eyes/ grains. Very fine granular texture from mm felsic granules and possible fine translucent and clay altered feldspars Very weak foliation Some areas greener colour, more intermediate looking 62.8 - 64.3m Occassional 1-3cm fault gouge zones Fault at 64.0m 68.4m Minor clay gouge 81.1m 3cm clay fault gouge at 65 degrees Occassional 10cm QFP screens towards base of unit	70	Weak sericite/chlorite throughout Rare quartz carbonate veining Very weak pervasive calcite 84.9 - 86.4m Moderately abundant quartz chlorite veining 92.5 - 93.3m Quartz chlorite veining		
93.30 TO 115.45	QFP Crystal Tuff «QFP TUFF»	Colour: Light green, speckled Grain Size: Fine grained 2-3% 1mm quartz eyes and up to 10% white clay and carbonate altered rounded feldspars Very weakly foliated Patchy silicified look in areas of fresh white feldspars Some crystal poor zones 98.4 - 101.5m Fault Zone Brecciated core, minor fault gouge, rubbly core Minor fault gouge and rubbly core also at 103.4 - 103.6m, 107.4 - 108m, 113.75 - 114.0m, 115.2 - 114.45m Mafic Ashes, Dykes? as follows 108.0 - 108.4m		Weak - moderate quartz chlorite veining throughout	Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		109.1 - 110.2m Weak to moderately magnetic, very fine disseminated magnetite. 10cm zone well layered/foliated? at 113.0 - 113.75m Also magnetic	 40			
115.45 TO 119.70	Mafic Dyke? «M DYKE»	Colour: Dark green Grain Size: Fine grained Massive with patchy streaky/foliated areas Weakly magnetic from very fine magnetite Faulted upper contact, rubbly lower contact		Moderate very fine disseminated calcite Minor quartz chlorite veining	Trace pyrite	
119.70 TO 133.10	F(Q)P Crystal Tuff «F(Q)P TUFF»	Colour: Streaky medium green and white Grain Size: Fine grained 1-2% <2mm rounded shattered quartz eyes and 5-7% mm whitish carbonate and clay altered feldspars. Distinctive streaky appearance unique to this rock Weakly foliated defined by streaky carbonate Foliation at 122.0m 131.0m	 60 60	Pervasive carbonate alteration giving rock a distinctive whitish streaked appearance. Weak to moderate sericite/chlorite Below 127m streaky carbonate alteration becoming patchy	Trace pyrite	Similar to hole 89-257 from 28.4-40.1m
133.10 TO 218.90	F(Q)P Crystal Tuff «QFP TUFF»	Colour: Light grey, light green grey Grain Size: Fine grained Massive to weakly foliated, weak to moderate pervasive silicified appearance 7-10% 1-3mm whitish clay/carbonate altered feldspar and 1-2% wmm rounded shattered quartz eyes Rare patches with 3-5% and up to 10% quartz eyes 143.4 - 144.15m Intermediate Tuff, Dyke? Dark green, fine grained, weakly foliated Very fine granules, possible felsic grains 10cm bleached zones at upper and lower contact Contact at 144.15m 146.2 - 149.6m QFP lapilli tuff Pinkish cream QFP fragments in a QFP groundmass, fragments 2-3cm, rounded, flattened. Fragments very silicified in appearance	 60	Weakly sericitic Weak to moderate silicified appearance could be primary in nature 105.7 - 154.25m Bleached appearance	Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				pinkish cream colouration		
		Below 154.25m patchy pinkish cream colouration with indistinct fragmental appearance, with siliceous QFP frags in a less silicified QFP groundmass Quartz eye content 2-3% and up to 10%, 2-3mm size Rare <1cm fragments of aphyric creamy pink felsics				The entire unit gives the impression of being a coarse QFP gragmental unit. Indistinct fragment outlines, silicified layers and less silicified layers at cm scale may represent fragments and groundmass respectively
		Foliation at 150.4m	75			
		156.3m	55			
		168.4m	53			
		175m	53			
		183.0m	47			
		189.5m	51			
		210.0m	55			
		More altered in bleached zones, feldspars indistinct				
		193.2 - 197.5m 1% <1cm creamy felsic fragments				
		195.8 - 196.2m Andesite Ash Dark green, fine grained, moderately foliated parallel to contacts				
		Contact at 195.8m	50			
		196.2m	45			
					204.2 - 204.6m <0.5% chalcopyrite disseminated. Possibly associated with minor quartz veining	
		213.8 - 216.75m Weakly bleached appearance Feldspars very indistinct			213.8 - 216.75m <1% pyrite as occassional <1mm wisps/veinlets	
		216.75 - 216.90m Fault zone, gougy brecciated core				
		Fault at 216.9m	50			
		Faulted lower contact at 218.4m	30			
		218.4 - 218.9m Mafic Dyke Dark green, fine grained, abundant very fine leucoxene				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
218.90 TO 229.25	QP Felsic Tuff «QP TUFF»	Colour: Light grey, light green Grain Size: Fine grained 2-3% 1-2mm and rare to 3mm rounded quartz eyes. Patchy 3-5% faint feldspar grains Weakly foliated 220.0 - 220.3m Andesitic Ash Dark green, fine grained, minor calcite veinlets and 1-2mm grains. Sharp upper and lower contacts Contacts at 220.0m 60 220.3m 70 224.60 - 224.75m Fault Zone, Gougy core 224.75 - 225.85m Andesite ash, dyke? Dark green, fine grained weak calcite veinlet. 1-2% 2-4mm vesicles? with quartz cores and calcite rims 226.45m 5cm fault zone 35	Weakly sericitic 221.1 - 224.75m Moderately bleached creamy green colour. Silicified	<1% pyrite as wispy veinlets associated with siliceous veinlets 221.1 - 224.75m 1% pyrite as <1mm veinlets cross cutting core	220.0 - 224.75m Possible 214-216 trend equivalent
229.25 TO 234.60	Felsic Lithic Tuff «F LITH TUFF»	Colour: Medium green Grain Size: Fine grained Very fine gritty granular texture of mm felsic grains and 1-2% shattered quartz eyes. Distinctive white weak speckled appearance from wispy disseminated calcite 233.1 - 233.4m Andesite ash, dyke? Moderate streaky carbonate Sharp upper and lower contacts Contacts at 233.1m 75 233.4m 65	Pervasive fine white calcite wisps		
234.60 TO 261.20	Felsic Tuff Lapilli Tuff «F TUFF,LAP TUFF»	Colour: Light grey green Grain Size: Fine grained <1% distinct <1cm grey fine grained siliceous felsic fragments Patchy siliceous banding = larger siliceous	Weak sericite/chlorite along foliations		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		fragments Occassional zones with dark green wispy 1cm pumice fragments				
		Foliations at 236.5m 240.2m	65 50			
		242.6 - 243.5m Foliations 0-10 deg to core axis				
		245.8m	55			
		247.3 - 249.3m Foliations 0-10 deg to core axis				
		Thin andesite ashes/dykes? as follows: 250.6 - 251.1m 251.25 - 251.75m 253.1 - 254.05m		250.6 - 255.0m Patchy white green quartz chlorite veining up to 10cm		
		Contact at 250.6m 254.05m	52 50			
		Gougy lower contact at	47	260.7 - 261.0m Quartz-chlorite veining		
261.20 TO 292.30	Felsic Tuff «F TUFF»	Colour: Medium green Grain Size: Fine grained Weakly foliated becoming massive below 276.0m Fine grained weakly granular texture Rare mm quartz eyes 261.0 - 276.0m Distinctive calcite blotches Below 276.0m stronger granular texture, Lithic Tuff		Weak sericite/chlorite alteration. Weakly siliceous 261.0 - 276.0m Weak to moderate calcite as wispy <1cm blotches Below 276.0m 2-3% <1mm greenish sericitic or epidote grains	Trace pyrite	

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13224	221.30	222.60	1.30	15	18	32	0.3	2													
13225	222.60	224.00	1.40	11	14	31	0.3	1													
13226	224.00	224.75	0.75	70	12	10	0.6	1													

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17269	14.30	17.30	3.00	13.96	0.075	2.29	2.26	3.04	0.92	0.06	2.37	0.09	71.12		0.23		0.04	96.45	0.8	20	115	16	1	1	27	5
17270	20.40	23.20	2.80	15.65	0.03	12.17	6.87	1.2	5.23	0.2	3.14	0.31	42.09		0.48		0.05	87.42	2.3	1	67	80	43	4	75	5
17271	52.70	55.70	3.00	15.27	0.095	1.71	2.81	2.74	1.38	0.06	3.61	0.09	68.72		0.23		0.05	96.78	0.4	11	133	17	8	1	42	5
17272	80.10	83.10	3.00	13.63	0.075	1.67	2.4	2.23	1.91	0.05	3.1	0.1	71.2		0.2		0.03	96.59	0.4	5	143	11	17	1	48	5
17273	105.00	107.00	2.00	15.33	0.08	2.35	2.88	2.42	1.44	0.06	3.48	0.1	67.51		0.23		0.03	95.91	0.7	26	99	6	14	1	47	10
17274	120.00	123.00	3.00	13.46	0.02	6.3	5.3	0.44	3.7	0.17	4.48	0.21	57.07		0.33		0.02	91.49	0.9	1	35	46	38	2	68	10
17275	151.80	154.50	2.70	14.2	0.085	1.95	2.63	2.16	1.11	0.07	3.68	0.1	69.02		0.21		0.06	95.26	0.4	18	99	6	8	1	51	5
17276	178.30	181.30	3.00	14.3	0.055	2.37	2.73	1.81	1.1	0.08	4.41	0.1	67.92		0.23		0.06	95.14	0.6	11	79	3	5	1	49	5
17277	209.90	212.90	3.00	14.84	0.09	2.15	2.48	2.3	1.08	0.06	3.83	0.09	68.58		0.25		0.13	95.87	0.6	1	105	140	3	1	40	5
17278	238.00	241.00	3.00	15.03	0.085	2.3	2.77	2.88	1.16	0.08	2.65	0.09	68.41		0.29		0.15	95.9	0.6	1	92	77	7	1	85	5
17279	267.30	270.30	3.00	15.47	0.095	3.37	4.46	2.24	1.75	0.12	2.9	0.14	64.09		0.4		0.07	95.1	0.9	4	137	30	12	2	74	5
17280	286.30	289.30	3.00	15.59	0.05	3.09	4.01	0.94	1.92	0.12	4.94	0.13	64.48		0.39		0.03	95.7	0.7	4	105	28	13	2	56	10

HOLE NUMBER: 89-259

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: T.L.
LOCATION: NTS 92B/13

PLOTTING COORDS GRID: Mine
NORTH: 10947.00N
EAST: 10273.00W
ELEV: 780.00

ALTERNATE COORDS GRID: Mine
NORTH: 109+47N
EAST: 102+73W
ELEV: 780.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 228.30m
START DEPTH: 0.00m
FINAL DEPTH: 228.30m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 208° 0' 0"

DATE STARTED: October 18, 1989
DATE COMPLETED: October 20, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling
CASING: 12.9
CORE STORAGE: Chemainus

PURPOSE: To test the shallow potential of the 214-216 trend 100m to the east

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
23.50	-	-54° 0'	ACID	OK	
71.90	-	-54° 0'	ACID	OK	
122.20	-	-53° 0'	ACID	OK	
178.90	-	-53° 0'	ACID	OK	
228.30	-	-52° 0'	ACID	OK	
201.20	209° 0'	-53° 0'	SING.SHOT	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 12.90	Overburden «OB»					
12.90 TO 18.80	QP Felsic Tuff «QP TUFF»	Colour: Light creamy green 1-2% 1-3mm round quartz eyes in a fine grained foliated groundmass 17.9 - 18.8m Unit becoming mottled with medium green flattened wispy <2cm fragments = pumice frags Foliation at 14.7m Sharp lower contact at	53 50	Weakly sericitic, weak bleached appearance	<1-1% disseminated pyrite 17.4m 1.5cm zone with 2-3% pyrite and trace sphalerite	
18.80 TO 26.30	Andesitic? Ash, Muddy Ash «AND ASH»	Colour: Medium greenish grey Grain Size: Fine grained 214-216 zone composed of chloritic foliated and massive andesitic ashes with screens of felsic tuff and felsic lithic tuffs. Detailed breakdown of unit as follows 18.8 - 19.0m Andesite ash, weak calcite 19.0 - 19.25m Felsic Tuff, wispy inclusions of Andesite 19.25 - 19.58m Andesite ash, same as 18.8 - 19.0 Contact at 19.25m 19.58 - 20.25m Felsic Tuff: 1% quartz eyes. Occassional green wisps = fragments Contact at 20.25m 20.25 - 20.75m Andesite Ash Massive moderate carbonate veinlets giving core a weak brecciated appearance 20.75 - 21.45m Felsic Lithic Tuff Massive, pervasive silicified fine granular texture Dark grey Weak brecciated appearance from carbonate veinlts	28 35	Moderate chlorite alteeration of andesite Weak to moderate carbonate veining	3-5% disseminated pyrites, trace chalcopyrite 19.05m 2cm zone with 1% red sphalerite 19.53 - 19.79m <1% red disseminated sphalerite	214-216 Equivalent

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		21.45 - 23.50m Andesite ash Massive, moderate to strong brecciated appearance from carbonate veining? Weakly foliated towards base of interval 23.50 - 26.3m Felsic Tuff Greenish grey Mixing of felsic and andesitic material Quartz veining from 23.8 to 24.6m Faulted lower contact, rubbly gougy core				
26.30 TO 29.30	Felsic Tuff «F TUFF»	Colour: Light green Grain Size: Fine grained Massive, moderate pervasive silicified appearance with patchy fine brecciated zones Rare 2-3cm felsic fragments at top of unit Rubbly core Sharp lower contact	60	Moderately silicified	<1% pyrite patchy, locallized in fractures	
29.30 TO 39.50	Intermed. to Andesitic Dyke, Tuff? «I DIKE, TUFF?»	Colour: Dark green Grain Size: Fine grained Very weakly foliated with very weak fine wispy calcite veinlets parallel to foliation Possible very fine grained leucoxene Lower contact disrupted by quartz veining Foliation at 31.5m	35	Moderate quartz carbonate veining with 2-10cm widths Strong pervasive, very fine disseminated calcite	Trace pyrite	
39.50 TO 65.25	QP Crystal Tuff «QP TUFF»	Colour: Light green Grain Size: Fine grained 2-3% 1-3mm and rare 4.5mm round quartz eyes. Occassional zones with 2-3% faint whitish feldspars Weakly foliated Narrow rubbly gougy zones at 45.6m, 54.3m, 54.6m Fault at 54.6m 54.6 - 56.6m 3-5% 1-2cm wispy green pumice frags	40	Weakly sericitic along foliation plane	Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Sharp contact at 56.6m	60			
		56.6 - 57.0m Andesitic ash Dark green, fine grained, moderate sheared appearance Abundant wispy calcite			56.6 - 57.0m 3-5% disseminated pyrite	
		57.2 - 59.6m Andesitic ash, dyke? Similar to above interval but with much less carbonate				
		59.95 - 60.1m Sericitic felsic ash Light grey, fine grained			59.95 - 60.1m 2-3% pyrite, trace chalcopyrite	
		60.1 - 63.75m Quartz eye content decreases to around 1% and size decreases to <1-1mm				
		63.1 and 63.6m 2-3cm gougy fault zones				
		63.75 - 65.25m Andesite ash, dyke? Dark green, fine grained Abundant streaky, wispy calcite Very indistinct lower contact. Appears to grade into lower diorite				
		Contact at 63.75m	60			
		65.25m	50			
65.25 TO 128.45	Diorite «DIOR»	Colour: Dark green Grain Size: Fine grained		Occassional <5cm quartz chlorite and quartz chlorite carbonate veining		
		Massive, feldspar porphyritic with 3-10% ragged white feldspar phenocrysts				
		90.0 - 91.0m Fine grained phase of diorite, moderately sheared with moderately abundant wispy streaky carbonate				
		Shearing 90.5m	50			
					111.1 - 113.9m <1% disseminated pyrrhotite	
				121.58 - 122.53m Quartz chlorite vein	121.58 - 122.53m Occassional blotches of chalcopyrite/pyrite and chalcopyrite/pyrrhotite Total sulfide content <1% of vein	
		Contact at 128.45m	38			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
128.45 TO 138.50	Felsic to Intermed. Tuff, Tertiary Dykes «F-I TUFF, M DIKES»	Colour: Medium green Grain Size: Fine grained Weakly foliated volcanics cut by the Tertiary? mafic dykes Volcanics -baked altered appearance 128.45 - 129.85m Felsic Volcanics <1% quartz eyes Wispy green patches gives fragmental appearance Dyke from 128.8 - 129.05m 129.85 - 130.55m Possible Tertiary Dyke, possible intermediate volcanics Fine grained, very weak foliation Patchy green blotches give fragmental appearance Contacts very indistinct 130.55 - 132.2m Felsic Tuff Silicified hornfelsed 132.2 - 133.2m Tertiary? mafic dyke 133.2 - 136.35m Felsic tuff Patchy QP and fresh looking FP zones 135.35 - 138.5m 20-40cm bleached cream fragments or core is cutting the edge of another Tertiary dyke			132.75 - 133.2m <1% chalcopyrite and pyrite within Tertiary? dyke	
138.50 TO 168.10	QP Felsic Tuff «QP TUFF»	Colour: Light to medium grey Grain Size: Fine grained 1-3% 1-2mm quartz eyes in a fine grained siliceous groundmass 138.5 - 143.65m Very granular gritty appearance, massive, patchy remnant clay altered feldspar 143.65 - 160.85m Patchy green and grey mottled appearance may represent spotty sericite alt or indistinct remnant fragments. Pseudofragmental appearance Some fine white specks may represent remnant		143.65 - 160.85m Possible patchy sericite giving fragmental appearance		Mottled zone may be equivalent of footwall mottled zones seen in 216, 256, 257

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		feldspars Rare definite distinct fragments of pumice and QP tuff. 158.5 - 159.55m 2-3% green pumice fragments (fiamee) Screens of fine grained mafic (dioritic) dykes as follows: 144.15 - 144.45m 155.45 - 155.55m 155.7 - 156.6m 160.85 - 164.6m 165.5 - 166.3m 166.85 - 167.35m Contact at 144.45m 164.6m 165.5m Sharp lower contact at 168.1m	75			
168.10 TO 180.25	Diorite «DIOR»	Colour: Dark green Grain Size: Fine grained 3-5% 2-5mm ragged white feldspar phenocrysts in a fine grained groundmass 170.2 - 173.3m Coarser more equigranular appearance 178.5 - 179.2m Finer grained phase, minor carbonate veining 179.2 - 180.25m Tertiary? Mafic Dyke Dark green, fine grained Shallow irregular contact at approximately 10 deg		Occassional quartz carbonate chlorite veining 179.2 - 180.25m Patchy silica epidote	179.2 - 180.0m 5% disseminated pyrrhotite <1% chalcopyrite, trace pyrite	
180.25 TO 182.60	Felsic Tuff «F TUFF»	Colour: Medium Green Grain Size: Fine grained Patchy siliceous faintly FP Felsic fragments in a severely altered groundmass. Unit looks more like an andesite due to alteration Probably related to dyking		Moderate epidote probably related to proximity to dykes	3-5% disseminated pyrite	Siliceous fragments more resistive to alteration than groundmass

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
182.60 TO 228.30	Diorite and Mafic Dykes «DIOR»	Colour: Dark green Grain Size: Fine grained 182.6 - 186.9m Fine grained granular mafic dykes, minor carbonate veining 183.2m 2cm fault at 50 deg 186.9 - 188.8m Feldspar porphyritic diorite 188.8 - 189.3m Later mafic dyke possibly Tertiary? 2-3% 1-2mm remnant phenocrysts, amphiboles? Irregular upper and lower contacts 189.3 - 228.30m Diorite feldspar porphyritic to weakly equigranular		183.75 - 184.3m Quartz chlorite carbonate veining 189.3 - 228.30m Weak quartz chlorite carbonate veining usually <10cm	183.75 - 184.0m 3% chalcopyrite, trace pyrite, pyrrhotite as patches within vein Rare grains of chalcopyrite	
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13227	17.80	18.80	1.00	29	7	475	0.6	1													
13228	18.80	19.80	1.00	250	26	2600	1.4	3	1950												
13229	19.80	20.75	0.95	140	19	1520	1	1													
13230	20.75	21.45	0.70	160	23	540	1.4	2													
13231	21.45	22.50	1.05	80	28	182	1.3	1													
13232	22.50	23.50	1.00	260	24	5400	1.4	6													
13233	23.50	24.90	1.40	200	19	134	1.3	2													
13234	24.90	26.30	1.40	110	18	79	1.1	2													
13235	56.60	57.00	0.40	59	28	145	1	1													
13236	59.70	60.10	0.40	245	16	270	1.1	2													
13237	121.58	122.53	0.95	800	15	73	1.2	3													
13238	132.20	133.20	1.00	1100	21	110	1.5	2													
13239	179.20	180.25	1.05	240	19	83	1.3	1													
13240	180.25	181.40	1.15	80	19	87	1	2													
13241	181.40	182.60	1.20	9000	22	130	2.9	400													
13242	183.75	184.40	0.65	50	16	86	0.8	1													

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17281	15.20	18.20	3.00	13.72	0.1	3.77	2.62	2.45	1.68	0.12	2.09	0.15	67.22		0.21		0.08	94.2	0.7	1	121	13	18	1	201	5
17282	31.30	34.30	3.00	13.64	0.01	8.61	11.73	0.19	5.92	0.18	2.06	0.31	44.49		1.78		0.26	89.18	1.1	1	12	180	40	10	142	5
17283	52.10	54.30	2.20	13.91	0.1	3.07	2.74	2.72	1.27	0.08	2.32	0.11	68.31		0.22		0.29	95.14	0.8	10	109	55	10	1	638	10
17284	140.70	143.70	3.00	14.76	0.165	2.35	3.31	2.61	2.16	0.05	3.43	0.1	66.66		0.23		0.11	95.94	1.1	5	245	13	16	1	47	5
17285	156.90	159.90	3.00	13.45	0.105	3.68	3.01	3.07	1.89	0.04	2.13	0.14	67.03		0.21		0.08	94.84	0.9	3	133	13	9	1	45	5

HOLE NUMBER: 89-260

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: T.L.
LOCATION: NTS 92B/13

PLOTTING COORDS GRID: Mine
NORTH: 11659.00N
EAST: 10696.00W
ELEV: 817.00

ALTERNATE COORDS GRID: Mine
NORTH: 116+59N
EAST: 106+96W
ELEV: 817.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 131.10m
START DEPTH: 0.00m
FINAL DEPTH: 131.10m

COLLAR GRID AZIMUTH: 183° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 211° 0' 0"

DATE STARTED: October 20, 1989
DATE COMPLETED: October 21, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling
CASING: 7.0
CORE STORAGE: Chemainus

PURPOSE: To test coincidental IP, VLF and geochemical anomalies in the Randy Zone

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
48.80	-	-48° 0'	ACID	OK		-	-	-	-	-	
124.10	-	0° 0'	ACID		Incomplete etch	-	-	-	-	-	
128.00	209° 0'	-46° 0'	SING.SHOT	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 7.00	Overburden «OB»					
7.00 TO 44.30	QP Crystal Tuff «QP TUFF»	Colour: Light creamy grey Grain Size: Fine grained 2-5% 2-5mm and up to 7mm round quartz eyes Coarse well foliated appearance with variable core angles for foliation 7.0 - 14.8m Mottled patchy green, fragmental appearance 11.7 - 11.9m Mafic dyke Tan brown sericitic mud? seams at 22.2 - 22.23m, 29.3 - 29.42m. Both intervals 5-7% pyrite. Possible mud horizons or fragments? Contacts parallel to foliation Contacts at: 22.23m 47 29.42m 30 35.3 - 38.3m Gougy fault <1cm wide parallel to core axis 39.4 - 41.2m Felsic tuff, ash Light grey, lacking the coarse foliated appearance and quartz eyes Contact at: 39.4m 35 41.2 - 41.7m Zone of distorted and folded foliations Foliations at: 8.5m 10.7m 15.0m 18.9m 23.3m 25.9m 30.5m 32.6m 39.3m 44.3m 3cm clay gouge at lower contact		Moderate to strong pervasive sericite 16.6 - 16.7m Quartz carbonate vein parallel to foliation	1-2% pyrite disseminated and as 1mm veinlets within quartz veinlets parallel to foliation 16.6 - 16.7m 5% pyrite, <1% cpy, trace sphalerite 42.3m 5mm sphalerite pyrite stringers	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
44.30 TO 62.35	Felsic Ash «F ASH»	Colour: Streaky light grey and tan brown Grain Size: Aphanitic to fine grained Very fine ash, scattered <1% <1mm quartz eyes, mainly light grey colour with tan brown sericite streaks and bands <1cm wide 44.45 - 45.5m Light to medium grey, possible argillite component to ash unit 57.0m Gougy core over 5cm Foliations at 46.6m 54.6m 58.9m Lower contact	 48 44 35 28	Moderate to strong sericite	 44.45 - 45.5m 1-2% pyrite disseminated and as <1mm quartz-pyrite stringers 45.5 - 62.35m Trace to 4% pyrite	
62.35 TO 63.15	Argillite «ARG»	Colour: Dark grey Grain Size: Fine grained Finely laminated with bedding parallel to foliation. Possible transposed bedding at 62.9m Bedding/Foliation at 62.6m	 31		2-3% pyrite associated with <1mm quartz veinlets and as fine disseminations	
63.15 TO 66.10	Intermed? Ash, Pelitic Mud «INT ASH, MUD»	Colour: Marroon grey, grey green Grain Size: Fine grained 63.15 - 64.7m Marroon grey, soft foliated pelitic mud. Very fine speckles hard round pepper coloured specks 64.7 - 64.8m Intermediate ash described below 64.8 - 65.1m Felsic tuff, possible stretched fragments, hard black pepper specks on foliation planes 65.1 - 66.1m Intermediate ash, tuff Grey green, fine grained, weakly foliated, patchy wispy marroon mud. A mixture of grey siliceous material and green chloritic/sericitic material		 63.15 - 64.7m Moderate quartz/ carbonate veining	Trace pyrrhotite, pyrite and sphalerite associated with veining Minor pyrite associated with weak veining	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Rare QFP fragment Patchy area with very faint whitish mm grains = remnant feldspars 99.75 - 100.05m Mafic Dyke 107.5 - 111.4m QP tuff, light creamy grey Foliations at 75.9m 78.8m 84.9m 90.1m 94.5m 100.3m 101.2m 103.0m 107.0m		107 - 111.4m Weak to moderate sericite	111.1 - 111.23 3-5% fine disseminated pyrite	
111.40 TO 120.65	Felsic Lithic Lapilli Tuff «F LITH,LAP TUFF»	Colour: Light grey Grain Size: Fine grained Moderately foliated, fine grained, weak streaky appearance Heterolithic <1cm flattened and stretched fragments of grey, felsic tuff, ash, fiamee, and argillite. 114.4 - 116.3m Quiet period. Fine grained tuff and ash. 116.0m bedding in aphyritc ash Bedding at 116.0m 50 Foliations at 112.8m 43 118.3m 30 120.4 - 120.65m Mafic Dyke Contact at 120.4m 40 120.65m 40		Weak to moderately sericitic Rare <10cm quartz carbonate veins	Rare <1mm quartz, pyrite, sphalerite veinlets parallel to foliation 114.9 - 115.65m <1% disseminated pyrrhotite with trace sphalerite	
120.65 TO 131.10	Intermed. Tuff «I TUFF»	Colour: Streaky white, medium green Grain Size: Fine grained Well foliated sheared apppearance, streaky creamy grey and green Pseudofragmental appearance with some very distinct flattened fragments		Weak sericite, chlorite	Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		128.6m Gougy core 130.1 - 131.1m Gougy Broken core, poor recovery				

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13250	16.50	16.80	0.30	913	40	726	5	122	2440												
13251	21.70	22.30	0.60	81	25	91	0.8	16	1150												
13252	33.10	34.40	1.30	16	17	252	0.7	28	4050												
13253	41.80	42.80	1.00	24	27	771	0.9	15	920												
13254	44.45	45.50	1.05	17	13	53	0.9	11	980												
13255	62.35	63.15	0.80	65	18	135	0.8	16	770												
13256	64.70	65.10	0.40	84	11	34	0.7	16	700												
13257	66.10	66.50	0.40	111	11	58	0.7	9	1160												
13258	66.50	66.80	0.30	63	13	70	0.8	12	1000												
13259	69.60	70.80	1.20	75	15	191	0.6	8	400												
13260	72.30	73.50	1.20	21	10	89	0.6	14													
13261	111.10	111.40	0.30	17	11	42	0.7	19	1270												
13262	114.70	115.65	0.95	37	40	248	0.9	18	1700												

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17287	7.60	10.60	3.00	12.54	0.075	4.52	2.78	2.75	2.3	0.17	0.44	0.15	66.17		0.2		0.58	92.67	0.9	29	53	14	26	3	31	5
17288	29.50	32.50	3.00	14.34	0.16	1.29	1.87	3.57	1.01	0.1	0.34	0.08	72.61		0.18		0.51	96.05	0.8	22	109	9	11	1	50	5
17289	50.00	53.00	3.00	13.58	0.075	2.98	2.2	2.81	1.46	0.13	0.39	0.12	70.07		0.15		0.04	94.02	0.7	3	59	7	13	1	33	5
17290	63.15	64.70	1.55	16.81	0.06	8.6	7.98	1.46	4.4	0.42	0.55	0.26	45.58		0.78		0.97	87.88	1.4	1	43	198	43	9	140	5
17291	65.10	66.10	1.00	17.88	0.055	8.14	11.11	1.04	4.08	0.51	0.39	0.28	44.72		0.83		1.9	90.93	2	1	54	364	46	10	116	5
17292	84.40	87.40	3.00	14.38	0.09	2.82	2.44	2.59	1.32	0.13	0.53	0.12	69.61		0.28		0.12	94.43	0.8	9	69	13	9	1	37	5
17293	102.70	105.70	3.00	13.92	0.095	3.37	2.7	2.68	1.49	0.11	0.68	0.13	68.42		0.26		0.16	94	0.8	22	73	12	15	1	51	10
17294	116.50	119.50	3.00	14.11	0.25	5.37	4.25	2.64	2.18	0.17	0.83	0.19	60.94		0.4		0.49	91.81	1	12	199	30	28	3	49	5
17295	121.00	124.00	3.00	16.14	0.05	3.43	4.72	2.42	1.46	0.11	2.73	0.13	62.5		0.42		0.23	94.34	0.9	8	50	40	11	1	68	5

HOLE NUMBER: 89-261

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: T.L.
LOCATION: NTS 92B/13

PLOTTING COORDS GRID: Mine
NORTH: 11747.00N
EAST: 10697.00W
ELEV: 824.00

ALTERNATE COORDS GRID:
NORTH: 117+47N
EAST: 106+97W
ELEV: 824.00

COLLAR DIP: -58° 0' 0"
LENGTH OF THE HOLE: 289.56m
START DEPTH: 0.00m
FINAL DEPTH: 289.56m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 208° 0' 0"

DATE STARTED: October 22, 1989
DATE COMPLETED: October 26, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: YES
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling
CASING: 6.1
CORE STORAGE: Chemainus

PURPOSE: To test the Randy Zone down dip of hole 260. Note: This is Hole 261A as well.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
66.10	-	-57° 0'	ACID	OK	
86.30	-	-57° 0'	ACID	OK	
144.20	-	0° 0'	ACID		Bad etch
227.70	-	-55° 0'	ACID	OK	
272.20	-	-52° 0'	ACID	OK	
67.67	210° 0'	-58° 0'	SING.SHOT	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 4.10	Overburden «OB»					
4.10 TO 183.80	QP Tuff Lapilli Tuff «QP TUFF, LAP TUFF»	Colour: Light green Grain Size: Fine grained 2-7% 2-7mm and up to 10mm round quartz eyes, coarse well foliated appearance Some patches with 2-3mm sericitic grains = relic feldspar grains. Streaky appearance from flattened fragments <0.5cm Fragments dark green fiamee, light grey, cream grey felsic frags. Below 21.9 unit also streaked by tan brown wisps 31.75-43.3 «Fault» Strong to intense fault gouge development. Upper contact 31.75 - 33.2m running at 2-5 degrees to core axis. Minor sulfides within fault zone associated with quartz veinlets. Fault cross cuts foliations. 53.0 - 53.65m Mafic Dyke (Sicker Age) Sheared parallel to foliation, Contacts parallel to foliation 67.8 - 68.1m Muddy ash, dark grey, fine grained 5-7% pyrite disseminated parallel to foliations 86.5 - 87.4m gougy soft core 118.9 - 119.4m Mafic Dyke Dark green, fine grained Abundant wispy carbonate parallel to contacts which parallels foliation		Blitzed looking but not as great as in hole 260. Moderately sericitic	Occassional <0.5cm quartz pyrite stringers parallel to foliation 21.9 - 24.6m 2-3% pyrite disseminated and thin veinlets *64.2-64.35* 1-1.5% slaw coloured sphalerite, 7% pyrite, trace chalcopyrite with tetrahedrite rims. Sulfides wispy and diss parallel to foliation. Interval sharply bounded parallel to foliation Interval more siliceous looking than surrounding rock.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		124.0 - 124.6m Fault zone Fault gouge. Sharp lower contact to fault zone at:	15			125.6m Pull rods for bit change. Rods stuck at 69.2m regain circulation and pull rods. 40 ft of rods left in hole Try to tap onto rods, hole sloughed in cannot reach rods. Tricone through core, hole deviates, start new core at 49.1m New hole 261A.
				130 - 147 Weak to moderate quartz carbonate veining.	132.37 - 132.65m 3-4% pyrite assoc. with quartz carbonate veining	
		141.4m 5cm fault gouge				
		Fine grained dark green mafic dyke with sharp contacts parallel to foliation at 150.9-151.5m, 151.7-152.0m, 152.2-152.35m				
				Alteration appears to decrease down hole but becomes stronger from 177.5 - 186.4m		
		Foliations at: 5.8m	18			
		11.8	20			
		17.6	10			
		24.6	25			
		31.3	35			
		46.6	29			
		52.6	30			
		69.8	25			
		75.5	32			
		81.3	30			
		90.2	15			
		96.7	28			
		104.0	32			
		112.4	22			
		123.5	20			
		138	20			
		149.5	18			
		166.8	18			
		180.0	40			
		Sharp lower contact	35			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
183.80 TO 185.40	Felsic Tuff Ash, Intermed? Tuff «F-I TUFF»	Colour: Light grey and medium green Grain Size: Fine grained 183.8 - 184.8m Fine grained aphyric siliceous tuff/ash, moderately foliated. First 10cm intermixed with green mm laminations Foliation at 184.8 — 42 184.3 — 42 184.8 - 185.4m Intermediate? Tuff: Distinctive striped green white caused by carbonate layers. Unit looks similar to end of hole rock in hole 260 Foliation at 185.2 — 40 Contact at 185.4 — 38		Weakly seritic Weak carbonate veining	183.8 - 184.8m 3-5% pyrite, trace sphalerite and chalcopyritie as disseminated and wispy veinlets parallel to foliation 184.8 - 185.4m <1-1% disseminated pyrite	Down dip equivalent of argillite units in hole 89-260
185.40 TO 289.50	Felsic Lapilli Tuff «F LAP TUFF »	Colour: Light grey, light green grey Grain Size: Fine grained Light grey QP fragments flattened to 1cm and less, occassionally larger in a fine grained finer QP groundmass. Mainly QP fragments with occassional fiamee. Patchy fragment supported, difficult to tell due to flattening Total quartz eye content 1-3% and locally 5%, 1-3mm, locally 5mm 188.75 - 189.1m Mafic dyke, contacts parallel to foliation 214.2 - 217.0 Fragment deficient QP Tuff, 1mm quartz eyes 220 - 249m Strong bleached appearance making fragment outlines very indistinct 225.0 - 227.7m Kink folded and distorted foliations. 227.6 - 227.8m Dark grey wisps, faulting slip planes? minor sulfides		Moderately sericitic Bleached blitzed appearance 220 - 249m Greater alteration, strong sericite, light grey, blitzed	<1% pyrite as rare qtz pyrite mm stringers 205.7 - 205.9m 5% pyrite disseminated and stringers parallel to foliation. Interval more siliceous than surrounding host rock. 221.6 - 227.9m 2-3% pyrite as mm stringers and disseminations parallel to foliation	Smaller quartz eyes and lower quartz eye percentage than QP lapilli tuff higher in hole

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		238.9 - 240.3m Felsic Tuff, Ash. Finely laminated, lacking quartz eyes. Minor tan brown streaks, layers.			238.9 - 240.3m Trace sphalerite associated with narrow quartz carbonate veins. 1-3% diss. pyrite	
		Layering at 239.0	37			
		240.2	36			
		Below 254 quartz eyes content decreases to <1-2% with some zones 3-5%.				
		251.5 - 270.4m Fragments also include tan brown wisps				
		253.3 - 253.5m Fault zone Well developed fault gouge				
		Below 270.4m Light green, pronounced dark green striping from increase in percentage of fiamee. Quartz eye content <1-2%		270.4 - 289.5m Greener fresher appearance, not as blitzed looking as above		
		282.35 - 282.75m Mafic Dyke, Sicker age Contacts parallel to foliation				
		284.45 - 284.66m Fine ashy interval, streaky medium grey, wispy darker green ash			284.45 - 284.66m 5% very fine pyrite, trace sphalerite	
		Foliations at 191.0	32			
		198.8	32			
		211.5	40			
		222.4	37			
		230.6	45			
		238.0	28			
		249.8	40			
		259.5	38			
		268.7	38			
		286.9	32			
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13263	21.90	23.25	1.35	9	12	32	0.5	8													
13264	23.25	24.60	1.35	11	7	31	0.6	7													
13265	63.20	64.20	1.00	27	5	44	0.4	47													
13269	63.20	64.20	1.00	20	7	47	0.8	68													
13266	64.20	64.40	0.20	492	10	5470	1.4	27	1000												
13270	64.20	64.70	0.50	265	9	4430	0.9	62	1400												
13267	64.40	64.90	0.50	6	7	52	0.4	10													
13271	64.70	65.20	0.50	7	6	59	0.3	11													
13268	67.80	68.10	0.30	105	16	127	0.8	17													
13272	68.15	68.45	0.30	109	27	201	0.9	11													
13273	132.15	132.65	0.50	13	32	55	1.2	20													
13274	155.75	156.25	0.50	70	21	1320	0.9	2	1400												
13275	182.80	183.80	1.00	17	18	72	0.4	1													
13276	183.80	184.80	1.00	123	43	455	1.9	47	740												
13277	184.80	185.40	0.60	71	34	144	0.8	2	1000												
13278	185.40	186.40	1.00	46	21	37	0.6	6	990												
13279	205.65	206.15	0.50	32	19	35	0.4	2	1420												
13280	238.90	240.30	1.40	43	22	332	2.2	51	1620												
13281	284.30	284.80	0.50	26	33	227	1.6	3	710												

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17296	8.20	11.30	3.10	12.56	0.085	2.52	1.81	1.94	1.05	0.1	0.43	0.1	74.43		0.16		0.47	95.66	0.8	8	91	7	5	1	23	5
17297	26.50	29.30	2.80	13.79	0.115	2.22	2.51	2.9	1.44	0.11	0.35	0.11	71.57		0.25		0.65	96	0.7	9	85	11	16	1	58	10
17298	58.00	61.00	3.00	14.52	0.11	2.45	2.55	3.17	1.29	0.1	0.48	0.1	69.52		0.25		0.95	95.5	0.6	17	88	32	11	1	27	5
17299	92.60	95.60	3.00	13.74	0.085	4.21	2.58	2.05	2.24	0.15	0.54	0.17	66.34		0.24		0.28	92.61	0.6	8	81	9	23	1	51	5
17300	120.60	123.60	3.00	14.74	0.085	2.99	2.96	1.8	2.28	0.12	0.66	0.13	68.11		0.26		0.66	94.79	0.9	4	89	17	24	1	69	5
17301	144.20	147.20	3.00	15.32	0.095	2.61	2.11	2.4	1.42	0.08	0.56	0.11	69.44		0.27		0.38	94.79	0.7	6	95	8	11	1	38	10
17302	178.90	181.90	3.00	14.33	0.165	3.04	2.29	3.36	1.7	0.16	0.41	0.13	67.95		0.24		0.66	94.45	0.3	4	105	11	20	2	42	5
17303	206.30	209.40	3.10	14.46	0.16	3.2	2.5	3.48	1.83	0.19	0.39	0.14	66.95		0.24		0.8	94.36	0.2	1	105	10	21	2	39	5
17304	233.80	236.80	3.00	13.74	0.09	1.85	1.87	2.98	1.24	0.09	0.4	0.09	73.1		0.21		0.7	96.36	0.6	8	76	12	15	1	76	5
17305	262.70	265.70	3.00	14.52	0.095	3.01	2.37	2.13	1.49	0.1	0.69	0.12	69.33		0.26		0.6	94.73	0.6	1	85	6	19	1	71	5
17306	286.00	289.00	3.00	13.86	0.11	2.2	2.28	2.38	1.52	0.1	0.67	0.11	71.83		0.25		0.4	95.73	0.5	12	100	8	17	1	66	5

HOLE NUMBER: 89-262

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: SILVER 2
LOCATION: NTS 92B/13

PLOTTING COORDS GRID: Mine
NORTH: 10684.00N
EAST: 8968.00W
ELEV: 681.00

ALTERNATE COORDS GRID: Mine
NORTH: 106+84N
EAST: 89+68W
ELEV: 681.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 203.90m
START DEPTH: 0.00m
FINAL DEPTH: 203.90m

COLLAR GRID AZIMUTH: 184° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 212° 0' 0"

DATE STARTED: October 27, 1989
DATE COMPLETED: October 29, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: YES
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling
CASING: 32.2 m
CORE STORAGE: Chemainus

PURPOSE: To test IP and geochemical anomalies in the Coronation Extension Zone hanging wall.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
96.30	-	-43° 0'	ACID	OK		-	-	-	-	-	
169.80	-	-42° 0'	ACID	OK		-	-	-	-	-	
200.90	207° 0'	-41°30'	SING.SHOT	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 32.20	Casing «OB»					
32.20 TO 85.60	Felsic Tuff «F TUFF»	Colour: Light to medium grey Weakly foliated, no distinctive or unique features Patchy fine granular texture with mm siliceous felsic grains in a less siliceous groundmass. 32.2 - 34.2m Numerous 10 - 20cm zones of fault gouge 76.5 - 84.5m Core becoming weakly bleached, slightly more altered 77.2 - 77.8m Thin green wisps = pumice fragments 81.7m Possible bedding at Foliations at 35.4 46.3 57.7 66.7	 60 50 52 65 62	Weakly sericitic	3-5% disseminated pyrite and trace disseminated chalcopyrite. Moderately abundant <1-5cm semi-massive siliceous pyrite +/- chalcopyrite stringers. Significant zones of mineralization as follows: 34.9 - 35.25m 5-7% pyrite as mm stringers and disseminated. Includes 5cm of semimassive pyrite with <1% chalcopyrite 55.65 - 56.55m 5-10% pyrite and <1% chalcopyrite disseminated and as 2-8cm coarse grained stringers with 15-20% pyrite 56.33 - 56.55m 2% dark grey sphalerite as stringers with pyrite 62.45 - 62.80m 5% pyrite, <1% chalcopyrite disseminated 65.15 - 68.0m 7-10% disseminated pyrite, trace chalcopyrite 81.7 - 82.6m 7-8% pyrite and trace chalcopyrite disseminated and 2-3mm stringers	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
85.60 TO 92.65	Diorite «DIOR»	Colour: Dark green Grain Size: Fine grained Feldspar porphyritic to finely equigranular, massive, rare quartz carbonate veinlets. Fine grained, weakly calcareous 30 - 40cm margins. Weakly magnetic.			Trace pyrite	
92.65 TO 111.60	Felsic Tuff Ash «F TUFF,ASH»	Colour: Light to medium grey Grain Size: Fine grained Weakly foliated, aphyric Patchy indistinctly fragmental appearance Patchy granular appearance near top of interval 95.4m 4cm fault zone at 106.85 - 107.8m Felsic to Intermediate Tuff (mixings, rework?) Medium grey felsics with green thin intermediate layers 108.2 - 108.35m Fault Zone Brecciated fragmental zone with a dark grey black muddy FS groundmass (similar to faults seen underground at Coronation Zone) Base of fault zone marked by quartz veining. 108.5 - 111.6m Creamy light grey, strongly bleached, rare quartz eyes Foliations at: 97.5m 105.7m	 30 60 65	92.65 - 108.5m Moderately bleached appearance, moderately sericitic 106.85 - 107.8m Moderate to strongly sericitic 108.5 - 111.6m Strongly sericitic	1-3% disseminated pyrite 109.2 - 109.65m 5% coarse brassy pyrite, includes 4cm of semi massive pyrite	
111.60 TO 112.75	Felsic Tuff Ash «F TUFF»	Colour: Medium grey Grain Size: Fine grained Fine grained tuff separated from abouve unit by sulfide content. 111.6 - 111.8m Minor intermediate tuff with a single 1cm chert layer Bedding at 111.7m	 80	Weak to moderately sericitic patchy silicification associated with sulfides	15-20% pyrite disseminated includes 111.8 - 111.92m 25% coarse brassy pyrite and 3% chalcopyrite in a siliceous groundmass 112.5 - 112.75m 25-30% pyrite and 4-5% chalcopyrite, trace sphalerite	Possible Horizon

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		111.6 - 111.8m Felsic Ash and chert layers at top of units				
112.75 TO 114.25	Intermed. Ash «I ASH»	Colour: Medium grey green Grain Size: Fine grained Very fine grains of quartz in a finer groundmass Weak layering at 114.15m at 80 degrees to core axis. Rare chert beds at 113.6 - 113.8m Bedding at 113.6m 113.8m	 82 75	Moderately chloritic	3-5% fine disseminated pyrite	
114.25 TO 122.30	QP Felsic Crystal Tuff «QP TUFF»	Colour: Light grey Grain Size: Fine grained 3-5% 1-4mm subrounded quartz eyes, weakly foliated strong bleached appearance Some areas indistinct QP fragments in QP groundmass Foliations at 117.7m	 57	Weak to Moderately Sericitic Strongly bleached appearance	7-10% disseminated pyrite and occassional 0.5 - 2cm quartz pyrite +/- chalcopyrite stringers 118.3 - 118.4m 50% Coarse brassy pyrite, 5% chalcopyrite 119.7 - 119.95m 15-20% coarse brassy pyrite, 2% chalcopyrite	
122.30 TO 126.20	Intermed. Ash, Tuff «INT ASH, TUFF»	Colour: Medium to dark grey, grey green Grain Size: Fine Grained Weakly foliated, aphyric with patchy more felsic screens with 1-2% quartz/felsic grains Distorted foliations/layering around lower contact		Moderately sericitic	5% disseminated pyrite Occassional <1cm brassy pyrite stringers	
126.20 TO 133.10	QP Felsic Lithic Tuff «QP LITH TUFF»	Colour: Light to medium grey Grain Size: Fine grained Weakly foliated, weak granular appearance becoming more prominent downhole. 1-3% <1-2mm quartz grains Indistinct mm felsic grains		Weakly sericitic. Finely disseminated epidote replacing feldspar grains	1-3% disseminated pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Below 130.4m 3-4% mm epidote grains as altered feldspars Sharp lower contact at 133.1m	72		126.2 - 126.7m 10% pyrite as <1cm brassy pyrite stringers	
133.10 TO 141.70	Andesitic Ash, Crystal Tuff «AND ASH, TUFF»	Colour: Dark green Grain Size: Fine grained 131.1 - 137.7m 5% 2mm epidote replacing feldspar crystals, fine ashy groundmass 137.7 - 141.7m Fine grained andesitic ash. Patchy areas with 2-5% feldspar grains		Weak to moderately chloritic groundmass Strong epidote alteration of feldspars	1-2% disseminated pyrite Rare 1-2cm quartz pyrite stringers 140.3 - 140.65m 15 - 20% coarse brassy pyrite and <1% chalcopyrite as quartz sulfide stringers	
141.70 TO 146.40	Andesite Crystal Tuff «AND TUFF»	Colour: Dark green Grain Size: Fine grained 10-20% 1-2mm epidote altered feldspar crystals and rare 5mm rounded epidotized fragments. Massive		Strong epidote alteration of feldspar crystals. Weakly chloritic	2-3% disseminated pyrite	
146.40 TO 160.00	Andesite Crystal Lapilli Tuff «AND LAP TUFF»	Colour: Dark green Same as above unit but with 5% 1-5cm epidotized fragments		Strong epidote alteration of fragments and feldspars	1% pyrite	
160.00 TO 182.65	Andesite Crystal Tuff «AND TUFF»	Colour: Dark green Grain Size: Fine grained Same as crystal tuff above Up to 25% epidotized feldspars Occassional crystal poor ashier intervals 165.1 - 167.05m Felsic Tuff, possibly coarse Lapilli Tuff Strong pervasive silicification. Light grey with some darker green streaks Spotty epidote after feldspars ? Contact at 165.1m	70			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		172.7m Crystal rich, crystal poor contact defining bedding at 72 degrees to core axis 174.9 - 175.6m Felsic Tuff. Similar to previous felsic interval 178.5 - 179.5m Felsic Tuff, possible lapilli tuff 1979.5 - 179.75m Diorite. Feldspar porphyritic 179.75 - 182.65m 3-5% feldspar; minor hematite within calcite veinlets. Becoming finer and ashier from 181.9 - 182.65m		177.5 - 178.1m Pervasive silica epidote alteration 179.75 - 182.65m Increasing chlorite alteration	181.9 - 182.65m 1-3% pyrite	
182.65 TO 188.05	Andesite Ash, Tuff, Chert «AND ASH, TUFF, CHT»	Colour: Dark green Grain Size: Fine grained 182.65 - 185.8m Andesite ash and thin lamination of light creamy grey chert. Variable core angles to chert units from 15 - 65 degrees. Bedding at 182.85m 64 183.05m 30 184.20m 15 184.8 - 185.6m Fault zone: gougy core, very rubbly, poor recovery, minor quartz veining 185.8 - 187.3m Andesite tuff: Fine granular texture 187.3 - 188.05m Andesite Ash, medium green, weak to moderately foliated. Gougy in last 10cm Faulted lower contact at 40		Weakly chloritic 187.3 - 188.05m Bleached appearance relative to surrounding andesite	185.8 - 187.3m 1-2% pyrite 187.3 - 188.05m 3-4% pyrite	
188.05 TO 203.90	Andesite Crystal Lithic Tuff «AND LITH TUFF»	Colour: Dark green Grain Size: Fine grained Abundant 1mm siliceous grey translucent grains and 1-3% 1-2mm epidotized feldspars in a finer green groundmass. Rare 1cm epidotized fragments. 188.05 - 189.6m Fault zone		Weakly chloritic	188.05 - 193.7m 1-3% disseminated py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Fault gouge, and gougy core. Fault slips vary from 38 to 52 degrees 191.3 - 192.5m Fault Zone Fault gouge, rubbly core, poor recovery 192.5 - 193.5m Felsic Tuff, light grey, moderately siliceous appearance, rubbly core, poor recovery			193.7 - 203.9m <1% pyrite	
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	GEOCHEMICAL Cu %	Pb %	Zn %	IAg oz/t	Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13282	34.80	35.35	0.55	2690	285	1500	3.7	75													
13283	55.65	56.55	0.90	371	117	5750	1.8	37													
13284	65.15	66.50	1.35	173	44	172	1.2	30													
13285	66.50	68.00	1.50	102	39	117	0.8	26													
13286	81.70	82.60	0.90	1155	52	385	2.3	88													
13287	106.85	107.80	0.95	73	36	161	1.2	49													
13289	111.60	112.75	1.15							1.42	0.01	0.12		5.9		0.14					
13290	112.75	114.25	1.50	521	19	106	1.4	14													
13291	114.25	115.25	1.00	3825	13	88	1.2	23													
13292	118.10	119.55	1.45	4340	15	96	2	48	1740												
13293	119.55	121.00	1.45	2270	12	83	1.3	30													
13295	122.45	123.90	1.45	31	19	43	0.9	12													
13294	140.20	140.70	0.50	2095	28	70	1.8	31													
13295	181.90	182.65	0.75																		
13296	182.65	183.50	0.85	11	20	42	0.8	19	4500												
13297	183.50	184.40	0.90	13	18	47	1.1	20													
13298	184.40	185.80	1.40	9	21	41	1.1	9													
13299	187.30	188.05	0.75	417	20	73	1.5	29													

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17307	37.20	40.20	3.00	14.24	0.135	0.94	4.56	2.69	4.22	0.14	1.28	0.12	66.18		0.3		1.66	96.47	0.6	1	114	131	46	2	156	20
17308	69.20	72.20	3.00	15.47	0.155	0.52	4.67	3.21	2.95	0.07	1.64	0.1	65.92		0.35		2.86	97.91	0.5	5	147	39	41	1	68	5
17309	96.30	99.30	3.00	15.81	0.22	0.37	2.69	3.75	4.31	0.1	0.28	0.1	67.69		0.34		1.18	96.84	0.5	1	187	5	40	1	66	5
17310	110.10	111.60	1.50	13.25	0.25	0.7	1.4	3.69	1.42	0.04	0.18	0.08	75.31		0.18		1.66	98.15	0.3	1	196	47	7	1	21	5
17311	115.25	116.25	1.00	14.76	0.155	1.27	4.3	3.6	1.26	0.06	0.98	0.1	68.35		0.29		2.86	97.98	0.4	2	117	175	7	1	26	5
17312	122.30	123.60	1.30	16.16	0.095	0.77	10.7	1.56	8.6	0.25	0.88	0.19	52.84		0.69		3.78	96.51	1	1	76	101	61	2	139	10
17313	127.10	130.10	3.00	13.21	0.135	0.62	5.84	2.24	4.67	0.12	1.12	0.12	66.36		0.28		3.4	98.1	0.6	1	174	17	41	2	69	5
17314	160.60	163.60	3.00	17.43	0.025	3.71	8.82	0.22	6.74	0.33	3.44	0.26	53.16		0.64		1.66	96.44	1.3	1	79	275	50	4	108	5
17315	195.10	198.10	3.00	17.39	0.06	2.5	7.38	0.54	6.09	0.32	4.15	0.2	56.21		0.62		0.7	96.17	1	1	110	303	64	4	129	15

HOLE NUMBER: 89-263

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: SILVER 2
LOCATION: NTS 92B/13

PLOTTING COORDS GRID: MINE
NORTH: 10514.00N
EAST: 8982.00W
ELEV: 664.00

ALTERNATE COORDS GRID: Mine
NORTH: 105+14N
EAST: 89+82W
ELEV: 664.00

COLLAR DIP: -67° 0' 0"
LENGTH OF THE HOLE: 241.70m
START DEPTH: 0.00m
FINAL DEPTH: 241.70m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 208° 0' 0"

DATE STARTED: October 29, 1989
DATE COMPLETED: November 1, 1989
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: YES
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Frontier Drilling
CASING: 16.5m
CORE STORAGE: Chemainus

PURPOSE: To test the Coronation Extension Zone 250m east ofthe last drill fence.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
16.50	-	-65° 0'	ACID	OK	
56.70	-	-64° 0'	ACID	OK	
117.70	-	-63° 0'	ACID	OK	
172.80	-	-63° 0'	ACID	OK	
217.30	-	-62° 0'	ACID	OK	
241.70	-	-62° 0'	ACID	OK	
95.10	205° 0'	-64°30'	SING.SHOT	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 16.90	Overburden «OB»					
16.90 TO 23.20	Mafic Dyke Diorite «M DYKE»	Colour: Dark green Grain Size: Fine grained Weakly foliated outlined by pervasive wispy carbonate 17.9 - 18.6m Feldspar porphyritic diorite. Blocky core				
23.20 TO 40.40	Andesite Tuff «AND TUFF»	Colour: Dark green Grain Size: Fine grained Weakly foliated 23.2 - 29.5m Fine granular appearance lacking feldspar crystals. Below 29.5m, 1-5% mm epidotized feldspar crystals. Occassional 2-4mm siliceous grey felsic grains 24.4 - 26.5m Fault zone, <20% recovery 29.5m 1cm chert layer between feldspar phyric and feldspar lacking interval Bedding at 29.5m 29.8m Bedding defined by crystal rich, crystal poor layering Bedding at 29.8m 36.2 - 37.0m Mafic Dyke. Medium green, fine grained, weakly foliated Contact at 36.2m Foliation at 37.3m Lower contact gougy rubbly core	 45 41 60 40	Weakly chloritic groundmass Epidote alteration of feldspars	<1-2% disseminated pyrite	
40.40 TO 43.60	Mafic Dyke, Diorite «M DYKE»	Colour: Dark green Grain Size: Fine grained Weakly foliated, fine creamy green speckled appearance from weakly epidotized mm feldspars. Also, fine white specks = calcite		Pervasive fine calcite throughout	Trace pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Rubbly lower contact				
43.60 TO 51.00	Andesite Ash, Chert «AND ASH, CHT»	Colour: Dark green grey Grain Size: Fine grained Fine weakly foliated homogenous ash with intervals of distorted laminated grey ash and occassional cherts. 43.6 - 44.4m Healed brecciated zone with some gougy zones 45.1 - 45.7m Well developed laminations, distorted and folded, no bedding measurements		Weakly chloritic	43.6 - 47.2m 5% very fine pyrite, mainly within laminated ashes disseminated and concentrated in thin beds 47.2 - 51.00m 2-3% fine disseminated pyrite	Blocky core throughout, approx. 70% recovery 49.7 - 51.0m 10 - 15% recovery
51.00 TO 113.80	Andesite Crystal Tuff «AND TUFF»	Colour: Dark green Grain Size: Fine grained 3-7% 1-2mm epidote altered feldspar crystals and occassional 1-2cm epidotized fragments (or possible epidote patches) Weakly foliated, some massive sections 2-3% mm grey siliceous felsic grains Chert fragments at 53.2m Foliation at 58.0m 70.9 - 72.55m Black muddy pyritic wisps to layers within andesite. 10cm fault gouge at 71.1m 72.4 - 72.55m Healed breccia zone, andesite fragments in muddy groundmass 70.8 - 85.4m 2-5cm epidote patches on epidotized fragments. Some with sharp outline, some more diffuse with minor quartz veining. 85.4 - 89.5m Felsic Tuff, Dyke? Light grey green, fine grained, strong pervasive silicified appearance 85.4 - 86.6m 2-3% 2mm epidote grains 87.8 - 88.4m 2-5% quartz grains and grey siliceous felsic grains 88.7 - 89.5m Strongly silicified layered ash	43	Moderate epidote alteration of feldspars. Weakly chloritic groundmass 70.8 - 85.4m Epidote patches, Patchy alteration or fragment replacement	70.9 - 72.55m 5-7% fine sulfides and pyrite disseminated within andesitic and within muddy zones. 72.05 - 72.15m 10% pyrite, 1% chalcopyrite associated with grey brecciated quartz 70.8 - 85.4m Occqassional 1-2cm pyrite aggregates associated with epidote patches	70.9 - 72.55m Possible argillite or argillaceous zonek locus for faulting. Similar to faults seen underground at Coronation Zone.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Layering at 89.3m	48		89.5 - 94.8m 2-4% dark disseminated pyrite	
		94.8 - 98.25m Felsic Tuff, Dyke? Light grey, fine grained, strong pervasive silicification. 0.5cm layering in first 15cm. Very fine <<1mm white specks. Blocky core				
		Layering at 94.9m	62			
		98.25 - 111.40m <1% Green epidote altered feldspars. Abundant fine, siliceous grey felsic grains 109.45 - 109.6m Felsic Ash, Dyke? Mottled green, weak/layered appearance, strongly silicified			98.25 - 109.0m 2-4% disseminated pyrite	
		Contact at 109.6m	25			
		109.9 - 110.3m Felsic Ash, Dyke Same as above interval				
		111.4 - 112.0m Possible fault zone. Brecciated felsic tuff and andesite with a dark grey pyritic muddy groundmass.				
		112.0 - 112.25m Mafic Dyke		112.25 - 113.85m Strong pervasive epidotization		
		Lower Contact at 113.85m	48			
113.80 TO 128.25	Felsic Dyke «F DYKE»	Colour: Light creamy grey Grain Size: Fine grained Massive with patchy fractured appearances Very fine mm epidote grains Occassional 20-30cm screens of felsic tuff and epidotized andesite		Stongly silicified	1% pyrite along fracture planes	
		122.2 - 124.0m Mafic Dyke Dark green, massive, fine grained Lacking epidotization of andesitic units				
		Contact at 122.2m	40			
		124.0m	50			
		124.0 - 128.25m 2-4mm blueish quartz eyes				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Contact at 128.25m	45			
128.25 TO 155.60	Andesitic Tuff Pyroxene Phyric «AND TUFF»	Colour: Dark Green Grain Size: Fine Grained 1-2cm epidote balls with diffuse edges Some sharply edged epidotized fragments and 1-10cm and up to 20cm epidote patches Occassional indistinct siliceous felsic fragments <1cm 133.7 - 135.9m 1% 2-3mm dark green fairly fresh equant pyroxene crystals. Occassional <1cm felsic fragments 144.6 - 155.6m 2-7% 2-4mm pyroxene crystals Sharp lower contact at 155.60m	55	Moderate to patchy strong pervasive epidote Occassional quartz carbonate veinlets	128.25 - 140.5m 3-5% disseminated pyrite, trace chalcopyrite 128.5 - 129.15m 5-10% pyrite 140.5 - 155.6m 1-2% pyrite 143.7 - 143.95m 10-15% pyrite, siliceous groundmass	
155.60 TO 179.05	Felsic Dyke «F DYKE»	Colour: Light grey Grain Size: Fine grained Massive, pervasive silicified appearance 5-7% 1-2mm green epidote grains, patchy 3-7% white feldspars and 1-2% 2-4mm round blueish and clear quartz eyes Rubbly blocky core Screens of Andesite crystal tuff toward lower contacts as follows: 165.8 - 167.6m, 170.0 - 170.6m, 175.2 - 176.75m Shearing at 176.5m Sharp lower contact somewhat irregular but very shallow to core axis, 10 - 15 degrees	20	Strongly silicified, primary feature	176.26 - 176.80m 7-10% pyrite disseminated in layers parallel to shearing and associated with quartz veinlets 176.80 - 179.05m 1-3% pyrite and up to 5% pyrite mainly along fracture planes	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
179.05 TO 197.80	Andesite Tuff «AND TUFF»	Colour: Dark green Grain Size: Fine Grained 1-2mm epidote grains, 2-3cm epidote balls with diffuse edges and sharp edged epidotized fragments 180.4 - 181.70m Occassional irregular mm black wispy mud layers and weak stockwork over 5cm widths 181.95 - 182.30m Felsic Tuff Medium grey green, weakly foliated, aphyric but with faint indistinct 0.5cm wispy fragments Foliation at 182.2m 184.15 - 184.75m Felsic Tuff Medium grey green, similar to above felsic tuff 186.85 - 187.6m Andesite ash Weakly foliated, aphyric, some distorted foliations 195.3 - 196.9m Felsic Dyke Light grey, fine grained, strongly silicified 197.5 - 197.8m Gougy sheared contact Fault contact at 197.8m	32 52	Moderate epidote as altered fragments and grains (fsp) and epidote balls 195.9 - 196.6m Milky white quartz veining	180.4 - 181.7m Fine sulfides within black mud 181.95 - 182.30m 7-10% fine disseminated pyrite 182.3 - 184.15m 1% disseminated pyrite 184.15 - 185.0m 7-10% pyrite 195.9 - 196.6m 10-15% pyrite as dark fine grained massive blotches within and along margins of quartz veins	
197.80 TO 203.05	Felsic Tuff «F TUFF»	Colour: Light grey Grain Size: Fine grained Aphyric, patchy silicification Brecciated and milled appearance with weak to moderate fault gouge development First 10cm black cherty argillite, fault bounded Faulted lower contact	42	Patchy strong silicification	Nil	
203.05 TO 209.60	Diorite «DIOR»	Colour: Dark green Grain Size: Fine grained 5-10% 2-5mm ragged feldspars. Pervasive weak melled appearance		Minor quartz +/- carbonate veining		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		1-2% tan leucoxene First 20cm gougy diorite				
209.60 TO 241.70	QP Felsic Tuff «QP TUFF»	Colour: Light creamy grey Grain Size: Fine grained 1-3% <1-1mm fine quartz eyes, rare zones with 3-4% white feldspars 209.6 - 212.2m Lighter green colour, more granular appearance from fine siliceous felsic grains Foliation at 211.70m 212.2 - 226.6m Moderately bleached appearance Finely brecciated in areas of mild silicification 212.4 - 212.55m Fault gouge Fault at 212.55m 215.7 - 215.85m Fault gouge Fault at 215.7m 215.85m 226.5m 2cm fault gouge Fine grained, weakly foliated calcareous mafic dykes from 226.6 - 228.6m, 229.15 - 231.3m Contact at 231.3m 231.3 - 241.7m Blocky rubbly core, numerous gouge zones	50 54 50 60 78	Weakly sericitic, patchy silicification	Trace - <1% pyrite	
	E.O.H.					241.7m Rods stuck for 5 hours. After rods were freed, could not get back to bottom of hole. Hole abandoned.

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13300	43.60	44.80	1.20	26	18	43	1	13													
13301	44.80	45.70	0.90	11	13	49	1.1	34													
13302	45.70	47.20	1.50	10	12	60	1.2	28													
13303	47.20	48.40	1.20	6	10	39	0.8	9													
13304	48.40	49.70	1.30	9	11	43	0.7	9													
13305	128.50	129.15	0.65	42	19	60	1	2													
13306	143.55	144.05	0.50	171	22	38	1.1	13													
13307	176.25	176.80	0.55	30	23	49	1.6	3													
13308	181.95	182.30	0.35	68	18	46	1.2	1													
13309	184.15	185.00	0.85	510	19	64	1.4	1													
13310	195.90	196.60	0.70	47	12	16	0.7	1													

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17316	31.10	34.10	3.00	16.08	0.09	1.76	9.6	0.69	7.13	0.2	2.85	0.19	54.74		0.61		1.66	95.6	1.3	1	183	17	64	1	88	5
17317	60.00	63.00	3.00	16.03	0.1	2.63	9.09	0.82	7.15	0.34	2.94	0.24	53.6		0.6		2.86	96.4	1.4	1	188	131	53	4	134	10
17318	90.30	93.30	3.00	16.95	0.035	3.57	11.19	0.24	5.95	0.24	3.5	0.24	50.99		0.66		3.4	96.96	1.7	1	118	26	46	2	95	5
17319	131.70	134.70	3.00	15.17	0.015	7.92	10.24	0.11	5.69	0.25	4.23	0.33	49.22		0.72		4.52	98.42	1.7	1	35	217	40	1	65	5
17320	188.10	191.10	3.00	16.67	0.04	6.46	9.59	0.35	4.95	0.19	3.26	0.28	51.27		0.78		3.3	97.13	2.3	1	270	745	40	1	76	5
17321	199.90	202.10	2.20	15.08	0.62	3.56	1.74	4.87	1.03	0.05	1.59	0.14	65.65		0.22		0.14	94.7	0.6	1	3658	18	11	1	40	5
17322	220.30	222.80	2.50	14.82	0.085	1.93	1.44	5.71	0.59	0.03	1.47	0.11	69.85		0.22		0.1	96.34	0.3	9	81	5	4	1	12	5

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: FANG
LOCATION: NTS 92B/13W

PLOTTING COORDS GRID: MINE
NORTH: 11136.00N
EAST: 5430.00W
ELEV: 736.00

ALTERNATE COORDS GRID:
NORTH: 111+36N
EAST: 54+30W
ELEV: 736.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 86.26m
START DEPTH: 0.00m
FINAL DEPTH: 86.26m

COLLAR GRID AZIMUTH: 180° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 208° 0' 0"

DATE STARTED: November 15, 1989
DATE COMPLETED: November 16, 1989
DATE LOGGED: November 16, 1989

COLLAR SURVEY: NO
MULTISHOT SURVEY: YES
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: YES
HOLE SIZE: NQ

CONTRACTOR: FRONTIER DRILLING LTD.
CASING: 27.4 m
CORE STORAGE: CHEMAINUS

PURPOSE: Test barite horizon

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
32.61	-	-41° 0'	ACID	OK		-	-	-	-	-	
82.00	212° 0'	-38° 0'	SING.SHOT	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 27.40	«OB»					
27.40 TO 39.15	Andesite Crystal Lithic Tuff «AND TUFF»	Colour: Medium green Grain Size: Medium to coarse grained Thick bedded, weakly foliated 5% white to ghosty to predominately epidote altered feldspar crystal to 1.5mm 3-5% light green epidote altered lithic fragments to 6mm, <1% to 4cm		Weakly developed chlorite on foliation surfaces	1% disseminated, minor stringers of fine to medium grained pyrite, rare trace disseminated chalcopyrite	
39.15 TO 45.87	Andesite Ash to Lithic Tuff «AND ASH, LITH TUFF»	Colour: Medium green Grain Size: Fine to medium grained Thick bedded, weakly foliated 1-2% ghosty feldspar crystals to 0.5mm 1% light green epidote altered lithic fragments to 3mm 3-5% quartz granuales to 1mm 41.86 - 42.39m 30% quartz vein, quartz, pyrite, chalcopyrite, stringer		Weakly developed chlorite on foliation surfaces	1% disseminated and stringers of fine to medium grained pyrite, rare trace chalcopyrite 41.86 - 42.39m 30% medium to coarse grained pyrite, 3% coarse grained chalcopyrite 42.39 - 45.87m 2-3% pyrite, predominately in stringers with trace chalcopyrite	Lower contact is gradational
45.87 TO 57.70	Quartz Porphyry Felsic Tuff «QP TUFF»	Colour: Light grey, weak green cast Grain Size: Medium grained Thick bedded, moderately foliated 2% quartz eyes, <1-4mm 1-2% white to ghosty to clay altered feldspar crystals to 0.5mm 46.21 - 46.22m Fault, gouge 90 degrees 48.26m CAF 51.84m CAF 57.19m CAF	 50 64 60	Weak to moderately developed sericite and minor chlorite on foliation planes	1% predominately stringer medium grained pyrite, rare trace chalcopyrite 57.50 - 57.70m 3-5% medium to coarse grained pyrite stringers, trace	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
					chalcopyrite	
57.70 TO 81.67	Andesite Crystal Lithic Tuff «AND LITH TUFF»	Colour: Medium green Grain Size: Medium grained Thick bedded, moderately foliated 3-5% ghosty to predominately epidote altered fedlspar crystals to 1mm 5% quartz granuales to 2mm 1% light green epidote altered lithic fragments to 2mm		Weak to moderately developed chlorite on foliation surfaces	1-2% disseminated to stringers of fine to medium grained pyrite, local trace chalcopyrite	
		62.20m CAF	59			
		⟨64.60-69.00⟩ Andesite crystal lithic to lapilli tuff «AND XLT-LaT» 2-3% felsic and mafic fragments to 2cm 65.20 - 66.60m Fault, very poor recovery, gouge and strongly sheared			65.20 - 66.60m Fragments of quartz pyrite stringers	
		⟨69.00-71.70⟩ Quartz Feldspar Porphyry Tuff «QFP Tuff» White, thick bedded, well foliated 3% quartz eyes to 2mm, 3-5% epidote altered feldspar crystals to 1mm		69.00 - 71.70m Very well developed sericite on foliation surfaces	69.00 - 71.70m 1-2% disseminated and stringer fine to medium grained pyrite trace chalcopyrite	69.00 - 71.70m "Blitzed"
		69.50m CAF	60			
		71.50 - 71.73m Quartz vein			71.50 - 71.73m 3-5% pyrite, trace chalcopyrite	
		71.73 - 72.23m Fault, strongly sheared				
		74.04 - 74.15m Quartz pyrite stringer			74.04 - 74.15m 70% medium grained pyrite	
		74.85 - 74.98m Quartz pyrite stringer			74.85 - 74.98m 15% pyrite	
		74.98 - 81.67m Interbedded sequence of andesite ash and crystal lithic tuff				
		76.94m CAB	85			
		77.25 - 78.03m quartz pyrite stringer			77.25 - 78.03m 10% fine to medium grained pyrite, trace chalcopyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
81.67 TO 83.75	Quartz Feldspar Porphyry Felsic Tuff «QFP TUFF»	Colour: Light grey, weak green cast Grain Size: Fine to medium grained Thick bedded, moderately foliated 2-3% quartz eyes to 1mm 2% white ghosty to weakly epidote altered feldspar crystals to 0.5mm 82.05 - 82.17m Quartz vein		Weak to moderately developed sericite and minor chlorite on foliation surfaces	<1% disseminated fine grained pyrite	
83.75 TO 86.26	Intermed. Ash «I ASH» E.O.H.	Colour: Light greenish grey Grain Size: Fine grained Thinly bedded, moderately foliated Interbedded ash with minor lithic tuff 85.71m CAB	90	Weakly developed sericite and chlorite on foliation planes	2-3% disseminated, bedded very fine grained pyrite, locally 10%	

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %		COMMENTS
13552	41.86	42.39	0.53	4510	26	77	2.3	51	650												
13553	57.00	57.70	0.70	70	33	106	0.8	40	1570												
13554	69.00	71.63	2.63	85	7	14	0.4	1	8200												
13555	77.25	78.03	0.78	877	11	21	0.7	10	3840												
13556	81.67	83.75	2.08	5	6	42	0.4	4													
13557	83.75	85.00	1.25	9	15	93	0.8	18	1140												
13558	85.00	86.26	1.26	24	17	94	0.8	24	1400												

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17179	29.57	32.57	3.00	16.81	0.04	4.19	8.55	0.64	5.49	0.33	3.07	0.26	54.66		0.59		1.24	95.88	1.4	1	78	297	63	3	160	5
17180	52.73	55.73	3.00	14.31	0.1	0.74	3.94	2.29	3.11	0.13	2.46	0.11	68.65		0.29		1.17	97.3	0.4	13	118	16	32	1	91	10
13556	81.67	83.75	2.08	12.51	0.15	1.9	3.74	3.48	2.42	0.14	1.49	0.22	69.9		0.21		0.95	97.11	0.5	23	164	6	11	2	44	5

HOLE NUMBER: 89-269

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LARA PROJECT
PROJECT NUMBER: 242
CLAIM NUMBER: SILVER 1
LOCATION: NTS 92B/13W

PLOTTING COORDS GRID: MINE
NORTH: 11375.00N
EAST: 6794.00W
ELEV: 729.00

ALTERNATE COORDS GRID:
NORTH: 0+ 0
EAST: 0+ 0
ELEV: 0.00

COLLAR DIP: -65° 0' 0"
LENGTH OF THE HOLE: 250.54m
START DEPTH: 0.00m
FINAL DEPTH: 250.54m

COLLAR GRID AZIMUTH: 180° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 208° 0' 0"

DATE STARTED: November 17, 1989
DATE COMPLETED: November 20, 1989
DATE LOGGED: November 20, 1989

COLLAR SURVEY: NO
MULTISHOT SURVEY: YES
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: YES
HOLE SIZE: NQ

CONTRACTOR: FRONTIER DRILLING
CASING: 9.1 m
CORE STORAGE: CHEMAINUS

PURPOSE: To test an IP anomaly in an area of anomalous geochem (Ba,Cu,Zn,Na2O)

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
39.00	-	-63° 0'	ACID	OK		-	-	-	-	-	
89.00	-	-62° 0'	ACID	OK		-	-	-	-	-	
209.39	-	-60° 0'	ACID	OK		-	-	-	-	-	
250.54	-	-59° 0'	ACID	OK		-	-	-	-	-	
145.50	210° 0'	-61°30'	SING.SHOT	OK		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 9.14	«OB»					
9.14 TO 62.70	«DIORITE»	Colour: Dark green Grain Size: Coarse grained Thick, massive, weakly foliated Feldspar porphyritic Equigranular 16.80 - 19.20m Very Rubbly 30.48 - 31.45m Very Rubbly 33.22 - 34.44m Very Rubbly 35.36 - 37.00m Very Rubbly 38.71 - 40.20m Very Rubbly 52.80 - 53.50m Very Rubbly 53.50 - 53.86m Very black medium grained dyke 53.86 - 62.70m Fine to medium grained phase 60.56 - 60.68m Quartz carbonate vein with trace chalcopyrite Contact at 62.70m	85			
62.70 TO 70.45	Quartz Porphyry Tuff «QP TUFF»	Colour: White Grain Size: Medium grained Thick bedded, massive, weakly foliated 3-5% quartz eyes to 4mm There may be a small percentage of very poorly defined feldspars 65.00 - 65.08m Fault, gouge and strongly sheared 70.30 - 70.45m Strongly sheared		Well developed sericite on foliation surfaces	Trace disseminated, patchy fine to medium grained pyrite, rare trace chalcopyrite, minor stringers	Blitzed
70.45 TO 76.61	Quartz Porphyry Intermed. Lithic Tuff «I LITH TUF	Colour: Light grey green Grain Size: Medium grained Moderate to thick bedded Weak to moderately foliated		Locally bleached, moderate to well developed sericite and chlorite on foliation planes	<1% disseminated fine grained pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	F»	<1% quartz eyes to 3mm, locally to 8mm Rare felsic fragments to 1.5cm Locally 1-2% light green lithic fragments, generally smeared along foliation planes, larger bleached patches to 2cm may represent larger fragments CAF at 71.44m 73.84 - 74.04m Fault, abundant gouge 75.37 - 75.60m Possible interbed of felsic ash, altered to sericite schist	 52 			
76.61 TO 80.32	Andesite Lithic to Lapilli Tuff «AND LAP TUFF»	Colour: Light to medium green Grain Size: Medium to coarse grained Thick bedded, moderately foliated 1-2% light green weakly epidote altered lithic fragments to 3cm 2% quartz granuales to 105mm Possible 1-2% feldspars obscured by the alteration 80.30 - 80.32m Fault	 90	Well developed chlorite on foliation surfaces Weak pervasive epidote alteration	Trace disseminated pyrite	
80.32 TO 93.50	Felsic Lapilli Tuff to Tuff Breccia «F LAP TUFF , T BX»	Colour: White, light green cast Grain Size: Coarse grained Thick bedded, massive, weakly foliated Possible 50-60% felsic fragments bleached white and very siliceous Textures totally obscured Locally feldspars are visible and minor quartz eyes Boundaries of fragments are locally diffuse, generally they may not exceed 6cm Groundmass has a light green cast and contains 3-5% quartz eyes to 4mm 3-5% white to ghosty to clay altered feldspars to 1mm, these are generally highly obscured 89.55 - 89.56m Fault 90.00 - 90.33m Fault, gouge	 65 20	Moderate to well developed sericite and minor chlorite on foliation surfaces Enitre interval has been silicified Felsic fragments are bleached and intensely silicified	Trace disseminated pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
93.50 TO 96.00	Andesite Lithic Tuff «AND TUFF»	Colour: Medium to dark green Grain Size: Fine to medium grained Moderately bedded, moderately foliated Very equigranular Epidotized lapilli fragment to 4cm at 93.67m 93.78 - 93.80m Fault 94.68 - 94.78m Strongly sheared 95.26 - 95.34m Fault	 75 90	Well developed chlorite on foliation surfaces	3% disseminated, patchy, minor stringers of medium grained pyrite	Strongly altered
96.00 TO 99.30	Intermed. Lithic Tuff «I LITH TUF F»	Colour: Medium grey green Grain Size: Fine to medium grained Moderately bedded, moderately foliated Very equigranular in appearance 3-5% felsic grains to 2mm 99.22 - 99.30m Fault, strongly sheared	 84	Moderately developed chlorite and sericite on foliation surfaces Weak to moderately calcareous	5-7% disseminated, patchy and minor stringers of fine to medium grained pyrite	Altered Andesite?
99.30 TO 113.32	Felsic Tuff to Lapilli Tuff «F TUFF,LAP TUFF»	Colour: White to light grey Grain Size: Medium to coarse grained Thick bedded, massive, weakly foliated May contain 5-10% felsic fragments, bleached white and silicified from 2mm to 3cm, these are generally obscure Groundmass fine grained, may contain 2-3% feldspar to 0.5mm, very obscure Locally 2-3% quartz eyes <1mm to 4mm		Moderate to well developed sericite on foliation surfaces Bleached, silicified mottled look	1% disseminated patchy and stringers, fine to medium grained pyrite Pyritic patches and stringers generally carry minor chalcopyrite	
113.32 TO 119.25	Andesite Crystal Lithic Tuff «AND TUFF»	Colour: Light to medium green Grain Size: Medium grained Thick, massive, weakly foliated 3-locally 5% ghosty to epidote altered feldspar crystals to 1mm Possible 2-3% dark green mafic crystals to 1mm Very equigranular appearance to interval Sharp upper and lower contact		Weakly developed chlorite on foliation surfaces Weak pervasive epidote alteration	Trace pyrite	Possible Diorite

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Contact at 113.32m 119.25m	90 50			
119.25 TO 142.75	Felsic Tuff «F TUFF»	Colour: Very light grey Grain Size: Fine to medium grained Thick bedded, moderately foliated Very equigranular in appearance May contain 1-2% obscure feldspars to 0.5mm 3% lithic material to 0.5mm Rare quartz eyes to 1mm 119.25 - 120.72m 5% indistinct fragments to 3cm 121.43m CAF 122.15 - 122.25m Fault, abundant gouge 129.90 - 130.20m Fault, abundant shear and gouge 133.00 - 133.02m Fault, gouge 134.03 - 134.07m Fault, gouge 134.57 - 134.63m Fault, gouge 137.00 - 137.02m Fault, gouge 138.02 - 138.31m Fault, gouge 138.60 - 138.63m Fault, gouge 139.38 - 138.47m Fault, gouge 139.84 - 139.94m Fault, gouge 140.30 - 140.31m Fault, gouge 142.29 - 142.30m Fault, gouge 142.62 - 142.63m Fault, gouge	 66 20 68 75 75 70 85 70 88 68 60 90 85	Well developed sericite on foliation planes	1% disseminated, patchy and minor stringers of fine to medium grained pyrite 130.60 - 137.60m 2% pyrite stringers, minor chalcopyrite with the stringers	
142.75 TO 159.80	Intermed. Tuff «I TUFF»	Colour: Medium grey, weak green cast Grain Size: Fine to medium grained Thick bedded, moderately foliated Very equigranular in appearance Possibly 1-2% feldspars to 0.5mm Rare quartz eyes to 1mm 142.81 - 142.90m Fault, gouge 142.95 - 142.98m Fault, gouge 143.45 - 143.48m Fault, gouge 145.10 - 145.44m Fault, gouge and	 85 40 80 50 85	Weakly developed sericite on foliation planes Minor chlorite	1-2% medium grained pyrite predominately in stringers Local trace chalcopyrite with the stringers	Possibly an unaltered version of the above unit

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		145.50 - 145.40m 2-3% angular felsic fragments to 8mm				
		CAF at 145.66	50			
		147.08 - 147.11m Fault, C-S Fabric, uphole down	70			
		CAF at 150.52m	57			
		154.12 - 154.16m Fault	50		152.39 - 152.44m Chalcopyrite stringer	
159.80 TO 175.27	Intermed. Ash «I ASH»	Colour: Light grey, weak green cast Grain Size: Fine grained Thinly bedded, moderately foliated Local interbeds of lithic tuff		Moderately developed sericite on foliation surfaces, minor chlorite	2 to locally 5% disseminated laminated fine grained pyrite	
		CAB at 162.00m	75			
		163.40 - 163.20m Felsic Lithic to Lapilli Tuff				
		163.48m CAB 163.84m CAB	70 80			
		164.00 - 164.39m Felsic lithic to lapilli tuff				
		164.45m CAB 165.59m CAB	80 76			
		165.05 - 166.00m Dyke, Felsic				
		172.97m CAB	50			
175.27 TO 181.45	«DIORITE»	Colour: Medium to dark green Grain Size: Medium grained Thick, massive, weakly foliated Feldspar porphyritic Equigranular				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
181.45 TO 191.80	Andesite Lithic Tuff «AND TUFF»	Colour: Light to medium green Grain Size: Medium grained Moderately bedded, moderately foliated Interbedded sequence of predominately fine to medium grained lithic tuffs with more medium to coarser grained lithic crystal lithic tuffs Lithic tuffs contain 3-5% quartz granuales to 1mm		Weak to moderate developed chlorite on foliation planes Local weak pervasive epidote alteration	2-3% pyrite, minor chalcopyrite predominately in stringers and disseminated	
		181.45 - 183.45m Intermixed sequence of felsic tuffs and andesite			3-5% pyrite, predominately stringers, possible trace sphalerite	
		185.48 - 185.77m Andesite lithic to lapilli tuff 5% light green epidote altered lithic fragments to 1cm				
		187.03 - 187.20m Andesite lithic tuff 5-10% light green epidote altered lithic fragments to 5mm				
		187.20 - 187.21m Fault	45			
		189.60 - 191.10m Intermediate Lithic Tuff			5% pyrite, minor chalcopyrite, patchy, stringers, and disseminated	
		189.90 - 190.00m Fault	70			
		191.30 - 191.50m Fault	15			
191.80 TO 250.54	Andesite Crystal Lithic Tuff «AND XL LIT H TUFF»	Colour: Light to medium green Grain Size: Medium grained Thick bedded, weak to moderately foliated 2-3% ghosty to epidote altered feldspar crystals to 1mm 5-7% light green epidote altered lithic fragments to 5mm 5% felsic granuales to 1mm		Weak to moderately developed chlorite on foliation surfaces Weak pervasive epidote alteration	3-5% pyrite with minor chalcopyrite, predominately in stringers and patches also disseminated	
				195.10 - 195.60m Intense epidote alteration	195.10 - 195.60m 10-15% pyrite, minor chalcopyrite	
					199.60 - 200.00m 50% medium to coarse pyrite	
		200.42m CAF	45			
		211.90m CAF	45			
		213.70 - 220.55m Andesite Lithic Tuff			3% pyrite, predominately patches and	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
					stringers, minor chalcopyrite 220.55 - 231.10m 1-2% pyrite, predominately patches and stringers, trace chalcopyrite 231.10 - 231.30m 3% pyrite, 3% chalcopyrite stringer 231.3 - 250.60m 1-2% pyrite, trace chalcopyrite, predominately stringers	
		232.00 - 232.40m 80% quartz vein		232.40 - 234.80m Intensely altered, strongly silicified, intense epidote alteration 241.33 - 242.90m Bleached, silicified, intense epidote alteration	232.00 - 232.40m 3% coarse grained pyrite, 1% chalcopyrite	
	E.O.H.	247.55 - 248.50m 5% lapilli fragments to 7cm				

Sample	From (m)	To (m)	Length (m)	ESTIMA GCu ppm	ASSAYS GPb ppm	GZn ppm	GAg ppm	GAu ppb	GBa ppm	Cu %	Pb %	Zn %	IAg oz/t	GEOCHEMICAL Ag g/t	IAu oz/t	Au g/t	SG SG	NSR NSR	SUL %	COMMENTS
13559	97.87	99.30	1.43																	
13560	101.55	102.88	1.33																	
13561	159.80	161.40	1.60																	
13562	161.40	163.20	1.80																	
13563	163.20	164.69	1.49																	
13564	164.69	166.04	1.35																	
13565	166.04	167.21	1.17																	
13566	167.21	168.68	1.47																	
13567	168.68	169.97	1.29																	
13568	169.97	171.20	1.23																	
13569	171.20	172.56	1.36																	
13570	172.56	173.28	0.72																	
13571	173.28	175.27	1.99																	
13572	181.45	182.18	0.73																	
13573	182.18	183.45	1.27																	
13574	183.45	185.17	1.72																	
13575	189.60	191.10	1.50																	
13576	195.10	195.60	0.50																	
13577	199.36	200.52	1.16																	
13578	200.52	201.97	1.45																	
13579	207.40	209.08	1.68																	

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	Sr %	TiO2 %	Zr %	S %	Tot %	Ag ppm	As ppm	Ba-ppm ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
17181	62.79	65.79	3.00	12.69	0.11	2.13	0.87	2.75	0.39	0.01	2.5	0.12	74.23		0.2		0.26	96.28	0.7	4	78	54	12	1	66	10
17182	88.70	91.70	3.00	14.63	0.08	1.13	0.96	2.05	3.11	0.03	4.5	0.12	70.12		0.22		0.08	97.03	0.8	1	97	6	28	1	24	5
17183	116.25	119.25	3.00	15.75	0.005	10.94	11.5	1.3	9.6	0.24	0.38	0.42	42.67		1.47		0.76	95.03	3.4	1	6	184	56	1	92	5
17184	132.70	135.70	3.00	13.61	0.115	0.42	5.14	3.25	3.85	0.09	0.5	0.12	67.2		0.32		2.85	97.47	0.8	8	95	27	32	1	95	15
17185	154.50	157.50	3.00	15.06	0.085	0.57	6.17	2.35	7.09	0.17	2.01	0.17	59.82		0.42		2.25	96.17	1	1	94	31	61	2	114	10
17186	187.20	189.60	2.40	16.68	0.125	1.17	9.94	2.49	8.45	0.25	1.45	0.22	51.54		0.61		2.9	95.83	1.1	1	164	186	55	1	130	5
17187	209.40	212.40	3.00	17.06	0.02	2.61	8.61	1.57	6.81	0.23	3.7	0.23	53.1		0.62		1.82	96.38	1.2	1	32	126	53	1	123	5
17188	242.90	245.90	3.00	16.82	0.04	2.29	8.36	1.74	6.34	0.17	3.72	0.21	54.2		0.6		1.57	96.05	1.7	1	52	69	52	1	75	10