



52C10NW1005 15 BLISS LAKE

010

DIAMOND DRILLING

AREA: BLISS LAKE

REPORT NO: 15

WORK PERFORMED FOR: Minnova Inc.

RECORDED HOLDER: Same as Above [xx]  
: Other [ ]

<u>Claim No.</u>	<u>Hole No.</u>	<u>Footage</u>	<u>Date</u>	<u>Note</u>
K 873627 & K 777333	ML-02	285m 33m	Jan/87	(1)
K 873627 & K 777333	ML-03	250m 278m	Jan-Feb/87	(1)
K 812844 & K 812846	SR-01	13m 197m	June/87	(1)
K 629137	HS-01 HS-02	48m 36m	May/87 May/87	(1) (1)
K 777325	HS-03	348m	May-June/87	(1)
K 695823 & K 777322	HS-04	306m	June/87	(1)

NOTES: (1) #W8801-009, filed June/88

MINNOVA INC.  
DRILL HOLE RECORD

HOLE NUMBER: ML-02

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: SWELL BAY PLOTTING COORDS GRID: Swell Bay ALTERNATE COORDS GRID: COLLAR DIP: -62° 0' 0"  
 PROJECT NUMBER: PN099 NORTH: 1370.00S EAST: 0+ 0 LENGTH OF THE HOLE: 318.00m  
 CLAIM NUMBER: KB73627/K 777333 EAST: 0+ 0 START DEPTH: 0.00m  
 LOCATION: Bliss Lake ELEV: 0.00 FINAL DEPTH: 318.00m  
*K873627 285M*  
*K777333 33M* COLLAR AZIMUTH GRID: 360° 0' 0" COLLAR ASTRONOMIC AZIMUTH: 340° 0' 0"

DATE STARTED: January 9, 1987 COLLAR SURVEY: NO PULSE EM SURVEY: YES CONTRACTOR: St. Lambert  
 DATE COMPLETED: January 15, 1987 MULTISHOT SURVEY: NO PLUGGED: NO CASING: 17.65 M left intact  
 DATE LOGGED: January 16, 1987 RWD LOG: NO HOLE SIZE: BQ CORE STORAGE: Robinson's Landing

PURPOSE: To test Bliss Lake south zone at 300m verticle.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
50.00	-	-57° 0'	ACID	OK		-	-	-	-	-	
117.00	-	-54° 0'	ACID	OK		-	-	-	-	-	
150.00	-	-52° 0'	ACID	OK		-	-	-	-	-	
200.00	-	-50° 0'	ACID	OK		-	-	-	-	-	
250.00	-	-46° 0'	ACID	OK		-	-	-	-	-	
300.00	-	-43° 0'	ACID	OK		-	-	-	-	-	
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*For B. Nelson*

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO DAI	ALTERATION	MINERALISATION	REMARKS
0.00 TO 17.00	OVERBURDEN «CASING»	Clay and gravel.				
17.00 TO 30.10	PERV ALT TO MAFIC «ALT MA»	Grey to green fine grained and generally quite hard and massive. Locally hint of spherulitic texture defining a fabric @ .....  24.0-24.1 Irregular frags in chl matrix.  27.1-31.3 4 narrow 4cm to 25cm stringer like zones of quartz and c.g. black needle-like amphibole (tourmaline?) and f.g. Py. Lower contact obscured by alteration.	45	Chlorite variable from moderate to strong.  28.8-28.9 «DALM» (Probable dalm).  29.5 «DALM» (Probable dalm).	27.1-31.3 «Py + CPy stringers» Narrow 3cm to 1cm Py stringers plus trace Cp sulphides increase near bottom of section.	Probably mafic volcanic but possibly altered felsic - check chemistry! (too hard and grey)
30.10 TO 108.50	PERV ALT TO MAFIC «ALT MA»	Massive green locally amygdaloidal.  36.5-41.2 Unaltered mafic, agr grey massive flow hard, stp texture, 15% feldspar xlls.  37.1-37.8 5 to 10cm wide quartz vein.  46.5-48.0 Bleached and very hard.  49.8-51.0 Silicified mafic, very hard minor quartz.  49.8-51.0 Quartz veining on a 0.5cm scale.  At 64.5 Pillow selvage, amygdules both sides.  65.0-65.3 Narrow brecciated zone of irregular blueish quartz frags in chlorite matrix plus 1% stringer po.  At 64.5 Pillow selvage, amygdules both sides.  65.0-65.3 Narrow brecciated zone of irregular blueish quartz frags in chlorite matrix plus 1% stringer po.  77.0-77.8	50	30.1-108.5 «LOCAL STRINGER CHLORITE» Local strong stringer chlorite.  65.6-66.5 Very strong chlorite.  75.4-76.0 «DALM» Dalm 25% 3cm sub to anhedral cordierite xlls.	37.1-37.2 Diss cubic py associated with spotchy po, moderately magnetic.  Pot+Py stringers and blebs, slightly increasing, downhole from 65m, 2% combined pot+py  Po + Py stringers and blebs, slightly increasing, downhole from 65m, 2% combined po + py.  At 76.7 3cm wide po stringer.	Felsic phase of mafic?

MINNOVA INC.  
DRILL HOLE RECORD

HOLE NUMBER: ML-02

DATE: 2-July-1987

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	(ANGLE) (TO CA)	ALTERATION	MINERALISATION	REMARKS
		Impression of brecciated frags in chlorite. 86.7-87.0 Amygdaloidal with frags in chlorite, frag elongation defines foliation @.....	50	77.8-79.8 «DALM» Dalm 25% seen to ice cords.		Is this dalm, possibly spherulites?
108.50 TO 110.00	INT DP DYKE «DP DY»	Sharp contact at 108.5 marked by 3cm wide qtz vein containing 5 mm cubes of Py..... Mass f.g. to m.g. grey rock containing 5% 2 mm to 5 mm subrounded quartz phenocrysts. Contacts sharp but angle to C.A. not apparent.	45		1 to 2% fgr diss Py.	Sharp contacts indicate DP dyke rather than flow.
110.00 TO 123.70	PERV ALT MAFIC «ALT MA»	F.g. green grey with fabric at ..... Fabric apparent in more chloritic sections. Small mm scale spherulitic?? lumps as approach 123.7.	60	110.0-118.0 «MDO CHL + SER» Moderate to strong chlorite & sericite 118.0-123.7 «STG CHL»		Possible altered felsic? Small blue qtz eyes or amygdules?
123.70 TO 126.20	INT DP DYKE «DP DY»	Sharp contact at 123.7 @ ..... Green to grey containing 10% 3 to 5 mm white partially absorbed qtz phenos in a fgr int. matrix Sharp contact at 126.2 @ .....	45 45		2 to 3% fgr diss, blobby and cubic Py.	Definitely a dyke.
126.20 TO 141.90	ALTERED MAFIC «ALT MA»	Gradational contact over 1 to 2 meters. Heterogeneous unit, zones of 40 to 50% 2 to 4mm ovoid spherulites?, zones from a few mm to 0.5m wide, locally unit looks amygdaloidal mafic.		Locally very strong stringer chlorite. Hint of dalm spots among spherulites.		Not good example of spherulitic rhyolite, mini sporadic spherulitic texture. May have mafic intercalated with spherulitic rhyolite!
141.90 TO 142.60	FLOW BRECCIA «BX»	Sharp contact at 141.9 @ ..... Wispy felsic and mafic frags define a foliation @. Irregular shaped frags vary in size from a few mm to a few cm, 50% felsic 50% mafic. Sharp contact at 142.6 @ .....	50 60 35	Mafic frags altered to chlorite.		Possibly intrusive breccia?
142.60 TO 146.50	INT DYKE «INT DY»	Mgr grey hard and massive containing 5% 2 to 5mm angular mafic phenocrysts. Cut by numerous 2 to 5mm wide felsic veinlets.				
146.50 TO 148.50	FAULT ZONE «FLT»	Heterogeneous mixture -- massive intermediate mgr dyke, chlorite stringers and DP dyklets.		146.5-148.5 «CHL» Moderate to strong chlorite.		
148.50 TO 149.90	DP DYKE «DP DY»	Massive grey rock containing 25% 2 to 5 mm semi absorbed qtz phenocrysts in a fgr felsic matrix. Upper and lower contacts quite sharp @ .....	45		3% fgr diss Py.	Very similar to preceding DP dykes.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE (TO CA)	ALTERATION	MINERALISATION	REMARKS
149.90 TO 156.80	PERVASIVE TO ALTERED «ALT MA»	Dark grey to green fgr and soft, foliated @.....	50	149.9-156.8 «STR CHL» Strong chlorite.		
156.80 TO 159.50	STRINGER ZONE «STR ZONE»	Mineralized stringer zone within altered mafic. 159.0-159.5 Fragmental, 35% flattened chloritic mafic frags define foliation @ .....	60 60		156.8-159.5 «15% Po, 4% Cpy, 1% Py, str» Cpy-Po as to ca scale stringers. 156.8-158.8 10% po, 3% cpy. 158.8-159.5 5% py, 20% po, 6% cpy.	Very good Cu rich stringer zone!
159.50 TO 169.00	PERVASIVE TO ALTERED MAFIC «ALT MA»	Dark grey to green fgr and soft, foliated @..... 168.4-169.0 Mafic fragmental (Hyaloclastite), fgr dark grey wispy elongated mafic frags set in a fgr siliceous matrix, frags define a foliation @ .....	50 50	159.5-169.0 «STG CHL» Strong chlorite.		Are they really frags or stockwork like chlorite alteration?
169.00 TO 195.50	PERVASIVE TO ALTERED SPHERULITIC RHYDLITE «ALT RHYD»	Mgr to fgr massive to banded, locally fragmental, locally amygdaloidal. 169.7-169.8 Qtz veining parallels micaceous fabric @ .....	45		Minor bleby to stringer py.	
		173.2-173.6 Brecciated fragmental texture. 191.2-191.7 Massive, light green, vgr and altered. 192.7-195.0 Feldspar porphyritic, 20% sericitic feldspar laths.		Strong sercite. 192.7-195.0 «STG CHL + SER» Strong chlorite + sercite		Is this an altered felsic dyke or more felsic phase of flow.
195.50 TO 255.20	PERVASIVE TO ALTERED MAFIC «ALT MA»	Fgr dark green and soft and amygdaloidal. 205.5-213.0 Qtz veining parallels fabric @ .....	60	195.0-255.2 «STG CHL» Strong to moderate chlorite.		At 213a-1to3I bleby and stringer py+po, these concentrations continue downhole thru unit with stringers parallel to foliation
		Still slightly amygdaloidal above quartz injection zone. Local hyaloclastite?				

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 2-July-1987

HOLE NUMBER: ML-02

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE I TO CAI	ALTERATION	MINERALISATION	REMARKS
255.20 TO 258.60	INTERBEDDED TO MASSIVE SULPHIDES AND MAFIC «SMS»	Seven brassy individual massive py+po beds ranging in thickness from 3cm to 0.3m are alternately layered within dark greeny grey fgr amygdaloidal mafic host, bedding @..... At 257.9 3cm classic pillow selvage.	60	{255.2-256.6} «STG CHL»	{255.2-256.6} «30% Py+Mgt+Po+Cpy+Sphal» Overall 30% sulphides over interval 20% py 5% mgt 2-3% po 1-3% cpy 1-4% sphal	
258.60 TO 263.10	MASSIVE TO SULPHIDES «MS»	Massive fgr to mgr brassy sulphides interbedded with mafic host, irregular shaped host rock frags within sulphides. 90% sulphides 10% mafic frags Hexagonal-octahedral light pinkish white spots, garnet?			{258.6-263.1} «80% Py, 8% Po, 8% Sphal, 2% Cpy, 2% mgt» Overall 80% py 8% po 1-2% mgt 5-8% sphal 1-2% cpy  {258.6-260.2} Fgr banded py plus sphal, 10% lcn-2cm chloritic mafic frags containing po blebs and garnet? 10% fgr to mgr choc. brown streaky, banded sphal, occasional secondary sphalerite veinlets. 3-5% fine network cpy, locally up to 10% 6% fgr py 5% fgr po 5% fgr mgt  {260.2-260.9} 80% vgr py 2-3% fgr po 5% qtz-chlorite veins 6% l to 2cm mgt xls 2-3% vgr cpy 2-3% vgr sphalerite  {260.9-262.2} 70% fgr py 8% chloritic frags 7-10% mgr streaky 0.5 to 1 cm bands of sphalerite 5% fgr diss mgt 3% fgr network cpy  {262.2-263.1} 70% mgr py 15-20% 2 to 5cm beds and streaks of mgr purplish-brown sphalerite 5% qtz-chlorite gangue	Bedded sulphides!

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MINNOVA INC.  
DRILL HOLE RECORD

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA:	ALTERATION	MINERALISATION	REMARKS
					5% agt Trace cpy	
263.10 TO 298.00	ALTERED TO MAFIC «ALT MA»	Fgr greeny-grey, massive and amygdaloidal. Cut by several 2-3mm white qtz veinlets. Occasional siliceous patches containing subrounded to angular mafic cores, cores 1 cm across. Small (1mm) white specks, locally up to 10%. 291.1-291.7 Large subrounded 1cm to 5cm qtz amygdules. 294.9-295.3 Barren white qtz vein, sharp but irregular upper and lower contacts. 295.3-296.3 15% 5mm to 1cm ellipsoidal qtz anygs. 296.3-296.5 Well bedded interpillow sed (tuff?). 1mm to 5mm beds, bedding @ ..... 60 296.5-298.0 15% 1cm amygdules		Weak to moderate chlorite, local brown biotite(chlorite?)		Same as footwall mafics.
298.00 TO 299.10	MAFIC TUFF TO EXHALITE «EXHALITE»	Fgr dark green and well bedded, locally convoluted Alternating py+po beds and chloritized mafic beds 298.3-298.5 Four - 1 to 2cm boudinaged felsic beds? Bedding generally @ ..... 75		298.0-299.1 «STG CHL» Strong chlorite.	298.0-299.1 «12% Py + 6% Po» 15-20% total sulphides 12% Py plus 6% Po as disseminations and small elongate blebs defining narrow sulphide beds, possibly fgr brown sphalerite associated with py and po.	
299.10 TO 318.00	QUARTZ PORPHYRY «QP» E.O.N.	Fgr to mgr grey and massive containing up to 25% blue 2 to 3mm rounded QEs. 305.8-305.85 Barren white qtz vein @ ..... 30 308.7-309.9 Mottled fragmental look, mgr to mgr, 5mm subrounded to angular chlorite spots in a fgr felsic matrix. 314.8-314.9 White qtz vein containing 5-10% mafic inclusions, vein oriented @ ..... 65		Moderate chlorite	Trace to 1% disseminated and blebby Py	Suspect it's an alteration feature

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DRILL HOLE RECORD

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
		At 316.0 2cm white qtz vein @ .....	60			
		At 317.4 2 to 3cm white qtz vein @ .....	25			

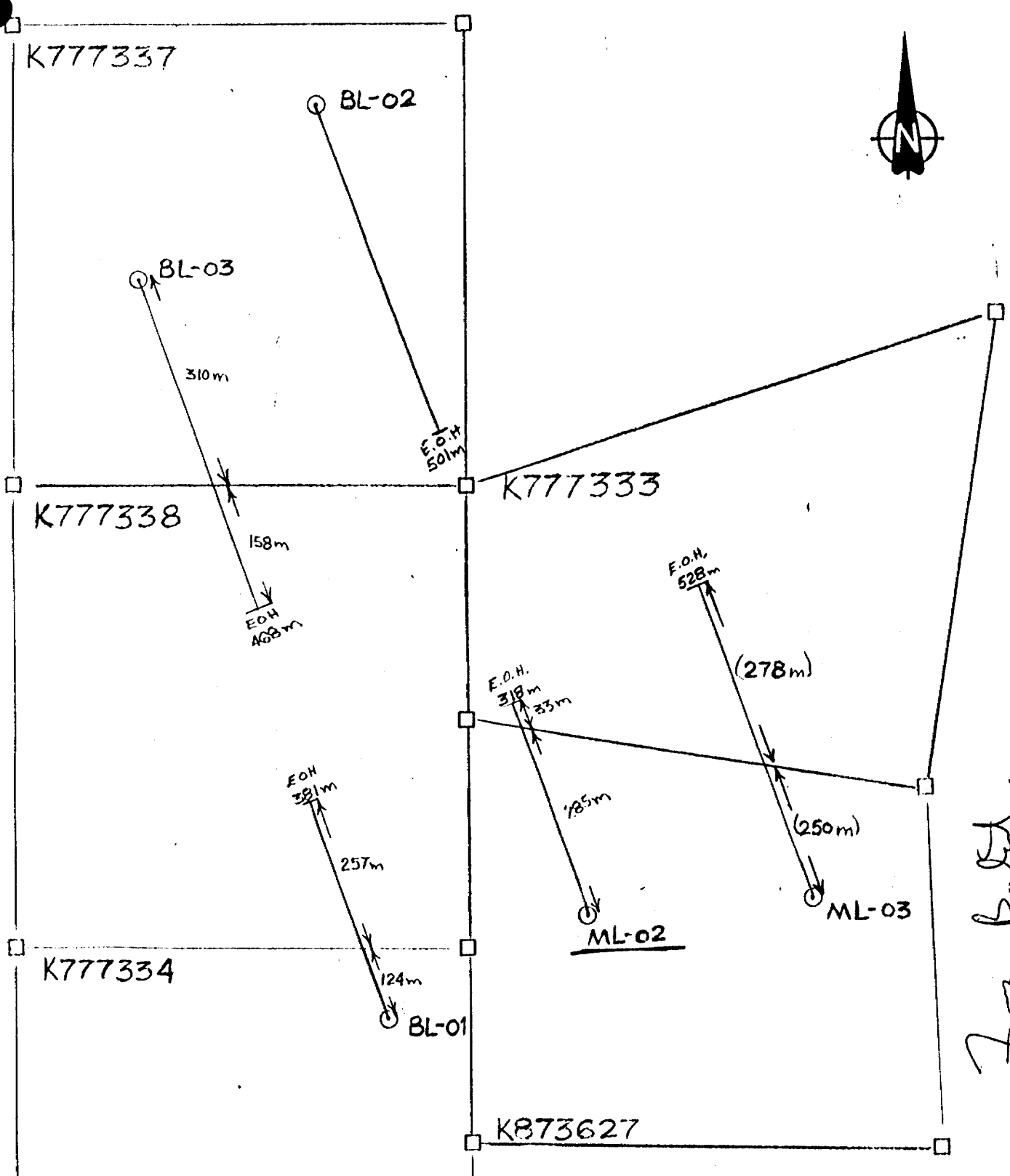
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DRILL HOLE RECORD

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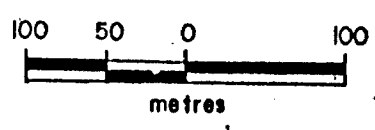
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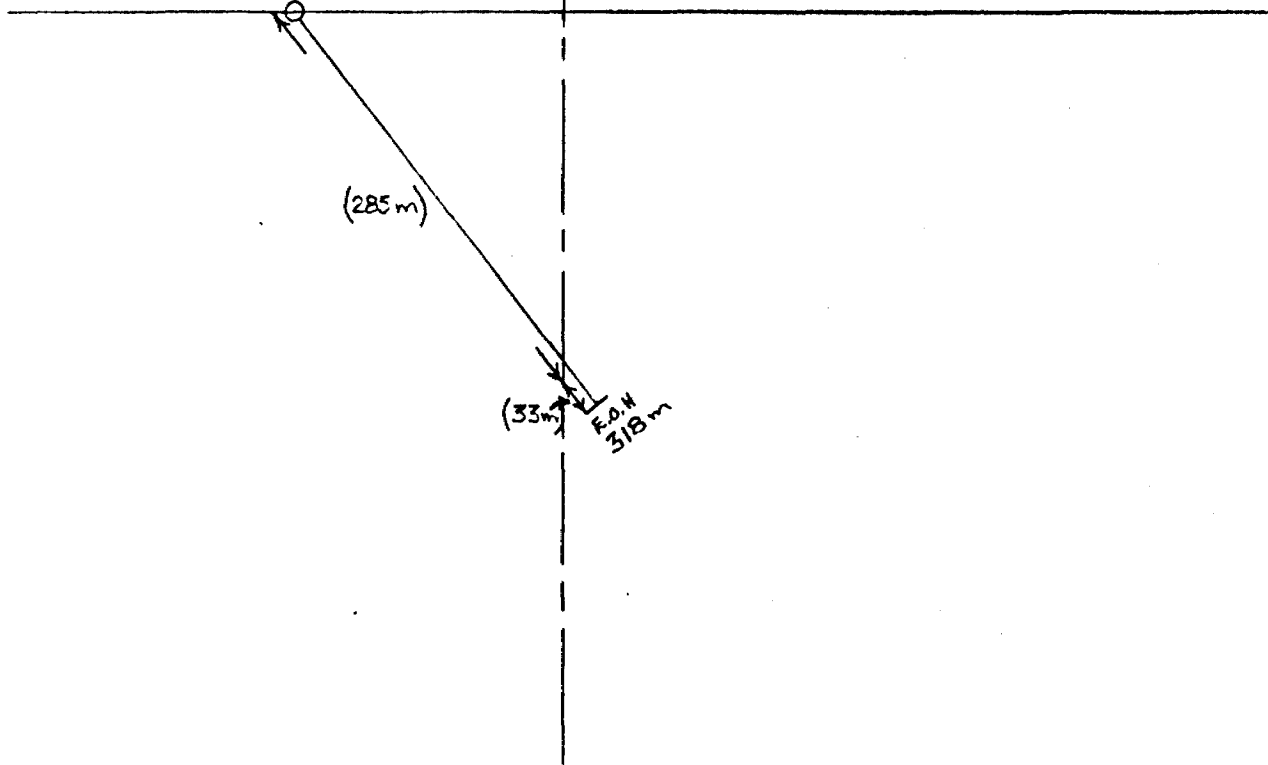
SWELL BAY  
DRILL PLAN



K 873 627

K777333

ML-02



SWELL BAY  
DRILL SECTION



*For Batch*

HOLE NUMBER: ML-03

HINNOVA INC.  
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SWELL BAY  
PROJECT NUMBER: PN399  
CLAIM NUMBER: K873627 + K777333  
LOCATION: Bliss Lake

PLOTTING COORDS GRID: Swell Bay  
NORTH: 1421.00S  
EAST: 1319S.00E  
ELEV: 5.00

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

COLLAR DIP: -65° 0' 0"  
LENGTH OF THE HOLE: 528.00m  
START DEPTH: 0.00m  
FINAL DEPTH: 528.00m

*K873627 250M  
K777333 278M*

COLLAR AZIMUTH GRID: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 340° 0' 0"

DATE STARTED: January 24, 1987  
DATE COMPLETED: February 10, 1987  
DATE LOGGED: February 10, 1987

COLLAR SURVEY: ND  
MULTISHOT SURVEY: ND  
ROD LOG: ND

PULSE EM SURVEY: YES  
PLUGGED: YES  
HOLE SIZE: BD

CONTRACTOR: St. Lambert  
CASING: 3.70 M left intact  
CORE STORAGE: Robinson's Landing

PURPOSE: To test Bliss Lake South Zone at 300m vertical.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
9.00	-	-65° 0'	ACID	OK							
50.00	-	-64° 0'	ACID	OK							
100.00	-	-62° 0'	ACID	OK							
150.00	-	-60° 0'	ACID	OK							
200.00	-	-58° 0'	ACID	OK							
250.00	-	-57° 0'	ACID	OK							
300.00	-	-56° 0'	ACID	OK							
350.00	-	-55° 0'	ACID	OK							
400.00	-	-54° 0'	ACID	OK							
450.00	-	-53° 0'	ACID	OK							
500.00	-	-51° 0'	ACID	OK							
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*For 6/1/87*

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MINNOVA INC.  
DRILL HOLE RECORD

DATE: 2-July-1987

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALISATION	REMARKS
0.30 TO 3.00	OVERBURDEN «CASING»	Gravel and boulders.				
3.00 TO 88.80	FRESH TO INTENSELY ALTERED MA VOLCANIC «MA»	Fgr green, massive to foliated, locally blotchy. 13.0-14.0 Subtle grey lca to 5cm subrounded spots. 24.7-24.9 Qtz-kepar? Fe stained vein @ ..... 55 pinkish to slightly rusty containing 10% tora needles, occasionally in rosetts. 39.0-43.9 & 49.0-51.0 & 56.8-58.5 Above intervals all look very similar lca or less chalky white spots in pervasively altered matrix foliated @ ..... 45 67.3-68.4 20% chalky white spots. 67.9-68.1 White qtz vein 15% MA inclusions. Contacts sharp but irregular. 69.0-70.6 «FLOW BX» Flow breccia - angular MAFIC frags from 1/2 ca to 2ca in a lighter matrix. 70% frags, 30% matrix. 70.6-72.0 Massive fgr & hard. 72.0-73.0 «FLOW BX» Identical to bx unit 69.0-70.6. 75.2 lca wide carbonate plus Py vein @ ..... 70 - brown but not rusty looking, could be FeCO <sub>3</sub> . 76.4-77.2 Speckled texture 20-25% lca white spots in fgr		Weak to moderate chlorite, locally very strong.  «39.0-58.5» «LDC STG CHL» Very strong chlorite.  «67.3-68.4» «STG CHL» Very strong chlorite.  Minor Ep blotching, weak chlorite.  Weak chlorite.  Very strong chlorite.	Trace diss to bleby Py & Po.	Incipient to blotchy alteration, not nearly as intense as same unit in ML-2.  Don't look like frags - possibly mild silicification feature.  Unit contains a few lca wide brown fgr sphalerite stringers just uphole of the white qtz. vein overall 1% sphalerite.  Could be an alteration or silicification feature.

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CAI	ALTERATION	MINERALISATION	REMARKS
		matrix, foliated @ .....	60			
		B6.9-B7.3 Appear to have 1/2 cm wide pillow selvages @.... weakly banded.	50 + 90			
88.80 TO 90.40	OP DYKE «OP DY»	Sharp contact at 88.8 @ .....	60			
		Massive fgr to mgr grey dyke containing 2 to 3% 3mm semi reabsorbed subrounded Qtz xls. Pyritic qtz vein with minor cpy marks contact at 90.4 @ ..	90			
90.40 TO 183.90	SILICIFIED MAFIC VOLCANIC «SIL MA»	Fgr massive dark greeny-grey and hard. 2% lam to 4cm barren white qtz veins. 101.1-103.5 «HYALD BX» Hyaloclastite. Angular to elongate frags define a foliation @..	60	Weak chlorite.	Local splashes and narrow lam Cpy stringers. Overall trace Cpy. Trace diss Py + Po.	Is this silicified MA volcanic?  Good example of hyaloclastic breccia.
		112.1-112.7 10% rounded to subrounded 2mm to 3mm amydules.			At 106.5 1-2cm wide Po stringer at 80 degrees to CA. Small splashes of Cpy associated with qtz veining (overall trace Cpy).	First amygs so far observed.
		125.4-127.2 Network of lam to 2cm qtz veinlets.			121.1-121.2 Minor splashy Cpy plus beebly Po with qtz veining -1% Cpy over 10cm. Trace Py smeared on fracture surfaces. Tr Cpy & Po associated with qtz veinlets.	Is this MA volcanic over HARD! breaks with a semi-conchoidal fracture.
		149.4-149.9 BE'd Dyke Contact at 149.4 @ .....	45	Moderate chlorite.		
		Massive mgr greeny-grey i to 2% 3mm blue QES in a mgr chloritic matrix. Sharp contact at 149.9 @ .....	45			
		149.9-183.9 Massive vfgr, very hard and green, silicified mafic.		«149.9-183.9» «V STRG SIL» Intense silicification.		Breaks like a Rhyolite, could be but think its mafic.
		150.4-150.6 Pseudo breccia - subrounded to angular MAFIC frag remnants in a very hard Ep-silica matrix.				

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
		At 160.8 3 to 4cm wide silicified Ep vein, brecciated contacts @ .....	65			
		At 167.5 Accicular light green needles on fracture surface Epidote?				
		At 169.0 5cm wide carbonate & qtz vein @ .....	30		Trace to 12 bleby Cpy.	
					At 178.8 1 to 2cm wide bleby Py, Po & Cpy stringer. 10% Cpy, 10% Py, & 80% Po.	Is this little sulphide bleb, the 12 channel EM37 conductor?
183.90 TO 205.00	PERVASIVELY ALTERED MAFIC «ALT MA»	Fgr green to grey and intensely foliated @ ..... 183.9-184.2 Flow breccia, 20% subrounded 2mm to 2cm dark green fgr mafic frags set in a lighter green chloritic matrix. 193.5-194.1 Blocky sheared up core @ ..... - (chlorite schist). 195.0-195.3 Blocky sheared core with 3cm wide - qtz vein. 200.0-205.0 Intensely altered, chlorite schist foliated @ .. 1 to 3mm white xls (soft) relict feldspar.	30 to 45	«183.9-205.0» «STG CHL + MOD SER» Very strong chlorite plus mod. to strong sericite.		
			40	Very strong chlorite.		Looks drill induced.
				Totally altered to chlorite & sericite		Looks drill induced.
205.00 TO 213.50	FAULT ZONE «FLT»	Mgr to fgr grey intensely foliated @ ..... - fault rock. 30% brecciated to bondinaged qtz veins (injections) are very erratically shaped and oriented with a tendency to parallel foliation. - host rock contains 25% relict 1 to 3mm white felds) xls-fgr grey groundmass. Very blocky sections at 206.2-206.3 & 211.5-213.5	30 to 40	«205.0-213.5» «V STRG CHL» Very strong chlorite.		Brecciation of Qtz veins plus general blocky sheared up condition of core defines a 8.5m wide fault zone.

HOLE NUMBER: ML-03

DRILL HOLE RECORD

LOGGED BY: B NELSON

PAGE: 4

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO DAI	ALTERATION	MINERALISATION	REMARKS
213.50 TO 220.70	PERVASIVELY ALTERED MAFIC «ALT MA»	Fgr to agr green rock with well defined foliation ① ..... 1-5% rounded to subangular amygdules - local dusting near (213.5) stratigraphic bottom of unit with tan white specks - minor Qtz veining parallel to foliation.  220.3-220.5 - hint of mini spherulitic texture - 1-2mm rice crispy spherulites aligned parallel to foliation ① .....	45 to 50	213.5-220.7 «STRG CHL» Strong to very strong chlorite.		Overall looks MAFIC.
220.70 TO 221.60	QP DYKE «QP DY»	Massive agr QP containing 3 to 5% 2 to 3mm round, blue QES in a fgr chloritic matrix. Sharp upper and lower contacts ① .....	30			
220.70 TO 221.60		220.7-220.73 Narrow agr dyket at 220.7 contact, upper and lower contacts ① .....	30	Moderate chlorite.		
221.60 TO 222.50	BLACK CHLORITE SCHIST «CHL SCH»	Sharp contact at 221.6 ① ..... Vfgr massive black chlorite, blocky to well foliated ① .....	30	Very strong chlorite.		May be totally altered MAFIC dyke.
222.50 TO 253.70	PERVASIVELY ALTERED QP (QE'D RHYOLITE) «ALT QP»	Sharp contact at 222.5 ① ..... agr to fgr massive unit containing 10 to 25% 2-4mm blue round QES. - get a fining of rock and decrease in chl alteration moving stratigraphically up through unit (down hole).  252.0-253.7 Local pseudo-spherulitic texture, small 2-3mm elongate felsic spherulitic (frags) in fgr chloritic matrix.	35	222.5-253.7 «STRG CHL» Strong chlorite.		Doesn't look like Dyke.
253.70 TO 267.00	PERVASIVELY ALTERED MAFIC «ALT MA»	Fgr green, amygdaloidal and well foliated ① .... 5-10% 5mm subrounded white to bluish qtz amygdules.  257.0-257.6 QP DYKE Sharp contact at 257.0 ① ..... 15% to 20% 2-5mm subrounded white qtz phenocrysts in fgr matrix. Sharp contact at 257.6 ① .....	45 to 60	253.7-267.0 «STRG CHL» Strong chlorite.  Weaker chlorite.	1% stringers of Py & Po parallel foliation.  5% diss Py.	Could just be alteration phenomena.

HOLE NUMBER: ML-03

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 2-July-1987

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
		258.2-260.8 10% irregular carbonate blotches.		Mod. carb + chl.	2-3% diss Py 264.7-264.75 Sulphide stgr-Py + 5% CPy.	
267.00 TO 268.50	FELSIC PORPHYRITIC DYKE «FELS DY»	Mgr massive grey dyke containing 10% irregular shaped 2-5mm mafic phenocrysts and 2-5% subrounded qtz phenocrysts. At 267.8 1-2cm wide bluish qtz vein with blotchy MA inclusions plus minor diss cubic Py.			1-2% diss Py.	
268.50 TO 298.20	MAFIC FLOW «MA»	Fgr green amygdaloidal flow weak to moderate foliation @ ..... 5% 1mm-5mm subrounded qtz anygs, locally up to 20%, minor carb veining. 276.0-283.6 Mgr mafic very hard, green and massive. 283.6-285.9 Fgr well foliated @ ..... alteration gives banded appearance on aa scale. 285.9-286.4 Bleached hard fgr to mgr banded and foliated @.. 2-3cm x 0.5 - 1cm MA clots lie in plane of foliation. Diffuse upper and lower contacts. 286.4-287.4 Lighter green intensely amygdaloidal, 50% 3mm to 1cm subrounded anygs. in fgr chloritic matrix. 287.4-298.2 Fgr, green and amygdaloidal, well foliated @ .... At 291.2 2cm wide DP dyklet. 291.3-291.4 DP dyklet - margins intensely chloritized.	45       50   45    45	Patchy chlorite.   Weak chlorite.  Moderate chlorite.   Moderate to strong chlorite.  «287.2-298.2» « 5% CHL » Strong chlorite.	270.0-273.0 1-2% diss 5mm Py cubes.  2-3% 1-2mm diss mgt? xls.  Trace to 1% diss and aa scale stringer Py & Po.   1% diss to bleby Py.	Unit appears to be coming harder and fresher up stratigraphy (down hole) to 284m.   Silicified Mafic.   Bleaching & silicification of Mafic flow.  Frothy phase of MA flow?

HOLE NUMBER: ML-03

DRILL HOLE RECORD

LOGGED BY: B NELSON

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MINNOVA INC.  
DRILL HOLE RECORD

DATE: 2-July-1987

HOLE NUMBER: ML-03

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
298.20 TO 302.40	DP DYKES (SWARM) «DP DY»	Sharp contact at 298.2 @ ..... Series of 4 massive grey qtz porphyritic dykes from 30cm to 1 meter alternate with chloritic MAFIC host. 2.5m of DP dyke, 1.3m MA host. Dilated Dykes contain 30-40% 2-8mm rounded white-grey quartz phenos in fgr grey hard matrix. Sharp contact at 307.4 @ ..... Sharp contacts throughout swarn.	55     30		Dykes contain 3 to 5% fgr diss Py.	
302.40 TO 372.10	PERVASIVELY ALTERED MAFIC «ALT MA»	Fgr green amygdaloidal moderately foliated @.... 1mm white speckled texture near 302.4m contact in first few meters, 20% 2mm - 1cm bluish qtz amygdules (frothy).  317.5-329.0 Massive and hard, 3-5% irregular qtz-carb veinlets and blotches predominantly oriented at approximately .....  333.6-335.0 Banded appearance alternation fresh mafic and massive chlorite defines a foliation @ .....  335.0-342.0 Pervasively altered, locally 10% 2-5mm subrounded carb amygs.  342.0-372.1 Fgr green weak to moderately foliated @ ..... locally amygdaloidal, overall quite homogeneous, locally looks mgr, may be a function of alteration 1-2% 2mm-2cm erratically oriented qtz-carb veinlets.  366.0-366.4 Blochy broken core.	45   45  45  30 to 60	«302.4-317.0» «STG CHLDRITE»  Moderate chlorite.  «336.-335.0» «STG CHL» Strong stringer-clotty chlorite.  «335.0-342.0» «STG CHL» Very strong chlorite.  Moderate to strong chlorite.	302.4-303.3 2-3% diss bleby to stringer Py.  «313.3-315.3» «1-2% Py» 1-2% bleby to stringer Py in chlorite schist.  At 330.4 2mm x 2cm bleb of Cpy.    Tr to 1% diss to bleby Py.  Trace diss to bleby Py. Trace stringer (mm scale) Po.  «360.0-363.3» «4% Py» 3-5% diss stringer Py.	Possibly interflow hyalocastites.
372.10 TO 465.10	SILICIFIED MAFIC «SIL MA»	Fgr to mgr grey-green volcanic, hard and massive. Trace to 1% subrounded 2mm-5mm bluish qtz amygs, look chalky white when dry but bluey-qtz when wet locally up to 10% amygs.		Weak incipient, locally moderate chlorite.	Trace diss Py.  At 400.1 1-2cm wide Po-Py stringer.  At 407.9 2mm-1cm Po stringer.  416.7-416.8	

HOLE NUMBER: ML-03

DRILL HOLE RECORD

LOGGED BY: B NELSON

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HOLE NUMBER: ML-03

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 2-July-1987

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CAI	ALTERATION	MINERALISATION	REMARKS
		432.2-434.5 & 444.9-445.2 & 446.4-446.6 Local 0.5 to 1m zones moderately foliated @ ....	50	432.6-434.5 ST6 CHL	3-5% 0.5-1cm Po blebs. 1% diss bleby Po.	
		440.5-442.5 Fgr dark grey hard rock cut by numerous (10-15%) m scale carbonate veinlets, overall this interval has a bx or pseudo-breccia appearance.		447.5-449.3 ST6 CHL Strong chlorite.	1% m scale Py & Po veinlets. 1-3% bleby to stringy Py plus Po with trace to 1% Cpy.	
		442.5-465.1 Hard fgr, silicified 3% m scale carbonate veinlets irregularly oriented.		450.0-451.2 ST6 CHL Very strong chlorite.  Very weak chlorite.	At 463.5 1-2cm wide network of Py & Po stringerlets.	
465.10 TO 468.00	PERVASIVELY ALTERED SED (TUFF)? «ALT SED»	Fgr green well foliated @ ..... to massive.  465.1-465.35 Well foliated.  465.35-466.1 Massive volcanic containing 2-3% subrounded qtz anys.  466.1-468.0 Well foliated @ .....	60	465.1-468.0 «VERY ST6 CHL»  Strong chlorite.  Strong chlorite.  Very strong chlorite.	Overall 1% fgr pyrite in bands. Oriented at 60-80 degrees RTCA.  3% diss & banded Py.  2-5cm and 1cm fgr to mgr diss Py bands Overall 1% Py.	Chloritized pyritic contact between MA volc. and S Rhyo.
468.00 TO 495.60	SPHERULITIC RHYOLITE «S RHYD»	No visible contact at 468.0, (broken core). Mgr to cgr green to grey rock, very heterogenous, hard to soft on a cm scale depending on weather its spherulitic, remnant felsic host or the chlorite matrix encasing both. Overall the unit is clastic xenorrhoidal- spherulitic rhyolite containing up to 50% 1cm-5cm ellipsoidal-globular spherulites both singly and in clusters together with 25% remnant dark grey perlitic subrounded to angular 2mm-1cm felsic host and 25% dark green fgr. interstitial chlorite.  417.2-471.7 Rice crispy texture 75% 2mm-1cm long spherulites		Locally moderately magnetic, patchy pervasive inter-spherulite chlorite.  Strong chlorite.	Trace to 1% diss, bleby to stringer Py + Po.	

HOLE NUMBER: ML-03

DRILL HOLE RECORD

LOGGED BY: D NELSON

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MINNOVA INC.  
DRILL HOLE RECORD

HOLE NUMBER: ML-03

DATE: 2-July-1987

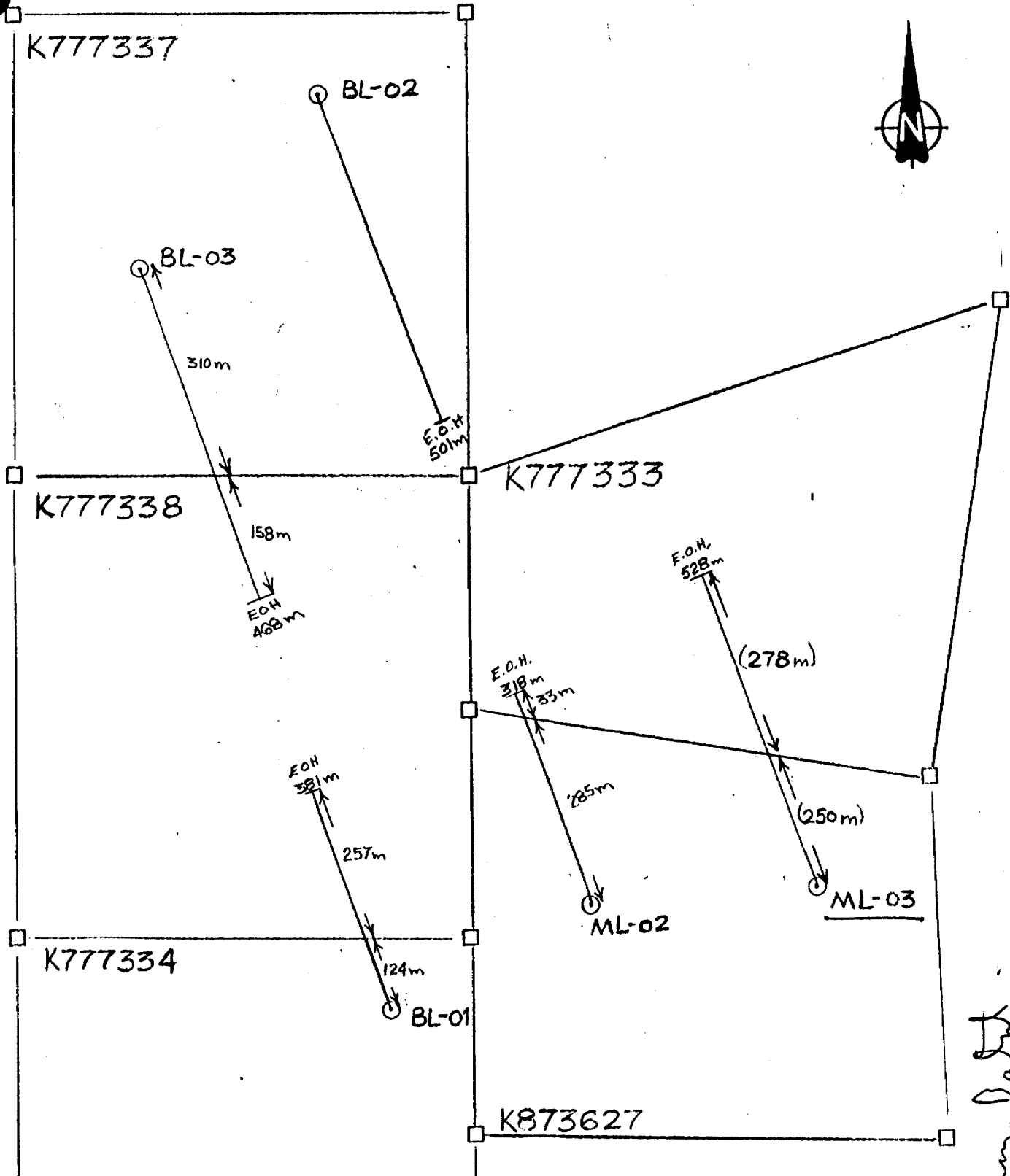
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
		L to W ratio of 4 to 1 define a foliation @ .... Spherulites surrounded by fgr chlorite.	50			
		487.3-493.0 Perlitic-breccia zone within S Rhyolite no visible spherulites, consists of 60% angular 2cm to 3cm felsic frags set in 40% fgr chlorite.		Strong chlorite displays a wispy habit as it surrounds frags.		
		493.0-493.5 Classic hemorrhoidal spherulitic rhyolite.				
		493.5-494.8 Alternating & interfingering of fgr grey felsic (same colour as spherulites) and green chlorite define a foliation @ .....	60			Likely huge spherulites.
		494.8-495.6 Hemorrhoidal spherulitic Rhyo bx - 30% 2cm-1cm spherulites with 40% angular felsic fragmental host and 30% chlorite.				
495.60 TO 504.90	BRECCIATED SPHERULITIC RHYOLITE «S RHYD BX»	Mgr to cgr grey to green, brecciated and locally foliated @ .....	45	495.6-504.9 «NETWORK CHL» Strong network chlorite.	Narrow on scale po stringers associated the more brecciated zones. Overall 1% Po.	Is this flow top breccia of S. Rhyo - may be a series of thin rubble flows.
		Heterogeneous unit with a great variability in the intensity and character of frags and chlorite matrix. Overall 80% grey subrounded to angular 1cm-2cm grey felsic frags with 20% wispy chlorite. Massive zones within bx are weakly amygdaloidal, 1% 1-3cm bluey qtz anags.				
		504.2-504.6 Well foliated, pseudo banded @ .....	50		At 504.9 1cm wide Po stringer oriented 30% to CA.	
504.90 TO 510.40	FELSIC VOLCANIC (SPHERULITIC) «S RHYD»	Fgr to mgr grey massive, hard, locally amygdaloidal rock, locally foliated @ .....	30	Moderate splotchy wispy chlorite.	1% 1cm-1cm Po stringers. AT 510.1 Trace sphalerite as 1cm stringer and a small 1cm blob.	Likely still in spherulitic rhyolite.
510.40 TO 516.10	FELSIC DYKE «FELS DY»	Sharp contact at 510.4 @ .....	80			
		Mgr massive dyke contains 20% semi reabsorbed 2-3cm mafic phenos, locally speckled with 5% small 1cm white xls. Dyke cut by 3-5% 1cm to 1cm carb veinlets.				

HOLE NUMBER: NL-03

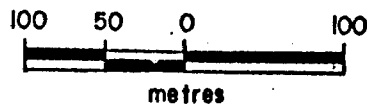
MINNOVA INC.  
DRILL HOLE RECORD

DATE: 2-July-1987

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
516.10 TO 528.00	SILICIFIED MAFIC *SIL MA E.D.H.	Fgr massive grey, hard and amygdaloidal. Unit cut by 1-21 mm scale qtz-carb veinlets.  521.3-521.5 Hyal or pseudo-hyal, 50% dark grey mm to cm wispy shards in a fgr lighter grey matrix.  524.0-524.6 15% 2mm to 1cm subrounded white qtz anags.  At 524.6 3cm x 5cm qtz blotch.		Weak incipient chlorite.	Overall trace to 1% bleby to stringer Po.          At 525.8 2mm wide Po stringers oriented parallel to CA 1% bleby Po in last 0.3m of hole.	Unit looks felsic but get feeling its silicified MAFIC.



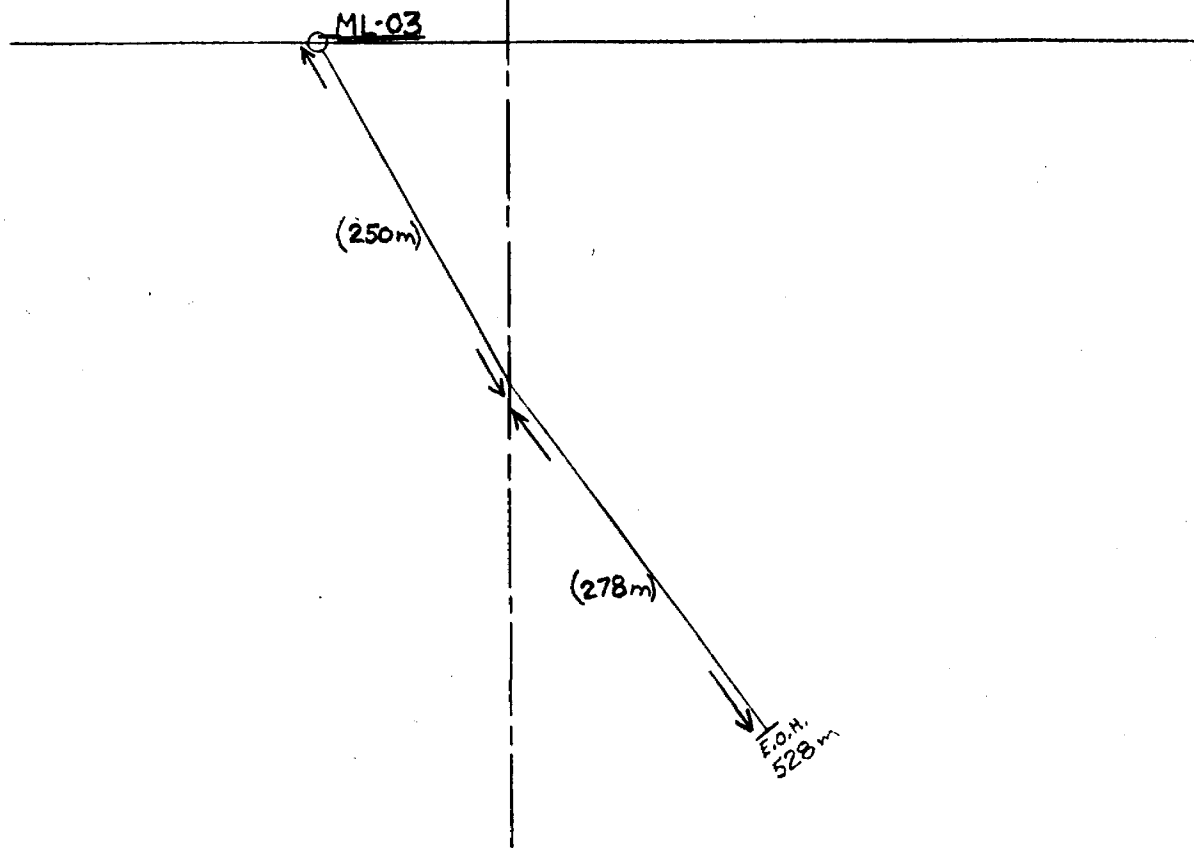
**SWELL BAY  
DRILL PLAN**



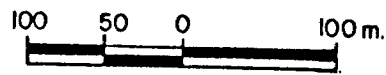
*From Datasheet*

K873627

K777333



SWELL BAY  
DRILL SECTION



*Jim Bate*

HOLE NUMBER: SR-01

MINNOVA INC.  
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SWELL BAY  
PROJECT NUMBER: PW358  
CLAIM NUMBER: K-812844 K-812846  
LOCATION: WEST OF GRAVEL PIT

PLOTTING COORDS GRID: NINE CENTRE N.  
NORTH: 1000.00N  
EAST: 18150.00E  
ELEV: 181.50

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

COLLAR DIP: 52° 0' 0"  
LENGTH OF THE HOLE: 210.00m  
START DEPTH: 0.00m  
FINAL DEPTH: 210.00m

*K812844 13 M*  
*K812846 197M*

COLLAR AZIMUTH GRID: . . .

COLLAR ASTRONOMIC AZIMUTH: 147° 0' 0"

DATE STARTED: June 10, 1987  
DATE COMPLETED: June 15, 1987  
DATE LOGGED: June 16, 1987

COLLAR SURVEY: NO  
MULTISHOT SURVEY: NO  
ROD LOG: NO

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

CONTRACTOR: ST. LAMBERT DRILLING  
CASING: 46 FEET  
CORE STORAGE: ROBINSON'S LANDING

PURPOSE: TO TEST B CHANNEL DEEPEM ANOMALY WITHIN LLDP AT A VERTICAL DEPTH OF 125 METERS.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
50.00	-	52° 0'	ACID	OK		-	-	-	-	-	
100.00	-	52° 0'	ACID	OK		-	-	-	-	-	
150.00	-	50° 0'	ACID	OK		-	-	-	-	-	
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*Zee Batul*

HOLE NUMBER: SR-01

DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

PAGE: 1

HOLE NUMBER: SR-01

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 15-September-1987

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
0.00 TO 13.20	DVERBURDEN «CASING»					
13.20 TO 13.50	GABBRO «GB»	Green massive mgr containing 10% Qtz-ep veining.			Trace diss Py.	
13.50 TO 165.70	QE'D RHYOLITE «QE'D RHYD»	<p>Grey massive and very hard containing 5 to 10% fine blue round QES.</p> <p>1 to 3% 2mm to 2cm subrounded to elongated carbonate anhydrides.</p> <p>13.5-21.0 5% 2mm to 2cm subrounded to elongated chloritic spots - spots appear to be altered relict anhydrides.</p> <p>2 to 3% 2mm to 2cm white subrounded to elongated carb anhydrides with chlorite rim.</p> <p>63.7-63.9 10% fine to 2cm subrounded Qtz-carb anhydrides.</p> <p>91.0-165.7 10 to 20% black biotite as irregular elongate to wispy clots up to 1cm along with fine interstitial biotite. Biotite not pervasive throughout zone but comes and goes.</p> <p>127.0-130.0 Mgr greeny grey with a pseudo-fragmental appearance defined by subrounded to 3mm to 2cm bluish sliceous spots (50% spots) set in fine moderately chloritic (biotitic) matrix. This texture subtle reappears off and on to end of QE'd Rhyolite.</p> <p>153.1-154.7 Pseudo-fragmental - blue - Qtz blotchy texture same as 127.0 to 130.0 but even more pronounced.</p>	<p>91.0-165.7 «MOD BIO» Moderate Biotite.</p> <p>Moderate biotite.</p> <p>Moderate biotite.</p>	<p>Trace fine Py as fine to 5mm stringers, locally disseminated 1 to 5mm blebs. Locally up to 5% diss Py in 10 to 2cm zones.</p> <p>1% bleby Py + Po.</p> <p>1 to 2% fine diss. to bleby Py.</p> <p>Trace Py + Po.</p>	<p>FRESH QE'd Rhyolite.</p> <p>Very Conductive.</p>	
					<p>164.3-164.3 1cm wide Po stringer at 30 degrees to CA.</p>	

HOLE NUMBER: SR-01

DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

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HOLE NUMBER: SR-01

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 15-September-1987

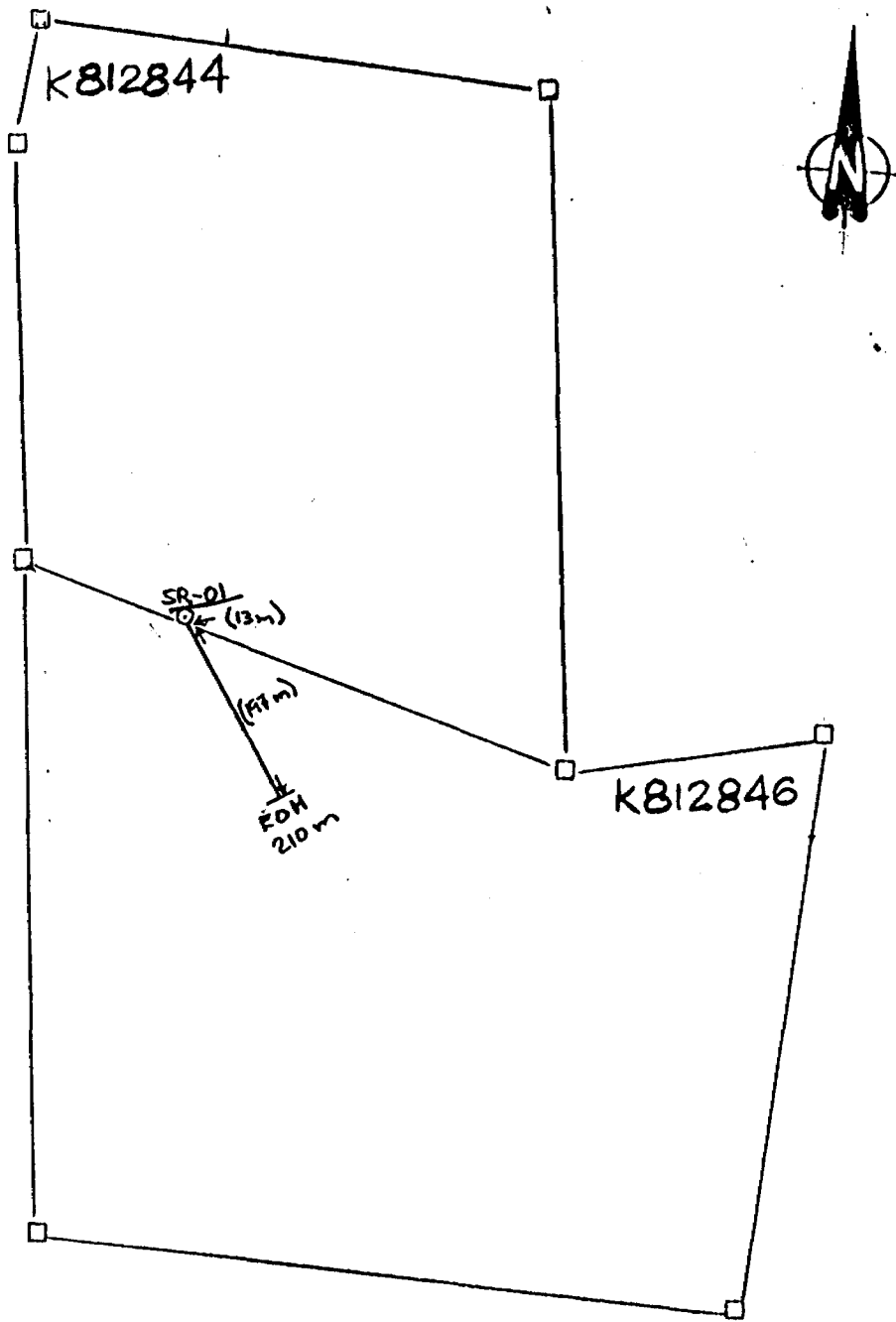
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
165.70	DE'D GABBRO				«1-3% PO, 1% PY TR CP»	
TO	«DE'D GB»	Medium green, mgr to cgr (generally cgr) and massive containing 10 to 15% 2mm rounded blue QES, generally quite hard, locally amphibole Xls up to 2cm long, good s + p texture, weak to strongly magnetic.		Local Qtz-Ep alteration.	Overall	
210.00	E.O.H.			At 180.5	1 to 3% bleby to stringer Po	
		Sharp contact at 165.7 marked by sheared chlorite and mineralized Qtz vein, contact @ .....	45	3cm long needlelike Xls (amph) - (form?) associated with 10cm wide Epidote zone.	1% diss to bleby to stringer Py.	
					> trace Cpy	
					trace Mo	
						165.7-165.75 «SHEAR ZONE»
		Overall 5% mineralized Qtz veining.			All Qtz vein mineralized with 5 to 30% Po plus lesser amounts of Py.	
		Qtz veins range from < 1cm			Most veins also carry trace to 3% Cpy.	
		> 25cm wide			Approximately half the veins contain trace to 1% Mo.	
		Qtz veins oriental @ .....	70			
			30			
		177.0-195.35 «10-12% QTZ VEINING»				
		Highest intensity of Qtz veining 10 to 12% Qtz veining over 18.3 meters.				
		195.5-210.0				
		Massive mgr hard (silicified) DE'd gabbro containing only about 2 to 3% Qtz veining.				
		(Qtz veining and mineralization diminishing down hole thru unit).				
		End of Hole.				

HOLE NUMBER: SR-01

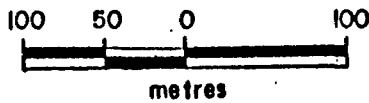
DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

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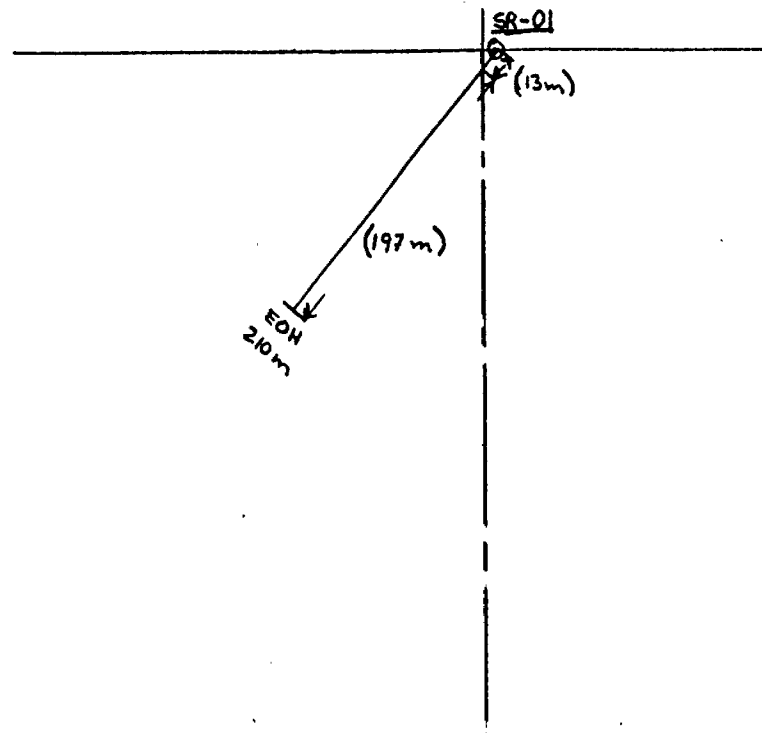
SWELL BAY  
DRILL PLAN



*7m 10m*

K 812 846

K 812 844



SWELL BAY  
DRILL SECTION



*Zee Batuk.*

HOLE NUMBER: HS-01

MINNOVA INC.  
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: SWELL BAY  
PROJECT NUMBER: PN355  
CLAIM NUMBER: ~~781118~~ K629137  
LOCATION: MORTY SHOWING

PLOTTING COORDS GRID: MINE CENTRE  
NORTH: 210.00S  
EAST: 15970.00E  
ELEV: -5.00

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

COLLAR DIP: 55° 0' 0"  
LENGTH OF THE HOLE: 48.00m  
START DEPTH: 0.00m  
FINAL DEPTH: 48.00m

COLLAR AZIMUTH GRID: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 147° 0' 0"

DATE STARTED: May 25, 1987 COLLAR SURVEY: ND  
DATE COMPLETED: May 26, 1987 MULTISHOT SURVEY: ND  
DATE LOGGED: May 28, 1987 RBD LOG: ND

PULSE EM SURVEY: ND  
PLUGGED: YES  
HOLE SIZE: BQ

CONTRACTOR: ST. LAMBERT DRILLING  
CASING: 3.5 meters left intact  
CORE STORAGE: ROBINSON'S LANDING

PURPOSE: To test easterly down plunge extension of Au bearing Morty Showing.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
0.00	-	55° 0'	ACID	DK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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*For Detail*

HOLE NUMBER: HS-01

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 1-July-1987

FROM TD	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TD CA:	ALTERATION	MINERALISATION	REMARKS
0.00 TO 3.60	OVERBURDEN *CASING*	Sand and silt.				
3.60 TO 29.50	SPHERULITIC RHYDLITE *S RHYD*	Grey, fgr to mgr massive to locally foliated @... Local well defined rice crispy spherulitic texture, up to 75%, 3 to 5mm ellipsoidal spherulites encased in a fgr chloritic matrix. Minor stringer qtz-hematite veinlets.  16.4-17.0 Massive mgr porphyritic mafic dyke, 30-40% 2 to 5cm subrounded chl-biot phenocrysts in a fgr felsic groundmass. Sharp contact at 16.4 @ ..... 45 Sharp but irregular contact at 17.0.  22.1-25.1 @ *QTZ GB DY* Qtz-Gabbro Dyke. Green mgr. massive gabbro cut by 10% erratically oriented 1 to 3cm carbonated stringers. Between 24.4 and 24.7 - 20% 5cm subrounded pink xlls (hematitic look to them). Sharp contact at 22.1 @ ..... 40 Contact at 25.1 marked by 10cm wide carb-chlorite shear - contact @ ..... 30	45	Weak to moderate chlorite.	Trace diss Py.	
29.50 TO 48.00	GABBRO *GB* E.O.H.	Green mgr massive to foliated to brecciated gabbro.  29.5-32.6 Moderately sheared gabbro (contact zone) mgr and cut by 10% stringer carbonate + chlorite.  41.8-42.8 Brecciated gabbro, very strong epidote, moderate hematite.  42.8-43.2 @ *CHL SHEAR* Qtz-chlorite shear zone within brecciated gabbro. Well foliated massive chlorite and bluey-qtz veins. Foliation @ ..... 45 Contacts gradational.  43.2-44.1 Gabbro breccia.		Moderate to strong chlorite.       Strong chlorite.	Trace diss to bleby Py.       1% diss Py.  1% diss Py.	            Is this little shear the Morty Zone?

HOLE NUMBER: HS-01

DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

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HOLE NUMBER: HS-01

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 1-July-1987

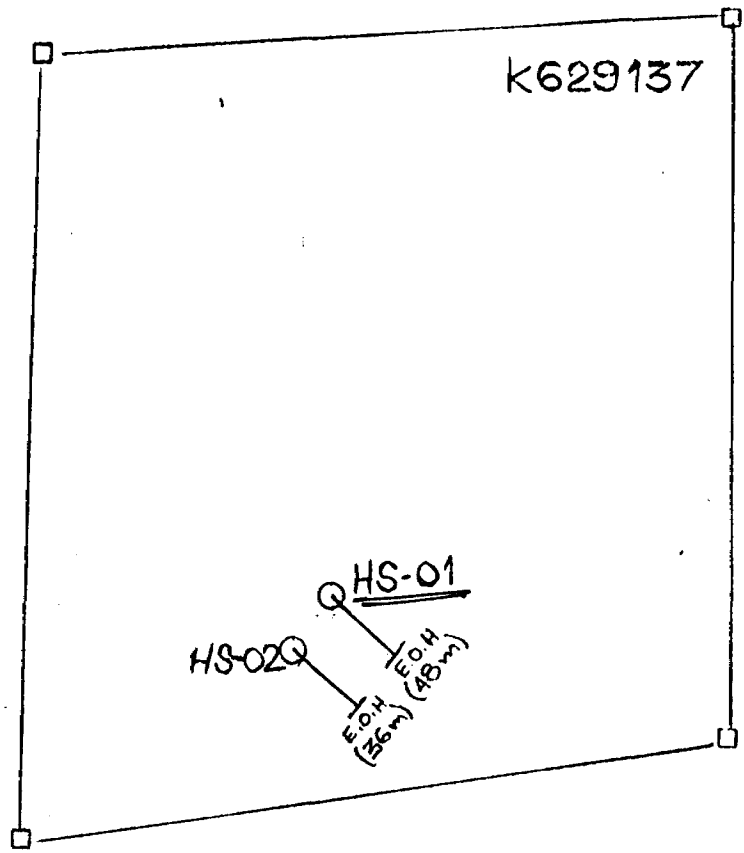
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALISATION	REMARKS
		44.1-45.0 Intensely sheared (foliated) gabbro plus bluey white qtz veining.		Strong chlorite.	< 1% diss Py.	
		45.0-48.0 Massive to foliated to brecciated gabbro, Ep & hea. 5% qtz-carb veining.			1% diss Py.	

HOLE NUMBER: HS-01

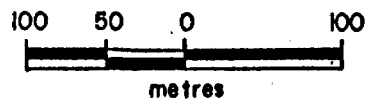
DRILL HOLE RECORD

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PAGE: 3



SWELL BAY  
DRILL PLAN



*For [unclear]*

HOLE NUMBER: HS-02

MINNOVA INC.  
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: SWELL BAY                                      PLOTTING COORDS GRID: MINE CENTRE                                      ALTERNATE COORDS GRID:                                      COLLAR DIP: -50° 0' 0"  
 PROJECT NUMBER: PN355                                      NORTH: 235.00S                                      NORTH: 0+ 0                                      LENGTH OF THE HOLE: 36.00m  
 CLAIM NUMBER: ~~75137~~ K 629137                                      EAST: 15920.00E                                      EAST: 0+ 0                                      START DEPTH: 0.00m  
 LOCATION: Morty Showing                                      ELEV: 10.00                                      ELEV: 0.00                                      FINAL DEPTH: 36.00m

COLLAR AZIMUTH GRID: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 92° 0' 0"

DATE STARTED: May 26, 1987                                      COLLAR SURVEY: NO                                      PULSE EM SURVEY: NO                                      CONTRACTOR: ST. LAMBERT DRILLING  
 DATE COMPLETED: May 27, 1987                                      MULTISHOT SURVEY: NO                                      PLUGGED: YES                                      CASING: 1.5meters left intact.  
 DATE LOGGED: May 28, 1987                                      RQD LOG: NO                                      HOLE SIZE: BQ                                      CORE STORAGE: ROBINSON'S LANDING

PURPOSE: To test down plunge extension of Au bearing zone beneath Morty Pit.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	-	-	-	-	-	-	-
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HOLE NUMBER: HS-02

DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

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MIMNOVA INC.  
DRILL HOLE RECORD

HOLE NUMBER: HS-02

DATE: 2-July-1987

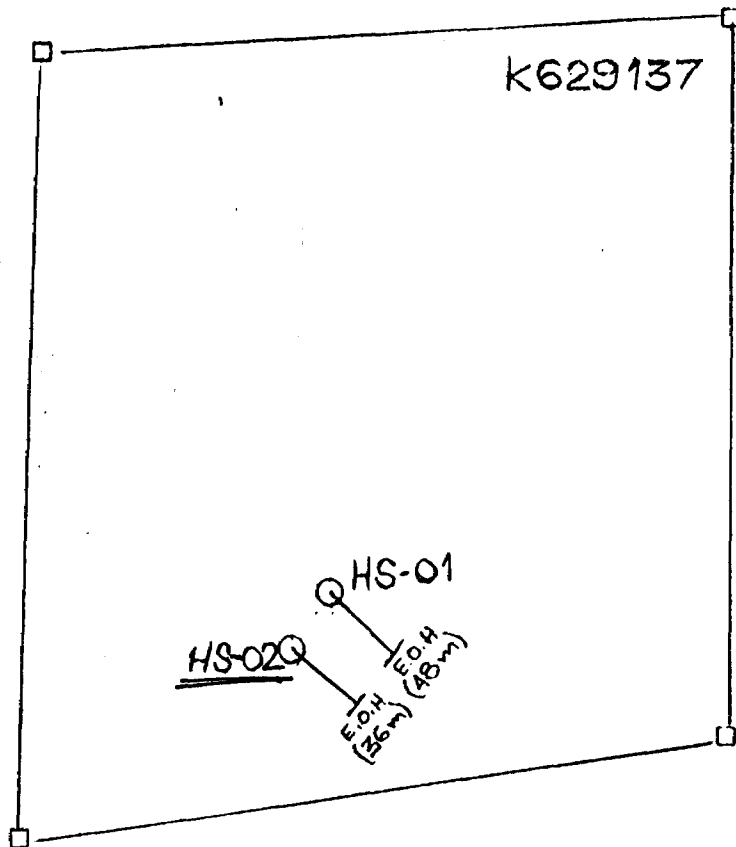
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	(ANGLE) TO CA	ALTERATION	MINERALISATION	REMARKS
0.00 TO 1.50	DVERBURDEN «CASING»	Sand.				
1.50 TO 22.90	SPHERULITIC RHYDLITE «S RHYD»	Grey hard fgr to mgr rice crispy spherulitic rhyolite, locally up to 75% 0.5mm avoid spherulite in a fgr chlorite rich matrix. Local strong hematite staining on fractures. Locally vuggy. Minor qtz veining.  2.3 to 3.7 Massive grey-green mgr. int dyke 5x 3 to 4mm rounded (hematitic) phenocrysts. Core very blocky.  7.0-7.7 Flow banded? - 1cm scale mafic bands alternate with 0.5cm scale felsic bands. Banding @ ..... 25  7.7 to 8.0 Blocky core.				
22.90 TO 29.40	GABBRO «GB»	Grey-green mgr. to fgr massive to locally foliated @ ..... Minor hematite staining. 5x mm scale erratically oriented carbonate veinlets. Local blue qtz patches - could be a qtz-gabbro.	45	Moderate chlorite.	Trace to 1% diss Py.	Possibly altered messed up Rhyo.
29.40 TO 32.80	CHLORITE TO SHEAR «CHL SHEAR»	Dark green fgr and intensely foliated @ ..... Massive sheared chlorite zone contains 5 to 10% bluey white qtz veins from 2mm to 1cm wide parallel to foliation. Dusty white carbonate is found associated with qtz veining. Upper and lower contacts gradational over 10cm.	50 to 60	«29.4-32.8» «CHL SCHIST» Very strong chlorite.	Trace Py.	
32.80 TO 36.00	GABBRO «GB» E.O.H.	Green mgr. massive to foliated @ ..... Strong Ep, weak Hematite. Local narrow 2cm wide chlorite shears @ .....  35.0-35.5 Chlorite - qtz - carb shear - quite similar to section 29.4-32.8. Shearing @ ..... 0	20 to 60	Moderate to locally strong chlorite.		

HOLE NUMBER: HS-02

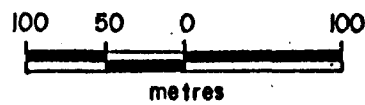
DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

PAGE: 2



SWELL BAY  
DRILL PLAN



*Handwritten signature or initials.*

HOLE NUMBER: HS-03

MINNOVA INC.  
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SWELL BAY  
PROJECT NUMBER: PN355  
CLAIM NUMBER: 777325  
LOCATION: 24-D ZONE

PLOTTING COORDS GRID: MINE CENTRE  
NORTH: 425.00N  
EAST: 17100.00E  
ELEV:

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

COLLAR DIP: -66° 0' 0"  
LENGTH OF THE HOLE: 348.00m  
START DEPTH: 0.00m  
FINAL DEPTH: 348.00m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 147° 0' 0"

DATE STARTED: May 27, 1987  
DATE COMPLETED: June 4, 1987  
DATE LOGGED: June 4, 1987

COLLAR SURVEY: NO  
MULTISHOT SURVEY: NO  
ROD LOG: NO

PULSE EM SURVEY: YES  
PLUGGED: YES  
HOLE SIZE: BQ

CONTRACTOR: ST. LAMBERT DRILLING  
CASING: 8.0 METERS  
CORE STORAGE: ROBINSON'S LANDING

PURPOSE: TEST 24-D N. ZONE AT A VERTICAL DEPTH OF 100m+24-DS. ZONE AT A VERTICAL DEPTH OF 250m.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
50.00	-	-64° 0'	ACID	DK		-	-	-	-	-	
100.00	-	-63° 0'	ACID	DK		-	-	-	-	-	
150.00	-	-63° 0'	ACID	DK		-	-	-	-	-	
198.00	-	-62° 0'	ACID	DK		-	-	-	-	-	
250.00	-	-62° 0'	ACID	DK		-	-	-	-	-	
300.00	-	-61° 0'	ACID	DK		-	-	-	-	-	
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*For Detail*

HOLE NUMBER: HS-03

DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

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MINNOVA INC.  
DRILL HOLE RECORD

DATE: 29-December-1987

HOLE NUMBER: HS-03

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
0.00 TO 9.00	OVERBURDEN «CASING»	Sand.				
9.00 TO 298.70	GABBRD-DE'D GABBRD «GB QTZ GB»	<p>Greeny-grey cgr to mgr massive to locally weakly foliated, good salt and pepper texture. Cut by 5% mm to cm scale Qtz and Ep stringers at numerous angles to CA. Locally 5% Qtz-carb stringers 3mm to 1cm wide.</p> <p>33.0-34.4 White barren Qtz vein containing 30% mafic (gabbroic) inclusions.</p> <p>Gabbroic texture becomes better defined as you move downhole thru unit, as becoming a Qtz or DE'd Gb.</p> <p>59.0-61.0 20% Qtz-Ep blotching, Ep haloes along margins of white Qtz veins.</p> <p>At 79.1 3cm wide Qtz - carb vein containing 5% marginal bleby Py.</p> <p>As you proceed downhole from approximately 115 meters get alternating 1 to 5 meter zone of mgr Ep rich gabbro and zones of mgr DE'd Gabbro.</p> <p>Generally gabbro becoming finer grained, but still visible feldspar, and somewhat harder.</p> <p>At 155.0 meters back into mgr massive DE'd Gabbro</p> <p>168.7-169.2 Zone of strong epidotization containing 20% cm scale irregular Ep patches and cm wide Qtz Ep vein subparallel to Ca.</p> <p>175.0-175.3 5 to 10% Qtz-carb veining and blotching.</p> <p>At 175.8</p>		<p>Overall weak chlorite but local 10 to 5% for strongly chloritic zones. Local strong chlorite on some fracture over faces.</p> <p>112.0-113.7 Moderate to strong incipient Ep.</p> <p>Strong chlorite on fracture surfaces.</p>	<p>Trace diss Py.</p> <p>104.0-104.5% 43% PY 3% diss and bleby to stringer Py.</p> <p>Locally up to 40% diss Py on narrow fracture surfaces.</p>	

HOLE NUMBER: HS-03

DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

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MINNOVA INC.  
DRILL HOLE RECORD

DATE: 29-December-1987

HOLE NUMBER: HS-03

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
		3cm wide qtz-Py vein cuts epidotized mgr Gb @ ...	30		30 to 40% fgr to cubic Py.	
		176.0-180.5 Zone of qtz-sulphide rich veins cutting fgr to mgr. Qe'd gabbro. Veining on 1cm to 20cm scale.			176.0-180.5: «3% PO + PY» Overall 2 to 3% Po + Py as stringers, blebs and disseminations, predominately associated with QTZ veins.	
		176.5-177.5 30% qtz plus qtz carbonate veining @ ..... 5 to 10% Fe sulphide associated with margins of qtz veins.	30		5% stringer Po, with stringers up to 1cm wide. 2 to 3% stringer to bleby Py.	Most mineralized section - good conductor (Po). Is this the spily 8 channel crone anomaly.
		180.3-180.4 1cm and 3cm wide qtz veins @ ..... Bleby Py associated with margins.	45			
		At 210.1 1cm wide massive Po stringer @ .....	50			
		At 210.3 2cm wide qtz plus 10% bleby Po cuts mgr Gb @ ....	80			
		220.9-226.4: «SHEAR ZONE» SHEAR ZONE - shearing (foliation) subparallel to CA. - locally well mineralized with Po + Py in association with brecciated qtz-carbonate veining. - host rock is altered to dark green chlorite aligned parallel to shearing. Gradational over 10 to 20cm upper and lower contacts.		Strong chlorite.	220.9-226.4: «3% Po + 2% Py» Overall 3% Po plus 2% Py as cm to m scale stringer oriented subparallel to CA.	
		226.4-E.D.H. Mgr to cgr massive green - grey qtz to Qe'd gabbro, predominately quite hard and qtz rich.			221.4-222.6 3% Po + 4% Py.	
		228.0-229.1 Mini - chlorite shear with bluey grey qtz veining as you approach 229.1			223.8-224.2 8% Po + 4% Py.	
		280.1-280.3 Strong epidote with one 2cm wide Ep - qtz vein @ .....	45			
		280.6-280.7 Fgr hard grey felsic dykelet. Upper and lower contacts @ .....	35			
						1 to 2% 0.5cm wide stringer Po.

HOLE NUMBER: HS-03

DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

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MINNDYA INC.  
DRILL HOLE RECORD

DATE: 29-December-1987

HOLE NUMBER: HS-03

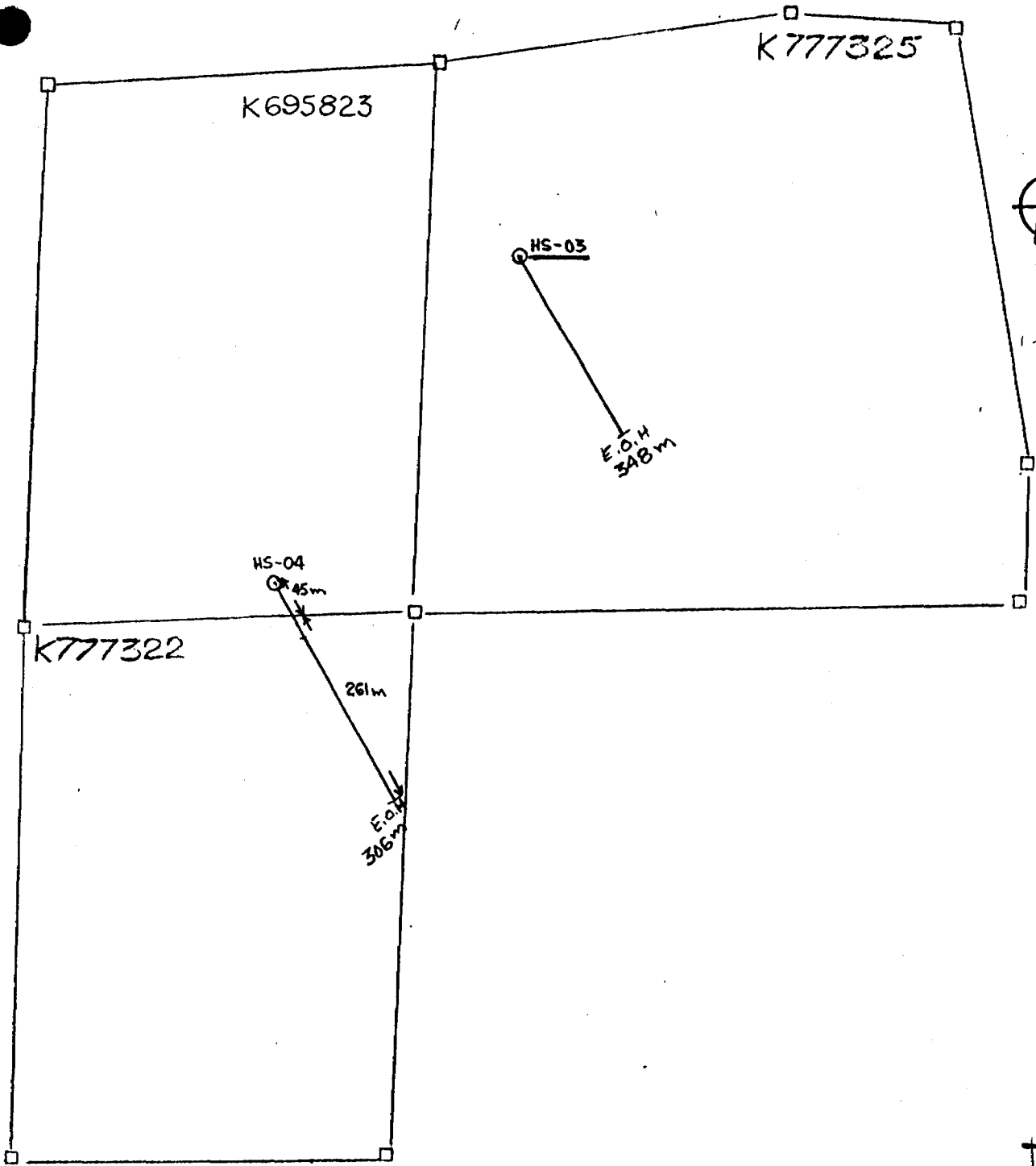
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: ITO CAI	ALTERATION	MINERALISATION	REMARKS
		291.0-291.4 Hard grey white felsic dyke. Sharp contacts @ .....	50			Could be silicification but very well defined contacts.
		294.4-294.8 Same as 291.0-291.4				
298.70 TO 310.50	QUARTZ - CHLORITE SHEAR ZONE «QTZ-CHL SHEAR»	Intensely sheared white-grey broken, boundinaged, ripped up. Qtz-carb veining encaised in massive green chlorite. Overall 50% qtz-carb veining and 50% chlorite. Qtz-carb lean zone from 298.8 to 298.9. Hematite staining.  302.7-305.0 Minor qtz veining in strong to massive chlorite.  At 306.6 Hematite staining.		Very strong chlorite.	Trace diss Py associated with chlorite	Is this an easterly equivalent to Morfy Showing.
310.50 TO 348.00	GABBRO «GB» E.O.H.	Green to light green mgr to cgr to fgr, generally massive to locally foliated @ .....	45		Overall 1% diss bleby to stringer Py.	
		Local sections from 0.5 to 3 meters of mgr to cgr leuco - Gb on QE'd Anorthosite.  30.2-330.7 Silicified QE'd Gabbro, mgr and very hard.  331.1-332.0 Massive chlorite and grey - white qtz veining.			5% diss bleby Py.  5% bleby to stringer Py.	
		332.0-332.4 Massive chlorite.  335.0-346.5 Fgr grey-green very hard and QE'd. fgr gabbro?, local iron gnts, minor qtz veining.			2% diss to bleby to stringer Py.	May not be QE'd Gb but xenolith of QE'd Rhyo in Gabbro!

HOLE NUMBER: HS-03

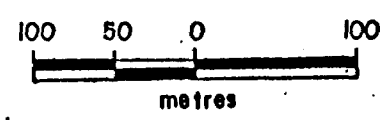
DRILL HOLE RECORD

LOGGED BY: BRIAN NELSON

PAGE: 4



SWELL BAY  
DRILL PLAN



*For Bait*

HOLE NUMBER: HS-04

MINNOVA INC.  
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: SWELL BAY  
PROJECT NUMBER: PW355  
CLAIM NUMBER: 695823 < 777322  
LOCATION: 24-D ZONE

PLOTTING COORDS GRID: MINE CENTRE M.  
NORTH: 250.00N  
EAST: 16800.00E  
ELEV:

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

COLLAR DIP: -53° 0' 0"  
LENGTH OF THE HOLE: 306.00m  
START DEPTH: 0.00m  
FINAL DEPTH: 306.00m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 147° 0' 0"

DATE STARTED: June 4, 1987 COLLAR SURVEY: NO  
DATE COMPLETED: June 10, 1987 MULTISHOT SURVEY: NO  
DATE LOGGED: June 10, 1987 RRD LOG: NO

PULSE EM SURVEY: YES  
PLUGGED: YES  
HOLE SIZE: BR

CONTRACTOR: ST. LAMBERT DRILLING  
CASING: 23.5m  
CORE STORAGE: ROBINSON'S LANDING

PURPOSE: TD TEST 24-D SOUTH ZONE (20 CHANNEL EM-37 CONDUCTOR) AT A VERTICAL DEPTH OF 200 METERS.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
50.00	-	-52° 0'	ACID	OK		-	-	-	-	-	
100.00	-	-51° 0'	ACID	OK		-	-	-	-	-	
150.00	-	-49° 0'	ACID	OK		-	-	-	-	-	
200.00	-	-47° 0'	ACID	OK		-	-	-	-	-	
250.00	-	-45° 0'	ACID	OK		-	-	-	-	-	
300.00	-	-43° 0'	ACID	OK		-	-	-	-	-	
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*F. J. B. B.*



MINNOVA INC.  
DRILL HOLE RECORD

DATE: 29-December-1987

HOLE NUMBER: HS-04

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CAI	ALTERATION	MINERALISATION	REMARKS
0.00 TO 23.40	DVERBURDEN «CASING»	Sand and gravel.				
23.40 TO 60.20	GABBRO «GB»	Green-grey massive mgr., locally qtz gabbro. Minor Epidote stringers and qtz (ca scale). 5 to locally 20% 2 to 3mm irregular shaped grey-white Xls - alteration of feldspar?  46.4-47.2 Grey fgr very hard felsic dyke. Sharp contact at 46.4 @ ..... 40 Sharp contact at 47.2 @ ..... 50  Gabbro becomes fgr over last 0.5 meters before contact with QE'd Rhyolite. Sharp contact at 60.2 @ ..... 60		5 to 10% 1 to 2mm biotite phenocrysts.	55.3 3ca wide chlorite - Py stringer. 80% chlorite, 20% Py.	
60.20 TO 205.00	QE'D RHYOLITE SPHERULITIC «QE'D RHYO»	Grey-green vfgr., hard, and massive containing 10 to 15% 1mm round blue QES.  81.5-85.5 Massive fgr to mgr QE'd Rhyolite containing 10 to 15% 2mm to 1ca subrounded to irregular chlorite spots.  9B Start to develop a mini-rice-crispy spherulitic texture, by 103m well developed 3mm rice crispy spherulites in a chloritic matrix. - small deep blue QES have vanished, and are replaced by creamy - blue 2 to 3mm subrounded Qtz Xls (amygdules?).  112-182 QES reappears - 2 to 5% 1mm deep blue round QES within a well defined rice crispy to mini-cauliflower spherulitic texture, spherulites encased in moderately strong chloritic matrix. Frequently QES form the core of spherulites.		Weak chlorite.  60.4 10ca wide massive chlorite stringer.            112-182 «MOD CHL» Moderate inter-spherulitic chlorite.		Is this a transition between QE'd Rhyo and S. Rhyo. May have contact between 2 felsic flows at about 100m.    Looks like spherulitic phase of LLQP-characteristic tiny blue QES.
					129.8-130.0	

HOLE NUMBER: HS-04

DRILL HOLE RECORD

LOGGED BY: B. NELSON

PAGE: 2

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
		130.6-130.9 Chloritic zone (shear?) 10% 2 to 5mm qtz-ep? veining.		Strong chlorite.	10% bleby diss Py.	
		155.7-156.1 BP-QFP - mgr massive bluey-green dyke? containing 40% light-blue. 3mm subrounded to angular Qtz Xlls and 10 to 20% pinky-beige 3mm subrounded feldspar Xlls in a mgr dark green matrix. Sharp contact at 156.1 @ .....	70	Stong chlorite.	1-2% diss bleby Py.	
		157.5-160.0 @ «QP» QFP Dyke - flow? Massive bluey-green and quite hard containing 25% 2mm light blue subrounde to angular Qtz Xlls and 5% sub-angular feldspar phenocrysts. Quite sharp contact at 160.0 @ .....	60		165.0 5 to 10% bleby Py over Sca.	
		182.0-205 Fgr., dark green, quite hard, massive foliated @ No BES, locally narrow 5cm zones of Qtz phenos (similar to Qtz Xlls in BP-QFP dykes). Locally 10% qtz carb blotching and veining on a mm scale. Trace 2mm white round qtz amygdules. Sections on 1 to 3 meter scale look mafic.	70	182.0-205.0 @ «MOD CHL» Moderate to locally strong chlorite.	Trace mm scale stringer plus disseminated Py.	Likely altered DE'd rhyolite but may have thin MAFIC flows, get impression of contacts between 2 rock types but likely intensity of alteration (check geochem).
		184.2-185.3 @ «SHEAR ZONE» Carb-chl-qtz shear. 30% mm to cm scale carbonate-qtz veining within massive chlorite. Veining attitude variable from 60 degrees to sub-parallel to CA. Contact at 184.2 @ .....	60	Strong chlorite.	No visible mineralization.	
		1 meter above and 1 meter below zone altered to strong chlorite and foliated @ .....	60			
205.60 TO 233.40	ANDRTHOSITE «ANDRTH»	Grey to reddish to light green mgr to cgr and massive. Strong hematite alteration giving the orangy red appearance. Local moderated light green epidote patches. Sharp intrusive contact at 205.0 @ .....	50	Strong hematite, weak to moderate Epidote.	Trace bleby stringer Py.	

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 29-December-1987

HOLE NUMBER: HS-04

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALISATION	REMARKS
		207.0-214.5 Inclusion of fgr volcanic. Same as section 182.0-205.0m.				
		225.0-233.4 Intensity of Epidote increasing along with slight decrease in hematite. 5% 1 to 10cm wide white qtz veining @ .....	30 70		233.0 5cm wide qtz vein contains 30% Py as on massive stringer.	
233.40 TO	QE'D RHYOLITE	Grey fgr to mgr. massive, hard felsic with weak pseudo-spherulitic texture. Trace to 1% 1mm blue QES.			1% fgr diss Py.	
243.10 TO	QE'D RHYD	240.4-240.6 Beige-bleached zone. Upper and lower contacts gradational over 10cm.				
243.10 TO	ANDRTHOSITE	Grey to pinky mgr and massive to locally foliated @ .....	60			
246.10 TO	ANDRTH	Contains numerous 5 to 10cm wide inclusions grey rhyolite. Contact at 246.0 gradational over a few cms.				
246.10 TO	MAFIC FLDW	Dark green fgr and massive to locally foliated @ .....	65	Moderate to locally very strong.	Disregarding massive sulphide beds! Overall trace to 1% diss Py.	
306.00 TO	MAF E.D.H.	Generally hard (silicified) with soft foliated zones of strong chlorite. Overall 5% erratic 1 to 5mm scale carbonate veining except in intensely chloritic zones where carbonate veining increases to 15%.				
		246.9-247.4 Bedded Sulphides 70% sulphides and 30% chloritic host as m to cm beds and irregular shaped fragments. Sharp contact at 246.9 @ .....	90	0.5 to 1.0 metres massive chlorite below bed (247.4-248.0).	246.9-247.4 [MS] Massive sulphides. 35% fgr brassy Po. 35% fgr to mgr Py. Zoned - with a 10cm Po rich top, 30cm wide pyritic middle and a 10cm wide Po rich bottom. No visible sphalerite or Cpy.	
		Sharp contact at 247.4 @ .....	80		249.0 2cm wide massive Po + Py bed.	

HOLE NUMBER: HS-04

MINNOVA INC.  
DRILL HOLE RECORD

DATE: 29-December-1987

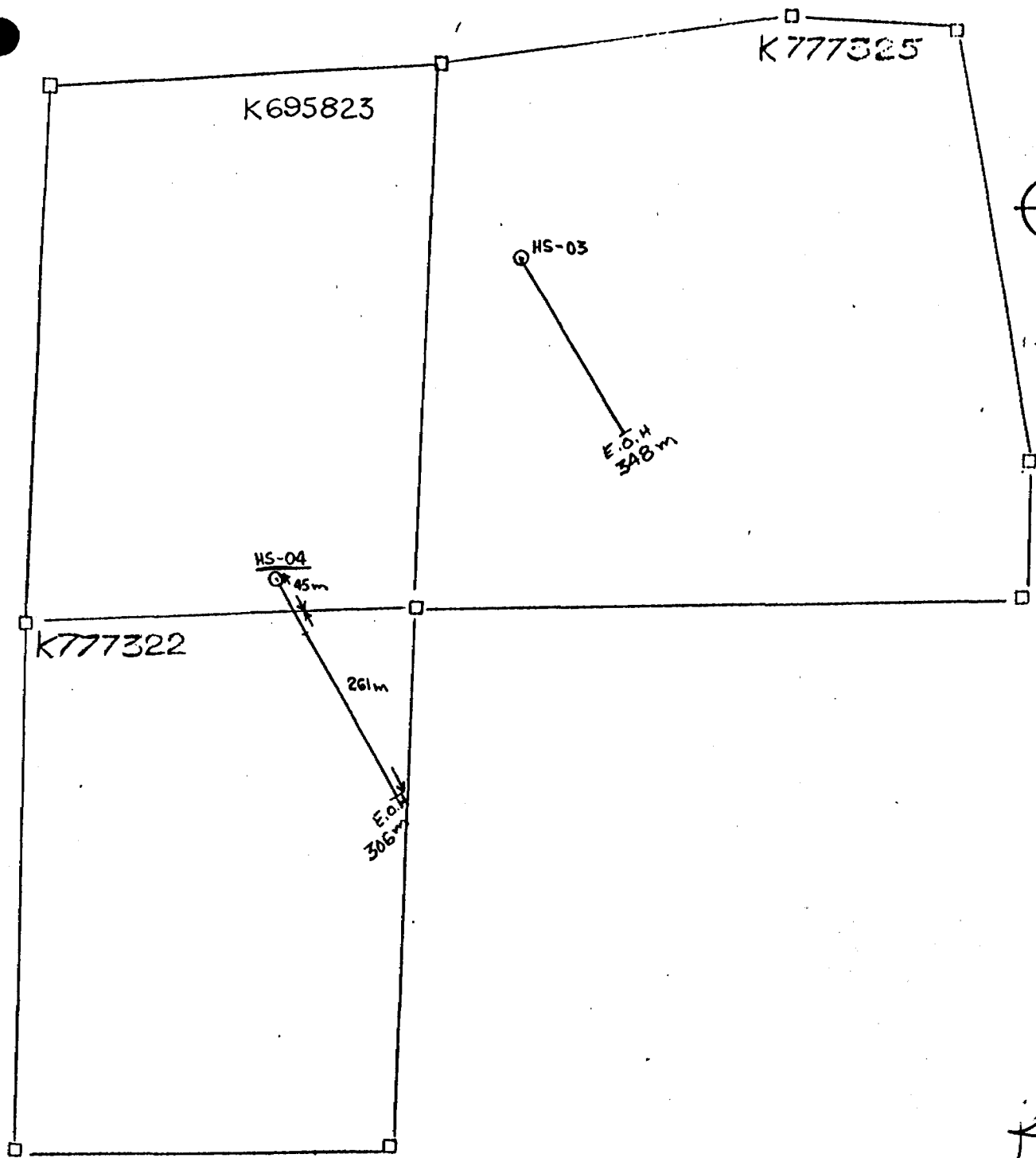
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CAI	ALTERATION	MINERALISATION	REMARKS
		250.0-250.15 Massive sulphide bed. 70% sulphide 30% light grey to dark chloritic host as frags and a 1cm wide bed.		1 meter of very strong chlorite below bed (250.15-251).	250.0-250.15 «MS» Massive sulphides 65% fgr Po. 5% fgr Py. No visible sphalerite or Cpy.	
		267.0-306.0 Dark green fgr mafic cut by 10% white-carb + qtz stringers 1 to 3mm wide erratically oriented. Predominantly quite hard (silicified) but locally soft and chloritic. Locally hint of hyaloclastite texture. Frequently carbonate veins offset by shearing (mini-faults).		Moderate to locally strong chlorite.	Overall trace diss Py.	
		290.3-290.7 Fgr light green dyke. Sharp upper and lower contacts @ .....	60	285.0-285.7 Very strong chlorite.		
		294.0 Anygdules start to appear, size and concentration of qtz anygs increases downhole to 15% 2 to 5mm qtz anygs by E.O.H.				
		296.2-303.3 3 distinct garnet rich zones from 10 to 20cm wide Zones contain up to 30% 1 to 3mm sub-hedral pink garnets, these zones have a subtle hyaloclastite look to them.		298.3-298.5 DALM? - possible co scale retrograded cordierite Xlls soft and sub to anhedral.		May represent interflow hyaloclastite plus sedient.

HOLE NUMBER: HS-04

DRILL HOLE RECORD

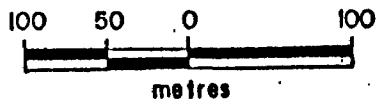
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PAGE: 5



*For data.*

SWELL BAY  
DRILL PLAN



K777322

K695823

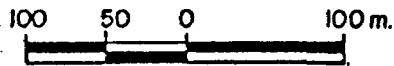
HS-04

(45m)

(261m)

EOH  
306m

SWELL BAY  
DRILL SECTION



*De Bate*



52C10NW1005 15 BLISS LAKE

900

Name and Postal Address of Recorded Holder  
**MINNOVA Inc.**

**SUITE 3970, P. O. BOX 91, COMMERCE COURT WEST, TORONTO, ONTARIO M5L 1C7**

Summary of Work Performance and Distribution of Credits

Work Days Cr. claimed	Mining Claim			Work Days Cr.	Mining Claim			Work Days Cr.	Mining Claim		
	Prefix	Number	Work Days Cr.		Prefix	Number	Work Days Cr.		Prefix	Number	Work Days Cr.
<del>19,511.0</del> <b>17,797.28</b>	K	629441	60	K	629449	60	K	670221	60		
		629442	60		629450	60		670222	60		
		629443	60					670223	60		
		629444	60		629476	60					
		629445	60		629477	60		670225	60		
		629446	60		629478	60		670226	60		
		629447	60		629479	60		670227	60		
		629448	60					670228	60		

All the work was performed on Mining Claim(s): K629137, 629172, ~~K~~ K670225, K 695823, 695828, K777322, ~~707325~~

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

\*K777333, 777334, 777337, 777338, K 812837, 812844, 812846, 812847, 812848, K 830403  
K 844958, K 846559, K 851617, 8511618, 8511619, K 862225, K 863634, K 873627

WORK PERFORMED BY: ST. LAMBERT DRILLING CO. LTD., P.O. BOX 473, VALLEYFIELD, QUEBEC J6S 4V7

DURING THE PERIOD: JANUARY 19th, 1987 to AUGUST 7th, 1987

DRILL HOLE NUMBERS, DATES AND FOOTAGE/METERS DRILLED ARE LISTED ON A SEPARATE PAGE:

TOTAL METERS/FEET DRILLED **17,797.28** Feet **5426** Meters x 3.28

~~TO BE USED FOR THIS SUBMISSION~~ **19,511.0** Feet

~~RETAINED FOR FUTURE SUBMISSION~~ **17.3** Feet

KENORA MINING DIV.  
RECEIVED  
JAN 15 1988

ONTARIO GEOLOGICAL SURVEY  
ASSESSMENT FILES  
RESEARCH OFFICE  
JAN 29 1988  
RECEIVED

Date of Report: **JANUARY 12, 1988**

Recorded Holder or Agent (Signature): *Frank Balint*

Certification Verifying **7,899.01** and **2,314.15**

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying  
**FRANK BALINT c/o MINNOVA Inc. 2606 VICTORIA AVENUE, EAST, THUNDER BAY, ONTARIO**

P7C 1E7

Date Certified: **JANUARY 12, 1988**

Certified by (Signature): *Frank Balint*

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific Information per type	Other Information (Common to 2 or more types)	Attachments
Manual Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Shaft Sinking, Drifting or other Lateral Work			
Compressed air, other power driven or mechanical equip.	Type of equipment	Names and addresses of owner or operator together with dates when drilling/stripping done.	Work Sketch (see page 2)
Power Stripping	Type of equipment and amount expended. Note: Proof of actual cost must be submitted within 30 days of recording.		
Diamond or other core	Signed core log showing footage, diameter of		

JANUARY 12th, 1988

- MINNOVA Inc.

LICENCE T-556

DIAMOND DRILLING ASSESSMENT FARRINGTON

TOWNSHIP etal

CLAIM LIST cont'd

<u>CLAIM NUMBER</u>	<u>DAYS</u>	<u>CLAIM NUMBER</u>	<u>DAYS</u>	<u>CLAIM NUMBER</u>	<u>DAYS</u>
K 670229	60 .	K 695831	60 .	K 812846	140 .
670230	60 .	695832	60 .	812847	140 .
670231	60 .	695833	60 .	812848	140 .
K 670232	60 .	K 695834	60 .	812849	140 .
				K 812850	140 .
K 670384	60 .	K 751312	100 .	812851	140 .
670385	60 .	751313	100 .	812852	140 .
670386	60 .	751314	100 .	812853	140 .
670387	60 .	751315	100 .	812854	140 .
670388	60 .	751316	100 .	812855	140 .
670389	60 .	751317	100 .	K 812856	140 .
K 670390	60 .	751318	100 .		
670391	60 .	K 751319	100 .		
670392	60 .			K 835126	<del>122 . 80</del>
670393	60 .	K 777322	100 .	835127	<del>122 . 80</del>
670394	60 .	777323	100 .	835128	<del>122 . 80</del>
K 670395	60 .	777324	100 .	835129	<del>122 . 80</del>
		777325	100 .	K 835130	<del>122 . 80</del>
K 695817	60 .	K 777326	100 .	835131	<del>122 . 80</del>
695818	60 .			835132	<del>122 . 80</del>
695819	60 .	K 812834	140 .	835133	<del>122 . 80</del>
K 695820	60 .	812835	140 .	835134	<del>122 . 80</del>
695821	60 .	812836	140 .	835135	<del>122 . 80</del>
695822	60 .	812837	140 .	835136	<del>122 . 80</del>
695823	60 .	812838	140 .	835137	<del>122 . 80</del>
695824	60 .	812839	140 .	K 835138	<del>122 . 80</del>
695825	60 .	K 812840	140 .		
695826	60 .	812841	140 .		
695827	60 .	812842	140 .	K 842194	140 .
695828	60 .	812843	140 .	842195	140 .
695829	60 .	812844	140 .	842196	140 .
K 695830	60 .	812845	140 .	K 842197	140 .

KENOR/K 842197  
 MINING DIV.  
**R** RECEIVED **D**  
 JAN 15 1988  
 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

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JANUARY 12th, 1988

MINNOVA Inc.

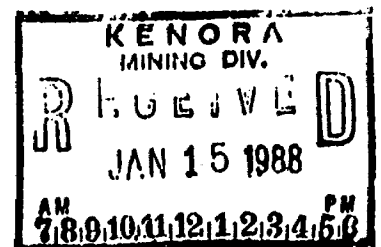
LICENCE T-556

DIAMOND DRILLING ASSESSMENT - FARRINGTON

TOWNSHIP etal

<u>CLAIM NUMBER</u>	<u>DAYS</u>	<u>CLAIM NUMBER</u>	<u>DAYS</u>	<u>CLAIM NUMBER</u>	<u>DAYS</u>
K 842198	140 .	K 855206	140 .	K 939783	<del>122</del> 80
842199	140 .	855207	140 .	939784	<del>122</del> 80
K 842200	140 .	855208	140 .	K 939785	<del>122</del> 80
		855209	140 .		
K 844955	140 .	855210	140 .	K 939787	<del>122</del> 80
844956	140 .	855211	140 .	939788	<del>122</del> 80
844957	140 .	855212	140 .	939789	<del>122</del> 80
K 844958	140 .	855213	140 .	K 939790	<del>122</del> 80
		855214	140 .	939791	<del>122</del> 80
K 846551	<del>140</del> 80	K 855215	140 .	939792	<del>122</del> 80
				939793	<del>122</del> 80
K 846559	140 .	K 862220	<del>122</del> 81	939794	<del>122</del> 80
K 846560	140 .	862221	<del>122</del> 81	K 939795	<del>122</del> 80
		862222	<del>122</del> 81		
K 851617	140 .	862223	<del>122</del> 81	K 939798	<del>122</del> 80
851618	140 .	862224	<del>122</del> 81	K 939799	<del>122</del> 80
851619	140 .	862225	<del>122</del> 81		
K 851620	140 .	K 862226	<del>122</del> 81	K 965521	<del>122</del> 80
				965522	<del>122</del> 80
K 854776	180 .	K 863608	110 .	965523	<del>122</del> 80
854777	180 .	K 863609	110 .	965524	<del>122</del> 80
854778	180 .			965525	<del>122</del> 80
854779	180 .	K 863627	101.8 .	K 965526	80.48 <del>122</del> 80
K 854780	180 .				
854781	180 .	K 863634	140 .		
K 854782	180 .				
		K 939128	122 .		
K 855201	140 .	939129	122 .		
855202	140 .	K 939130	122 .		
855203	140 .	K 939131	122 .		
855204	140 .				
K 855205	140 .				

TOTAL 179 CLAIMS



# MINNOVA

January 12th, 1988

LICENCE #T-556

Minnova Inc.  
Mining Innovation  
2606 Victoria Avenue East  
Thunder Bay, Ontario  
P7C 1E7  
Telephone (807) 623-1511  
Telecopier (807) 623-7019

List of Diamond Drill Holes, Drilling Dates, Claims Numbers and  
Meters Drilled for drilling submission of January 12th, 1988

<u>HOLE NUMBER</u>	<u>CLAIM NUMBER(S)</u>	<u>DRILLING DATES</u>	<u>METERS DRILLED</u>
BL-01	K777334/K777338	Feb. 11 - 21, 1987	381 ✓
BL-02	K777337	Mar. 19 - Apr. 1, 1987	501 ✓
BL-03	K777337/K777338	Apr. 2 - 10, 1987	468 ✓
ML-02	K873627/K777333	Jan. 9 - 15, 1987	318 ✓
<del>ML-03</del>	<del>K873627/K777333</del>	<del>Jan. 24 - Feb. 10, 1987</del>	<del>528</del>
ML-05	K830403	May 4 - 6, 1987	174 ✓
ML-06	K846559	July 7 - 9, 1987	171 ✓
ML-07	K863634	July 9 - 10, 1987	144 ✓
SR-01	K812844/K812846	June 10 - 15, 1987	210 ✓
SR-02	K812847	June 15 - 20, 1987	321 ✓
SR-03	K812848/K851619	June 26 - 29, 1987	204 ✓
SR-04	K812837	June 30 - July 2, 1987	216 ✓
BR-01	K851618	June 20 - 25th, 1987	252 ✓
BR-02	K851618	August 1 - 7th, 1987	312 ✓
HS-01	K629137	May 25 - 26, 1987	48 ✓
HS-02	K629137	May 26 - 27, 1987	36 ✓
HS-03	K777325	May 27 - June 4, 1987	348 ✓
HS-04	K695823/777322	June 4 - 10th, 1987	306 ✓
HS-05	K695827	July 3 - 7th, 1987	178 ✓
HS-06	K862225/FF4261	July 12 - 18th, 1987	187 ✓
Portion used for assessment on claim K862225 only			
Hole length 349.7 meters			
HS-07	K670225	July 20 - 24th, 1987	423 ✓
HS-08	K629173/K629172	July 24 - 31st, 1987	228

TOTAL 5,954 Meters

5,954 Meters x 3.28 = 19,529.12 Feet/Days

To be used for this submission 19,511.8 Feet/Days

