

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
101.40 TO 106.70	MDSTN	Colour: black Grain Size: Siltstone grades into mudstone; massive bedding; minor slicks				
106.70 TO 122.90	SLTST & SST	Colour: dark grey to black sltst; med grey sst. Flaser bedding, convoluted bedding Possible ripples, minor slicks 111.45-112.7 -shears and fault gouge and breccia; minor displacement; graphite slicks (oblique movement) 112.6-112.7 -rubbly core	45			Siltstone with thin and occasional medium-thick interbed of sst; some mudstone intervals are carbonaceous 121.9-122.9 -grading downwards into sst.
122.90 TO 125.85	SST	Colour: light-med. grey Grain Size: fine to medium Rip-up clasts of sltst-mdstn; scours, possible x-beds; tops up hole	50	Thin calcite veinlets devoid of sulphides		Carbonaceous wisps locally 125.90 -thin 3 cm seam of fusane 122.90-131.1 (E.O.H.) -is a sst dominated sequence (approx. 80% SST); outwash or migrating river channel
125.85 TO 128.80	SST AND SLTST	Colour: med. and dark grey Grain Size Thin interbeds, some x-beds and rip-up clasts; minor slicks				

HOLE NUMBER: FW-80

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
128.80 TO 131.10	SST E.O.H.	Colour: med. light grey Grain Size: medium Top 1.0 m is thin bedded with carbonaceous wisps; remainder is massive	61	Minor calcite veinlets; sst are calcareous		sst consists of sub-angular to sub-rounded clasts of qtz-fld and sltst or mdstn; lithic ca kose

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 73.17	«CASING»					
73.17 TO 84.00	MDSTN & SLT ST	Colour: dark grey to black Grain Size: Massive bedding, also includes poorly developed thin beds of sst and sand sltst Narrow 5 cm to 20 cm wide zones of fracture to breccia with gouge and slicks (oblique movement)	40	Minor calcite veinlets		Broken and rubbly core to 85 m
84.00 TO 86.00	SLTST AND S ST	Colour: dark grey Grain Size: Thin wispy bedding, convoluted and flaser				
86.00 TO 91.00	SST & SLTST	Colour: med. grey sst, dark grey sltst Thick beds with thin bedded sltst tops; carbonaceous wisps; rip-up clasts, flaser bedding 88.5-91 -fractured to brecciated with minor gouge development	45	Minor calcite veinlets; 50 deg and 15 deg to c.a.		
91.00 TO 99.10	SLTST AND SAND SLTST	Colour: dark grey Grain Size: Common flaser bedding; poorly developed thin bedding; some scours and minor fracturing	50			
99.10 TO 110.90	SST	Colour: light grey Grain Size: medium Thick beds with minor very thin beds of sltst 50-55 deg, scours, clasts sltst, scours, clast (sltst) 109.9-110.8 -fractured with minor gouge; gouge @ 60 deg to c.a.		Minor calcite veinlets, calcareous		Minor carbonaceous wisps; porous due to leaching of calcite?

HOLE NUMBER: FW-81

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
110.90 TO 132.00	SLTST	<p>Colour: dark grey Grain Size: Thin to massive bedding, minor flaser bedding</p> <p>111.35-113 -strongly fractured with gouge and breccia; some graphitic gouge; minor slicks with oblique movement</p> <p>115 m 121 m</p>	20 35	Minor calcite veinlets		Minor sst and sltst throughout; common mudstn interbeds
132.00 TO 137.10	SLST & SST E.O.H.	<p>Colour: Grain Size: Faulted from 111.35-137.1 Rubbly fractured core 5 cm wide zones with gouge some graphitic slicks show oblique movement</p>		Minor calcite veinlets		Minor sst about 15% of interval

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 103.63	«CASING»					
103.63 TO 107.28	BASAL TILL	Colour: Grain Size: Poorly sorted sand to boulder sized clasts within a clay-silt matrix graphitic in 15 cm above the bedrock contact				Clasts of sst, sltst and mdstn; also less igneous clasts fld porphyry, possible tuff
107.28 TO 116.08	SLTST	Colour: dark grey black 107.28-131 -Fault zone 107.3 m Fracturing and lesser brecciation throughout; shears up to 20 cm and gouge up to 10 cm wide; slickensides show oblique to strike slip movement some gouge and shears are graphite (20%) Shears @ Shears @ Micro-faults appear to have normal displacement	30 45 55	Calcite veining throughout; veinlets at 0, 40, 60, 80 deg. to c.a.	<1%	
116.08 TO 123.50	MDST & SLTS T	Colour: dark grey and black	55		<1%	Structure as noted above
123.50 TO 130.06	SST & SLT ST	Colour: medium and light grey Grain size: fine to med. Primarily medium to thick beds; some flaser bedding; some rip-up clasts variable 0 - 45 deg			<1%	Structure as noted above; about 30% thick interbed of sltst
130.06 TO 133.12	SLTST	Colour dark to medium grey Massive bedding 58 deg to 70 deg average 60 deg				

HOLE NUMBER: FW-82

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
133.12 TO 141.70	SST & SLTST	Grain Size: fine to coarse Thin bedded and minor laminated sltst and sst; cross bedding (tops up-hole), flaser bedding, graded bedding (tops uphole) 60 - 65 deg Minor shears with graphite slicks		Minor calcite veining	<1%	
141.70 TO 147.50	MDSTN	Colour: black Bedding is massive, minor shearing and fracturing				
147.50 TO 170.07	SLTST E.O.H.	Colour: dark grey to dark Fault Zone Moderate shearing, broken core, calcite veinlets throughout; minor gouge and breccia development some shear slips and gouge are graphitic slicks show oblique movement and less dip slip	65			Minor interbeds of sst and mdst

HOLE NUMBER: FW-82

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

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HOLE NUMBER: FW-83

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: FW4
LOCATION:

PLOTTING COORDS GRID: FIELD
NORTH: 839.00N
EAST: 7894.00E
ELEV: 880.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 167.30m
START DEPTH: 0.00m
FINAL DEPTH: 167.30m

COLLAR GRID AZIMUTH: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: February 18, 1991
DATE COMPLETED: February 20, 1991
DATE LOGGED: 0, 0

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

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

CONTRACTOR: J. T. THOMAS
CASING: PULLED, 109.0 M
CORE STORAGE:

PURPOSE: TO TEST IP CHARGEABILITY ALONG STRIKE FROM L65+00E

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
152.40	-	47° 0'	ACID	-	UNCORRECTED, POOR ETCH	-	-	-	-	-	-
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 109.00	«CASING»					
109.00 TO 113.33	SST	Colour: medium grey Grain Size: fine to med. Thin to medium beds; cours and rip-up clasts; tops uphole, contorted bedding	45			Silty sandstone with some carbonaceous wisps
113.33 TO 121.91	MDST	Colour: black Massive Fault zone 114-122 -narrow (10-15 cm) zones of shearing 0-10 deg with or without brecciation and gouge; slicks show dip slip movement; graphite on some slicks and in some gouge; fault mark bedding to c.a. change from 45 deg above it to 0 - 10 deg below it; shear primarily at 45-55 to c.a.		-very minor calcite veinlets		Rare carbonaceous seam (coal-durane)
121.91 TO 140.85	SST	Colour: dark grey to black Grain Size: v. fine to fine Thin to medium bedding; convoluted bedding 0-10 deg Vague wispy bedding contacts; one scour suggests tops uphole? 10-15 deg		Calcareous		Fine grained sst interval with minor sltst 128 -grain size increases slightly and get dark and light-medium grey sst; some possible bioturbation; muddy siltstone
140.85 TO 151.78	SLTST	Colour: dark Massive, vague bedding				
151.78 TO 157.15	SST	Colour: med. grey Grain Size: fine and medium Thin and medium beds				Thin to medium beds, generally vague wispy contacts; unit coarsens downward hard to get top direction, possible tops uphole?

HOLE NUMBER: FW-83

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
157.15 TO 167.30	MDSTN E.O.H.	Colour: dark grey Grain Size: Massive - vague bedding				Mudstone to silty-mudstone

HOLE NUMBER: FW-83

DRILL HOLE RECORD

LOGGED BY: J. McDONALD

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HOLE NUMBER: FW-84

MINNOVA INC.
 DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: FIREWEED
 PROJECT NUMBER: 665
 CLAIM NUMBER: GER1
 LOCATION: NTS 93M/1W

PLOTTING COORDS GRID: FIELD
 NORTH: 850.00N
 EAST: 5000.00E
 ELEV:

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

COLLAR DIP: -47° 0' 0"
 LENGTH OF THE HOLE: 139.60m
 START DEPTH: 0.00m
 FINAL DEPTH: 139.60m

COLLAR GRID AZIMUTH: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: February 12, 1991
 DATE COMPLETED: February 22, 1991
 DATE LOGGED: 0, 0

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

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

CONTRACTOR: J. T. THOMAS DRILLING
 CASING: PULLED, 70.10 M
 CORE STORAGE: J. T. THOMAS YARD

PURPOSE: TO TEST FULL EXTENT OF MINERALIZATION INTERCEPTED OUT OF THE COLLAR IN DDH FW-88-21 - EAST 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
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 70.10	«CASING»					
70.10 TO 70.20	SST	Colour: med. grey Grain Size: med.		Weak clay alt'n of the matrix	<1%	Minor blocky core
70.20 TO 84.88	SLTST	Colour: dark grey Grain Size: Massive, vague bedding 80 m	15 30	Minor calcite veinlets Appearance of thin 1 to 3 mm veinlets of calcite, pyrite +/- ZnS, PbS, 1 to 10 meter	Minor calcite veinlets with py +/- ZnS, +/- PbS, <5% As above 82.14-82.21 -dissem. py 25% 83-84 -as above 84-85 -as above	93% recovery
84.88 TO 88.15	SST	Colour: light grey Grain Size: fine to medium Thin and medium beds, rip up clasts and thin interbeds of sltst; minor convoluted bedding		Minor veinlets of calcite-pyrite +/- PbS +/- ZnS, +/- Cpy veinlets at 70 deg and 45 deg to c.a.	Py dissem. in SST </- 1% overall Bx calcite veinlets with pyrite, ZnS, PbS +/- cpy, sulfides <5%, minor dissem. py </- 1% (locally up to 30%) Minor dissem py calcite veinlets 87-88 -dissem. py, </- 2% 88-89 -as above, calcite filled fault breccia	93% recovery

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
88.15 TO 121.00	SLTST	Colour: dark grey Massive to vague thin bedding	30	Very minor calcite veinlets		sltst and some very fine grained sandstone
		91-104 -Fault zone, broken to rubbly core				
		91.4-91.5 -Fault breccia, clay and sltst @	30			91.5-94.5 -74% recovery
		91.7-93.0 -rubbly core with sheared clay gouge and breccia; 30 deg to c.a., subparallel to bedding				
		97.0 m	15			
		100-104 -rubbly core				
		102.7-102.80 -clay gouge with qtz veinlets no sulfides				
		108-111 -weak fracturing and shearing, competent core; some breccias filled with calcite			111.50 -reappearance of py veinlets +/- PbS +/- ZnS, 1-3 mm, <5% @	65
		111.30 -calcite filled breccia fragments are slightly displaced				
		114.85-114.95 -Fault gouge			111.50-115 -minor py veinlets with trace PbS, ZnS </- 5%	93% recovery
		115-120.40 -pyrite veinlets are sheared and brecciated ptygmatic? qtz veining shows some shear fabric and brecciation; qtz flooding replaces or forms breccia matrix and may be partially brecciated; calcite veinlets crosscut everything		-very strong silica flooding of breccia matrix	-pyrite +/- ZnS, +/- PbS veinlets @ 40 and 60 deg. to c.a. -primarily veins are about 40 deg to c.a. sulfides 15-20%	
		118.67-118.87 -narrow fracture - to breccia; fabric's @ 30 deg to c.a.				
		117 to 12 broken to rubbly core		Minor calcite and qtz +/- sulfide veinlets	sulfides </- 2%	116-118 -92% recovery

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		117.10-117.20 -Gp shear/gouge at 25 deg to c.a. veins @ 40 - 45 deg to c.a.			pyrite-sphalerite +/- galena veins <1 to 2 cm wide comprise 15-20% of the interval sulfides </- 2%, minor py-ZnS veins 5% of interval	118-119.60 -92% recovery
121.00 TO 139.60	INTRA-FORMATIONAL MDST CONGLOM	Colour: Grain Size: Mudstone-conglomerate -40-80% granular sized frags of mudstone with a mudstone matrix, subtle mottled texture 121.5-122.5 -calcite veining of breccia matrix; breccias are fractures causing minor dislocation of frags; 40 deg to c.a. 125 m 125.4-126.50 -breccia filled by quartz and calcite veining at 30, 40, 55 deg to c.a. 128.01-132.2 -Fault zone, broken and rubbly core, strong fabric @ 40 deg to c.a.; causing brecciation and minor gouge development; minor qtz calcite veining 131.06-132.21 -rubbly core about 50% recovery; minor frags of qtz-py in rubble <5% 132.5 m 133.5 m 134.1-135.5 -numerous calcite and/or quartz veinlets with fragments of (angular clasts) sediment veins at 30 and 50 deg to c.a. 135.0 m	20 40 30 45 30	-minor </- 2% sulfide veins	130.6-131.06 -qtz-py veins up to 2 cm wide +/- ZnS, +/- PbS @ 25 deg and 40 deg. to c.a. comprising 30% of the interval 85% recovery	Recovery 56%

HOLE NUMBER: FW-84

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	E.O.H.	138.0 m 136.95-137.50 -fault breccia, angular mdst. clasts within qtz-calcite matrix 40 deg to c.a. sulphide <1%	35			

HOLE NUMBER: FW-84

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

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HOLE NUMBER: FW-84

ASSAY SHEET

DATE: 13-May-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS							GEOCHEMICAL										COMMENTS	
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAg g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %	Mn ppm		
	0.00	0.00	0.00																			

D.D.H. F.W. 84

ASSAY SHEET

Sample Number	From (M)	To (M)	Estimate		Length ()	% Cu	ppm % Zn	% Pb	gm. T Ag	gm. T Au	% SiO ₂	% TiO ₂	% Na ₂ O	% MgO	% Fe	PPM Cu	PPM Zn	PPM Pb	PPM Ag	PPB Au					
			Cu	Zn																					
29127	81	82			1.0		297																		
29128	82	83			1.0		163																		
29	83	84			1.0		775																		
30	84	85			1.0		156																		
31	85	85.37			0.37		761																		
32	85.37	86			0.63		191																		
33	86	87			1.0		152																		
34	87	88			1.0		174																		
291 35	88	89			1.0		116																		
36	111.50	112			0.5		196																		
37	112	113			1.0		214																		
38	113	114			1.0		646																		
39	114	115			1.0		1409																		
40	115	116			1.0		326																		
29141	116	117			1.0		994																		
42	117	118			1.0		661																		
43	118	119			1.0		2238																		
44	119	119.6			0.6		22551																		
45	119.6	120.0			0.4		2287																		
29146	120.0	120.4			0.4		9488																		

D.D.H. FW 84

ASSAY SHEET

Sample Number	From (M)	To (M)	Estimate		Length (M)	% Cu	ppm % Zn	% Pb	gm. T Ag	gm. T Au	% SiO ₂	% TiO ₂	% Na ₂ O	% MgO	% Fe	PPM Cu	PPM Zn	PPM Pb	PPM Ag	PPB Au					
			Cu	Zn																					
29147	130.4	122																							
29148	130.6	131.06																							
		112																							

HOLE NUMBER: FW-85

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: GRR1
LOCATION: NTS 93M/1W

PLOTTING COORDS GRID:
NORTH: 975.00N
EAST: 5200.00E
ELEV: 852.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 216.20m
START DEPTH: 0.00m
FINAL DEPTH: 216.20m

COLLAR GRID AZIMUTH: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: February 22, 1991
DATE COMPLETED: February 24, 1991
DATE LOGGED: February 24, 1991

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

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

CONTRACTOR: J. T. THOMAS
CASING: PULLED, 69.58 M
CORE STORAGE: THOMAS YARD

PURPOSE: TO TEST MODERATE TO WEAK IP CHARGEABILITY 200 M EASTWARD ALONG STRIKE FROM FW88-21 (THE MOST EASTE

DIRECTIONAL DATA: (RN TEST OF EAST ZONE MINERALIZATION)

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
161.59	-	0° 0'	ACID			-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 69.58	«CASING»					
69.58 TO 77.85	SLST	<p>Colour: dark grey to black Grain Size: Massive and vague, thin bedding</p> <p>69.58-84.80 -Fault zone broken, rubbly core, shears, breccia with gouge, and fractures; gouge is graphitic; calcite and qtz veinlets 20, 0, 60 deg to c.a. shears and gouge 20, 45 deg to c.a.; sulphides </= 1%</p>	35		Pyrite disseminations and veinlets in bands up to 4 cm wide 5% overall to 71.5 m	Carbonaceous in shears or gouge Samples: 75% recovery 69-70 70-71 71-71.5
77.85 TO 87.50	MDST-SLST CONGLOM	<p>Colour: Grain Size: Intraformational conglomerate, subrounded to rounded mdst-slst clasts </= granule to pebble size; clasts comprise 5-50% of unit</p> <p>86-87 -grades downward into a sst; scours, grading, possible load structures (non-definitive) tops uphole</p>				
87.50 TO 91.50	SST	<p>Colour: medium to dark grey Grain Size: fine to medium Thin bedded; approaches convoluted beds locally; graded beds; load marks and scours imply tops uphole 90 m @</p> <p>93-93.7 -sheared brecciated core with minor qtz-calcite veinlet shears @ 40-45 deg to c.a.</p>	46 65		<1%	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
91.50 TO 95.00	MDST	Colour: dark to med. grey Grain Size: Massive grades into silty sst	60			
95.00 TO 96.10	SST	Convoluted thin bedding, silty sst; grades upwards and downwards; top direction, possibly down-hole?	65			
96.10 TO 106.00	MDST	Massive bedding locally mottled texture with rare mdst or slst clasts 103-104 -thin interbeds of fine grained sst 104-106 -mottled texture with black (carbonaceous?) wisps some (up to 15%) clasts, intraformational conglomerate or bioturbated; grades into underlying sst	65 65	Minor calcite veinlets	<1%	
106.00 TO 108.20	SST	Colour: med. grey Grain Size: m.gr. and f.gr. Thick bedded in to 1.0 m; then thin bedded sst to mdst grading upwards sequence			<1%	
108.20 TO 111.50	MDST AND SST	Colour; Grain Size: Thick, mottled (bioturbated) mdst. grades into m.gr.sst; convoluted bedding				
111.50 TO 116.70	MDST	Colour: med. grey Massive bedding, mottled texture (bioturbated) same black wisps (carbonaceous?) some mdst. clasts <5%; bedding to c.a.	65			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		114 m gradually changes 116.5 m 65 deg to 25 deg	40	Minor calcite and quartz veinlets	rare speck of honey ZnS in qtz	
116.70 TO 124.05	SST	Colour: med to dark grey Grain Size: silt to coarse sand Massive to thin bedded; convoluted bedding; scours grades downward into med to coarse grained sst @ 118 m and becomes medium to thick bedded 123 m -15 cm of qtz veining and breccia	25		<1%	
124.05 TO 127.90	SST AND SLST	Colour: dark grey to black Grain Size: silt to coarse sand Thin and medium beds, convoluted, flaser and rare cross beds, possible ripples; carbonaceous seams and matrix inclusions throughout 125.25 -cross beds indicate tops downhole 127.90 -3 cm wide scour fill of pebble conglomerate; fines downhole		122.80-123 -qtz veins in sst with trace ZnS	-1% dissem py in sst -total sulphides <= 1%	122-123 123-124.50 -75% recovery
127.90 TO 133.85	SLST AND SST	Colour: dark grey Grain Size: silt and sand Thin bedded, convoluted bedding, rip up clasts, flaser bedding, scours - silt and sand inter-mixing (silty sst and sand slst) 130 m @	20 28		<1%	
133.85 TO 144.85	SLST	Colour: dark grey Massive with vague thin bedding some sst inter-beds <10%			<1%	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS	
144.85 TO 148.32	SST	Colour: med. to dark grey Grain Size: f. to m.gr. Thin bedded, some convoluted bedding due to loading; grading of sst bed in two directions?	25		<1%		
148.32 TO 152.39	MDST	Colour: black Grain Size: Massive	25	rare qtz veinlet with pyrite			
152.39 TO 216.20	SLST	Colour: dark grey to med. grey Grain Size: Massive, vague bedding 22 to 25 deg; mottled texture due to bioturbation 167.05 -minor fracturing and gouge @ 45 and 0 deg to c.a. 159.5 @ 170.05 -narrow zone of rubbly core and gouge parallel to bedding 167.5 m @ 178.05-182.05 -broken core, slicks @ 20 and 40 deg to c.a.; show oblique to dip slip movements 171 m 172 m 181-182 -interbed, med. grained 182.05-180.60 -graphite shear, brecciated qtz calcite veins and sltst, 70% graphitic gouge, slicks with oblique movement -shears @ 45-50 deg to c.a. -veins to c.a. 40, 65 and 70 deg 183.05-183.55	30 22 0 10	rare qtz calcite veinlet -brecciated qtz veining in qp gouge	<1%	179.05-180.05 -minor <2% calcite-qtz veinlets with ZnS 180.05-181.05 -same as above 181.05-182.05 -minor dissem py 1-2% with qtz veinlets +/- ZnS, +/- PbS <2% 182.05-183.05	-78% recovery -as above -as above

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-sheared and graphitic				
		185-186 -sheared graphitic shearsat 45, 55, 20 deg. to c.a., primarily 40-45 deg		183.55-184.05 -qtz calcite veining	-minor py, ZnS +/- PbS 183.05-183.55 -as above	-100% recovery -as above
		186.05-187.05 -ZnS vein about 50 deg to c.a.	10	184.05-185.05 -minor qtz calcite veins 185.05-186.05	-qtz-py-ZnS-PbS vein with 20% sulphide over 5 cm -minor py +/- ZnS, <5% -as above	-100% recovery -as above
		186.05-187.05 -ZnS vein about 50 deg to c.a.	10	186.05-186.55 -minor qtz-calcite veinlets 186.05-187.05 -about 50% qtz-sulphide-calcite veining infilling a breccia 187.05-188.05 -about 20-25 veins of py, ZnS, PbS </= 1 cm and as thick as 3 cm 188.05-189.05 -weak veinlet development <10%	-py, +/- ZnS, +/- PbS, <5% overall -py, ZnS, PbS, blackjack and possible honey ZnS, 4-7% Zn overall -py, ZnS, PbS ZnS(-PbS) <2%	-95% recovery -95%
		190.05-190.55 Bedding @	20	189.05-189.55 -py, ZnS, +/- PbS with qtz and calcite veins	-py, +/- ZnS, +/- PbS, one py vein 2 cm wide @ 185.15 m -Py, ZnS (black and brown), PbS in veins with qtz 25% of interval ZnS about 5-7%	-95%
		190.05-190.55 Bedding @	40	189.05-190.05 -veining as above veins up to 2.5 cm 190.05-190.55 -veining as above one vein from 187.04-187.2	-py, ZnS +/- PbS, ZnS </= 4% -py, ZnS +/- PbS -187.04-187.2: 60% ZnS, about 20% ZnS over sample	-93% -93% recovery
		190.05-190.55 Bedding @	40	190.55-191.30 -thin veinlets </= 5 mm of py, +/- ZnS and qtz	-sulphides <5% Py +/- ZnS	-93% recovery
		190.05-190.55 Bedding @	40	191.30-191.90 -brecciated sst intb'd, qtz calcite infilling with minor sulphides, some veinlets parallel to bdg	-minor py +/- ZnS and PbS, rare dissem sulphides, mostly in veinlets, some possible honey ZnS, </= 1% overall	-93%
		190.05-190.55 Bedding @		191.90-193.05 -minor </= 5% qtz-py-ZnS veinlets < 5 mm veinlets @ 0 and 45 deg to c.a. 193.05-194.05 -brecciated with qtz +/- calcite vein infilling 0-10 deg, 20 and 40 deg	py, +/- ZnS, +/- PbS, <5% sulphide - py	-100% recovery

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		201-204 -slst and very f.gr. sst 203.35-205 -minor gouge, rubbly core and shearing 206 m	65 40 45	to c.a. 194.05-194.80 -as above, stronger brecciation 194.8-195.3 -very minor veinlets, <5%	-as above -sulphides <2% 209-212 -virtually no veinlets or sulphides 209 -reappearance of weak +/- % qtz- calcite-py +/- ZnS +/- PbS veinlets	-100% -100% recovery
216.20 TO 216.40	SST	Colour: light grey Grain Size: m.gr. *****		216.20-216.45 -minor dissem. sulphide py, 1-2% and minor qtz veinlets	-py, ZnS, PbS dissem. in quartz vein- lets +/-1%	-100% recovery
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ASSAYS							GEOCHEMICAL										COMMENTS
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAg g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %	Mn ppm	
29151	69.00	71.00	2.00									72	26	114	0.6	5	2	1	32		747
29152	71.00	71.50	0.50									87	19	86	0.5	5	1	2	1		1805
29149	121.80	123.00	1.20									84	16	291	0.4	15	1	2	25		1562
29150	123.00	124.50	1.50									52	26	171	0.2	20	1	1	19		1368
29176	179.05	180.05	1.00									75	43	145	0.9	5	64	1	26		1337
29177	181.05	182.05	1.00									42	665	1748	0.7	5	1	4	1		2195
29178	182.05	183.05	1.00									73	118	237	1.7	5	26	2	7		3437
29179	183.05	183.55	0.50									51	231	425	1.9	5	3	2	15		2818
29180	183.55	184.05	0.50									140	299	15766	6.1	40	3	4	67		2438
29181	184.05	185.05	1.00									110	237	359	2.2	15	1	3	41		2164
29182	185.05	186.05	1.00									72	189	941	2.2	10	10	2	26		1605
29183	186.05	186.50	0.45	0.015	0.10	0.60	0.11	.001	3.70	0.02											
29184	186.55	187.05	0.50	0.020	0.09	6.03	0.23	.001	7.90	0.01											
29185	187.05	188.05	1.00	0.017	0.09	1.85	0.12	.001	4.20	0.04	169	938	18471	4.2	45	21	3	40		2944	
29186	188.05	189.05	1.00	0.009	0.04	2.00	0.11	.001	3.80	0.02											
29187	189.05	189.55	0.50	0.030	0.04	5.85	0.29	.011	9.80	0.39											
29188	189.55	190.05	0.50	0.007	0.03	3.07	0.11	.001	3.90	0.02											
29189	190.05	190.55	0.50	0.044	0.07	14.51	0.31	.001	10.60	0.02											
29190	190.55	191.30	0.75	0.007	0.05	0.28	0.09	.001	3.00	0.02											
29191	191.30	191.90	0.60								77	502	2038	1.2	15	1	3	21		2905	
29192	191.90	193.05	1.15																		
29193	193.05	194.05	1.00								71	304	1756	1.7	5	10	2	7		1511	
29194	194.05	194.80	0.75								57	973	2050	2.4	10	3	2	9		3184	
29195	194.80	195.30	0.50								30	412	256	1.6	50	6	3	41		3069	
29196	199.20	200.05	0.85								42	1037	460	1.5	20	1	3	18		2801	
											47	124	349	0.6	5	1	2	18		2207	
29197	200.05	201.05	1.00								21	116	119	0.3	15	2	3	18		1909	
29198	201.05	202.05	1.00								40	127	115	0.6	25	1	3	31		2167	
29199	202.05	203.05	1.00								63	272	1838	1.4	50	4	2	79		2541	
29200	203.05	204.05	1.00								29	57	540	0.7	5	1	3	19		2136	
29201	204.05	205.05	1.00								26	38	110	0.3	20	1	3	36		1879	
29202	205.05	206.05	1.00								33	592	559	0.9	5	1	3	10		1391	
29203	216.20	216.40	0.20								55	43	267	0.6	5	39	3	5		3673	
AVE.	186.55	190.55	4.00	0.019	0.06	4.64	0.17	0.002	6.02	0.07											

HOLE NUMBER: FW-86

MINNOVA INC.
 DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: FIREWEED
 PROJECT NUMBER: 665
 CLAIM NUMBER: GERI
 LOCATION: NTS 93 M/1W

PLOTTING COORDS GRID: FIELD
 NORTH: 800.00N
 EAST: 4200.00E
 ELEV: 873.00

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

COLLAR DIP: -47° 0' 0"
 LENGTH OF THE HOLE: 159.76m
 START DEPTH: 0.00m
 FINAL DEPTH: 159.76m

COLLAR GRID AZIMUTH: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: February 23, 1991
 DATE COMPLETED: February 25, 1991
 DATE LOGGED: February 27, 1991

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

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

CONTRACTOR: J. T. THOMAS
 CASING: 38.10 M, PULLED
 CORE STORAGE: J. T. THOMAS YARD

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
102.74	-	0° 0'	ACID	OK		-	-	-	-	-	
143.29	-	0° 0'	ACID	OK		-	-	-	-	-	
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HOLE NUMBER: FW-86

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 39.63	<<CASING>>					
39.63 TO 55.60	SST	<p>Colour: medium to dark grey Grain Size: m. and f.gr. Massive bedding with vague internal bedding; flaser type texture and minor bioturbation</p> <p>38.10-72 -broken and rubbly core generally <75%</p> <p>40.4-42.6 -Fault gouge and breccia shear fabric @ 43.0 m</p> <p>43.5-45.77 -strong to moderate shear fabric @ also with minor gouge and qtz veining 47</p>	<p>45 70</p> <p>45 25</p>	<p>38.10-40.0 -numerous, <5 mm qtz veinlets with minor py possibly PbS</p>	-sulphides </- 1%	<p>39.63-41 -68% recovery Sandstone is fine to medium grained and contains from <10% to 60% silt size grains</p>
55.60 TO 58.50	MDST	<p>Colour: black Massive</p>				
58.50 TO 74.30	SLST	<p>Colour: dark to med. grey Massive, strong to moderate shear fabric @</p> <p>61-77.65 -broken and rubbly core, recoery 52-75%; about <10% overall are narrow </= 5 cm bands of fault gouge (clay); fractured, poor slicks, show oblique to dip-slip movement -shear fabric @ 25 and 40-45 deg to c.a.</p> <p>67 -slst becomes weakly bioturbated and contains minor wisps of carbonaceous material</p>	40			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
74.30 TO 79.60	MDST	Colour: black Massive, moderate to weak shear fabric @ 45 deg to c.a., some slicks with oblique movement				
79.60 TO 85.15	SST	Colour: medium grey Grain Size: f.gr. Medium bedding with vague thin bedding	45	About 10% coarse grained very dark clasts (slst or alt'n e.g. chlorotoid?)	dissem. sulphides, </= 1%	
85.15 TO 91.20	MDST	Colour: black Massive, some bioturbation, shear fabric @ 0 and 45 deg to c.a.; rubbly, minor gouge				Silty sections
91.20 TO 94.00	SLST	Colour: dark grey Massive with poorly developed laminations formed by sandy layers - flaser bedding	45			
94.00 TO 97.10	SST	Colour: medium dark grey Grain Size: f.gr. Poorly defined thin bedding to laminations, very silty near flaser bedded				
97.10 TO 98.50	MDST	Colour: black Massive, shear fabric @ 40-45 deg to c.a.				
98.50 TO 103.00	SST	Colour: medium grey Grain Size: f. to m.gr. Thin to medium bedding, thin silty interbeds	43	Very minor qtz-calcite veinlets	<1%	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
103.00 TO 106.75	MDST	Colour: dark grey to black Thick bedded, mdst grades down into sst	44			
106.75 TO 134.34	SST	Colour: very light grey Grain Size: c.gr. Thick to massive bedding, fining upwards tops uphole, scours and rip-up clasts	45	Minor qtz-calcite veinlets throughout; weakly calcareous throughout; matrix appears to be altered to clay-chlorite throughout 118-119 -minor qtz veinlets 121-122 -as above 127-128 -minor qtz veinlets 128-129; 129-130; 130-131 -as above	-trace ZnS, PbS, <1% -as above -trace cpy, ZnS, PbS, <1% -as above	-recovery: 100% -recovery: 100% -as above
134.34 TO 140.00	SLST	Colour: dark grey to black Massive and vague thin bedding; broken core 134-137.50 -minor qtz-calcite veining and breccia 139.8-140 -minor calcite veining				
140.00 TO 143.70	MDST	Colour: black 142.90 -5 cm of gouge @ 40 deg to c.a. Massive mdst, minor bioturbation also silty sections				

HOLE NUMBER: FW-86

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
143.70 TO 146.45	SLST AND SS T	Colour: dark grey Grain Size: f.gr. Thin interbeds 60-70 deg, convoluted bedding and bioturbation				
146.45 TO 159.45	MDST E.O.H.	Colour: black Grain Size: Massive 148.4-149.3 -broken core, minor shear fabric @ 45 deg to c.a., dip slip and oblique movement on slicks about 150 m -mdst become silty and bioturbated	50 45			

HOLE NUMBER: FW-86

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

PAGE: 5

Sample	From (m)	To (m)	Length (m)	ASSAYS							GEOCHEMICAL										COMMENTS	
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAg g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %	Mn ppm		
29126	39.63	41.00	1.37									66	29	318	0.9	15	1	2	6		658	
29170	118.00	119.00	1.00									21	11	80	0.4	5	1	2	15		803	
29171	121.00	122.00	1.00									16	12	61	0.5	5	1	1	18		720	
29172	127.00	128.00	1.00									16	48	134	1	5	1	2	17		1630	
29173	128.00	129.00	1.00									23	13	62	0.6	5	1	1	20		738	
29174	129.00	130.00	1.00									11	29	234	0.7	5	1	2	18		372	
29175	130.00	131.00	1.00									9	16	49	0.6	5	1	2	13		749	

HOLE NUMBER: FW-88

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: GER1
LOCATION: NTS 93M/1W

PLOTTING COORDS GRID: FIELD
NORTH: 110.00S
EAST: 4200.00E
ELEV: 900.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 178.35m
START DEPTH: 0.00m
FINAL DEPTH: 178.35m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 180° 0' 0"

DATE STARTED: February 22, 1991
DATE COMPLETED: February 23, 1991
DATE LOGGED: 0, 0

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

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

CONTRACTOR: J. T. THOMAS
CASING: 27.43 M, PULLED
CORE STORAGE: J. T. THOMAS YARD

PURPOSE: TO TEST IP CHARGEABILITY ON L42+00E ALONG SOUTH 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
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HOLE NUMBER: FW-88

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 27.43	«CASING»					
27.43 TO 42.40	SLST AND SST	<p>Grain Size: f. and v.f.gr. Thin bedded interbeds of sst and slst; convoluted bedding, scours, rip-up clasts 30.5 m 27.43-43.3 -shear zone 33 m</p> <p>-shears breccias, fracture zones throughout; most are graphitic qtz +/- calcite veins throughout, also sheared and brecciated</p> <p>30.3-31.2 -Fault breccia 80-95% clasts (slightly displaced) in a gp clay matrix</p> <p>35.10-36.2 -moderate to strong shearing, 40-60 deg c.a.</p> <p>37.8-39.9 -strong graphitic shear, 40-60 deg to c.a.</p> <p>42.2-43 -moderate brecciation and calcite veining</p>	0 55			
42.40 TO 54.00	SLST	<p>Colour: dark grey Grain Size: Vague thin bedding 45.5 m 47.0 m 49.0 m</p> <p>49.6-51.35 -shear at 10-20 deg to c.a., graphitic gouge</p>	50 60 45			

HOLE NUMBER: FW-88

DRILL HOLE RECORD

LOGGED BY: J. McDONALD

PAGE: 2

HOLE NUMBER: FW-88

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
54.00 TO 59.00	SST	Colour: light grey Grain Size: f. to m.gr. Thick bedding, convoluted bedding with rip up clasts grades upwards into slst and downwards in slst; bedding: 35-40 deg to c.a.				
59.00 TO 60.66	SLST	Colour: dark grey Grain Size: sandy Convoluted bedding, mined slst and very fine grained sst				
60.66 TO 62.80	SST	Colour: light grey Grain Size; coarse to granule Thick, convoluted slump; rip up clasts grading up and downhole. Also scours; most evidence appears to support tops uphole		Trace py, cpy, dissem.	60.66-65.7 -1% sulphides	60.66-61.66: recovery 88% 61.66-62.66: 88% 62.66-63.66: 88% 63.66-64.7: 95% 64.7-65.7: 95%
62.80 TO 65.00	SST	Colour: medium to dark grey Grain Size: v.f.gr. 63.66 -slump feature with bedding changing from 45 deg to 0 deg to c.a. across a bedding plane				
65.00 TO 78.00	SLST	Colour: dark grey Massive 65.7-69 -fault breccia and gouge, graphitic; minor brecciated qtz veinlets 75 -coarsening in a sandy slst				

HOLE NUMBER: FW-88

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

PAGE: 3

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
78.00 TO 79.80	SST	Colour: light grey Grain Size: c.gr. Massive bedding, weakly fractured	75	Moderate qtz veining +/- calcite veinlets	Trace very fine grained py?	
79.80 TO 85.00	SLST	Colour: medium dark grey Sandy slst, vague bedding (massive) 84-85 -weakly brecciated with minor shearing and gouge, shears @ 40-45 deg to c.a.	40			
85.00 TO 86.80	SST	Colour: light grey Grain Size: c.gr. Thick bedding		Moderate to strong qtz veinlet density	Very fine grained py, possible tetrahedrite	85-86: 92% recovery 86-87
86.80 TO 89.65	SLST	Colour: medium dark grey Massive		Minor qtz calcite veinlets along fractures		
89.65 TO 92.80	SST	Colour: medium grey Grain Size: f.gr. Medium bedded, fine grained and silty sst; grades downward into coarse sst		Weak to moderate qtz-calcite veinlets		
92.80 TO 95.00	SST	Colour: light grey Grain Size: c.gr. Thick bedding	40	Moderate qtz +/- calcite veining (up to 15-20% qtz over 1.0 m)	<1%	
95.00 TO 97.26	MDST	Colour: black Grain Size: Massive, bioturbated bedding 95-104 -moderately sheared and brecciated; brecciated veining; shears @ 30, 45-50 deg to c.a., minor gouge		-moderate qtz calcite veins in shear		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
97.26 TO 98.40	SST	Colour: light grey Grain Size: m.gr. Thick bedding, 40 to 20 deg to c.a. -sheared at lower contact		Weak qtz veining		
98.40 TO 104.00	MDST	Colour: black Massive, mdst with minor thin sst interbeds, variable bedding Rubby broken core, sheared and brecciated with minor fault gouge/graphitic Breccias @ 45 deg to c.a. Shears @ 0, 40 deg to c.a.		Weak qtz-calcite veining		
104.00 TO 108.80	SLST	Colour: medium dark grey Massive, bioturbated bedding	45			
108.80 TO 112.90	SST AND SLS T	Colour: dark and medium grey Thin interbeds of sst and slst, scours and graded bedding; grading upwards and reverse grading; top uphole?	62			
112.90 TO 126.00	SLST AND MD ST	Colour: dark grey and black Massive bedding, some bioturbation; also 10-15% thin to very thin sst beds; grades down into coarse sst 114-115.20 -fault breccia; mdst clast in clay gouge, contacts at 10 and 40 deg to c.a. 117.12-117.59 -as above bx with graphite and qtz veins (brecciated)	60 48			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
126.00 TO 127.00	SST	Colour: light grey Grain Size: c.gr. Thick bedded, moderately brecciated and qtz veinlets	50		<1% sulphides	
127.00 TO 141.55	MDST	Colour: black Massive, minor sst intbd; faulted throughout; broken and rubbly core 128.8-129 -Fault bx in clay matrix 134.4-135.6 -sheared fault bx graphitic -shears @ 40, 60 deg to c.a. 135.6-137.75 -moderate fracturing to brecciation 137.75-137.85 -gouge and bx 140-140.6 -sheared fault breccia		Qtz veinlets throughout	<1%	
141.55 TO 144.30	SST	Colour: light grey Grain Size: m.gr. Thick bedding, minor shearing and brecciation		Strong qtz veining up to 60% from 43-44; qtz stockwork throughout	141-144 -1% py	141.55-142: 79% recovery 142-143: 79% 143-144.3: 100%
144.30 TO 155.30	MDST/SLST	Colour: dark grey and black Massive bedding, sheared and brecciated throughout minor sst intbd 144.6-146 -shear, brecciated qtz veins, mdst clasts in a graphitic clay matrix; shear 40 and 60 deg to c.a. 147.7-148.1 -graphitic shear			<1%	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		148.2-149.16 -md.gr.sst intbd 151-151.4 -graphitic shear 153.10-155.8 -fault bx and gouge	40			
155.30 TO 161.45	SST	Colour: light grey Grain Size: m.gr. Thick bedding, brecciated and sheared throughout 155.3-157 -fault breccia, minor slicks, graphitic	55	Strong silicification 155.3-156.4 -strong silicification 156.4-157 -Gp fault bx, brecciated qtz veins 157.0-158.10 -very strong silicification 158.10-159 -weak qtz veining 159-160; 160-161; 161-161.45 -weak qtz veinlet stockwork	Variable, py, cpy \leq 4-6% -sulphides 1% -sulphides 1% -cpy, py dissem and streaks, cpy about 2-3% overall -py, trace cpy, py \leq 1% -py \leq 1% trace cpy	-82% recovery -82% -82% -100%
161.45 TO 176.40	«SLST»	Colour: black Massive bedding, minor thin interbed of sst (<5%) Minor breccia and gouge 175.70-176.78 -shear fault gouge and breccia gouge graphitic	50	170.5-173 -moderate to weak qtz-calcite veining		
176.40 TO 178.35	«SST AND SLST» E.O.H.	Colour: dark and light grey Grain Size: m.gr. Thick to medium bedding; brecciated and sheared				

Sample	From (m)	To (m)	Length (m)	ASSAYS							GEOCHEMICAL										COMMENTS	
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAg g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %	Mn ppm		
29204	60.66	61.66	1.00									45	31	152	0.3	5	1	3	12		1774	
29205	61.66	62.66	1.00									31	22	137	0.3	5	1	2	32		1171	
29206	62.66	63.66	1.00									53	28	156	0.3	5	1	3	8		1350	
29207	63.66	64.70	1.04									84	33	184	0.3	5	1	3	18		928	
29208	64.70	65.70	1.00									66	28	112	0.4	5	1	3	14		853	
29209	85.00	86.00	1.00									22	25	86	0.3	5	1	2	13		1833	
29210	86.00	87.00	1.00									25	30	487	0.4	5	1	2	14		2203	
29211	141.55	142.00	0.45									16	40	169	0.2	5	1	2	27		2625	
29212	142.00	143.00	1.00									29	19	75	0.3	5	1	3	55		2138	
29213	143.00	144.30	1.30									11	28	62	0.2	5	1	2	47		2399	
29214	155.30	156.40	1.10																			
29215	156.40	157.00	0.60									2261	60	727	11.8	5	4	2	55		2967	
29216	157.00	158.10	1.10									10788	149	2140	41.5	20	13	2	642		4748	
29217	158.10	159.00	0.90									236	26	135	1.4	5	3	2	39		2474	
29218	159.00	160.00	1.00									65	20	84	1	5	1	3	31		2782	
29219	160.00	161.00	1.00									13	14	78	0.1	5	1	2	11		2049	
29220	161.00	161.45	0.45									7	19	84	0.1	5	1	3	12		1811	

HOLE NUMBER: FW-87

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: GER1
LOCATION: NTS 93M/1W

PLOTTING COORDS GRID: FIELD
NORTH: 425.00S
EAST: 3600.00E
ELEV: 900.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 155.49m
START DEPTH: 0.00m
FINAL DEPTH: 155.49m

COLLAR GRID AZIMUTH: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: February 25, 1991
DATE COMPLETED: February 26, 1991
DATE LOGGED: February 27, 1991

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

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

CONTRACTOR: J. T. THOMAS DRILLING
CASING: 54.88, PULLED
CORE STORAGE: J. T. THOMAS YARD

PURPOSE: TO TEST SOUTH ZONE - WEAK IP CHARGEABILITY

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
155.49	-	0° 0'	ACID	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 54.88	«CASING»					
54.88 TO 61.00	SST AND SLS T	Colour: medium to dark grey Grain Size: f. to m.gr. Thin and medium bedded; moderate brecciation and qtz veinlets	40		Very fine grained pyrite and galena <1 to 4% locally, 1% overall	
61.00 TO 69.31	SLST	Colour: dark grey black Bioturbated, massive, minor thin sst intbds 60.9-62 -Fault gouge and breccia, shear fabric 45 deg to c.a. Broken and rubbly core 62-69 About 64 m -slst becomes a black mdst 69-69.5 -breccia with qtz veins		61-61.2 -brecciated qtz vein	-minor sulphide 1% pyrite	
69.31 TO 84.30	SST	Colour: light grey Grain Size: c.gr. Massive bedding; fractured and brecciated throughout with infilling of qtz veins Matrix appears to have been "leached" out as the sst is fairly porous; qtz veins 45-50 deg, 25-35 deg. to c.a. 76-76.2 -fault breccia and gouge 821.25-32.80 -breccia, gouge and gp shear, shear 45-50 deg	53	Moderate qtz veining throughout Moderate to strong qtz veining, veins generally <1 cm - up to 3 cm 73-82 -moderate to strong qtz veining -moderate qtz veining	69-83 py 1% and <= 1% dark grey blue very fine grained metallic mineral graphite? galena?, tetrahedrite?, trace cpy, ZnS	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		to c.a. 33.15-84.2 -50% core and 50% sand (probable fault gouge)				
84.30 TO 91.70	SLST	Colour: dark grey Thin intervals of slst and sand slst 85 m @ broken core throughout 90 m @	60 55			
91.70 TO 94.00	MDST	Colour: Massive				
94.00 TO 98.68	SST AND SLS T	Colour: Thin bedded, wavy laminations, convoluted bedding and scours; grading indicates tops both directions but scours indicate tops uphole	50			
98.68 TO 107.00	MDST	Colour: black Massive, minor bioturbation				
107.00 TO 114.00	SLST	Colour: dark grey Massive, grades down into an sst				
114.00 TO 119.40	SST	Colour: medium dark grey Massive with poorly developed medium and thin beds 45-50 deg to c.a.				
119.40 TO 130.00	SLST	Colour: dark grey to black Massive with some mdst to silty mdst interbeds; convoluted bedding and bioturbated 121.72-121.83 -Gp shear with shear qtz 50 - 45 deg to c.a.				

HOLE NUMBER: FW-87

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		124.7-130 -broken rubbly core, minor calcite veining 129.85-130 -fault fracture to breccia @ 45 deg to c.a. (minor gouge in matrix)				
130.00 TO 136.70	SST	Colour: dark grey Grain Size f.gr. Silty sst vague thin and medium bedding 133.9-134.2 -fault breccia (to fracture zone - small displacement of clasts) within a clay matrix; 40 and 60 deg to c.a.	30	Minor qtz veinlets		
136.70 TO 146.60	SLST	Colour: dark grey Massive, vaguely bedded; sporadically bioturbated bedding 35-40 deg to c.a. 146.3-146.5 -minor shearing @	45			
146.60 TO 152.40	SST	Colour: dark to medium grey Grain Size: f.gr. Silty sst; vague thin and medium bedding; convoluted and possibly bioturbated				
152.40 TO 155.49	SLST	Colour: dark grey Massive, grades into mdst @ about 20-40 deg to c.a. 153.9 -some bioturbation				
	E.O.H.					

HOLE NUMBER: FW-87

DRILL HOLE RECORD

LOGGED BY: J. McDONALD

PAGE: 4

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL										COMMENTS		
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAg g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %		Mn ppm	
29153	59.00	60.00	1.00									56	54	93	0.4	5	1	2	8		2408	
29154	60.00	61.00	1.00									22	20	67	0.3	5	1	1	19		1876	
29155	61.00	62.00	1.00									36	24	150	0.6	5	1	2	39		1867	
29155	61.00	62.00	1.00																			
29156	69.35	70.00	0.65									11	16	61	0.2	5	1	3	21		1137	
29157	70.00	71.00	1.00									4	14	37	0.2	5	1	2	12		1561	
29158	71.00	72.00	1.00									17	19	337	0.6	5	1	2	35		1147	
29159	72.00	73.00	1.00									6	15	99	0.4	5	1	2	28		1120	
29160	73.00	74.00	1.00									16	28	303	0.5	5	1	2	34		2640	
29161	74.00	75.00	1.00									5	22	69	0.5	5	1	3	29		2042	
29162	75.00	76.00	1.00									8	21	59	1.2	5	1	2	25		908	
29163	76.00	77.00	1.00									16	22	92	0.5	5	1	1	26		1104	
29164	77.00	78.00	1.00									14	28	140	0.7	10	1	3	21		1986	
29165	78.00	79.00	1.00									23	21	168	0.7	5	1	2	25		1462	
29166	79.00	80.00	1.00									32	19	108	0.5	5	1	3	26		2046	
29167	80.00	81.00	1.00									27	22	76	0.5	5	1	2	23		1161	
29168	81.00	82.00	1.00									42	23	188	0.2	5	1	3	40		1183	
29169	82.00	83.15	1.15									20	19	95	0.3	5	1	2	42		1692	

HOLE NUMBER: FW-89

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: GRR1
LOCATION: NTS 93M/1W

PLOTTING COORDS GRID: FIELD
NORTH: 900.00N
EAST: 5100.00E
ELEV: 865.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 224.90m
START DEPTH: 0.00m
FINAL DEPTH: 224.90m

COLLAR GRID AZIMUTH: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: February 28, 1991
DATE COMPLETED: March 2, 1991
DATE LOGGED: 0, 0

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

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

CONTRACTOR: J. T. THOMAS
CASING: 64.0 M, PULLED
CORE STORAGE: J. T. THOMAS YARD

PURPOSE: TO TEST EAST ZONE BETWEEN FW-21 AND FW-85

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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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 64.00	«CASING»					
64.00 TO 76.00	«SST»	Colour: medium grey Grain Size: v.f. to f.gr. SST, massive bedding, convoluted; occasional slst or sst intra-formational clasts	35			66-67 and 75-76: 98% recovery
76.00 TO 85.34	«SST»	Colour: light grey Grain Size: c.gr. Massive, bedding, rare rip-up clasts, tops uphole 79 -2 cam band of med. gr. semi-massive pyrite 83.8 -3 cm of py as above	30	Minor qtz veinlets, weakly calcareous 83-85 -non calcareous	2-4% of v.f.gr. dissem, py +/- ZnS throughout; trace ZnS, PbS and possible tetrahedrite? in qtz veinlets	76-77;77-78;78-79;79-80: 98% recovery 80-81;81-82: 85% recovery 82-83;83-84;84-85.34: 100% recovery
85.34 TO 92.20	«SLST TO MD ST»	Colour: dark grey black Massive, vague bedding, bioturbated		About 20 hairline py seams/meter, py replacement of carbonaceous? clasts	Sulphides <1%	85.34-86;86-87;87-88;88-89;89-90: 95% recovery
92.20 TO 97.00	«SST»	Colour: light grey Grain Size: m. to c.gr. Thick bedded, minor breccia and shearing at 93.9-94.6	40	Possible clay alteration of matrix	Very f.gr. dissem py, 3-5% +/- ZnS, +/- PbS, minor veinlets	91-92; 92-93; 93-94; 94-95; 95-96; 96-97: 96% recovery
97.00 TO 198.00	SLST AND MDST	Colour: dark grey and black Massive, some bioturbation, weak brecciation, minor gouge 100.05-100.15 -fault gouge -sst interbeds in top 2 m		Weak qtz +/- py, po, ZnS veinlets; veinlets 20, 30, 45 deg to c.a.	97-106 -py, 2-5% +/- po, +/- py 101.5-103 -two 1-2 cm veins of py, po, +/- ZnS +/- cpy	97-98; 98-99; 99-100; 100-101; 101-101.5: 85% recovery

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<p>117-118 -weak brecciation</p> <p>-about 115 m -unit becomes predominantly mudst to silty mdst with moderate bioturbation; possible mdst conglomerate beds, but clasts may have been formed by bioturbidity</p> <p>135-135.30 -Fault breccia; with qtz-calcite infilling and clay gouge</p> <p>145.6 -worm burrow tops uphole</p> <p>145.70-145.90 -fault breccia; qtz veinlets and gouge</p> <p>145.70-145.90 -Fault breccia; qtz veinlets and gouge</p> <p>160-162 -50-60% thin interbeds of sst; 50-60% load structures (flame structures)</p> <p>179.4-181.7 interval of thin bedded to laminated fine grained sst and slst; convoluted bedding, flame structures grading upwards; probably worm burrows</p> <p>Slst to mdst below sandy unit; massive variably bioturbated; grades into sst interval at about 198 m</p>	<p>45</p> <p>45</p>		<p>103-104 -minor .5-1 cm py +/- po veinlets, trace sulphides</p> <p>116-118 -<2% thin py veinlets along fractures and in breccia</p>	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
198.00 TO 205.35	SST	<p>Colour: light grey Grain Size: fine to medium Thin and medium beds; wavy vague bedding and sharp plane parallel and scoured bedding; Poorly developed load structures; ripples, cross beds and convoluted bedding.</p> <p>199-200 -slst clasts, 10-20% up to 1.5 cm</p> <p>minor bioturbation, probable worm burrows</p> <p>About 15% slst to 203.50 m then slst becomes 30% of interval; tops uphole</p>		<1% sulphides		
205.35 TO 208.15	«MDST TO SLST»	<p>Colour: black Massive</p>				
208.15 TO 211.80	«SST»	<p>Colour: light grey Grain Size: m. to v.c.gr. to granule size Massive to thick bedded; scours, grades upwards 40-45 deg</p> <p>208.15-210.3 -sheared, graphite, qtz veining</p> <p>210.3-211.80 -very coarse grained sst to granule conglomerate lower contact scoured with rip-up clast, tops uphole</p>		<p>208.15-210.3 -qtz veining and flooding</p> <p>-minor qtz veinlets</p>	<p>-1% dissem. py</p> <p>-2% dissem. py</p>	
211.80 TO 219.00	SLST	<p>Colour: dark grey Massive bedding, same bioturbation, grades downward into a silty sst</p>		<p>215.05-215.30 -minor qtz-py +/- ZnS +/- PbS veinlets in fracture zone</p>	-sulphides <4%	

HOLE NUMBER: FW-89

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
219.00 TO 223.40	«SST»	Colour: dark grey Grain Size: f. to v.f.gr. Massive, bedding convoluted internally to 222 m and then thin bedding				
223.40 TO 224.90	«MDST» E.O.H.	Colour: black Massive				

HOLE NUMBER: FW-89

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

PAGE: 5

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL										COMMENTS		
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAG g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %		Mn ppm	
29221	66.00	67.00	1.00									66	54	193	0.3	5	1	2	1		1002	
29222	75.07	76.00	0.93									71	26	150	1.2	5	1	3	5		1454	
29223	76.00	77.00	1.00									33	34	139	0.7	10	29	3	17		1570	
29224	77.00	78.00	1.00									23	35	120	0.6	5	35	3	14		2308	
29225	78.00	79.00	1.00									12	26	86	0.8	5	1	2	24		1912	
29226	79.00	80.00	1.00									56	26	128	1.3	10	1	4	19		2074	
29227	80.00	81.00	1.00									35	38	129	0.9	5	1	2	5		3000	
29228	81.00	82.00	1.00									32	47	135	0.9	5	1	3	2		3399	
29229	82.00	83.00	1.00									19	83	278	0.2	5	33	5	5		8363	
29230	83.00	84.00	1.00									27	274	664	0.3	5	7	7	4		17984	
29231	84.00	85.34	1.34									38	713	1830	2.5	5	2	3	12		2470	
29232	85.34	86.00	0.66									79	175	344	1.9	20	1	3	18		2305	
29233	86.00	87.00	1.00									78	57	210	1.4	15	1	2	11		2497	
29234	87.00	88.00	1.00									95	134	452	1.9	5	1	2	49		2917	
29235	88.00	89.00	1.00									93	24	285	1.3	5	1	3	3		1983	
29236	89.00	90.00	1.00									82	26	100	1.2	15	1	2	37		1288	
29237	90.00	91.00	1.00									83	27	122	1	5	1	2	16		1471	
29238	91.00	92.00	1.00									84	62	242	1.3	5	1	2	23		2119	
29239	92.00	93.00	1.00									66	206	836	0.9	5	1	2	5		2398	
29240	93.00	94.00	1.00									43	66	527	0.5	5	1	3	17		1884	
29241	94.00	95.00	1.00									48	95	2231	0.9	5	1	3	14		2673	
29242	95.00	96.00	1.00									47	194	616	0.8	5	1	3	26		2404	
29243	96.00	97.00	1.00									40	665	912	1	5	1	3	5		2894	
29244	97.00	98.00	1.00									64	84	1221	0.9	5	1	3	12		2135	
29245	98.00	99.00	1.00									41	226	1656	1.1	5	1	3	16		3058	
29246	99.00	100.00	1.00									90	766	2991	1.8	5	1	4	10		2988	
29247	100.00	101.00	1.00									64	79	486	0.5	5	1	3	12		2668	
29248	101.00	101.50	0.50									46	42	194	0.5	15	1	3	26		2826	
29249	101.50	102.00	0.50									478	698	5803	4	10	1	4	10		2521	
29250	102.00	103.00	1.00									193	319	397	1.1	5	1	2	6		2871	
29251	103.00	104.00	1.00									124	474	823	0.8	5	1	2	1		3072	
29252	104.00	105.00	1.00									49	32	133	0.3	5	1	2	2		1926	
29253	105.00	106.00	1.00									45	9	65	0.1	5	1	2	12		1711	
AVE.	82.00	89.00	7.00									59.294	234.70	652.61	1.39	7.8429	6.6200	3.5714	14.280		5510.7	
ALT.AVG.	91.00	104.00	13.00									89.692	277.38	1225.9	1.0654	5.5769	1.0000	2.8077	12.692		2602.9	
ALT.AVG.	94.00	102.00	8.00									82.000	309.87	1638.9	1.1562	5.9375	1.0000	3.1875	14.125		2686.7	

HOLE NUMBER: FW-90

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: GRR1
LOCATION:

PLOTTING COORDS GRID: FIELD
NORTH: 990.00N
EAST: 5300.00E
ELEV: 850.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 191.16m
START DEPTH: 0.00m
FINAL DEPTH: 191.16m

COLLAR GRID AZIMUTH: 360° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: March 2, 1991
DATE COMPLETED: March 4, 1991
DATE LOGGED: 0, 0

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

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

CONTRACTOR: J. T. THOMAS
CASING: PULLED, 85.36 M
CORE STORAGE: J. T. THOMAS YARD

PURPOSE: TO TEST NORTHEASTERN STRIKE EXTENT OF FW-21,85 MINERALIZATION

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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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 85.36	«CASING»					
85.36 TO 89.40	«SST AND SL ST»	Colour: dark grey to grey Grain Size: m. and f.gr. Medium and thin bedded; 85.36-91.0 -faulted, rubbly core and minor gouge 87.7-89.0 -fault gouge and shearing -broken core to 149.9	70	85.36-86.35 -minor veining 86.35-87.6 -as above 87.6-88.39 -minor veinlets of qtz-calcite	-1% py -as above -veinlets of PbS and PbS dissem. in gouge-PbS </= 2%	-50% recovery -50% recovery -50% recovery
89.40 TO 103.00	«SLST»	Colour: dark grey Massive 95.70-95.8 -fault breccia to shear 98.33-98.80 -fault shear	45	94-94.5 -weak veining	-py (+/- ZnS) </= 4% 94.5-95 -as above 95-96 -trace sulphide	-recovery: 72% -as above -as above
103.00 TO 103.40	«SST»	Colour: light grey Grain Size: c.gr. Massive, bedding, sheared				
103.40 TO 107.25	«SLST»	Colour: dark grey Fault zone, sheared throughout, shears @ 40-45, 20, 60 deg to c.a. Fault breccia and gouge throughout				
107.25 TO 109.00	«SST»	Colour: med to light grey Grain Size: c.gr. Thickly bedded, moderately brecciated		-weak qtz veining	-dissem py, 1-2%; rare bleb of py	recov.: 85%

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
109.00 TO 112.70	«SLST»	Colour: dark grey Massive and 10% very thin sst interbeds, rubbly core	30			
112.70 TO 115.40	«SST»	Colour: light grey Grain Size: c.gr. Thin to medium bedding; weakly sheared	50	-weak qtz veinlets	-trace sulphide, py < /= 1-2%, trace ZnS	recov.: 60%
115.40 TO 129.80	«SLST»	Colour: dark grey Massive bedding with 10-20% thin interbeds of fine grained sst 120.3-120.50 -fault breccia 124.6-124.96 -sheared rubbly core, fault gouge	45 35			
129.80 TO 137.00	«SST»	Colour: light grey Grain Size: c.gr. Thick bedding 40-50 deg; scours; some fining upwards		Weak qtz and calcite veinlets, calcareous throughout	Fine dissem py 1-2%	Recovery: 90%
137.00 TO 161.54	«SLST & MDS T»	Colour: dark grey and black Massive; less than 10% thin sst intbds in top 7 m Broken core with fault breccia, shears, minor gouge with weak qtz veining to 152 m 148.7-148.8 -very strong qtz veining, py < 1% @ 158.3-158.70 -fault gouge and breccia at 20 deg and 40 deg to c.a.	70 30			

HOLE NUMBER: FW-90

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
161.54 TO 167.60	«SST»	Colour: medium grey Grain Size: m.gr. Thick bedding 40-45 deg to c.a., 10 cm of conglomerate over a scour at base of unit at 167.6 m; tops uphole				
167.60 TO 178.20	«SLST & MDS T»	Colour: black to dark grey Massive 176.6-177.8 -broken core, grades downward into an sst				
178.20 TO 181.40	«SST»	Colour: medium grey Grain Size: m.gr. Thick bedded 178.2-180 -sheared with weak calcite veining shear 20-40 deg and 60 deg to c.a.	50	-very weak qtz and calcite veinlets	-py 1-2%, trace ZnS, PbS in veinlets	recovery: 90%
181.40 TO 191.16	«MDST & SLS T» E.O.H.	Colour: black Massive with rare interbed of fine grained sst 185.1-185.2 -very weak qtz veinlets with trace ZnS and PbS	50			

HOLE NUMBER: FW-90

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

PAGE: 4

Sample	From (m)	To (m)	Length (m)	ASSAYS							GEOCHEMICAL										COMMENTS	
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAg g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %	Mn ppm		
29257	85.36	86.35	0.99									55	76	588	0.6	5	1	2	14		1748	
29258	86.35	87.60	1.25									23	21	134	0.1	10	1	2	41		2297	
29259	87.60	88.39	0.79									52	27683	5135	35.8	20	58	5	35		2497	
29260	88.39	89.39	1.00									62	439	143	0.6	5	1	5	5		10078	
29261	89.39	90.39	1.00									68	55	63	0.4	5	1	2	14		1239	
29262	94.00	94.50	0.50									77	528	717	1.3	10	1	2	37		1309	
29263	94.50	95.00	0.50									84	143	170	1	5	1	3	35		1251	
29264	95.00	96.00	1.00									90	38	202	0.4	10	1	2	1		995	
29265	107.25	108.00	0.75									29	22	91	0.4	10	1	2	22		1441	
29266	108.00	109.00	1.00									35	19	100	0.3	5	1	2	18		1309	
29254	112.70	113.80	1.10									79	17	140	0.3	5	1	2	1		878	
29255	113.80	114.80	1.00									45	15	105	0.3	5	1	2	9		1108	
29256	114.80	115.40	0.60									56	21	111	0.4	10	1	1	16		1214	
29267	129.80	130.80	1.00									16	16	68	0.4	5	1	2	10		860	
29268	130.80	131.80	1.00									13	12	50	0.4	15	1	2	12		523	
29269	131.80	132.80	1.00									13	13	51	0.4	5	1	2	12		629	
29270	132.80	133.80	1.00									26	14	87	0.4	5	1	2	12		724	
29271	133.80	134.80	1.00									12	18	51	0.6	10	1	2	8		2067	
29272	134.80	135.80	1.00									13	14	51	0.4	10	1	2	16		433	
29273	135.80	137.80	2.00									12	13	47	0.6	5	1	2	16		670	
29274	161.60	162.60	1.00									48	17	118	0.4	5	1	2	14		992	
29275	162.60	163.60	1.00									30	18	98	0.5	5	1	3	4		1169	
29276	163.60	164.60	1.00									31	17	99	0.4	5	1	2	5		832	
29277	164.60	165.60	1.00									30	16	99	0.5	5	1	2	9		677	
29278	165.60	166.60	1.00									28	20	101	0.5	5	1	3	12		667	
29279	166.60	167.60	1.00									29	24	108	0.3	5	1	1	4		916	
29280	179.00	180.00	1.00									43	33	303	0.5	5	1	3	32		1067	
29281	180.00	181.00	1.00									24	36	1129	0.2	5	1	3	34		1577	
29282	181.00	181.40	0.40									18	71	2345	0.5	5	1	3	27		1746	

HOLE NUMBER: FW-91

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: GER2
LOCATION: NTS 93M/1W

PLOTTING COORDS GRID: FIELD
NORTH: 120.00S
EAST: 800.00E
ELEV: 900.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 125.00m
START DEPTH: 0.00m
FINAL DEPTH: 125.00m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 180° 0' 0"

DATE STARTED: March 4, 1991
DATE COMPLETED: March 5, 1991
DATE LOGGED: March 5, 1991

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

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

CONTRACTOR: J. T. THOMAS DRILLING
CASING: 24.39 M, PULLED
CORE STORAGE: THOMAS YARD, SMITHERS

PURPOSE: TO TEST FAR WEST IP ANOMALY

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	-	0° 0'	ACID	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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HOLE NUMBER: FW-91

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 24.39	«CASING»					
24.39 TO 45.16	«AND DYKE»	Medium green, porphyritic to sericite texture with in a very fine grained to aphanitic mesocratic to leucocratic matrix; phenocrysts comprise about 25-30% of the rock Massive, no bedding or flow features probably dyke or sill phenocrysts ar about 60/40 white amygdules of analcite and feldspar, and dark green chlorite altered amphiboles phenocrysts are </= 5 mm; matrix is very light greenish grey Contactt with underlying unit is chilled over 1.0 meter to a very light green-grey aphanitic rock; the contact is irregular and brecciated		Minor calcite veinlets throughout with rare epidote and hematite	Very fine grained disseminated pyrite <1%	Composition is andesite (to latite)
45.16 TO 47.70	«MDST & COAL»	Colour: black Black, massive, mudstone and coal; at least one thin interbed of black porphyritic (fine grained) tuff also some tuffaceous clasts in the coal Sheared throughout to a mylonitic texture of mdst clasts (rounded) within a friable coaly matrix Shear fabric about	45			
47.70 TO 48.87	«AND DYKE»	Shear fabric about 45 deg to c.a.; very fine grained to aphanitic, very light greenish grey dyke				
48.87 TO 53.56	«MDST AND COAL»	Sheared as above dyke, predominantly fusane 51.6-51.7 -durane-clarane				recovery; 80-85

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
53.56 TO 60.96	«AND DYKE»	Colour: light green Porphyritic dyke as above mdst-coal interval; upper contact is faulted; unit becomes progressively more sheared down hole, manifested by fracturing to brecciation with minor gouge				
60.96 TO 70.10	«COAL & MDS T»	Colour: black Sheared to mylontonized throughout; class of mdst and rare sst and tuff within a matrix of coal 60.96-63.4 -fusane and mdst 63.4-66.5 -clarane and vitrane 66.50-69.50 -fusane and mdst 69.50-70.10 -durane with seams of clarane				
70.10 TO 72.80	«AND DYKE»	Sheared, homogenous				
72.80 TO 77.40	«SST»	Massive, coarse grained 74 -strongly sheared 76.20 -10 cm of clay gouge		Very strong clay alteration of the matrix	<1%	
77.40 TO 88.00	«COAL»	Colour: black Sheared throughout 77.4-79.25 -fusane 79.25-80.75				

HOLE NUMBER: FW-91

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-durane, fusane and clarane 80.75-81.0 -sst, mudstone 81.0-85.1 -clarane - durane 85.1-85.43 -mdst 85.43-88 -clarane-durane				
88.00 TO 90.12	«ANDESITE TUFF»	Massive, fine grained tuff		Very strong clay alt'n	Py </= 1%	
90.12 TO 91.25	«COAL»	Clarane - durane				
91.25 TO 91.40	«SST»	Colour: grey Grain Size: f.gr.				
91.40 TO 111.35	«COAL»	Sheared throughout, variable 0 to 40 deg 91.40-92.9 -fusane, durane and clarane, some mudstone 5% 92.9-93.9 -clarane-durane, 10 cm of mdst 93.9-94.85 -brecciated sst with 30% coal, 15 and 40 deg to c.a. 94.85-97.56 -clarane-durane 97.56-97.85 -mdst 97.85-98.8				

HOLE NUMBER: FW-91

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

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HOLE NUMBER: FW-91

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-May-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-clarane 98.8-101.75 -50% sst, mdst, 50% clarane 101.75-103.5 -fusane and clarane 103.5-104.2 -mdst, minor coal 104.2-110.2 -clarane and durane 110.2-111.35 -clarane, durane and fusane				
111.35 TO 113.00	«AND DYKE»					
113.00 TO 113.70	«COAL»	Durane				
113.70 TO 125.00	«SST AND CG L» E.O.H.	Volcaniclastic and coarse grained grading up to fine grained tops in thick bedded sequences; rounded clasts of slst, mdst and about 80% fld clasts, unit is based by possible ash flow containing about 90% fld crystals (+/- 1 mm)	65	Very strong clay alteration		

HOLE NUMBER: FW-91

DRILL HOLE RECORD

LOGGED BY: J. MCDONALD

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HOLE NUMBER: FW-94

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: FIREWEED
PROJECT NUMBER: 665
CLAIM NUMBER: GRR3
LOCATION: NTS 93M/1W

PLOTTING COORDS GRID: FIELD
NORTH: 515.00N
EAST: 400.00W
ELEV: 900.00

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

COLLAR DIP: -47° 0' 0"
LENGTH OF THE HOLE: 169.82m
START DEPTH: 0.00m
FINAL DEPTH: 169.82m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 180° 0' 0"

DATE STARTED: March 7, 1991
DATE COMPLETED: March 8, 1991
DATE LOGGED: 0, 0

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

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

CONTRACTOR: J. T. THOMAS DRILLING
CASING: PULLED, 27.43 M
CORE STORAGE: J. T. THOMAS YARD

PURPOSE: TO TEST A WEAK IP ANOMALY IN THE FAR WEST 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
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 27.43	«CASING»					
27.43 TO 29.50	«DEBRIS FLOW»	Massive, angular to rounded clasts of clay altered slst, mdst, unaltered mdst, slst, and fragments containing lath shaped calcite frags and probable carbonaceous material (shell pieces?) and wood fragments; matrix is a dark grey mdst? Unsorted, unbedded, also probable tuff fragments		-calcareous		
29.50 TO 30.15	«SST»	Colour: light grey Grain Size: c.gr. Medium bedded, poorly to moderately sorted clasts of qtz, fld, lesser slst, mdst and shell? frags		Very strong clay alteration calcareous		
30.15 TO 37.10	«MDST AND COAL»	Colour: black Thin and medium beds Rubby core and minor gouge throughout the unit; coal is primarily fusane and durane with seams of clarane up to 20 cm long	60	Clay altered to 31.0 m	Minor <1% laminations of bedded pyrite	
37.10 TO 39.00	«FOSS. MDST»	Colour: medium to light grey Fossiliferous mdst, massive bedding locally micritic shell fragments and whole shells throughout from 10% to 30% of unit		Weak to moderate clay alteration		
39.00 TO 42.60	«SST»	Colour: greenish grey Grain Size: c.gr. Medium and thick bedded; poorly to moderately sorted clasts of slst, mdst, qtz feld, shells and carbonaceous fragments 40.25-40.9 -conglomerate with clasts of slst and whole			39.62-40.25 -dissem. and lam. of bedded py, 10-15%	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		shells				
42.60 TO 45.72	«DEBRIS FLOW»	As described at 27.43-29.50 42.74-42.80 -clay altered interbed either and ash bed or clast	80			
45.72 TO 47.34	«CONGLOM»	Colour: light Grain Size: granule Massive, bedding subrounded poorly sorted clasts as in sst @ 39 m; fines upwards		Moderate clay alteration of matrix variably calcareous	<1%	
47.34 TO 49.86	«SST»	Colour: light grey Grain Size: c. and m.gr. As above cgl but finer grained 49.56-49.86 -two thin carbonaceous slst interbeds	70	Moderate clay alteration of matrix -variably calcareous	Very fine grained pyrite, 5% -very fine grained pyrite <5%	
49.86 TO 56.00	«SST»	Colour: very light grey Grain Size: f.gr. Massive with minor thin cgl. bases; about 70% fld? clasts, 10-20% qtz and slst and carbonaceous clasts in the remainder?; vague bedding throughout Unit grades into an underlying one as a colour change and is probably its bleached equivalent		49.56-51 -bleached possibly clay alteration 53.48-54.7 -calcite veinlets @ 10 deg to c.a. 54.7-55.86 -calcite veining and breccia infilling veinlets @ 10 deg to c.a.	-<1% py 52-53.48 -minor py veinlets @25 deg to c.a. -py along calcite veinlets and as blebs adjacent to veinlets of py, py 5-10%	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
56.00 TO 101.00	«SST TO SLS T»	Colour: dark grey Grain Size: f.gr. Massive, silty sst shell (bivalve and gastropod) fossils and carbonaceous (wood) fragments, bioturbated throughout		Minor calcite veinlets	Dissem. py <1-2%	
101.00 TO 108.50	«SST»	Colour: dark and medium grey Grain Size: m. and c.gr. Massive bedding, mottled texture due to bioturbation and possibly slumping 30-40% coarse grained clasts of shells? Carbonaceous throughout also shell fossils throughout (bivalves and gastropods); unit becomes increasingly lighter downhole due to bleaching 105.5-107.5 -fine to medium grained massive, moderate to strong leaching; homogenous texture 107.5-108.5 -medium to coarse grained mottled texture moderately bleached	65	101.5-102.9 -weak calcite veinlets 105.9-106.5 -moderately to strongly bleached, probable clay alteration 107.5-108.5 -moderately bleached	-very fine grained, py dissem. < /= 1% - 2% -py veinlets 10 deg to 30 deg to c.a. 5% with calcite veins 106.5-107.5 -very fine grained pyrite, <1-3%	
108.50 TO 115.50	«SST»	Colour: very light greenish grey Grain Size: m. and c.gr. Massive bedding, homogenous texture due to bleaching		Strongly bleached (clay alt'n), weak calcite veinlets; non calcareous	109.5-115.5 -very fine grained pyrite <1-3%	
115.50 TO 129.00	«SST»	Colour: medium to light grey Grain Size: m. and c.gr. Massive with thin cgl. bases (<10%), fining upwards 119.5-124 -strongly bioturbated, carbonaceous wisps throughout		Variably calcareous, weakly bleached	Very fine gr. pyrite, <1-3%, check sample	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
129.00 TO 169.82	«SST» E.O.H.	<p>Colour; dark grey Grain Size: f.gr. to silty Massive bedding 60-70 deg.; mottled texture due to bioturbation; also bivalve and gastropod fossils</p> <p>140-141.0 -fault breccia with calcite veining in the matrix</p> <p>150 to -medium patchy bleaching</p> <p>162-164 -fault breccia infilled by calcite</p>		<p>Weak calcareous</p> <p>-siliceous hairline veinlets bleached</p>	<p>Very fine grained pyrite, <1-3%</p> <p>-py <1-2%</p> <p>165-166 -as above with trace ZnS in qtz veinlet</p>	<p>148-151 -large calcite nodules with rims of py replacing large shells</p>

Sample	From (m)	To (m)	Length (m)	ASSAYS							GEOCHEMICAL										COMMENTS
				Cu %	Pb %	Zn %	Ag oz/t	Au oz/t	MAg g/t	MAu g/t	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Sb ppm	Bi ppm	As ppm	Mn% %	Mn ppm	
29292	39.62	40.25	0.63								23	16	151	0.1	10	1	1	31		621	
29293	46.00	47.00	1.00								56	17	101	0.1	5	1	1	25		1197	
29294	47.00	47.90	0.90								18	11	86	0.5	5	1	2	12		1331	
29295	47.90	48.56	0.66								18	10	86	0.1	5	1	1	6		1004	
29296	48.56	49.56	1.00								18	16	60	0.3	5	1	1	17		1235	
29297	49.56	51.00	1.44								21	15	102	0.6	10	1	1	15		877	
29298	51.00	52.00	1.00								19	15	131	0.1	5	1	1	22		806	
29299	52.00	53.48	1.48								20	12	143	3.5	10	1	1	24		553	
29300	53.48	54.70	1.22								18	11	99	0.2	5	2	1	65		536	
29301	54.70	55.86	1.16								13	11	59	0.8	5	2	1	30		593	
29302	101.50	102.90	1.40								40	17	152	0.6	5	1	1	43		911	
29303	102.90	103.90	1.00								46	13	129	0.4	5	1	1	21		1048	
29304	103.90	104.90	1.00								37	17	134	0.6	5	1	1	25		1184	
29305	104.90	105.50	0.60								44	18	125	0.5	5	1	1	22		1177	
29306	105.50	106.50	1.00								23	15	168	0.4	5	1	1	37		1169	
29307	106.50	107.50	1.00								18	21	151	0.5	5	1	1	14		1159	
29308	107.50	108.50	1.00								20	15	109	0.1	5	1	1	13		1410	
29309	108.50	109.50	1.00								14	11	121	0.4	5	1	1	1		1185	
29310	109.50	110.50	1.00								15	12	133	0.3	5	1	1	12		1154	
29311	110.50	111.50	1.00								14	11	103	0.3	5	1	1	16		1053	
29312	111.50	112.50	1.00								15	11	78	0.4	5	1	1	5		942	
29313	112.50	113.50	1.00								15	13	56	0.6	5	1	1	13		949	
29314	113.50	114.50	1.00								17	13	86	0.6	5	1	1	21		825	
29315	114.50	115.50	1.00								18	19	133	0.6	5	1	1	20		806	
29316	118.00	119.50	1.50								16	20	47	0.6	5	1	1	15		1273	
29317	126.50	128.00	1.50								26	18	105	0.3	5	1	1	40		1011	
29318	131.00	132.00	1.00								22	17	97	0.7	5	1	2	21		957	
29319	162.00	163.00	1.00								40	17	110	0.9	5	1	3	15		723	
29320	163.00	163.80	0.80								29	23	81	0.8	5	1	3	18		746	
29321	163.80	165.00	1.20								27	20	93	0.9	5	1	5	47		1049	
29322	165.00	166.00	1.00								30	18	137	1.1	5	1	6	6		1100	