

BRITISH COLUMBIA NIS 92H/5
Drill Logs - relogged Seneca
87 1-12, 86 1-28, 85 1-12

820830

HOLE NUMBER: 87-12

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 4
LOCATION: VENT WEST

PLOTTING COORDS GRID: IDEAL
NORTH: 210.00N
EAST: 9161.00E
ELEV: 262.00

ALTERNATE COORDS GRID: Vent
NORTH: 2+20N
EAST: 92+20E
ELEV: 262.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 319.40m
START DEPTH: 0.00m
FINAL DEPTH: 319.40m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

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

CONTRACTOR:
CASING: Pulled
CORE STORAGE: PROPERTY

PURPOSE: Test Vent stratigraphy 800m West of Vent 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
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 13.70	CASING					
13.70 TO 19.20	BOULDERS					
19.20 TO 24.20	«XT\ASH»	Crystal tuff followed by massive homogenous ash v.f.g., olive green 20.1m FLT			ash contains 3-5% v.f.g. py	
24.20 TO 34.40	«FPD»	massive fsp, porphyritic dike contains rare mafic patches & occ xenoliths olive green 25.3m FLT 34.4m FLT				as seen in 87-10
34.40 TO 103.30	«FHPD»	massive, fresh fsp, hornblende porphyritic intrusive mafic xenoliths frequent carbonate veining common				
103.30 TO 117.00	«AND ASH»	med to thin bedded ash tuffs and minor crystal tuffs dips variable - 30-50 minor cherty zones 107.6m «FLT» 110.3m «FLT»	40			
117.00 TO 125.00	«DAC TBX»	117.3m «FLT» Dac blocks (fsp porphyry in fine sulphide matrix)		reaction rims on blocks minor silicification	tr py	Greater than 5% total barium.
125.00 TO 125.40	«MS»	Massive sulphide py as fragments or clots preferred orientation but not bedded			20% sph 80% py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
125.40 TO 139.50	«DAC FLBX»	intense stockwork silica and sulphides developed between frags of dac fsp porphyry		«i si»	«py-sph stckwk» 5-15% py 1-5% sph	
139.50 TO 142.20	«FPD»	feldspar porphyritic olive to pale green				
142.20 TO 151.50	«DAC FL»	massive pale green pseudo brecciated with fine py/sph		stg si	tr sph/py	
151.50 TO 153.90	«DAC LTH LT /TBX»	large blocks and lapilli size frags heterolithic includes Jasper frags				
153.90 TO 233.20	«FHPD»	Both contacts marked by flt gouge massive fsp hornblende porphyry 224.6m FLT				
233.20 TO 240.50	«AND LT»	fragments vague occ fsp porphyritic dome frags dk green		med chlor		
240.50 TO 271.00	«FPD»	Feldspar porphyritic rare mafic xenoliths minor qtz veining				an early version
271.00 TO 317.90	«DAC FL/FL BX»	massive weakly fsp porphyritic occ brecciated zones green alteration makes I.D. difficult		296.3-302.4m «i si» matrix silicification 304.8-316.1m frequent carb veins	tr py 316.1-317m u.f.g. py in matrix	
317.90 TO 319.10	«FPD»	as described in 240.5-271.0m				

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
15864	124.97	125.43	0.46	.465	3.04	6.45	326	2.29	1.52								
15865	125.43	126.80	1.37	.44	1.5	5.92	48.5	.58	.14								
15866	126.80	128.00	1.20	.413	.15	5.1	22.1	.45	.15								
	128.00	128.63	0.63							1611	1330	32480	14.7	535			
	128.63	129.54	0.91							1883	4023	28669	17.7	310			
	129.54	130.45	0.91							1151	2236	27298	26.9	340			
	130.45	131.37	0.92							1139	272	21460	16.5	320			
	131.37	132.28	0.91							672	919	19254	25.5	390			

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
23490	24.43	30.48	6.05	13.75	0.045	0.73	1.99	1.11	1.69	0.08	5.53	0.01	71.92	0.26	0.02	97.13	0.4	18	156	1	26	1	68	5
23491	67.66	70.71	3.05	13.53	0.05	1.34	3.3	1.62	3	0.1	3.77	0.01	69.51	0.35	0.05	96.63	0.9	1	71	1	10	1	72	5
23492	108.20	111.25	3.05	13.29	0.05	1.37	3.73	0.84	3.18	0.12	4.18	0.01	68.88	0.41	0.98	97.05	1	1	301	1	37	1	149	5
23493	120.40	123.44	3.04	15.51	5.055	1.85	2.68	3.13	0.94	0.03	3.2	0.01	59.93	0.48	2.49	95.3	14.4	180	89	147	1117	17	2578	140
23494	129.84	132.89	3.05	8.72	0.21	0.33	6	2.63	1.06	0.01	0.07	0.01	71.46	0.24	1.18	91.92	20.5	303	89	1981	1337	51	20718	250
23495	148.44	151.48	3.04	11.25	0.135	0.96	2.99	3.39	2.03	0.05	0.12	0.01	73.16	0.32	2.47	96.88	1.2	105	391	37	41	9	727	10
23496	194.16	197.20	3.04	13.94	0.035	0.89	3.35	0.56	2.06	0.21	5.63	0.01	70.33	0.37	0.22	97.6	1.2	1	210	1	43	1	303	5
23497	236.83	239.88	3.05	17.63	0.025	0.01	9.69	0.66	10.41	0.47	2.99	0.1	49.06	0.76	0.82	92.63	2.3	1	60	1	1	1	330	5
23498	267.31	270.36	3.05	12.65	0.04	2.32	2.45	1.11	1.97	0.14	4.4	0.01	70.13	0.29	0.91	96.41	0.7	8	124	62	21	1	100	5
23499	279.50	282.55	3.05	13.19	0.065	1.14	2.14	2.3	2.47	0.14	2.35	0.01	71.67	0.35	0.65	96.45	0.6	18	205	1	25	2	85	10
23500	306.93	309.98	3.05	14.11	0.035	2.11	2.76	1.07	2.44	0.17	4.65	0.01	67.16	0.39	0.54	95.43	1.1	18	88	1	20	1	102	5

HOLE NUMBER: 87-11

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA	PLOTING COORDS GRID: IDEAL	ALTERNATE COORDS GRID: Vent	COLLAR DIP: -90° 0' 0"
PROJECT NUMBER: 663	NORTH: 2.00N	NORTH: 0+ 5N	LENGTH OF THE HOLE: 319.43m
CLAIM NUMBER: DOROTHY 3	EAST: 10388.00E	EAST: 103+43E	START DEPTH: 0.00m
LOCATION: VENT	ELEV: 262.00	ELEV: 262.00	FINAL DEPTH: 319.43m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED:	0, 0	COLLAR SURVEY: NO	PULSE EM SURVEY: NO	CONTRACTOR:
DATE COMPLETED:	0, 0	MULTISHOT SURVEY: NO	PLUGGED: NO	CASING: Pulled
DATE LOGGED:	0, 0	RQD LOG: NO	HOLE SIZE: NQ	CORE STORAGE:

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
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HOLE NUMBER: 87-11

DRILL HOLE RECORD

LOGGED BY: Int Curator/PB

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 21.90	Casing					
21.90 TO 40.50	«DAC FP FLO W/DOME»	Colour: Grain Size: Weak, mottled, fragmental texture Last 1 m of unit chalky white, very crumbly, rubbly Faulted lower contact		Weak silicified		
40.50 TO 48.40	«AND TUFF»	Colour: dark green Grain Size: fine Rubbly, some soft white clay along fct surfaces Fine grained fairly massive and homogeneous unit Lower contact not preserved		Moderate epidote as irregular patches and selvages about ep. veinlets; epidote as fine disseminations - possible altered fsp	Minor py veinlets and coated fct surfaces	If unit is a dyke, the dyke predates alteration
48.40 TO 133.80	«DAC FP FL/ DOME»	Colour: mottled creamy green Grain Size: 69.9-71.3 -Fault zone -stronger bleaching, very rubbly core, includes 30-40 cm of pyritic fault gouge Lower contact: 5-10 cm pyritic fault gouge		Strong mottled silicification giving strong fragmental appearance Fsp not very altered	Occasional <1-1.5 mm wide zones of 2-3%, coarse diss py and py veinlets Overall 1% py	Strong resemblance to silica flooding of dome in trough area
133.80 TO 157.80	«SEDS» SILTST, MUD ST, ASH,SS	Colour: tan, brown, green Grain Size: Mainly fine grained to v. fine grained siltst/mudstone/Ash with occasional narrow beds of coarse ss to finer cobblestone, poorly bedded 137.8-139.8 -exhalitive pyrite laminations			<1-2% finely diss py - syngenetic and as f.g. fct coatings 137.8-139.8 -occasional < 1.0 cm wide py rich	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Bedding 141.1 m 156.0 m Rubbly lower contact	70 75		laminations and zones of py enrichment, very f.g. py	
157.80 TO 162.60	«AND TUFF»	Colour: dark green Grain Size: f.g. Similar to previous And Tuff; f.g., massive, fairly homogeneous		Moderate epidote as irregular patches and diss grains; weakly chloritic		
162.60 TO 212.10	«AND T Bx»	Colour: dark green Grain Size: Large lapilli to block size fragments of grey FP, F(H)P flow, rounded frags, some with narrow reaction rims in a dark green andesite groundmass Two types of fsp 1. fresh, white 2. greenish, white, cloudy, weak epidote altered Rubbly zones, minor gouge as follows: 163.2-163.7 174.3-175.8 182.4-182.7 191.1-192.0 Below 194.15 -block size greatly increases with blocks up to 1.5 m		Weak chlorite alteration of And ground-mass		Unit in not the HW marker as seen in the Seneca deposit area
212.10 TO 293.20	«INT FP FLO W/DOME»	Colour: Grain Size: Unit looks similar to usual FP unit; but fsp are not fresh and unit contains abundant soft greenish sericite altered clots		Weak-mod sericite as altered fsp and alteration and <5mm greenish inclusions within unit Minor anhydrite veinlets	Overall <1% diss py and trace sp and occasional py veinlets Locally there is fine py +/- sp, cp veinlets and diss. significant	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<p>291.2-291.35 -shear zone; strong shear texture</p> <p>291.35-293.2 -slightly different than rest of unit, fsp poor or fsp strongly altered and ghosted</p>	40	<p>Below 234.7-253.7 -unit looks more altered</p>	<p>zones as follows</p> <p>212.1-212.7 -3-5% fine py veinlets</p> <p>217.2-218.2 -7-8% fine py and sp includes 1 cm py-sp-anhydrite vein at 218.2, trace diss py</p> <p>221.6-227.0 -<1% diss. sp, py, minor py veinlets +/- sp, cp</p> <p>Below 234.7 -sp and py more common but overall <1%</p> <p>238-239 -10% py, <1% cp veining</p> <p>254.25-262.5 -overall 1-2% sp, py as diss and fine veining; significant zones as follows</p> <p>256.6-257.3 -5-6% sp, 5-7% py as fine veinlets/ stockwork</p> <p>257.8-258.5 -5% sp, 5% py, tr cp fine veinlet/ stockwork</p> <p>259.65-260.0 -0.5-1.0 cm wide SP vein</p>	
293.20 TO 299.30	«DAC LT»	<p>Colour: Grain Size: Heterolithic, abundant, dark green and frags, altered fp flow frags, bxd frags, like Vent zone</p>				

HOLE NUMBER: 87-11

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Sulphide-rich frags in a white silica flooded ground mass 297.5-299.3 -py rich groundmass			297.5-299.3 -10-25% pyrite, diss within groundmass, trace sp	
299.30 TO 319.43	«FP FL, DOM E»	Colour: Grain Size: Similar to previous but not as altered, is lacking py-sp mineralization and this unit is strongly faulted/brecciated		Minor qtz veining	Traces of py; locally 5-7% py assoc. with some faulting	

HOLE NUMBER: 87-11

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
16326	297.50	299.30	1.80							866	50	142	.9	2	99	

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28848	22.20	25.30	3.10	16.16	0.01	0.83	3.21	0.01	2.22	0.17	5.63	0.01	68.84	0.46	0.02	97.55	1.5	8	42	6	21	1	75	5
28849	42.10	45.10	3.00	16.31	0.005	3.51	11.57	0.01	6.59	0.55	1.88	0.01	55.48	1.17	0.4	97.46	2.8	1	18	186	23	1	172	5
28850	50.00	53.00	3.00	15.12	0.01	0.53	2.71	0.01	2.1	0.15	5.64	0.01	70.41	0.42	0.4	97.48	0.7	51	31	25	26	1	61	5
28851	79.20	82.60	3.40	14.96	0.01	1.08	2.68	0.01	2.2	0.19	5.87	0.01	66.93	0.43	0.04	94.39	1.3	32	48	63	20	1	74	5
28852	108.80	111.90	3.10	15.11	0.025	0.73	2.72	0.01	2.08	0.18	6.1	0.01	70.12	0.43	0.09	97.58	1.3	19	133	14	28	1	66	10
28853	142.30	145.40	3.10	14.92	0.005	0.86	3.48	0.01	2.42	0.18	5.5	0.01	68.85	0.58	0.34	97.14	1.7	1	22	5	32	1	68	5
28854	169.80	172.80	3.00	17.48	0.005	1.2	6.26	0.01	6.05	0.28	5.31	0.01	58.48	0.62	0.02	95.71	2	1	29	34	19	1	143	10
28855	200.30	203.30	3.00	15.89	0.005	2.66	4.23	0.48	3.24	0.25	6.29	0.39	61.59	0.55	0.49	96.05	2.3	16	9	48	22	1	103	5
28856	224.60	227.60	3.00	14.99	0.335	1.11	3.13	4.17	1.32	0.06	0.76	0.09	68.73	0.52	2.27	97.48	2.3	81	403	728	30	3	696	10
28857	252.10	255.10	3.00	14.46	0.26	0.77	3.85	4.11	2.75	0.15	0.7	0.01	66.61	0.51	2.03	96.21	2.4	67	210	302	37	1	5267	5
28858	282.50	285.50	3.00	15.82	0.225	0.8	4.15	2.48	3.51	0.23	1.68	0.01	66.27	0.55	1.1	96.82	1	10	288	54	23	1	242	5
28859	293.30	296.30	3.00	14.54	0.05	0.78	7.94	0.46	5.57	0.34	0.81	0.01	62.38	0.85	2.67	96.39	1.1	12	121	277	36	1	210	5

HOLE NUMBER: 87-10

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT WEST

PLOTTING COORDS GRID: IDEAL
NORTH: 300.00S
EAST: 9102.00E
ELEV: 165.00

ALTERNATE COORDS GRID: VENT
NORTH: 2+70S
EAST: 91+50E
ELEV: 165.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 330.40m
START DEPTH: 0.00m
FINAL DEPTH: 330.40m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

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

CONTRACTOR:
CASING: Pulled
CORE STORAGE: Property

PURPOSE: Tests deep 900m west of

Lower Vent 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
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 14.30	Casing					
14.30 TO	«QFPD» dike	quartz, feldspar porphyry crowded, large <5mm phenocrysts fsp faintly pink chilling near base				
26.50 TO 29.60	«FLT BX»	heterolithic breccia				
29.60 TO 34.10	«FPD»					
34.10 TO 52.30	«AND FL»	massive 48.5m FLT carb-clay		w-m epi, weak hematite in upper portion	1-2% diss py	
52.30 TO 77.90	«AND ASH»	Thick and thin bedded -ultra fines 62.8-64.0m FLT Bx?	70		overall tr py but zones up to 5% diss u.f.g. py	
77.90 TO 81.40	«DAC LT» «GMS»	partially welded ash flow collapse pumice frags				a green and white mottled unit
81.40 TO 125.90	«DAC ASH»	massie, ultrafines olive green occ thin beds @ 80-85 -ctc gradational			‡113.4‡ «Py lam» less than 1cm CHTY ASH @75 ‡114-115.2‡«Sulph Mud»	
125.90 TO 134.40	«DAC LT XT» «GMS»	m.g. to f.g lithic and fiamme rich crudely grades upward				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
134.40 TO 140.10	«AND FL»	massive amygdular towards top conformable etc's		m-str epi carbonate veinlets	«tr cp»	
140.10 TO 162.50	«DAC ASH»	massive ultrafine ash beds, occasional XT beds, otherwise homogenous v.f.g, olive green distinctive cross cutting narrow breccia "dikelets" heterolithic v.f.g. sulphide rich	80	‡143.6-147.3‡«stg si»	‡140.8-141.7‡«Sulph Mud» 20% v.f.g. Py	
162.50 TO 169.20	«AND FL»	epidote ball and knots dominate amygdaloidal flow top bx		«int epi»	nil	
169.20 TO 181.10	«DAC ASH»	massive ultra fines homogenous v.f.g., olive green			tr py <3% occ clot of v.f.g. Py	
181.10 TO 194.20	«FPD» «Int Dike»	contacts at high angle green fsp porphyritic contains mafic patches - xenoliths		«mod epi»		
194.20 TO 200.90	«DAC ASH»	massive homogenous ultrafine grains olive green	75			
200.90 TO 239.60	«DAC TBX»	Block and lapilli size fsp porphyritic hosted in a f.g. chloritic matrix monolithic - wk rx rim around some frags				Spectacular white fragment breccia Most frags are bombs
239.60 TO 252.50	«AND FLOW or TBX?»	dominated by large epidotized patches - frags? green		intense epi «i epi»	240.8m Qtz vein 2-3%Py	
252.50 TO 277.50	«DAC FL/FLB X»	massive, weakly fsp porphyritic large blocks and lapilli densely packed olive green, f.g.				

HOLE NUMBER: 87-10

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
277.50 TO 280.70	«AND FL?»	vaguely amygdaloidal		mod chlorite «m chl»	tr py	
280.70 TO 304.20	«DAC FL»	massive v. wk. pseudobx f.g., olive green				Dome
304.20 TO 311.70	«FPD»	strongly fsp porphyritic mafic xenoliths green speckled				
311.70 TO 333.50	«AND FL/FLB X»	series of epidote altered amygdaloidal flows and Andesitic lapilli tuffs with silicification at top		«stg epi»	«tr cp»	

HOLE NUMBER: 87-10

DRILL HOLE RECORD

LOGGED BY: INT CURATOR/CB

PAGE: 4

HOLE NUMBER: 87-10

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	0.00	0.00	0.00														

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
23476	17.40	20.40	3.00	13.73	0.105	3.42	2.6	2.24	1.05	0.1	3.89	0.01	68.89	0.29	0.04	96.37	2.2	32	178	1	34	8	57	5
23477	34.70	37.80	3.10	15.57	0.03	1.47	5.25	0.73	2.97	0.3	5.21	0.01	63.77	0.55	0.83	96.68	2.5	1	73	1	23	3	144	5
23478	66.10	69.20	3.10	13.19	0.035	0.99	5.7	0.83	2.88	0.19	4.23	0.01	66.93	0.46	2.5	97.94	1.3	1	89	1	34	3	274	5
23479	90.50	93.60	3.10	14.95	0.065	0.33	3.75	2.03	3.46	0.21	3.01	0.01	68.06	0.37	0.62	96.85	0.8	1	148	1	13	1	98	5
23480	114.00	115.20	1.20	12.31	0.075	0.11	7.07	2.73	1.78	0.08	1.28	0.01	67.64	0.3	5.64	99.01	0.1	16	149	1	21	1	40	10
23481	134.40	137.50	3.10	15.8	0.03	3.56	8.94	0.33	4.68	0.49	3.89	0.09	55.37	0.84	1.16	95.18	2.5	1	129	522	8	1	1464	5
23482	140.80	141.70	0.90	15.36	0.06	0.01	8.5	1.59	5.01	0.32	3.02	0.05	58.67	0.58	4.12	97.29	1.5	1	88	9	31	1	186	5
23483	175.90	178.90	3.00	13.14	0.06	0.64	2.98	1.68	2.14	0.14	3.56	0.01	71.96	0.25	0.9	97.44	0.6	12	106	1	29	1	79	5
23484	195.70	197.50	1.80	13.15	0.125	0.99	3.95	3.24	2.04	0.16	1.81	0.01	70.03	0.36	1.88	97.73	0.6	31	236	1	26	1	101	10
23485	227.70	230.70	3.00	13.19	0.035	2.63	2.86	0.87	2.71	0.14	4.55	0.01	67.43	0.34	0.99	95.73	0.8	30	78	1	21	1	88	10
23486	246.00	249.00	3.00	16.46	0.015	8.25	8.25	0.01	7.04	0.55	2.6	0.01	50.29	0.56	0.11	94.13	2.4	1	27	17	1	1	302	5
23487	277.70	280.70	3.00	18.16	0.025	0.62	8.64	0.41	9.94	0.43	4.3	0.02	49.35	0.62	0.55	93.05	1.3	1	82	161	1	1	272	5
23488	313.30	316.40	3.10	13.74	0.045	1.39	4.73	1.45	3.2	0.17	3.79	0.01	66.14	0.7	1.21	96.59	1.5	1	121	1	18	1	100	10
23489	324.30	327.40	3.10	15.43	0.02	4.93	10.2	0.08	7.03	0.49	2.63	0.06	52.15	0.77	0.91	94.71	2.3	1	53	113	3	1	194	5

HOLE NUMBER: 87-9

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 270.00S
EAST: 8836.00E
ELEV: 172.00

ALTERNATE COORDS GRID: Vent
NORTH: 2+50S
EAST: 89+ 0E
ELEV: 172.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 256.95m
START DEPTH: 0.00m
FINAL DEPTH: 256.95m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

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

CONTRACTOR:
CASING: Pulled
CORE STORAGE: Property

PURPOSE: Strat hole 1.2 km. west of lower Vent 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
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
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HOLE NUMBER: 87-9

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 14.63	Casing					
14.63 TO 25.15	«FPD»					
25.15 TO 39.62	«DAC TBX?»					
39.62 TO 70.10	«AND FL?»					
70.10 TO 80.32	«FPD»					
80.32 TO 112.47	«ASH»					
112.47 TO 146.61	«AND LT»					
146.61 TO 202.84	«ASH»				‡201.26-201.65‡«MSPH Frags»	
202.84 TO 224.00	«DAC XT/LT»					
224.00 TO 256.95	«FPD»					

HOLE NUMBER: 87-9

DRILL HOLE RECORD

LOGGED BY: Int Curator

PAGE: 2

HOLE NUMBER: 87-9

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 87-8

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 4
LOCATION: Lower Vent West

PLOTTING COORDS GRID: IDEAL
NORTH: 272.00S
EAST: 8428.00E
ELEV: 168.00

ALTERNATE COORDS GRID:
NORTH: 3+85S
EAST: 84+70E
ELEV: 168.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 434.00m
START DEPTH: 0.00m
FINAL DEPTH: 434.00m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

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

CONTRACTOR:
CASING: Pulled
CORE STORAGE: Property

PURPOSE: Strat hole 1.6 km. on road west of Lower Vent

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: 87-8

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.10	Casing					
6.10 TO 61.26	«Dac»					
61.26 TO 142.86	«QFPD?»					
142.86 TO 201.66	«AND»					
201.66 TO 244.00	«QFPD»					
244.00 TO 341.00	«AND»					
341.00 TO 375.00	«QFPD»					
375.00 TO 434.00	«AND»					

HOLE NUMBER: 87-8

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 87-7

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 272.00S
EAST: 10418.00E
ELEV: 198.00

ALTERNATE COORDS GRID:
NORTH: 2+25S
EAST: 104+55E
ELEV: 198.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 232.26m
START DEPTH: 0.00m
FINAL DEPTH: 232.26m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

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

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 21.90	Casing					
21.90 TO 34.10	«QFP DYKE»	Colour: lt. green Grain Size: 29.5-34.1 -unit grading from lt. to dark green and more andesitic looking		Weak epidote as alteration of fsp	<1-1% py, tr cp, diss and veinlets	
34.10 TO 50.30	«TRICONE»					
50.30 TO 66.60	«FP FL/DOME »	Colour: mottled creamy green Grain Size: First 80 cm fault gouge and FP, minor basalt dyking <1 m		Weak silica flooding giving mottled texture		
66.60 TO 73.40	«DACITIC EPI» SAND/SILT/ ASH/CHERT	Colour: light green Grain Size: f. ash to c. sand Bedding 58-65 deg			<1% py	
73.40 TO 141.55	«AND LT, T Bx»	Colour: Grain Size: Same as unit in 87-11, unit characterized by lapilli to block size green beige altered FP flow blocks in an andesite Lt, T, groundmass		Irregular <1-3 cm epidote clots, epidote as finer grains; weak-mod epidote alt of fsp within FP blocks; occasional ANH veinlets 104.3-105.3 -abundant white anhydrite-pyrite veining	104.3-105.3 -15% py associated with anhydrite veining	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
141.55 TO 171.90	«FP FL/DOME»	Colour: Grain Size: Massive, homogeneous, patchy flow bx texture		Anhydrite veinlets/stockwork, most abundant from 147-159 -some veins up to 2 cm wide -weak ep alteration of fsp xtals		
171.90 TO 192.75	«AND FL/Bx ALT.»	Colour: Grain Size: Some brecciation, possibly hydrothermal shatter Bx FP flow frags at top of unit		Large irregular epidote-silica patches, some epidote veinlets, weak-mod. chlorite	Trace cp within amygdules	
192.75 TO 209.50	«FP FLOW»	Colour: light - med. green Grain Size:		192.75-197.0 -strongly silicified	192.75-196 -1-3% diss and vein py	
209.50 TO 216.90	«AND T LT»	Colour: Grain Size: Monolithic and frags		Moderate epidote as large patches and narrow veinlets, wk. chl.		
216.90 TO 232.30	«AND FL» E.O.H.	Colour: Grain Size: Amydaloidal		Moderate epidote as large patches and narrow veining; anhydrite veining some causing strong brecciation over 10-20 cm	Trace sp associated with epidote patches, 1-2% py with some epidote patches	

HOLE NUMBER: 87-7

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	0.00	0.00	0.00														

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28860	25.90	28.90	3.00	14.16	0.01	1.72	4.1	0.77	2.07	0.18	5.07	0.49	67.48	0.36	1.02	97.43	1.1	20	23	27	32	1	69	5
28861	61.60	64.60	3.00	15	0.02	0.62	3.19	0.62	2.06	0.2	5.75	0.36	68.55	0.43	0.1	96.91	0.6	26	77	271	35	1	76	5
28862	92.00	95.10	3.10	18.28	0.005	3.89	7.95	0.97	7.1	0.46	3.82	0.53	51.2	0.69	0.05	94.95	2.7	1	9	61	27	1	207	5
28863	122.60	125.60	3.00	18.05	0.005	4.84	7.96	0.22	6.36	0.4	3.85	0.4	52.1	0.69	0.17	95.05	3	1	8	86	20	1	155	5
28864	153.00	156.00	3.00	14.4	0.01	2.78	2.99	1.03	2.09	0.17	5.55	0.42	64.64	0.47	0.91	95.47	1.7	16	78	6	18	1	84	5
28865	183.50	186.50	3.00	17.7	0.005	7.07	9.52	0.41	7.3	0.61	1.53	0.61	49.06	0.66	0.13	94.59	2.8	1	4	80	20	1	204	5
28866	204.80	207.80	3.00	16.36	0.005	2.48	4.02	1	2.91	0.23	6.13	0.59	61.91	0.55	0.21	96.4	2.4	5	17	14	26	1	86	5
28867	226.20	229.20	3.00	17.23	0.005	6.25	8.48	0.01	7.48	0.55	3.21	0.38	49.77	0.61	0.17	94.14	2.7	1	9	170	20	1	556	10

HOLE NUMBER: 87-4

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 2
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 445.00N
EAST: 10545.00E
ELEV: 326.00

ALTERNATE COORDS GRID:
NORTH: 4+45N
EAST: 105+35E
ELEV: 326.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 212.44m
START DEPTH: 0.00m
FINAL DEPTH: 212.44m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 12.20	Casing					
12.20 TO 87.50	«QFP FLOW»	<p>Colour: patchy, creamy green, med. green Grain Size: Mottled, creamy green, dark green texture, gives core a fragmental appearance = Flow Bx</p> <p>Very fine green clots/laths</p> <p>64.0-70.5 -abundant white, v. soft clay veinlets, shallow to c.a.</p> <p>83.2-87.5 -bxl near lower contact (flow Bx)</p>				
87.50 TO 89.50	«DAC XT»	<p>Colour: Grain Size: Minor fiamme and 2 or 4 cm frags; more fragmental towards base, more like a flow bx of lower unit</p>			2-5% pyrite	
89.50 TO 163.80	«DAC FP FL»	<p>Colour: Grain Size:</p> <p>121.6-123.0 -rubbly core, minor fault gouge</p> <p>153.2-153.7 -Fault zone, rubbly core, poor recovery</p>			<p>111.2-121.6 -1-2% py brassy disseminations and fct controlled veinlets with trace coarse grained sp</p> <p>121.6-123.0 -2-4% py, <1% sp fct controlled</p> <p>139.9-146.8 -5% brassy py veinlets; open void veinlets good crystal formation</p>	

HOLE NUMBER: 87-4

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
163.80 TO 185.30	«QFP DYKE»	Colour: Grain Size: Very sharp upper and lower contacts upper contact	35			
185.30 TO 212.40	«FP FLOW»	Colour: Grain Size: Patchy mottled and fragmental flow Bx appearance				

HOLE NUMBER: 87-4

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28834	14.30	17.40	3.10	15.21	0.05	0.82	2.53	1.99	1.66	0.17	5.45	0.57	68.75	0.33	0.01	97.56	0.8	30	80	15	23	1	124	5
28835	44.80	47.90	3.10	15.12	0.055	1.03	2.21	1.55	1.2	0.07	5.62	0.27	70.87	0.33	0.06	98.37	1.1	38	68	4	26	1	46	5
28836	75.30	78.30	3.00	16.13	0.065	1.09	2.86	0.49	2.21	0.23	4.87	0.13	68.84	0.35	0.02	97.27	0.9	40	98	23	22	1	207	5
28837	105.80	108.80	3.00	15.02	0.02	1.03	2.8	0.65	1.76	0.2	5.78	0.23	69.19	0.43	0.05	97.15	1.3	7	67	15	33	1	111	5
28838	136.20	139.30	3.10	15.07	0.03	0.88	2.96	0.54	2.1	0.22	5	0.01	70.07	0.43	0.17	97.47	1	36	52	48	24	1	127	5
28839	165.50	168.60	3.10	14.43	0.005	0.86	2.71	0.01	1.78	0.19	5.38	0.01	72.13	0.35	0.02	97.86	1.1	36	38	61	25	1	100	5
28840	194.20	197.20	3.00	15.13	0.015	1.04	2.62	0.01	1.76	0.09	4.46	0.01	71.27	0.41	0.01	96.81	0.6	54	130	3	23	1	64	10

HOLE NUMBER: 87-3

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 2
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 405.00N
EAST: 10280.00E
ELEV: 312.00

ALTERNATE COORDS GRID:
NORTH: 4+25N
EAST: 102+85E
ELEV: 312.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 211.53m
START DEPTH: 0.00m
FINAL DEPTH: 211.53m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 25.00	Casing					
25.00 TO 28.05	«DAC T, LT»	Colour: Grain Size: Mix of fine grained tuff, coarse dac flow frags and possible v. large blocks			27.6-28.05 -coarse fragmental, monolithic with 5% 1-2 mm fine grained py aggregate	
28.05 TO 34.50	«FP FLOW»					
34.50 TO 86.90	«QFP DYKE?»	Colour: Grain Size: Possible dyke similar to QFP dyke in hole 87-4 with coarse fsp and qtz eyes; green chloritic clots/laths 38.7-44.5 57.0-65.5 -soft white clay veining, very shallow to c.a.				
86.90 TO 95.10	«DAC FP FL Bx»	Colour: Grain Size: Minor lap T; flow Bx, flow banding				
95.10 TO 110.10	«(Q)FHP DYK E»	Colour: Grain Size: 95.1-101.5 -darker green, more andesitic in appearance grading down hole (no definite contact) into grey green (Q)FHP Unit becoming greener, more andesitic towards base		95.1-101.5 -mod epidote alteration of fsp crystals minor epidote veinlets and patches 105.8-110.1		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Unit contains abundant fine grained speckled xenoliths lower contact	55	-anhydrite veinlets		
110.10 TO 118.15	«DAC FLOW»	Colour: lt. green Grain Size: Fine, faint fsp Possible flow banding at upper contact lower contact (somewhat irregular)	60	Moderately bleached, minor anhydrite and veinlets 115.5-118.15 -strongly bleached up to 1 cm wide; anhydrite veining parallel to c.a.	115.15-118.15 -5-7% brassy py associated within anhydrite veining and weakly disseminated	Mineralization and anhydrite veins post date (after) QFHP dykes or sulphides are remobilized
118.15 TO 124.00	«(Q)FHP DYKE»	Colour: med. grey green Grain Size: Similar to previous dyke, minor anhydrite veinlets			<1% diss. py. mainly near upper margin	
124.00 TO 146.15	«QFP DOME/DYKE»	Colour: light green Grain Size: Unit different from previous unit by 1. fsp & qtz phenocrysts, smaller esp. qtz 2. less % of qtz, less % of fsp 3. lighter colour 4. less abundant green clots/laths 124.7-127.9 -QFP dyke, coarser grained upper contact	55			
146.15 TO 147.40	«QFP DYKE»	Colour: grey green Grain Size: Coarse grained fsp and qtz phenocrysts				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
147.40 TO 149.30	«INT AND FP DYKE»	Colour: dark green Grain Size: Dark green, round <1-2 mm chlorite amygdules Lower contact very gradational, nodes from dark green, FP to light green FP to light green QFP				
149.30 TO 173.30	«QFP DOME/D YKE»	Colour: light green Grain Size: fine 7-8% xstals; similar to unit from 124-146.15; gradational contact with previous work; fine fsp and qtz eyes Faint but sharp lower contact	50			
173.30 TO 211.50	«QFH? DOME DYKE» E.O.H.	Colour: speckled med. green Grain Size: coarse grained Coarser grained fsp and qtz phenocrysts; more abundant xstals, 10-15% xtls		Patchy brownish bleaching/dicoloration more continuous brown bleaching below 201.5 m		

HOLE NUMBER: 87-3

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28841	28.05	31.10	3.05	16.07	0.025	0.91	2.71	0.01	2.54	0.13	5.14	0.01	69.26	0.44	0.15	97.38	1.1	21	99	9	33	1	95	5
28842	58.50	61.60	3.10	13.94	0.055	0.64	2.39	0.46	1.97	0.11	3.75	0.01	73.61	0.28	0.16	97.36	0.9	36	59	59	26	1	179	5
28843	91.50	93.60	2.10	15.75	0.015	0.7	2.69	0.01	2.64	0.08	5.21	0.01	69.76	0.42	0.03	97.3	1.5	21	47	3	24	1	60	5
28844	110.30	113.40	3.10	13.8	0.01	2.03	1.81	0.01	1.23	0.13	5.56	0.01	70.51	0.27	0.92	96.28	1.1	38	30	49	26	1	63	5
28845	139.30	142.30	3.00	14.03	0.01	1.46	2.02	0.21	2.09	0.11	4.46	0.01	71.14	0.26	0.66	96.45	1.2	41	35	5	28	1	68	10
28846	169.80	172.80	3.00	14.83	0.04	1.37	2.05	0.01	2.56	0.08	3.61	0.01	71.5	0.27	0.38	96.68	0.8	64	246	3	26	1	51	5
28847	203.30	206.30	3.00	14.1	0.03	1.68	1.81	0.01	0.85	0.07	4.92	0.01	71.8	0.26	0.15	95.66	0.8	37	394	3	21	1	37	5

HOLE NUMBER: 87-2

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 505.00N
EAST: 10025.00E
ELEV: 331.00

ALTERNATE COORDS GRID:
NORTH: 5+ 5N
EAST: 100+25E
ELEV: 331.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 213.40m
START DEPTH: 0.00m
FINAL DEPTH: 213.40m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 34.20	Casing					
34.20 TO 37.20	«FHP DYKE»	Colour: Grain Size:		Patchy epidote, epidotized inclusions		
37.20 TO 50.00	«DAC ASH, ULTRAFINES»	Colour: Grains: bedding 78-84 deg to c.a. rubbly lower contact			45.4-49.7 -very fine grained diss sulphides, sulphide mud laminations	
50.00 TO 64.60	«FP FL, FL Bx»	Colour: Grain Size:			2-5% diss. fine py cubes; minor veinlets; locally 5-7% py	
64.60 TO 80.50	«AND TUFF/ FL»	Colour: Grain Size: Non-magnetic; massive homogeneous, 1-2 mm green chlorite clots last 50 cm fp fragments; minor clay along LC lower contact	43	Epidote balls, irregular patches, veinlets	64.6-73.1 -3-5% py diss cubes and veinlets/fcts	
80.50 TO 174.95	«FP DOME»	Colour: lt-med green Grain Size: Fine fsp, patchy mottled at top of unit Note*** This unit could be a dyke; rare, up to 4 cm green				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		f.g. xenoliths, minor mafic laths Possible flow Bx texture at 332 ft.; 15-20 ft of FL Bx texture at 357 Mottled appearance picking up below 477'; 502' flow banding. Below 510' stronger mottled appearance - greenish pseudoBx				
174.95 TO 195.95	«DAC TBx»	Colour: Grain Size: Heterolithic but mainly FP frags; FP frag green, beige, reddish brown, orange red; minor basalt blocks lower contact Need angle	4	Patchy silicification	195.38-195.95 -mineralized groundmass	Could this be at all related to the Seneca FW Dacite LT, TBx Horizon on tip of Flow
195.95 TO 210.55	«FP FL/DOM »	Colour: Grain Size: Pseudobx with greenish stockwork and py-sp stockwork; pseudobx sotckwork mainly a darker green coloration, sulphide very minor lower contact	45	Sericite alt. fsp. and groundmass	Py-sp veinlets/stockwork overall <1 - 1%; slightly greater % at top of unit	Vent type dome brecciation and sp stockwork
210.55 TO 213.40	«QF(H)P DYK E»			Fresh		

HOLE NUMBER: 87-2

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
16327	195.40	196.00	0.60							688	58	3941	1.8	22	341	

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28925	40.20	43.20	3.00	14.45	0.05	0.01	5.46	0.37	3.42	0.35	5.2	0.01	66.25	0.62	0.82	96.98	1.7	1	238	16	50	1	214	5
28926	69.20	72.20	3.00	16.27	0.02	0.01	10.17	0.13	4.73	0.49	5.79	0.01	55.67	0.86	2.95	97.08	2.1	1	80	28	30	1	238	5
28927	99.70	102.70	3.00	14.17	0.09	0.78	2.37	0.7	1.24	0.14	6.83	0.01	67.26	0.43	0.82	94.83	0.7	1	618	5	21	1	109	10
28928	134.70	137.70	3.00	14.95	0.03	0.2	2.79	0.67	1.79	0.14	6.54	0.01	69.63	0.44	0.01	97.19	1.1	9	163	3	14	1	114	5
28929	163.10	166.10	3.00	13.68	0.025	0.01	2.48	0.69	1.64	0.15	6.55	0.01	71.6	0.39	0.01	97.23	1.1	1	140	4	17	1	96	5
28930	188.10	191.10	3.00	12.19	0.03	0.14	3.25	0.58	2.67	0.16	4.72	0.01	55.2	0.41	0.02	79.37	1.3	14	204	11	14	1	125	5
28931	197.20	200.20	3.00	13.19	0.095	0.01	3.02	3.42	4.3	0.14	0.09	0.01	70.51	0.37	0.63	95.78	0.6	38	270	90	25	1	496	5

HOLE NUMBER: 87-1

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 63
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 550.00N
EAST: 9885.00E
ELEV: 341.00

ALTERNATE COORDS GRID:
NORTH: 5+30N
EAST: 98+75E
ELEV: 341.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 207.57m
START DEPTH: 0.00m
FINAL DEPTH: 207.57m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

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

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 30.50	Casing					
30.50 TO 33.80	«FHP DYKE»					
33.80 TO 39.00	«DAC ASH» «UF»	‡35.96‡«FLT» Colour: Grain Size: Mainly fine to ultrafine ash 34.4 -10 cm py rich mud bedding	65			
39.00 TO 53.30	«AND LT/ASH» »	Bedding	60			
53.30 TO 73.45	«DAC ASH» «UF»	Colour: Grain Size: 656.75-68.8 -FP Dyke			Py jelly beans up to 3 cm 69.85-71.1 -7-10% coarse brassy py veining - bleached core	
73.45 TO 76.35	«DAC ASH/LT» »«GMS»	Colour: Grain Size: Pumice frags top of unit (0.5 cm)				
76.35 TO 90.20	«FP FLOW»	Colour: Grain Size:		Weak alt. appearance of fsp phenos		

HOLE NUMBER: 87-1

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
90.20 TO 104.40	«DAC TBX» «LT/XT»	90.2-93.75 «ASH» Colour: Grain Size: 90.2-93.75 -fine grained ashes bedding 93.75-97.7 -(Q) FP XT 97.7-104.4 -LT -large lapilli of green QFP	72			Overall a fining upwards sequence tops uphole
104.40 TO 194.15	«FP FL, FL Bx»	Colour: Grain Size: 104.4-109.5 -flow top brecciation -patcy flow bx or later bx -patchy mottled texture 156.25-160.0 -QFP dyke -faulted lower contact 168.7 -unit becomes creamy silicified appearance flow bx, patchy fragmental			Patchy pseudobx texture with minor fine py veinlets Occasional coarse brassy py crystals and aggregates	
194.15 TO 207.57	«DAC LT, TB X» E.O.H.	Colour: Grain Size: Heterolithic same as hole 87-2			<1-1% py, tr cp within groundmass	Hole did not go deep enough to hit mineralization at base of TBx/ top of Alt. Vent Dome

HOLE NUMBER: 87-1

DRILL HOLE RECORD

LOGGED BY: Int. Curator/PB/CB

PAGE: 3

HOLE NUMBER: 87-1

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	0.00	0.00	0.00														

HOLE NUMBER: 87-1

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28932	107.30	110.30	3.00	14.63	0.055	0.01	3.36	1.68	2.67	0.21	4.77	0.01	69.16	0.41	1.02	97.97	0.7	1	240	12	18	1	121	5
28933	139.30	142.30	3.00	13.74	0.025	0.01	2.93	0.97	2	0.14	5.42	0.01	70.25	0.38	0.75	96.62	0.8	1	82	6	25	1	81	10
28934	174.30	177.40	3.10	12.92	0.02	0.01	2.62	0.68	2.04	0.15	5.97	0.01	71.42	0.36	0.43	96.61	1.2	2	70	4	27	1	79	5
28935	198.40	201.40	3.00	12.9	0.03	0.77	2.8	1.17	2.31	0.18	4.23	0.01	70.53	0.39	0.57	95.88	0.5	8	78	4	27	1	79	5

HOLE NUMBER: 87-1

GEOCHEM. SHEET

PAGE: 5

HOLE NUMBER: 86-28

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 20.00N
EAST: 10022.00E
ELEV: 257.00

ALTERNATE COORDS GRID:
NORTH: 0+20N
EAST: 100+25E
ELEV: 257.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 121.01m
START DEPTH: 0.00m
FINAL DEPTH: 121.01m

COLLAR GRID AZIMUTH: 95° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 145° 0' 0"

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 15.50	Casing					
15.50 TO 25.95	«ALT DAC FP FLOW»	Colour: Grain Size: Strongly brecciated with a coarse silica and sulphide stockwork; very well developed		Silica stockwork; altered fsp, ghosted outlines, green tan sericitic; bleached appearance	5-7% sulphides mainly as silica sulphide stockwork and minor diss., <1% sp, tr cp within stockwork; locally 3% sp over 10-20 cm first 1.5 m 2-3% sp	
25.95 TO 28.50	«DAC TUFF»	Colour: med green Grain Size: fine Thinly banded <1%, 3 mm qtz eyes, 1-3% brownish carbonate alt fsp lower contact	64 55		1-3% diss py, tr cpy	Unit does not show the brecciation and silica/sulphide stockwork development of the lower and upper FP flow units
28.50 TO 105.05	«ALT DAC FP FLOW»	Colour: Grain Size: Similar to previous FP flow but brecciation and stockwork development is not as strong 91 m -rock not as brecciated looking (still brecciated though); sulphide content decreased; occasional zones of narrow base metal veinlets		Altered fsp-ghosted; well bleached appearance	<1% sp, 3-5% py, tr cp mainly as siliceous stockwork - very narrow; locally 1-2% sp over 10-20 cm 87.9-89.8 -1.9 m of 2.17% Zn Below 91 m -minor sulphide stockwork, <1% sp	-0.39% Cu, No PM
105.05 TO 113.80	«DAC FL Bx LT»	Colour: Grain Size: Different appearance from above FP flow		Weak silica flooded appearance; sericite flecks		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<p>Unit lacking anyu fsp, more similar to silica flooded flows but only weakly developed</p> <p>105.05-112.1 -weak fragmental appearance flow Bx</p> <p>112.1-113.8 -unit looks more like a lapilli tuff or unit has been strongly bxd -DAC Fl frags, mineralized bxd frags, some minor FP frags</p>			<p>-5-6% py veinlets, <1-1% sp diss and within veinlets, tr cp within veinlets</p> <p>-py-sp-cp within fragments, diss in groundmass and as occasional veinlets</p>	-up to 0.55% Zn
113.80 TO 121.00	«QFP DYKE» E.O.H.	<p>Colour: Grain Size: Gougy upper contact, dark green FP upper chill contact; grading downhole into green grey QFP</p> <p>Up to 20 cm dark green fine speckeled xenoliths; fairly abundant</p>				

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	36.90	39.90	3.00	.04	.01	.06	.5	.02								
	39.90	42.90	3.00	.04	.01	.32	.5	.02								
	42.90	45.90	3.00	.07	.01	.06	.5	.02								
	45.90	48.90	3.00	.07	.01	.02	.5	.02								
	48.90	51.90	3.00	.07	.01	.04	.5	.02								
	51.90	54.90	3.00	.13	.01	.04	1	.02								
	54.90	57.90	3.00	.07	.01	.02	.5	.02								
	57.90	60.90	3.00	.08	.01	.02	.5	.02								
	60.90	63.90	3.00	.13	.01	.05	.5	.02								
	63.90	66.90	3.00	.11	.01	.05	.5	.02								
	66.90	69.90	3.00	.09	.01	.02	1.5	.02								
	69.90	72.90	3.00	.01	.01	.01	.5	.02								
	72.90	75.90	3.00	.02	.01	.01	.5	.02								
	75.90	78.90	3.00	.01	.01	.01	.5	.02								
	78.90	81.90	3.00	.01	.01	.01	.5	.02								
	81.90	84.90	3.00	.01	.01	.01	.5	.02								
	84.90	87.90	3.00	.06	.01	.13	.5	.02								
	87.90	89.80	1.90	.39	.01	2.17	.5	.02								
	89.80	92.80	3.00	.06	.01	.02	.5	.02								
	104.09	107.37	3.28	.07	.01	.03	2.5	.02								
	107.37	110.64	3.27	.02	.01	.02	2.5	.02								
	110.64	113.83	3.19	.04	.01	.55	1.0	.02								
	113.83	116.83	3.00	.01	.01	.02	.5	.02								

HOLE NUMBER: 86-28

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28898	18.60	21.90	3.30	14.81	0.02	0.13	3.84	0.01	6.6	0.14	0.01	0.01	68.71	0.4	1.42	96.08	0.7	9	56	205	30	1	1071	20
28899	47.60	50.60	3.00	15.07	0.015	0.19	4.73	1.16	4.8	0.16	0.01	0.08	68.32	0.42	2.05	96.99	0.5	35	45	704	25	1	533	5
28900	78.30	81.40	3.10	15.84	0.07	0.14	3.72	0.01	4.6	0.13	0.01	0.01	69.61	0.44	1.38	95.93	1.1	28	141	68	29	1	474	10
28901	108.80	111.80	3.00	16.02	0.07	0.16	3.59	0.01	4.68	0.13	0.01	0.01	70.25	0.44	1.33	96.67	1.1	38	131	63	35	1	429	5

HOLE NUMBER: 86-28

GEOCHEM. SHEET

PAGE: 5

HOLE NUMBER: 86-27

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 100.00N
EAST: 9970.00E
ELEV: 267.00

ALTERNATE COORDS GRID:
NORTH: 1+ 0N
EAST: 99+70E
ELEV: 267.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 168.25m
START DEPTH: 0.00m
FINAL DEPTH: 168.25m

COLLAR GRID AZIMUTH: 95° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 145° 0' 0"

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
0.00	-	0° 0'	ACID			-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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HOLE NUMBER: 86-27

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 18.80	Casing					
18.80 TO 40.20	«QFP DYKE»	Colour: Grain Size: Strongly bleached and discolored at base of unit with large qtz eyes				
40.20 TO 84.50	«F(H)P DYKE »	Colour: Grain Size: Fresh; occasional zones with some fine qtz eyes 80.7-81.3 -Fault Zone 80.7 m	20			
84.50 TO 108.00	«QF(H)P DYKE »	Colour: Grain Size: Similar to previous dyke but with qtz eyes; no sharp contact; phases of the same intrusive; grades downhole into next unit				
108.00 TO 114.60	«F(H)P DYKE »	Colour: Grain Size: Rare qtz eyes				
114.60 TO 116.35	«QFP DYKE»					
116.35 TO 118.10	«F(H)P DYKE »					

HOLE NUMBER: 86-27

DRILL HOLE RECORD

LOGGED BY: BP-Selco/PB

PAGE: 2

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
118.10 TO 119.30	«AND LT»	Colour: Grain Size: FP flow fragments		Strongly chloritic str-INT unit	3-4% py	
119.30 TO 138.80	«F(H)P DYKE »	Colour: Grain Size: Rare qtz eyes				
138.80 TO 141.40	«AND LT»	Colour: Grain Size:		Strong to intense chlorite	3-5% py, tr sp, cp	Chlorite alteration stronger here than in holes to the east ie 87-11, 87-7
141.40 TO 147.05	«QFP DYKE»					
147.05 TO 168.25	«AND LT» E.O.H.	Colour: Grain Size: Heterolithic; fragmental poor from 147.05-148.1 150.5-150.7 -Fault gouge -Fault	10	Strongly chloritic alteration of gnd mass; lesser alt. of fragments	147.05-147.5 -2-3% diss. sp 2-3% py diss, rimming frags and within frags, tr sp, cp 148.4 -siliceous brassy pyrite vein	

HOLE NUMBER: 86-27

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	0.00	0.00	0.00														

HOLE NUMBER: 86-27

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28911	151.50	154.50	3.00	18.58	0.015	0.27	10.26	0.01	11.58	0.73	0.12	0.01	49.07	0.67	1.76	93.05	0.1	1	42	65	13	1	774	5

HOLE NUMBER: 86-26

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 140.00N
EAST: 9985.00E
ELEV: 271.00

ALTERNATE COORDS GRID:
NORTH: 1+40N
EAST: 99+85E
ELEV: 271.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 97.54m
START DEPTH: 0.00m
FINAL DEPTH: 97.54m

COLLAR GRID AZIMUTH: 95° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 145° 0' 0"

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Yes
CORE STORAGE:

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
-	-	-	-	-	-	-	-	-	-	-	-
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 15.20	Casing					
15.20 TO 25.15	«FP DYKE»	Colour: med green Grain Size: 24.3-25.15 -FP dyke grades into a darker green more andesitic fine grained chill margin		Epidote alt. of fsp greenish discoloration	1-2% py	
25.15 TO 27.20	«DAC TUFF/E PICLAS»	Colour: Grain Size: Characteristic streaky layered appearance. Chert bed at top of unit gives bedding @ Faulted lower contact	50		Trace py	
27.20 TO 30.60	«FP DYKE»	Colour: Grain Size: Fine grained grading into more andesitic looking margins repetition of above dyke				
30.60 TO 32.10	«DAC TUFF E PICLASTIC»	Colour: Grain Size: Similar to previous dacite tuff unit 31.5-31.7 -Fault gouge				
32.10 TO 71.70	«ALT FP FLOW»	Colour: Grain Size: 32.0 -fault slip plane @	10	32.1-37.2 -abundant qtz veining/stockwork, str. bleached; fsp ghosted to absent	32.1-37.2 -10-15% coarse brassy py associated with qtz veins and disseminated	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<p>37.2 -bxd with py +/- sp stockwork</p> <p>37.2-71.7 -well developed pseudoBx texture</p> <p>67.8-68.25 -QFP Dyke</p> <p>Upper contact</p>	40	<p>below 37.2 -ser alt. ghosted fsp</p>	<p>37.2-46.2 -<1-1.5% sp, 3-5% py, tr cpy as py-sp stockwork +/- cp; locally veinlets up to 1 cm wide of 80% sp</p> <p>46 - 50 -coarse py stockwork</p> <p>Below 46.2 -well developed pseudobx and with a fine pyrite +/- cp, sp stockwork</p> <p>55.5 -10 cm py-sp-cp vein</p> <p>70.05 -10 cm of nice py-sp-cp veining</p>	<p>9 m of .31% Zn -py-sp-cp stockwork</p>
71.70 TO 97.54	«(Q)FHP DYK E» E.O.H.	<p>Colour: Grain Size:</p> <p>79.6-86.6 -bleached; broken core, moderate fault gouge seams patchy Q zones; fsp indistinct to absent; gradational upper and lower contacts to interval</p> <p>87.6-89.05 -screen of altered FP flow with <1% sphalerite</p>		<p>79.6-86.6 -strongly bleached; tan brown discoloration; minor dolomite veining</p>	<p>79.6-86.6 -2-4% py veinlets</p> <p>85.2-86.6 -2-3% sp veinlets</p>	<p>Is different than the altered FP Flow</p>

HOLE NUMBER: 86-26

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	37.18	40.18	3.00	.04	.01	.32	1	.02									
	40.18	43.18	3.00	.11	.01	.26	1	.02									
	43.18	46.18	3.00	.08	.01	.35	2	.02									
	46.18	49.18	3.00	.03	.01	.04	1.5	.02									
	49.18	52.39	3.21	.02	.01	.02	1.5	.02									
	52.39	52.99	0.60	.1	.01	.1	.5	.02									
	52.99	55.47	2.48	0.13	.01	.51	1.5	.02									
	55.47	58.47	3.00	.37	.01	.63	1	.02									
	58.47	61.47	3.00	.01	.01	.02	1	.02									

HOLE NUMBER: 86-26

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28912	18.60	21.60	3.00	15.91	0.005	1.69	3.76	0.01	2.13	0.2	4.77	0.01	68.16	0.41	0.39	97.42	1	1	33	118	13	1	68	10
28913	40.00	43.10	3.10	14.09	0.045	0.2	5.57	0.01	3.69	0.12	0.01	0.01	69.69	0.38	3.1	96.89	1.1	40	111	780	21	6	3736	5
28914	63.10	66.10	3.00	14.2	0.04	0.15	4.66	0.47	3.77	0.11	0.01	0.01	71.15	0.39	2.23	97.18	0.7	35	104	422	26	1	136	5

HOLE NUMBER: 86-26

GEOCHEM. SHEET

PAGE: 5

HOLE NUMBER: 86-25

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 300.00S
EAST: 10412.00E
ELEV: 193.00

ALTERNATE COORDS GRID:
NORTH: 2+75S
EAST: 104+50E
ELEV: 193.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 135.64m
START DEPTH: 0.00m
FINAL DEPTH: 135.64m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 30.50	Casing					
30.50 TO 72.50	«FP FL/DOME »	Colour: mottle cream green Grain Size: 67.45 -Exhalite fragment -8 cm frag of v.f.g., light green Ash/seds with fine pyrite laminations -fragment probably from underlying sed/ash/tuff package		Moderate silica flooding	<1% py as occasional veinlets and diss.	
72.50 TO 75.00	«DAC SEDS/A SH/TUFF/CHT »	Bedding	83		Rare py as liminations, disseminations and as py rich frags within coarser ss	
75.00 TO 135.60	«AND LT, TB X» E.O.H.	Colour: Grain Size: Amygdaloidal AND frags and altered Fp flow frags (blocks) 123.0-126.0 -Fault Zone 123 - E.O.H. -rubbly core		Moderate epidote veining, irregular large patches, alt of fsp xtals; weak chl.; occasional ANH veins		

HOLE NUMBER: 86-25

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	30.48	33.48	3.00											1			
	33.48	36.48	3.00											1			

HOLE NUMBER: 86-25

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
	0.00	0.00	0.00																					

HOLE NUMBER: 86-24

MINNOVA INC.
 DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
 PROJECT NUMBER: 663
 CLAIM NUMBER: DOROTHY 3
 LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
 NORTH: 200.00S
 EAST: 9990.00E
 ELEV: 163.00

ALTERNATE COORDS GRID: Vent
 NORTH: 2+ 5S
 EAST: 99+83E
 ELEV: 163.00

COLLAR DIP: -60° 0' 0"
 LENGTH OF THE HOLE: 91.44m
 START DEPTH: 0.00m
 FINAL DEPTH: 91.44m

COLLAR GRID AZIMUTH: 95° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 145° 0' 0"

DATE STARTED: 0, 0
 DATE COMPLETED: 0, 0
 DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
 PLUGGED: NO
 HOLE SIZE:

CONTRACTOR:
 CASING: Pulled
 CORE STORAGE:

PURPOSE: Test downplunge potential of Lower Vent Bx Minzn.

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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-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	Casing					
3.00 TO 11.60	«QF(H)P DYK E»	Colour: Grain Size: Same type of work as QF(H)P dyking in hole 86-16; contact in rubble				
11.60 TO 14.30	«DAC FLOW»	Colour: Grain Size: Rubbly core altered FP Flow with a white grey silica veining/flooding		Silicified stockwork	1-3% diss py; bxd patches with up to 15% fine py stockwork, trace sp	
14.30 TO 40.10	«AND LT»	Colour: Grain Size: Minor altered FP Flow frags, some with diss. py and sp		Weak epidote, chlorite	1-3% py; tr. sp	Same unit as seen in the hole 87-11 and 87-7; FP frags not as large and not as abundant
40.10 TO 85.80	«SIL FLD. D AC FLOW»	Colour: Grain Size: Strong brecciated texture with a creamy green silica stockwork Gougy zones within first 6 m 67.6-85.8 -decrease in strength of brecciation; patchy brecciation and silicification 73.7-75.3 -Fault gouge 75.3-76.8 -rubbly, brecciated core, minor gouge Faulted lower contact		Strongly silicified sericite flecks 67.6-85.8 -very weak brecciation, silica stockwork	<1% py 67.6-67.85 -narrow sp veinlets 67.85-69.2 -<1% diss. pyrite	

HOLE NUMBER: 86-24

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
85.80 TO 91.40	«F(H)P DYKE »	Colour: Grain Size: Similar to QF(H)P at top of hole but with rare qtz phenos			<1% diss. py, tr sp	

HOLE NUMBER: 86-24

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	11.40	13.38	1.98	.01	.01	.03	0.5	.02								
	13.38	14.32	0.94	.05	.01	.51	1.5	.22								
	14.32	17.32	3.00	.03	.01	.25	.5	.02								

HOLE NUMBER: 86-24

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28885	17.10	20.10	3.00	16.92	0.16	0.89	8.37	2.39	9.69	0.82	1.68	0.21	51.96	0.6	0.84	94.52	1.5	1	48	281	34	1	1040	5
28886	47.50	50.30	2.80	13.2	0.02	0.29	2.35	1.03	3.55	0.18	1.76	0.2	73.83	0.35	0.31	97.07	0.3	49	42	8	27	1	138	5
28887	79.80	82.90	3.10	13.54	0.035	0.51	2.86	2.09	3.42	0.19	2.54	0.62	70.56	0.39	0.4	97.14	0.6	51	53	11	28	1	148	5

HOLE NUMBER: 86-24

GEOCHEM. SHEET

PAGE: 5

HOLE NUMBER: 86-23

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 142.00N
EAST: 9978.00E
ELEV: 271.00

ALTERNATE COORDS GRID:
NORTH: 1+42N
EAST: 99+78E
ELEV: 271.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 137.77m
START DEPTH: 0.00m
FINAL DEPTH: 137.77m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 12.20	Casing					
12.20 TO 12.80	«(Q)FHP DYKE»	Fresh				
12.80 TO 18.80	«AND LT»	Colour: Grain Size: Heterolithic; lapilli size FP fragments		Very weakly chloritic 14.2-15.5 -strongly bleached, minor fault gouge siliceous - qtz veined	3-5% py 14.2-15.5 -20-25% coarse, brassy pyrite, trace sp	-not sampled
18.80 TO 30.65	«QFHP DYKE»	Colour: Grain Size: Fresh upper contact lower contact	18 50		Occasional siliceous py veinlets with silica flooding/bleaching into host rock	
30.65 TO 34.00	«DAC/EPICLAST?»	Colour: med green Grain Size: Pervasive streaky layered appearance in same unit as in hole 86-26; <1% up to 4 mm qtz eyes(square) Minor fsp laths Banding top of unit bottom of unit	40 25	Silicified, hard, primary	<1-1% py, trace cp at top of unit	
34.00 TO 43.85	«QF(H)P DYKE»	Colour: Grain Size: Upper contact	28			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Massive, fresh 42-43.85 -green haloes around mafic clots/laths Lower contact 30-35 deg				
43.85 TO 56.30	«FP DYKE»	Colour: Grain Size: 43.85-45.5 -Andesite margin with diss and irregular clots of epidote		-weak epidote alt. of fsp		
56.30 TO 63.20	«AND DYKE»	Colour: Grain Size: 56.3-57.7 -finer grained magnetite; chill margin; rest of unit non-magnetic Last 30 cm broken, discoloration Lower contact	45	-abundant irregular clots, veinlets, and diss. of epidote		
63.20 TO 68.70	«QFP DYKE»	Colour: tan, brown Grain Size:		Strongly bleached, tan brown discoloration; abundant dolomite veining	Tr py	
68.70 TO 85.50	«FP, FL, FL BX»	Colour: Grain Size: Patchy FL Bx texture possible, unaltered equiv. of mineralized vent zone FP?; minor green clots/laths Lower contact in rubble		Fsp still fairly fresh, patchy, weak bleaching Fairly strong bleaching, minor dolomite from 68.7-71.3	<1-1% py; locally py veinlets over 10 cm	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
85.50 TO 100.50	«FP DYKE? F LOW»	Colour: Grain Size: Light green the previous FP; fairly massive and homogeneous; strongly fct. Chilled LC	50	90.6 -10 cm bleached core, py veinlet	90.5 -Sp fracture coatings	
100.50 TO 101.70	«AND LT»	Colour: Grain Size: FP frags		Mod - strong chl.		
101.70 TO 110.00	«QFP DYKE»	Fresh				
110.00 TO 134.20	«F(H)P DYKE »	Colour: Grain Size Fresh; speckled xenoliths; occasional qtz eyes		Patchy brown bleaching with minor dol veinlets		
134.20 TO 137.90	«QFP DYKE» E.O.H.					

HOLE NUMBER: 86-23

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	0.00	0.00	0.00														

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28915	31.10	32.60	1.50	13.76	0.48	2.12	1.54	0.54	0.73	0.08	2.35	0.01	74.56	0.16	0.47	96.8	1.1	35	1559	305	16	1	88	5
28916	59.90	62.60	2.70	16.84	0.005	5.95	10.04	0.01	5.57	0.41	2.76	0.25	51.77	0.77	0.14	94.51	2	1	35	175	11	1	319	5
28917	81.40	84.40	3.00	19.14	0.1	0.49	3.14	2.33	3.61	0.16	1.54	0.2	63.87	0.53	0.53	95.63	1.1	53	99	9	24	1	85	5
28918	95.10	97.80	2.70	12.78	0.02	0.34	2.22	1.86	2.11	0.11	4.14	0.3	72.5	0.24	0.4	97.02	1	65	97	12	34	3	83	5

HOLE NUMBER: 86-22

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 1
LOCATION: Pit West/Vent East

PLOTTING COORDS GRID: IDEAL
NORTH: 135.00N
EAST: 10860.00E
ELEV: 290.00

ALTERNATE COORDS GRID: VENT
NORTH: 1+25N
EAST: 108+15E
ELEV: 290.00

COLLAR DIP: -90° 0' 0"
LENGTH OF THE HOLE: 103.94m
START DEPTH: 0.00m
FINAL DEPTH: 103.94m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
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HOLE NUMBER: 86-22

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.05	Casing					
3.05 TO 7.30	«ASH/SLTST»					
7.30 TO 13.10	«AND ASH»					
13.10 TO 14.80	«QFP XT/ASH»					
14.80 TO 33.10	«ASH» «UF»				«2% py»	
33.10 TO 103.90	«QFHPD»					

HOLE NUMBER: 86-22

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-21

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA	PLOTTING COORDS GRID: IDEAL	ALTERNATE COORDS GRID:	COLLAR DIP: -90° 0' 0"
PROJECT NUMBER: 663	NORTH: 815.00N	NORTH: 8+15N	LENGTH OF THE HOLE: 151.49m
CLAIM NUMBER: DOROTHY 2	EAST: 10403.00E	EAST: 104+ 5E	START DEPTH: 0.00m
LOCATION: VENT	ELEV: 425.00	ELEV: 425.00	FINAL DEPTH: 151.49m

COLLAR GRID AZIMUTH: ° ' "

COLLAR ASTRONOMIC AZIMUTH: ° ' "

DATE STARTED: 0, 0	COLLAR SURVEY: NO	PULSE EM SURVEY: NO	CONTRACTOR:
DATE COMPLETED: 0, 0	MULTISHOT SURVEY: NO	PLUGGED: NO	CASING: Pulled
DATE LOGGED: 0, 0	RQD LOG: NO	HOLE SIZE:	CORE STORAGE:

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
0.00	-	0° 0'	ACID	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 36.90	Casing					
36.90 TO 40.70	«DAC FP TUF F»	Colour: Grain Size: Base of unit flow top brecciation		Fresh Fsp		
40.70 TO 43.90	«DAC FP FLO W»					
43.90 TO 45.00	«DAC FP TUF F»	Colour: Grain Size: Grading downhole to flow top Bx similar to first unit				
45.00 TO 54.90	«DAC FP FLO W»	Colour: Grain Size: Massive		51.1-54.9 -brown Fe staining and minor bx and silicification		
54.90 TO 61.70	«DAC XT, LT »	Colour: Grain Size: Strong Fe brown discoloration masking primary textue, granular tuffaceous appearance; same zone with <1.5 cm FP flow frags and rare arg frags 59.5-61.7 -faulting, rubbly gougy patches; questionable recovery stronger Fe alteration				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
61.70 TO 70.80	«AND DYKE»	Colour: Grain Size: Strongly magnetic				
70.80 TO 71.55	«DAC LT,XT»	Colour: Grain Size: Monolith DAC Flow frags, FP minor qe		Strong Fe staining at base	Trace mm grains py, cp	
71.55 TO 74.10	«SEDS, ASH»	Colour: green to dk. grey Grain Size: fine to v. fine Fine grained darker grey sltst and med green v.f.g ash/mud Seds distorted - no bedding measurements possible		St		
74.10 TO 151.20	«QFP FLOW D OME»	Colour: med - lt. green Grain Size: 74.1-74.6 -QFP XT 77.9 -Fault 111.9-122.2 -5-7%, <1-3 mm dark green, speckled clots, and minor laths	15	Fresh fsp		

HOLE NUMBER: 86-21

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-21

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28830	45.00	48.00	3.00	14.91	0.02	0.89	2.66	1.5	1.51	0.08	6.47	0.6	68.23	0.37	0.02	97.27	1.2	29	124	3	31	1	41	5
28831	75.00	78.00	3.00	14.9	0.01	0.54	2.27	1.78	1.81	0.12	6.28	0.66	68.43	0.33	0.02	97.15	0.4	40	25	14	26	1	62	5
28832	105.50	108.50	3.00	14.13	0.015	0.45	2.44	1.65	2.26	0.11	5.25	0.53	70.08	0.31	0.01	97.22	0.7	37	35	3	23	1	51	10
28833	132.90	135.90	3.00	15.15	0.005	0.43	2.41	0.78	2.25	0.13	6.09	0.44	69.8	0.32	0.01	97.84	0.5	50	20	2	22	1	56	5

HOLE NUMBER: 86-21

GEOCHEM. SHEET

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HOLE NUMBER: 86-20

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 305.00N
EAST: 9980.00E
ELEV: 288.00

ALTERNATE COORDS GRID:
NORTH: 3+ 5N
EAST: 99+80E
ELEV: 288.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 127.10m
START DEPTH: 0.00m
FINAL DEPTH: 127.10m

COLLAR GRID AZIMUTH: 95° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 145° 0' 0"

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
125.58	145°50'	-41° 0'	SING.SHOT	OK		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 27.30	Casing					
27.30 TO 34.60	«F(H)P DYKE»	Colour: Grain Size: Fresh, white fsp, occasional qtz eyes Gradational very indistinct contact				
34.60 TO 63.40	«FP DYKE? F LOW?»	Colour: Grain Size: Fsp phenos are not as large or as fresh as above dyke; the unit is lacking the green clots/laths of above unit 49.4-51.8 -some finer grained sections - dyke margins?		Weak epidote alt. of fsp.; patchy wk hematite within fsp		
63.40 TO 68.35	«FHP»	Colour: Grain Size: Very weak bleached appearance				
68.35 TO 71.30	«AND DYKE»	Colour: dk. green Grain Size: fine Massive, homogeneous		Weak epidote veinlets	Patchy 2-3% py, tr cp	
71.30 TO 107.25	«FHP DYKE?»	Colour: Grain Size: Massive, homogeneous, abundant green altered clots 75.95-77.3 -AND DYKE -chill margins in fine And Dykes at 93.6 m		Weak, bleached appearance; green clots/laths altered to sericite; fsp not as fresh as usual		Is this a dyke or a very weakly altered and unbrecciated equivalent of the altered, mineralized brecciated FP Flow?

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				95.4-97.5 -strongly bleached -silicified -ghosted fsp -bxid with grey pseudobx stockwork 97.5-107.25 -not as altered looking as previous; green clots, less alt.	95.4-97.5 -2-5% py stockwork and diss.	
107.25 TO 116.70	«FP FL/DYKE »	Colour: Grain Size: Fsp xtals smaller and more abundant than previous FP; same unit as from 34.6-63.4				
116.70 TO 127.10	«FP DYKE? F LOW? E.O.H.	Some sections possibly FL Bx texture otherwise a massive, fairly homogeneous unit				

HOLE NUMBER: 86-20

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	68.35	71.30	2.95											1		
	71.30	75.96	4.66											2		
	75.96	77.30	1.34											2		

HOLE NUMBER: 86-20

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28919	39.70	42.70	3.00	13.52	0.005	0.74	2.33	0.73	1.28	0.16	6.36	0.32	71.28	0.29	0.02	97.03	0.6	20	19	78	20	1	86	5
28920	72.20	74.70	2.50	14.01	0.005	0.59	2.37	0.6	2.32	0.17	5.33	0.3	71.22	0.28	0.07	97.26	0.6	2	22	13	21	1	84	10
28921	101.20	104.20	3.00	13.19	0.015	0.54	1.7	1.16	1.94	0.12	3.92	0.2	74.24	0.23	0.08	97.33	0.3	19	50	8	12	1	72	5

HOLE NUMBER: 86-19

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 405.00N
EAST: 9980.00E
ELEV: 309.00

ALTERNATE COORDS GRID:
NORTH: 4+ 5N
EAST: 99+80E
ELEV: 309.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 114.91m
START DEPTH: 0.00m
FINAL DEPTH: 114.91m

COLLAR GRID AZIMUTH: 95° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 145° 0' 0"

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: Pulled
CORE STORAGE:

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
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HOLE NUMBER: 86-19

DRILL HOLE RECORD

LOGGED BY: BP-Selco/PB

PAGE: 1

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 21.30	Casing					
21.30 TO 37.50	«DAC ASH/T EPICLAST»	<p>Colour: Grain Size:</p> <p>21.3-24.0 -minor AND component</p> <p>24.0-25.1 -DAC T, <0.5 cm green chloritic clots similar to same unit in 86-18</p> <p>25.1-27.85 -AND LT, minor ultrafine ash</p> <p>27.8-29.18 -rubby core, minor fault gouge, LT (DAC)</p> <p>29.18-37.1 -ultra fine ashes, rubbly broken core</p> <p>37.1-37.5 -FP</p>			<p>24.0-25.0 -2-3 mm fine py, jelly beans</p> <p>32.5-32.8 -up to 1 cm fine py, jelly beans</p>	Bedding 23.7 m 45 deg
37.50 TO 47.10	«AND DYKE»	<p>Colour: Grain Size: Magnetite</p> <p>Minor chl and epi, amygdules, rubbly cc</p>		Weak to moderate epidote as irregular patches and fine veinlets		
47.10 TO 51.50	«FP FLOW»	<p>Colour: med. green Grain Size: Finer, irregular pitted fsp; no mafics</p>			Tr py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
51.50 TO 60.35	«QFHP DYKE»	Colour: Grain Size: Coarse fsp and qtz phenos 51.5-55.5 -darker green andesite looking margin; dark green spots/amygdules grading down hole to FP and then QfHP material		Fresh		
60.35 TO 73.30	«QFP DYKE»	Colour: Grain Size: Smaller qtz phenos lesser % of mafic laths 60.35-61.77 -chill margin -very fine grained fsp grading downhole into larger fsp and fine qtz eyes appear -downhole phenos become larger Faulted lower contact		Fresh		
73.30 TO 74.20	«DAC LT»	Colour: Grain Size: Same LT as in hole 86-18 <0.5 cm clay gouge at LC; fault LC			1% diss. py	
74.20 TO 82.70	«QFP FLOW?»	Colour: med. green Grain Size: Finer fsp and qtz eyes than previous QPF, minor mafic laths 20 cm fault gouge at lower contact shearing	45			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
82.70 TO 104.70	«FP FLOW»	Colour: green Grain Size: Finer fsp than seen in dykes; fsp smaller, pitted; minor mafics		Patchy mottled, bleaching away from py veinlets	82.7-84.3 -5-7% fine py veinlets below 84.3 -occasional fine py veinlets	
104.70 TO 114.90	«QF(H)P DYK E» E.O.H.	Colour: Grain Size: 104.7-106.6 -2 m chill, gradation zone from fine grained xtl poor to coarse qtz-fsp phenos			104.7-106.5 -3-4% py as large brassy aggregates and finer veinlets 114.4 -open void qtz veins with large brassy py crystals	

HOLE NUMBER: 86-19

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-19

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28924	84.40	87.50	3.10	14.06	0.01	0.52	2.36	1.03	1.83	0.12	4.77	0.32	71.71	0.38	0.6	97.72	0.6	22	46	4	18	1	65	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 16.80	Casing					
16.80 TO 49.40	«DAC ASH EP ICLASTS»	<p>Colour: lt. - med green Grain Size: aphanitic to f.g.</p> <p>16.8-19.9 -darker green, more andesitic composition</p> <p>119.9-22.0 -chloritic FP and QFP fragments</p> <p>22.0-45.4 -ultrafines</p> <p>45.4-49.4 -slightly coarser epiclastics/ASH sulphide muds</p>			<p>-rare, 1-3 mm py laminations</p> <p>22.0-24.5 -fine py patches and laminations</p> <p>32.0 -1 cm py laminations, v.f.g. py</p>	<p>Bedding</p> <p>24.5 m 54 deg 32.5 m 60 deg 32.5 m 65 deg 34.3 m 55 deg 46.2 m 60 deg</p>
49.40 TO 59.20	«FP FLOW»	<p>Colour: weak, mottle, possible flow bx texture Grain Size:</p> <p>55.5-59.2 -more massive texture, lighter green</p> <p>lower contact in rubble</p>		Patchy silicification		
59.20 TO 73.25	«AND FL?»	<p>Colour: Grain Size: Massive, no flow bx at all - possible Dyke? patchy dark green clots and round chloritic amygdules</p>		Patchy str. epidote flooding rock away from veinlets		
73.25 TO 81.70	«FP FLOW»	<p>Colour: med. green Grain Size: Small, irregular pitted fsp, indistinct mottled texture</p>		Weak alt. appearance to fsp		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
81.70 TO 82.90	«DAC LT»	Colour: Grain Size: Faulted upper contact; heterolithic, angular frags frags generally <1 cm; matrix support			2-3% diss py	
82.90 TO 90.00	«FP FLOW»	Colour: Grain Size: Possible continuation of previous FP Flow (73-81)				
90.00 TO 112.85	«F(H?)P DYK E»	Colour: grey green Grain Size: 90.0-91.2 -dark green AND DYKE; (possible margin dyking or chill) 111.1-112.85 -F(H)P grades into a darker green more andesitic looking zone speckled dark green = chill margin				
112.85 TO 122.20	«QF(H)P DYK E» E.O.H.	Colour: grey green Grain Size: Massive, homogeneous, large fsp and qtz phenocrysts			Py fct coatings	

HOLE NUMBER: 86-18

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	0.00	0.00	0.00													

HOLE NUMBER: 86-18

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28922	37.20	40.20	3.00	13.64	0.015	0.43	2.52	1.57	2.66	0.18	3.61	0.3	71.19	0.29	0.36	96.76	0.3	1	42	22	22	1	82	5
28923	67.70	70.40	2.70	16.58	0.005	4.57	9.33	0.01	5.24	0.44	3.61	0.24	54.92	0.83	0.04	95.79	2.6	1	10	55	4	1	198	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 25.30	Casing					
25.30 TO 32.00	«QFP DYKE»	Colour: Grain Size: 30.7-32.0 -grading into a dark green andesite looking groundmass with epidotized fsp and occasional qtz eyes = QFP dyke margin				
32.00 TO 52.05	«F(H)P DYKE »	Colour: Grain Size: Fine, speckled green xenoliths				
52.05 TO 55.50	«ALT. FP FLOW»	Colour: Grain Size: Bxd with a greenish py stockwork		Ghosted altered fsp, wk sericite	3-7% py, <1% py stockwork, py brassy coloration	.11% Cu
55.50 TO 97.40	«(Q) FP DYKE»	Colour: Grain Size: 55.5-55.9 -fine grained, dark green, weakly FP (epidotized) chill margins -large speckled xenoliths 64.6-65.4 -dark green andesitic looking dyke margin 65.4-67.7 «Alt. FP Flow» -usual altered flow with ghosted fsp 67.7-68.0 -dark green chill margin to QFP Dyke		-greenish discoloration to fsp phenocrysts		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Faulted lower contact; no chill margin				
97.40 TO 109.34	«ALT FP FLO W»	Colour: Grain Size: Usual altered FP, brecciated with a fine grey siliceous py stockwork +/- cpy		Sericite altered rock and fsp	2-3% py as fine siliceous stockwork; occasional 2-4 mm wide py-cp veinlets	
109.34 TO 146.90	«(Q)FP DYKE » E.O.H.	Colour: Grain Size: 60 cm, dark green f. gr. andesitic looking chill margin		Green discolored fsp (wk. ser/epidote)		

HOLE NUMBER: 86-17

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	51.87	55.47	3.60	0.11	.01	.04	1.5	.15								
	65.35	67.66	2.31	.01	.01	.02	.5	.02								
	97.41	100.41	3.00	.03	.01	.02	1	.02								
	100.41	103.41	3.00	.16	.01	.02	1	.03								
	103.41	106.41	3.00	.03	.01	.02	.5	.02								
	106.41	109.34	2.93	.16	.01	.01	.5	.14								

HOLE NUMBER: 86-17

GEOCHEM. SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28910	102.70	105.80	3.10	14.6	0.045	0.21	3.77	0.81	5.05	0.19	0.01	0.01	69.93	0.4	0.86	95.86	1	45	118	143	13	2	136	10

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 20.80	Casing					
20.80 TO 107.60	«QF(H)P DYK E»	Colour: Grain Size: Massive, homogeneous; large qtz and fsp phenocrysts up to 3 mm; speckled green xenoliths up to 2 cm		Fresh, unaltered 83.9-95.0 -epidote coated fct surfaces		
107.60 TO 109.90	«AND LT»	Colour: Grain Size: Possibly spherulitic andesite fragments 107.9-108.7 -strong, breccia texture, possibly hydrothermal? -interval contains altered FP frags and frags		107.9-108.7 -py-sp and cp patches, fragments minor rims on lithic frags interfragmental. -some qtz-sulphide veining at top of interval -1% sp, <1% cp, 2-5% py	Possible correlation with AND LT, TBx in hole like 87-7, 87-11	
109.90 TO 117.75	«ALT FP BX»	Colour: Grain Size: Large, angular altered FP blocks (fsp altered away), minor andesite fragments in a whitish silica stockwork 115.8-117.75 -odd green coloration -possible strongly silicified andesite?		Str silicified	<1-1%, locally 2% sp, tr cpy, as patches within silica stockwork	Hydrothermal Bx
117.75 TO 127.00	«AND FL Bx or LT»	Colour: Grain Size: Flow Bx or LT composed of And flow fragments Fine chl. and silica amygdules			1-3% py diss patches 119.5-119.7	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
127.00 TO 159.15	«QF(H)P DYK E»	Colour: Grain Size: Same as QFP and top of hole 127.0-125.7 -dark green andesite FP rare qtz eyes = dyke margin?				-1 cm py aggregates - possible frags?
159.15 TO 160.30	«SI FLD. DA C FLOW»	Colour: mottled white green Grain Size: Same type of silica flood FP Fl/Dome as seen in other holes Fsp gone		Strongly silicified		

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	107.58	109.92	2.34	.11	.01	.32	1.0	.02									
	109.92	112.47	2.55	.11	.01	.79	1.0	.02									
	112.47	115.02	2.55	.03	.01	.89	.5	.02									
	115.02	117.58	2.56	.01	.01	.52	.5	.02									
	117.58	118.98	1.40	.02	.01	.27	.5	.02									
	118.98	121.98	3.00	.01	.01	.99	2.0	.03									

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28882	50.90	53.90	3.00	14.11	0.045	1.18	2.39	0.87	1.49	0.09	4.7	0.27	71.97	0.32	0.03	97.47	0.7	33	133	23	20	1	70	5
28883	86.90	89.90	3.00	14.34	0.02	1.16	2.64	0.01	1.99	0.08	4.64	0.07	71.87	0.33	0.01	97.14	0.9	21	43	5	20	1	55	5
28884	119.50	122.50	3.00	17.22	0.19	0.54	8.61	1.96	9.81	0.73	1.41	0.09	51.22	0.59	2.19	94.56	1	1	149	289	24	1	2329	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 13.20	Casing					
13.20 TO 13.70	«F(H)P DYKE»	Colour: Grain Size: Large, green speckled xenolith last 20 cm bxd; minor brown discoloration		Nil		
13.70 TO 50.50	«FP FLOW»	Colour: Grain Size: Fairly well developed pseudobx texture with well developed fine dark stockwork with minor pyrite		Grey brown bleached discoloration	Fine py stockwork	
50.50 TO 52.90	«AND LT»	Colour: Grain Size: Mod - str epidote, irregular patches, diss. grains (fsp)		<1% py		
52.90 TO 63.50	«FP FLOW»	Colour: Grain Size: Similar to previous FP flows but lacking pseudobx texture		Diss. sericite flecks	2-4% minor narrow py veinlets and diss.	
63.50 TO 82.80	«ALT DAC (FP) FLOW»	Colour: Grain Size: Strong bxd texture, silica flooding, fsp generally absent (altered away); fsp reappearing around 78 m		Sericite specks, some sericite alt of rock, strong silicification	Sp-py-cp veining/stockwork; minor disseminations; best stockwork and dissem. from 65.3-71.3	65.3-71.3 -6.0 m -3.56% Zn, 19.0 g/t Ag, 0.29 g/t Au 65.3-74.3 -9.0 m -2.98% Zn, 15 g/t Ag

HOLE NUMBER: 86-14

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
82.80 TO 95.10	«FP Flow» E.O.H.	Colour: Grain Size: Very weak patchy pseudobx texture		Fsp fairly fresh; sericite flecks	1-2% py locally, 7-8% py within pseudobx areas diss and fine veinlets	

HOLE NUMBER: 86-14

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	0.00	0.00	0.00													

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28888	37.20	40.20	3.00	15.3	0.095	1.05	5.09	2.14	1.53	0.12	1.06	0.42	65.27	0.45	2.78	95.31	10	381	122	27	55	45	71	230
28889	58.50	61.50	3.00	16.63	0.02	0.43	2.86	0.01	2.61	0.14	5.95	0.31	67.15	0.45	0.35	96.91	0.5	55	66	5	23	1	67	10
28890	75.30	78.30	3.00	15.17	0.25	0.83	5.46	3.41	3.05	0.06	0.01	0.27	64.84	0.44	4.33	98.1	3.9	195	168	47	121	16	770	90
28891	92.10	95.10	3.00	16.36	0.025	0.62	3.08	0.1	1.56	0.07	6.66	0.23	67.32	0.43	1.66	98.11	0.6	38	66	5	20	1	45	5

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
0.00	0.00	0.00	0.00	0	0	0	0	0	0	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 12.20	Casing					
12.20 TO 39.40	«F(H)P DYKE »	Colour: Grain Size: Same as top of hole 86-14				
39.40 TO 102.10	«ALT. BXD DAC (FP) FL »	Colour: Grain Size: Fsp phenocrysts ghosted, very soft (sericite alt.) some also replaced by sp-py Rock brecciated with a sulphide stockwork ~87 to approx 95 -stronger texture, weak, whitish stockwork (silica flooding)		Sericite alteration of fsp, strong bleached appearance	Sp-py-cp stockwork well developed from 40.2-63 -<1-7% sp locally -10% sp, 3-5% cp over narrow intervals Zones of best mineralization 40.2-57 89.0-91.0 (5% Zn) over 2 m (approx. 1% Cu)	39.57-53.30 -13.73 m of 1.57% Zn (\$18 ore @ \$0.60 Zn 89.0-92.0 -3.0 m of 0.69% Cu, 3.92% Zn
102.10 TO 104.25	«AND LT»	Colour: Grain Size: Lapilli sized amygdaloidal andesite fragments		Strongly bleached and altered	Minor sp-cp-py veining	
104.25 TO 106.40	«DAC FP FL BX, LT»	Colour: Grain Size: Fragmental appearance first and last 50 cm creamy green silica flooded appearance		Patchy white silica flooding	Overall -3% sp, 1-2% cp, 7-10% py -50 cm zones of 5-7% sp -interfragmental mineralization (stockwork) and diss.	

HOLE NUMBER: 86-13

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
106.40 TO 139.30	«AND LT»	Colour: Grain Size: Heterolithic; minor FP flow component to fragments		Mod chlorite; rock fairly soft	112.5-139.3 -<1-3% sp, tr-1% locally cp, 3-10% py.; mainly as narrow veinlets, locally strong veining/stockwork over 15-25 cm	114.6-130.42 -15.82 m of .18% Cu, 1.24% Zn
	E.O.H.				zones of best mineralization at 114.6-117.6 123.5-126.5 129.5-130.5	

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	36.57	39.57	3.00	.01	.01	.01	.5	.03									
	39.57	41.66	2.09	.15	.01	1.24	.5	.03									
	41.66	44.60	2.94	.17	.01	1.77	2.5	.03									
	44.60	47.50	2.90	.34	.01	1	3.5	.03									
	47.50	50.40	2.90	.16	.01	1.44	1.5	.1									
	50.40	53.30	2.90	.29	.01	2.3	1.5	.03									
	53.30	56.04	2.74	.16	.01	.78	1.5	.03									
	56.04	59.04	3.00	.04	.01	.34	1.5	.03									
	59.04	61.03	1.99	.11	.01	.44	.5	.03									
	61.03	64.03	3.00	.03	.01	.08	1	.03									
	64.03	67.03	3.00	.02	.01	.15	.5	.03									
	67.03	70.03	3.00	.05	.01	.02	.5	.03									
	70.03	73.03	3.00	.07	.01	.37	.5	.03									
	73.03	76.03	3.00	.16	.01	.04	.5	.03									
	76.03	79.03	3.00	.01	.01	.02	.5	.03									
	79.03	82.48	3.45	.05	.01	.12	.5	.03									
	82.48	83.65	1.17	.1	.01	.5	.5	.03									
	83.65	86.35	2.70	.05	.01	.07	.5	.03									
	86.35	89.00	2.65	.11	.01	.3	1	.03									
	89.00	92.00	3.00	.69	.01	3.92	.5	.03									
	92.00	95.00	3.00	.01	.01	.05	.5	.03									
	95.00	98.15	3.15	.01	.01	.25	.5	.03									
	98.15	100.45	2.30	.01	.01	.13	1	.03									
	100.45	102.68	2.23	.02	.01	.04	.5	.03									
	102.68	104.45	1.77	.06	.01	.1	1.5	.03									
	104.45	106.50	2.05	.41	.01	1.28	2.5	.03									
	106.50	107.02	0.52	.01	.01	.1	.5	.03									
	107.02	107.29	0.27	.02	.01	.08	.5	.03									
	107.29	108.18	0.89	.06	.01	.29	.5	.03									
	108.18	111.18	3.00	.03	.01	.06	.5	.03									
	111.18	114.60	3.42	.02	.01	.25	.5	.03									
	114.60	117.60	3.00	.28	.01	1.99	1.5	.03									
	117.60	120.60	3.00	.21	.01	.54	.5	.02									
	120.60	123.55	2.95	.05	.01	.97	.5	.02									
	123.55	126.55	3.00	.22	.01	1.81	1	.02									
	126.55	130.42	3.87	.14	.01	.97	1	.02									
	130.42	133.42	3.00	.11	.01	.69	.5	.02									
	133.42	136.42	3.00	.03	.01	.25	.5	.02									

HOLE NUMBER: 86-13

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	136.42	139.29	2.87	.03	.01	.29	1.5	.02									

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28892	61.60	64.60	3.00	15.02	0.035	0.26	4.7	1.67	5.35	0.11	0.01	0.2	66.48	0.43	2.62	96.89	1.4	84	50	139	32	5	182	35
28893	90.50	93.60	3.10	17.61	0.07	0.29	3.16	1.04	7.06	0.15	0.01	0.01	63.43	0.49	1.35	94.66	1	1	96	95	12	1	1564	10
28894	119.50	122.50	3.00	16.81	0.15	0.33	9.27	0.51	9.53	0.81	0.75	0.01	53.79	0.63	2.22	94.81	0.6	1	51	188	24	1	1399	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 18.50	Casing					Hole collared into mineralization
18.50 TO 103.75	«ALT. FP FL OW»	<p>Colour: Grain Size: Bxd into various size blocks with a dark, fine sulphide stockwork +/- base metals</p> <p>71.9-81.5 -well developed brecciated stockwork veining sp and cp veins</p> <p>83.21-103.75 -Fl Bx, Fl banding; mottled brown cream texture (silica flooded) -banding at 50-60 deg to c.a. (possible more like tuff?)</p>		<p>Fsp altered to semitransparent soft green tan sericite; fsp outlines still evident</p> <p>-silica flooded -silica veining, stockwork -no fsp</p>	<p>18.5-20.0 -3% cp, 7% sp (1.31% Cu, 3.43% sp) 20.0-33.0 -<1% sp, cp</p> <p>-Zn sulphide poor from 33.0-71 m, py veinlets, still exist</p> <p>5-10% py, <1% sp diss. and veinlets/ stockwork</p> <p>91.4-93.1 -0.58% Cu, 8.99% zn (veins/stockwork)</p> <p>101.2-103.75 -10-70% fine py</p>	Vent zone mineralization
103.75 TO 108.50	«(Q) FP DYK E» E.O.H.	<p>Colour: Grain Size: First 30 cm, dark green andesitic looking FP grading into QFP = dyke margin</p> <p>Massive homogeneous unit</p>		<p>Wk epidote alteration of fsp phenocryst; fsp phenos green not white</p>		

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	18.50	20.00	1.50	1.31	.01	3.43	4	.05								
	20.00	23.00	3.00	.11	.01	.04	1	.05								
	23.00	26.00	3.00	.01	.01	.02	0.5	.05								
	26.00	29.00	3.00	.05	.01	.04	1.5	.05								
	29.00	31.14	2.14	.05	.01	.09	1	.05								
	31.14	33.00	1.86	.56	.01	.76	2	.05								
	33.00	36.00	3.00	.08	.01	.07	1	.05								
	36.00	38.19	2.19	.01	.01	.02	0.5	.05								
	38.19	40.00	1.81	.24	.01	.29	1	.05								
	40.00	43.00	3.00	.03	.01	.02	.5	.05								
	43.00	46.00	3.00	1.34	.01	.29	1.5	.05								
	46.00	49.00	3.00	.01	.01	.01	.5	.05								
	49.00	52.00	3.00	.01	.01	.01	.5	.05								
	52.00	55.00	3.00	.01	.01	.01	1.0	.05								
	55.00	58.00	3.00	.03	.01	.01	1	.05								
	58.00	61.00	3.00	.01	.01	.01	2	.05								
	61.00	64.00	3.00	.01	.01	.01	1	.05								
	64.00	67.00	3.00	.01	.01	.01	1.5	.05								
	67.00	71.73	4.73	.04	.01	.01	1.5	.05								
	71.73	73.63	1.90	.43	.01	.31	7.5	.05								
	73.63	75.54	1.91	.37	.01	1.13	2.5	.05								
	75.54	78.50	2.96	.62	.01	1.45	10	.05								
	78.50	81.50	3.00	.19	.01	.07	3	.05								
	81.50	84.50	3.00	.58	.01	.37	1.5	.05								
	84.50	87.50	3.00	.01	.01	.02	.5	.05								
	87.50	91.40	3.90	.01	.01	.17	1.5	.05								
	91.40	93.08	1.68	.58	.01	8.99	2	.05								
	93.08	96.00	2.92	.05	.01	.55	2	.05								
	96.00	99.00	3.00	.11	.01	1.98	1.5	.05								
	99.00	102.00	3.00	.01	.01	.07	.5	.05								
	102.00	103.77	1.77	.03	.01	.31	1.5	.05								

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28895	23.20	26.20	3.00	14.26	0.03	0.1	5.81	0.01	5.13	0.15	0.01	0.01	68.38	0.38	2.61	96.86	1.2	22	70	14	22	1	127	25
28896	53.60	56.70	3.10	15.95	0.045	0.21	4.4	1.55	4.08	0.14	0.01	0.01	68.23	0.44	1.6	96.64	1.2	30	53	31	26	1	89	65
28897	86.30	89.30	3.00	15.38	0.015	0.1	3.25	0.01	5.07	0.12	0.01	0.01	70.93	0.41	1.08	96.36	0.4	33	37	6	13	1	86	10

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 9.14	Casing					
9.14 TO 18.70	Bleached «FP FL»	Colour: Creamy grey Bxd with a fine iron stained oxidized stockwk FP Andesite dykes with 2-4% epidote alt fsp from 12.5-13.2m and 14.0-15.9m		Depending on the degree of bleaching, fsp vary from white and weakly altered to ghosted, to destroyed, in most intense bleached zones	1-3% py, tr sp diss and rare very fine veinlets	
18.70 TO 33.50	«F(H)P DYKE »	Colour: Grey green Fresh fsp Fine green speckled xenoliths, green clots/laths				Dyke post dates alteration Thin Section ~32.6m
33.50 TO 34.70	«AND DYKE»					
34.70 TO 80.77	«FP FL/DOME ?»	41.5m Flow becoming more brecciated with good sulfide stockwork development from 42.9-51.6m Below 51.6m brecciation decreasing downhole with weak sericite/pyrite +/- sp stockwork Very weak brecciation towards EOH END OF HOLE		34.7-41.5m Weak alteration of fsp phenocrysts Sericate flecks Silicified 41.5-42.9m Gradational increase in alteration fsp becoming replaced by green soft minerals Sericate flecks 42.9m Fsp ghosted green outlines. Soft mineral replacement (ser) entire rock is somewhat softer than 34.7-41.5m sericite alteration	<1% sp diss and veinlets 2-4% py diss and veinlets 42.9-50.1m Well developed sulfide stockwork with best mineralization (3-5cm wide sp veins) from 46.3-50.1m Below 50.1m 2-3% py tr sp as narrow sericite-py stockwork and disseminations	43.9-49.95m 6.05m of 4% Zn includes 3.05m of 6.5% Zn 10g/t Ag Thin section 52m

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
34.69	36.60	1.91		.01	.01	.03	4.	.05								
36.60	39.90	3.30		.01	.08	.17	1.5	.05								
39.90	42.90	3.00		.02	.01	.37	2	.05								
42.90	43.90	1.00		.02	.07	.35	3	.05								
43.90	46.90	3.00		.07	.05	1.51	2.	.05								
46.90	49.95	3.05		.71	.37	6.51	10	.05								
49.95	52.95	3.00		.04	.01	.08	.5	.05								

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28902	9.20	12.20	3.00	17.75	0.05	0.64	1.83	0.01	1.71	0.02	4.76	0.01	69.81	0.47	0.17	97.21	0.9	32	127	5	17	2	52	5
28903	36.00	39.00	3.00	15.86	0.185	0.3	2.87	4.79	1.36	0.06	0.22	0.01	70.62	0.43	1.51	98.2	2.8	85	182	106	977	4	1269	60
28904	65.80	68.80	3.00	14.64	0.025	0.17	3.25	0.22	5.64	0.19	0.01	0.01	70.77	0.41	0.68	96	0.5	1	54	18	30	1	226	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.30	Casing					
3.30 TO 93.30	«ALT. FP FL OW»	<p>Colour: Grain Size:</p> <p>3.3-10.5 -well developed brecciation and stockwork develop- ment</p> <p>below 10.5 -weak brecciation and pseudobx stockwork</p> <p>-minor green soft (ser?) +/- py veinlets/stockwork</p> <p>Below 49 m -fairly massive, patchy, very weak pseudobx</p> <p>88.5-89.2 -crushed gougy zones -faults at 15-30 deg</p>		-fsp altered to semi-translucent green tan soft mineral	<p>-3-5% py stockwork and diss.</p> <p>10.5 - -1-3% py diss. and minor veinlets -trace sp @ 22.3 m</p> <p>Traces of sp over narrow widths @ 44.8 anmd 49.4</p> <p>78.4 -sp-cp fct coating 83.9 -2-5 mm veinlet sp</p> <p>90.0-91.2 -2-4% py, <1% cp diss. and very fine veinlets most concentrated in last 30 cm of zone</p>	
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	6.74	7.60	0.86	.01	.01	.06	1.	.05									

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28908	62.80	65.80	3.00	14.3	0.025	0.15	3.31	1.53	5.77	0.2	0.01	0.18	69.53	0.4	0.76	96.16	0.5	1	63	20	14	1	189	5
28909	87.20	90.20	3.00	14.83	0.04	0.16	3.32	0.99	5.28	0.18	0.01	0.02	70.12	0.41	0.79	96.14	0.5	13	99	299	9	1	142	5

HOLE NUMBER: 86-9

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 27.43	Casing					
27.43 TO 57.00	«FPD»					
57.00 TO 76.81	«ASHES»					

HOLE NUMBER: 86-9

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL					COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	

HOLE NUMBER: 86-8

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 32.00	Casing					

HOLE NUMBER: 86-8

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-7

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 21.34	Casing					
21.34 TO 42.37	«ASH/LT»				«Tr Sph»	

HOLE NUMBER: 86-7

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-6

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 15.24	Casing					
15.24 TO 38.40	«FP»					

HOLE NUMBER: 86-6

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-5

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 9.14	Casing					
9.14 TO 41.45	«FP»					

HOLE NUMBER: 86-5

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-4

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 15.24	Casing					
15.24 TO 55.47	«FP?»					

HOLE NUMBER: 86-4

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-3

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 33.53	Casing					
33.53 TO 43.28	«ASH»					
43.28 TO 50.90	«DAC FL/BX»					
50.90 TO 63.05	«LT»					
63.05 TO 76.81	«ASH/LT»					

HOLE NUMBER: 86-3

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-2

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: SENECA
PROJECT NUMBER: 663
CLAIM NUMBER: DOROTHY 3
LOCATION: VENT

PLOTTING COORDS GRID: IDEAL
NORTH: 625.00N
EAST: 9880.00E
ELEV: 365.00

ALTERNATE COORDS GRID:
NORTH: 6+ 5N
EAST: 98+55E
ELEV: 365.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 68.28m
START DEPTH: 0.00m
FINAL DEPTH: 68.28m

COLLAR GRID AZIMUTH: 275° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 325° 0' 0"

DATE STARTED: 0, 0
DATE COMPLETED: 0, 0
DATE LOGGED: 0, 0

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

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR:
CASING: No
CORE STORAGE:

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
67.06	333°30'	-57° 0'	SING.SHOT	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

HOLE NUMBER: 86-2

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 16.76	Casing					
16.76 TO 24.38	«QFP»					
24.38 TO 38.10	«FPD»					
38.10 TO 68.28	«ASH/LT»					

HOLE NUMBER: 86-2

ASSAY SHEET

DATE: 1-March-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

HOLE NUMBER: 86-1

MINNOVA INC.
DRILL HOLE RECORD

DATE: 1-March-1991

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 23.16	Casing					

HOLE NUMBER: 86-1

DRILL HOLE RECORD

LOGGED BY: BP-Selco

PAGE: 2

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.70	Casing					
6.70 TO 83.40	«FP FL DOME»	<p>Colour: Grain Size: Usual weak - strong silica flooded FP flows/dome Fairly strong surface oxidation down to 32 m</p> <p>40.3-44.6 -possible FP dyke, darker brown, not very altered appearance; some screens of more altered FP</p> <p>Occasional areas of excellent flow banding</p>		<p>6.7-25.0 -fairly strong surface oxidating/discoloration; weak altered appearance; fsp fairly fresh looking</p> <p>25.0-32.6 -moderate altered appearance fsp faintly outlined</p> <p>32.6-40.3 -weak, silica flooded FP</p> <p>44.6-52.3 -strong altered appearance; fsp gone -dark grey coloration, some tan beige rims (sericitic) to some bxd fragments -minor sericitic veinlets</p> <p>52.3-approx. 73 -strong silica flooded appearance -fsp generally absent (altered out) some patches with fsp -interval contains more sericite specks</p>	<p><1% sulphides</p> <p>27.3-28.0 -sp stockwork</p> <p>28.0-32.6 -traces sp</p> <p>Richest intersection from, 46.8-48.5; well developed Sp-Gn stockwork</p> <p>52.3-65.2 -<1-1.5% sp diss.</p>	<p>-Vent Zone alteration and mineralization</p> <p>43.4-53.0 (9.6 m) -4.06% Zn, 1.45% Pb, 0.26% Cu, .96 opt Ag, .024 opt Au</p> <p>46.5-50.0 (3.5 m) -5.5% Zn, 3.0% Pb, .35% Cu, 1.4 opt Ag, .034 opt Au</p> <p>($\\$100$ plus ore/3.5 m)</p>

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				Below 73 m -fsp phyrlic, weaker silica flooded appearance		
83.40 TO 93.60	«QFP DYKE» E.O.H.	Colour: Grain Size: 83.4-85.9 -Fault zone -rubbly cores crushed QFP with fault gouge Fault 85.9 m -large qtz eyes -massive homogeneous	30	-fresh looking	-1-2% diss. brassy py	

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
	6.71	8.23	1.52	.012	.01	.01	.34	.03								
	8.23	11.28	3.05	.022	.01	.01	.34	.03								
	11.28	14.33	3.05	.012	.01	.01	.34	.03								
	14.33	17.37	3.04	.014	.01	.01	.34	.03								
	17.37	20.42	3.05	.007	.01	.01	.34	.03								
	20.42	23.47	3.05	.006	.01	.01	.34	.03								
	23.47	26.52	3.05	.007	.01	.01	1.03	.03								
	26.52	29.56	3.04	.018	.04	.12	.34	.03								
	29.56	32.61	3.05	.008	.01	.01	4.46	.03								
	32.61	35.66	3.05	.008	.01	.01	1.03	.03								
	35.66	38.71	3.05	.007	.01	.01	.34	.07								
	38.71	39.93	1.22	.006	.01	.01	.34	.03								
	39.93	41.76	1.83	.008	.01	.02	3.09	.21								
	41.76	43.43	1.67	.012	.01	.08	8.23	1.2								
	43.43	46.48	3.05	.074	1.06	2.6	38.4	1.78								
	46.48	48.46	1.98	.368	4.5	6.25	61.71	.38								
	48.46	49.99	1.53	.322	1.06	4.56	29.83	.07								
	49.99	53.04	3.05	.35	.05	3.93	10.63	.03								
	53.04	56.08	3.04	.04	.01	.64	4.8	.03								
	56.08	59.13	3.05	.026	.01	.38	2.4	.03								
	59.13	62.18	3.05	.026	.01	.17	2.06	.03								
	62.18	65.23	3.05	.015	.01	.1	.34	.03								
	65.23	67.06	1.83	.019	.01	.04	2.06	.03								
	67.06	69.19	2.13	.008	.01	.01	2.4	.03								
	69.19	72.24	3.05	.014	.01	.01	2.06	.03								
	72.24	75.29	3.05	.014	.01	.02	2.06	.03								
	75.29	78.33	3.04	.009	.01	.01	.34	.03								
	78.33	80.77	2.44	.006	.01	.01	.69	.03								
	80.77	82.91	2.14	.009	.01	.01	.34	.03								

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28874	8.20	11.20	3.00	14.72	0.005	0.46	2.54	0.81	1.21	0.15	6.56	0.41	69.25	0.41	0.07	96.6	0.1	64	43	308	20	1	75	5
28875	29.50	32.50	3.00	13.87	1.57	0.4	4.54	2.64	0.5	0.02	3.46	0.68	66.85	0.39	3.29	98.2	9.2	256	56	37	58	17	401	45
28876	44.80	47.80	3.00	16.93	0.25	0.41	3.24	4.84	1.2	0.03	0.03	0.27	67.25	0.48	2.45	97.37	4.1	101	227	290	95	4	5586	15
28877	75.30	78.30	3.00	16.98	0.225	0.5	2.99	4.91	1.71	0.08	0.73	0.15	67.17	0.46	1.5	97.42	1	89	365	46	34	3	78	20
28878	89.60	92.60	3.00	14.4	0.035	0.81	2.09	0.1	1.1	0.13	5.71	0.1	72.92	0.26	0.41	98.07	0.5	38	326	474	29	1	72	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.70	Casing					
6.70 TO 27.00	«FP FL/DOME»	Colour: Grain Size: Weak to moderate brecciated texture and silica flooding		Moderate to strong silica flooding with brecciation 17.3-27.0 -strong Fe oxidation/discoloration	17.3-27.0 -3-5% pyrite diss. and fine veinlets	
27.00 TO 50.90	«ALT. DAC F L»	Colour: med. grey Grain Size: Fairly strong bxd texture 7-10%, <1 mm tan specks (sericite) Some patches vaguely resemble silica flooded FP of above but lacking Fsp planes		29.5-50.9 -1-3% sp disseminated and veinlets -2-3% locally 10-15% py diss. and stockwork mineralization -trace cp	Vent Zone equivalent 21.3 m of .5% Zn, .005% Cu, .10 oz/t Ag	
50.90 TO 63.20	«FP DYKE»	Colour: med. grey Grain Size: 10-15%, 1 mm white fsp xstals Unit looks very fresh and fsp stand out when compared to previous unit			Patchy 10-15% fine pyrite stockwork; trace cpy	
63.20 TO 84.40	«FP FL DOME» E.O.H.	Colour: grey green Grain Size: Fsp porphyritic with <1 mm tan sericite?; specks that are similar to specks in altered mineralized unit from 27-59 m; weak pseudobreccia texture		Silicified	<1% py	

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm		
	18.29	21.33	3.04	.008	.01	.02	.34	.03									
	21.33	23.93	2.60	.006	.01	.01	.34	.03									
	24.37	26.52	2.15	.012	.02	.01	4.11	.21									
	26.52	29.52	3.00	.030	.01	.46	2.06	.03									
	29.52	32.61	3.09	.04	.12	1.2	2.74	.03									
	32.61	35.66	3.05	.058	.02	.61	3.77	.03									
	35.66	38.71	3.05	.078	.01	.13	3.09	.03									
	38.71	41.76	3.05	.042	.01	.02	2.06	.03									
	41.76	44.81	3.05	.031	.01	.85	4.11	.03									
	44.81	47.85	3.04	.076	.04	.25	5.83	.03									
	47.85	50.90	3.05	.054	.02	.02	1.37	.03									
	50.90	53.95	3.05	.014	.01	.01	.34	.03									
	53.95	57.00	3.05	.02	.01	.01	.34	.03									
	57.00	60.05	3.05	.018	.01	.01	4.11	.03									
	60.05	63.25	3.20	.009	.01	.01	.34	.03									
	63.25	66.14	2.89	.008	.01	.01	1.37	.03									
	66.14	69.19	3.05	.007	.01	.01	.34	.03									

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28870	8.20	11.30	3.10	15.07	0.005	0.33	2.02	0.01	0.98	0.12	6.61	0.4	71.33	0.41	0.05	97.34	0.1	15	22	15	23	1	60	5
28871	38.70	41.75	3.05	15.02	0.27	0.52	3.09	4.49	0.87	0.03	0.06	0.33	70.46	0.42	2.15	97.7	2.7	144	365	380	60	5	1496	45
28872	60.00	63.00	3.00	18.16	0.075	0.81	4.34	1.51	1.26	0.05	5.35	0.33	62.7	0.51	3.23	98.31	1.5	86	126	14	43	6	40	5
28873	80.80	83.80	3.00	15.22	0.015	0.71	2.33	0.13	1.83	0.08	6.6	0.35	69.72	0.41	0.74	98.14	0.7	31	113	13	57	1	101	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.70	Casing					
6.70 TO 38.40	«DAC FP FL DOME»	Colour: Grain Size: Weak, brecciated and weak silicified appearance from 6.7-14.0 Smaller fsp, and lacking green clots of next unit downhole rubble lower contact			24.8-38.4 -occasional narrow py veinlets, locally 10-20 cm py stockwork, trace sp -previous sample returned negligible results	Probable Vent Zone porphyry mineralization
38.40 TO 44.50	«FHP DYKE» E.O.H.	Colour: Grain Size: Abundant mm green clots/laths; some speckled xenoliths to 1 cm				

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL					COMMENTS		
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm		Au ppb	Ba ppm
	27.89	29.56	1.67	.008	.01	.01	.34	.07								
	29.56	31.09	1.53	.008	.01	.01	.34	.03								
	32.61	34.75	2.14	.007	.01	.01	.34	.03								
	34.75	36.88	2.13	.006	.01	.01	.34	.07								
	36.88	38.40	1.52	.008	.01	.01	.34	.1								

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28868	11.30	14.30	3.00	14.75	0.03	0.53	3.01	1.06	2.62	0.16	4.47	0.37	69.86	0.4	0.05	97.32	0.7	19	71	46	27	1	88	5
28869	39.30	42.30	3.00	15.94	0.02	0.72	3.21	1.38	2.66	0.17	4.64	0.35	67.19	0.46	0.06	96.8	1.3	24	61	26	23	1	79	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 20.10	Casing					
20.10 TO 25.90	«FP FLOW»			Very weakly altered, fsp fairly fresh but start to altered going down hole	1-2% diss py, tr sp	
25.90 TO 66.30	«ALT DAC FLOW»	Last 6m good flow banding		25.9-49.1m Fsp altered out. Pseudobx texture, No silica flooding, some sericite alteration (scratches with knife) 49.1m Alteration changes from grey pseudobreccia to a creamy green, grey mottled silicification Silica flooded FP Fsp xstal still altered away	25.9-35.36m Well developed SP stockwork with minor cp and py, gn. Some veins up to 5cm wide. Rare cp rich veins up to 5cm wide at 32.6m. Base sulfides also disseminated Below 35.6-49.1m Minor py-sp+/-cp veinlets and disseminations 49.1-59.4m 1-3% sp, <1% cp as moderate stockwork and disseminations 59.4-66.3m <1% sp occasional py-sp veinlets and zones with disseminations Trace cpy Coarse brassy py toward base of unit	25.9-35.36m Vent zone 9.45m of 4.06% Zn, 0.76% Cu, 0.52 oz/T Ag, 0.05 Au (\$60 ore) includes: 4.26m of 5.77% Zn, 1.18% Cu, 0.69 oz/T AG, 0.006 oz/T Au (\$90 ore) 49.1-59.4m 1.17% Zn, 0.10% Cu
66.30 TO 75.30	«QFP FL/DYKE?»	First 30cm fine grained andesite No sharp contact to QFP Is the dyke margin or tuff grading into QFP flow END OF HOLE		Fsp not fresh and white are cloudy with a yellow green coloration	1-2% py at top of unit	

Sample	From (m)	To (m)	Length (m)	ASSAYS						GEOCHEMICAL						COMMENTS
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Ba ppm	
22.86	25.91	3.05		.029	.01	.08	.34	.17								
25.91	28.35	2.44		.279	.43	3.5	16.46	.24								
28.35	30.78	2.43		.504	.1	6.6	21.94	.24								
30.78	32.61	1.83		2.07	.02	4.63	26.06	.14								
32.61	35.36	2.75		.543	.01	1.9	10.3	.07								
35.36	38.40	3.04		.142	.01	.92	3.43	.03								
38.40	41.45	3.05		.226	.01	.18	1.03	.03								
41.45	42.98	1.53		.092	.01	.54	2.4	.07								
42.98	46.02	3.04		.094	.12	.55	8.23	.21								
46.02	47.85	1.83		.092	.02	.2	.34	.07								
47.85	49.07	1.22		.073	.01	.03	2.06	.03								
49.07	50.90	1.83		.13	.07	1.06	2.06	.03								
50.90	52.43	1.53		.026	.01	.04	.34	.03								
52.43	54.25	1.82		.115	.01	1.64	.34	.03								
54.25	57.00	2.75		.14	.06	1.3	.68	.21								
57.00	59.44	2.44		.08	.01	1.45	.34	.10								
59.44	61.26	1.82		.03	.01	.04	.34	.03								
61.26	63.09	1.83		.026	.01	.16	.34	.03								
63.09	66.29	3.20		.009	.01	.01	.34	.03								
66.29	69.19	2.90		.056	.01	.01	.34	.03								

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28879	22.30	25.30	3.00	14.45	0.23	0.64	2.85	2.65	2.3	0.13	2.33	0.18	70.16	0.4	1.27	97.59	1.7	32	386	211	27	1	501	5
28880	41.40	44.40	3.00	12.63	0.115	0.17	9.65	1.69	3.3	0.08	0.01	0.2	62.27	0.35	6.94	97.41	5.9	229	85	3402	105	16	6474	55
28881	61.30	64.30	3.00	13.88	0.14	0.24	4.16	1.97	3.35	0.13	0.01	0.1	70.74	0.39	1.92	97.02	0.7	37	276	121	32	1	559	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 1.50	Casing					
1.50 TO 4.00	«F(H)P DYKE »					
4.00 TO 87.50	«ALT FP FLO W»	<p>Fault 16.7m end of significant mineralization</p> <p>Below 16.7m brecciated appearance with dark green soft veinlets +/- pyrite. Good pseudobreccia texture</p> <p>27.25-27.7m Dac XT, LT Below 27.7m Mild brecciation with fine py +/- sp fine stockwork, veinlets</p> <p>Downhole loose py from pseudobx stockwork and have mainly a soft darker green stockwork +/- py</p> <p>END OF HOLE</p>		<p>Moderate sericite alt of rock Fsp ghosted with green brown sericite</p>	<p>8.2-13.1m <1-2% sp as narrow veinlet</p> <p>13.1-16.7m 6-8% sp, 1% cp, 3% py as well developed stockwork</p> <p>55.5-58.5m 2-3% py stockwork</p> <p>63.1m 20cm sp veinlets</p> <p>85.5-89.5m Sphalerite veinlets</p>	<p>12.8-16.76m 3.96m of 3.62% Zn, 0.49% Cu (50 ore)</p> <p>0.8% Zn</p>

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL					COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ba %	Cu ppm	Pb ppm	Zn ppm	Ag ppm		Au ppb
	3.96	6.10	2.14	.034	.06	.22	4.11	.21							
	6.10	8.23	2.13	.033	.03	.19	5.14	.21							
	8.23	9.75	1.52	.027	.04	.3	3.09	.07							
	9.75	12.80	3.05	.052	.02	.84	4.11	.03							
	12.80	15.24	2.44	.58	.02	3.75	8.23	.1							
	15.24	16.76	1.52	.342	.01	3.42	4.11	.1							
	16.76	18.90	2.14	.011	.01	.06	1.71	.17							
	18.90	21.95	3.05	.01	.01	.07	.34	.14							
	55.47	58.52	3.05	.01	.01	.04	.34	.03							
	84.89	87.48	2.59	.047	.01	.8	.34	.17							

Sample	From (m)	To (m)	Length (m)	Al2O3 %	BaT %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	Total %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb
28905	6.70	9.70	3.00	15.48	0.18	0.37	2.78	3.24	2.72	0.08	0.01	0.01	70.08	0.44	1.35	96.72	5	105	169	281	529	5	2731	65
28906	40.20	43.20	3.00	14.73	0.025	0.14	3.1	1.07	5.6	0.17	0.01	0.02	69.65	0.41	0.65	95.58	0.6	5	76	9	18	1	306	5
28907	69.20	72.20	3.00	15.14	0.38	0.42	3.11	2.14	4.3	0.17	0.01	0.01	69.29	0.42	0.95	96.33	0.6	38	885	19	19	1	385	5