

Project: FWZ

Hole: NB20-004

Property:	NIDD	Survey Type:	GPS	Logged By:	J.Lewis	Hole Type:	DDH
Prospect:	Boundary	Survey By:	J.Milton	Date Started:	2020-09-12	Company:	Fireweed Zinc
UTM Grid:	NAD83_09	Date Surveyed:		Date Completed:	2020-09-20	Core Size:	HQ3
UTM East:	422049	Survey Accuracy:	GPS_GLO +/- dm	Drill Company:	NewAge	Casing Status:	Left in hole
UTM North:	7010614	Grid Convergence:	-1.03	Drill Rig:	A5_1	Casing Depth (m):	7.5
Elev. CGVD28 (m):	1217.5	Declination:	19.5	Drill Started:	2020-09-10	Reduced (m):	
Hole Status:	Complete	Dip:	-50	Drill Completed:	2020-09-18	Reduced Size:	
Hole Purpose:	EXPL	Length (m):	333	Approved By:		Oriented?:	Oriented
		Comments:				Grouted?:	No

Casing extends to 7.5 m and was collared in overburden. MacMillan Pass chert-pebble conglomerate is variably altered and faulted. It extends from 7.5 m to 78.8 m where it transitions into the Fuller Lake Carbonaceous submember. At 130.61 m, the sequence abruptly changes to massive sulphides containing pyrite, metallic pink to pink-brown sphalerite, minor galena and trace pyrrhotite inferred from weak magnetic response. Probably MacMillan Pass diamictite and mudstone underlies the massive sulphides from 156.2-195.91 m containing vein-hosted sulphide mineralization and barite snowflakes variably replaced by pyrite. MacMillan Pass volcanoclastics continue from 195.91 to 216.76 containing semi-massive sulphide mineralization that caps the beginning and end of the interval. Nidderly Lake mudstone/chert runs from 195.91 to 285.69 m and overlies sheared/faulted mixed mudstone. The hole concludes with Duo Lake Formation, a black, calcareous mudstone with silty laminae.

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
15	DOWNHOLE		2020-09-18	-48.9	213	193.5	214.03	59325	74.1	Reflex EZ-trac +/- degrees	Good	☒	
18	DOWNHOLE		2020-09-18	-48.8	212.5	193	213.53	58127	73.1	Reflex EZ-trac +/- degrees	Good	☒	
20	DOWNHOLE		2020-09-10	-49	213	193.5	214.03	57975		Reflex EZ-trac +/- degrees	Good	☒	
21	DOWNHOLE		2020-09-18	-48.9	212.2	192.7	213.23	57863	71.3	Reflex EZ-trac +/- degrees	Good	☒	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
24	DOWNHOLE		2020-09-18	-48.9	212.2	192.7	213.23	57746	69.6	Reflex EZ-trac +/- degrees	Good	☒	
27	DOWNHOLE		2020-09-18	-48.9	209.3	189.8	210.33	57961	68.1	Reflex EZ-trac +/- degrees	Good	☒	
30	DOWNHOLE		2020-09-18	-49	211.8	192.3	212.83	57679	66.8	Reflex EZ-trac +/- degrees	Good	☒	
33	DOWNHOLE		2020-09-18	-49.1	211.5	192	212.53	57647	66.6	Reflex EZ-trac +/- degrees	Good	☒	
36	DOWNHOLE		2020-09-18	-49.1	211.7	192.2	212.73	57632	65.7	Reflex EZ-trac +/- degrees	Good	☒	
39	DOWNHOLE		2020-09-18	-49.1	212.1	192.6	213.13	57575	65	Reflex EZ-trac +/- degrees	Good	☒	
42	DOWNHOLE		2020-09-18	-49.3	212.3	192.8	213.33	57499	63	Reflex EZ-trac +/- degrees	Good	☒	
45	DOWNHOLE		2020-09-18	-49.3	212.2	192.7	213.23	57569	69.8	Reflex EZ-trac +/- degrees	Good	☒	
48	DOWNHOLE		2020-09-18	-49.9	211.9	192.4	212.93	57589	67.6	Reflex EZ-trac +/- degrees	Good	☒	
51	DOWNHOLE		2020-09-18	-49.1	212.5	193	213.53	57591	66.9	Reflex EZ-trac +/- degrees	Good	☒	
54	DOWNHOLE		2020-09-18	-48	210.6	191.1	211.63	57351	66.8	Reflex EZ-trac +/- degrees	Good	☒	
57	DOWNHOLE		2020-09-18	-48.7	211.1	191.6	212.13	57513	61.2	Reflex EZ-trac +/- degrees	Good	☒	
60	DOWNHOLE		2020-09-18	-48.4	211.4	191.9	212.43	57645	31.3	Reflex EZ-trac +/- degrees	Good	☒	
63	DOWNHOLE		2020-09-18	-48.4	211.6	192.1	212.63	57586	36.9	Reflex EZ-trac +/- degrees	Good	☒	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
66	DOWNHOLE		2020-09-18	-48.3	212	192.5	213.03	57581	37.7	Reflex EZ-trac +/- degrees	Good	☒	
68	DOWNHOLE		2020-09-11	-48.3	212.4	192.9	213.43			Reflex EZ-trac +/- degrees	Good	☒	
69	DOWNHOLE		2020-09-18	-48.2	211.8	192.3	212.83	57599	37.5	Reflex EZ-trac +/- degrees	Good	☒	
72	DOWNHOLE		2020-09-18	-48.1	212.4	192.9	213.43	57586	40.9	Reflex EZ-trac +/- degrees	Good	☒	
75	DOWNHOLE		2020-09-18	-47.9	212.5	193	213.53	57580	40.8	Reflex EZ-trac +/- degrees	Good	☒	
78	DOWNHOLE		2020-09-18	-47.9	213	193.5	214.03	57596	41.9	Reflex EZ-trac +/- degrees	Good	☒	
81	DOWNHOLE		2020-09-18	-47.8	212.3	192.8	213.33	57578	42	Reflex EZ-trac +/- degrees	Good	☒	
84	DOWNHOLE		2020-09-18	-47.6	212.5	193	213.53	57575	42.9	Reflex EZ-trac +/- degrees	Good	☒	
87	DOWNHOLE		2020-09-18	-47.6	212.7	193.2	213.73	57573	43.9	Reflex EZ-trac +/- degrees	Good	☒	
90	DOWNHOLE		2020-09-18	-47.7	213.3	193.8	214.33	57722	45.1	Reflex EZ-trac +/- degrees	Good	☒	
93	DOWNHOLE		2020-09-18	-47.8	212.9	193.4	213.93	57576	44.8	Reflex EZ-trac +/- degrees	Good	☒	
96	DOWNHOLE		2020-09-18	-47.7	212.7	193.2	213.73	57582	44.4	Reflex EZ-trac +/- degrees	Good	☒	
99	DOWNHOLE		2020-09-18	-47.6	212.7	193.2	213.73	57503	43.8	Reflex EZ-trac +/- degrees	Good	☒	
102	DOWNHOLE		2020-09-18	-47.7	212.5	193	213.53	57564	45.3	Reflex EZ-trac +/- degrees	Good	☒	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
105	DOWNHOLE		2020-09-18	-47.5	212.7	193.2	213.73	57571	49	Reflex EZ-trac +/- degrees	Good	☒	
108	DOWNHOLE		2020-09-18	-47.4	212.6	193.1	213.63	57578	48.7	Reflex EZ-trac +/- degrees	Good	☒	
111	DOWNHOLE		2020-09-18	-47.4	212.5	193	213.53	57562	50.2	Reflex EZ-trac +/- degrees	Good	☒	
114	DOWNHOLE		2020-09-18	-47.4	212.3	192.8	213.33	57575	50.7	Reflex EZ-trac +/- degrees	Good	☒	
117	DOWNHOLE		2020-09-18	-47.3	212.3	192.8	213.33	57561	50.8	Reflex EZ-trac +/- degrees	Good	☒	
120	DOWNHOLE		2020-09-18	-47.2	212.5	193	213.53	57550	50.3	Reflex EZ-trac +/- degrees	Good	☒	
123	DOWNHOLE		2020-09-18	-47.2	212.6	193.1	213.63	57571	50	Reflex EZ-trac +/- degrees	Good	☒	
126	DOWNHOLE		2020-09-18	-47.1	212.2	192.7	213.23	57564	50.8	Reflex EZ-trac +/- degrees	Good	☒	
129	DOWNHOLE		2020-09-18	-47	212.7	193.2	213.73	57566	51.3	Reflex EZ-trac +/- degrees	Good	☒	
132	DOWNHOLE		2020-09-18	-47.1	212.6	193.1	213.63	57565	50.2	Reflex EZ-trac +/- degrees	Good	☒	
135	DOWNHOLE		2020-09-18	-47.1	212.8	193.3	213.83	57589	49.1	Reflex EZ-trac +/- degrees	Good	☒	
138	DOWNHOLE		2020-09-18	-47.2	213	193.5	214.03	57561	49.8	Reflex EZ-trac +/- degrees	Good	☒	
141	DOWNHOLE		2020-09-18	-47.2	212.9	193.4	213.93	57574	51	Reflex EZ-trac +/- degrees	Good	☒	
144	DOWNHOLE		2020-09-18	-47.2	212.9	193.4	213.93	57576	49.8	Reflex EZ-trac +/- degrees	Good	☒	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
147	DOWNHOLE		2020-09-18	-47.3	212.7	193.2	213.73	57581	60.4	Reflex EZ-trac +/- degrees	Good	✓	
150	DOWNHOLE		2020-09-18	-47.3	213	193.5	214.03	57573	60.5	Reflex EZ-trac +/- degrees	Good	✓	
153	DOWNHOLE		2020-09-18	-47.3	213.1	193.6	214.13	57584	58.8	Reflex EZ-trac +/- degrees	Good	✓	
156	DOWNHOLE		2020-09-18	-47.3	213	193.5	214.03	57583	62.6	Reflex EZ-trac +/- degrees	Good	✓	
159	DOWNHOLE		2020-09-18	-47.3	213.2	193.7	214.23	57578	65	Reflex EZ-trac +/- degrees	Good	✓	
162	DOWNHOLE		2020-09-18	-47.2	213.2	193.7	214.23	57582	64.6	Reflex EZ-trac +/- degrees	Good	✓	
165	DOWNHOLE		2020-09-18	-47.2	213.1	193.6	214.13	57578	63.7	Reflex EZ-trac +/- degrees	Good	✓	
167	DOWNHOLE		2020-09-14	-47.2	213	193.5	214.03	57677		Reflex EZ-trac +/- degrees	Good	✓	
168	DOWNHOLE		2020-09-18	-47.1	213.5	194	214.53	57583	63.3	Reflex EZ-trac +/- degrees	Good	✓	
171	DOWNHOLE		2020-09-18	-47	213.7	194.2	214.73	57581	63.2	Reflex EZ-trac +/- degrees	Good	✓	
174	DOWNHOLE		2020-09-18	-46.9	213.6	194.1	214.63	57578	62.5	Reflex EZ-trac +/- degrees	Good	✓	
177	DOWNHOLE		2020-09-18	-46.8	214	194.5	215.03	57581	61.7	Reflex EZ-trac +/- degrees	Good	✓	
180	DOWNHOLE		2020-09-18	-46.7	213.9	194.4	214.93	57574	61.3	Reflex EZ-trac +/- degrees	Good	✓	
183	DOWNHOLE		2020-09-18	-46.6	214.2	194.7	215.23	57576	61.2	Reflex EZ-trac +/- degrees	Good	✓	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
186	DOWNHOLE		2020-09-18	-46.5	214.1	194.6	215.13	57576	60.5	Reflex EZ-trac +/- degrees	Good	☒	
189	DOWNHOLE		2020-09-18	-46.4	214.1	194.6	215.13	57585	60.3	Reflex EZ-trac +/- degrees	Good	☒	
192	DOWNHOLE		2020-09-18	-46.3	214.4	194.9	215.43	57575	61.3	Reflex EZ-trac +/- degrees	Good	☒	
195	DOWNHOLE		2020-09-18	-46.2	214.4	194.9	215.43	57575	60.2	Reflex EZ-trac +/- degrees	Good	☒	
198	DOWNHOLE		2020-09-18	-46.2	214.5	195	215.53	57580	60.2	Reflex EZ-trac +/- degrees	Good	☒	
200	DOWNHOLE		2020-09-14	-46.2	214.4	194.9	215.43	57618		Reflex EZ-trac +/- degrees	Good	☒	
201	DOWNHOLE		2020-09-18	-46	214.6	195.1	215.63	57576	59.5	Reflex EZ-trac +/- degrees	Good	☒	
204	DOWNHOLE		2020-09-18	-46	214.7	195.2	215.73	57577	58.9	Reflex EZ-trac +/- degrees	Good	☒	
207	DOWNHOLE		2020-09-18	-45.9	214.7	195.2	215.73	57578	57.6	Reflex EZ-trac +/- degrees	Good	☒	
210	DOWNHOLE		2020-09-18	-45.9	214.6	195.1	215.63	57574	56.1	Reflex EZ-trac +/- degrees	Good	☒	
213	DOWNHOLE		2020-09-18	-45.8	214.9	195.4	215.93	57580	54.9	Reflex EZ-trac +/- degrees	Good	☒	
216	DOWNHOLE		2020-09-18	-45.8	215	195.5	216.03	57577	53.1	Reflex EZ-trac +/- degrees	Good	☒	
219	DOWNHOLE		2020-09-18	-45.8	215.1	195.6	216.13	57586	52	Reflex EZ-trac +/- degrees	Good	☒	
222	DOWNHOLE		2020-09-18	-45.8	214.7	195.2	215.73	57581	50.3	Reflex EZ-trac +/- degrees	Good	☒	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
225	DOWNHOLE		2020-09-18	-45.7	214.9	195.4	215.93	57584	49.2	Reflex EZ-trac +/- degrees	Good	☒	
228	DOWNHOLE		2020-09-18	-45.7	214.7	195.2	215.73	57587	47.8	Reflex EZ-trac +/- degrees	Good	☒	
231	DOWNHOLE		2020-09-18	-45.7	215	195.5	216.03	57586	45.6	Reflex EZ-trac +/- degrees	Good	☒	
234	DOWNHOLE		2020-09-18	-45.7	214.8	195.3	215.83	57589	43.9	Reflex EZ-trac +/- degrees	Good	☒	
237	DOWNHOLE		2020-09-18	-45.7	214.9	195.4	215.93	57595	42.1	Reflex EZ-trac +/- degrees	Good	☒	
240	DOWNHOLE		2020-09-18	-45.6	214.7	195.2	215.73	57596	39.8	Reflex EZ-trac +/- degrees	Good	☒	
243	DOWNHOLE		2020-09-18	-45.5	214.8	195.3	215.83	57601	38.1	Reflex EZ-trac +/- degrees	Good	☒	
246	DOWNHOLE		2020-09-18	-45.4	214.7	195.2	215.73	57605	36.3	Reflex EZ-trac +/- degrees	Good	☒	
249	DOWNHOLE		2020-09-18	-45.4	214.6	195.1	215.63	57598	34	Reflex EZ-trac +/- degrees	Good	☒	
252	DOWNHOLE		2020-09-18	-45.3	214.6	195.1	215.63	57604	32.5	Reflex EZ-trac +/- degrees	Good	☒	
255	DOWNHOLE		2020-09-18	-45.2	214.6	195.1	215.63	57595	31.2	Reflex EZ-trac +/- degrees	Good	☒	
258	DOWNHOLE		2020-09-18	-45.2	214.6	195.1	215.63	57599	30	Reflex EZ-trac +/- degrees	Good	☒	
261	DOWNHOLE		2020-09-18	-45.1	214.6	195.1	215.63	57606	29	Reflex EZ-trac +/- degrees	Good	☒	
264	DOWNHOLE		2020-09-18	-45.1	214.3	194.8	215.33	57603	28	Reflex EZ-trac +/- degrees	Good	☒	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
267	DOWNHOLE		2020-09-18	-45	214.4	194.9	215.43	57598	26.4	Reflex EZ-trac +/- degrees	Good	☒	
270	DOWNHOLE		2020-09-18	-45	214.3	194.8	215.33	57620	25	Reflex EZ-trac +/- degrees	Good	☒	
273	DOWNHOLE		2020-09-18	-45	214.6	195.1	215.63	57585	23.7	Reflex EZ-trac +/- degrees	Good	☒	
275	DOWNHOLE		2020-09-15	-45.1	214.7	195.2	215.73	57682	79.6	Reflex EZ-trac +/- degrees	Good	☒	
276	DOWNHOLE		2020-09-18	-44.9	214.4	194.9	215.43	57625	22.9	Reflex EZ-trac +/- degrees	Good	☒	
279	DOWNHOLE		2020-09-18	-44.9	214.3	194.8	215.33	57625	21.2	Reflex EZ-trac +/- degrees	Good	☒	
282	DOWNHOLE		2020-09-18	-44.9	214.3	194.8	215.33	57624	31.6	Reflex EZ-trac +/- degrees	Good	☒	
285	DOWNHOLE		2020-09-18	-44.8	214.4	194.9	215.43	57614	30.5	Reflex EZ-trac +/- degrees	Good	☒	
288	DOWNHOLE		2020-09-18	-44.7	214.5	195	215.53	57617	28.8	Reflex EZ-trac +/- degrees	Good	☒	
291	DOWNHOLE		2020-09-18	-44.7	214.6	195.1	215.63	57623	27.4	Reflex EZ-trac +/- degrees	Good	☒	
294	DOWNHOLE		2020-09-18	-44.7	214.7	195.2	215.73	57625	25.9	Reflex EZ-trac +/- degrees	Good	☒	
297	DOWNHOLE		2020-09-18	-44.6	214.6	195.1	215.63	57624	24.2	Reflex EZ-trac +/- degrees	Good	☒	
300	DOWNHOLE		2020-09-18	-44.5	214.4	194.9	215.43	57623	22.8	Reflex EZ-trac +/- degrees	Good	☒	
303	DOWNHOLE		2020-09-18	-44.3	214.6	195.1	215.63	57618	21.5	Reflex EZ-trac +/- degrees	Good	☒	

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Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	TN Azimuth	Mag. Azimuth	Grid Azimuth	Mag. Field	Roll	Accuracy	Confidence	Accept Values?	Comments
306	DOWNHOLE		2020-09-18	-44.1	214.4	194.9	215.43	57621	20.1	Reflex EZ-trac +/- degrees	Good	☒	
309	DOWNHOLE		2020-09-18	-43.9	214.6	195.1	215.63	57615	18.4	Reflex EZ-trac +/- degrees	Good	☒	
312	DOWNHOLE		2020-09-18	-43.7	214.2	194.7	215.23	57619	16.7	Reflex EZ-trac +/- degrees	Good	☒	
315	DOWNHOLE		2020-09-18	-43.5	214.2	194.7	215.23	57622	15.6	Reflex EZ-trac +/- degrees	Good	☒	
318	DOWNHOLE		2020-09-18	-43.3	214.2	194.7	215.23	57613	14.4	Reflex EZ-trac +/- degrees	Good	☒	
321	DOWNHOLE		2020-09-18	-43.2	213.8	194.3	214.83	57618	12.6	Reflex EZ-trac +/- degrees	Good	☒	
324	DOWNHOLE		2020-09-18	-43.1	213.6	194.1	214.63	57617	11	Reflex EZ-trac +/- degrees	Good	☒	
327	DOWNHOLE		2020-09-18	-42.9	213.5	194	214.53	57617	12.1	Reflex EZ-trac +/- degrees	Good	☒	
330	DOWNHOLE		2020-09-18	-42.8	213.6	194.1	214.63	57613	11.5	Reflex EZ-trac +/- degrees	Good	☒	
333	DOWNHOLE		2020-09-18	-42.6	213.4	193.9	214.43	57616	11.3	Reflex EZ-trac +/- degrees	Good	☒	

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From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
0.00	7.15	CASE Casing									
7.15	56.80	CONG Conglomerate									
		Light Grey FC									
Polymictic chert pebble conglomerate. Up to 90% of the clasts are chert pebbles, slightly more angular and sorted than typical for MMC; 10% mudstone/siltstone clasts up to cm-scale are subround to subangular. Inherently siliceous mudstone clasts have sharp edges; softer muddy/silty clasts show synsedimentary deformation through injection of chert clasts, forming rough irregular edges. The conglomerate is very crudely cyclic, grading from chert pebbles/rare cobbles uphole into chert grit/sand over m-scale sporadically throughout the interval. Faulted over dm-m scale starting at 26.0 m, with redrilled pebbles of diamictite/mud and sulphide in the rubble; preserved 50 cm section of muddy diamictite at 56.0 m. Fractures within the fault are coated in bright orange weakly effervescent powder. Conglomerate matrix and sandy sections are commonly replaced by siderite. The hangingwall of the fault at 26.0 m is silicified, and pyrite has replaced the matrix/uncommon clasts as opposed to siderite. Rare mm-scale planar quartz +/- Fe-carb veins are consistently low angles to core axis, cutting through siderite/pyrite replacement. Gouge-filled micro faults in the upper portion of the interval are accompanied by low angle cm-scale quartz +/- Fe carb with vugs showing mm-scale euhedral quartz crystals. Up to 5% fine grained dull to brassy pyrite overall, with higher grade sections amongst the fault rubble. A cm-scale piece of brown sphalerite vein is within fault rubble at 31.00, otherwise visually barren. The interval terminates sharply into light blue silicified chert pebble conglomerate. <<Min: 31 - 33: 20% Pyrite / 3% Sphalerite>> Cm-sclae chunks of brown sphalerite vein in pyritic fault rubble <<Alt: 7.15 - 26: Moderate Fe Carbonate>> Fe-carb replacement of conglomerate matrix <<Struc: 17.5 - 17.5: Fault>> Microfault bounded by vuggy quartz veins.											
	7.15		7.15	11.75	4.60	3202649	0.01	0.00197	0.0088	10.2	0.25
	11.75		11.75	14.00	2.25	3202650	0.07	0.01	0.02	35.1	1.2
	14.00		14.00	16.01	2.01	3202651	0.04	0.00496	0.02	59.1	0.5
	16.01		16.01	18.00	1.99	3202652	0.07	0.02	0.02	117.2	1
	18.00		18.00	20.00	2.00	3202653	0.07	0.02	0.0108	91	1.4
	20.00		20.00	22.00	2.00	3202654	0.01	0.00216	0.0034	12.4	0.25
	22.00		22.00	24.00	2.00	3202655	0.01	0.00243	0.0029	13.8	0.25
	24.00		24.00	26.00	2.00	3202656	0.03	0.0052	0.0036	22.7	0.6
	26.00		26.00	29.00	3.00	3202657	0.04	0.00826	0.0057	33.7	0.9
	29.00		29.00	31.00	2.00	3202658	0.33	0.0078	0.3	22.9	0.9
	31.00		31.00	32.50	1.50	3202659	4.38	0.1	3.99	153.1	10.5
	32.50		32.50	36.00	3.50	3202661	0.37	0.03	0.27	45.2	2.7
	36.00		36.00	38.00	2.00	3202663	0.09	0.01	0.04	34	1.3
	38.00		38.00	40.00	2.00	3202664	0.14	0.00597	0.06	61.1	2.5
	40.00		40.00	42.00	2.00	3202665	0.05	0.00558	0.0122	18.9	0.9
	42.00		42.00	44.00	2.00	3202666	0.08	0.01235	0.04	21.7	1.1
	44.00		44.00	46.00	2.00	3202667	0.1	0.01	0.06	22.1	1.1
	46.00		46.00	55.20	9.20	3202668	19.75	0.01	0.02	1312.4	630.5

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
55.20	56.80	1.60	3202669	0.15	0.03	0.07	27.9	1.8			
56.80	61.00	CONG Conglomerate	Light Grey	FC							
Silicified light grey/blue chert pebble conglomerate. Very hard, with a glassy sheen on the core surface. Crudely cyclic fining uphole from pebbles to sand over m-scale. Typical conglomerate, with 90/10 ratio of chert pebbles to muddy/silty clasts. As in the overlying interval, uncommon muddy/silty clasts show syndimentary deformation by surrounding chert pebbles/grit. Natural fractures are uncommon but regular at ~ 24 degrees to core axis and are coated in a red/orange rusty powder, non-effervescent. Pervasive silicification overprints the matrix and all clasts. Patchy Fe-carb replacement of the conglomerate matrix predates silicification. No apparent veining. 1-2 % very fine pyrite as clast replacement, favoring chert pebbles. Very rare partial to complete sphalerite replacement within clasts as dark red blebs. The interval terminates sharply into completely unsilicified chert pebble conglomerate. <<Alt: 56.8 - 61: Strong Silicification>> <<Struc: 59.83 - 59.83: Fracture>> Regular fracture set in silicified conglomerate											
61.00	77.00	CONG Conglomerate	Light Grey	FC							
Light grey to grey chert pebble conglomerate in grey silica cement. Clast supported, with white-light grey-grey rounded to subrounded chert granules- pebbles comprising ~85% of visible clasts. Hard angular to subrounded black mudstone pebbles are scattered throughout, showing syndimentary deformation as in previous intervals. Overall competent, showing uncommon regular natural fractures at low angles to core axis coated in non-effervescent orange-yellow powder. Stylolites cut through rare sandy subintervals at low angles to core axis, dodging around and tracing chert pebbles in more coarse sections. Patchy Fe-carb or pyrite replacement of the silica-matrix. Rare veining as diffuse Fe-carb pyrite near parallel to core axis, planer mm-scale quartz-Fe carb +/- sphalerite, and irregular meandering dull brown pyrite. Pyrite veins cut and offset quartz-Fe-carb +/- sphalerite veins at 69.80 m. Up to 5% pyrite as dull brown veins and matrix/clast replacement mineral. Brassy coarser crystals rarely form along the edges of more Py-rich matrix replacement/veining. Rare orange-pink sphalerite replaces mm-scale clasts within the conglomerate, and occurs as accessory vein mineral. The interval terminates sharply into a fault, after which black mudstone continues. <<Min: 61 - 77: 4% Pyrite / 0.75% Sphalerite>> Rare clast replacement in conglomerate by orange-pink sphalerite, accessory vein mineral with quartz-Fe carb <<Alt: 61 - 77: Weak Fe Carbonate>> <<Struc: 64.15 - 64.15: Stylolite>> <<Struc: 76.95 - 76.95: Shear>> Sheared quartz vein marking the uphole start of a major fault.											
56.80	58.00	1.20	3202670	0.1	0.00416	0.07	15	1			
58.00	60.00	2.00	3202671	0.09	0.00362	0.07	11.3	0.7			
60.00	61.00	1.00	3202672	0.03	0.00332	0.0111	10.5	0.6			
61.00	63.00	2.00	3202673	0.06	0.00349	0.04	13	0.7			
63.00	65.00	2.00	3202674	0.22	0.00346	0.19	18.3	0.8			
65.00	67.00	2.00	3202675	0.04	0.00398	0.01	17.5	0.8			
67.00	69.00	2.00	3202676	0.07	0.00442	0.04	18.3	0.9			
69.00	71.00	2.00	3202677	0.34	0.01	0.28	43.8	1.7			
71.00	73.00	2.00	3202678	0.23	0.00484	0.2	22.2	0.9			
73.00	75.00	2.00	3202679	0.04	0.00696	0.01	22.3	0.9			
75.00	77.00	2.00	3202681	0.07	0.02	0.004	31.3	1.5			

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Zn Equiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
77.00	79.60	CONG Conglomerate									
		Light Grey FC									
Sheared and faulted mix of chert pebble conglomerate and mudstone. Rubble and gouge, with competent sections showing regular shear fabric in both lithologies between 25-40 degrees to core axis. Chaotic quartz veins throughout, with rare mm-scale blebs/crystals of red sphalerite and euhedral fine to coarse brassy pyrite. A cm-scale section within the sheared conglomerate carries diffuse and blebby orange-red sphalerite. Terminates sharply into cm-scale black gouge, followed by bedded black carbonaceous mudstone. <<Min: 77 - 79.6: 3% Sphalerite / 2% Pyrite>> Matrix/vein hosted orange to pink sphalerite and pyrite spanning a sheared/faulted contact between uphole conglomerate and downhole mudstone. <<Struc: 77 - 77: Shear>>											
77.00	78.60		77.00	78.60	1.60	3202683	6	1.05	3.72	703.1	44.7
78.60	79.60		78.60	79.60	1.00	3202684	0.55	0.07	0.35	152.1	4.6
79.60	85.46	BMST Black mudstone									
		Black VF									
Black carbonaceous mudstone with rare laminated grey sphalerite. Very thinly bedded and mostly regular between 25-32 degrees to core axis. Uncommon gentle parasitic folds over dm-scale form shallower or steeper bedding planes, with fine black stylolites defining a cleavage fabric roughly normal to folded bedding planes. Rare cm-dm foliated (?) elongated bands of muddy diamictite parallel bedding, commonly mineralized by pyrite. Natural fracture surfaces are coated in shiny black graphite, uncommonly accompanied by smears of bright white soft barite. White quartz +/-pyrite veinlets form along cleavage planes, as cm-scale stockworks, and paralleling bedding planes. Fine steel grey spherical sphalerite psuedomorphs mm barite nodules along bedding at 80.20 in a 1.2 cm band. Up to 3% pyrite as laminae, vein mineral and within diamictite beds. Dull brown very fine pyrite is commonly rimmed by brassier coarser pyrite crystals. The interval terminates abruptly into a large section of sheared/faulted/fractured mudstone. <<Min: 79.6 - 80.7: 1% Sphalerite / 1% Pyrite>> Steel grey nodular sphalerite in cm-scale beds within black carbonaceous mudstone. Hairline dull brown pyrite laminae. <<Struc: 80.05 - 80.05: Bedding>> <<Struc: 80.21 - 80.21: Bedding>> Bedded grey sph nodules <<Struc: 80.33 - 80.33: Stylolite>> Normal to bedding <<Struc: 82.83 - 82.83: Stylolite>> Defining cleavage in parasitic fold. <<Struc: 84.13 - 84.13: Bedding>> <<Struc: 84.96 - 84.96: Bedding>>											
79.60	80.70		79.60	80.70	1.10	3202685	0.37	0.06	0.12	144.6	6.2
80.70	82.60		80.70	82.60	1.90	3202686	0.36	0.07	0.15	88.6	4.6
82.60	84.45		82.60	84.45	1.85	3202687	0.16	0.04	0.0043	79.7	3.8
84.45	85.46		84.45	85.46	1.01	3202688	0.14	0.04	0.0062	70.2	3.2

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
85.46	103.22	MDST Mudstone Black VF									
Sheared/faulted/fractured black carbonaceous mudstone with zones of strong quartz veining. Mudstone is very thinly bedded, where competent, at ~ 60-65 degrees to core axis and contains ample very fine disseminated pyrite. Characteristic "gritty" texture of radiolari beds over m-scale at 91.0 m in the footwall of a large shear. Shears and faults comprise > 50% of the interval, defined by gouge, elongation textures and chaotic hairline to dm-scale quartz veining. Stylolites are less defined compared to overlying mudstone, but still follow a consistent fabric cutting at low angles through bedding. White quartz veining outside of shears/faults either parallels or cuts bedding visually similar to the stylolite orientation. Rare red to brown mm-scale crystal masses of sphalerite occur in the larger quartz veins. Sub-mm to mm-scale barite "snowflakes" present on rare bedding-parallel fractures. 2% dull brown to brassy pyrite throughout the interval as clots, diffuse bedding-parallel bands and as vein/fault mineral. The interval terminates in a shear/fault, after which competent black mudstone continues. <<Min: 87 - 88.5: 2% Pyrite / 0.5% Sphalerite>> Mm-scale sphalerite masses in shear-hosted white quartz veins. <<Struc: 92.51 - 92.51: Bedding>> <<Struc: 94.83 - 94.83: Bedding>> <<Struc: 98.18 - 98.18: Bedding>> <<Struc: 101.24 - 101.24: Bedding>>											
85.46	87.00		3202689	0.17	0.04	0.01	76.7	3.9			
87.00	88.50		3202690	0.22	0.09	0.03	67.4	3.2			
88.50	91.00		3202691	1.18	0.06	1.01	46.5	4.2			
91.00	93.00		3202692	0.08	0.03	0.004	54.5	1.5			
93.00	95.00		3202693	0.16	0.04	0.0024	69.4	3.8			
95.00	97.00		3202694	0.16	0.03	0.0034	65.6	4.1			
97.00	99.00		3202695	0.12	0.02	0.0021	82.8	3.1			
99.00	101.00		3202696	0.14	0.02	0.0022	92.9	3.7			
101.00	103.22		3202697	0.16	0.03	0.006	73.8	4			
103.22	105.00		3202698	0.08	0.01	0.04	76.3	1			

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
103.22	130.61	BMST Black mudstone Black VF	105.00	107.00	2.00	3202699	0.06	0.02	0.02	64.9	0.8
Black siliceous carbonaceous mudstone with quartz veining. Very hard, and tightly bedded at steep angles to core axis. Variably fractured to competent, generally correlating with silica content of the mudstone. From 128 to ~ 129.5 m, the mudstone is rich with radiolaria. Uncommon parasitic folds are apparent on the core surface as undulating bedding planes; stylolites normal to bedding define cleavage in more folded sections. A m-scale shear from 115 - 117 m contains ample chaotic quartz veining and very graphitic fracture surfaces. Folding occurs within the shear, with microfractures defining cleavage instead of stylolites. Outside of this shear, planar mm-cm scale white quartz veins generally parallel bedding planes, disrupted slightly when cut by cleavage. Ubiquitous very fine disseminated pyrite, and hairline laminae to cm-scale bands of dull brown pyrite paralleling bedding; overall 5-7% of interval. The interval terminates sharply into massive sulphides.											
<<Alt: 129.7 - 130.61: Moderate Silicification>> Silicification of mudstone uphole from massive sulphides, grading in.			107.00	109.00	2.00	3202701	0.1	0.02	0.06	66.4	0.8
<<Struc: 103.95 - 103.95: Bedding>>			109.00	111.00	2.00	3202703	0.09	0.01114	0.06	119.9	0.8
<<Struc: 106.9 - 106.9: Fabric 1>> Cleavage plane defined by repeating stylolites, near normal to bedding.			111.00	113.00	2.00	3202704	0.12	0.01	0.09	122.6	0.8
<<Struc: 106.92 - 106.92: Bedding>>			113.00	115.00	2.00	3202705	0.17	0.01	0.13	82	1
<<Struc: 109 - 109: Bedding>>			115.00	117.00	2.00	3202706	0.07	0.01	0.04	59.7	0.7
<<Struc: 111 - 111: Bedding>>			117.00	119.00	2.00	3202707	0.13	0.01	0.1	61.9	0.8
<<Struc: 113.86 - 113.86: Bedding>>			119.00	121.00	2.00	3202708	0.11	0.01	0.08	53.7	0.6
<<Struc: 117.77 - 117.77: Fabric 1>> Cleavage cutting bedding			121.00	123.00	2.00	3202709	0.08	0.00914	0.04	47.2	0.9
<<Struc: 117.85 - 117.85: Bedding>>			123.00	125.00	2.00	3202710	0.12	0.02	0.04	74.2	1.9
			125.00	127.00	2.00	3202711	0.18	0.02	0.08	72.7	2.7
			127.00	128.00	1.00	3202712	0.15	0.01	0.04	58.5	3.1
			128.00	129.50	1.50	3202713	0.37	0.02	0.2	62.2	5
			129.50	130.61	1.11	3202714	0.36	0.03	0.02	82.3	9.9
			130.61	131.50	0.89	3202715	2.43	0.05	1.97	43.9	14.8

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
130.61	156.20	MXSX Massive sulphide Dark Yellow FG	131.50	132.50	1.00	3202716	3.51	0.06	2.62	52.6	29.8
Massive pyrite, sphalerite, minor galena and trace pyrrhotite (inferred from weakly magnetic intervals). Protolith texture and mineralogy are completely overprinted by sulphide mineralization with the exception of mm to cm-scale mudstone and diamictite clasts. Relict mudstone is strongly silicified and entire interval is competent.											
Low angle banded pyrite veins consisting of fine-grained dull pyrite and medium to coarse-grained shiny pyrite are noted at 139.15 m. At 136.08 m, pyrite pseudomorphs mm-scale barite snowflake structures within mudstone clasts. Blebs of medium to coarse-grained galena occur in the last ~6 m of the interval in association with barite rims. Pink to pink-brown sphalerite mineralization within the massive pyrite is patchy and coarse-grained. Sphalerite appears vitreous and blood-red on broken surfaces of the core, trace amounts of honey sphalerite and silver-gray sphalerite are also found. Minor amounts of a softer yellow-brown mineral is infrequently associated with sphalerite and pyrite mineralization.											
<<Min: 130.61 - 156.2: 85% Pyrite / 10% Sphalerite / 2% Galena / 1% Barite / 0.1% Pyrrhotite>> Massive sulphides with minor mudstone and diamictite clasts. Sphalerite is medium to coarse-grained and metallic pink on core surface. On broken surfaces, sphalerite appears blood-red and vitreous. Trace amounts of honey-colored sphalerite and silver-gray sphalerite is infrequently noted. Presence of trace pyrrhotite is inferred from weak magnetic response in some intervals.			132.50	133.50	1.00	3202717	5.69	0.05	4.84	62	28.9
			133.50	134.50	1.00	3202718	5.69	0.04	4.91	63.1	26.9
			134.50	135.50	1.00	3202719	5.19	0.03	4.52	57.4	23.1
			135.50	136.50	1.00	3202721	2.16	0.06	1.43	47.7	23.2
			136.50	137.50	1.00	3202723	3.16	0.06	2.55	46.9	20
			137.50	138.50	1.00	3202724	6.83	0.29	5.66	64.5	32.2
			138.50	139.50	1.00	3202725	11.92	0.58	9.65	134	61.6
			139.50	140.50	1.00	3202726	11.5	0.67	9.35	134.9	54
			140.50	141.50	1.00	3202727	15.66	1.12	12.81	157.6	63.7
			141.50	142.50	1.00	3202728	14.24	1.44	10.82	152.5	73.1
			142.50	143.50	1.00	3202729	15.2	2.28	10.43	170.1	92.4
			143.50	144.50	1.00	3202730	12.46	0.96	10.14	189.1	50.1
			144.50	145.50	1.00	3202731	4.18	0.48	2.77	146.2	33.5
			145.50	146.50	1.00	3202732	4.92	0.49	3.54	155.9	32.5
			146.50	147.50	1.00	3202733	5.72	0.4	4.43	167.5	32.7
			147.50	148.50	1.00	3202734	3.52	0.24	2.65	115.4	23
			148.50	149.50	1.00	3202735	6.21	0.4	4.9	186.9	33.4
			149.50	150.50	1.00	3202736	14.11	0.83	11.5	351.3	65.3
			150.50	151.50	1.00	3202737	14.1	1.11	11.08	632.8	70.2

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Zn Equiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
			151.50	152.40	0.90	3202738	11.07	0.73	8.84	317.8	54.8
			152.40	153.30	0.90	3202739	10.31	1.94	6.04	2698.9	83.5
			153.30	154.30	1.00	3202741	6.39	1.43	3.21	2735	61.1
			154.30	155.30	1.00	3202743	4.37	0.77	2.26	1494.9	46.4
			155.30	156.20	0.90	3202744	5.41	0.83	3.25	646.1	47.2

156.20 160.57 DIAM Diamictite Grey VC

Interbedded diamictite and mudstone interval with pyrite and sphalerite mineralization occurring in irregular veins, replacing bedding, and pseudomorphing barite snowflakes. Diamictite is predominantly matrix-supported and contains poorly sorted, polymictic, coarse sand to pebble-size clasts ranging from angular to rounded. Stylolites occur at both high and low angles to core axis; bedding is not defined. Interval is competent.

Veins are irregular and stockwork, commonly brecciating the host rock and ranging from sub-mm to cm scale. Veins are comprised of mm-scale pyrite, pyrite-sphalerite, sphalerite-quartz veins as well as sub-mm quartz veins. Irregular ~1 mm wide sphalerite and quartz veins are cut by later pyrite and pyrite-sphalerite veins. Pyrite mineralization is fine to medium-grained and occurs as irregular veins, replaces bedding and pseudomorphs barite. Some diamictite intervals experience partial replacement of the matrix with pyrite and metallic-pink sphalerite. Low angle pyrite bands diffuse from irregular veins. Mm-scale barite snowflakes are partially replaced by pyrite over the interval and are most abundant at 159.30 m. Fine to medium-grained pink sphalerite occurs in association with fine-grained pyrite throughout veins and as patchy mineralization throughout diamictite.

<<Min: 156.2 - 160.57: 20% Pyrite / 5% Sphalerite / 2% Barite>> Interval is comprised of at least 2 generations of vein-hosted mineralization, as stockwork, breccia and irregular veins. Sphalerite is metallic pink and medium-grained, occurring in veins with pyrite and with quartz as well as in patchy mineralization within the diamictite.

<<Alt: 156.2 - 160.57: Moderate Silicification>>

156.20	157.20	1.00	3202745	1.07	0.09	0.69	158.7	10.3
157.20	158.30	1.10	3202746	4.73	0.52	3.37	328.7	30.7
158.30	159.35	1.05	3202747	2.73	0.07	2.33	118.2	11.9
159.35	160.57	1.22	3202748	3.72	0.1	3.21	126.8	15.1
160.57	161.60	1.03	3202749	9.91	0.37	8.5	332.7	38.1

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
160.57	195.91	MDST Mudstone Dark Grey VF	161.60	162.57	0.97	3202750	3.53	0.1	3	119.4	15.8
Thinly laminated, silicified mudstone containing stockwork, brecciated and irregular mineralized veins as well as disseminated pyrite. Mudstone is thinly laminated with uncommon siltstone bands, bedding is at a low angle to the core axis. Two main joint sets are present, characterised by medium and medium-low angles to the core axis. Irregular chaotic stylolites are also present over the interval. Interval is strongly silicified during the first metre and moderately silicified over the remainder of the interval. Several generations of veins exhibit cross-cutting relationships. Thick cm-scale pyrite veins are cut by cm-scale fine-grained metallic-pink and medium to coarse-grained sphalerite veins. Mm-scale quartz-pyrite +- sphalerite are cut by later low-angle cm-scale pyrite veins. The interval contains pyrite and metallic-pink sphalerite mineralization in irregular, stockwork and brecciated veins as well as replacement textures in bedding and pseudomorphed barite snowflakes. Sphalerite abundance increases moving downhole. Barite mineralization commonly occurs as disseminated snowflake crystals, rims on sulphide mineralization and sub-mm irregular veins. An uncommon, green, medium-soft (~4-5) crystalline mineral is observed within cm-scale quartz veins. XRF showed increased levels of barium. Pyrite commonly forms thick (2-3 cm) irregular and stockwork veins that occur at a low angle to bedding and the core axis. Pyrite infiltrates bedding adjacent to veins and diffuses into the mudstone with mineralization decreasing as the distance from the source vein increases. Pyrite pseudomorphs barite snowflakes. Sphalerite is fine to medium-grained metallic-pink with rare pink-brown mineralization. It occurs commonly as patchy mineralization within cm-scale pyrite or pyrite-quartz veins. Fine to medium-grained pyrite and sphalerite mineralization uncommonly brecciates and infills mudstone while commonly replacing earlier grey-blue silica brecciation. <<Min: 160.57 - 195.91: 10% Pyrite / 3% Sphalerite / 1% Barite>> The interval contains pyrite and metallic-pink sphalerite mineralization in irregular, stockwork and brecciated veins as well as replacement textures in bedding and pseudomorphed barite snowflakes. Sphalerite abundance increases moving downhole. Barite mineralization commonly occurs as disseminated snowflake crystals grading out downhole by ~180 m, as uncommon rims on sulphide mineralization and rare silicified sub-mm irregular veins. An uncommon, green, medium-soft (~4-5) crystalline mineral is observed within cm-scale quartz veins. XRF showed increased levels of barium. Pyrite commonly forms thick (2-3 cm) irregular and stockwork veins that occur at a low angle to bedding and the core axis. Uncommonly, quartz or quartz and sphalerite are present in the vein centre, while patchy sphalerite mineralization commonly occurs within these veins. Pyrite infiltrates bedding adjacent to veins and diffuses into the mudstone with mineralization decreasing as the distance from the source vein increases. Within the veins, pyrite forms medium to coarse-grained shiny yellow vein cores with fine-grained dull pyrite rims. Isolated, disseminated pyrite uncommonly forms medium to coarse-grained hexagonal crystals, noted from 165.00-165.25 m and rarely over the rest of the interval. Pyrite pseudomorphs barite snowflakes. Sphalerite is fine to medium-grained metallic-pink with rare pink-brown mineralization. It occurs commonly as patchy mineralization within cm-scale pyrite or pyrite-quartz veins. Fine to medium-grained pyrite and sphalerite mineralization uncommonly brecciates and infills mudstone while commonly replacing earlier grey-blue silica brecciation. <<Alt: 160.57 - 161.3: Strong Silicification>> <<Struc: 167.12 - 167.12: Bedding>>											
			162.57	163.60	1.03	3202751	1.19	0.05	0.88	62.5	9.3
			163.60	164.60	1.00	3202752	0.4	0.07	0.05	55.8	9.1
			164.60	165.60	1.00	3202753	1.07	0.11	0.55	121.5	13.9

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
<<Struc: 167.19 - 167.19: Bedding>>			165.60	166.58	0.98	3202754	0.98	0.09	0.54	104.9	11.9
<<Struc: 180.05 - 180.05: Bedding>>			166.58	167.60	1.02	3202755	0.53	0.05	0.24	48.2	8
<<Struc: 193 - 193: Bedding>>			167.60	168.60	1.00	3202756	1.01	0.08	0.64	60.1	10
			168.60	169.60	1.00	3202757	0.48	0.07	0.15	55.8	8.6
			169.60	170.60	1.00	3202758	0.81	0.05	0.54	57.5	7.7
			170.60	171.60	1.00	3202759	2.96	0.08	2.56	94.9	11.7
			171.60	172.62	1.02	3202761	0.45	0.08	0.15	54.8	7.2
			172.62	173.60	0.98	3202763	0.33	0.05	0.11	43.1	5.5
			173.60	174.60	1.00	3202764	1.83	0.08	1.5	71	9
			174.60	175.60	1.00	3202765	1.67	0.07	1.38	67.7	8.2
			175.60	176.60	1.00	3202766	0.42	0.06	0.13	47.6	7.5
			176.60	177.60	1.00	3202767	1.94	0.11	1.45	88	13.9
			177.60	178.55	0.95	3202768	1.98	0.19	1.4	96.1	14.3
			178.55	179.59	1.04	3202769	1.05	0.11	0.62	82.1	11.1
			179.59	180.60	1.01	3202770	1.11	0.06	0.8	60.7	9
			180.60	181.60	1.00	3202771	1.16	0.09	0.8	87.8	9.6
			181.60	182.60	1.00	3202772	1.16	0.09	0.8	70.1	9.7
			182.60	183.60	1.00	3202773	1.25	0.08	0.93	67.4	8.9
			183.60	184.60	1.00	3202774	3.33	0.13	2.79	116.6	14.8
			184.60	185.60	1.00	3202775	3.03	0.11	2.55	98.6	13.6
			185.60	186.60	1.00	3202776	1.07	0.08	0.78	61.6	7.7
			186.60	187.60	1.00	3202777	4.19	0.14	3.6	121.7	16.5
			187.60	188.60	1.00	3202778	8.74	0.11	8.15	168.4	17.4
			188.60	189.65	1.05	3202779	12.16	0.21	11.13	222.3	30
			189.65	190.60	0.95	3202781	10.35	0.24	9.26	237	30.9
			190.60	191.65	1.05	3202783	1.55	0.08	1.23	59	8.6
			191.65	192.62	0.97	3202784	0.92	0.08	0.59	71.6	8.7
			192.62	193.60	0.98	3202785	0.6	0.09	0.2	60.7	10.3
			193.60	194.60	1.00	3202786	0.26	0.04	0.0066	43.9	6.8

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
			194.60	195.91	1.31	3202787	1.1	0.09	0.8	59.3	7.5
			195.91	197.00	1.09	3202788	2.63	0.12	2.18	100.6	12.1
195.91	216.76	LPTF Lapilli Tuff									
		Dark Grey MC	197.00	198.00	1.00	3202789	1.06	0.07	0.84	81.2	5.5
Lithic lapilli tuff with sulphide mineralization. Volcaniclastics host coarse sand to pebble-sized, sub-angular to sub-rounded mudstone clasts in a grey ashy matrix. Styrolitic, varying from chaotic and irregular to high-medium angle to the core axis. Scattered subintervals are heavily microfractured. Blue-green pyrophyllite (?) forms rounded masses along and near certain core-parallel fractures. Weakly to moderately silicified over localized sections. Weakly foliated, defined by talc-greasy mm-scale seams. Rare quartz +/- pyrite-sphalerite veinlets cut through both mineralized and unmineralized core at erratic angles. Pyrite and metallic-pink to brown sphalerite occur in stockwork, irregular and brecciated veins as well as replacement textures (matrix and lapilli). Numerous white-clear quartz gashes up to 4 mm thick occur within more sulphide-rich sections. Dm-scale massive sulphide caps the beginning and end of the interval, accompanied by massive white quartz veining. Terminates abruptly into a shear, followed by disrupted/sheared mudstone.											
<<Min: 195.91 - 216.76: 10% Pyrite / 7% Sphalerite>> Sulphides replacing both clasts and matrix material in volcaniclastic. Pyrite is very fine to coarse as brassy crystals with rare dull brown wispy seams. Sphalerite is fine grained metallic pink or coarser grained orange-red, occurring throughout the interval. A high grade sulphide section runs from ~ 203.5 to 205.75, carrying up to 20% sphalerite.			198.00	199.00	1.00	3202790	1.63	0.08	1.35	118.7	7.4
<<Alt: 206 - 207.5: Moderate Silicification>> Silicification of volcaniclastic sandwiched between quartz-rich, sulphide flooded intervals.											
<<Struc: 203.45 - 203.45: Foliation>>											
<<Struc: 205.84 - 205.84: Foliation>>											
			199.00	200.00	1.00	3202791	1.21	0.06	0.99	120.2	5.9
			200.00	201.00	1.00	3202792	2.25	0.04	2.05	112.7	5.9
			201.00	202.00	1.00	3202793	5.72	0.09	5.36	153.4	9.8
			202.00	203.00	1.00	3202794	5.98	0.07	5.73	132.5	6.7
			203.00	204.00	1.00	3202795	5.97	0.08	5.59	171.3	10.9
			204.00	205.00	1.00	3202796	10.82	0.54	9.63	365.1	24.1
			205.00	206.00	1.00	3202797	12.8	0.11	12.33	221.9	13.2
			206.00	207.00	1.00	3202798	8.54	0.16	8.04	176.3	12.4
			207.00	208.00	1.00	3202799	7.53	0.29	6.78	202.1	16.9
			208.00	209.00	1.00	3202801	9.65	0.14	9.14	219.1	13.4
			209.00	210.00	1.00	3202803	1.99	0.23	1.56	90	7.3
			210.00	211.00	1.00	3202804	2.43	0.49	1.63	121.2	11.6
			211.00	212.00	1.00	3202805	3.91	0.21	3.47	158.7	8.7
			212.00	213.00	1.00	3202806	0.78	0.29	0.31	126.5	6.5
			213.00	214.00	1.00	3202807	0.6	0.14	0.38	73.4	2.9
			214.00	215.00	1.00	3202808	0.6	0.15	0.37	76.2	2.9

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
			215.00	216.00	1.00	3202809	0.4	0.15	0.13	72.1	4.2
			216.00	216.76	0.76	3202810	4.25	0.32	3.56	145.7	13.6

216.76 285.69 BMST Black mudstone Black VF

Structurally complex cherty black carbonaceous mudstone with variable sulphide mineralization. Thin to very thinly bedded, where apparent, defined by mm-scale grey cherty bands ranging from normal to parallel to core axis; predominately low angle. Sheared/foliated or brecciated throughout, with all fracture surfaces coated in shiny black graphite. Parasitic Z folds and microfaults further disrupt cherty beds. Dm-scale sections are silicified, bleached to a lighter grey, accompanied by stylolites forming roughly parallel to relict bedding planes. Extensive chaotic pyrite/quartz/Fe-carb veins parallel/crosscut bedding and stockwork/brecciate host mudstone. Pyrite mineralization is dominant as fine-coarse brassy crystals ranging from mm-scale veinlets to m-scale massive sections. Sphalerite is erratic, accompanying rare quartz-rich pyritic zones or as isolated fine metallic-pink angular clasts in silicified sections. The interval terminates into massive sulphides, preceded by strong brecciation.

<<Min: 226.57 - 233: 65% Pyrite / 5% Sphalerite>> Semi-massive and veined pyrite near parallel to core axis. Grey-light pink sphalerite in angular clasts from remnant veining broken apart by pyrite veins. Quartz gashes up to 3 mm wide form normal within larger pyrite veins. Internal banding within pyrite veins, having dull brown finer crystals in the core and brighter coarser crystals on the rims.

<<Min: 265.75 - 285.69: 8% Siderite / 7% Pyrite>> Crackle to mosaic breccias throughout the interval filled by variable siderite or pyrite.

<<Alt: 265.75 - 285.69: Moderate Silicification>> Silicification of mudstone in footwall of m-scale shear/fault.

<<Struc: 225.75 - 225.75: Bedding>>

<<Struc: 250.55 - 250.55: Bedding>>

<<Struc: 254.56 - 254.56: Bedding>>

<<Struc: 257.5 - 257.5: Bedding>>

<<Struc: 258.12 - 258.12: Bedding>>

<<Struc: 266.95 - 266.95: Stylolite>>

<<Struc: 269.82 - 269.82: Bedding>>

<<Struc: 272.75 - 272.75: Stylolite>>

<<Struc: 272.8 - 272.8: Bedding>>

<<Struc: 273.85 - 273.85: Bedding>>

<<Struc: 278.09 - 278.09: Bedding>>

<<Struc: 280.55 - 280.55: Stylolite>>

<<Struc: 280.6 - 280.6: Bedding>>

<<Struc: 285.41 - 285.41: Bedding>>

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
			216.76	218.00	1.24	3202811	1.96	0.15	1.61	93	7.4
			218.00	219.00	1.00	3202812	1	0.05	0.77	118.1	6.6
			219.00	220.00	1.00	3202813	0.65	0.1	0.41	72.8	5
			220.00	221.00	1.00	3202814	0.28	0.05	0.1	65.5	4.4
			221.00	222.00	1.00	3202815	0.1	0.02	0.02	54.9	2.1
			222.00	223.00	1.00	3202816	0.5	0.05	0.34	76.1	3.9
			223.00	224.00	1.00	3202817	0.36	0.04	0.21	67.5	3.7
			224.00	225.00	1.00	3202818	0.21	0.04	0.09	53	2.7
			225.00	225.90	0.90	3202819	0.52	0.01103	0.48	26.6	1
			225.90	226.70	0.80	3202821	0.6	0.06	0.39	62.1	5.3
			226.70	227.80	1.10	3202823	1.15	0.09	0.82	93.4	8.9
			227.80	228.90	1.10	3202824	0.33	0.07	0.07	69.7	6.3
			228.90	230.00	1.10	3202825	0.29	0.07	0.04	65.7	5.9
			230.00	231.00	1.00	3202826	0.61	0.06	0.39	59.4	5.7
			231.00	232.00	1.00	3202827	1.24	0.06	0.97	74.5	7.7
			232.00	233.00	1.00	3202828	0.3	0.06	0.06	57.4	5.8
			233.00	234.00	1.00	3202829	0.53	0.04	0.41	60	3
			234.00	235.50	1.50	3202830	0.28	0.07	0.07	48.5	4.7
			235.50	237.00	1.50	3202831	1.02	0.51	0.17	41.5	11.6
			237.00	238.50	1.50	3202832	0.2	0.03	0.11	41.6	2.1
			238.50	240.00	1.50	3202833	0.09	0.02	0.02	47.2	1.6
			240.00	241.50	1.50	3202834	0.08	0.02	0.03	30.6	0.9
			241.50	243.05	1.55	3202835	0.2	0.03	0.11	38.1	2
			243.05	245.00	1.95	3202836	0.39	0.02	0.33	31.3	1.3
			245.00	246.50	1.50	3202837	1.61	0.03	1.5	44.1	3
			246.50	248.00	1.50	3202838	0.92	0.04	0.8	49.3	3.1
			248.00	249.50	1.50	3202839	0.14	0.03	0.05	53.1	1.9
			249.50	251.00	1.50	3202841	0.09	0.03	0.02	31.5	1.2
			251.00	252.50	1.50	3202843	0.05	0.02	0.01	33.5	0.8

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
			252.50	254.00	1.50	3202844	0.07	0.02	0.0047	38.6	1.4
			254.00	255.50	1.50	3202845	0.2	0.02	0.13	48	1.8
			255.50	257.00	1.50	3202846	0.14	0.03	0.05	53.1	2
			257.00	258.50	1.50	3202847	1.15	0.02	1.06	84.1	2.5
			258.50	260.00	1.50	3202848	0.3	0.03	0.19	126.2	2.7
			260.00	261.50	1.50	3202849	0.13	0.02	0.07	72.5	1.4
			261.50	263.00	1.50	3202850	0.19	0.03	0.1	90.3	2
			263.00	264.50	1.50	3202851	0.24	0.02	0.17	79.2	1.7
			264.50	265.75	1.25	3202852	0.15	0.03	0.06	60.7	2.1
			265.75	267.00	1.25	3202853	0.08	0.02	0.02	60.3	1.4
			267.00	268.00	1.00	3202854	0.31	0.02	0.23	51.9	2.2
			268.00	269.00	1.00	3202855	1.39	0.04	1.16	109.5	7
			269.00	270.00	1.00	3202856	0.08	0.02	0.01	38.9	1.7
			270.00	271.00	1.00	3202857	0.05	0.01	0.01	31.6	1
			271.00	272.00	1.00	3202858	0.21	0.02	0.12	53.6	2.4
			272.00	273.00	1.00	3202859	0.05	0.01	0.003	28.5	1.1
			273.00	274.00	1.00	3202861	0.12	0.02	0.05	53.7	1.6
			274.00	275.00	1.00	3202863	0.47	0.0057	0.43	24.2	1.3
			275.00	276.00	1.00	3202864	0.27	0.02	0.22	17.8	1.2
			276.00	277.00	1.00	3202865	1.93	0.03	1.75	68.2	5.6
			277.00	278.00	1.00	3202866	0.53	0.03	0.38	63	4.4
			278.00	279.00	1.00	3202867	0.05	0.00865	0.0052	29.3	1.3
			279.00	280.00	1.00	3202868	0.13	0.02	0.05	33	2
			280.00	281.00	1.00	3202869	0.12	0.02	0.01	52.5	2.8
			281.00	282.00	1.00	3202870	0.14	0.01565	0.05	39.4	2.4
			282.00	283.00	1.00	3202871	0.4	0.03	0.26	67	3.8
			283.00	284.30	1.30	3202872	0.1	0.02	0.04	32.5	1.5
			284.30	285.69	1.39	3202873	0.17	0.02	0.08	41.3	2.3
			285.69	286.60	0.91	3202874	5.92	0.12	5.55	117.2	9.1

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
285.69	289.43	MXSX Massive sulphide	286.60	287.60	1.00	3202875	7.64	0.1	7.22	175.4	11.6
Massive sulphides with large, irregular quartz veins. Massive pyrite and metallic pink to pink-brown sphalerite with irregular quartz veins ranging from 5-45 mm. Several mm-scale veins diffuse outward from one large white low-angle quartz vein at the beginning of the interval. Sub-mm to mm-scale transparent quartz veins internally fracture massive sulphides. Fine to medium-grained pyrite and fine-grained metallic-pink to pink-brown sphalerite are the dominant sulphide minerals present. <<Min: 285.69 - 289.43: 78% Pyrite / 12% Sphalerite / 2% Siderite>> Massive sulphides. Fine to medium-grained pyrite and fine-grained metallic-pink to pink-brown sphalerite are abundant, with minor amounts of vein-hosted Fe-carb.			287.60	288.50	0.90	3202876	11.07	0.17	10.32	280	21.3
			288.50	289.43	0.93	3202877	7.43	0.47	6.39	495.9	20.9
289.43	295.40	Goug Fault gouge									
Mudstone gouge with quartz, pyrite and Fe-carb veins. Veins commonly follow bedding planes and are at a medium angle to core axis. Vein widths range from mm-scale to cm-scale. Possible shear vein at the beginning of the interval. Deformed barite crystals are found ~289.5-289.75 m. Pyrite has replaced some of the barite. Pyrite, quartz and Fe-carb veins commonly follow bedding in the competent silty mudstone sections of the interval and are erratic and high-angle in the less competent gouge. Less pyrite is found in the gouge; veins are predominantly composed of Fe-carb. Fe-carb veins effervesce with exposure to HCl and are slightly magnetic. Trace amounts of fine-grained galena are present in some veins. <<Min: 289.43 - 295.4: 5% Ankerite / 5% Quartz / 3% Pyrite / 1% Barite / 0.1% Galena>> Vein-hosted and replacement mineralization textures. Disseminated pyrite found throughout competent silty mudstone layers. Sheared barite crystals found from 289.5-289.75 m with pyrite commonly replacing barite. Pyrite, quartz and Fe-carb veins commonly follow bedding in the competent silty mudstone sections of the interval and are erratic and high-angle in the less competent gouge. Trace amounts of galena are located in cm-scale ankerite and ankerite-quartz veins found in the mudstone gouge. <<Alt: 295 - 333: Weak Silicification / Moderate Silicification>> Silicification ranges from weak to moderate over the interval. <<Struc: 291.18 - 291.18: Bedding>> <<Struc: 294.78 - 294.78: Shear>> Graphite/quartz											
			289.43	290.40	0.97	3202878	0.56	0.03	0.45	57.9	3
			290.40	292.40	2.00	3202879	0.29	0.01	0.25	21.9	1.1
			292.40	293.40	1.00	3202881	0.12	0.00978	0.08	23.5	1.1
			293.40	294.40	1.00	3202883	1.05	0.23	0.75	56	2.9
			294.40	295.40	1.00	3202884	0.22	0.01055	0.19	71.5	0.6

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
295.40	333.00	BMST Black mudstone Black FG									
Fine-grained black mudstone with silty laminations, disseminated pyrite and uncommon veining throughout. A soft, light grey, soapy/greasy ash layer runs from 296.52-297.05 m. Uncommonly, crenulation cleavage occurs in sections where bedding is parallel to sub-parallel to the core axis. Joints are commonly at a medium to medium-high angle to the core axis. Weak to moderate silicification noted throughout. Vein thicknesses range from sub-mm to cm-scale and are predominantly quartz and Fe carb with uncommon pyrite. Veins are commonly parallel to bedding or occur at a medium-high angle to bedding. Rarely, mm-scale banded veins with Fe carb, quartz and pyrite occur. Vein textures are massive and planar with uncommon irregular or brecciated textures. Disseminated and vein-hosted pyrite are present. Disseminated pyrite occurs as very fine to medium-grained euhedral to subhedral crystals. Pyrite grades commonly range from 1-3% with a 25 cm interval at 324.55 m reaching ~15%. Vein-hosted pyrite is uncommon and occurs with Fe carb and rarely as pyrite veinlets cross-cutting bedding. <<Min: 295.4 - 333: 2% Pyrite / 1% Ankerite>> Laminated silty black mudstone with disseminated pyrite as well as quartz, quartz-pyrite and Fe carb-quartz-pyrite veins. Disseminated pyrite occurs as very fine to medium-grained euhedral to subhedral crystals. Pyrite grades commonly range from 1-3% with a 25 cm interval at 324.55 m reaching ~15%. Vein-hosted pyrite is uncommon and occurs with Fe carb and rarely as pyrite veinlets cross-cutting bedding. <<Struc: 297.88 - 297.88: Bedding>> <<Struc: 297.89 - 297.89: Fabric 1>> Crenulation cleavage. <<Struc: 299.74 - 299.74: Fabric 1>> <<Struc: 299.75 - 299.75: Bedding>> <<Struc: 302.73 - 302.73: Bedding>> <<Struc: 302.77 - 302.77: Fabric 1>> <<Struc: 309.27 - 309.27: Bedding>> <<Struc: 311.48 - 311.48: Bedding>> <<Struc: 311.52 - 311.52: Fabric 1>> Cuts bedding normal. <<Struc: 314.13 - 314.13: Bedding>> <<Struc: 315.34 - 315.34: Bedding>> <<Struc: 321.9 - 321.9: Bedding>> <<Struc: 329.23 - 329.23: Bedding>> <<Struc: 330.75 - 330.75: Fabric 1>> <<Struc: 330.78 - 330.78: Bedding>> Crenulation cleavage.											
295.40	296.55		295.40	296.55	1.15	3202885	0.05	0.0036	0.03	51.2	0.5
296.55	297.00		296.55	297.00	0.45	3202886	0.16	0.02	0.14	80	0.25

Hole: NB20-004

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	ZnEquiv pct	Pb Best pct	Zn Best pct	Cu Best ppm	Ag Best ppm
			297.00	298.60	1.60	3202887	0.1	0.00642	0.09	27.7	0.25
			298.60	300.00	1.40	3202888	0.01	0.00645	0.0044	22.7	0.25
			300.00	301.75	1.75	3202889	0.01	0.00768	0.0041	28.7	0.25
			301.75	303.50	1.75	3202890	0.01	0.00663	0.0019	22.3	0.25
			303.50	305.25	1.75	3202891	0	0.00338	0.001	17.6	0.25
			305.25	307.00	1.75	3202892	0	0.00324	0.0017	19.4	0.25

End of Hole @ 333