

P0413

RESULTS
DIAMOND DRILLING AND TRENCHING

ALBERT CREEK AREA,
Northern B.C.

NTS 104P/13E Project #079

February, 1982 B.W.Downing

Report #28-079-81

THE RESULTS OF DIAMOND DRILLING AND TRENCHING IN THE
ALBERT CREEK AREA, NORTHERN B.C., PN 079

NTS 104P/13E LIARD M.D.
LATITUDE 59° 54'N LONGITUDE 129° 33'W

February, 1982
Report No. 28-079-81

B.W. Downing

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1.

SUMMARY

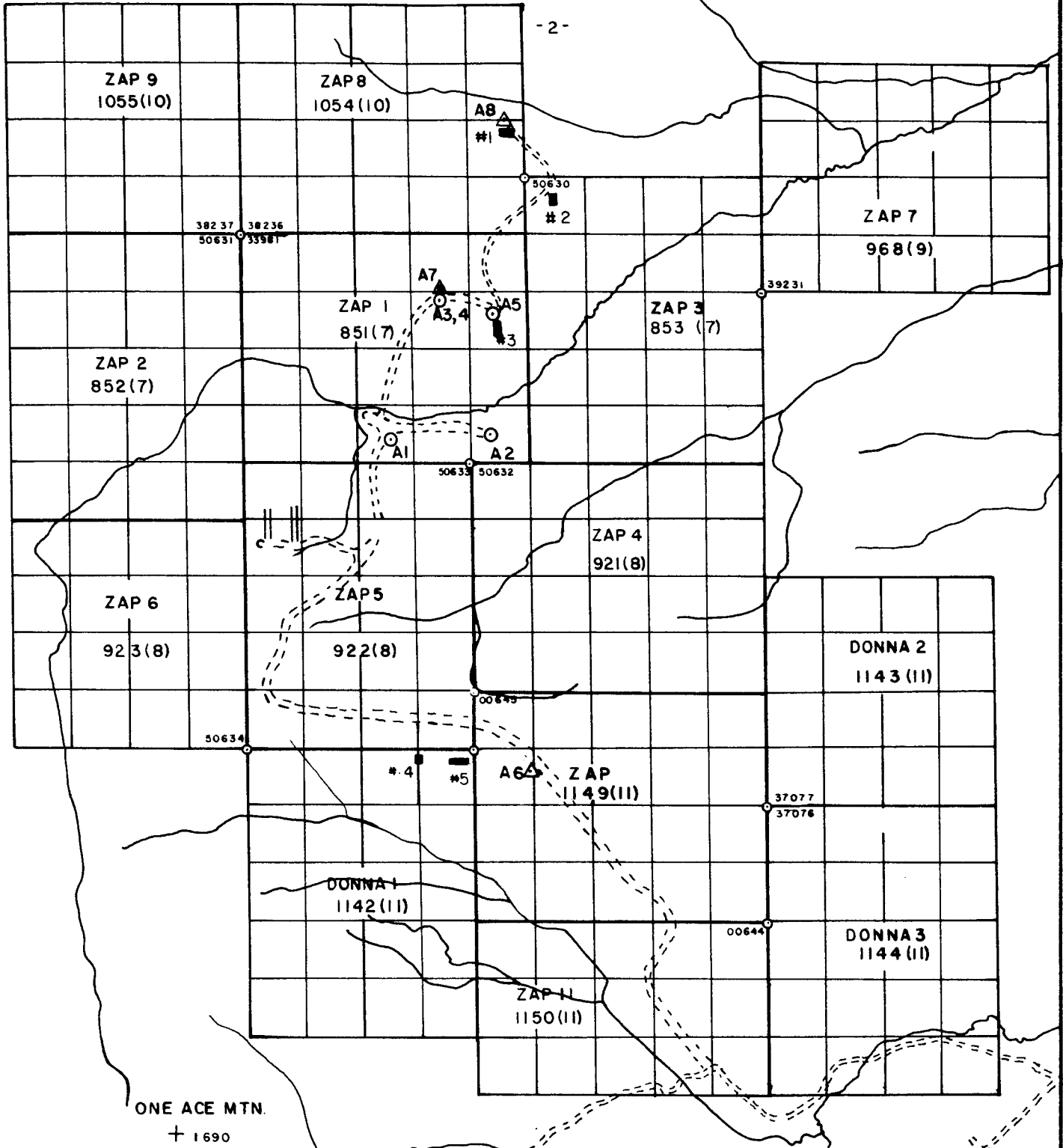
Three VLF EM16 geophysical anomalies coincident with soil geochemical anomalies were drilled during November 9 - 27, 1981. Drilling conditions (weather and ground) were not favourable, however, two anomalies were successfully drilled and coupled with a drill breakdown the third hole had to be abandoned. No significant Pb-Zn-Ag mineralization was intersected. Probable cause of the geophysical anomalies are weakly mineralized fault zones.

2.

INTRODUCTION

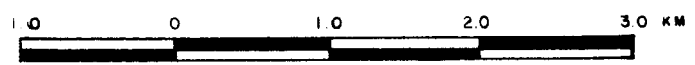
As a result of the geophysical (VLF EM16) and soil geochemical surveys over five grids during June-August, 1981, two anomalous areas were located that warranted drilling, (Grids A and D). Another area needing further work (i.e. drilling) was a geophysical-soil geochemical anomaly that was the target of two drill holes in September 1980, both of which were abandoned due to caving.

The best time for a drill program is during the winter months when the access road is frozen. Owing to budget constraints in 1982, money was made available for the drilling program in late October 1981. A drill contract was made with D.J. Drilling Co. for a total of 1,800 feet of BQ and NQ core at \$55.00/foot and \$60.00/foot all inclusive, respectively. Mobilization, camp set-up and maintenance and access road maintenance (snow clearing, road extension) were included in the drill contract. The most severe problems encountered were freezing water lines (temp +2 to -20°C, avg. -10°C) and stuck drill rods. A Longyear 34 drill was used for the program (November 9-27, 1981). Approximately three miles of new road was built for access to drill site A8.



ONE ACE MTN.
+ 1690

- DRILL HOLES 1980
- TRENCHES
- △ DRILL HOLES 1981



Scale: 1:50 000
NTS 104P 13E/14W

FALCONBRIDGE NICKEL MINES LIMITED	
Property: ALBERT CREEK	
Location: ONE ACE MT.	
Type of Map: CLAIM MAP	
Based on:	
Date of Work: NOVEMBER 1981	
Date: FEB. 1982	
Drawn by: PA.	
Figure: 079-81-1 Location map	

INTRODUCTION (contd)

Slashing was done along the new section of the access road, which was subsequently inspected and passed by T.C. VanHorlick, forest Ranger at Lower Post. Three holes were drilled for a total of 1534 feet (467.6 metres) Figure 1. All drill core was taken to J. Schussler's warehouse in Watson Lake, Yukon where it was subsequently logged, split and sampled. The core is at present stored outside. All samples were sent to the Bondar-Clegg Laboratories, North Vancouver for geochemical analysis (Pb, Zn, Ag, Cd, Ba).

Trenching was carried out (per telephone conversation with J.B. Gammon) over several areas with soil geochemical anomalies. Two cats (D7E & D6C) were contracted from Grant Stewart Construction Ltd., Watson Lake, Yukon for a cost of \$5,666.65 (Dec. 4 - 6, 1981).

A mineralogical report from Thornhill on three samples from DDH A5 is given in Appendix II. Field personnel during the drill program were B.W. Downing (geologist), K.H. Christensen, A. McArthur, C. Edwards and K. White. Ken White was hired from Watson Lake for the core splitting and sampling. The other personnel were involved in slashing.

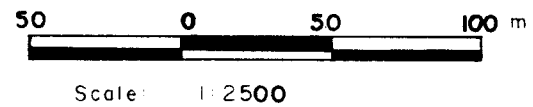
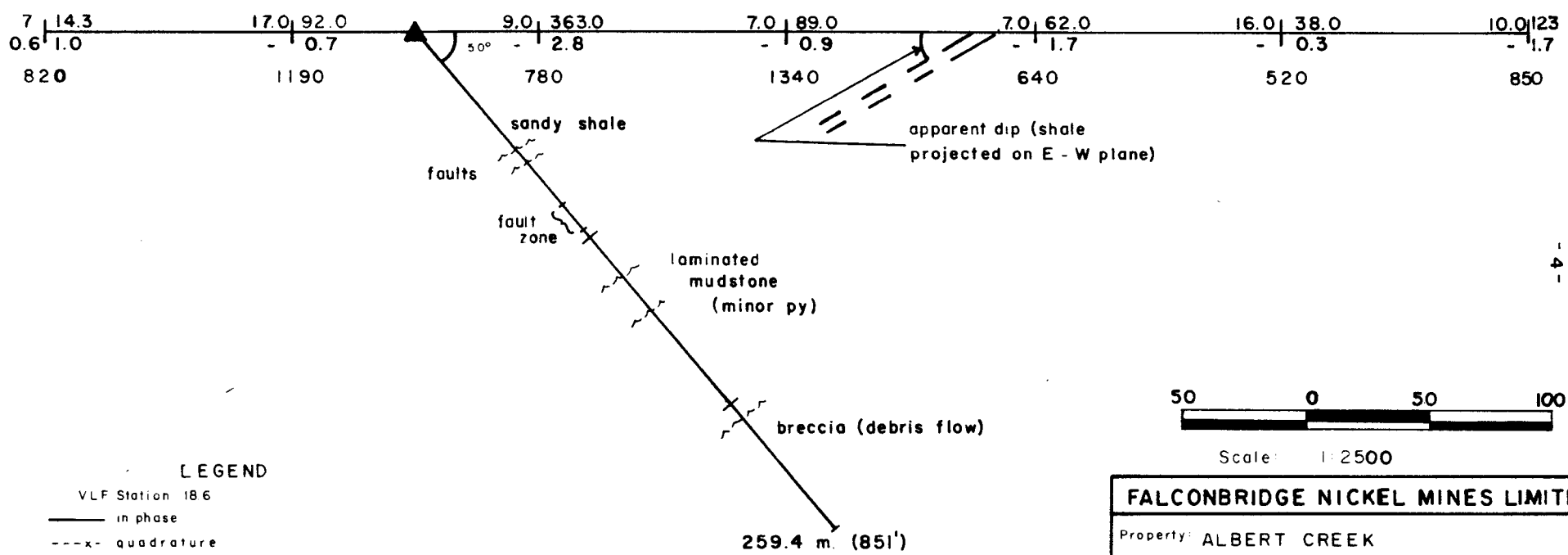
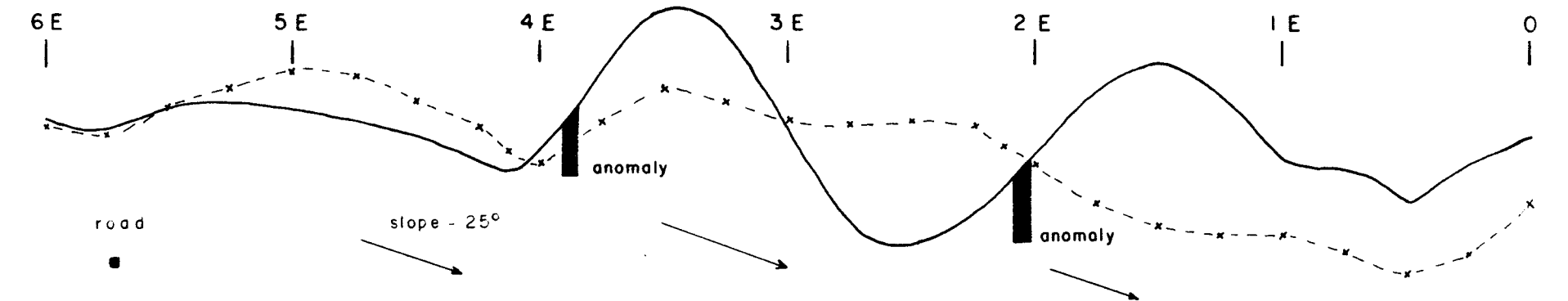
3.

DISCUSSION

The drill logs and geochemical values for holes A6, A7 and A8 are given in Appendix I.

3.1 DDH A6 (Figure 079-81-2)

Hole A6 was drilled to test two strong VLF EM16 conductors (#1 & #2, STN 18.6) on Grid D, coincident with a Zn and Cd soil geochemical anomaly. Total depth was 851ft with approximately 70 percent core recovery. Several fault zones were encountered in a sandy shale-pyritiferous laminated mudstone-sedimentary breccia sequence. No anomalous Pb, Zn, Ag, Cd or Ba values occur. Both conductors appear to be fault related.



LEGEND

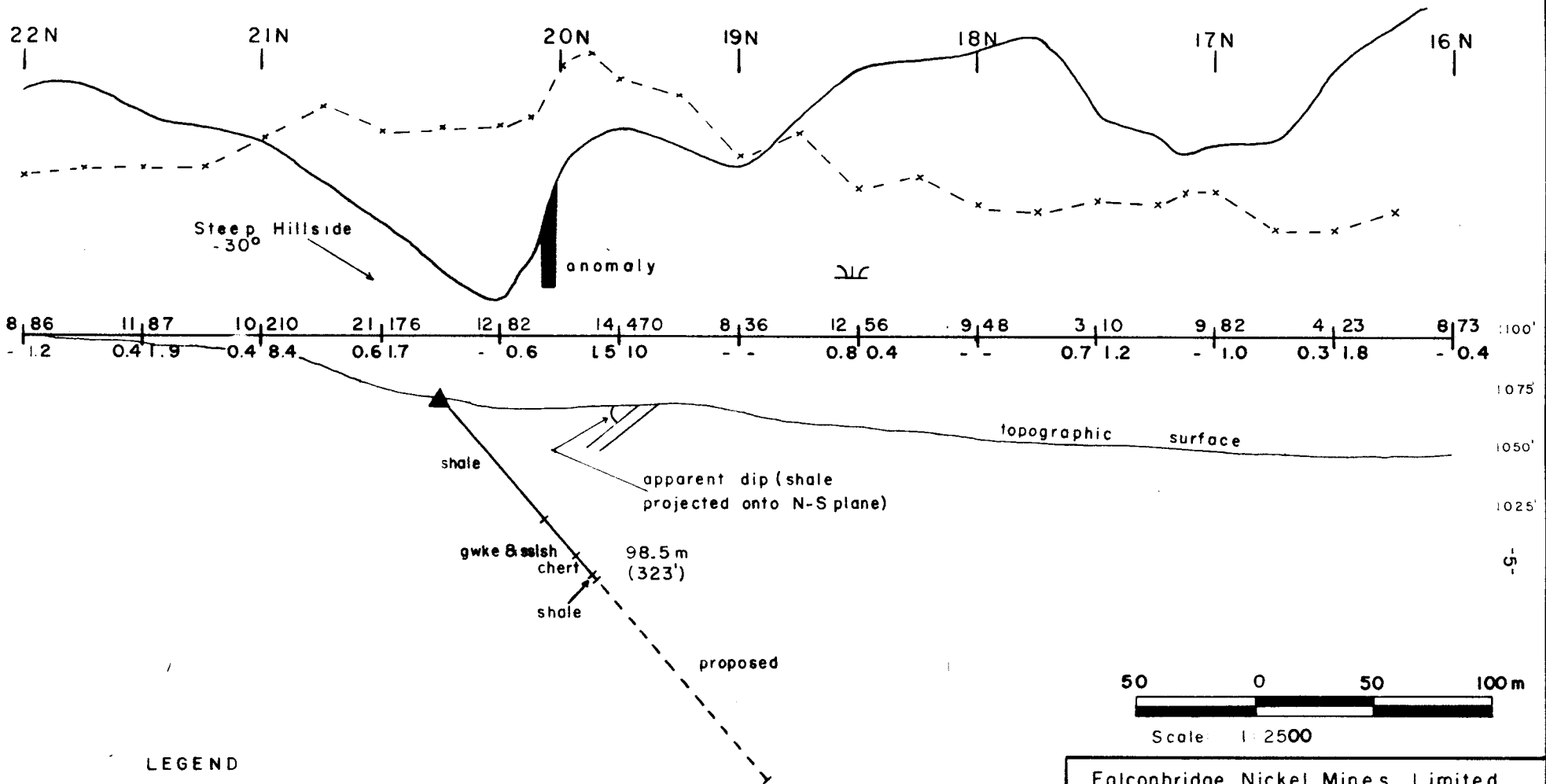
VLF Station 186
 — in phase
 ---x--- quadrature

shale - 140/40 NE (bedding)
 DDH A6 695 S
 460 E
 -50 W

Soil Sample

Pb	Zn	ppm
Ag	Cd	
Ba		

FALCONBRIDGE NICKEL MINES LIMITED	
Property: ALBERT CREEK	(PN 079)
Location: Grid D, line 7S	
Type of Map: CROSS SECTION, DDH A6	
Based on: GEOLOGY	
Date of Work: JULY / AUGUST / NOVEMBER '81	
Date: FEB / 81	
Drawn by: B.W.D. / P.A.	
Figure no.: 079 - 81 - 2	



LEGEND

VLF Station 21.4
 — in phase
 - - x - quadrature

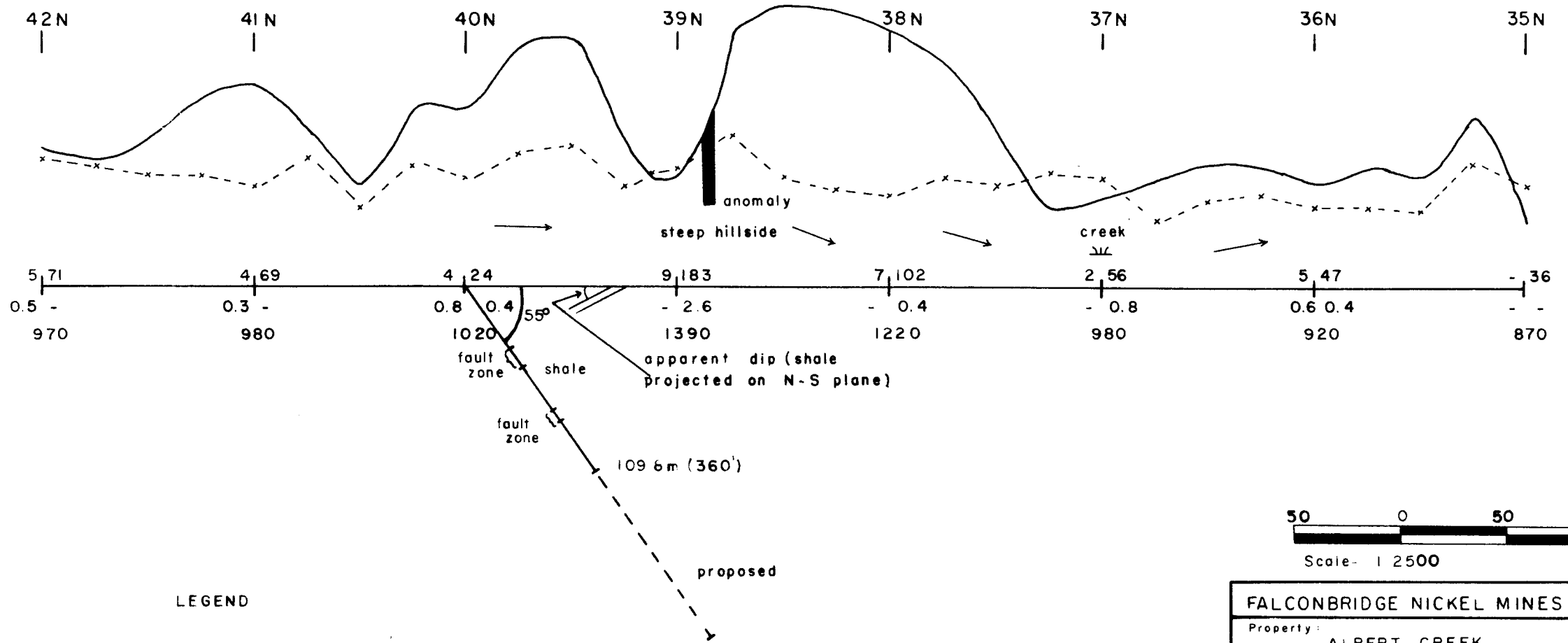
shale 120/45° NE (bedding)
 DDH A7 2025 N
 490W
 - 50°S

Soil Sample

Pb	Zn	ppm
Ag	Cd	

Swamp

Falconbridge Nickel Mines Limited	
Property	ALBERT CREEK (PN 079)
Location	Detail Grid line 5W
Type of Map	CROSS SECTION, DDH A7
Based on	GEOLOGY
Date of Work	JULY / AUGUST / NOVEMBER '81
Date	FEB. / 82
Drawn by	B.W.D. / P.A.
Figure no.	079-81-3



LEGEND

- VLF Station 178
- in phase
- - x - quadrature
- Shale 120/65° N-E (bedding)
- DDH AB 4000 N
- 300 E
- 55°S
- Soil Sample

Pb	Zn
Ag	Cd

ppm.

Ba

- Swamp

FALCONBRIDGE NICKEL MINES LIMITED	
Property:	ALBERT CREEK
Location:	Grid A, line 7S
Type of Map:	CROSS SECTION, DDH AB
Based on:	GEOLOGY
Date of Work:	JULY / AUGUST / NOVEMBER '81
Date:	FEB / 82
Drawn by:	B.W.D / P.A.
Figure no.:	079 - 81 - 4

DISCUSSION (contd)

3.2 DDH A7 (figure 079-81-3)

This hole was drilled to test a VLF EM16 geophysical anomaly and a soil geochemical (Pb, Zn, Ag, Cd) anomaly on the detail grid. Two holes were attempted in 1980, however, both had to be abandoned due to caving. Another attempt was made from a set-up approximately 25 metres north of the 1980 drill site and drilled at a 55° dip. This hole also had to be abandoned after 323 feet due to caving and stuck rods. Probable cause of the conductor are numerous faults in a shale-greywacke-chert-shale sequence. No anomalous values are present. Core recovery was approximately 54%.

3.3 DDH A8 (figure 079-81-4)

This hole was drilled to test a strong VLF EM16 geophysical anomaly (conductor #1) on Grid A. The hole was abandoned after 360 feet due to caving and stuck rods. In an attempt to free the rods, the drill transmission was broken. Core recovery was poor (approx. 55%) due to numerous fault zones in shale. A probable cause of the VLF anomaly may be a fault. No anomalous values are present.

4.

TRENCHING (figure 079-81-1)

Six trenches were dug, two of which did not reach bedrock after three metres. Chip samples of bedrock were taken for geochemical analysis (Table 1).

Trench #1 - Line 550E/3950N, 2.5x4x30 metres,
1.5 metres of overburden, shale

Trench #2 - Line 970E/3200N, 3x4x30 metres,
3 metres of overburden, shale

Trench #3 - Line 200W/2075N, 3x4x20 metres,
3 metres of overburden, no outcrop reached

Trench #4 - Line 500W/2050S, 2.5x4x30 metres,
2.5 metres of overburden, limestone

TABLE 1 - TRENCH DATA

TRENCH		NO.	Pb ppm	Zn ppm	Ag ppm	Cd ppm	Ba ppm
1	Chip sample over 3m shale	532	16	255	0.2	2.0	1090
1	" 3m "	533	16	148	0.2	1.4	1140
1	" 4m "	534	13	255	0.2	1.6	1310
2	Chip sample over 0.5m shale	535	10	283	1.8	5.1	3050
2	" 1m "	536	10	199	1.9	2.2	3530
3	no outcrop						
4	Chip sample over 8m limestone	537	8	79	0.2	0.3	60
4	" 8m "	538	10	237	0.2	1.9	100
5	no outcrop						
6	chip sample over 5m sh-ls	539	7	43	0.2	0.2	700
6	" " 5m sh-ls	540	5	34	0.2	0.2	580
	chip sample over 5m sh-ls along road by trench #6	541	5	10	0.2	0.2	120

TRENCHING (contd)

Trench #5 - Line 025BL/2025S, 3x4x30 metres,
3 m of overburden, shale-limestone contact

Trench #6 - Line 3790S/1210E, 3x4x30 metres,
3 m of overburden, shale-limestone contact

5. CONCLUSIONS AND RECOMMENDATIONS

Two of three geophysical-geochemical anomalies were drill-tested successfully (DDH A5, A7). The probable cause(s) of these anomalies are weakly mineralized shear/fault zone(s) in shale. No anomalous Pb, Zn, Ag, Cd or Ba values were intersected. A possible cause for the anomaly drilled on Grid A (DDH A8) might also be a fault zone. The sedimentary breccia encountered at the end of DDH A6 may either be a debris flow or contact zone between the shale and limestone/dolomite.

No significant anomalous results are present from the trenching program. Drilling (DDH A8) and trenching have shown that shale occurs over a large area in a heavily glaciated area where outcrop is approximately 10 percent.

Recommendations for any future work in the Albert Creek area are:

- 1) IP or Max Min geophysical survey over the conductors on Grids A and D to clarify the cause as to either faults or mineralization.
- 2) Any future drilling should be done with a rotary drill as it will drill effectively the highly fractured shales (vs. coring drill) and it is cheaper.
- 3) Put the ZAP 1-11 claims ahead for up to two years (effective till 1985 at a cost of \$4140.00 for recording fees) The importance of retaining these claims is to keep viable ground in the western extension of the Selwyn Basin which is on strike with a significant occurrence of a Pb-Zn-Ag-barite property (Amax option from Regional Resources - Midway Property).

APPENDIX I - DRILL LOGS

NORTH 695
 EAST 460
 ELEV. 270
 BEARING 270°
 DIP 50° BQ Core

STARTED Nov. 11, 1981
 COMPLETED Nov. 16
 LENGTH 851'

SUMMARY LOGS
FALCONBRIDGE
DIAMOND DRILL RECORD

PROPERTY

Albert Creek PN 079

PURPOSE to test VLF EM16
 HOLE No. A6
 CLAIM ZAP 10
 SECTION _____
 OFFSET _____
 LOGGED BY B.W. Downing
 PLOTTED _____

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
0 - 117	Casing (highly broken rock, no recovery)			ppm	ppm	ppm	ppm	ppm
117 - 220	<u>Sandy to silty shale</u> with irreg. blebs, disseminations		156 - 164	22	296	0.2	15.0	220
	of white carb throughout		184 - 197	50	166	0.2	2.4	340
220 - 357	<u>Sandy to silty shale</u> with scattered carb blebs							
357 - 851	black, thin bedded <u>calcareous mudstone</u> with							
	intermittent beds of breccia, calcareous sandstone,							
	thin fine grain pyrite beds up to ½cm. @ 10°							
	620 - 690 Increase in number of cal. sandstone beds,							
	breccia fragments (avg. ¼cm)							
	690 - 705 Breccia fragments (avg. ½cm)							
	705 - 851 Breccia fragments (avg. 1cm)							
	772 - 851 increase in mudstone content							
END								
	Core Recovery 70%							
	Conductor - pyritiferous mudstone							

HOLE No. A6

SUMMARY LOGS

NORTH 2025 STARTED Nov. 18, 1981
 EAST 490 COMPLETED Nov. 21, 1981
 ELEV. _____ LENGTH 323'
 BEARING 180°
 DIP 50° NQ 0-225, BQ 225-323'

FALCONBRIDGE
DIAMOND DRILL RECORD
 PROPERTY
Albert Creek PN 079

PURPOSE to test VLF EM16 HOLE No. A7
conductor & soil CLAIM ZAP 1
geoanomaly SECTION _____
 LOGGED BY B.W. Downing OFFSET _____
 PLOTTED _____

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
				ppm	ppm	ppm	ppm	ppm
0 - 65	Casing							
65 - 137	<u>Siliceous Shale</u> , brecciated, fine grain pyrite blebs & as rinds around fragments, melanterite along some fractures		97 - 113	9	700	0.2	27.0	4110
137 - 170	<u>Calcareous shale</u>		113 - 126	6	365	0.2	28.0	6350
170 - 221	<u>Brecciated shale</u>							
221 - 222	<u>Calcareous greywacke</u>							
222 - 223	<u>Siliceous Shale</u>							
223 - 281	<u>Greywacke - sandstone</u> , scattered pyrite blebs							
281 - 305	<u>Chert</u> , scattered pyrite blebs							
305 - 323	<u>Shale</u> , quartz-carbonate stockwork, scattered pyrite blebs							
END	Hole abruptly ended due to stuck rods, Core Recovery 54° Conductor - fault zones (?)							

NORTH 4000 STARTED Nov. 23, 1981
 EAST 300 COMPLETED Nov. 26
 ELEV. _____ LENGTH 360'
 BEARING 180°
 DIP 55° NQ Core

SUMMARY LOGS
FALCONBRIDGE
DIAMOND DRILL RECORD

PROPERTY
 Albert Creek PN 079

PURPOSE tp test VFL EM16 HOLE No. A8
conductor CLAIM ZAP 8
 SECTION _____
 LOGGED BY: B.W. Downing OFFSET _____
 PLOTTED _____

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
0 - 30	Casing							
30 - 154	<u>Shale</u> , very broken, melanterite along some fractures							
154 - 215	Siliceous Shale		303 - 313	20	304	0.8	14.0	810
215 - 360	<u>Shale</u> , broken core, scattered quartz veins		313 - 320	21	243	2.0	20.0	630
END	Hole abruptly ended due to stuck rods and broken drill transmission, did not reach conductor at approx. 425'. Core Recovery 55% Conductor - fault zones (?)							

SOUTH 695
 EAST 460
 ELEV. _____
 BEARING 270°
 DIP -50° dip west

STARTED Nov. 11/81
 COMPLETED Nov. 16/81
 LENGTH 851 ft
(259.4m)

FALCONBRIDGE DIAMOND DRILL RECORD

PROPERTY

ALBERT CREEK, PN079

(set up on bedrock)

PURPOSE to test VLF
EM 16 conductor

LOGGED BY B.W. DowningHOLE No. A6CLAIM ZAP 10

SECTION _____

OFFSET _____

PLOTTED _____

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb PPM	Zn PPM	Ag PPM	Cd PPM	Ba PPM
0 - 117	CASING - broken rock, no recovery	39493	156 - 164	22	296	0.2	15.0	220
117 - 220	sandy, moderate to hard, <u>shale</u> with irreg. blebs, & disseminations of white carb throughout, long axis of blebs and trails of blebs @ 20°; scattered carb veinlets up to 1 cm @ 20°.	494	164 - 173	15	267	0.2	7.6	230
		495	173 - 184	26	222	0.2	4.2	190
		496	184 - 197	50	166	0.2	2.4	340
		497	197 - 199.5	11	56	0.2	0.2	190
	173' (9cm) small shale frags in bed of carb	498	199.5 - 201.5	27	72	0.2	0.2	140
	breccia (80% matrix 20% frags) irr. py	499	201.5 - 204	17	46	0.2	0.2	130
	veinlets (5%) throughout.	500	204 - 214	9	66	0.2	0.2	230
	174' & 176' carb vein (1cm) rimmed with py on both sides	501	214 - 220	9	87	0.2	0.2	320
	199' - 199.5 5 py bands (1cm, 1/2cm, 1/4, 1/4, 1/4cm) @ 5°.	502	220 - 230	9	82	0.2	0.2	160
	101.5' 2 py bands (1/2cm each)	503	230 - 240	10	74	0.2	0.2	170
	204' - 205' calcareous sandstone	504	240 - 250	8	59	0.2	0.2	570
	specimen 170'	505	250 - 260	8	84	0.2	0.2	180
	212' - 212.5 sand/mud - fault gouge	506	260 - 270	9	78	0.2	0.2	320
	230' - 232' mud, mud/rock 80° fault gouge	507	270 - 280	10	69	0.2	0.2	920
	228' - 229' fault gouge - mud & chips	508	280 - 290	12	46	0.2	0.2	190
	245' - 246' calcareous sandstone	509	290 - 300	11	31	0.2	0.2	280

HOLE No. A6

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
	250' - 251' calcareous sandstone, bed @ 60°	510	300 - 310	12	59	0.2	0.2	470
230 - 357	soft to mod hard, <u>sandy to silty shale</u> - scattered	511	310 - 320	11	54	0.2	0.2	280
	white carb blebs, irreg py blebs & grains up to 1cm	512	320 - 330	17	39	0.2	0.2	280
	(avg. 1cm) scattered throughout.	513	330 - 340	20	180	0.2	2.0	410
	271' - 271.5 fault gouge	514	340 - 346.5	29	106	0.2	0.9	280
	274.5-275.5' bed @ 30°, cal. gwke with cal. blebs and	515	346.5 - 357	14	102	0.2	3.0	270
	scattered shale frags.	516	357 - 366.5	19	159	0.2	1.9	260
	specimen 266'	517	366.5 - 372	16	264	0.2	1.5	220
	254.5- 285' cal. sandstone	518	372 - 382	16	76	0.2	0.5	330
	256.5' fault gouge	519	382 - 384	6	222	0.2	1.6	280
	289'-291.5' cal. sandstone	520	384 - 394	8	398	0.2	2.8	330
	specimen 291'	521	394 - 400	16	59	0.2	0.2	430
	296'-296.5 cal sandstone	522	400 - 410	10	50	0.2	0.2	470
	307' - 310' fault gouge (mud and chips)	523	410 - 420	13	92	0.2	0.6	320
	316.5- 317' fault gouge (mud and chips)	524	420 - 430	10	380	0.2	1.8	530
	329.5- 330' fault gouge (mud and chips)	525	430 - 443	12	91	0.2	0.2	620
	342 - 346.5 fault zone, (mud and chips)	526	443 - 453	12	358	0.2	1.7	430
357 - 851	<u>black thin beds, calcareous laminated mudstone, bed</u>	527						
	@ 10°, intermmittent beds of breccia/congl and cal	528	471 - 479	11	321	0.2	1.4	380
	sandstone/siltstone	529	479 - 493	14	825	0.2	4.4	520

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
	specimen 443"	530	493 - 503	11	218	0.3	1.3	480
	thin fine-grain py beds parallel to bedding up to ½cm	531	503 - 518	12	196	0.3	1.3	470
	(avg. 1mm, diss py throughout), scattered py veins(1	532	518 - 527	12	233	0.2	1.6	430
	cm)associated with carb ± qtz @ 30°, thin carb	533	527 - 547	10	245	0.2	1.2	370
	veinlets/stringers 30 to 70°	534	547 - 565	13	68	0.2	0.3	270
	427' - 428' fault zone	535	565 - 587	13	40	0.2	0.2	350
	475' - 476' fault zone	536	587 - 607	7	420	0.2	2.0	200
	513.5' py bed 1 cm	537	607 - 622	10	339	0.2	1.5	390
	specimen 522'	538	622 - 637	11	172	0.2	0.6	410
620 - 690	increase in number of cal. sandstone beds (avg 1cm)	539	637 - 650	13	235	0.2	1.0	590
	minor congl/breccia beds up to 6 cm, breccia frags	540	650 - 659	12	30	0.2	0.2	460
	≤ ½cm; fine grain, py laminae	541	659-665	15	18	0.2	0.2	330
	specimen 629'	542	665 - 675	13	21	0.2	0.2	410
	specimen 664'	543	675 - 689	13	65	0.2	0.3	2060
	675' - 689' fault zone	544	689 - 699	10	72	0.2	0.3	430
690 - 705	breccia frags increase in size up to 1 cm with avg	545	699 - 710	12	128	0.2	0.7	1020
	½cm; carb matrix	546	710 - 724	10	23	0.2	0.2	2580
705 - 772	breccia frags up to 2 cm with avg 1 cm; carb matrix	547	724 - 731	10	107	0.2	1.0	170
	frags - (mudstone & shale 5-10°), limestone, cal	548	731 - 741	11	117	0.2	1.2	1220
	sandstone, cal siltstone, minor dol; graded bedding	549	741 - 752	9	103	0.2	1.1	1490

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
	with tops upright; chaotic assemblages	550	752 - 762	4	10	0.2	0.2	5890
	matrix { carb (90%)	00526	762 - 772	5	7	0.2	0.2	5040
	{ mudstone (10%)	527	772 - 782	10	11	0.2	0.2	1120
	specimen 738'	528	782 - 792	11	10	0.2	0.2	1740
	748.5 - 749.5' frags up to 3 cm (avg. 1 1/2 cm)	529	792 - 803	10	12	0.2	0.2	1140
	758' - 772' frags up to 20 cm (avg. 2 cm)	530	803 - 827	7	8	0.2	0.2	1300
	specimen 758'	00531	827 - 851	6	10	0.2	0.2	1170
772 - 851	mudstone content increases							
	mudstone matrix 90% } BRECCIA	39492	117 - 156	7	251	0.2	4.4	200
	carb matrix 10% }							
	py blebs - scattered in breccia							
	frags (avg 1/2 cm) { cal sandstone, cal siltstone - 40%							
	{ dolomite (increases) 60%							
	specimen 778'							
	specimen 851'							
	* breccia beds may be debris flows							
851	END							

DDH A6

CORE RECOVERY

117 - 127	10%	chips
127 - 137	10%	"
137 - 155	5%	"
155 - 164	80%	blocky
164 - 173	100%	"
173 - 184	100%	"
184 - 197	100%	"
197 - 204	100%	"
204 - 214	100%	"
214 - 223	100%	"
223 - 231	100%	"
231 - 245	100%	"
245 - 255	100%	"
255 - 265	100%	"
265 - 273.5	100%	"
273.5 - 284	100%	"
284 - 291	100%	"
291 - 299	100%	"
299 - 307	100%	"
307 - 316	100%	"
316 - 326	100%	"
326 - 336	100%	"
336 - 346.5	90%	"
346.5 - 357	5%	chips
357 - 366.5	5%	"
366.5 - 372	15%	"
372 - 382	10%	"
382 - 384	50%	"
384 - 394	40%	
394 - 402	90%	
402 - 406.5	85%	

CORE RECOVERY (contd)

406.5 - 417	100%	
417 - 427	70%	
427 - 437	100%	
437 - 443	50%	
443 - 453	100%	
453 - 471	10%	chips
471 - 476	75%	
476 - 479	95%	
479 - 490	95%	
490 - 493	65%	
493 - 503	100%	
503 - 509	35%	chips
509 - 518	100%	
518 - 527	100%	
518 - 527	100%	
527 - 537	60%	
537 - 547	65%	
547 - 553	50%	chips
553 - 565	15%	"
565 - 568	65%	"
568 - 572	50%	"
572 - 587	5%	"
587 - 607	10%	"
607 - 612	80%	
612 - 622	100%	
622 - 629	100%	
629 - 637	85%	
637 - 644	20%	
644 - 650	35%	
650 - 659	95%	
659 - 665	100%	
665 - 667	90%	
667 - 675	85%	
675 - 686	15%	chips

CORE RECOVERY (contd)

686 - 689	85%	chips
689 - 699	40%	chips
699 - 710	90%	
710 - 718	50%	
718 - 724	65%	
724 - 731	85%	
731 - 741	100%	
741 - 752	85%	
752 - 762	100%	
762 - 772	100%	
782 - 790	100%	
790 - 792	100%	
792 - 803	100%	
803 - 827	20%	
827 - 837	30%	
837 - 847	10%	
847 - 851	25%	

AVERAGE 70%

NORTH 2025
 WEST 490
 ELEV. _____
 BEARING 1800
 DIP -50° S NQ 0-225', BQ 225 - 323'

STARTED Nov 18, 1981
 COMPLETED Nov 21, 1981
 LENGTH 323 ft
 (98.5m)

FALCONBRIDGE

DIAMOND DRILL RECORD

PROPERTY
ALBERT CREEK PN079

PURPOSE to test VLF
EM 16 conductor
and soil geochemical
anomaly
 LOGGED BY B.W. Downing

HOLE No. A7
 CLAIM ZAP 1
 SECTION _____
 OFFSET _____
 PLOTTED _____

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
				PPM	PPM	PPM	PPM	PPM
0 - 65	CASING	39468	65 - 79	8	275	1.8	2.5	2400
65 - 137	Hard - v. hard shale, (porcelanite), brecciated; f.gr.	469	79 - 97	8	400	0.2	4.3	7160
	py blebs and py as filling around breccia frags irreg	470	97 - 113	9	700	0.2	27.0	4110
	qtz stringers,	471	113 - 126	6	365	0.2	28.0	6350
	65' - 80' Odd fracture with melanterite	472	126 - 136.5	8	385	0.4	13.0	2120
	specimen 128'	473	136.5 - 149	8	179	0.7	1.8	880
137 - 170	soft to mod hard calcareous shale, bed @40°; wkly	474	149 - 155	13	155	0.2	1.8	1380
	brecciated,	475	155 - 169	18	157	0.2	1.7	1400
	carb (barite?) veinlets with disseminated py in matrix	476	169 - 177	14	229	0.2	2.7	1420
	(5 - 10% py) 150-151'	477	177 - 189	15	154	0.6	1.7	1340
	4 cm vein of py 169'	478	189 - 196.5	14	250	0.2	2.8	1360
170 - 221	mod to hard brecciated shale; scattered qtz ± carb	479	196.5 - 207	16	124	0.2	0.8	1640
	veins; fractures @ 25°,	480	207 - 218	16	120	0.3	1.0	1640
	specimen 180'	481	218 - 223	7	151	0.2	1.8	2310
221 - 222	gwke, scattered irreg py blebs (2 - 5% py)	482	223 - 225	ND	42	0.2	0.4	400
222 - 223	shale (porcelanite)	483	225 - 235	6	193	1.3	3.2	720
223 - 281	mod-hard gwke-sandstone with scattered qtz veins	484	235 - 247	12	74	0.2	0.5	1700

HOLE No. A7

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
	@35 - 55°	485	247 - 257	18	67	0.2	0.2	1460
	272' - 281' contorted qtz-carb veinlets	486	257 - 269	5	24	0.2	0.2	680
	275' irreg contorted py vein 1 cm wide; py	487	269 - 272	ND	10	0.2	0.2	150
	blebs throughout in matrix,	488	272 - 281	7	20	0.2	0.2	240
	specimen 235'	489	281 - 283	ND	22	0.2	0.2	640
281 - 305	light grey <u>chert</u> , fractured, v. hard	490	283 - 305	ND	85	0.2	1.0	530
	281' - 283' wkly brecciated with py filled fractures	491	305 - 323	4	17	0.2	0.2	50
	up to ½cm wide, disseminated py grains							
	throughout, scattered qtz ± carb veins							
	@ 30°							
	specimen 284'							
305 - 323	-hard <u>shale</u> with stockwork of narrow carb-qtz							
	(barite?) veins, disseminations of carb-qtz material							
	in matrix; irreg blebs, stringers and grains of py							
	throughout (2-5% sulphides)							
	specimen 310'							
323	END							
	(rods stuck, broke off and had to be cut at surface,							
	lost rods in hole, hole abandoned)							

DDH A7

CORE RECOVERY

65 - 79	35%		
79 - 97	15%	blocky	chips
97 - 113	15%	"	
113 - 126	40%	"	
126 - 136.5	40%	"	
136.5 - 149	50%	"	
149 - 155	85%	"	
155 - 169	50%	"	
169 - 177	25%	"	
177 - 189	40%	"	
189 - 196.5	75%	"	
196.5 - 207	100%	"	
207 - 218	95%	"	
218 - 223	100%		
223 - 225	95%	"	
225 - 247	30%	"	
247 - 257	15%	"	
257 - 269	50%	"	
269 - 273	45%	"	
273 - 283	80%	"	
283 - 287	60%	"	
287 - 305	20%	"	
305 - 323	80%	"	

AVERAGE 54%

NORTH 40 + 00
 EAST 3 + 00
 ELEV. _____
 BEARING 180°
 DIP 55° NQ core

STARTED Nov. 23, 1981
 COMPLETED Nov. 26, 1981
 LENGTH 360 ft
 (109.8m)

FALCONBRIDGE

DIAMOND DRILL RECORD

PROPERTY
ALBERT CREEK PN079

PURPOSE to test VLF
EM 16 conductor

HOLE No. A8
 CLAIM ZAP 8
 SECTION _____
 OFFSET _____
 LOGGED BY B.W. Downing
 PLOTTED _____

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb PPM	Zn PPM	Ag PPM	Cd PPM	Ba PPM
0 - 30	CASING	39426	30 - 40	18	6	0.4	0.3	840
30 - 154	broken core (chips), <u>shale</u> , mod to hard, (30-70' - melanterite along some fracture); irreg. veinlets of qtz ± carb ± hydrozincite, massive, no bedding angles pervassive fracturing @ 35°, - no reaction to HCL	427 428 429 430 431	40 - 50 50 - 60 60 - 70 70 - 80 80 - 91	19 21 16 14 13	6 8 8 5 5	0.4 0.4 0.5 0.8 1.1	0.2 0.3 0.3 0.2 0.2	1020 1050 950 670 560
	blocky core 77-98'	432	91 - 98	9	12	0.8	1.2	720
	v. broken core - small chips 98-117'	433	98 - 107	11	13	0.7	0.3	800
	sandy core - fault zone 117-154'	434	107 - 117	12	14	0.6	0.3	710
154 - 215	<u>siliceous shale</u> (porcelanite or black chert) - odd fracture with melanterite - odd stringer of qtz carb ± hydrozincite	435 436 437	117 - 124 124 - 132 132 - 139	24 23 22	26 28 25	0.5 0.6 0.4	0.8 0.7 0.8	980 960 970
215 - 219	few <u>wacke</u> beds up to 1 cm side @ 45° - no melanterite	438	139 - 147	19	23	0.4	0.6	940
219 - 254	soft and mod <u>hard shale</u> , odd fracture with melanterite	439	147 - 154	23	29	0.3	0.9	1030
	232' - 234' sandy - fault zone	440	154 - 164	10	30	0.4	0.8	980
	234' - 254' small chips	441	164 - 181	5	11	0.2	0.4	520
	blocky 254-275'	442	181 - 191	13	23	1.0	0.8	740

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
	275 - 293' chips	443	191 - 198	25	53	0.4	0.7	1170
	293' - 342' blocky	444	198 - 201	8	31	0.2	0.4	410
	342' - 360' chips	445	201 - 207	5	10	0.2	0.3	380
254 - 260	mod to hard <u>shale</u> , zone of network of qtz veinlets/ stringers with few grains pyrite	446	207 - 215	17	25	0.2	0.3	1000
		447	215 - 219	5	14	0.2	0.2	290
260 - 360	soft to <u>mod shale</u> specimen 258'	448	219 - 221	27	42	0.2	0.3	1560
		449	221 - 232	19	49	0.2	0.5	1200
	268' - qtz vein 2 cm	450	232 - 240	16	26	0.3	0.6	860
	277' - qtz vein 6 cm	451	240 - 244	8	19	0.3	1.2	740
	296' - bed @ 65°	452	244 - 246.5	10	13	0.5	0.6	710
	300' - numerous fractures @ 75°	453	246.5 - 254	15	20	0.4	1.2	860
	305' - 309' graphite along fractures	454	254 - 260	11	34	0.4	0.7	750
	317' - 320' " "	455	260 - 268	16	41	0.5	0.4	1360
	312' - 315' qtz stringers (irreg with few specks py)	456	268 - 274	14	72	0.9	1.2	1110
	1 cm vein @ 30°; numerous fractures @	457	274 - 281	26	71	0.8	1.3	1540
	30°; 314' few blebs py in matrix	458	281 - 283	30	101	0.2	0.6	1900
	335' breccia with qtz veining over 6cm -no py	459	283 - 293	16	106	0.2	0.9	1120
360	END (rods stuck, in process of trying to free them, they broke off at 250' and at the same time, the	460	293 - 303	16	269	0.3	6.7	1030
		461	303 - 313	20	304	0.8	14.0	810
	drill transmission was damaged beyond field repair hole was then abandoned - did not reach projected target at approximately 425'	462	313 - 320	21	243	2.0	20.0	630

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	Pb	Zn	Ag	Cd	Ba
		463	320 - 323	7	49	1.0	1.0	640
		464	323 - 331	8	44	1.3	0.6	830
		465	331 - 342	12	97	0.9	4.3	1020
		466	342 - 347	18	74	0.4	1.4	1080
		467	347 - 360	16	175	0.5	4.5	1090

DDH A8

CORE RECOVERY

30 - 35	50%
35 - 41	100%
41 - 49	100%
49 - 54	90%
54 - 59	60%
59 - 71	40%
71 - 77	60%
77 - 82	100%
82 - 91	100%
91 - 98	30%
98 - 107	10%
107 - 117	5%
117 - 124	15%
124 - 132	10%
132 - 139	5%
139 - 147	5%
147 - 154	15%
154 - 164	50%
164 - 181	5%
181 - 191	15%
191 - 198	60%
198 - 201	100%
201 - 207	15%
207 - 215	60%
215 - 219	40%
219 - 221	100%
221 - 232	45%
232 - 240	60%
240 - 246.5	100%
246.5 - 254	15%
254 - 264	15%
264 - 268	100%

CORE RECOVERY (contd)

268 - 274	100%
274 - 281	65%
281 - 283	100%
283 - 293	30%
293 - 299	100%
299 - 303	100%
303 - 309	100%
309 - 317	100%
317 - 323	90%
323 - 331	30%
331 - 342	20%
342 - 347	10%
347 - 360	40%

AVERAGE 55%

APPENDIX II - MINERALOGICAL EXAMINATION, DDH A5

FALCONBRIDGE METALLURGICAL LABORATORIES

Mineralogy Report #1199

TO: B.W. Downing/I.L. Elliott PROJECT No. 302-810714
(JO#2875)

FROM: J. E. Muir SAMPLE No. L#81-326

DATE: July 14, 1981

SUBJECT: Mineralogical Examination of Three Samples from DDH 5 at
the Albert Creek Property, B.C.

KEYWORDS: Sediment, Zinc

DISTRIBUTION: RAB, JBG, CMHJ/JCC, WDH, RB/Min File

DESCRIPTION OF SAMPLE: INFORMATION REQUESTED

Three miscellaneous core samples from DDH 5 (#'s 158, 448 and 460) from the Albert Creek property (PN079, NTS 104P 13) were received on May 4th for examination.

PROCEDURES: Spectrochem. Analysis Chemical Analysis X.R.D.
 Optical Microscopy Electron Probe

RESULTS:

Results of spectrographic analysis of the 3 samples are given in Table I attached. All contain anomalously high Ag contents and in one instance (i.e. #460) an unusually high Zn content. Other elements which might be considered present in abnormally high concentrations in the suite are B, Ba, Mo and Pb.

Detailed petrographic descriptions of pol-thin sections prepared from portions of the samples are given on accompanying pages. Textures observed in the samples indicate that they are all clastic sediments. The mineral assemblage of #158 is consistent with that of a calcareous sandstone. The other two samples can best be classified as argillites, possibly partly volcanic in origin.

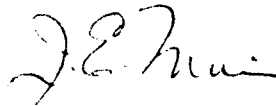

J.E. Muir

TABLE I

**FALCONBRIDGE METALLURGICAL LABORATORIES
QUALITATIVE SPECTROGRAPHIC ANALYSIS**

DISTRIBUTION: _____ REPORT No. Q1139

ANALYTICAL METHOD: _____

REQUESTED BY: _____ DATE: July 14/81

RECEIVED FROM: _____ CHARGE: JO#2875

SAMPLE No.: L#81-326 No. of SAMPLES: _____

SAMPLE DESCRIPTION: DDH 5 Albert Creek, B.C.

	#158	#448	#460
10 - 100%			
3 - 30%	Si, Ca	Si	Si
1 - 10%	Mg, Al	Fe, Al	Al
0.3 - 3%	Fe	Mg	Mg, Fe, Zn
0.1 - 1%	Na, Ti	Ti	Ti
0.03 - 0.3%	Sr	Ca	
0.01 - 0.1%	Zr	Ni	V, Ni, Ca
0.003 - 0.03%	Cu, Ni, Co, Cr, Ba	Mo, V, Cu	Mo, Cu
0.001 - 0.01%	B, Mn, V	B, Pb, Zn, Zr	B, Pb, Zr
0.0003 - 0.003%		Co, Sr, Cr, Ba	Co, Sr, Cr, Ba
0.0001 - 0.001%	Ag	Ag	Ag
< 0.0003%			
I			
S			

I = Interference prevents positive identification.

S = Strong spectral lines, unable to estimate amount.

Unless specified above, the following were not detected at the approx. ppm lower limits of 0.5 Cu, Ag; 1 Mn; 5 Mg, Cr; 10 Ba, Be, Bi, Ca, Co, Ni, V; 25 Ge, Fe, Pb, Mo, Si, Sr, Sn, Ti, Zr, Tl, Pd; 50 Al, Sb, B, Cd, Ga, In, Li, Zn; 100 As, Au, Na; 200 Rh, Re, Ir, Pt, Ru, Sc; 300 Te, Os; 1000 K, U, Th; 2000 P.

Location Albert Creek Property, B.C.

Lab. No. 81-326

Sample Description DDH 5 #158

PTS No. 6143

MINERALS	Est. % by Vol.	Grain Size (m.m.)	
		Max.	Avg.
Quartz	55 - 60	.15	.10
Plagioclase	< 5	.10	.07
Calcite*	20	.30	.10
Dolomite	20	.15	.10
Muscovite	tr	.05	.02
Tourmaline	tr	.05	.03
Zircon	tr	.03	.02
Rutile	tr	.03	.02
Pyrite	< 1	.05	.03

DESCRIPTION

A more or less equigranular, fine grained sediment consisting of predominantly subangular clasts of quartz cemented together by calcite and dolomite. Calcite is also prominent as cross-cutting veinlets. Minor to trace amounts of plagioclase, muscovite, tourmaline, zircon, rutile and pyrite are disseminated throughout. Pyrite occurs mainly in the form of euhedral grains, however, framboidal masses are also occasionally found.

* possibly Ba-bearing but not barytocalcite which by definition (eg. Dana) contains 46% Ba [i.e. spectrographic analysis indicates <300 ppm Ba in sample and there is ~20% calcite present.]

calcareous sandstone

Location Albert Creek Property, B.C.

Lab. No. 81-326

Sample Description DDH 5 #448

PTS No. 6144

MINERALS	Est. % by Vol.	Grain Size (m.m.)	
		Max.	Avg.
Quartz } Clay }	85 - 90	-	-
Calcite	2 - 3	.15	.10
Dolomite	3 - 4	.02	.01
K feldspar?	<5	-	-
Muscovite	tr	-	-
Graphite	4 - 5	.10	.02
Pyrite (+ marcasite)	2 - 3	.10	.02
Rutile	tr	.02	.02

DESCRIPTION

This particular sediment consists of a slightly schistose, brecciated microcrystalline mixture of quartz, clay, graphite and dolomite which has been transected by numerous calcite (+ graphite, quartz) veinlets. Abundant euhedral and framboidal pyrite grains are disseminated throughout and together with marcasite are particularly concentrated in one bed approximately 5 mm thick. Minor to trace amounts of dolomite, feldspar, muscovite and rutile are also dispersed throughout. Where individual grains of quartz can be discerned their shape appears subangular suggesting that they are in fact fragments.

argillite (possibly tuffaceous)

Location Albert Creek Property, B.C.

Lab. No. 81-326

Sample Description DDH 5 #460

PTS No. 6145

MINERALS	Est. % by Vol.	Grain Size (m.m.)	
		Max.	Avg.
Quartz } Clay }	>90	-	-
Muscovite	tr	.01	.01
Graphite	4 - 5	.10	.01
Pyrite	2 - 3	.05	.02
Sphalerite	1 - 2	.05	.02
Rutile	tr	.05	.02

DESCRIPTION

Similar to the sample #448 except it contains abundant disseminated honey-coloured grains of sphalerite.

argillite (possibly tuffaceous)

APPENDIX III - STATEMENT OF EXPENSES

STATEMENT OF EXPENSES

Drilling (November 9 - 27, 1981)

D.J. Drilling Co.
13135 - 20th Avenue
Surrey, B.C.
V4A 1Z1

Hole #81-A6 BQ 0 - 851' @ \$55.00/ft	\$46,805.00
Hole #81-A7 NQ 0 - 323' @ \$60.00/ft	19,380.00
Hole #81-A8 NQ 0 - 360' @ \$60.00/ft	21,600.00
Room & Board, 35 man days @ \$20.00/man day (BWD, KHC, AM, CE - Falconbridge personnel)	<u>700.00</u>
TOTAL	\$88,485.00

Analyses (Bondar-Clegg Labs)

DRILL CORE

130 samples (Pb, Zn, Ag, Cd, Ba) @ \$7.75	\$1,007.50
130 sample preparations @ \$2.50	325.00

TRENCH SAMPLES

11 samples (Pb, Zn, Ag, Cd, Ba) @ \$7.75	85.25
11 samples @ \$2.50	27.50

141 retention & handling of rejects @ 0.25¢	<u>35.25</u>
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TOTAL	\$1,480.25
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TRENCHING

<u>5,666.65</u>

TOTAL	<u>\$95,631.19</u>
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DDH SITE - A.6



TRENCH #1



TRENCH # 5