

REPORT ON
DIAMOND DRILLING

by
I. G. Sutherland, B.Sc.

on the

A1 1 Mineral Claims

("Fiji-83" Group)

situated north of Metsantan Lake
in the Liard Mining Division

57°28'N, 127°24'W
NTS 94E/6W

owned by
KIDD CREEK MINES LTD.

work by
KIDD CREEK MINES LTD.

Part 1
of 3

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,157

June, 1983

Vancouver, B.C.

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INTRODUCTION

Location, Access and Terrain

The A1 property is located east of the Stikine River and directly north of Metsantan Lake, in north-central British Columbia (Figure 1). The nearest supply and transportation centres are Smithers, some 300 km due south, and Watson Lake in the Yukon, some 300 km to the north.

Access to the claims is by a combination of fixed wing aircraft from Smithers or Watson Lake to the Sturdee Valley airstrip 30 km south-east of the property, and local helicopter charter thereafter. Float equipped aircraft can also land at Metsantan Lake. There is no road access although it has been suggested that the Omineca mining road to the south may be extended into the Toodoggone River area in the future.

The claims are located near the eastern margin of the Spatsizi Plateau and cover a subdued ridge of gentle to moderate relief with elevations ranging from 1400 m to 1700 m (Figure 2). The lowermost parts of the property are covered by an intermixed growth of spruce, and scrub willow (below 1500 m). Extensive areas of alpine grassland, occurring above 1600 m, make for easy foot travel. Water supplies may become scarce and all but the lowest elevations during midsummer.

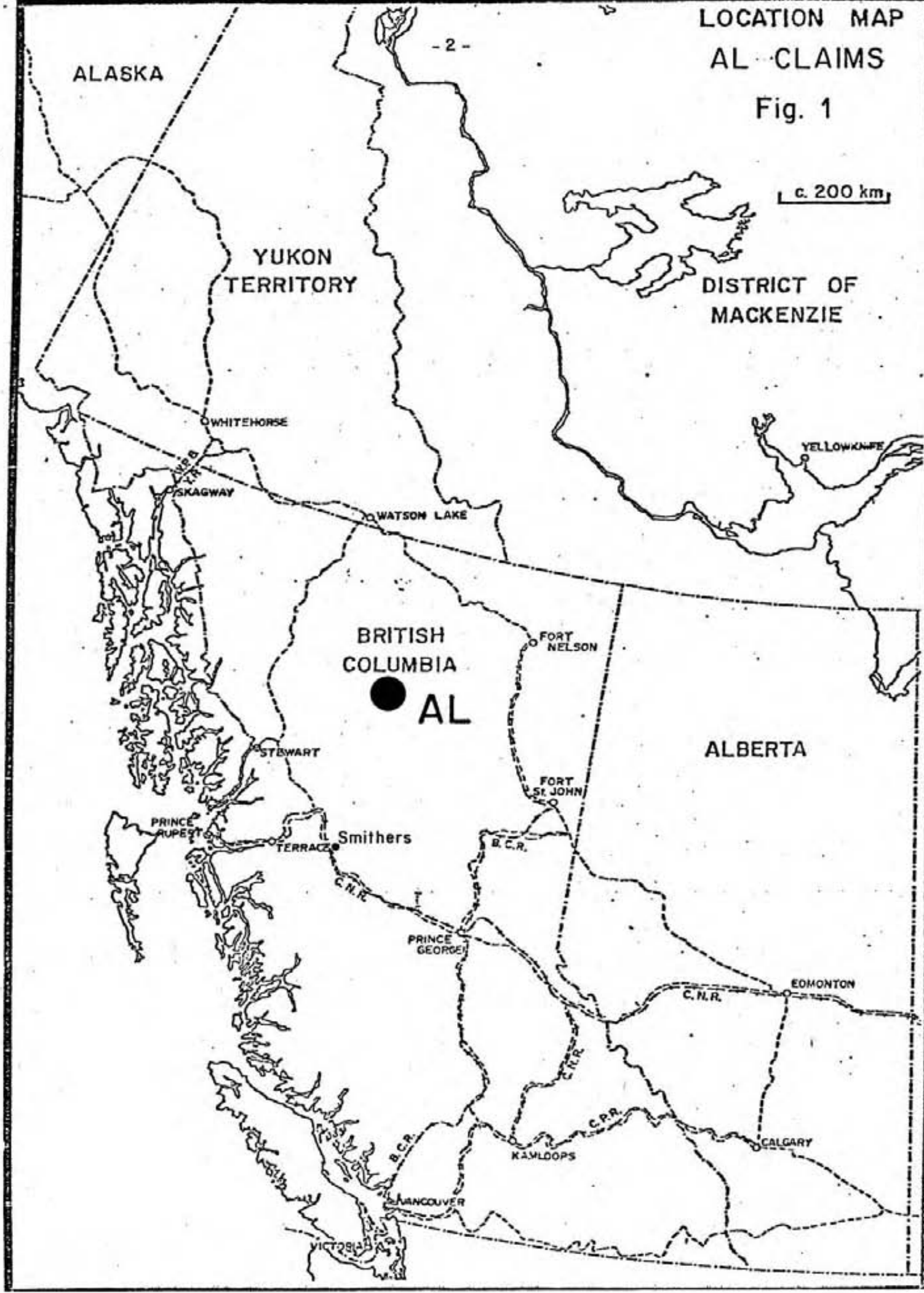
Property History and Definition

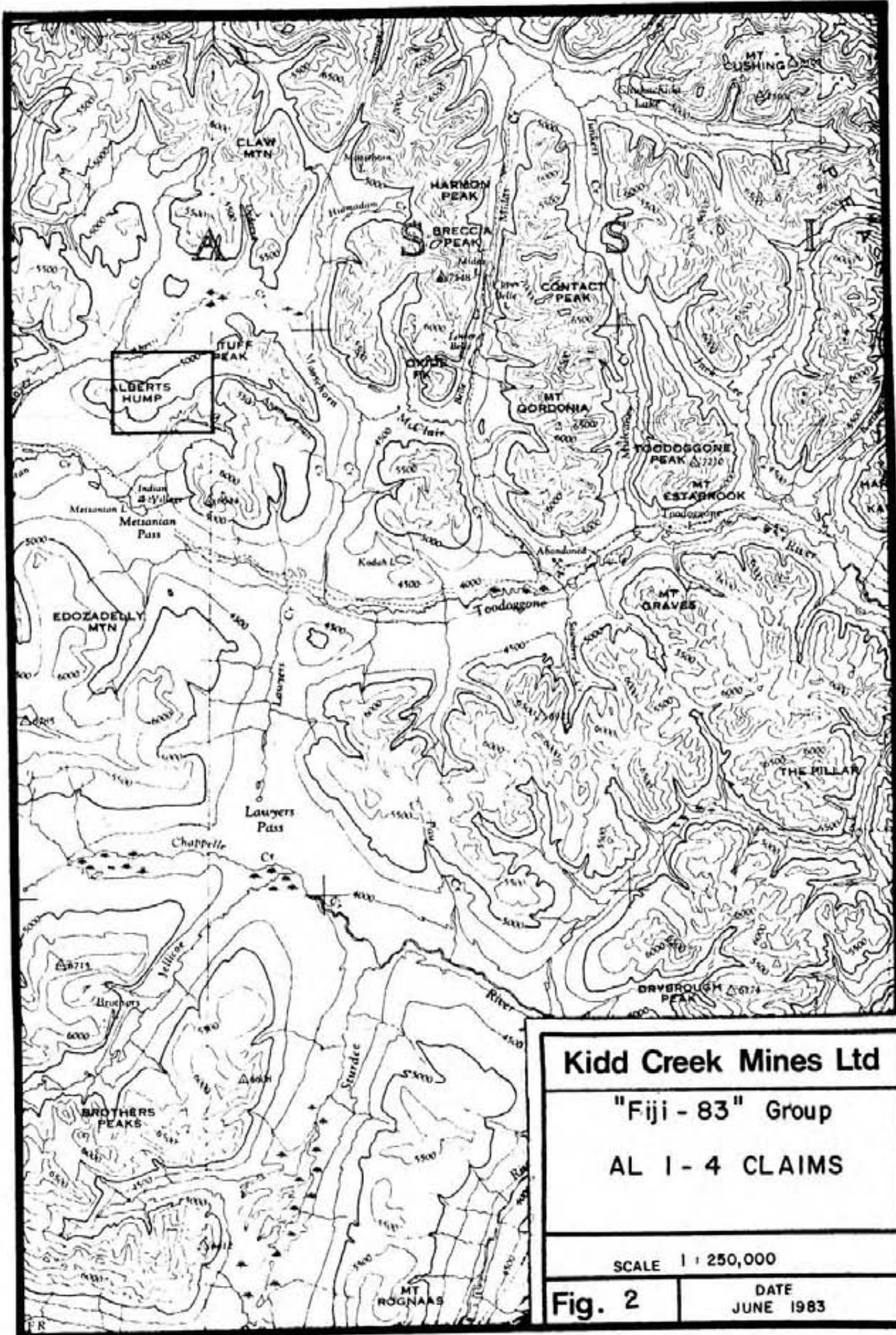
The area was originally staked by Sumac Mines Ltd. in 1971 for its porphyry copper potential. The claims were allowed to lapse after several seasons fieldwork. Rising prices for both gold and silver and close proximity to the Chappelle and Lawyers deposits prompted Energex Minerals Ltd. to stake the A1 1-4 claims in 1979. In 1980 these claims were optioned to Texasgulf Canada Ltd. (now Kidd Creek Mines Ltd.). Work described in this report was undertaken by Kidd Creek Mines Ltd., the registered owner of the claims.

LOCATION MAP
AL CLAIMS

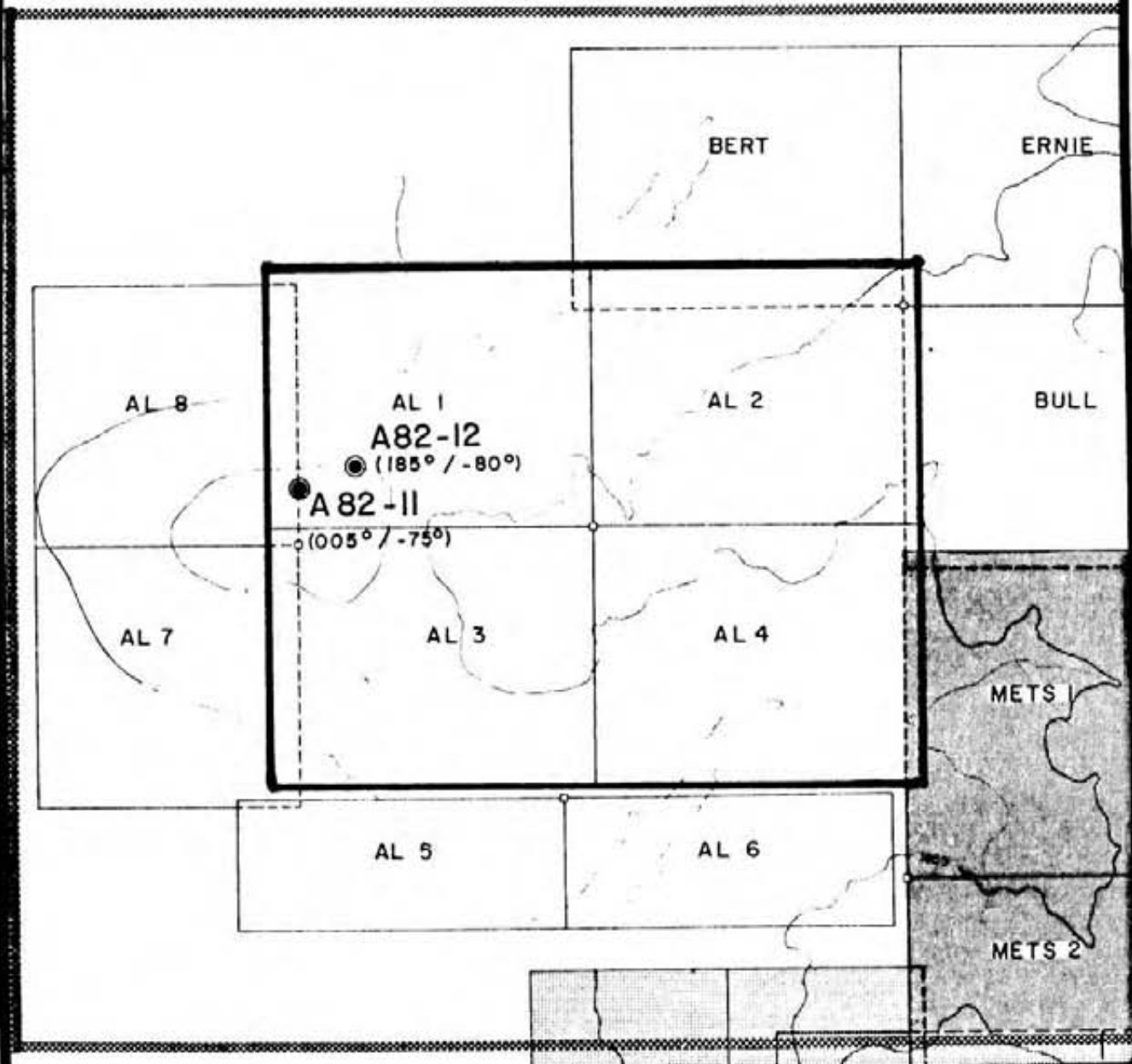
Fig. 1

c. 200 km





Kidd Creek Mines Ltd	
"Fiji - 83" Group	
AL 1 - 4 CLAIMS	
SCALE 1 : 250,000	
Fig. 2	DATE JUNE 1983



Kidd Creek Mines Ltd

"Fiji - 83" Group

AL 1 - 4 CLAIMS

SCALE 1 : 50,000

Fig. 3

DATE
JUNE, 1983

The "Fiji-83" Group consists of 4 MGS claims of 20 units each (80 units). A1 1-4 were recorded in June, 1979. Figure 3 indicates the claim positions and group boundaries.

Summary of Work Completed

Diamond Drilling

During the period August 11 to August 16, a total of 2 NQ diamond drill holes, totalling 203.25 m, were completed on the A1 1 M.C. All cores were split and sampled then analysed geochemically for Au, Ag, Cu, Pb and Zn.

Work Distribution

All work was done on the A1 1 M.C., part of the "Fiji-83" group.

GEOLOGY

The property is underlain by a thick succession of primarily andesitic crystal and crystal-lapilli tuffs, tuff-breccias, flows and associated hypabyssal phases. These rocks belong to the 'Toodoggone Volcanics' of Jurassic age. A more complete description of the geology can be found in previously submitted assessment reports (Sutherland, 1982; Sutherland and Clark, 1982). The relevant portion of the property showing the approximate drill hole locations, is illustrated in Figure 4.

DIAMOND DRILLING

This report presents the results of a preliminary diamond drilling programme undertaken in 1982 on the A1 1 M.C. The two NQ holes are considered as follows (see Figure 4):

<u>D.D.H.</u>	<u>Azimuth</u>	<u>Dip</u>	<u>Depth</u>
A82-11	005°	-75°	76.2 m
A82-12	185°	-80°	270.0 m

Detailed logs and geochemical results are included together in Appendix C. The core is stored in camp on the Moose 3 M.C.

The holes were drilled to test known surface geology and, in particular, to test existing concepts regarding the relationship of mineralization to alteration in this region.

GEOCHEMISTRY

Drill core was routinely split and sampled, the standard sample interval being approximately 1.0 m. Changes in alteration and/or lithology also influenced this sample interval considerably. A total of 292 samples were shipped to Min-En Laboratories Ltd. in North Vancouver where they were analysed geochemically for Au, Ag, Cu and Pb. Just 244 of these were analysed for Zn. A summary of the extraction and analytical techniques for these metals follows:

<u>Element</u>	<u>Extraction</u>	<u>Analysis</u>
Ag, Pb, Zn, Cu	Nitric, perchloric digestion	Atomic Absorption
Au	Hot Aqua Regia	Atomic Absorption

CONCLUSIONS

The results shown in the logs indicate a high degree of variation in the nature of the alteration assemblages and in the distribution of the associated precious metals values. Grades encountered are, for the most part, sub-economic and not likely of sufficient interest to encourage further work. The nature of the intense quartz-sulphate alteration is interesting but its significance is not well understood. Similar confusion exists with the intrusion of the hypabyssal porphyry in terms of its relation to alteration and mineralization.

Ian G. Sutherland

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APPENDIX A

Statements of Qualifications

APPENDIX A

Statements of Qualifications

I.G. Sutherland - Geologist

I.G. Sutherland holds a B.Sc. (Hons) Degree in Geology from the University of Western Ontario, granted in 1976. Since that time he has held several positions in Industry and Government, and has been employed by Kidd Creek Mines Ltd. in Vancouver since March 1981.

J.R. Clark - Geologist

J.R. Clark holds a B.Sc. (Hons) Degree in Geology from McGill University, granted in 1979. He has wide exploration experience and was employed by Kidd Creek Mines Ltd. for the 1981 and 1982 field seasons. He is presently enrolled in a M.Sc. program at McGill, where his research will concern aspects of the geology of properties in this region.

P.R. Leriche - Geologist

P.R. Leriche holds a B.Sc. Degree in Geology from McMaster University, granted in 1980. He has considerable experience in Industry and has held his present position with Kidd Creek Mines Ltd. since March 1982.

APPENDIX B

Statement of Expenditures

APPENDIX B

Statement of Expenditures

A. DIAMOND DRILLING AND SUPPORT

DIAMOND DRILLING

D.W. Coates invoice charges for drilling, survey, core boxes, supplies and equipment, moving time, etc. applicable to the holes covered in this report.	\$18,144.43	
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Mobilization costs (5% pro-rate of \$11,915.50)	<u>595.78</u>	
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	\$18,740.21	\$18,740.21
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ROOM AND BOARD

D.W. Coates personnel	20 days @ \$80/day	1,600.00
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HELICOPTER

ALC Hughes 500D	15 hrs @ \$492/hour (incl. fuel)	<u>7,380.00</u>
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		\$27,720.21
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APPENDIX B

Statement of Expenditures

B. FIELD REPORTING ON DIAMOND DRILL CORE

EXAMINATIONS AND ANALYTICAL WORK

SALARIES AND FRINGE BENEFITS, KIDD CREEK MINES LTD.

I.G. Sutherland - Geologist			
Period: Aug 30 - Sept. 1	3 days @ \$160/day	\$480.00	
J.R. Clark - Geologist			
Period: Aug 30-31	2 days @ \$105/day	210.00	
P.R. Leriche - Geologist			
Period: Aug 30 - Sept. 1	3 days @ \$ 95/day	<u>285.00</u>	\$ 975.00

ROOM AND BOARD

Kidd Creek personnel	8 days @ \$ 80/day		640.00
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ANALYTICAL COSTS

292 Au, Ag, Cu and Pb analyses	@ \$11.30		3,299.60
244 Zn analyses	@ \$ 0.90		219.60

5,134.20

Total expenditures \$32,854.41

APPENDIX C

Diamond Drill Logs and
Analytical Results

NOTE : Cu, Pb, Zn, and Ag results in 'ppm'.
Au results in 'ppb'

KIDD CREEK MINES LTD		DRILL HOLE LOG					HOLE No A82-11		PAGE No 11					
TEXTURE, ALTER'N MINERALIZATION, ETC	GRAPH GEOLOG	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS						
			FROM	TO				Cu	Pb	Zn	Ag	Au		
		BOX 8 40.1 - 45.6												
Andesite Crystal-Lapilli tuff		Andesite crystal lapilli tuff and a zone of quartz-hematite alteration												
	41	40.1 - 43.8; andesite crystal lapilli tuff - 40% white feldspar crystals, 5% lapilli fragments, 55% chloritic groundmass - minor alteration of feldspars to sericite	40.1	41.0			5091	6	68	1090	0.5	5		
	42	- lapilli fragments subrounded, hematitic averaging 1-2cm in diameter - later stage limonite throughout - linear fractures 30-40° to axis - lower contact gradational	41.0	42.0			5092	9	76	860	0.6	5		
	43	43.8 - 45.1; hematite-chlorite alteration - probably exactly the same rock type as 40.1 - 43.8 but has been subject to strong hematization	42.0	43.0			5093	5	85	950	0.6	10		
			43.0	43.8			5094	5	68	940	0.5	15		
	44	- core becoming soft and friable near lower contact - lower contact a bit irregular approximately 80° to axis	43.8	44.5			5095	4	36	1160	0.5	10		
			44.5	45.1			5096	5	64	380	0.7	5		
	45	45.1 - 45.6; pyrophyllite-quartz-hematite alteration - initially quartz-hematite altered crystal tuff which has been pitted - grads into a zone of grey pyrophyllite stringers which goes into a zone of almost massive pyrophyllite with wispy hematitic pieces within	45.1	45.6			5097	3	70	21	0.3	5		
	46	- at 45.6 back to weathered crystal tuff with strong hematite-pyrophyllite alteration												
		BOX 9 45.6 - 51.15												
		Andesite crystal lapilli tuff												
		45.6 - 46.6; hematite altered crystal lapilli tuff - 35% white feldspar crystals altering to pyrophyllite, 10% lapilli fragments, 55% hematitic	45.6	46.6			5098	8	48	181	0.6	5		

KIDD CREEK MINES LTD		DRILL HOLE LOG					HOLE No A82-11		PAGE No 12					
TEXTURE, ALTER'N MINERALIZATION, ETC	GRAPH GEOLOG	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS						
			FROM	TO				Cu	Pb	Zn	Ag	Au		
		groundmass - lapilli fragments are 1-2cm in diameter, crystal tuff in composition - most are hematite altered	46.6	47.7			5099	14	40	640	0.6	5		
	47	- strong pyrophyllite alteration from 45.6 - 45.8 - core is cracked and broken - lower contact is gradational												
	48	46.6 - 51.15; andesite crystal lapilli tuff - 40% white feldspar crystals, 15% lapilli fragments 45% chloritic groundmass - lapilli fragments 1-3cm in size, crystal tuff in composition and hematitic	47.7	48.9			5100	35	47	270	1.2	10		
	49	- few siliceous fragments - kaumontite vein 48.0 - 48.2, 10° to axis - few linear fractures 50° to axis	49.0	50.0			5101	15	28	141	1.2	20		
	50	BOX 10 51.15 - 56.86	50.0	51.0			5102	12	32	102	0.7	10		
Andesite Crystal-Lapilli Tuff		Andesite crystal lapilli tuff - 40% white feldspar crystals, 10% lapilli fragments, 50% chloritic groundmass												
	51	- lapilli fragments are of several types 1) light green crystal tuff fragments, average 1cm wide 2) fine grained hematitic fragments, average 1-4cm 3) large hematitic fragments contains white feldspar crystals 4) one granite intrusive fragment 3cm wide @ 55.8	51.0	52.0			5103	17	29	90	0.7	5		
	52	- linear fractures 60° to core axis	52.0	53.0			5104	16	26	88	0.6	5		
	53		53.0	54.0			5105	15	26	81	0.9	10		
	54		54.0	55.0			5106	16	23	64	0.7	5		

KIDD CREEK MINES LTD		DRILL HOLE LOG					HOLE No AB2-11		PAGE No 15			
TEXTURE, ALTER'N MINERALIZATION, ETC	GRAPH GEOL	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS				
			FROM	TO				Cu	Pb	Zn	Ag	Au
Andesite Crystal-Lapilli Tuff		BOX 14 73.97 - 74.3 Andesite crystal lapilli tuff similar to 51.15 - 56.86 - probably reworked due to diversity of fragment types	73.0	74.0			5125	11	28	74	0.4	10
	74	- quartz-zeolite veining from 75.4 - 77.4 - veins average 4mm wide trending subparallel to 10° to core axis	74.0	75.0			5126	14	27	75	0.3	5
	75	- quartz in middle of veins with a pink zeolite margin - few cubes of galena within veins - few linear fractures 20° to axis	75.0	76.0			5127	14	24	81	0.5	10
	76		76.0	77.0			5128	12	30	112	0.6	5
	77		77.0	78.3			5129	15	36	241	0.6	5
		End of Hole DDH AB2-11 78.3m										
	78											

PROPERTY: ALBERT'S HUMP		KIDD CREEK MINES LTD					HOLE No AB2-12		PAGE No 1				
HOLE LOCATION D+985; 13+03E		DRILL HOLE LOG											
AZIM	ELEV	SURVEY					CLAIM No: AL 1						
DIP	LENGTH	DEPTH	AZIM	DIP	DEPTH	AZIM	DIP	SECTION	LOGGED BY: I. Sutherland; J. Clark				
CORE SIZE: NQ								DATE LOGGED: August 30, 1982	DRILLING CO: D.W. Coates Enterprises				
STARTED: August 14, 1982		127m	180°	82°				ASSAYED BY: Min-En Labs					
COMPLETED: August 16, 1982													
PURPOSE: To test IP Anomaly and test Geological Interpretations													
CORE RECOVERY:													
TEXTURE, ALTER'N, MINERALIZATION, ETC	GRAPH GEOL	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS					
			FROM	TO				Cu	Pb	Zn	Ag	Au	
		0 - 3.35m Casing											
		BOX 1 3.55 - 8.8m											
		Andesitic lapilli and crystal tuff; some finer- grained units with possible ash component	3.55	4.0			5130	15	16	64	0.6	10	
Intensely Altered		3.55 - 5.1m; upper weathered zone of quartz-pyrophy- llite - iron-oxide altered crystal lapilli tuff;	4.0	4.5			5131	24	18	41	0.6	5	
Andesite Lapilli and Crystal Tuff		probable weathered equivalent of lapilli tuffs below 5.4m; rusty, weathered vugs (15%) after al- tered feldspars and lithic fragments altered to pyrophyllite; 15-20% angular lithic fragments of primarily intermed volcanic, 5% original quartz "eyes"; fairly massive with no bedding evidence; becomes less pitted and less limonitic towards 4.2m	4.5	5.1			5132	20	13	38	0.3	5	
			5.1	5.45			5133	16	15	39	0.5	20	
			5.45	5.9			5134	17	25	47	0.4	10	
			5.9	6.4			5135	15	13	40	0.6	10	
		- @ 4.2m, 4.7 - 5.0m; reddish hematitic alteration especially of dissolved fragments, locally concen- trated with alteration fronts along apparent bed- ding (from fragment and crystal long axis orienta- tion) @ roughly 50° \wedge to core axis.	6.4	6.9			5136	20	10	38	0.5	5	
			6.9	7.4			5137	19	20	43	0.4	5	
		5.1 - 5.4 & 6.4 - 7.5m; gradational and indistinct upper and lower contacts between lapilli tuffs & these predominantly crystal tuffs; typically	7.4	7.9			5138	16	14	38	0.5	5	
			7.9	8.35			5139	14	12	34	0.4	5	

KIDD CREEK MINES LTD		DRILL HOLE LOG					HOLE No AB2-12		PAGE No 10					
TEXTURE, ALTER'N MINERALIZATION, ETC	GRAPH GEOLOG	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS						
			FROM	TO				Cu	Pb	Zn	Ag	AU		
		alteration (± pyrophyllite); some limited brecciation												
		52.9 - 55.9m; quartz diorite porphyry; closest to fresh intrusive observed; 30-40% feldspar phenocrysts (? k-spar; plagioclase) (generally altered to pyrophyllite and then partially to kaolinite)	54.3	54.8			5216	4	164	16	0.6	5		
		10% biotite phenos (silicified) and 12 quartz phenocrysts in intermed. quartz-hematite ± pyrophyllite altered groundmass; irregular patchy hematitic colouration.	54.8	55.3			5217	8	210	15	0.6	5		
			55.3	55.9			5218	4	123	16	1.1	10		
		53.5 - 53.6m, 54.1 - 54.2m, 55.4 - 55.5m	55.9	56.4			5219	15	82	20	1.3	5		
		- dark red-brown zones of apparent shear (? forceful intrusive flow textures) with attendant brecciation and locally with foliation development in feldspars adjacent to zone (54.6 - 54.7m & 55.3 - 55.4m)	56.4	57.0			5220	17	75	23	0.7	10		
		55.9 - 58.1; similar to 41.0 - 49.7m	57.0	57.5			5221	13	104	16	0.4	5		
		- massive silicification and moderate to strong, localized brecciation of quartz diorite, buff to white with minor pyrophyllite and later kaolinite; minor large limonite-coated vugs.	57.5	58.0			5222	7	80	10	0.5	5		
		BOX 10 58.1 - 64.6m	58.0	58.5			5223	4	164	7	0.6	5		
Altered Quartz Diorite Porphyry		- same as 55.9 - 58.1m	58.5	59.0			5224	3	125	7	0.7	5		
		- variable brecciation but alteration is mostly the same	59.0	59.5			5225	2	126	8	0.4	5		
		59.9 - 62.3m; light orange to purple-grey, hematitic equivalent; similar to 49.7 - 50.5m; complete silicification (even late stringers) with very little pyrophyllite; some evidence of strong shearing @ 60° to core axis (very local)	59.5	59.9			5226	3	84	8	0.6	5		
		- core badly ground (60% recovery)	59.9	62.3	60%		5227	5	158	8	0.5	5		
		62.3 - 64.6m; very similar to 58.1 - 59.9m but alteration is very fine grained quartz-barite (? proportions) with minor, late pyrophyllite												
		- occasional vuggy infilling of barite but mainly all fine grained - also minor veins of later barite, traces hematite and later limonite	62.3	62.8			5228	4	110		1.1	5		

KIDD CREEK MINES LTD		DRILL HOLE LOG					HOLE No AB2-12		PAGE No 11					
TEXTURE, ALTER'N MINERALIZATION, ETC	GRAPH GEOLOG	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS						
			FROM	TO				Cu	Pb	Zn	Ag	AU		
		- possible very fine kaolinite mixed with quartz-barite	62.8	63.3			5229	1	495		0.8	15		
		BOX 11 64.66 - 70.7m	63.3	63.8			5230	3	580		0.8	5		
Altered Quartz Diorite Porphyry		- same as 62.3 - 64.6m; vugs filled with barite-kaolinite-quartz	63.8	64.3			5231	3	410		1.0	5		
		65.1 - 65.3; 67.2 - 67.4m; pyrophyllite-quartz-hematite stringers along very irregular open space fractures	64.3	64.8			5232	3	310		1.7	10		
		66.3 - 66.4m; moderate shear banding @ 50° to core axis	64.8	65.3			5233	4	160		0.7	5		
		66.4 - 67.0m; shear marks start of strong, later brecciation; some fragments with good relict intrusive textures @ 67.9m - 1cm of chocolate brown clay gouge @ 50° to core axis	65.3	65.8			5234	2	320		1.2	5		
		68.2 - 68.8m; medium grey silicification breccia with barite matrix (85:15); minor, late, dark grey to black stringers of (?) very fine-grained pyrite (possible copper mineral)	65.8	66.3			5235	2	265		1.3	5		
		69.9 - 70.4m; same as 66.4 - 67.0m without adjacent shear	66.3	66.8			5236	3	600		0.7	5		
			66.8	67.3			5237	2	320		0.8	10		
		69.8 - 70.4m; same as 66.4 - 67.0m without adjacent shear	67.3	67.8			5238	5	300		1.2	5		
		ground core 69.0 - 69.5m	67.8	68.2			5239	4	305		0.8	5		
			68.2	68.8			5240	13	520		1.1	5		
			68.8	69.8	50%		5241	1	540		0.9	5		
		BOX 12 70.7 - 76.15m	69.8	70.3			5242	1	360		0.8	5		
Altered Quartz Diorite Porphyry		- very similar to Box 11; 40% is moderately to strongly hematitic	70.3	70.8			5243	2	320		1.2	5		
		- barite alteration variable; generally less in hematitic zones	70.8	71.4			5244	3	240		0.9	10		
		71.4 - 71.8m; wispy hematitic alteration (30%) mixed with wispy, banded quartz-barite as above	71.4	71.8			5245	5	290		0.7	5		
		- shear @ 70° to core axis	71.8	72.3			5246	3	44		0.8	10		

No analyses - accidental omission

KIDD CREEK MINES LTD		DRILL HOLE LOG					HOLE No AB2-12		PAGE No 12					
TEXTURE, ALTER'N MINERALIZATION, ETC	GRAPH GEOL	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS						
			FROM	TO				Cu	Pb	Zn	Ag	Au		
		cement as in 68.2 - 68.8m												
		72.85 - 73.4m; above breccia grades into mostly banded locally brecciated pink to purple quartz-barite alteration; shear @ 60° to core axis	72.3	72.85			5247	4	77		1.1	5		
			72.85	73.4			5248	6	85		1.5	5		
		73.9 - 74.35m; above in sharp contact with pink hematitic, quartz-kaolinite-barite altered zone; some brecciation but mainly uniform with hematitic spotting	73.4	73.9			5249	5	31		0.6	5		
			73.9	74.35			5250	3	28		0.9	10		
		74.35 - 75.3; massive, medium dark purple quartz-pyrophyllite ± barite alteration; minor distinct brecciation; many later, dark hematitic stringers throughout	74.35	75.3			5251	6	132		1.2	5		
			75.3	75.8			5252	4	131		0.7	15		
		- banded to brecciated with scattered specularite stringers along late fractures (also minor late quartz-pyrophyllite)	75.8	76.3			5253	4	112		1.2	10		
		- irregular shear @ 40-50° to core axis	76.3	76.9			5254	2	66		1.1	5		
Altered Quartz Diorite Porphyry	77	BOX 13 76.15 - 81.78m	76.9	77.4			5255	6	245		1.0	5		
		- similar to Box 12 but more brecciated with less banded sheared sections	77.4	77.9			5256	3	370		0.8	5		
		- original rock type indistinct as above to approximately 79.0m; intrusive textures of probable quartz diorite increasingly distinct towards 82.0 m	77.9	78.4			5257	3	440		0.7	5		
			78.4	78.9			5258	3	475		0.6	5		
		76.15 - 79.65m; buff, quartz-barite alteration brecciated in situ and healed with pyrophyllite ± quartz; patchy hematization to 77.0m then very gradual increase in hematite to 78.0m (medium purple)	78.9	79.65			5259	1	420		0.6	5		
			79.65	79.8			5260	2	295		1.5	45		
		78.4 - 79.65m; same hematitic alteration becomes increasing brecciated (sheared, not in situ) with quartz, hematite ± pyrophyllite cement; less hematitic towards bottom of section	79.8	80.3			5261	4	178		1.3	5		
			80.3	80.8			5262	1	360		0.7	10		
		79.65 - 79.8m; banded and intensely sheared quartz-	80.8	81.3			5263	3	455		0.8	5		

KIDD CREEK MINES LTD		DRILL HOLE LOG					HOLE No AB2-12		PAGE No 13					
TEXTURE, ALTER'N MINERALIZATION, ETC	GRAPH GEOL	DESCRIPTION	INTERVAL		REC'Y	EST GRADE	SAM No	ASSAYS						
			FROM	TO				Cu	Pb	Zn	Ag	Au		
		barite alteration with later specularite; shear @ 30° to core axis	81.3	81.8			5264	1	131		0.9	10		
		79.8 - 81.78m; variable crackle and shear brecciation of quartz-barite altered intrusive (quartz diorite?) buff to locally hematitic	81.8	82.3			5265	2	260		0.8	5		
		- earliest brecciation quartz-filled, later quartz-pyrophyllite (± barite?)	82.3	82.8			5266	1	230		0.9	5		
		BOX 14 81.78 - 87.61m	82.8	83.3			5267	2	395		0.7	15		
Altered Quartz Diorite Porphyry	83	- same as Box 13	83.3	83.8			5268	2	320		0.9	5		
		81.78 - 84.2m; same as 79.8 - 81.78m	83.8	84.15			5269	1	315		0.8	5		
		- mostly medium orange-brown with scattered specularite stringers (& patches) throughout; many hematitic stringers with pyrophyllite + quartz veins (some drusy) from 83.3 - 83.75m	84.15	84.8			5270	1	245		0.7	45		
		84.2 - 87.61m; very similar to above but much more complex variations in brecciation	84.8	85.3			5271	2	305		0.6	5		
		- original rock types variably distinct; below 85.2m later quartz ± pyrophyllite ± barite open-space filling increases to 10% and below 86.5m, to 50%; shear, where present @ 40-50° to core axis	85.3	85.8			5272	1	280		0.6	5		
			85.8	86.5			5273	4	225		0.8	10		
			86.5	87.0			5274	3	375		0.6	5		
		BOX 15 87.61 - 93.05m	87.0	87.5			5275	3	395		0.7	5		
Altered Quartz Diorite Porphyry	87	- same as 84.2 - 87.61m to 91.3m; 30-60% latest quartz-pyrophyllite (± barite) veining in light orange-brown silicified quartz diorite (?); becomes increasing reddish and hematitic towards 91.3m	87.5	88.0			5276	2	190		0.4	5		
		- lower contact marked by 2 separate faults each @ 30° to core axis	88.0	88.5			5277	2	148		0.4	5		
			88.5	89.0			5278	3	80		0.4	5		
		91.3 - 93.05m; complex overprinted quartz-pyrophyllite hematite - ? barite alteration; purple to orange with highly irregular replacement veins of pyrophyllite-quartz; early pyrophyllite after feldspars commonly dissolved leaving finely pitted texture;	89.0	89.5			5279	2	98		0.6	10		
			89.5	90.0			5280	2	110		0.5	5		
			90.0	90.5			5281	3	90		0.4	5		

