REPORT

ON THE

MAGNETOMETER, SELF-POTENTIAL, ELECTROMAGNETIC

AND GEOLOGICAL SURVEYS

OF THE

KULAN LITTLE SALMON PROPERTY

DONE BETWEEN AUGUST 11th AND 27th, 1963

CLAIM SHEET NO. 105 L-1

LONGITUDE 134° 13' LATITUDE 62° 11'

YUKON TERRITORIES

BY

P. M. KAVANAGH, Ph.D., P.Eng., ONTARIO

SUPERVISING ENGINEER

W. M. SIROLA, P.Eng., B.C.

January 2, 1964 Toronto, Ontario

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SUMMARY AND RECOMMENDATIONS

The Little Salmon Lake property consists of 32 claims. Claims designated Carol 29 - 32 inclusive were staked on August 30, 1963.

The work described in this report was done on two small areas. On one area, on parts of claims Carol 9, 2, 15, and 17, magnetometer, geological and electromagnetic surveys were done. On a second small area, mainly on claims Carol 7 and 29, magnetometer, self-potential, geological and electromagnetic surveys were carried out.

These two small areas surveyed are immediately southwest and northeast of claims Carol 1 to 8 on which the most recent work done was described in a report by the writer dated August 1, 1963.

The present work failed to find anomalies of interest and no further work is recommended on the areas surveyed.

THE PROPERTY AND LOCATION

The property consists of 32 claims of which 8 claims, designated Carol 1 - 8, are held on option from A. Kulan of Whitehorse, Y.T. The remaining 24 claims, designated Carol 9 - 32, were staked contiguous to the 8 optioned claims and are held by Kerr Addison Mines Limited.

The 8 claim group is centred $6\frac{1}{4}$ miles ENE of the east end of Little Salmon Lake in the Whitehorse district of The Yukon Territory, or about 105 miles in a direction N15°E from the town of Whitehorse.

PREVIOUS WORK

Previous work on claims Carol 1 - 8 is described in the writer's previous report of August 1, 1963.

So far as is known no previous work was done on the areas covered by the surveys described in this report.

PRESENT WORK

On the southwest area, on claims Carol 9, 2, 15 and 17, work consisted of 17,800' of linecutting followed by magnetometer, electromagnetic and geological surveys.

On the northeast area, mainly on claims Carol 7 and 29, work consisted of 12,800' of linecutting followed by magnetometer, self-potential, electromagnetic and geological surveys. The results of this work are shown on drawings EMG 4060 and MSP 4061 accompanying this report.

MAGNETOMETER SURVEY

The magnetometer work was carried out using a Sharpe Magcrometer ES-180. This instrument has a sensitivity which varies from 35 to 60 gammas per scale division. Repeatability of readings is better than one scale division.

On the southwest area 11,300' of line was read and on the northeast area 12,300' of line was read. Readings were mainly at 100' intervals.

MAGNETOMETER SURVEY (CONT'D)

The results are shown plotted and contoured at 100 gamma intervals on the accompanying drawing MSP 4061. No anomalies considered economically significant were found.

ELECTROMAGNETIC SURVEY

The electromagnetic survey was carried out using a Crone EM reconnaissance unit which can be used in such a way that the readings are not affected by transmitter alignment, distance of separation or elevation differences.

In carrying out the survey the two operators traversed the same line, the lines having been cut perpendicular to the average strike of the rocks. Both operators used similar units and kept a separation distance of 200 feet. At each station the chief operator first transmitted until the helper operator had oriented his coil and read a dip angle and then their roles were reversed and the chief operator read a dip angle. The two dip angles read were recorded and the resultant obtained by adding the two readings was plotted on the station position of the mid-point between the two men.

The results of the work are shown as plotted on the accompanying Drawing EMG 4060. In the southwest area 17,800' of line was read and in the northeast area 12,800' of line was read.

No anomalies were found.

SELF-POTENTIAL SURVEY

In the northeast area 15,000' of line was read. No self-potential work was done on the southwest area.

The self-potential instrument used is a null-balance, transistorized potentiometer equipped with a 10-turn dial. Two porous-pot electrodes connected through 2000' of wire on a commutator-equipped aluminum reel were used with the potentiometer.

No anomalies of interest were found.

Results of the work are plotted on Drawing No. MSP 4061.

GEOLOGICAL SURVEY

The areas, on which the surveys described above were done, were also geologically mapped. The results of the mapping are shown on Drawing No. EM 4060.

MAPS	SCALE	DRAWING NO.
Electromagnetic & Geological Survey plan	1" = 200'	EMG 4060
Magnetometer & Self-potential Survey plan	1" = 200'	MSP 4061

Paul M. Kavanagh

P. M. Kavanagh, P.Eng.

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited — 2796

PROPERTY Kulan Little Salmon Lake Option, Y.T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 1 PAGE 1

LATITUDE 2 + 50 S BEARING OF HOLE 349° STARTED June 26, 1964

DEPARTURE 2 + 00 E DIP OF HOLE -45° COMPLETED July 3, 1964

ELEVATION 3850' DIP TESTS ____ DEPTH 300'

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

AXT Core = 1 9/32" Diameter

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Zn%	Pb%	Ag.oz.	Cu%	Magnetic Iron
0	30	overburden									
30	34	green & purplish banded, aphanatic "tuffaceous chert"									
34	37	brecciated "tuffaceous chert"									
37	38	garnet skarn									
38	74	"tuffaceous chert" with fine grained disseminated pyrite									
74	78	transition zone "tuffaceous chert" to skarn; minor sulphides									
78	80.5	epidote garnet skarn, disseminated pyrite; some galena, sphalerite, chalcopyrite									
80.5	81	pyrite, galena, chalcopyrite, and sphalerite in skarn									
81	82	skarnitized tuffaceous chert									
82	83	brecciated patches of pyrite, sphalerite, galena, and chalcopyrite	867	82	83	1.0	2.3	8.4	7.68	.07	
		in skarnitized "tuffaceous chert" with scattered disseminated pyrite									
83	94	skarnitized "tuffaceous chert" with scattered disseminated pyrite									
94	97	calcite epidote skarn									
97	138	magnetite, galena, sphalerite, pyrite, chalcopyrite,	849	97	104	Gold Tr	0.1		Tr	Tr	29.8

DIAMOND DRILL RECORD

LOGGED BY _____

PROPERTY _____

D.D.H. No. 1 PAGE 2

LATITUDE _____ BEARING OF HOLE _____ STARTED _____

DEPARTURE _____ DIP OF HOLE _____ COMPLETED _____

ELEVATION _____ DIP TESTS ____ _____ DEPTH _____

N

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	~~SAMPLE LENGTH~~ Lead%	Magnetic Iron%	ASSAY Cu%	ASSAY Zn%	Gold Oz.	Ag. oz.
97	138	trace of tetrahedrite (?) in high replacement of skarn	850	104	114	0.5	41.8	.07	1.6	.02	.42
		-calcite gangue and occasional irregular calcite stringers	851	114	124	4.7	33.4	.15	6.0	.01	2.48
		-common bracciated appearance; good core recovery	852	124	134	2.2	4.1	.22	7.6	.01	2.40
			853	134	138	2.7	1.1	.07	3.9	.01	2.18
138	300	quartz feldspar porphyry with some narrow, irregular stringers of sulphides									
		- generally galena & sphalerite	863	138	143					Tr	Tr
		- a few specks of scheelite.	864	143	148					Tr	Tr
		138 - 152 : badly broken & some yellow oxidation on breaks									
		152 - 300: predominantly relatively fresh light green porphyry									
		- some apparent serpentinization locally									
		- badly broken rock generally 271.5 - 285									
		- pinkish caste to rock 285 - 300									
		161.5 - 162.5 - galena & sphalerite patches									
		252.5 - 1" pyritized									
		265 - ¼" streak of galena									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh

Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 2 PAGE 1

LATITUDE 1 + 76 S BEARING OF HOLE 349° STARTED July 5, 1964

DEPARTURE 0 + 00 DIP OF HOLE -59° COMPLETED July 9, 1964

ELEVATION 3815' DIP TESTS ____ DEPTH 301'

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

A X T Core

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	Lead%	Magnetic Iron%	ASSAY Au oz	ASSAY Ag oz	ASSAY Zn%	ASSAY Cu%
0	20	overburden									
20	44	"tuffaceous chert" - green with purplish interbands; some brecc'n									
44	57	"tuffaceous chert" - some black bands; partially skarnitized; - massive calcite									
		at 56 - 57; some disseminated pyrite & chalcopyrite									
57	59	dense dark greenish rock									
59	72	predominately magnetite with skarn; considerable calcite & quartz gangue 66.0 - 67.5	854	59	72	Nil	46.4	Tr	.10	0.6	Tr
72	92	magnetite with galena, sphalerite, pyrite, chalcopyrite in high	855	72	82	0.3	47.5	Tr	1.04	2.3	Tr
		replacement of skarn	856	82	92	Nil	63.8	Tr	Tr	0.1	Tr
92	101	primarily skarn with some sulphides; rather bleached appearance	857	92	101	0.6	1.8	Tr	0.44	2.8	.07
101	106	sphalerite galena chalcopyrite, pyrite, good core recovery; high % of calcite gangue	858	101	106	1.8	4.8	.01	3.08	12.8	.37
106	118	brecciated quartz porphyry; bleached looking; skarnitized	865	106	111			.005	0.68		
		- small sphalerite patches at 109.5	866	111	116			Tr	.08		
118	301	whitish quartz feldspar porphyry with occasional small galena, sphalerite,									
		chalcopyrite stringers & patches; occasional serpentinized sections									
		- at 140 - 2" of + 3% disseminated scheelite; broken up & gougy in places between									
		272 - 280									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east end of Little Salmon Lake

D.D.H. No. 3 PAGE 1

LATITUDE 0 + 7 S — BEARING OF HOLE 349° — STARTED July 13, 1964

DEPARTURE 12 + 00 W — DIP OF HOLE -45° — COMPLETED July 17, 1964

ELEVATION 3710' — DIP TESTS ____ — DEPTH 196'

CLAIM No. Carol #4

DIRECTION AND DISTANCE FROM NE. CLAIM POST

A X T Core

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	[illegible] WO 3%	ASSAY Magnetic Iron%	Ag oz.	Pb%	Zn%	Cu%
0	24	overburden									
24	50	highly broken up light colored "tuffaceous chert" - 40% core recovery									
50	60	mainly sand; almost no core recovery									
60	61	light brown dense altered "tuffaceous chert"									
61	73	25% core recovery - brownish orange, highly oxidized (gossan) dense, brecciated									
73	80	almost no core recovery; what little core there is indicates oxidation &									
		mineralization - mainly magnetite									
80	84	85% magnetite - 15% pyrite - some oxidation; 40% core recovery	861	80	84		42.3	.14	0.1	4.8	0.22
84	92	85% magnetite - 15% pyrite - very little oxidation; 100% core recovery	859	84	92		65.4	.18	0.1	1.2	.16
92	108	highly altered skarnitized porphyry (?); - considerable oxidation; 100% core	860	104	108						
		recovery									
108	196	predominantly light colored porphyry									
		132 - 153) considerable oxidation 104 - 108)									
		169 - 171) 120 - 121) 1% disseminated scheelite									
		125 - 126)									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east end of Little Salmon Lake

D.D.H. No. 3 PAGE 1

LATITUDE 0 + 7 S — BEARING OF HOLE 349° — STARTED July 13, 1964

DEPARTURE 12 + 00 W — DIP OF HOLE -45° — COMPLETED July 17, 1964

ELEVATION 3710' — DIP TESTS — DEPTH 196'

CLAIM No. Carol #4

DIRECTION AND DISTANCE FROM NE. CLAIM POST

A X T Core

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	[illegible] 60 3%	ASSAY Magnetic Iron%	ASSAY Ag oz.	ASSAY Pb%	ASSAY Zn%	ASSAY Cu%
0	24	overburden									
24	50	highly broken up light colored "tuffaceous chert" - 40% core recovery									
50	60	mainly sand; almost no core recovery									
60	61	light brown dense altered "tuffaceous chert"									
61	73	25% core recovery - brownish orange, highly oxidized (gossan) dense, brecciated									
73	80	almost no core recovery; what little core there is indicates oxidation &									
		mineralization - mainly magnetite									
80	84	85% magnetite - 15% pyrite - some oxidation; 40% core recovery	861	80	84		42.3	.14	0.1	4.8	0.22
84	92	85% magnetite - 15% pyrite - very little oxidation; 100% core recovery	859	84	92		65.4	.18	0.1	1.2	.16
92	108	highly altered skarnitized porphyry (?); - considerable oxidation; 100% core	860	104	108						
		recovery									
108	196	predominantly light colored porphyry									
		132 - 153) considerable oxidation 104 - 108)									
		169 - 171) 120 - 121) 1% disseminated scheelite 125 - 126)									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 4 PAGE 1

LATITUDE 1 : 50 N BEARING OF HOLE 169° STARTED July 19, 1964

DEPARTURE 8 : 00 W DIP OF HOLE -30° COMPLETED July 26, 1964

ELEVATION 3730' DIP TESTS ____ DEPTH 310'

CLAIM No. Carol #4

NN — DIRECTION AND DISTANCE FROM NE. CLAIM POST

A X T Core

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE XXXXXX Au	ASSAY Ag. oz	Pb%	Zn%	Cu%	WO_3%
0	70	overburden									
70	73	100% core recovery; quite broken up & a little ground core - a mixture of rock types, but predominantly biotite (?) granite - a couple of small pieces of cherty rock; a couple of 2" pieces of feldspar porphry									
73	90	100% core recovery, but very broken up; skarnitized "tuffaceous chert"; oxidized on faces; minor pyrite									
90	100	80% core recovery; 40% massive pyrrhotite replacing "tuffaceous chert"; minor chalcopyrite & pyrite	868	90	100		.10	Nil	0.3	.07	
100	110	60% mineralized; massive pyrrhotite in "tuffaceous chert" with minor magnetite, pyrite, chalcopyrite	869	100	110		.12	Nil	0.2	.03	
110	120	60% mineralized; pyrrhotite, magnetite, trace chalcopyrite & pyrite	870	110	120		.36	Nil	1.2	.05	
120	130	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite	871	120	130		.14	0.2	0.3	.02	
130	140	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite	872	130	140		.14	Nil	0.2	.02	
140	150	90% mineralized; magnetite, pyrite, pyrrhotite	873	140	150		.10	0.2	0.4	.05	
150	178	70 - 90% mineralized; similar to above - (not split)									
178	0	generally skarnitized tuffaceous chert									
		231 - 236 (1% disseminated scheelite	874	231	236	Tr	0.12				

END OF HOLE

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y.T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 1 PAGE 1

LATITUDE 2 + 50 S — BEARING OF HOLE 349° — STARTED June 26, 1964

DEPARTURE 2 + 00 E — DIP OF HOLE -45° — COMPLETED July 3, 1964

ELEVATION 3850' — DIP TESTS — DEPTH 300'

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

AXT Core = 1 9/32" Diameter

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Zn%	ASSAY Pb%	ASSAY Ag.oz.	ASSAY Cu%	Magnetic Iron
0	30	overburden									
30	34	green & purplish banded, aphanatic "tuffaceous chert"									
34	37	brecciated "tuffaceous chert"									
37	38	garnet skarn									
38	74	"tuffaceous chert" with fine grained disseminated pyrite									
74	78	transition zone "tuffaceous chert" to skarn; minor sulphides									
78	80.5	epidote garnet skarn, disseminated pyrite; some galena, sphalerite, chalcopyrite									
80.5	81	pyrite, galena, chalcopyrite, and sphalerite in skarn									
81	82	skarnitized tuffaceous chert									
82	83	brecciated patches of pyrite, sphalerite, galena, and chalcopyrite	867	82	83	1.0	2.3	8.4	7.68	.07	
		in skarnitized "tuffaceous chert" with scattered disseminated pyrite									
83	94	skarnitized "tuffaceous chert" with scattered disseminated pyrite									
94	97	calcite epidote skarn									
97	138	magnetite, galena, sphalerite, pyrite, chalcopyrite,	849	97	104	Gold Tr	0.1		Tr	Tr	29.8

DIAMOND DRILL RECORD

LOGGED BY _____

PROPERTY _____

LATITUDE _____ BEARING OF HOLE _____ STARTED _____

DEPARTURE _____ DIP OF HOLE _____ COMPLETED _____

ELEVATION _____ DIP TESTS ____ _____ DEPTH _____

D.D.H. No. 1 PAGE 2

CLAIM No. Carol #6

N

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	Magnetic Iron%	Cu%	ASSAY Zn%	Gold Oz.	Ag. oz.
						Lead%					
97	138	trace of tetrahedrite (?) in high replacement of skarn	850	104	114	0.5	41.8	.07	1.6	.02	.42
		-calcite gangue and occasional irregular calcite stringers	851	114	124	4.7	33.4	.15	6.0	.01	2.48
		-common bracciated appearance; good core recovery	852	124	134	2.2	4.1	.22	7.6	.01	2.40
			853	134	138	2.7	1.1	.07	3.9	.01	2.18
138	300	quartz feldspar porphyry with some narrow, irregular stringers of sulphides									
		- generally galena & sphalerite	863	138	143					Tr	Tr
		- a few specks of scheelite.	864	143	148					Tr	Tr
		138 - 152 : badly broken & some yellow oxidation on breaks									
		152 - 300: predominantly relatively fresh light green porphyry									
		- some apparent serpentinization locally									
		- badly broken rock generally 271.5 - 285									
		- pinkish caste to rock 285 - 300									
		161.5 - 162.5 - galena & sphalerite patches									
		252.5 - 1" pyritized									
		265 - ½" streak of galena									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 2 PAGE 1

LATITUDE 1 - 76 S — BEARING OF HOLE 349° — STARTED July 5, 1964

DEPARTURE 0 - 00 — DIP OF HOLE -59° — COMPLETED July 9, 1964

ELEVATION 3815' — DIP TESTS ____ — DEPTH 301'

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

A X T Core

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	Lead%	Magnetic Iron%	ASSAY Au oz	Ag oz	Zn%	Cu%
0	20	overburden									
20	44	'tuffaceous chert' - green with purplish interbands; some brecc'n									
44	57	'tuffaceous chert' - some black bands; partially skarnitized; - massive calcite									
		at 56 - 57; some disseminated pyrite & chalcopyrite									
57	59	dense dark greenish rock									
59	72	predominately magnetite with skarn; considerable calcite & quartz gangue 66.0 - 67.5	854	59	72	Nil	46.4	Tr	.10	0.6	Tr
72	92	magnetite with galena, sphalerite, pyrite, chalcopyrite in high	855	72	82	0.3	47.5	Tr	1.04	2.3	Tr
		replacement of skarn	856	82	92	Nil	63.8	Tr	Tr	0.1	Tr
92	101	primarily skarn with some sulphides; rather bleached appearance	857	92	101	0.6	1.8	Tr	0.44	2.8	.07
101	106	sphalerite galena chalcopyrite, pyrite, good core recovery; high % of calcite gangue	853	101	106	1.8	4.8	.01	3.08	12.8	.37
106	118	brecciated quartz porphyry; bleached looking; skarnitized	865	106	111			.005	0.68		
		- small sphalerite patches at 109.5	866	111	116			Tr	.08		
118	301	whitish quartz feldspar porphyry with occasional small galena, sphalerite,									
		chalcopyrite stringers & patches; occasional serpentinized sections									
		- at 140 - 2' of + 3% disseminated scheelite; broken up & gougy in places between									
		272 - 280									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east end of Little Salmon Lake

D.D.H. No. 3 PAGE 1

LATITUDE 0 + 7 S — BEARING OF HOLE 349° — STARTED July 13, 1964

DEPARTURE 12 + 00 W — DIP OF HOLE -45° — COMPLETED July 17, 1964

ELEVATION 3710' — DIP TESTS — DEPTH 196'

CLAIM No. Carol #4

N

DIRECTION AND DISTANCE FROM NE. CLAIM POST

A X T Core

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	W0 3%	ASSAY Magnetic Iron%	Ag oz.	Pb%	Zn%	Cu%
0	24	overburden									
24	50	highly broken up light colored "tuffaceous chert" - 40% core recovery									
50	60	mainly sand; almost no core recovery									
60	61	light brown dense altered "tuffaceous chert"									
61	73	25% core recovery - brownish orange, highly oxidized (gossan) dense, brecciated									
73	80	almost no core recovery; what little core there is indicates oxidation & mineralization - mainly magnetite									
80	84	85% magnetite - 15% pyrite - some oxidation; 40% core recovery	861	80	84		42.3	.14	0.1	4.8	0.22
84	92	85% magnetite - 15% pyrite - very little oxidation; 100% core recovery	859	84	92		65.4	.18	0.1	1.2	.16
92	108	highly altered skarnitized porphyry (?); - considerable oxidation; 100% core recovery	860	104	108						
108	196	predominantly light colored porphyry									
		132 - 153) considerable oxidation 104 - 108)									
		169 - 171) 120 - 121) 1% disseminated scheelite 125 - 126)									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 4 PAGE 1

LATITUDE 1 : 50 N — BEARING OF HOLE 169° — STARTED July 19, 1964

DEPARTURE 8 - 00 W — DIP OF HOLE -30° — COMPLETED July 26, 1964

ELEVATION 3730' — DIP TESTS ____ — DEPTH 310'

CLAIM No. Carol #4

DIRECTION AND DISTANCE FROM NE. CLAIM POST

A X T Core

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLES Au	ASSAY Ag. oz	ASSAY Pb%	ASSAY Zn%	ASSAY Cu%	ASSAY WO_3%
0	70	overburden									
70	73	100% core recovery; quite broken up & a little ground core - a mixture of rock types, but predominantly biotite (?) granite - a couple of small pieces of cherty rock; a couple of 2" pieces of feldspar porphry									
73	90	100% core recovery, but very broken up; skarnitized "tuffaceous chert"; oxidized on faces; minor pyrite									
90	100	80% core recovery; 40% massive pyrrhotite replacing "tuffaceous chert"; minor chalcopyrite & pyrite	868	90	100		.10	Nil	0.3	.07	
100	110	60% mineralized; massive pyrrhotite in "tuffaceous chert" with minor magnetite, pyrite, chalcopyrite	869	100	110		.12	Nil	0.2	.03	
110	120	60% mineralized; pyrrhotite, magnetite, trace chalcopyrite & pyrite	870	110	120		.36	Nil	1.2	.05	
120	130	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite	871	120	130		.14	0.2	0.3	.02	
130	140	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite	872	130	140		.14	Nil	0.2	.02	
140	150	90% mineralized; magnetite, pyrite, pyrrhotite	873	140	150		.10	0.2	0.4	.05	
150	178	70 - 90% mineralized; similar to above - (not split)									
178	0	generally skarnitized tuffaceous chert									
		231 - 236 (1% disseminated scheelite	874	231	236	Tr	0.12				

END OF HOLE

27996

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 1 PAGE 1

LATITUDE 2 + 50 S BEARING OF HOLE 349° STARTED June 26, 1964.

DEPARTURE 2 + 00 E DIP OF HOLE -45° COMPLETED July 3, 1964.

ELEVATION 3850' DIP TESTS ____ DEPTH 300'

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

AX Core = 1 9/32" Diameter

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Zn%	Pb%	Ag. oz.	Cu%
0	30	overburden								
30	34	green & purplish banded, aphanatic "tuffaceous chert"								
34	37	brecciated "tuffaceous chert"								
37	38	garnet skarn								
38	74	"tuffaceous chert" with fine grained disseminated pyrite								
74	78	transition zone "tuffaceous chert" to skarn; minor sulphides								
78	80.5	epidote garnet skarn, disseminated pyrite; some galena, sphalerite, chalcopyrite								
80.5	81	pyrite, galena, chalcopyrite, and sphalerite in skarn								
81	82	skarnitized tuffaceous chert								
82	83	brecciated patches of pyrite, sphalerite, galena, and chalcopyrite		82	83		2.3	8.4	7.68	.07
		in skarnitized "tuffaceous chert" with scattered disseminated pyrite								
83	94	skarnitized "tuffaceous chert" with scattered disseminated pyrite								
94	97	calcite epidote skarn								
97	138									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 1 PAGE 2

LATITUDE 2 + 50 S — BEARING OF HOLE 349° — STARTED June 26, 1964.

DEPARTURE 2 + 00 E — DIP OF HOLE -45° — COMPLETED July 3, 1964.

ELEVATION 3850' — DIP TESTS — DEPTH 300'

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Magnetic Iron%	Cu%	Zinc%	Gold oz	Ag oz
						Lead%					
97	138	magnetite, galena, sphalerite, pyrite, chalcopyrite,		97	104	Nil	29.8	Tr	0.1	Tr	Tr
		trace of tetrahedrite (?) in high replacement of skarn		104	114	0.5	41.8	.07	1.6	.02	.42
		- calcite gangue and occasional irregular calcite stringers		114	124	4.7	33.4	.15	6.0	.01	2.48
		- common bracciated appearance; good core recovery		124	134	2.2	4.1	.22	7.6	.01	2.40
				134	138	2.7	1.1	.07	3.9	.01	2.18
138	300	quartz feldspar porphyry with some narrow,									
		irregular stringers of sulphides - generally galena & sphalerite		138	143					Tr	Tr
		- a few specks of scheelite. 138 - 152 - badly broken & some yellow oxidation									
		on breaks 152 - 300 - predominantly relatively fresh light									
		green porphyry - some apparent serpentinization locally									
		- badly broken rock generally 271.5 - 285									
		- pinkish caste to rock 285 - 300									
		161.5 - 162.5 - galena & sphalerite patches									
		252.5 - 1" pyritized									
		265 - ½" streak of galena									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh

Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 2 PAGE 1

LATITUDE 1 + 76 S BEARING OF HOLE 349° STARTED July 5, 1964.

DEPARTURE 0 + 00 DIP OF HOLE -59° COMPLETED July 9, 1964.

ELEVATION 3815' DIP TESTS ____ DEPTH 301'

CLAIM No. Carol #6

N

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Magnetic Iron%	ASSAY Au oz.	ASSAY Ag oz.	ASSAY Zn%	ASSAY Cu%
						Lead%					
0	20	overburden									
20	44	"tuffaceous chert" - green with purplish interbands; some brecc'n									
44	57	"tuffaceous chert" - some black bands; partially skarnitized; - massive calcite									
		at 56 - 57; some disseminated pyrite & chalcopyrite									
57	59	dense derk greenish rock									
59	72	predominately magnetite with skarn; considerable calcite & quartz		59	72	Nil	46.4	Tr	.10	0.6	Tr
		gangue 66.0 - 67.5									
72	92	magnetite with galena, sphalerite, pyrite, chalcopyrite in high		72	82	0.3	47.5	Tr	1.04	2.3	Tr
		replacement of skarn		82	92	Nil	63.8	Tr	Tr	0.1	Tr
92	101	primarily skarn with some sulphides; rather bleached appearance		92	101	0.6	1.8	Tr	0.44	2.8	.07
101	106	sphalerite galena chalcopyrite, pyrite, good core recovery; high % of calcite gangue		101	106	1.8	4.8	.01	3.08	12.8	.37
106	118	brecciated quartz porphyry; bleached looking, skarnitized		106	111			.005	0.68		
		- small sphalerite patches at 109.5		111	116			Tr	.08		
118	301	whitish quartz feldspar porphyry with occasional small galena, sphalerite,									
		chalcopyrite stringers & patches; occasional serpentinized sections									
		- at 140 - 2" of ± 3% disseminated scheelite; broken up & gougy in places between 272 - 280									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh

Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east end of Little Salmon Lake

D.D.H. No. 3 PAGE 1

LATITUDE 0 + 7 S BEARING OF HOLE 349° STARTED July 13, 1964

DEPARTURE 12 + 00 W DIP OF HOLE -45° COMPLETED July 17, 1964.

ELEVATION 3710' DIP TESTS ____ DEPTH 196'

CLAIM No. Carol #4

N

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Magnetic Iron%	Ag oz.	Pb%	Zn%	Cu%
						WO_3%					
0	24	overburden									
24	50	highly broken u p light colored "tuffaceous chert" - 40% core recovery									
50	60	mainly sand; almost no core recovery									
60	61	light brown dense altered "tuffaceous chert"									
61	73	25% core recovery - brownish orange, highly oxidized (gossan) dense, brecciated									
73	80	almost no core recovery; what little core there is indicates oxidation &									
		mineralization - mainly magnetite									
80	84	85% magnetite - 15% pyrite - some oxidation; 40% core recovery		80	84						
84	92	85% magnetite - 15% pyrite - very little oxidation; 100% core recovery		84	92			.18	0.1	1.2	.16
92	108	highly altered skarnitized porphyry (?); - considerable oxidation; 100% core		104	108						
		recovery									
108	196	predominantly light colored porphyry									
		132 - 153) considerable oxidation 104 - 108) 1% disseminated scheelite 169 - 171) 120 - 121) 125 - 126)									
		END OF HOLE									

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 4 PAGE 1

LATITUDE 1 + 50 N BEARING OF HOLE 169° STARTED July 19, 1964.

DEPARTURE 8 + 00 W DIP OF HOLE -30° COMPLETED July 26, 1964.

ELEVATION 3730' DIP TESTS ____ DEPTH 310'

CLAIM No. Carol No. 4

N ← DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Ag oz	Pb%	Zn%	Cu%	WO_3%
0	70	overburden									
70	73	100% core recovery; quite broken up & a little ground core - a mixture of rock									
		types, but predominantly biotite (?) granite - a couple of small									
		pieces of cherty rock; a couple of 2" pieces of feldspar porphury									
73	90	100% core recovery, but very broken up; skarnitized "tuffaceous chert"; oxidized									
		on faces; minor pyrite									
90	100	80% core recovery; 40% massive pyrrhotite replacing "tuffaceous chert"; minor		90	100		.10	Nil	0.3	.07	
		chalcopyrite & pyrite									
100	110	60% mineralized; massive pyrrhotite in "tuffaceous chert" with minor magnetite,		100	110		.12	Nil	0.2	.03	
		pyrite, chalcopyrite									
110	120	60% mineralized; pyrrhotite, magnetite, trace chalcopyrite & pyrite		110	120		.36	Nil	1.2	.05	
120	130	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite		120	130		.14	0.2	0.3	.02	
130	140	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite		130	140		.14	Nil	0.2	.02	
140	150	90% mineralized; magnetite, pyrite, pyrrhotite		140	150		.10	0.2	0.4	.05	
150	178	70 - 90% mineralized; similar to above - (not split)									
178	310	generally skarnitized tuffaceous chert									
		231 - 236 - < 1% disseminated scheelite		231	236						

END OF HOLE

77906

DIAMOND DRILL RECORD

LOGGED BY Dr. P. M. Kavanagh — Kerr Addison Mines Limited

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 1 PAGE 1

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DEPARTURE 2 + 00 E — DIP OF HOLE -45° — COMPLETED July 3, 1964.

ELEVATION 3850' — DIP TESTS ____ — DEPTH 300'

CLAIM No. Carol #6

DIRECTION AND DISTANCE FROM NE. CLAIM POST

AX Core = 1 9/32" Diameter

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE No.	FOOTAGE FROM	FOOTAGE TO	SAMPLE LENGTH	ASSAY Zn%	Pb%	Ag. oz	Cu%	
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30	34	green & purplish banded, aphanatic "tuffaceous chert"									
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37	38	garnet skarn									
38	74	"tuffaceous chert" with fine grained disseminated pyrite									
74	78	transition zone "tuffaceous chert" to skarn; minor sulphides									
78	80.5	epidote garnet skarn, disseminated pyrite; some galena, sphalerite, chalcopyrite									
80.5	81	pyrite, galena, chalcopyrite, and sphalerite in skarn									
81	82	skarnitized tuffaceous chert									
82	83	brecciated patches of pyrite, sphalerite, galena, and chalcopyrite		82	83		2.3	8.4	7.68	.07	
		in skarnitized "tuffaceous chert" with scattered disseminated pyrite									
83	94	skarnitized "tuffaceous chert" with scattered disseminated pyrite									
94	97	calcite epidote skarn									
97	138										

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D.D.H. No. 1 PAGE 2

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DEPARTURE 2 + 00 E — DIP OF HOLE -45° — COMPLETED July 3, 1964.

ELEVATION 3850' — DIP TESTS — DEPTH 300'

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DIRECTION AND DISTANCE FROM NE. CLAIM POST

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						Lead%					
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		- calcite gangue and occasional irregular calcite stringers		114	124	4.7	33.4	.15	6.0	.01	2.48
		- common bracciated appearance; good core recovery		124	134	2.2	4.1	.22	7.6	.01	2.40
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138	300	quartz feldspar porphyry with some narrow,									
		irregular stringers of sulphides - generally galena & sphalerite		138	143					Tr	Tr
		- a few specks of scheelite. 138 - 152 - badly broken & some yellow oxidation									
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		252.5 - 1" pyritized									
		265 - ¼" streak of galena									
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LOGGED BY Dr. P. M. Kavanagh

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106	118	brecciated quartz porphyry; bleached looking; skarnitized		106	111			.005	0.68			
		- small sphalerite patches at 109.5		111	116			Tr	.08			
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		chalcopyrite stringers & patches; occasional serpentinized sections										
		- at 140 - 2" of ± 3% disseminated scheelite; broken up & gougy in places between 272 - 280										
		END OF HOLE										

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		132 - 153) 169 - 171) considerable oxidation 104 - 108) 120 - 121) 125 - 126) 1% disseminated scheelite									
		END OF HOLE									

DIAMOND DRILL RECORD

7906

LOGGED BY Dr. P. M. Kavanagh

PROPERTY Kulan Little Salmon Lake Option, Y. T., 8 miles east of east end of Little Salmon Lake

D.D.H. No. 4 PAGE 1

LATITUDE 1 + 50 N BEARING OF HOLE 169° STARTED July 19, 1964.

DEPARTURE 8 + 00 W DIP OF HOLE -30° COMPLETED July 26, 1964.

ELEVATION 3730' DIP TESTS ____ DEPTH 310'

CLAIM No. Carol No. 4

DIRECTION AND DISTANCE FROM NE. CLAIM POST

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70	73	100% core recovery; quite broken up & a little ground core - a mixture of rock									
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90	100	80% core recovery; 40% massive pyrrhotite replacing "tuffaceous chert"; minor		90	100		.10	Nil	0.3	.07	
		chalcopyrite & pyrite									
100	110	60% mineralized; massive pyrrhotite in "tuffaceous chert" with minor magnetite,		100	110		.12	Nil	0.2	.03	
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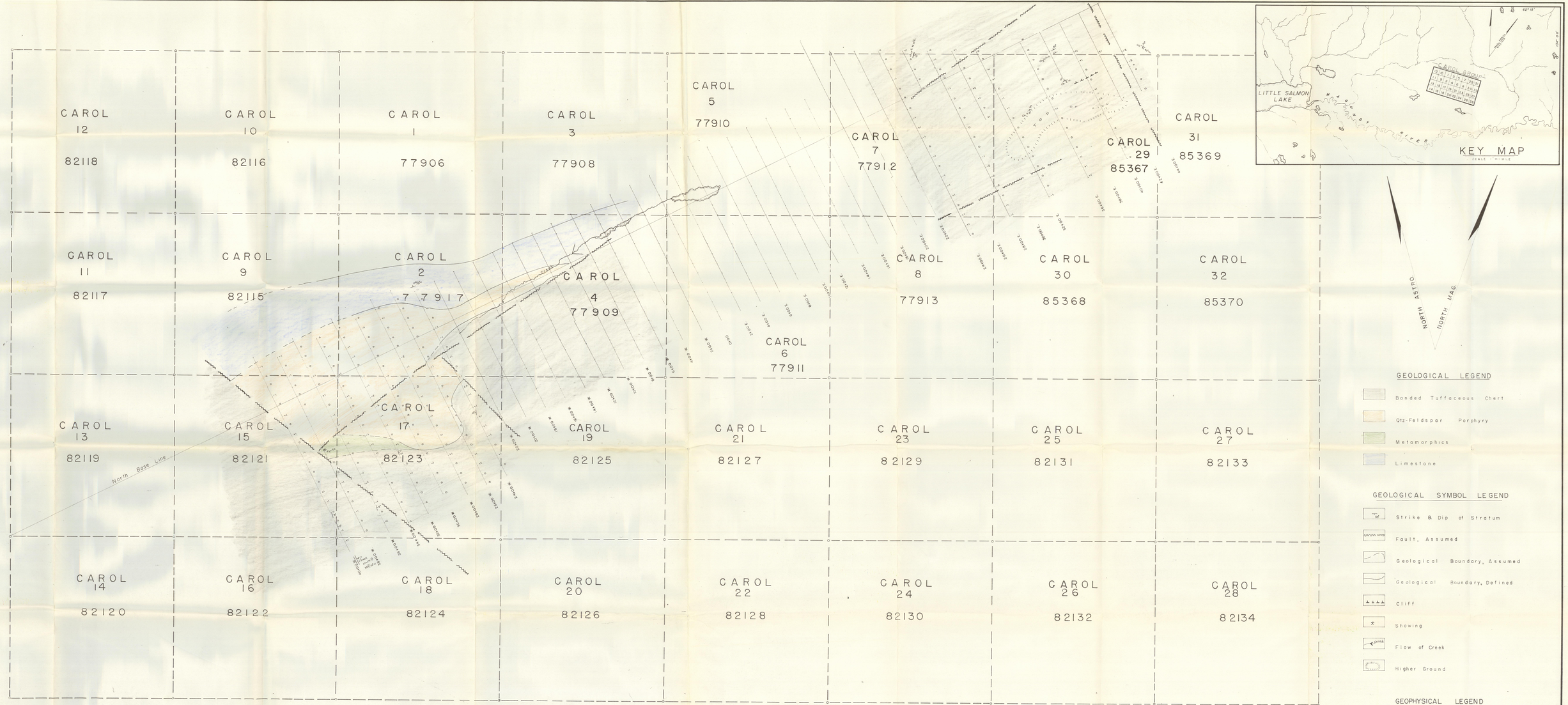
110	120	60% mineralized; pyrrhotite, magnetite, trace chalcopyrite & pyrite		110	120		.36	Nil	1.2	.05	
120	130	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite		120	130		.14	0.2	0.3	.02	
130	140	90% mineralized; mainly magnetite & pyrrhotite; minor pyrite		130	140		.14	Nil	0.2	.02	
140	150	90% mineralized; magnetite, pyrite, pyrrhotite		140	150		.10	0.2	0.4	.05	
150	178	70 - 90% mineralized; similar to above - (not split)									
178	310	generally skarnitized tuffaceous chert									
		231 - 236 - < 1% disseminated scheelite		231	236						

END OF HOLE



GEOLOGICAL LEGEND

- Banded Tuffaceous Chert
- Qtz-Feldspar Porphyry
- Metamorphics
- Limestone

GEOLOGICAL SYMBOL LEGEND

- Strike & Dip of Stratum
- Fault, Assumed
- Geological Boundary, Assumed
- Geological Boundary, Defined
- Cliff
- Showing
- Flow of Creek
- Higher Ground

GEOPHYSICAL LEGEND

- Electro-Magnetic Readings on Right side of Traverse Lines.

Instrument Operator: D. McGraa

KERR-ADDISON GOLD MINES LIMITED

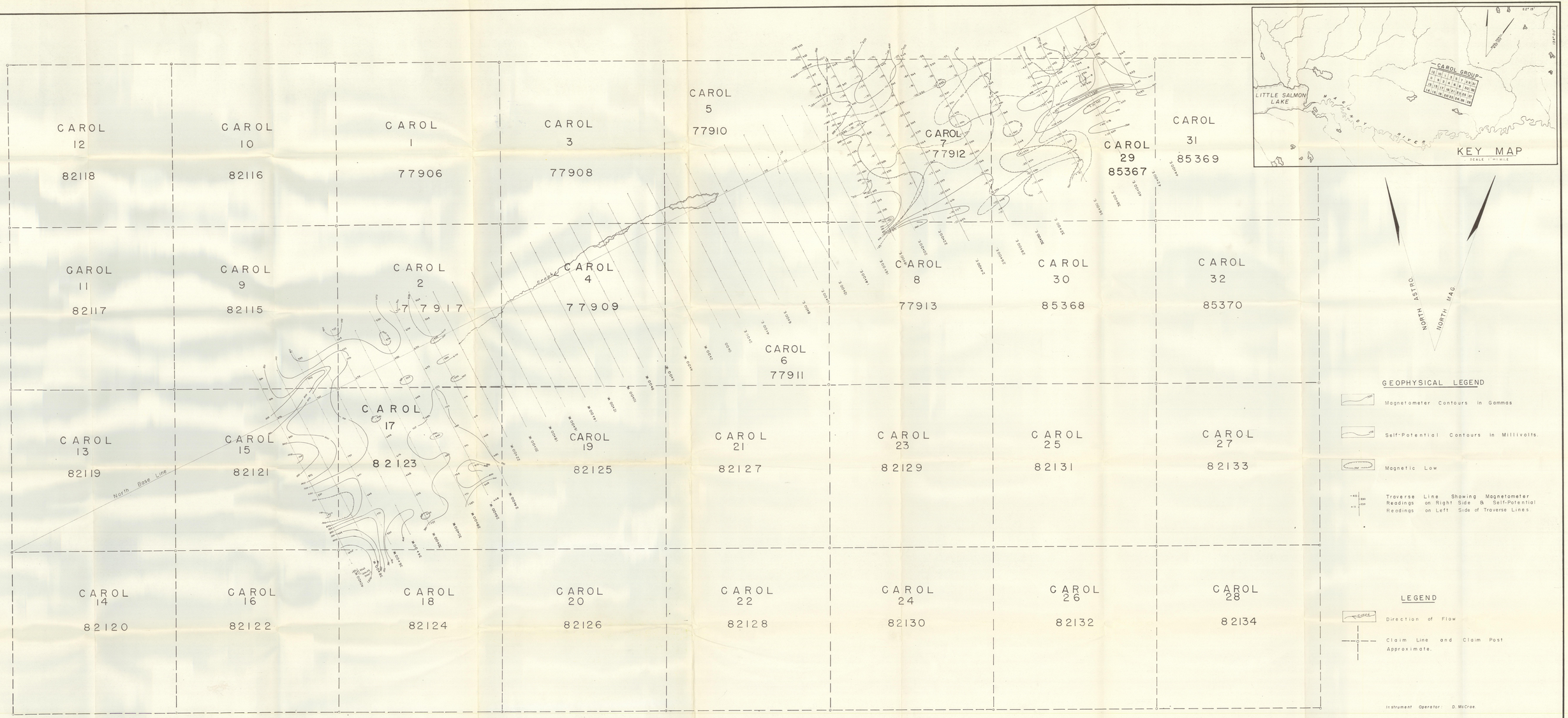
KULAN LITTLE SALMON LAKE PROPERTY Y.T.

ELECTRO-MAGNETIC & GEOLOGICAL SURVEYS

SCALE 1" = 200'

DRAWN BY J.E.S.

DEC. 1963



KERR-ADDISON GOLD MINES LIMITED

KULAN LITTLE SALMON LAKE PROPERTY Y.T.

MAGNETOMETER & SELF-POTENTIAL SURVEYS

SCALE 1" = 800'

DRAWN BY J.E.S. DEC. 1963