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KIDD CREEK MINES LTD.

GEOPHYSICAL REPORT

ON

AIRBORNE MAGNETIC

AND

ELECTROMAGNETIC SURVEYS

MATHESON 13

N.T.S: 42-A-10

PROJECT #82

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MINING LANDS SECTION

DECEMBER, 1984

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SUMMARY AND RECOMMENDATIONS

An airborne electromagnetic survey detected an east-west striking graphite conductor at a volcanic-sediment contact on the Matheson 13 property. The magnetic results show a regional gradient which increases from north to south.

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An Induced Polarization survey is being completed on the property to outline any disseminated sulphides which may be associated with gold mineralization.



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1. AIRBORNE MAGNETIC AND ELECTROMAGNETIC RESULTS 5

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INTRODUCTION

During August 1982, Aerodat Limited carried out an airborne magnetic and electromagnetic survey over part of Matheson and Cody Township. This survey covered four contiguous claims held by Kidd Creek Mines Ltd. in the N1/2 of Lot 8, Concession I, Matheson Township, Porcupine Mining District. The north boundary of the property is located along Highway 101, 25 kilometres east of the City of Timmins. The claims are numbered as follows:

P 585548 - P 585551 inclusive.

PREVIOUS WORK

In 1981, Texasgulf Canada Ltd. cut north-south grid lines on the property and carried out magnetic and horizontal loop EM surveys. Results from the EM survey outlined a conductor which strikes east-west about 200 metres north of the south boundary. This conductor had been tested with a diamond drill hole by Inco Metals Limited in 1967. The hole indicated the source of the EM anomaly to be graphite at the contact between volcanics to the north and sediments to the south.

SURVEY DESCRIPTION

The survey was conducted by Aerodat Ltd. using a helicopter borne system. An Astar 350-D helicopter was used. The magnetometer was a GEOMETRICS G-803 Proton Precession type with a 1/2 gamma sensitivity. The EM was run with an AERODAT/GEONICS AEM system consisting of 2 vertical coaxial coil pairs operating at 940 Hz and 4550 Hz and one coplanar pair operating at 960 Hz.

Mean flying heighth of the helicopter was 70 metres; the magnetometer bird was at 54 metres and the EM bird at 38 metres. Line spacing was approximately 200 metres. The position of the helicopter was constantly recorded using a miniranger radar positioning system.

RESULTS

The magnetic and electromagnetic results are shown in Figure 1 at a scale of 1:15840.

A conductor was outlined striking east west through the middle of the two southern claims. This is the same conductor which was detected by the ground horizontal loop survey carried out by Texasgulf(Gasteiger, 1981) and tested by Inco Metals Limited. A summary of the interpretation of

the anomalies is given in Table 1. The anomalies just to the north of the property coincide with the highway and are due to a cultural source.

1

The volcanics to the north and sediments to the south can not be differentiated in the magnetic results. The property is located within a regional magnetic gradient which increases to the south. The source of the magnetic high anomaly to the south of the property in Cody Township is an east-west striking ultramafic unit.

The conductor does not have a coincident magnetic anomaly on the property, however to the west there is a linear magnetic low on strike.

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TABLE 1: Interpretation of airborne EM anomalies on Matheson 13.

				FREQUENCY 940		CONDUCTOR		BIRD	
FLIGHT	LINE	ANOMALY	CATEGORY	INPASE (ppm)	QUAD (ppm)	CTP (MHOS)	DEPTH (MTRS)	HEIGHT (MTRS)	
2	1370	J	3	14.3	7.2	14.5	31	25	
2	1380	Е	3	13.6	8.2	11,1	33	22	
2	1092	Е	1	7.8	9.4	3.5	26	25	



REFERENCES

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Gasteiger, W. A., 1981, Texasgulf Canada Ltd., Report on Geophysical Work, Matheson Township, Timmins Assessment File T-2483.

Type of Survey(s)		<u> </u>	The Minir	-	Township	or Area	V. S	
AIKBUKNE EM AND	MAGNETIUS			<u> </u>	MAIHE	SON TUW	NSHIP	
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	- Magnetometer			585549				
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Enter 20 days (for each)	- Other			585551			L	
	Geological							
	Geochemical						an construction grade ex-	
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	- Radiometric			NOV	1 1 1001		an a	1
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erformed on Claim(s)				A.M.	P	N. 28		
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Total Days Credits may be an choice. Enter number of day	oportioned at the claim h s credits per claim select	iolder's .ed		For Office Use C	Jnly Stee]	Al.	0
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OFFICE USE ONLY

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s)AIRBORNE GEOPHYSICS	
Township or Area <u>MATHESON</u>	MINING CLAIMS TRAVERSED
Claim Holder(s) KIDD CREEK MINES LTD.	List numerically
571 Moneta Avenue, Timmins, Ontario	
Survey Company_KIDD CREEK MINES LTD.	P 585548
Author of Report DOUGLAS LONDRY	(prefix) (number) P 585549
Address of Author 571 Moneta Avenue, P.O.Box 1140,	
Covering Dates of Survey 14/08/82 - 12/12/84	P 585550
(linecutting to office)	P 585551
Total Miles of Line Cut	
SPECIAL PROVISIONS CREDITS REQUESTED DAYS per claim ENTER 40 days (includes Electromagnetic line cutting) for first Magnetometer survey. Radiometric ENTER 20 days for each -Other additional survey using Geological same grid. Geochemical AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys) Magnetometer 20 Electromagnetic Radiometric uthor of Report or Agent -	
Res. GeolQualifications22289	RECEIVEN
Previous Surveys	UED
File No. Type Date Claim Holder	MTRU:
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	SECTION
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•••••••••••••••••••••••••••••••••••••••	TOTAL CLAIMS 4

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GEOPHYSICAL TECHNICAL DATA

G	ROUND SURVEYS – If mor	re than one survey, spe	cify data for each t	sype of survey	
N	umber of Stations		Number	of Readings	
S	ation interval		Line spa	cing	
P	cofile scale			8	
C C	ontour interval				
rni	Instrument				·
Ĭ	Accuracy – Scale constant _				******
CN	Diurnal correction method _				<u> </u>
MA	Base Station check-in interva	al (hours)			,,
	Base Station location and va	lue			
2	Instrument				
NET	Coil configuration				
AGI	Coil separation				
MO	Accuracy				
IR	Method:	Fixed transmitter	Shoot back	🗔 In line	Parallel line
TEC	Frequency		(specify V.L.F. station)		
	Parameters measured				
	Instrument			h	
	Scale constant				
VE	Corrections made		L I Warmer and a straight of the straightoo straight of the straight of the straight of the straight of the		
AV					
G	Base station value and locati	ion			
	Elevation accuracy				
	Instrument				
TION	Method			Frequency Domain	
	Parameters – On time			Frequency	<u></u>
	– Off time			Range	
IV AR	– Delay time <u>–</u>				
D	- Integration tir	ne			
RES	Power				
-	Electrode array				
N	Electrode spacing				
	Type of electrode				

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Instrument	Range	
Survey Method		
Corrections made		
RADIOMETRIC		
Instrument		· ·
Values measured		
Energy windows (levels)	·····	
Height of instrument	Background Count	
Size of detector	·····	· •
Overburden	rop map)	
OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)		
Type of survey		
Instrument		
Accuracy		
Parameters measured		
Additional information (for understanding results)	······································	
AIDDODNE SUDVEVS		
m () Magnetic		
Instrument(s) Geometrics G803 (specify for each type of sur	rvev)	······································
Accuracy		
Aircraft used Astar 350-D Helicopter		
Sensor altitude38 metres		
Navigation and flight path recovery method <u>Motorola M</u> Radar Positioning System	ini-Ranger (MRS III)	
Aircraft altitude70 metres	Line Spacing 200 me	tres
Miles flown over total area 660 km	Over claims only2.4	km

Numbers of claims from which samples taken_____

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计数数

Total Number of Samples	ANALYTICAL METHODS						
Type of Sample	Values expressed in: per cent						
Average Sample Weight	p. p. m.						
Method of Collection	p. p. o						
	Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)						
Soil Horizon Sampled	Others						
Horizon Development	Field Analysis (tests)						
Sample Depth	Extraction Method						
Terrain	Analytical Method						
	Reagents Used						
Drainage Development	Field Laboratory Analysis						
Estimated Range of Overburden Thickness	No. (tests						
	Extraction Method						
	Analytical Method						
	Reagents Used						
SAMPLE PREPARATION	Commercial Laboratory (tests						
(Includes drying, screening, crushing, ashing)	Name of Laboratory						
Mesh size of fraction used for analysis	Extraction Method						
	Analytical Method						
	Reagents Used						
General	General						
· · · · · · · · · · · · · · · · · · ·							

Mining Lands Section

File No 2.7563

Control Sheet

TYPE OF SURVEY

GEOPHYSICAL GEOLOGICAL GEOCHEMICAL EXPENDITURE

MINING LANDS COMMENTS:

Signature of Assessor

14/12/84

Date



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Kidd Creek Mines Ltd.

Box 1140 571 Moneta Avenue, Timmins, Ontario P4N 7H9 (705) 267-1188

Exploration Division

December 12, 1984

Mr. Fred Matthews Director, Land Management Branch Whitney Block, Room 6450 Queen's Park TORONTO, Ontario M7A 1W3

Dear Sir:

Re: MATHESON TOWNSHIP

Enclosed please find duplicate copies of a report and maps covering claims in Matheson Township. The claims aforementioned are P-585548, P-585549, P-585550 and P-585551.

Your prompt attention to this matter would be greatly appreciated.

Yours very truly,

DL/pp Encls.

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DEC 1 3 1984 MINING LANDS SECTION

