

1P15NE2001 OP93-375 CAIRO

#### 010

### FINAL SUBMISSION

#### DENIS CHARTRE AND ROGER DUFRESNE

0P93 - 375 AND 0P93 - 376

1993 12 23

CAIRD TOWNSHIP

DUFRESNE - CHARTRE - SOUTH - CAIRO - PROPERTY (seven claims staked in 1991 and two claims staked in 1992)

Claims 1179885, 1179886, 1179887, 1179888, 1179889, 1179889, 1179889, 1179890, 1185634, 1185635, 1185636.



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010C

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SUMMARY

The Matachewan Area, in the District of Timiskaming located in Northern Ontario drew the attention of many gold prospectors as early as 1909 with the height of activity in the 1930's.

Past gold exploration had focused on the search for quartz veins near shear zones and faults with intrusions in the symplete porphyry.

Over the years other minerals have been found in small quantities: barite, asbestos, copper, lead, silver, zinc, molybdenite, and others.

In December, 1990 interest in base metals had come to life in the Matachewan Area with the copper discovery in Robertson Township, 9 miles north of Matachewan, by Strike Minerals Inc. and Queenston Mining Inc., two exploration companies based in Kirkland Lake. In the 1991 Annual report for Queenston Mining Inc., Queenston explains the geology as a small lens of volcanogenic massive sulphides which occured in a thick pyritic exhalite sequence. The discovery hole returned 1.45% copper and 4.7% zinc over a core length of 30.8 feet. Further work by Queenston and Strike also identified a favourable base metal stratigraphy extending 6.5km across the property. In 1992 the property was optioned to Falconbridge.

Exploration Trinity also indicates participation in Matachewan copper discovery and provides us with a general geology and location sketch. (see annex " C" )

Another General Geology map of the Matachewan Area is provided for us by W. Powell, from Queen's University. (see annex "A") F/WAL SUBMISSION OP92-520 AND OP92-52/

After taking a long look at all the information Denis Chartre and Roger Dufresne decided to look at new ground which would have some potential as a gold-base-metal prospect in Cairo Township. As a result we prospected the old Matachewan Hub Pioneer Property in Cairo Township where it was reported that the bedrock was composed of greenstone and rhyolite cut by diabase dikes and Cobalt sedimentary rocks. The other property that was prospected was the George Sunisloe Property on the south side of the Montreal River (see map 2110); here, it was reported that for a length of more than a mile southwest from Fox Rapids and for a maximum width of 400 feet, mafic intrusive rocks on the south shore of the Montreal River are highly sheared. Near the southwest end of this major shear zone, about 700 feet north of a granite batholith, a boss of massive granitic rocks about 600 feet in diameter has been intruded into the sheared mafic intrusive rocks. Again, it was reported that small amounts of chalcopyrite exist in the boss near its contact with the sheared diorite and serpentinite, and quartz-carbonate stringers cutting the diorite and serpentinite contain chalcopyrite, pyrite, hematite, and magnetite.

Seven claims were staked in the fall of 1991 and two more were staked in the spring of 1992. In the fall of 1991 many grab samples were taken for assay for copper and gold. The best assays were .04 oz/ton Au and 3.74% Cu for sample AA-1 and .06 oz/ton Au and 2.23% Cu for sample AA-3 (see Swastika Lab certificate # 1W-4108-RA1 dated Dct. 3, 1991.) (ANNEX T)

Since no work had been done on these claims since 1966, Roger Dufresne and Denis Chartre believed that it was time for the property to have another evaluation using a new approach and up-to-date prospecting methods. The plan was to locate and clean out all the pits using manual labour and power strip where it was possible using Wajax high pressure pump, take samples, do line cutting and complete a Mag Survey, put together geological mapping and finally, prepare recommendations for future work.

Ed Chartre of Services Explorations Enrg. who mapped the Prospecting Program - 1992 on the 10 stripped sites explains that the exposed rock surfaces and local outcrops indicate the presence of a granodiorite with dioritic phases. A major fault zone traverses the northwestern part of the property in a northeasterly direction. This fault zone lies mostly under the bed of the Montreal River. The fault has been exposed in trench (area 7) where the rock exposure indicates the presence of granodiorite while shearing strongly sheared increases northwestwards towards the river. This strong fault zone has fractured the adjacent granodiorite with most of the quartz-filed fractures trending northeasterly. The numerous fractures observed are host to quartz veins which vary in length and width. The quartz veins and adjacent sheared walls contain disseminated hematite, magnetite, chalcopyrite and pyrite. The strongest concentration of chalcopyrite is in trench # 7. The highest gold assay returned 240 ppb and the highest copper assay returned 2.48%. The pervasive distribution of low gold values would seem to indicate the presence of a gold-bearing system within the (see report annex (" ") FINAL SUBMISSION OP 92-520 fault zone under the Montreal River. -521

Ed Chartre of Services Explorations Enrg. carried a magnetometer survey on the Chartre-Dufresne Cairo Property with the purpose of outlining fault zones as possible prospecting targets. 2.8 line km were covered using an Exploraniun G-816 proton magnetometer on claims 1179886. 1179887 and 1179890. The results show two northwest trending faults. These two fault zones appear to be good targets for systematic prospecting in order to find more information regarding the presence of gold-(See report Annex ") FINAL FINIAL SUBMISSION OP 92-520 -521 bearing structures.

former geologist with M.N.D.M. visited the Howard Lovell. property twice and provided interesting observations. Howard explains that in as much as the chalcopyrite-bearing quartzcarbonate veins fill fractures in this diabase, perhaps the chalcopyrite originated post diabase or was remobilized from older basement rocks by the intruding diabase. The chalcopyrite in the serpentinite along one claim length of the Montreal River shore between high and low water levels tends to occur along the numerous slip planes and as fracture fillings both accompanying quartz gangue and silicification, and also as chalcopyrite alone. Howard suggests that diamond drilling should take into account the cliff under the Montreal River below the low water level. (See report annex (" ") FINAL SUBMISSION OP 92-520 AND OP 92-521

In the year 1993, Denis Chartre and Roger Dufresne continued systematic re-evaluation of the remainder of pits and the trenches located 500 to 600 feet from the water's edge on G. Sunisloe's claim # 39477 where North Expo found 5' of 2.56% copper in a drill hole. Using manual labour and a Wajax high pressure water pump these pits were cleaned out and reevaluated. The layout, description, evaluation and assays are enclosed in this report. A Magnetometer survey was completed on claims # 1179888 and # 1185634. A V.L.F. survey was completed on the following claims: # 1179886, # 1179887, # 1179880, #1179888 and # 1185634. Results of surveys are enclosed.

P.5

Acknowledgements

We wish to thank David Bending, Senior Geologist with Homestake Canada Ltd., who visited our Holmes-Flavelle Property and our Cairo Property and has provided for us, a compilation map for the Holmes-Flavelle Property and assays, whole rock analysis and comments for the Cairo Property. (see annex "D")

We wish also <del>like</del> to thank Ed Chartre of Services Explorations Enrg. for a fine report. Description of Property

Denis Chartre and Roger Dufresne staked a total of nine contiguous claims in Cairo Township. The claim numbers are: 1179885, 1179886, 1179887, 1179888, 1179887, 1179887, 1179887, 1179887, 1179887, 1185635, 1185636.

The property consists of the old Matachewan Hub Pioneer Property and the former George Sunisloe Property. (references 16 and 18 on map 2110 Powell and Cairo Townships Timiskaming District) (see Cairo claim map dated June 10, 1992)

#### Location

The property is located in the southwest sector of Cairo Township about one mile east of the community of Matachewan, Ontario. Highway 66, between Matachewan and Kirkland Lake, is located a few hundred feet north of the Montreal River which forms part of the property. The claims are south of the eastern bend of the Montreal River. (see Cairo claim map dated June 10, 1992)

#### ACCESS

The property is accessed by truck. We travel West 59k. from Kirkland Lake along Highway 66 to Matachewan. About one mile East of Matachewan, a boat is launched at the Hub Pioneer Park into the Montreal River. The claims can be found across the river and the stripped areas on claim #1179888 and #1179887 up river; the witness posts are visible from the water.

#### Regional Geology

G. L. Kirwan, Consulting Geologist with North Expo Mines Limited explains in a report dated April 22, 1966 that Keewatin volcanic flows are the most abundant rock types in the Matachewan area, and two parallel east-trending synclines are formed by Temiskaming sediments in Cairo and adjacent Powell townships. These rocks are intruded by Algoman igneous rocks consisting of symmite and granite which in turn, have been intruded by north-trending diabase dikes. The flat-lying Cobalt Conglomerate lies with marked unconformity upon Precambrian formations. Shear zones in the Keewatin flows and pyroclastic rocks on the property contain mineralization consisting essentially of pyrite, pyrrhotite, and chalcopyrite, as well as iron formation.

#### Property Geology

Howard Lovell, staff geologist with M.N.D.M. in Geological Report # 51 <u>Geology of the Matachewan Area</u>, 1967, page 49 explains that for a length of more than a mile southwest from Fox Rapids and for a maximum width of 400 feet, mafic intrusive rocks on the south shore of the Montreal River are highly sheared. The strike of the shearing is approximately parallel to the shore of Montreal River, and the dip is south.

Ed Chartre of Services Explorations Enrg. who mapped the Prospecting Program - 1992 on the 10 stripped sites explains that the exposed rock surfaces and local outcrops indicate the presence of a granodiorite with dioritic phases. A major fault zone traverses the northwestern part of the property in a northeasterly direction. This fault zone lies mostly under the bed of the Montreal River. The fault has been exposed in trench (area 7) where the rock exposure indicates the presence of strongly sheared granodiorite while shearing increases northwestwards towards the river. This strong fault zone has fractured the adjacent granodiorite with most of the quartz-filed fractures trending northeasterly. The numerous fractures observed are host to quartz veins which vary in length and width. The guartz veins and adjacent sheared walls contain disseminated hematite, magnetite, chalcopyrite and pyrite. The strongest concentration of chalcopyrite is in trench # 7. The highest gold assay returned 240 ppb and the highest copper assay returned 2.48%. The pervasive distribution of low gold values would seem to indicate the presence of a gold-bearing system within the (see report <del>annex (" ")</del> fault zone under the Montreal River. FINAL SUBMISSION OP92-520

OP 92 - 521

Ed Chartre of Services Explorations Enrg. carried a magnetometer survey on the Chartre-Dufresne Cairo Property with the purpose of outlining fault zones as possible prospecting targets. 2.8 line km were covered using an Exploranium G-816 proton magnetometer on claims 1179886, 1179887 and 1179890. The results show two northwest trending faults. These two fault zones appear to be good targets for systematic prospecting in order to find more information regarding the (see report annex ") presence of gold-bearing structures. Final Submission 0P92-520Howard Lovell, former geologist with M.N.D.M. visited the 0P92-52/property three times and provided interesting observations. Howard explains that in as much as the chalcopyrite-bearing quartz-carbonate veins fill fractures in this diabase, perhaps the chalcopyrite originated post diabase or was remobilized from older basement rocks by the intruding diabase. The chalcopyrite in the serpentinite along one claim length of the Montreal River shore between high and low water levels tends to occur along the numerous slip planes and as fracture fillings both accompanying quartz gangue and silicification, and also as chalcopyrite alone. Howard suggests that diamond drilling should take into account the cliff under the Montreal River below the low water level. (See report annex (" ") FINAL 548 NISSION OP 92-520 OP 92-52) Maurice Y. Houle, Contract Geologist with Falconbride Limited indicated that the property hosts geological features favourable for hosting economic shear zone gold-silver-copper mineralization similar to the Young-Davidson Mine. The mineralization consists of up to 10% py, cpy in shear zones and quartz veins within shear zones. The shear systems are narrow, (typically <5 metres wide) and contain disseminated

sulphides up to 10 centimetres in the wallrock adjacent to

serpentinite intruded by felsic intrusive rocks ranging from

(see Falconbridge file at annex ") FiNAL SUBMISSION OP92 - 520David Bending of Homestake Canada Ltd. provided some assays

and observations on the cairo property. Assays and whole

shears. The property is underlain by Precambrian

rock analysis are enclosed at annex (n).

equigranular granodiorite to quartz feldspar porphyry.

History

1964 - (circa) George Sunisloe staked 11 claims, dug pits and trenches, found gold and copper. The mineralized host rock is reported to be mainly diorite of Haileyburian age. G. Sunisloe reported a few low assays of gold in samples of quartz bearing metallic gold from veins cutting granodiorite.

1965- Rosmar Corp. Ltd. conducted a limited amount of selfpotential work, advanced geology and geophysics. Prior work and trenching exposed two copper bearing zones and one major anomalous condition was recorded in Keewatin Volcanics including two parallel anomalies, one minor anomaly and 3 sub-anomalies trending Eastward in Temiskaming sediments containing high grade anomalous characteristics.

1966 - North Expo Mines Ltd. did a combined magneticelectromagnetic survey on part of property followed by 3 ddh in two zones. Five feet of core yielded 2.56% Cu.

1991 - Denis Chartre and Roger Dufresne prospected the general area; they discoved a number of old pits; they took a number of rock samples; the best assays were AA-1 and AA-3 which yielded .04 and .06 Au (oz/ton) respectively and 3.74% and 2.23% copper respectively. (See annex "I")

1992 - Denis Chartre and Roger Dufresne assisted by Services Explorations Eng. stripped 10 areas on claim 1179888 with the following results: Ed Chartre of Services Explorations Enrg. who mapped the Prospecting Program - 1992 on the 10 stripped sites explains that the exposed rock surfaces and local outcrops indicate the presence of a granodiorite with dioritic phases. A major fault zone traverses the northwestern part of the property in a northeasterly direction. This fault zone lies mostly under the bed of the Montreal River. The fault has been exposed in trench (area 7) where the rock exposure indicates the presence of strongly sheared granodiorite while shearing increases northwestwards towards the river. This strong fault zone has fractured the adjacent granodiorite with most of the quartz-filed fractures trending northeasterly. The numerous fractures observed are host to quartz veins which vary in length and width. The quartz veins and adjacent sheared walls contain disseminated hematite, magnetite, chalcopyrite and pyrite. The strongest concentration of chalcopyrite is in trench # 7. The highest gold assay returned 240 ppb and the highest copper assay returned 2.48%. The pervasive distribution of low gold

values would seem to indicate the presence of a gold-bearing system within the fault zone under the Montreal River. (see report annex. (" ") F/NAL SYBMISSION OD92-520521

Ed Chartre of Services Explorations Enrg. carried a magnetometer survey on the Chartre-Dufresne Cairo Property with the purpose of outlining fault zones as possible prospecting targets. 2.8 line km were covered using an Exploraniun G-816 proton magnetometer on claims 1179886, 1179887 and 1179890. The results show two northwest trending faults. These two fault zones appear to be good targets for systematic prospecting in order to find more information regarding the presence of gold-bearing structures. (see report annex  $\#_{iNAZ}^{*}$ ) SUBMISSION OP 92 -520 92 - 52/

Howard Lovell, former geologist with M.N.D.M. visited the property three times and provided interesting observations. Howard explains that in as much as the chalcopyrite-bearing quartz-carbonate veins fill fractures in this diabase, perhaps the chalcopyrite originated post diabase or was remobilized from older basement rocks by the intruding diabase. The chalcopyrite in the serpentinite along one claim length of the Montreal River shore between high and low water levels tends to occur along the numerous slip planes and as fracture fillings both accompanying quartz gangue and silicification, and also as chalcopyrite alone. Howard suggests that diamond drilling should take into account the cliff under the Montreal River below the low water level. (See report annex (" ")

FINAL SUBMISSION OP 92-520 OP 92-521 General note:

In the Matachewan area gold is associated with pyrite and chalcopyrite (copper) found in quartz veins cutting symmite. In the G. Sunisloe claim group, copper was reported as being found at the contact of sheared mafic intrusive rocks with granitic intrusive rocks. Recommendations and Conclusions

The current prospecting program undertaken by D. Chartre and R. Dufresne included the stripping and trenching of 4 different sites along a ridge which parallels the Montreal River. All of the observed quartz-carbonate veins have been sampled and assayed for gold. Most of the samples assayed returned values ranging from 0.01 to 0.15 gr/T.

The presence of low gold values within most quartzcarbonate veins, strongly suggests the occurerence of a favourable gold-bearing environment.

It is recommended that a continued exploration program be implemented.

The V.L.F. electromagnetic conductor may indicate the presence of a fault or shear zone.

The magnetometer survey has outlined numerous magnetic anomalies of random distribution probably caused by the variable concentrations of disseminated magnetite within the mafic intrusives of the area.

The V.L.F. electromagnetic survey has defined a north-south trending conductor near the river's edge.

It is recommended that an induced polarization survey be undertaken on the property in an attempt to outline zones of sulfide concentrations.

(1) S. (1997) Addition of the second seco



# Swastika-Laboratories

A Division of TSL / ASSAYERS INC.

Assaying - Consulting - Representation

# 1.

# Assay Certificate

3W-2564-RA1

Date: OCT-06-93

Company:	ROGER DUFRESNE
Project:	OPAP/93 CAIRO TOWNSHIP
Attn:	

We hereby certify the following Assay of 29 ROCK samples submitted SEP-27-93 by .

Samp I e	Au	Au	Au	Au	Ag	Cu	
Number	g/tonne	oz/ton	g/tonne	oz/ton	oz/ton	%	
17651	0.11	.003	0.11	. 003	0.01	0.77	
17652	0.01	.001					
17653	0.01	.001					
17654	0.02	.001			0.01	0.23	
17655	0.02	.001			0.01	0.24	
17656	0.01	.001					
17657	0.01	. 001			0.01	0.34	
17658	0.02	. 001			0.01	0.33	
17659	0.04	. 001					
17660	0.03	.001					
17661	0.01	.001			0.01	0.04	
17662	0.03	.001	0.03	.001			
17663	0.02	. 001			0.01	0.12	
17664	0.02	.001					
17665	0.03	.001			0.01	0.91	
17666	0.02	.001			0.01	0.87	
17667	0.01	.001			0.01	0.38	
17668	0.02	.001					
17669	0.15	.004	0.13	.004			
17670	0.02	.001				0.27	
17671	0.02	.001					
17672	0.02	.001					
17673	0.02	.001	×				
17674	0.01	.001					
17675	NIL						
17676	NIL						
17677	0.02	. 001					
17678	NIL						
17679	0.02	.001	0.02	.001			

Certified by Devir chan

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300 Swastika Laboratories P.O. Box 10 Swastika, Ontario P0K 1T0

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SHIP TO:

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R. Dufresne 14 Wright-Hargreaves Ave. Kirkland Lake, Ontario P2N 1B2

#### GST Number: R132862640

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	GP	UNIT PRICE	AMOUNT
	29 10 11 29	Code 1 Code 1 Code 1 Code 4	Au Assays Ag Assays Cu Assays Sample Prep Cert #3W-2564-RA1	3 3 3 3	8.000 2.500 1.250 3.000	232.00 25.00 13.75 87.00
			Less 10% Discount 3-GST @ 7 % SWASTIKA LABORATORIES	З		38.28 22.36
comments: Net 30 I	Days		PERDUkauder		TOTAL 🖡	341.83

# SERVICES EXPLORATION SERVICES

765, BOUL. QUÉBEC C.P. 428 Rouyn-Noranda, P.Q. J9X 5C4

Code: \_

TÉLÉPHONE: (819) 797-0853 1-800-567-6053 FAX: (819) 797-1848 1-800-661-1848

Levés géophysiques Levés géologiques Jalonnement de claims Dessin et reproduction Coupage de lignes Programmes d'exploration Ventes d'articles d'exploration minière

Geophysical Surveys Geological Surveys Claim staking Drafting and Reproduction Line Cutting n Exploration Programmes Sales of mining exploration articles

En compte avec:	Denis Chartré						
in account with.	Box 53						
	Swastika, Ont.	IN VOICE	7573				
	POK 1TO						

Projet: CAIRO TWP. Date NUMERO DU CLIENT Project: \_\_\_\_\_\_ CAIRO TWP. \_\_\_\_\_\_

	DESCRIPTION		PRIX UNITAIRE UNIT PRICE	TOTAL
	Magnetometer Survey:	2.7 Km	\$ 65.00	\$ 175.50
1	V L F Electromagnetic S	urvey: 4.6 Km	\$ 65.00	\$ 299.00
				\$ 474.50
		GST		\$ 33.18
T.V.P./P.S.T.: Q-10-	301906 0169-9225 TV 0001 THANK VOLL		TOTAL	\$ 507.68

TERME: NET 30 JOURS TERMS: NET 30 DAYS

COPIE DU CLIENT

SEDVICES	FXPLORATION SERVICE	TÉLÉPHONE: (819) 797-0853 1-800-567-6053	FAX: (819) 797-1848 1-800-661-1848
SERVICES EXTEROTION SERVICES Regis 765, BOUL. QUÉBEC C.P. 428 ROUYN-NORANDA, P.Q. J9X 5C4		Levés géophysiques Levés géologiques Jalonnement de claims Dessin et reproduction Coupage de lignes Programmes d'exploration Ventes d'articles d'exploration minière	Geophysical Surveys Geological Surveys Claim staking Irafting and Reproduction Line Cutting Exploration Programmes Sales of mining exploration articles
En compte avec In account with	c: Denis Chartré	r	
	Box 53	FACTURE -7	571
Swastika, Ont.		INVOICE I	574
	POK 1TO		
		Dec. 30,1993	NUMERO DU CLIENT CUSTOMER NO.
Projet:	CATRO TWP.	N° COM	MANDE

Code: \_\_\_\_

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Projet: CAIRO TWP.

Geological Mapping & Report on Prospecting Program (OPAP) & 750.00 G S T \$ 52.50	DESCRIPTION	PRIX UNITAIRE UNIT PRICE	TOTAL
Geological Mapping & Report on Prospecting Program (OPAP) & 750.00 G S T \$ 52.50			
Geological Mapping & Report on Prospecting Program (OPAP) G S T \$ 52.50			
Prospecting Program (OPAP) <b>G</b> S T <b>S</b> 52.50	Geological Mapping & Report on		
G S T \$ 52.50	Prospecting Program (OPAP)		
G S T \$ 52.50			\$ 750.00
G S T \$ 52.50			
	GST		\$ 52.50
T.P.S./G.S.T.: R105801906	L. T.P.S./G.S.T.: R105801906	TOTAL	
THANK YOU 101AL \$ 802.50	THANK YOU	IUTAL	\$ 802.50

TERME: NET 30 JOURS TERMS: NET 30 DAYS ٠

PURCHASE ORDER NO.

p.40





ANNEX "B"



# Laboratoires Chemex Ltee.

Essayeurs \* Geochimistes \* Chimistes Analytique 175 Boul, Industriel C.P. 284, Rouyn, Quebec, Canada J9X 5C3 PHONE: 819-797-1922

HOMESTAKE MINERAL DEVELOPMENT COMPANY

2116 - 120 ADELAIDE ST., W. TORONTO, ON M5H 1T1

Project : 5700 Comments: ATTN: DAVID BENDING Page N Total Pages :1 :1 Certificate Date: 25-AUG-92 Invoice No. : 19219251 P.O. Number : Account HRD

**CERTIFICATE OF ANALYSIS** A9219251 Cr203 **si02** PREP 1203 CaO Fe203 **K20** Mg0 Man Ma20 P205 TiO2 LOI TOTAL SAMPLE CODE ٤. \* £. ٩. ٤. ٩. \* ٩. ٩. CHA-2 208 274 7.63 1.53 0.13 19.10 0.05 9.52 0.09 0.06 0.57 51.51 0.80 4.79 95.77 CAIRO ait

CERTIFICATION:



# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers 5175 Timberlea Blvd., Mississauga, Ontario, Canada L4W 2S3 PHONE: 416-624-2806 ) o: HOMESTAKE MINERAL DEVELOPMENT COMPANY

2116 - 120 ADELAIDE ST., W. TORONTO, ON M5H 1T1 Page | )er :1 Total F. & :1 Certificate Date: 14-AUG-92 Invoice No. : 19219250 P.O. Number : Account :HRD

. . . . . . . . .

Project : 5700 Comments: ATTN: DAVID BENDING

						CERTIFIC	AIEOF	ANALYSIS	5 A9	219250	
BAMPLE	PREP	Au ppb FA+AA	Au FA g/t								
DE1-1 DE1-2 DE1-3 DE2-1 DE2-2	212 270 212 270 212 270 212 270 212 270 212 270	355 >10000 185 195 70	0.4 44.1 								
CD1-1 CD1-2 CD1-3 CD1-4 CD1-5	212 27 212 27 212 27 212 27 212 27 212 27	15 1030 145 430 15	1.1  0.4								
CD1-6 CD1-7 CD1-8 CD1-9 CNA-1	212 27 212 27 212 27 212 27 212 27 212 27 212 27	175 8640 3370 40 10	7.8 3.2								
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CERTIFYATA flexande



# Swastika Laboratories

A Division of Assayers Corporation Ltd.

### Assaying - Consulting - Representation

Established 1928

## Assay Certificate

#### 1W-4108-RA1

Company: ROGER DUFRESNE Project: Attn: Date: OCT-03-91

Copy 1. 14 Wright-Hargraves,,Kirkland Lake.

We hereby certify the following Assay of 2 rock samples submitted OCT-02-91 by.

Sample Number		Au oz/ton	Au check oz/ton	Au 2nd oz/ton	Cu %	
AA-1 AA-3	<b></b>	0.044 0.052	- 0.042 0.062	0.051	3.74 2.23	

indula Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300



# SERVICES EXPLORATION SERVICES Enr.



Š

765, BOUL. QUÉBEC C.P. 428 ROUYN-NORANDA, P.Q. **J9X 5C4** 

Line Cutting

Drafting and Reproduction Services Claim Staking Geophysical Surveys Geological Surveys Exploration Programmes Sales of mining exploration articles



41P15NE2001 OP93-375 CAIRC

Dessin et Reproduction

Jalonnement de Claims

Programmes d'Exploration

Coupage de Lignes

Levés Géophysiques

Levés Géologiques

Vente d'articles d'exploration minière

020

## PROSPECTING PROGRAM

### CHARTRE-DUFRESNE OPAP PROJECT

CAIRO TWP. PROPERTY

October 1993 TABLE OF CON



41P15NE2001 OP93-375 CAIRO

020C

I	-	INTRODUCTION	P	1
II	-	PROPERTY	Р	1
III	-	LOCATION & ACCESSIBILITY	Р	2
IV	-	PROSPECTING PROGRAM	Р	2
v	_	CONCLUSIONS & RECOMMENDATIONS	Р	5

## APPENDIX

A - Assay results

MAPS

1	-	Claim Map	1"	=	1/2	mi
2	-	General Geology Map	1"	=	1/2	mi.
3	-	Location Map	1"	=	2 m <sup>-</sup>	i.
4	-	Location Map	1:	1 6	500 (	000

SERVICES EXPLORATION ENRG.

I - INTRODUCTION:

This report, written at the request of D. Chartré and R. Dufresne, describes the prospecting carried out on the CHARTRE-DUFRESNE Cairo township property during the months of August, September and October, 1993.

The stripping, trenching and sampling programs were carried out within the framework of an OPAP project, in an attempt to locate and re-evaluate old trenches and pits.

II - <u>PROPERTY</u>: The CHARTRE-DUFRESNE property consists of 7 contiguous 16 hectare claims which are numbered as follows:

> 1179885 - 1179886 - 1179887 - 1179888 - 1179889 1179890 - 1185634.

The prospecting referred to in this report was carried out on claims 11179887 and 1179890.

The claim group is located in the southwest quadrant of Cairo township at an approximate distance of 1/2 mile east of the town of Matachewan, Ontario.

From Matachewan, the claim group may be reached by travelling along highway 66, eastwards, for a distance of 1 mile to a river access point - then the claim group may be reached by crossing the river by boat.

#### **IV - PROSPECTING PROGRAM:**

#### a) Stripping & Trenching:

A total of 4 sites have been stripped and trenched, exposing old trenches and pits and also fresh rock exposures along a ridge parallel to the shore of the Montréal River, on claims 1179887 and 1179890. (see accompanying map for location).

The stripping was done manually by clearing areas of vegetation and then by cleaning rock surfaces by using a fire hose.

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#### b) <u>Geology</u>:

The exposed rock surfaces and local outcrops indicate the presence of granodiorite with dioritic phases.

The <u>granodiorite</u> is greyish pink in colour with a buff altered surface. This rock type has a coarse granitic texture and contains the following minerals:

-	feldspars	40%
-	amphibole-pyroxene	15%
-	quartz	15%
-	biotite	5%

accessory minerals include hematite,
magnetite and pyrite.

The <u>diorite</u> has a dark greyish-green colour and a greyish-green alte red surface. Its mineral composition is similar to that of the granodiorite, however, quartz is usually absent.

c) Structure.

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Only a few minor shear zones have been observed on the exposed rock surfaces; these usually strike at  $50^{\circ}$ 

#### d) Economic Geology:

The numerous fractures and shear zones observed are usually host to quartz-carbonate veins; these are usually short, in the range of 1 to 4 meters. Their widths vary from a few mmm to 25 cm.

Most of the veins contain disseminated pyrite, chalcopyrite and hematite.

The highest gold value assayed 0.15 g/T and the highest copper value assayed 0.91% Cu/T.

e) Sampling:

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Samples of mineralized quartz-carbonate veins were taken randomly within the stripped and trenched areas.

The location, the sample no and assay results are of each sample are indicated on accompanying maps.

A total of 29 samples have been assayed for gold. Of these, 11 have also been assayed for silver and copper. Assay results are tabulated on Appendix "A" of this report. The current prospecting program undertaken by D. Chartré and R. Dufresne included the stripping and trenching of 4 different sites along a ridge which parallels the Montréal River. All of the observed quartz-carbonate veins have been sampled and assayed for gold. Most of the samples assayed returned values ranging from 0.01 to 0.15 gr/T.

The presence of low gold values within most quartzcarbonate veins, strongly suggests the occurrence of a favourable gold-bearing environment.

It is recommended that a continued exploration program be implemented.

Respectfully submitted:

SERVICES EXPLORATION ENRG

E. Chartré, B.A., B.Sc.\_\_\_\_\_

#### Oct. 30, 1993



# Swastika Laboraturies

A Division of TSL / ASSAYERS INC.

Established 1928

Assaying - Consulting - Representation

# Assay Certificate

3W-2564-RA1

Date: OCT-06-93

Company: ROGER DUFRESNE Project: OPAP/93 CAIRO TOWNSHIP Attn:

We hereby certify the following Assay of 29 ROCK samples submitted SEP-27-93 by.

Sample	Au	Au	Au	Au	Ag	Cu	
Number	g/tonne	oz/ton	g/tonne	oz/ton	oz/ton	%	
17651	0.11	.003	0.11	.003	0.01	0.77	
17652	0.01	.001					
17653	0.01	.001					
17654	0.02	.001			0.01	0.23	
17655	0.02	.001			0.01	0.24	
17656	0.01	.001					
17657	0.01	.001			0.01	0.34	
17658	0.02	.001			0.01	0.33	
17659	0.04	.001					
17660	0.03	.001					
17661	0.01	.001			0.01	0.04	
17662	0.03	.001	0.03	.001			
17663	0.02	.001			0.01	0.12	
17664	0.02	.001					
17665	0.03	.001			0.01	0.91	
17666	0.02	.001			0.01	0.87	
17667	0.01	.001			0.01	0.38	
17668	0.02	.001					
17669	0.15	.004	0.13	.004			
17670	0.02	.001				0.27	
17671	0.02	.001					
17672	0.02	.001					
17673	0.02	.001					
17674	0.01	.001					
17675	NIL						
17676	NIL						
17677	0.02	.001					
17678	NIL						
17679	0.02	.001	0.02	.001			

Certified by Denir chanto









# SERVICES EXPLORATION SERVICES Enrog.

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765, BOUL. QUÉBEC C.P. 428 ROUYN-NORANDA, P.Q. J9X 5C4

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#### GEOPHYSICAL SURVEYS

## CHARTRE-DUFRESNE OPAP PROJECT

#### CAIRO TWP. PROPERTY

December 1993



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#### 5NE2001 OP93-375 CAIRO

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MAPS

V - CONCLUSIONS & RECOMMENDATIONS

1-Coloured Magnetic Map	1:5 000
2-Claim Map	1"=1/2 mi.
3-Location Map	1"= 2 mi.
4-Location Map	1:1 600 000

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I - INTRODUCTION:

At the request of D. Chartré and R. Dufresne, a 1992 magnetometer survey was extended and a V.L.F. electromagnetic survey was undertaken on the criginal 1992 grid and also on the 1993 grid extension. The surveys were carried out during the fall of 1993, by Exploration Services Reg'd, on the CHARTRE-DUFRESNE Cairo township property.

The surveys were undertaken in an attempt to outline fault zones as potential prospecting targets.

II - <u>PROPERTY</u>: The CHARTRE-DUFRESNE property consists of 7 contiguous 16 hectare claims which are numbered as follows:

SERVICES EXPLORATION ENRG.

1179885 - 1179886 - 1179887 - 1179888 - 1179889 1179890 - 1185634.

III - LOCATION & ACCESSIBILITY.

The claim group is located in the south-west quadrant of Cairo township at an approximate distance of one half mile east of the town of Matachewan, Ontario.

From Matachewan, the claim group may be reached by travelling eastwards along highway 66 for a distance of 1 mile to a river access point - then by crossing the Montréal River by boat.

#### IV - GEOPHYSICAL SURVEYS:

The geophysical surveys were carried out along a grid which was partially cut in 1992 and extended in 1993. The 900 meter long base line of this grid trends northsouth. Cross lines extend westwards to the shore of the Montréal River. The lines occur at every 100 meter intervals. A total of 2.8 line Km were cut in 1992 and an additional 2.7 Km were cut in 1993.

#### Magnetometer Survey:

- Instrumentation:

An Exploranium G-816 proton magnetometer was used for the survey; readings were taken at every 12.5 meter intervals.

- Data Presentation:

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The magnetmeter data were plotted on a map at the scale of 1:2 500 and magnetic contour lines were

drawn at every 100 gamma intervals from 0 to 100 gammas, at every 200 gamma intervals from 1000 to 2000 gammas and at every 1000 gamma intervals for values beyond 2000 gammas.

A coloured magnetic map was also drafted at the scale of 1:5 000.

#### - Interpretation:

Strong magnetic anomalies have been observed throughout the surveyed area - the shape, size and distribution of the anomalies are irregular. Variable concentrations of disseminated magnetite are the probable cause of the random patterns. The magnetite is contained in the diorite and granodicrite intrusives

#### V. L . F. Electromagnetic Survey:

#### - Instrumentation:

A Geonic's EM-16 V.L.F. electromagnetic unit was used for the survey. Readings were taken at every 25 meter intervals tuned to station NSS.

- Data Presentation:

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The EM data were plotted on a map at the scale of 1:2 500. In-phase and out-of-phase profiles were drafted at the scale of 1 cm = 10%.

#### - Interpretation:

A <u>V L F</u> electromagnetic conductor has been oulined by the river's edge, trending in a north-south direction, between line 7S and line 9S.

This conductor may indicate the presence of a fault or shear zone - it could also indicate the presence of sharp topographical features.

#### V - CONCLUSION & RECOMMENDATION:

The <u>magnetometer</u> survey has outlined numerous magnetic anomalies of random distribution - these are probably caused by the variable concentrations of disseminated magnetite within the mafic intrusives of the area.

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The  $V \perp F$  electromagnetic survey has defined a northsouth trending conductor near the river's edge.

It is recommended that an induced polarization survey be undertaken on the property in an attempt to outline zones of sulfide concentrations.

Respectfully submitted,

101 E. Chartré, B.A., B.Sc.

December 30, 1993





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HO



41P15NE2001 OP93-375 CAIRO

900

NTS 42A/02

November 10, 1992

Roger Dufresne 14 Wright - Hargreaves Kirkland Lake, Ontario P2N 1B2

Dear Roger:

RE: YOUR HOLMES AND CAIRO PROPERTIES

It was a pleasure to meet with you and discuss your property last week. I hope that the analyses and comments are of some value to you. Your property is well located and warrants further exploration work, but Homestake is terminating exploration activity in the area and will not conduct further investigations.

I enclose for your convenience a general compilation map of the area. This map is based on work by Len Cunningham, published maps by Howard Lovell, and reports by Pamourex. It is quite generalized but may help you in your discussions of the property. It is not confidential but has not been distributed to the other parties active in the area.

As part of your continuing exploration strategy, I suggest that you examine the area in syenite along the Wiley Fault and the area of high magnetic response (shaded on the compilation map) in syenite immediately south of the Brookbank gold occurrence. It is possible that these areas will host gold mineralization not tested by your work to date.

Thank you for your interest and cooperation. Best of luck in your continuing exploration activities.

Sincerely,

David A. Bending Senior Geologist

HOMESTAKE CANADA LTD. #2116 - 120 Adelaide Street West • Toronto • Ontario M5H 1T1 Canada (416) 366-4432 • Fax (416) 366-3979

ANNEX D"





1.1

TRIM LINE

FLOODING OR FLOODING RIGHTS SUBDIVISION OR COMPOSITE PLAN **DISPOSITION OF CROWN LANDS** SYMBOL 🕑 or 🌰 PATENT, SURFACE & MINING RIGHTS . , SURFACE RIGHTS ONLY ..... , MINING RIGHTS ONLY LEASE, SURFACE & MINING RIGHTS .....

TRIM LINE

00 ۲ CANCELTED SAND & GRAVEL () **DOTE:** MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1. (2 KM) DATE OF ISSUE JUN 0 9 1998

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Ministry of Ministry of Northern Development Resources and Mines

محصف الهيدي المالية الوالعودة فيهرين الرابي وتترويا التولوع والبيار

CIRCULATED JANUARY 17, 1995 ML

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	g / tonne	Cu %
• 17669	0.15	NIL
<ul><li>● 17670</li></ul>	0.02	0.27
• 17671	0.02	NIL
• 17672	0.02	NIL
• 17673	0.02	NIL
• 17674	0.01	NIL

• - -.•













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ALL READINGS IN RANGE OF 58,000 GAMMAS





