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#### SPIDER RESOURCES INC. KWG RESOURCES INC. FREEWEST RESOURCES INC.

#### McFAULDS LAKE JOINT VENTURE PROPERTY

#### NI 43-101 TECHNICAL REPORT

ON

THE BIG DADDY CHROMITE DEPOSIT AND ASSOCIATED Ni-Cu-PGE

#### JAMES BAY LOWLANDS, NORTHERN ONTARIO

March 31, 2009

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### 1.0 SUMMARY

#### 1.1 TERMS OF REFERENCE, PROPERTY DESCRIPTION & OWNERSHIP

The Spider-KWG-Freewest Joint Venture (SKF JV) represented by Messrs. Neil Novak (President of Spider), Frank Smeenk (President of KWG) and Mackenzie Watson (President of Freewest) commissioned Micon International Limited (Micon) in January, 2009 to complete a NI 43-101 compliant Technical Report on the Big Daddy chromite deposit and associated PGE mineralization. This followed the completion of the SKF's preliminary exploration program on the deposit in December, 2008. Therefore the effective date of the data for this report is December 31, 2008.

The Big Daddy chromite deposit is located in the McFaulds Lake area in the James Bay Lowlands of north-central Ontario, some 255 km north of the town of Nakina. The property occupies the western extremity of the 7 Freewest JV claims which are under option to Spider Resources Inc. (Spider) and KWG Resources Inc. (KWG) from Freewest. The agreement stipulates that Spider and KWG may earn a 50 % interest in the 7 claims from Freewest by expending \$3 million on exploration over a four year period. On December 31, 2008, Freewest informed Spider and KWG that each company had earned a 25 % interest in the property (acknowledged by Spider on January 9, 2009). The JV partners may increase their stake to 60 % interest by delivering a bankable feasibility study on any mineralization discovered. They also have an option to increase their combined stake by another 5 % by arranging financing for Freewest to bring such mineralization into commercial production.

### **1.2 GEOLOGICAL OUTLINE**

Very little is known about the geology of this area from direct field examination as the bedrock is covered by glacial material and swamps. Nonetheless, an interpretation of aeromagnetic data from the Ontario Geological Survey (OGS) (2003) supported by isotope chemistry of a small number of drill core samples has elucidated the concealed geology. This interpretation suggests:

- A Basement Complex comprising greenstone belt rocks thought to be an extension of the Sachigo greenstone belt.
- A regional scale granodiorite pluton intruded into and causing the doming of the host greenstone rocks.
- A mafic ultramafic mantle-derived layered intrusion dubbed the Ring of Fire Intrusion (RFI), emplaced along the margin of the granodiorite. The RFI is magnetically distinct allowing it to be traced with minor interruptions for tens of km along the granodiorite margin.



The structure is not fully understood. However the interpreted morphology/geometry and younging direction suggest complex deformation/dislocation resulting in the intrusion being rotated in the clockwise direction by about 90 degrees.

The assemblage described above is partially overlain by Paleozoic Platform rocks of the James Bay Lowlands consisting of a poorly consolidated basal sandstone and mudstone overlain by muddy dolomite and limestone. The sedimentary pile is intermittently present in the immediate property area, but thickens appreciably (to greater than 100 m) to the east and north.

A persistent layer of glacial and periglacial sediments (Quaternary cover) caps the Platform rocks.

### **1.3 DEPOSIT TYPE**

#### Class

In the authors' opinions, the Big Daddy deposit is a stratiform chromite deposit which belongs to the magmatic Cr-Ni-Cu-PGE deposit type associated with layered maficultramafic intrusions. Examples include the Bushveld Complex in South Africa, the Great Dyke in Zimbabwe, the Stillwater Complex in Montana (USA), the Kemi in Finland, the Muskox Intrusion in the Northwest Territories (Canada), the Bird River Sill in Manitoba (Canada) and the Campo Formoso and Jacurici Valley in Brazil.

### **Genetic Model**

The stratiform chromite deposits are formed by magmatic segregation during fractional crystallization of mafic-ultramafic magma. All major deposits occur in Precambrian intrusions.

### **1.4 MINERALIZATION**

The chromite mineralization occurs as a distinct layer (massive to semi-massive cyclic unit) with a disseminated zone mainly in the footwall of the layer, and is hosted in a highly magnetic peridotite unit. The magnetic nature of the peridotite host rock can be used as an indirect means of locating the chromite mineralization. The association of chromite mineralization with peridotite is almost universal. However, in some intrusions, pyroxenite and anorthosite can also be host rocks.

The chromite grades based on current limited drill hole information are as specified below:

- Massive type:  $30 \text{ to } 40 \% \text{ Cr}_2\text{O}_3$ .
- Semi- massive to disseminated type: 20 to 30 % Cr<sub>2</sub>O<sub>3</sub>.
- Disseminated type: 5 to 20 % Cr<sub>2</sub>O<sub>3</sub>.



The thickness gradually decreases down dip.

It is important to note that magmatic stratiform chrome deposits are usually accompanied by Ni-Cu-PGE mineralization and this is also applicable to the Big Daddy deposit. The Ni-Cu-PGE mineralization may occur within the chromite zone or as a separate layer above or below the chromite mineralization. More detailed investigations are required to determine the nature and extent of the Ni-Cu-PGE mineralization both within and without the chromitite layers, particularly in the hanging wall pyroxenite.

### **1.5 EXPLORATION CONCEPT**

Due to the swampy nature of the project area and the concealed bedrock, the SKF JV's planned delineation exploration program will be based mainly on the geophysical characteristics of the host rock and deposit/mineralization.

The peridotite unit which hosts the chromite mineralization is highly magnetic allowing it to be traced with minor interruptions for thousands of metres along the granodiorite margin. Thus a detailed ground magnetic survey will be an indirect method of defining the potential for chrome mineralization.

The relative high density of chromite (3.8 to 4.9) allows for the use of gravity surveys to directly map and trace the massive chromitite layers along strike. This direct technique will significantly reduce the amount of drilling required to delineate the deposit.

For the ultimate determination of resources, a drilling program will be conducted to establish the grade(s) and depth extension.

Based on the mineralization/deposit characteristics outlined above, Micon endorses the SKF JV's delineation exploration program as summarized in Table 20.1. In addition, Micon recommends that geotechnical studies be initiated now to run concurrently with the next drilling phase.

### **1.6 INTERPRETATION AND CONCLUSIONS**

The intrusion hosting the Big Daddy chromite deposit and the associated PGE mineralization has been faulted, dislocated and transposed about 90 degrees in the clockwise direction. This is based on the evidence of drill hole FW-08-07 which shows the fractionation trend ending in gabbro-norite. Following the transposition, the chromite zone and the encompassing lithological units are steeply dipping to the southeast.

Based on the magnetic signature of the peridotite host rock the chromite mineralization has an inferred strike length on the property of about 2 km. An analysis of the drill hole sections (Figures 10.3 to 10.7) shows that the main zone of chromite mineralization decreases in thickness along strike from the northeast to the southwest and down dip with increasing depth. The decrease is more rapid along strike as evidenced by the abrupt thinning of the



massive/semi-massive chromite zone from >15 m in Figure 10.4 to <5 m in Figure 10.3 over a lateral distance of only 100 m. This suggests a termination of the main chromite zone at approximately line 800E (Figure 10.8) and is corroborated by the termination of the magnetic anomaly (Figure 10.1). The difference in elevation of the massive chromite in Figures 10.4 and 10.5 is attributed to a fault as depicted in Figure 10.8.

Based on extrapolations of the drill hole sections (Figures 10.4 to 10.7) combined with the interpreted geometry of the long section (Figure 10.8), the lower limit of the mineralization at its deepest point is estimated to be between 500 m and 700 m. However, this remains to be substantiated by deeper drilling. The Mag 3D inversion conducted by Cavén (December, 2008) demonstrated that "the magnetic host rocks appear to be limited in their depth extent".

The PGE minerals encountered just below the massive chromite (in the stratigraphic footwall) may be due to volatile-induced partial melting of cumulates giving rise to constitutional zone refining. However, this is a hypothesis at this time as more evidence needs to be gathered. In any case, it is the PGE zone encountered above the chromitite layer in pyroxenite that draws more attention as this would fit perfectly with the MSZ model of the Great Dyke, Zimbabwe. (See explanation/notes on Figure 8.3). Based on the drilling completed to date, no economic grade PGE's have been encountered in the massive/semi-massive chromite.

The coefficient of correlation between Pt and Pd based on 2,100 assays is 0.73 with a coefficient of determination of 0.53. Thus the presence of one of these elements can be used as a rough guide (path finder) as to the presence of the other. However, the correlation is not robust enough to enable the estimation of the actual values using assays of the other.

In so far as the chromite mineralization is concerned, the drilling to date has been localized and insufficient to determine either the potential size of the deposit or a meaningful resource estimate.

At this stage a variographic analysis cannot give tangible results due to the following limitations:

- Inadequate drill hole data (Note that only 13 intersections are available).
- Inadequate sample coverage of the potential deposit (The 13 intersections currently available are clustered in the south-western portion covering only 1/5 of the potential size of the deposit).

### **1.7 RECOMMENDATIONS**

Micon recommends that a proper database of the completed drilling be compiled in preparation of an eventual resource estimate. This will entail the down-hole re-surveying all the drill holes using gyroscopic instruments which are not susceptible to magnetic interference.



In view of the remoteness and lack of infrastructure of the SKF JV area, the overall (global) size of the deposit will impact significantly in any future investment decision making process. Thus for the next phase of exploration, Micon recommends the following.

#### Definition of lateral limits and morphology of the deposit

Combined gravity and magnetic ground surveys at 100 m spacing between lines and 12.5 m between stations should be completed before the next stage of drilling commences. This will eliminate wasteful drilling and reduce associated drilling costs. The spacing between lines should be reduced to 50 m at or close to the zones where existing aeromagnetic data have shown major dislocations (see Figure 10.1). This is necessary for the accurate definition of fault positions prior to drilling.

Based on the continuity of the target zone(s) defined by the geophysical surveys, diamond drilling should be conducted initially at 200 m spacing between lines taking 2 holes per line at 150 m apart to define the lateral limit/extent and morphology of the deposit. Simultaneously this drilling will provide representative sample coverage of the deposit.

The 200 m spacing along strike is based on the authors' experience of lateral continuity of massive chrome layers while working on similar deposit types where such spacing would, in the absence of structural disruptions, yield an Indicated resource following a variographic analysis.

#### **Resource Definition Criteria**

Following the completion of the drilling mentioned above, a variographic analysis of the drilling results should be conducted to determine the optimum drilling grid for resource categorization. It must be noted that at this stage, adequate/representative sample coverage of the deposit would have been attained. It is possible that a resource might even be established if the continuity of the mineralization justifies it and therefore only minimal additional drilling may be required.

#### **Investigation of PGE Potential**

Despite the perceived financial constraints, Micon strongly recommends that the associated PGE potential of the Big Daddy chromite deposit be assessed. Pt analyses are expensive since gold is used as a collector for the bead. On the basis of a coefficient of correlation of 0.73 between Pt and Pd assays, Micon recommends using Pd to detect PGE enriched zones and thereafter restricting detailed PGE analyses to those zones.

At least one hole must be sampled at 1 m intervals over its entire length in order to establish with precision the stratigraphic horizon(s) at which PGE enrichment occurs. On the basis of these results, further work on PGE will be planned. However, in Micon's opinion, the real potential for PGE is in the pyroxenite unit which is in the hanging wall of the main Cr layer.



This is the zone/interval where fractional crystallization is likely to give rise to a PGE-rich layer not associated with the base of a cyclic unit (Example II in Figure 8.3).

A provision should be made for a change of scope in SKF JV's development budget should economic grades of PGE be encountered in this exercise.

#### Follow-up on unexplained EM anomalies

Whilst current exploration efforts are on chrome and associated PGE, the potential for other deposit types should not be overlooked, particularly MMS (which might occur in the same peridotite unit hosting the chrome mineralization) and VMS type deposits in the eastern segment of the SKF JV area. Freewest's and Noront's MMS discoveries in peridotite (see Section 15) lend support for follow-up work on EM conductors.

#### Investment in Quality Assurance(QA)/Quality Control(QC)

In preparation of a NI 43-101 compliant resource estimate, it is imperative that strict levels of QA/QC procedures be put in place immediately and maintained.

Logging of the holes should be conducted using a bar coding system to ensure uniformity in defining geological boundaries.

Appropriate survey equipment and procedures should be put in place before the commencement of the next drilling program. The grid lines currently being cut in preparation for ground geophysics must also be surveyed and tied to the national grid.

Purchase or manufacture of certified reference materials is a necessary prerequisite to conducting any further analyses of samples.

The budget for sample analyses should include provision for:

- Repeat analyses at an ISO certified laboratory (10 % of the total project samples).
- Use of control samples (at least one each of a blank, a certified standard, a duplicate sample and an in-house standard in every 25 samples).
- Petrological and mineralogical studies by independent consultants to help explain the metallurgical aspects of the deposit.
- Bulk metallurgical tests using the appropriate coarse assay rejects.

In the case of blank samples, it is recommended that the blanks must look like the rest of the samples and not be in powder form. If the blanks are already crushed and pulverized, they will escape the critical test at the crushing stage.



### **Preparations for Resource Modelling**

Micon recommends that all future sampling programs related to chromite mineralization be categorized or placed into domains as follows:

- Disseminated mineralization.
- Semi-massive mineralization.
- Massive/lumpy mineralization.

Contacts between the different types of mineralization must not be crossed when selecting samples, particularly where the massive chromitite layers are encountered. This will facilitate the definition of resources at different cut-off grades. The site geologist is encouraged to develop an appropriate coding system for these three categories of mineralization. The cores from the previous drilling program will need to be categorized in the same manner as cores from the forthcoming drilling campaign.

Density determinations must be conducted for each category of mineralization. A reputable laboratory can be used in conjunction with in-house efforts.

### Additional Staff and Drill Core Facilities

In Micon's opinion there is urgent need for the JV to engage a geotechnician to assist the site geologist with the following:

- Supervise drill rigs and ensure down-hole surveys are done properly.
- Supervise transportation and storage of drill core.
- Carryout geotechnical logging of drill core to establish RQD, etc. and take photographs of the drill cores before logging and sampling by the geologist.

An investment in proper core shed facilities is highly recommended before the next phase of drilling commences. It will not be possible to put every piece of core under roof and lock but it is imperative to have half or quarter core of all the intersections together with at least 10 m each of the hanging wall and footwall in secure storage.

#### **Exploration Budget For 2009**

In pursuit of fulfilling the recommendations outlined above, the SKF JV has planned to spend a total of approximately CAD \$5.8 million in two phases. Phase I (\$0.8 M) will focus on (a) activities relating to and incorporating detailed ground geophysical surveys, (b) development of standard logging procedures plus drill hole survey checks/corrections and (c) preliminary metallurgical test work. Phase II (\$5.0 M) primarily consists of delineation drilling including pilot metallurgical testwork and mineral resource development. Details on the breakdown are shown in Table 20.1.



Micon endorses this budget in its entirety as it believes that it will define the lateral limits and morphology of the Big Daddy deposit not only in a systematic manner but also in the most cost effective way. Based on its own assessment, Micon also believes that the 2 km potential strike length of the Big Daddy chromite is worthy of further exploration.



### 2.0 INTRODUCTION

#### 2.1 BACKGROUND, AUTHORIZATION AND PURPOSE

Spider Resources Inc. (Spider) and KWG Resources Inc. (KWG) are joint venture partners on the Freewest Option mining claims comprising 78 claim units (nominally 16 ha) in the McFaulds Lake area in the James Bay lowlands of north-central Ontario. The agreement stipulates that Spider and KWG may earn a 50 % interest in the 7 claims from Freewest by expending \$3 million on exploration over a four year period. On December 31, 2008, Freewest informed Spider and KWG that each company had earned a 25 % interest in the property (acknowledged by Spider on January 9, 2009). The JV partners may increase their stake to 60 % interest by delivering a bankable feasibility study on any mineralization discovered. They also have an option to increase their combined stake by another 5 % by arranging financing for Freewest to bring such mineralization into commercial production.

The alliance amongst these three companies (Spider, KWG and Freewest) is hereinafter referred to as the SKF JV. Spider is the designated operator and Billiken Management Services Inc. conducts the work at Spider's direction. Exploration in the general area dates back to the mid-1990's during which time diamonds were the main target sought. As a direct consequence of a copper discovery made in 2002 during a De Beers drilling campaign for diamonds, the geological environment of the McFaulds Lake area emerged to be highly prospective for volcanogenic massive sulphide (VMS) base metal deposits. Thus the exploration emphasis immediately shifted to multi-metal base metal deposits, principally copper and zinc.

Following a detailed program of geophysical surveys (aeromagnetic, Aerotem, ground magnetics and HLEM surveys), a number of coincident EM and magnetic anomalies thought to be associated with VMS mineralization were established on the SKF JV property. Subsequent test drilling in 2006 on one of the high priority targets in the extreme western claim number 3012253 (Figure 4.1) culminated in the discovery of chromium associated with Ni-Cu-PGE mineralization. Follow-up drilling conducted in 2008 proved chromium mineralization over a strike length of 400 m and to a vertical depth of 300 m within an ultramafic-mafic intrusion. This discovery was subsequently dubbed the Big Daddy chromite deposit. None of the holes intersected the suspected VMS type mineralization. The location of the Big Daddy deposit is shown in Figure 2.1.

In January, 2009, the SKF JV partners represented by Messrs. Neil Novak (President of Spider), Frank Smeenk (President of KWG) and Mackenzie Watson (President of Freewest) contracted Micon International Limited (Micon) to prepare a technical assessment report to National Instrument 43-101 standards for the Big Daddy chromite occurrence based on the results of the drilling program ended in December, 2008.

### 2.2 PURPOSE

The purpose of this technical assessment report is threefold, viz:



- To substantiate the preliminary exploration work completed by the SKF JV leading to the discovery of the Big Daddy chromite deposit and the associated PGE mineralization and in so doing, to ensure that shareholders get an independent review of the company's activities.
- To support documents, which may be required by the Canadian regulatory authorities such as the filing of Annual Information Forms (AIF).
- To lend support to possible future financing efforts by the SKF JV partners.

The independent Qualified Persons responsible for the preparation of this report and for the opinion on the propriety of the proposed exploration program are Richard Gowans, P.Eng. and Charley Murahwi, P. Geo., MAusIMM. Both authors have previously spent several years working on Cr-Ni-Cu-PGE mineralization in layered intrusions, notably the Bushveld Complex and the Great Dyke in Southern Africa.

### 2.3 SOURCES OF INFORMATION

The sources of information for this report are detailed below, and include those in the public domain as well as personally acquired data.

- Data supplied by SKF JV personnel.
- Review of various geological reports and maps produced by the Ontario Geological Survey (OGS) or its predecessors, and the Geological Survey of Canada (GSC.).
- Discussions with SKF JV staff knowledgeable of the property.
- Research of technical papers produced in various journals.
- Independent analyses of quartered core samples.
- Independent repeat analyses of sample pulps (assay splits).
- Personal knowledge of Cr and Ni-Cu-PGE in layered intrusions and similar geological environments.

Micon is pleased to acknowledge the helpful cooperation of the SKF JV staff and management all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.



### 2.4 SCOPE OF PERSONAL INSPECTION

Micon visited the Activation Laboratory in Thunder Bay on January 10, 2009 and inspected the sample preparation facilities and analytical equipment. Following the laboratory inspection, Micon conducted a site visit to the Big Daddy chromite deposit project area from January 11 to 13, 2009 to review QA/QC (including sample security) procedures; verify drill hole collar positions and mineralization intercepts in drill cores; select sample pulps (assay splits) for repeat analyses and collect independent quarter drill core samples. In both instances, Micon was represented by Charley Murahwi who is the main author of this report.

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Figure 2.1 Location map of the Big Daddy Chromite Deposit



### 3.0 **RELIANCE ON OTHER EXPERTS**

Micon has read a copy of the original agreement between the SKF JV partners but has not verified the legality of any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties. Thus Micon offers no legal opinion as to the validity of the mineral titles claimed.

The existing environmental conditions, liabilities and remediation have been described under the relevant section as per the NI 43-101 requirements. However, the statements made are for information purposes only and Micon offers no opinion in this regard.

The general descriptions of geology and past exploration activities used in this report are taken from reports prepared by various reputable companies or their contracted consultants, as well as from various government and academic publications.

While exercising all reasonable diligence in checking, confirming and testing it, Micon has relied upon SKF JV's presentation of the project data from previous and on-going exploration programs.



### 4.0 **PROPERTY DESCRIPTION AND LOCATION**

#### 4.1 SIZE, LOCATION AND TENURE

The SKF JV claim area is composed of four 16 unit claims that equal 64 units, plus a 12 unit claim and 2 units, one each in claims 3012250 and 3012251, for a total of 78 units. The following description of property location is taken from a progress report by Novak (2006).

"The property is located approximately 20 km west-southwest of the McFaulds Lake discovery area in the James Bay Lowlands of Northern Ontario. Figure 4.1, shows the location of the claim group in northern Ontario, some 200 km west (or upstream) from the First Nation community of Attawapiskat on the western shore of James Bay, or conversely 80 km east of the First Nation community of Webequie. More specifically, using UTM coordinates it is centered upon 555000 m E 5845000 m N (NAD 83, Z 16)."

The JV project claim map is shown in Figure 4.1.



Figure 4.1 SKF JV Project Claim Map

The details of the SKF JV claims are given below in Table 4.1.



Claim Number	Claim Units	Date Staked	Date Recorded	Work Required	Total Work	Due Date**	Present Work Assign	Total Reserve	Area TWP	Status
2012250	1	Mar 20.02	Apr 22.02	\$4.040*	\$20.860	22 Apr 11	7070	0.2	BMA 527861	Activo
3012230	1	Iviai-29,03	Api 22,05	\$4,940	\$39,800	22-Api-11	Zelo	\$0	527601 RMA	Active
3012251	1	Mar-29,03	Apr 22,03	\$6,400*	\$32,000	22-Apr-10	zero	\$0	527861	Active
3012252	16	Mar-29,03	Apr 22,03	\$6,400	\$32,000	22-Apr,10	zero	\$0	BMA 527861	Active
3012253	16	Mar-26,03	Apr 22,03	\$6,400	\$32,000	22-Apr,10	Apr. 10 \$30,786 \$152,334 <b>527861</b>		BMA 527861	Active
3008268	16	Jul-27,03	11-Aug-03	\$1,395	\$37,005	11-Aug-10	zero	\$45,598	BMA 527861	Active
3008269	16	Jul-27,03	11-Aug-03	\$6,400	\$32,000	11-Aug-10	\$60,945	\$33,429	BMA 527861	Active
3008793	12	Aug 01,03	11-Aug-03	\$4,800	\$24,000	11-Aug-10	zero	0	BMA 527861	Active

 Table 4.1

 Spider – KWG – Freewest JV Project – Claim Details, 2009

Notes:

\* The amounts stated refer to the entire claim, not just the claim units that are part of the agreement.

\*\* Although the due dates for the claims are in 2010 and 2011, there are sufficient work credits to hold the claims for several more years. In addition, the work conducted in 2008 and not yet filed will be sufficient to hold the claims for many years thereafter.

Claims 3012250, 3012251, 3012252 and 3012253 are subject to 2 % Net Smelter Royalty.

#### 4.2 STATUS OF CLAIMS

The known mineral zones are discussed under the relevant sections of this report. Neither mineral reserves nor resources have been estimated. There has been no production from the property and as such there are no tailings dams or waste dumps.

For claims 3012250, 3012251, 3012252 and 3012253 there is a 2 % Net Smelter Royalty (NSR) payable to Richard Nemis (i.e. the vendor of the claims to Freewest). One half of the NSR (i.e. 1 %) may be bought back for \$1,000,000.

At the time of writing this report, the SKF JV property consists of staked claims only and there are no environmental liabilities. The SKF JV partners are undertaking basic exploration and are not aware of any other specific requirements at this stage.



### 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE

### 5.1 PHYSIOGRAPHY

The SKF JV project area lies along the western margin of the James Bay Lowlands, forming an almost perfectly planar topographic feature that slopes slightly eastwards (0.7 m/km). Major and secondary rivers incise shallow trenches into the soft marine clays that cover much of the Lowlands. Elevations in the project area are about 150 m ASL.

Drainage is poor due to the lack of relief; consequently inland areas remain water logged throughout the year. The perennially water logged surface makes effective surface travel impossible except during the winter months (December to March).

Missisa Lake, the largest fresh water lake in the area, lies near the southeast of the area. The Otoskwin-Attawapiskat River Provincial Park includes a 200 m wide band along both sides of the Attawapiskat River, located about 21 km to the east of the claim block. There is also a 1 km water reserve along the eastern part of the Attawapiskat River. The Attawapiskat Indian Reserve 91 lies along the Ekwan River in the north-central part, the Marten Falls Indian Reserve 65 lies in the extreme west-central part, and the English River Indian Reserve 66 lies in the extreme south part of the area.

### 5.2 RELIEF AND DRAINAGE

The SKF JV area is generally flat with a mean altitude of 150 m ASL. The ground rises from an altitude of 120 m in the northeast to 220 m in the west-central to southwest part. The local relief of the area is very low, generally less than 10 m. Streams and rivers are generally incised only 5 to 10 m below the surrounding terrain. Raised beach ridges form 1 to 2 m local topographic highs which are slightly better drained than the surrounding ground and support a local ecosystem. Throughout most of the general project area, the ground is poorly drained with abundant small ponds and creeks. The main rivers which drain the general area include, from south to north, the Albany River, the Atikameg River, the Attawapiskat River and the Ekwan River, all of which flow eastward into James Bay.

### 5.3 ACCESSIBILITY

The area is accessible by bush plane equipped with floats in the summer, or with skis or wheels during the winter to the McFaulds Lake camp. From the Billiken Management owned camp, a helicopter is required to access the area. It is feasible to use a skidoo in the winter but due to the long distance, only the helicopter is used to transport people or equipment and to conduct drill rig moves. In previous programs, fuel for the camp and helicopters, along with food and equipment, were flown into the camps. Garbage, empty drums and samples are flown out on the back-hauls. Charter air service is available from Nakina, 255 km to the south-southwest, and Pickle Lake, 400 km to the west-southwest. Since last year Charter flights can be procured from Webequie using West Caribou Air Service. Access for mineral exploration within the area is generally by helicopter and on foot, but most rivers and creeks



are navigable by canoe. People from the nearby communities commonly travel via the main rivers in large canoes in the summer and with snowmobiles in the winter on their hunting and fishing expeditions. The closest all weather road is in Nakina, but the winter road system which services the communities of Marten Falls, Webequie, Lansdowne House, Fort Albany and Attawapiskat, could be extended to give access to the area. In recent years, a side road to the winter road from Moosonee to Attawapiskat has been built to service the De Beers Canada Exploration Inc. Victor project mine site located approximately 100 km east of the property. Diamond drilling on most programs in the property area has been accomplished by utilizing a drill designed for moving with a helicopter. This drill could be moved for short distances by a Bell 206L helicopter, but an A-Star S350-BA is used to move the bigger drill being used on the project.

### 5.4 CLIMATE

The James Bay Lowlands of northern Ontario has a humid continental climate with cool summers and no dry season. The local climate is greatly affected by the proximity of the project area to Hudson Bay and James Bay. Commonly, the weather at the McFaulds Lake base camp is quite different from the weather to the south or west. Usually there are only one or two days per month when the weather is too foggy to work in the summer, or it is too stormy to work in the winter. The summer temperatures are generally between 10°C and 20°C with a mean July temperature of 13°C and a mean maximum summer temperature of 29°C. The extreme maximum summer temperature is 35°C. Winter temperatures are generally between -10°C and -30°C with a mean January temperature of -23°C and a mean minimum temperature of -45°C. The extreme winter minimum is -55°C; in January, 1996 the minimum recorded temperature in the area was -57°C. The period from mid-June to mid-September is generally frost free. Lakes start to freeze in mid-October and start to thaw in mid-April. The average annual precipitation is 610 mm with approximately 200 mm falling as 2 m of snow. Measurable precipitation falls on an average of 140 days during the year with snow falling on 70 of those days. The average maximum depth of snow on the ground is 750 mm. Winds are commonly strong and blow from the west to northwest in the winter and from the west to southwest in the summer. Easterly winds commonly bring fog from James Bay and are the precursors of bad weather. Fog is common in the early morning, but may last all day during the summer months.

### 5.5 VEGETATION

The SKF JV project area is in the Tundra Transition Zone. In the southern part of the general area, large black and white spruce (Picea glauca and mariana) and tamarack (Larix laricina) are fairly common, however, they become smaller toward the north where larger trees are restricted to narrow bands along rivers and creeks and on the well drained raised beaches. Trembling aspen (Populus tremuloides), balsam poplar (Populus balsamifera) and white birch (Betula papyrifera) are present to the south, but occur only on the driest sites in the northern part of the area. Willows (Salix) and alders (Alnus) are present along creeks and in poorly drained areas. North of the Attawapiskat River, tundra terrain and vegetation is prevalent; in this region, trees are very small or are not present.



### 5.6 FAUNA

Field personnel have observed beaver, black bear, otter, red fox, marten, wolf, moose and woodland caribou in the area. Muskrat and mink are also known to occur. Native hunting for food and furs is limited to areas that are accessible from the main rivers, but the harvest is for personal consumption and not commercial exploitation. Similarly harvesting of fish and birds is for personal consumption. Commercial (tourist) exploitation of the fauna as fishing and hunting camps is restricted to the land south of the Albany River. North of the Albany River, where most of the mineral exploration has taken place to date, a few fishing and hunting camps do exist, primarily along the major rivers and on Missisa Lake where float planes can land. Several hunting or fishing camps, probably used by the residents of Webequie, have been observed on some of the lakes in the general area. The Webequie First Nation is presently developing a tourist-fishing industry. A commercial fish farm was attempted at Missisa Lake but was a failure.

### 5.7 LOCAL RESOURCES

The local services available at Attawapiskat, Webequie and Marten Falls are limited, but include an airport, hospital, public schools, mail, telephone/facsimile, and various community stores and services. There are two hotels in Attawapiskat and one in Webequie. Hunting and fishing camps for both locals and tourists are present in the western and southern parts of the area. Attawapiskat is supplied by barge in the summer and all communities are connected to the south via winter roads in the winter, although the winter road to Ogoki is generally of poor quality and is not well maintained. None of the communities has a base for charter air service (West Caribou Air Service commenced operation in 2008 from Webequie) and hence cannot support field operations. Camp supplies and equipment are normally brought in through Nakina, Pickle Lake or if special arrangements are made, through Hearst.

### 5.8 SURFACE RIGHTS

The claim group has adequate ground to support an open pit, accommodation for mining personnel, and waste dumps. The area has plenty of water that could be used for mineral processing. Electrical power would have to be provided by on site generators. A winter road could easily be extended from Webequie but it would be better to build an all weather road from Nakina (located on the main CN rail line) about 300 km to the south. At the present time Noront (3.5 km to the west) is building an all weather landing strip several kilometres north of the Eagle One MMS copper-nickel and PGE deposit. A road could be built from the Big Daddy deposit to this landing strip which would be able to accommodate larger planes.

The First Nation community of Marten Falls Indian Reserve #65, located on the Albany River to the south of the project area, has traditional interests in the project area, that co-exist with the validly staked mining claims that were acquired under the guidelines of the Ontario Mining Act and its amendments. The First Nation interests consist of, but are not limited to,



trap-lines, hunting areas, fishing areas, burial sites, etc.. Other First Nation communities to the west and southwest of the project area, that are somewhat closer to the project area, also claim similar traditional pursuits, some of which overlap portions of the project area. At present, negotiations are underway to enter into early exploration agreements with each of the First Nation communities acknowledging the overlap concern, and Traditional Ecological Knowledge ("TEK") studies have been proposed. The communities and the Company are looking for government support to help sort out the demarcation of Traditional Territory for the affected communities.



### 6.0 HISTORY

#### 6.1 GENERAL

The exploration history of the James Bay Lowlands/McFaulds Lake area dates back to about 1886 when Robert Bell of the Geological Survey of Canada (GSC) mapped the geology along the Attawapiskat River from the James Bay coast inland past the McFaulds Lake area. Results of this exercise were published in Geological Survey of Canada, Annual Report, 1886, Volume II, Part G, pp. 1 – 39 and titled Report of an exploration of portions of the Attawapiskat and Albany Rivers, Lonely Lake to James Bay.

In about 1906 and also between 1940 and 1965, the GSC and the Ontario Department of Mines (ODM) undertook regional studies focused on (a) the petroleum potential of the sedimentary basins in Hudson and James Bays and (b) the potential for industrial and fuel minerals in the Moose River Basin.

Technical Reports filed on SEDAR by Howard Lahti for UC Resources Limited/Spider (2007) and by P & E Consultants Inc. for Noront Resources Limited (2008) describe early diamond exploration activities which were carried out intermittently between 1959 and 1988. However the most notable diamond exploration programs commenced in the early to mid-1990's when Spider/KWG employed a multi-disciplinary approach over the Spider number 1 and 3 areas which entailed a high resolution fixed wing magnetometer survey, helimag surveys over 48 selected airborne magnetic anomalies, stream sediment sampling, limited bedrock mapping, air photographs interpretation and diamond drilling. This work led to the discovery of the Good Friday and MacFayden kimberlites in the Attawapiskat cluster and the 5 Kyle kimberlites located to the east and northeast of the property.

In 2001, De Beers Canada Inc. (De Beers) optioned information regarding the Spider 3 area from Spider and KWG. In 2002, De Beers conducted a follow-up reverse circulation drill program on magnetic anomalies which culminated in the discovery of copper mineralization which was later delimited by Spider and KWG and named the McFaulds No. 1 VMS deposit. Subsequent work by Spider and KWG led to the discovery of the McFaulds No. 3 deposit and other related VMS occurrences. These VMS discoveries prompted the staking of claims in the McFaulds Lake area.

### 6.2 **DISCOVERY HISTORY**

The claims comprising the SKF JV area were staked on March 26, 29 and July 27, 2003 and recorded by John Weduwen on April 22 and August 11, 2003. They were transferred 100 % to Richard Nemis (175159) on April 22 and August 14 and he then had them transferred 100 % to Freewest Resources Canada Inc. Prior to the formation of the SKF JV between 2003 and 2005, Freewest accomplished the following work:

- Airborne EM and Magnetics.
- Establishing cut lines in Grids J and H (Figure 10.2).



• Groung HLEM, VLF and magnetics.

In December 2005, Spider and KWG signed an Option agreement with Freewest to explore the 7 claim property for VMS, MSS, chromite and PGE mineralization.

In 2003, Billiken Management staff reviewed a regional airborne survey completed by Fugro in the summer of 2003 that was immediately followed up by ground HLEM, VLF and magnetics surveys with the data interpreted by Scott Hogg & Associates. A number of the best geophysical targets where then chosen by Billiken for follow-up exploration after discussions with Scott Hogg & Associates staff and Freewest. A summary of the airborne and ground geophysical surveys is given in Table 6.1.

 Table 6.1

 Geophysical Surveys and Result on the JV Property

Date	Company	Type Of Survey	Results
2003	Scott Hogg (Flown by Fugro)	Airborne	Fugro flew the survey between July 27 and Aug 10. A total of 146 line km comprised the survey over the Freewest claims. The results were as follows: 9 EM anomalies were identified following a SW-NE trend. Many of the EM
			conductors are related to magnetic anomalies in ultramafic rocks or Iron Formation.

In the winter of 2006 Scott Hogg & Associates completed a detailed interpretation of the Fugro Airborne EM/Magnetic survey and delineated a number of targets for drilling (Figure 10.1). Three coincident EM/Mag anomalies were selected for the initial test drilling program. The drilling contract was awarded to Heath & Sherwood which subsequently drilled the targets using BQ size drill rods. Howard Lahti, Ph. D., P Geo. and James Burns, P. Eng. were the drill geologists working out of the McFaulds Lake camp, about 11 km to the east of the claim block. A summary of the drilling results follows. The claim blocks are shown in Figure 4.1. Collar positions of the early reconnaissance holes and those drilled in 2008 are shown in Figure 10.2.

### 6.2.1 FW-04-01 (claim 3008269)

This is the earliest reconnaissance drill hole in the SKF JV project area (Grid H) and was drilled in April 2004 well before the SKF JV was formed. The drill hole was collared at L37+00E 5+50S on Grid H and was drilled to test a moderate strength, short strike length Max Min anomaly that is bisected by a long linear magnetic feature. It intersected semi-massive pyrite from 96.5 m to 109.95 m and then disseminated pyrite (about 15 %) from 137.0 m to 149.25 m. These intersections where analyzed for Cu, Zn, Ag, and Au but yielded only trace amounts for all the four metals. Thus no follow-up drilling on this anomaly was justified.



### 6.2.2 FW-06-02 (Claim 3008269)

This is the SKF JV's pilot reconnaissance drill hole and was collared at L30+00E 9+00S on Grid H and inclined at -50° to the south. The total length drilled was 197 m. A 9.5 m wide intersection of 40 % to 50 % sulphides (VMS type) was intersected in a black, chloritic felsic tuff unit within a much broader muscovite alteration zone. Samples 261301 to 261325 were collected from the sulphide zone and sent to the ALS Chemex Laboratory in Thunder Bay. The sample pulps were forwarded to the ALS Chemex Laboratory in Vancouver for confirmation analyses (Novak, 2006). Only weak geochemically anomalous copper and zinc were detected in the sulphide zone. There was no further interest in this geophysical target.

### 6.2.3 FW-06-03 (Claim 3012253)

This hole was collared at L10+00E 15+25N and was inclined at -50° to the south. The total length attained was 353.5 m. The core did not intersect any sulphides or any other obvious conductor. The ubiquitous magnetite explained the magnetic anomaly. Instead of sulphides, two massive chromite bands were intersected, one at 153.27 m (1.03 m wide) and the second one at 159 m (0.85 m wide). The intersections assayed 22.7 %  $Cr_2O_3$  and 23.7 %  $Cr_2O_3$ , respectively. These were the first reported intersections of chromite in the greater McFaulds Lake area and the discovery would later be named the Big Daddy chromite deposit. In addition, there were samples with anomalous PGE values within and adjacent to the chromite layer (153.27 m to 154.30 m), assays of the total precious metals (TPM) comprising Pt, Pd and Au were 0.19 g/t and 0.41 g/t, respectively. The second (lower) chromite layer yielded 0.76 g/t TPM from 158.8 m to 159.05 m and 0.70 g/t from 159.05 m to 159.65 m. In addition to chromite, Pt, Pd and Au, selected samples were subsequently analyzed for the other PGE elements and yielded the results presented in Table 6.2

				$Cr_2O_3$	Pt	Pd	Au	Os	Ir	Ru	Rh
Sample	From	То	Length	%	ppb	ppb	ppb	pbb	ppb	ppb	ppb
261329	153.27	154.3	1.03	34.49	185	210	11	80	86	319	48.6
261418	158.8	159.05	0.25	24.85	261	490	12	79	58	316	69.9
261330	159.05	159.65	0.6	34.93	217	472	15	74	74	295	45.8
261422	162.5	164	1.5	7.40	77	152	11	25	10.4	101	17

Table 6.2Cr2O3 and PGE Analyses of Samples from Drill Hole FW-06-03

### 6.2.4 FW-06-04 (Claim 3012253)

This hole was located at L14+00E 12+00N and inclined at -50° to the south. The total drilled length was 254 m. The hole intersected several sulphide rich zones including a 0.75 m zone of massive pyrrhotite at 128 m followed by another zone of massive pyrrhotite (0.45 m wide) at 132.38m. The sections have anomalous copper concentrations of between 0.1% and 0.4%. The zinc concentrations were weakly anomalous.



Following the completion of this hole, the drilling operations were suspended and were later revived in January, 2008 with a follow-up program centered upon chromite in hole FW-06-03.

## 6.3 HISTORIC PRODUCTION

The property has no historical reserve estimates and there has been no prior production.



### 7.0 GEOLOGICAL SETTING

### 7.1 **REGIONAL GEOLOGY**

The Big Daddy chromite deposit lies within the James Bay Lowlands which are believed to constitute a continuation of the Sachigo greenstone belt in northwestern Ontario. Due to lack of rock exposures much of the regional geology has been inferred from public domain aeromagnetic data supported by isotope chemistry of a small number of drill core samples. The greenstone stratigraphy is interpreted to be tightly folded and in places, quite broken up.

The geology of the James Bay Lowlands can be broadly subdivided into the Precambrian Basement Complex plus related intrusion(s), the Palaezoic Platform rocks and the Quaternary cover rocks/formations (Figure 7.1).

### 7.1.1 Precambrian Basement Complex

The Basement Complex comprises volcanic and sedimentary belts elongated in the southwest – northeast direction between large masses of granite and gneisses. Stott (2007) notes that the Oxford-Stull Domain which represents an older core (2870 Ma to 2830 Ma), extends eastwards under Paleozoic cover and into James Bay. A limited number of basement inliers have been observed in the lowlands and include:

- Coarse-grained fragmental and pillowed basalt located approximately 30 km north of Missisa Lake (McBride, 1994).
- Aphebian (Proterozoic) iron formation, greywacke and other clastic sediments (Sutton Ridge Formation), dolomite, limestone, and minor argillite (Nowashe Formation) and Archean gneisses exposed in the Sutton inlier, approximately 200 km north-northeast of Missisa Lake (Lahti, H., April 2008 Technical Report ).

Calc-alkaline volcanics from McFaulds Lake show a U/Pb zircon isotopic age of 2737 +/- 7 Ma which is comparable with data from other parts of the Superior Province of the Canadian Shield (Stott, 2007).

A regional scale granodiorite pluton was intruded into and caused the doming of the host Sachigo greenstone belt rocks. However, current geological interest is not on the greenstone belt rocks but focused on a mantle-derived ultramafic-mafic intrusion (the Ring of Fire Intrusion) which has been emplaced along the margin of the regional scale granodiorite. The Ring of Fire Intrusion (RFI) is thus situated between the granodiorite on one hand (footwall) and the surrounding greenstone belt rocks (hanging wall) on the other. The RFI is magnetically distinct allowing it to be traced with minor interruptions for tens of kilometres along the granodiorite margin. It appears that a series of conduits cutting across the granodiorite have acted as feeders to the main RFI.



### 7.1.2 Paleozoic Platform Rocks

The Paleozoic Platform rocks of the James Bay Lowlands consist of sedimentary rocks mainly of the upper Ordovician age (450 Ma to 438 Ma). The sedimentary pile is intermittently present in the immediate property area, but thickens appreciably (to greater than 100 m) to the east and north. It comprises thin, poorly consolidated basal sandstone and mudstone overlain by muddy dolomites and limestone.

### 7.1.3 Quaternary Cover

The Quaternary cover comprises a thin but persistent layer of glacial and periglacial sediments. Drill hole information suggests a thickness ranging from 3.5 m to 10 m.

### 7.2 LOCAL AND PROPERTY GEOLOGY

The property is on flat lying swampy ground with no known outcrops. Apart from drillingderived geology in the vicinity of the Big Daddy chromite project area, little is known about the geology of this area from direct examination.



Figure 7.1 Regional Geology in the Environs of the Big Daddy Chromite Occurrence

(Source: P & E Consultants Inc., August 2008 Technical Report)

The following geological description of the property is partly based on information gained from recently drilled core holes as seen by one of the authors during the site visit and partly as documented by Burns (2005).



Within the environs of the property the stratigraphic section comprises Archaean age mafic and felsic volcanic rocks with subordinate interflow sediments intruded by various gabbroic and granitic sills/stocks. This volcanic assemblage is steeply dipping and is isoclinally folded.

The Archaean rocks are overlain by sedimentary rock units of Ordovician age. The sedimentary units comprise a basal calcareous sandstone (0 m to 5 m thick) overlain by 15 m to 20 m of grey to tan coloured limestone.

Overburden is generally between 5 m and 10 m thick and consists of glacial outwash.

The western segment of the property is dominated by a regional scale granodiorite intrusion which caused a doming of the greenstone belt rocks.

A mantle derived layered mafic – ultramafic intrusion (the RFI) emplaced along the margin of the regional scale granodiorite pluton is host to the Big Daddy deposit. A simplified lithological succession of the layered intrusion from the base upwards comprises:

- A highly magnetic peridotite unit which is intensely altered (serpentinized) in places with evidence of micro-layering.
- Chromite bands and layers.
- Pyroxenite.
- Gabbro.

The stratigraphy has been transposed to a sub-vertical position with a slight inclination to the southeast. Thus the younging direction is from the northwest to the southeast.

The peridotite unit hosts the chromite deposit(s) and associated Ni-Cu-PGE mineralization. In addition to this mineralization, Noront has discovered MMS Ni-Cu in a similar peridotite unit. The pyroxenite unit is a potential target for PGE's and is to be investigated thoroughly. In places the pyroxenite unit has also been altered beyond recognition.

Intense faulting is dominant in roughly the east – west and northeast – southwest directions and is evident from drill cores and from aeromagnetic data.



#### 8.0 **DEPOSIT TYPES**

The interpreted geology of the project area is favourable to a number of deposit types including Ni-Cu in magmatic massive sulphides (MMS), Cu-Zn-±Au in volcanogenic massive sulphides (VMS) and magmatic Cr-Ni-Cu-PGE in layered intrusions. However, the description that follows is restricted to the Big Daddy Deposit.

In the authors' opinions, the Big Daddy chromite deposit and associated PGE mineralization is a stratiform deposit which belongs to the magmatic Cr-Ni-Cu-PGE deposit type associated with layered mafic-ultramafic intrusions. They are characterized by layering and remarkable lateral continuity often measured in tens of km. Examples include the Bushveld Complex in South Africa, the Great Dyke in Zimbabwe, the Stillwater Complex in Montana (USA), the Kemi in Finland, the Muskox Intrusion in Northwest Territories (Canada), the Bird River Sill in Manitoba (Canada), and the Campo Formoso and Jacurici Valley in Brazil.

The importance of stratiform chrome deposits is demonstrated by the fact that stratiform deposits account for 45 % of total world chromite production and 95 % of reserves. The Bushveld alone accounts for 35 % of production. Other significant producers are the Great Dyke, Kemi and Brazilian deposits, which together produce about 10 % of the world's total.

### 8.1 GENETIC MODEL

#### **Stratiform Chromite**

Stratiform chromite deposits are formed by magmatic segregation during fractional crystallization (fractionation) of mafic-ultramafic magma. The precise reasons why massive chromite cumulate layers form are not entirely understood. Irvine (1975, 1977) suggested a mechanism whereby a chromite saturated picritic tholeiite liquid becomes more siliceous by contamination (assimilation) with granitic material or alternatively by blending with a more siliceous differentiate of the parent magma, thereby causing chromite to precipitate.

On the evidence of field relations and mineralogical data (Jackson 1961, von Gruenewaldt 1979) combined with isotopic studies (Kruger and Marsh 1982, Sharpe 1985, Lambert et al. 1989) it has been shown that large layered intrusions are not the result of single, one-shot injections of magma, but are the result of repetitive inputs. Irvine (1977) demonstrated that if a new input of magma was injected into one that had reached a higher degree of fractionation, the resultant mixing action could inhibit the fractional crystallization of silicate minerals such as olivine and orthopyroxene and permit the crystallization of chromite alone. This is the mechanism by which layers of massive chromitite can develop, without dilution by cumulate silicates. As illustrated in Figure 8.1 (after Irvine 1977), the mixing of liquid A which is on the olivine – chromite cotectic, with liquid D on the orthopyroxene field may, provided that points on the mixing line lie above the liquidus surface, culminate in a hybrid magma such as AD which will intersect the liquidus in the chromite field on cooling. Hence it will crystallize chromite alone while it moves to point X on the olivine – chromite cotectic, and thereafter it will continue to crystallize chromite and olivine. It has been shown that the



decrease in the solubility of chromite in basaltic magma in equilibrium with chromite per degree centigrade fall in temperature is greater at high  $(1,300^{\circ}C - 1,400^{\circ}C)$  than at low  $(1,100^{\circ}C - 1,200^{\circ}C)$  temperature. Due to this concave – upward curvature of the solubility curve, the mixing of two magmas at different temperatures saturated (or nearly saturated) in chromite places the resultant mixture above the saturation curve, which suggests that point AD in Figure 8.1 is likely to lie above the liquidus.

#### Figure 8.1 Phase Relations in the System Olivine-Silica-Chromite as determined by Irvine (1977) (illustrating the consequence of mixing primitive magma (A) with well fractionated (D) and slightly fractionated (B) variants of the same primitive magma (Source: Naldrett et al., 1990))



The suggestions by Irvine (1977) are consistent with observations on chromitites in layered intrusions. Most significant amongst these observations is the fact that most of these chromitite layers occur at the base of well defined cyclic units (e.g. Bushveld Complex and Great Dyke in Southern Africa) or at/near the base of similar cyclic units. Further evidence comes from the textures of the underlying rock units which indicate a common cotectic crystallization of chromite with olivine or orthopyroxene showing that the magmas previously in the chambers were saturated with respect to chromite.



#### Association of PGE with Stratiform Chromite

Stratiform chrome deposits are commonly associated with magmatic Ni-Cu-PGE mineralization which is directly linked to sulphide liquation. For this sulphide precipitation to occur, the silicate liquid in the magma chamber must become sulphur-saturated and this is dependent upon the following factors:

- Temperature.
- Oxygen fugacity.
- Magma composition FeO, SiO<sub>2</sub>, and S content.
- Magma mixing as a result of repetitive inputs of magma.

As far as magma mixing is concerned, it is generally accepted (Campbell and Turner, 1986) that layered intrusions have formed through repetitive inputs of magma. These inputs are likely to have been turbulent and thus to have involved significant entrainment and mixing of resident magma within the input. The resulting hybrid would also spread out at the appropriate density level to give rise to turbulently convecting layers. If sulphides formed in the hybrid at this stage, the turbulent mixing and convection would have provided the ideal environment in which they could have developed a high R-factor, and thus have become enriched in PGE. The R factor is defined as the ratio of silicate melt to sulphide melt during sulphide segregation.

Sulphide saturation may be achieved in one of three ways as proposed by Naldrett et al. (1990):

- Fractional segregation where sulphide saturation is attained through fractionation (Figure 8.2).
- Batch segregation where batch segregation of sulphide is achieved through mixing of a primitive magma with an evolved resident magma that is close to crystallizing plagioclase (Figure 8.2).
- Constitutional zone refining where sulphide saturation is preceded by volatileinduced partial melting and remobilization of cumulates and sulphides (Figure 8.3, example iv).

The above three processes lead to the formation of different types of deposits as illustrated in Figure 8.3. Subsolidus and deuteric processes are responsible for the modification of the original primary textures in these deposits.

It is important to note that the mixing of fresh primitive magma with that resident in an intrusion can give rise to a chromitite formation regardless of the degree of fractionation of the resident magma, whereas extensive segregation of sulphide will only occur as a consequence of this type of mixing close to or after the stage at which plagioclase saturation has been achieved by the resident magma.





Figure 8.2 Variation in Solubility of Fe-sulphide in Differentiating Basaltic Magma (Modified after Naldrett & Von Gruenewaldt, 1989. (Source: Maier et al., 1998))

Example I is applicable to the Bushveld Complex chromitites and most of Stillwater. Example II is applicable to the Great Dyke PGE in the Main Sulphide Zone; and finally, Example III is applicable to the Merensky Reef of the Bushveld Complex.

If the Big Daddy massive chromite layer(s) prove not to be significantly rich in PGE's as is reflected by the current limited drill hole information, then they might be categorized under Example I in Figure 8.3 which includes the Lower Group Chromitites (LG-6, etc) of the Bushveld Complex. However it must be stressed that more work needs to be done to verify the true position.


Figure 8.3

Cross-section through a Hypothetical Layered Intrusion (showing the types of chromitite and PGE-enriched sulphide deposits that can result from fractional crystallization, magma mixing and constitutional zone refining. Mixing of resident magma with primitive magma before plagioclase has appeared on the liquidus of the former is likely to produce sulphide- and ,therefore , PGE- poor chromitite (Example I); fractional crystallization may give rise to a PGE-rich layer not associated with the base of a cyclic unit (Example II); mixing of resident magma with more primitive magma after plagioclase is crystallizing from the former may give rise to sulphide- and, therefore, PGE- enriched chromitites or PGE-rich sulphide layers (Example III). Volatile-induced partial melting of cumulates can give rise to constitutional zone refining and the concentration of PGE at the point at which the partial melt becomes saturated in sulphide (Example IV). (Re-drawn after Naldrett et al.,1990))





### 9.0 MINERALIZATION

The chromite mineralization is hosted in peridotite and occurs in three forms, viz: disseminated (mainly in the footwall zone), semi-massive in the intermediate zone, and distinctly massive in the hanging wall. Where massive chromite mineralization terminates at depth (i.e. at the edge of the magma chamber), it is typically in finger-like form as depicted in Figures 10.4 and 10.5. The association of chromite mineralization with peridotite is almost universal. However, in some intrusions, pyroxenite and anorthosite can also be host rocks; for example the Bushveld chromitites of South Africa are interlayered with orthopyroxenite, anorthosite and norite.

When in disseminated form, the chromite occurs with olivine, pyroxenite, biotite, serpentine, chlorite, tremolite, plagioclase, and talc. The chromite is syngenetic with its host intrusion.

The limited drilling completed at the Big Daddy deposit clearly indicates layering. On a micro-scale the layering can be seen in the peridotite unit while on a mega scale, it is manifested by the presence of one major chromitite layer of between 10 m and 20 m thick separated from a thinner one (1 m to 3 thick) in the footwall by a distance of about 50 m (Figure 10.6). However, there are typically many parallel chromitite layers in any given intrusion and the individual layers have remarkable lateral continuity. All major deposits occur in Precambrian intrusions.

The grades in the visually mineralized zones based on the current level of limited drilling are as follow:

- Massive type: 30 % to 40 % Cr<sub>2</sub>O<sub>3</sub>.
- Semi-massive to disseminated: 20 % to 30 % Cr<sub>2</sub>O<sub>3</sub>.
- Disseminated type 5 % to 20 %  $Cr_2O_3$ .

Current drilling results show Cr:Fe ratios varying between 1.5 and 2. This appears marginally higher than the South African deposits on the Bushveld Complex. In terms of thickness, the Big Daddy deposit may resemble the Kemi deposit in Finland but this remains to be substantiated through additional drilling.



### **10.0 EXPLORATION**

#### **10.1 DISCOVERY STAGE**

The exploration carried out in the project area including the whole of the Lake McFaulds greater region initially comprised airborne EM and magnetic surveys conducted in 2003 by Fugro for Spider/KWG. This was complemented by ground HLEM, VLF and magnetics surveys that were interpreted by Scott Hogg and Associates in 2004. Following these geophysical surveys, a number of coincident EM and magnetic anomalies were established (Figure 10.1). The anomalies were previously thought to be linked to VMS style mineralization. Specifically they were attributed to pyrrhotite which is an extremely good conductor, both in pure mineral form and as an ore; it is the main cause of EM anomalies over most VMS deposits. Follow up on the geophysical anomalies culminated in the chromite discovery in hole number FW-06-03 (Figure 10.1) at what subsequently became named the Big Daddy deposit. The original magnetic anomaly is well explained by the strongly magnetic peridotite unit which hosts the chromite mineralization. The associated EM anomaly has not been thoroughly accounted for although, in Micon's opinion, it could be linked to MMS mineralization within the peridotite unit yet to be discovered.

Figure 10.1 Aero TEM Survey Map of the McFaulds Lake Area



(Source: JVX Geophysical Surveys and Consulting, November 2008 Report)



The Big Daddy chromite deposit was the first chromite discovery in the RFI and is a major accidental discovery in the exploration history of Canada.

# **10.2 CONFIRMATION STAGE**

As at end of December, 2008, a total of 14 diamond drill holes had been completed on the Big Daddy deposit. This drilling has established significant chromite mineralization over a continuous strike length of 400 m and down to a vertical depth of 300 m. The drill holes completed to date are shown on Figure 10.2.



Figure 10.2 Plan Showing Drill Hole Layout in the J Grid Covering Part of the Big Daddy Deposit

#### **10.3 INTERPRETATION AND PRESENTATION OF EXPLORATION RESULTS**

In order to guide the next phase of delineation drilling, Micon focused its interpretation of the exploration data on establishing the geometry of the deposit and its physical characteristics. This was accomplished as follows:

• Determination of the fractionation trend and way-up in the intrusion. This was achieved by carefully logging one representative drill hole (Hole FW-08-07). The



evolution of the lithological units commencing with dunite followed by harzburgite then pyroxenite and finally gabbro showed that the fractionation trend was to the southeast indicating that the intrusion had been dislocated clockwise from its original upright position.

- Determination of the most obvious physical characteristics involved the use of a hand held magnet over the drill core for the entire length of the hole. The peridotite unit which hosts the chromite mineralization was found to be distinctly magnetic. Thus a detailed ground magnetics survey would not only pick up the host rock; it would simultaneous establish discontinuities in the form of faults or other disruptions.
- Establishing evidence of layering. This was achieved by careful observations on drill cores followed by construction of sections of the massive/semi-massive chromite zones (Figures 10.3 to 10.7). This showed layering in the vertical sense thereby confirming that the layered RFI had been transposed in the clockwise direction. The sections also suggest a steep dip to the southeast, and that in addition to being transposed; the intrusion has been truncated into two limbs. One limb is missing due to either erosion or displacement elsewhere.

Further interpretations of these results are given in Section 19 (Interpretations and Conclusions) of this report.



Figure 10.3 Cross Section of Drill Hole Massive Chromite Intersections – Line 1000E





Figure 10.4 Cross Section of Drill Hole Massive Chromite Intersections – Line 1100e

Figure 10.5 Cross Section of Drill Hole Massive Chromite Intersections – Line 1150E







Figure 10.6 Cross Section of Drill Hole Massive Chromite Intersections – Line 1200E

Figure 10.7 Cross Section of Drill Hole Massive Chromite Intersections – Line 1300E







Figure 10.8 Idealized Longitudinal Section of the Uppermost Chromite Layer

Evidence for the classification of the Big Daddy deposit into the stratiform deposit class comes from the observed layering (both on a mega and micro- scale) and the differentiation of the lithological sequence as described in Section 10.2. Thus the host RFI must have been a funnel shaped intrusion before being deformed into its current shape. The current geometry as revealed by drill holes is such that the Big Daddy deposit is in the eastern flank of an originally funnel shaped intrusion which has been dislocated/transposed through 90 degrees in a clockwise direction. The western flank of the intrusion has either been displaced/transposed elsewhere or eroded. There is need for a detailed structural interpretation of the greater region to locate or help explain the disappearance of the western flank.

The overburden thickness based on current drilling is between 3 m and 15 m. Thus a gravity survey should be able to map out the lateral continuity of the dense massive chromite layer(s) and reduce the amount of drilling required to delineate the ultimate lateral extent of the deposit. The host peridotite unit is known to be highly magnetic; this attribute will be useful in establishing discontinuities and/or displacements. Thus a combined gravity and magnetic survey will facilitate the delineation of the Big Daddy deposit, given that the individual chromite layers display remarkable lateral continuity.

The sampling conducted to date is not adequately systematic and detailed to define the pattern(s) in the Ni-Cu-PGE mineralization that may be associated with the Big Daddy deposit, particularly in the pyroxenite unit in the hanging wall of the main chromite zone.



However, the coefficient of correlation derived from a scatter plot (Figure 10.9) involving over 2,100 sample analyses of Pt and Pd is 0.73 and demonstrates a good relationship between these two elements. This is enhanced by a coefficient of determination (r squared) of >0.5.



Figure 10.9 Scatter Plot of Pt and Pd assays



#### 11.0 DRILLING

#### 11.1 GENERAL

The initial diamond drilling on the SKF JV claims was conducted in the winter of 2004. In that year, drill hole FW-04-01 was completed in claim block 3008793 (H Grid). Holes FW-06-02 (H Grid) and FW-06-03 and FW-06-04 in claim block 3012253 (J Grid) were drilled in 2006. This test drilling was conducted using BQ size core.

The preliminary drilling operations were suspended during 2007 and then revived in the winter of 2008. Between January and December, 2008, nineteen drill holes of NQ size core were completed for a total meterage of 6,098 m. The layout of the drill holes for both the 2006 and the 2008 drilling campaigns are shown on Figure 10.2. The details for each drill hole are given in Table 11.1. Only those drill holes highlighted in bold are relevant to the Big Daddy chromite mineralization; the rest were drilled in pursuit of VMS or MMS style mineralization.

Hole ID	UTM	UTM	Local Grid	Local Grid	Azimuth	Inclination	Length
	Easting (m)	Northing (m)	Easting (m)	Northing (m)	degrees	degrees	( <b>m</b> )
FW-04-01	555535	5846609	37+00E	5+50S	130°	-45°	190
FW-06-02	555368	5845849	30+00E	9+00S	130°	-50.3°	197
FW-06-03	551087	5845306	10+00 E	15+25 N	120°	-50°	353.5
FW-06-04	551604	5845237	14+00E	12+00N	120°	-50°	254
FW-08-05	551050	5845367	L10+00E	16+00N	150°	-50°	327
FW-08-06	550959	5845324	L9+00E	16+00N	150°	-50°	384
FW-08-07	551136	5845427	L11+00E	16+00N	150°	-50°	405.7
FW-08-08	551683	5846061	L19+00E	18+75N	150°	-50°	270
FW-08-09	551683	5846061	L19+00E	18+75N	150°	-73.5°	176
FW-08-10	551159	5845242	L14+00E	12+07N	150°	-65°	312
FW-08-11	551550	5845294	L14+00E	12+75N	150°	-65°	309
FW-08-12	551111	5845472	L11+00E	16+00N	150°	-50°	354
FW-08-13	551164	5845384	L11+00E	15+50N	150°	-50°	297
FW-08-14	551180	5845451	L11+50E	16+00N	150°	-50°	189
FW-08-15	551158	5845494	11+50E	16+50N	150°	-50°	240
FW-08-16	550875	5846305	96+00E *	6+00N *	315°	-50°	372
FW-08-17	550875	5846305	96+00E *	6+00N *	315°	-65°	376
FW-08-18	551192	5845511	12+00E	16+50N	150°	-50°	255
FW-08-19	551168	5845554	12+00E	17+00N	<b>150°</b>	-50°	273
FW-08-20	551134	5845599	12+00E	17+50N	<b>150°</b>	-50°	357
FW-08-21	551118	5845650	12+00E	18+00N	150°	-50°	447
FW-08-22	551208	5845693	13+00E	18+00N	150°	-50°	330
FW-08-23	551171	5845732	13+00E	18+50N	150°	-50°	424

# Table 11.1List of Drill Holes in the SKF JV Area

\* Holes FW-08-16 and FW-08-17 were collared relative to a grid with north/south lines that was used for magnetic and electomagnetic surveys across the property.

The collar positions of the holes were surveyed using a hand held GPS. Down-hole surveys were conducted using an Ezishot instrument. Due to the magnetic nature of the peridotite



hosting the chromite mineralization, Micon has recommended that check down-hole surveys using gyroscopic instruments not prone magnetic influence be conducted on all these holes.

The drill hole positions are in local coordinates and are related to the H and J Grids as shown in Figure 10.2. All drill holes in the J Grid save for FW-06-04, FW-08-08, FW-08-09, FW-08-10 and FW-08-11 are relevant to the Big Daddy chromite drilling. The section lines are numbered from 0 m in the southwest and increase at 100 m intervals in the northwest direction.

The summary descriptions in sub-sections 11.2 and 11.3 are largely based on Lahti's inhouse April 2008 final report on drill results.

# **11.2 SUMMARY DESCRIPTION OF DRILL HOLE INTERCEPTS**

The drill holes with chromite and associated PGE intersections are described per section line as follow:

### **11.2.1** Section Line 900 E

Drill hole FW-08-06 was collared at L9+00E 16N. The hole started in granodiorite that extended to a depth of 103 m before intersecting peridotite in which narrow chromite rich bands were intersected at depths of 330.2 m grading 19.6 %  $Cr_2O_3$  over 0.6 m and at 339.5 m grading 24.64 %  $Cr_2O_3$  over 1.2 m. The significant zone of TPM concentration occurs between 292.5 m and 306 m where one sample assayed 1.6 g/t TPM. Disseminated chromite mineralization was also intersected from 377.1 m to 378.5 m. It must be noted that when this hole was drilled, one of the objects was to test the granodiorite contact and peridotite for magmatic massive sulphides (MMS) associated with copper-nickel mineralization. However, there was no evidence for this type of mineralization.

### **11.2.2** Section Line 1000 E

Drill hole FW-06-03 was collared at L10E 15+25N and is the discovery hole for the Big Daddy chromite mineralization. The hole intersected approximately 1 m thick layers of chromite at depths of 153 m and 159 m which assayed 22.7 %  $Cr_2O_3$  and 20 %  $Cr2O_3$ , respectively. The corresponding TPM assays for the chromite intercepts mentioned above are 0.5 g/t and 0.7 g/t.

Drill hole FW-08-05 which was collared 75 m west of FW-06-03 was drilled after the Noront Eagle One MMS deposit had been discovered. As a result of the Noront discovery, this hole was designed to test the granodiorite-peridotite contact for MMS in addition to being directed at chromite mineralization. The hole showed no sign of MMS mineralization but intersected two significant chromite layers (see Figure 10.3).



# **11.2.3** Section Line 1100E

The three drill holes on section are FW-08-07, FW-08-12 and FW-08-13. FW-08-07 was collared 100 m due grid east from FW-08-05. The hole intersected significant massive chromite layers that are thicker than those in FW-08-05 located 100 m to the west (see Figures 10.3 and 10.4).

Drill hole FW-08-12 was collared 50 m north-northwest of drill hole FW-08-07. The hole intersected chromite mineralization from 225 m to 244.8 m averaging 33.6 %  $Cr_2O_3$  and 0.5 g/t TPM; within this zone was an 11.7 m section grading 49.9 %  $Cr_2O_3$  and 0.6 g/t TPM with one sample grading 58.6 %  $Cr_2O_3$  over 1.5 m representing the highest grade found to date. Deeper down the hole, a second chromite layer was intersected from 251 m to 264.3 m (13.3 m) that graded 36.4 %  $Cr_2O_3$  and 0.53 g/t TPM. The mineralization is open at depth.

Drill hole FW-08-13 was collared 50 m south-southeast of FW-08-07 and was designed to test the mineralization at a shallower depth. The hole intersected what appears to be a merging of the two chromite bands into one thick unit (Figure 10.4) extending from 74.3 m to 142.15 m (67.85 m). The assays for this interval are 25.1 %  $Cr_2O_3$  and 0.39 g/t TPM. Within this broad zone is a higher grade section that assayed 27.47 %  $Cr_2O_3$  and 0.5 g/t TPM over 25.8m. It is almost certain that the mineralized zone extends to the surface making it ideal for a potential open pit operation.

# **11.2.4** Section Line 1150 E

There are two drill holes on this section, FW-08-14 and FW-8-15. Both holes were designed to test the continuity of the mineralization at depth and along strike to the northeast. FW-08-14 was collared 50 m to the northeast of FW-08-07. The hole intersected chromite mineralization from 30 m to 103.5 m (73.5 m) that averaged 29.6 %  $Cr_2O_3$  and 0.39 g/t TPM Below the chromite zone are two short intervals of TPM enrichment i.e. from 103.5 m to 106.5 m (3 m) that assayed 2.37 g/t TPM and from 113.6 m to 117 m (3.6 m) that assayed 3.38 g/t TPM.

FW-08-15 was collared 50 m to the north-northwest of FW-08-14 and was designed to test the mineralization at a greater depth. Low grade chromite starts at 81 m and extends down to 174.3 m (93.3 m) giving an average grade of 12.04 %  $Cr_2O_3$  and 0.35 g/t TPM. Within this broad low grade section is an 11.15 m interval averaging 30.49 %  $Cr_2O_3$  and 0.32 g/t TPM.

There are at least two zones that are significantly enriched in PGE. The first section is in peridotite and extends from 76.5 m to 79.5 m (3 m) averaging 2.76 g/t TPM. The second zone after the chromite intersection extends from 174.3 m to 177 m (2.7 m) averaging 3.92 g/t TPM (mainly palladium and platinum).



# 11.2.5 Section Line 1200E

This section has four drill holes, viz: FW-08-18, FW-08-19, FW-08-20 and FW-08-21 (see Table 11.1 for the collar positions).

In FW-08-18 the chromite mineralization was intersected from 44.9 m to 136.6 m (91.7 m) and averaged 20.85 %  $Cr_2O_3$  and 0.21 g/t TPM. Within this broad zone is a 31.9 m section from 104.7 m to 136.6 m averaging 37.6 %  $Cr_2O_3$ .

Hole FW-08-19 was collared 50 m to the north-northwest of FW-08-18 and was designed to undercut this hole (i.e. FW-08-18). The hole intersected low grade chromite mineralization from 139.5 m to 161.95 m (22.45 m) that averaged 11.3 %  $Cr_2O_3$  and 0.26 g/t TPM. Higher grade chromite mineralization was intersected from 210 m to 229.5 m (19.5 m) that averaged 37.1 %  $Cr_2O_3$  and 0.44 g/t TPM. The best PGE mineralization extends from 165.4 to 174 m (8.6 m) and averages 3.3 g/t TPM. This hole also intersected a semi-massive pyrrhotite zone with minor chalcopyrite from 114 m to 115.5 m (1.5 m) assaying 0.11 % cobalt, 0.87 % copper, 1.75 % nickel, and 3.78 g/t TPM. The second (0.4 m) sulphide rich section assayed 0.85 % Ni, 0.063 % Co, 0.086 % Cu and 1.4 g/t TPM. Resistivity tests indicated that the first sulphide zone was a possible conductor.

FW-08-20 was collared 50 m the north-northwest of FW-08-19. The hole intersected a broad section of low grade chromite just over 2 %  $Cr_2O_3$  from 52.5 m to 121.5 m (69 m) followed by a higher grade section from 253.5 m to 336.85 m (83.45 m) that averaged 21.61 %  $Cr_2O_3$  and 0.2 g/t TPM. Within this broad zone is a high grade section from 304.3 m to 336.95 m (32.65 m) that averages 39.56 %  $Cr_2O_3$  and 0.4 g/t TPM.

FW-08-21 was designed to test the chromite mineralization at a vertical depth of 300m. The mineralized zone extended from 360 m to 417 m (57 m) and averaged 17.52 %  $Cr_2O_3$  and 0.36 g/t TPM. Within this zone is a 10.8 m section from 406.2 m to 417 m that grades 39.22 %  $Cr_2O_3$  and 0.83 g/t TPM.

### **11.2.6** Section Line 1300E

There are two drill holes on this section, FW-08-22 and FW-08-23.

FW-08-22 was collared at 18N. The hole intersected chromite mineralization from 192.15 m to 298.5 m averaging 19.42 % chromite and 0.28 g/t TPM. Within this broad zone is a high grade section from 263.65 m to 298.5 m (34.85 m) averaging 42.08 %  $Cr_2O_3$  and 0.37 g/t TPM.

FW-08-23 was collared 50 m north-northwest of FW08-22 and was designed to intersect the chromite layer at a greater depth. The main mineralization is from 263.5 m to 378 m (114.5 m) and averages 18.5 %  $Cr_2O_3$  and 0.25 g/t TPM. The high grade section extends from 351.5 to 378 m (27.5 m) averaging 39.48 %  $Cr_2O_3$  and 0.28 g/t TPM.



# 11.2.7 Overall Comments

The diamond drilling outlined above has proved continuous chromite mineralization over a strike length of 400 m, i.e. from section line 900 E to section line 1300 E, down to a vertical depth of 300 m. The mineralization is open ended along strike to the northeast and down dip from section line 1300 E going northeast. The depth of the overburden is variable between 3 m and 15 m. More drilling is planned to establish the lateral limits and morphology of the deposit.

# 11.3 NON-CHROMITE BEARING DRILL HOLES

### 11.3.1 FW-04-01, FW-06-02 and FW-06-04

These three drill holes are understood to have been targeted at coincident EM and magnetic anomalies much further away from the environs of the Big Daddy deposit (Figure 10.2). No significant mineralization intercepts were made. The details for each hole are given under Section 6.

# 11.3.2 FW-08-08

This hole was collared at 18+75N on line 1900 E (Grid J) and was positioned to test a VTEM and Max Min EM conductor with a coincident magnetic anomaly. The site location was recommended by Scott Hogg & Associates (a geophysical consulting company) as a potential VMS or MMS target. No major sulphide mineralization or other obvious conductor was intersected in this hole but it was thought that either the extensive magnetite veinlets system or a major fault caused the geophysical conductor. In the latter case, 27 m (core length) from 120 m to 147 m has several clay seams that could be conductive. Only trace amounts of platy pyrite was found in the core. No significant copper, nickel or PGE concentrations were detected. However, the lithological sampling of the core beyond 200 m identified chromite concentrations that averaged >7 % chromite from 222 m to 265.5 m. These assays could be highly significant as there could be massive chromite layers to the south-southeast of this drill hole.

### 11.3.3 FW-08-09

This hole was drilled from the same location as FW-08-08 but the inclination was increased to  $-73.5^{\circ}$  to the south. The hole was drilled in case the first hole had over shot the conductor. It was stopped at a depth of 176 m after surpassing the projected conductor. There were no significant sulphides intersected and no samples were taken.

### 11.3.4 FW-08-10

This hole was located to the north-northwest of FW-06-04 and was designed to test the sulphide zones intersected in FW-06-04 at depth. The intersection results are as follows: from 90 m down to 115.5 m the core contains 2-4 % sulphides (mainly pyrite with very minor



chalcopyrite) in an olivine gabbro. The assays vary from 700+ ppm Cu to over 1,000 ppm Cu with a slight enrichment in Ni, Zn and Co. At 170 m the lithology changes from a mafic intrusive rock to a metavolcanic unit with an erratic but significant increase in pyrite accompanied by lesser concentrations of pyrrhotite and chalcopyrite. The main sulphide zone is from 179.6 m to 192.65 m. Generally the assays vary from 1,300 ppm to 2,760 ppm for both Cu and Zn. The sections with the most sulphides are anomalous in Ni (maximum 1,370 ppm) and Co (maximum 590 ppm). The highest concentration of Cu was 0.4 % Cu from 209.5 m to 210.9 m.

# 11.3.5 FW-08-11

This hole was collared in a gabbro and intersected volcanic rocks from 156 m to 175 m. There are a few anomalous copper values, i.e. >1,000 ppm, in quartz veins. The sulphide/magnetite mineralized zone extends from 175.6 m to 182.7 m. It is very similar to that found at the VMS camp located just north of the McFaulds Lake camp where significant VMS deposits (McFaulds # 3 and # 1) were discovered. The zone typically has bands of massive magnetite with a variable concentrations of sphalerite and chalcopyrite. The copper concentration varied from 648 ppm to 2,380 ppm, while the nickel varied from 1,420 ppm to 3,000 ppm. There was little zinc but elevated concentrations of cobalt (164 ppm to 409 ppm).

A deeper weakly mineralized sulphide zone was intersected from 235.5 m to 242.3 m. There was no significant enrichment in any of the base metals. Erratic 1 % to 2 % sulphides continued to the bottom of the hole but there were no zones with significant base metal enrichment.

### 11.3.6 FW-08-16

This drill hole was located to the northwest of the J Grid in which the Big Daddy deposit is located (claim 3012253). The target was a coincident EM/magnetic anomaly thought to be related to VMS type mineralization. The hole intersected a banded iron formation (BIF) from 114 m to 145.8 m and this explained the magnetic anomaly but not the EM conductor. The BIF has only very modest copper, zinc and gold enrichment. To test the BIF at depth, FW-08-17 was drilled from the same location but at a steeper angle.

### 11.3.7 FW-08-17

This hole was drilled from the same location as FW-08-16 with the same azimuth but with a dip of -65°. There was no appreciable improvement in the concentration of the base metals or gold in the BIF at depth. No further drilling was done to test this EM/magnetic anomaly.

### **11.4 DRILLING RESULTS**

Table 11.2 provides the assay results obtained from drilling conducted on the Big Daddy deposit.



Drill Hole Number	Fro m	То	Length	% Cr <sub>2</sub> O <sub>3</sub>	TOTAL Rock TPM g/t Type	Easting	Northing
FW-08-05	75	77	2	2.04	0.092 Peridotite	551050	5845367
	160.7	165	4.3	2.2	0.24 Peridotite		
	174	184.2	10.2	13.62	0.5 Peridotite		
	203	212.4	9.4	6.28	0.15 Peridotite		
	219.5	225	5.5	1.25	0.19 Peridotite		
	240	251.2	11.2	6.19	0.23 Peridotite		
	251.2	268.5	17.3	27.15	0.16 Mass Chromite		
	268.5	298.5	27.95	16.56	0.25 Semi Mass Chro		
Including	292.85	298.5	7.45	36.32	0.14 Mass Chromite		
	298.5	305	7		0.34 pyroxenite		
FW-08-06	314.85	384	69.15	4	0.21 Peridotite	551136	5845427
FW-08-07	64.5	69	4.5	mainlyAu	3.6 Peridotite	551136	5845427
	100.3	108	7.7	9.17	0.61 Peridotite		
	115.5	119.1	3.6	4.58	1.03 Peridotite		
	165.5	176.65	13.15	10.42	0.4 Peridotite		
	196.8	205.9	9.1	30.7	0.8 Mass Chromite		
	209.8	224.2	14.4	30.73	0.42 Mass Chromite		
FW-08-12	208.65	213	4.35	9.45	0.24 Peridotite	551111	5845472
	225	244.8	19.8	33.63	0.56 Mass Chromite		
Including	228.25	240	11.75	49.87	0.6 Mass Chromite		
	251	264	13.3	36.43	0.54 Mass Chromite		
Including	251	260.7	9.7	44.29	0.49 Mass Chromite		
FW-08-13	70.3	142.15	67.85	25.1	0.39 Mass Chromite	551164	5845384
Including	116.35	142.15	25.8	27.47	0.5 Mass Chromite		
FW-08-14	30	103.5	73.5	29.6	0.35 Mass Chromite	551180	5845451
	103.5	106.5	3		2.47 Peridotite?		
FW-08-15	81	174.3	93.3	12.04	0.34 Semi Mass Chro	551158	5845494
Including	160.15	171.3	11.15		0.32 Mass Chromite		
FW-08-18	13.5	24	10.5	1.12	0.27 diss Chro Perid	551192	5845511
	44.9	136.6	91.7	20.85	0.21 Semi Mass Chro		
Including	104.7	136.6	31.9	37.6	0.16 Mass Chromite		
FW-08-19	10.5	34.5	24	1.28	0.25 diss Chro Perid	551168	5845554
	139.5	`61.95	22.45	11.3	0.26 diss Chro Perid		
	165.4	174	8.6		3.3 Peridotite		
	210	229.5	19.5	37.1	0.44 Mass Chromite		
FW-08-20	24.2	39.85	15.65	2.34	0.22 diss Chro Perid	551134	5845599
	52.5	121.5	69	2.12	0.19 diss Chro Perid		
	252.5	226.05	02.45	21.(1	0.2 Sami Mara Char		
T I P	255.5	330.95	83.45	21.01			
EW 08 21	304.3	330.95	32.03	39.30	0.38 Mass Chromite	551110	5945650
F W-00-21	250.5	277.5	10.5	1.46	0.24 diss Chro Perid	551116	5645050
	360	Δ17	57.00	17.52	0.36 Semi Mass Chro		
Including	406.2	417	10.8	39.22	0.83 Mass Chromite		
FW-08-22	192.15	298.5	106.35	19.42	0.28 Semi Mass Chro	551208	5845693
Including	263.65	298.5	34.85	42.08	0.37 Mass Chromite	221200	2042075
FW-08-23	263.5	378	114.5	18.5	0.25 Semi Mass Chro	551171	5845732
Including	351.5	378	26.5	39.5	0.28 Mass Chromite		

Table 11.2Assay Results from the Big Daddy Deposit



# 12.0 SAMPLING METHOD AND APPROACH

During the drill core logging process, the geologist identified the intercepts to be sampled based mainly on the host rock and to some extent on the intensity of the chromite mineralization. Massive chromite intercepts were sampled separately from the zones with disseminated mineralization.

Following identification of the host lithology, the site geologist used a crayon to mark those intervals of core to be sampled for analysis. The lengths of the samples were a constant of 1.5 m from the footwall peridotite (host rock) up to the contact of chromite mineralization with the hanging wall pyroxenite. Then, based on the presence/absence of visible sulphide mineralization, either 1.0 m or 1.5 m samples or composite 9.0 m samples comprising 10 cm lengths of core at 1.5 m intervals would be taken in some selected zones of the hanging wall pyroxenite.

Prior to sampling, the drill core was split into symmetrical halves using an electric saw equipped with a diamond embedded blade. In rare instances where the core was badly broken and/or heavily weathered, the splitting was conducted manually. Once the core had been split, one half, per sample position was bagged with the corresponding sample ticket number and recorded in the sample book. The other half was retained in the original core box with depth markers and labels showing positions of the individual samples for future reference. Thus it is possible to match analytical results with the remaining halved cores to confirm the geological interpretation of the mineralization.

The sampling of the core was conducted in three ways (a) every 1.5 m in zones of chromite mineralization, (b) 9 m composite samples to check the pyroxenite for PGE mineralization and (c) variable length samples to check structures (such as faults and major joints) and veins, for sulphide mineralization, and at the upper and lower contacts of the massive or disseminated chromite.

The number of samples taken depended on the length of the hole and the geology. Most of the time the olivine pyroxenite was sampled by taking 9 m composites except when there were zones of visible sulphides. The peridotite hosting the chromite mineralization was sampled using a sample length of 1.5 m from the top of the hole to the bottom of the deepest chromite unit. A composite sample was collected as follows: from a core meterage block a 10 cm section of core was cut, and then subsequently at 1.5 m intervals until 9 m of core had been covered bringing the total number of 10 cm core lengths to 6. The six pieces constituted one composite sample.

The individual samples were placed in rice bags where a numbered seal lock was applied under the supervision of the site geologist. The sealed rice bags were placed in plastic sealed pails and shipped via bonded carrier to Activation Laboratories (ActLabs) in Thunder Bay, Ontario.



Aside from a few narrow intervals of fault gouge and blocky core, no drilling, sampling, or recovery factors were encountered that would materially impact the accuracy and reliability of the analytical results from drill core samples of this drilling campaign. The drill cores provided samples of high quality, which were representative of any disseminated or massive chromite mineralization intersected by the drill holes.



# **13.0 SAMPLE PREPARATION AND SECURITY**

Sample preparation was conducted at the Thunder Bay facility of ActLabs from where the sample pulps where shipped via laboratory-laboratory bonded courier to ActLab's main laboratory in Ancaster, Ontario. No aspect of the sample preparation was conducted by an employee, officer, director or associate of the SKF JV.

The following summary on sample preparation was provided by ActLabs, Thunder Bay:

The entire sample is crushed to a nominal minus 10 mesh (1.7 mm), mechanically split (riffle) to obtain a representative sample (about 500 g) and then pulverized to at least 95 % minus 150 mesh (105 microns).

The sample preparation QA/QC procedures followed by ActLabs include the following:

- Use of cleaner sand between each sample to avoid contamination between samples during crushing.
- Use of mild steel mills which do not induce Cr or Ni contamination.
- Routine checks on the quality of crushing and pulverization.
- Computerized vacuum ventilation system to eradicate dust.

After the initial sample preparation at the Thunder Bay facility of ActLabs the samples were shipped to ActLabs main laboratory in Ancaster, Ontario. All the samples were subjected to multi-element analysis using four acid digestion followed by Inductively Coupled Plasma analysis (TD-ICP). Nickel and copper were also determined by Optical Emission Spectrometry (ICP-OES) while Fire Assay Inductively Coupled Plasma (FA-ICP) was used for gold, platinum and palladium analysis. Additional analyses using Instrumental Neutron Activation Analysis (INAA) were completed for all samples for their chrome contents in excess of 1 % Cr by TD-ICP. More detailed information on these analytical techniques can be obtained from the ActLabs website <u>www.actlbs.com</u>.

The ActLabs in-house analytical QA/QC procedures include the following.

- Use of certified reference materials.
- Routine duplicate analyses.
- Use of blanks.
- Participation in round robin analytical exercises.



# 14.0 DATA VERIFICATION

### 14.1 LABORATORY VISIT

Micon inspected the Activation Laboratory facilities in Thunder Bay on January 10, 2009. This is the laboratory used by the SKF JV for sample preparation before shipment to the sister laboratory in Ancaster for the actual analyses. Thus Micon's focus was on the sample preparation facilities. In this regard Micon observed that the sample preparation is carried out to the highest industry standards. Contamination between samples during crushing is eliminated by using a barren quartz rich material to clean the jaw/primary/secondary crushers after the treatment of every sample. Dust control is achieved by the use of a vacuum ventilation system that employs the latest technology.

As a consequence of this inspection, Micon is satisfied that although the Thunder Bay laboratory is not yet ISO accredited, there are no deficiencies in its sample preparation facilities.

#### **14.2 REPEAT ANALYSES**

Micon selected 18 sample pulps (assay splits) and re-numbered them in a different sequence using a new set of sample numbers. The samples were then submitted to Activation Laboratory in Ancaster for repeat analyses. At no time were any employees of Activation Laboratories or SKF JV advised as to the identification of the samples chosen. The original assays and repeat analyses are compared in Figures 14.1. The basic statistics are summarized in Table 14.1.

VARIABLE	Cr <sub>2</sub> O <sub>3</sub> % ORIGINAL	Cr <sub>2</sub> O <sub>3</sub> % REPEAT
Number of samples	18	18
Minimum value	33.64	34.55
Maximum value	39.60	40.02
Mean	37.23	37.85
Median	37.30	38.10
Geometric Mean	37.20	37.82
Variance	2.75	1.99
Standard Deviation	1.66	1.41
Coefficient of Variation	0.04	0.04

 Table 14.1

 Statistics of Original and Repeat Cr<sub>2</sub>O<sub>3</sub> Analyses

The statistics of the different sets of analyses are comparable, most notably the coefficient of variation. On this basis, Micon considers the Ancaster Activation Laboratory's  $Cr_2O_3$  analyses to be reliable.







The marginally higher sample mean of the repeat analyses reflected in Table 14.1 is corroborated in Figure 14.1. However, in Micon's opinion the minor differences in the statistics are insignificant as the coefficient of variation is the ultimate determinant factor.

#### 14.3 SITE VISIT (11 – 13 JANUARY, 2009)

Micon conducted a site visit to the Big Daddy chromite project area from 11 to 13 January, 2009, and accomplished the following tasks.

- Verification of some of the drill hole collar positions using a GPS in the company of James Burns, P.Eng., VP Exploration for Spider Resources.
- Review of the sampling facilities and security arrangements in place.
- Verification of massive chromite intersections in drill hole numbers FW-08-14, FW-08-17, FW-08-18 and FW-08-19.
- Verification of lithological units encountered in drill hole FW-08-07.
- Independent sampling of quarter core from drill hole FW-08-19 and asking for check analyses using a different laboratory.

The independent samples collected were delivered to Actlabs in Thunder Bay for PGM analyses. The sample pulps were sent to TSL laboratories in Saskatoon for check analyses by the author. The results are compared on Figure 14.2 to Figure 14.4 and show a good match



on the assays obtained from the two different laboratories. Also shown in the figures are the original assays from Ancaster ActLabs (ACT A) which used half core samples. It is sample 7 which appears problematic and this most likely due to a nugget effect of the precious metals. What is more critical is the fact that the quarter core sample analyses from two different laboratories are more or less the same except for Au in sample 8. This is attributed to a nugget effect of the gold. The data set of 10 samples is inadequate to conduct further meaningful statistical analyses.

It is Micon's opinion that the sample preparation, security and analytical procedures are satisfactory. Although the Activation laboratory in Thunder Bay is still in the process of getting accreditation, it has demonstrated a high level of competence by producing more or less the same results with the accredited TSL Laboratory in Saskatoon.







#### Figure 14.3





#### Figure 14.4

Comparison of Original Pt Assays from the Activation Laboratory in Ancaster (half core samples) and Duplicate (quarter core samples) Analysed at the Activation Laboratory in Thunder Bay and the TSL Laboratory in Saskatoon)





# **15.0 ADJACENT PROPERTIES**

The following information on adjacent properties is taken from publicly available documents, but Micon has been unable to verify this information and this information is not necessarily indicative of the mineralization on the property that is the subject of this Technical Report.

Other than the De Beers Victor diamond mine located approximately 100 km to the east there are no producing mines in the James Bay Lowlands. However, the area has been the focus of considerable recent claim staking and exploration activity following the discovery of two volcanogenic massive sulphide (VMS) deposits and an additional eight other VMS occurrences within a distance of about 12 km to 20 km to the northeast or west of the Big Daddy chromite deposit (Figure 15.1). The two VMS deposits are referred to as the McFaulds # 1, and # 3. Since then, several other new discoveries (but not related to VMS style of mineralization) have been made; the most noteworthy ones being:

- Noront's Eagle 1 and 2 Ni-Cu-PGE (MMS) located about 4 km to 6 km to the southwest of the Big Daddy deposit.
- Noront's Blackbird 1 and 2 chromite discoveries located about 6 km to the south-west of the Big Daddy deposit.
- Freewest's Black Thor Chromite Deposit some 2 km to 3 km to the northeast.
- Freewest's Ni-Cu-PGE F2 Target about 3 km to the northeast.

All these later discoveries are in the RFI. Thus the Big Daddy deposit and all the deposits mentioned above, save for the McFaulds VMS, are consanguineous to the magma source which gave rise to the RFI.

Based on the size of the RFI on one hand and the occurrence of volcanogenic type lithologies within the southern limb of the Sachigo greenstone belt on the other, Micon considers the greater region surrounding the McFaulds Lake area to be highly prospective for MMS, magmatic Cr-Ni-Cu-PGE, and VMS deposits. The three chrome projects discovered to date (i.e. Noront's Blackbird 1 and 2, SKF JV's Big Daddy and Freewest's Black Thor) lie along a 12 km to 14 km long northeast-southwest structural trend and all sit within the same peridotite body. In Micon's opinion these chromite discoveries collectively form one of the most significant chromite discoveries made in North America, notwithstanding the fact that all of the projects still require much more drilling to demonstrate a resource.

The land holdings around the Big Daddy Deposit are shown in Figure 15.2.





Figure 15.1 Airborne Magnetics Map showing Discoveries around the Big Daddy Deposit





Figure 15.2 Concession Map of the McFaulds Lake area



### 16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

In July, 2008, quarter core samples taken from drill holes FW-08-05 and FW-08-07 were submitted to World Industrial Minerals, Arvada, Colorado, USA, for chemical and mineralogical analysis, and preliminary metallurgical testing. A total of eight sample intervals were tested.

#### 16.1 MINERALOGICAL AND CHEMICAL ANALYSIS

The eight samples were submitted to DCM Science Laboratory Inc. of Wheat Ridge Colorado (DCM) for x-ray diffraction (XRD) analysis and The Mineral Lab. Inc., of Lakewood, Colorado for x-ray fluorescence (XRF) analysis. DCM also completed a petrographic study of the samples.

A summary of the XRD analytical results is presented in Table 16.1.

Phase	17204	172405	172406	172426	172427	172428	172429	172430
Amphibole	-	-	8%	-	-	-	-	-
Chlorite	45%	45%	32%	37%	38%	36%	41%	34%
Pyroxene	5%	3%	-	-	-	-	-	-
Chromite	48%	51%	52%	61%	58%	60%	55%	50%
Talc	-	-	6%	-	2%	2%	1%	13%
Unaccounted	<5%	<5%	<5%	<5%	<5%	<5%	<5%	<5%

# Table 16.1Summary of XRD Analysis Results

A summary of the XRF analytical results is presented in Table 16.2. Only elements and compounds with values above the instrument detection limit are included in the table.

Element	Units	17204	172405	172406	172426	172427	172428	172429	172430
/Compound									
MgO	%	28	27	24	24	24	23	24	24
Al <sub>2</sub> O <sub>3</sub>	%	7	9	8	12	11	11	12	10
SiO <sub>2</sub>	%	25	22	23	16	18	16	18	23
CaO	%	2.1	1.2	1.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TiO <sub>2</sub>	%	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3
MnO	%	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3
Fe <sub>2</sub> O <sub>3</sub>	%	12	14	14	17	16	18	17	16
V	ppm	635	690	744	785	791	864	804	842
Cr	ppm	180,000	190,000	200,000	230,000	220,000	230,000	210,000	190,000
Со	ppm	135	142	162	176	170	174	155	176
Ni	ppm	1,320	825	1,040	1,120	1,070	921	1,130	819
Zn	ppm	316	348	403	529	518	540	499	567

#### Table 16.2 Summary of XRF Analysis Results

As XRF analyses showed chrome values of between 18 % to 23 %, which corresponds to calculated chromite  $(Cr_2O_3)$  values of between 26 % to 34 %.



It is noted that the XRF analysis did not include PGM's, such as Pd, Pt and Rh.

The petrographic analysis showed that chromite grains were generally discreet and high grade. The grains typically had subhedral to euhedral shape and measured from 50  $\mu$ m to 750  $\mu$ m in size. The chromite grains tended to be of very high purity and no deleterious minerals were identified within the chromite grains.

The matrix containing the chromite grains is composed of altered chlorite and talc and the mineralogical investigations suggest that chromite could be liberated and recovered using standard mineral processing technology.

### **16.2 METALLURGICAL TESTING**

Metallurgical testing on the Big Daddy composite sample was performed by Phillips Enterprises LLC of Golden, Colorado. The scope of this preliminary testwork program included gravity separation and flotation of ground material. Figure 16.1 presents the test procedure. Micon notes that the work was scoping in nature and significant improvements in results would be expected from more detailed studies.



Figure 16.1 Big Daddy Scoping Test Procedure

Table 16.3 provides a summary of the scoping testwork results. Note that these results are based on chemical analyses, which are generally more accurate than the XRF method.



Product	Chromite	Chromite		
	Grade (%)	Distribution (%)		
Gravity concentrate	49	47		
Flotation concentrate	43	28		
Combined concentrate	47	74		
Total Tailings	10	26		
Feed	37	100		

# Table 16.3Summary of Metallurgical Test Results

A XRF analysis of the combined concentrate is compared to the average feed analysis in Table 16.4.

 Table 16.4

 Average Feed and Combined Concentrate XRF Analyses

Stream	MgO	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	CaO	TiO <sub>2</sub>	MnO	Fe <sub>2</sub> O <sub>3</sub>	V	Cr	Со	Ni	Zn
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Feed	24	11	19	1.6	0.3	0.3	17	814	211,250	167	994	518
Conc.	18	10	11	0.2	0.5	0.2	22	954	280,000	221	761	652

Using the XRF analyses presented in Table 16.4, the calculated Cr to Fe ratio of both the average feed and combined concentrate is 1.83. However, using wet chemical methods to analyze for  $Cr_2O_3$ , which is more accurate than XRF due to potential incomplete dissolution of chromium using the XRF method, the value of  $Cr_2O_3$  46.6 % for the combined concentrate equates to a Cr to Fe ratio of 2.07.

Of note is the 11 % SiO<sub>2</sub> assay of the combined concentrate which would preclude this product from some of the main chromite markets. However, mineralogical analyses suggest that the chromite grains are relatively pure, therefore additional liberation studies and metallurgical testing would most likely reduce this to an industry acceptable level.

### **16.3 RECOMMENDATIONS**

Further metallurgical work needs to be undertaken on samples of Big Daddy chromite mineralization to establish an optimum beneficiation flowsheet.



#### 17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Neither a mineral resource nor a mineral reserve has been estimated for any part of the Big Daddy chromite deposit and its associated PGE mineralization. Although the potential strike length of the deposit on the property is close to 2 km based on the magnetic signature of the peridotite host rock, only 400 m has been confirmed by diamond drilling. The next phase of diamond drilling will aim to define the lateral limits and morphology of the deposit prior to geostatistical work to define the optimum drilling grid to categorize the resources.



# **18.0 OTHER RELEVANT DATA AND INFORMATION**

All relevant data and information regarding the Big Daddy chromite deposit has been disclosed under the relevant sections of this report.



# **19.0 INTERPRETATION AND CONCLUSIONS**

The intrusion hosting the Big Daddy chromite deposit and the associated PGE mineralization has been faulted, dislocated and transposed about 90 degrees in the clockwise direction. This is based on the evidence of drill hole FW-08-07 which shows the fractionation trend ending in gabbro-norite. Following the transposition, the chromite zone and the encompassing lithological units are steeply dipping to the southeast.

Based on the magnetic signature of the peridotite host rock the chromite mineralization has an inferred strike length on the property of about 2 km. An analysis of the drill hole sections (Figures 10.3 to 10.7) shows that the main zone of chromite mineralization decreases in thickness along strike from the northeast to the southwest and down dip with increasing depth. The decrease is more rapid along strike as evidenced by the abrupt thinning of the massive/semi-massive chromite zone from >15 m in Figure 10.4 to <5 m in Figure 10.3 over a lateral distance of only 100 m. This suggests a termination of the main chromite zone at approximately line 800E (Figure 10.8) and is corroborated by the termination of the magnetic anomaly (Figure 10.1). The difference in elevation of the massive chromite in Figures 10.4 and 10.5 is attributed to a fault as depicted in Figure 10.8. This interpreted geometry is important in any future pit design and in future drilling programs aimed at increasing the resource at depth.

Based on extrapolations of the drill hole sections (Figures 10.4 to 10.7) combined with the interpreted geometry of the long section (Figure 10.8), the lower limit of the mineralization at its deepest point is estimated to be between 500 m and 700 m. However, this remains to be substantiated by deeper drilling. The Mag 3D inversion conducted by Cavén (December, 2008) demonstrated that "the magnetic host rocks appear to be limited in their depth extent".

The PGE mineralization encountered just below the massive chromite (in the stratigraphic footwall) may be due to volatile-induced partial melting of cumulates giving rise to constitutional zone refining. However, this is a hypothesis at this time as more evidence needs to be gathered. In any case, it is the PGE zone encountered above the chromitite layer in pyroxene that draws more attention as this would fit perfectly with the MSZ model of the Great Dyke, Zimbabwe. (See explanation/notes on Figure 8.3). Based on the drilling completed to date, no economic grade PGE's have been encountered in the massive/semi-massive chromite.

The coefficient of correlation between Pt and Pd based on 2,100 assays is 0.73 with a coefficient of determination of 0.53. Thus the presence of one of these elements can be used as a rough guide (path finder) as to the presence of the other. However, the correlation is not robust enough to enable the estimation of the actual values using assays of the other.

In so far as the chromite mineralization is concerned, the drilling to date has been localized and insufficient to determine the potential size of the deposit or a meaningful resource estimate.



•

At this stage a variographic analysis cannot give tangible results due to the following limitations:

- Inadequate drill hole data (Note that only 13 intersections are available).
- Inadequate sample coverage of the potential deposit (The 13 intersections currently available are clustered in the south-western portion covering only 1/5 of the potential size of the deposit).



#### 20.0 RECOMMENDATIONS

Micon recommends that a proper database of the completed drilling be compiled in preparation of an initial resource estimate. This will entail re-surveying all the drill holes using gyroscopic instruments which are not susceptible to magnetic interference.

In view of the remoteness and lack of infrastructure of the SKF JV project area, the overall (global) size of the deposit will impact significantly in any future investment decision making process. Thus for the next phase of exploration, Micon recommends the following.

#### **Global Definition of the Chromite Deposit.**

Combined gravity and magnetic ground surveys at 100 m spacing between lines and 12.5 m between stations should be completed before the next stage of drilling commences. This will eliminate wasteful drilling and reduce the associated drilling costs. The spacing between lines should be reduced to 50 m at or close to the zones where existing aeromagnetic data have shown major dislocations (see Figure 7.1). This is necessary for the accurate definition of fault positions prior to drilling.

Based on the continuity of the target zone(s) defined by the geophysical surveys, diamond drilling should be conducted initially at 200 m spacing between lines taking 2 holes per line at 150 m apart to define the lateral limit/extent and morphology of the deposit. Simultaneously this drilling will provide representative sample coverage of the deposit.

The 200 m spacing along strike is based on the authors' experience of lateral continuity of massive chrome layers while working on similar deposit types where such spacing would, in the absence of structural disruptions, yield an Indicated resource following a variographic analysis.

#### **Resource Definition Criteria**

Following the completion of the drilling mentioned above, a variographic analysis of the drilling results should be conducted to determine the optimum drilling grid for resource categorization. It must be noted that at this stage, adequate/representative sample coverage of the deposit would have been attained. It is possible that a resource might even be established if the continuity of the mineralization justifies it. And therefore only minimal additional drilling may be required.

#### **Investigation of PGE Potential**

Despite the perceived financial constraints, Micon strongly recommends that the associated PGE potential of the Big Daddy chromite deposit be assessed. Pt analyses are expensive since gold is used as a collector for the bead. On the basis of a coefficient of correlation of 0.73 between Pt and Pd assays, Micon recommends using Pd to detect PGE enriched zones and thereafter restricting detailed PGE analyses to those zones.



At least one hole must be sampled at 1 m intervals over the entire length in order to establish with precision the stratigraphic horizon(s) at which PGE enrichment occurs. On the basis of these results further work on PGE will be planned. However, in Micon's opinion, the real potential for PGE is in the pyroxenite unit which is in the hanging wall of the main chromite layer. This is the zone/interval where fractional crystallization is likely to give rise to a PGE-rich layer not associated with the base of a cyclic (Example II in Figure 8.3).

A provision should be made for a change of scope in the SKF JV's development budget should economic grades of PGE be encountered in this exercise.

#### Follow-up on unexplained EM anomlies

Whilst current exploration efforts are on chrome and associated PGE, the potential for other deposit types should not be overlooked, particularly MMS (which might occur in the same peridotite unit hosting the chrome mineralization) and VMS type deposits in the eastern segment of the SKF JV area. Freewest's and Noront's MMS discoveries in peridotite (see Section 15) lend support for follow-up work on EM conductors.

#### Investment in QA/QC

In preparation of a NI 43-101 compliant resource estimate, it is imperative that acceptable levels of QA/QC procedures be put in place immediately and maintained.

Logging of the holes should be conducted using a bar coding system to ensure uniformity in defining geological boundaries.

Appropriate survey equipment and procedures should be put in place before the commencement of the next drilling program. The grid lines currently being cut in preparation for ground geophysics must also be surveyed and tied to the national grid.

Purchase or manufacture of certified reference materials is a necessary prerequisite to conducting any further analyses of samples.

The budget for sample analyses should include provision for

- Repeat analyses at an ISO certified laboratory (10 % of the total project samples).
- Use of control samples (at least one each of a blank, a certified standard, a duplicate sample and an in-house standard in every 25 samples).
- Petrological and mineralogical studies by independent consultants to help explain the metallurgical aspects of the deposit.
- Bulk metallurgical tests using the appropriate coarse assay rejects.



In the case of blank samples, it is recommended that the blanks must look like the rest of the samples and not be in powder form. If the blanks are already crushed and pulverized, they will escape the critical test at the crushing stage.

#### **Preparations for Resource Modelling**

Logging of the drill hole cores should be conducted using a bar coding system to ensure uniformity in defining geological boundaries.

Appropriate survey equipment and procedures for down-hole and x, y, z coordinates should be put in place before the commencement of the next drilling program. The grid lines currently being cut in preparation for ground geophysics must also be surveyed and tied to the national grid.

Micon recommends that all future sampling programs related to chromium mineralization be categorized or placed into domains as follows.

- Disseminated mineralization.
- Semi-massive mineralization.
- Massive/lumpy mineralization.

Contacts between the different types of mineralization must not be crossed when selecting samples, particularly where the massive chromitite layers are encountered. This will facilitate the definition of resources at different cut-off grades. The site geologist is encouraged to develop an appropriate coding system for these three categories of mineralization. The cores from the previous drilling program will need to be categorized in the same manner as cores from the forthcoming drilling campaign.

Density determinations must be conducted for each category of mineralization. A reputable laboratory can be used in conjunction with in-house efforts.

### Additional Staff and Drill Core Facilities

In Micon's opinion there is urgent need for the JV to engage a geotechnician to assist the site geologist with the following.

- Supervise drill rigs and ensure down-hole surveys are done properly.
- Supervise transportation and storage of drill core.
- Carryout geotechnical logging of drill core to establish RQD, etc. and take photographs of the drill cores before logging and sampling by the geologist.


An investment in proper core shed facilities is highly recommended before the next phase of drilling commences. It will not be possible to put every piece of core under roof and lock but it is imperative to have half or quarter core of all the intersections together with at least 10 m each of the hanging wall and footwall in secure storage.

## **Exploration Budget For 2009**

In pursuit of fulfilling the recommendations outlined above, the SKF JV has planned to spend a total of approximately CAD \$5.8 million in two phases. Phase I (\$0.8 M) will focus on (a) activities relating to and incorporating detailed ground geophysical surveys, (b) development of standard logging procedures plus drill hole survey checks/corrections and (c) preliminary metallurgical studies. Phase II (\$5.0 M) primarily consists of delineation drilling including pilot metallurgical test-work and mineral resource development. Details on the breakdown are shown in Table 20.1

Micon endorses this budget in its entirety as it believes that it will define the lateral limits and morphology of the Big Daddy deposit not only in a systematic manner but also in the most cost effective way. Based on its own assessment, Micon also believes that the 2 km potential strike length of the Big Daddy chromite is worthy of further exploration.

PHASE I		
Planning		\$5,000
Line cutting	37.5 km (incl. skidoo rental, gasoline, etc	32,100
Geophysics	gradiometer & gravity + standby, mob / de-mob, etc	67,500
Re-log	geologistsm GeoTic licence, mob / demob, XRF & mag susc rental	128100
Assays	includes saw blades, sample shipment, etc	25,900
43-101 Report	includes site visit, assays, etc	68,300
Metallurgy		86,900
Geo Consultant		13,200
Helicopter	incl fuel	89,900
Fixed wing		49,500
Drafting		5,000
Meals / Camp Costs		103,500
	Sub total	674,900
	Contingency (9.6%)	65,100
	TOTAL	740,000
PHASE II		
Planning		18,300
Drilling	16,000m + fuel	2,222,600
Geology	geos, geotecks, GeoTic lic., core racks, XRF & mag susc rental, down hole survey	673,800
Assays	incl assoc. costs	135,300
Resources est / 43-101		82,500
Env studies		66,000
Helicopter	incl fuel	906,400
Fixed Wing		99,000
Meals / Camp costs		426,400
	Sub total	4,630,000
	Contingency (8.0%)	370,000
	TOTAL	5,000,000

 Table 20.1

 SKF JV Budget Proposals for the Global Definition of Resources of the Big Daddy Deposit



# MICON INTERNATIONAL LIMITED.

"Richard M. Gowans"

Richard M. Gowans, P. Eng.

"Charley Z. Murahwi"

Charley Z. Murahwi, P. Geo. MAusImm

Signature date: March 31, 2009.



## 21.0 REFERENCES

### 21.1 TECHNICAL REPORTS (SEDAR/IN-HOUSE)

Burns, J. G. April, 2005. Report of Drilling on the McFaulds Lake Property, Porcupine Mining Division, Ontario, of Freewest Resources Canada Inc. for Freewest Resources Canada Inc. (In-house Report).

Cavén, R. J. December, 2008. Report on the Mag 3D Inversion of the Magnetic Anomalies on the Spider Property of Billiken Management, McFaulds Area, Ontario.

Lahti H. R., April, 2008. Technical Report on the McFaulds Lake Project, Porcupine Mining Division, James Bay Lowlands, Ontario, Canada, for UC Resources and Spider Resources Inc.

Lahti H. R., April, 2008. Final Report On Drill Results Spider/KWG/Freewest JV Project McFaulds Camp, Ontario. Claims 3012250, 30122252,3012253, 3008268, 3008269 and 3008793. BMA 527861. Private Report for JV Companies.

McBride, D. E., September, 1994. Report on the geological observations and their significance, Spider Lake Project, Attawapiskat River, James Bay Lowlands. Unpublished report for KWG Resources and Spider Resources Inc.

Novak, N., April 12, 2006. Spider Resource Inc. / KWG Resources Inc/ Freewest Resources Inc., Option Agreement On Their West Property Grid "H" and "J" On Claims 3012250, 3012252,3012253, 3008268, 3008269 and 3008793 all of which are centered on or about: 555000E and 5845000N NTS 43D/16. Private Report for JV Companies.

P & E Consultants Inc., August, 2008. Technical Report and Resource Estimate on the Eagle One Deposit, Double Eagle Property, McFaulds Lake Area, James Bay Lowlands, Ontario, Latitude 52° 45 N, Longitude -86° 17 W.

JVX Geophysical Surveys and Consulting, November, 2008. Report on Magnetic/VLF and HLEM Surveys, Freewest Option Property, McFaulds Lake Area, Ontario. Private Report for JV Companies.

Hogg, S & Associates, 2004. Ground Magnetic and Horizontal Loop Electromagnetic Survey, McFaulds Lake - Northwestern Ontario; Compilation and Interpretation Report.

Hogg, S & Associates, 2006. Condor Diamond Corp. Compilation and Interpretation Report of a Ground Magnetic Survey in the McFaulds Lake Area, Northern Ontario.

World Industrial Minerals, September, 2008. "Chromite Testing Analyses Report, Big Daddy Chromite Occurrence". Prepared for the SKF JV.



Phillips Enterprises, LLC, Metallurgical Testing and Consulting Services, October 2, 2008. Beneficiation Report.

## 21.2 SCIENTIFIC PUBLICATIONS/BOOKS

Campbell, I. H., Naldrett, A. J., 1979. The influence of silicate:sulphide ratio on the geochemistry of magmatic sulphides. *Econ. Geol.*, **76**, 1503 – 1506.

Campbell, I. H. and Turner, J. S., 1986. The influence of viscosity on fountains in magma chambers. *J. Petrol.* **27** 1 - 30.

Irvine, T. N., 1975. Crystallization sequences in the Muskox Intrusion and other layered intrusions. II. Origin of chromite layers and similar deposits of other magmatic ores. *Geochim. Cosmochin. Acta*, **39**, 991 – 1020

Irvine, T. N., 1977. Origin of the chromite layers in the Muskox Intrusion and other stratiform intrusions: a new interpretation. *Geology*, **5** 273 -277.

Jackson, E. D. 1961. Primary textures and mineral associations in the ultramafic zone of the Stillwater complex. U. S. Geol. Surv., Prof. Pap. **358.** 

Kruger, F. J. and Marsh, J. S., 1982. Significance of Sr87/Sr86 ratios in the Merensky cyclic unit of the Bushveld complex. *Nature* **298**, 53 - 55.

Lambert et al, 1989. Rhenium-osmium and samarium-neodymium isotope systematics of the Stillwater Complex, Montana. *Science* **244**, 1169 – 1174.

Maier et al., 1998. Exploration for magmatic Ni-Cu-PGE sulphide deposits: a review of recent advances in the use of geochemical tolls, and their application to some South African ores. *S.Afr J. Geo.*, 1998, **101**(3), 237 - 253

Naldrett, A. J., Brugmann, G. E. and Wilson, A. H., 1990. Models for the concentration of PGE in layered intrusions. *Can. Mineral.* **28**, 389 – 408.

Stott, G. M., 2007. Precambrian geology of the Hudson Bay and James Bay Lowlands region interpreted from aeromagnetic data – east sheet. Ontario Geological Survey, Preliminary Map p. 3597; scale 1:500,000.

Sharpe, M. R., 1985. Strontium isotope evidence for preserved density stratification in the main zone of the Bushveld Complex, South Africa. *Nature* **316**, 119 – 126.

Von Gruenewaldt, G., 1979. A review of some recent concepts of the Bushveld complex with particular reference to the sulfide mineralisation. *Can. Mineral.* **17**, 233 – 256.



# 22.0 CERTIFICATES



#### CERTIFICATE OF AUTHOR RICHARD M. GOWANS P.Eng.

As a co-author of this report entitled "NI 43-101 Technical Report on the Big Daddy Chromite Deposit And Associated Ni-Cu-PGE, James Bay Lowlands, Northern Ontario", dated March 31, 2009, I, Richard M. Gowans P. Eng. do hereby certify that:

- I am employed by, and carried out this assignment for Micon International Limited Suite 900, 390 Bay Street Toronto, Ontario M5H 2Y2 tel. (416) 362-5135 fax (416) 362-5763 e-mail: rgowans@micon-international.com
- I hold the following academic qualifications: B.Sc. (Hons) Minerals Engineering, The University of Birmingham, U.K. 1980
- 3. I am a registered Professional Engineer of Ontario (membership number 90529389); as well, I am a member in good standing of the Canadian Institute of Mining, Metallurgy and Petroleum.
- 4. I have worked as an extractive metallurgist in the minerals industry for over 28 years.
- 5. I do, by reason of education, experience and professional registration, fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes the management of technical studies and design of numerous metallurgical testwork programs and metallurgical processing plants.
- 6. I have not visited the project site.
- 7. I am responsible for the preparation of Section 16 of this report entitled "NI 43-101 Technical Report on the Big Daddy Chromite Deposit And Associated Ni-Cu-PGE, James Bay Lowlands, Northern Ontario", dated March 31, 2009.
- 8. I am independent of the joint venture parties involved in the Big Daddy property, as defined in Section 1.4 of NI 43-101.
- 9. I have had no prior involvement with the mineral properties in question.
- 10. I have read NI 43-101 and the portions of this report for which I am responsible have been prepared in compliance with the instrument.
- 11. As of the date of this certificate, to the best of my knowledge, information and belief, the sections of this Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make this report not misleading.

Dated this 31<sup>st</sup> day of March, 2009.

"Richard M. Gowans" {signed and sealed}

Richard M. Gowans, P.Eng.



## **CERTIFICATE OF AUTHOR**

#### CHARLEY Z. MURAHWI

As a co-author of this report entitled "NI 43-101 Technical Report on the Big Daddy Chromite Deposit And Associated Ni-Cu-PGE, James Bay Lowlands, Northern Ontario" dated March 31, 2009, I, Charley Z. Murahwi do hereby certify that:

- 1) I am employed as an Senior Geologist by, and carried out this assignment for, Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, telephone 416 362 5135, fax 416 362 5763, e-mail <u>cmurahwi@micon-international.com</u>.
- 2) I hold the following academic qualifications:

B.Sc. (Geology and Botany) University of Rhodesia, Zimbabwe, 1979;

Diplome d'Ingénieur Expert en Techniques Minières, Nancy, France, 1987;

M.Sc. (Economic Geology), Rhodes University, South Africa, 1996.

- 3) I am a registered Professional Geoscientist of Ontario (membership number 1618) and am also a member of the Australasian Institute of Mining & Metallurgy (AusIMM) (membership number 300395).
- 4) I have worked as a mining and exploration geologist in the minerals industry for over 28 years;
- 5) I do, by reason of education, experience and professional registration, fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 12 years on Cr-Ni-Cu-PGE deposits (on and off- mine), and the balance on a wide variety of other mineral commodities including gold, silver, copper, tin, and tantalite.
- 6) I visited the Activation Laboratory in Thunder Bay on 10 January, 2009 and the Big Daddy mineral property, between 11 and 13 January, 2009.
- 7) I have had no prior involvement with the mineral property in question;
- As of the date of this certificate to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this report not misleading;
- 9) I am independent of the parties involved in the Big Daddy property, other than providing consulting services;
- 10) I have read the NI 43-101 and the portions of this Technical Report for which I am responsible have been prepared in compliance with this Instrument.
- 11) I am responsible for the preparation of all sections except Section 16 of this Technical Report dated March 31, 2009 and entitled "NI 43-101 Technical Report on the Big Daddy Chromite Deposit And Associated Ni-Cu-PGE, James Bay Lowlands, Northern Ontario".

Dated this 31<sup>st</sup> day of March, 2009.

"Charley Z. Murahwi" {signed and sealed}

Charley Z. Murahwi, M.Sc., P. Geo. MAusIMM