



# Canada's Ring of Fire & Direct Reduction

## Understanding the Opportunity



**KWG RESOURCES INC.**

**CANADA CHROME CORPORATION**



**Members' Meeting 2018 - 24-26<sup>th</sup> April 2018 - Paris, France**

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

*This presentation includes certain "forward-looking information" within the meaning of applicable Canadian securities legislation. Examples of such forward-looking information includes information regarding the timing, extent and success of exploration, development and mining activities, conclusions of economic evaluations (including those contained in the Technical Report, as defined herein), project financing requirements, project permitting, planned infrastructure for the Ring of Fire region and the estimated and anticipated economic impact of KWGs mineral projects. Forward-looking information is based on reasonable assumptions that have been made by the Company as at the date of such information and is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: the impact of general business and economic conditions; risks related to government and environmental regulation, actual results of current exploration and development activities, changes in project parameters as plans continue to be refined; problems inherent to the marketability of base and precious metals; industry conditions, including fluctuations in the price of base and precious metals, fluctuations in interest rates; government entities interpreting existing tax legislation or enacting new tax legislation in a way which adversely affects the Company; stock market volatility; competition; risk factors disclosed in the Company's most recent Management's Discussion and Analysis and Annual Information Form, available electronically on SEDAR; and such other factors described or referred to elsewhere herein, including unanticipated and/or unusual events. Many such factors are beyond KWG's ability to control or predict.*

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# About ; KWG Resources Inc



KWG Resources Inc is an exploration stage company that is positioned to be the world's lowest cost producer of **ferrochrome**.

This premise is based on three essential components;

- 1- high grade chromite deposit (Black Horse)
- 2- low cost bulk transport (Canada Chrome Corp)
- 3- reducing chromite to ferrochrome using natural gas. (Muketi)

# Ring of Fire ; Location





From a practical point of view the Lowland is a vegetation rich lake





Which makes boating very difficult





When the Lowland is not frozen, all activities require helicopter support

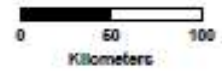




Canada Chrome Corp has staked mining claims on a unique sand ridge that stands proud of the wet Lowlands that will support heavy transport infrastructure and egress from its minesite.







Legend

- Mines
- First Nation Communities
- Roads
- Existing Railroad
- Proposed Railroad
- TransCanada Pipeline

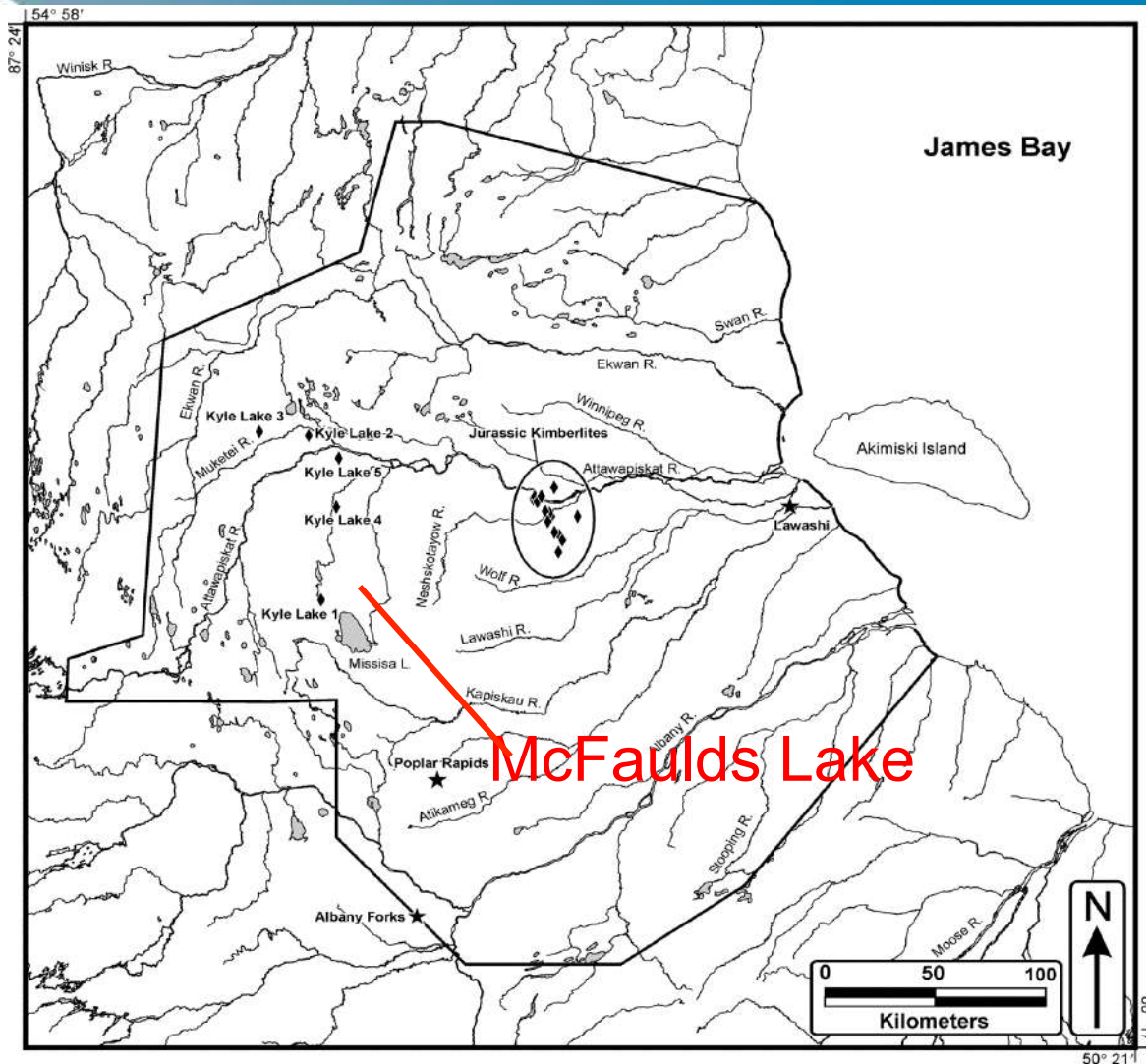


The proposed 328 km railroad will connect the Ring of Fire with existing railroads, paved roads and natural gas pipelines



# Brief history

In 2001 Debeers drilled on a KWG claim at McFaulds Lake and discovered copper and zinc.

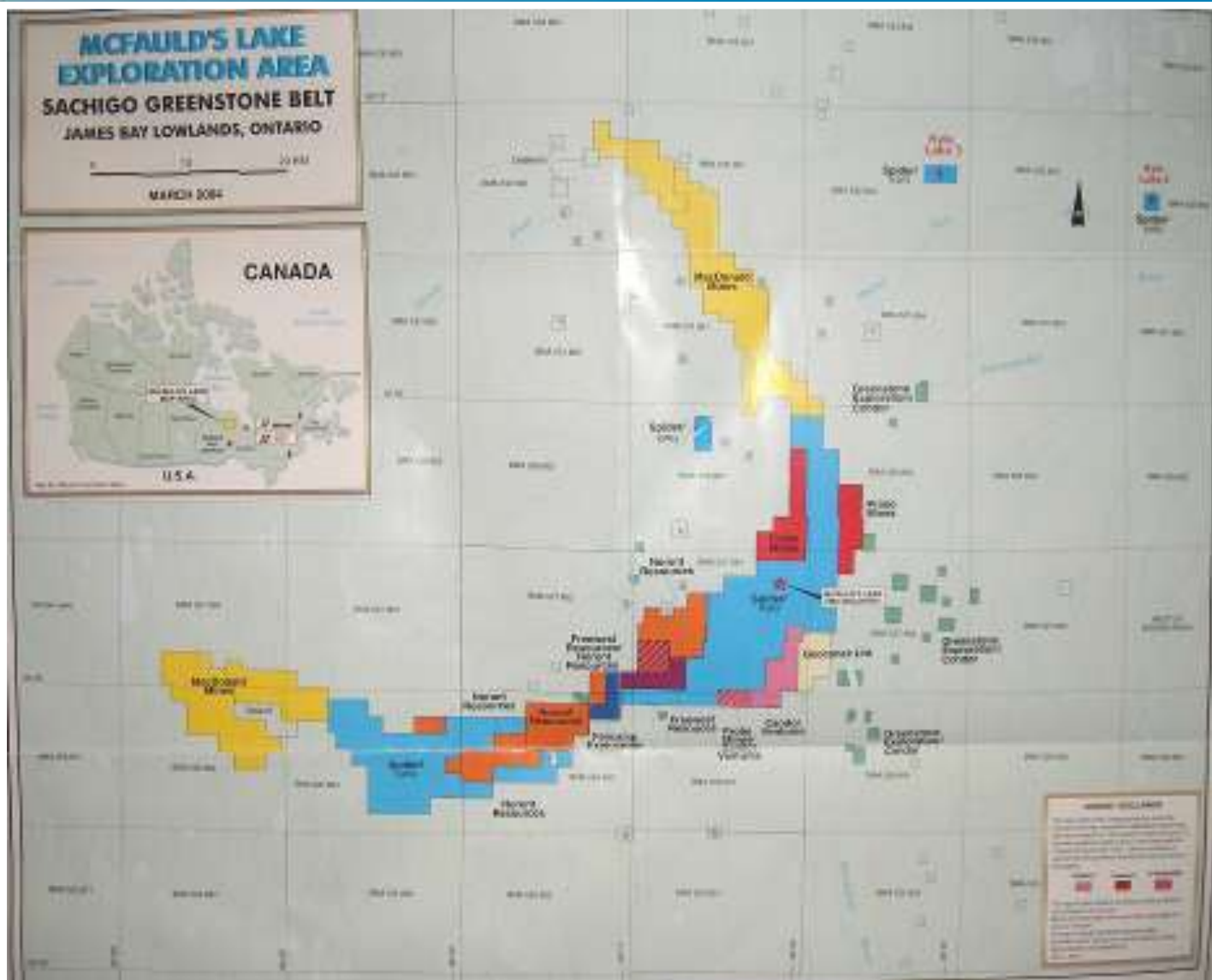


**Figure 6.** Location of diatremes and other alkalic complexes in the James Bay Lowland survey area. Diatremes are shown as diamonds and the alkalic complexes are shown as stars. The Kyle Lake diatremes are believed to be Mesoproterozoic in age



# Brief history

The discovery led to a mining claim staking rush that defined the "Ring of Fire"

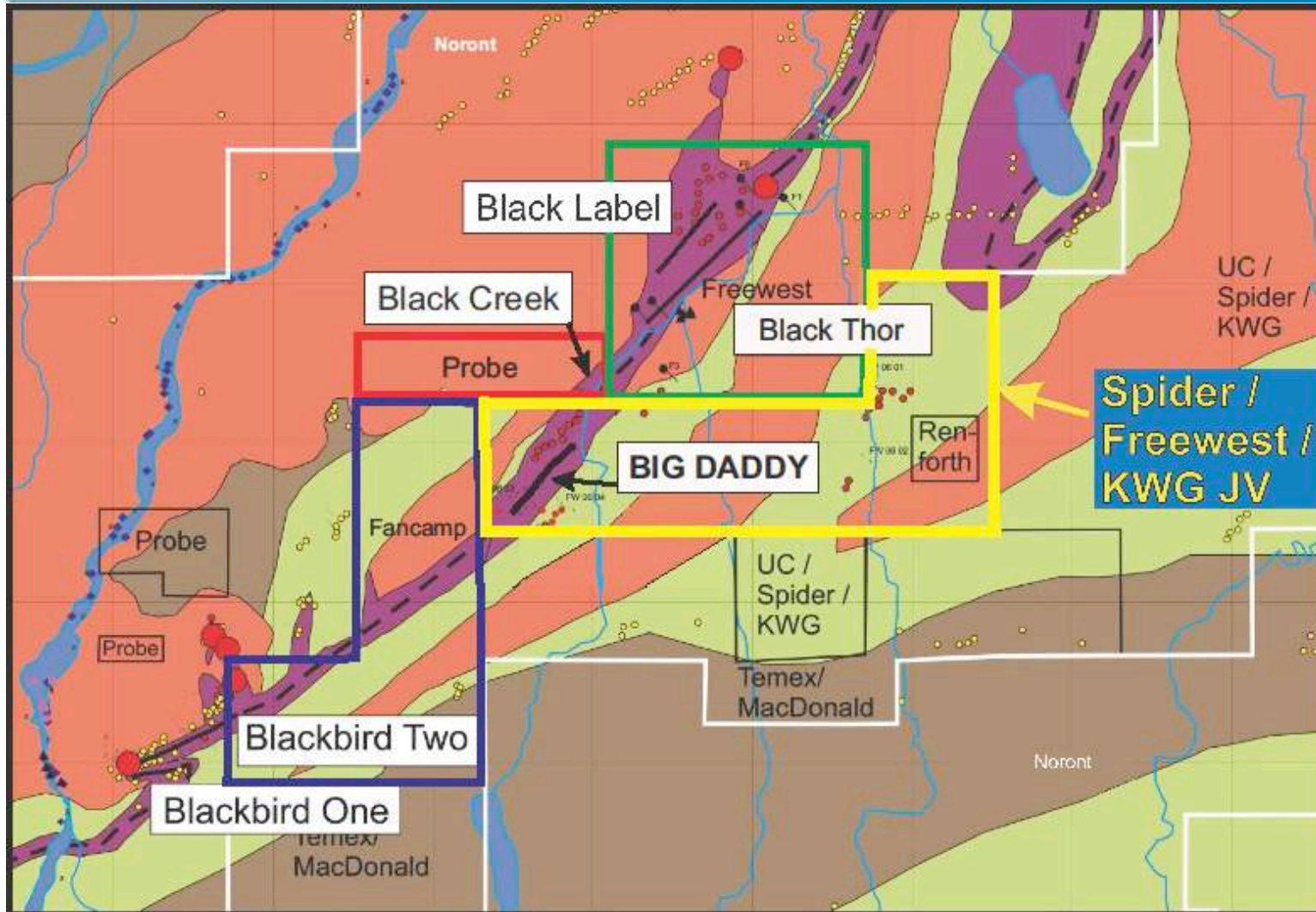






# Brief history

- In 2008, 3 chromite deposits were discovered
- Black Bird - Noront
- Big Daddy - Freewest-Spider-KWG
- Black Thor - Freewest

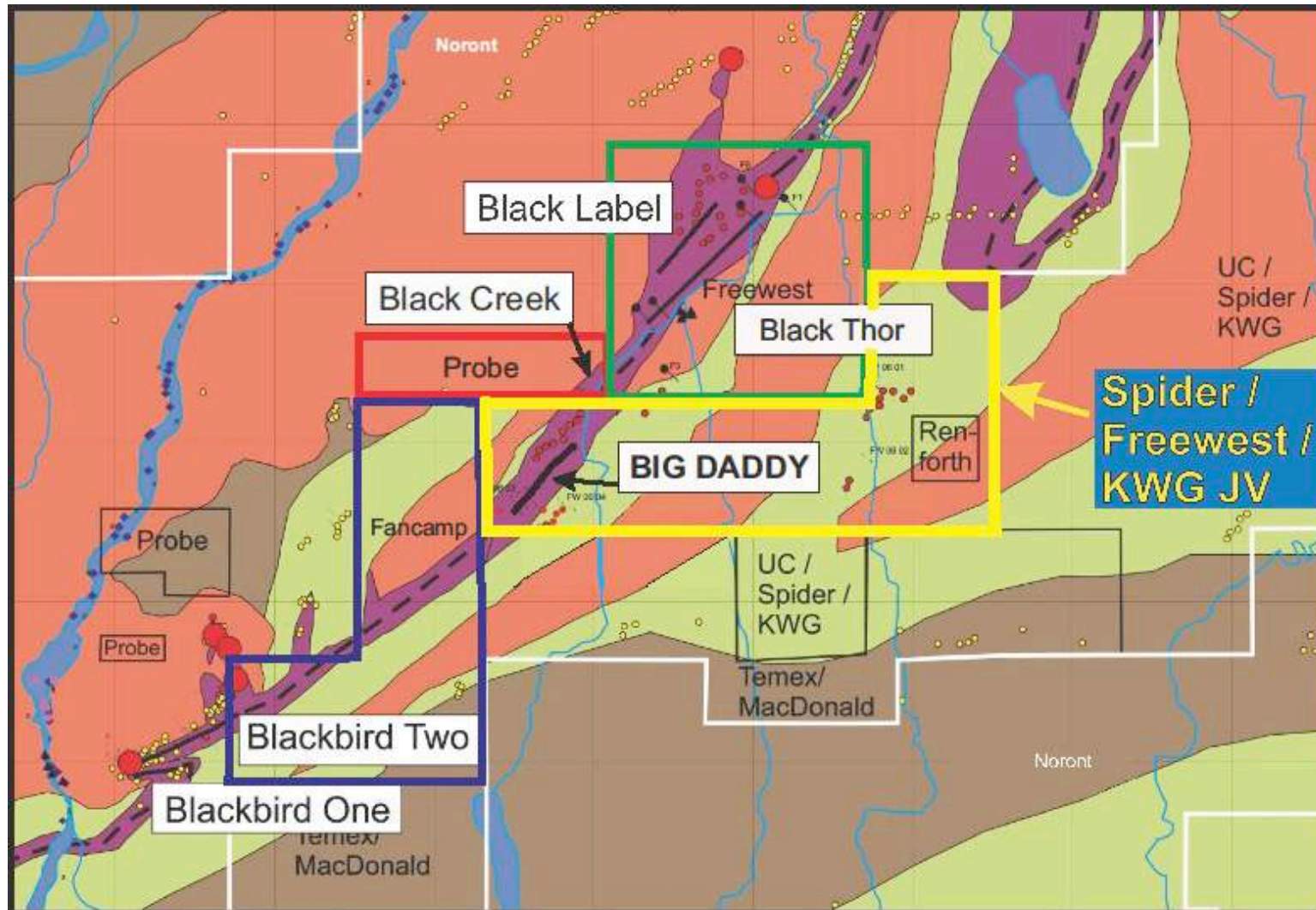




# Brief history

In 2008-2009

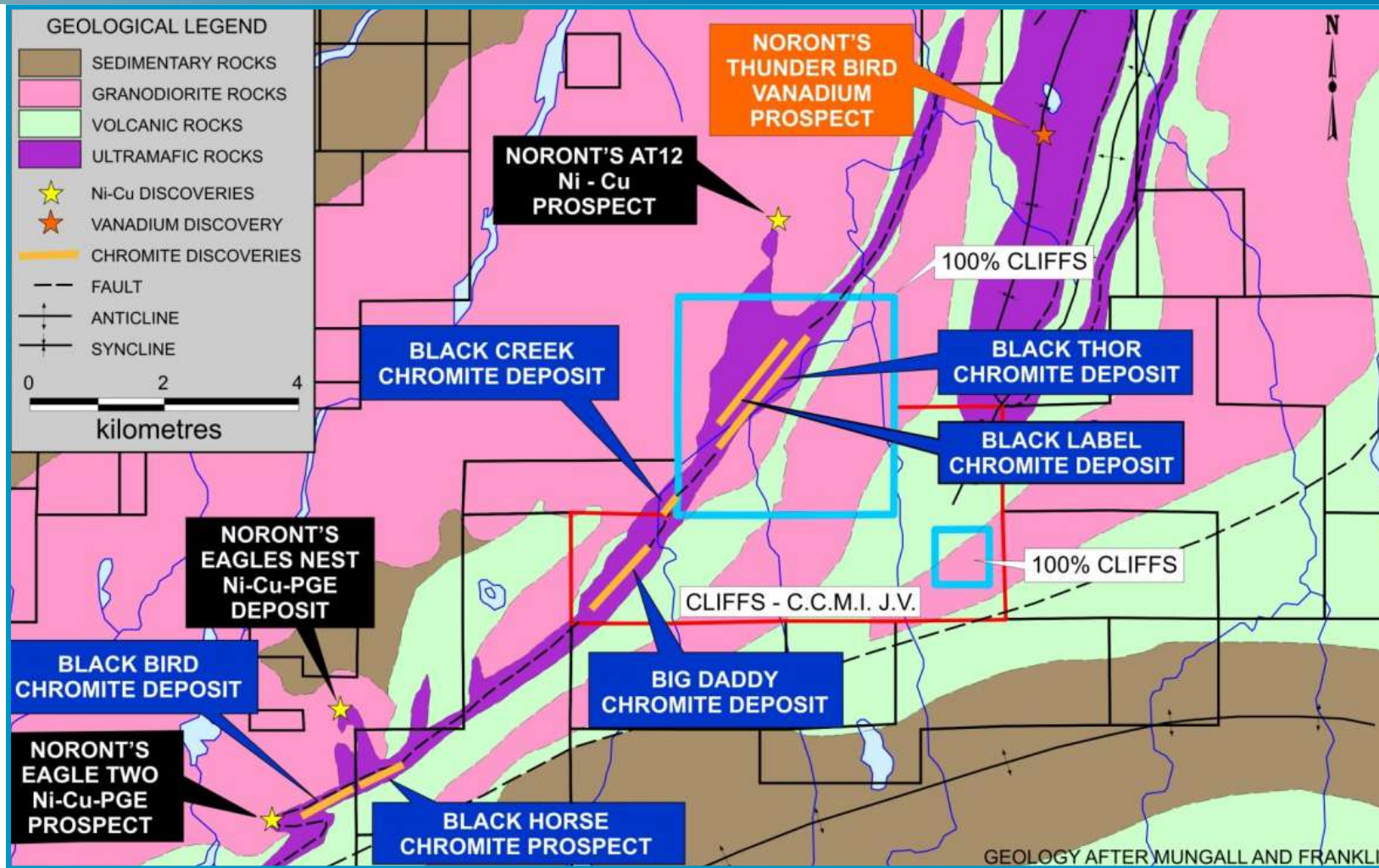
KWG partners with Cliffs Natural Resources to support the development of the Big Daddy



# Brief history

2010 - Cliffs buys Freewest and Spider and control over Big Daddy and Black Thor

Cliffs proceeds with plans to develop Black Thor





# Brief history

2011 - Cliffs raises \$5 billion to purchase control of the Bloom Lake iron mine.

2014 – Cliffs Canadian subsidiary declares bankruptcy

2015 – Sale of Canadian assets, Ring of Fire to Noront

## Markets Chart of the Day

China Spot Iron Ore Prices by Quality vs. Industrial Production

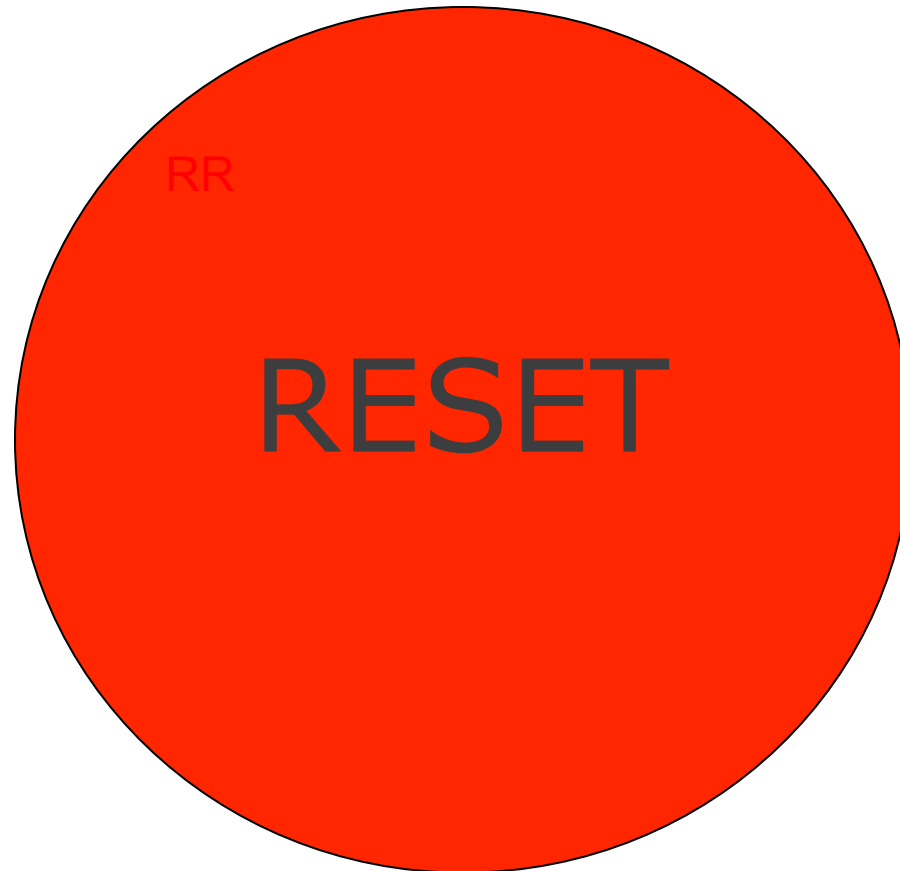


Copyright © 2014 Bloomberg Finance L.P.

23-Sep-2014 07:18:51



# Brief history



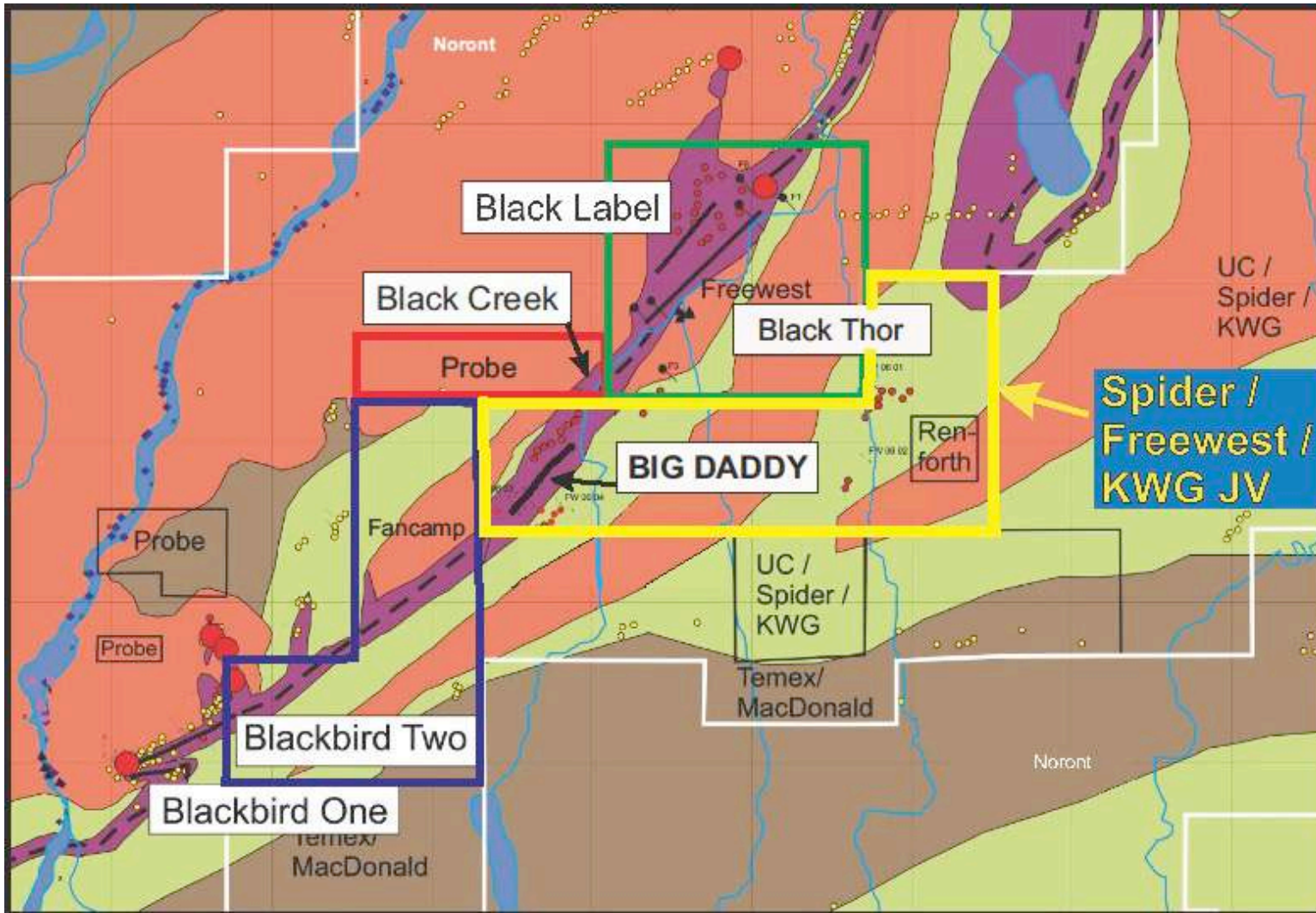
# Brief history – Moving forward

- 1-Grow chromite resource
- 2-Develop chromite gas reduction
- 3-Orchestrate railroad development
- 4-Explore First Nation partnerships



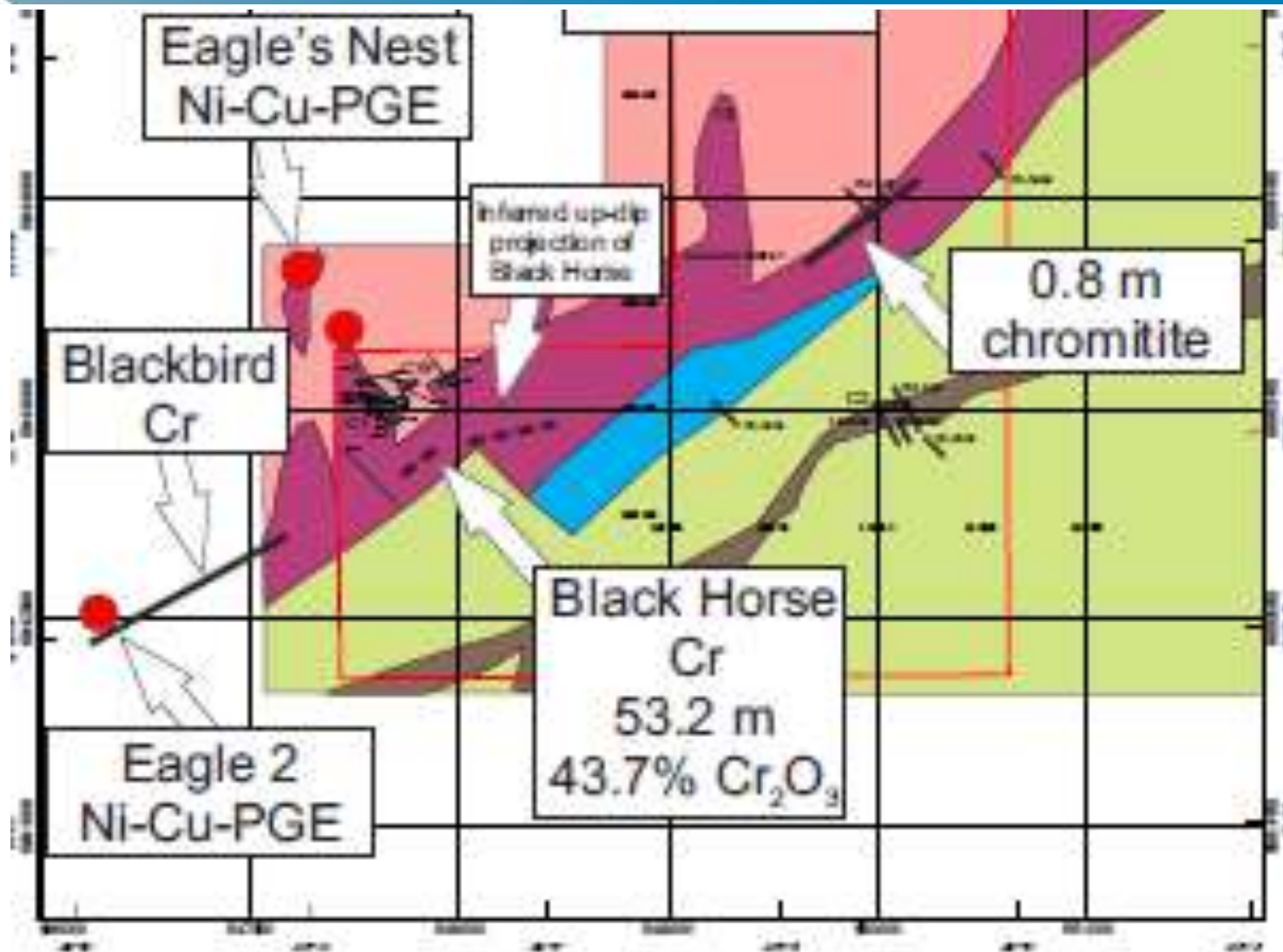
# Brief history

In 2013-14 KWG earned a 50% interest in the chromite on the Fancamp claims, the gap in the chromite horizon



# Brief history

In 2013-14 KWG earned a 50% interest in the chromite on the Fancamp claims





# FN-10-25 - Fancamp discovery hole



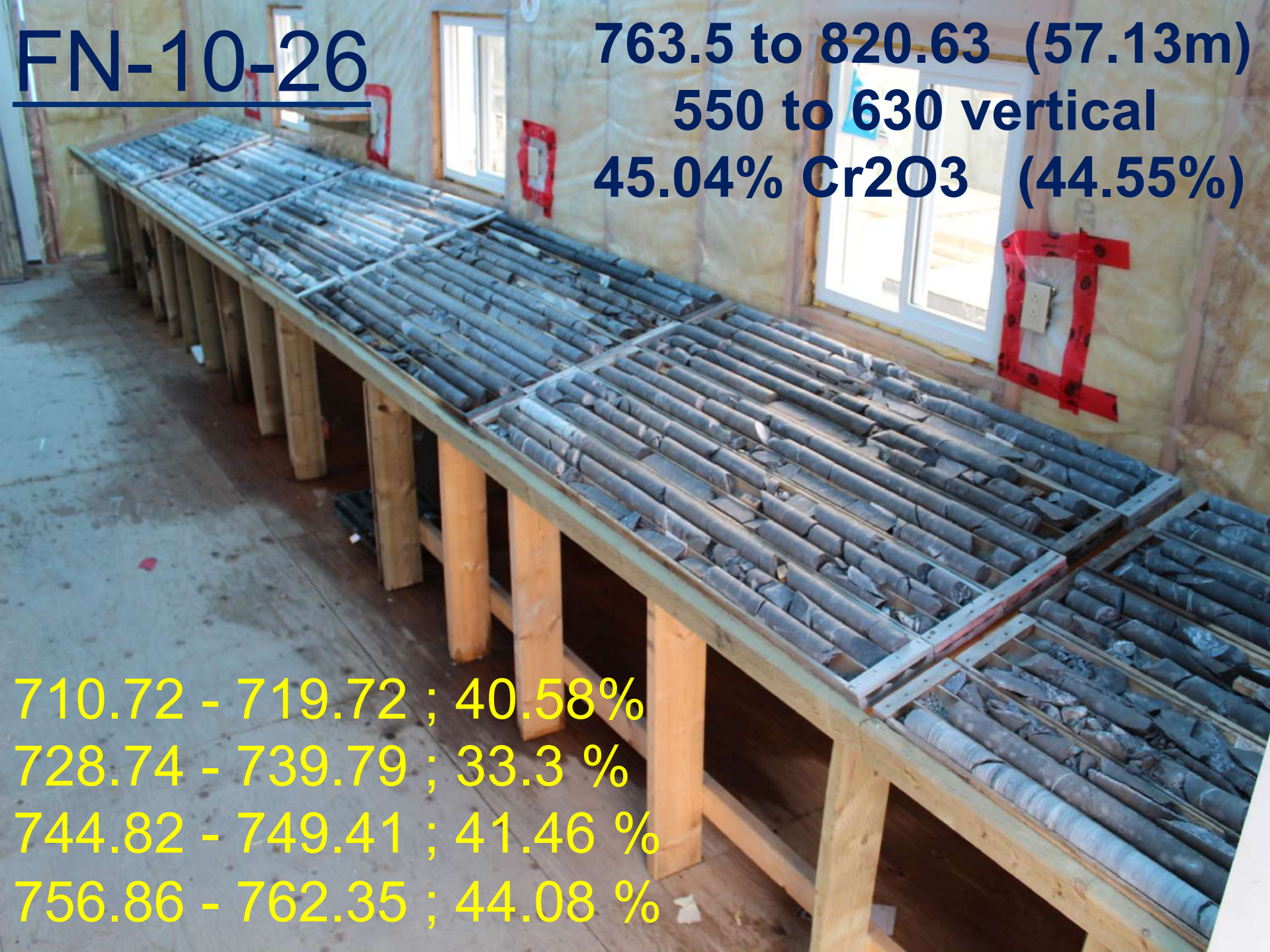
- 838.17m to 1048.31m- massive chromitite**
- 210.14m at 43.49% Cr<sub>2</sub>O<sub>3</sub> (43.30%)**
- 650 - 850 vertical depth**



FN-10-26

763.5 to 820.63 (57.13m)  
550 to 630 vertical  
45.04% Cr2O3 (44.55%)

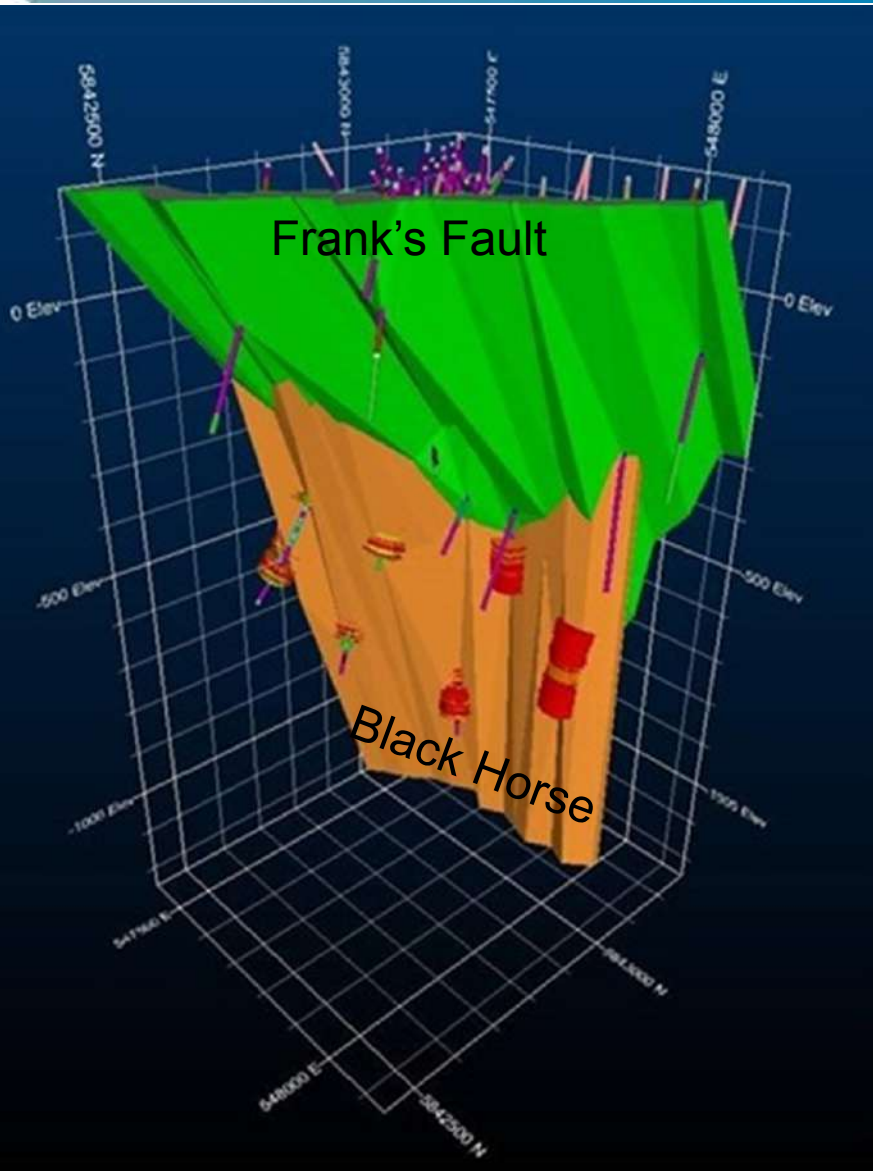
710.72 - 719.72 ; 40.58%  
728.74 - 739.79 ; 33.3 %  
744.82 - 749.41 ; 41.46 %  
756.86 - 762.35 ; 44.08 %





# Brief history

In 2013-14 KWG delineated the Black Horse chromite deposit

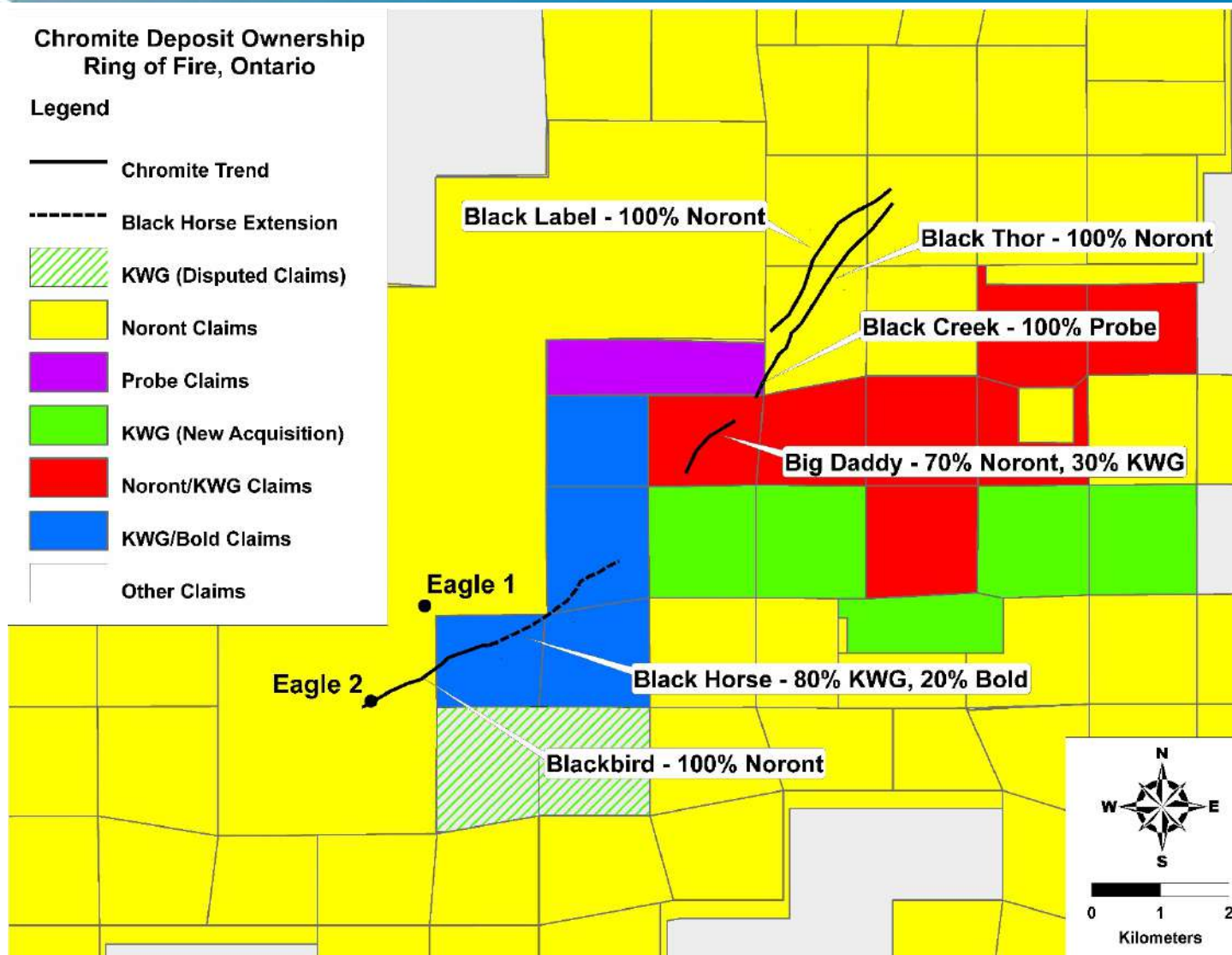


## Black Horse Chromite

85.9 MT @ 34.5% Cr<sub>2</sub>O<sub>3</sub>  
43-101 compliant  
Inferred Resource

# Brief history

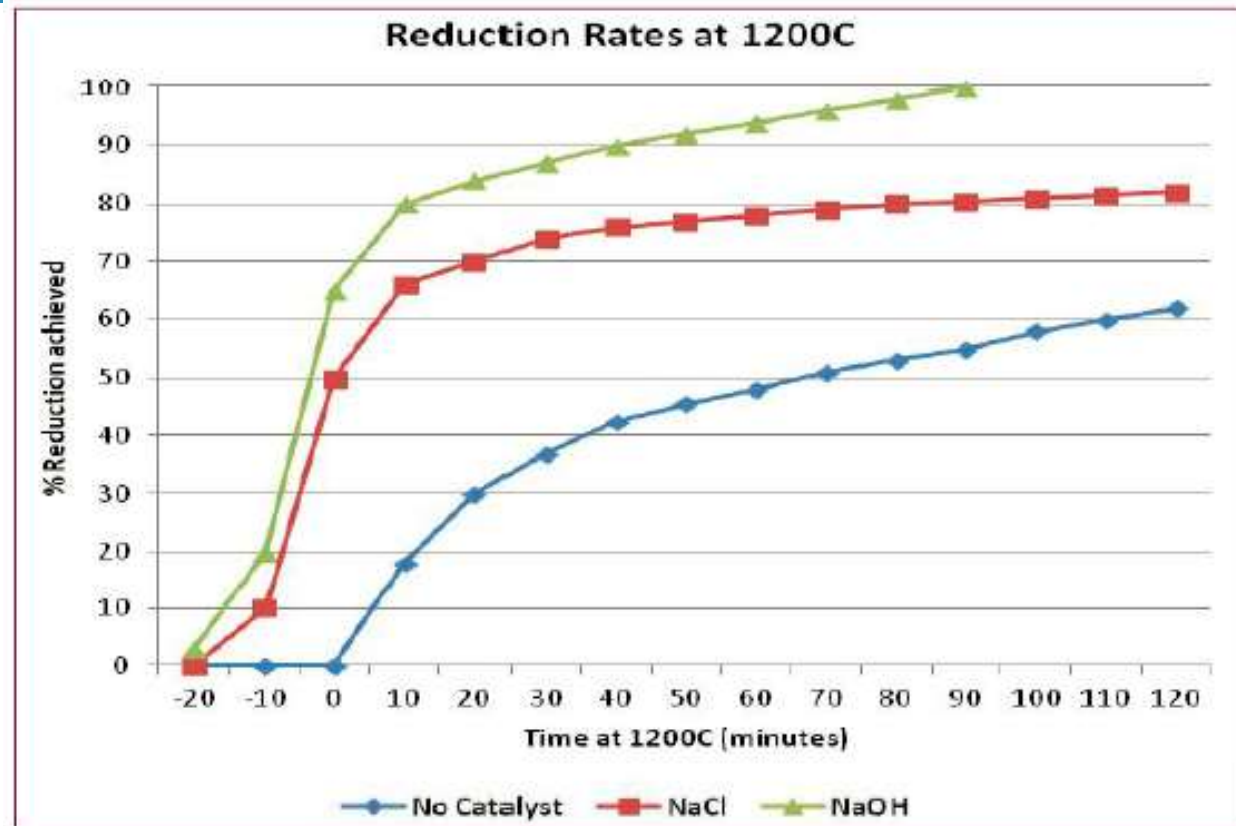
The full extent of the Black Horse chromite deposit remains to be determined by drilling.





# Brief history

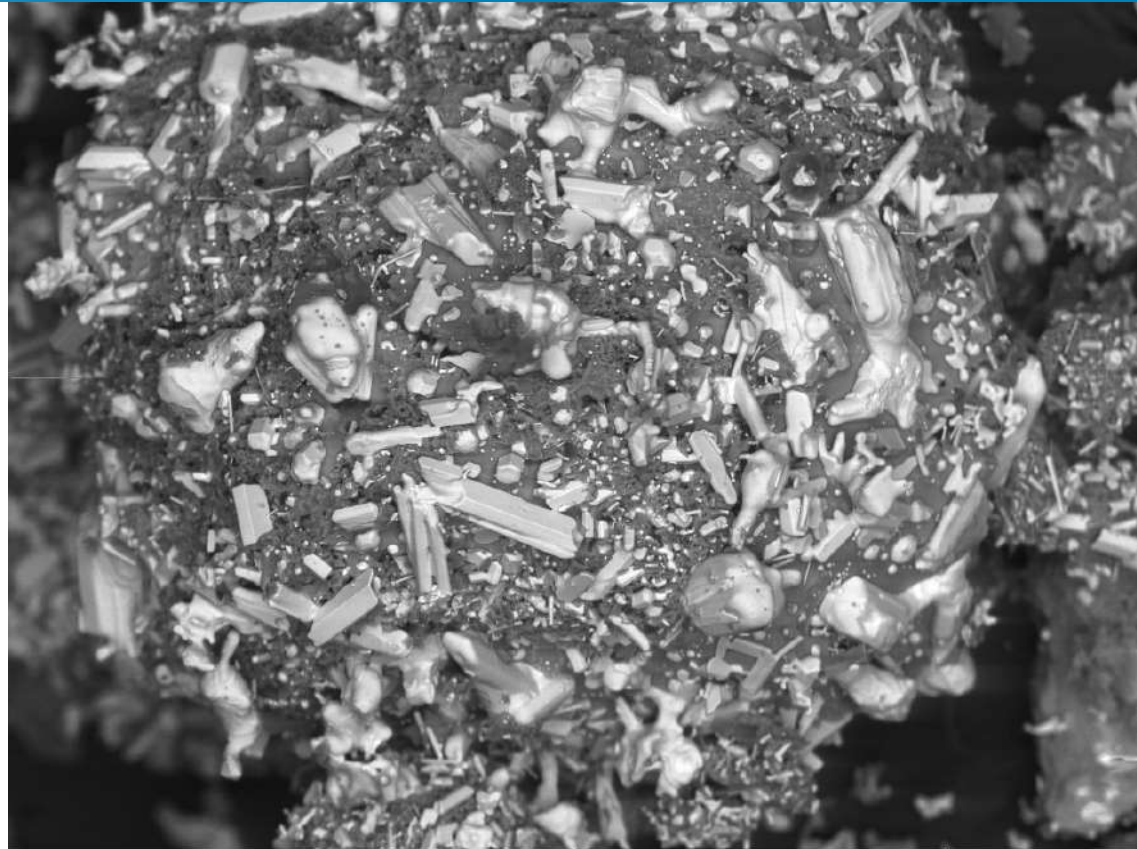
From 2011 to 2015 XPS developed NaOH assisted direct reduction of chromite with natural gas



# Brief history

The ferrochrome carbide is easily liberated from the friable matrix

Ferrochrome carbide crystal



Det: BSE Detector  
SEM HV: 20.00 kV

WD: 27.0000 mm  
SEM MAG: 500 x

200 µm

VEGA\\ TESCAN



# Ongoing

No. 232

**KWG**

Symbol on CSE: **KWG**

Shares issued and outstanding: **871,418,968**

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**KWG MOVES FORWARD ON GLOBAL PATENT PROTECTION BY UNDERTAKING NATIONAL PHASE OF GAS REDUCTION PATENT CLAIM WITH FILINGS IN KEY FERROCHROME-PRODUCING COUNTRIES: CANADA, CHINA, INDIA, INDONESIA, JAPAN, KAZAKHSTAN, SOUTH AFRICA, SOUTH KOREA, TURKEY, USA**

Toronto, Canada, March 22, 2016 – **KWG Resources Inc. (CSE: KWG) (FRANKFURT: KW6)** (“KWG”) is in the process of filing the National Phase in the above-identified countries under the Patent Cooperation Treaty to seek patent grants for its method to reduce chromite ore to metallics utilizing natural gas, a carbon reductant, and a catalyst formulation. The grant of a patent will be sought for the invention in each of the countries where the method might have commercial application and viability.

KWG Allowed Canadian Patent for Production of Chromium Iron Alloys Directly from Chromite Ore

14 Dec 2017

SOUTH AFRICA ACCEPTS KWG PATENT APPLICATION – CANMET MINING PUBLISHES EXCELLENT REDUCTION TEST RESULTS

25 Jan 2018

Kazakhstan Patent Issued to KWG for Chromite Direct Reduction Method

28 Mar 2018



# Ongoing

2015 – 2020 - Though CanMET, the Canadian government committed \$8 million to study all aspects of chromite processing, with a focus on developing a deep understanding of direct reduction by natural gas.



Natural Resources  
Canada

Ressources naturelles  
Canada



*NATURAL RESOURCES CANADA – INVENTIVE BY NATURE*

## Canadian Chromite R&D Initiative

Canada 

# Next step

Pilot scale testing  
ESS furnace, at Mintec, Randburg,  
South Africa





# Railroad

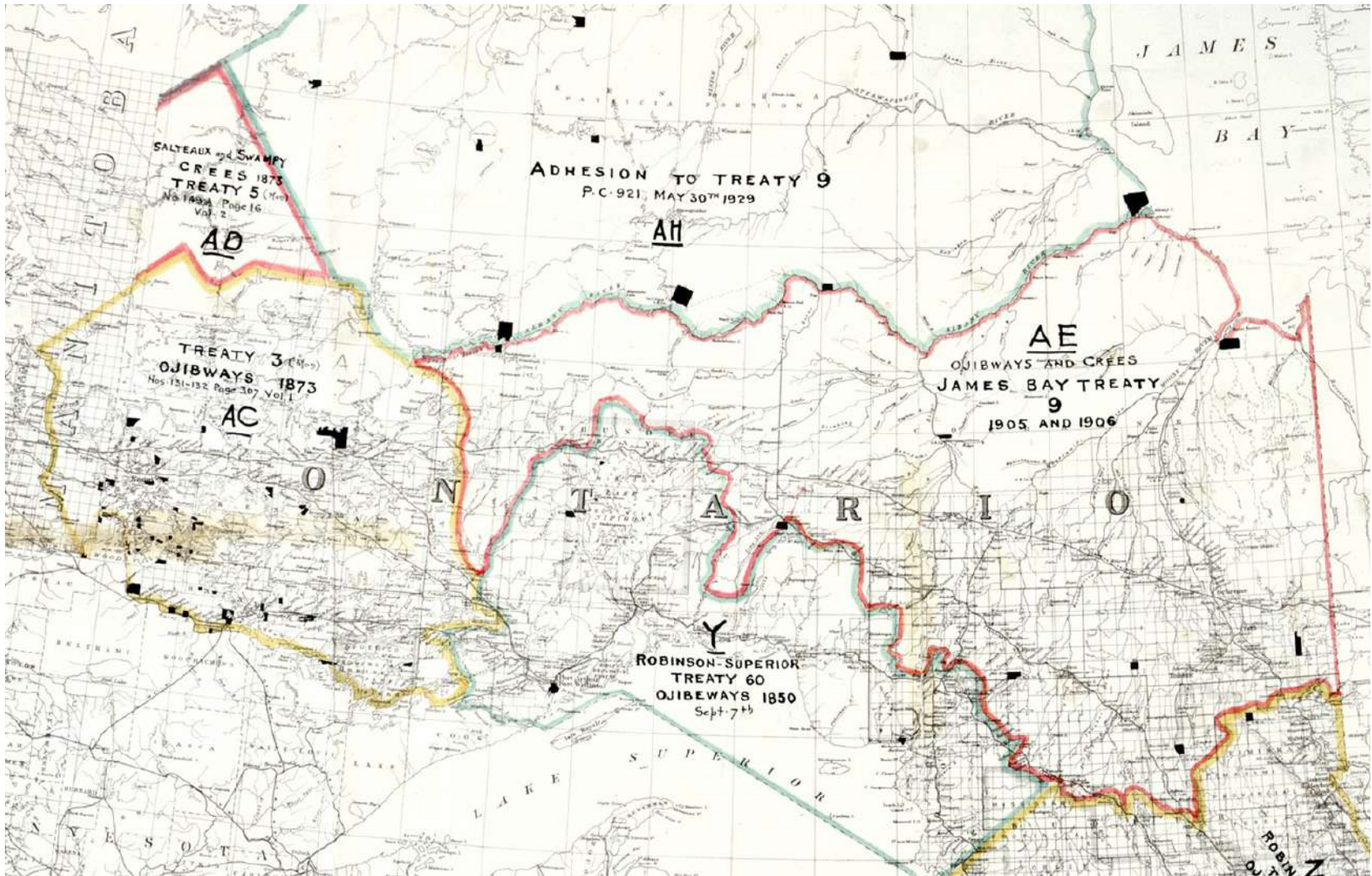
## KWG AND CHINA RAILWAY FSDI INK STRATEGIC COOPERATION AGREEMENT – FSDI TO COMPLETE CONDITIONAL BANKABLE FEASIBILITY STUDY

22 Aug 2016

**TORONTO, ONTARIO–(Aug. 22, 2016) – KWG Resources Inc. (CSE:KWG) (FRANKFURT:KW6)** (“KWG”) announces that it has entered a Framework Strategic Cooperation Agreement with China Railway First Survey & Design Institute Group Co., Ltd. (“FSDI”). Pursuant to the Strategic Cooperation Agreement, the parties have also executed a Conditional Bankable Feasibility Study Consultation Service Agreement (“BFSCS”). Under terms of the BFSCS the parties have agreed on the deliverables and timetable for FSDI to complete a Conditional Bankable Feasibility Study on a railroad from the mineral properties in Ontario’s *Ring of Fire* to a junction with the CN Railroad at Exton, Ontario.

# First Nations

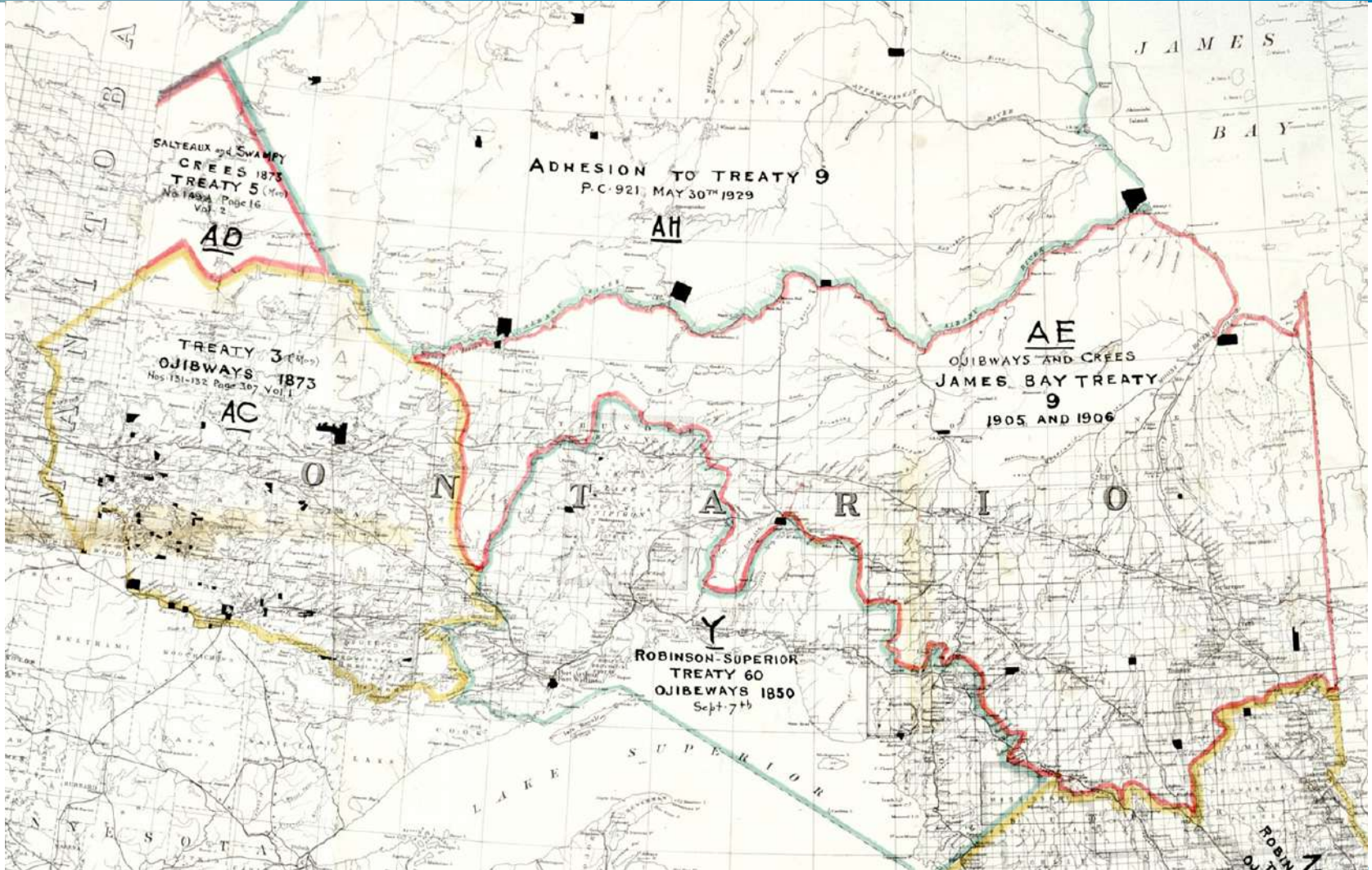
KWG wishes to honour the spirit of the treaties and share the land





# First Nation

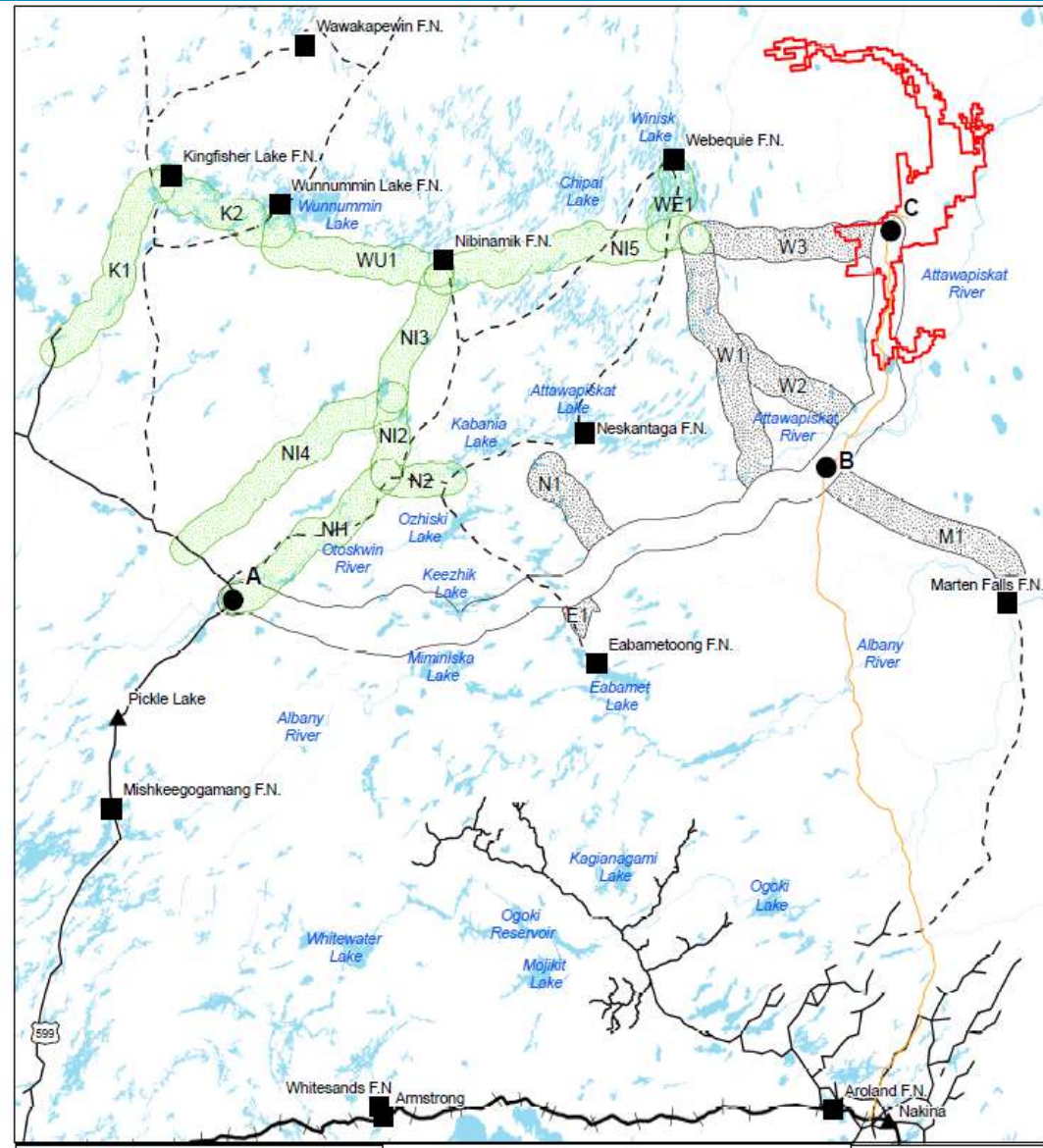
Building mine infrastructure cannot happen in isolation of First Nation needs and desires.



# FIRST NATIONS

Green Forrest Management Inc  
Terrain analysis.

The province of Ontario has  
Funded several First Nations to  
prepare road alternatives studies  
For submission to the EA process





# FIRST NATIONS

## KWG PROPOSES PARTNERSHIP WITH WEBEQUIE & MARTEN FALLS

02 Jun 2016

**TORONTO, ONTARIO—(June 2, 2016)** – In meetings this week **KWG Resources Inc. (CSE:KWG)(FRANKFURT:KW6)** (“KWG”) has discussed with the Chiefs of the Webequie and Marten Falls First Nations an outline of principal terms for the possible creation of an equal partnership through which to undertake the development and exploitation of mineral deposits in the *Ring of Fire*.

*“A little more than a year ago now, we welcomed the Webequie and Marten Falls First Nations joining forces to act together in concluding a ‘Negotiation Protocol Respecting Early Exploration in the Ring of Fire,’”* said KWG President Frank Smeenk. *“The railroad feasibility study that China Railway FSDI proposes to undertake for us is based on the railroad being part of the large-volume underground chromite mining operations being envisaged to supply a gas reduction processing facility where the chromite would be upgraded to ferrochrome. Those mining and transportation capital assets will be largely located within the traditional territories of Webequie and Marten Falls.*

# KEY HURDLES

- 1- Drill Black Horse deposit to support feasibility study and EA
- 2- Commercialize gas reduction of chromite to ferrochrome
- 3- Securing offtake agreements
- 4- Finding a senior partner to build and finance railroad
- 5- Structuring ownership; First Nation–Government–KWG
- 6- Seek financing to develop chromite mine and reduction facilities