

Report to:



**Sangdong Project
Resource Update**

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Report to:



WOULFE MINING CORPORATION

SANGDONG PROJECT RESOURCE UPDATE

16TH SEPTEMBER 2011

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GLOSSARY

UNITS OF MEASURE

American Dollars	US \$
Centimetre	cm
Degree	°
Degrees Celsius	°C
Hectare (10,000 m ²)	ha
Kilometre.....	km
Metre.....	m
Metres above mean sea level	mamsl
Millimetres	mm
Million.....	M
Million tonnes	Mt
Million Years	Ma
Minute (plane angle)	'
Parts per million	ppm
Percent	%
Plus or minus	±
Square kilometre.....	km ²
Square metre	m ²
Standard Deviation	SD
Three Dimensional.....	3D
Tonne (1,000 kg)	t
Year (annum).....	a

ABBREVIATIONS AND ACRONYMS

ALS Chemex	ALS
Bismuth.....	Bi
Chartered Engineer	C. Eng.
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
CDN Resources Laboratories Ltd.	CDN
Company	Co.
Copper	Cu
Corporation	Corp.
Datamine Studio 3 version 3.20™	Datamine
East	E
Fellow of the Institute of Materials, Minerals and Mining	FIMMM
Global Positioning Survey.....	GPS
Gold	Au
Inductively Coupled Plasma Mass Spectrometry	ICP
Incorporated	Inc.
Korea Tungsten Mining Co. Ltd.	KTMC
Lead	Pb
Limited	Ltd.
Microsoft Excel™	Excel
Molybdenum	Mo
Molybdenum Disulphide	MoS ₂
National Instrument 43-101	NI 43-101
Net Smelter Return	NSR
North	N
Northeast	NE

North-northeast	NNE
Northwest	NW
Ordinary Kriging	OK
Property	The Sangdong Property
Quality Assurance.....	QA
Quality Control	QC
Relative Density	RD
Rock Quality Designation	RQD
Sangdong Mine in South Korea	Sangdong
Sangdong Property.....	Property
Se Woo Mining Co. Ltd.	Se Woo
Silicon	Si
Silver.....	Ag
South	S
South East	SE
Standards Technical Services Co. Ltd.	SGS
Tin	Sn
Tungsten.....	W
Tungsten Trioxide	WO ₃
Universal Transverse Mercator	UTM
Versus	V.
Wardrop Engineering Inc.	Wardrop
West	W
Woulfe Mining Corp.	Woulfe
Zinc	Zn

1.0 SUMMARY

1.1 INTRODUCTION

In April 2010 Wardrop, a Tetra Tech company (**Wardrop**) completed a scoping study for Woulfe Mining Corp. (**Woulfe**) for the Sangdong mine in South Korea (**Sangdong**). This study was based on the historical underground drilling and 2006 – 2008 surface drilling information available at that time. Since April 2010 Woulfe have gained access to the old workings and acquired a wealth of historical data. This has greatly enhanced understanding of the mined areas, the physical distribution of the Resource and has identified areas of additional Resource as described in this report. In addition, Woulfe has completed the first phase of a drilling programme of 4,285 metres (**m**) in 37 holes, mostly completed from the old underground workings.

Wardrop have completed an interim resource update for the Sangdong mine in South Korea, presented in this report. This update focuses on the data acquired from the modern drilling programmes completed by Woulfe and compilation of historical data for the upper quarter of the known dip length of the mine, that is, the section from surface to just below the current water level. The work incorporates the current understanding of the mined and unmined parts of the mineralised zones from plans and sections in this upper section.

The historical drilling data used in the April 2010 scoping study has not been used for this work, meaning that any down dip extension of the mineralised zones is not represented in this report as a Resource. The down dip extension of the mineralised zones represents significant potential. As the mine is progressively dewatered and rehabilitated down dip, Woulfe will continue drilling and sampling programmes to refine and extend the overall Resource. Woulfe is currently undertaking a second phase of drilling within this upper section designed to upgrade the Resource presented in this report.

1.2 PROPERTY LOCATION, OWNERSHIP

The Sangdong Property (**Property**) contains a skarn-type tungsten-molybdenum-bismuth deposit and is located in the Republic of Korea (South Korea), in the south eastern (**SE**) area of the Korean Peninsula, about 170 kilometres (**km**) southeast of the capital city of Seoul. The deposit was formerly mined by underground methods during the period 1940 to 1992.

The Property is comprised of 12 Mining Rights with an aggregate area of 3,173 hectares (**ha**), held in the name of Se Woo Mining Co. Ltd. (**Se Woo**), a private Korean company. On 19th October 2006, Woulfe, formally known as Oriental Minerals Inc. entered into an agreement with Se Woo whereby Woulfe can earn up to 100 percent (**%**) interest in the Property through a series of payments and exploration expenditures.

1.3 GEOLOGY

Mineralisation is hydrothermal in nature and is related to sub-horizontal skarn-altered horizons in the Cambrian-age Myobong Shale Formation and to a minor extent, within the overlying Pungchon Limestone and underlying Jangsan Quartzite and is also associated with concordant and cross-cutting quartz veins.

Alteration is concentrically zoned with respect to an underlying, Cretaceous-age granitic intrusive that was the source of hydrothermal fluids that caused the alteration and introduced the mineralisation. Mineralisation is also concentrically zoned with respect to the underlying intrusive, particularly in the Myobong Shale: highest grades of tungsten (**W**), molybdenum (**Mo**) and bismuth (**Bi**) occur in the central, most intensely altered zone and diminish outwards.

A surface drilling programme of some 22,800 metres for 90 diamond drill holes was completed between 2006 and 2008 by Oriental Minerals. Exploration is ongoing at Sangdong as the old underground development is re-opened with an additional 4,285 metres of drilling for 37 diamond holes completed in 2011. Exploration and subsequent modelling are focussed on assessment of the skarn mineralisation around, and as extensions of, the area mined out by the former mining operation.

The tungsten and associated molybdenum mineralisation within the skarn alteration horizon is divided into three major zones: Main, Hangingwall and Footwall. The footwall zone is further divided into sub-zones, although for the purposes of this report they are reported as one zone. Workings of the former underground Sangdong mine largely mined out the Main zone. Recent work has identified a significant infrastructure protection pillar remaining within the Main Zone and this now forms part of the Resource. Minor selective working of the Footwall zone is known in the upper section, whilst the Hangingwall Zones is mined in the deepest section of the mine.

Wardrop have produced this interim Resource model based on the most recent Oriental and Woulfe drilling results. The current drilling database consists of a total of 127 Surface and Underground drillholes for a total of some 27,085 m drilling. Grade estimation was completed using ordinary kriging. The Interim Resource estimate for the Sangdong deposit is given in Table 1.1.

Table 1.1 Sangdong, Skarn mineralisation Resource Estimate; reporting cut-off 0.1% WO₃*

Resource Category	Mineralised Zone	Tonnes	WO ₃ [*] (%)	MoS ₂ ^{**} (%)
'Indicated'	Hangingwall	1,143,000	0.38	0.07
'Indicated'	Main	2,076,000	0.47	0.03
'Indicated'	Footwall	2,749,000	0.41	0.03
'Indicated'	Total	5,968,000	0.42	0.04
'Inferred'	Hangingwall	6,073,000	0.38	0.06
'Inferred'	Main	9,002,000	0.50	0.04
'Inferred'	Footwall	3,497,000	0.46	0.04
'Inferred'	Total	18,572,000	0.45	0.05

Note: MoS₂ is reported in terms of WO₃ cut-off
*WO₃ = Tungsten trioxide, **MoS₂ = Molybdenum Disulphide

The interim Resource defines the mineralised zones in the upper quarter of the known dip length of the mine. Significant potential to extend the Resource exists down dip. Wardrop estimates that the down-dip target mineralisation, within the alteration zones, is in the order of:

- Hangingwall Zone, 20 to 25 Million tonnes (**Mt**).
- Main Zone, infrastructure pillar remnant, 8 to 13 Mt.
- Footwall Zones, 17 to 23 Mt (zones combined).

Target grades for all the mineralised zones are in the order of 0.30% to 0.60% WO₃ and 0.03% to 0.08% MoS₂.

No additional work has been completed for the Jangsan Quartzite molybdenum resource reported in the April 2010 scoping study.

1.4 CONCLUSIONS AND RECOMMENDATIONS

Work to date completed by Woulfe has successfully demonstrated the presence of Mineral Resources within the area of the historical mine at Sangdong as evidence by the Interim Resource estimate presented in this report.

Wardrop recommend that:

1. Woulfe continue their programme of exploration and resource definition drilling to better define and understand the mineralisation in the upper section of the mine, and to upgrade the currently estimated Resources to higher Resource categories.

2. As the mine is progressively dewatered and rehabilitated down dip, drilling, mapping and sampling should continue to further define and explore the Resource.

2.0 INTRODUCTION

Woulfe has retained Wardrop to produce a National Instrument 43-101 (**NI 43-101**) update to the resource estimate for the Sangdong Property, a former tungsten mine, located in the Republic of Korea. Wardrop published an NI 43-101 scoping study for Sangdong in April 2010.

This report is an interim NI 43-101 resource update report. Wardrop is currently engaged in other detailed studies for Woulfe on the Sangdong project.

The Property contains a skarn-type tungsten-molybdenum-bismuth deposit and is located in the Republic of Korea (South Korea), in the south-eastern area of the Korean Peninsula, about 170 km southeast of the capital city of Seoul. The deposit was formerly mined by underground methods during the period 1940 to 1992.

The review of the Sangdong property was based on data and observations made during the site visit together with data, professional opinions and unpublished material submitted by the professional staff of Woulfe, or its consultants. Much of the data was prepared and provided by Woulfe.

Wardrop is pleased to acknowledge the helpful cooperation of Woulfe's management and personnel, all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.

The qualified person responsible for the preparation of this NI 43-101 Technical Report is Mr. Paul Gribble C.Eng., FIMMM. Mr. Gribble, a senior geologist with Wardrop in Swindon, UK visited the Sangdong site between April 11th and 14th 2011 inclusive. Mr. Gribble worked on site at Sangdong with Mr. Brian Wesson, Mrs. Amelia Wesson, Mr. Bill Kable, Dr. K.J. Moon and colleagues of Woulfe. During the site visit the drill sites and re-opened underground workings at the Sangdong mine site were visited. Several of the drill holes from the current campaign were reviewed to independently verify the mineralisation and style of mineralisation on the property. No independent samples were taken as visible mineralisation was identified on site. An additional site visit was made by Mr. Joe Hirst, a geologist with Wardrop in Swindon, UK in May 2011 as part of the Resource update process.

3.0 RELIANCE ON OTHER EXPERTS

Wardrop has reviewed and analysed data and reports provided by Woulfe and its consultants and previous operators of the property and has drawn its own conclusions, augmented by its direct field examination.

While exercising all reasonable diligence in checking, confirming and testing it, Wardrop has relied upon Woulfe's presentation of the project data for the Sangdong project in formulating its opinion and estimates.

The various agreements under which Woulfe holds title to the mineral lands for the project have been reviewed by Wardrop but Wardrop offers no opinion as to the validity of the mineral title claimed. A description of the property and ownership is provided for general information purposes only. Comments on the state of environmental conditions, liability and remediation have been made where required by NI 43-101.

The description of geology, mineralisation and exploration methodology used in this report are based on direct field examination and on data available in published and unpublished reports supplied by Woulfe.

The maps and tables for this report were reproduced or derived from reports written on the property and supplied to Wardrop by Woulfe. Photographs reproduced in this report are taken by Wardrop personnel unless otherwise stated.

4.0 PROPERTY DESCRIPTION

The Sangdong Property is located in the south-eastern Korean Peninsula, about 170 km south-east of the capital city of Seoul, at 37 degrees (°) 08 Minutes (') North (**N**) Latitude and 128° 50' E Longitude as shown in Figure 4.1.

The Property is comprised of 12 Mining Rights with an aggregate area of 3,173 ha, held in the name of Se Woo. The licence areas are shown in Figure 4.2. On 9th October 2006, Woulfe entered into an agreement with Se Woo whereby Woulfe can earn up to 100% interest in the Property through a series of payments and exploration expenditures (the "Agreement"). That Agreement was subsequently amended several times. The terms of the Agreement as amended between Woulfe and Se Woo are as follows:

- Paying Se Woo American Dollars (**US \$**) 8,000 on or before November 8, 2006 (completed).
- Payment of US \$16,000 on or before January 8, 2007 (completed).
- Woulfe, as operator may earn a 51% interest in the Property by:
 - Paying Se Woo upon execution of the Agreement initial payment of US \$80,000 (completed).
 - Paying to Se Woo US \$720,000 in cash and US\$ 800,000 in any combination of cash and Woulfe shares upon closing which took place on January 25, 2007 (completed).
 - Paying to Se Woo US \$2,400,000 in cash and US \$800,000 in any combination of cash and Woulfe shares at six months after closing, closing being defined as being subject to regulatory and shareholder approval (completed).
 - Paying to Se Woo US \$2,400,000 in cash and US \$800,000 in any combination of cash and Woulfe shares at 18 months after closing. (Pursuant to the first amendment dated 18th July 2008, however, the US \$2,400,000 was now to be paid in two equal instalments of US \$1,200,000 on 31st July 2008 and 30th November 2008. The first US \$1,200,000 has been paid, but pursuant to the second amendment dated 14th November 2008, payment of the second US \$1,200,000 was re-scheduled to 30th April 2009).
 - Paying to Se Woo US \$2,400,000 in cash and US \$800,000 in any combination of cash and Woulfe shares at 30 months after closing. (Pursuant to the third amendment dated 6th February 2009, the US \$1,200,000 which had been re-scheduled to be paid on 30th April 2009 and the US \$3,200,000 payment due 30 months after closing – a total

payment of US \$4,400,000 – was re-scheduled such that US \$3,400,000 was to be paid in Woulfe shares and the remaining US \$1,000,000 would be paid in cash, both of which have been done as of 17th December 2009).

- Spending a minimum of US \$800,000 on exploration and related activities in each of the first and second years.
- Spending US \$2,400,000 on exploration and related activities during each of the third, fourth and fifth years after closing on Sangdong or on any other properties of Se Woo, and
- Spending at least US \$16,000,000 if undertaking commercial production.

Woulfe may earn an additional 19% interest in the Property by completing a Preliminary Economic Assessment or a Pre-Feasibility Report (as amended as of 4th February 2010) within five years of closing.

Woulfe may earn an additional 30% interest in the Property by delivering an independent feasibility study by the fifth anniversary after closing. This period may be extended by up to 18 months without penalty to Woulfe.

Se Woo retains a 2% Net Smelter Return (**NSR**).

Further details of the licences are given in Table 4.1.

Figure 4.1 Location Map of the Sangdong Deposit

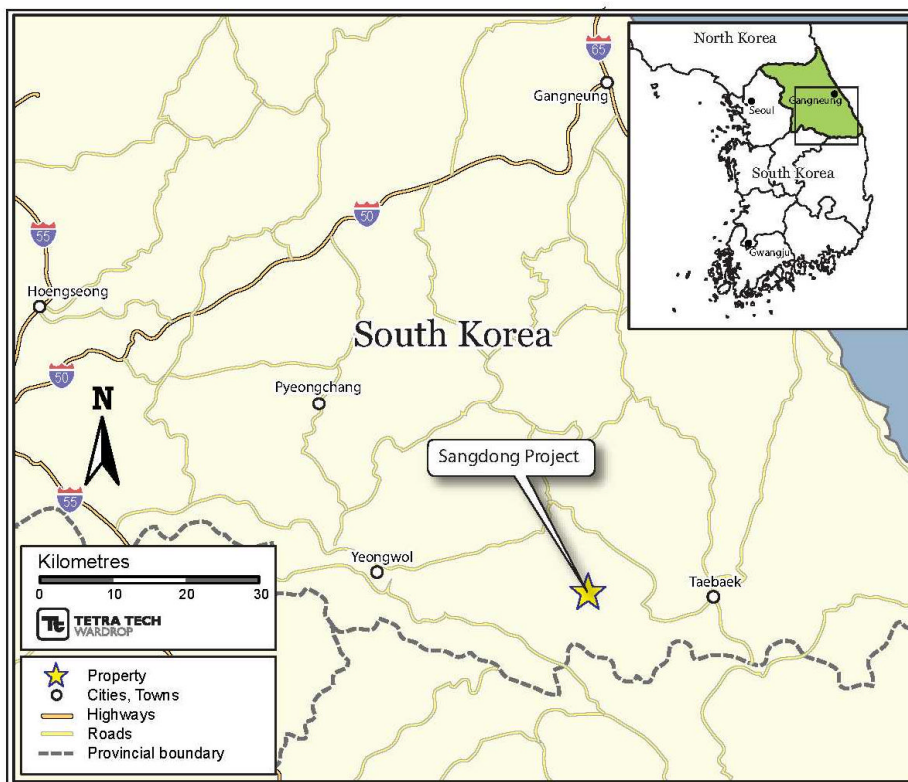


Figure 4.2 Sangdong Mineral Rights Licence Areas

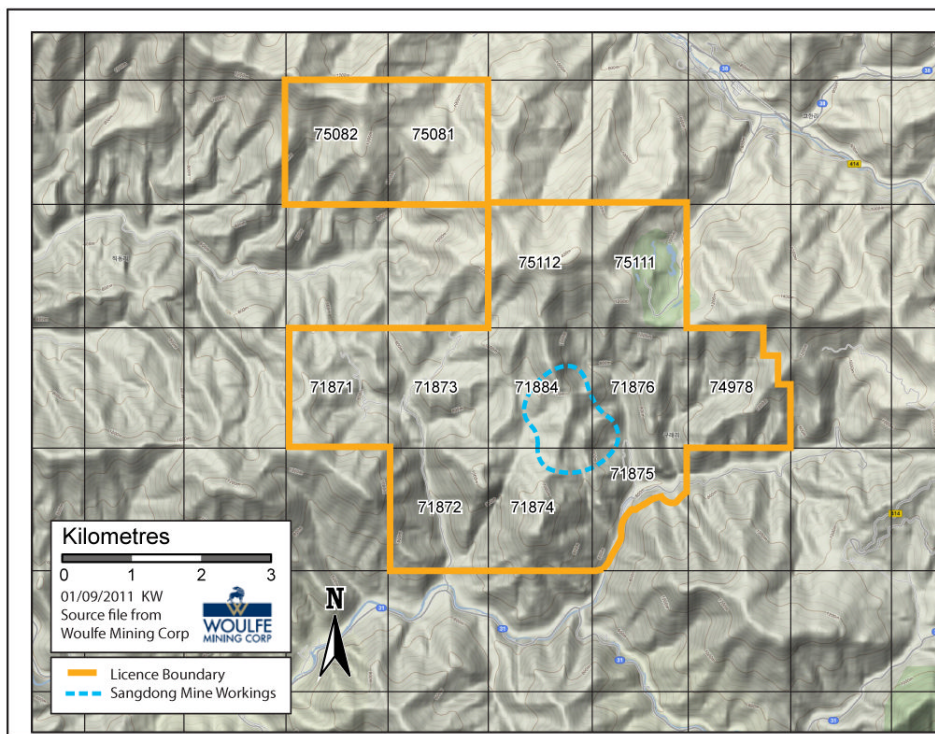


Table 4.1 Sangdong licence details

Owner	Sector	District	Block No	Reg No	Area (ha)	Mineral	Reg Date	Submit MEP	Report MEP	Approve MEP	Submit MPA	Approve MPA	
WOF	Sangdong	Sebyeok	121	71871	274	Au, Ag, Cu, Pb, Zn, W, Mo, Bi, Si	01-Jun-01	09-Oct-06	03-Jul-09	06-Jul-09	23-Apr-10	04-Jun-10	
		Sebyeok	112	71872	274	Au, Ag, Cu, Pb, Zn, W, Mo, Bi, Si	01-Jun-01	09-Oct-06	03-Jul-09	06-Jul-09	23-Apr-10	04-Jun-10	
		Sebyeok	111	71873	274	Au, Ag, Cu, Pb, Zn, W, Mo, Bi, Si	01-Jun-01	09-Oct-06	03-Jul-09	06-Jul-09	23-Apr-10	04-Jun-10	
		Sebyeok	102	71874	274	Au, Ag, Cu, Pb, Zn, W, Mo, Bi, Si	01-Jun-01	09-Oct-06	03-Jul-09	06-Jul-09	23-Apr-10	04-Jun-10	
			Sebyeok	92	71875	185	Au, Ag, Cu, Pb, Zn, W, Mo, Bi, Si	01-Jun-01	09-Oct-06	03-Jul-09	06-Jul-09	23-Apr-10	04-Jun-10
	Sangdong 2	Sebyeok	91	71876	274	Au, Ag, Cu, Pb, Zn, W, Mo, Bi	02-Jun-01	09-Oct-06	03-Jul-09	06-Jul-09	23-Apr-10	04-Jun-10	
		Sebyeok	101	71884	274	Au, Ag, Cu, Pb, Zn, W, Mo, Bi	08-Jun-01	09-Oct-06	03-Jul-09	06-Jul-09	23-Apr-10	04-Jun-10	
WOF	Sangdong 6	Sebyeok	81	74978	248	Au, Ag, W	08-Jun-01	22-Sep-07	18-Jun-10	21-Jun-10	08-Apr-11	20-May-11	
	Sangdong 7	Homyeong	119	75081	274	Au, Ag, W	17-Nov-05	13-Nov-07	12-Aug-10	15-Aug-10	02-Jun-11	14-Jul-11	
		Homyeong	129	75082	274	Au, Ag, W	17-Nov-05	13-Nov-07	12-Aug-10	15-Aug-10	02-Jun-11	14-Jul-11	
		Homyeong	100	75111	274	Au, Ag, W	05-Dec-05	13-Nov-07	12-Aug-10	15-Aug-10	02-Jun-11	14-Jul-11	
		Homyeong	110	75112	274	Au, Ag, W	05-Dec-05	13-Nov-07	12-Aug-10	15-Aug-10	02-Jun-11	14-Jul-11	

Notes: WOF – Woulfe; MEP – Mineral Exploration Plan; MPA – Mining Plan Application

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Property is situated within the Taebaek Range and elevations within the Property area rise from about 500 to 1,260 metres above mean sea level (**mamsl**). The highest local peak in this range is Taebaek-san, about 8 km SE of the Property.

Temperatures rise to a maximum of about 30 Degrees Celsius (**°C**) during the wet summer months of June to August. The winter period is relatively dry and extends from October to March, with freezing temperatures occurring during the period December to February. Snow accumulations can be as much as one metre.

The former Sangdong mine was a major employer in the area, but ceased operations in 1992. It is therefore unlikely that a skilled workforce adequate for a new mining operation still exists in the immediate area, although workers would be available from elsewhere within Korea.

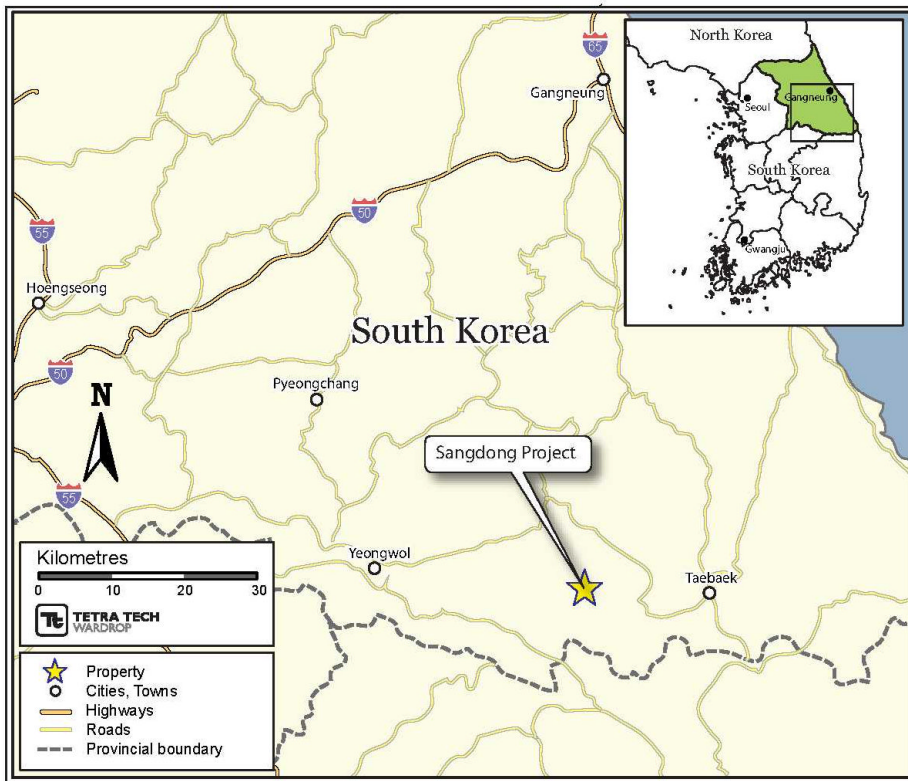
The Sangdong Property is located in an area of moderately rugged relief, with steep hills rising to about 500 m above deeply-incised valleys. Despite the terrain, access is well developed country-wide and a paved road passes within several hundred metres of the old mill site and forestry roads traverse the Property. A power line passes within several kilometres of the Property and water sufficient for a mining operation is available either from ground water or from a nearby river.

Sites adequate for the disposal of tailings and waste rock exist within the Property in the immediate area of the former mine.

Larger population centres are located at Taebek some 20 km to the east of Sangdong.

Figure 5.1 shows the Sangdong Property Location.

Figure 5.1 Sangdong Property Location



6.0 HISTORY

The following summary of the history of the Sangdong mine is based on the description of Kuehnbaum, 2006 with additions derived from recently acquired data.

Tungsten mineralisation was discovered within the Property in 1916 and mining took place at two locations for the next several years, but then ceased. Operations at both locations re-commenced in 1933 and the main Sangdong deposit was discovered during the period 1939 to 1940. The Sangdong mine was operated during World War II by Sorim Resources Co. and during the period 1946 to 1949, under the jurisdiction of the United States military government office.

In 1949 the Korean Tungsten Mining Company, a government agency, assumed control and operated until 1951. In 1952, the Korean Tungsten Mining Company changed its name to Korea Tungsten Mining Co. Ltd. (**KTMC**) and resumed mining.

The mine produced tungsten, and scheelite, bismuth and molybdenum concentrates.

The mine operated until 1992, with annual rates of production of up to 600,000 tonnes (**t**) of ore. By the time of closure, the mine had been developed on 20 levels, between the elevations of 242 and 755 mamsl, with a cumulative length of 20 km of workings.

Production figures over the life of the mine are not available, having either been lost or having never been fully documented. During the period 1952 to 1987, annual production of tungsten concentrate varied between 994 t and 3,268 t and total production was 74,911 t. There are indications that in the period between 1987 and 1992 mine production was limited and concentrate production was derived from toll treatment. Various quantities of ammonium paratungstate, tungsten metal and tungsten steel were also produced.

Between 1961 and 1987, 2,930 t of bismuth were recovered and 2,725 t of paramolybdate or molybdenum oxide were produced during the period 1967 to 1987.

Gold (**Au**) and silver (**Ag**) were also recovered, with maximum annual production rates of 37 kg of gold (1987) and 531 kg of silver (1974), apparently from the bismuth concentrate.

Between 1980 and 1985, 15 holes (8,940 m in aggregate) were drilled to investigate the East Tungsten Orebody, now referred to as Sangdong East, about one kilometre to the east of the main Sangdong Mine and the deposit was further

investigated with a drift about one kilometre long. About 100,000 t were mined here in 1990. No additional work has been completed in this area to date.

Between 1979 and 1989, 18 holes (16,502 aggregate metres) were drilled in the West Tungsten Orebody area, now referred to as Sangdong West, about two kilometres northwest (**NW**) of the Sangdong Mine area. This zone has not been further explored.

Between 1980 and 1987, 22 vertical holes (12,390 aggregate metres) were drilled underground from the Sangdong workings to investigate the extent of molybdenum mineralisation in the quartzite unit that underlies the main skarn zone. No additional work has been completed in this area to date.

During an unknown period, about 780 holes with an aggregate length of 30,000 m were drilled underground to explore the mineralised zones. These historical holes were used in Wardrop's scoping study of April 2010.

Two historic tungsten resource estimates were prepared for the Sangdong mine, in 1985 and 1988. The 1985 estimate, prepared by the mine staff, contained a total of about 20 Mt at a grade of 0.5% WO_3 . The 1988 estimate, prepared by Korea Resources Corp., contained about 18.8 Mt at an average grade of 0.5% WO_3 . The second estimate includes about 1.4 Mt attributed to the Sangdong East deposit and therefore the difference between the two estimates does not represent the tonnage mined in the interim. These were polygonal estimates and used a standard density of 2.9 relative density (**RD**).

West (**W**) Sangdong was estimated to contain 2.3 Mt at an average grade of 0.5% WO_3 , but no details of the estimation process or the number of holes employed in the estimate are known.

A resource estimate was carried out for the molybdenum zone beneath the main Sangdong mine. This estimate is considered neither reliable nor relevant.

These estimates predate the institution of NI 43-101 and do not necessarily conform to the reporting requirements of Sections 1.2 and 1.3 of that instrument. These estimates are of unknown reliability but are considered relevant as an indication of the order of magnitude of tonnes and grades of mineralisation present. These historical estimates should not be relied upon.

7.0 GEOLOGICAL SETTING AND MINERALISATION

7.1 REGIONAL GEOLOGY

The Korean Peninsula is situated on the eastern margin of the North China – Korea Platform, a craton comprised of three blocks of Archean age, the Nangrim-Pyeongnam Block and the Gyeonggi and Yeongnam Massifs that are separated by the northeast-trending Imjingang and Okcheon mobile belts of Phanerozoic age. The Sangdong Property is located within the Okcheon Belt (Figure 7.1).

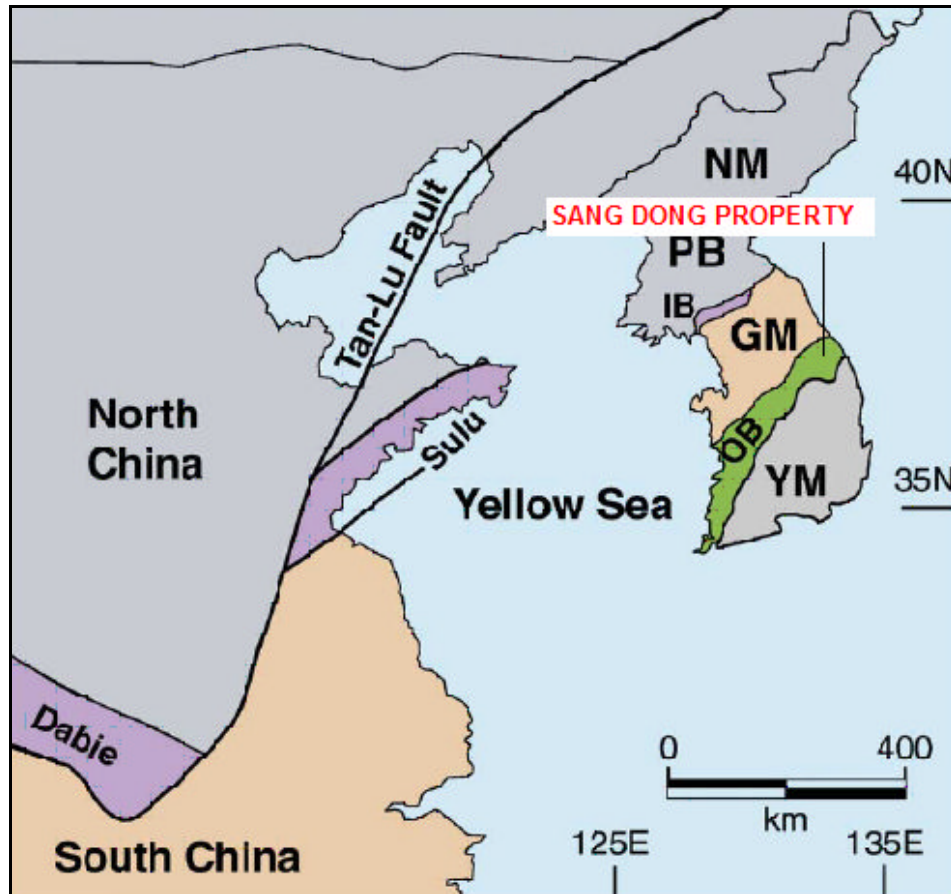
The Okcheon Belt is a fold-and-thrust belt sandwiched between the Gyeonggi massif to the north-west and the Yeongnam massif to the south-east. The Belt has been divided into the southern Okchon and northern Taebaeksan basin or zone.

The Okchon zone, in which the Sangdong Property is located, is comprised of low to medium-grade metasedimentary and metavolcanic rocks of Cambrian to Ordovician age. The Taebaeksan zone contains weakly-metamorphosed shallow-marine Paleozoic sedimentary rocks and marginal-marine to non-marine Early Mesozoic sedimentary rocks that contain economically important coal measures. These rocks rest unconformably upon Precambrian gneiss and metasedimentary rocks of the Yulli Group of the Yongnam massif.

In the Sangdong area, the Cambro-Ordovician strata belong to the Joseon System that is divided into the lower Yangdeok and overlying Great Limestone Series. The Yangdeok Series is comprised of two formations, the basal Jangsan and overlying Myobong. The Great Limestone Series is subdivided into seven formations, from oldest to youngest, the Pungcheon and Hwajeol Formations, Dongjeom Quartzite, Dumugol, Makgol and Duwibong Formations.

Plutonism occurred primarily during the Jurassic and Cretaceous Periods and most intrusions are biotite granite in composition.

Figure 7.1 Regional Geology



Crustal Blocks and massifs of the Korean Peninsula and adjacent north-east Asia: Nangrim massif (NM); Pyeongnam basin (PB); Imjingang Belt (IB); Gyeonggi massif (GM); Okcheon Belt (OB); Yeongnam massif (YM).

7.2 PROPERTY GEOLOGY

This section is based upon Kuehnbaum, 2006, Le, 2001 and Moon, 1981.

The Sangdong Property area is underlain by metasedimentary rocks belonging to the Yangdok and Great Limestone Series that are situated on the south limb of a syncline that plunges gently to the south-east; strata strike at approximately 110° and dip to the north-northeast (NNE) at 20° to 30° (Figure 7.2).

The lowermost formation is the Changsan (Jangsan) Formation that is comprised of milky-grey, milky-white and light-yellow quartzite and is about 250 m thick. This formation contains the molybdenum mineralisation that underlies the main Sangdong deposit.

The Myobong Formation conformably overlies the Changsan Formation and is comprised of black, dark greenish-grey and brownish-grey shale and phyllite with seven or eight interbedded horizons of calcareous shale that, within the deposit

area, have been altered to skarn. This formation is about 150 to 200 m thick in the Property area and is the host of all significant tungsten mineralisation there.

The Great Limestone Series, of Cambrian to Ordovician age, is comprised of six formations that have a cumulative thickness in excess of 1,000 m. These formations are largely comprised of limestone and dolomite with interbedded shale, quartzite, calcareous shale and sandstone.

The Pungchon Limestone, the basal unit of the Great Limestone Series, is comprised of white and grey limestone and dolomite and conformably overlies the Myobong Formation.

The Sesong Shale is comprised of thinly-interbedded grey to dark grey shale, arenaceous shale and white to pink limestone.

The Hwajeol Limestone is principally comprised of limestone and basal, interbedded grey to dark-grey shale.

The Tongjeom Quartzite is comprised of varicoloured quartzite and basal, interbedded black shale.

The Dumudong Limestone is comprised of interbedded light-brown calcareous shale, dark-grey shale, and light-grey limestone.

The Makdong Limestone is the uppermost member of the Great Limestone Series and is comprised of interbedded grey limestone, light-brown calcareous shale and black shale.

In the immediate area of the Sangdong deposit, the Changsan, Myobong, Pungchon and several overlying formations have been affected by thermal metamorphism.

Several Cretaceous-age granitic intrusive bodies outcrop within several kilometres of the Sangdong deposit and a granitic intrusive of Cretaceous age (85 million years **[Ma]**, Le, 2001) was intersected at about 700 m depth below the tungsten mineralisation in at least three holes drilled to test the quartzite-hosted molybdenum mineralisation.

7.3 MINERALISATION

The following information is taken from Le (2001) and Moon (1981).

The tungsten mineralisation of the Sangdong deposit is contained within a series of tabular, bedding-conformable skarn horizons within the Myobong Shale that have been interpreted to have been carbonate-bearing horizons that were altered and mineralised by fluids ascending from the underlying Sangdong Granite. From uppermost to lowermost, these horizons are termed the Hangingwall, Main, and Footwall horizons. Calc-silicate layers from 50 centimetres (**cm**) to 1 m in thickness have developed on the upper and lower contacts of the Main and Footwall Horizons.

The Hangingwall Horizon is located near the upper contact of the Myobong shale and varies in thickness from about five to thirty metres because of the irregular boundary of the shale with the overlying Pungchon Limestone. This zone has a strike length of about 600 m and a down-dip extent of about 800 m. Above the most highly-altered portion of the Main Horizon, the Hangingwall Horizon is not tabular, but extends steeply and irregularly into the overlying limestone. The Hangingwall Horizon contains diopside, garnet, fluorite, zoisite, quartz, hornblende, wollastonite and up to 50% calcite and although there is some zonal variation in mineral assemblages (diopside-, hornblende- and quartz-rich zones) the zonation is not as well-developed as in the underlying Main Horizon. The tungsten values show some zonation and are decreasing in value up dip. The base of the Hangingwall Horizon is approximately 14 m above the upper contact of the Main Horizon.

The Main Horizon strikes about 100° and dips northerly between 15° and 30°. The strike length is in excess of 1,300 m and thickness varies between five and six metres. Alteration (skarnification) within the Main Horizon forms three, concentric, roughly circular zones. A central quartz-rich zone consisting of muscovite, biotite, quartz and minor chlorite is about 350 m in diameter and plunges down the Main Horizon at N05°W and is coincident with the higher tungsten grade portion of the deposit. The central zone is succeeded outward by a hornblende-rich zone containing diopside, hornblende or tremolite, chlorite, fluorite and calcite. A diopside-rich zone occurs both horizontally beyond and stratigraphically above the hornblende-rich zone, and contains garnet, diopside, quartz, fluorite, zoisite and plagioclase. The diopside zone is typically poorly-mineralised. Boundaries between these zones are diffuse and transitional.

The Footwall Horizons are comprised of multiple layers: Footwall Zone I occurs 1 m below the Main Horizon and is approximately 2 m thick; Footwall Zones II and III are situated approximately 35 to 40 m below the Main Horizon and are less than 1 m in thickness. Further Footwall zones have been identified beyond Footwall III. Areal dimensions of these horizons and zonal distribution of calc-silicate minerals in them are similar to that of the Main Horizon. Footwall Zone I has sometimes been mined with extraction of the Main Zone. Some parts of Footwall Zone III have been mined in the upper section of the mine.

Age determinations of metapelites beneath the footwall of the Main Horizon gave Potassium-Argon ages of 81.2 and 84.0 Ma, consistent with the age of the underlying Sangdong Granite and implying that this intrusive was responsible for the alteration and mineralisation. (Le, 2001.)

The Sangdong deposit contains scheelite, minor wolframite, molybdenum, bismuthenite and native bismuth. Molybdenum also occurs in substitution with scheelite and about 30% of the molybdenum produced at Sangdong was scheelite-related. Gold and silver occur in association with bismuthinite and native bismuth and were recovered from the bismuth concentrate. Tellurides, arsenopyrite, pyrite, chalcopyrite and sphalerite also are found within the deposit.

Mineralisation is largely associated with quartz veins within those horizons, with the exception of the central portion of the Hangingwall Horizon. Quartz veins are most abundant within a central, quartz-rich portion of the deposit, parallel to and

discordant with the calc-silicate layering. Veining ranges from 1 – 10 cm in width, and is best-developed in the lower portions of the mineralised horizons.

The abundance of scheelite within the mined portion of the Main Horizon is concentrically zoned, increasing with alteration intensity depending on temperature.

Scheelite abundance within the Hangingwall Horizon is less well zoned.

Within the Main Horizon, molybdenum and bismuth abundance are concentrically zoned in a similar pattern to tungsten.

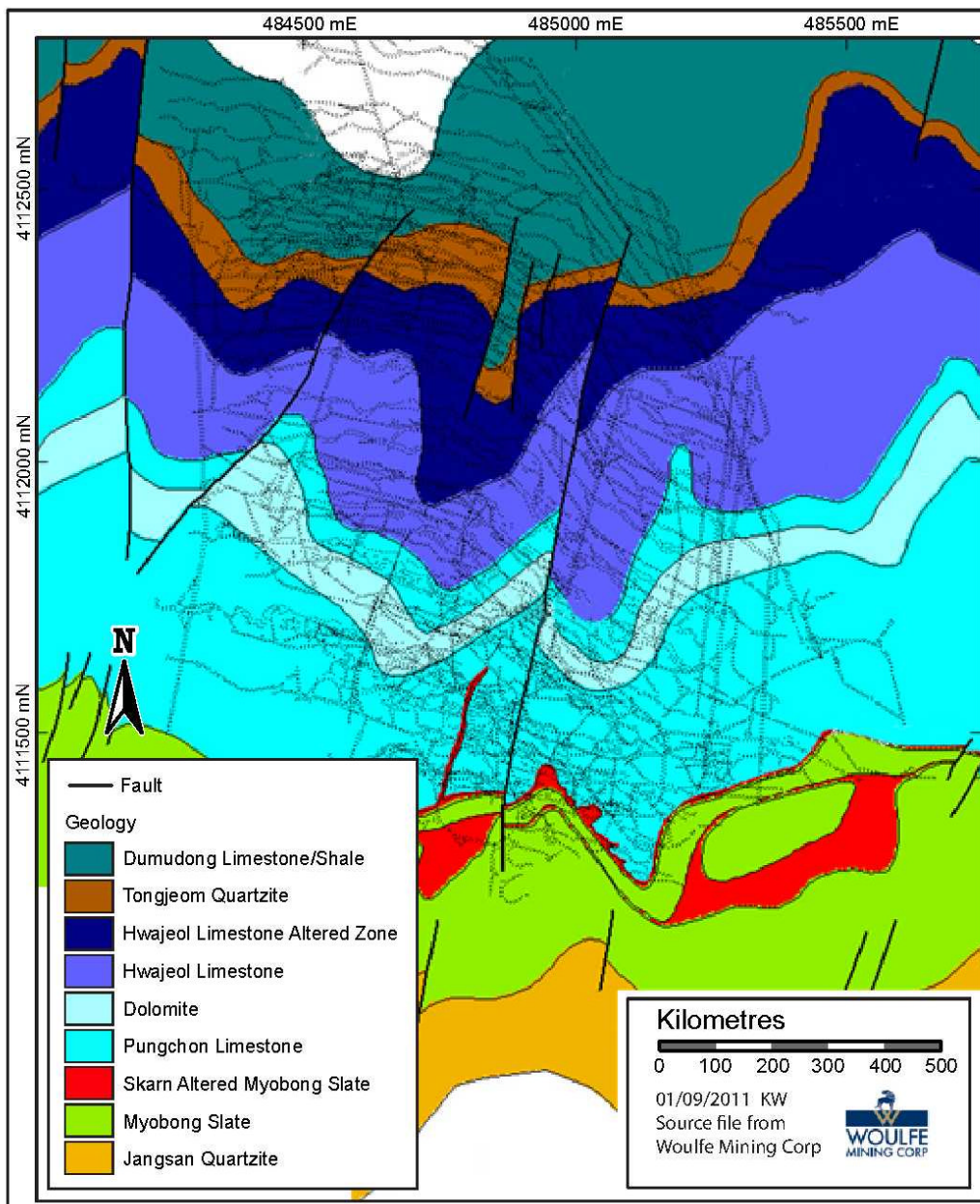
Le (2001) states that the mineralisation is hydrothermal in nature and that there were two stages of mineral deposition:

1. Related to skarn alteration and;
2. To quartz vein emplacement.

Molybdenum-poor Scheelite was deposited during the first event, while scheelite, molybdenite and bismuthenite were deposited during the second.

Examples of mineralisation from the current core drilling programme are shown in Figure 7.3.

Figure 7.2 Sangdong Property Geology



Courtesy of Woulfe Mining Corp.

Figure 7.3 Mineralisation in Core from Current Drilling Programme



At left: From top to bottom of picture, later quartz veining gives way to hornblende/diopside and pyrrhotite zones of mineralisation followed by calc-silicate alteration.
At right: Close up of mineralised zone.

8.0 DEPOSIT TYPES

The Sangdong Property is a tungsten skarn deposit. Salient characteristics of this deposit type are summarised below: (after Ray, 1995). Skarns are contact metasomatic tungsten deposits, exploited for tungsten, with accessory molybdenum, copper (**Cu**), tin (**Sn**) and zinc (**Zn**).

They typically form in Continental marginal settings, associated with synorogenic plutons that intrude and metamorphose deeply buried sequences of carbonate-shale sedimentary sequences. Skarn mineralisation is typically hosted by pure and impure limestones, calcareous to carbonaceous pelites. Due to their contact metamorphic nature, mineralisation has a close special association with calc-alkaline granitic intrusives (tonalite, granodiorite, quartz monzonite and granites). Deposits form stratiform, tabular and lens-like deposits, which can be continuous for hundreds of metres along intrusive contacts.

Principal and subordinate mineralogy comprises Scheelite \pm molybdenite \pm chalcopyrite \pm pyrrhotite \pm sphalerite \pm arsenopyrite \pm pyrite \pm powellite. Trace wolframite, fluorite, cassiterite, galena, marcasite and bornite also occur. Reduced types are characterised by pyrrhotite, magnetite, bismuthinite, native bismuth and high pyrrhotite: pyrite ratios. Variable amounts of quartz-vein stockwork (with local molybdenite) can cut both the exo and endoskarn.

Exoskarns display the following alteration zonation:

1. An innermost zone of massive quartz may be present.
2. An inner zone of diopside-hedenbergite \pm grossular-andradite \pm biotite \pm vesuvianite.
3. An outer barren wollastonite-bearing zone.

There is commonly a late-stage alteration assemblage, comprising spessartine \pm almandine \pm biotite \pm amphibole \pm plagioclase \pm phlogopite \pm epidote \pm fluorite \pm sphene. Reduced types are characterised by hedenbergitic pyroxene, iron-rich biotite, fluorite, vesuvianite, scapolite and low garnet: pyroxene ratios, whereas oxidised types are characterised by salitic pyroxene, epidote and andraditic garnet and high garnet: pyroxene ratios. The exoskarn envelope can be associated with extensive areas of biotite hornfels. Endoskarn alteration: Pyroxene \pm garnet \pm biotite \pm epidote \pm amphibole \pm muscovite \pm plagioclase \pm pyrite \pm pyrrhotite \pm trace tourmaline and scapolite; local greisen developed.

The location of mineralisation is usually controlled by:

1. The presence of carbonate rocks in extensive thermal aureoles of intrusions.
2. Gently-inclined bedding and intrusive contacts.
3. Structural and/or stratigraphic traps in sedimentary rocks and irregular parts of the pluton/country rock contacts.

9.0 EXPLORATION

At the time of writing, exploration undertaken by Woulfe at the Sangdong property is solely resource definition diamond drilling.

10.0 DRILLING

The exploration work undertaken by Woulfe at the Sangdong property was the surface drilling programme completed between November 2006 and July 2008. From June 2010 an underground resource definition drilling campaign was designed and the first phase completed. As of the time of writing this report the second phase of drilling is in progress.

For the purposes of this report, the cut off date for data admission was the 15th June 2011. No data collected subsequent to this date has been used in the estimation process.

10.1 2006 – 2008 DRILLING PROGRAMME

Woulfe (as Oriental Minerals) conducted a drill programme on the Sangdong property between November 2006 and July 2008. 90 HQ/NQ surface core holes were completed, with an aggregate length of 22,800 m. HQ and NQ cores are nominally 63.5 millimetres (**mm**) and 47.6 mm in diameter respectively. The holes were largely drilled within the area of the former underground Sangdong tungsten deposit. Analysis for WO_3 , Molybdenum Disulphide (**MoS₂**), Bismuth and others was completed and this dataset comprises some 20,355 analyses.

These holes were all been drilled in the south-eastern portion of the deposit where the mineralisation occurs near surface or is outcropping. The majority of the holes have been drilled on a bearing of 135°, parallel or nearly so, to geological strike. About 30% have been drilled on the opposite bearing of 315°; most have been drilled at a dip of 70°, several have been drilled vertically or at a dip of about 80°. The holes have been designed to test all three principal horizons of mineralisation and with several accidental exceptions; all have penetrated well into the Jangsan Quartzite that underlies the host Myobong Formation. Difficulty was often experienced in penetrating the lower horizons due to the mined out areas of the skarn mineralisation. The drilling is illustrated in Figure 10.1.

The drill hole collar locations were surveyed by global positioning survey (**GPS**) and the down-hole position of the holes was measured at 50 m intervals. There are some uncertainties with regard to the collar elevations. Woulfe have recently undertaken additional surveying work to resolve this situation and to consolidate the survey of the site in general.

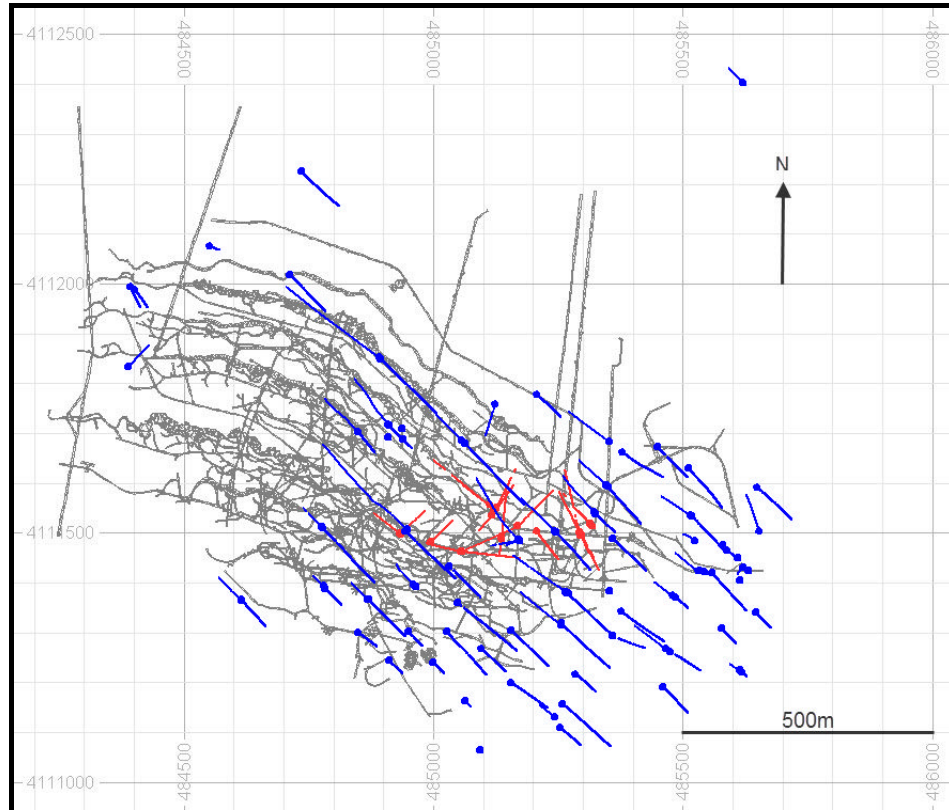
Drill results and their interpretation are discussed in Sections 14.0 Mineral Resource Estimates and 15.0 Mineral Reserve Estimates. It is appropriate to state here, however, that holes drilled on bearings of both 135° and 315° intersected strata and mineralisation obliquely; the intersected thickness of mineralisation overstates true thickness by about one third.

10.2 CURRENT DRILLING

Once access was gained to the underground workings Woulfe began a programme of infill and resource definition drilling. Phase I of this programme was 37 holes totalling 4,285 m. The drilling was largely completed from the underground workings supplemented by additional surface holes where underground access was not possible. A second phase of some 4,750 m drilling is currently in progress that is scheduled for completion during 2011.

For this interim resource a total of 27,085 m over 129 holes has been used comprising 24 underground holes and 105 surface holes. Analysis for WO_3 , MoS_2 , Bismuth and others was completed and this dataset comprises some 23,240 analyses. Figure 10.1 below, shows the drill holes and underground workings.

Figure 10.1 Sangdong Current Drill Hole Locations and Upper Mine Workings



Key: Grey – Old workings; Blue – Woulfe/Oriental surface drill holes; Red – Woulfe underground holes

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

All sampling was from drill core. The drill core is collected from the drill site by Woulfe personnel on a daily or more frequent basis and brought to a core-logging facility beside the Woulfe field office. Here the core is measured for recovery and Rock Quality Designation (**RQD**) and then logged geologically. Core recovery for the current programme is 93%. Density measurements are taken at intervals of 15 to 20 m. The core is then marked up for sampling. Samples are collected continuously at one metre increments from the collar or from the uppermost practical limit of bedrock. Sampling does not cross geological boundaries. Core is then photographed and scanned with an ultraviolet lamp to detect the presence of scheelite. The abundance of scheelite is logged in a semi-quantitative way, on an intensity scale from one to five.

11.1 SAMPLE PREPARATION

Sample preparation from core to pulps for analysis is completed on site. Core is sawn in half, half placed in a plastic sample bag and half replaced in the core box for archival storage. Sample tags are placed in the core box and in the sample bag and the sample number is written on the sample bag as well. Standards are placed into the sample stream at this point in the sampling process, in accordance with a sample list that has been drawn up by the geologist responsible for logging the hole.

Core samples are crushed and pulverised on site by Woulfe personnel in a preparation lab that was purchased as a modular unit from an engineering firm in Perth, Australia. Equipment is cleaned by brushing and use of compressed air between each sample. The Woulfe staff, employed in the sample preparation facility, were trained by SGS Australia Pty Ltd. (**SGS**), Perth, Australia.

Samples are dried, crushed, split, and pulverised. A split portion of the pulverised sample is sent to SGS in Perth, Australia for analysis.

Samples are analysed by Inductively Coupled Plasma Mass Spectrometry (**ICP**) for 41 elements and for ore-grade quantities of specific elements by aqua regia or 4-acid digestion followed by ICP analysis. Gold is analysed by fire assay with an atomic absorption finish. Molybdenum, tin and tungsten are analysed by X-ray fluorescence. All quantities are reported in parts per million (**ppm**).

Duplicate samples of the coarse-crushed material are collected as a check on the efficacy of the preparation lab. Duplicate samples of the pulps are collected and submitted to ALS Chemex in Australia as a check on the efficacy of the SGS analyses.

A split portion of the pulp from each sample is retained in a locked building at the project site.

Wardrop has observed the sample preparation process and considers that adequate sampling protocols are followed and that Woulfe has taken reasonable measures, such as specific staff training and check samples from the sample preparation process, to ensure that the sample preparation process produces samples of acceptable quality. Wardrop conclude that the sample collection and preparation process meets or exceeds industry standards. Sample security is considered by Wardrop to be adequate.

Samples are weighed prior to being submitted for preparation.

Archival core and coarse rejects are stored on the Property in one of the buildings remaining from the former mining operation.

11.2 QUALITY CONTROL MEASURES

Woulfe employed both blanks and standards in their quality control procedures, as well as duplicates of coarse and pulp rejects from the sample preparation process.

Blanks included with the core samples from the initial six drill holes of the Oriental Surface drilling programme were made up of locally-obtained sand, but the composition of this material was found to be too inherently variable for it to be used as blank material. Subsequent blanks have been made of ground glass.

Duplicate samples of both coarse rejects and pulp rejects were submitted to ALS Chemex (**ALS**) as a check on both the quality of the sample preparation process and as a check on the SGS assays. Comparative assays of tungsten and molybdenum are available for coarse rejects and for pulp rejects.

Routine duplicate analysis showed good results with few values falling outside +/- 10% limits, with the exception of values close to detection limits. 188 analyses were available for molybdenum and tungsten from the recent Woulfe drilling programme. The results are shown in Figure 11.1 and Figure 11.2.

Standards were obtained from CDN Resources Laboratories Ltd., Delta, Canada (**CDN**). The performance against the CDN standards is shown in Figure 11.3 to Figure 11.6 inclusive. Performance against the standards is acceptable with no failures reported. The current drilling programme comprised 3900 samples. Standards were analysed for every 20 samples.

Figure 11.1 Duplicate Analysis for Tungsten

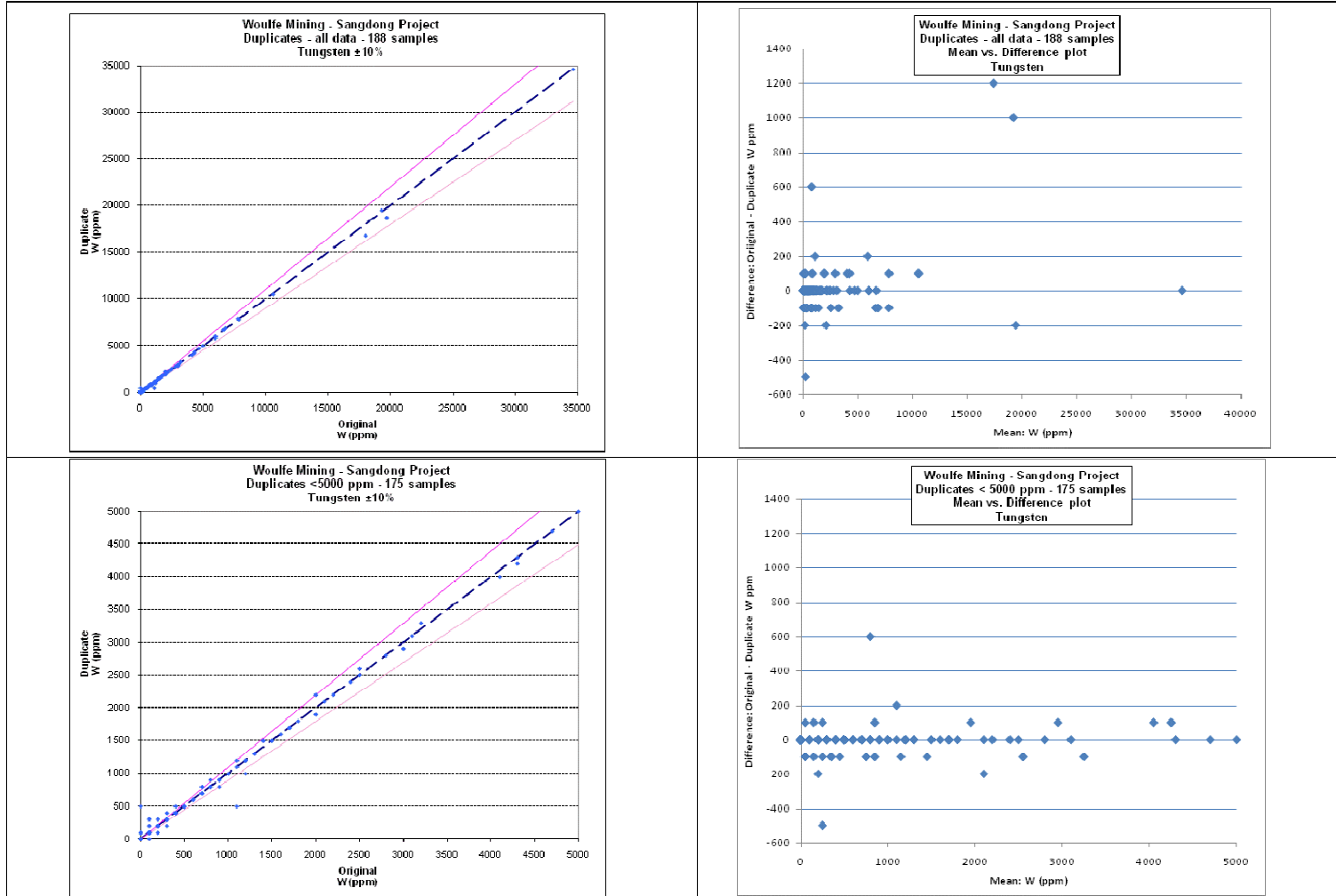


Figure 11.2 Duplicate Analysis for Molybdenum

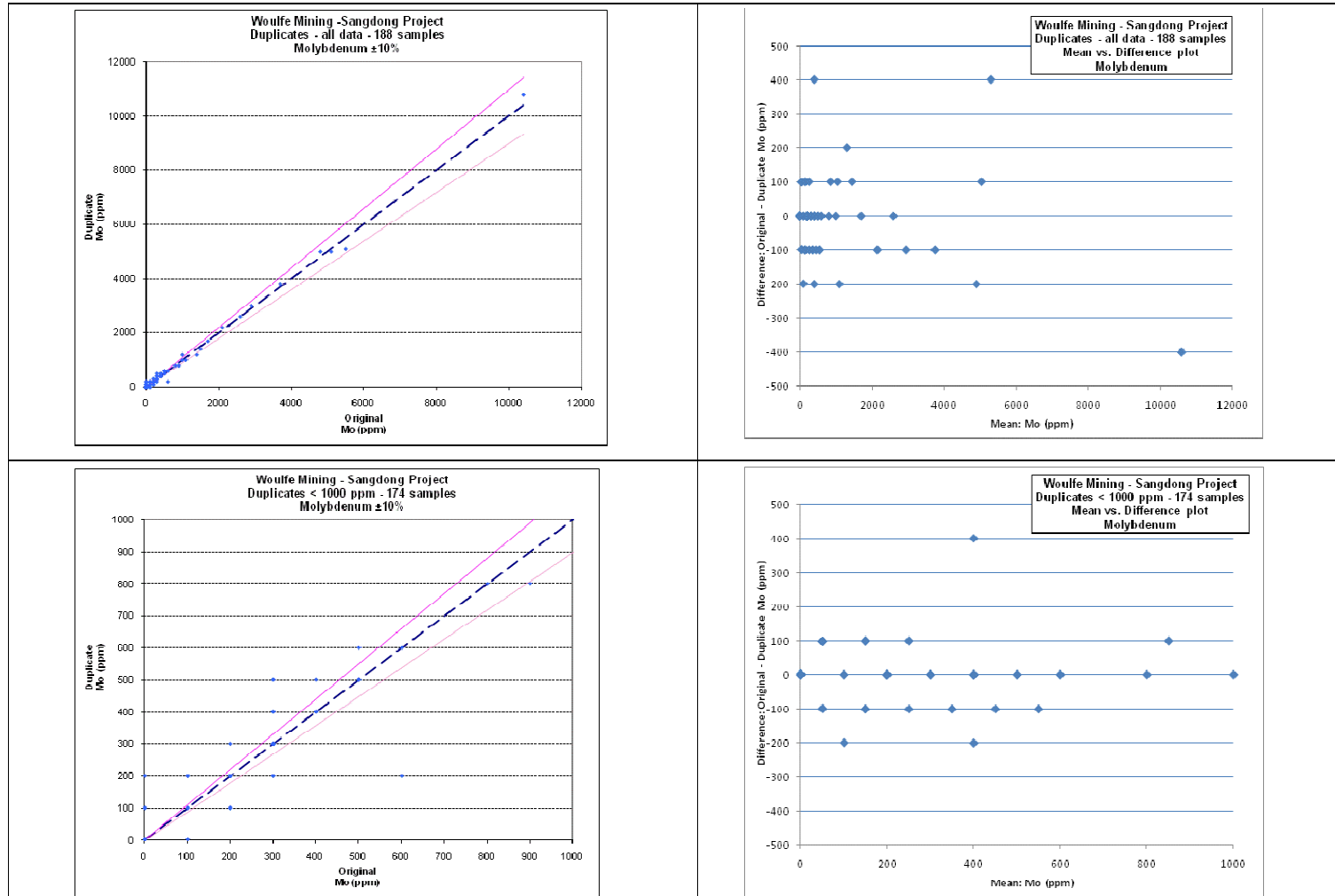


Figure 11.3 Molybdenum Analysis v. CDN Standard (38 Analyses)

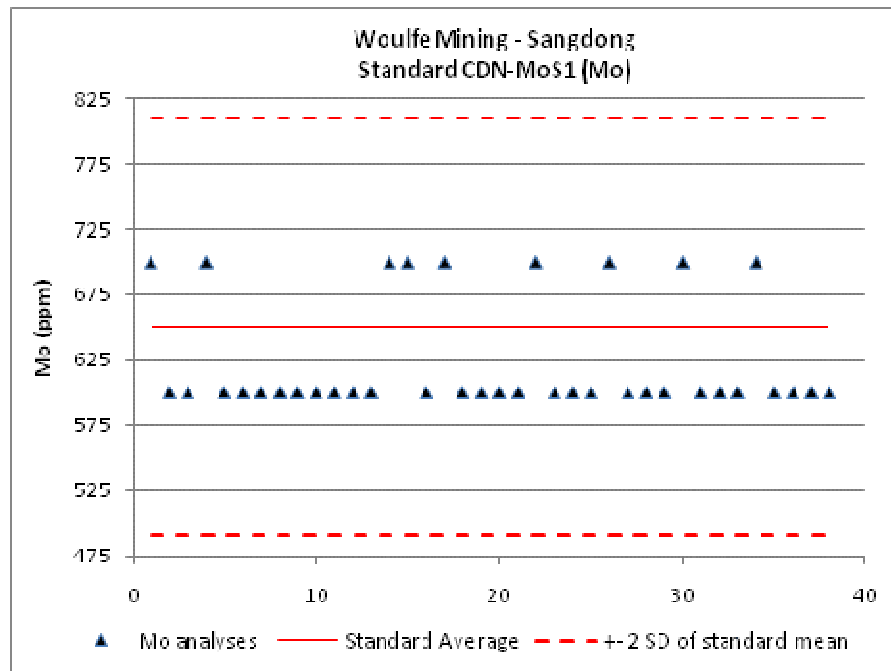


Figure 11.4 Tungsten analysis v. CDN standard W1 (50 analyses)

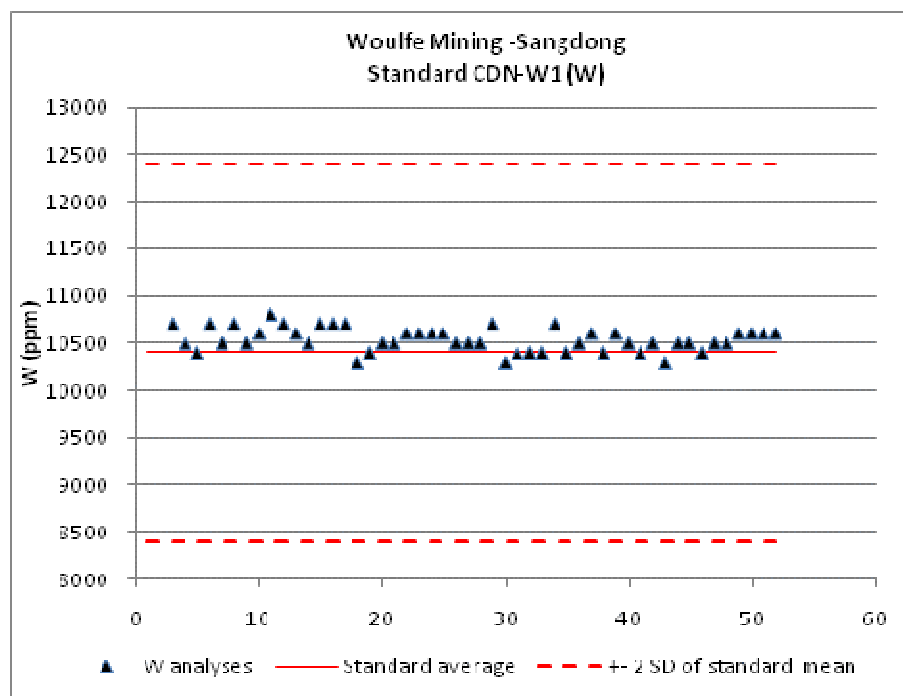


Figure 11.5 Tungsten Analysis v. CDN Standard W2 (53 Analyses)

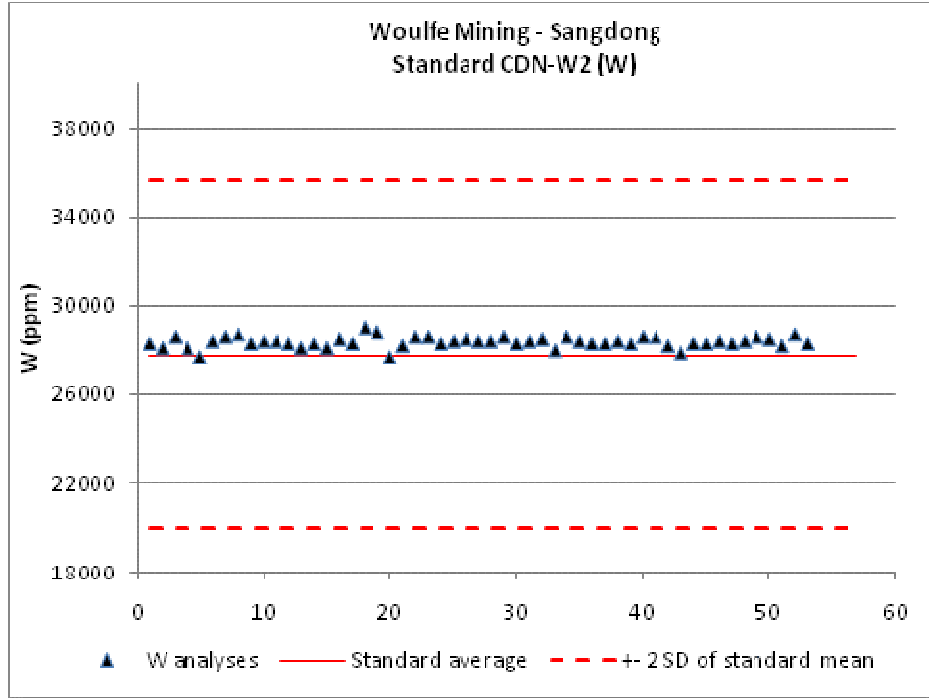
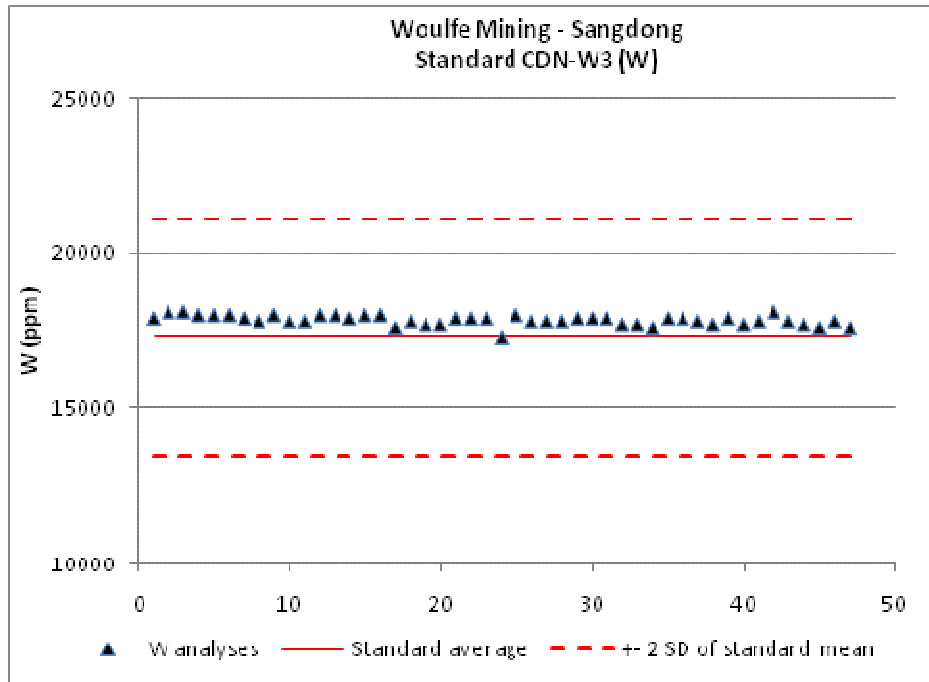


Figure 11.6 Tungsten analysis v. CDN standard W3 (47 analyses)



11.3 RE-ANALYSIS PROGRAMME

The performance against standards taken in the Oriental surface drilling programme, as reported in the Wardrop 2010 scoping study, gave some indication of possible bias. This was investigated by re-analysis of coarse rejects of 123 samples from within the mineralised zones. The spread of results shows no such bias, the results are shown in Figure 11.7 and Figure 11.8.

Figure 11.7 Tungsten Re-analysis Programme (123 samples)

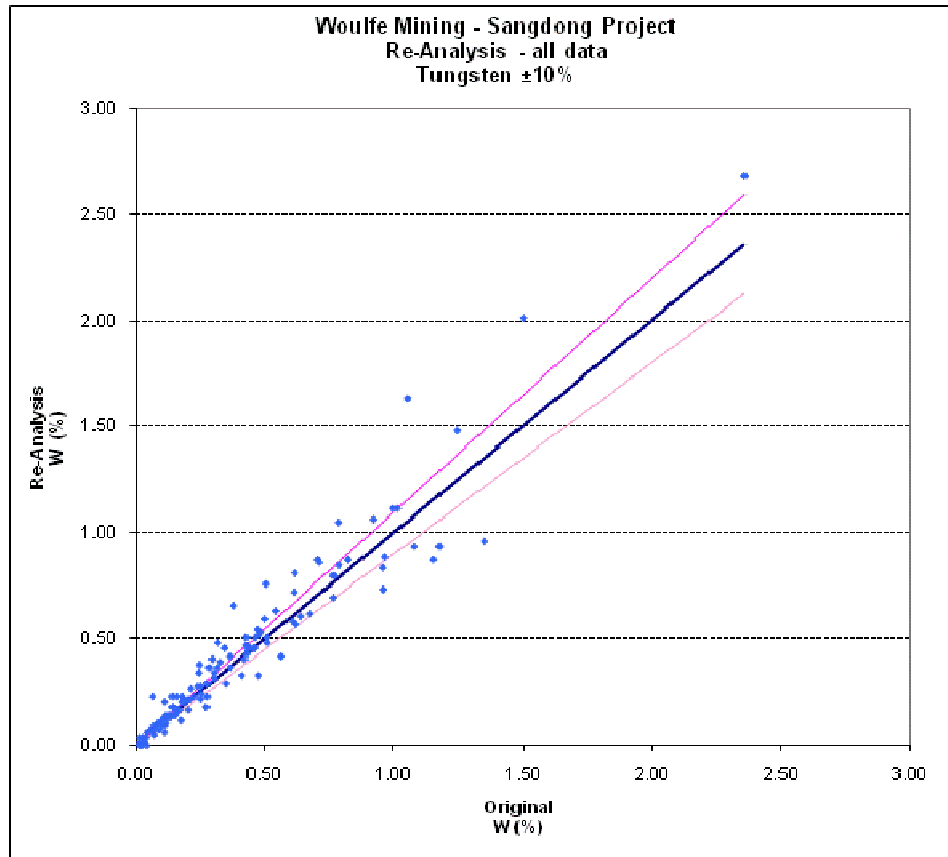
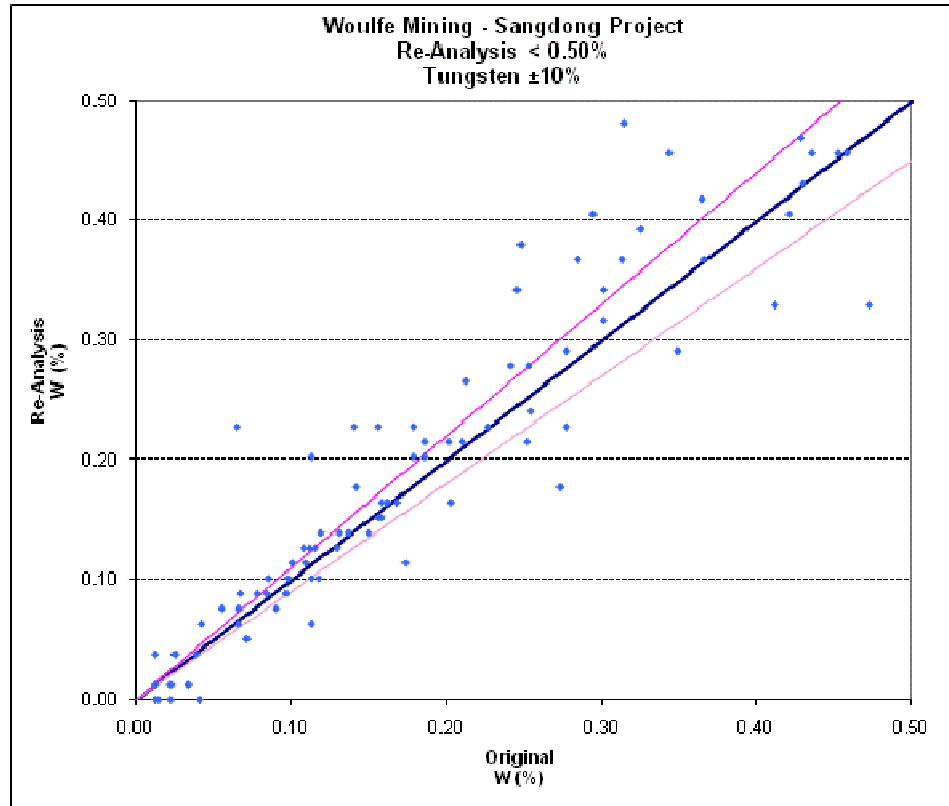


Figure 11.8 Tungsten Re-analysis Programme Sub Set (90 samples)



11.4 EARLIER SAMPLING PROGRAMMES

No details of sample preparation, analyses and security are available for work conducted prior to the modern surface drilling programme that commenced in 2006.

12.0 DATA VERIFICATION

Wardrop undertook various aspects of data verification.

Verification activities conducted during the site visit included:

- Multiple site visits to the Sangdong property, most recently in June 2011, inspection of the exposed host skarn, veining and associated lithologies. The skarn and quartz veining are illustrated in Figure 12.1 and Figure 12.2. Mineralisation in hand specimen is shown in Figure 12.3.
- Core logging (lithology, mineralisation) of selected Sangdong diamond drill holes from the modern programme at the Sangdong facilities.
- Observation and review of core storage, core logging, core sampling, core cutting and sample preparation procedures; standard reference sample and reject sample storage facilities at the Sangdong facilities. Detailed discussion with Woulfe staff was undertaken during the visit to the Sangdong facilities.

Figure 12.1 Gently Dipping Skarn at Sangdong



Figure 12.2 **Concordant Quartz Veining at Sangdong**



Figure 12.3 **Hand Specimen of Mineralisation at Sangdong**



Verification activities subsequent to the site visit included:

- Selection of between 5 and 10% of the Sangdong drill holes for verification of handwritten geological logs, original field sample sheets and original ALS assay certificates against corresponding records in the supplied Sangdong database. Copies and scans of original data were supplied by Woulfe in order to carry out the verification exercise off site.

Very minor discrepancies and errors were encountered during these processes and referred to Woulfe for clarification or correction.

Overall it is concluded by Wardrop that appropriate care and attention in data entry, validation and QA / QC procedures have been applied by Woulfe and that analytical issues have been identified and appropriate remedial action taken. Industry standard practices have been followed and the quality of the Sangdong database meets NI 43-101 standards and Canadian Institute of Mining, Metallurgy and Petroleum (**CIM**) best practice guidelines.

Wardrop has not carried out any independent exploration work, drilled any holes or carried out any programme of sampling and assaying on the property. During the field visit (June 2011) Wardrop did not collect any samples from the Sangdong project but is satisfied from visual inspection as to the presence of mineralisation at Sangdong.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Mineral Processing and Metallurgical Testing is not appropriate for this interim report. For further details please refer to the Wardrop Scoping Study (2010).

14.0 MINERAL RESOURCE ESTIMATES

14.1 MINERAL RESOURCE SUMMARY

The Mineral Resource estimate for the mineralised zones associated at Sangdong was prepared or supervised by Paul Gribble, C. Eng., FIMMM in July 2011, with an effective date for the resource of 15th July 2011. Mineral resources at Sangdong have been estimated in accordance with CIM Standards of Mineral Resources and Reserves (2005). This estimate covers only approximately the upper quarter of the known dip-length of the mineralised Zones.

Statistical and grade continuity analyses were completed to characterise the tungsten (as WO₃) and molybdenum (as MoS₂) mineralisation and subsequently used to develop grade interpolation parameters for the Zones.

Geological interpretation of the three Zones was achieved using a combination of modern surface and underground drill holes and historical underground drilling. Geological models (wireframes) of the Hangingwall, Footwall and Main Zones were created as surfaces describing the observed limits of mineralisation. Geological and analytical data was provided by Woulfe in a Microsoft Excel™ (**Excel**) database and GEMS Access™ database. Modelling and estimation was completed using Datamine Studio 3 version 3.20™ (**Datamine**). Woulfe also provided other data relevant to resource estimation such as density data and a topographic model.

Ordinary Kriging was used to estimate tungsten and molybdenum block grades within the block models. The block dimensions were 20 m (easting), 20 m (northing) and 10 m (elevation) in a model orientated north-south. Search ellipsoid dimensions and directions chosen reflected the continuity obtained from geostatistical studies. The density used in the model was provided by Woulfe. No estimates were made for the minor bismuth mineralisation present as it is Wardrop's opinion that the potential for incremental value to be added by this commodity is limited although a concentrate credit might be realised as in previous mining operations.

A mineral resource classification scheme consistent with the CIM guidelines (2005) was applied. Due to uncertainties regarding location and sampling quality control of the historical KTMC underground drilling data from this drilling was not used in the estimation process. The estimate is reported above a grade cut-off that is derived from the supporting preliminary mining and economic studies that demonstrate the deposit has reasonable prospects for economic extraction.

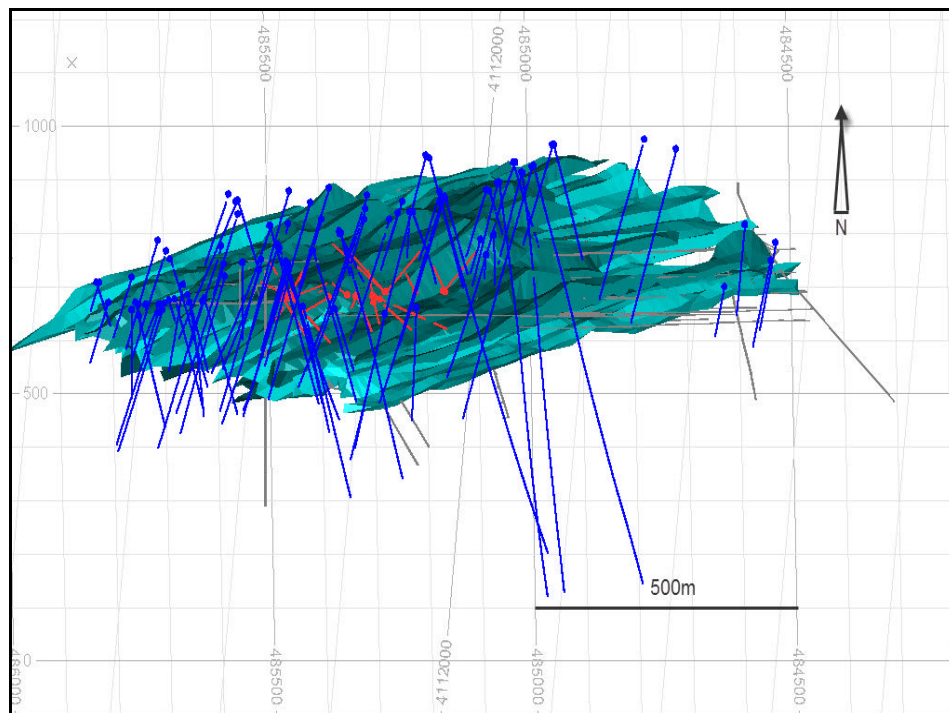
No Mineral Reserves have been estimated at this stage for the Sangdong deposit. Additional drilling is in progress to upgrade Resources from the Inferred category and to better understand the variation in and distribution of the mineralisation.

14.2 GEOLOGICAL INTERPRETATION

Tungsten and molybdenum mineralisation is principally contained within tabular calc-silicate horizons that are the product of skarn alteration of calcareous layers within the Myobong Shale. The Myobong Formation is overlain by the Pungchon Limestone and is underlain by the Jangsan Quartzite. The former contains only minor mineralisation. The latter contains molybdenum mineralisation related to quartz veining and stockwork development, preliminarily reported on in Wardrop's scoping study of 2010 and further described below. The strata strike approximately SE – NW, and dip to the NE at about 30°.

The skarn hosted mineralisation can be broadly divided into three Zones that have dip and strike sub parallel to that of the strata. The three Zones are referred to as Hangingwall, Main and Footwall. During mining operations large parts of the Main Zone were extracted together with small sections of the Hangingwall and Footwall Zones. Woulfe have generated three-dimensional (**3D**) models of the old underground development workings. Known mined areas within the main zone were digitised from plans on site and provided to Wardrop. These models and solids were used to reduce the volume of the skarn solids so as to represent the effect of historical mining as appropriate. The skarn solids are illustrated in Figure 14.1.

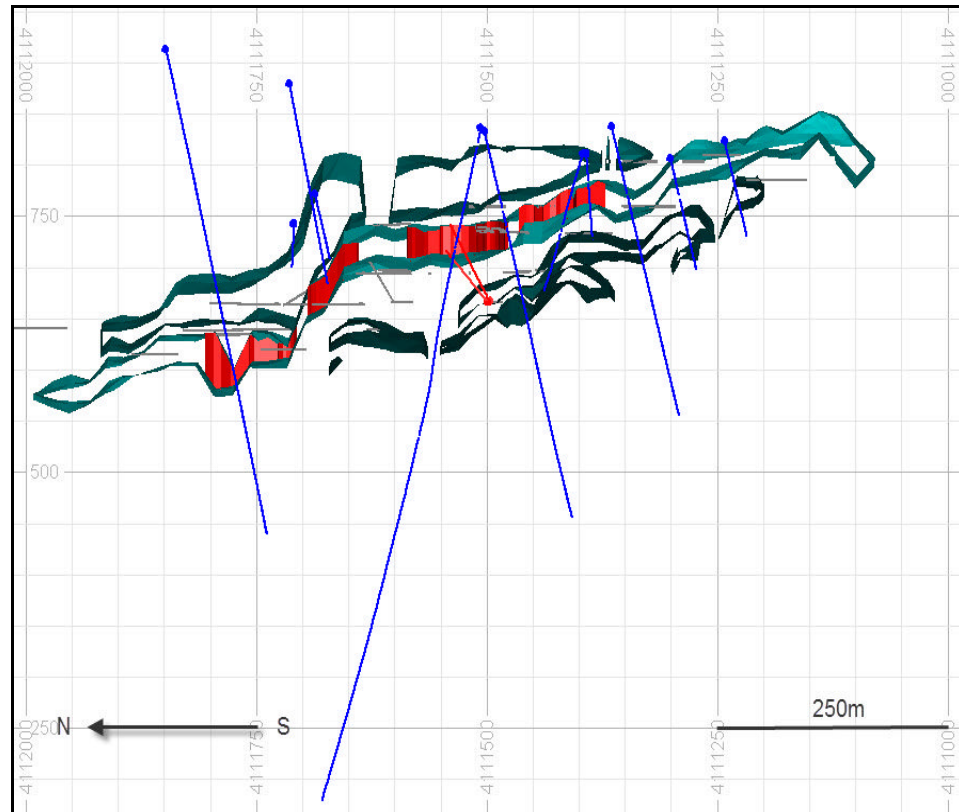
Figure 14.1 Perspective View of Interpreted Skarn Zones, Old Workings and Drill Holes looking SE



Key: Drill holes: Red - modern underground holes; Blue – modern surface holes
Wireframes: Cyan, three zones overlain.

Interpretation of the Hangingwall, Main and Footwall Zones was completed by creating triangulated surfaces of the observed limits of continuous mineralisation. The surfaces were combined to create 3D wireframes describing the volume of each Zone. The wireframes are illustrated in Figure 14.2.

Figure 14.2 Typical Vertical Cross Section through Interpreted Skarn Zones, Old Workings and Drill Holes



Key: Drill holes: Blue - modern surface holes; Red – modern underground holes;
Wireframes: Grey – development; Red – depletion zones; Blue – mineralised zones.

The mineralised zones defined by the current Resource for the upper quarter of the known dip length of the old mine are as follows:

- Hangingwall Alteration Zone, approximate strike length 600 m, dip length 900 m, true thickness 5-15 m.
- Main Zone, infrastructure pillar remnant, approximate strike length 750 m, dip length 900 m, true thickness 10-20 m.
- Footwall Alteration Zones, two separate alteration zones, approximate strike length 900 m, dip length 550 m, true thickness' 5-15 m.

The estimated true width given is that of the alteration zone as a whole, not the true width of contained scheelite (WO_3) mineralisation. The stockwork hosting molybdenum mineralisation is developed within the Footwall skarn and the underlying Jangsan Quartzite. For the purpose of this estimate any molybdenum mineralisation lying within the Footwall Zone is estimated as a part of that Zone. The stockwork takes the form of quartz veins of variable widths, developed from hydrosomatic dewatering of the underlying granite.

14.3 EXPLORATORY DATA ANALYSIS

Wardrop received the Sangdong dataset from Woulfe as part of the Oriental Minerals Gemcom GEMS project and associated Excel databases that had been validated by Woulfe, and subsequently developed and maintained by the Woulfe Chief Geologist on site.

The modern Oriental surface holes were drilled at angles between -60 and sub-vertical, sometimes in fans of 2 or more holes per drill pad, at azimuths approximating to 135° and 315°. There are some uncertainties relating to the collar elevations of some of the modern surface holes, but this is being addressed by Woulfe. The underground holes drilled by Woulfe testing the mineralisation intersections were drilled from accessible development in an appropriate orientation to avoid voids relating to the old workings.

Resurvey of the old workings as they are rehabilitated has shown acceptable matching of the digital models of those workings with the modern survey. The Universal Transverse Mercator (**UTM**) 52 grid is now being used. There are still uncertainties relating to the exact location and orientation of all the historical holes drilled underground.

The drill dataset of Oriental surface drilling and the phase I Woulfe programme contained a total of 129 holes with 23,240 assays for use in the Resource estimation. Historical drilling data was used for reference in the construction of the geological model but is considered as superseded and tungsten values are not included in the estimation database.

The wireframe models for all of the Zones were used to flag the relevant samples within the database and these samples were used for analysis and estimation.

14.3.1 SKARN HOSTED MINERALISATION

Since underground access has been granted drilling has commenced where access has allowed. The purpose of drilling is to define continuity and better understand the mineralisation in those areas where surface drilling is sparse. Analysis showed that the sample populations of the separate mineralisation zones relate to the same mineralising event and statistical analysis normalised to different analysis methods reflects this theory.

There is no abnormal statistical variance between mineralised zones. There is however a statistical difference between the Oriental and Woulfe drilling. This is explicable in that Woulfe have concentrated their drilling underground to target

known areas of higher grade mineralisation and consequently the average grade for these holes are higher.

14.3.2 *CAPPING*

The Parrish method of analysis was conducted on the sample population and it was shown that capping was not necessary.

14.3.3 *COMPOSITES*

Samples were originally taken on a one metre basis so samples were composited to the average sample length of one metre except where there was a firm geological boundary in which case the sample was split to the nearest half metre.

Sample lengths were composited using a best fit routine with one metre as the target composite length. As described above, sampling and analysis for the modern surface drilling programme was continuous and consistent for both elements.

14.4 *BULK DENSITY*

A density of 2.9 was applied to the block model as supplied by Woulfe from density determinations conducted during the Oriental surface drilling programme.

14.5 *SPATIAL ANALYSIS*

Variography was completed using equal length composites for the Sangdong deposit.

14.5.1 *DOWNHOLE VARIOGRAPHY*

Downhole variography was performed using the equal length composite data sets described above to derive the nugget effect for the population.

14.5.2 *DIRECTIONAL VARIOGRAPHY*

Experimental variograms were calculated in a variety of orientations.

For the skarn hosted mineralisation the directions of best continuity were sub-parallel to the Zone strike and dip. Good continuity in all directions was observed.

14.6 *RESOURCE BLOCK MODEL*

The mineralisation block model was constructed orientated towards the north. The model parameters are given in Table 14.1. A single split of sub-blocking was used.

Table 14.1 Block Model Extents, Skarn Hosted Mineralisation

Parameter	X	Y	Z
Minimum Co-ordinate	484,200	4,110,710	500
Block size (m)	20	20	10
Extent (m)	1,800	1,960	700

14.7 INTERPOLATION STRATEGY

14.7.1 SKARN HOSTED MINERALISATION

Tungsten and molybdenum values were estimated for all Zones using ordinary kriging with an ellipsoidal model determined by the variogram analysis and models described in Section 14.5. The estimation was limited to those blocks inside the wireframe of the structure. The number of informing samples per sampling location was limited to prevent individual holes or samples having too large an influence on the estimate. A three pass strategy was used for each Zone or sub-section thereof. Details of the estimation parameters are shown in Table 14.2. Sub-cells received the parent cell grade. The zones were divided into two domains to reflect the higher grade area targeted by the Woulfe drilling campaign where average grades were approximately 0.6% WO₃. The estimation parameters used were the same for each domain as the genesis of the mineralisation is believed to be the same. Informing samples, however, were separate for each domain.

Table 14.2 Estimation Parameters

Mineralised Zone WO ₃ and Mo			
	Indicated	Inferred	Target
Minimum Samples	4	2	1
Maximum Samples	16	20	20
Maximum Samples per Hole	2	1	1
Azimuth	345	345	345
Plunge	-15	-15	-15
Dip	10	10	10
Major	25	50	200
Semi-major	25	50	200
Minor	7.5	15	60
Method	OK	OK	OK

14.8 BLOCK MODEL VALIDATION

Validation of this interim model was by visual inspection of estimated block grades versus informing samples and by comparison of descriptive statistics of estimated values versus informing samples. Wardrop concludes that the block model satisfactorily models the distribution and variability of the informing sample grades without undue bias or smoothing for the level of study. More detailed and

controlled drilling and sampling is required to better understand the local grade variation and distribution and such work is ongoing.

14.9 MINERAL RESOURCE CLASSIFICATION AND TABULATION

The classification of the Sangdong resource incorporates the confidence in the sampling data, the geological interpretation, data distribution and variogram modelling. The model was classified according to CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM, 2005).

The Sangdong mineral resource estimate is summarised in Table 14.3. The effective date for the resource estimate is 15th July 2011.

Table 14.3 Sangdong, Skarn mineralisation Resource Estimate; reporting cut-off 0.1% WO₃*

Resource Category	Mineralised Zone	Tonnes	WO ₃ * (%)	MoS ₂ ** (%)
'Indicated'	Hangingwall	1,143,000	0.38	0.07
'Indicated'	Main	2,076,000	0.47	0.03
'Indicated'	Footwall	2,749,000	0.41	0.03
'Indicated'	Total	5,968,000	0.42	0.04
'Inferred'	Hangingwall	6,073,000	0.38	0.06
'Inferred'	Main	9,002,000	0.50	0.04
'Inferred'	Footwall	3,497,000	0.46	0.04
'Inferred'	Total	18,572,000	0.45	0.05

Note: MoS₂ is reported in terms of WO₃ cut-off

*WO₃ = Tungsten trioxide, **MoS₂ = Molybdenum Disulphide

14.10 COMPARISON WITH PREVIOUS ESTIMATE

The estimate given in the Wardrop 2010 scoping study was made on a very different basis than the estimate described here.

The scoping study estimate largely relied on the holes drilled underground by KTMC and on a coarse geological interpretation of the mineralised zones. Because of doubts attaching to the location and sample quality control of these underground holes and the limited geological understanding, the 2010 Resource was classified in the Inferred category.

This estimate relies entirely on modern drilling programmes with associated sample quality control. The modern data, however, covers only approximately the upper quarter of the known dip-length of the mineralised zones.

For these reasons comparison of the two estimates is unreliable and liable to mislead.

15.0 MINERAL RESERVES ESTIMATES

Mineral Reserves have not been recalculated in this study. New Mineral Reserve Estimates are planned for future studies. For historical reference please refer to the Wardrop Scoping Study (2010).

16.0 MINING METHODS

Mining Methods have not been considered in this study. New Mining Method analyses are planned for future studies. For historical reference please refer to the Wardrop Scoping Study (2010).

17.0 RECOVERY METHODS

Recovery Methods have not been considered in this study. New Recovery Method analyses are planned for future studies. For historical reference please refer to the Wardrop Scoping Study (2010).

18.0 PROJECT INFRASTRUCTURE

Project Infrastructure has not been considered in this study. New Project Infrastructure analyses are planned for future studies. For historical reference please refer to the Wardrop Scoping Study (2010).

19.0 MARKET STUDIES AND CONTRACTS

Market Studies and Contracts have not been considered in this study. New Market Studies and Contract analyses are planned for future studies. For historical reference please refer to the Wardrop Scoping Study (2010).

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Environmental Studies, Permitting and Social or Community Impacts have not been considered in this study. New Environmental Studies, Permitting and Social or Community Impacts analyses are planned for future studies and Woulfe are in the process of gaining the necessary permits. For historical reference please refer to the Wardrop Scoping Study (2010).

21.0 CAPITAL AND OPERATING COSTS

Capital and Operating Cost Studies have not been considered in this study. New Capital and Operating Cost analyses are planned for future studies. For historical reference please refer to the Wardrop Scoping Study (2010).

22.0 ECONOMIC ANALYSIS

Economic Analysis Studies have not been considered in this study. New Economic analyses are planned for future studies. For historical reference please refer to the Wardrop Scoping Study (2010).

23.0 ADJACENT PROPERTIES

There are no adjacent properties relevant to the project.

24.0 OTHER RELEVANT DATA AND INFORMATION

All relevant data and information is covered elsewhere within this report.

25.0 INTERPRETATION AND CONCLUSIONS

Since taking ownership and re-opening the old workings at the mine Woulfe have continued to acquire data and information pertinent to the mineralisation and the old mine workings. This has resulted in 1) a much greater understanding of the distribution of the mineralisation in the three skarn altered and mineralised zones, and 2) compilation and analysis of old mine data has enabled a more detailed three dimensional model of the mined areas to be constructed. From this work, Wardrop have produced an updated interim resource model based on the modern Woulfe and Oriental Minerals drilling results. The current drilling database consists of a total of 129 Surface and Underground drillholes for a total of 27,085 m drilling. Grade estimation was completed using ordinary kriging and is described in more detail in Section 14.

The Interim Resource estimate for the Sangdong deposit is given in Table 25.1.

Table 25.1 Sangdong, Skarn Mineralisation Resource Estimate; Reporting Cut-off 0.1% WO₃*

Resource Category	Mineralised Zone	Tonnes	WO ₃ * (%)	MoS ₂ ** (%)
'Indicated'	Hangingwall	1,143,000	0.38	0.07
'Indicated'	Main	2,076,000	0.47	0.03
'Indicated'	Footwall	2,749,000	0.41	0.03
'Indicated'	Total	5,968,000	0.42	0.04
'Inferred'	Hangingwall	6,073,000	0.38	0.06
'Inferred'	Main	9,002,000	0.50	0.04
'Inferred'	Footwall	3,497,000	0.46	0.04
'Inferred'	Total	18,572,000	0.45	0.05

Note: MoS₂ is reported in terms of WO₃ cut-off

*WO₃ = Tungsten trioxide, **MoS₂ = Molybdenum Disulphide

It is important to note that the modern drill data covers approximately the upper quarter of the dip length of the mineralised zones known from the historical mine workings. Significant potential to extend the Resource exists down dip. Wardrop estimates that the down-dip target mineralisation, within the alteration zones, is in the order of:

- Hangingwall Zone, 20 to 25 Mt.
- Main Zone, infrastructure pillar remnant, 8 to 13 Mt.
- Footwall Zones, 17 to 23 Mt (zones combined).

Target grades for all the mineralised zones are in the order of 0.30% to 0.60% WO_3 and 0.03% to 0.08% MoS_2 .

From the work completed to date by Woulfe, Wardrop conclude that following progressive dewatering and rehabilitation of the old mine workings down dip, continuation of the current exploration and resource definition drilling programme is likely to continue to add to the defined Resource.

26.0 RECOMMENDATIONS

Work to date completed by Woulfe has successfully demonstrated the presence of Mineral Resources within the area of the historical mine at Sangdong.

Wardrop recommend that:

1. Woulfe continue their programme of exploration and resource definition drilling to better define and understand the mineralisation in the upper section of the mine and to upgrade the currently estimated Resources to higher Resource categories.
2. As the mine is progressively dewatered and rehabilitated down dip, drilling should continue to further define and explore the Resource.
3. Where practical, mapping and channel sampling within the old workings should be undertaken to add to knowledge of the mineralisation.
4. Compilation of data from the old mine plans should continue to better define the areas of the old infrastructure pillars that have not been mined and to better define those areas of the footwall zones that have been mined.
5. Additional survey work within the underground workings is carried out to ensure accuracy of the digital models of those workings.
6. Further examination of the reported mineralisation in East Sangdong and the Jansang Molybdenum be considered and followed up as required.

27.0 REFERENCES

Wardrop Engineering Inc., 1st April 2010; Sangdong Project, Scoping Study (0753410100-REP-R0004-06) for Woulfe Mining Corp.

Kuehnbaum, Robert M., 29th December 2006; Technical Report on the Sangdong Tungsten Mine, Republic of Korea for Oriental Minerals Inc.

Le, Hang Jae, 20th June 2001; Report on Sangdong Tungsten Mine in Korea for Korea Engineering Co. Ltd.

Ray, Gerald E., 1995; W Skarns In: Selected BC Mineral Deposit Profiles, Vol. 1 – Metallics and Coal Lefebure, D.V. and Ray, G.E., editors British Columbia Ministry of Energy, Employment and Investment Open File 1995-20, pp.71-74.

K.J. Moon, 1981; The genesis of the *Sangdong* tungsten deposit, the Republic of Korea, Unpubl. Ph.D. thesis, Univ. Tasmania.