

Market Release

April 21 2009

Ivanhoe Australia's Merlin Project now established as the world's highest-grade molybdenum-rhenium deposit

Merlin mine will provide world's first direct source of rhenium, used in super-strength aerospace alloys

Initial resource estimate covers only half of project's identified strike length

MELBOURNE, AUSTRALIA – Peter Reeve, Chief Executive Officer, and Robert Friedland, Chairman of Ivanhoe Australia Limited (IAL), announced today that the initial Mineral Resource estimate has established the company's Merlin Project, in northwestern Queensland, as the world's highest-grade, combined source of molybdenum and rhenium.

Mr. Reeve said that because of the exceptionally high-grade nature of the orebody, Merlin will provide Ivanhoe Australia with an opportunity to create a dominant supply position in the global rhenium market and a major position in the molybdenum market.

Merlin's Identified Mineral Resource estimate Merlin is:

 13 million tonnes at 0.8% molybdenum, and 14 g/t rhenium, 0.2% copper and 4.8 g/t silver.

The estimate of contained metal is:

- 110,000 tonnes (240 million pounds) of molybdenum;
- 180,000 kilograms (6 million ounces) of rhenium;
- 30,000 tonnes copper; and
- 2 million ounces of silver.



This resource estimate is based on 500 metres of strike length and does not include high-grade mineralisation identified by drilling for 400 metres north of the Mineral Resource envelope. (See Figure 3)

"The Merlin resource estimate announced today will provide Ivanhoe Australia with the potential to become the world's dominant and most reliable supplier of rhenium and also position the company as a major molybdenum producer," Mr Reeve said.

"As the picture of this remarkable deposit has emerged through our ongoing exploration, we have likened it to some of the earlier, great mineral discoveries in Australia, such as Western Mining's discovery of the Kambalda nickel field. We believe the Merlin discovery will have that type of major corporate impact for our company. The deposit is high-grade, shallow and showing very good response to metallurgical testwork, so our current view is that production of a bulk flotation concentrate should be straightforward and require relatively modest levels of capital expenditure."

Mr Reeve added: "At current spot prices, Merlin is equivalent to a gold deposit containing 6 million ounces of gold at a grade of 14 grams per tonne, or a copper deposit containing 1.1 million tonnes of copper at a grade of 8.5% copper. It is unique in the sector."

(See Figures 14, 15, 16 and 17 for comparisons of the Merlin project to other molybdenum and rhenium projects.)

"With companies such as GE, Pratt & Whitney and Rolls-Royce dominating rhenium demand for use in aerospace and power generation turbines, it is clear that the rhenium market is supply-constrained," Mr. Reeve said. "The lack of a reliable, assured supply of rhenium metal limits the expansion of rhenium's use in manufacturing and provides an opportunity for Ivanhoe Australia's Merlin project to fill that gap. With approximately 25 kilograms of rhenium required for each rhenium-alloy turbine, the potential growth in the market is enormous."

As part of its evaluation strategy, Ivanhoe Australia has been investigating the viability of further on-site processing stages for the molybdenite concentrate to recover molybdenum (as molybdenum trioxide) and rhenium (as ammonium perrhenate - NH_4ReO_4). Mr. Reeve said that this could be conducted via roasting or autoclave technology and, given the high-grade nature of the orebody, the resulting low volumes of concentrate production indicate that the equipment sizing for this purpose would be relatively modest.

Merlin is a zone of molybdenum-rhenium mineralisation that occurs as molybdenite hosted in an east-dipping shear and breccia zone with extremely high-grade portions occurring as a molybdenite-supported breccia. The mineralised intervals are defined in a wedge-shaped body that tapers up-dip and bifurcates into upper and lower zones.

The mineralised zone starts at a depth of 100 metres and extends down-dip for more than 400 metres, with an average width of approximately 25 metres. The currently identified strike length is 900 metres; however, it remains open to the north along strike and down-dip. In the southern part of the orebody, the thick zone of high-grade

mineralisation in MDQ0132 (50m @ 1.6% Mo and 24 g/t Re) has yet to be closed off along strike.

A total of 100 holes now has been drilled at the Merlin Deposit, with assay results returned for 87 of the holes. Results from only 60 holes have been used to calculate the initial Mineral Resource estimate. (Table 3 lists the drillholes for which assays have been returned but not utilised in the resource estimate.)

Step-out drilling to the north has continued on 100-metre advances and recent drilling in hole MDQ0220, in the far northeast portion of Merlin, intersected almost 30 metres of visually high-grade molybdenite mineralisation. This is the further-most hole drilled to the northeast of Merlin. (See Table 2 for descriptive logs of this and the other northern holes showing strong visual molybdenum.)

(Figure 1 shows a plan of the Merlin mineralised zone and figures 2 and 3 and 6-9 show sections of the mineralised zones.)

Colorado School of Mines Research Project confirms Merlin's significance

Professor Murray Hitzman, the Fogarty Professor of Economic Geology at the Colorado School of Mines, who is overseeing an iron oxide-copper-gold (IOCG) research project at Cloncurry, said after a recent site visit that Merlin "is a new type of molybdenum (rhenium) deposit with average grades an order of magnitude higher than the highest-grade existing molybdenum producers." He added: "existing geophysics suggests further potential for continuation of the Merlin system to the north." (See Figures 4 and 5.)

Professor Hitzman further stated that initial, shallow drilling at the Lanham's Prospect, in the northern portion of Ivanhoe Australia's Cloncurry tenements, confirms the discovery of a second Merlin-type system. (See Table 1 for details of Professor Hitzman's assessment. Figure 13 shows a location map for Lanham's.)

Scoping study underway to evaluate mine development options

The key attributes of the Merlin project are:

- The deposit is extremely high grade in molybdenum and rhenium.
- It possesses a very high, in-ground metal value that, based on current spot metal prices, is approximately A\$6.4 billion (US\$4.6 billion).
- On current metal prices, this equates to almost A\$500 per tonne of ore.
- At current spot prices, the value is attributed approximately 50/50 to molybdenum and rhenium.
- Mineralisation commences close to surface and is relatively shallow, affording ease of mining and low-cost mine development.
- Metallurgical testwork in the molybdenum-rhenium zone has indicated excellent gravity concentration results and high flotation recoveries to a bulk sulphide concentrate.
- Initial indications of the capital cost for further processing of molybdenum sulphide concentrate on site are relatively modest.



A scoping study for the Merlin project is underway to evaluate mining, metallurgical, marketing and commercial aspects of project development and is expected to be completed in May 2009.

Ivanhoe Australia is continuing to pursue development of its copper-gold projects, with the following studies underway:

- Updated Mineral Resource estimate for Mount Elliott gold and copper project, including the Swan High-Grade Zone.
- Updated Mineral Resource estimate for Mount Dore.
- Column leach testwork for Mount Dore copper oxides and polymetallics.
- Engineering studies for Mount Dore heap leach.
- Infrastructure studies for all projects.

These projects are continuing to be advanced in parallel with the Merlin scoping study.

Ivanhoe Mines (IVN: TSX, NYSE, NASDAQ) is Ivanhoe Australia's largest shareholder and currently owns, directly and indirectly, approximately 83% of Ivanhoe Australia's issued and outstanding shares

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Merlin Geological Description

The molybdenum-rhenium mineralisation at Merlin occurs mostly as a molybdenitesupported breccia hosted in an east-dipping chloritic shear and breccia zone. The Merlin Deposit has been drilled over a 900-metre-long north-south trending zone; it is about 400 metres wide and averages about 25 metres in thickness.

Mineralised intervals define a wedge-shaped body in section that tapers up-dip, while at depth it bifurcates into lower and upper zones. The best intercepts are 50 to 70 metres thick. A chloritic shear zone typically occurs along the contact of phyllite and underlying black shales and siltstones. Down-dip toward the east, the shear thickens and does not always follow the phyllite-black shale contact.

A significant portion of the mineralisation also occurs as disseminated and fracturefilled K-feldspar, albite-silica±clay altered siltstones and shales beneath the main shear. This disseminated zone is up to 50 metres thick in the deeper parts and does not occur at shallower levels. Significant shale-hosted copper and zinc mineralisation has been discovered at the open-ended northern portion of the deposit.

Table1: Professor Murray Hitzman, Colorado School of Mines, USA - Assessment of Merlin's significance

- There is a major, untested magnetic anomaly at Flora East within and/or under the Mount Dore granite 3 kilometres north of the northern-most drilling at Mount Dore-Merlin. This anomaly may well be the centre of a major IOCG system.
- Significant geochemistry and favourable alteration is present in a corridor extending from Merlin-Mount Dore to Metal Ridge which is a distance of seven kilometres, and west of the Flora East anomaly. Much of the favourable area is hidden by the post-mineralization Mount Dore granite (which also covers portions of the known Merlin deposit). This corridor contains a number of untested anomalies and is HIGHLY prospective for a series of IOCG deposits similar to Swan-Elliott.
- Merlin is a new type of molybdenum (rhenium) deposit, with average grades an order of magnitude higher than the highest-grade existing molybdenum producers.
- Merlin appears to be associated with a late potassic alteration related to a phase of the Mount Dore IOCG system. Current research will include dating the age of mineralization at Merlin to conclusively determine its relationship to the Mount Dore IOCG system.
- Existing geophysics suggests further potential for continuation of the Merlin system to the north. (Additional geophysics on the Merlin-Mount Dore to Metals Ridge corridor is recommended to better determine potential for additional Merlin-type deposits.)
- Drilling at the Lanham's Prospect in the northern portion of the Ivanhoe Australia Cloncurry tenement confirms the discovery of a second Merlin-type system. (See Figure 13.)

RHENIUM FACT SHEET

Rhenium market facts

- Rhenium is a very rare, silvery metal that often occurs with and is recovered with, molybdenum. (First identified in 1925 by German scientists, it was the last naturally occurring chemical element to be discovered.)
- Current global production totals only approximately 50 tonnes each year. An estimated 77% of rhenium is used in super-alloys and 15% is used in petroleum catalysts.
- Rhenium currently sells for approximately US\$350 per ounce.
- Chile is the world's largest rhenium producer (28 tonnes in 2007), followed by the U.S. and Kazakhstan.
- World Reserves are approximately 10,000 tonnes, 80% of which are in the U.S, Chile and Canada.
- Molymet (Molibdenous y Metales S.A.), of Chile, is the world's largest producer, followed by Zhezkazganredmet, of Kazakhstan, and Phelps Dodge, of the U.S. Until recently, market deficits were filled from stockpiles in Kazakhstan that now are largely depleted.
- Rhenium usually is extracted from flue gases from roasting molybdenum concentrates. The smelter technology required to perform this recovery is very expensive, which is a barrier to rhenium recovery.

Industrial uses for Rhenium

- Aircraft-engine turbine blades use rhenium alloys to allow operation at higher temperatures, which also improves fuel efficiency. Rhenium content in alloys used in turbine blades has increased from 3% to 6%.
- Rocket thrusters, chambers and nozzles. Rocket thrusters made with rhenium have been tested through 100,000 thermal fatigue cycles without failing.
- Oil refinery and nuclear power plant components in high-temperature applications.
- Petroleum-reforming catalysts.
- Filaments in ion gauges and mass spectrographs.
- Electron and vacuum tubes for x-rays.
- Heating elements and thermocouples.
- Rhenium combined with boron produces rhenium diboride, a compound that is harder than diamond.

Rhenium's unique properties

- A very high melting point of 3180° C, exceeded only by tungsten and carbon.
- Extreme resistance to heat and wear.
- No ductile-to-brittle transition temperature. Ductile from 0° Kelvin (-273° C) to melting point, which allows plastic deformation without fracturing.
- Extreme stability and rigidity under stress via a high Modulus of Elasticity.
- High resistance to creep failure.





Figure 1: Plan showing Merlin high grade zone.



Figure 2: Long section showing the Merlin zone relative to the Mount Dore copper project



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OF DEFSONA!









Figure 5: Region plan of Mount Dore and the Merlin zone relative to undrilled regional geophysical features such as Flora East prospect.

















Figure 8: Cross Section N7605400





447800 E-

M000125

Mt Dore Granite

back shale

Phyllite

Siltstone

447800 E

MDODIZI NDG0125 Е

400 RL-

300 RL-

200 RL-

100 RL-

0 RL-

-100 RL-

447700 E-

ofOxide

447600 E-

MDQ0187

ondary Zon

MDQ0189

Top of Sul

Primary Zone

Silicified

Sediments

-447700 E



Figure 9: Cross Section N7605550

MDQ020

Merlin Molybdenite Zone

MOUNT DORE PROJECT

MERLIN ZONE Section N7605550

(50m window) File : 2500A4_md_SecN7605550_GeoMo Updated : 06 Apr 2009

Oxide

50m

Figure 10: Drilling at Merlin Project (30th November, 2008) with Five Drill Rigs



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Figure 11: MDQ0119 412m Down Hole (Core is 6cm Diametre) – "Molybdenite Supported Breccia" Brecciated Sediment with a Matrix of Molybdenite





Table 2:	Geological Summary Logs of Northern Holes Identifying Strong
	Visual Molybdenum <u>not</u> Included in Resource Estimation

Hole ID	From (m)	To (m)	Lithology	Visual Est (Mo) Comments			
MDQ0210	197	233	Phyllite		Foliated, patchy K-feldspar alteration		
	233	235.3	Shear zone	Very strong	Very strong molybdenite		
	235.3	234.9	Black Shale	Strong	Strong molybdenite		
	234.9	244.1	Breccia	Very strong	Very Strong molybdenite		
	244.1	253.4	Black Shale	Moderate	Moderate molybdenite		
	253.4	338.2	Siltstone	Moderate	Moderate disseminated molybdenite		
	338.2	354	Siltstone		Silicified siltstone		

MDQ0210 @ 244m



MDQ0212	104	128	Phyllite		Foliated
	128	132	Breccia	Very strong	Very strong molybdenite
	132	143	Breccia		K-feldspar altered, clast supported
	143	149	Breccia	Very strong	Very strong molybdenite
	149	154	Black shale		K-feldspar altered
	154	155.5	Siltstone	Strong	Strong disseminated molybdenite
	155.5	167	Siltstone		Banded, albite altered with hematite staining



Table 2 Cont

Hole ID	From (m)	To (m)	Lithology	Visual Est (Mo)	Comments		
MDQ0213	316.7	371.8	Phyllite		Patchy K-feldspar alteration		
	371.8	376.1	Breccia	Strong	Strong molybdenite		
	376.1	394.4	Siltstone		Banded, albite altered with		
					hematite staining		
	394.4	397.6	Breccia	Strong	Strong matrix molybdenite		
	397.6	408.4	Breccia	Moderate	Moderate disseminated		
MD00213	408.4	443.8	Siltstone		Banded albite altered with		
101000213	400.4	443.0	Sitistone		hematite staining		
MDQ0214	468.55	495.4	Siltstone		Banded, albite altered with		
					hematite staining		
	495.4	503.1	Black Shale	Strong	K-feldspar altered, strong		
					molybdenite		
	503.1	561.6	Siltstone		Banded, albite altered with		
					hematite staining		
MDQ0215B	249	280	Phyllite		Patchy carbonate breccias		
	280	283	Breccia	Very strong	K-feldspar altered, very strong		
					molybdenite		
	283	287	Black Shale		Patchy albitisation		
	287	300	Black Shale	Strong	Strong molybdenite		
	300	320	Siltstone		Intense albitisation, banded		
MDQ0216	402	461.5	Phyllite		Foliated, blotchy chlorite		
	461.5	464	Breccia	Strong	Clast supported, strong		
					molybdenite		
	464	475.5	Black Shale	Very strong	K-feldspar altered, very strong molvbdenite		
	475.5	483.5	Black shale		Graphitic, K-feldspar veins		

MDQ0216 @ 465.5m





Table 2 Cont





Hole ID	From (m)	To (m)	Lithology	Visual Est (Mo)	Comments
MDQ0217	408.5	500.7	Phyllite		Foliated with small breccia seams
	500.7	507	Breccia	Strong	Variably brecciated, strong molybdenite
	507	520.7	Siltstone	Trace	Albite altered with hematite staining, trace molybdenite
	520.7	527.2	Siltstone	Strong	Albite altered with hematite staining, strong molybdenite
	527.2	579.4	Siltstone		Albite altered with hematite staining
MDQ0218	423	434	Siltstone		Albite altered with hematite staining
	434	447	Siltstone	Strong	Albite altered with hematite staining, strong molybdenite
	447	480	Siltstone	Weak	Albite altered with hematite staining
MDQ0219	113	200	Phyllite		Foliated
	200	202	Shear zone	Strong	Strong molybdenite
	202	243	Siltstone		Albite altered with hematite staining
MDQ0220	484.2	561.5	Phyllite		Foliated with small breccia seams
	561.5	562	Shear zone	Strong	Strong molybdenite
	562	569	Breccia	Moderate	Clast supported, moderate molybdenite
	569	571.5	Siltstone	Very strong	Very strong disseminated molybdenite
	571.5	589	Siltstone	Strong	Strong disseminated molybdenite
	589	650.5	Siltstone		albite altered with hematite staining



Table 2 Cont

MDQ0220 @ 271.24m



MDQ0220 @ 372.8m



Hole ID	From (m)	To (m)	Lithology	Visual Est (Mo)	Comments
MDQ0223	430.55	540.7	Phyllite		Foliated with small breccia
					seams
	540.7	544	Siltstone	Very strong	K-feldspar altered, very strong molybdenite
	544	586	Siltstone	Weak	Banded, albite altered with hematite staining

MOUNT DO	UNT DORE (Merlin Zone) Molybdenite and Polymetallic Zone Intersections - 20 April 2009										Collar Coordinates				
HoleID	From (m)	To (m)	Interval (m)	Mo (%)	Re (g/t)	Cu (%)	Au (g/t)	Ag (ppm)	Co (ppm)	Zn (%)	East	North	RL	Azi	Dip
MDQ0137	190	228.9	38.9	0.00	0.03	0.52	0.15	8.15	67	0.44	447650	7605600	360	0	-90
inc	214	224	10	0.00	0.06	1.37	0.42	15.04	102	0.48	447650	7605600	360	0	-90
and	326.5	368	41.5	1.24	24.10	0.12	0.05	2.92	40	0.01	447650	7605600	360	0	-90
MDQ0141	176	182	6	0.00	0.02	0.40	0.10	3.40	42	0.60	447700	7605700	363	0	-90
and	234	284	50	0.00	0.02	0.50	0.13	8.66	218	0.35	447700	7605700	363	0	-90
inc	246	260	14	0.00	0.02	0.87	0.21	13.89	534	0.58	447700	7605700	363	0	-90
and	369	388	19	1.20	26.52	0.31	0.06	10.58	436	0.48	447700	7605700	363	0	-90
MDQ0142	158	173	15	0.00	0.01	0.15	0.02	4.10	40	1.83	447650	7605800	361	0	-90
and	201	245	44	0.00	0.02	0.47	0.11	6.15	141	0.47	447650	7605800	361	0	-90
and	361	371	10	0.36	9.23	0.56	0.12	9.32	144	1.21	447650	7605800	361	0	-90
inc	363	369	6	0.60	15.29	0.56	0.14	13.67	179	1.65	447650	7605800	361	0	-90
and	415	421	6	0.00	0.08	0.52	0.01	4.80	267	0.01	447650	7605800	361	0	-90
and	447	457	10	1.08	25.69	0.24	0.04	3.68	67	0.01	447650	7605800	361	0	-90
MDQ0143	126.8	136	9.2	0.01	0.09	0.37	0.11	5.15	71	0.32	447650	7605700	364	0	-90
and	166	198	32	0.01	0.10	0.39	0.10	5.96	315	0.42	447650	7605700	364	0	-90
inc	168	176	8	0.01	0.19	0.48	0.11	9.13	880	0.48	447650	7605700	364	0	-90
and	324	340	16	0.63	16.18	0.16	0.04	6.98	107	0.08	447650	7605700	364	0	-90
MDQ0144A	118	143.55	25.55	0.00	0.01	0.07	0.04	2.87	52	1.42	447650	7605790	363	270	-80
and	155	164	9	0.01	0.02	0.54	0.21	7.70	76	0.90	447650	7605790	363	270	-80
and	251	264	13	0.43	10.69	0.23	0.06	5.59	52	0.39	447650	7605790	363	270	-80
inc	251	260	9	0.60	15.12	0.32	0.08	7.87	71	0.54	447650	7605790	363	270	-80
MDQ0145	158	186	28	0.00	0.03	0.12	0.02	4.64	44	1.90	447650	7605900	364	0	-90
and	206	252	46	0.01	0.02	0.79	0.18	11.37	97	1.18	447650	7605900	364	0	-90
inc	222	252	30	0.01	0.02	1.07	0.25	15.01	120	1.33	447650	7605900	364	0	-90
MDQ0146	202	214	12	0.00	0.12	0.36	0.06	5.17	160	0.47	447700	7605800	364	0	-90
and	230	236	6	0.01	0.04	0.17	0.03	3.60	29	1.44	447700	7605800	364	0	-90
and	300	332	32	0.00	0.02	0.43	0.11	7.78	85	0.81	447700	7605800	364	0	-90
and	464	490	26	0.16	3.07	0.25	0.06	3.02	105	0.11	447700	7605800	364	0	-90
MDQ0160	90	110	20	0.08	0.40	0.27	0.39	13.03	11	0.02	447450	7605050	367	0	-90
MDQ0213	192	204	12	0.01	0.03	0.37	0.12	5.13	31	0.44	447700	7605600	360	0	-90
and	370	376	6	0.16	2.94	0.10	0.03	1.83	124	0.01	447700	7605600	360	0	-90
and	394	414	20	0.26	3.95	0.27	0.06	3.51	124	0.21	447700	7605600	360	0	-90
inc	394	400	6	0.75	11.26	0.29	0.06	7.50	95	0.43	447700	7605600	360	0	-90

Table 3: Results from recent drilling received by 20 April, 2009





Figure 13: Lanhams Prospect Regional Location

Comparison with other major molybdenum deposits

Figure 14: Relative grades of molybdenum deposits







Figure 15: Relative value per tonne of in-situ value of deposits





Figure 16: Major molybdenum deposits Mo content and tonnes





Figure 17: Major molybdenum deposits Mo grade

MINERAL RESOURCE ESTIMATE FOR THE

MERLIN MOLYBDENUM ZONE OF THE MOUNT DORE OREBODY

CLONCURRY - NORTH QUEENSLAND.

A Mineral Resource of 13 million tonnes at 0.8% molybdenum, 14 g/t rhenium, 0.2% copper and 4.8 g/t of silver, containing approximately 110 thousand tonnes of molybdenum (240 million pounds), 180 tonnes of rhenium, 30 thousand tonnes of copper and 2 million ounces of silver has been estimated for the Merlin Molybdenum zone of the Mount Dore orebody.

Barry Goss, General Manager – Development of Ivanhoe Australia (IVA), has provided this statement conforming to the Joint Ore Reserves Committee (JORC) Code for mineral resource estimates, for a Mineral Resource estimate for the Merlin Molybdenum zone of the Mount Dore orebody.

The Mount Dore orebody is situated within the meta-sedimentary rocks of the Proterozoic Kuridala Formation to the west of and below the Mount Dore granite. High grade surfaceenriched copper was mined from Mount Dore in the early 1900's. Diamond drilling in 1957 showed the copper mineralisation to extend at depth, with hole DDH-06 intersecting 8.8 metres at 1.3% Cu from 49.7 metres. Exploration undertaken from 1976 extended the known mineralisation down dip and to the north during drilling campaigns over a 24 year period. Early holes had shown an increase in zinc content of the orebody to the north, these early holes were not assayed for molybdenum.

Ivanhoe Australia commenced infill drilling into the shallow portion of the Mount Dore deposit in 2004 with the aim of establishing an early copper heap leach operation. Seventeen holes had been completed before the focus of drilling moved to the Swan Zone of the Mount Elliott orebody.

A second infill program commenced at Mount Dore in late 2007 to define the deeper, highergrade zones of the deposit. Holes into the primary polymetallic sulphides also contained anomalous molybdenum levels. Near the end of this program Ivanhoe drilled a broad pattern of reverse circulation holes (RC) along the up-dip western edge of the deposit where no drilling had been undertaken; during this drilling hole number MDQ0153 intersected a strong zone of molybdenite mineralisation beneath the Mount Dore oxide copper and copper-zinc sulphide mineralisation. This hole was twinned by diamond drill hole MDQ0153a which confirmed the zone consisted of strong visible molybdenite in a breccia zone within shales.

This molybdenite rich zone was called Merlin, the name of the Queensland County in which the deposit occurs.

Two sub-zones now are recognised within the Merlin mineralisation: a lower sub-zone rich in molybdenum and rhenium and an upper sub-zone rich in molybdenum and rhenium, with elevated copper, zinc, cobalt and silver.

The lower sub-zone, at or near the base of the shales above the silicified footwall siltstones, dips at 55 degrees to the east and consists of high-grade molybdenum and rhenium mineralisation with lesser amounts of copper. The upper sub-zone, along the sheared interface between the overlying phyllites and underlying black shales, dips at a shallower angle of between 30 and 45 degrees to the east and also contains molybdenum and rhenium but with higher copper, zinc and silver content.

A structure now is interpreted to separate the molybdenum dominant mineralisation from a strong polymetallic zone, consisting of dominant copper and zinc with associated silver, lead, cobalt, minor molybdenum and gold, which continues down dip to the east before apparently being terminated by the Mount Dore granite. The nature of the transition from molybdenum to copper-zinc dominated mineralisation has yet to be determined; holes are being drilled



into this critical area and as such this down-dip molybdenum mineralisation is classified as Inferred resource until the exact nature of the termination is determined.

A mineral resource for the polymetallic zone mineralisation has yet to be estimated.

Towards the surface the lower molybdenum sub-zone and the upper molybdenum sub-zone merge with into one thinner 55-degree east-dipping zone as the shale unit thins.

Discrete copper and zinc rich polymetallic sulphide zones overlie the molybdenum zone and continue down dip to the east. These zones contain minor amounts of molybdenite in shale units.

One interpretation of the origin of the Mount Dore orebody, including the Merlin zone, is that it is related to a, potentially very large, sediment hosted copper (silver-lead-zinc, cadmium, molybdenum, rhenium) deposit with strong geochemical and geological affinities to the billion plus tonne sediment hosted deposits such as at Lubin in Poland (Cu, Ag, Zn, Pb, Mo, Re, Cd), and the Dzhezkazgan deposit of Kazakhstan (Cu, Zn, Pb, Ag, Re, Co, Cd, Mo). However at Mount Dore there has been significant east-west compression of the sediment package and over thrusting of the Mount Dore granite followed by later regional overprinting of IOGC style alteration during the period of the formation of the Mount Elliott, Starra and other IOCG orebodies in the region. There appears to have been significant remobilisation of sulphides during the regional alteration and compression events. It is of interest that the second largest producer of rhenium in the world is Kazakhstan from Dzhezkazgan, Poland recently has begun producing rhenium from the Lubin deposit.

The current strike length of the zone, for which full results are available, is over 500 metres, however mineralisation has been found in step out holes to the north and copper holes to the south.

By the end of 2008, 60 holes had been completed into the Merlin zone. Heavy rain and subsequent flooding of the roads delayed the transportation of samples from site to the sample preparation facility in Mount Isa until late February. Upon receipt of the assay and QA/QC results, it became apparent that the analytical method had to be upgraded to a four acid digestion method to account for the extremely high molybdenum grades being found and the need to fully liberate rhenium from the molybdenite crystal lattice.

All assays with more than 0.05% molybdenum were resubmitted for re-assaying. Samples were also sent to a number of laboratories and for neutron activation analysis in North America to provide further checks on the results.

Full confirmed results for all holes drilled in 2008 became available in late March 2009, when resource estimation using this information began.

Drilling is continuing at Mount Dore and an updated resource estimate for all mineralisation at Mount Dore is planned to be completed during the June quarter of 2009. This estimate will use all data available at that date including the polymetallic zones occurring above Merlin and to the east together with the Mount Dore oxide and transitional zones that may be amendable to open pit mining and heap leaching for copper recovery. High-grade copperoxide mineralisation has been found during the Merlin drilling program.



Resources have been classified by Ivanhoe Australia under the Joint Ore Reserve Committee (JORC) code as follows:

Table 1: Mineral Resource Estimates for the Merlin Zone of the Mount Dore orebody as at December 31, 2008.

Resource	Tonnes	Мо	Re	Cu	Ag
Category	(million)	(%)	(g/t)	(%)	(g/t)
Indicated	7.4	0.8	14	0.1	4.7
Inferred	5.6	0.8	13	0.3	5.1
Total	13	0.8	14	0.2	4.8

JORC advises that resource estimates be rounded to one or two significant figures, grades have therefore been rounded to one decimal place and tonnes to the nearest 0.1 million. Note that this may result in minor rounding errors in the total figure.

High-grade molybdenum assays have been cut as they currently are thought to represent real but small volumes. The cut was made at 99% of the population, assays over 9.9 % Mo were reduced to 9.9% Mo. This mainly affected hole MDQ0119 which had six metres at over 15% Mo in a "molybdenite-supported-breccia". The uncut grade of the resource is about 0.9% Mo and 15 g/t Re.

Indicated resources were estimated in an area where drilling has been competed on a 50 x 50-metre pattern between 7,605,300 N and 7,605,575N (MapGridAustralia).

Inferred resources are estimated at the southern end, where drilling remains at 100×50 metre pattern or greater, up dip where the zone thins, at depth where drilling remains on a 100×50 -metre pattern and at the north end to 7,605,600N, the limit of information from the 2008 drilling.

The total resource estimate covers the area from approximately 7,605,100N to 7,605,600N and from 447,450E to 447,800E.

Drilling is being undertaken on a 50E x 100N-metre pattern going north and has reached 7,606,000N. Drilling is also stepping out to the south along 447,700E in 50-metre intervals to follow the thick ore found in MDQ0132 (50.m @1.6% Mo, 24 g/t Re).

Data verification

All drilling into Merlin has been undertaken by Ivanhoe Australia, early reverse circulation holes that intersected molybdenum mineralisation while testing for oxide copper have been replaced by diamond drill holes or form a small part of the inferred resources.

Drilling by Ivanhoe has been conducted under current industry best practise with regard to QA and QC controls for sampling, sample preparation and assaying and has been reviewed continually by Ivanhoe Mines personnel.

Notes:

- Intersections are estimated using a 0.7% copper equivalent cut-off using the following Australian dollar metal values; Cu \$2.6/lb, Mo \$14/lb, Re \$450/oz, Ag \$22/oz, Zn \$0.78/lb values are added; 0.7% Cu is equivalent to \$40/tonne of ore, the average gross value of the mineralisation is \$488/tonne. Metal equivalent factors are reviewed prior to each resource estimate. Copper has been used as the equivalent as it is common to all of Ivanhoe Australia's orebodies. No metallurgical recoveries have yet been used as testing and process route selection in ongoing.
- 2. Based on metal equivalent ratios this can be equated to an 8.5% copper deposit containing 1.1 million tonnes of copper or a 14 g/t gold deposit containing 6 million ounces of gold (at \$1,100/oz AUD).



- 3. Intersections used in the estimate are over a minimum down hole length of 6 metres, thin intersections have been expanded to 6 metres by adding the next highest grade samples to reach the minimum length provided the overall intersection remains above the cut-off grade.
- 4. Copper and zinc mineralisation contiguous with molybdenum mineralisation have been included into the intersection if the added interval is above the cut-off grade.
- 5. Nearby polymetallic zones with minor amounts of molybdenum have not been included in the Merlin Resource estimate.
- 6. Density determinations were made on the high grade core samples by using an algorithm to account for the minerals present as the measurements made on small pieces of core at 5 metre intervals did not reflect the metal content of the intervening rock. The average bulk density of the deposit is currently estimated to be 2.67 tonnes per cubic metre. The estimate from measurements was 2.62, a 2% variation; however the calculated density for the higher-grade samples increases the variation to 7% in grade. For example the measured density from a 10 centimetre length of core near the 22% Mo sample in MDQ0119 assigns a density of 2.61 to this core where as the molybdenite content alone would account for a density of 1.76 without allowing for the density of the included rock which would increase the density to above 3.0. Ivanhoe is moving towards pre-cutting full core length density measurements to account for the wide variation in density in such core.
- 7. Grade tonnage estimates were derived from an ID²W (Inverse Distance Squared Weighted) interpolation of 2 metre down-hole grade composites within a wireframe boundary that was snapped to the top and bottom of the intersections. Domains related to the search ellipse used to select points for interpolation were used to control the data search within different portions of the wireframe envelopes. Preliminary tests on various method of interpolation have been made and the method used produces a slightly higher grade than a kriging estimate and a lower grade than a ID³W estimate.
- 8. Variations in grade estimation by the methods tested and density measurement assignment are considered to be within a reasonable resource estimation error range given the overall grade of the deposit. Both the resource interpolation method and density measurement methods are to be optimised for future resource estimates.

Competent Persons Statement

The information in this announcement that relates to Ivanhoe Australia's mineral resource estimates for the Merlin zone resource, is based on information compiled by Barry J. Goss, who is a full time employee of Ivanhoe Australia and a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional (Management). Barry J. Goss has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a 'Competent Person' as defined in the JORC code. Barry J. Goss consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.

The information within this report as it relates to geology and mineral resources was independently reviewed by, Mr Keith Whitehouse. Mr Whitehouse is a Member of the Australasian Institute of Mining and Metallurgy and a Chartered Professional (Geology). He has sufficient experience which is relevant to the style of mineralization and the type of deposit under consideration to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code". Mr Whitehouse consents to the inclusion in the report of the matters based on information in the form and context which it appears.