

IVANHOE MINES LTD  
Form 6-K  
February 01, 2005

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SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16 OF  
THE SECURITIES EXCHANGE ACT OF 1934

From: January 28, 2005

IVANHOE MINES LTD.

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(Translation of Registrant's Name into English)

**Suite 654 999 CANADA PLACE, VANCOUVER, BRITISH COLUMBIA V6C 3E1**

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(Address of Principal Executive Offices)

(Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.)

Form 20-F-

Form 40-F-

(Indicate by check mark whether the registrant by furnishing the information contained in this form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.)

Yes:

No:

(If Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b):  
82\_\_\_\_\_ .)

Enclosed:

ASX Fourth Quarter Technical Report

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**SIGNATURES**

**QUARTERLY TECHNICAL REPORT**

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**IVANHOE MINES LTD.**

**Date:** January 28, 2005

By: */s/ Beverly A. Bartlett*  
**BEVERLY A. BARTLETT**  
Corporate Secretary

**Ivanhoe Mines Ltd.***Quarterly Technical Report***For the quarter ending December 31, 2004**

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**Key Points:**

In December, the company successfully traced a thick seam of coal onto property controlled by Ivanhoe in southern Mongolia, approximately 40 kilometres north of the Mongolia-China border. Five core holes drilled by Ivanhoe intersected the same seam that is being mined by an independent Mongolian-Chinese joint venture (the Nariin Sukhait Mine) on a small license area surrounded by Ivanhoe's extensive land interests. The coal seam, one of five conformable seams identified to date at Nariin Sukhait, has been mapped in outcrop and sub-crop throughout a major coal basin that stretches a total of 120 kilometres, east and west of the mine, on ground controlled by Ivanhoe.

In December, the company received the full repayment of the US\$50 million treasury bill purchased by the company in December, 2003. During the one-year term of the investment, Ivanhoe received interest payments totalling approximately US\$1.34 million from the Mongolian government.

In November, the company's exploration team discovered four significant, gold-rich copper porphyry targets in the newly named Bronze Fox District in southern Mongolia. The discoveries are approximately 140 kilometres northeast of Ivanhoe's Oyu Tolgoi copper-gold project and 430 kilometres south-southeast of Ulaanbaatar.

**Overview**

**Production**

Copper cathode production from the Monywa Mine was 8,704 tonnes for the quarter (4,352 tonnes net to Ivanhoe). Ivanhoe's 50% share of sales revenue was US\$13.9 million. The average copper price received for the cathode was \$1.36/lb.

Iron pellet production from ABM's Savage River Mine was 481,452 tonnes for the quarter. Pellet sales were 497,897 tonnes. Sales revenue was A\$33.5 million.

**Development**

The 30% increase in the S&K Mine's production capacity was completed in October. In November and December, cathode production averaged approximately 3,100 tonnes per month or 37,200 tonnes annually.

**Exploration**

Exploration is ongoing at Ivanhoe's projects in Mongolia, Myanmar, Australia and China.

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**COPPER PRODUCTION SUMMARY**

Q4	Tonnes of Ore to Heap	Head Grade (Cu CN %)	Cathode Production (tonnes)	Price of Copper (US\$ per lb.)
December, 2004	(000 s)			
Monywa, S&K, Myanmar	2,301	.57%	8,704	\$ 1.36

**IRON PRODUCTION SUMMARY:**

Savage River, Australia	Tonnes Milled Wet	Concentrate Production	Grade (DTR)	Pellet Production (tonnes)	Pellet Sales (tonnes)
Q4 2004	1,413,900	509,622	37.9	481,452	497,897
Q4 2003	1,351,475	601,776	46.9	582,330	601,794

  

Savage River, Australia Total Iron Ore Product	Tonnes Sold	Sales Revenue (A\$ million)	Total Operating Costs (A\$ million)	Capitalized Pre-stripping Costs (A\$ million)
Sales Results				
Q4 2004	533,625	33.5	29.8	3.5
Q4 2003	623,657	27.1	27.9	3.9

**PRODUCTION****Monywa Copper Joint Venture, Myanmar**

The S&K Mine produced 8,704 tonnes of LME grade A cathode copper during the quarter. This is an average of 2,901 tonnes per month or 94.61 tonnes per day. This is the highest quarterly production since the project was commissioned in 1998, and represents a production rate of 34,533 tonnes on an annual basis.

A total of 8,856 tonnes of cathode was shipped during the quarter at an average price of \$1.36/lb or \$2,997/tonne. This represents sales revenue of US\$27.8 million for the quarter.

Ore tonnes increased to 1.75mt but grade was lower at 0.55% down from 0.81% in the third quarter. Record rainfall in September adversely impacted mine production and total tonnes mined fell to 2.3mt.

Construction of Tankhouse B was completed on October 15<sup>th</sup>, 2004. The expansion increased electrowinning capacity to a nominal 42,000 tpa and targets averaged production of 39,000 tpa.

The 30% increase in production was completed at a total cost of \$3.5 million, and in November and December cathode production averaged approximately 3,100 tonnes/month or 37,200 tonnes annually.

A further expansion is planned for December 2005 (subject to government approval) which will take production to a total of 49,000 tpa at the Sabetaung and Kyisintaung projects.

Pad 3 heap-leach-pad facility was completed during the quarter, increasing the available leach pad area by approximately 840,000 sqm.

The facility was constructed by Myanmar Ivanhoe Copper Company Limited ( MICCL ) with technical supervision provided by geo-technical consultant, Knight Piesold. The Pad 3 facility will assist heap leach operations by allowing increased heap leach inventories and improving ultimate heap leach recovery.

Construction of Pad 3 began in 2001. Since then, heap-leach recovery has increased to 81% CNSCu in 367 days.

During the month, construction and commissioning work on a fines treatment plant was completed which will assist in copper recovery from high clay ores. The plant removes the majority of sub-0.067mm sized particles from ore utilising a wet vibrating screen cyclone bank and vibrating dewatering screens.

<b>S&amp;K Copper Mine</b>	<b>Qtr End December 2004</b>
	<b>Actual</b>
Tonnes ore to heap (000 s)	2,301
Total tonnes mined (000 s)	3,081
Grade (Cu CN%)	0.57%
Strip Ratio	0.30
Tonnes Sold	8,856
Cathode Production (tonnes)	8,704
Revenue (\$000 s)	27,816
Price of Copper (US\$ per Lb.)	1.36

Phase 1 Drilling Program

The Phase 1 drilling program was completed at the start of December 2004. A total of 39 holes for 3,863 metres was completed during this drilling program, with drilling being done in five different target areas;

1. Yama Camp area.
2. Sabetaung Stage 3 Pit.
3. Limits of Sabetaung Pit.
4. Limits of Sabetaung-South Pit.
5. The bottom of the main Sabetaung pit.



The Phase One drilling program was successful in extending known mineralization in and around the existing Sabetaung and Sabetaung South pits. The discovery and delineation of a zone of very high grade in Sabetaung Stage 3 pit area was made and a new potential mining area was identified in the Yama Camp. The program improved the geological understanding of the deposit as a whole, and produced valuable geo-technical data. Based on the results of the Phase One program, a second Phase Two program was developed.

### Significant Phase One Intersections

Below is a table showing some of the better intersections from the Phase One drilling;

Hole ID	Intersection Summary +0.1% Cu				Including interval +1% Cu				Area				
	From	To	Width	Cu%	From	To	Width	Cu%					
SDD0406	10.20	98.00	87.80	0.44	62.00	66.00	4.00	1.36	Yama Camp				
					80.00	86.00	6.00	2.67					
SDD0407	19.00	39.00	20.00	0.51					Yama Camp				
SDD0403	19.00	63.00	44.00	0.54	39.00	43.00	4.00	3.44	Yama Camp				
SDD0404	28.00	68.00	40.00	0.40	60.00	66.00	6.00	1.69	Yama Camp				
SDD0408	0.00	116.00	116.00	0.18					Sab Stage 3				
SDD0415	24.00	62.00	38.00	0.36					Sab Stage 3				
SDD0416	38.00	250.05	212.05	1.33	72.00	104.00	32.00	5.87	SHG Zone				
					114.00	132.00	18.00	2.24					
SDD0417	0.00	50.00	50.00	0.62	4.00	14.00	10.00	1.46	SHG Zone				
					82.00	250.00	168.00	1.78		100.00	194.00	94.00	2.82
SDD0425	0.00	14.00	14.00	0.72					SHG Zone				
					38.00	250.05	212.05	2.83		70.00	116.00	46.00	7.40
										128.00	132.00	4.00	9.23
										144.00	208.00	64.00	2.76
SDD0427	3.00	119.00	116.00	11.18	230.00	236.00	6.00	1.50	SHG Zone				
					3.00	53.00	50.00	25.43					
					10.00	32.00	22.00	4.04					
					38.00	42.00	4.00	1.43					
SDD0428	178.00	178.00	1.23	50.00	64.00	14.00	3.68	SHG Zone					
				130.00	136.00	6.00	1.81						
SDD0409	8.00	24.00	16.00	0.78	8.00	12.00	4.00	1.40	Sab Pit Limits				
SDD0419	13.00	28.00	15.00	0.91	13.00	16.00	3.00	3.82	Sab Pit Limits				
SSDD0401	14.00	92.00	78.00	0.50					Sab Sth				
SSDD0402	18.00	44.00	26.00	1.35	20.00	28.00	8.00	3.81	Sab Sth				
SSDD0403	18.00	46.00	28.00	1.76	20.00	32.00	12.00	3.50	Sab Sth				
SSDD0407	0.00	93.00	93.00	0.43	8.00	14.00	6.00	1.38	Sab Sth				
SSDD0408	40.00	80.00	40.00	0.30					Sab Sth				
SDD0418	0.00	90.90	90.90	0.27									

					<b>Sab Bottom</b>
<b>SDD0429</b>	0.00	18.00	18.00	0.36	<b>Sab Bottom</b>
	24.00	90.00	66.00	0.19	
<b>SDD0430</b>	0.00	12.00	12.00	0.54	<b>Sab Bottom</b>
	18.00	35.90	17.90	0.40	

**Savage River, Tasmania**

Production and sales were adversely affected by the shortage of high-grade ore from the pit; however, revenue was better than the previous quarter as a result of better iron ore prices.

The lower grade was mainly due to the development of a wall failure in Center Pit South which has temporarily restricted access to high-grade ore sources. It is expected the shortage of high-grade ore will continue into the next quarter. In the meantime Center Pit South has been redesigned to develop two smaller pits either side of the failed zone to maximise ore recovery from this pit. The failure has reduced the concentrate production in 2005 to 2mt and the overall life of the existing Mine Plan by six months.

During the quarter, further pit optimization studies commenced to re assess open pit reserves

at different price levels given the expectation that iron ore prices will see real price increases over the next couple of years. Whilst there are some fairly major physical constraints to conducting further major cutbacks it may well be possible modify the existing pit designs to recover more ore.

In the shorter term, all efforts are being made to exceed the planned concentrate production in 2005 through process improvements in the concentrator and improvements in the mine plan.

Process improvements in the pellet plant over the past year has resulted in a step change improvement in the physical qualities of the pellets, with compressive strength measured at the stackers averaging 250kg over the year.

#### **Bakyrchik Gold Mine, Kazakhstan**

No Doré gold was produced during the fourth quarter of 2004; however, tailings processing continued. Four additional used gravity tables, purchased in the third quarter, were refurbished and installed during the month of October on the lower level of the existing plant. With these additional tables the total plant throughput was increased by approximately 50%. All of the refurbishing and installation work, including foundations, was done by Bakyrchik personnel.

A total of 22,000 tonnes of tailings were processed in the fourth quarter yielding 363 tonnes of concentrate averaging 53.6 grams per tonne ( g/t ) of gold. The gravity concentration tables will continue to produce batches of concentrate for sale. The sale of small parcels of concentrates to a Russian roasting plant continues. Currently there is 820 tonnes of gravity concentrate in stock ready for shipment.

During the fourth quarter, operation of the pilot-sized rotary kiln roaster continued. The gas handling equipment was fabricated and installed at the laboratory pilot rotary kiln. The test results confirm that this technology can be applied to roast whole ores, concentrates and technogenics (man-made materials). Recoveries exceeding 90% are consistently being achieved by chemical treatment of the calcine before carbon in leach ( CIL ).

To confirm the pilot plant results achieved in the Bakyrchik metallurgical laboratory, a series of confirmatory and process optimization roasting tests are planned in the fully instrumented pilot scale rotary kiln at FFE [Fuller] Minerals ( FFE ). The initial battery of tests at FFE have confirmed that in the rotary kiln the levels of arsenic and sulphur in Bakyrchik ore can be reduced to equal or lower levels than previously obtained in a circulating fluidized bed pilot plant. Currently, calcines are being washed with brine ahead of CIL and again, an improvement in the overall gold recovery is being experienced. The next iteration is a series of continuous pilot plant tests planned in the first quarter of 2005 at FFE testing centre to further optimise the process.

Work continues toward implementation of the 200-thousand tpa rotary kiln project. Aker Kvaerner and local institutes have been engaged for this work. The local research institutes VNIItsvetmet and Kazgiprotsvetmet continue to work on the mining plan and the process plant design. During the quarter the approval of the project documentation by the government agencies continued.

During the quarter, site preparation and foundation work was completed and the 40 metres rotary kiln and all accessory parts were mounted onto the foundations. A third party specialized organization conducted the welding inspection. The Design Institute has issued the drawings for construction of the discharge section of the roasting plant. In December the contract was signed for the site preparation and foundation work for construction of the discharge section of the plant. The work is scheduled for completion in February 2005. Furthermore, the contract for disassembly of steel structures located at the site was signed. The structures will be used for construction of the new plant facilities. The fabrication of the



scrubbers and cyclones using materials already existing on site is ongoing. The overall project progress as of the end of the 4<sup>th</sup> quarter was approximately 10%.

As per the terms of the Subsoil Use Contract and the Sale and Purchase Agreement, an eight-year extension was requested from the Ministry of Energy and Minerals Resources to evaluate all commercial discoveries in BMV exploration territory. This issue has not yet been resolved, however, the work program, requested by the Ministry of Energy and Mineral Resources, has been prepared and issued.

Minproc, together with Bakyrchik mining engineers, continues to assess the option of mining approximately one million ounces of gold (eight plus grams of gold per tonne ore) by extending Open Pit No. 4. If realized, the potential to start commercial operation with surface, rather than underground, mined ore would reduce the start up risk of the mining part of the project.

The fourth quarter net expenditures totalled approximately US\$1.73 million, including care and maintenance and capital.

## **DEVELOPMENT**

### **Modi Taung Gold Project Block 10, Myanmar**

Exploration and development continued at a reduced rate relative to the previous quarter, pending approval by the government of the proposed joint venture for development of the mine.

The development and mining proposal was re-negotiated following changes in the tax regime, and a revised proposal with adjustments in equity ratios and royalty rates was submitted to the Myanmar Investment Commission in December. Government approval is now expected in February.

Underground exploration and development continued, with underground crews reduced to eight from late October. Exploration advances were on the Htongyi Taung 1025, 975 and 950 Levels and the Adder 950 Level; a new (1000 metre) Level was started at Htongyi Taung in December. The 950 Level development (hauling) drive at Htongyi Taung advanced to 170 metres from the portal, using the battery-powered locomotive and, from November, the overhead loader. Total underground advance in the quarter was 321.3 metres. Advances in the Htongyi Taung 975 and 1025 Levels and the Adder adit were mostly in vein, with encouraging widths and visible gold in November and December, particularly on the Htongyi 975 Level where vein widths are 60 to 80 cm.

Surface drilling was terminated but soil sampling and trenching continued at targets within the 40 km<sup>2</sup> Modi Taung area north and south of the adits, and in the Kinywa area to the north.

Check gold assays by two laboratories outside Myanmar showed a satisfactory correlation with the results from the Mandalay lab, with reduced variability relative to the previous two batches of check samples. Multi-element assays on the Kankaung veins showed base-metal and arsenic values significantly higher than samples with similar gold values from Modi Taung.

Theodolite surveying at Htongyi Taung was completed, the data entered into a SURPAC data base, and a three-dimensional geological model created for the three main veins. This resulted in definition of the steeply-dipping high-grade shoots between levels. This resource excludes a high-grade (supergene enriched) crown pillar at the surface. Similar processing and calculation of the resource on the Shwesin veins are pending.

The security situation in the field remained highly satisfactory throughout the quarter with no illegal miners at Modi Taung or Kinywa.

Total expenditure in the quarter was US\$0.4 million.

## **Oyu Tolgoi, Mongolia**

### **Feasibility Study**

The study group has focused on a detailed evaluation of initial facilities required to mine and process material from the open pitable resources at a nominal rate of 70,000 tpd.

The preliminary design of the processing facility is based on a grinding circuit of a single 12-metre SAG mill and two 8-metre ball mills. The layout readily allows the addition of mills to increase the circuit capacity. The design has been developed sufficiently to enable equipment pricing to be obtained and to provide material take-offs for estimating purposes.

The preliminary design of infrastructure required for the project has been completed to this stage. This includes the water supply system design and design of tailings storage facilities, as well as, on-site support facilities such as offices, accommodations and workshops.

The study group undertook a series of trade-off studies aimed at optimising the process flow sheet and the site layout. The results of these studies together with the results of the current round of metallurgical testwork will be used in the next phase of the work to finalise designs and estimates for the study.

In parallel with the work on the feasibility study, McIntosh Engineers continued initial work related to the Prefeasibility Study for the Hugo deposit.

### **Mine Planning**

Infill drilling for Hugo North was continued throughout the quarter and is expected to be completed in January 2005. Further infill drilling due to the enlargement of the Hugo North deposit may be required during the rest of the first quarter 2005 to ensure that the early production from Hugo North sits within the indicated resource classification.

Geo-technical drilling in Hugo North was completed during the quarter as required for the Prefeasibility Study. Open pit geotechnical analysis and recommendations are due for completion in January 2005. The shaft farm location for the underground development of the Hugo deposit will be determined from a drill program planned for execution in the first half of 2005.

Detailed cost analysis of the Hugo North block cave was carried out during the quarter, including intensive trade off studies and investigation of the potential for cost saving through the use of local suppliers.

### **Bulk Sample**

Sinking of a shaft for extraction of a bulk sample of ore from Southwest Oyu deposit for SAG mill testwork is near completion. It is envisaged that the shaft will reach its targeted depth of 68 to 74 metres in early January and that the bulk sample will be extracted and shipped during the month.

### **Exploration Shaft (Shaft No.1)**

The contract for the shaft sinking (1,200 metres) and lateral development has been awarded to a major international shaft sinking firm. Long lead items have been identified and are in the process of being purchased or manufactured. Equipment for a quarry and batch plant has been purchased. Surface works are planned for construction in early 2005.

### **Water Supply**

Hydrogeological investigations aimed at defining the water supply for Oyu Tolgoi were completed during the quarter. Preparation of models to confirm the ability of the aquifers to provide the required water supply was also complete.





### Metallurgical Testwork

At the end of the quarter, flotation testing of composites, representing time periods of production, and variability samples from the Southwest, Hugo North and Hugo South deposits was complete. Flotation testwork on composites, representing different ore types, from the Central deposit are 70% complete.

Comminution testwork at AMMTEC Limited, on large diameter diamond drill core from the Southwest and Central deposits, and MinnovEX, on samples from Southwest, Central, Hugo North and Hugo South, was complete.

A small flotation pilot plant was run on a composite sample representing the first ten years of production from the Southwest deposit. The main focus of the pilot plant was to produce samples of concentrate for marketing.

## EXPLORATION

### Mongolia

Ivanhoe's direct and indirect holdings at the end of the third quarter of 2004 include four mining licenses totaling 238.7 km<sup>2</sup> at Oyu Tolgoi, and 143 mineral exploration licenses covering 117,794.3 km<sup>2</sup>.

Of the 143 exploration licenses, 98 licenses totalling 77,424.2 km<sup>2</sup> are held 100% by Ivanhoe Mines Mongolia Inc. Eleven licenses, totalling 4,952.1 km<sup>2</sup>, are held as Oyu Tolgoi coal, water or limestone exploration plays. Asia Gold Corp. (a company 51.1% owned by Ivanhoe) holds a further 60 of the exploration licenses totalling 48,037.15 km<sup>2</sup> whilst three licenses, totalling 259.4 km<sup>2</sup> over the Kharmagtai prospects, are in a joint venture with QGX Ltd.

Ivanhoe has an additional nine exploration licenses totalling 5,860.1 km<sup>2</sup> under application.

Fourth quarter expenditures outside the Oyu Tolgoi project totalled approximately US\$4.2 million. Of this, approximately US\$550,000 was spent on license renewals, US\$350,000 was spent at Bronze Fox District and US\$650,000 was spent at Kharmagtai. The remainder was spent on general reconnaissance and target generation.

### Kharmagtai

Regional reconnaissance work in the Kharmagtai area included rock chip sampling over gold-anomalous low sulphidation quartz-carbonate vein systems at Tsagaan Mogoi, located 20 kilometres to the west of the main porphyry occurrences and on ground held 100% by Ivanhoe Mines.

### Gold Hill/Altan Tolgoi

The third phase of diamond drilling at Gold Hill (Altan Tolgoi) was completed in the third quarter of 2004. This diamond drilling discovered significant new intersections of mineralization along strike to both the east and west.

The initial two phases of diamond drilling at Gold Hill totalled 11,829 metres (37 holes) whilst the recently completed third phase totalled 8,519 metres (22 holes at depths of up to 755 metres). The gold-rich copper-gold porphyry mineralization is hosted within two pipe-like quartz-chalcopyrite-pyrite stockwork zones, the Southern and Northern stockwork zones, which are approximately 100 metres apart and hosted in diorites and quartz diorites. Copper-gold mineralization was also intersected in tourmaline breccias which occur predominantly southeast of the Southern stockwork zone and mostly from depths greater than 200 metres.

The Southern stockwork zone consists of strong quartz stockwork veins and associated high-grade gold mineralization. This zone is at least 550 metres long and at least 600 metres deep; its width widens eastwards from 20 metres to 200 metres. The induced polarization survey indicated that the Southern stockwork zone continues a further 100 metres east of the current drilling.



Grades range from 0.6 g/t to greater than 5.0 g/t gold and 0.3% to 1.0% copper. Holes KH240 (from earlier drilling), KH259 and KH281 were drilled at a 40-metre spacing and down the core of the Southern stockwork. They returned intercepts respectively of 245 metres at 2.48 g/t gold and 0.75% copper; 203 m at 2.45 g/t gold and 0.45% copper; and 210 metres at 1.61 g/t gold and 0.63% copper; beginning at down-hole depths respectively of 3 metres, 3 metres and 28 metres.

New areas opened up by the third phase of drilling include the shallow western section, where KHDDH273 intersected 34 metres at 0.45 g/t gold and 0.24% copper and 40 metres at 1.70 g/t gold and 0.57% copper; and the large eastern extension of the Southern stockwork zone from where intersections include 298 metres at 0.58 g/t gold and 0.45% copper in KHDDH275.

The Southern stockwork zone is bisected by a 130° trending shear zone intruded by a post-mineralization andesite dyke. The eastern section of the zone has been down-faulted 200 metres by a northeast trending normal fault.

The Northern stockwork zone comprises a broad halo of quartz veins that is at least 250 metres long, 150 metres wide and at least 350 metres deep. Grades of 0.3 g/t to 0.5 g/t gold and 0.1% to 0.5% copper are typical, although there are several 10 metre to 30 metre wide pockets of stronger mineralization with grades of 0.7 g/t to 1.3 g/t gold and 0.2% to 0.5% copper that are associated with abundant quartz veins. Recent drilling on the shallow extension of the Northern Stockwork included 103 metres at 0.38 g/t gold and 0.45% copper, starting from surface, in KHDDH267.

Mineralization at both quartz stockwork zones is spatially and temporally focused around 0.2 metre to 20 metre wide quartz diorite dykes that were emplaced into a series of diorites, diorite porphyries and quartz diorites. The host rocks in the quartz stockwork zones have been strongly epidote-magnetite-chlorite altered; and overprinted by a sericite-chlorite-tourmaline assemblage associated with the variably mineralized tourmaline breccias. The thin nature of the mineralizing dykes and their irregular geometry are features typically observed in the shallower sections of porphyry copper-gold systems. The potential exists for the dykes and associated quartz stockwork mineralization to amalgamate into a larger porphyry stock at depth.

Mineralization in the stockwork zones is characterised by high gold grades with percent copper to grams/tonne gold ratios that typically exceed 1:2. Petrographic studies indicate that the gold occurs as micron-sized grains which infill fractures and form blebs within chalcopyrite. Mineralization hosted in the tourmaline breccias is characterised by chalcopyrite disseminations and blebs within the tourmaline-rich matrix. Intercepts in the breccia zone are commonly over 100 metres long with grades from 0.4 g/t to 0.8 g/t gold and 0.3% to 0.6% copper.

The recent drilling indicates that the copper-gold mineralized tourmaline breccias and the Southern stockwork zone remain open to the west, east and at depth. The Northern stockwork remains open to the northeast.

#### The Duck Anomaly

Three holes were drilled on the Duck Anomaly. The Duck Anomaly is a strong chargeability high, over a 1,500 metre by 1,000 metre area, located 1 kilometre southwest of the Gold Hill prospect and along the same northwest trending structure as the Copper Hill prospect. The results of the drilling, the induced polarization survey and recent detailed mapping were processed this quarter.

Results from three diamond drill holes at the Duck chargeability indicate that the strongly sericite-pyrite altered surface expression of the Duck forms a 200 metres thick pyritic alteration blanket that overlies weakly mineralized quartz diorite dykes and an extensive distal porphyry alteration assemblage (biotite alteration, pyrite veins and elevated copper grades).



KHDDH284, on the southeastern flank of the Duck, tested a small vertically extensive chargeability anomaly similar in shape and magnitude to the chargeability anomalies centered over Tsagaan Sudal and Zesen Uul. The hole intersected elevated copper (96 metres at 0.15 %) associated with a distal porphyry alteration assemblage of strong biotite alteration and abundant pyrite veinlets.

KHDDH285 tested a chargeability shell located on the northern margin of the Duck; it is similar in shape and magnitude to the chargeability anomaly associated with Southwest Oyu Tolgoi. The hole intersected a strongly sericite-pyrite altered ash siltstone that is crosscut by numerous 1 to 20 metre wide diorite and quartz diorite dykes; the latter are associated with unmineralized quartz-pyrite veins and strong biotite alteration.

KHDDH286 targeted outcropping quartz veins located on the northern margin of the Duck. The hole intersected 90 metres at 0.17 g/t gold and 158 metres at 0.16 % copper, associated with a weakly mineralized diorite porphyry dyke that has been emplaced into a strongly sericite- and locally biotite-albite altered ash siltstone.

### **Bronze Fox District**

The Bronze Fox District is located 140 kilometres northeast of Oyu Tolgoi and 15 kilometres northeast of the Shuteen Project. The district comprises four new auriferous porphyry targets: Bronze Fox, East Fox, West Fox and Tourmaline Hills. These targets occur within a 14 kilometre long corridor of alteration and mineralization which is associated with monzodiorite to granodiorite intrusions that were emplaced into a package of Devonian volcanosedimentary rocks. Work has included surface mapping, a ground magnetic survey (1,729 line kilometres) and analysis of 6,065 rock-chip samples.

The gold-copper mineralization at Bronze Fox is associated with quartz-sulphide veins and disseminated sulphides and at Tourmaline Hills with quartz-tourmaline-hematite veins. Work has been primarily centred at Bronze Fox where 2,862 rock-chip samples averaged 0.51 g/t gold. However, the 266 rock-chip samples at the more recently defined West Fox prospect average 3.1 g/t gold. Anomalous lead, arsenic and molybdenum are also encountered at most targets.

The large numbers of rock samples with strong gold and copper values collected throughout the district are indicative of a large and highly-mineralized gold and copper porphyry system. The presence of sheeted quartz veins and unidirectional solidification textures (UST s), as well as tourmaline veins and breccias with highly significant gold and copper values, demonstrate that the upper mineralized parts of the porphyry intrusions have been preserved.

Summaries of the four main prospects are given below:

The Bronze Fox prospect comprises gold-copper-molybdenum-arsenic mineralization associated with sheeted quartz veins and quartz-albite-sericite alteration that is centred on quartz diorite porphyry dykes within a multiphase intrusive complex. The zone strikes northwest over a distance of approximately 1,500 metres and varies in width from 200 to 400 metres. From 2,862 rock-chip samples, 534 samples returned results over 0.5 g/t gold, including 166 samples over 2.0 g/t gold, with a maximum assay of 46.50 g/t. A total of 577 samples returned copper values over 0.5%, including 98 samples over 2% copper, with a maximum value of 8.1% copper.

East Fox lies approximately 3.5 kilometres northeast along strike from the Bronze Fox prospect. The two prospects are hosted by the same monzodiorite-granodiorite intrusive complex. Gold-copper-molybdenum mineralized sulphide veinlets and quartz veins are associated with calc-sodic (actinolite-albite-sericite-quartz) alteration. The 1,831 rock-chip samples average 0.94 g/t gold; of these samples there are 116 assaying over 2.0 g/t, and a maximum assay of 109 g/t. A total of 216 samples returned copper values over 0.5%, including 34 samples over 2% copper, with a maximum value of 11.6% copper.



West Fox is located 4.5 kilometres northwest of the Bronze Fox prospect. A series of echelon, gold-arsenic-lead  $\pm$  silver mineralized, quartz-hematite veins is associated with narrow diorite porphyry dykes that have been emplaced into a package of hornfelsed siltstones, sandstones and basic to intermediate volcanic rocks. The veins are distributed over a 1,500 metre by 350 metre area where 266 rock-chip samples returned an average of 3.08 g/t gold, with a maximum assay of 53.4 g/t, as well as anomalous silver and base metal assays.

At Tourmaline Hills the gold-copper mineralized tourmaline-hematite veins and breccias are hosted within a multiphase monzodiorite-granodiorite stock. They outcrop over an area of approximately six km<sup>2</sup>. The mineralized zone has a strike length of at least 1.5 kilometres and is open in both directions. The mineralized veins and breccias are generally less than six metres wide, but are up to 20 metres wide at vein intersections. The 1106 rock-chip samples from the prospect returned 253 results over 0.5 g/t gold, including 71 samples over 2.0 g/t gold, and a maximum assay of 65.4 g/t. There are 93 results greater than 0.5% copper.

### **Oyu Tolgoi/Turquoise Hill**

The fourth quarter drilling continued to focus on the Hugo North deposit with infill holes to increase the confidence level from inferred resources as defined by AMEC in May 2004 to indicated resources. Step out drilling on two, 150 metre spaced lines north of the northern limit of the defined resource has also extended the length of the Hugo North high-grade copper-gold core to more than 1.6 kilometres, a further 300 metres beyond the discovery's northern limit that was established in May by the AMEC resource model. Hugo North is part of the 2.8 kilometre long Hugo Dummett Deposit, which in turn is part of the now 5.8 kilometre long chain of deposits delineated to date by Ivanhoe at Oyu Tolgoi, in Mongolia's South Gobi region.

Drilling has established that the high-grade core is continuous from a northing of 4766300N to 4767900N (1.6 kilometres in strike length) and has a vertical extent that increases from 100 metres in the southern end to more than 700 metres vertical extent at the northern end. The horizontal width of the high-grade core ranges from 150 metres to 180 metres, but increases to approximately 200 metres in the recent extension at the north end of the deposit. The greater than 1% copper grade shell, which fully envelops the high-grade core, attains a maximum horizontal thickness of 450 metres on the zero RL level (1,160 metres below surface), at 4767200N, decreasing to 270 metres at 4767800N on the OTD963 drill section at the presently defined northern, but open, end of the deposit.

The ongoing drilling program includes two deep-hole rigs drilling 150 metre step out holes on the northern strike extension, utilizing a navi-drill system to fan multiple holes off a single pilot hole, referred to below as the OTD918 series and the OTD963 series of holes. In addition, six rigs are drilling infill holes to bring the Hugo North deposit from a drill-inferred to a drill- indicated status and one rig is drilling geo-technical holes at right angles to the northerly trend of the deposit to verify the deposit's caving characteristics.

Details of the step-out drill holes:

OTD918 intersected 74 metres grading 3.89% copper and 1.22 g/t gold (4.69% copper equivalent (cu eq.)), starting at a down hole depth of 996 metres in the upper portion of the deposit. This intersection is approximately 150 metres north of the OTD514 series of intersections, which formed the most northerly extent of the Hugo North deposit in the May 2004 AMEC resource estimate.

OTD918A, a daughter hole down-dip of OTD918, intersected 228 metres averaging 2.96% copper and 1.28 g/t gold (3.79% cu eq.), including 56 metres in the gold-rich quartz monzodiorite that averaged 2.97% copper and 2.49g/t gold (4.59% cu eq.) at a down hole depth of 1156 metres, just over 150 metres below OTD918.

OTD918B, which deviated 150 metres north from OTD918, intersected 60 metres grading 2.85% copper and 0.85 g/t gold (3.40% cu eq.).





OTD918C intersected 326 metres grading 3.77% copper and 1.23g/t gold (4.57% cu eq.), starting at a down hole depth of 1,026 metres approximately 80 metres down-dip of OTD918A. This intersection, which is approximately 100 metres above the base of the planned first lift of the Hugo North block cave, included 96 metres grading 5.85% copper and 1.79g/t gold (for a 7.01% cu eq.).

OTD918D, drilled approximately 75 metres down-dip from OTD918C has intersected 120 metres grading 1.11% copper and 0.04 g/t gold (1.13% cu eq.), starting at 994 metres down hole. This is followed, starting at 1,114 metres, by 212 metres of 3.81% copper and 0.87g/t gold (or 4.37% cu eq.) and at 1326m, 46 metres grading 1.51% copper and 0.57 g/t gold (1.88% cu eq.). At a depth of 1452m, the hole intersected 72 metres grading 1.40% copper and 0.76g/t gold (or 1.89% Cu Eq.).

OTD939 and OTD963 were drilled on the east-west section approximately 150 metres north of the 918 section. The holes extend the deposit up-dip and down-dip from the OTD918B intersection.

OTD963, 140 metres down-dip of OTD918B, intersected 302 metres grading 3.11% copper and 0.98 g/t gold (3.75% cu eq.), including 216 metres of 3.90% copper and 1.27 g/t gold (4.72% cu eq.). Fifty metres up-dip of the 918B hole, OTD939 encountered 22 metres grading 1.73% copper and 1.81g/t gold (2.90% cu eq.) in the roof of the deposit.

OTD963A, approximately 80 metres down-dip of OTD963, intersected 104 metres grading 1.20% copper and 0.07 g/t gold (1.24% cu eq.), starting at 1040 metres down hole, followed by 212 metres starting at 1144 metres, grading 3.28% copper and 0.52 g/t gold (3.58% cu eq.), continuing down from the 212 metre interval, the final 54 metres of mineralization grades 1.28% copper and 0.38g/t gold (or 1.53% cu eq.).

The 918 and 963 series step-out sections, representing approximately 300 metres of additional strike extent of the high-grade mineralization from the 514 section of drill holes, define a vertical extent of approximately 300 metres starting at the 300 metre RL (elevation). Both sections are open down-dip and have a horizontal thickness on the zero RL of between 200 metres and 250 metres. Both sections have confirmed a marked shallowing in the plunge of mineralization to the north from +/- 20 degrees to less than five degrees. Based on the 514 drill section, where the vertical extent of the high-grade zone is more than 700 metres, the mineralized zone at the 918 and 963 series sections could extend down-dip an additional 400 metres, to the -400 metre RL.

Drilling plans for the first quarter of 2005 are to continue to step down-dip below the zero RL (Sea Level) following the mineralization intersected in the 150-metre-spaced OTD918 and OTD963 sections. A wider spacing will be utilized to define inferred resources as the resources located below the Zero RL are beyond the first seven year production envelope of the block cave currently being designed for Hugo North. The potential for further expansion of Hugo North continues to be significant, particularly on the remaining 300 metre northern strike extension between the collars of OTD963 and the boundary between the Oyu Tolgoi and the Ivanhoe Mines/Entrée Gold joint venture properties. A further 150 metre step-out north from OTD963 will be initiated before the end of the year.

A northeasterly-striking late fault, known as the Boundary Fault, which juxtaposes younger quartz monzodiorite and volcanoclastic sediments on its north hanging-wall side with the sedimentary rocks that overlie the Hugo Dummett deposit on the footwall side of the fault, was encountered in the upper portion of OTD939. This suggests that the northwesterly-dipping fault is flatter than was first believed. If so, the fault may not cut the mineralized body at depth until a point beyond Oyu Tolgoi's northern boundary. However, the West Bat Fault, which flanks the Hugo Deposit on its western limb, appears to be trending easterly, which may restrict the width of the deposit as it strikes north. The shallower dip of the Boundary Fault could allow the deposit to extend the full 400 plus metres from the OTD514 intersections to the



boundary between the properties. Recent structural analysis of this northeasterly-striking fault structure suggests that its intersection with the north-northeasterly-striking structural zone that bounds the Oyu Tolgoi chain of deposits could be the focal point of the gold-rich quartz monzodiorite intrusive rocks that are being intersected in the northern drill holes at the Hugo North Deposit.

Under terms of a recently announced joint venture between Ivanhoe Mines and Entrée Gold Inc., Ivanhoe Mines is to use its deep-penetrating, Induced Polarization (IP) systems and deep-hole diamond drilling to test the potential of the northerly extension of the Hugo Deposit beyond the boundary of Ivanhoe's Oyu Tolgoi block.

**Table 1: Selected grades and thicknesses of recent intercepts of step-out holes drilled in the Hugo North Deposit**  
\*

<b>Drill Hole</b>	<b>From (metres)</b>	<b>To (metres)</b>	<b>Interval (metres)</b>	<b>Copper (%)</b>	<b>Gold (grams per tonne)</b>	<b>Copper equivalent (%)*</b>
<b>OTD918</b>	996	1,070	74	3.89	1.22	4.69
<b>OTD918A</b>	984	1,212	228	2.96	1.28	3.79
including	1,034	1,116	82	4.20	1.41	5.12
including	1,156	1,212	56	2.97	2.49	4.59
<b>OTD918B</b>	1,052	1,112	60	2.85	0.85	3.40
<b>OTD918C</b>	1,026	1,352	326	3.77	1.23	4.57
including	1,026	1,112	86	3.30	0.34	3.52
including	1,112	1,208	96	5.85	1.79	7.01
including	1,208	1,308	100	3.26	1.63	4.32
including	1,308	1,352	44	1.37	0.92	1.97
<b>OTD918D</b>	994	1,114	120	1.11	0.04	1.13
	1,114	1,356	212	3.81	0.87	4.37
including	1,114	1,202	88	4.21	0.54	4.56
including	1,202	1,326	124	3.52	1.10	4.24
	1,326	1,372	46	1.51	0.57	1.88
	1,452	1,524	72	1.40	0.76	1.89
<b>OTD963</b>	1,018	1,320	302	3.11	0.98	3.75
including	1,018	1,058	40	1.45	0.22	1.60
	1,058	1,274	216	3.90	1.27	4.72
including	1,058	1,112	54	3.52	0.54	3.87
including	1,112	1,274	162	4.02	1.51	5.00
including	1,274	1,292	18	0.12	0.06	0.16
including	1,292	1,324	32	1.24	0.44	1.53
<b>OTD963A</b>	1,040	1,144	104	1.20	0.07	1.24
	1,144	1,356	212	3.28	0.52	3.58
	1,356	1,410	54	1.28	0.38	1.53
<b>OTD934</b>	886	926	40	4.17	1.27	4.99
	926	978	52	0.78	0.43	1.05
	978	1,114	136	2.57	1.78	3.73

\* All copper equivalent grades used in this report have been calculated using copper prices of US\$0.90 per pound and gold prices of US\$400 per ounce. A complete list of new assay results will be posted to the Ivanhoe Mines website: [www.ivanhoe-mines.com](http://www.ivanhoe-mines.com).

The previous independent resource estimate prepared by AMEC of Canada in May 2004, at that time reported that Hugo North contained inferred resources of 666 million tonnes, grading 1.46% copper and 0.34 grams of gold per tonne (1.68% copper equivalent), at a 0.60% copper equivalent cut-off; approximately 21.4 billion pounds (9.7 million tonnes) of copper; and 7.3 million ounces of gold.

Within what was already a very large resource, the AMEC estimate last May identified a high-grade core of inferred resources totalling approximately 178 million tonnes grading 2.89% copper and 0.59 g/t gold (3.26% copper equivalent).

For the Oyu Tolgoi project, expenditures totalled approximately US\$22.6 million.

Infill drilling program

Since May 2004, infill drilling at Hugo North has been focused on upgrading to the indicated resource classification the portion of the inferred resource which lies within the initial seven year underground mine plan for inclusion in a pre-feasibility study now being prepared. The infill drill results to date indicate a significant improvement of gold grades in bornite-rich quartz monzodiorite.

OTD514I intersected 178 metres grading 3.54% copper and 0.83 g/t gold (4.08% cu eq.) in the hanging-wall portion of the zone, starting at 1164 metres downhole, followed by 188 metres grading 1.77% copper and 2.56 g/t gold (3.43% cu eq.) in the footwall portion of the deposit, referred to as the West Gold Zone in previous announcements. Included in this footwall intersection is 82 metres grading 2.77% copper and 4.01 g/t gold (5.37% cu eq.) in bornite-rich, potassic altered, quartz monzodiorite, now referred to as the late, gold-rich QMD. This high-grade, gold-rich interval featured a number of two-metre intervals grading between three and six grams of gold per tonne, including one two-metre interval grading 3.82% copper and 54.1 g/t gold. Microscopic examination of this interval revealed abundant, finely-disseminated gold grains enclosed within bornite.

OTD770A, another infill hole drilled midway between the 200-metre-spaced intersections in the OTD514 and OTD465 series of holes, intersected 202 metres grading 3.40% copper and 1.30 g/t gold (4.24% cu eq.), including 86 metres grading 4.03% copper and 2.80g/t gold (5.85% cu eq.).

**Table 2: Selected grades and thicknesses of recent intercepts of infill holes drilled in the Hugo North Deposit**

<b>Drill Hole</b>	<b>From (metres)</b>	<b>To (metres)</b>	<b>Interval (metres)</b>	<b>Copper (%)</b>	<b>Gold (grams per tonne)</b>	<b>Copper equivalent (%)*</b>
<b>OTD514I</b>	1,164	1,342	178	3.54	0.83	4.08
<b>West Gold Zone</b>	1,492	1,680	188	1.77	2.56	3.43
including	1,492	1,574	82	2.77	4.01	5.37
including	1,574	1,594	20	0.14	0.07	0.19
including	1,594	1,680	86	1.20	1.75	2.33
<b>OTD770A</b>	996	1,198	202	3.40	1.30	4.24
including	1,112	1,198	86	4.03	2.80	5.85
<b>OTD770B</b>	1,260	1,302	42	2.28	0.39	2.54
	1,320	1,468	148	1.51	0.41	1.78
including	1,390	1,444	54	1.87	0.74	2.36
<b>OTD770C</b>	1,044	1,274	230	4.44	0.36	4.67
	1,362	1,624	262	1.99	1.67	3.08
<b>OTD770D</b>	1,154	1,294	140	3.65	0.41	3.92
<b>OTD770F</b>	1,096	1,242	146	3.54	0.44	3.83
	1,404	1,568	164	1.63	0.80	2.14
<b>OTD841A</b>	884	1,142	258	3.68	0.98	4.32
including	884	914	30	2.66	0.16	2.77
including	914	1,002	88	4.86	1.45	5.80
including	1,002	1,142	140	3.15	0.87	3.72
<b>Total West Gold Zone</b>	1,254	1,558	304	1.84	1.15	2.58
<b>OTD958</b>	884	1,014	130	1.72	0.49	2.04
including	980	1,014	34	2.79	1.71	3.90
<b>OTD960</b>	858	908	5	1.28	0.05	1.31
	908	964	56	3.42	1.68	4.51
<b>OTD960B</b>	800	850	50	1.15	0.06	1.18
	850	882	32	3.49	0.63	3.90
	882	942	60	3.87	1.58	4.89
<b>OTD891B</b>	982	1,162	180	3.83	0.90	4.46

\* All copper equivalent grades used in this report have been calculated using copper prices of US\$0.90 per pound and gold prices of US\$400 per ounce. A complete list of new assay results will be posted to the Ivanhoe Mines website: [www.ivanhoe-mines.com](http://www.ivanhoe-mines.com).



**Entrée Gold & Ivanhoe Mines Joint Venture Property**

Exploration work was initiated on the Entrée Gold property adjoining the northern boundary of Oyu Tolgoi where Ivanhoe has the right to spend US\$35 million to earn an 80% interest in the minerals lying below a sub-surface depth of 560 metres or 70% interest in mineral deposits extractable by open pit methods from surface to a depth of 560 metres.

An area of approximately 8.8 kilometres east west by 5.6 kilometres north south was surveyed by Induced Polarization (IP) utilizing gradient array with multiple current electrode (AB) spacings. The preliminary IP survey results indicate that the Hugo North IP anomaly, which is in part coincident to the Hugo North deposit, extends onto the Ivanhoe/Entrée joint venture property for approximately four kilometres in a north-northeast direction. The IP survey also has identified several other significant geophysical targets on the joint-venture property.

The proprietary IP system used on the Oyu Tolgoi property was developed by Delta Geoscience, of Canada, to explore for and delineate sulphide mineralization to depths not normally detected by typical IP surveys. At Oyu Tolgoi, immediately to the south of Entrée property, the IP surveys have delineated a continuous chargeability anomaly over a six kilometre strike length representing sulphide mineralization that hosts the Southwest Oyu, South Oyu, Central Oyu and Hugo Dummett copper and gold deposits. The northern most 1.6 kilometre section of the IP anomaly on the Oyu Tolgoi property represents the gold-rich, high-grade-copper Hugo North porphyry deposit.

On the Entrée property where Ivanhoe is earning its interest, the IP anomaly is approximately 350 metres wide at the northern end of the Oyu Tolgoi property, narrows in width to approximately 150 metres approximately 500 metres north of the Oyu Tolgoi property boundary. The depth to the top of the IP target is approximately 800 metres below surface for the first 400 metres north of the property boundary. Continuing northward, the depth to the top of the anomaly appears to gradually increase.

The continuation of the IP anomaly under the younger granitic rocks outcropping at the northern boundary of the Oyu Tolgoi block indicates that the northern Boundary Fault, previously thought to cut off the northern extension of the Hugo North deposit, is a shallow-dipping feature that might not extend to the depth of the Hugo North deposit.

The IP survey indicates two linear chargeability highs on the northerly extension that might denote zones of increased sulphide content. As such, these will be prioritized for future diamond drilling to test the potential of the northerly extension of the Hugo North deposit beyond the boundary of Ivanhoe's Oyu Tolgoi block. Drilling on the joint venture ground is expected to begin following completion of detailed surveying of the chargeability anomaly to fully define the vertical extent of the anomaly. This drilling likely will commence once the deep-drilling program on the Oyu Tolgoi property has reached the northern boundary. To date, the deep drilling has extended the high-grade copper and gold mineralization in Hugo North to within 300 metres of the joint venture boundary.

Approximately 1,800 metres north of the joint venture property boundary and 900 metres to the east of the Hugo North trend anomaly, the IP surveying also detected a weak, semi-circular IP anomaly that may represent a very deep target down-dip of the main Hugo North anomaly.

Approximately two kilometres west-northwest of the Hugo North deposit, a large anomaly also has been outlined, measuring 2.2 kilometres by 500 metres. Preliminary surveys indicate that the depth to the top of this feature appears to be approximately 300 metres at the southern end and 450 metres at the northern end. Depth extent of this feature appears promising. Another smaller anomaly has been defined midway between this feature and the Hugo North trend anomaly. The depth to the top of this anomaly appears to be approximately 300 metres, but depth extent appears more limited.





Resistivity data indicate that both these IP anomalies are related to high resistivity features, possibly porphyry intrusive rocks at depth much like those associated with the gold-rich porphyries found on the Hugo North trend anomaly. Planned detailed section work in this area will better define these targets prior to drilling. The fact that these two anomalies parallel the trend of the Hugo North anomaly is encouraging since Oyu Tolgoi is a structurally controlled deposit and it is common to find smaller, but significant, flanking mineralized structures adjacent to the main deposit.

In the far northeast sector of the joint venture grid, a large, weak north-northwest oriented anomaly has been defined. This likely is a very deep target that will need further work to define its depth and depth extent prior to drilling. Deeper probing geophysics likely will enhance this target.

Zones of high chargeability as detected by IP surveys typically define sulphide mineralization that may or may not have economic copper and gold values. The commonest form of sulphide mineralization is pyrite, which often produces strong chargeability anomalies. Chalcopyrite, bornite and chalcocite, the primary copper-bearing sulphide minerals found at Oyu Tolgoi, are usually associated with pyrite and contribute in part to the chargeability response. The Hugo Dummett copper-rich mineralization typically lies along the eastern flank of the strong north-northwesterly trending chargeability anomaly. Only at the northern most end of the anomaly on the Oyu Tolgoi ground does the copper-and gold-rich mineralization merge with the axis of the chargeability anomaly. The northern extension of the chargeability anomaly onto the joint venture property will have to be diamond drilled on regular intervals to test for the presence of copper and gold.

### **China**

Ivanhoe is exploring for gold, copper, nickel and platinum-group metals ( PGMs ) on numerous projects throughout China, through a joint venture with Jinshan Gold Mines Inc. ( Jinshan ). Jinshan s most advanced project is the 217 Gold Project in Inner Mongolia, PRC where pilot mining for large-scale, heap-leach trials commenced in the third quarter.

Ivanhoe has several additional joint ventures for exploration, mining and processing of gold, copper, silver and other metals and minerals in China s Autonomous Region of Inner Mongolia.

Total expenditures in the quarter were approximately US\$1.0 million.

### **Vietnam**

Ivanhoe holds a 19% interest in Olympus Pacific Minerals, a public Canadian mineral exploration company.

### **Australia**

#### **Cloncurry Project**

Ivanhoe Cloncurry Mines was formed in September 2003, as a wholly owned subsidiary of Ivanhoe, and holds all the purchased assets and Mining and Exploration Leases of the Selwyn Mines. The area is recognised as being very prospective for copper and gold, with potential for other minerals such as cobalt, lead, zinc and silver.

### **Drilling**

The table below contains all recent drilling assay results for Mt Doré in the fourth quarter of 2004. These intersections are all based on 0.3% acid + cyanide soluble copper. The host material has very low calcite content and would have a high recovery on a heap leach pad. The overburden ratio will decide the economics of this project.

### **Mt Doré**

The drill program at Mt Doré finished at the end of November with 17 holes and 3549 metres drilled in total. The best mineralization occurs east of a large fault/breccia structure, with the leachable, soluble copper, including malachite and chalcocite, occurring at depths of 100



metres and extending to 200 250 metres down hole. The better results were obtained from holes MD 74 to MD 80 with further drilling required to the south.

**Summary of Significant Results Mount Doré at a 0.3% Cu (soluble) cut off.**

Hole ID	Depth from	Depth to	Interval	Total Cu %	Soluble Cu % **	Au g/t
MDHQ_04_64	23	32	9	0.47	0.45	0.10
	43	60	17	1.16	0.88	0.25
	66	70	4	0.76	0.56	0.09
MDHQ_04_65	118	122	4	1.18	1.14	0.04
	139	145	6	0.64	0.51	0.07
	150	164	14	0.53	0.48	0.14
MDHQ_04_66	24	38	14	1.00	0.86	0.16
	51	55	4	0.64	0.54	0.21
	59	63	4	1.00	0.86	0.23
MDHQ_04_67	59	69	10	3.80	3.58	0.37
	123	133	10	0.69	0.55	0.05
MDHQ_04_68	72	84	12	1.18	0.92	0.21
<i>Includes at a 1% Cu cut off</i>	72	77	5	2.06	1.51	0.30
MDHQ_04_69	1	15	14	1.51	1.28	0.93
<i>Includes at a 1% Cu cut off</i>	1	9	8	2.19	1.88	0.67
MDHQ_04_70	35	40	5	0.53	0.39	0.10
MDHQ_04_72	218.0	225.0	7.0	0.57	0.57	0.09
	242.0	252.0	10.0	1.52	1.35	0.09
including	248.0	249.0	1.0	8.59	7.26	0.17
MDHQ-04-0073	118.0	125.0	7.0	0.64	0.40	0.01
MDHQ-04-0075	100.0	144.0	44.0	1.10	1.00	0.01
including	102.0	110.0	8.0	3.62	3.46	0.01
	155.0	164.0	9.0	0.83	0.79	0.01
	201.0	214.0	14.0	1.48	1.44	0.06
MDHQ-04-0078	124.0	133.0	9.0	1.80	1.85	0.22
	151.0	157.0	6.0	0.73	0.67	0.01
	188.0	193.0	5.0	0.80	0.75	0.32
MDHQ-04-0079	111	118	7	1.03	.97	0.16
	130	137	7	0.57	.53	0.1
	169	182	13	0.67	.61	0.07
MDHQ-04-0080	103	106	3	2.37	2.28	0.75
	121	125	4	0.66	0.58	0.06
	134	172	38	0.68	0.64	0.19

\*\* Intersections are based on 0.3% soluble copper cut off.

Understanding Mt Doré will assist in designing the exploration program northwards, with potentially large shallow mineralized areas at Flora, Busker and Metal Ridge along strike northwards.

#### Mt. Elliott/Swan

A seven-hole, 1,071-metre diamond core drilling program was completed at the Swan prospect with results back on the first hole. In the oxide clay zone, down to 60 metres, soluble copper assays were only 25% of the total copper present in the zone. Soluble copper refers to the combined weak acid and weak cyanide soluble components of the total copper present in the sample. Within the sulphide zone chalcocite and gold rich zones, within a magnetite skarn matrix, have been confirmed by the assay results. This material should be recoverable by flotation methods. Assay results for a further six holes have not been received.

#### **Summary of Significant Results Swan Prospect at a 0.3% Cu (soluble) cut off.**

Hole ID	Depth from	Depth to	Interval	Total Cu %	Soluble Cu %	Au g/t
<b>SWAN DD Program</b>						
<b>MEHQ-04-1068</b>	8.0*	56.0*	48.0	0.85*	0.22*	0.45*
	65.0	87.0	22.0	1.40	1.26	0.83
including	67.0	68.0	1.0	19.13	17.15	10.00
	94.0	120.0	26.0	2.53	2.07	1.65
including	94.00	95.00	1.0	14.77	11.84	6.4
	106.0	107.0	1.0	18.80	16.25	19.80
	134.0	140.0	6.0	0.79	0.72	0.52
	143.0	147.0	4.0	0.74	0.65	0.34

\* Results for the interval 8 to 56 metres calculated using 0.3% total Cu cut off

Eleven RC holes were also completed, for a total of 1,614 metres of drilling, testing geochemical and geophysical anomalies. These targets are along strike from known mineralization and results will justify further drilling in due course.

Total expenditures at Cloncurry for the quarter were approximately US\$1.8 million.

#### **Qualified Persons**

The following persons were responsible for the preparation of the technical information in this document:

Project	Qualified Person	Relationship to Issuer
Monywa	Steve Ross	General Manager, MICCL
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Bronze Fox/ Kharmagtai	Paul Carter	Exploration Manager, Mongolia
Savage River	Dave Sandy	Managing Director, ABM Mining Limited
Modi Taung	Andrew Mitchell	Project Manager, Ivanhoe Myanmar Holdings Ltd.
Cloncurry	Jim Heape	Exploration Manager, Ivanhoe Cloncurry Mines
Bakyrchik	Jaime Troncoso	General Director, Bakyrchik Mining Venture