


**Market Release** **December 8 2008**

# High-Grade Molybdenum and Rhenium Discovery Confirmed at Northern End of Ivanhoe Australia's Mount Dore Project

## New Discovery to be named the Merlin Project

Peter Reeve, Chief Executive Officer, and Robert Friedland, Chairman, Ivanhoe Australia (IAL), are pleased to announce that recent drilling at the Mount Dore Project, on Ivanhoe's Cloncurry tenements in north-western Queensland, has discovered and confirmed a significant zone of high-grade molybdenum and rhenium mineralisation. Drilling on this new discovery, which will be named the Merlin Project, has significantly extended the mineralised zone and also has returned exceptionally high-grade rhenium assays. Rhenium is a rare metal that is currently trading at approximately US$350 per ounce (US$11 per gram).

The Merlin discovery has now been tested by 20 drill holes. The results indicate a clearly defined, high-grade body of easily accessible molybdenum (Mo) and rhenium (Re) sulphide mineralisation starting at a depth of 100 metres. Assay results are pending on an additional 20 completed holes.

The Merlin zone starts near the surface and dips east at a 45-degree angle. At this stage, it has been intersected to approximately 500 metres down dip. The current strike length of the zone for which results are available is greater than 300 metres. Merlin's apparent true thickness averages approximately 30 metres and remains open at depth and along strike to both the north and south.

Significantly, visual estimates for Molybdenite in both MDQ0118 and MDQ0119, which test the deepest parts of the mineralisation drilled to date, have returned some of the highest visual grades discovered. Figure 6 highlights a zone of approximately seven to eight metres of drillhole MDQ0119 in which sediment clasts are hosted in a matrix of almost pure Molybdenite (Figure 6). This has been termed a Molybdenite Supported Matrix.

MDQ0118, which is on a section 50 metres south of MDQ0119 and 100 metres east of the closest molybdenum intersection, has also returned strong visual molybdenite and appears to extend the system in a south easterly direction. MDQ0121 and MDQ0123 which are 50 and 100 metres respectively north of MDQ0119 have also intersected moderate to strong visual molybdenite indicating the mineralisation extends fully along the known eastern flank (Figure 1).

The most recent results include the completed intersection for diamond drillhole MDQ0153a, for which rhenium assays have been received, and also MDQ0147, which intersected the zone 120 metres down-dip of MDQ0153a. MDQ0119 has intersected strong molybdenum mineralisation a further 150 metres down dip. MDQ0118 has extended the mineralisation down dip a further 50 metres beyond this point. Assays are pending for both these drillholes. A complete set of results is shown in Table 1.

The highest-grade results achieved on the Merlin Project to date are:

**MDQ0153a - 40 metres @ 0.99% Mo, 26.8 g/t Re and 0.20% Cu from 162 metres.**

**MDQ0147 - 67 metres @ 1.28% Mo, 29.2 g/t Re, and 0.13% Cu from 220 metres,**

**including 10 metres @ 6.73% Mo, 150.7 g/t Re and 0.52% Cu from 230 metres.**

**MDQ0149 - 59 metres @ 0.67% Mo, 13.3 g/t Re and 0.17% Cu from 213 metres.**

**MDQ0195 - 30 metres @ 0.51% Mo, pending Re and 0.10% Cu from 150 metres.**

**MDQ0197 - 22 metres @ 0.39% Mo, pending Re and 0.07% Cu from 126 metres.**

**MDQ0153 - 32 metres @ 0.41% Mo, 14.3 g/t Re and 0.11% Cu from 166 metres.**

**MDQ0148 - 9 metres @ 0.62% Mo, pending Re and 0.29% Cu from 184 metres.**

**MDQ0205 - 10 metres @ 0.35% Mo, pending Re and 0.08% Cu from 96 metres.**

***NOTE: Rhenium results quoted in this release are based on geochemical analyses. Additional check analyses are underway and may affect or change the final Rhenium results quoted in this release.***

The molybdenum, which occurs as molybdenite ($MoS_2$), appears to be hosted in a sheared-fault breccia developed in black shale and siltstone beneath the main Mount Dore copper ore zone. The rhenium occurs in a fairly constant ratio within the molybdenite. Both metals are easily recoverable to a concentrate using standard metallurgical unit processes.

"Our initial high-grade molybdenum assay results on the Merlin Project now have been bettered in several holes," Mr. Reeve said. "The recent step-out holes have provided the strongest indication to date that the molybdenum and rhenium zone is forming a large, discrete body that has the potential to be developed and mined as a separate project."

"The high-grade zone of Merlin is part of a much larger 800-metre-long molybdenum trend that has been subjected to only limited drilling. Clearly, one of Merlin's strongest characteristics is that the grades of the molybdenum and rhenium mineralisation would appear to easily rank among some of the highest grades encountered for this style of mineralisation anywhere in the world".

An extensive program of drilling is underway, with five diamond-drill rigs testing the strike and depth extensions, which will provide information for a planned resource estimate. The majority of this Phase 1 drilling should be completed in the next four weeks.

The attached figures 1, 2, 3 and 4 show a plan, cross-sections and geological image of the molybdenite rhenium zone.

A comprehensive program of re-assays and check assays has been conducted on all of the high-grade molybdenum and rhenium samples to ensure the highest assaying standards are followed.

Preliminary project studies are underway to evaluate possibilities for the development of suitable mining and processing facilities for the Merlin Project. The following studies have been initiated:

- Metallurgical testing to design the optimal process flowsheet.
- Cost estimate for decline access and mining of the deposit.
- Initial scoping for the design of a 500,000 tonnes per annum mill.
- Commencement of a bid process for design and construction of facilities.
- Cost benefit assessment of utilising the existing tailings dam, mill footings and infrastructure in the Merlin development plan.

This work and the first Mineral Resource estimate are expected to be completed early in 2009.

## **Rhenium Background Information**

- 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 of Chile (Molibdenous y Metales S.A.) 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-forming 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.

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# Table 1: Molybdenite/Rhenium Intersections at the Merlin Project

| As at 1 December 2008 | | | | Mid-point of intersection | | | at 100 and 500 ppm Mo cut-off | |
|---|---|---|---|---|---|---|---|---|
| Hole Number | From (m) | Intercept (m) | True width (m) | East | North | RL | Mo ppm | Re g/t |
| MDQ0159 | 94 | 28 | 21.1 | 447,449 | 7,605,153 | 260 | 1,647 | 5.9 |
| inc | 100 | 20 | 15.1 | 447,448 | 7,605,153 | 258 | 2,218 | 8.1 |
| MDQ0151 | 140 | 12 | 7.5 | 447,555 | 7,605,343 | 217 | 3,181 | 10.9 |
| MDQ0197 | 126 | 22 | 15.6 | 447,526 | 7,605,373 | 226 | 3,913 | TBA |
| inc | 126 | 6 | 4.3 | 447,527 | 7,605,373 | 234 | 13,877 | TBA |
| MDQ0198* | 162 | 28 | 22.7 | 447,561 | 7,605,376 | 188 | 4,933 | 12.5 |
| MDQ0194* | 182 | 14 | 12.0 | 447,574 | 7,605,394 | 170 | 3,112 | TBA |
| MDQ0195 | 150 | 30 | 23.7 | 447,544 | 7,605,397 | 198 | 5,072 | TBA |
| inc | 150 | 6 | 4.7 | 447,545 | 7,605,399 | 209 | 24,790 | TBA |
| MDQ0196 | 110 | 10 | 7.1 | 447,507 | 7,605,401 | 247 | 1,531 | TBA |
| MDQ0147 | 227 | 67 | 54.1 | 447,594 | 7,605,451 | 105 | 12,788 | 29.3 |
| inc | 230 | 10 | 8.1 | 447,598 | 7,605,449 | 128 | 67,296 | 150.7 |
| inc | 252 | 42 | 33.9 | 447,592 | 7,605,452 | 93 | 4,296 | 10.6 |
| MDQ0149 | 213 | 59 | 49.5 | 447,585 | 7,605,429 | 112 | 6,711 | 13.3 |
| inc | 213 | 42 | 35.2 | 447,587 | 7,605,429 | 121 | 8,648 | 17.6 |
| MDQ0150 | 168 | 19 | 19.0 | 447,516 | 7,605,425 | 226 | 5,183 | 10.0 |
| MDQ0202 | 66 | 12 | 8.5 | 447,469 | 7,605,449 | 292 | 523 | TBA |
| MDQ0153a | 162 | 40 | 28.3 | 447,553 | 7,605,449 | 181 | 9,860 | 26.8 |
| inc | 162 | 34 | 24.1 | 447,553 | 7,605,449 | 184 | 11,567 | 31.3 |
| MDQ0152 | 40 | 32 | 23.1 | 447,450 | 7,605,450 | 310 | 207 | 0.4 |
| MDQ0153 | 166 | 32 | 24.5 | 447,547 | 7,605,453 | 181 | 4,091 | 14.3 |
| inc | 166 | 24 | 17.0 | 447,548 | 7,605,453 | 185 | 5,353 | 18.8 |
| MDQ0207 | 108 | 8 | 6.1 | 447,505 | 7,605,453 | 252 | 11,120 | TBA |
| MDQ0148 | 184 | 9 | 8.5 | 447,517 | 7,605,489 | 221 | 6,248 | TBA |
| inc | 186 | 5 | 4.7 | 447,518 | 7,605,485 | 222 | 11,120 | TBA |
| MDQ0203 | 62 | 26 | 18.4 | 447,469 | 7,605,495 | 292 | 414 | TBA |
| inc | 70 | 6 | 4.2 | 447,469 | 7,605,495 | 294 | 1,215 | TBA |
| MDQ0206 | 106 | 6 | 4.5 | 447,506 | 7,605,503 | 236 | 567 | |
| MDQ0204 | 68 | 10 | 7.1 | 447,471 | 7,605,544 | 293 | 1,408 | TBA |
| inc | 70 | 6 | 4.3 | 447,471 | 605,544 | 293 | 2,193 | TBA |
| MDQ0205 | 96 | 10 | 7.6 | 447,508 | 7,605,552 | 269 | 3,468 | TBA |

* holes to be deepened

***NOTE: Rhenium results quoted in this release are based on geochemical analyses. Additional check analyses are underway and may affect or change the final Rhenium results quoted in this release.***

*The information in this announcement that relates to Ivanhoe Australia's exploration results for the Merlin Project, 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. 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 JORC. 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.*

**Figure 1: Plan of Merlin High-Grade Molybdenum and Rhenium Project**

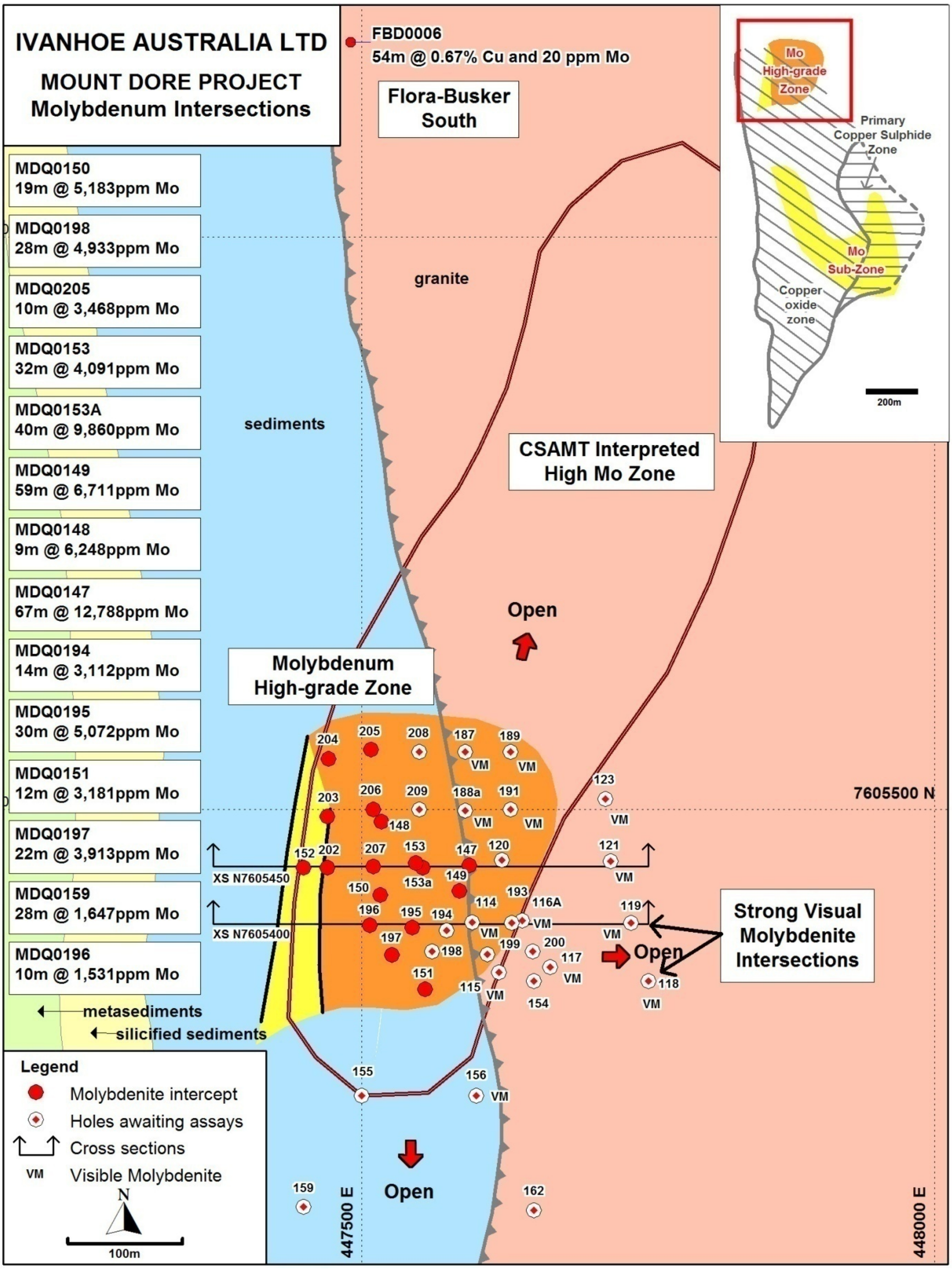

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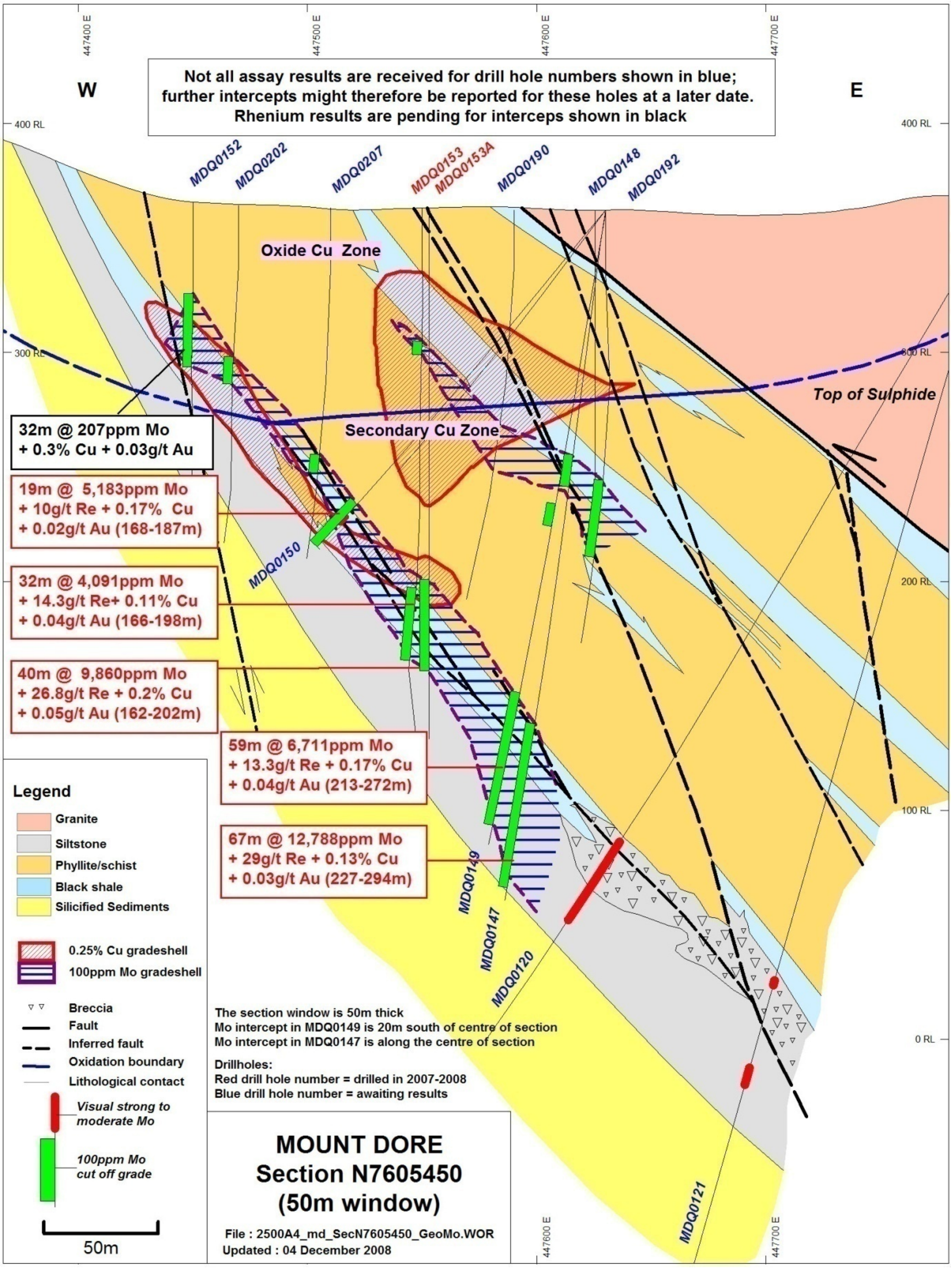
**Figure 2**: **Cross-section 7605450N Showing Down Dip Drilling on Merlin Project**



## Figure 3: Cross section 7605400N Showing Down Dip Drilling on Merlin Project

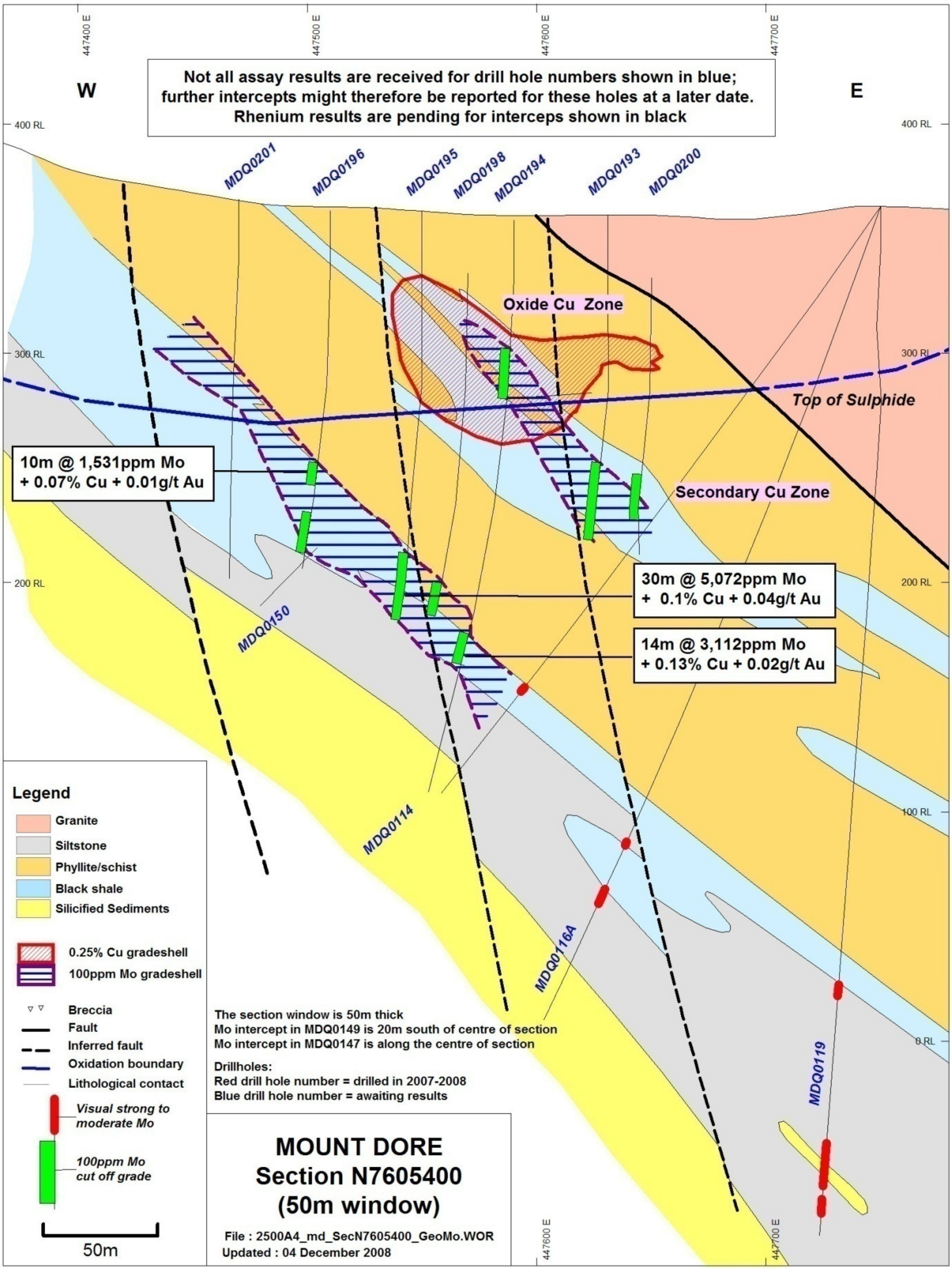


**Figure 4: Mount Dore Oxide Copper Orebody and Merlin Molybdenum Project – 3D image looking west**

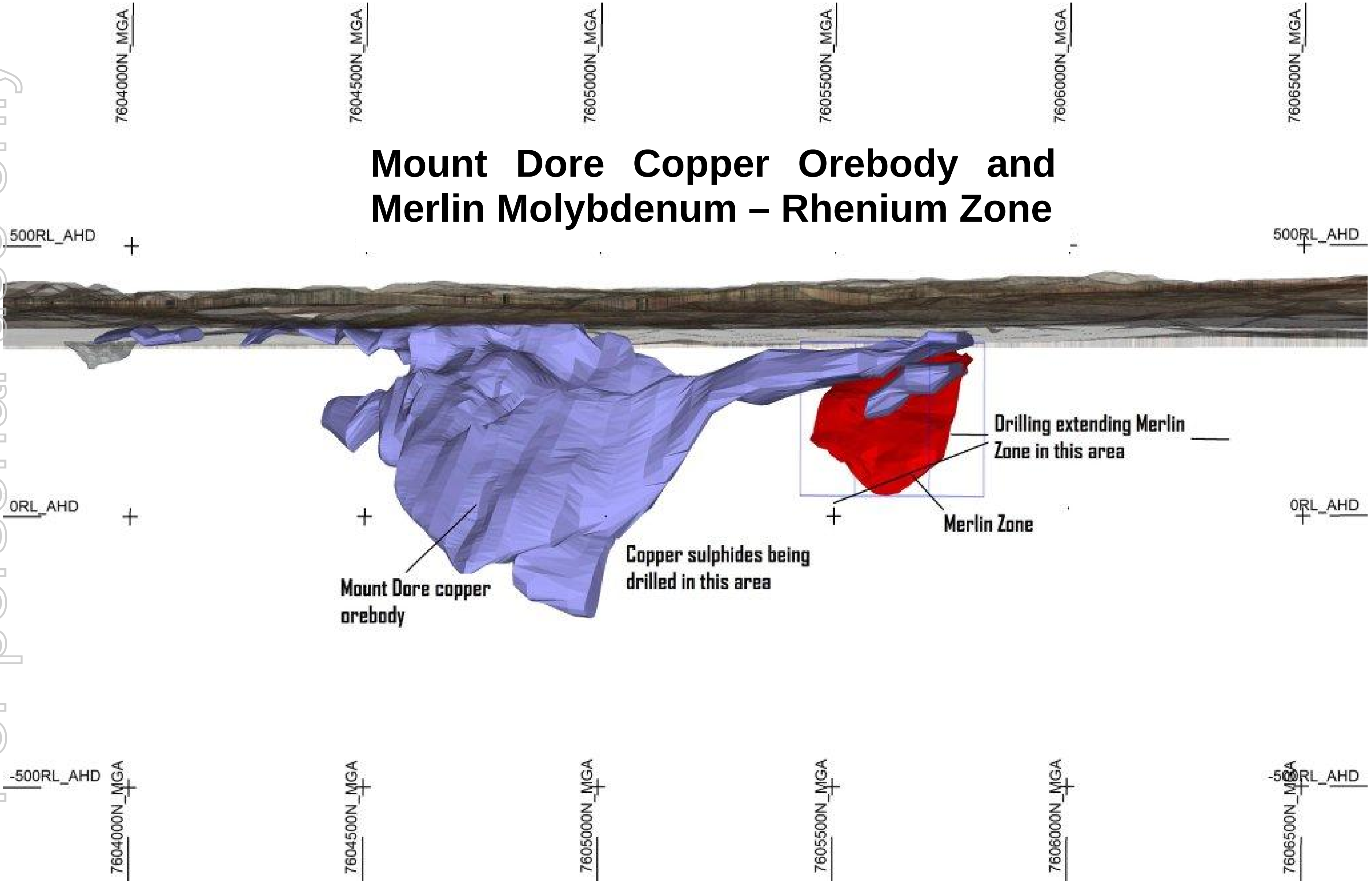


**Figure 5: Drilling at Merlin Project (30th November) with Five Drill Rigs**

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

**Figure 7: MDQ0147 Breccia, Sheared Sediment with Molybdenite in Filling Fractures**

**Figure 8: MDQ0147 – 231.4m – Molybdenite Fracture Filling in Sediments**

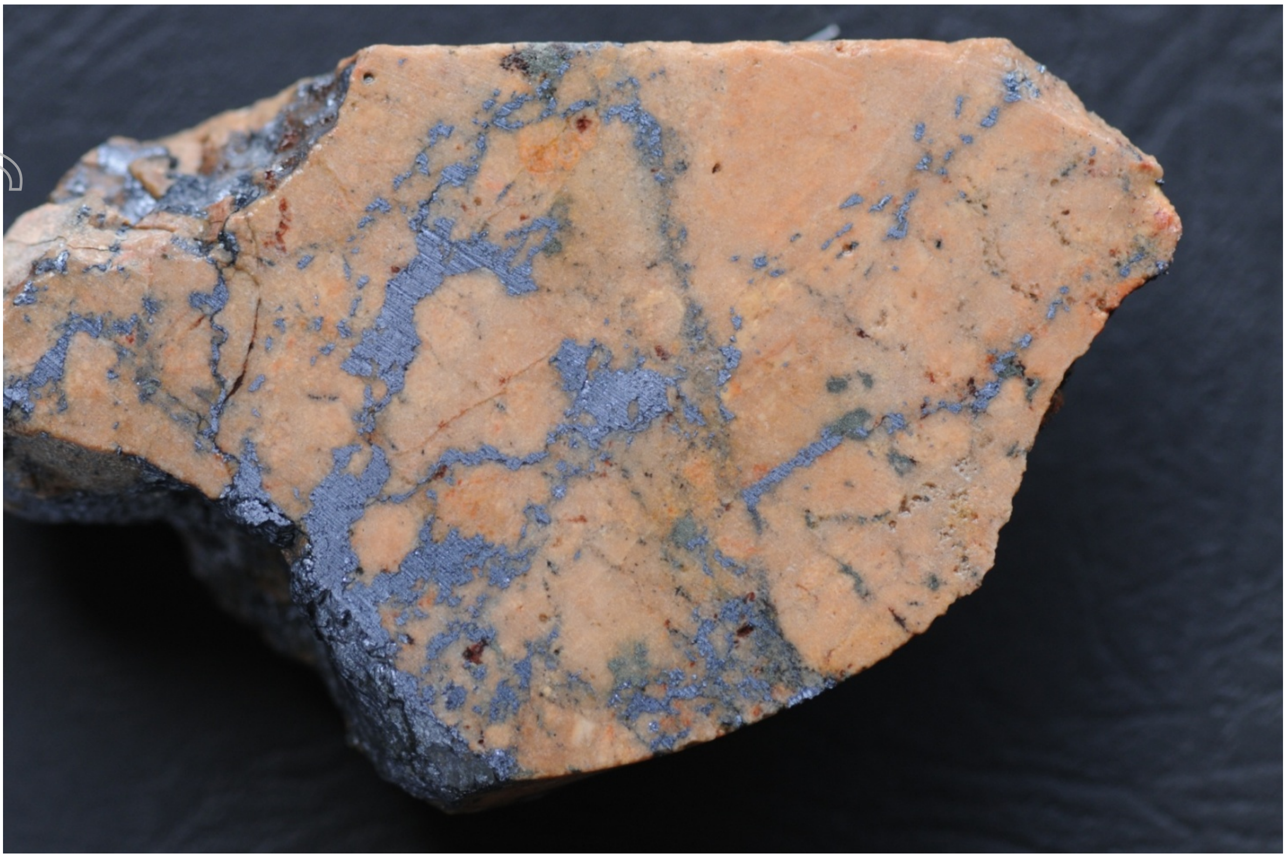


**Figure 9: MDQ0147 – 233.1m (Molybdenite Supported Breccia 8.1% Mo, 151g/t Re, over 233-234m)**

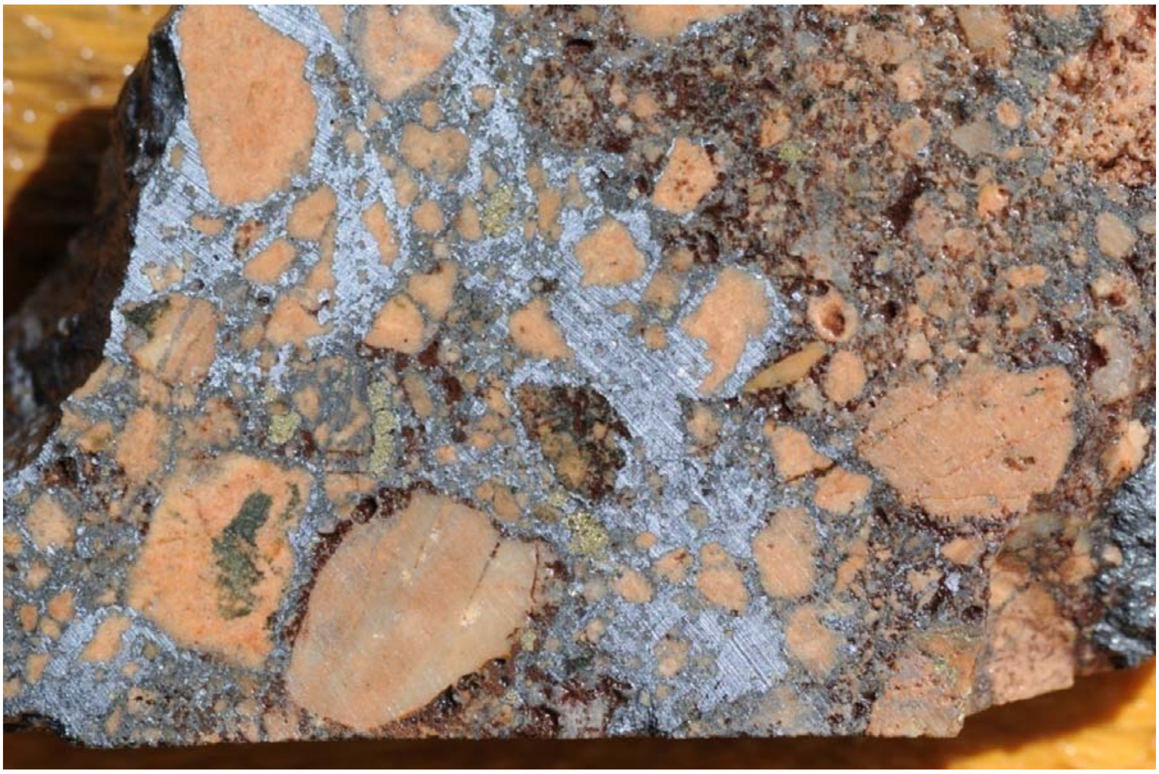


**Figure 10: MDQ0147 – 238.4 – Interval from 238-239m, 12.4% Mo, 305g/t Re, 0.6% Cu, 0.16g/t Au, 83g/t Ag**

**Figure 11: Hole 147 – Close up Image Shown in Figure 10. The scale rule is in mm.**