# Superior Resources Limited

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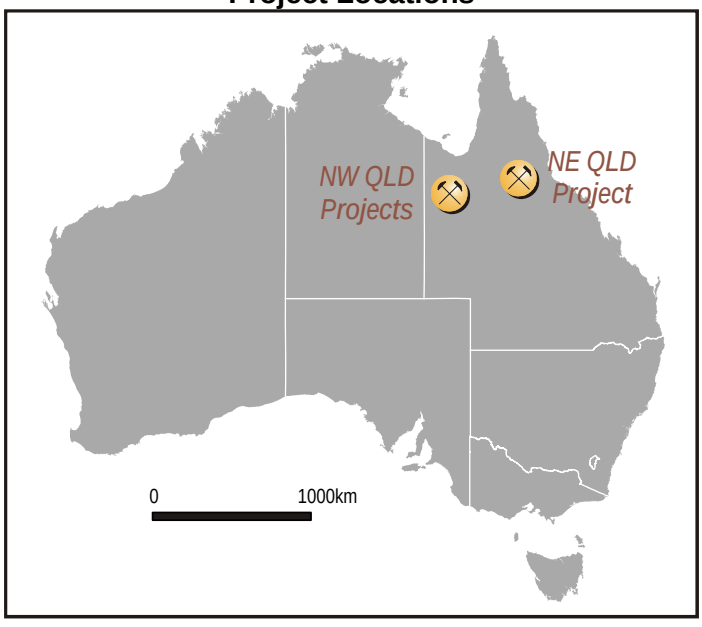
## 31 DECEMBER 2011

# QUARTERLY ACTIVITIES REPORT

## HIGHLIGHTS

- All assay data has now been received from drilling on the volcanogenic massive sulphide target on ML6750 “One Mile”.
- The best intersection is 13.6m @ 0.31% Cu, 0.31g/t Au and 0.91% Zn in hole SPOM004 including 7.4m @ 0.42% Cu, 0.50g/t Au and 1.64% Zn on the southernmost section drilled.
- The results indicate an increase in width and grade along strike and at depth (>150m from surface) towards the south. The southern portion of the deposit is untested and is proposed for drilling in the 2012 field season.

**Project Locations**




## Superior Resources Limited

**ASX:SPQ**

### Board

David Horton – Non-exec Chairman
Ken Harvey – Managing Director
Peter Hwang – Non-exec Director
Carlos Fernicola – Company Secretary

### Securities

Ordinary Shares – 76,993,688

### Financial

Cash and Shares – $2.0M

### Summary

Superior Resources Limited is a Brisbane based ASX listed mineral explorer whose principle aim is the discovery a large base metal deposit in northern Queensland. Superior holds a number of exploration projects in northwest Queensland for large Mount Isa type copper and lead-zinc-silver deposits and an exploration project in northeast Queensland for a massive sulphide copper-gold-zinc deposit. Superior also holds gold, phosphate and uranium tenements.

### Share Registry

Link Market Services
Level 15, 324 Queens Street
Brisbane, QLD, 4000

### Web Site

www.superiorresources.com.au

### Contact

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(07) 3839 5099

# EXPLORATION OVERVIEW

Most exploration during the quarter was directed to diamond drilling on the One Mile Mining Lease where the drilling program for the 2011 field season was completed. All results have now been received and data plotted.

The results give encouragement for further drilling in the 2012 field season targeting the sulphide body at depth at the southern end of the outcropping gossan zone. A lower-priority supergene copper target exists in the sulphide body below the base of oxidation and along the 800m strike length of the main gossan zone.

Discussions were held with a number of potential joint venture partners for Mount Isa style targets in northwest Queensland during the quarter.

A field visit was made to the Tick Hill Project in connection with the pre-conditions to the farm-in agreement.

Superior's current tenement position, in both northeast and northwest Queensland, is shown in Figures 1 and 2. No changes were made to the tenements during the quarter.

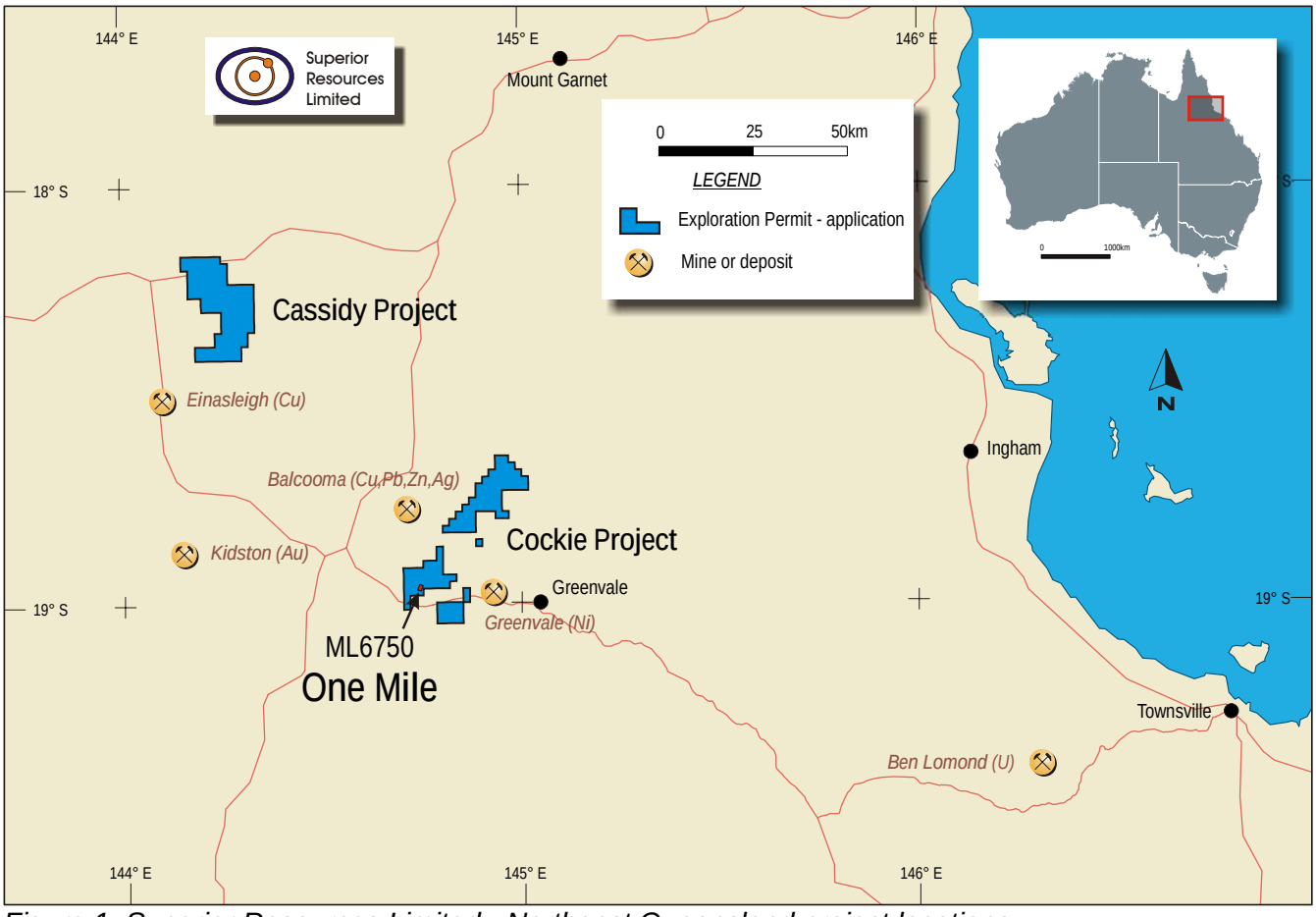



*Figure 1. Superior Resources Limited - Northeast Queensland project locations.*

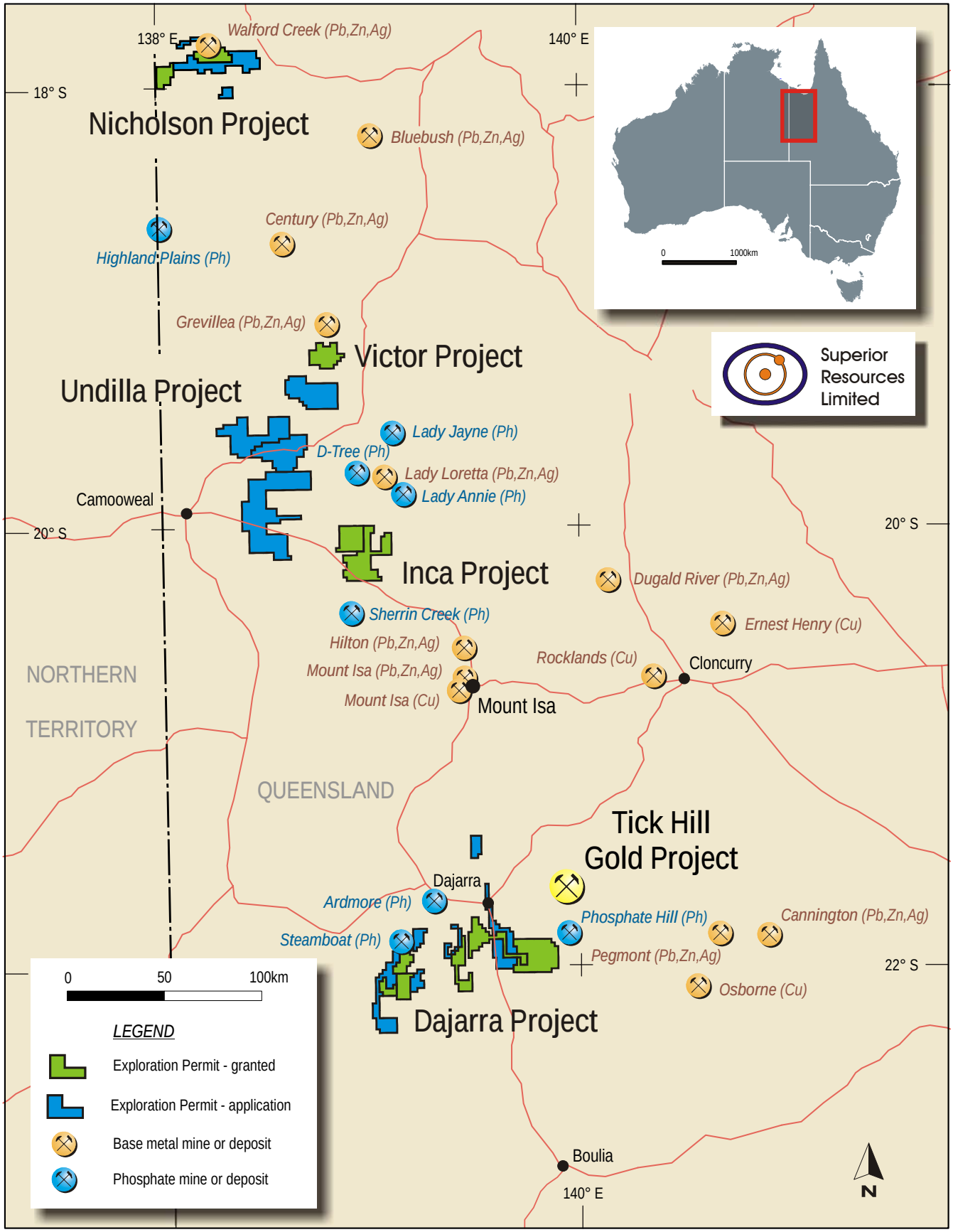



*Figure 2. Superior Resources Limited - Northwest Queensland project locations.*

# EXPLORATION ACTIVITIES

## One Mile Mining Lease – Northeast Queensland

The One Mile Mining Lease is located 210km west-northwest of Townsville in northeast Queensland (Figure 1). The mining lease covers an outcropping gossan horizon which reflects a body of massive and semi-massive sulphides at depth. The area has potential for a volcanogenic massive sulphide (VMS) copper-gold deposit.

Following a 15 hole reverse circulation (RC) drilling program in the September quarter a diamond drilling program involving diamond tails on five of the RC holes was completed in the December quarter. Hole locations and other details are shown in Table 1 and the holes are plotted in Figure 3.

Significant assay intersections from both the RC and diamond drilling within the sulphide body are included in Table 2.

*Table 1. ML6750 "One Mile" – Drillhole locations and other details.*

| Hole Name | North (MGA Zone 55) | East (MGA Zone 55) | RL (m) | Depth (m) | Dip (°) | Azimuth (Magnetic) |
|---|---|---|---|---|---|---|
| SPOM001 | 7901699.942 | 262243.402 | 560.61 | 156 | -60 | 105 |
| SPOM002 | 7901638.152 | 262286.029 | 560.59 | 90 | -60 | 105 |
| SPOM003 | 7901729.245 | 262109.227 | 558.09 | 378.8 | -60 | 105 |
| SPOM004 | 7901570.557 | 261962.018 | 563.57 | 447.0 | -60 | 105 |
| SPOM005 | 7901763.051 | 262253.613 | 563.22 | 90 | -60 | 105 |
| SPOMWB01 | 7901771.595 | 262257.057 | 562.16 | 43 | -90 | 0 |
| SPOM006 | 7901790.496 | 262316.215 | 574.93 | 96 | -90 | 0 |
| SPOM007 | 7901528.158 | 262081.599 | 561.98 | 150 | -60 | 105 |
| SPOM008 | 7902436.446 | 262569.284 | 582.75 | 146 | -60 | 285 |
| SPOM009 | 7902473.203 | 262463.696 | 573.23 | 102 | -60 | 105 |
| SPOM010 | 7901593.399 | 262112.083 | 558.74 | 290 | -60 | 105 |
| SPOM011 | 7901618.045 | 262201.041 | 557.12 | 156 | -60 | 105 |
| SPOM012 | 7901663.293 | 262100.371 | 558.37 | 278.3 | -60 | 105 |
| SPOM013 | 7901538.501 | 262036.821 | 564.41 | 180 | -60 | 105 |
| SPOM014 | 7901613.043 | 262053.756 | 560.52 | 222 | -60 | 105 |
| SPOM015 | 7901852.858 | 262196.818 | 559.95 | 141.5 | -61 | 83.5 |

*Table 2. ML6750 "One Mile" – Diamond and RC drillhole intersections.*

| Hole Name | From (m) | To (m) | Length (m) | Cu (%) | Au (g/t) | Zn (%) | S (%) | Calculated Pyrite* (%) |
|---|---|---|---|---|---|---|---|---|
| SPOM001 | 118.0 | 130.0 | 12.0 | 0.16 | 0.14 | 0.05 | 33.87 | 63.34 |
| SPOM004 | 274.4 | 288.0 | 13.6 | 0.31 | 0.31 | 0.91 | 19.30 | 36.09 |
| including | 275.6 | 283.0 | 7.4 | 0.42 | 0.50 | 1.64 | 24.76 | 46.30 |
| SPOM007 | 92.0 | 96.0 | 4.0 | 0.14 | 0.08 | 0.17 | 27.20 | 50.86 |
| SPOM010 | 228.4 | 234.6 | 6.2 | 0.24 | 0.19 | 0.26 | 25.90 | 48.43 |
| SPOM011 | 132.0 | 140.0 | 8.0 | 0.32 | 0.37 | 0.19 | 18.09 | 33.83 |
| SPOM012 | 249.9 | 253.7 | 3.8 | 0.20 | 0.24 | 0.02 | 22.20 | 41.51 |
| SPOM013 | 160.0 | 168.0 | 8.0 | 0.24 | 0.19 | 0.28 | 16.39 | 30.65 |

* Pyrite is calculated from sulphur using a multiplication factor of 1.87 – this approach assumes that all of the sulphur is contained in pyrite.

In addition to the holes in Table 2, drillhole SPOM003 intersected an alteration zone with a relatively low sulphide and metal content and hole SPOM015 which was drilled below the western gossan did not intersect sulphides.

The One Mile sulphide deposit is of the volcanogenic massive sulphide type (VMS). VMS deposits are a type of metal sulphide deposit representing a significant source of the world's copper, lead, zinc, silver and gold. They were formed on or close to the sea floor during volcanic-associated hydrothermal events in submarine environments (black smokers). The deposits are often layered accumulations of sulphide minerals on the sea floor which become interbedded with the enclosing sediments and are subjected to later deformation and metamorphism during tectonic events.

The Balcooma, Reward and Thalanga deposits in the northeast Queensland area are VMS deposits which occur in rocks of similar age to those that host the One Mile deposit.

As mineral exploration has extended into more remote areas it has become more difficult to find prospects of the VMS type with outcropping gossans after sulphides and exploration now largely depends on drilling of geophysical and other targets. Superior is fortunate to own an outcropping deposit of this style within a granted mining lease.

One of the features of these deposits is that the valuable metal sulphides in the deposits are often associated with adjacent barren or poorly mineralised pyrite accumulations. Drilling to date at One Mile has shown sub-economic grades of copper, gold and zinc in massive and semi-massive pyrite. It is not known whether the sulphides intersected at One Mile are a reflection of the true grade of the deposit or whether the pyrite mineralisation is peripheral to a high-grade VMS deposit. Only further drilling will provide an answer to this question and work to determine the best location for future drillholes has been underway since the completion of the drilling.

A further feature of VMS deposits is that they often are multi-element deposits with high metal grades and the value of the ores is often high. The best intersection at One Mile of 7.4m @ 0.42% Cu, 0.50g/t Au and 1.64% Zn in hole SPOM004 (Photographs 1 and 2) has a contained metal value of about $90 per tonne at current metal prices (Cu - $8038/tonne; Zn – $2046/tonne; Au – $52.40/gram) or a gold equivalent grade of 1.78g/t AuEq ignoring metal recoveries. This value reflects the presence of appreciable gold and zinc with the copper. Whilst the combined grade is sub-economic it is approaching the grade which might be considered economic if it occurred in a large sulphide body. It is therefore important that further drilling is competed for thicker and higher-grade extensions to the One Mile sulphide body.

Intersections from the drilling have been plotted on the long section in Figure 4. An interpretation of the possible outline of the massive and semi-massive sulphide body is also shown on this section. The extent of the sulphide body at depth and to the south is uncertain until further drilling has been completed.

The intersections in holes 7, 13 and 4 which were drilled on the southernmost section (1950N – local grid) show a consistent increase in width and grade of the sulphide body with depth and these outline a deeper primary target zone for further drilling. This target zone extends into the area beneath the narrower outcropping southern gossan which has not been drilled to date.

Figure 4 also shows a potential higher-grade supergene copper target zone along and below the 800m strike length of the outcropping gossan. This represents a lower-priority second target zone for drilling in the proposed drilling program for the 2012 field season.

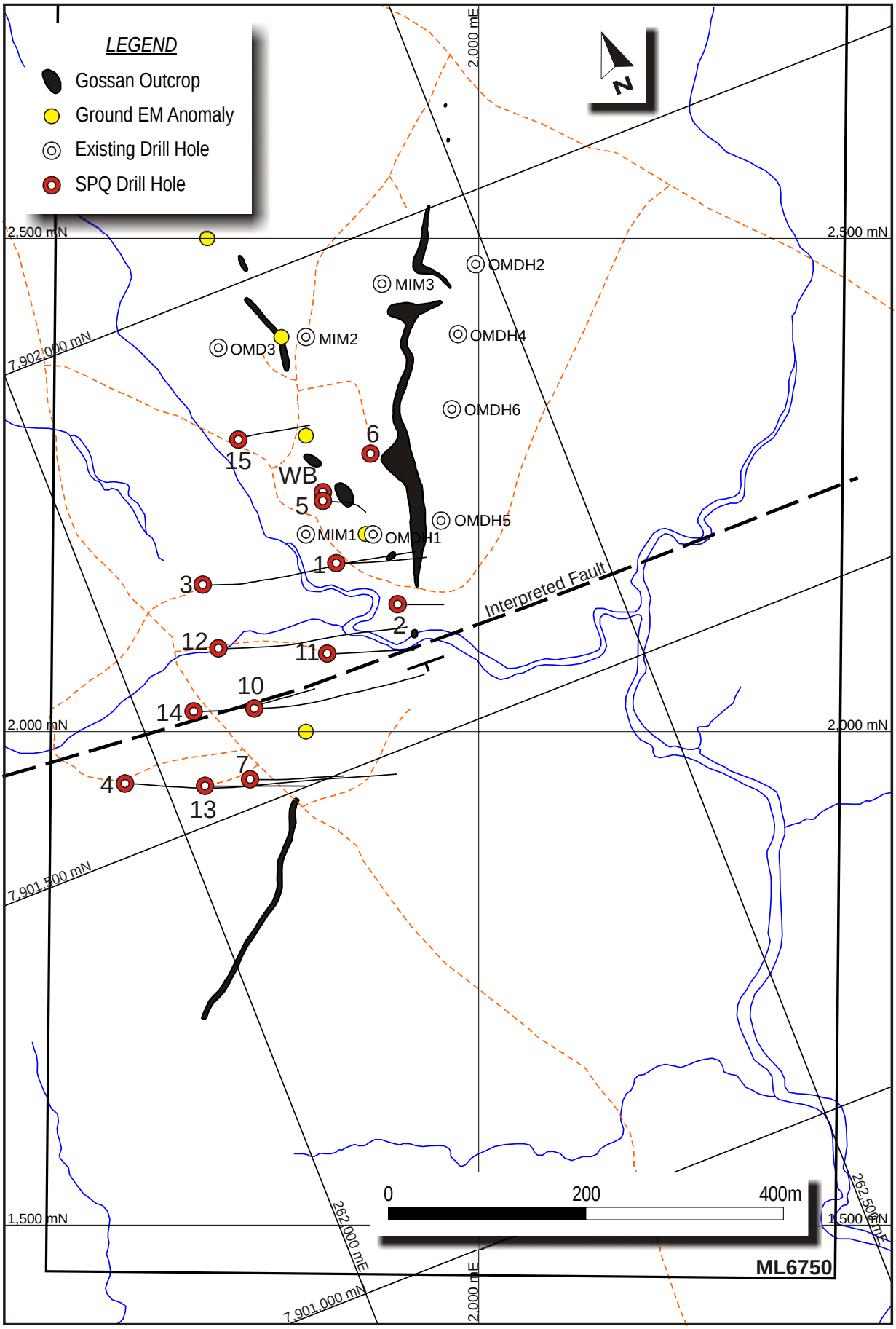



*Figure 3. ML6750 "One Mile" – Plan showing gossans and drilhole locations.*

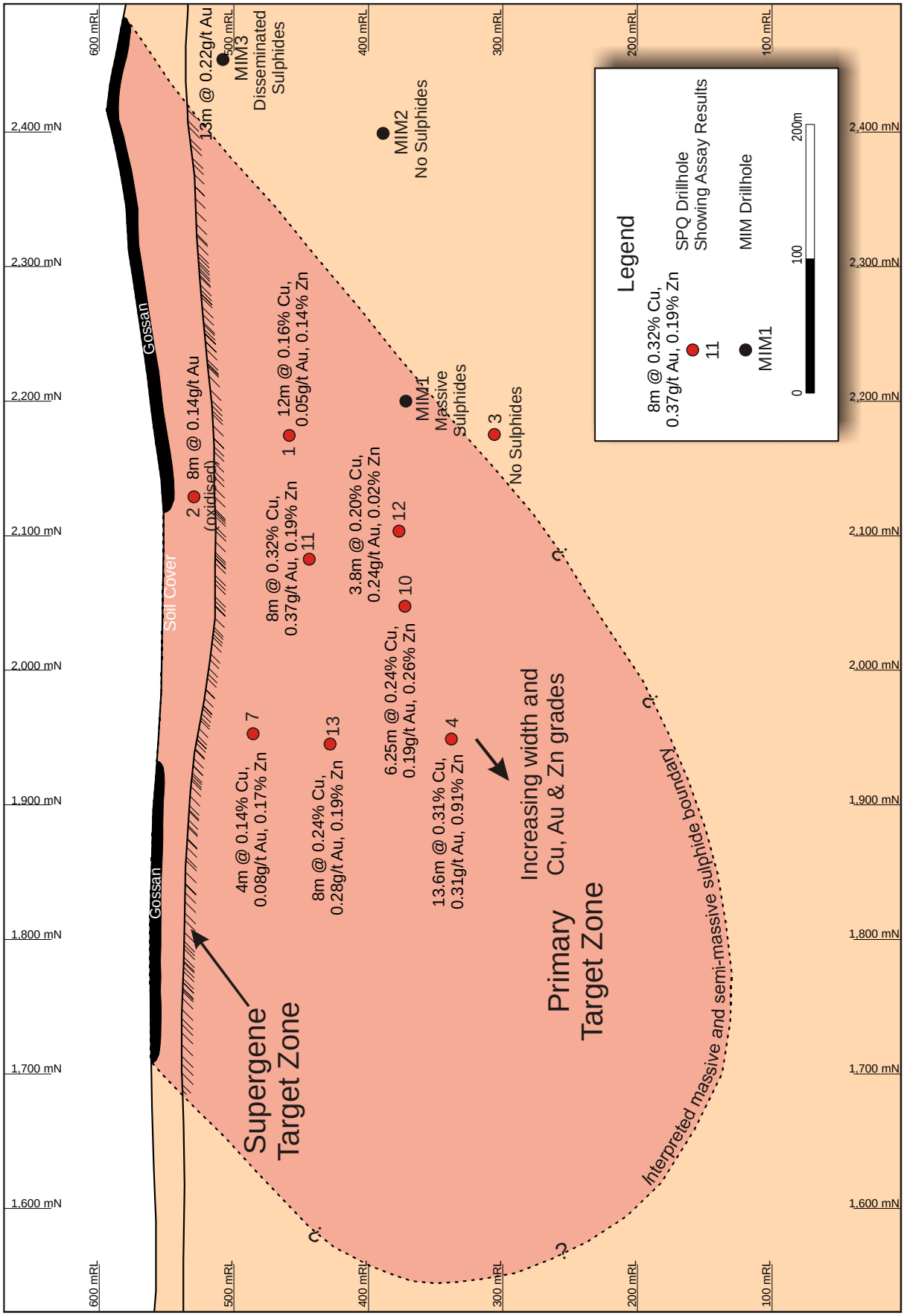


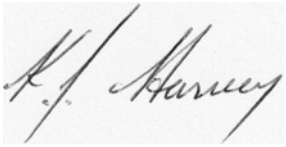

*Figure 4. ML6750 "One Mile" – Vertical long section (local grid) through the gossans and the drillhole sulphide intersections showing the drillholes which have intersected the sulphide body and the target zones for the next proposed drilling program. An apparent cross-fault between holes 7 and 11 is not shown.*


*Photograph 1. One Mile Mining Lease – Photograph of core from hole SPOM004 for the interval 275m to 289m (Trays 14, 15 and 16). The interval of semi-massive sulphides in the top two trays between 275.6m and 283m of 7.4m averages 0.42% Cu, 0.50g/t Au and 1.64% Zn.*


*Photograph 2. One Mile Mining Lease – Close-up photograph of core from hole SPOM004 for part of the interval from 277.1m to 279.2m (Tray 14). The sulphides are mainly pyrite at the top and pyrite and chalcopyrite at the bottom.*

## Tick Hill Gold Project – Northwest Queensland

A field inspection was undertaken during the quarter with Diatreme Resources Limited (ASX:DRX) to assess the status of the Tick Hill mining leases. The previously announced farm-in agreement with DRX is subject to pre-conditions and the purpose of the visit was part of the due diligence related to these pre-conditions. It is uncertain when the pre-conditions will be met and SPQ will be able to commence exploration at Tick Hill.



**Ken Harvey**
**Managing Director**

*The information in this report that relates to Exploration Results is based on information compiled by Mr Ken Harvey, a full-time employee of the Company, who is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Harvey 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Harvey consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*