

# PROTO



RESOURCES & INVESTMENTS LTD

## STOCK EXCHANGE ANNOUNCEMENT

July 31, 2012

### Quarterly Activity Report ending 30 June 2012

#### ASX Release: PRW

*Proto Resources & Investments Ltd ("Proto", "the Company") achieved important milestones across its projects in the second quarter of 2012. Results of drilling LBD3 at Lindeman's Bore and the first exploration of the recently granted Doolgunna tenements were important events during the quarter.*

#### Highlights

- Barnes Hill (Tasmania) – Proto is pleased with the progress being made on the Barnes Hill project and looks forward to developing a solid and sustainable multi-mineral production facility at its flagship project. Subject to further beneficiation testing, upgraded ironstone caprock is planned to constitute the first production from the Barnes Hill Project. Work is continuing on the process testwork for the upgrading and sale of this ferruginous hardcap and is running alongside testwork on the limonitic iron species also found at Barnes Hill. In the period, Proto also extended its arrangement with Caterpillar Finance SARL to allow for the completion of an updated Definitive Feasibility Study which takes into account the increased throughput at the Barnes Hill project which will greatly increase the project's positive cash flow.
- Lindeman's Bore (NT) – Proto received favourable assay results from its third drill hole (LBD3) during the quarter at Lindeman's Bore in the Northern Territory. Drilling of the third deep diamond drill hole at Proto's 50%-owned Lindeman's Bore project was completed to a depth of 466.6m. LBD3 intersected three mineralised zones of geological interest between 385-430m, including a 20m section of quartz/carbonate stringers in foliated and chloritic mafic rock that contained pyrite and chalcopyrite from 385m. In addition, an intrusive intersected at around 370m bore a strong resemblance to an interpreted felsic intrusive that hosted the anomalous gold zone of LBD1. Quartz veining immediately above this is also of geological interest.
- Waterloo (NT) – Proto also updated on work performed by Dr Mike Widdowson on the Antrim Plateau Volcanics (APV). Dr Widdowson, together with a PhD student jointly funded by The Open University, UK, have commenced a program of work that will culminate in sophisticated geochemical analysis including sulphur isotope analysis and Ar/Ar dating. The secondment will support the integrated database of structural geology, geochemistry and geophysical anomalies that is being used to site upcoming drilling in the Northern Territory.

**Proto Resources & Investments Ltd**

ACN: 108 507 517

Suite 1901, Level 19, 109 Pitt St,  
Sydney 2000 NSW Australia

PO Box R1870  
Royal Exchange NSW 1225

**p:** +61 2 9225 4000

**f:** +61 2 9235 3889

**e:** [info@protoresources.com.au](mailto:info@protoresources.com.au)

**w:** [www.protoresources.com.au](http://www.protoresources.com.au)



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- Doolgunna Projects (WA) – On 6 June 2012 Proto announced that the Yerrida Basin high resolution airborne magnetic and radiometric survey data had been received. A number of magnetic and uranium anomalies were identified. These included a strong uranium anomaly associated with calcrete within the Station Bore tenement. At the Mt Killara and Casey tenements the survey data identified anomalous uranium associated with the Archaean/Proterozoic margin and with lithological boundaries within the Proterozoic sediments.
- Kiefernberg and Nossen (Germany) – During the period Proto announced its expectation for near-term resolution of two new license applications lodged in Germany in late 2011. These are the Nossen application covering the Großschirma tin prospect in addition to anomalous gold and base metals results, and the Kiefernberg application that covers nickel-cobalt mineralisation as defined by historical drilling. One drill hole intersecting the Großschirma tin mineralization that sits in the Nossen application area has been retrieved and verified from German Democratic Republic ('GDR') records. This hole, Grsm 2/77, returned assays of 0.55% Sn over 2m (from 706.0 m), 4m @ 0.15% Sn (from 722m) and 4m @ 0.13% Sn (from 772.0 m). The Kiefernberg application hosts known nickel-cobalt mineralisation that was the subject of extensive exploration by the GDR with 1,270 holes having been completed to varying depths. Proto considers that Kiefernberg represents an excellent opportunity to replicate the plant that has been designed for its flagship project at Barnes Hill in Tasmania.

### ***Barnes Hill, Tasmania (Nickel Laterite, Cobalt and Iron)***

Progressing the Barnes Hill nickel-cobalt-iron project towards production remained Proto's key focus during the quarter. Proto's Barnes Hill joint venture partner, Metals Finance Limited (ASX: MFC), made significant progress with the final definitive feasibility study that was completed on schedule at the end of June 2012 (as announced by Metals Finance on 2 July 2012). As previously announced, Proto is looking to produce a saleable iron product from the ironstone cap which sits above the nickel deposit at the Barnes Hill project (see Figure 1). To this end test work is advancing at a facility in Queensland on bulk iron ore samples from Barnes Hill. Proto is confident that it will be able to produce a saleable form of 58%+ Fe which will significantly reduce capital expenditure costs at the project prior to the commencement of nickel mining.



**Figure 1 – Barnes Hill Area Ironstone**



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First mining of the iron oxide caprock is targeted to commence within less than a year of completion of the beneficiation work and grant of final approvals. Subject to final beneficiation results and approvals, minimal mine development is needed and specialist engineering contractors have confirmed the ability to deliver turn-key processing solutions. Caprock iron production is facilitated by the presence of excellent local infrastructure, with roads already accessing the site, a state highway just 3km away and the deep-water port of Bell Bay only 20km distance. Any ironstone production will increase the earnings currently being targeted from the planned nickel production that has been the focus of the Company for the past five years.

On 7 June 2012, Proto announced that following positive discussions with Caterpillar Finance SARL ("Caterpillar Financial"), the financing agreement for the Barnes Hill Project in Tasmania had been extended until September 30th, 2012 to allow for the completion of the updated Definitive Feasibility Study ("DFS"). Since the original arrangement was signed in August last year (see Proto announcement dated 16th August 2011), Proto and its joint venture partner Metals Finance have doubled the planned throughput of the mine from 250,000tpa to 500,000tpa. This has greatly increased the attractiveness of the project's economics. Proto's arrangement with Caterpillar Financial covers the Barnes Hill project and notes Caterpillar Financial's ability to finance Proto's future nickel projects as well. Aside from the debt finance, Caterpillar ("Caterpillar", NYSE: CAT) will also provide earthmoving and transport equipment for the project.

### ***Lindeman's Bore, NT (Nickel Sulphide, Copper and PGEs)***

On 12 April 2012, Proto announced the completion of the third deep diamond hole (LBD3) at the Lindeman's Bore project 380km south west of Katherine, Northern Territory. LBD3 was completed to a final vertical depth below surface of 466.6m. The target was a tabular 500m by 500m electromagnetic ("EM") anomaly identified through sequential application of a Z-Axis Tipper Electromagnetic ("ZTEM") survey in 2010 and follow-up ground EM geophysical surveys performed during 2011. The results of LBD3 have led Proto to conclude that it has hit the western margins of a hydrothermal system prospective for gold and copper and the Company believes that the high-temperature core of the hydrothermal system may be mineralized at a higher grade, hence Proto plans to drill a fourth hole to test this potential.

Proto was highly encouraged by the results of LBD3 which encountered various geological units of the Inverway Metamorphic Formation, consisting of mafic and meta-sedimentary stratigraphy. As reported during the quarter, initial logging of LBD3 suggested that three mineralised zones of geological interest were encountered. These three zones of interesting alteration and/or mineralisation are summarised as follows:

- quartz/carbonate stringers containing trace amounts of pyrite and chalcopyrite developed within a foliated and chloritic mafic rock unit (385-405m depth, see Figure 2);
- stringers of pyrite and trace amounts of chalcopyrite developed within a foliated and partly silicified black shale rock unit (405-419m depth, see Figure 3);
- minor pyrite and chalcopyrite stringer development in a foliated and banded, haematite-magnetite-chlorite meta-sedimentary rock unit (419-430m depth).



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*Figure 2– Quartz/carbonate stringers in foliated and chloritic mafic rock at 390.8m*



*Figure 3 –Pyrite and chalcopyrite in stringers and on joint planes in black shale rock at 415.4m*

In addition, the core returned, at approximately 370m, a strong resemblance to an intrusive intersected in the anomalous gold zone of LBD1 from 424-431m. Quartz veining was observed immediately above this zone in LBD3.

Significant assays from LBD3 are provided in Table 1. In summary, anomalous levels of Au and Cu were intersected with elevated intervals of 0.16ppm Au, from 341-347m and 0.012ppm Au and 432.4ppm Cu over 19m from 404-423m. Higher zones of copper from this zone included 0.13% Cu and 0.18% Cu from 416m-417m and 420m-421m. Also, of interest are elevated levels of phosphorous (e.g. 5,715ppm P from 341-372m) and Ba (e.g. 8,680ppm Ba from 343-344m) associated with the quartz carbonate veining.



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**Table 1 – Summary of Significant Intersections LBD-3**

From (m)	To (m)	Interval (m)	Au (ppm)	Cu (ppm)	Ag (ppm)	Zn (ppm)	Pb (ppm)	P (ppm)	Ba (ppm)
<b>341</b>	<b>347</b>	<b>16</b>	0.16	5.2	0.23	15.5	16.9	6,962	3,105
341	342	1	0.90	10.6	0.16	24	22.6	720	2,590
343	344	1	0.05	8.6	0.45	20	17.3	7,290	8,680
<b>341</b>	<b>372</b>	<b>31</b>	0.037	13.6	0.41	40.5	13.9	5,715	933
<b>380</b>	<b>381</b>	<b>1</b>	0.11	31.6	0.01	62	12.5	2,500	960
<b>386</b>	<b>404</b>	<b>18</b>	0.004	243	0.25	65.2	10.3	4,239	91.7
<b>404</b>	<b>423</b>	<b>19</b>	0.012	432.4	1.16	63.2	23	2,805	348
415	417	2	0.16	814	1.36	121	22.8	2,780	310
416	417	1	0.024	0.13%	1.98	104	30.9	5,040	70
<b>416</b>	<b>433</b>	<b>17</b>	0.009	410.8	0.91	98	22.6	4,756	113
420	421	1	0.01	0.18%	5.05	73	67.5	6,680	180

### ***Waterloo (Nickel Sulphide, Copper and PGEs)***

Good progress was achieved at the Waterloo project during the reported period under the research sponsorship (and linked secondment of leading volcanologist Dr Mike Widdowson) that is investigating Proto’s Northern Territory tenements. Dr Widdowson has also established a dedicated PhD project focused on the Waterloo project area. The project is centred upon the Kalkarindji Continental Flood Basalt Province (“CFBP”). This is the world’s most ancient CFBP for which significant thicknesses of the lava succession still remain preserved with many of the thickest, most complete and extensive successions located in the Waterloo area. This work builds on the geochemical database, that has already been the subject of work by a team from the Queensland University of Technology (“QUT”) led by Dr David Murphy.

Waterloo is being explored under Proto’s joint venture with Peak Mining and Exploration Limited (“Peak”) and is situated approximately 80km southeast of Kununurra in the Kimberley region of the Northern Territory. Waterloo sits within the extensive Antrim Plateau Volcanics (“APV”) and comprises two granted exploration licenses (EL27416 and EL27420).

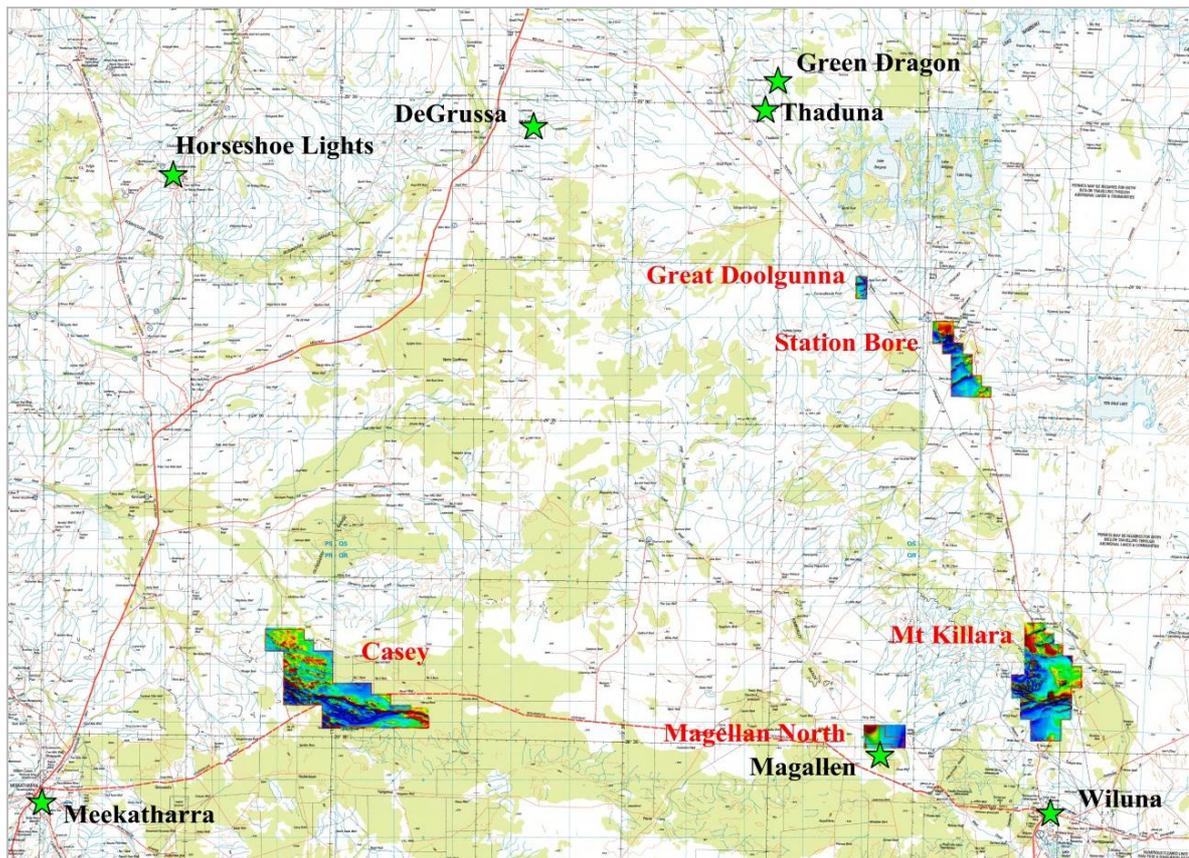
Further to this, an additional targeted Masters-level project is under negotiation for September 2012 – June 2013, which would aim to investigate and document the magnetostratigraphy of the APV succession. Results will aid in establishing a detailed chronology of magnetic fluctuations during the eruption of the APV. This will aid in: (1) improving the tectonic interpretation of the widely northern Australian continental area and, (2) developing a stratigraphic correlation tool which can then be extended throughout the Kalkarindji CFBP.

### ***Doolgunna Projects, WA (Copper, Gold and Lead)***

During the quarter Proto announced the results of detailed airborne magnetic and radiometric surveys across the Doolgunna Project tenements (see Figure 4). Located to the south of Sandfire Resources NL’s DeGrussa Deposit (14.33Mt @ 4.6% Cu, 1.6g/t Au and 15g/t Ag) and to the north of Ivernia Inc’s Magellan Lead Mine (22.1Mt @ 4.8% Pb) the Doolgunna Project tenements are located within the Palaeoproterozoic-aged Yerrida Basin. The Yerrida Basin is considered highly prospective for base metals, copper-gold and uranium mineralisation. Initial results from the airborne surveys were released during the quarter with a number of magnetic and uranium anomalies defined.



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**Figure 4 – Yerrida Basin Geophysics Survey Coverage**

Highlights from the airborne surveys are outlined below:

- The Magellan North project is situated immediately to the north of the Magellan Lead Mine and is considered prospective for further base metal discoveries. Airborne magnetics revealed deep seated magnetic anomalies in the basement Archaean sequence. The radiometric data showed a potential ~NE-SW trending corridor that contains known base metal mineralisation.
- The Mt Killara is located 10km north of the township of Wiluna and contains mapped volcanics of the Killara Formation. Radiometric data delineated anomalous uranium in the vicinity of the Archaean/Proterozoic unconformity.
- The Great Doolgunna project adjoins Great Western Exploration Limited's (ASX: GTE) Doolgunna Project. Previous work, undertaken by the Geological Survey of Western Australia and Great Western Exploration, has defined a broad polymetallic geochemical soil anomaly to the immediate east of the tenement. Airborne magnetics demonstrated magnetic lineaments apparently striking ~NE-SW.
- The Casey Project lies 55km northeast of Meekatharra and covers a portion of the southwest margin of the Yerrida Basin. The magnetics indicated a complex mixed geological package of



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Proterozoic/Archaean units. The Archaean/Proterozoic unconformity is most likely a shear zone with an anomalous uranium response associated with this unconformity.

- The Station Bore Project covers part of the Mibbeyean drainage system. The magnetics showed Proterozoic dyke units striking ~NE-SW. There is a NNW-SSE striking feature on the eastern margin of the tenement which could represent a potential unconformity/structural boundary in addition to a strong magnetic anomaly in the north. The radiometric data demarcated strong anomalous uranium responses associated with the drainage.

A program of geochemical sampling and geological mapping is being planned to target base metals, copper-gold and uranium.

On 29 June 2012, the Company entered into an agreement with Victory Mines Limited ("Victory") whereby Victory will acquire from Proto a 70% interest in the Great Doolgunna tenement (E51/1455) and 50% interest in the Station Bore tenement (E69/2872). The acquisition will also allow Victory Mines to earn up to approximately a 63.75% interest in the Clara Hills tenements (E04/1533, E04/2026, E04/2142 and ELA04/2060),

These three assets are non-core assets to Proto however, despite this fact that, Proto has elected to joint venture the joint assets rather than disposing of them. As such Proto shareholders still have significant upside to look forward to if Victory is successful in their exploration.

## ***Germany Projects (Nickel, Gold and Tin)***

During the quarter Proto announced that it soon expects resolution of two new license applications lodged in Germany in late 2011. These are the Nossen application covering the Großschirma tin prospect and sites of anomalous gold and base metals results, and the Kiefernberg application that covers a previously drilled nickel-cobalt mineralisation. These applications cover the prospective areas previously the subject of an acquisition agreement with Deutsche Rohstoff AG that sat within the now expired Granulite Mountains licence (No: 32-4741.1/649). Both applications are in Saxony, Germany located approximately 50km west of Dresden and contain known mineralisation.

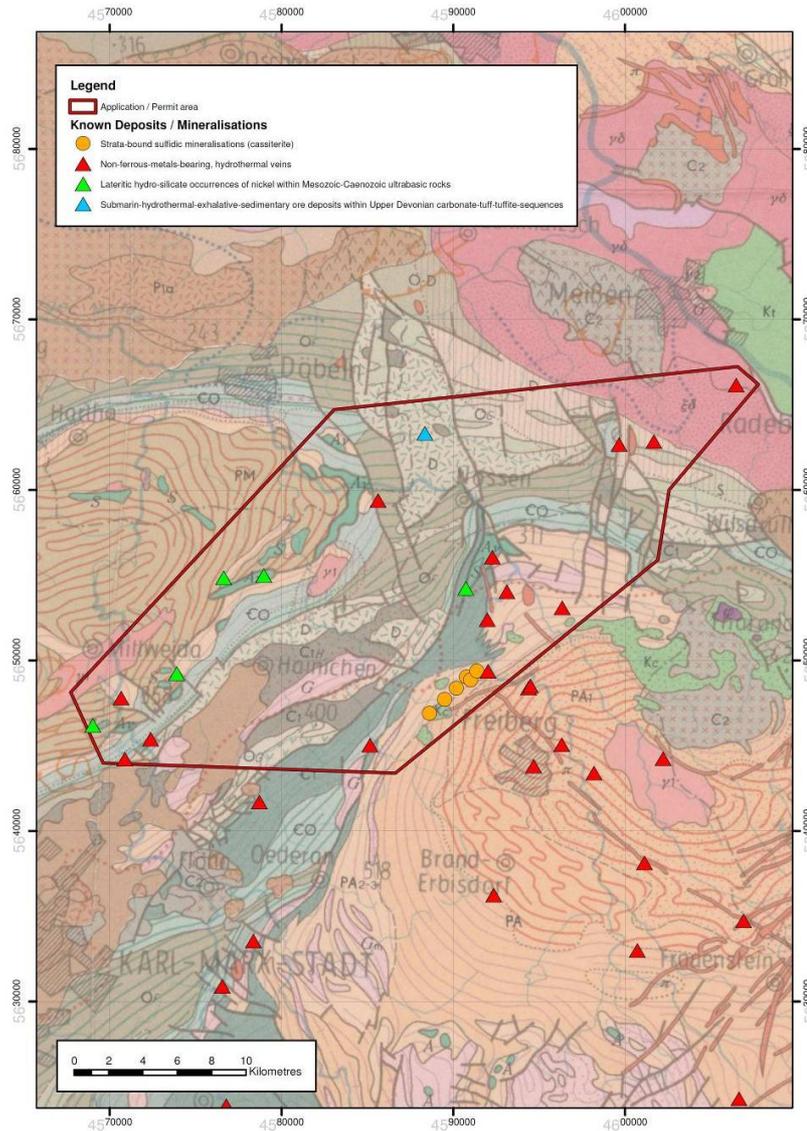
## **Nossen Tin, Gold and Base Metal Prospects**

The Nossen license has been the subject of small-scale historic silver mining and several prospects were partially explored by the former East German government. The distribution, diversity, and presence of "stratiform" mineralisation within the application area suggest strong exploration potential. A summary of the position of the known mineralisation on the Nossen license is shown in Figure 5.

The main target at Nossen is a previously drilled tin occurrence called Großschirma that locates in a major schistosity-conformable shear zone in a sequence of metamorphics. The mineralised sequence consists of chloritic schists, altered marbles and pyritic rocks dipping 70 degrees NNW, having a thickness of up to 300m. In this sequence, single layers have a known Sn grade of up to 0.5%, and past drilling and underground intersections have confirmed ore thicknesses of 1–4m. The strike of the prospective sequence has been traced on the surface by soil and rock geochemistry and shallow drilling over a distance of about 5km. To date only one drill hole intersecting the mineralization has been retrieved and verified from the GDR records. This hole, Grsm 2/77, returned assays of 0.55% Sn over 2 m (from 706.0 m), 4m @ 0.15% Sn (from 722m) and 4m @ 0.13% Sn (from 772.0 m). The extent of the mineralisation was also noted in rock chip assays taken from a historical lead-silver mine that has also been plotted in the modelling undertaken so far.



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**Figure 5 – Previously Identified Mineralisation over Geology at Nossen**

Proto plans to use geophysical techniques, stream sediment sampling, drilling and trenching to test the wider mineral potential, including exploring for base metal, tin and gold mineralisations. Digitisation of the substantial archived records of GDR exploration will also be an important initial step in guiding systematic modern exploration.

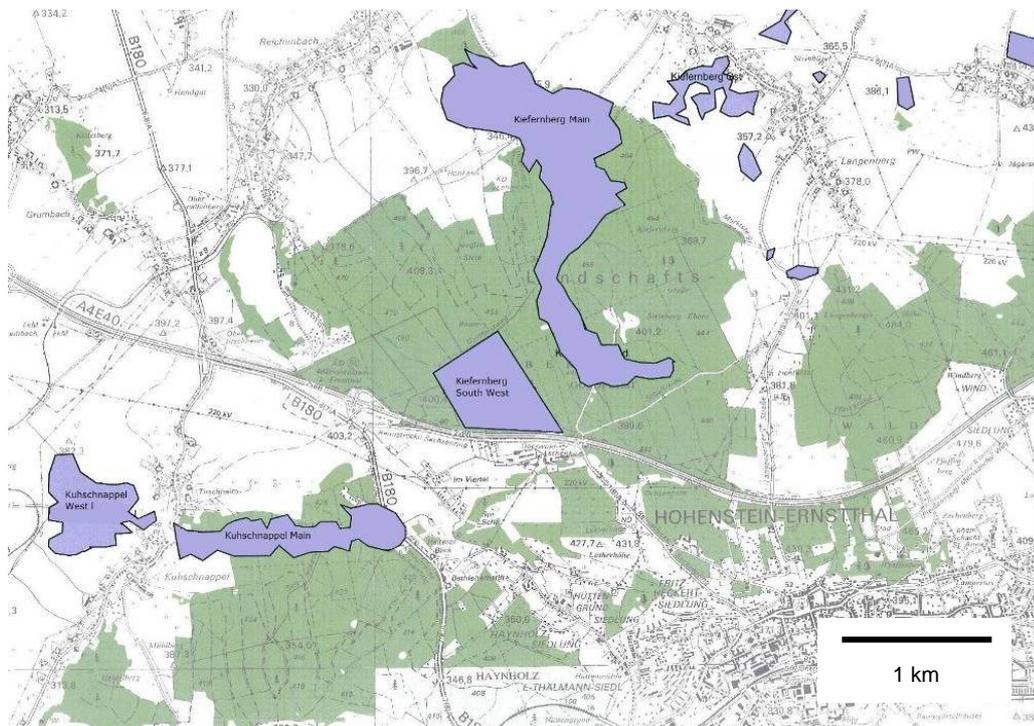


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## Kiefernberg Nickel-Cobalt Mineralisation

Kiefernberg hosts a known nickel-cobalt mineralisation that was the subject of extensive exploration by the GDR. The Kiefernberg application area was the subject of very substantial drilling, with 1270 holes having been completed to varying depths.

The previous exploration of the lateritic nickel mineralisations located at Kiefernberg took place in two major stages: the first during 1947-1953 and the second stage from 1961-1965. These results were analysed in the period up to 1971, when metal inventory calculations were completed under GDR reporting rules. Figure 6 shows areas that were drilled during the exploration phases. The first stage of work for Proto at Kiefernberg will be to complete confirmatory exploration required to allow the extensive historical geological work for use in a JORC-compliant resource estimation.



**Figure 6 – Sites of Previous Exploration and Mining around the Kiefernberg Mineralisation**

Proto considers that Kiefernberg represents an excellent opportunity to replicate the plant that has been designed for its flagship project at Barnes Hill in Tasmania. The economic potential of the project is reinforced by the proximity of infrastructure, with roads accessing the mineralisation and electricity passing just a few hundred metres away.



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## ***Corporate Activities***

### **Metals Finance Strategic Investment**

Proto continued to build its shareholding in Metals Finance during the period. As announced on 16 June 2012, as at 13 June 2012, Proto's shareholding of Metals Finance had reached 19.18%. Proto consider this a strategic investment that brings together Proto's control of the Barrier Bay Technology with Metals Finance's strong track record in putting minerals processing assets into production.

### **Proto's ADRs to Commenced OTCQX Trading**

On 9 May 2012, Proto announced that OTC Markets Group Inc. ("OTC Markets"; OTCQX: OTCM), the company that operates the world's largest electronic marketplace for OTC-traded equities, would commence trading in Proto's shares. Under this initiative, American Depositary Receipts ("ADRs") would be traded on the OTCQX<sup>®</sup> such that each ADR represents 50 fully paid ordinary shares in Proto. Proto ADRs commenced trading on the OTC market's highest tier, OTCQX International. The OTCQX listing aims to makes it easier for North American and international investors to trade Proto's stock. Proto has also been added to the S&P Capital IQ Corporation Records, a recognised securities manual for secondary trading in up to 38 States under the Blue Sky Laws. As part of the program, a full description of Proto has been published in the Daily News Section of S&P Capital IQ Corporation Records.

### **Oversubscribed Placement**

Proto completed several small capital raises during the reported period. The most substantial was announced on 15 May 2012, where a successful placement to raise \$540,000 from sophisticated and institutional investors was oversubscribed, with Investorfirst Securities Limited acting as the Lead Manager. The funds raised were to continue progress at the Barnes Hill iron ore and nickel project and to fund preparations to drill the much anticipated fourth drill hole at Lindeman's Bore in the Northern Territory.

### ***Comment from the Managing Director, Mr Andrew Mortimer***

A great deal of progress was made during this quarter on the Barnes Hill and Lindeman's Bore projects. Barnes Hill is very much now an iron ore project as well as a nickel project. Proto is hoping that this will dramatically change what were already incredibly favourable economics. In relation to Lindeman's Bore, the third drill hole has greatly increased Proto's knowledge of the sub-surface geology of the project and our enthusiasm for and confidence in the project have increased greatly from the already high levels proceeding the third drill hole. The company is confident that either project or both will dramatically re-value the company in the next 12 months. Interestingly, while Proto's Doolgunna assets are non-core, they have allowed the Company to create some value through the joint venture and commercial alliance with Victory Mines. As such, Proto has continued to generate tangible value in other areas while progressing Barnes Hill and Lindeman's Bore. The Company's share price (like the share price of so many others) reflects macro economic difficulties that Proto has navigated skilfully over the past five years. Despite the issuance of shares, since then Proto has continued to add value to the Company's operational business to limit any dilutive effect of share issues. The Company will continue to generate value through mineral exploration, mineral processing innovation and mineral project development, and looks forward to its first production at Barnes Hill and continued exploration progress on the Company's Greenfield assets.



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## **Competent Persons Statement**

*The information in this release that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Carl Swensson, who is a Member of the Australasian Institute of Mining & Metallurgy. Mr Swensson is a director of Swensson Integrated Resource Management Services and has sufficient experience 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 Swensson consents to the inclusion in the release of the matters based on his information in the form and context in which it appears.*