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Independent Technical Review

The Haib Copper Porphyry Project, Namibia.

For

**Jet Gold Corporation
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Vancouver, BC. Canada V6K 2G8**

Prepared by

Qualified Person –

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1. SUMMARY

This independent Technical Report has been prepared at the request of Deep-South Mining (Pty) Ltd ("DSM") a Namibian wholly owned subsidiary of 1054137 BC Ltd. ("BC") in support of the sale of their shares to Jet Gold Corporation ("Jet or "the Issuer") which is listed on the TSX Venture Exchange (the "Exchange"). In consideration, the shareholders of BC will receive 45 million shares of Jet at a value of CDN\$ 0.065 or CAD\$ 2,925,000. BC is the sole shareholder of DSM which owns 30% of the shares in Haib Minerals (Pty) Ltd ("HM") which in turn holds the exploration rights in the Haib Porphyry Copper property in southern Namibia. Teck Namibia (Pty) Ltd ("Teck"), a Namibian subsidiary of Teck Resources Limited owns the remaining 70% share in HM. HM is the registered holder of Exclusive Prospecting Licence 3140 ("EPL") over the property.

The Haib deposit is a large palaeo-Proterozoic copper porphyry deposit, located in southern Namibia that, according to a Behre Dolbear report written in 1996 ⁽¹⁾ has a combined Historical Estimate using a Kriging estimation model of some 1,353 Mt of mineralised material (using a 0.1% Cu cut-off) of which 739 Mt is at 0.29 % Cu (using a 0.2% Cu cut-off) and within which a higher grade section of 244 Mt at 0.37% copper was estimated (using a 0.30% Cu cut-off). These estimates were constrained within a planned series of open pits. The estimates of tonnages and grades quoted in this report are considered as **Historical Estimates**, that is to say they were prepared prior to publication of the National Instrument 43-101 guidelines and the CIM definitions and Standards for reporting of mineral reserves and resources in 2001 and their subsequent amendments. The Historical Estimates developed by Behre Dolbear (1996) for the Haib deposit have been reviewed by the author, however, the underlying data and evidence required to validate and classify these Historical Estimates as current mineral resources was deemed to be beyond the scope of this report and HM is not treating this historical estimate as a current mineral resource or mineral reserve. Therefore, the historical grades and resources terminology from the historical original reports are to be used only as a reference and should not be considered as a NI 43-101 compliant mineral resource but are to be considered as Historical Estimates as per the NI 43-101 Rules and Policies Part 1 definition of Historical Exploration Information.

This report is based on a review of historical and currently available data concerning the Haib property obtained from HM and also from Mr. V. Stuart-Williams, who is familiar with the project based on numerous visits and direct involvement as geological consultant to the Namibian Copper Joint Venture ("NCJV") in the period 1995 to 1999 and since 2004 as the current Technical Director of DSM.

In 2008 DSM entered into a contract with Teck which offered Teck an option to obtain a major interest in the project in return for meeting certain exploration expenditure commitments. This June 20th 2008 agreement with Teck, as amended on March 9th 2009 (the "Agreement"), provided that Teck had the right to earn a 70% undivided interest in the Haib copper project in Namibia by fulfilling certain obligations; Teck has now fulfilled all of its commitments under the Agreement and as a result 70% of the shares in HM were issued to Teck.

The exploration rights and obligations over the Haib property are held by HM under EPL 3140. This licence originally had an area of 74,563 ha and it incorporated all of the known mineralisation within the Haib deposit and a substantial area around the deposit. The EPL was renewed in April 2007, April 2009, April 2011, April 2013 and

April 2015. The current area, after reductions required in terms of the first renewal, is some 37,000 ha and the licence is valid until April 2017 (see Appendix 1 & 2).

Access to the Haib project camp-site is via a 10 km graded gravel road from the main Cape Town – Windhoek north-south tar road and is accessible to conventional cars. Access from the camp-site to the main deposit area is along some 5 km of tracks suitable for four wheel drive vehicles. The site is very rugged and there is only limited access along numerous bulldozed tracks. The project area borders on both a summer and winter rainfall area, is very arid and in summer the temperature can go as high as the mid 40°C, while in winter it can go as low as freezing point. Average annual rainfall is 25-50 mm.

The main Haib deposit straddles the Volstruis River, a tributary of the Haib River, which is an ephemeral tributary of the Orange River which lies some 10-15 km south of the deposit. The deposit has a distinct surface expression with abundant copper staining on fractures and joint planes particularly in and around the dry river bed of the Volstruis River. It was discovered in the late 1800's / early 1900's.

The Haib deposit is located within part of the Richtersveld geological province ⁽³⁶⁾. The area lies within the Orange River Group volcanic suite of andesitic lavas, intercalated with acidic volcanics and tuffs, which were intruded by Vioolsdrif Intrusive Suite granites, granodiorites and adamellites dated around 1,880 Ma. The principal mineralised hosts at the Haib are a Quartz Feldspar Porphyry (QFP) and a Feldspar Porphyry (FP). The entire sequence has undergone low grade regional metamorphism to greenschist facies. At the Haib there is a further overprint exhibited by typical porphyry copper type alteration zones associated with this style of mineralisation.

The Haib copper deposit is an example of a Precambrian porphyry copper deposit. Porphyry copper deposits are a major world source of copper. It is in essence a very large volume of rock containing low-grade copper mineralisation.

Five separate geophysical, geochemical and diamond core-drilling exploration programmes have been conducted at the Haib by Falconbridge (eleven drillholes); King Resources (twenty-one drillholes); Rio Tinto Zinc ("RTZ") (one hundred and twenty drillholes); the NCJV / Great Fitzroy Mines ("GFM") joint venture (12 drillholes); and HM (32 diamond drillholes). The most recent historical estimate of tonnage and grades was completed by GFM / NCJV in 1996 using Behre Dolbear (BD) to complete the tonnage / grade audit ^(1, 4).

Teck, as the operator of the Haib joint venture has proposed to the Ministry of Mines, as motivation for renewal of the EPL, a programme of exploration over the next 18 months involving 1:10,000 scale geological mapping of outlying areas of interest, preliminary resource estimation and economic studies, further metallurgical tests, geotechnical drillholes to aid advanced mining studies, and detailed resource estimation and economic studies. These programmes are estimated to cost N\$ 3.5 million (currently equivalent to some C\$ 356,000).

In my opinion this programme has real merit and it is recommended that HM proceed with the proposed programme.

2. INTRODUCTION

The mandate given to P&E Walker Consultancy cc ("P&E") is to provide the Boards of Directors of DSM and Jet ("The Boards") with an updated independent technical review of the Haib property as a previous draft technical report, which was not made public, was prepared for a postponed first listing procedure and is no longer current and to comment on the efficacy of the proposed exploration programme by HM. The Board of BC intend to sell their 30% interest in HM to Jet in consideration for 45 million shares in Jet at a value of CAD\$0.070 per share or CAD\$ 3,150,000. BC will then become the majority shareholder of Jet (The "Proposed Transaction").

This independent Technical Report has been prepared at the request, on 5th June 2015, of Mr. P. Léveillé, Managing Director of DSM and BC and Mr. T. Fernback, CEO of Jet in support of their proposed transaction. The fee for the preparation of this Report is being paid by DSM and is not dependant on the outcome of the proposed transaction with Jet.

The Report was completed by P&E and relies extensively on information, materials, representations and exploration data provided by historical records obtained from The Boards, Teck and Mr. V. Stuart-Williams, a Professional Geologist registered with the South African Council for Natural Scientific Professions, registration No.400266/87, who has been associated with the Haib Project in various technical and advisory roles for over 20 years and is currently the Technical Director of DSM. The author has reviewed these sources in writing this review report and has also discussed and debated with Mr. Stuart-Williams and the local Teck representatives the efficacy of various exploration, mining and metallurgical studies that have been completed at the Haib.

This Report has undergone extensive review by The Boards and their advisors to ensure that the information and representations contained in the Report are current, accurate, correct and complete and that there are no material omissions of information that would affect the conclusions contained in the Report.

The Technical Report is to be read as a whole and sections or parts of it should not be read or relied upon out of context. This notice, which is an integral part of the Report, must accompany every copy of the Report.

This entire Report is subject to the scope of work conducted as well as the assumptions made and to all other sections of this Report.

The effective date of this report is 23rd October 2015. The Qualified Person and author of this Report and P&E have no direct or indirect interest in the subject or any nearby mineral property and are entirely independent of the participants in the Proposed Transaction.

I visited the Haib Project site described in this report on various occasions between 1989 and 1995 and more recently on the 24th January 2012 in the company of Mr. Nuri Ceyhan, exploration manager of Teck Namibia and with Mr. Neil Grumbley, Teck's Haib Project manager and again on the 30th June 2015 with Mr. Neil Grumbley. I am assured by the Teck management that as at the 3rd May 2016 no further field work or material change has occurred at the Haib since my June 2015 visit and that their desk-top appraisal studies as outlined in their work programme for 2015 / 16 are in progress.

3. RELIANCE ON OTHER EXPERTS

DSM requested that the author review the Haib Porphyry Copper Project and prepare a technical summary of the project. This report has been prepared under the guidelines of National Instrument 43-101 and is to be submitted as a Technical Report to the TSX Venture Exchange ("TSX") in support of DSM / BC's Proposed Transaction with the Issuer.

The author has reviewed the records^(42 & 50) of the Namibian Ministry of Mines and Energy last updated on 1st March 2016 and believes that the Exclusive Prospecting Licence is in good standing; furthermore, the Issuer has provided the author with a written legal opinion⁽⁴⁹⁾ on the status of EPL 3140 dated 29th April 2016 which confirms this belief.

The opinion of the author regarding the validity of HM's rights to EPL 3140 as presented in this report are wholly conditional upon the accuracy and completeness of the information supplied by those references named above. The author reserves the right, but will not be obliged, to revise this report if additional information becomes known to the author subsequent to the effective date of this report.

4. PROPERTY DESCRIPTION AND LOCATION

In Namibia the Ministry of Mines and Energy grants an Exclusive Prospecting Licence ("EPL") in terms of section 48(4) of the Minerals (Prospecting and Mining) Act, No.33 of 1992 to an applicant under certain terms and conditions which form part of the licence documentation – see Appendices 1 & 2.

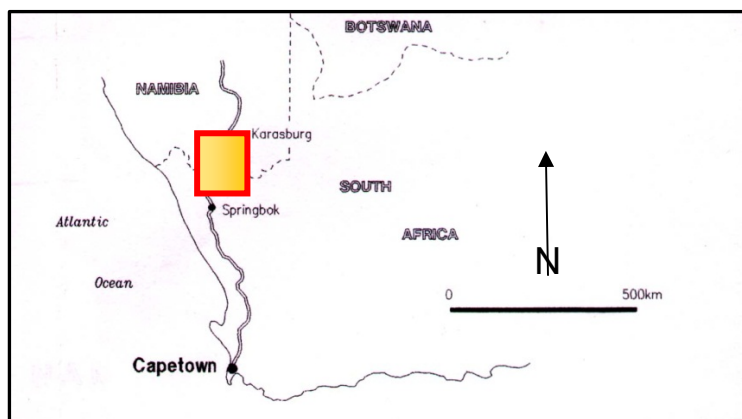
DSM obtained EPL No. 3140 allowing for the exploration of Precious and Base Metals and Base and Rare Metals Groups of Minerals over an original area of 74 563 ha on 22nd April 2004; the area extended over the known mineralisation of the central Haib deposit and a substantial surrounding area. The EPL was renewed in 2007, 2009, 2011, 2013 and again in 2015 and is valid to 22nd April 2017. In April 2007, the extent of ground held was reduced in accordance with the renewal obligations to an area of 37 000ha. The Table below lists the corner co-ordinates of the reduced EPL: -

Table 1: List of corner co-ordinates in decimal degrees for EPL 3140.


Licence	Nr	Lat	Long
EPL-3140	1	-28.72530758	17.78740212
EPL-3140	2	-28.71183732	17.74992010
EPL-3140	3	-28.67100381	17.68364770
EPL-3140	4	-28.62124926	17.75614951
EPL-3140	5	-28.55535382	17.82202069
EPL-3140	6	-28.62443708	17.92656044
EPL-3140	7	-28.62670927	17.95497900
EPL-3140	8	-28.69475300	17.96558957
EPL-3140	9	-28.72089474	17.96970697
EPL-3140	10	-28.75324360	17.95375930
EPL-3140	11	-28.74086885	17.79335440

Details of the location are given in the Location Map, Figure 1, while Appendices 1 and 2 are copies of the documents granting and renewing the EPL as well as recording the transfer of rights to the EPL from DSM to HM. The surface rights of the property are owned by the State. The EPL boundaries have not been surveyed or physically beacons but the current corner coordinates have been provided by the Namibian government in the EPL grant documents.

The Haib copper deposit is in the extreme south of Namibia close to the border with South Africa which is defined by the course of the Orange River (see Figure 1). The deposit lies some 12 – 15 kilometres east of the main tarred interstate highway connecting South Africa and Namibia and the nearest railway station is at Grunau, some 120km north on the main highway. This rail connection could provide access to either the port of Luderitz or to Walvis Bay via Windhoek or to South African ports or facilities via Upington.



LEGEND

 Location of the Main Haib mineralisation.

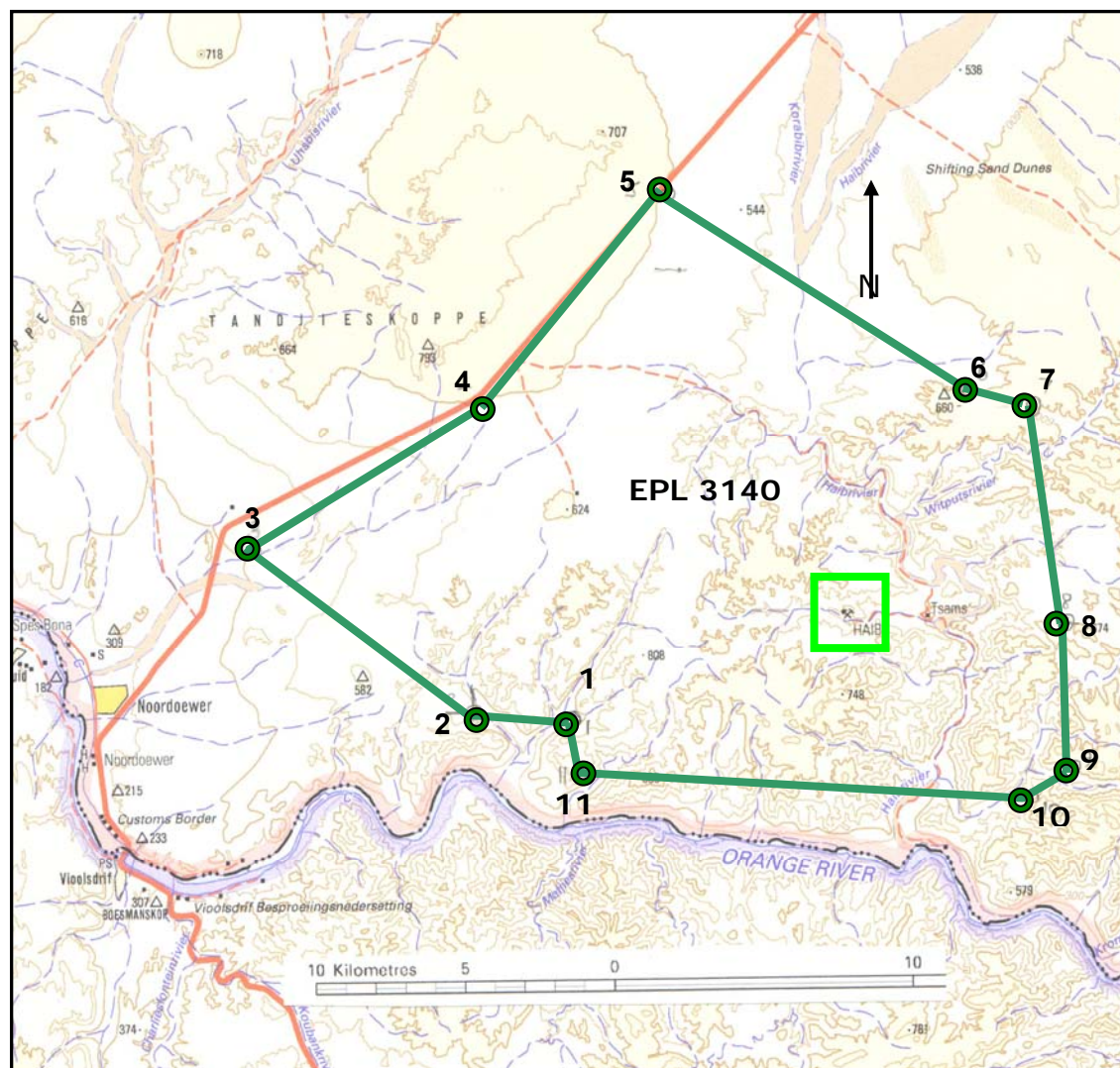


Figure 1: The Haib deposit is situated some 12-15 kilometres east of the main tar road connecting South Africa and Namibia. Access from the tar road to site is via variable quality all-weather gravel road, the last section requiring all wheel drive. The current area of EPL 3140 is 37,000ha.

On June 20th 2008 DSM concluded a joint venture agreement with Teck, which was amended on March 9th 2009 (the "Agreement"). Teck now acts as the exploration operator and manager for HM.

The Agreement with Teck provided that Teck had the right to earn a 70% undivided interest in the Haib copper project in Namibia if: -

- by December 31st, 2012 Teck had incurred exploration expenditures of US\$2 million; and
- Teck had made cash payments to DSM of US\$700,000 over that 4 year period.

Once Teck had acquired its 70% undivided interest, DSM registered a holding company, Haib Minerals (Pty) Ltd ("HM") and transferred the rights and obligations of the EPL to that company and also issued 70% of the shares in HM to Teck. DSM had the option to convert their 30% undivided interest into a 2% Net Smelter Royalty or fund their 30% share in the development of the project; DSM elected to fund its 30% share of the project. In the event that the DSM partners do not fund their share of the development programme and their share in the project is diluted to under 20%, the remaining interest is converted into a 12% Net Profit Interest (NPI). In the event that Teck decides to bring the Property into commercial production, Teck would pay DSM a sum of US\$1 million within 60 days of the date of the official mine opening.

DSM will transfer its 30% interest in HM to BC which intends to sell this interest to Jet in exchange for 45 million shares in Jet at a value of CAD\$ 0.070 per share or CAD\$ 3,150,000.

The recent exploration approach by Teck was to prospect for adjacent, additional mineralisation (hence a regional geophysical programme) and / or to increase the tonnage and / or the grade by drilling to explore the already identified higher-grade portions of the mineralisation since these are poorly defined by the historical vertical drilling. The Teck exploration programme described in this report is the result of that initial exploration approach.

I am not aware of any environmental obligations or liabilities except those listed in Part 3 of the attached Appendix 1 which states: -

"8. The holder of the exclusive prospecting licence shall observe any requirements, limitations or prohibitions on his or her prospecting operations as may, in the interests of environmental protection be imposed by the Minister from time to time.

9. The holder of the exclusive prospecting licence shall enter into an Environmental Contract with the Ministry of Environment and Tourism and that of Mines and Energy within one (1) month of the date of issue of the licence."

I have been informed that the Environmental Contract has been concluded with the respective Ministries but have not had sight of these documents. I have also been informed that Teck commissioned an Environmental Management Assessment and recommended Plan ⁽⁴³⁾ by a credible, independent, local consulting firm and submitted these to the Ministry and this plan now forms part of the accepted commitment towards their environmental obligations.

I am not aware of any additional permits required in respect of exploration activities on the property apart from water abstraction permits that will need to be obtained from time to time from the Ministry of Water Affairs in order to pump water from the Orange River for drilling purposes. I have been provided with a copy of the current water abstraction permit which is valid from 28th March 2014 to the 27th March 2017 and that the only significant conditions attaching to this permit are for the installation of an approved water meter, monthly readings of the meter and payment at a tariff rate of 1.5 Namibian cents per cubic metre of water consumed.

As the subject property is State land, no access permits or contracts are required in terms of the grant of the EPL (see Appendix 1).

In order to retain title to the EPL, HM have to spend at least 80% of the committed budget for the 2015 / 2016 work programme which has been agreed with the Namibian Ministry of Mines & Energy (see also the conditions of grant as specified in Appendix 1); As at 3 May 2016, I am assured by the management of HM that their current expenditure on the project will meet and possibly exceed this minimum expenditure commitment.

I am not aware of any additional significant risk factors that may impede the progress of the exploration activities proposed for the property which may involve access, title or availability of contractors.

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY

Physiography

The Haib deposit straddles the Volstruis River (meaning the Ostrich river in Afrikaans), which is a tributary of the Haib River. Both are ephemeral tributaries of the Orange River which lies south of Haib.

The Orange River is a deeply incised drainage with several nick-points. Haib lies below all of the main nick-points at a location where the Orange River elevation is approximately 200 metres above sea level. The Haib deposit lies at elevations from a floor elevation of just under 375 metres amsl to over 600 metres amsl. The surrounding area is up to about 650 metres amsl at the highest point. The area is rugged with steep sided valleys and rapid local relief.

The vegetation around the deposit is essentially xerophytic in nature with sparse semi-desert shrubs and grasses with some stunted trees (*Adenolobus garipensis*, *Euclea pseudobenensis* or wild ebony³⁴ and others) along water courses.

Accessibility

Access to the Haib property is via a 10 km graded gravel road from the main interstate tarred highway to the camp site at the old Rio Tinto Zinc Corporation ("RTZ") exploration campsite. This road is accessible to conventional cars. From the RTZ campsite to the Haib copper deposit (another 5 km) is a four wheel drive gravel track that is relatively slow but essentially all-weather. The site itself is very rugged and there is only limited access along the numerous bulldozed drill-site access roads. Access to other parts of the site is largely by foot. The topography of the site is illustrated in Photograph 1. There is an existing gravel airstrip, some 1,500m long on the property which is in good condition and light aircraft have made use of this in the recent past.



Photograph 1: The photograph very clearly shows the rugged, barren nature of the area surrounding the Haib deposit. The view is looking northeast down the Volstruis River to the Haib River at the foot of the far hills. Almost all of the rocks visible in the foreground area of this photograph lie within the Main Haib deposit. The main access road can be seen running across the photograph from the photograph's bottom left hand corner. The white arrow indicates the location of the old workings in the Volstruis River and the nearby bulk sampling adit.

Infrastructure

The infrastructure in the area is good. The Haib deposit is relatively close to the main north-south tarred interstate highway between Cape Town and Windhoek so the only road construction required would be an upgrade to the existing ~12 km long access road to site. The nearest settlement is Noordoewer, some 12Km south of the Haib entrance gate, a village of some 5,000 people with only basic services and facilities.

The main north-south national power grid lines are some 85km to the east of the Haib; an 85 km link and upgrade of the line capacity would likely be required should the project be developed.

Water is currently available in large amounts from the Orange River which is about 15 kilometres by pipeline south of the main Haib deposit, however, future demand upstream may lessen the available water supply.

The nearest rail link is at Grunau station, some 120 kilometres north of the Haib. The area between the Haib and Grunau is almost completely flat and the local rail authority has confirmed that a link could be laid relatively easily; this would provide access to either the port of Luderitz or the port of Walvis Bay via Windhoek or to South Africa via Upington.

Climate

The Haib copper deposit is in the extreme south of Namibia and is unusual in that it is located on the boundary between the summer and winter rainfall areas. In summer the temperature can go as high as the mid 40°C, while in winter it can go as low as freezing point. Rainfall in winter is generally light drizzle with occasional harder falls. In summer the rainfall is associated with occasional thunder storms and is of short duration, but can be of very high intensity. All of the streams within the area are ephemeral but can flow very strongly after summer storm rainfall. Average annual rainfall is 25-50 mm. Access to the site is possible throughout the year and there should be no interruptions to mining because of inclement weather (6, 30).

Sufficiency of Surface Rights

Suitable and sufficient areas for tailings dams, recovery plant, waste dumps and heap leach pads are available within the EPL area but the chosen sites will be dependant on the eventual mine and plant design. The area of the property and surrounding remainder of the farm Tsams is State land and currently only used for emergency stock grazing purposes under lease from the State so mining will not conflict with any formal farming activities.

6. HISTORY

The author draws his knowledge for this section from the Behre Dolbear ⁽¹⁾ report; from the Namibian Copper Mines report ⁽²⁾, from the South African Committee for Stratigraphy (SACS) ⁽³⁾ and from the Gordon / McIlwraith report ⁽⁴⁾, and from personal knowledge. The author has only seen extracts of reports and third-party reports on the early mining at Haib and information referred to is gained from these reports and discussions with the late Mr. George Swanson (see below).

6.1. Early Mining

The Haib deposit has a distinct surface expression with abundant copper staining on fractures and joint planes, particularly in and around the dry river bed of the Volstruis River (see Photographs 1 & 2). This led to German prospectors identifying the deposit around the late 1800s or early 1900s. Small tonnages of high grade copper carbonate ore were mined at this time. Incidentally, the word Haib is probably derived from the local Nama language although the Haib Pforte (fort) is shown on the original German military maps of German South West Africa, dating from about 1907. The fort appears to have been a place rather than a structure and the location on the ground is unknown.

After World War II, the prospect was pegged as claims by prospector Mr. George Swanson who carried out small scale mining and tank leaching operations. Over 6,000 t of hand sorted high-grade copper ore were sold to the O'okiep Copper Mines, across the border at Nababeep in South Africa, reportedly at grades of up to 18% Copper. Lower grade copper carbonate ore was leached with acid. The acid was then run over iron scrap and the copper precipitated as "copper cement". This copper cement was sold to the smelter at the O'okiep Copper Company for further refining. Swanson only worked these claims when the copper price was high enough to justify the process (personal communication).



Photograph 2:

This photograph is taken in the bed of the Volstruis River looking approximately southwest at the portal of the bulk sampling adit.

6.2. Post-1960 Exploration ^(1, 4, 6)

In 1963 - 1964 Falconbridge of Africa (Pty) Ltd ("Falconbridge") completed a more detailed exploration programme looking at the higher grade zones within the Haib deposit. They drilled some eleven diamond drillholes totalling 1,012 metres of drilling. The average grade of the drillhole intersections was given as 0.33% Cu. In 1964 Falconbridge allowed their rights to lapse; very little of their data remains on record.

During 1968 - 1969 King Resources of South Africa Pty Ltd ("KRC") conducted a further diamond drilling programme of 21 holes totalling 3,485 metres. They examined both lower and higher grade sulphide zones, as well as the higher grade oxide shear zones. Some leach test work was carried out. The area was abandoned in 1969. Again, very little useful data survives from this programme.

During 1972 – 1975 Rio Tinto Zinc ("RTZ") conducted the first extensive and systematic investigation of the Haib deposit. Geochemical and chip sampling surveys were conducted along with IP and Resistivity surveys. They drilled one hundred and twenty diamond drillholes (120) totalling 45,903 metres, one section was partially drilled at 25 metre spacing to provide detailed information on close spaced variability (see Figure 2 below); the core from this programme is still intact and stored in a core shed on site (see photograph 3 & 4 below), although much of the mineralised sections are now reduced to quarter core. RTZ sampled by compositing half cores over 2 metre intervals and submitted these for determination of total copper and where appropriate, oxide copper (acid soluble copper). Composite samples from each drillhole were also tested metallurgically to determine recoverable copper and were assayed for molybdenum, silver and gold indicating average contents of 25 g/t Mo, 0.01 g/t Au, and 0.9 g/t Ag. Tonnage and grade estimates at various cut-offs were made and a conceptual pit design was proposed.

In 1991 - 1992 Revere Resources SA Ltd, produced a technical brochure and promoted the Haib as a "potential world class copper producer for the 1990s". It would appear that the intent was to list the company, possibly on the Johannesburg Stock Exchange, using the Haib as a property of merit. For reasons unknown to me this listing never materialised. No exploration work was done.

In November 1993 Rand Merchant Bank Ltd (of South Africa) ("RMB") acquired an option over the Haib property. Venmyn Rand Pty Ltd., mining management consultants to RMB then undertook a study of the project including compilation of all the available drillhole and assay records from previous investigations and set up a computerised drillhole database. It was concluded that the increase in the copper price since the 1970's, development of low cost / high tonnage mining systems and new and refined technologies such as bacterial leaching, solvent extraction and electro-winning combined to create a situation where development of the Haib deposit could represent an economic project; however, no further exploration work was done and work terminated in 1995.

In March 1995, Great Fitzroy Mines NL ("GFM") and RMB executed an Agreement in association with claim owner Mr. George Swanson to acquire 100% of the Haib project. GFM agreed terms with RMB whereby GFM could earn 90% of the project. Subsequently GFM agreed to transfer a 70% interest in the deposit to Namibian Copper Mines Inc. ("NCM") in exchange for NCM reimbursing past expenditure and



Photograph 3: View of the RTZ core shed in the background and the Teck drill core stacked in the foreground in metal boxes.



Photograph 4: View of the RTZ core – split for assay and well preserved in wood & metal core trays.

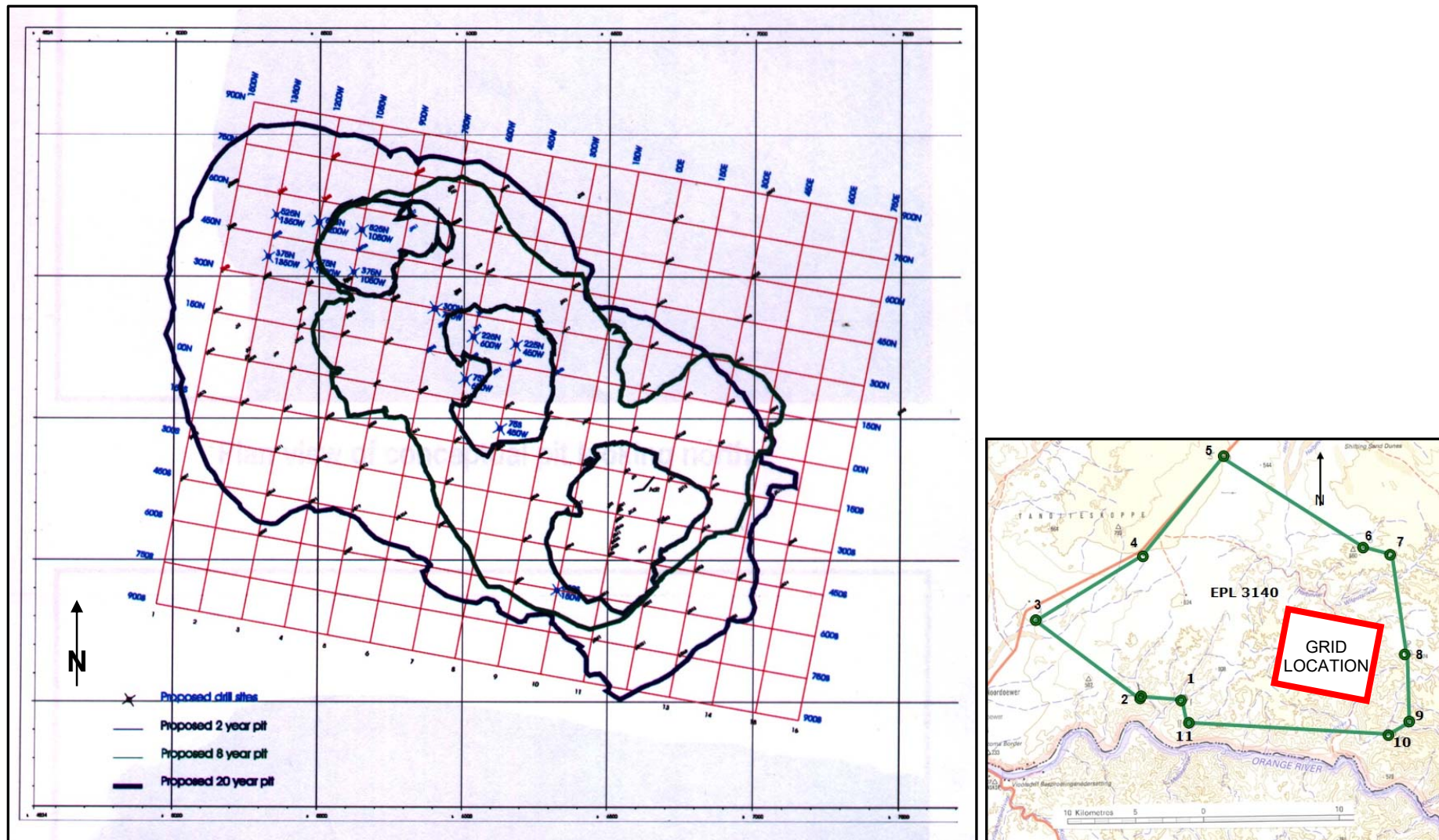


Figure 2: This is a reduction of a GFM map dated about 1996. The map shows the proposed 2 year, 8 year and 22 year pits generated from their geological model. The small black numbers indicate drillholes from the Rio Tinto and earlier drilling programmes. The larger blue numbers indicate drillholes that the NCJV / GFM proposed for drilling (June 1996). These drillholes were only drilled after the BD resource estimates were completed.

providing GFM with a free 20% carried interest. NCM then purchased the remaining RMB interest leaving GFM with a 20% free carried interest and the management and NCM holding 80%⁽²⁾. The operating company was called the Namibian Copper Joint Venture ("NCJV"). From 1995-99 the NCJV prospected the Haib managed by GFM. The names NCJV and GFM can be read as being synonymous.

Apart from the central mineralised core of the deposit which was covered by the Swanson claims and held under option by NCJV, the mineral rights over the greater Haib area were held by Copper Mines of Southern Africa (Pty) Ltd ("CMSA") as EPL 2152 and worked by the NCJV.

From 1995 to 1999 the NCJV drilled a further 12 infill holes, drilled 5 geotechnical investigation holes, completed 126 metres of excavation in an adit and two crosscuts for bulk sampling and metallurgical testing and carried out various test works including mining cost audits, bio-leaching studies, and milling and grinding studies. In February 1997 a Feasibility Study – Phase 2 Report was produced by their mining consultants, the Minproc – Davy Joint Venture⁽¹⁶⁾. The NCJV ran into financial difficulties and work was stopped at the Haib deposit in late 1998 to early 1999.

Rusina Mining Ltd of Perth, Australia acquired the concession from GFM / NCJV during 1999-2000 and they took over ownership of the Haib data. The transfer of the mineral rights to Rusina was apparently not ratified by the Namibian Government and no work was done by this company.

In 2003 (date uncertain) in response to the Namibian government enforcing the new Namibian Minerals Act, claim owner Mr. George Swanson, who throughout much of the Haib dealings had held some 69 x 18 hectare claims over the core area of the Haib deposit, was forced to finally relinquish his Haib claims as he had not prospected or mined the claims for some years. This meant that the property was free and 100% of the mineral rights were vested in the Namibian Government.

This allowed DSM to consolidate a single mineral rights entity over the entire Haib deposit. An initial Exclusive Prospecting licence 3140 was granted for 3 years from 22 April 2004 to 21 April 2007 over an area of 74,563.0 ha covering the deposit and a very large surrounding area. This was subsequently renewed in April 2007, 2009, 2011, 2013 and 2015 with the area reduced to 37,000ha after the 2007 renewal. The current EPL and details of its location are shown in Appendices 1 & 2.

From 2008, Teck under the option Agreement with DSM has completed a comprehensive exploration programme at the Haib and immediate surroundings and it is this programme that will be the main interest of this report as it will be Teck, with their 70% majority interest that will be initiating and managing the on-going exploration and development programme.

6.3. Historical Resource Estimates

The tonnage and grade estimates quoted in this report are historic mineral resource estimates, that is to say they were prepared prior to DSM and subsequently, HM acquiring their interest in the Haib property and they have not verified the

estimates as a current mineral resource or mineral reserve because of the lack of assay certificates; the estimates quoted here are therefore Historical Estimates as per the NI 43-101 Rules and Policies Part 1 definition of Historical Exploration Information.

There are no current mineral resource estimates for the Haib.

I have not done sufficient work on the drill assay database nor have I had access to RTZ assay certificates or QA / QC data to classify the historical estimates as current mineral resources and neither Teck, DSM, HM or the Issuer are treating the historical estimates as current mineral resources or mineral reserves.

Four sets of resource estimates were prepared in the past by different authors. These will each be examined in turn. They are relevant in that they show the thinking of the investigators at that time and also provide insight into the expected tenor of mineralisation.

6.3.1. RTZ Historical Resource Estimate –

Somewhere around 1975 RTZ, using the sample results from the 120 drillholes drilled by them (and perhaps the earlier drilling as well?), calculated an estimate of tonnage and grade for the Haib deposit. The figures reported suggest a very large volume of contained copper amounting to over 2 million tonnes of metal at a fairly low average grade of 0.27% Cu. RTZ used various cut-offs, but it is not reported what method of determination they used. The figures were considered by RTZ to be an Indicated Resource; however, they should be viewed as an Historical Estimate only (see Table 2) but are certainly of the same order of magnitude as found by later investigators.

Table 2: RTZ - Haib Historical Estimate			
Cut-Off (% Cu)	Tonnage (Mt)	Grade (% Cu)	Contained Cu (t)
0.15	831	0.27	2,244,000
0.20	563	0.32	1,802,000
0.25	374	0.37	1,384,000

(Note: This is a Historical Estimate; a qualified person has not done sufficient work to classify this historical estimate as current mineral resources or mineral reserves and the Issuer is not treating them as current mineral resources or mineral reserves)

Interestingly, RTZ seems to have concentrated on higher tonnages and not on the higher grade zones. There is no evidence that they attempted estimates at any higher grade cut-offs (such as 0.3% Cu). Clearly RTZ was interested in developing large volume mining resources.

6.3.2. Venmyn Rand Historical Resource Estimate –

In 1993 Venmyn Rand Pty Ltd prepared an information memorandum on the Haib deposit and estimated an in-pit “reserve” using a computer model, although the exact methodology is unknown. They generated the historical estimate presented in Table 3 below.

Table 3: Venmyn Rand – Haib Historical Estimate			
Cut-Off (% Cu)	Tonnage (Mt)	Grade (% Cu)	Contained Cu (t)
0.3	400	0.4	1,600,000

(Note: This is a Historical Estimate; a qualified person has not done sufficient work to classify this historical estimate as current mineral resources or mineral reserves and the Issuer is not treating them as current mineral resources or mineral reserves)

The pit design used by Venmyn Rand was essentially conceptual and very large, being well beyond subsequent pit boundary designs. The Venmyn Rand estimate is thus considered to be effectively a global Historical Estimate above the 0.3% Cu cut-off.

6.3.3. NCJV / GFM Historical Resource Estimate ⁽²⁾ (1996)

The NCJV used the Venmyn Rand computer database and recalculated their estimate around a more realistic geological and pit model. Their approach is detailed below: -

6.3.3.1. General

A geostatistical block model was completed by NCJV/ GFM in January 1996 and updated in June 1996. The stages undertaken comprised principally: -

- The compilation and verification of the drillhole data prepared by Venmyn Rand incorporating all available data to the end of the RTZ programme;
- A manual pit design by Mr. Bill Holly, who was the Project Manager (Figure 2 below). This design provided approximately 22 years of potentially mineable resources within which were designed 2-year and 8-year mine pit plans;
- Geostatistical block modelling was carried out and tonnage and grades reported at a range of cut-offs within the various pit outlines; and
- A Whittle 4D optimisation exercise was carried out on the block model and generated a pit outline broadly comparable to the manual Holly model.

6.3.3.2. GFM Methodology

The following methodology was adopted by GFM: -

- Compositing – all drillhole assay results were composited over 7.5 metre down-hole intervals prior to variography and block kriging;
- Variography – GFM and its consultants determined nugget and sill values of 0.010 and 0.028 respectively (a sill: nugget ratio of 2.8). The principal ranges and directions were determined to be Range 1 (strike) 320° = 300m; Range 2 (across strike) 050° ; and Range 3 (down dip) vertical = 250 m;
- Kriging – GFM used the previous parameters. The vertical dimensions of the search ellipses were reduced to 75 metres to reflect a perceived horizontal grade layering and to reduce homogenisation across the layering. Block dimensions were set at 25x25x10 metres and grades were estimated by ordinary kriging. A minimum of four composite grades was required for block estimation and a maximum of 30 was used;
- Pit Designs (Figure 2 above) – Block tonnes and grade were estimated within three small initial pits designed to maximise grade over the first two years of mining. A first cut-back resulted in a second stage single pit complete after eight years and a second cut- back gave a stage 3 pit complete after 22 years;
- Constraints – no geological constraints were applied. The mineralised body was treated as a disseminated zone with grade gradually falling to zero near the margins. The pit outlines were used to constrain the reporting of the block tonnes and grade which were thus reported as resource tonnages within a specified pit. GFM considered these figures would approximate the pit reserves but no mining recovery or dilution adjustments were applied;
- Top Cut – A top cut was not applied to high grade samples; and
- Categorisation – The estimates were made in August 1996 and considered by GFM to be Indicated Resources although this category was chosen "...in accordance with accepted mineral industry practices" and not in accordance with any of the then accepted codes – the Australian JORC was published in 1989 (CIM codes were only approved in August 2000 and the South African SAMREC code in 1997). Behre Dolbear ("BD") in their report state that they "consider this generally an appropriate classification at this stage though some blocks might be categorised as Inferred in areas less well drilled or where there are indications of poorer continuity". BD commented that "the current programme of infill drilling, check assaying, clarification of the mineralisation and structural controls, and removal of the survey uncertainties, should allow parts of the resource to be upgraded to a measured status". This confirmation programme was unfortunately not completed by GFM.

6.3.3.3 GFM Historical Resource Estimate ⁽²⁾

The in-pit **Historical Estimates** as determined by GFM in 1996 (and approved by BD) based on the drilling to the end of 1975 are tabulated below in Table 4. Figure 2 above shows the proposed GFM two year, eight year and twenty year pit outlines.

Table 4: GFM - Haib In-Pit Historical Estimate – June 1996							
Pit	Cut-Off 0.3% Cu		0.1%-0.3% Cu		Cut-Off 0.1% Cu		Waste
	Mt	% Cu	Mt	% Cu	Mt	% Cu	Mt
Year 2	21.4	0.39	27.9	0.20	49.1	0.28	2.1
Year 8	73.4	0.36	289.2	0.20	362.4	0.23	21.8
Year 22	135.5	0.38	803.4	0.19	939.1	0.22	95.7
Total	230.2	0.37	1120.5	0.19	1350.7	0.22	119.5

(Note: This is a Historical Estimate; a qualified person has not done sufficient work to classify this historical estimate as current mineral resources or mineral reserves and the Issuer is not treating them as current mineral resources or mineral reserves)

6.3.4. Behre Dolbear Historical Resource Estimate ⁽¹⁾

6.3.4.1. General

BD viewed the Haib deposits as resources not reserves, because at the time of assessment they could not be demonstrated to be economic since no feasibility study had been completed. Therefore BD undertook, after discussion with GFM, to review potentially mineable resources after the additional work had been completed, all or part of which could then be upgraded to a reserve status. This work was never completed. BD added that they “cannot endorse the use of any specific cut-off grades at this juncture of the project due to lack of sufficient cost information and engineering data”. BD conducted this estimation of the Haib resources at the request of GFM. The estimate as discussed below was accomplished with the computerized mine planning package known as TechBase produced by MineSoft Ltd.

Data supplied by GFM included: -

- The drillhole assay database;
- The drillhole surveys, including hole inclinations; and
- Miscellaneous geological plans, maps, and cross sections.

BD did not independently check the accuracy of the data provided by GFM but accepted the data as supplied for this work.

The drillhole data set provided to BD consisted of assay and survey data from 152 drillholes. The assay and survey data were supplied to BD on a 3.5 inch floppy disc

as ASCII files. The location of the drillholes was based on a local coordinate system. Included in the assay database were primarily the copper assays.

6.3.4.2 Methodology

The historical mineral resource models generated by BD were estimated by generating three separate three-dimensional block models using nearest neighbour, inverse distance squared and kriging estimation techniques. BD used the drillhole database compiled by GFM to develop the resource models utilizing the following steps: -

- Selection of the block model design;
- Compilation and verification of a geological model;
- Selection of the estimation parameters;
- Calculation of a geologic resource; and
- Calculation of a potentially mineable resource.

Computerised topographic data was not provided by GFM as it was not available at that time. BD used the drillhole collar elevations to establish an approximation of the topography for the study.

6.3.4.3. Selection of Block Model design

BD selected a block model comprised of rectangular blocks; the model parameters for their estimation are summarised below in Table 5.

Table 5: Summary of the Behre Dolbear Block Model Parameters		
Item		
Coordinates of the lower left block (Haib local grid)	N	-742300
	E	84500
	Z	800
Size of the blocks (metres)	Y	25
	X	25
	Z	10
Number of blocks	Y	90
	X	110
	Z	60
Baseline Azimuth (degrees)		100.5

6.3.4.4. *Compilation and Verification of the Geological Model*

The first step in the estimation process was to generate and verify a computerised geologic model for each of the planned pits. GFM did not provide plan or section maps of the geologic zones for the deposit and did not differentiate geologic zones in their initial modelling. Therefore BD did not develop and constrain the model by geologic boundaries. BD, after a review of the GFM geology, believed that this would produce acceptable results for preliminary estimates but recommended that GFM constrain any future model.

6.3.4.5 *Determination of Estimation Parameters*

The next step in the BD resource estimation was the determination of the appropriate parameter to be used for estimating values of the block model. BD used the parameters supplied by GFM for their estimation as a guide. GFM used a search ellipsoid for their kriging of 350 metres at an azimuth of 320 degrees, 250 metres at 50 degrees and 75 metres in the vertical direction. BD's technique paralleled those of GFM in that no capping of assays was utilized for their estimates. BD, however, believes that the data set does require capping at the 1.0% level. Table 6 below shows the exact parameters used in the BD block model:-

Table 6: Behre Dolbear Block Model Estimation Parameters				
Item		Nearest Neighbour	Inverse Distance Squared	Kriging
Search Ellipsoid	Major	300	300	300
	Semi-Major	250	250	250
	Minor	75	75	75
	Azimuth of Major Axis	320	320	320
Variogram	Major	NA	NA	300
	Semi-Major	NA	NA	250
	Minor	NA	NA	250
	Azimuth of Major Axis	NA	NA	320
Number of Samples	Minimum	1	4	4
	Maximum	1	10	10

6.3.4.6. *Calculation of the BD Historical Resource Estimate*

BD calculated the resource at the Haib property by utilising a 22 year pit plan furnished by GFM. The GFM pit design served as the basis for comparison as metallurgical test work was not completed and capital and operating cost values had not been defined in order for BD to independently define economic pit outlines and validate the GFM design. Therefore BD could not endorse the pit design at the time of the estimation (August 1996). The GFM pit design was however used as a basis for representation of the in-situ mineralisation indicated by the then current drilling data.

Table 7: Haib Historical Estimate - Behre Dolbear / GSM								
Minimum Block Grade	GFM Model		Behre Dolbear's Model					
			Kriging		Inverse Distance Squared		Nearest Neighbour	
	M Tonnes	Grade % Cu	M Tonnes	Grade % Cu	M Tonnes	Grade % Cu	M Tonnes	Grade % Cu
0.1	1350	0.23	1353	0.23	1331	0.23	1184	0.25
0.2	730	0.28	739	0.29	726	0.29	630	0.34
0.3	230	0.37	244	0.37	262	0.38	292	0.46

(Note: This is a Historical Estimate; a qualified person has not done sufficient work to classify this historical estimate as current mineral resources or mineral reserves and the Issuer is not treating them as current mineral resources or mineral reserves)

The procedure used by BD was to take their block model and summarise the grade and tonnes of the material contained within the GFM 22 year pit outline. Table 7 below gives the results of this exercise at minimum block grades comparing the results of the GFM estimate with BD's kriging, inverse distance squared and nearest neighbour models.

6.3.4.7. Behre Dolbear Estimates - Comments and Discussions

BD's work on the GFM block model indicated that the modelling work was sufficient to provide preliminary "Terms of Reference" at various assumed economic or mining scenarios. BD recommended that following completion of the drilling programme and other activities, additional work be completed to constrain the model by local geologic and if relevant, stratigraphic zones to facilitate detailed mine planning work.

Validation and verification of the economically mineable portion of the resource would require additional work to define reliable processing parameters, recovery and costs.

6.3.4.8. Minproc-Davy Feasibility Study ⁽¹⁶⁾

This NCJV commissioned feasibility study was completed in January 1998.

QP's Comments on the Various Resource Models and Estimates

Both the GFM model and one of the BD models used Kriging methods as the basis for their estimate calculations. The figures generated are very comparable, the BD numbers being very slightly more generous in both grade and tonnes. Kriging as a statistical estimation technique is widely used in porphyry deposits.

When calculating block values with the inverse distance model, the arithmetic process decreases grade on an inverse basis away from the point of measurement. In simple terms this means that the grade initially decreases rapidly away from the data source then flattens off with distance. Parameters for the X, Y and Z axes are operator chosen

and can be varied in different directions in the event of mineralisation being obviously controlled by any geological factor, such as faulting, unconformity contact or bedding.

The Haib deposit is not bedded, although some structural control over higher grade mineralisation is apparent, and has a fairly uniform grade distribution.

The nearest neighbour technique assigns the grade of the sample nearest the centre of the block to the block and provides a global check on the estimates.

It should also be noted from comments made elsewhere in this report during discussions of the recent Teck drilling that the historical, vertical drilling used for all of the above historical estimates may have incorrectly estimated both the extent and the grade of the high-grade zones because the high-grade zones lie within a dipping set of fractures and require inclined drillholes to obtain a true thickness estimate.

The most significant and well documented historical mineral resource estimate derives from the report by Behre-Dolbear ⁽¹⁾ (1996) that was commissioned near the end of the NCJV tenure at the Haib and is summarized in Table 7 above. Please note:-

- (1) That this estimate was prepared prior to publication of the National Instrument 43-101 guidelines and the CIM definitions and Standards for reporting of mineral reserves and resources in 2000 and their subsequent amendments in 2005, 2010 & 2014, and perhaps more importantly,
- (2) The Historical Estimates developed by Behre Dolbear (1996) for the Haib deposit have been reviewed here by the author; however, the underlying data and evidence, particularly assay certificates, required for the author to validate and classify these Historical Estimates as current mineral resources are not available. Therefore, the historical grades and resources terminology from the historical original reports are to be used only as a reference and are to be considered as Historical Estimates as per the NI 43-101 Rules and Policies Part 1 definition of Historical Exploration Information. Neither DSM, BC, the Issuer, Teck or HM are treating the historical estimate as a current mineral resource or mineral reserve and do not rely on this estimate in any financial studies.

In my view, additional evidence will be required, backed by verifiable assay data on a closer spaced drill pattern and by obtaining either original certified assay data from the historical drilling or by enough duplicate core sampling to verify the historical assay results before estimating a compliant current resource or reserve estimate of the Haib mineralisation. Despite the above cautionary notes, the Behre Dolbear Historical Estimate is considered by me to be the best indication of the size and tenor of the mineralisation at the Haib.

7. GEOLOGICAL SETTING AND MINERALISATION

7.1. Regional Geology⁽³⁶⁾

The Haib deposit is located within part of the Namaqua-Natal Province called the Richtersveld geological sub-province which is further subdivided into a volcano-sedimentary sequence (locally, the Haib Subgroup), the Orange River Group and the intrusive Vioolsdrift suite which are closely related in space and time (Figures 3, 4 and 5 below). The Orange River Group is composed of sub-aerial volcanic rocks and reworked volcanoclastic sediments; deformation caused displacements along stratigraphic contacts before intrusion of the Vioolsdrift suite. The predominance of andesitic and calc-alkaline magmatic rocks with tectonic compression prevailing throughout the magmatic episode has led to an interpretation of an island-arc model for the region. Recent age dating of Haib rocks by separation of zircon and apatite on which laser ablation and inductively coupled plasma mass spectrography was used to derive the U/Pb ratios was performed at Trinity College, Dublin by Neil Grumbley and indicated an age of 1,880 Ma for the volcanics.⁽⁴⁶⁾

The principal mineralised hosts at the Haib are a Quartz Feldspar Porphyry (QFP) and a Feldspar Porphyry (FP) – see Figures 4 and 5 below. The QFP is interpreted as a quartz diorite body which intruded the feldspar porphyry some $1,868 \pm 7\text{Ma}$ ⁽⁴⁶⁾. The FP is generally interpreted as being part of the suite of andesitic rocks although some workers have suggested that it too, may be partially of intrusive origin. The QFP is elongated along the orientation of the Volstruis Valley, largely coincident with the location and orientation of many of the higher grade intersections within the deposit.

The sequence has undergone low grade regional metamorphism to greenschist facies which event has been dated at $1,100\text{Ma}$ ⁽⁴⁶⁾. Most of the rock exhibits typical porphyry copper type alteration zones associated with mineralisation. A potassic hydrothermal alteration zone coincides with the main mineralised area surrounded by phyllic and propylitic alteration haloes. Propylitic and sericitic alteration appears to overprint the earlier potassic zones. Silicification, sericitisation, chloritisation and epidotisation are widespread.

Although not present in the immediate area of the Haib deposit, some kilometres to the west of the area are outcrops of Karoo age⁽³⁾ (early Permian) mudstones, siltstones and sandstones of the Prince Albert Formation. These create very flat topography.

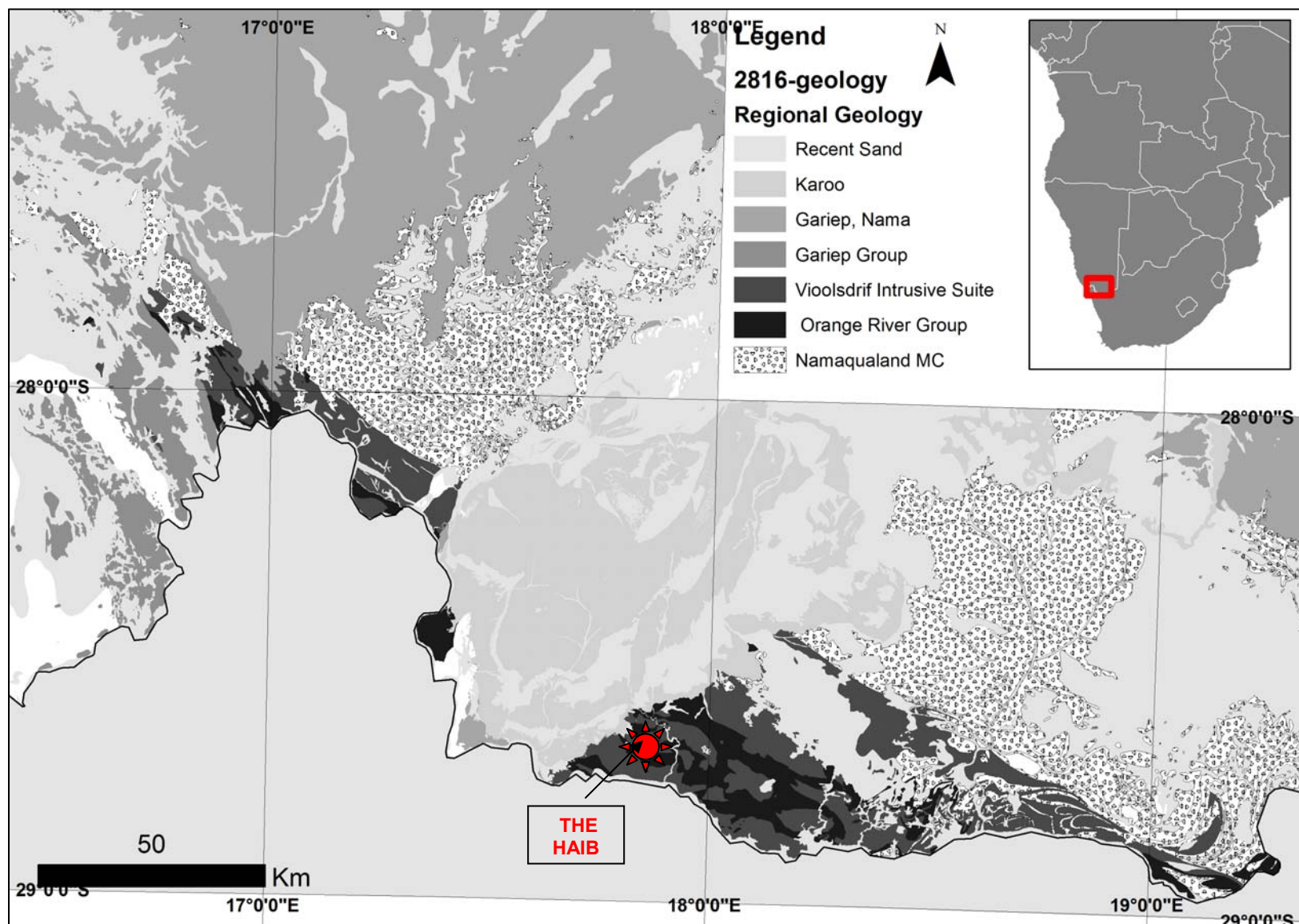


Figure 3: Map showing the general distribution of the Violsdrift and Orange River rocks in relation to the Haib deposit.
(Source: Teck Namibia ⁽⁴⁴⁾, 2015).

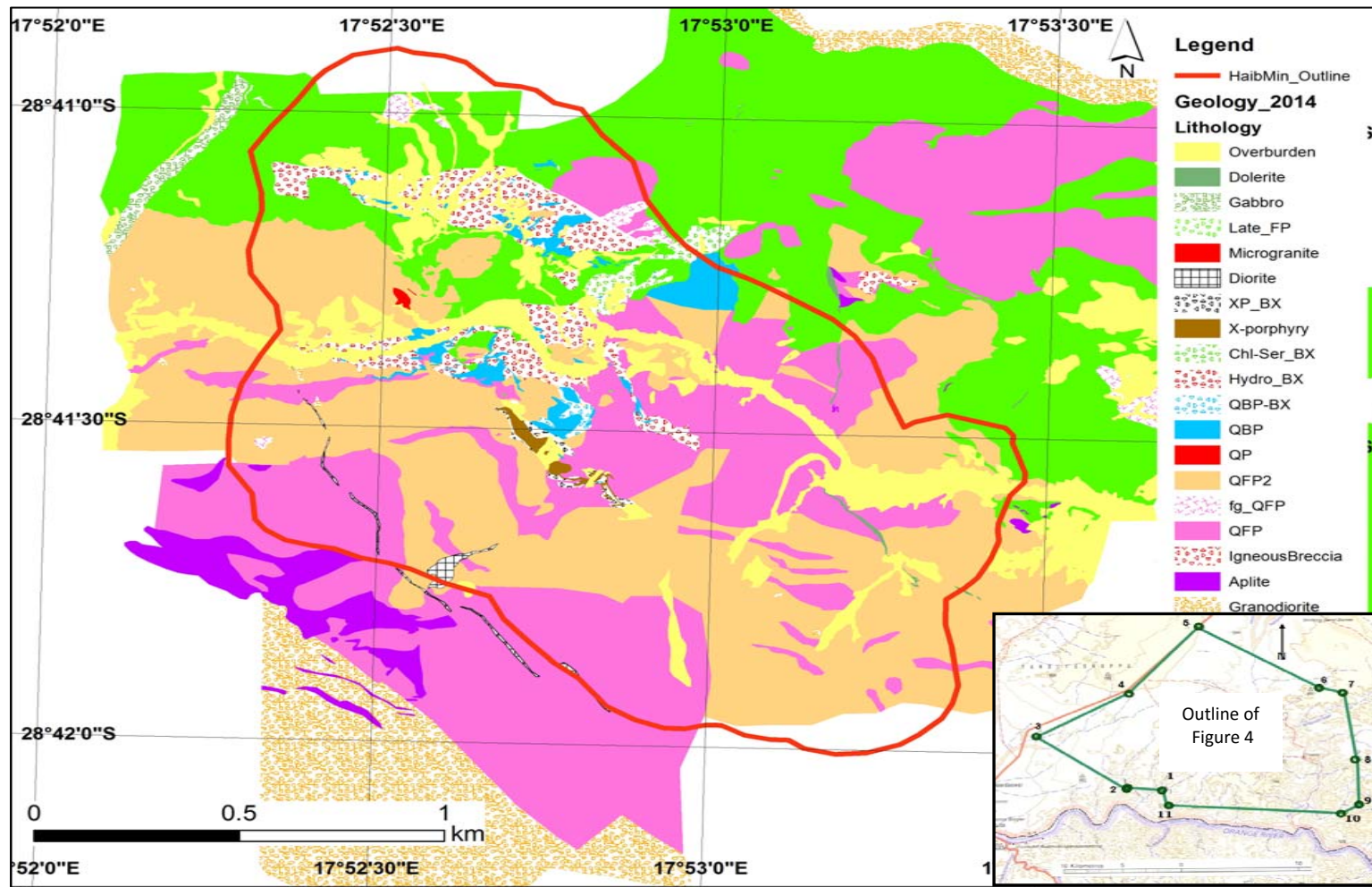


Figure 4: Geology of Haib (from Teck 2015 ⁽⁴⁴⁾)

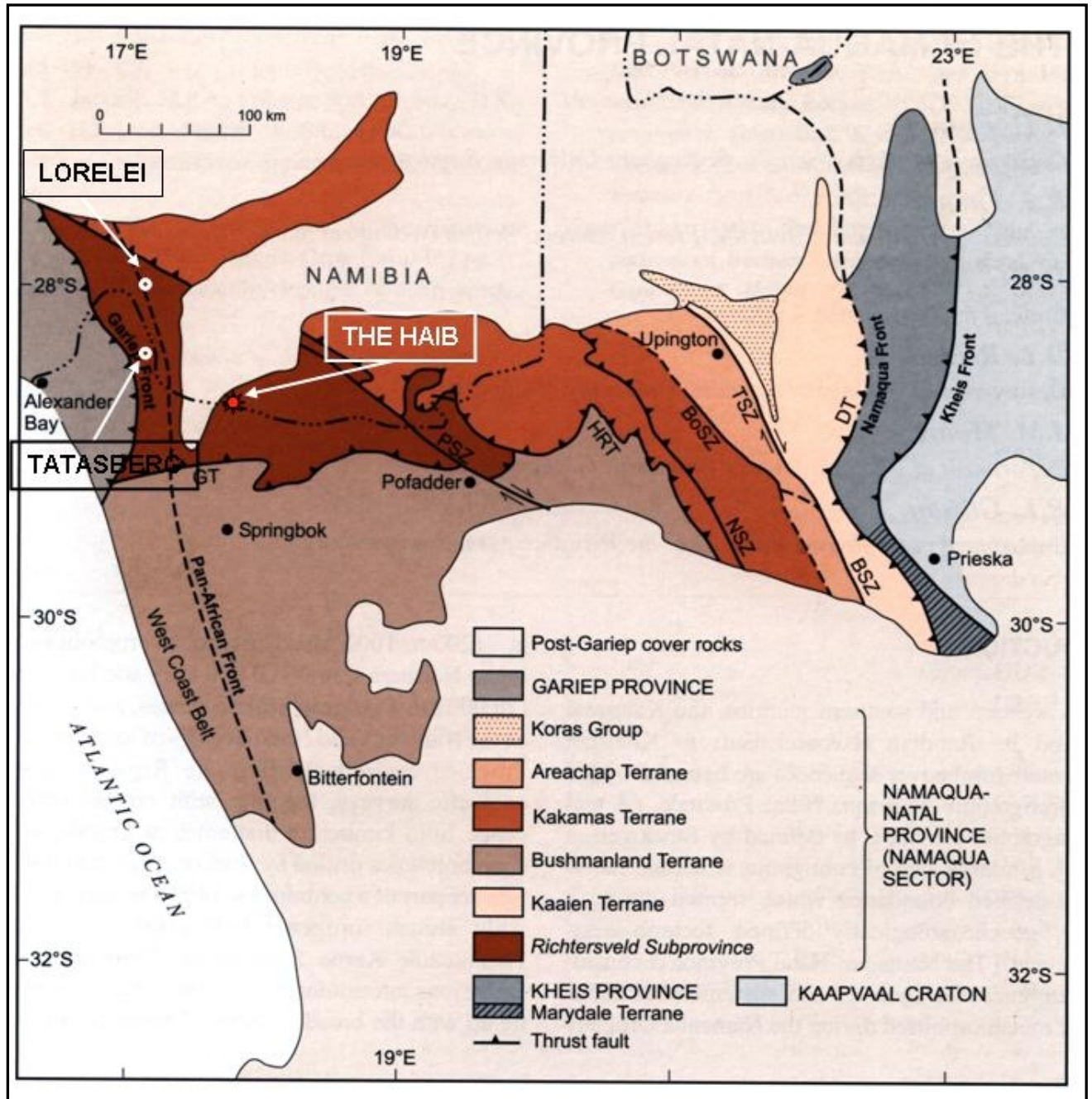


Figure 6: Tectonic sub-division of the Namaqua sector of the Namaqua-Natal Province, as sourced from the *Geology of South Africa*, pg.326⁽³⁶⁾.

BoSZ: Boven Rugzeer Shear Zone, BSZ: Brakbosch Shear Zone, DT: Dabep Thrust, GT: Groothoek Thrust, HRT: Hartbees River Thrust, NSZ: Neusberg Shear Zone, PSZ: Pofadder Shear Zone.

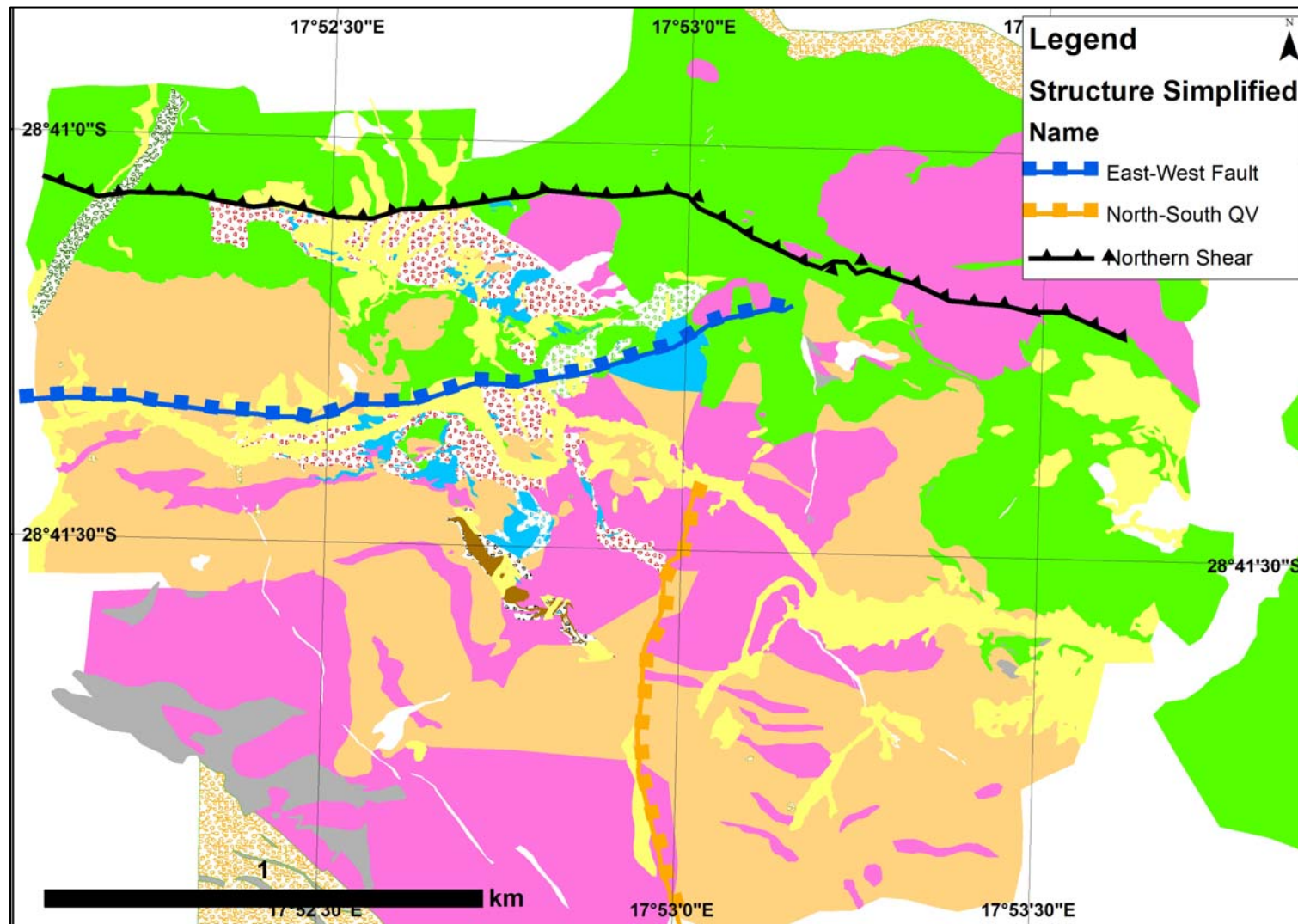


Figure 7: The three main structures recognised at Haib: 1) The Northern Shear Zone truncates porphyry mineralisation to the north, with reverse of movement; 2) the East-West Fault has normal movement down dropping mineralisation by > 100m to the north; 3) the North-South Quartz Vein has normal movement, down dropping mineralisation by > 100m to the SE. There are also numerous other smaller faults and shears with 1-5m displacement (Teck 2015 ⁽⁴⁵⁾).

7.2. *Local Geology of the Haib Deposit* ^(18, 19, 22, 44, 45)

The QFP comprise typically blue quartz and feldspar phenocrysts within a medium grained rock mass of quartz, feldspar, sericite, biotite, chlorite, epidote and calcite. The FP is generally a medium to fine grained rock of similar composition but without the quartz phenocrysts and with a higher proportion of chlorite and epidote; please note that the sericite, epidote, chlorite and calcite are alteration products and not the original igneous composition of the QFP or the FP (Figures 4 and 5 above). Minor basic dykes and quartz veins traverse the area.

Rocks within the Haib area are hard and competent but generally well jointed with both flat and steeply dipping joint sets being well developed. Striking east-west along the Volstruis River is a well developed zone of steeply dipping shears. The orientation and location of the main mineralisation coincides with the fracture zone which is interpreted as fractures providing a focus of the intrusion and then channel-ways for late-stage mineralising fluids. The fracture zones likely represent the local stress regime at the time of porphyry formation and control the orientation of high grade zones, and were later re-activated by the Namaqua deformation event circa 1,100 Ma ago (Figure 6 above).

7.3. *Structural Controls on Copper Mineralisation* ⁽⁴⁴⁾

Mineralisation at Haib is typical of a porphyry copper deposit and despite the age of the deposit, and the fact that the mineralisation has been subjected to local post-mineral deformation, the deposit remains relatively intact. Detailed mapping by Teck geologists within the main deposit area has shown that high-grade copper mineralisation is controlled by a fracture/vein set that parallels a regional structural trend and strikes N60°W and dips steeply (-70°) to the southwest. This high grade zone also appears to plunge at 30° to 40° towards the south-east (see Figures 7 above and 8 below). This model has significant economic implications as it suggests that the higher grade zone of copper mineralisation has not been adequately tested by the historical vertical drillholes and that inclined drillholes will better define the extent and tenor of this mineralised zone. If this model is correct then systematic inclined drilling could better define the high-grade sections leading to better pit design to exploit near-surface high-grade mineralisation at the start of mining operations.

Teck has also defined four new target areas near to the main deposit and three other target areas on the property, namely the SW alteration feature, the NW IP anomaly and the E alteration feature that are, as yet, poorly defined (Figure 9 below). The well-defined targets, referred to as the eastern, southern, south-western and western anomalies, have been defined using geological mapping, stream and soil sample geochemistry and geophysical surveys using IP with several diamond drillholes in three anomalies (east, south and west) to determine the extent and tenor of mineralisation.

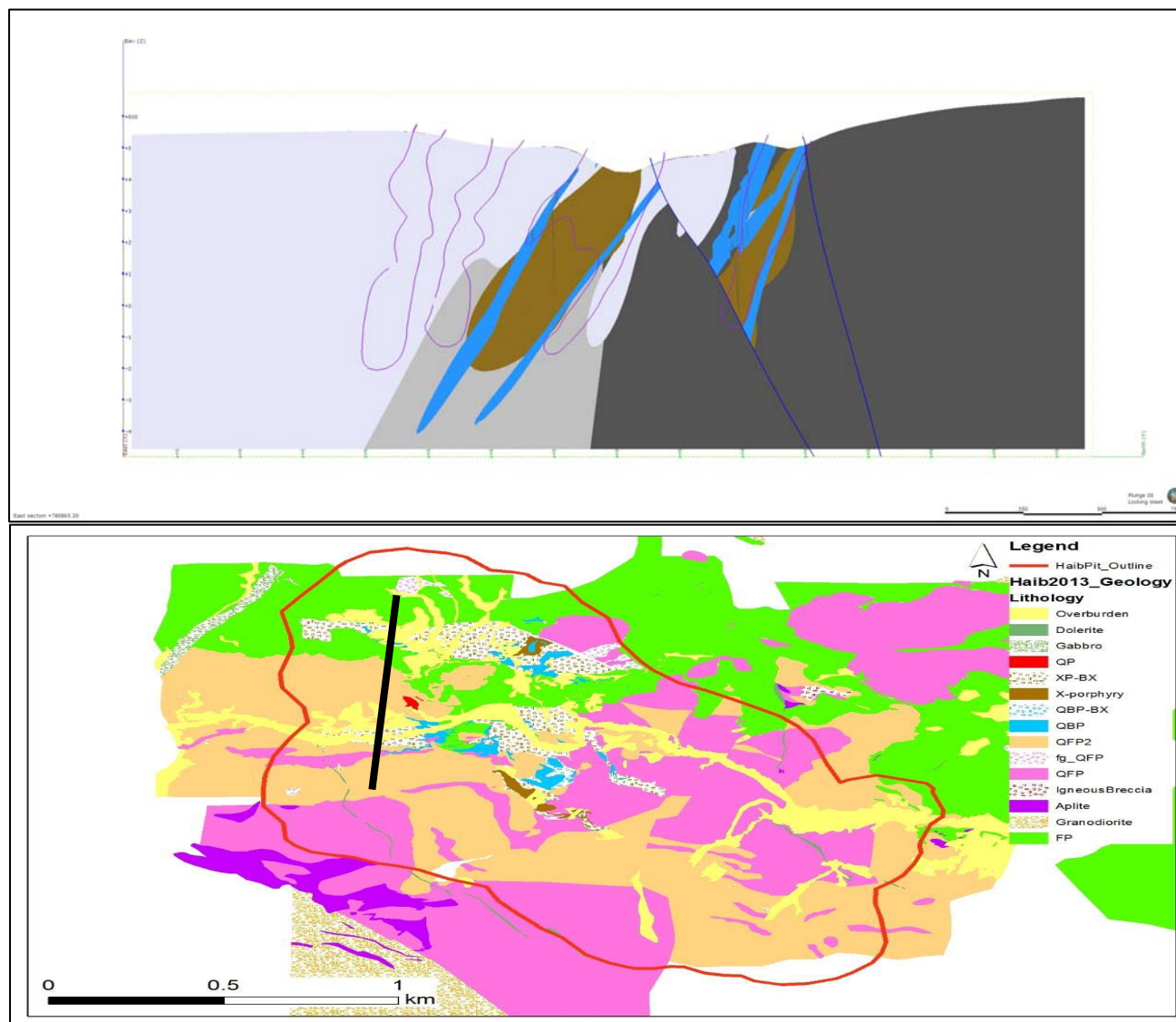


Figure 8: North-south cross-section across the western end of Haib, showing steeply south dipping Quartz Breccia Porphyry (“QBP”) dykes and hydrothermal breccias (blue and brown) intruding the country rocks (QFP, QFP2 and FP), and truncated by a shear zone in the north and fault in the centre. Potassic Early Dark Micaceous veins are developed mainly in the wall rocks to breccias, particularly to the south. (Teck 2015 ⁽⁴⁵⁾)

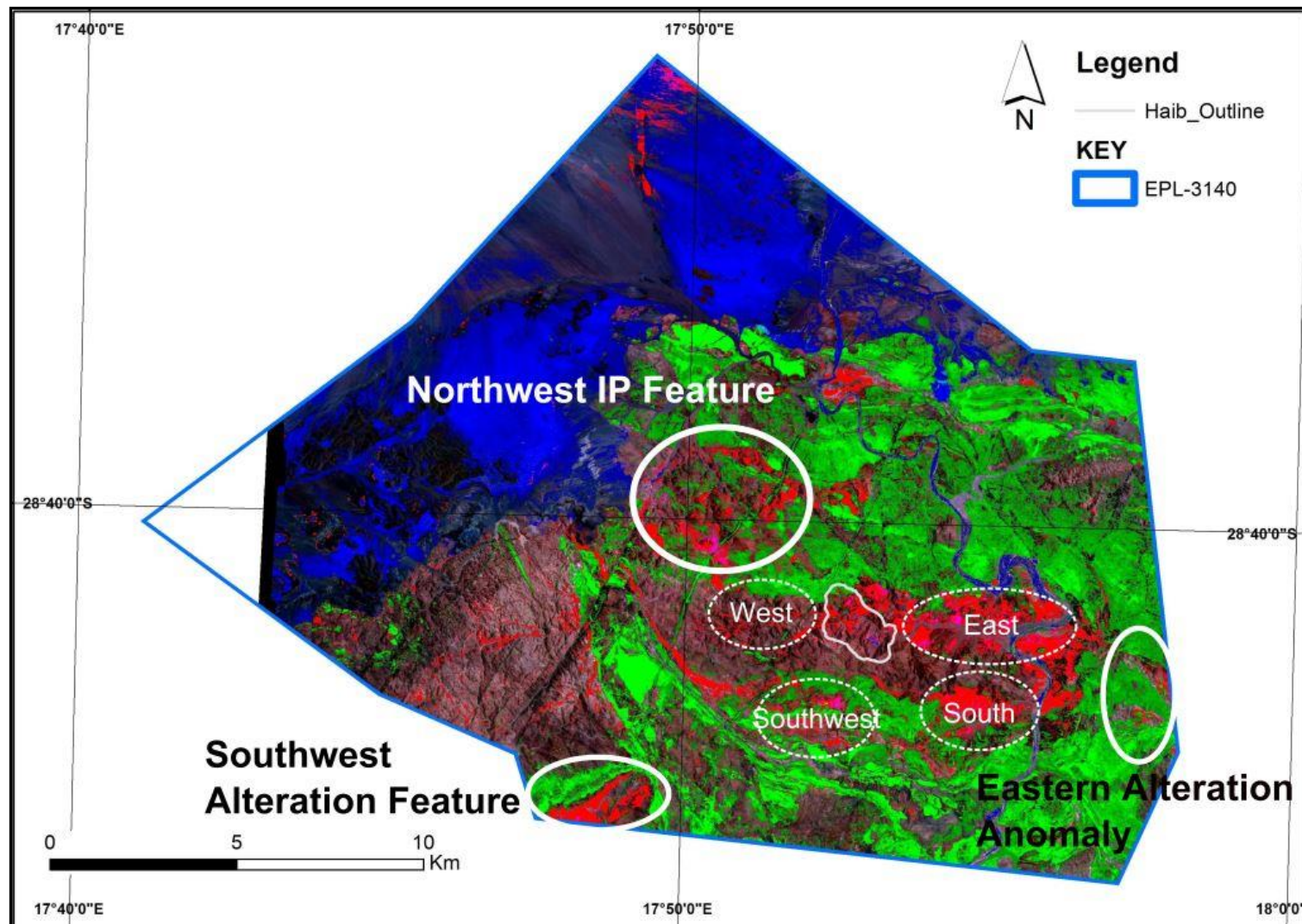


Figure 9: This map shows the main Haib deposit (outlined in solid white at the centre of the coloured area) and the more important anomalies against Hymap Alteration Imagery: - red colours generally correspond to sericite, green to chlorite/volcanics, reddish-brown to Vioolsdrift granodiorite, and blue to Karoo and recent sand cover. (Teck 2015⁽⁴⁶⁾).

7.4. *The Haib Mineralisation Model* ^(6, 18, 44, 45)

The Haib deposit comprises a large volume of rock containing low-grade copper mineralisation with some accessory molybdenite. At surface, the copper grade varies between three higher grade core zones progressively reducing in grade outwards towards the margin of the deposit. A similar distribution persists below surface in the 300m - 400m levels explored by RTZ, although the recent deep inclined drilling by Teck to 800m depth suggests that the higher grade zones of mineralisation exist below 400m depth. The surface area in which mineralisation has been identified equates to a surface dimension of about 2,200 x 1,250 metres. The deposit is still partially open to the west (at surface), to the south, and also at depth.

Mineralisation is spatially associated with syn-mineral porphyritic dykes (the QBP) and associated hydrothermal breccias, but there is also considerable vein and disseminated mineralisation in the QFP and FP wall rocks. Molybdenum bearing quartz veins cut both breccia and wall rocks in the high grade zones. Teck, using very detailed geological mapping techniques, have identified a fore-arc system that strikes E-W, with late-stage oblique fracturing striking N60°W and dipping 70° towards the south-west. These fractures are utilized by numerous generations of quartz and Early Dark Micaceous ("EDM") veins accompanied by biotite flooding and increased grades of copper mineralisation. The EDM veins are fractures along which the earliest hydrothermal fluids flowed and are mainly composed of macroscopic biotite-kspars-chalcopyrite ± pyrite, and are typical of porphyry deposits. The sets of EDM veins are parallel to the breccias and dykes and contribute to a high-grade section plunging 30° to 40° to the east-south-east.

The principal sulphides within the Haib body are pyrite and chalcopyrite with minor molybdenite. Bornite, digenite, chalcocite and covellite are also present locally. There is sulphide zonation where a deep bornite-chalcopyrite assemblage grades outwards and upwards to chalcopyrite-pyrite, with a low grade pyrite ± chalcopyrite fringing zone. There is no major development of a supergene zone, probably due to the high rates of erosion associated with the lower Orange River canyons.

Near-surface oxidation has led to the formation of malachite, azurite, chrysocolla, minor cuprite and chalcocite, generally along fracture zones. Oxide copper rarely extends to depths in excess of 30 metres on these fracture zones. While the oxide zone volumetrically represents a fairly minor proportion of the deposit, grades are significantly above average giving the potential for some leachable copper from the oxide material. These portions of the deposit have not been explored in detail.

In addition, there is a variable thickness of transition zone mineralisation generated over large parts of the deposit, between the surface oxide zone and a pure sulphide (un-oxidised) zone of some 10-20 metres thickness (i.e. completely fresh rock is encountered 30-40m below surface).

Sulphide minerals are disseminated within the rock mass and are also found concentrated in blebs and along veinlets and fractures. Significant mineralisation commonly occurs along quartz veins and in EDM veins.

Gold, silver and molybdenum are trace constituents associated with the copper mineralisation. Molybdenite is occasionally seen as disseminated flakes and in EDM veins, but the majority is hosted within a distinct generation of quartz-molybdenite

veins. Assaying for gold, silver and molybdenum was not routinely conducted on drill samples by RTZ but was done later by NCJV on composite samples of their core and some of the RTZ core in their preparatory studies for metallurgical testing, giving an approximate indication of the likely values. HM are now routinely including determinations of gold, silver and molybdenum in their core drilling and has also re-assayed mineralised sections of 14 RTZ drillholes for these elements (see discussion on this programme under Section 10 below) with results being similar to the NCJV values quoted above.

Outside of the main Haib deposit HM have outlined three satellite targets (see Figure 9 above) called the East, West, and South anomalies which have been drilled and evaluated (see Section 9.4 below) as well as four further anomalies – the Southwest alteration feature and Southwest sericite anomaly, the Eastern alteration feature and the North-west IP feature which still require further exploration.

8. DEPOSIT TYPE

The Haib copper deposit is a porphyry copper deposit of palaeo-Proterozoic age ^(18, 46, 51). Porphyry copper deposits are a major world source of copper (also molybdenum, silver and gold) with the best known examples being concentrated around the Pacific Rim, in North America, South America, and areas such as the Philippines. Most of these deposits are relatively young, of Tertiary or Cretaceous age. The United States Geological Survey⁽⁵¹⁾ defines a porphyry copper deposit as follows –

- *One wherein copper-bearing sulfides are localized in a network of fracture-controlled stockwork veinlets and as disseminated grains in the adjacent altered rock matrix;*
- *Alteration and ore mineralization at 1–4-km depth are genetically related to magma reservoirs emplaced into the shallow crust (6–8+ km), predominantly intermediate to silicic in composition, in magmatic arcs above subduction zones;*
- *Intrusive rock complexes that are emplaced immediately before porphyry deposit formation and that host the deposits are predominantly in the form of upright-vertical cylindrical stocks and(or) complexes of dikes;*
- *Zones of phyllic-argillic and marginal propylitic alteration overlap or surround a potassic alteration assemblage; and,*
- *Copper may also be introduced during overprinting phyllic-argillic alteration events*

The Haib deposit has all of the above defined geological characteristics (see Section 7 above) and is therefore a porphyry copper deposit, being formed within intrusive Proterozoic rocks at 1 880my BP. Porphyry copper systems usually occur along subductive zones and commonly occur in clusters. It is interesting to note therefore that: - The Lorelei Deposit, some 120km WNW of the Haib (Figure 6), is another low grade copper-molybdenum porphyry showing similar alteration zonation and is of a similar age to the Haib ^(37, 51) and the Tatasberg deposit, some 80 km WNW of the Haib across the border in South Africa (Figure 6) is reportedly also a porphyry style Cu-Mo deposit showing typical alteration zoning but is reported to be only some 540my old, although the source of this dating is not reliable; the deposit was explored between 1974 & 1976 by African Selection Trust Exploration ("ASTE") and some 9 diamond drillholes were completed with the best intersection yielding 6% Cu and 32% Mo over a 1m interval but the general average is reportedly some 0.2% Cu ⁽⁴⁷⁾. Unfortunately, the detailed reports of ASTE's exploration could not be obtained from the S.A. Geological Survey as they are apparently "lost" in their library.

9. EXPLORATION

In April 2004 DSM acquired the Haib area under EPL 3140. Subsequently, Teck as discussed previously in the Background Sections of this Report optioned the property and assumed management of the exploration programme.

Teck took a more regional view of the project than previous operators and did not only focus on the work completed by the NCJV. Their exploration objective was to provide the required data to show that the deposit had potential for large-scale mining, particularly if the tonnage or grade, or both, could be improved and that early stage mining could exploit sufficient high-grade mineralisation to improve the economics of mining. They started a new exploration programme both to investigate the open ended parts of the deposit (deep drilling and extension drilling) and to explore for new, undiscovered outlying mineralisation. This had not been previously attempted.

Teck, following this model, from 2008 to date, have completed the following work: -

- A regional stream sediment sampling programme collected 276 samples aiming to sample all first and second-order streams every 300m-500m over an area of 320sq.km. This was conducted in 2008 over outlying areas of alteration around the existing Haib deposit. This led to the discovery of four adjacent anomalous zones spaced some 2km from the main Haib mineralisation and it is these anomalous zones that have been geophysically investigated as discussed in later sections. Three of these zones (shown in Figure 10 above) have recently been evaluated by diamond drilling and found to be of low grade and caused by distal veining from some unknown porphyry intrusive.
- A total of 32 diamond drillholes (totalling 14,252 metres). These were drilled within the historically defined main mineralisation and on the Eastern, Southern and Western IP / soil geochemical anomalies (discussed in Sections 9.4 & 10.2 below).
- Using the Anaconda mapping method, which maps in detail the lithology, alteration, vein type, orientation and intensity on separate overlays, they have mapped about 75% (205 ha) of the area around the 275 ha. main deposit (at a scale of 1:10,000) and all (90 ha.) of the main deposit at 1:2,000 scale; Teck have also mapped the Eastern and Southern IP defined anomalies at 1:10,000 scale, while the vein zone at Haib West has been mapped at 1:2,000 scale (Locations are shown in Figure 9 above).
- They have re-logged all of the available (108 out of 120) old RTZ drillholes in detail, again using the Anaconda method. These were all located within the Main Haib deposit.
- They have re-sampled 14 of the old RTZ drillholes to compare the assay results obtained by RTZ for copper and also to determine the grade of gold, silver and molybdenum (Figure 19 below).
- They completed some 83 line kms. of pole-dipole Reconnaissance Induced Polarization (RIP); and another 6 line km. of Audio Magnetotellurics (AMT).

(Note: - AMT is a high-frequency magneto-telluric technique for shallower investigations. While AMT has less depth penetration than MT, AMT measurements often take only about one hour to perform, although deep AMT measurements during low-signal strength periods may take up to 24 hours, and use smaller and lighter magnetic sensors.)

- They have taken 636 soil samples on grid lines 150m apart with sample spacing of 50m covering an area of 400 hectare across three of the satellite targets – the South, Southwest and West anomalies (Location - Figure 9 above).
- They have constructed a 3-D geological model of the Main Haib zone using Leapfrog geo-modeling software (see Figure 10 below). This model combines all the surface and down hole geology, assays and geochemistry to constrain the grade envelope in a future resource estimate. The model is complete but the non-compliant resource estimate using the new geology constraints has not been completed.

9.1. Teck's Geophysics

Various geophysical techniques have been applied over the Haib deposit on several occasions. The earliest documented geophysics for which records exist was an Electromagnetic survey (EM) conducted by J. Shepherd of Falconbridge in March 1964.

A further significantly more detailed IP and resistivity survey was conducted by RTZ in December/ January 1974-75. This covered the bulk of the main mineralised area.

Teck proceeded to complete RIP, PDP and AMT geophysical surveys initially over the main Haib mineralisation and then extended their surveys to cover targets generated by a study of alteration patterns in the Proterozoic country rocks in EPL 3140. These programmes were conducted in-house. Figure 11 below shows the location of RIP sections completed across the main Haib mineralised zone with a 3D representation showing the Haib drilling. The impact of the disseminated sulphides in the main Haib body is well represented by the zones of red and pink (high chargeability).

The fairly extensive geophysical survey programme over alteration anomalies around the main Haib mineralised body determined several additional zones of high chargeability. These geophysical anomalies, together with detailed geological mapping to show alteration and geochemical soil, stream and rock chip sampling results allowed Teck to prioritise follow-up evaluation programmes of these anomalies which are on-going (for their location see Figure 9 above).

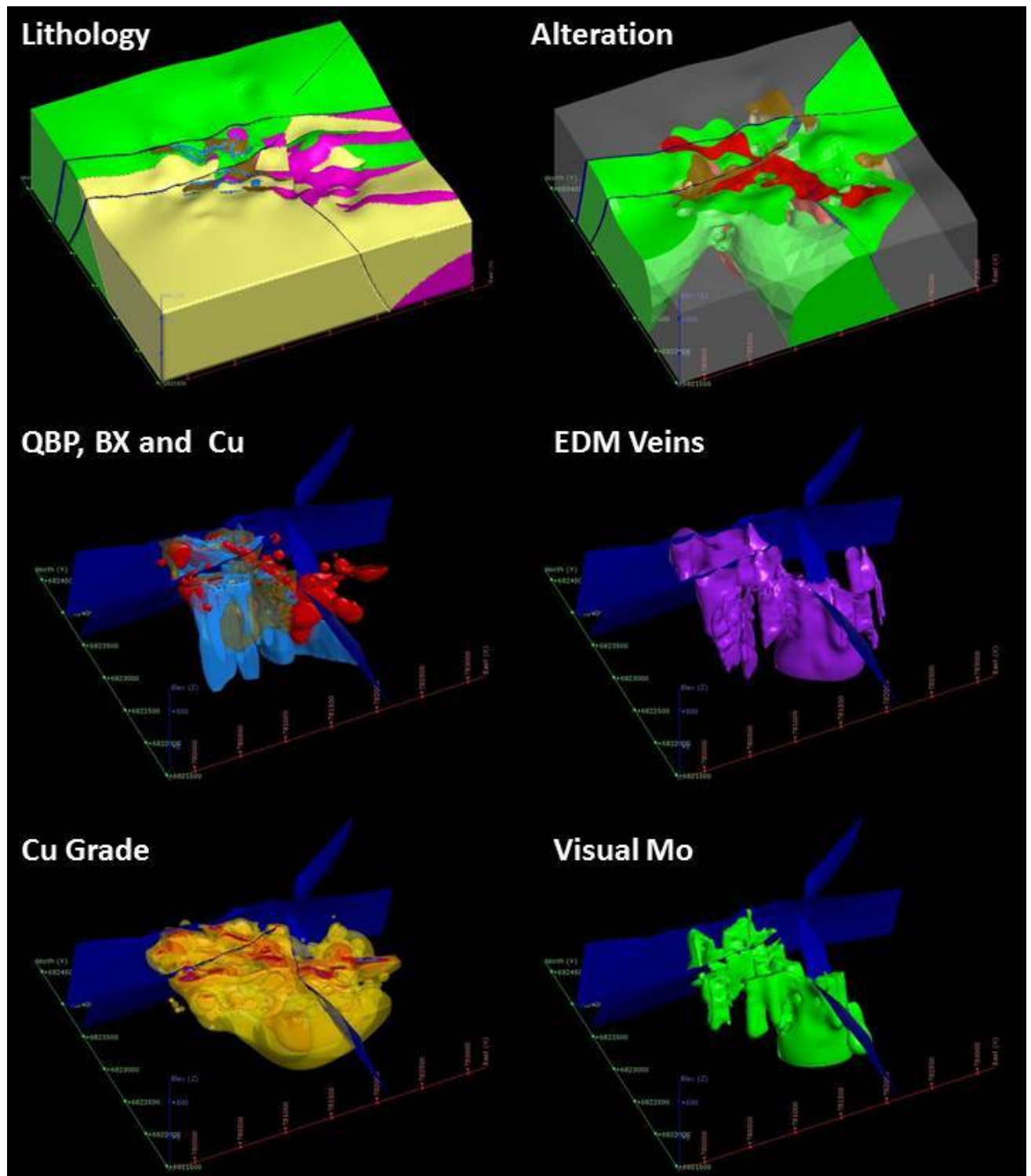


Figure 10: A compilation of 3-D models of the Main Haib deposit (Source: Teck, 2015)

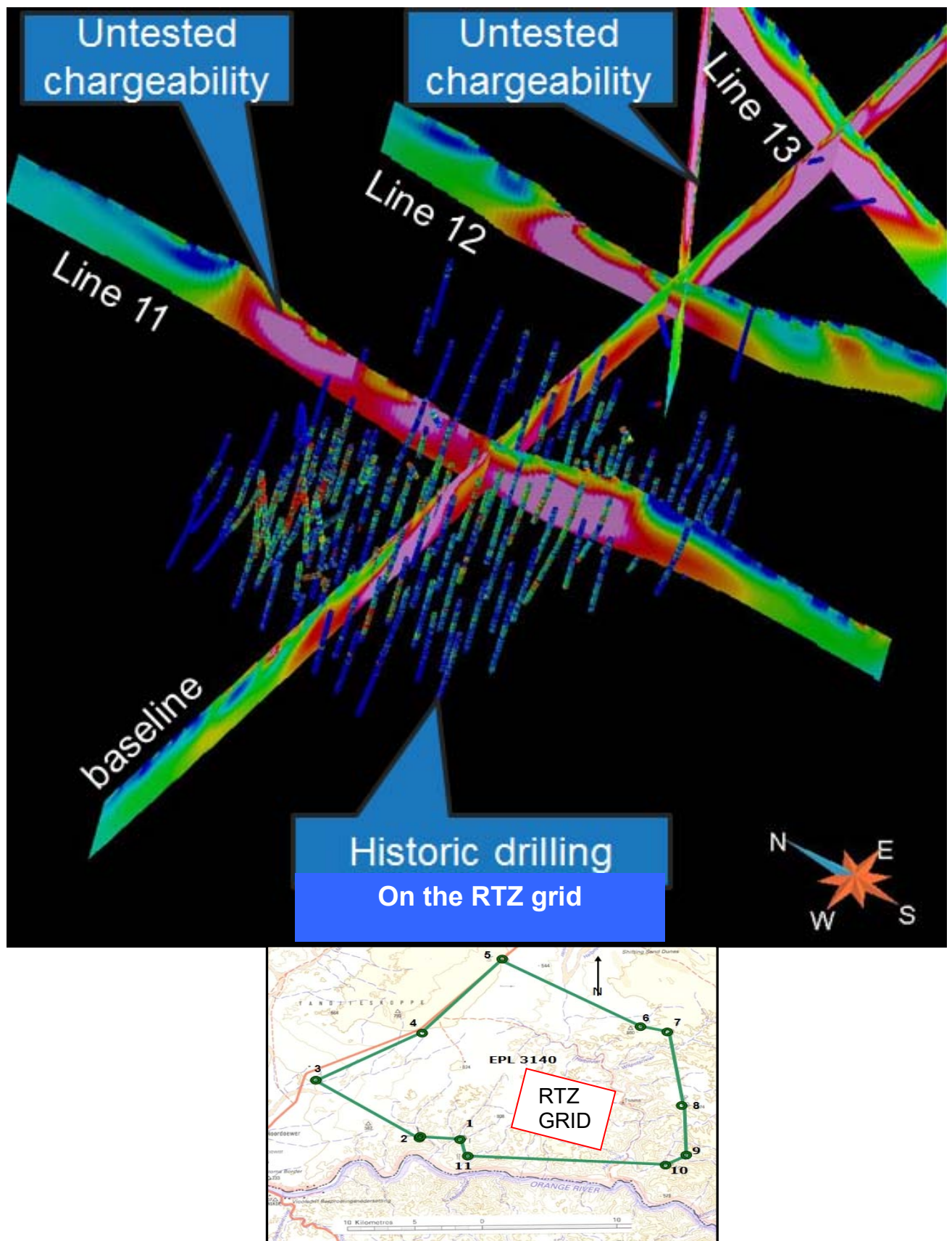


Figure 11: A 3-D diagrammatic representation of the Teck IP geophysical section lines across the main Haib deposit. The pink and red zones adjacent to the drillholes show the zone of mineralisation with a high chargeability. (Source Teck 2012)

9.2. Teck's geochemical surveys

9.2.1. Stream sampling: This sampling campaign was aimed at evaluating the outlying areas of the licence and none of the main Haib mineralisation area was sampled by Teck. The sampling was completed in 2008 and all the large third-order streams were avoided since these would be much diluted. First and second-order streams were sampled every 300m to 500m by collecting roughly 1-2Kg of sample from trap sites using a stainless steel shovel, dry sieving these to -2mm and further to -80# size using stainless steel sieves (brushing the sieves between samples and washing them every day) and packaging these in a brown paper sample bag with a sample number tag inside and outside of the bag. The GPS location was taken and recorded. Every 20th sample is duplicated by taking another sample within 1 or 2 metres of the first site. Standard and Blank samples are inserted later on a 1:20 frequency but randomly inserted in the sampling sequence.

9.2.2. Soil Sampling: Since RTZ soil sampling coverage around the main Haib body was quite extensive, Teck have extended their grid lines into the outer regions of the licence using the same orientation. The samples were collected on 150m line spacing using 50m sample spacing. This campaign has collected 636 samples over an area of 400 hectare. The procedure employed is to dig a hole to a depth of some 10cm. using a stainless steel shovel, dry sieving these to -2mm and then -80# size using stainless steel sieves (brushing the sieves between samples and washing them every day) and packaging these in a brown paper sample bag with a sample number tag inside and outside of the bag. The GPS location is taken and recorded. Every 20th sample is duplicated by taking another sample within 1 or 2 metres of the first site. Standard and Blank samples are inserted later on a 1:20 frequency but randomly inserted in the sampling sequence.

9.3. Teck's geological mapping

Teck use a geological mapping method which results in at least 3-overlays for mapping of structural, lithological and alteration features. The more detailed mapping in and around highly mineralised areas add another "vein" overlay to this map. The various features are colour coded.

9.4. Teck's Other Targets

Outside of the main Haib deposit Teck outlined three satellite targets, as indicated on Figure 9 above. The eastern anomaly, with extensive sericite alteration zones, high molybdenum geochemical results and a defined IP anomaly, has been evaluated by four vertical diamond drillholes with a total depth of 1,525.35m (see Table 8 below) with only minor traces of mineralisation.

The southern anomaly (Figures 9 above and 12, 13 below) is also well defined by extensive sericite alteration, some copper staining with haematite/limonite and gypsum associated with quartz vein sets, so-called D-veins in porphyry system terminology (photograph 5 below) and a distinctive IP response. On surface this anomaly extends over 1.2km along strike and 350m – 500m across strike; it appears to be steeply dipping to the south. Four diamond drillholes totalling 1,484.34m of which 3 holes were angled to the north and one to the south were

used to evaluate this anomaly, (see Figure 14 below) but assay results indicated less than 0.2% Cu in zones where there is a high density of D-veins and <0.1% Cu elsewhere. The strong IP anomaly is probably the result of the abundant pyrite in the veins. This vein zone has been interpreted as being distal from a further porphyry system but because of thrusting and late-stage normal faulting, the location and depth of this body are difficult to estimate. The drilling clearly defines a lower contact for the vein zone.



Photograph 5: Weathered outcrop showing iron-stained (after pyrite) quartz D-Veins at the Haib South Anomaly.

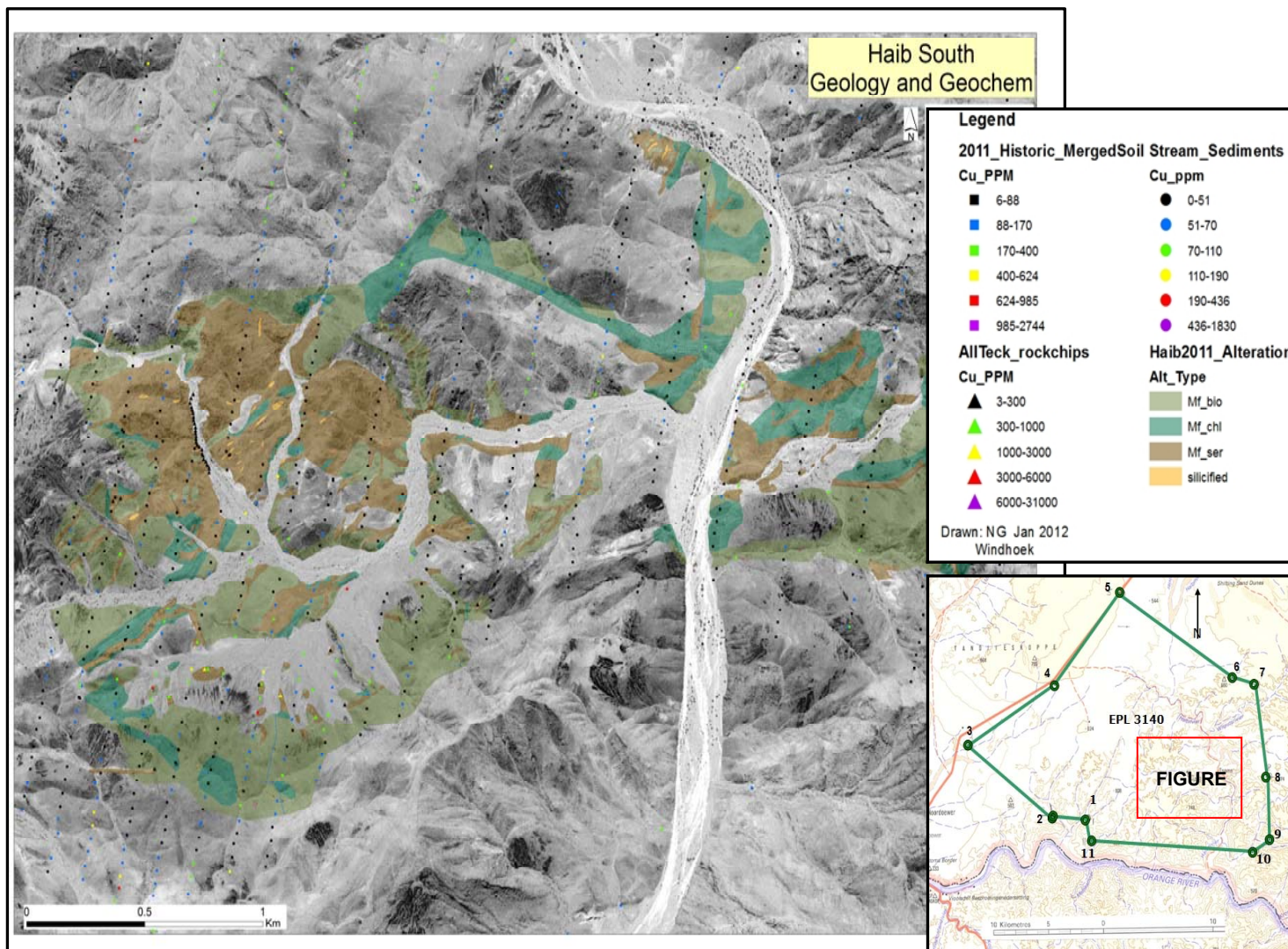


Figure 12: Map showing the alteration geology of the Haib South anomaly (Source Teck 2012⁽⁴¹⁾)

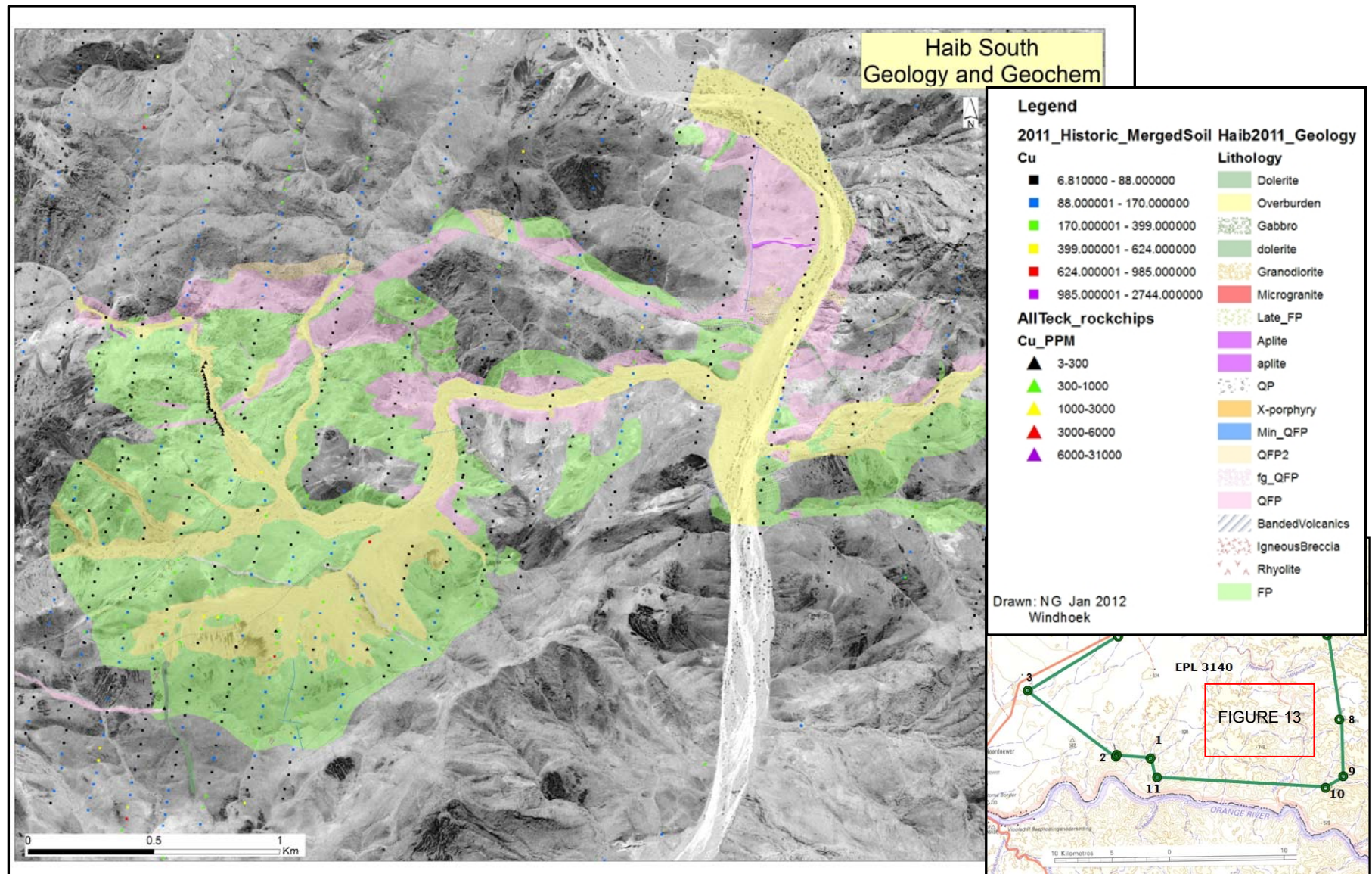


Figure 13: Map showing the lithology of the Haib South anomaly (Source Teck 2012⁽⁴¹⁾)

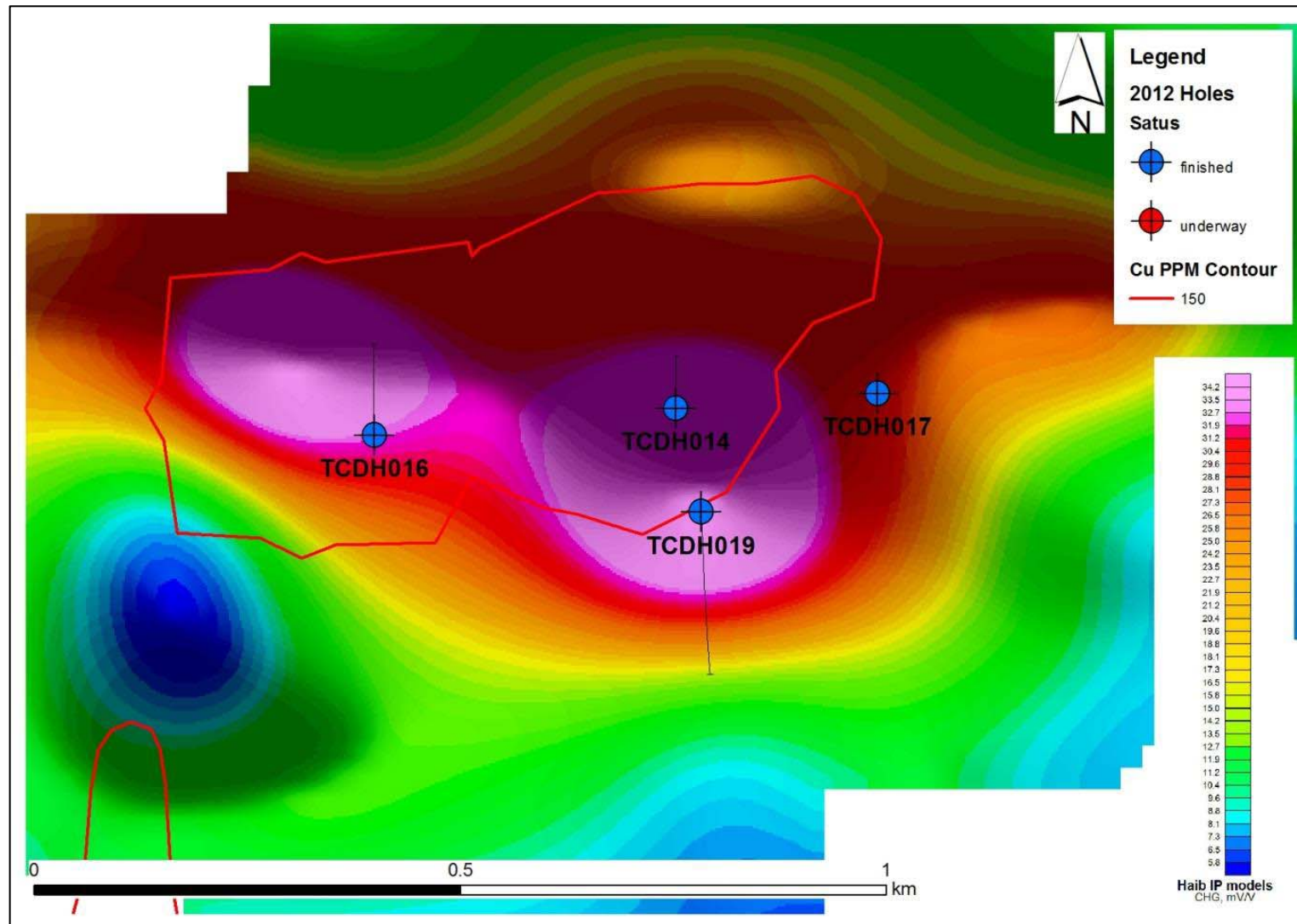


Figure 14: Map showing the location of drillhole collars overlaid on the IP Chargeability contours (50m depth slice of pole-dipole lines) & the Cu in soil >150ppm contour line – Haib South Anomaly (Source Teck 2012⁽⁴¹⁾).

The Western anomaly (Location - see Figure 9 above) consists of a km-scale soil anomaly coincident with an 800m long, NE trending and SE dipping quartz vein zone (photograph 6 below) truncated in the Northeast by a shear zone. The veins are predominantly A- and B-type quartz veins with only minor EDM veins, and are analogous to those found at the main Haib deposit. The Western anomaly was drilled by RTZ using a single vertical hole. Teck have now drilled two inclined diamond drillholes totalling 735.37m but these were completed before the detailed mapping programme and may not have been sited optimally (see Figures 15, 16, and 17 below). The one Teck hole intersected 44m of 0.22% Cu with a high grade section of 4m at 0.4% Cu. Again, this anomaly has been interpreted as a distal portion of a separate porphyritic intrusive.

There is some alteration and IP evidence which outlines a further four targets (see Figure 9 above) which will require follow-up geophysical, geological mapping and geochemistry work to confirm their potential as exploration targets for drill investigation: -

- The North-western IP anomaly has poorly defined soil geochemistry and has not yet been drilled by HM.
- The South-western anomaly contains extensive sericitic alteration with zones of pyrophyllite and alunite indicating it is very high in the porphyry intrusive alteration system but with no indications of near surface mineralisation.
- The Eastern alteration feature consists of a quartz-rich sericitic alteration zone with minor copper staining within the FP to the immediate south of a dyke of QFP dipping steeply (75 – 80°) to the Southwest.



Photograph 6:

Example of the vein zone at Haib West, with each horizontal fracture representing a quartz vein which weathering has broken open.

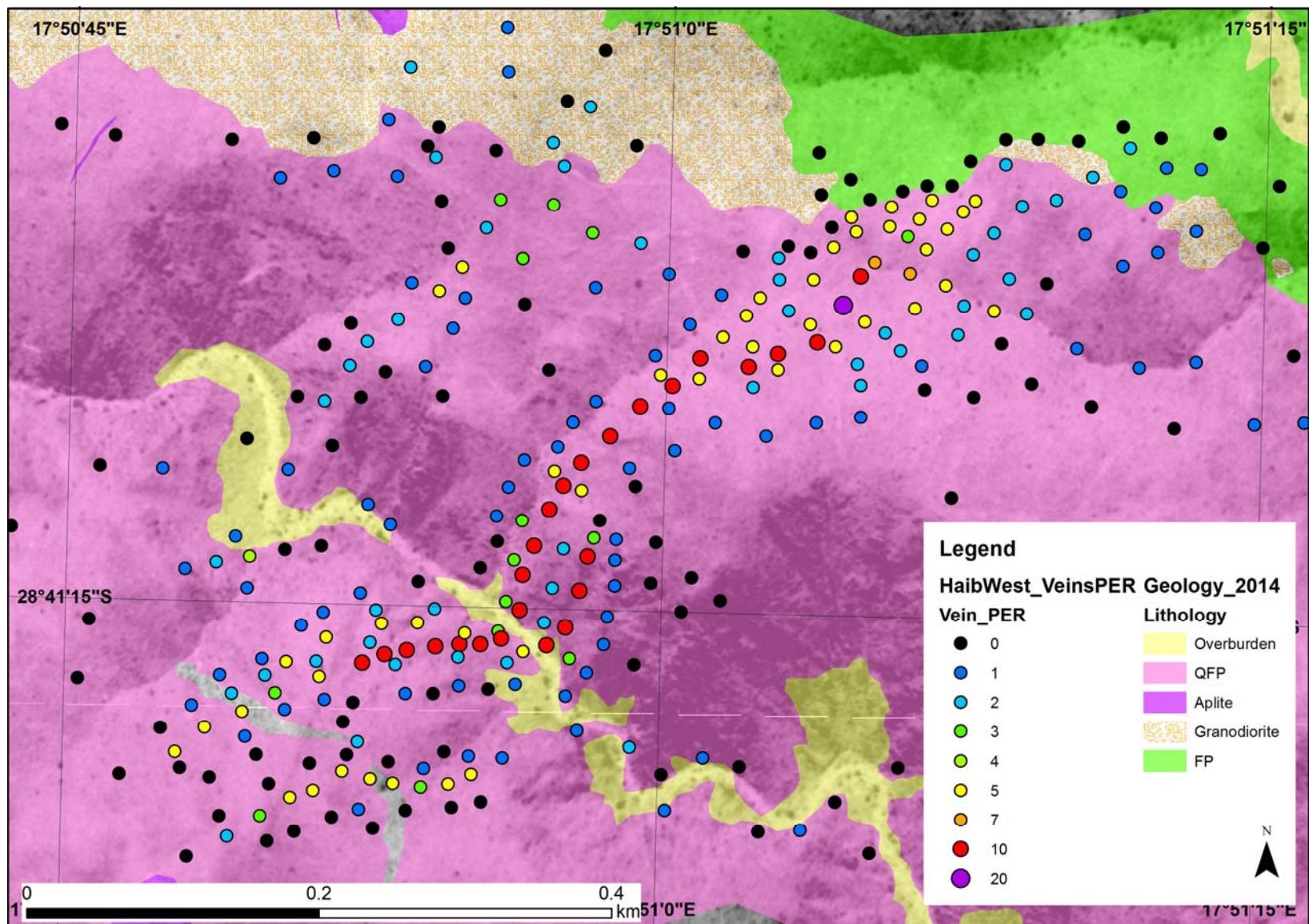


Figure 15: Map showing the geology and vein densities (%) at Haib West (Source Teck 2015⁽⁴⁴⁾)

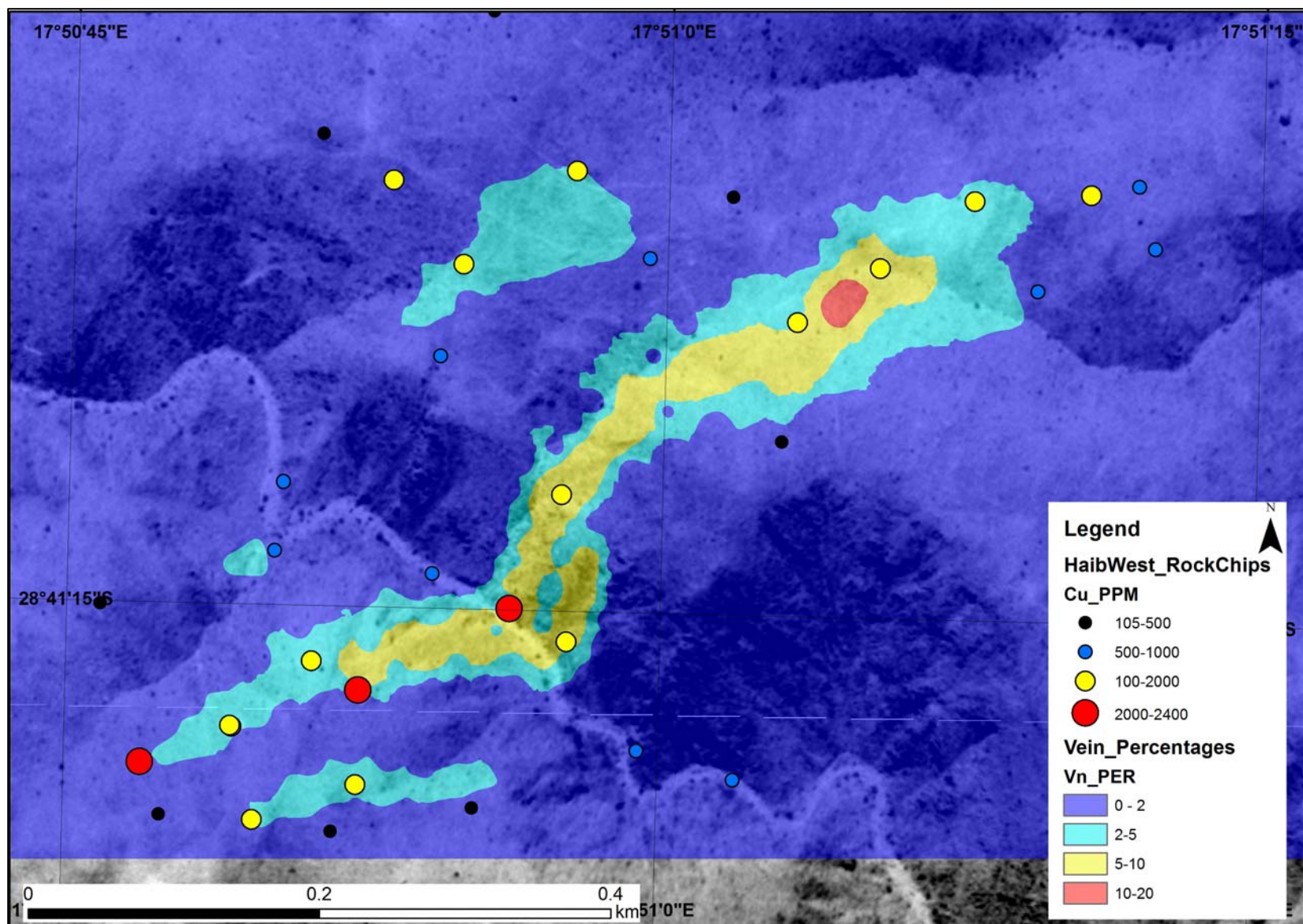


Figure 16: Rock Chip samples collected across the vein zone identified at Haib West, with a background image of contoured vein percentages estimated from outcrop locations in Figure 17 (Source Teck 2015⁽⁴⁴⁾).

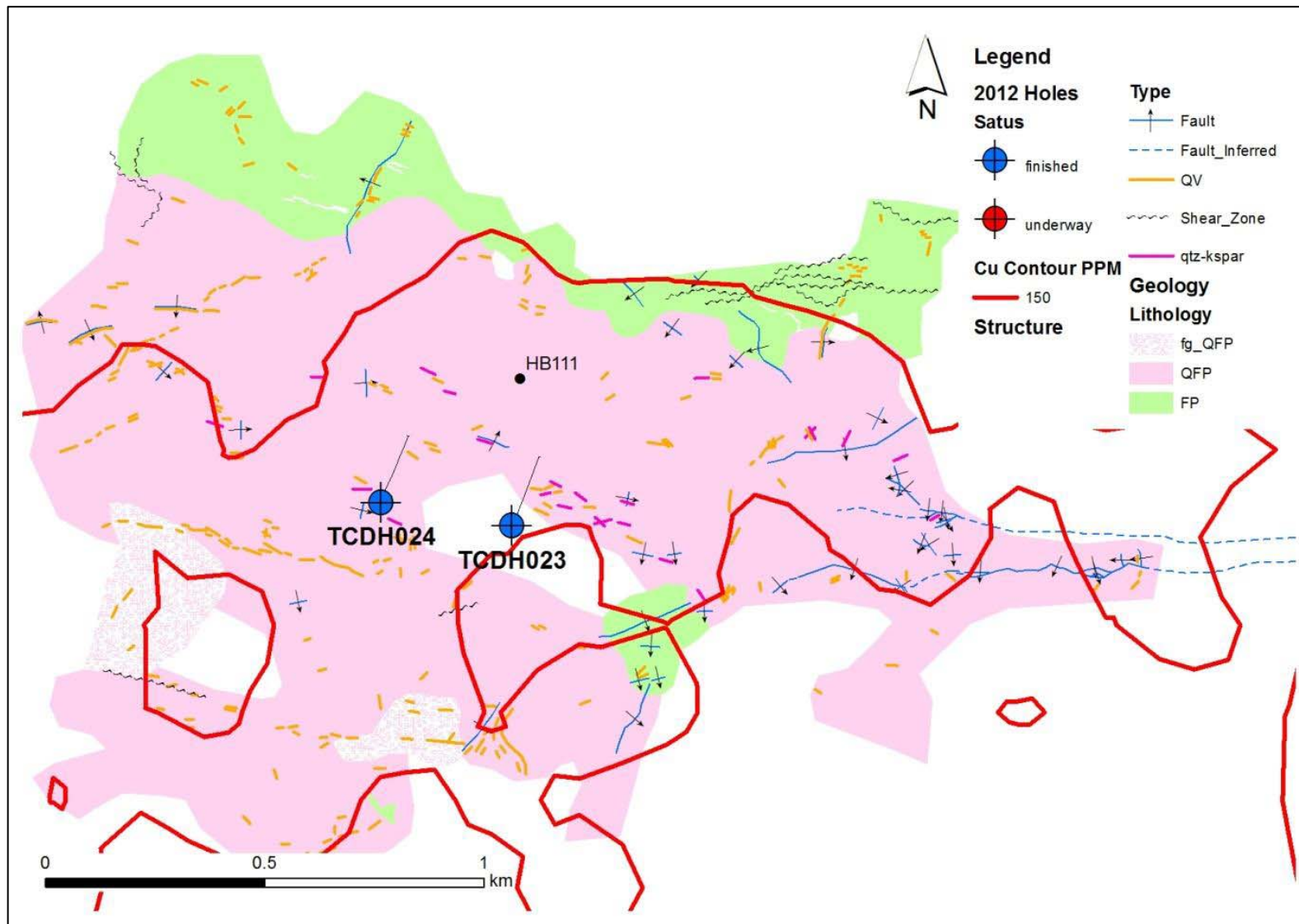


Figure 17: Plan map of Haib West showing the position of the holes drilled in 2012, targeting a zone of veining in the centre of a broad soil anomaly (Source Teck 2013⁽⁴⁴⁾)

10. DRILLING

10.1. Historical⁽⁶⁾

At least five separate drilling programmes have been conducted at the Haib; for dates of these programmes see the History Section above.

The first drilling was completed by Falconbridge who drilled eleven drillholes into the deposit in three principal areas of interest. Total drilling of some 1,012 metres was completed. The average grade of the drillhole intersections was given as 0.33% Cu. Very little of this data remains other than the drill core assays and their location in the field. It is not really possible to comment on this programme.

After Falconbridge, King Resources conducted a drilling programme of 21 holes totalling 3,485 metres. Again, this programme has very little useful data surviving, although drill assays are available and the drillhole collars have been located.

Most of these earlier holes were blocked or difficult to locate.

Subsequently, RTZ completed one hundred and twenty diamond drillholes, mostly vertical, on a systematic 150 metre square grid giving a total of 45,903 metres drilled (Figure 18). Holes were on average 300-400 metres deep. These cores are preserved in a shed (see photographs 3 and 4 above) at the old RTZ campsite and are available to study although some mineralised sections are reduced to quarter-core by assay and re-assay campaigns. The information from these drillholes was verified by GFM and incorporated into their geological model. This information was therefore used by Behre Dolbear in the Haib resource evaluation presented in section 6.3.4. of this report.

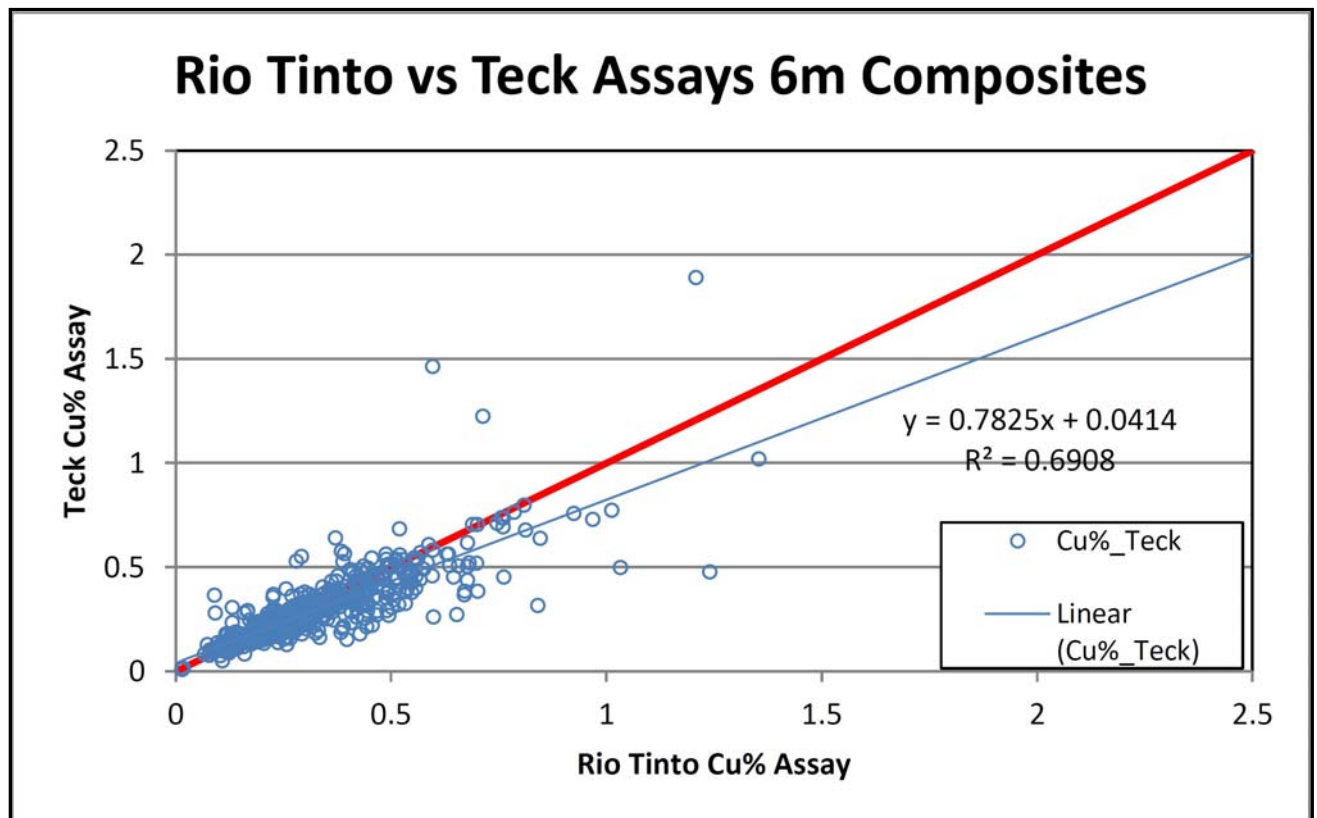
All drillhole assay data is based on diamond drill core, generally "N" or "B" sizes. Drillhole spacing was generally on a regional 150 metre square grid. The RTZ drillholes are mostly vertical, while the earlier Falconbridge and King Resources drillholes are inclined. One section line, 865₀₀ E was partially drilled by RTZ at 25 metre spacing across the zone of high-grade mineralisation. This was the line along which the adit was developed by the NCJV (photograph 2 above).

Sample recovery was reported to be generally good. Most of the historical drillholes were hammer-split and half core composites were sent for assay. The RTZ cores were sampled over 2 metre intervals for determination of total copper and, where appropriate, acid soluble (oxide) copper. Composite samples from each drillhole were tested metallurgically to determine recoverable copper and were assayed for molybdenum, silver and gold indicating average contents of 25 g/t Mo, 0.01 g/t Au, and 0.9 g/t Ag. The reliability of these numbers cannot be assured as assay certificates are not available.

From all of this information Venmyn Rand captured an electronic database of the available 1963-1975 drillhole data using drillhole logs as the original assay data sheets were unavailable. The database comprised 152 drillholes – 120 from RTZ, 21 from King Resources and 11 from Falconbridge.

To this database have now been added the 13 holes drilled by GFM and the 32 drillholes completed by Teck.

In 2010 and 2011, Teck quartered 3,714 metres of RTZ core from 14 drillholes (Figure 18 below) on a composited 3-metre sample interval and submitted them for re-assay using an *Aqua Regia* digestion method and an Inductively Coupled Plasma Emission Spectrometry (ICP-ES) technique to provide a 24 element determination; the RTZ composite samples were done on a 2-m sample interval whereas Teck composited at a 3-m interval – this means that a comparison of average elemental values can only be made at 6m intervals. The 619 x 6-m average value comparison for copper revealed that below 0.6%Cu the assay results are statistically identical but that bias (~15% positive bias in the RTZ data) creeps into the data above the 0.6% Cu level as shown graphically in the binary X-Y plot below.



It is probable that the ~15% positive bias in the RTZ >0.6% Cu results may be due to RTZ using a 4-acid digestion method which would release copper from silicate minerals, for example the copper in the biotite lattice in the high-grade zones where EDM veins are ubiquitous.

It should be noted that some of Teck's check assays of RTZ core completed in 2010 also used a fire assay in addition to the ICP-ES method, but since virtually all values returned <5ppb Au, it was decided to discontinue the fire assay as a routine assay method.

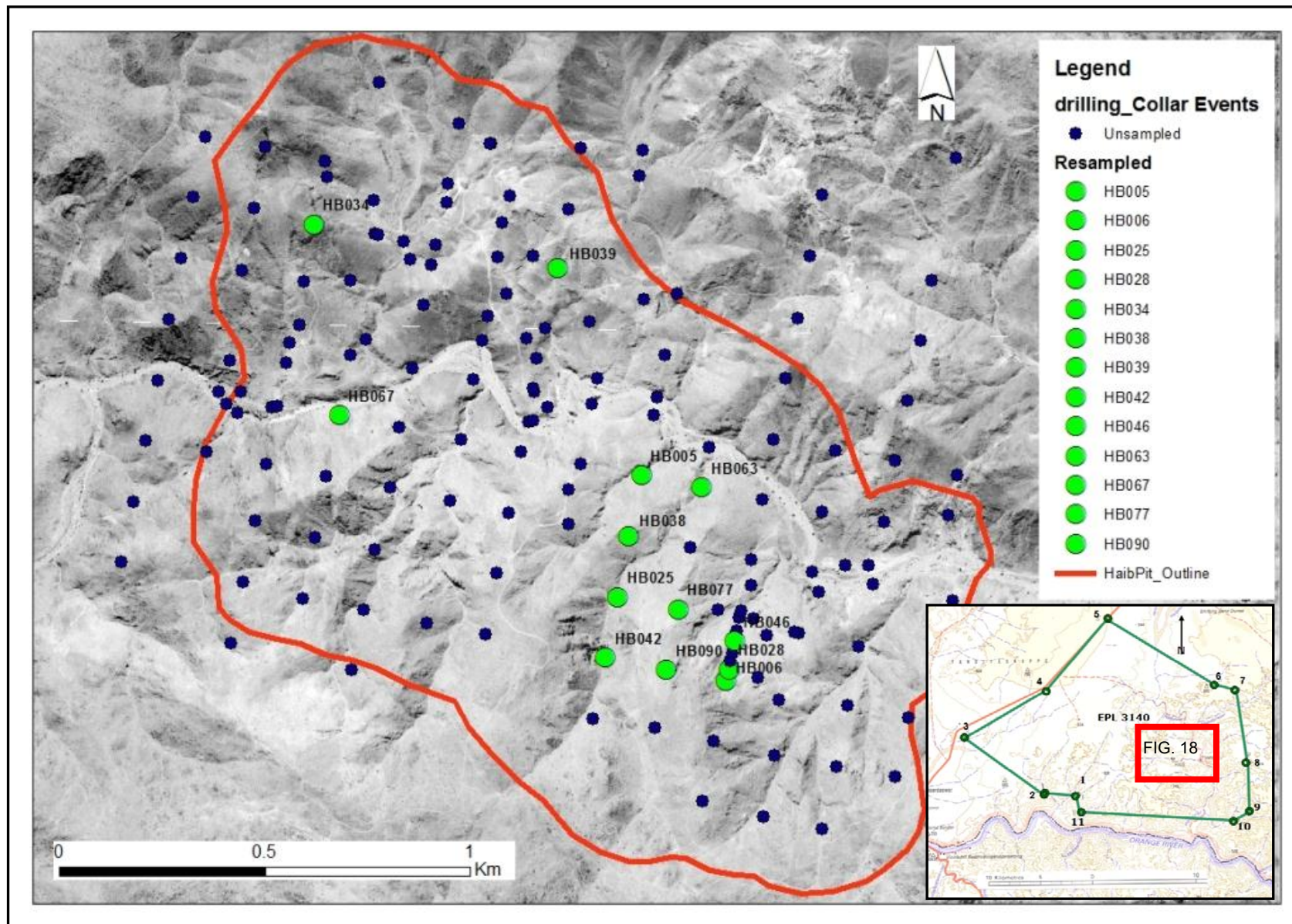


Figure 18: Plan showing location of RTZ drill collars and those re-assayed by Teck (Source: Teck 2012⁽⁴¹⁾)

An attempt was made by the NCJV to locate and resurvey all drillhole collars completed during the Falconbridge, King Resources and RTZ programmes. The data from this survey is available although not included in this report. Where existing data was available, the eastings and northings were generally found accurate but there were significant discrepancies (up to 80 metres) in the reported drillhole elevations. This factor represented a constraint on the accuracy of the data for geological modelling and on the confidence limits placed on the resource estimates, but it was not considered that it would have a significant impact on the overall resource figure as discussed later.

This issue was subsequently resolved by the NCJV which commissioned an Orthophoto survey of the area and generated a new surface topographic plan.

The NCJV/ GFM core drilling programme completed a further 12 infill drillholes for analytical purposes and another 5 large diameter drillholes for geotechnical work. Technical data is available for these holes. These were reported in an October 2004 report titled "Independent Technical Review, the Haib Copper Porphyry Project, Namibia" ⁽⁶⁾.

10.2. Teck Drilling

The most recent drilling programme at Haib was completed by Teck between 2010 and 2014 and comprised 32 diamond drillholes totalling 14,252m. Figure 19 below shows the location of the Main Haib deposit drillholes (including historic drillholes) and Photograph 7 shows a diamond drill-rig on site.

These drillholes were used to evaluate several target zones; the first group of 22 holes totalling 10,507.92m was drilled within the existing main Haib mineralised body; the holes were drilled to test: -

- the predictability of the mineralisation grades in the model derived from historical assay data,
- the higher grade portion of the mineralised body and,
- the deeper portions of the known mineralisation with the deepest hole at 806m depth (some 800m below surface).



Photograph 7:

This photograph shows one of the larger drill-rigs used by Teck to drill the deeper drillholes at the Haib eastern anomaly area. This rig is situated in the Volstruisrivier at Haib.

Table 8 below gives the basic data for all of these 32 drillholes with the Copper and Molybdenum results for significant intervals.

The second group of diamond drillholes tested for mineralisation at the Eastern, Southern and Western combined soil and geophysical anomalies and consisted of 10 holes totalling 3,745.06m. The location of these anomalies is shown in Figure 9 above.

Teck's protocol for Drillhole Surveys:- The drillhole collar locations are surveyed using a hand-held GPS at the start of the drillhole and a certified land surveyor using a differential GPS surveys all of the drill collars at the end of the programme. Down-hole surveys using a Reflex EZ-Com multi-shot tool are performed on holes in the main Haib body at 6m intervals as rods are pulled from completed holes. Down-hole surveys of the exploration holes into peripheral anomalies use a Reflex EZ-Com single shot tool at 100m intervals during the course of drilling. These instruments have a stated accuracy of 0.1 degrees of dip and azimuth.

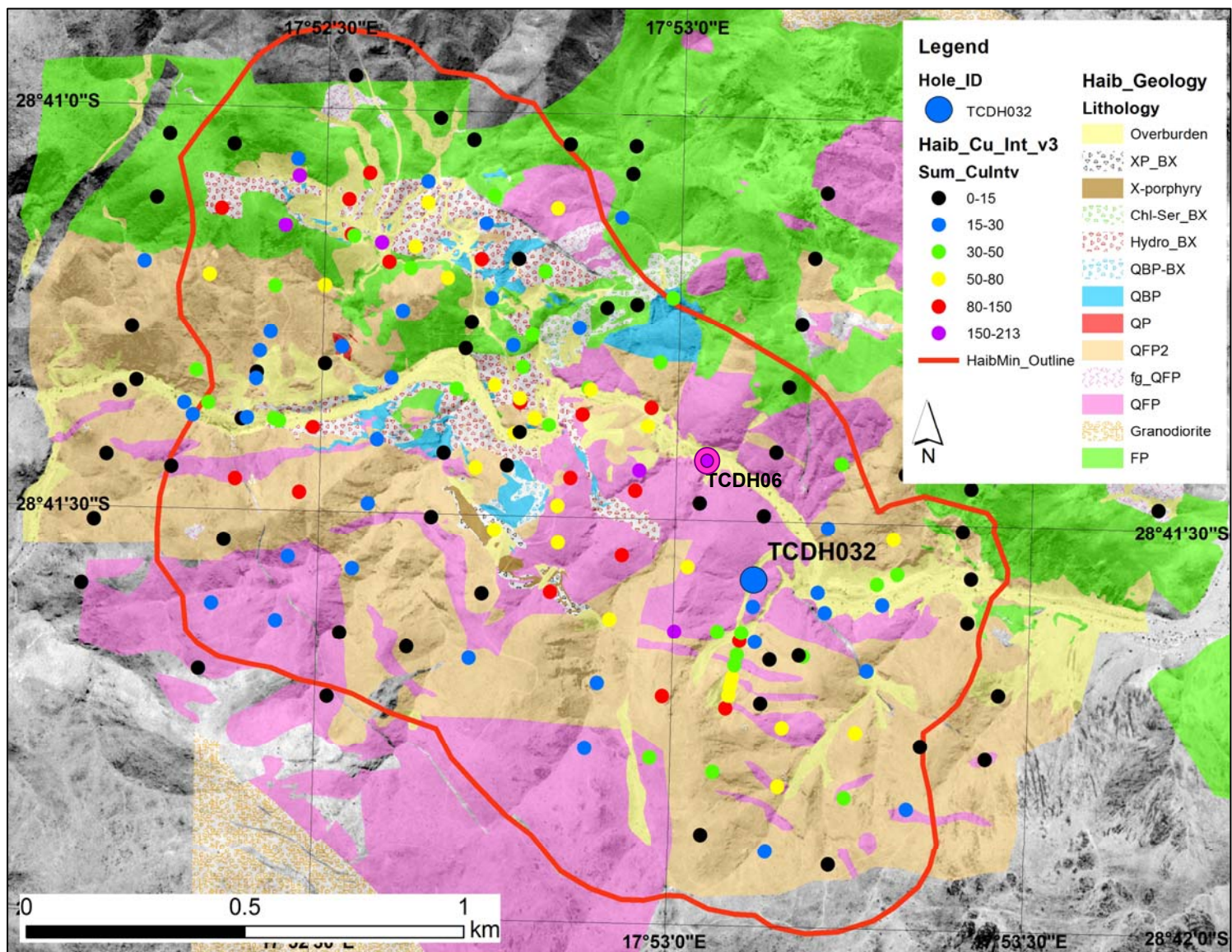


Figure 19: This map shows the historical drilling completed on the main Haib deposit together with the recent Teck drilling. The location of drillhole TCDH06 is shown, the log of which is shown as Figure 20. (Source: Teck 2015⁽⁴⁴⁾)

Teck's Procedures for drill logging and sampling: -

All drillhole cores are collected daily and stored in a galvanized steel tray at the core yard. The cores are washed to remove all residual cuttings and drill additives. The core is then measured to determine core recovery and Rock Quality Designation ("RQD"). The average recoveries reported by RTZ were >95% and Teck have measured average recoveries of >99% in the main Haib body and averages of >98% in the more altered peripheral Anomalies. The whole cores are then photographed.

The core is logged for lithology, alteration, structural elements, and mineralisation before being marked up for core cutting and sampling, the core sample length being at the discretion of the geologist, bearing in mind the wish to constrain well mineralised intervals and lithological breaks with recommended minimum 1m and maximum 3m length; to date the sampling tends to average 2m in length. The entire hole is sampled.

The core is halved sampling one half only, although early drillhole core from 2010 and 2011 used quarter-core duplicates, subsequent drillhole sampling has used half-core duplicates. Core cutting is done on site using a water-cooled diamond saw with the cutter being assigned one hole only and prohibited from wearing any jewellery; The saw is cleaned twice daily using a concrete brick and simultaneously the coolant water settling tanks (2 sequential tanks per machine) are also emptied and cleaned. The half core sample is bagged in good quality plastic sample bags with one sample number tag inside and a duplicate number tag attached to the outside of the bag. The sample bags are batched and transported by Teck personnel to Analytical Laboratory Services, an independent commercial laboratory in Windhoek where the samples are crushed, milled, and split with representative splits shipped by Teck in batches sealed in a box using FedEx couriers to an independent commercial laboratory, Acme Analytical Laboratories, now a subsidiary of Bureau Veritas in Vancouver, Canada for assay. Teck core samples are batched with a blank, standard and duplicate sample inserted every 20 samples. The Windhoek laboratory duplicates every 20th crushed sample to check for any bias after splitting of the crushed sample and for combined preparation and analytical variation (see discussion under section 11 below).

The above protocols ensure minimum probability of sample contamination and the chain of custody is also well defined and ensures minimal opportunity for third party tampering with samples.

Table 8:- Details of the Teck Drilling with Significant Intersections.

Hole ID	Target	X	Y	Z m	Length m	Azimuth	Dip	From (m)	To (m)	Interval (m)	Cu %	Mo %
TCDH-01	Haib East	784102	6823216	386	434.17	360	-90	No significant Intersections				
TCDH-02	Haib East	783201	6823112	348	350.04	360	-90	No significant Intersections				
TCDH-03	Haib East	784698	6823388	309	383.23	360	-90	No significant Intersections				
TCDH-04	Haib East	784709	6822725	328	357.91	360	-90	No significant Intersections				
TCDH-05	Deposit	781662	6822222	556	806.52	14	-80	0	806.52	806.52	0.16	0.005
Incl.								218	245.2	27.2	0.22	0.002
TCDH-06	Deposit	781802	6822906	397	842.78	194	-50	0	842.78	842.78	0.28	0.011
Incl.								349	842.78	493.78	0.36	0.018
Incl.								537	658	121	0.5	0.027
TCDH-07	Deposit	781667	6823026	398	822.86	195.5	-65	0	822.86	822.86	0.25	0.008
Incl.								231	405	174	0.32	0.006
Incl.								704	764.9	60.9	0.38	0.012
TCDH-08	Deposit	781624	6823560	468	370	30	-60	No significant Intersections				
TCDH-09	Deposit	781366	6823047	428	602.11	15	-55	0	602.1	602.1	0.16	0.006
Incl.								63	196	133	0.36	0.010
TCDH010	Deposit	781639	6822881	415	799.11	182	-65	0	799.9	799.9	0.29	0.012
Incl.								172	799.9	627.9	0.31	0.014
Incl.								227	515	288	0.37	0.018
Incl.								269	308	39	0.53	0.020
TCDH011	Deposit	780763	6823093	432	601.06	7	-60	0	601.06	601.06	0.10	0.003
Incl.								170	215	45	0.53	0.002
TCDH012	Deposit	780490	6823091	431	156.26	5	-50	No significant Intersections				
TCDH013	Deposit	782228	6822642	387	600.77	186	-55	0	600.77	600.77	0.19	0.003
Incl.								14	151	137	0.28	0.001
Incl.								86	139	53	0.34	0.001
Incl.								20	29	9	0.63	0.004
TCDH014	Haib South	784364	6819712	380	351.33	360	-80	No significant Intersections				
TCDH015	Deposit	781201	6823323	519	464.02	10	-60	0	464.02	464.02	0.2	0.002
Incl.								188	242	54	0.26	0.002
Incl.								50	82	32	0.56	0.005
TCDH016	Haib South	784010	6819680	435	311.06	360	-70	No significant Intersections				
TCDH017	Haib South	784601	6819729	351	393.85	360	-90	No significant Intersections				

(See continuation of Table 8 on next page)

Table 8 continued

Hole ID	Target	X	Y	Z m	Length m	Azimuth	Dip	From (m)	To (m)	Interval (m)	Cu %	Mo %
TCDH018	Deposit	781566	6823254	494	460.95	14	-60	0	455	455	0.1	0.002
Incl.								63	69	6	0.26	0.023
Incl.								269	279	10	0.26	0.001
TCDH019	Haib South	784394	6819590	415	428.1	182	-60	No significant Intersections				
TCDH020	Deposit	781600	6823460	476	497.12	360	-90	0	497.12	497.12	0.24	0.006
Incl.								116	472	356	0.3	0.008
Incl.								256	270	14	0.39	0.005
TCDH021	Deposit	782397	6822631	404	314.25	190	-60	No significant Intersections				
TCDH022	Deposit	781265	6822888	435	477.48	12	-60	0	477.48	477.48	0.21	0.011
Incl.								332	425	93	0.44	0.007
Incl.								383.65	415.52	31.84	0.79	0.010
TCDH023	Haib West	778372	6823136	494	376.93	21	-60	0	376.83	376.83	0.08	0.001
Incl.								180	204	24	0.2	0.001
Incl.								276	296	20	0.24	0.003
TCDH024	Haib West	778074	6823190	653	358.44	10	-60	No significant Intersections				
TCDH025	Deposit	781435	6822603	528	568.7	360	-90	0	568.7	568.7	0.22	0.005
Incl.								71.7	122.4	50.7	0.21	0.013
Incl.								402	480.6	78.6	0.32	0.005
Incl.								20	50	30	0.36	0.003
TCDH026	Deposit	781024	6823563	495	475.33	192	-70	0	475.3	475.3	0.3	0.007
Incl.								349	427	78	0.31	0.021
Incl.								178	327	149	0.57	0.004
Incl.								283	313	30	0.81	0.007
TCDH027	Deposit	781528	6823066	409	446.07	10	-60	0	446.07	446.07	0.2	0.006
Incl.								207	262	55	0.27	0.004
Incl.								0	87.5	87.5	0.31	0.013
TCDH028	Deposit	780804	6823001	442	401.34	360	-90	0	401.14	401.14	0.15	0.010
Incl.								20	182	162	0.27	0.014
Incl.								146	176	30	0.45	0.023
TCDH029	Deposit	780816	6822996	458	200.11	185	-60	0	200.11	200.11	0.27	0.005
Incl.								71.1	125.5	54.4	0.4	0.004
Incl.								90	99.2	9.2	0.75	0.007

(See continuation of Table 8 on next page)

Table 8 continued

Hole ID	Target	X	Y	Z m	Length m	Azimuth	Dip	From (m)	To (m)	Interval (m)	Cu %	Mo %
TCDH030	Deposit	781309	6823077	457	200.51	12	-65	0	200.51	200.51	0.29	0.013
Incl.								39.7	92.7	53	0.41	0.012
Incl.								103.22	200.51	97.29	0.30	0.018
Incl.								51.3	77	25.7	0.66	0.019
TCDH031	Deposit	781432	6822985	435	200.47	15	-60	0	200.47	200.51	0.27	0.010
Incl.								62.9	164.2	101.3	0.36	0.008
Incl.								81.27	121.8	15.67	0.49	0.260
Incl.								51.3	137.47	9.57	0.54	0.007
TCDH032	Deposit	781900	6822630	408	200.1	188	-60	0	200.1	200.1	0.26	0.002
Incl.								4	37.3	33.3	0.33	0.002
Incl.								77	82	5	0.45	0.004
Incl.								110	117	7	0.58	0.004

Several of Teck's drillholes were drilled deeper than the average RTZ hole (about 400m). The deepest Teck hole was TCDH-06 drilled to 842.78m. The log of this hole is shown in Figure 21. The hole produced anomalously high copper results (Table 9) as the average grade throughout the drillhole was significantly higher than predicted from the mineralisation model derived from previous RTZ drilling.

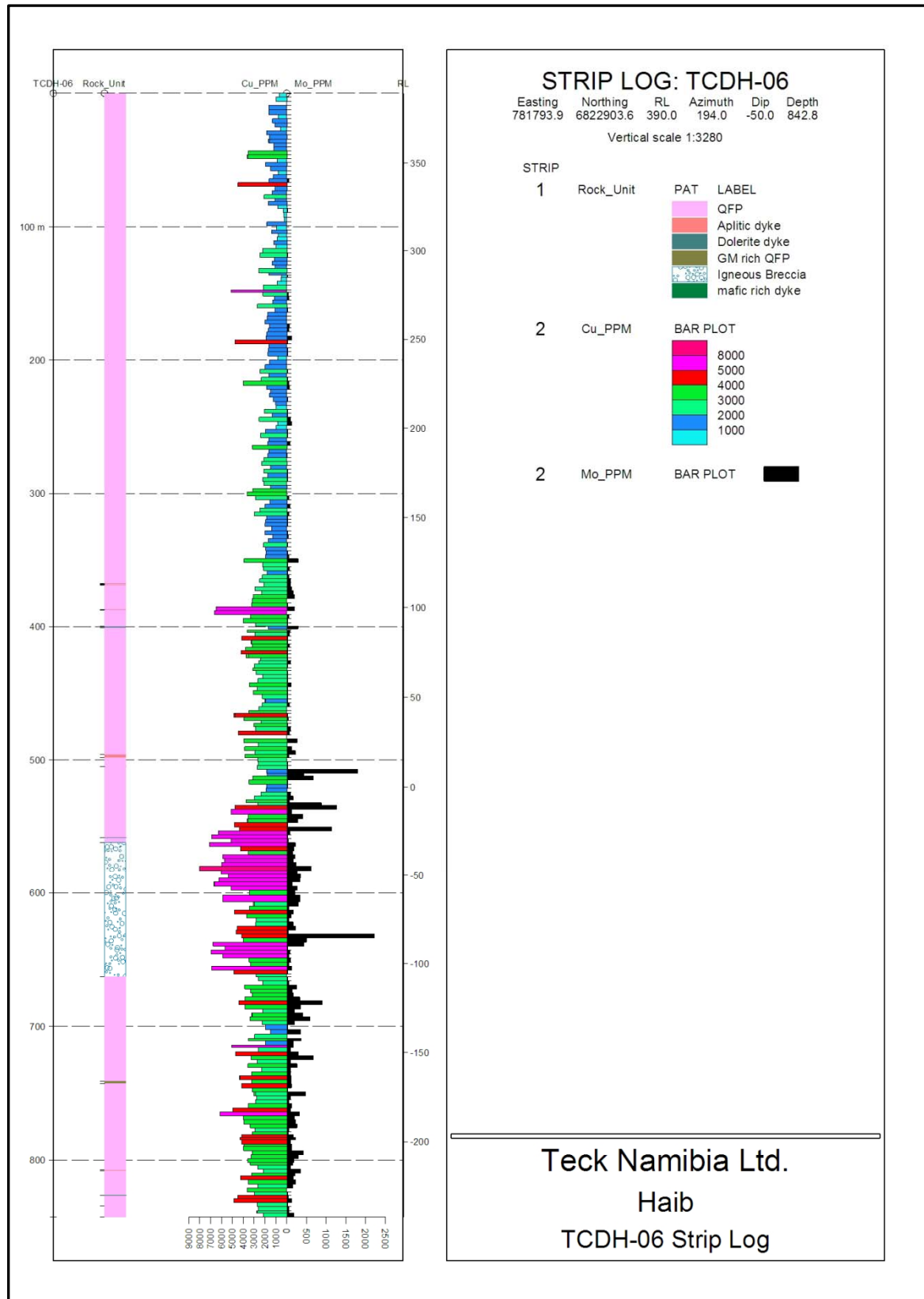


Figure 20: This diagram shows the strip log for drillhole TCD-06, the deepest hole drilled at Haib by Teck. This drillhole was located just west of the centre of the main deposit at one of the lowest points (in the Volstruis riverbed). It can be seen that sections of this drillhole below 500m returned significantly high copper values and above average Molybdenum values (Source: Teck, 2012⁽⁴¹⁾).

Table 9: Selected assay results for drillhole TCDH-06.

Hole No.	From (m)	To (m)	Copper (%)	Molybdenum (%)
TCDH-06	0	842.78	0.285	0.011
Including	349	842.78	0.36	0.018
Including	537	658	0.5	0.027

This hole also illustrates the point that historical, vertical drilling may have underestimated the extent and tenor of the high-grade plunging EDM vein sets.

QP's Comment on Core Sample Representivity and Bias

Since both the RTZ and Teck drilling core recoveries were respectively >95% overall, my opinion is that core sampling fairly represents the values of the particular intersections reported on and core loss, broken ground or voids do not materially impact on accuracy or reliability of results.

The mineralisation is to a large extent in disseminated form and there are only small differences between the sample length and the true thickness of mineralisation for the majority of the drillholes. However, detailed evaluation of the higher grade sections of the main Haib body which have additional mineralisation in sheeted veins following fractures dip steeply to the south. Teck have detailed surface mapping and logging of inclined drillhole intersections (both RTZ & Teck) through this zone and are confident that their calculations of true thickness of mineralisation within this zone are accurate. Since vein control of high-grade mineralisation is apparent in some locations, care is exercised in sampling intervals where veins run at a low angle to the core axis, since these intervals may overestimate the grade; these occurrences are rare and in my opinion the assay results fairly represent the true grades with minimal bias.

11. SAMPLING PREPARATION, ANALYSIS AND SECURITY

11.1 Historical Sampling

The historical drilling database comprises physical details of each hole, a drill lithological log, details of sampling intervals and assay results from approximately 25,000 samples of which the vast majority are 2 metre half-core composite samples from the Rio Tinto drilling (22,800 samples). The King Resources composite samples averaged 4.5 metres average length, while the Falconbridge samples were an average 3.0 metre length.

Of the total samples approximately 15,000 have values greater than 0.1% Cu but only 1,100 have values greater than 0.5% Cu. The acid soluble oxide-copper database comprises 1,980 samples.

Specific gravity ("SG") measurements were carried out by RTZ on 40 drillholes giving approximately 7,000 determinations; SG's ranged from 2.43 to 3.35 and averaged 2.71; GFM continued the process of SG determinations on core samples during their drilling campaign, sampling every tenth sample.

It is not possible for me to comment on the sample preparation, analysis and security of these historical drill samples as the details of quality control and assurance and copies of original assay certificates are not available. It is known that the RTZ samples (22,800) were all prepared on site, Rio Tinto having a prep-laboratory at the campsite fitted with crusher, pulveriser and splitters – the dust extractor plus parts of the other equipment are still on site. It is believed that the actual analyses were done off site at both the RTZ Rossing mine and RTZ Palaborwa mine laboratories.

11.2. Teck Sampling

No core sampling was being carried out at the time of the site visits so I was unable to verify or review the Teck sampling procedures. I have been supplied with an internal Teck memorandum⁽³⁸⁾ detailing the sample preparation protocols to be employed during both core and geochemical sampling at the Haib project and I have been assured that these protocols are strictly enforced on site and at the independent prep-laboratory in Windhoek (Analytical Laboratory Services) and the independent assay laboratory (Acme Analytical Laboratories – www.acmelab.com, now a subsidiary of Bureau Veritas) ("Acme") in Vancouver, Canada. The protocol lists the following important steps: -

- A standard sample to monitor analytical accuracy, a field blank sample to monitor carry-over contamination at the crusher and a core (or soil/stream/rock) duplicate sample to monitor geological, preparation and analysis variation are to be inserted in the core-shed every 20 samples. The appropriate standards used at the Haib are sourced from CDN Resource Laboratories in Canada who have supplied certificates certifying the material supplied. I have had sight of a selection of these certificates and am satisfied as to their veracity and appropriateness in terms of the range of expected values for copper, gold and molybdenum.

- All drillholes are sampled from the start to end of hole; the core is split using a water lubricated diamond saw blade which is cleaned frequently by using a brick to prevent carry-over contamination. Core samples are bagged in good quality plastic bags to avoid contamination or loss of fine material during transport. Sequential sample numbers are assigned and recorded on the paper drill log sheet. All of the hole's survey, logging and sampling data are captured and stored in a secure database system (Excel) on a laptop in the field and backed up by transfer to a central Access database system in Windhoek. All data is subject to routine validation during capture and storage. Drill log sheets, survey records and drill assay certificates are all securely filed in Windhoek on a regular basis.
- At the independent sample preparation laboratory in Windhoek the entire sample is dried, crushed and check screened to ensure that at least 80% of the crushed material passes through a 2mm screen; the entire crushed sample is riffle split to approximately 1Kg and this is pulverized in a disk mill as a single charge with testing of the pulp to ensure that a minimum 80% is <75 microns. Every 20 samples a duplicate sample is drawn off of the riffler to assess combined preparation and analytical variation. All of the sizing tests are recorded in a book to ensure compliance. Samples that do not pass the sizing tests are re-crushed or re-milled until a pass is obtained. The preparation laboratory cones and quarters the pulp sample to obtain a 100gm of material which is bagged in a good quality paper envelope. The entire remaining crushed and pulped sample is retained and stored by Teck so that umpire samples may be taken.
- The drill core assays routinely include copper, molybdenum, gold and 21 additional elements all determined by an ICP-ES technique.
- The Acme Vancouver facility has maintained a quality system compliant with the International Standards Organization (ISO) 9001 Model for Quality Assurance and ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories. In October 2011 the Vancouver facility received formal approval of its ISO/IEC 17025:2005 accreditation from Standards Council of Canada.
- The Analytical Laboratory Services facility in Windhoek is not certified as being ISO 17025 compliant. QA is provided by replicate analysis, the insertion of control samples, the submission of samples to independent laboratories in Namibia and the participation in independent proficiency testing schemes.

Teck have stated on public record that:-

"The design of Teck's drilling programme, quality assurance / quality control programme and the interpretation of results are under the control of Teck's geological staff. The QA/QC programme is consistent with industry best practices. Drill core is logged and cut onsite, with half-core samples prepared at Analytical Laboratory Services, Windhoek, Namibia. Prepared samples are shipped to Acme Analytical Laboratories, Vancouver, Canada for appropriate base metal assaying and gold fire assaying techniques. All analytical batches contain appropriate blind standards, duplicates and blanks inserted at regular intervals to independently assess analytical accuracy and precision."

11.3. Sample Security

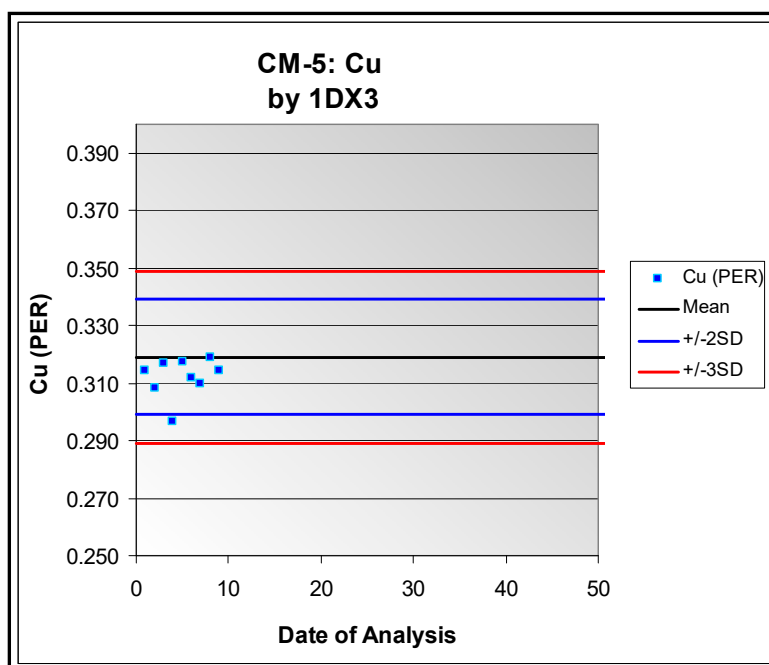
The core yard at the Haib camp is surrounded by 2m wire fencing and the metal entrance gate is secured by a padlock. I am assured by the site geologist that sampling of core is done under his supervision; the bags are secured immediately after the cutting and sampling process and the samples taken are stored within the locked RTZ laboratory building within the core yard until transported by him to Windhoek.

11.4. Data Verification

The Teck guidelines for data verification are as follows:

- The guideline for Standard failure is: Any Standard sample which falls outside of the mean ± 3 standard deviation range or any two consecutive sample results outside of the mean ± 2 standard deviations range.
- Re-analysis is at the discretion of the geologist, but the guideline is that any failure (as with CM-5 below) should trigger re-assay of all samples from the first sample after the previous passing Standard sample to the sample previous to the next passing Standard.

An example of Teck's graphical plots, this one for Standard Sample No.CM-5 is given below:



QP's Comments on Sample Preparation, Analysis and Security:

In my opinion Teck's knowledge regarding the controls on high grade zones ensures that there is no bias in their sampling. On the assumption that Teck personnel strictly adhere to their protocols regarding sample collection, transport, preparation, security and analytical procedures, the reliability, validity and integrity of the sample assay results should be assured. Assuming that Teck personnel are adhering to their stated procedures, the chain of custody in sample collection and transport would be well controlled.

Teck used duplicates, standards and blanks to check the accuracy and precision of their assay data. The amount of QC / QA data is significant and the spreadsheet files and graphical presentation of their results have been checked sampled by me and found to be adequate to ensure veracity of their results.

In the author's opinion there is no relationship between Analytical Laboratory Services in Windhoek and/or Acme and/or Teck as operator for HM apart from a normal principal and client business relationship and both laboratories can be classified as independent applying all of the standard tests of independence.

12. DATA VERIFICATION

12.1. Historical Data

Original assay laboratory sheets or certificates were not located for the Falconbridge, KRC, or RTZ data. In addition there were no records of any assay duplicates, field re-splits or check assays having been carried out by independent laboratories.

The RTZ drill samples were collected as composite half core samples over 2m sampling intervals and a total of some 45,865 metres has been assayed. Validating this database has been difficult because the assays were done at the RTZ Rossing laboratory with every tenth sample check assayed at the RTZ Palaborwa Mine laboratory. No original or copies of assay certificates have been located to validate the historical database. In order for HM to utilize the RTZ data in any future resource estimate, re-assaying of important intervals of RTZ core is required; this programme has been implemented – see discussion under section 10.1 above.

The NCJV drilling (completed after the Behre Dolbear resource estimation), supported the mineralisation models created from previous assay results but could not verify them.

RTZ also prepared extensive metallurgical composites comprising sequential down-hole samples over approximately 20 metres. A resource estimate carried out by GFM based solely on this composite data gave comparable results to resources estimated using the other drill assay data.

12.2. Teck Resampling

Due to the difficulty of validating the previous drilling, and in particular the RTZ database, in 2010 and 2011 Teck re-logged and re-assayed 619 x 6m quarter-core composites of the RTZ drillhole cores from 14 drillholes (see Figure 19 above) representing approximately 8% of the RTZ assay data and could potentially extend this programme of RTZ core analysis so that it can be included in a future compliant resource estimate – please see our discussion of the comparative results in Section 10.1 above. RTZ only assayed for copper on a systematic basis while all of the Teck assays routinely include copper, molybdenum, gold and 21 additional elements all determined by an ICP-ES technique.

QP Comments on Data Verification

I have not independently picked up any collar positions, or taken any core samples for independent verification of assay results but have made all reasonable enquiries to establish the completeness and authenticity of the information and data provided by HM. In addition, a final draft of this report was provided to Teck and to the Directors of DSM along with a written request to identify any material errors or omissions prior to lodgement. In my opinion since there is no current compliant resource estimate, further independent data verification is unnecessary. In my opinion the procedures and guidelines established by Teck to ensure data verification are adequate for the purposes of this report.

13. MINERAL PROCESSING & METALLURGICAL TESTING

In early 1996 NCJV commissioned engineering firm Davy & Minproc (in joint venture) to prepare a feasibility study for the Haib Copper Project ⁽¹⁶⁾.

The first phase of the feasibility study involved an extensive programme of metallurgical test work; to accommodate this test work, a sampling programme involving diamond drilling and the excavation of an adit (photograph 2) and cross-cuts into a representative section of the defined mineralisation was completed. This involved some 150 metres of underground development of an adit at a nominal 2 x 2 metre cross-section with two short cross-cuts at the end of the adit. This adit and cross-cut generated some 2,000 tonnes of fresh material for metallurgical test-work. The adit intersected higher grade material delineated by RTZ's close-spaced drilling on section 000E/W. The 2,000 tonnes of rock were removed from the adit, stacked in heaps representing each 1m advance of the excavation and then sampled. This resulted in the accumulation of a representative bulk sample of some 500 tonnes which was sent to various laboratories for test-work. The balance of 1,500 tonnes is still stockpiled on site (see photograph 8).



Photograph 8:
The remaining metallurgical bulk sample stacked in separate heaps.

Test work was done at the following laboratories: -

- Mintek, Johannesburg, South Africa.
- University of the Witwatersrand, Johannesburg, South Africa.
- Metcon, Tucson, Arizona, USA.
- Amdel, Adelaide, S. Australia.
- Ammtec, Perth, W. Australia.

Test work included: -

- Mineralogy.
- Flotation.
- Comminution.
- Roasting & Acid Leaching of concentrates.
- Autogenous and semi-autogenous milling.
- Bacterial oxidation of concentrates.
- Column leach test work for heap leaching.

The reports generated by this study are listed in the References and Bibliography section of this Report numbered 9 to 16 and the results are summarized in the Davy-Minproc phase II feasibility study ⁽¹⁶⁾ and the NCJV Feasibility Study - Executive Summary report ⁽⁸⁾. The results of these various studies are summarized in the following paragraphs.

The basic initial test work results showed that the Haib mineralisation is a competent quartz feldspar porphyry rock having a ball mill work index of between 17 and 20. The copper mineralisation is primarily chalcopyrite which is highly amenable to flotation. The test work indicates that grinding to 80% passing 150 microns will yield an overall Roast Leach Electrowin ("RLE") recovery to cathode copper of 83.7%.

The second phase test work involved the design and costing of a 34.2Mtpa RLE plant with an associated 14Mtpa heap leach operation reported on in the Davy-Minproc report ⁽¹⁶⁾. This showed a RLE treatment cost at that date of US\$2.36/tonne plus a contingency of 10%. At then current comparable rates, this was regarded as a low-cost metallurgical operation; because of this low cost and successful conventional RLE treatment process the NCJV management decided not to incorporate heap leaching in further studies despite the good results achieved in column test work at the Metcon Laboratories in Arizona.

The NCJV then embarked on definitive engineering studies to design and cost all the mining and metallurgical plant and equipment required to mine at Haib, as well as preliminary environmental studies ^(23 to 32) prior to definitive drilling of the selected open pit area and then the production of a final bankable feasibility study. The NCJV then ran into financial difficulties and the further test work was abandoned.

In 2003, at the request of Mintek, the then claim holder Mr. George Swanson provided a 1-tonne sample of oxide mineralisation and a 1-tonne sample of sulphide mineralisation from Haib so that Mintek could do further testing of their new proprietary heap bio-leach process ⁽¹³⁾.

The oxide sample was crushed to -25mm and blended to homogenize it before sub-sampling. Sub-samples were submitted for chemical assay, mineralogical study and sieve size analysis. Roll bottle tests on samples determined the acid consumption characteristics of the mineralisation and the particle size of copper leach kinetics. Column test work to determine agglomeration requirements and percolation tests at various irrigation rates were completed.

The results indicated that:-

- The oxide copper sample contained 3% Cu.
- The copper is present as acid-soluble silicates and carbonates.
- Copper extraction of 70% to 93% is possible with acid consumption of 1.9 to 2.4kg acid/kg Cu.
- The feed acid concentration should be kept at 10g/l for maximum extraction.
- Highest extractions were obtained at -12mm & -6mm crush sizes.

The sulphide sample was treated in a similar fashion and the results indicated: –

- The mineralised sulphide sample contained some 0.6% copper.
- The copper is present as chalcopyrite associated with pyrite.

- The mineralised sulphide is difficult to agglomerate & pelletising was tried.
- Higher temperatures and lower crush sizes improved the leach kinetics.
- The best extraction for 6mm material at 65°C was 80% Cu recovery over a 200 day period.

Neither Mintek nor Swanson has made any economic assessments of these test results.

QP's Comments

The NCJV adit was located specifically to test a cross section of the oxide mineralisation as well as normal grade and high grade sections of the defined copper / molybdenum sulphide mineralisation; as such, the metallurgical samples can be regarded as being closely representative of all of the mineralisation at Haib and none of the metallurgical or feasibility reports indicate anything to the contrary; neither RTZ, NCJV or Teck have shown the presence of any deleterious elements that could have a significant effect on potential economic extraction.

Teck is considering further metallurgical test work and has drilled 4 diamond drillholes totalling 801.19m of HQ diameter (63.5mm) core with the intention of taking samples from the high-grade zones to be able to verify the metallurgical characteristics and perhaps for testing the amenability of the material to various (and more modern?) copper extraction techniques.

14. MINERAL RESOURCE ESTIMATES

There are no current compliant mineral resource estimates of the Haib mineralisation.

15. ADJACENT PROPERTIES

There are several large properties currently held by other exploration companies that completely surround the Haib property. These are shown in Figure 22 below, which is a map extract from the Namibian Department of Mines and Energy ⁽⁷⁾ website. As far as I am aware, no comprehensive exploration programme for copper or base metal mineralisation has been reported on any of these properties despite historically reported visible surface indications of oxide copper, particularly to the southeast and east of Haib in Haib Volcanics and Vioolsdrif Intrusives. The larger, adjacent EPL's are tabulated below: -

Table 10. List of Properties and Owners Adjacent to the Haib Property ⁽⁷⁾.

EPL No.	Owner	Henan Afro-Asia Geo Engineering (Namibia) (Pty) Ltd.
3822 13 520ha	Tel. No.	+264-61-303361
	Minerals	Base metals; rare metals; precious metals
	Granted	30-08-2012 valid to 18 Dec 2016
	Region	Karas
	District	Karasburg
4182 44 819ha	Owner	Walenga, John
	Tel. No.	+264-61-262572
	Minerals	Base metals; rare metals; industrial minerals; precious metals; phosphate
	Granted	17-6-2014 renewal pending
	Region	Karas
4413 19 996ha	District	Karasburg
	Owner	Namibian Huaxin Resources Exploration and Development (Pty) Ltd.
	Tel. No.	+264-62-500200
	Minerals	Base metals; rare metals; industrial minerals; precious metals
	Granted	Jan 2010 valid to 2 Jun 2016
5783 44 492 ha	Region	Karas
	District	Karasburg
	Owner	Giant Mineral Namibia cc
	Tel. No.	+264-81-244777
	Minerals	Base metals; rare metals; industrial minerals, nuclear fuels, phosphates.
4791 99 729ha	Granted	30 Sep 2014 application pending
	Region	Karas
	District	Karasburg
	Owner	Epangelo Mining Company (Pty) Ltd.
	Tel. No.	+264-61-415-700
	Minerals	Base metals; rare metals; precious stones
	Granted	Pending Approval of application dated July 2011
	Region	Karas
	District	Karasburg

N.B. The above licence details were correct at the date of downloading them from the DME website on 7th July 2015.

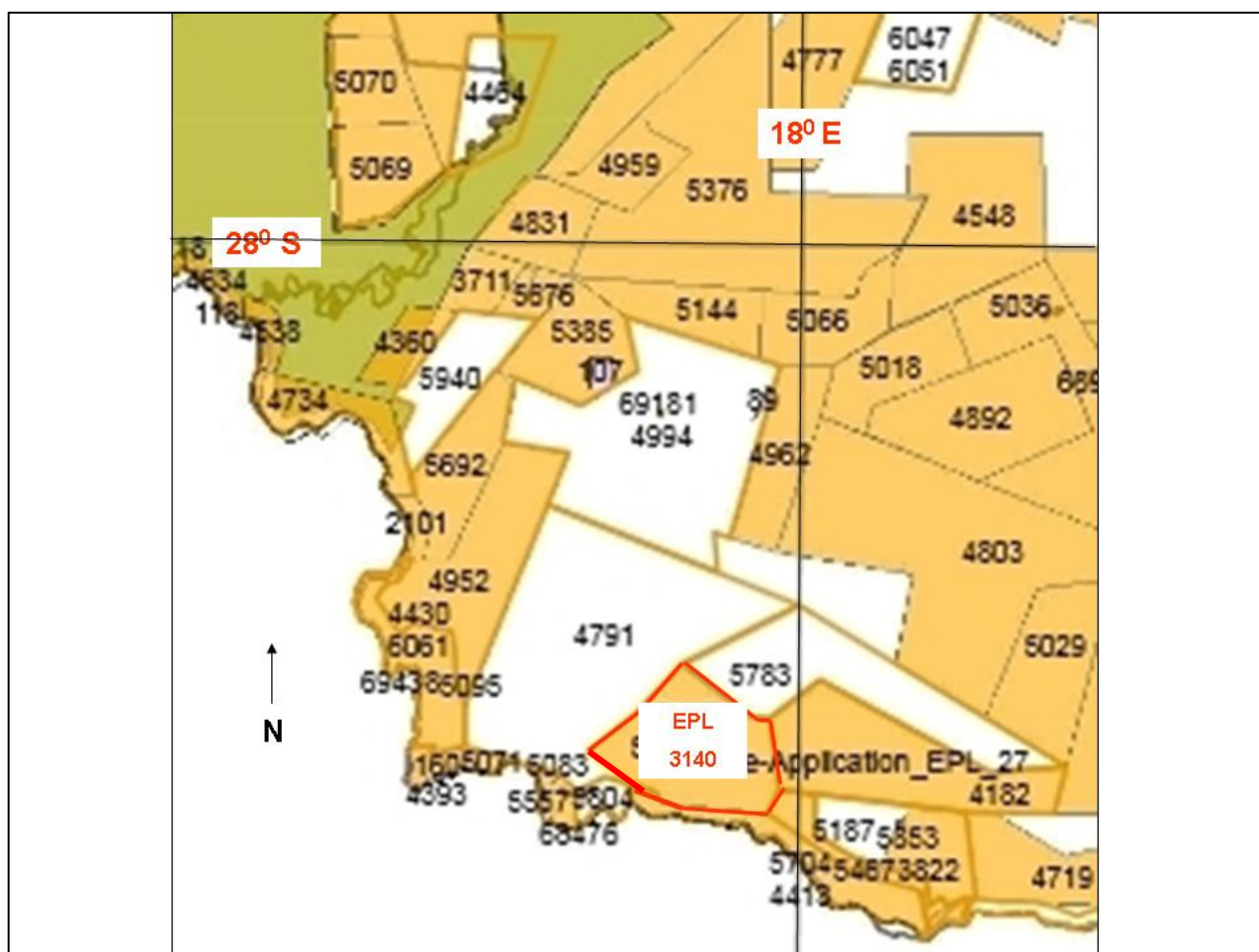


Figure 21: A map, extracted from the Department of Mines and Energy website⁽⁷⁾ showing EPL 3140 (the Haib – outlined in red) and adjacent properties.

16. OTHER RELEVANT DATA AND INFORMATION

General

Subsequent to the BD historic tonnage / grade estimation, NCJV completed a significant amount of work that was not reviewed by BD but does contribute significantly to the Haib knowledge base. This information will not be reviewed in detail here as the recent HM approach has been to focus solely on an effort to increase the grade or tonnage of the deposit through exploration of additional targets and the high-grade zones within the known main deposit.

However, a description and summary of this data is merited as it indicates the potential for future development of the Haib. Most of this data is available in the form of written reports and maps, some of which are available in electronic format.

Some of the additional data includes: -

- Data from the underground development of the adit. This involved some 150 metres of underground development of an adit at a nominal 2 x 2 metre cross-section with two short cross-cuts at the end of the adit (see photograph 2). This adit and cross-cut generated some 2,000 tonnes of fresh material for metallurgical test-work. The adit intersected higher grade material delineated by RTZ's close-spaced drilling on section 000E/W;
- Of the 2,000 tonnes of rock removed from the adit some 500 tonnes was sent to various laboratories for test-work. The balance is still stockpiled on site (see photograph 8);
- Geological mapping and sampling of the adit was carried out coincident with mining. Two sets of samples were collected for assay – the first being a sludge sample from the blast hole drilling, and the second being sidewall channel sampling. Assay samples were sent to the Scientific Services commercial laboratory in Cape Town, South Africa, and assayed for Cu oxide, Cu total, gold, silver, molybdenum, manganese and sulphur. The results of these analyses are available;
- Detailed surface geological mapping and drillhole re-logging was carried out. This included mapping of the Haib deposit and environs and the potential tailings site. This mapping included a geological re-logging of many of the old drillhole cores so that a geological model was developed. Much of this data is available. In addition, nearly all of the old RTZ and NCJV drill cores are still available on site at Haib (see photographs 3 and 4);
- 12 NQ drillholes were drilled by NCJV, totalling 4,306 metres. This programme was designed to complete in-fill drilling on the RTZ grid and to obtain some selective closer spaced drilling in the higher grade western end of the deposit;
- 5 x T2-101 large diameter holes, similar to PQ-size, were drilled totalling 627 metres; the drilling aimed at obtaining whole core samples of specific rock types

for geotechnical testing. Existing NQ holes were twinned so that these rock types could be confidently sampled. These drillholes were also used to test grade variability over short distances. Analyses were as for the adit samples. Geotechnical logs were produced;

- An extensive structural mapping programme was carried out as a component of the open pit design. This study concentrated on the mineralised area and in part on areas where major infrastructure was to be located; this data is on record and available; and
- The area was flown for the production of ortho-photos and surface topographic maps at 1:10,000 scale over the mine site and 1:30,000 scale over the entire prospecting licence area. Both ortho-photos and surface topographic maps were produced and are available. The ortho-photos are currently being used by Teck geologists in their detailed geology mapping campaigns.

QP's Comment

Although the metallurgical testing and all of the environmental and rock competency tests and studies undertaken by the NCJV are still valid and therefore contribute greatly to the further development of Haib, the historical feasibility study will need to be re-assessed in the light of current costs, markets, technologies, etc, at such time as the commercial viability of the deposit is next under investigation.

17. INTERPRETATION AND CONCLUSIONS

The Haib mineralisation is undoubtedly a classic porphyry copper system and is probably one of the oldest known, preserved, porphyry deposits in the world⁽⁵¹⁾.

Historical exploration work has shown that the Haib project has large but low-grade copper mineralisation. In August 1996 Behre Dolbear confirmed the Historical Estimates at Haib to be 244 Mt at 0.37% Cu (using kriging and a 0.3% Copper minimum block grade). In using the nearest neighbour method and a 0.30% Copper minimum block grade, their estimate was 292 Mt at 0.46% copper - (see Table 7 above). Total contained copper, using minimum block grades of 0.1% Copper, was estimated to be 4 billion pounds while the total contained copper using minimum block grades of 0.3% Copper, was estimated to be 3 billion pounds of copper metal. **Please note** that although I have reviewed the Behre Dolbear report and their methodology, it is beyond the scope of this report to verify their historical estimate and I have therefore not done sufficient work to classify their historical estimate as a compliant current mineral resource or mineral reserve **and HM is not treating their historical estimate as a compliant current mineral resource or mineral reserve.**

Currently this deposit is being re-investigated by HM with the objective of providing a compliant resource estimate both from their own drilling and assaying and from re-assayed historical drill core. This estimate will be used to construct a 3-dimensional model of the deposit which will provide the appropriate information for an economic assessment of the deposit.

Teck's exploration results from the geological mapping, stream and soil sampling, geophysical survey and core drilling programmes to date contribute positively towards achieving HM's above stated objective of providing a better understanding of the controls on high grade sections of the main Haib mineralised body and the nature of the satellite anomalies proximal to the main Haib body.

I therefore conclude that: -

- The exploration and surface rights held by HM are valid and HM have taken the appropriate steps in regard to meeting exploration spending commitments to ensure renewal of these rights⁽⁴⁰⁾. I have relied for this conclusion on the certificates and a legal opinion letter⁽⁴⁹⁾ obtained by HM supplied to me by both DSM and Teck and have checked the Ministry's list of EPL holders available on-line^(42 & 50). The Directors have assured me that there are no past or current disputes in relation to their legal title.
- The agreement between Teck and DSM is typical of exploration joint venture agreements within the mining industry and will not impede the development of the project.
- The existing infrastructure such as electric power, water, access routes, availability of trained personnel, transport and communications facilities is highly favourable not only for exploration but also for further development of the property to a mining stage. In this regard, the availability of sufficient space for mining operations,

processing plant, tailings and waste dump sites, heap leach pads and the highest and best use of the land as a mining property are positive factors.

- The geological understanding of the settings, lithologies and mineralisation controls for the target deposit type and knowledge of the regional geology is well enough understood to inform pre-feasibility study exploration programmes.
- The current sampling methods employed by Teck meet or exceed industry standard best practice and the quality of both the exploration geochemical and drill core assay data is reliable and performed in accordance with exploration best practices and industry standards. The lack of historical drill assay certificates and QA / QC of the RTZ assay data may mean that Teck needs to verify further RTZ drill core by an expanded re-assay programme; unless there is a large, verified assay database the risk of inaccurate estimation of grades for resource / reserve purposes is greatly increased. The over-estimation of grades by RTZ as shown by check assays completed to date are possibly caused by total Cu dissolution assay methods used by RTZ and in my opinion, the assay bias is relevant. In my opinion, therefore, HM should continue the check assay programme for all RTZ drillholes which are likely to fall within their geological model.
- There is a risk that resource estimates followed by economic studies may show that the project is not economic at, say, the mean spot price of copper over the past 10 years or on some other measure; this may result in project failure.
- The political, economic, commodity market and technical risks and uncertainties which may affect the successful development of the property are adequately known and understood but future changes may impact substantially, in either positive or negative ways.

In my opinion, the HM joint venture is exploring a large volume porphyry copper deposit situated in an ideal location adjacent to modern infrastructure which has the potential to become a large copper resource. There already exists a significant body of technical data concerning the Haib mineralisation and the period between resource estimation, pre-feasibility and definitive feasibility studies could be relatively short.

18. RECOMMENDATIONS

HM has ownership of a significant, although highly challenging project in the Haib deposit which could rapidly progress to a preliminary economic assessment prior to feasibility with a great deal of the investigative work already completed.

Teck, as the operator of HM, has proposed a programme of exploration ⁽⁴⁸⁾ involving further 3-D modelling of the main porphyry body based on the results of detailed geology mapping, geophysics, stream and soil geochemical sampling and extensive drill knowledge of geological and mineralisation features. The first goal of the project is to define the various higher grade zones near to surface and to provide geological and mineralisation boundaries within the 3-D model to inform resource estimation techniques. The resource estimation will then be followed by various stages of feasibility studies if and when appropriate. This programme was proposed and accepted by the Namibian Ministry of Mines and Energy and forms part of the documentation submitted in support of the renewal of the EPL for the period April 2015 to April 2017.

Any future phases of the programme will be results driven; for example, areas that may lack data in the 3-D model may require additional drilling and assaying while resource estimation will drive decision making as to mine planning and economic studies. The future budgets are therefore preliminary and may be changed at any stage, however the total actual expenditure during the renewal period must equal or exceed 80% of the total budgeted commitment in order for further renewals of the EPL to be granted.

Teck estimates that this proposed exploration programme⁽⁴⁸⁾ will cost some N\$3.5 million (currently equivalent to some C\$ 360,000) (see Table 11 below).

Table 11: Summary Table of the Proposed Haib Exploration Programme			
		Phase 1	Phase 2
Category	Main Items	N\$000's	N\$000's
Geology, GIS	Labour, field expenses & GIS costs	400	-
Geophysics	NONE	-	-
Metallurgy	Existing core samples for initial tests	300	-
Diamond Drilling	1,500m geotechnical drilling	-	1 900
Economic & Resource Estimates	In-house first pass estimates using the existing 3-D model	500	-
Economic & Resource Estimates	Detailed and refined estimate studies	-	400
TOTAL	N\$ 000's	1 200	2 300
	C\$ 000's	122	234
	C\$ 000's	356	

Note: Assumed exchange rate of N\$1=C\$0.10177.

QP's Comment

In my opinion this programme has real merit as it provides the most direct route to obtaining an early project decision point after a pre-economic assessment ("PEA") and it is therefore recommended that the joint venture partners proceed with the proposed programme as outlined in the Teck budget presentation ^(35, 48). As stated in section 17 above, once the project passes the PEA, the HM Directors should extend the RTZ re-assay programme in order to incorporate verifiable assay data into their geological model prior to the production of a compliant resource estimate and further economic studies.

The management of HM has assured me that as at 3rd May 2016, actual expenditure and work on the Phase 1 programme is as planned and their studies are in progress with no further significant results since the effective date of this report, being 23rd October 2015.

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QUALIFIED PERSON CERTIFICATE

I, Peter W.A. Walker, B.Sc. (Hons) Geology, M.B.A., Pr. Sci. Nat., as the author of this report titled "Independent Technical Review - The Haib Copper Porphyry Project, Namibia" with an effective date of 23rd October 2015, do hereby certify that:

1. I am an independent Consulting Geologist conducting work under the auspices of P&E Walker Consultancy cc of 41 Dennekamp, Main Road, Kenilworth 7708. Republic of South Africa. Tel: +27 (21) 762 1915 Cell: +27 (72) 411 1108 e-mail: elipet@mweb.co.za
2. I graduated with a Bachelor of Science (Hons.) degree in Geology in 1972 and an MBA in 1982, both from the University of Cape Town, South Africa.
3. I am a Professional Geologist registered with the South African Council for Natural Scientific Professions, registration No.400064/99;
4. I have worked as a geologist for a total of 38 years since my graduation from university. My relevant experience for the purposes of this Technical Report is:
 - Seven years (1971 – 1978) as an exploration geologist in South Africa engaged in the mapping, drilling and evaluation of base metal deposits.
 - Five years (1978 – 1982) as an exploration geologist in South Africa engaged in the exploration for Uranium and Tungsten deposits. During this period I had mine visits to Climax Molybdenum mine amongst others in the USA, Australia, Canada and Brazil and also worked for three years on the discovery and evaluation of the Riviera porphyry Tungsten – Molybdenum deposit in the South Western Cape, South Africa.
 - Six years (1989 – 1995) as a senior exploration geologist in Namibia in the exploration, drilling and evaluation of gold and base metal deposits.
 - Seven years (1995 – 2002) as exploration manager for first Trans Hex International Ltd and then Group exploration manager for Trans Hex Group, engaged in the valuation and assessment of new alluvial and kimberlite diamond projects, their exploration and management through to production.
 - Three years as an independent, sole practitioner consultant (2002 – 2004) advising and writing competent person reports for exploration & mining companies.
 - Ten years (2007 – present) as Principal of P&E Walker Consultancy cc, an independent geological consulting closed corporation engaged in advising and writing competent person reports for exploration and mining companies.
5. I have read the definition of a "Qualified Person" as set out in NI 43-101 as amended on June 30 2011, and certify that by reason of my education, 38-years of experience in exploration geology and mining and my affiliation with a professional

association I fulfill the requirements to be a "Qualified Person" for the purpose of preparing this Report.

6. I am responsible for all sections of this independent technical review report.

7. I visited the Haib Project site described in this report on various occasions between 1989 and 1995 on Geological Society of Namibia field excursions and more recently on the 24th January 2012 and on the 30th June 2015. I have had no previous involvement with the Haib property.

8. As of the date of this certificate, to the best of my knowledge, information and belief, the report contains all scientific and technical information that is required to be disclosed to make the report not misleading.

9. In terms of section 1.5 of NI 43-101 "Standards of Disclosure for Mineral Properties" I am independent of the commissioning entities, Deep South Mining (Pty) Ltd as well as of the Issuer, 1054137 BC Ltd. their subsidiaries and associates as well as of Jet Gold Corporation applying all of the standard tests of independence; P&E Walker Consultancy cc is also independent of the commissioning entities and the Issuer, their directors, senior management and advisors.

10. I have read NI 43-101 as amended on June 30, 2011 and confirm that this Technical Review Report has been prepared in compliance with the Standards and Guidelines as set out in that document.



P.W.A. WALKER B.Sc. (Hons.) MBA Pr. Sci. Nat. FSEG MSAGS MGSN.
Dated: 12th April 2016.



APPENDIX 1

Details of the Deep South Mining Company (Pty) Ltd

Exclusive Prospecting licence 3140

Granted 22 April 2004



REPUBLIC OF NAMIBIA
MINISTRY OF MINES AND ENERGY

EXCLUSIVE PROSPECTING LICENCE

(Issued in terms of Section 70 of the Minerals (Prospecting and Mining) Act, 1992)

Exclusive Prospecting Licence No **3140** Office Reference No **14/2/1/4/2/3140**

Subject to the provisions of the Minerals (Prospecting and Mining) Act, 1992, this exclusive prospecting licence is hereby issued to

Full Name of Licence Holder **Deep-South Mining Company (Pty) Ltd.**

Identity or Passport No (natural person) **N/A**
Company Registration No (company) **2003/543**
Address (natural person) or Registered Address (company)
P.O. Box 22978
Windhoek, Namibia

Full Name of Accredited Agent (if applicable) **N/A**
Address of Accredited Agent (if applicable) **N/A**

for the period of **3 years** from (date of issue) **22 April 2004** to (date of expiry) **21 April 2007**

unless abandoned or cancelled on any prior date, or extended to such later date as may be endorsed on this licence in the event that this licence is renewed.

This exclusive prospecting licence is issued in respect of

Name of Mineral(s)/Group(s) of Minerals **Precious Metals and Base & Rare Metals**

over a certain portion of land situate in Region(s) **Karas**

Registration Division(s) **V** Magisterial District(s) **Karasburg**


as more fully depicted in the attached diagram No **EPL 3140** signed by the Commissioner

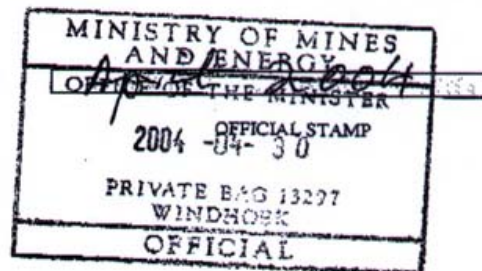
and is further subject to the terms and conditions contained in the notice of the Minister's intention to grant the

licence dated **20 April 2004** and agreed to in writing by the applicant on **22 April 2004**

as appended hereto.

Signed at WINDHOEK this **20th** day of


MINISTER OF MINES AND ENERGY





REPUBLIC OF NAMIBIA

MINISTRY OF MINES AND ENERGY

Tel (061) 284 8111
 Fax (061) 238 643
 E-mail: Post master@mme.gov.na
 Web address: www.mme.gov.na

Private Bag 13297
 WINDHOEK

Enquiries: Mr A Iilende

20 April 2004

Reference No.: 14/2/1/4/2/3140

Deep-South Mining Company (Pty) Ltd.
 P. O. Box 22978
 Windhoek
 Namibia

NOTICE TO APPLICANT OF PREPAREDNESS TO GRANT APPLICATION FOR EXCLUSIVE PROSPECTING LICENCE 3140.

In terms of section 48(4) of the Minerals (Prospecting and Mining) Act, No. 33 of 1992, notice is hereby given that the Minister is prepared to grant your application, lodged on 01 December 2003 for an exclusive prospecting licence in respect of the Precious Metals and Base & Rare Metals Groups of Minerals over a certain area of land as shown in the attached diagram, subject to the terms and conditions contained in the attached schedule, which terms and conditions supplement the terms, conditions and provisions of the said Act.

Your attention is drawn to the provisions of section 48(5) of the said Act which require that within one month from the date of this notice, written acceptance of such terms and conditions must be received by the Commissioner, failing which the application will be deemed to have lapsed.

Kindly acknowledge your acceptance of such terms and conditions by-

- (a) completing the section at the bottom of this notice;
- (b) initialling each page of the schedule and the diagrams; and

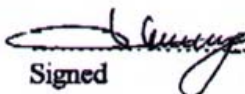
All official correspondence must be addressed to the Permanent Secretary

(c) returning such signed and initialled documents to the Commissioner.


.....
MINING COMMISSIONER

TO THE MINING COMMISSIONER
MINISTRY OF MINES AND ENERGY

I, John H. Akwenye.....(name of person) in my capacity as applicant/duly authorised officer/approved accredited agent (please delete titles not relevant), hereby accept the supplementary terms and conditions referred to in this notice and contained in the attached schedule which are to be imposed on the grant of the application for exclusive prospecting licence herein referred to.


.....
Signed

22-04-07
Date

Capacity.....Director.....
(~~applicant/authorised officer of applicant if a company/approved accredited agent of a non-resident applicant who is a natural person/authorised officer of such accredited agent~~)

**SCHEDULE OF SUPPLEMENTARY TERMS AND CONDITIONS TO BE
IMPOSED ON THE GRANT OF EXCLUSIVE PROSPECTING LICENCE NO.
3140 IN DEEP-SOUTH MINING COMPANY (PTY) LIMITED.**

PART 1 - GENERAL

1. The exclusive prospecting licence shall endure for a period of three (3) years reckoned from the date of acceptance (hereinafter "the date of issue") of the terms and conditions referred to in this notice unless it is abandoned in terms of section 54 of the Minerals (Prospecting and Mining) Act, 1992, (hereinafter "the Act") or cancelled in terms of section 55 of the Act or on application made to the Minister in terms of section 72 of the Act, it is renewed by the Minister for any further period or periods.
2. In consideration of the rights hereby granted, the holder of the exclusive prospecting licence shall pay to the Commissioner for the benefit of the State Revenue Fund, such licence fee as may from time to time be prescribed in terms of section 123 of the Act, it being recorded that the annual licence fee prescribed in relation to the licence at the time of its issue shall be NS 2 000 payable annually on or before each anniversary date of the date of issue of the licence.
3. In the event that the prescribed licence fee changes, such change shall become effective on the next anniversary date of the date of issue of the licence subsequent to such change.
4. The rights under the exclusive prospecting licence shall be limited in extent as stipulated in terms of paragraphs (d) to (g) of subsection 69(2) of the Act; provided that if during the currency of the exclusive prospecting licence, any claim area or area held under any other mineral licence existing on the date of issue of the exclusive prospecting licence which so limited such rights lapses, whether by abandonment, cancellation or expiry, such rights shall not extend to such claim or licence area.
5. The Commissioner may by notice in writing require the holder of the licence to beacon off the prospecting area in such a manner and within such a period, which shall not be less than one month, as may be specified in such notice at such holder's own cost.
6. The Minister may, in the interest of reasonable development of the prospecting operations, impose from time to time such additional conditions terms and conditions as he may deem fit.

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PART 2 - WORK PROGRAMME AND OBLIGATIONS

7. The holder of the exclusive prospecting licence shall-
- 7.1. commence with, and thereafter continue without undue interruption or delay, prospecting operations within one month of the date of issue of the licence in substantial conformity with the proposed work programme, schedule and budget which accompanied the original application for the licence and which served as motivation of the granting thereof;
 - 7.2. where any material deviation of such work programme, schedule and budget is in the opinion of the holder of the licence, necessitated by the nature of the results of prospecting operations (but specifically excluding any circumstances of Vis Major provided for in terms of section 56 of the Act), apply in writing to the Minister for approval of the revision of such work programme, schedule and budget in terms of section 75 of the Act;
 - 7.3. execute such additional work programme and expend such additional expenditure within a specified period of time as may be imposed by the Minister from time to time;
 - 7.4. the holder of the exclusive prospecting licence shall be obliged to secure a Joint Venture partner (who has the technical and financial resources) within one year of the date of issue of this licence; and
 - 7.5. the holder of the exclusive prospecting licence shall give a presentation to the Ministry of Mines and Energy regarding the progress made on exploration, within one year of the date of issue of the licence.

PART 3 - ENVIRONMENT

8. The holder of the exclusive prospecting licence shall observe any requirements, limitations or prohibitions on his or her prospecting operations as may, in the interest of environmental protection be imposed by the Minister from time to time.
9. The holder of the exclusive prospecting licence shall enter into an Environmental Contract with the Ministry of Environment and Tourism and that of Mines and Energy within one (1) month of the date of issue of the licence


.....
MINING COMMISSIONER

MINISTRY OF MINES AND ENERGY	
MINING COMMISSIONER	
DATE	20 APR 2004
Private Bag 13297 9000 WINDHOEK	
OFFICIAL	

APPENDIX 2

Details of the Deep South Mining Company (Pty) Ltd

Exclusive Prospecting licence 3140

After Renewal 22 April 2015

**MINISTRY OF MINES AND ENERGY
ENDORSEMENT (RENEWAL)**

With the approval of the Minister of Mines and Energy, this mineral licence has been renewed for a period of Two (2) years from 22 April 2007 to 21 April 2009

15.09.2008
Date Commissioner

**MINISTRY OF MINES AND ENERGY
ENDORSEMENT (RENEWAL)**

With the approval of the Minister of Mines and Energy, this mineral licence has been renewed for a period of Two (2) years from 22 April 2009 to 21 April 2011

17/04/2009
Date Commissioner

**MINISTRY OF MINES AND ENERGY
ENDORSEMENT (RENEWAL)**

With the approval of the Minister of Mines and Energy, this mineral licence has been renewed for a period of Two (2) years from 22 April 2011 to 21 April 2013

01-04-2011
Date Commissioner

**MINISTRY OF MINES AND ENERGY
ENDORSEMENT (ALIENATION)**

With the approval of the Minister of Mines and Energy, this licence/an interest in this licence has been alienated by transfer/grant/cession/assignment to, or the joining as a joint holder of Haib Minerals (Pty) Ltd

with effect from 12 April 2013

22/04/2013
Date Commissioner

**MINISTRY OF MINES AND ENERGY
ENDORSEMENT (RENEWAL)**

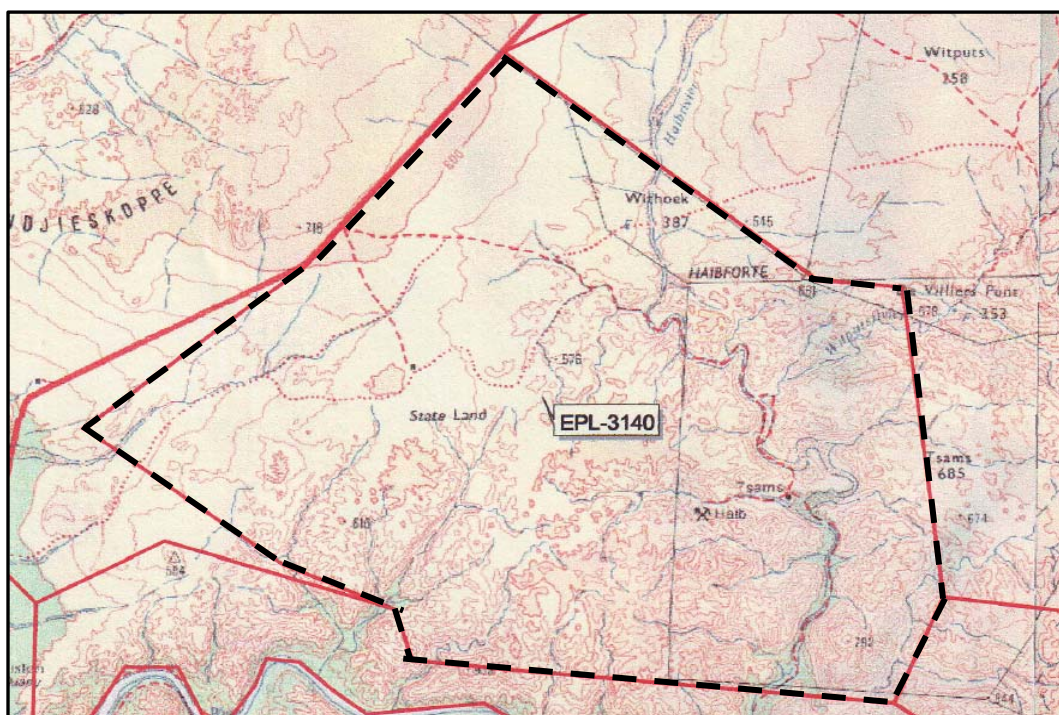
With the approval of the Minister of Mines and Energy, this mineral licence has been renewed for a period of Two (2) years from 22 April 2013 to 21 April 2015

27/05/2013
Date Commissioner

**MINISTRY OF MINES AND ENERGY
ENDORSEMENT (RENEWAL)**

With this approval of the Minister of Mines and Energy, this mineral licence has been renewed for a period of Two (2) years from 22 April 2015 to 21 April 2017

01/04/2015
Date Commissioner



Licence	Nr	Lat	Long
EPL-3140	1	-28.72530758	17.78740212
EPL-3140	2	-28.71183732	17.74992010
EPL-3140	3	-28.67100381	17.68364770
EPL-3140	4	-28.62124926	17.75614951
EPL-3140	5	-28.55535382	17.82202069
EPL-3140	6	-28.62443708	17.92656044
EPL-3140	7	-28.62670927	17.95497900
EPL-3140	8	-28.69475300	17.96558957
EPL-3140	9	-28.72089474	17.96970697
EPL-3140	10	-28.75324360	17.95375930
EPL-3140	11	-28.74086885	17.79335440

The current map of EPL 3140 and a table of the coordinates.
The current area is 37,000ha.