



Maximising Beneficiation in Botswana from the Kihabe/Nxuu Poly-Metallic Project
Botswana Resources Conference - June 2019

Disclaimer : Forward Looking Statement

This presentation contains forward looking statements in respect of the projects being reported on by the Company. Forward looking statements are based on beliefs, opinions, assessments and estimates based on facts and information available to management and/or professional consultants at the time they are formed or made and are, in the opinion of management and/or consultants, applied as reasonably and responsibly as possible as at the time that they are applied.

Any statements in respect of mineral reserves, resources and zones of mineralisation may also be deemed to be forward looking statements in that they contain estimates which the Company believes have been based on reasonable assumptions with respect to mineralisation that has been found. Exploration targets are conceptual in nature and are formed from projection of the known resource dimensions along strike. The quantity and grade of an exploration target is insufficient to define a Mineral Resource. Forward looking statements are not statements of historical fact, they are based on reasonable projections and calculations, the ultimate results or outcomes of which may differ materially from those described or incorporated in the forward looking statements. Such differences or changes in circumstances to those described or incorporated in the forward looking statements may arise as a consequence of the variety of risks, uncertainties and other factors relative to the exploration and mining industry and the particular properties in which the Company has an interest.

Such risks, uncertainties and other factors could include but would not necessarily be limited to fluctuations in metals and minerals prices, fluctuations in rates of exchange, changes in government policy and political instability in the countries in which the Company operates.

OTHER IMPORTANT INFORMATION

PURPOSE OF PRESENTATION: This presentation has been prepared by Mount Burgess Mining NL (MTB). It is intended only for the purpose of providing information on MTB, its project and its proposed operations. This presentation is neither of an investment advice, a prospectus nor a product disclosure statement. It does not represent an investment disclosure document. It does not purport to contain all the information that a prospective investor may require to make an evaluated investment decision. MTB does not purport to give financial or investment advice.

PROFESSIONAL ADVICE: Recipients of this presentation should consider seeking appropriate professional advice in reviewing this presentation and should review any other information relative to MTB in the event of considering any investment decision.

FORWARD LOOKING STATEMENTS: This presentation contains forward looking statements which should be reviewed and considered as part of the overall disclosure relative to this presentation.

DISCLAIMER: Neither MTB nor any of its officers, employees or advisors make any warranty (express or implied) as to the accuracy, reliability and completeness of the information contained in this presentation. Nothing in this presentation can be relied upon as a promise, representation or warranty.

PROPRIETARY INFORMATION: This presentation and the information contained therein is proprietary to MTB.

The information in this presentation relating to 2017 exploration drilling results is extracted from ASX Announcements released to the market during the period from 5 February 2018 to the current date and are all available to view on the Company's website www.mountburgess.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Licence Title

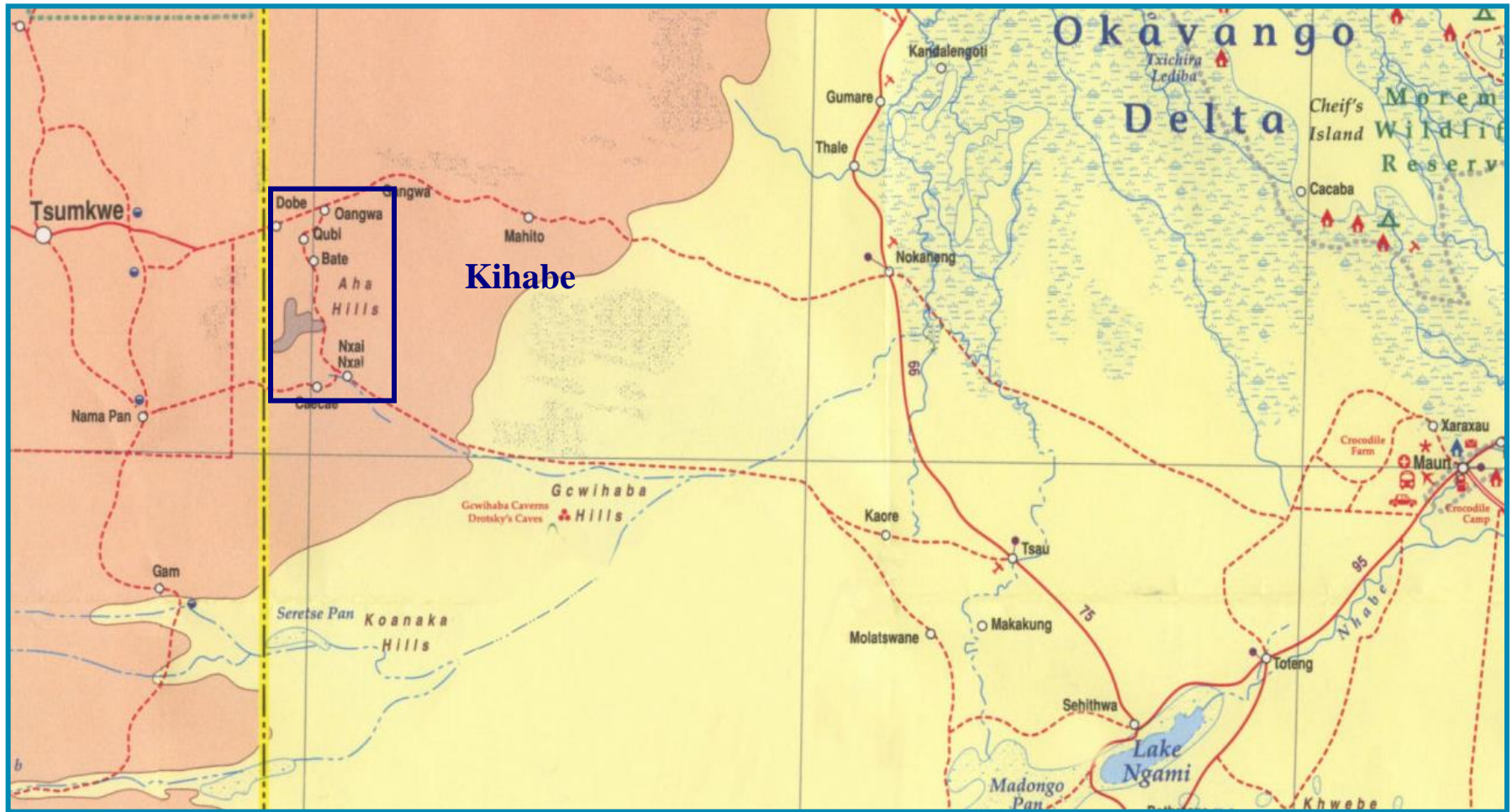
- PL 43/2016 renewed for a further 2 years to 31 December 2020
- Right to renew for a further 2 years to 31 December 2022

Mount Burgess Mining grateful to Minister Eric Molale renewing title over the original licence area.

The focus for the Project now centred on maximising beneficiation within Botswana.

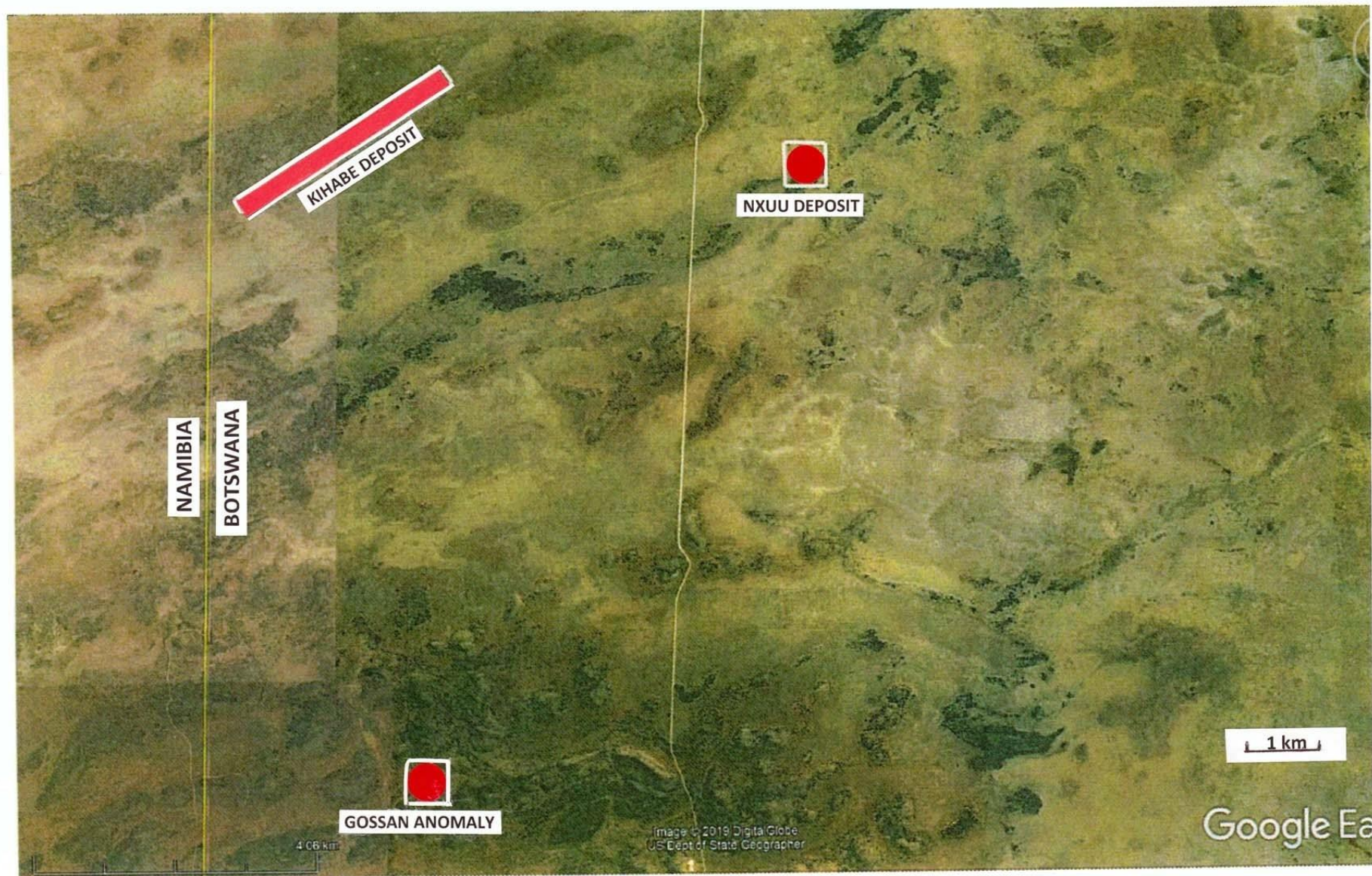
Maintaining the original licence area allows for potential further discoveries of minerals such as Germanium and Vanadium Pentoxide which could exist outside the known Zinc, Lead and Silver mineralised domains.

PL43/2016 – Location



50km

Google Earth Image showing Kihabe and Nxuu Deposits and Gossan Anomaly



Achievements during the Year

Initial production planned for the **Zinc, Lead, Silver, Germanium and Vanadium Nxuud Deposit** for the following reasons:

- Mineralisation currently known to extend only to a depth of 64m
- Mineralisation hosted within a totally oxidised Quartz Wacke basin
- Significant zones of **Vanadium mineralisation** outside those of Zn, Pb and Ag identified in 2017 drilling



- Mineralogical and Metallurgical test work conducted on the **Vanadium** content.

Why Vanadium?

Future electric vehicles will eliminate carbon emission. Large scale renewable energy (solar/wind projects planned). **How will grids store planned renewable energy and extra power required to replace petrol and diesel ?**

GRID POWER STORAGE OPTION FOR FUTURE POWER REQUIREMENTS

Vanadium Redox Flow (VRF) batteries manufactured from Vanadium Pentoxide:

- Capable of storing gigawatts of power over long periods of time with little power loss.
- Long life span with little deterioration when subjected to significant variation in high/low power storage capacity

Grids now constructing and planning VRF batteries including:

- **China** constructing 200 MW/800 MWh VRF battery at Dalian.
- 1,000 MW VRF battery project planned for Utah, **USA**, to power 150,000 homes p.a.
- **Germany** to build Vanadium Redox flow Battery to power Berlin
- **Saudi Arabia** together with SCHMID (Germany) to build VRF batteries to store 57.5 gigawatts of renewable energy by 2030

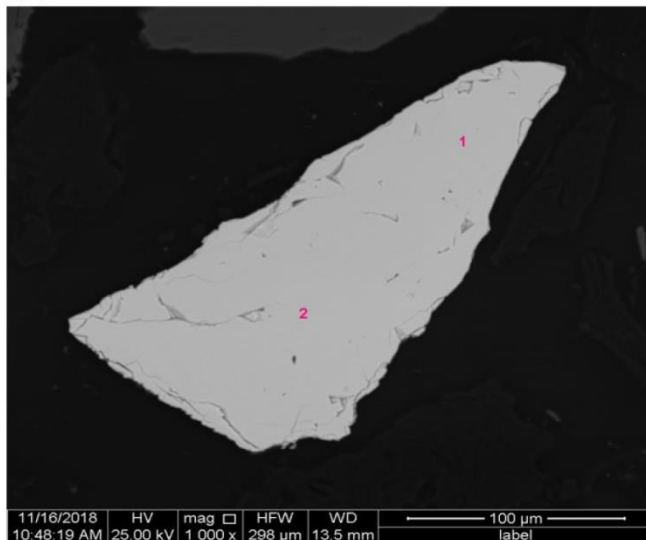
Mineralogical Test Work – ALS Laboratories

Mineralogical test work conducted on Vanadium samples concluded the **host oxide vanadate is DESCLOIZITE**.

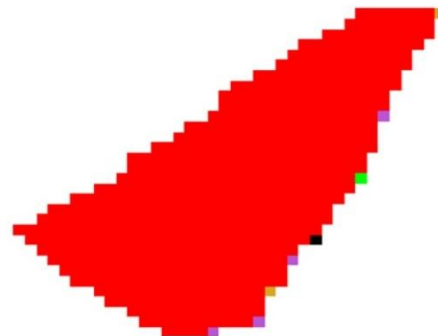
In **DESCLOIZITE** Vanadium (V) is hosted in **Vanadium Pentoxide (V_2O_5)**.

V_2O_5 is 1.785 times the volume of V

V_2O_5 is a marketable product



Min3533-Particle-01



Mineral Name	
<input type="checkbox"/>	Background
<input checked="" type="checkbox"/>	Descloizite
<input type="checkbox"/>	Galena/other Pb
<input type="checkbox"/>	Sphalerite
<input type="checkbox"/>	Other sulphides
<input type="checkbox"/>	Quartz
<input type="checkbox"/>	K-feldspar
<input type="checkbox"/>	Muscovite
<input type="checkbox"/>	Al-silicates (+/- Zn)
<input type="checkbox"/>	Zn-silicate
<input type="checkbox"/>	Other silicates
<input type="checkbox"/>	Calcite
<input type="checkbox"/>	Dolomite
<input type="checkbox"/>	Other carbonates (Zn)
<input type="checkbox"/>	Apatite
<input type="checkbox"/>	Limonite/goethite
<input type="checkbox"/>	Other minerals

'Galena/other Pb' was found to be mainly cerussite.

Spectrum	Pb	Cu	Zn	V	Fe	Mg	Al	Si	K	Ca	Ti	O	Total
Particle-01- 1	58.4		18.3	18.1								5.1	100.0
Particle-01- 2	58.8		17.9	18.3								5.0	100.0

The composition data shown here is based on a normalized, standardless, semi-quantitative measurement.

Element	Pb	Cu	Zn	V	Fe	O	H	Total
Average of all descloizite analyses (original)	57.4	0.2	18.1	17.9	0.6	5.7		100.0
Average of all descloizite analyses (O adjusted to 20 %)	48.7	0.2	15.4	15.2	0.5	20.0		100.0
Descloizite (typical composition from www.webmineral.com)	51.2		16.2	12.6		19.8	0.3	100.0

Oxygen, the lightest element, is significantly underestimated.

The second table shows the average composition of the descloizite after oxygen is adjusted to 20%.

Metallurgical Test Work – ALS Laboratories

Metallurgical test work conducted on Vanadium/Vanadium Pentoxide samples concluded:

- Through direct flotation using Hydroxamate as a collector over **80.4% recoveries** of V_2O_5 can be achieved **as a marketable product**. This is an environmentally friendly recovery process as the V_2O_5 is in **Descloizite** which **does not** require either smelting to 1,000 deg C or potassium salt roasting

Conclusion

With over **80.4%** recoveries of V_2O_5 , **a marketable product**, V_2O_5 mineralised zones in the Nxuu Deposit will add significant dimension to overall recoverable Zn, Pb, Ag, Ge, V mineralised zones.

Assessment of twenty-four (24) holes drilled into the Nxuu Deposit show that on average:

- The recoverable mineralised intersections amount to **57.53%** of drill hole lengths to end of mineralisation
- The barren or non-recoverable intersections amount to **42.47%** of drill hole lengths to end of mineralisation

*Refer to Slide 16 showing depths to
base of mineralisation for all drill holes on Sections 1 – 4 and Nxuu SW*

Metallurgical Test Work Conducted to separate Barren Quartz Wacke from Mineralised Quartz Wacke – EXXARO

Ultra Fine Dense Media Separation was applied to determine whether barren Quartz Wacke (the host rock of mineralisation at Nxuu Deposit) could be separated from mineralised Quartz Wacke as a pre-concentration step, i.e. after primary crushing but before milling.

Conclusion

Using a Heavy Liquid Separator with a SG of 2.6 (the SG of non-oxidised Quartz Wacke):

- Over 88% of Pb and V recoveries were successfully separated into sinks
- Zn, Ag and Ge showed little response to separation at an SG of 2.6

Because the host Quartz Wacke is totally oxidised, its density is likely to be affected by porosity, thereby requiring a Heavy Liquid Separator with a SG of less than 2.6.

Successful separation of barren Quartz Wacke from mineralised Quartz Wacke prior to milling will reduce plant size and tonnages for milling. **This will reduce power requirements and overall capital and treatment costs.**

Test Work currently in Progress

Mount Burgess Mining is currently conducting Sighter test work (ore sorting test work) by scanning samples through a Fines Combination Sensor Sorter, a Colour 3D Laser Camera and a X-ray Transmission Sensor.

This is **further** test work to trial separating mineralised Quartz Wacke from barren Quartz Wacke prior to milling **to reduce power requirements as well as capital and processing costs.**

Maximising Beneficiation within Botswana

Successful Test Work Conducted to Date

Test work conducted to date on the Nxuu Deposit has shown that:

- **93% Zn** metal can be recovered on site through Solvent Extraction and Electro-Winning
- Over **80.4% V_2O_5** can be recovered on site as a marketable product through flotation using Hydroxamate as a collector

Further Test Work Required

In conjunction with the **Chemical, Materials and Metallurgical Department of the Botswana International University of Science and Technology**, Mount Burgess Mining will be conducting the following test work.

Maximising Beneficiation within Botswana (cont'd)

Mineralogical Test Work

Test work needs to be conducted to determine the host mineral of Germanium. Several intersections of between 5 – 11ppm Ge occur at both Kihabe and Nxuu Deposits.

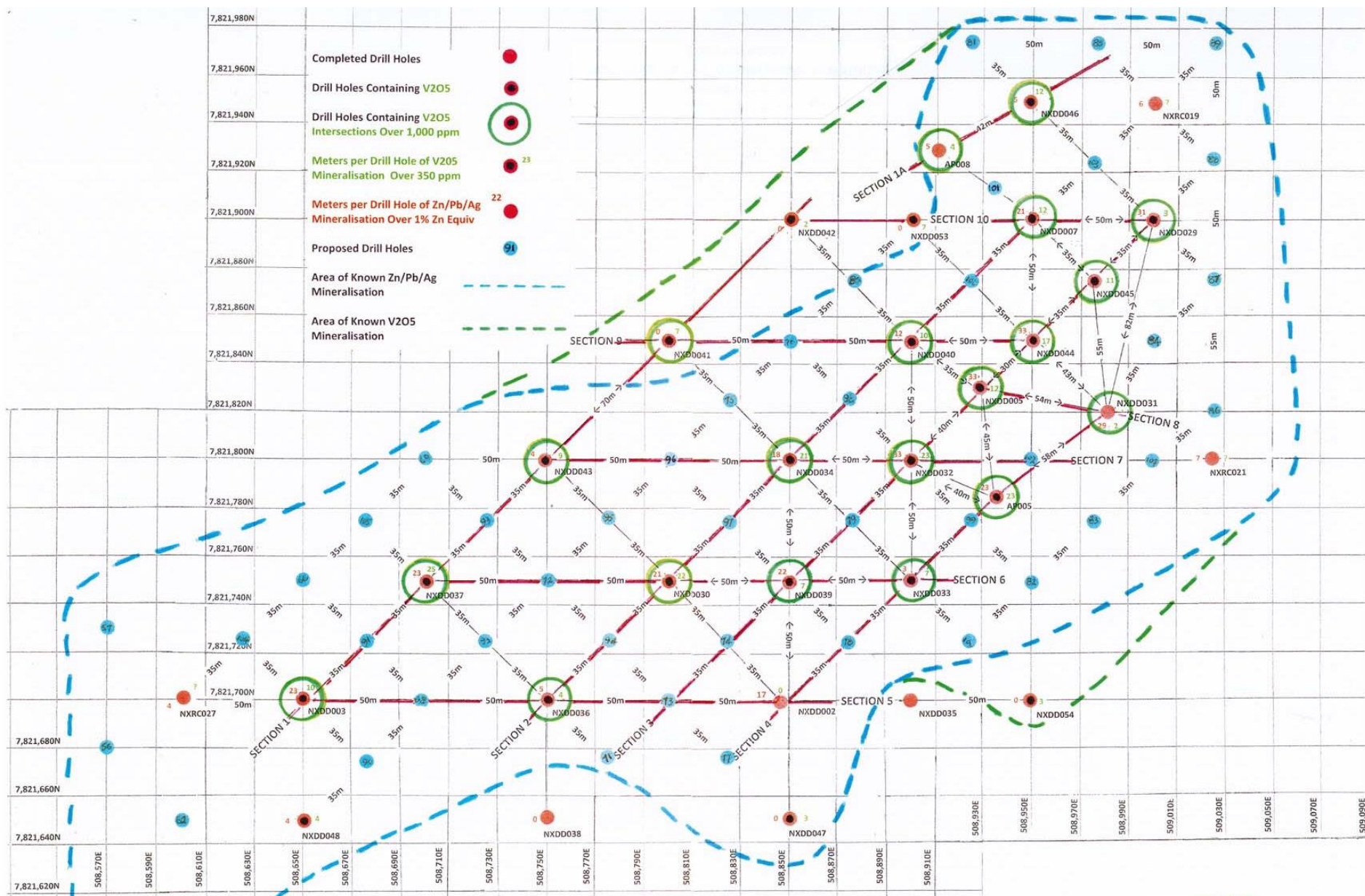
Metallurgical Test Work

- Optimised gravity + oxide flotation using Hydroxamate and/or other suitable oxide flotation collectors
- Flotation with the addition of NaHS or Na₂S – i.e. Controlled Potential Sulphidisation to produce a beneficiated concentrate of Zn, Pb, Ag, Ge, V₂O₅

This can then be followed by:

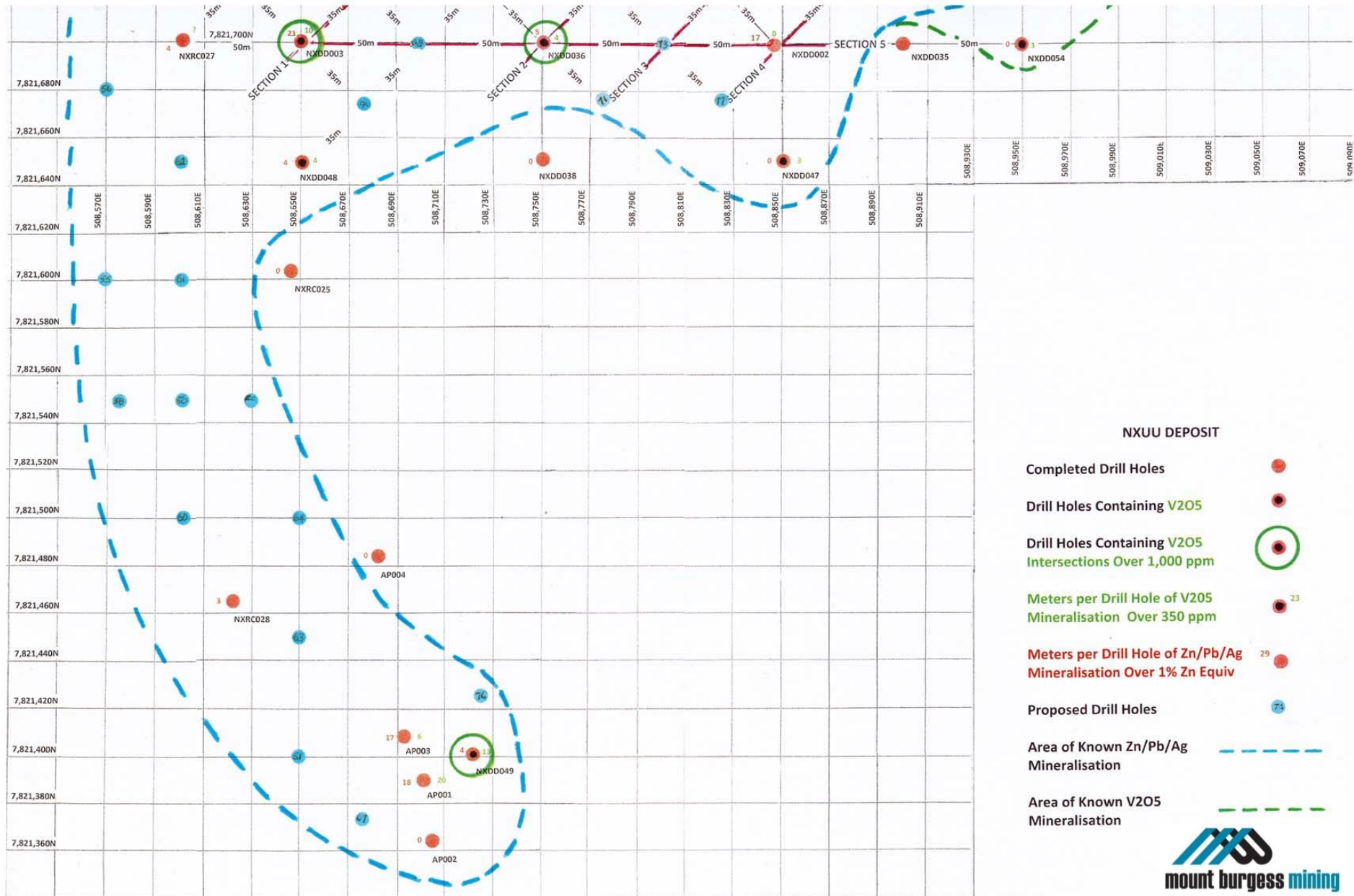
- Dissolution of the optimised flotation concentrate in Methane Sulphonic Acid to solubalise all metals
- Selective Solvent Extraction for each individual metal to determine whether they can then be separately recovered
- Electro-Winning

Part 1 of 2



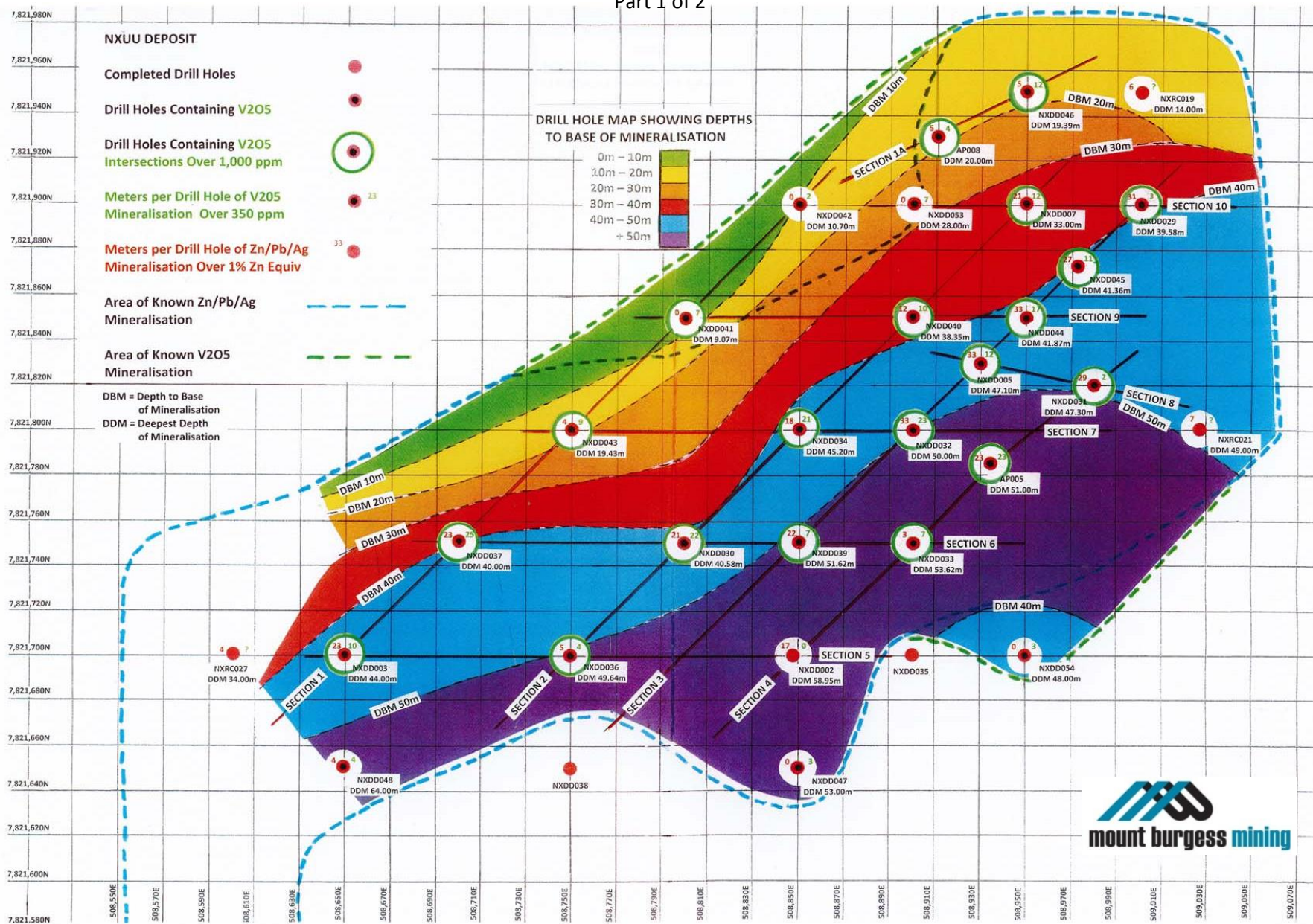
Nxuu Deposit Zn/Pb/Ag/Ge/V Mineralisation – Drill Hole Map

Part 2 of 2

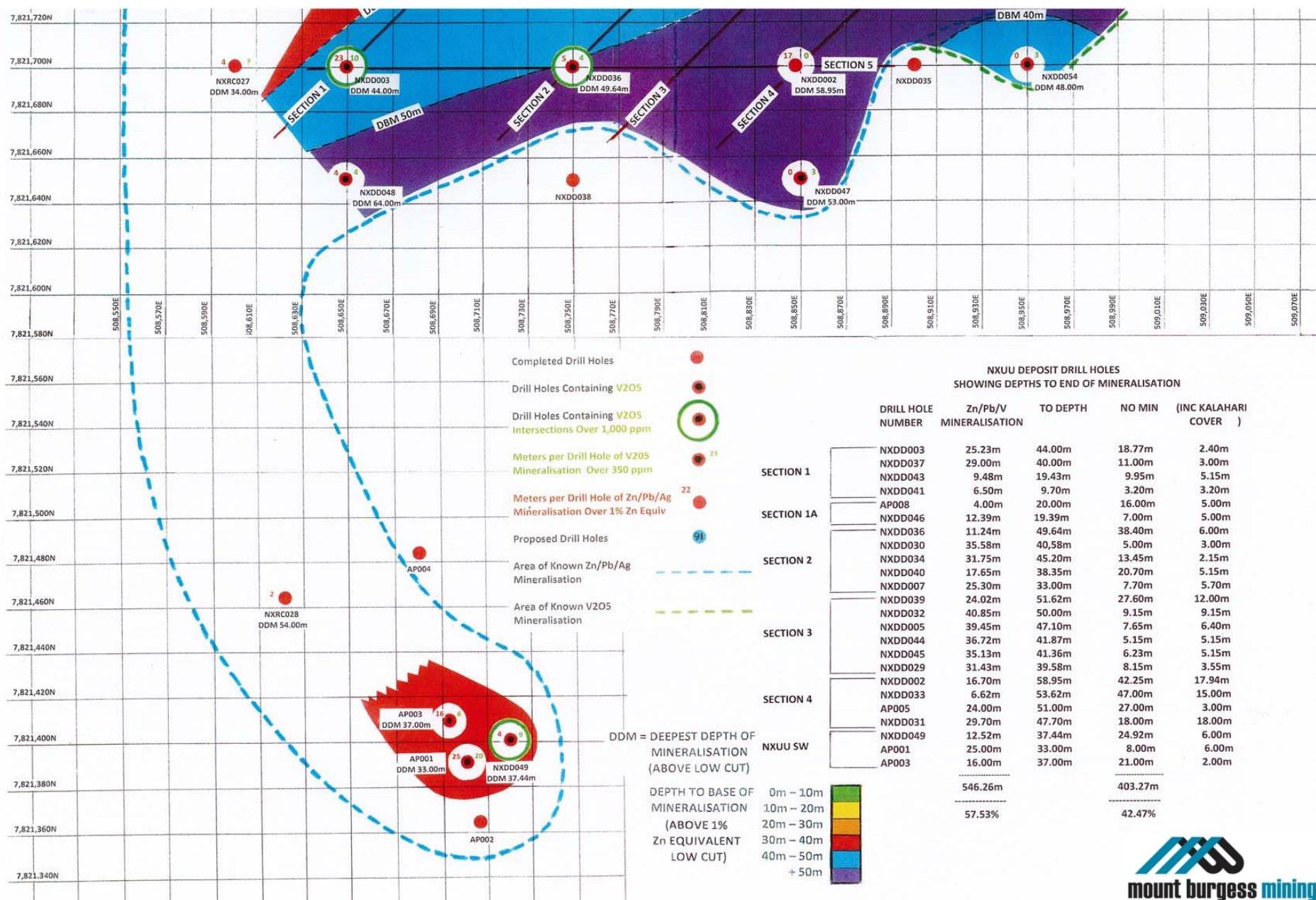


Drill Hole Map showing Depths to Base of Mineralisation – Nxuu Deposit

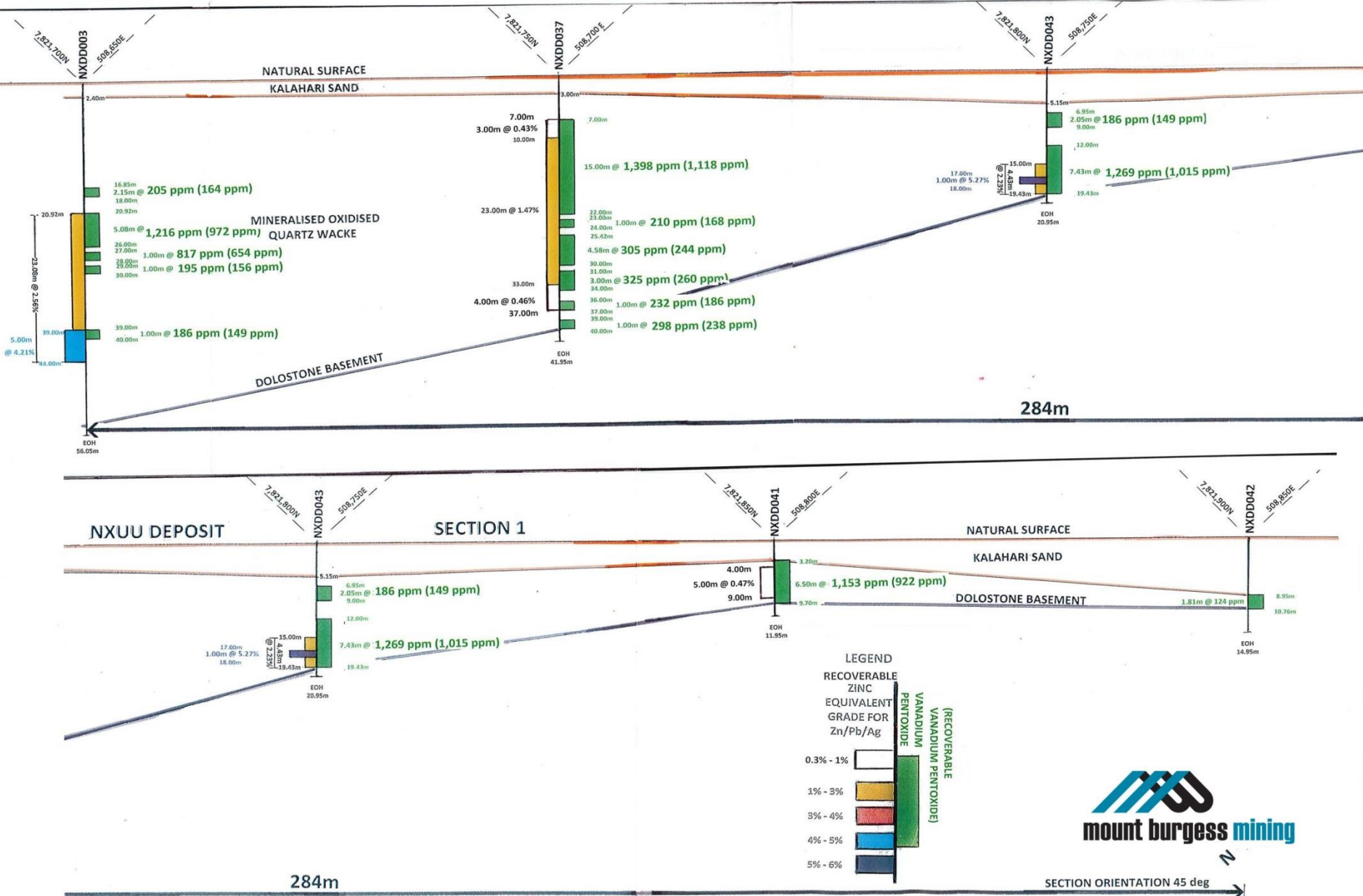
Part 1 of 2



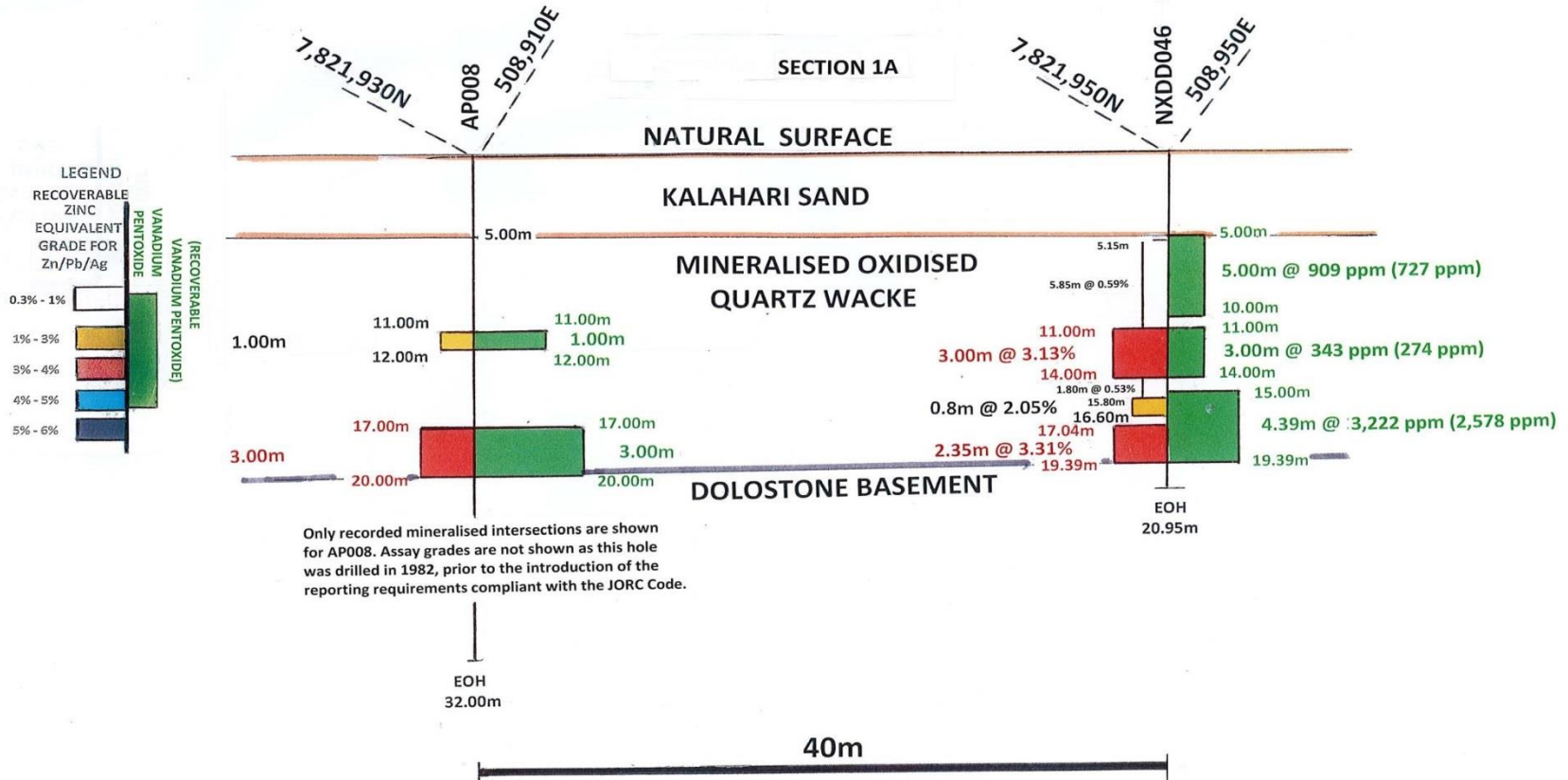
Drill Hole Map showing Depths to Base of Mineralisation – Nxuu Deposit Part 2 of 2



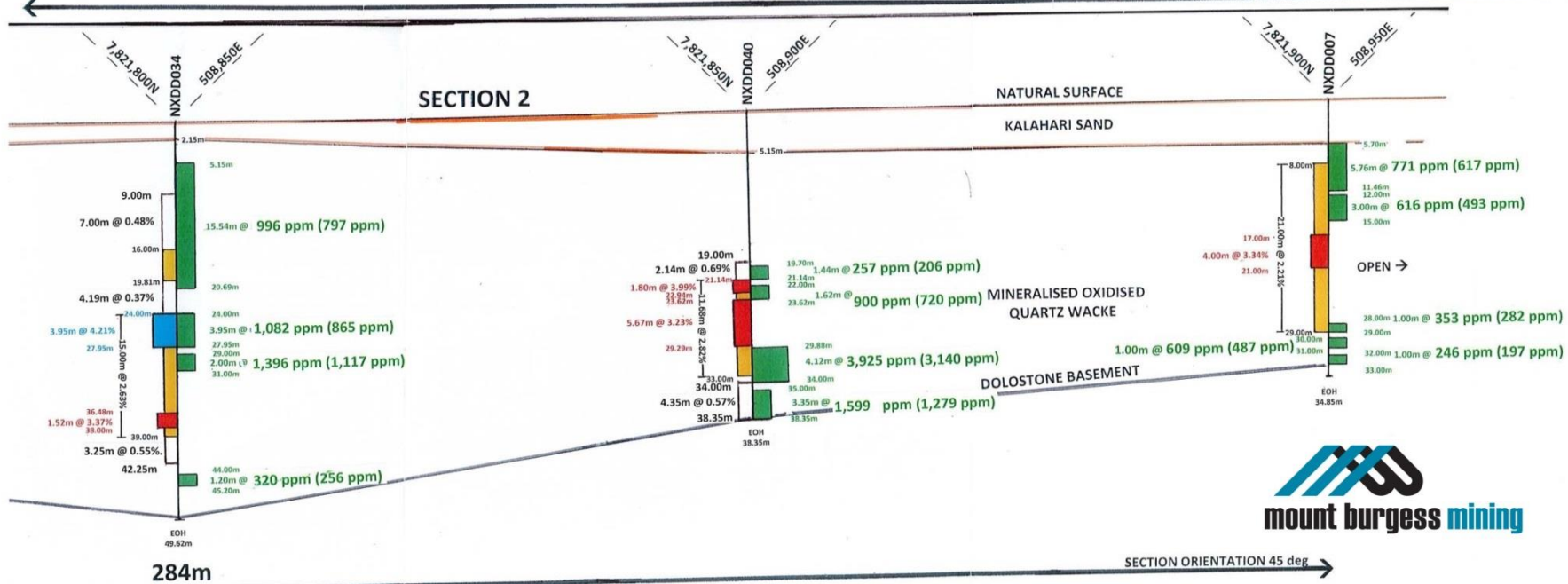
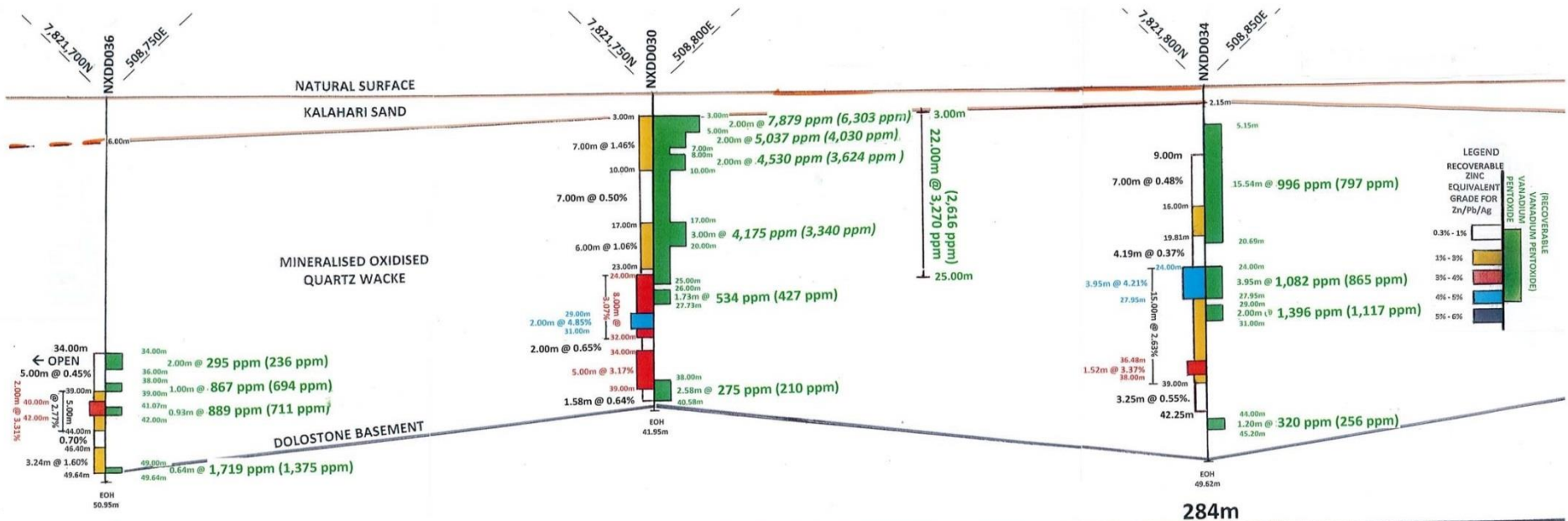
Nxuu Deposit – Section 1



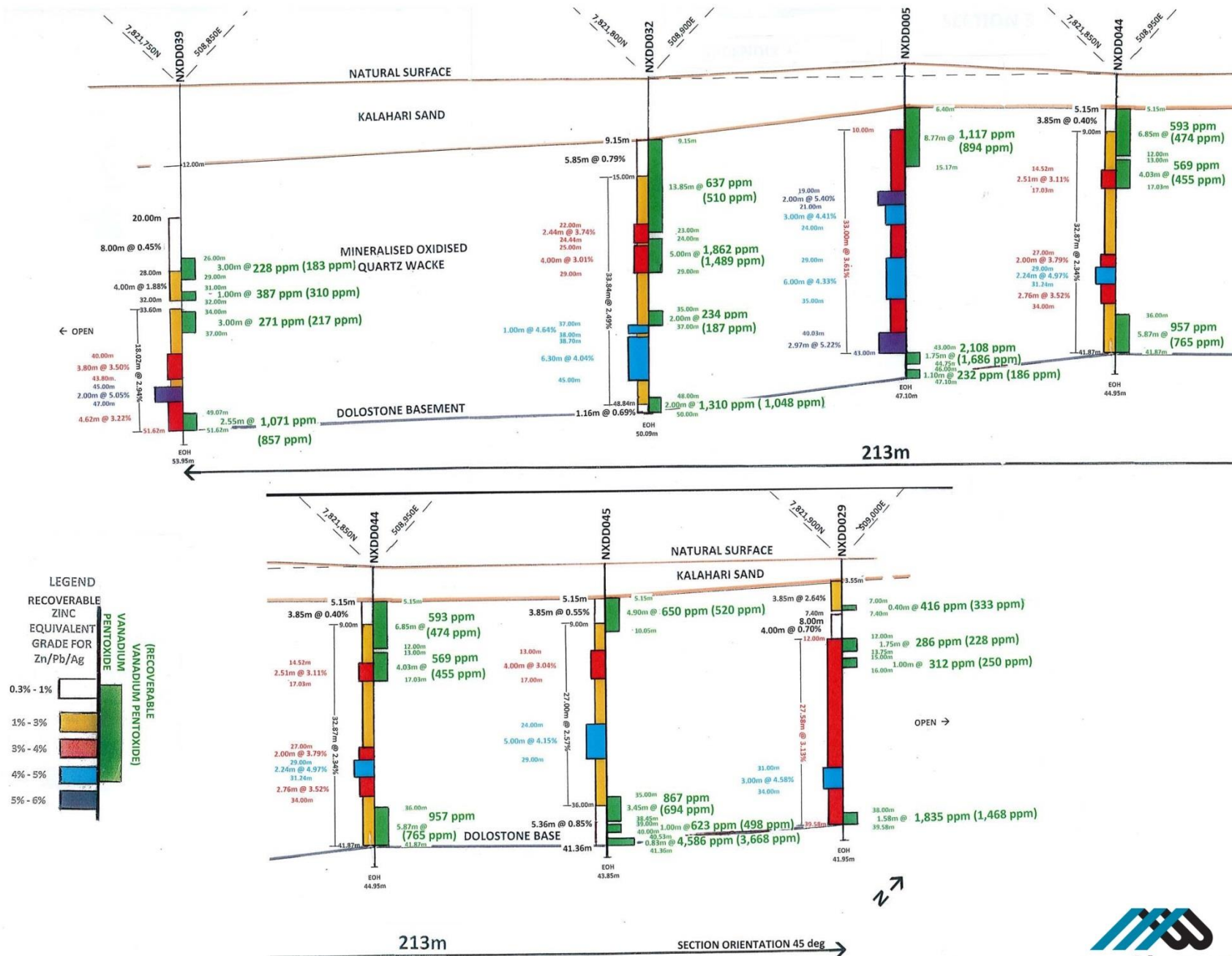
Nxuu Deposit – Section 1A



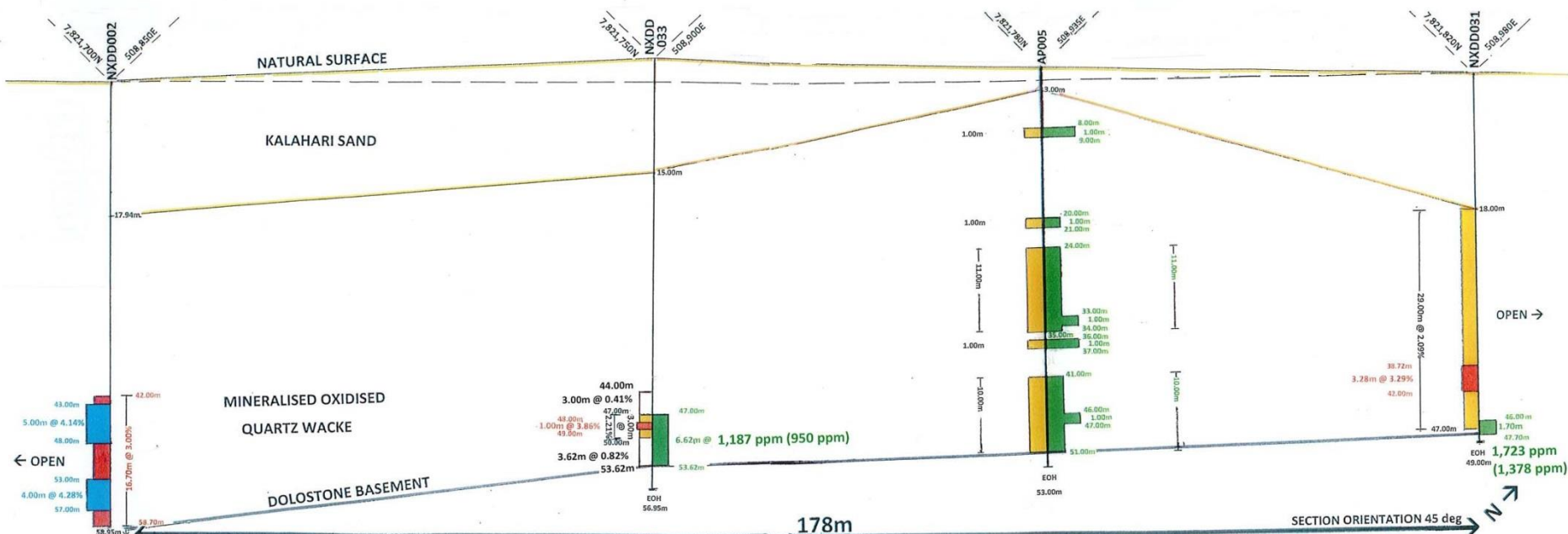
Nxuu Deposit – Section 2



Nxuu Deposit – Section 3



Nxuu Deposit – Section 4



Only recorded mineralised intersections are shown for AP005. Assay grades are not shown as this hole was drilled in 1982, prior to the introduction of the reporting requirements compliant with the JORC Code.

The Kihabe Resource

The Kihabe SEDEX style mineralisation covers a **strike length of 2.4km**

Within that 2.4km there is:

- A SW zone of mineralisation extending from 9,700mE to 10,750mE (local grid), over a strike length of 1,050m
- A NE zone of mineralisation extending from 11,250mE to 12,000mE (local grid), over a strike length of 750m

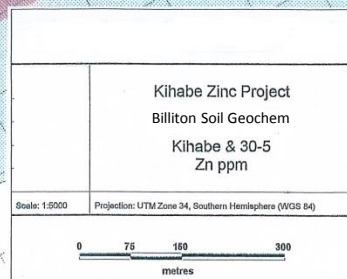
The two zones combined cover a strike length of 1,800m (1.8km).

Within the combined 1.8km there are 35 drill sections.

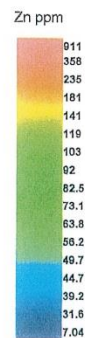
The average width of mineralisation defined by the 35 drill sections is 27m down to a depth of 175m. The widest width of mineralisation is 60m.

The top 25% is oxidised with the bottom 75% being sulphide.

A resource has been calculated at various cut offs in accordance with the 2004 JORC Code



KIHABE **Zn,Pb,Ag,Ge,V2O5** **DEPOSIT**



LEGEND

- 50m RL Dolomite Contact
- Contact
- Calcrete Cover Masking Anomaly
- Granite / Zone of Potential Mineralisation
- Drill Hole (Proposed White)
- IP Line / Conductor
- ☆ IP Anomaly (Bill Peters)

Kihabe Resource between Easting 9,700m and 10,750m and 11,250 to 12,000mE

Cut Off Zn Eq %	Volume	Tonnes	Zn %	Pb %	Ag g/t	Zn Metal (t)	Pb Metal (t)	Ag Ounces
0.0	189,000,002	464,876,532	0.06	0.03	0.23	281,885	121,592	3,459,333
0.1	7,934,338	21,105,098	1.34	0.58	5.10	281,885	121,592	3,459,333
0.3	7,889,650	20,986,594	1.34	0.58	5.12	281,810	121,453	3,457,310
0.5	7,648,088	20,350,652	1.38	0.59	5.26	280,379	120,384	3,441,106
0.6	7,397,502	19,689,008	1.41	0.60	5.41	278,309	119,095	3,423,175
0.8	6,889,514	18,347,549	1.49	0.63	5.71	272,655	116,238	3,367,491
1.0	6,334,104	16,881,344	1.57	0.66	6.06	265,237	111,723	3,291,212
1.2	5,816,819	15,512,322	1.65	0.70	6.39	255,261	108,054	3,187,165
1.4	5,315,940	14,185,988	1.71	0.74	6.74	243,264	104,487	3,073,401
1.5	5,053,088	13,486,863	1.75	0.76	6.93	236,312	102,282	3,006,093
1.6	4,744,162	12,663,490	1.80	0.78	7.18	227,723	99,330	2,922,320
1.8	4,184,435	11,171,221	1.89	0.84	7.67	210,655	93,474	2,753,179
2.0	3,618,029	9,659,569	1.98	0.90	8.24	191,707	86,532	2,558,042
2.5	2,451,739	6,545,737	2.25	1.05	9.82	147,185	68,712	2,066,286
3.0	1,676,993	4,472,728	2.49	1.22	11.39	111,351	54,433	1,638,148
3.5	1,157,266	3,082,603	2.71	1.37	13.11	83,409	42,269	1,298,926
4.0	788,691	2,100,128	2.93	1.51	14.94	61,622	31,649	1,008,423
4.5	516,289	1,374,673	3.18	1.64	17.03	43,703	22,524	752,622
5.0	309,336	823,696	3.52	1.79	18.78	28,983	14,738	497,467
5.5	203,496	540,549	3.80	1.91	20.67	20,541	10,334	359,197
6.0	135,000	358,059	4.15	2.00	21.10	14,873	7,154	242,942

Kihabe Metal Recoveries

Kihabe Oxide:

- 97% Zn recovered (24 hrs via acid leach) – potential to produce Zn metal on site via SX/EW
- 92% Pb recovered to produce high grade concentrate of 76% Pb

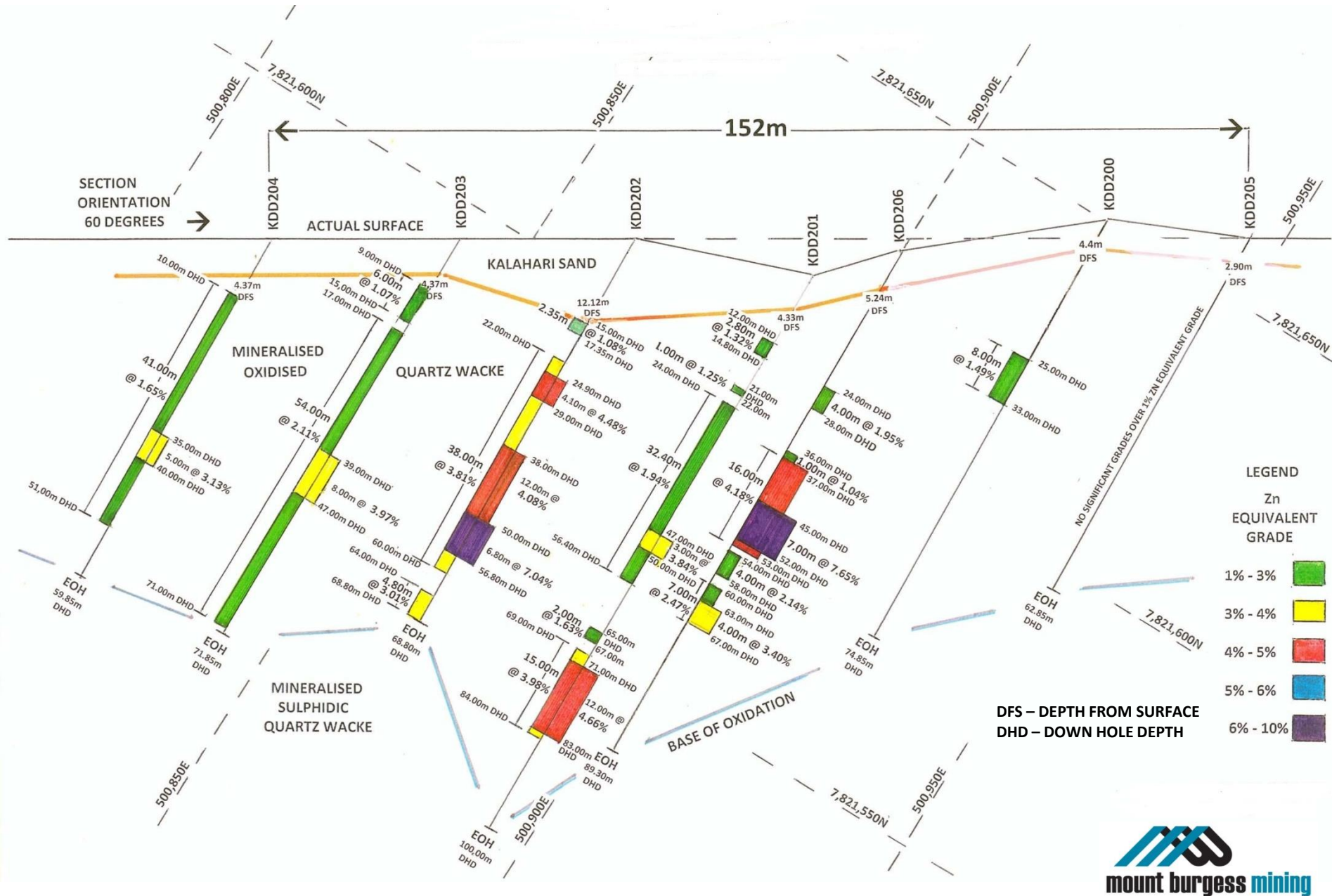
Kihabe Sulphide:

- 94% Zn, 88% Pb, 96% Ag recovered (15 mins via flotation) producing 58% Zn con and 76% Pb con

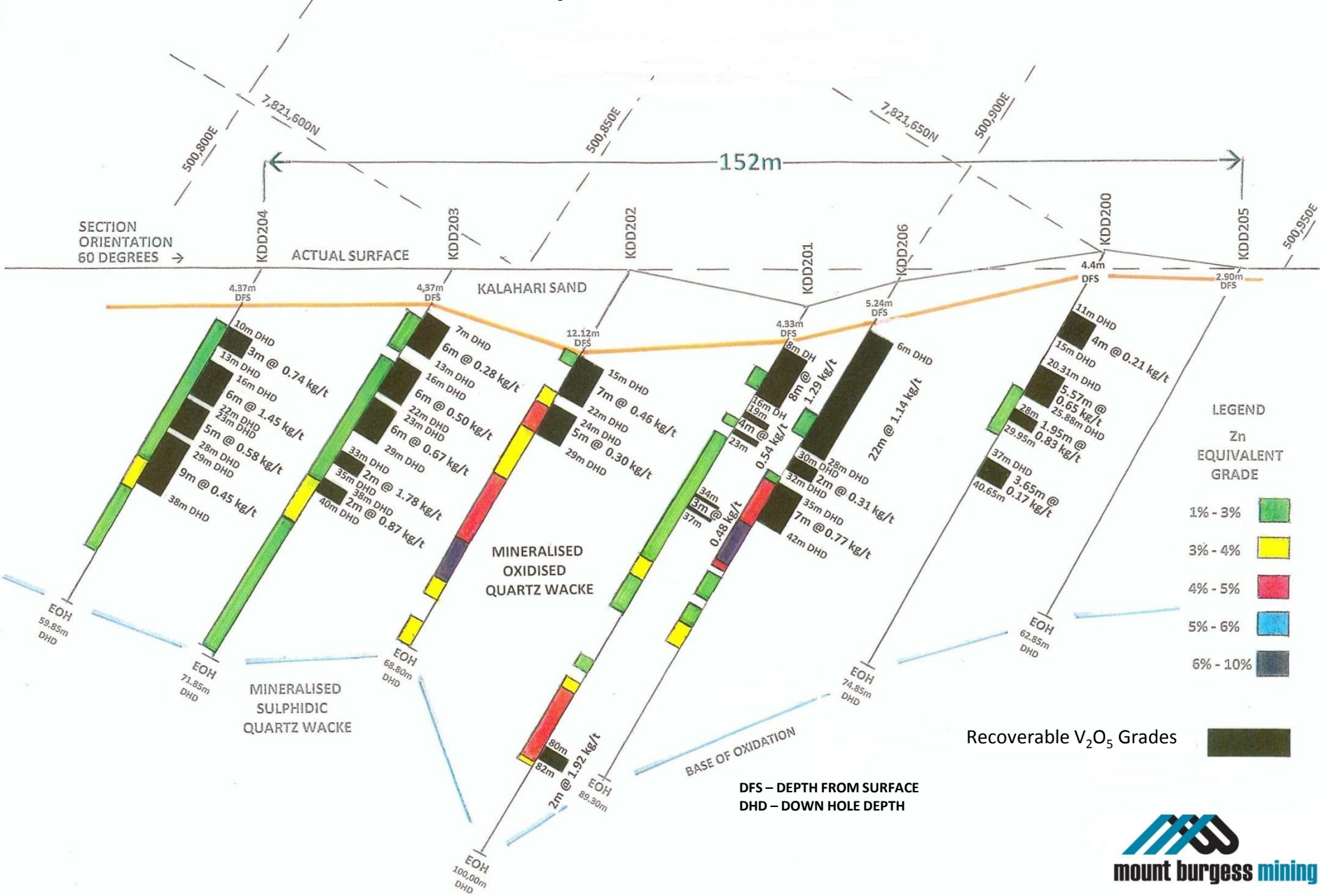
The information in the resource statement that relates to the Kihabe Resource is compiled by Byron Dumpleton, B.Sc., a member of the Australasian Institute of Geoscientists.

Mr Dumpleton is an independent qualified person and has sufficient experience relevant to the style of mineralisation under consideration and to the activity to which he has undertaken to qualify as a Competent Person as defined in the 2004 Edition of the “Australasian Code of Reporting of Mineral Resources and Ore Reserves”. Mr Dumpleton has consented to the inclusion in this report of the matters based on the information in the form and context in which it appears. The information regarding the Kihabe Resource was first released on 8 October 2008 and updated with recovery information on 12 April 2012. The information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

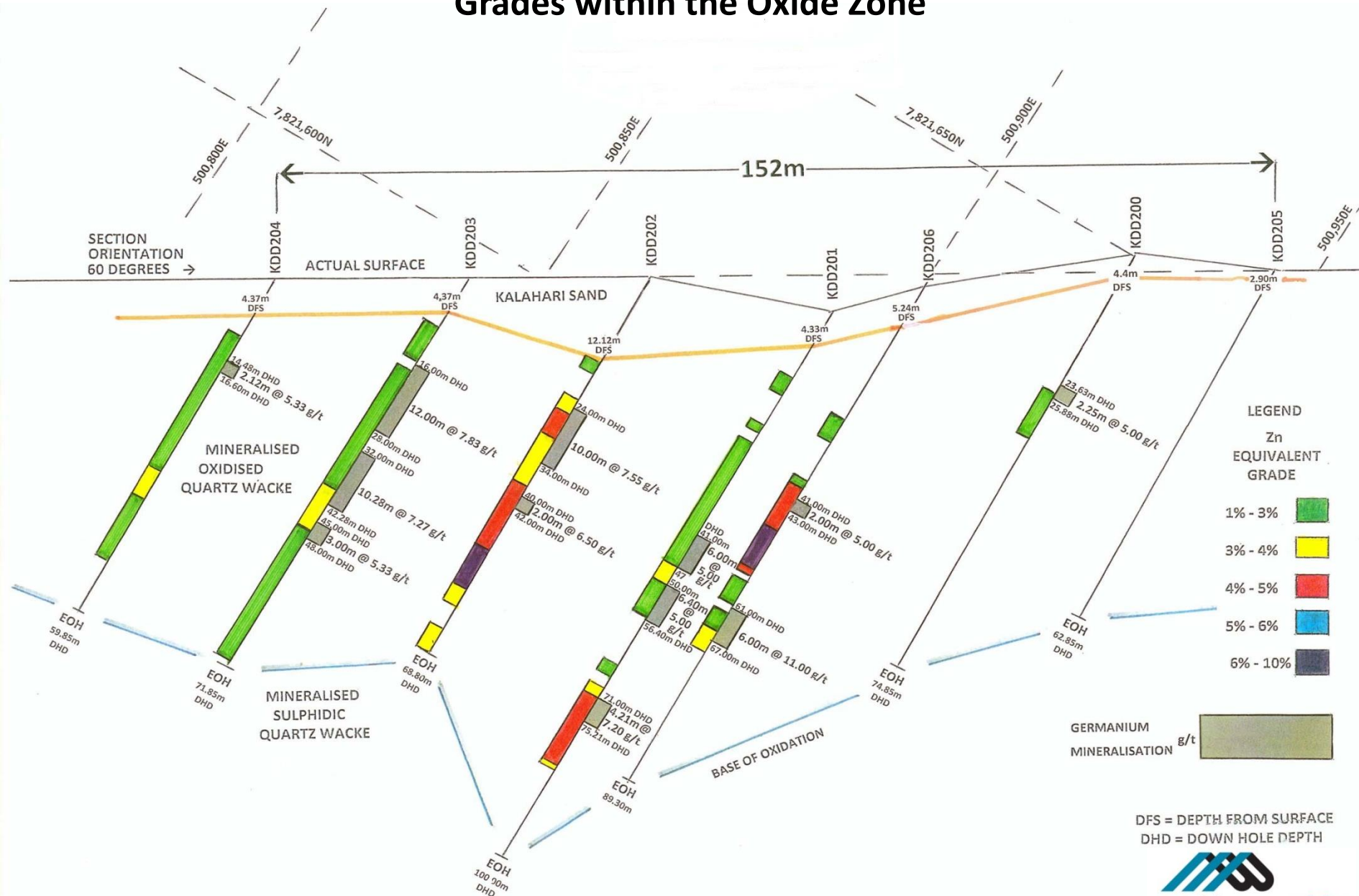
Kihabe Deposit – Recoverable Zn, Equiv Grades for Zn, Pb & Ag within the Oxide Zone



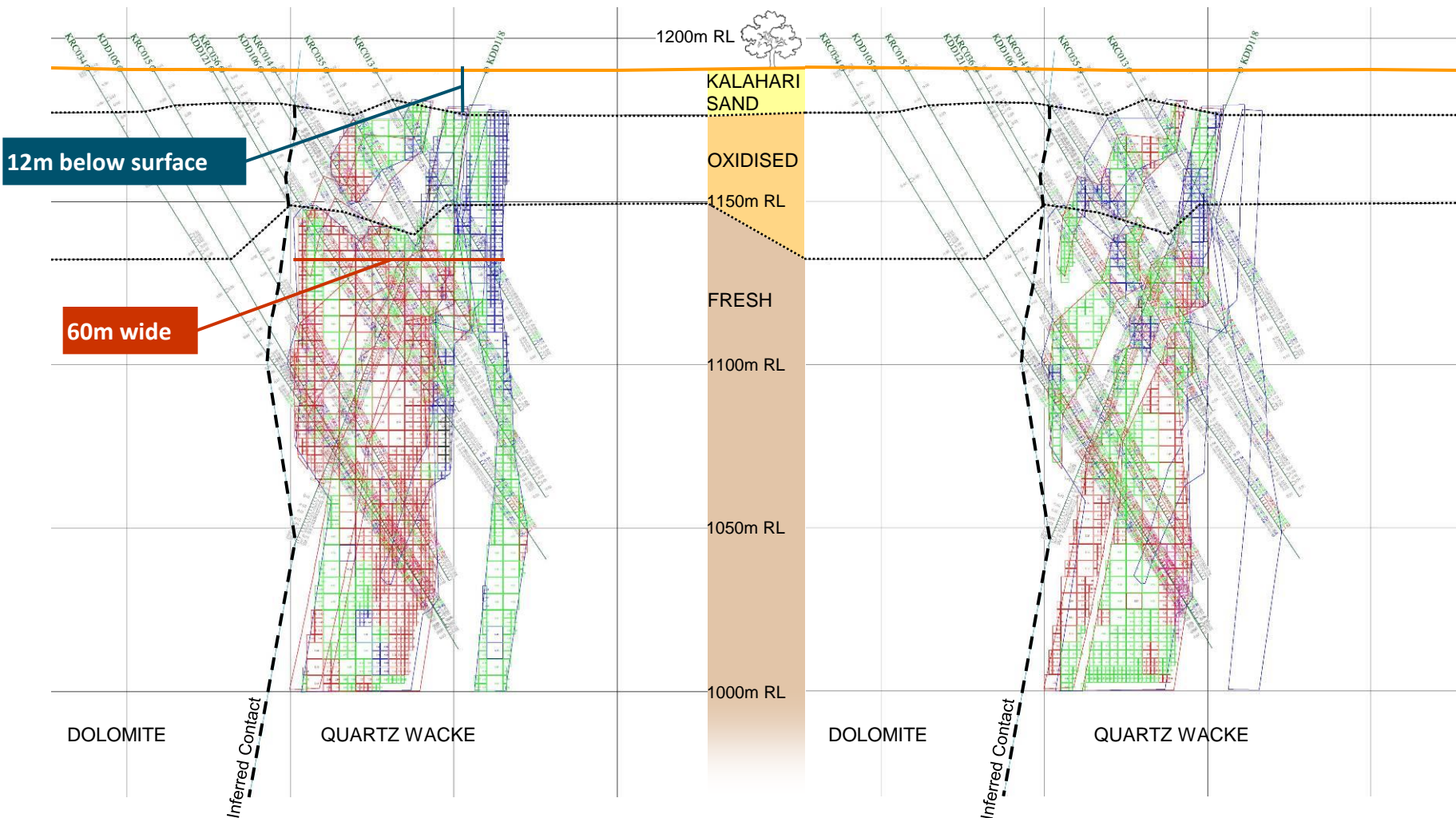
Kihabe Deposit – Recoverable Vanadium Pentoxide V_2O_5 Grades alongside Recoverable Zn Equiv. Grades within the Oxide Zone



Kihabe Deposit – Germanium Grades alongside Recoverable Zn Equiv. Grades within the Oxide Zone



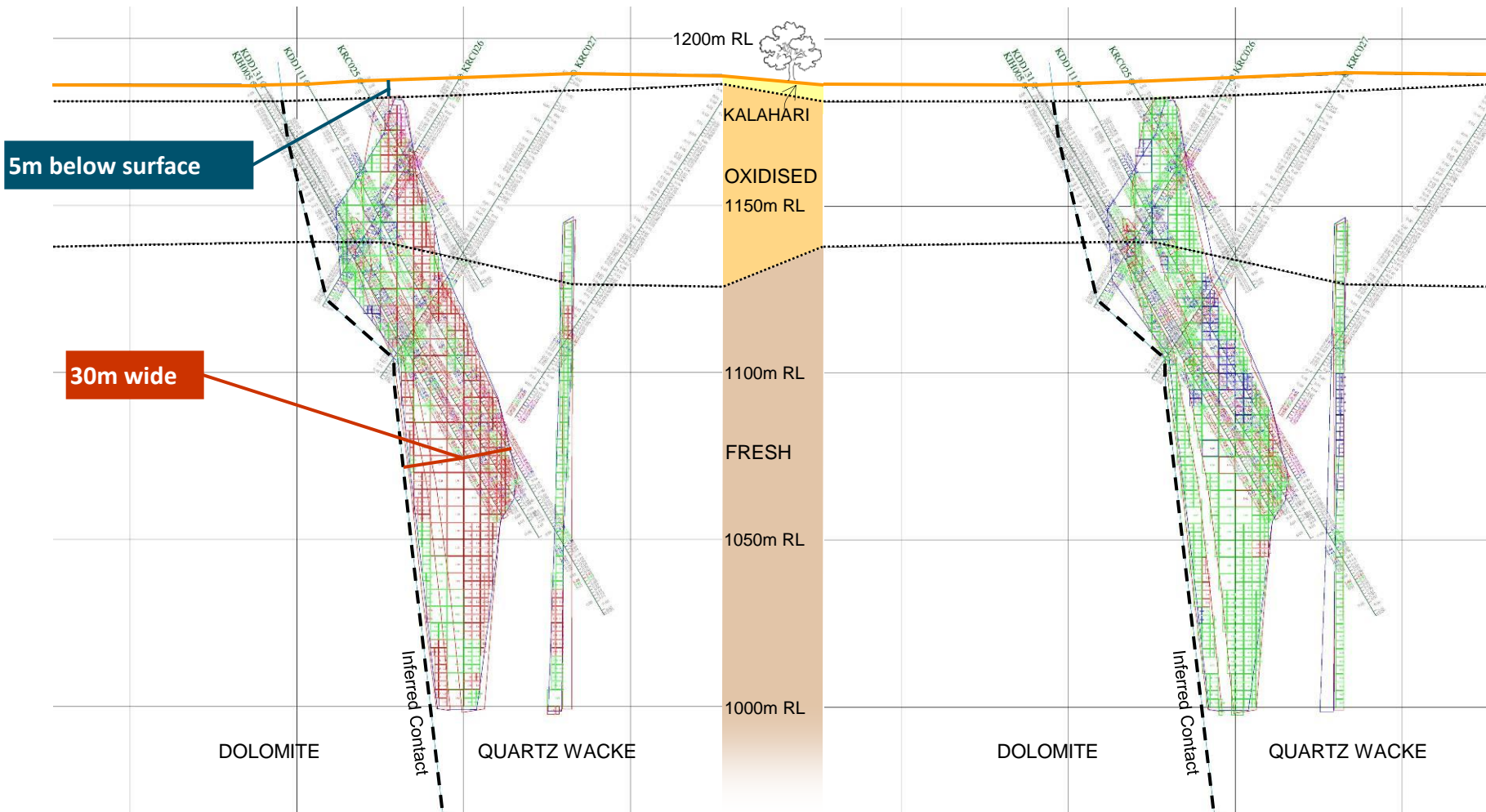
Kihabe Resource – Section 9900mE



Zinc Model

Lead Model

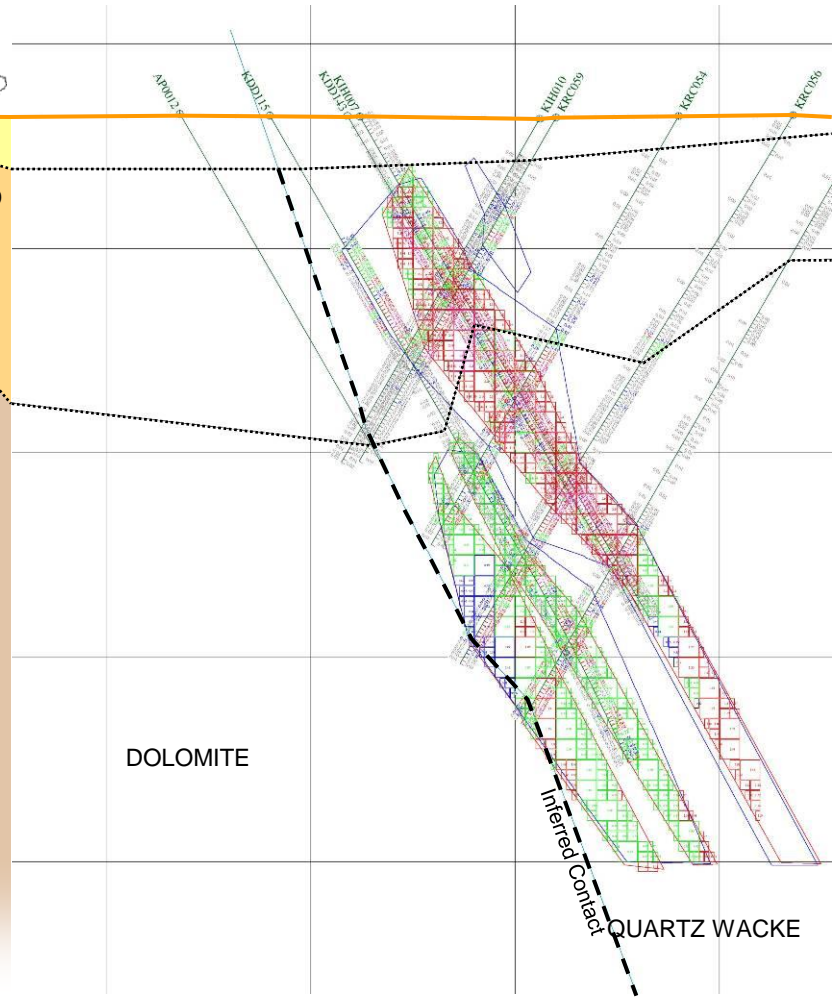
Kihabe Resource – Section 10400mE



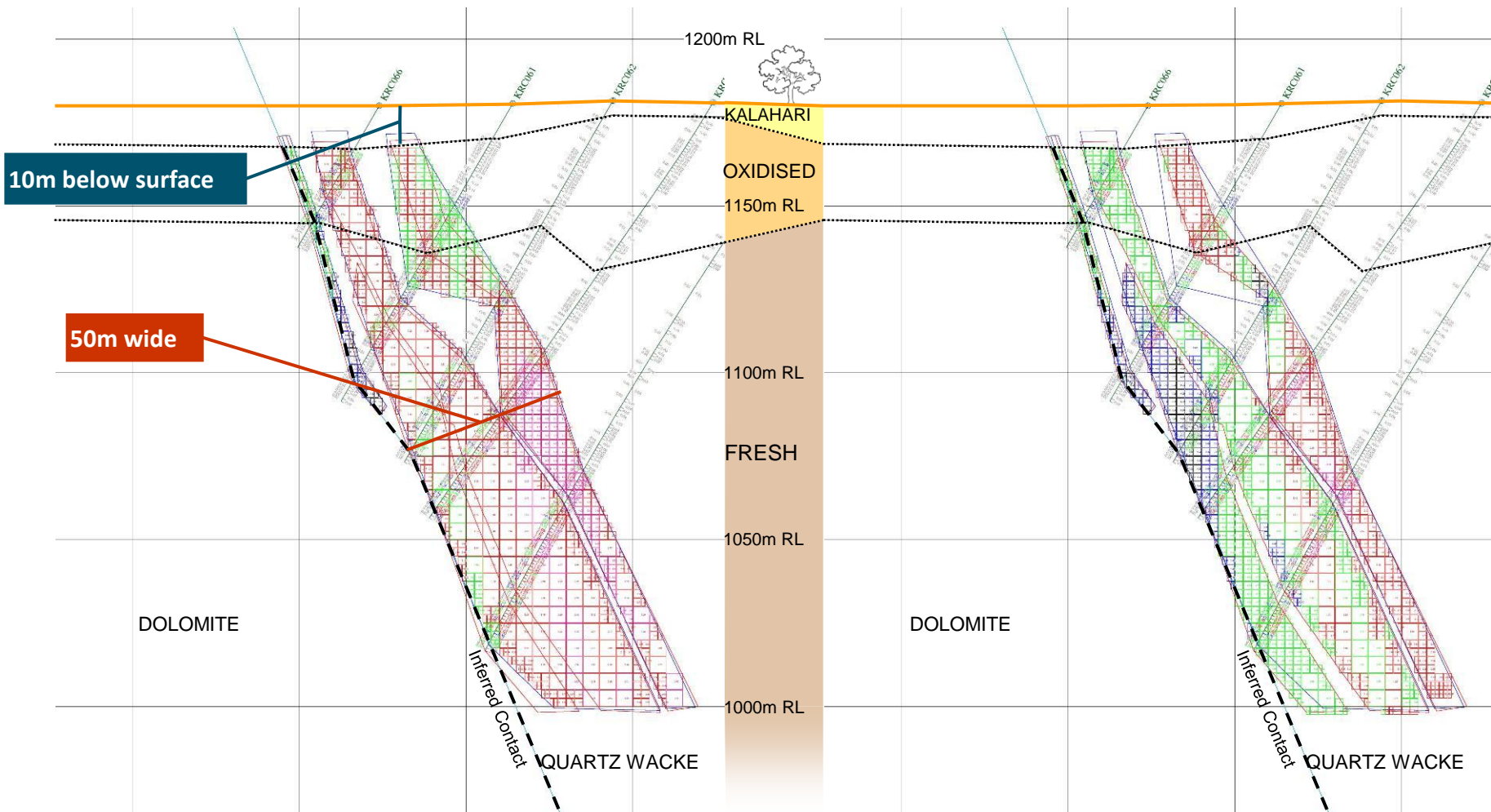
Zinc Model

Lead Model

Zinc Model



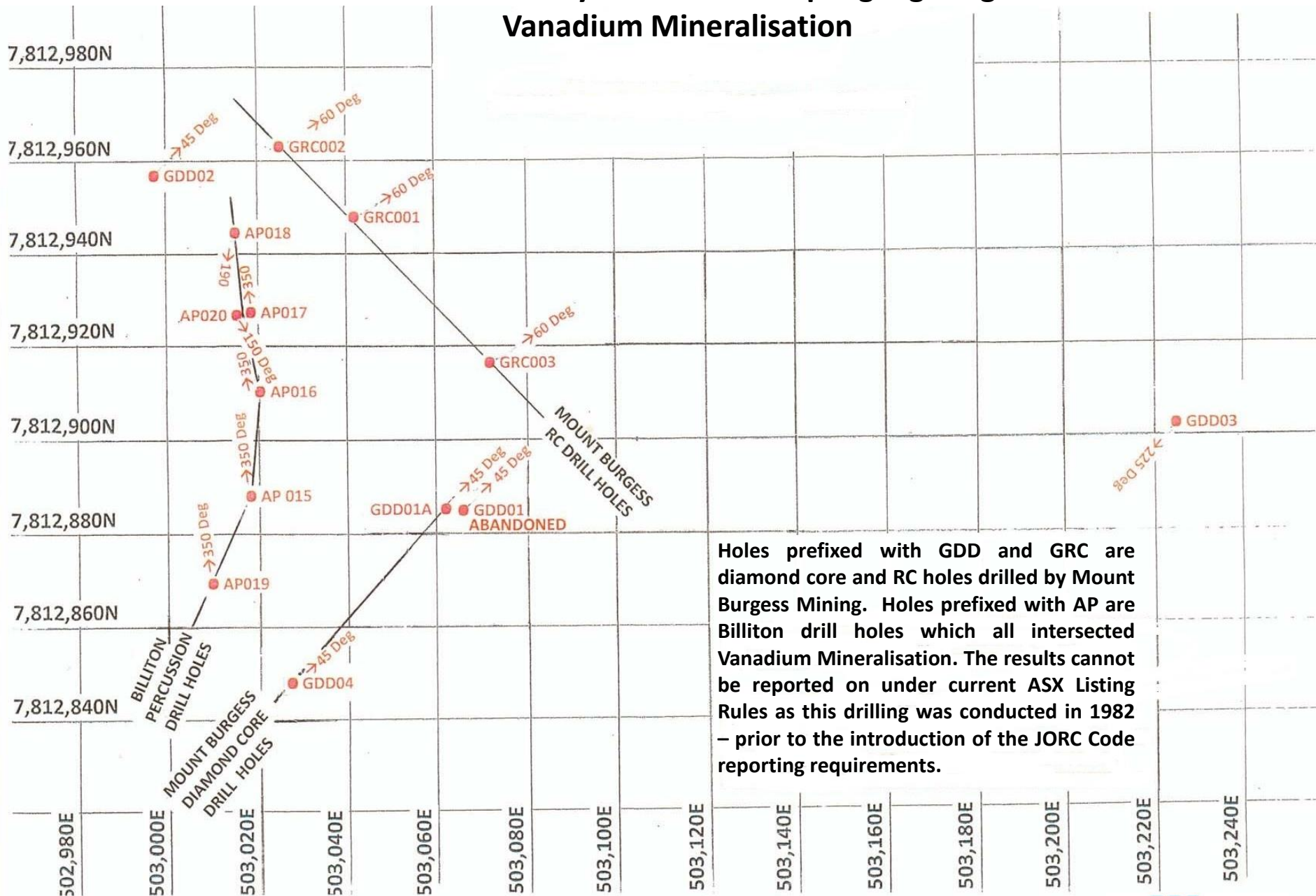
Kihabe Resource – Section 11700mE



Zinc Model

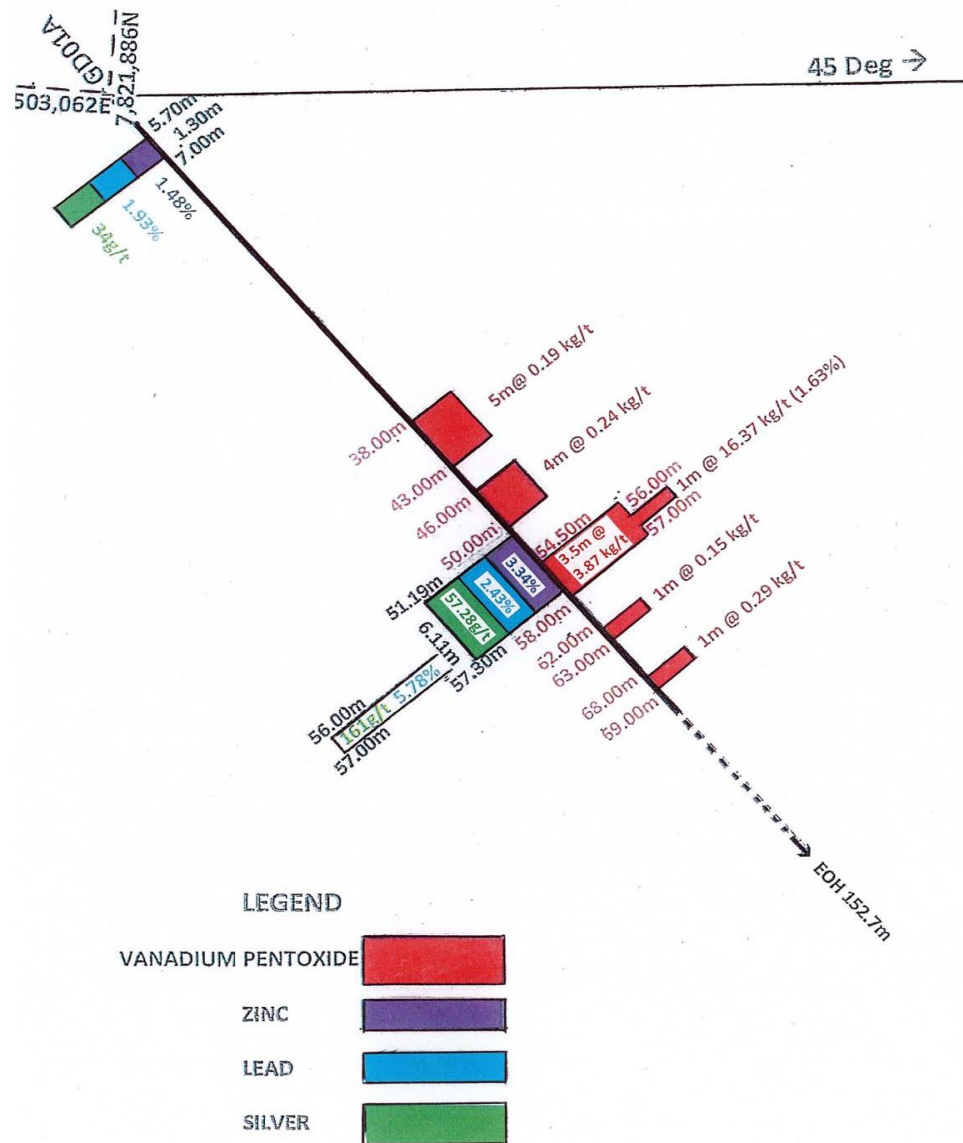
Lead Model

Gossan Anomaly – Drill Hole Map highlighting Vanadium Mineralisation

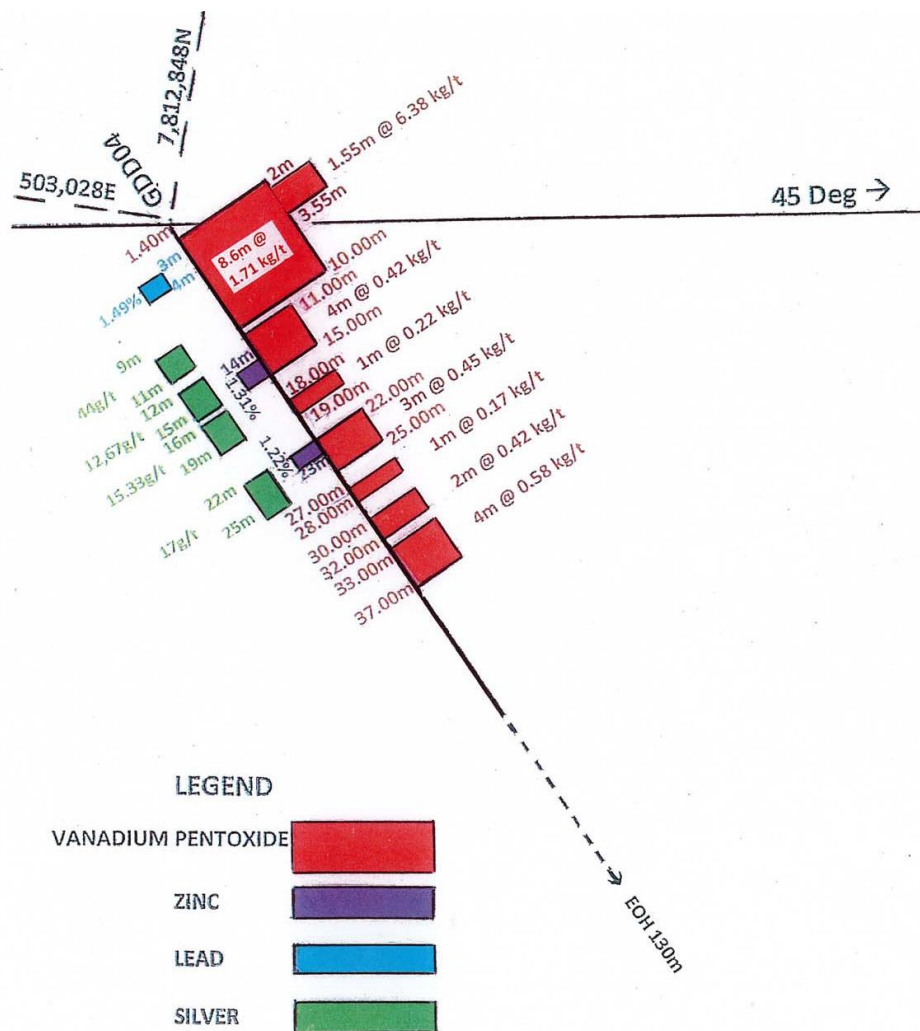


Holes prefixed with GDD and GRC are diamond core and RC holes drilled by Mount Burgess Mining. Holes prefixed with AP are Billiton drill holes which all intersected Vanadium Mineralisation. The results cannot be reported on under current ASX Listing Rules as this drilling was conducted in 1982 – prior to the introduction of the JORC Code reporting requirements.

Gossan Anomaly – Mount Burgess Mining Diamond Core Hole Recoverable Vanadium Pentoxide Grades

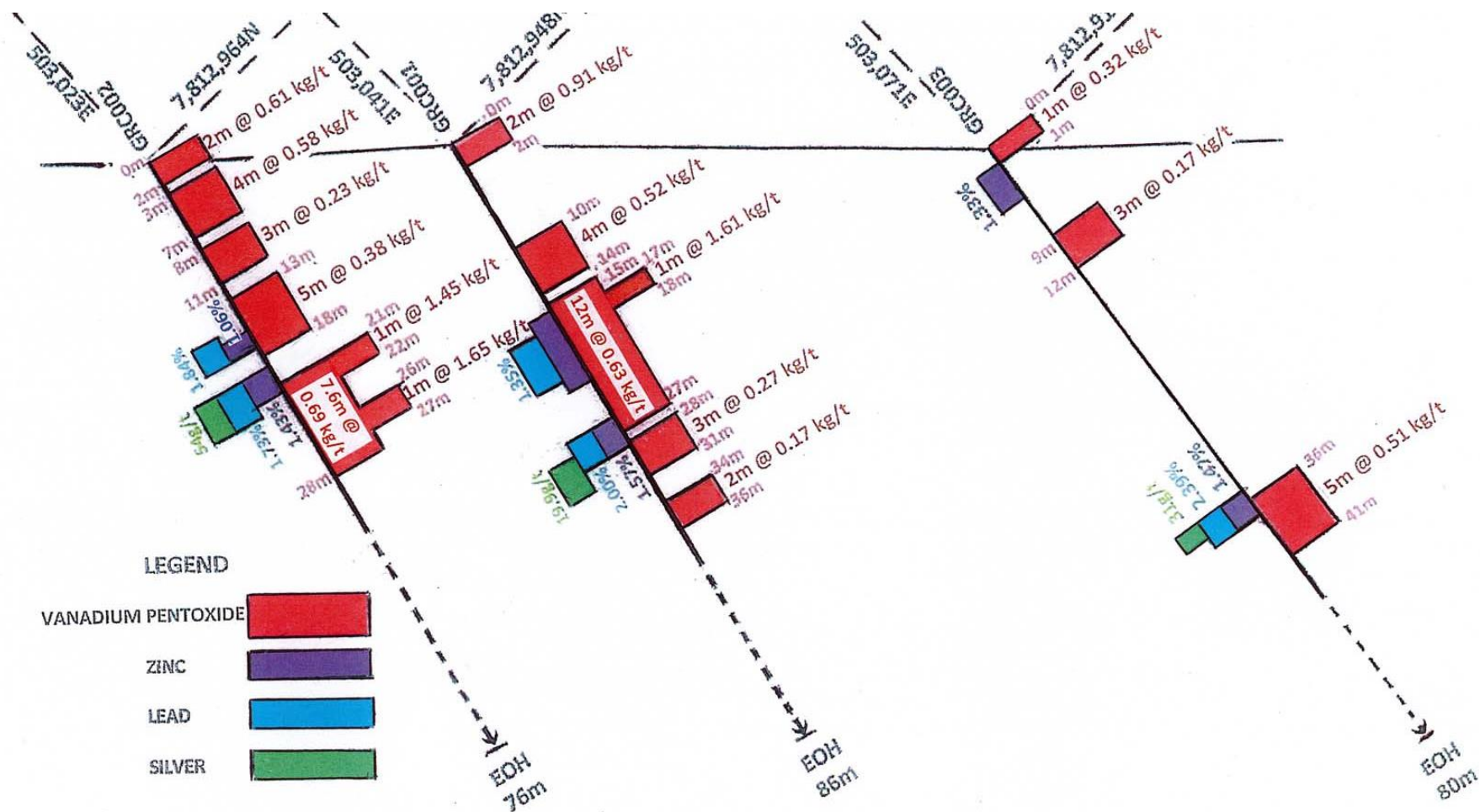


Gossan Anomaly – Mount Burgess Mining Diamond Core Hole – Recoverable Vanadium Pentoxide Grades

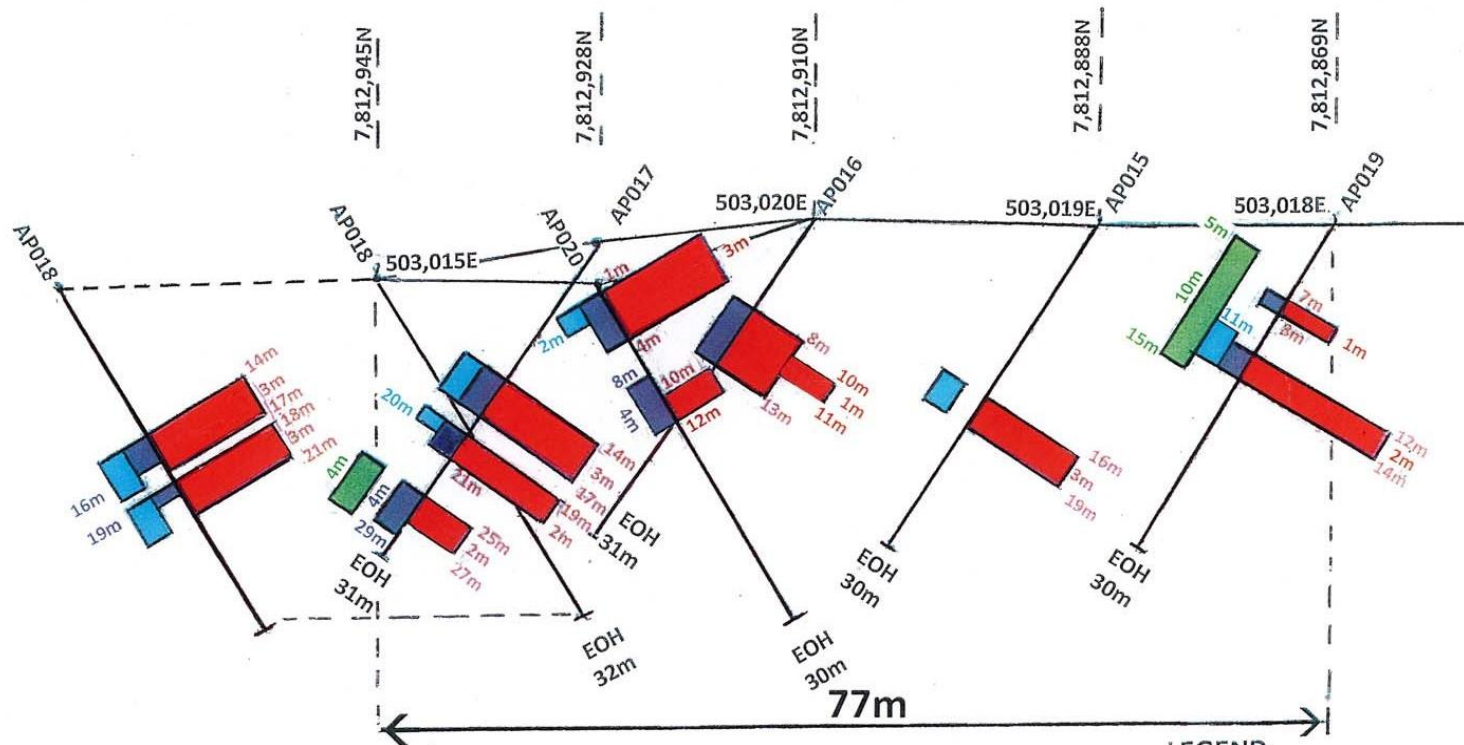


Gossan Anomaly – Mount Burgess Mining RC Drill Holes

Recoverable Vanadium Pentoxide Grades



Gossan Anomaly – Billiton Percussion Drill Holes highlighting Vanadium Mineralisation



Billiton Percussion drill holes all intersected Vanadium mineralisation. All assay results for **V**, **Zn**, **Pb** and **Ag** cannot be reported on under current ASX Listing Rules as this drilling was conducted prior to the introduction of the JORC Code reporting requirements.

CALCULATION OF THE RECOVERABLE ZINC EQUIVALENT GRADE APPLYING A 1% ZINC EQUIVALENT LOW CUT

Sections 1, 1A, 2, 3 and 4 of the Nxuu Deposit show Zinc Equivalent grades. The **152m Drill Section** within the Oxide zone of Kihabe Deposit shows Zinc equivalent grades.

The Zinc equivalent grades include grades for Zinc, Lead and Silver calculated by applying the average of five trading days LME closing prices for Zinc and Lead and the five trading days of USA closing prices for Silver from 22 to 26 January 2018. For the Nxuu Deposit Zinc and Lead grades were then discounted to 93%. For the Kihabe Deposit the zinc grade was discounted to 96.9% and the Lead grade was discounted to 91.9%. The discounts reflect the **RECOVERABLE** grades based on metallurgical test work conducted by AMMTEC. The Silver grade values were then discounted to 70% to reflect the **RECOVERABLE** value of Silver as achieved in similar deposits. (See Estimated Silver Recovery below)

- LME average closing Zinc price of US\$ 3,464/t, being US\$ 34.64 per 1% was reduced to **US\$32.21 per 1%** to reflect a recovery of 93% as demonstrated in previous metallurgical test work conducted by AMMTEC.
- LME average closing Lead price of US\$ 2,611/t, being US\$ 26.11 per 1% was reduced to **US\$24.28 per 1 %** to reflect a recovery of 93% as demonstrated in previous metallurgical test work conducted by AMMTEC.
- USA average Day Trade closing Silver price of US\$ 17.23/oz, being US\$ 0.55/g reduced to **US\$0.38/g** to reflect a recovery of 70% based on recovery performance of similar deposits. (Refer to Estimated Silver Recovery below)

Combined total discounted US\$ value of each assay including any or all of Zinc, Lead and Silver was then divided by the discounted calculated Zinc price of US\$32.21 per 1% to arrive at the **RECOVERABLE** Zinc Equivalent Grade. Only resulting grades of over 1% Zinc Equivalent grade were then applied in determining widths of mineralised intersections reported to ASX.

Zinc Equivalent Recoverable Grade - Calculation Formula

- US\$ Zinc price/t divided by 100 = US \$ Zinc price per 1% X 93% Recovery X Zinc Grade % = US\$A
- US\$ Lead price/t divided by 100 = US \$ Lead price per 1% X 93% Recovery X Lead Grade % = US\$B
- US\$ Silver price/oz divided by 31.1 = US \$ Silver price per gram X 70% Recovery X Silver Grade g/t = US\$C

US\$A + US\$B + US\$ C divided by US\$A = Zinc Equivalent Grade

CALCULATION OF THE RECOVERABLE ZINC EQUIVALENT GRADE APPLYING A 1% ZINC EQUIVALENT LOW CUT (cont'd)

Metallurgical Recovery Test Work for Zn/Pb from the Nxuu Deposit

Five metres of halved HQ drill core (34m – 39m) from drill hole NXDD003 and eight metres of halved HQ drill core (17m – 25m) from drill hole NXDD005 (Refer to **Figure 2 and Sections 1 and 3**), which holes are 308m apart, were composited and subjected to metallurgical test work conducted by AMMTEC in 2010 and 2011. This showed that at 75 micron grind size 93% Zinc was recovered to solution in 12 hours through tank acid leaching at 25 deg C (ambient Botswana temperature) using 30kg/t acid suitable for solvent extraction/electrowinning (SX/EW), together with a lead compound.

Metallurgical Recovery Test Work for Zn/Pb from the Kihabe Deposit Oxide Zone

Independent metallurgical test work conducted by AMMTEC Laboratories on the Kihabe oxide zone has confirmed that:

- 96.9% of Zinc is recovered in 24 hours through tank acid leaching @ 40 deg C. Zn metal can be recovered on site through solvent extraction and electro-winning (SX/EW)
- 91.9% of Lead is recovered through flotation and concentration yielding a 55% Pb concentrate.

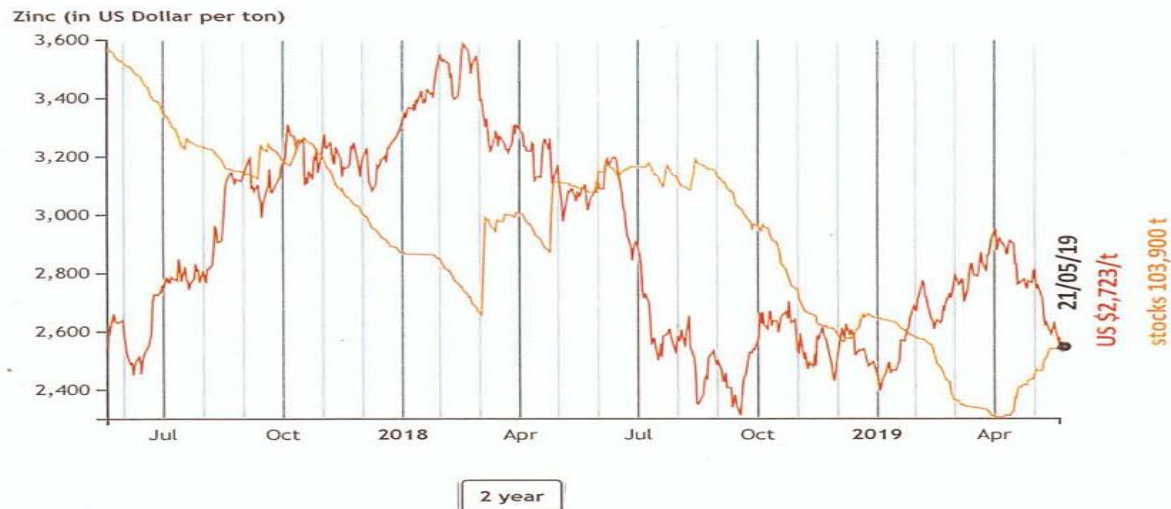
Estimated Silver Recovery

The estimated silver recovery at the totally oxidised Nxuu Deposit and the Oxide Zone of the Kihabe Deposit is based on the silver recoveries achieved at the Minera San Christobal Mine's totally oxidised Toldos ore body in Bolivia. In 2016 Joselyn Riquelme PhD, did extensive mineralogical, metallurgical and selective flotation test work on Toldos ore at the University of Queensland, achieving a Silver recovery rate of 83.80%. (University of Queensland, Improved process development for complex silver ores through systematic, advanced mineral characterisation; Jocelyn Andrea Quinteros Riquelme, B. Eng (Mineral Processing) and Metallurgical Engineer, December 2014).

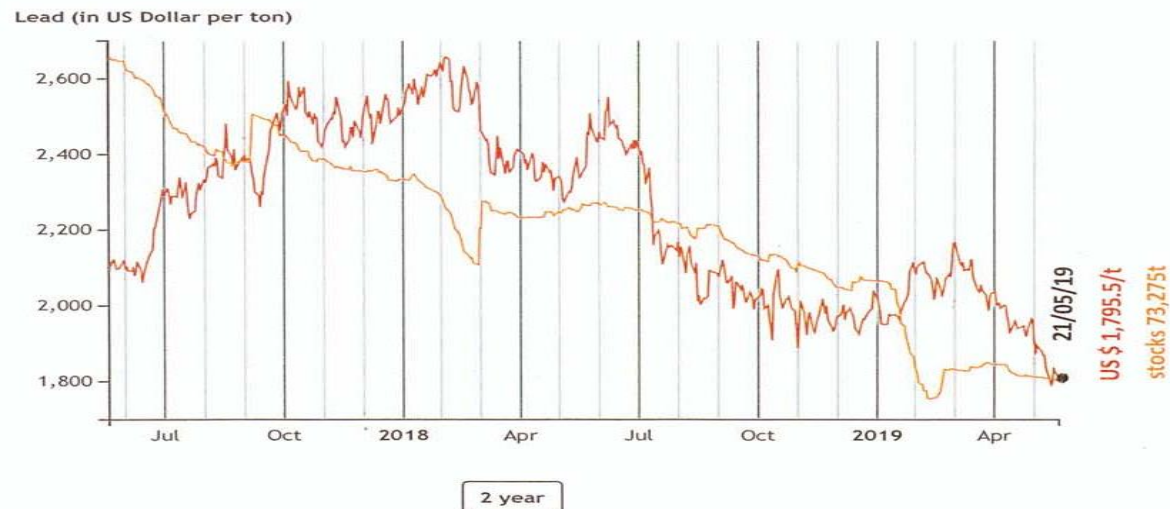
The Company is of the opinion that all the elements included in the recoverable Zn equivalent grade calculations for both the Nxuu and Kihabe Deposits have reasonable potential to be recovered and sold.

Zinc and Lead Prices

LME
Market data westmetall



LME
Market data westmetall

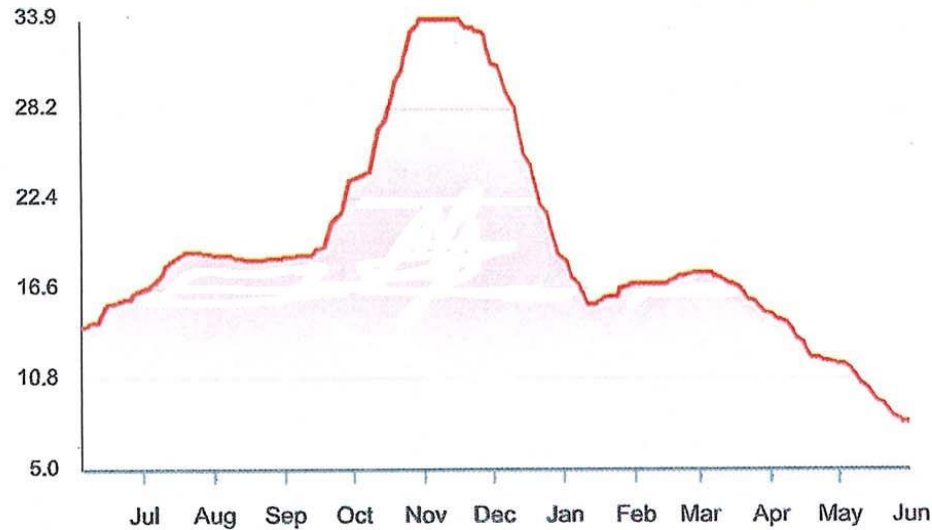


Vanadium Pentoxide and Germanium Prices

V2O5 Vanadium Pentoxide Flake 98% Price USD / lb

China : US\$8.00/lb (0.00%)

May 31, 2019

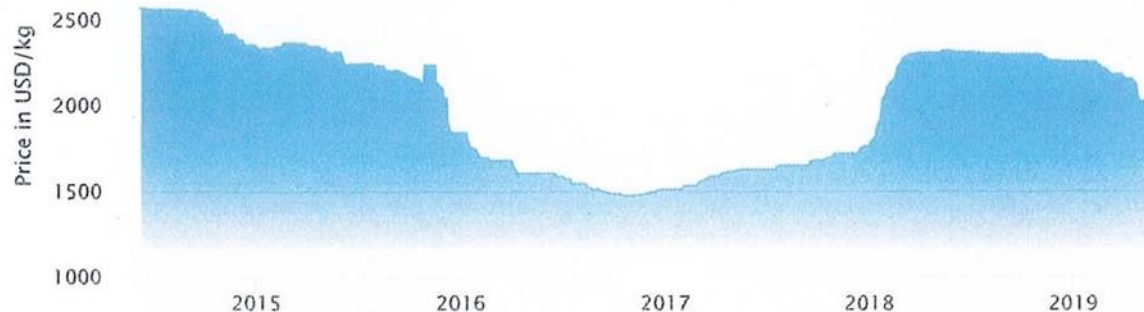


www.vanadiumprice.com

6/1/2019

Strategic Metals | Kitco

Germanium (Ge) ask price chart



US\$2,063.80/kg

Corporate Details

Listed on ASX since 1985

Shares on Issue **475,879,391** (as at 30 May 2019)

Directors

Nigel Raymond Forrester, FCA

Jason Stirbinskis, MBA,B.Sc., Grad Dip Ed., AusIMM

Chris Campbell-Hicks, FAusIMM, CP Met MMICA

Harry Warries, MS Mine Eng., AusIMM

Karen Clark

Registered Office

8/800 Albany Highway

East Victoria Park

Western Australia 6101

Telephone: +61 8 9355 0123

Facsimile: +61 8 9355 1484

Email: mtb@mountburgess.com

Website: www.mountburgess.com

ASX Code **MTB**

Joint Company Secretaries

Jan Forrester

Serene Chau, CPA

