

**12 August 2015**

Australian Securities Exchange  
Exchange Centre  
20 Bridge Street  
Sydney  
NSW 2000

## Mineral Resource Update - Torrington Tungsten Project

Krucible Metals Limited (**Krucible**) (**Company**) (ASX: **KRB**) is pleased to announce the following:

### Highlights:

- **Updated JORC Code 2012 compliant Mineral Resource estimate completed for the Torrington Tungsten Project in northern New South Wales:**
    - **Indicated and Inferred Resource totals 2,146,000 tonnes at 0.23% WO<sub>3</sub> for 4,965 tonnes WO<sub>3</sub> (at 0.063% WO<sub>3</sub> cut-off)**
  - **The previous JORC Code 2012 Mineral Resource estimate contained 2,247 tonnes WO<sub>3</sub>, with the updated resource more than doubling that figure to 4,965 tonnes WO<sub>3</sub>.**
  - **Importantly, the resource grade has also been increased from 0.19% to 0.23% WO<sub>3</sub>.**
  - **Exploration Licences 8258 and 8355 at Torrington have been transferred from Resolve Geo (Pty) Ltd to Torrington Minerals (Pty) Limited a wholly owned subsidiary of Krucible Metals Limited**
  - **The Company's initial production profile as announced to ASX on 15 April 2015 of 650,000tpa (inclusive of dilution) at an ore grade of 0.22% WO<sub>3</sub> remains unchanged**
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Krucible Metals Limited (**Krucible**) (**Company**) (ASX: **KRB**) is pleased to announce updated Mineral Resource estimates for the Torrington Tungsten Project (the **Project**) in accordance with the 2012 edition of the JORC Code (JORC 2012).

Krucible acquired the Torrington Tungsten Project comprising Exploration Licences 8258 and 8355 from Resolve Geo Pty Ltd (ASX announcement 15 April 2015). Resolve had previously estimated a combined Indicated and Inferred Resource estimate for the project of **1,164,000 tonnes at 0.19% WO<sub>3</sub> for 2,247 tonnes WO<sub>3</sub>** (JORC 2012) as detailed in **Table 1**.

**Table 1: Summary Indicated and Inferred Tungsten Resources – April 2015**

Resource Category	Silexite (t) >0.05% W	Grade (% W)	Grade (% WO <sub>3</sub> )	W (t)	WO <sub>3</sub> (t)
Indicated	332,000	0.17	0.22	577	727
Inferred	832,000	0.14	0.18	1,206	1,520
<b>Total (rounded)</b>	<b>1,164,000</b>	<b>0.15</b>	<b>0.19</b>	<b>1,783</b>	<b>2,247</b>

(A cut-off grade of 0.05% W is used throughout the tables in this announcement and in the JORC Report and is equivalent to 0.063% WO<sub>3</sub>)

Under the terms of the acquisition Resolve were contracted to complete an update of the mineral resource utilising a recently flown LiDAR survey to provide an accurate topographic surface and allow delineation of volumes associated with previous mining operations.

The updated Indicated and Inferred Resource estimate totals **2,146,000 tonnes at 0.23% WO<sub>3</sub> for 4,965 tonnes WO<sub>3</sub>** (in accordance with the 2012 edition of the JORC Code (JORC 2012)) as detailed in **Table 2 below (and in Annexure 1 Tables 3 - 5)**.

**Table 2: Summary Indicated and Inferred Tungsten Resources – August 2015**

Resource Category	Silexite (t) >0.05% W	Grade (% W)	Grade (% WO <sub>3</sub> )	W (t)	WO <sub>3</sub> (t)
Indicated	422,000	0.20	0.25	827	1,043
Inferred	1,724,000	0.18	0.23	3,110	3,922
<b>Total (rounded)</b>	<b>2,146,000</b>	<b>0.18</b>	<b>0.23</b>	<b>3,937</b>	<b>4,965</b>

A scoping study completed by the previous tenement holders had financially modelled a conceptual mine plan based on shallow open pit methods, deriving a tungsten cut-off grade of 0.05% contained tungsten (W), which remains valid at recent APT prices of around US\$210 to 220 per MTU\*\*\*. This figure has been adopted for this JORC estimation and deposits have been wireframed to a 0.05% W cut-off.

Resolve has also completed an evaluation of the Exploration Target potential of the Torrington Project based on the extensive historic workings as well as previous drilling and mining records. The Exploration Target\* is expressed as a range of tonnes and grade as required by the JORC 2012 and comprises **5 to 39 million tonnes at 0.063 to 0.5% WO<sub>3</sub>** as detailed in **Table 6 (Annexure 1) and Figure 17 (Annexure 3)**.

*(\*The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource for the areas covered by the Exploration Target)*

Details of the individual Exploration Targets are given in **Annexure 1 - Table 6**. The criteria used to assess the Exploration Target potential are detailed in the consultants' report (**Annexure 3**) and in the accompanying **JORC Table 1 (Annexures 2 and 3)**.

An extensive RC percussion and diamond drilling programme will be undertaken at Torrington to further delineate the existing JORC resources and to test the validity of the exploration targets. This work will commence once all approvals are in place, which the Company is led to believe by the authorities will take about 6-months. The Company's initial production profile as announced to ASX on 15 April, 2015 of 650,000tpa\*\* (inclusive of dilution) at an ore grade of 0.22% WO<sub>3</sub> remains unchanged.

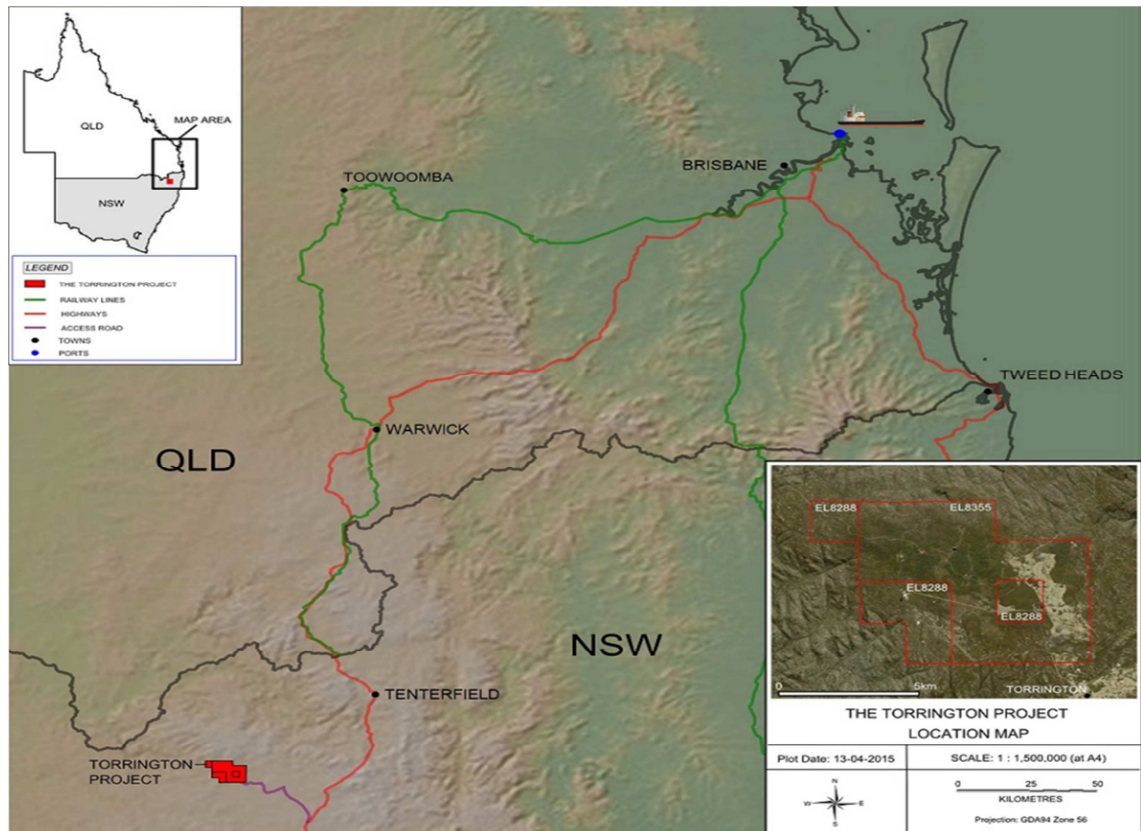
The doubling of the Indicated and Inferred Resource together with the potential of the Exploration Targets\* provides the confidence to proceed with the planned drill programme at Torrington targeting resources in excess of 10,000 tonnes of contained WO<sub>3</sub> at a cut-off grade of 0.063% WO<sub>3</sub>.

*(\*\*Initial target production profile is 650,000tpa (inclusive of dilution) at an ore grade of 0.22% WO<sub>3</sub>. There has been no change to the material assumptions underpinning the production target announced to ASX on 15 April 2015. As per ASX Listing Rule 5.16.4 and 5.16.5 the Company clarifies this production profile is based on a part inferred mineral resource and, as such, under this low level of geological confidence there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised; and that the potential quantity and grade of the exploration target is conceptual in nature and there has been insufficient exploration to determine a mineral resource and there is no certainty that further exploration work will result in the determination of mineral resources or that the production target itself will be realised);*

*(\*\*\*A Metric Tonne Unit ("MTU") is equal to 10 kg of tungsten trioxide (WO<sub>3</sub>) contained in a tonne of material (concentrate) and is the standard weight pricing measure for tungsten. Tungsten prices are generally quoted as US dollars per MTU. Theoretically pure wolframite concentrate contains 79.3% tungsten metal, so a MTU contains 7.93kg of tungsten. However, in practice the grade of concentrate products acceptable for sale ranges from about 62% to about 72% WO<sub>3</sub>. Saleability of concentrate depends on grade and also the impurities in the concentrate. Tungsten prices are also quoted as US\$ per MTU of WO<sub>3</sub> in Ammonium Paratungstate ("APT"), which is a downstream secondary product made from the concentrates.*

#### **Project Overview:**

- Krucible holds 100% of Exploration Licences 8258 and 8355 (ASX announcement 6 August 2015)
- The Project is located in northern New South Wales in proximity to the Torrington Township approximately 35km south of the Queensland border approximately 75km from the local Shire town of Tenterfield (see Figure 1)
- Generally infrastructure is very good and includes a 22 kVA powerline to site
- The Project area encompasses 53km<sup>2</sup> and covers most of the numerous historic shallow tungsten mines and workings
- Results from a recently flown LiDAR survey (high definition topography) were instrumental in allowing the bulk of the historic data to now be included in this revised JORC Code estimate
- Recent field mapping indicates the potential for significant exploration upside in the short term from the Company's proposed exploration plan



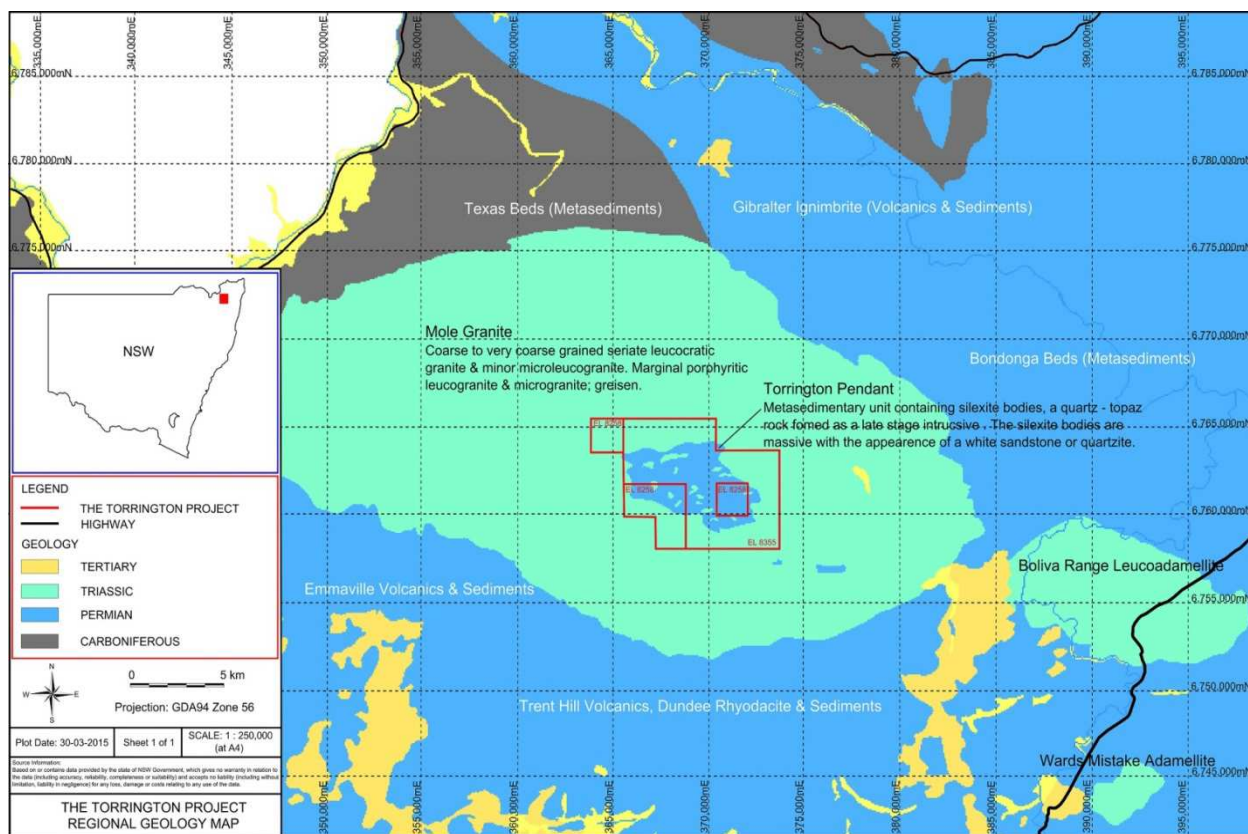
**Figure 1: Project Location**

### **Project Geology:**

The Torrington Project lies within the Torrington Pendant, an elliptical ~30km<sup>2</sup> outlier of Early Permian metasediments (siltstone, mudstone, sandstone and conglomerate) within the Mole Granite (see Figure 2).

The Mole Granite is a member of the Mole Supersuite of leucogranites of the New England Orogen and as a group are the main mineralising granites in the region. The Mole Granite in particular is the most significant mineraliser in the New England region with over 2,000 known mineral occurrences.

The Torrington Project encompasses almost the entire Torrington Pendant, a metasedimentary roof pendant within the Mole Granite. The pendant contains substantial silexite bodies, a quartz-topaz rock that forms as late stage intrusive sills and dykes within the metasediments and at the contact with the Mole Granite. Some silexite bodies exhibit a metasomatic origin in that they seem to grade into the surrounding Mole Granite have also been described as a quartz-topaz greisen. The silexite is massive granular textured rock with the appearance of a white sandstone or quartzite. The silexite contains tungsten and bismuth mineralisation, as fine grained disseminations, or as massive concentrations or lodes up to several tonnes (see Photos of typical mineralisation below).



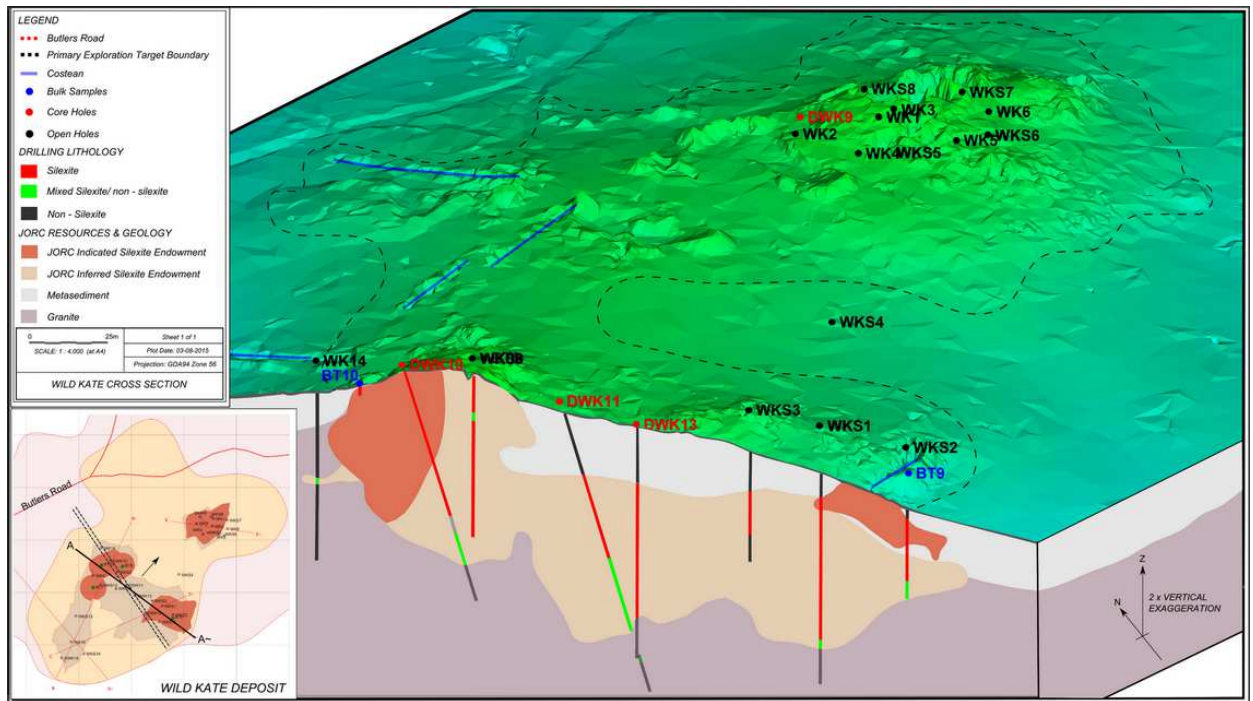
**Figure 2: Project Geology**

### Project Mineralisation:

The Mole Granite was emplaced during the Late Permian – Early Triassic NE-NW shear couple, resulting in a prominent series of NE trending ridges, which are easily discernible in satellite images. This structure has a strong control over mineralisation with NE-NW joint sets being the focus of hydrothermal mineralising events. Late carapace fracturing focused mineralising fluid release that led to the formation of sheeted vein systems in the crown of the granite; these are seen as steeply dipping NE and NW sheeted vein systems. Simple vein systems are also present and follow NW trending shears, faults and joints.

The metal mineralisation associated with the Mole Granite include, polymetallic tin, tungsten, gold, silver and base metals, while non-metallic minerals emerald, beryl and topaz are also present. The metallic mineralisation shows distinct zonation, from a tin rich core, through a tungsten rich and gold zone near the granite margins, to a base metal zone in the surrounding country rock. This zonation often represents a chemical continuum; from tin and tungsten out to base metal rich zones with all the end members represented. This is probably due to the polyphase nature of the Mole Granite with five mineralising events recognized. Tungsten mineralisation occurs dominantly as ferberite (the Fe rich wolframite end member) and is present either as large euhedral crystals (up to 5cm long) in bungs within quartz or silicite bodies, or as disseminated fine to coarse grained euhedral-anhedronal crystals throughout quartz and silicite veins and bodies. Many large multi-tonne wolframite bodies have been recovered from deposits within the Torrington Pendant, with the largest single mass of wolfram recorded being 12.5t. The main style of tungsten mineralisation within the lease area are tungsten  $\pm$  bismuth ( $\pm$  gold) in silicite bodies and veins within the Torrington Pendant which host the largest known in situ tungsten deposits (**Figure 3**).



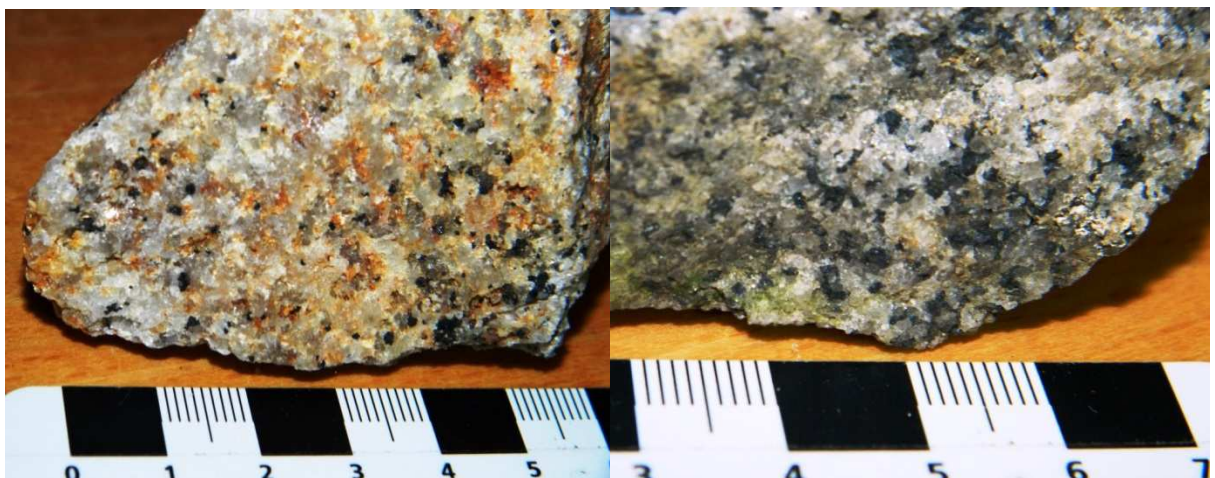


**Figure 3: Wild Kate Deposit – LiDar Topography over Geology and Mineralisation**

Topaz ( $\text{Al}_2\text{SiO}_4(\text{FOH})_2$ ) occurs in the silexite, a quartz-topaz rock of a late intrusive phase of the Mole Granite that is found almost exclusively within the Torrington Pendant, and represents one of the world's largest in situ topaz deposits. The topaz itself appears to be distributed evenly throughout the silexite with a grain size average of 2mm. The average topaz content of the silexite is ~17%.

**Photos of typical ferberite (tungsten) mineralisation (black mineral):**

**Finely disseminated in silexite**



### Coarse grained in silicite



### Coarse grained vein-type in metasedimentary cover rock



### Way forward:

- Krucible has not commenced its planned intensive exploration drilling programme to increase this present JORC resource base due to delays in Native Title clearances (Right to Negotiate – RTN process). This is obviously a great disappointment but has and will allow management and its technical consultants to complete the other statutory requirements such as the Reviews of Environmental Factors (REFs); baseline EIS studies; access and compensation agreements; establish a local operating base; source suitable local personnel; and, establish an onsite sample preparation laboratory ahead of drilling
- The Company's Olympus XRF instrument will be set-up as a benchtop screening analytical tool for use on pressed powder pellets from the drill-samples either in Torrington or Brisbane to assist in drillhole selection and to lessen samples sent to third party laboratories for analyses.
- Krucible will continue advancing metallurgical studies on both the tungsten and topaz mineralisation.

*For, and on behalf of, the Board of Directors,*  
**Dr. Leon Pretorius**  
Executive Chairman  
Krucible Metals Limited

For technical enquiries please contact Leon Pretorius on +61 (0) 419 702 616.

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## ANNEXURE 1

### KRUCIBLE METALS LIMITED - JORC RESOURCES AUGUST 2015 TORRINGTON PROJECT TUNGSTEN MINERAL RESOURCE \*

**Table 3: Indicated Tungsten Resources - Torrington Project**

Orebody	Silixite (t) >0.05% W	Grade(%W)	Grade (%WO3)	W (t)	WO <sub>3</sub> (t)
WK Central Main North	151,310	0.17	0.21	257	324
WK Central Upper (south)	67,126	0.32	0.40	215	271
WK North Upper	77,474	0.20	0.25	154	194
Mt Everard	126,457	0.16	0.20	202	255
<b>Total (rounded)</b>	<b>422,000</b>	<b>0.20</b>	<b>0.25</b>	<b>827</b>	<b>1,043</b>

**Table 4: Inferred Tungsten Resources – Torrington Project**

Orebody	Silixite >0.05% W	Grade (%) W	Grade (%WO3)	Tungsten (t)	WO <sub>3</sub> (t)
WK_Central main (exc indicated)	941,789	0.17	0.21	1,568	1,978
WK_North Lower	56,093	0.20	0.25	93	118
Fielders Hill North	134,232	0.21	0.26	287	362
Fielders Hill South	343,596	0.21	0.26	736	928
Burnt Hut	192,393	0.17	0.21	336	423
Mt Everard	55,572	0.16	0.20	89	112
<b>Total (rounded)</b>	<b>1,724,000</b>	<b>0.18</b>	<b>0.23</b>	<b>3,110</b>	<b>3,922</b>

**Table 5: Summary Indicated and Inferred Tungsten Resources – Torrington Project**

Resource Category	Silixite (t) >0.05% W	Grade (%) W	Grade (%WO3)	W (t)	WO <sub>3</sub> (t)
<b>Indicated</b>	<b>422,000</b>	<b>0.20</b>	<b>0.25</b>	<b>827</b>	<b>1,043</b>
<b>Inferred</b>	<b>1,724,000</b>	<b>0.18</b>	<b>0.23</b>	<b>3,110</b>	<b>3,922</b>
<b>Total (rounded)</b>	<b>2,146,000</b>	<b>0.18</b>	<b>0.23</b>	<b>3,937</b>	<b>4,965</b>

(A cut-off grade of 0.05% W is used throughout the tables in this announcement and in the JORC Report and is equivalent to 0.063% WO<sub>3</sub>)

\* Reported in accordance with JORC Code 2012 Edition for the Reporting of Exploration Results, Mineral Resources and Ore Reserves

Domain Name	Domain Area (m2)	Silixite Area (m2)	Silixite footprint (%)		orebody thickness (m)		Orebody Tonnes (t)		Anticipated grade range	
			Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Tungsten (W)	Topaz
Burnt Kate	714,000	11,000	7	29	5	15	770,000	8,910,000	Disseminated mineralisation 0.05 - 0.4%	Disseminated mineralisation 10 -25%
Mt Everard	568,000	177,000	8	29	5	15	685,000	7,085,000		
Fielders Hill	136,000	8,000	3	9	4	6	45,000	210,000		
D&E Bodies (orebodies)	411,000	18,000	2	7	3	5	80,000	390,000		
Bung/New Hope (orebodies)	323,000	49,000	8	23	4	8	285,000	1,705,000		
Carters East	176,000	14,000	4	12	4	8	80,000	485,000		
Locks	612,000	152,000	12	37	5	8	1,100,000	5,290,000		
Gordons	592,000	175,000	15	44	4	8	1,015,000	6,090,000		
Currawong	453,000	103,000	11	34	2	6	300,000	2,690,000		
Wolfram Hill	419,000	90,000	11	32	2	6	260,000	2,350,000		
Sheep Station	211,000	44,000	10	31	2	6	130,000	1,150,000		
Carters West	143,000	16,000	6	17	4	8	95,000	555,000		
Bob Swamp East	51,000	51,000	25	100	2	6	75,000	885,000		
The Ranch	50,000	50,000	25	100	3	9	110,000	1,305,000		
Officer	17,000	17,000	25	100	1	5	10,000	245,000		
isolated bodies (combined)	90,000	90,000	25	100	4	8	260,000	2,090,000		
<b>Massive orebody exploration target subtotal</b>	<b>4,876,000</b>	<b>975,000</b>	<b>12</b>	<b>41</b>	<b>4</b>	<b>9</b>	<b>5,040,000</b>	<b>39,345,000</b>		
Cow Flat (Vein/dyke swarm)	212,000	6,000	1.4	4.2	assumed 0.5m width * 10m depth based on field observations		2,000	6,000	Vein hosted mineralisation - 0.5 -4%	N/A - Veins not considered for Topaz potential
Elliot's (Vein/Dyke swarm)	260,000	2,000	0.4	1.2			7,000	21,000		
Mt Abundance (Vein/dyke swarm)	263,000	7,000	1.3	4.0			3,000	9,000		
D&E Bodies (Vein/Dyke swarm)	411,000	3,000	0.4	1			7,000	21,000		
Bung/New Hope (Vein/Dyke)	323,000	7,000	1.1	3			7,000	21,000		
<b>Vein-hosted orebody exploration target subtotal</b>	<b>1,146,000</b>	<b>18,000</b>	<b>1.1</b>	<b>3.3</b>			<b>4,680</b>	<b>14,040</b>		

**Table 6: Summarised Exploration Targets\*\* EL 8258 & EL 8355 – Torrington Project (0.05 – 0.4% W = 0.063 – 0.5% WO<sub>3</sub>)**

**\*\* Cut-off parameters Exploration Target**

- (1) All grades are reported as weight percentages, and Topaz is only reported within silicite bodies where the Tungsten grade is >0.05% W (0.063% WO<sub>3</sub>).
- (2) A Tungsten cut-off grade of 0.05% W (0.063% WO<sub>3</sub>) has been derived from cost analysis contained within the Resolve Geo Pty Ltd financial model, and has been determined to exclude between 14 % and 31 % of the known silicite ore from reporting to a resource estimation.
- (3). Contained Tungsten (W) Range is calculated by multiplying the reported areal extent of silicite host rock by an estimated minimum and maximum thickness of silicite.
- (4) An exploration target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource. The potential quantity and grade is conceptual in nature, there has been insufficient exploration to estimate Mineral Resource and it is uncertain if further exploration will result in an estimation of a Mineral Resource.

**Competent Person Statement**

I, Gordon Saul, confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition);
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility;
- I am a Member of the Australian Institute of Geoscientists (Membership 3440); and
- I have reviewed the Report to which this Consent Statement applies.

I am a consultant and shareholder working for Resolve Geo Pty Ltd, and have been engaged by Krucible to prepare the documentation for the Torrington tungsten and topaz deposit on which the Report is based, for the period ended 31 July 2015

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest. Resolve Geo are the previous holders of the tenements prior to acquisition by Krucible and have been retained in a consultant capacity. Resolve Geo Pty Ltd hold the right to a 15% shareholding in the parent company at the time of reporting.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, and the information in my supporting documentation relating to Exploration Targets, Exploration Results & Mineral Resources.

I consent to the release of the Report and this Consent Statement by the directors of Krucible Metals Ltd.

## ANNEXURE 2

### Torrington Tungsten Project

#### JORC Code, 2012 Edition – Table 1

##### JORC Code (2012) supporting tables.

Section 1: Sampling Techniques and Data	
(Criteria in this section apply to all succeeding sections.)	
Criteria	Explanation
Sampling techniques	<ul style="list-style-type: none"> <li>Samples were routinely collected at 5 foot (1.52m) intervals from Reverse Circulation Percussion (RC), Open Hole Percussion (OHP), and Rotary Air Blast (RAB) drill holes. Diamond Drill Hole (DDH) samples were collected every 1m. Southland Mining drilled 52 OHP (5") holes in 1969 on a local grid at 30-50m spacing. Pacific Copper and its associates drilled 161 holes between 1978 and 1981 as infill to these grids, as validation for the previous drilling by Southland Mining, and to test the existence and dimensions of new silexite host rock bodies (NQ core and 4 ½" OHP). Australia Wide Industries drilled 223 RAB holes (37-65mm sized bits used) between 1981 and 1995 on a local grid at 50m spacing, and as infill drilling.</li> </ul>
	<ul style="list-style-type: none"> <li>Wolframite (ferberite) occurs both as disseminated mineralisation, and with some concentration along joint and vein contacts, resulting in a moderate nugget effect. Bulk samples have been used in a number of areas to provide robust grade control, and are considered the most reliable source of grade information.</li> </ul>
	<ul style="list-style-type: none"> <li>Sampling procedures followed by all historic operators were in line with industry standards at the time (personal communication with senior staff in charge of previous work, and a review of the available data). All RC samples were split at the rig using either a riffle or cone splitter to produce between 3 and 5kg of sample for shipment to the laboratory. NQ Diamond core was cut in half over mineralized intervals, using a core-saw. All core samples were analysed.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Data from 436 drill holes (6,700 metres) were used for the interpretation, along with the bulk testing. Southland Mining drilled 52 holes using RAB. Pacific Copper drilled 161 holes of which 148 were OPH and 13 were NQ diamond core. Australia Wide Industries drilled 223 holes with RAB. All of the Southland</li> </ul>



	<p>Mining holes were drilled vertically the majority of the Pacific Copper; Australia Wide Industries holes were vertical while some were inclined.</p> <ul style="list-style-type: none"> <li>Core was not oriented</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Core recovery data is available for all the core holes sampled. Most of this data reports recoveries above 70 %. Core recovery in the 13 NQ holes drilled by Pacific Copper is described as “poor to good” by historic reports. No relationship between recovery and grade was observed.</li> </ul>
	<ul style="list-style-type: none"> <li>Sampling data is available for the 423 OHP, RC &amp; RAB holes drilled. More than 90 % of samples were completely collected. Difficulties were described by Pacific Copper with groundwater affecting sample return for some of their holes drilled in 1981 on the Burnt Hut deposit.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Detailed lithological logs exist for most of the holes in the database. Where these only exist in hard copy, they have been scanned and stored digitally.</li> </ul>
	<ul style="list-style-type: none"> <li>Logging of diamond core and RAB, OHP and RC samples recorded lithology, mineralogy, mineralisation, structure (DDH only), weathering and colour.</li> </ul>
	<ul style="list-style-type: none"> <li>Lithological data exists for all 436 holes in the database. These drill holes were geologically logged in full.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>Diamond core was cut in half on site using a diamond saw.</li> </ul>
	<ul style="list-style-type: none"> <li>RAB, OHP &amp; RC samples were generally wet and split at the rig using a rotary device which was standard industry practice at the time.</li> </ul>
	<ul style="list-style-type: none"> <li>Large samples weighing between 2 and 35kg each were dried, crushed and pulverized using industry best practice at that time.</li> </ul>
	<ul style="list-style-type: none"> <li>For all drill holes, in the case of RC samples, rig duplicates were collected at regular intervals. Personal communication with senior staff supervising the Pacific Copper drilling indicates that industry best practice was employed at the time.</li> </ul>
	<ul style="list-style-type: none"> <li>In some instances where detailed data was required for head grade reconciliation bulk samples (~5T) were obtained.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>Historical assaying was undertaken in the SGS laboratory in Sydney, and in Pilbara Laboratories in Perth. Most of the samples were assayed for W by gravimetric and chemical methods, selected samples were analysed by XRF and Atomic Absorption.</li> <li>QA/QC analysis was completed on multiple samples, with specific emphasis on reconciliation from bulk samples</li> </ul>
	<ul style="list-style-type: none"> <li>No geophysical tools were used to determine any element concentrations in this resource estimate.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>Hard copy logs of historical drilling show that umpire laboratory checks were undertaken to check the Monitor Geochemical Laboratory results. The Pacific Copper and Australia Wide Industries drilling contains QC samples including some field</li> </ul>

	<p>duplicates, coarse crush laboratory duplicates and laboratory pulp splits, certified reference materials and blanks.</p>
Location of data points	<ul style="list-style-type: none"> <li>Primary data was sourced from an existing digital database and compiled into an industry standard drill hole database software. Drill hole locations were generally sourced from maps from historical reports though with numerous drill collars identified and picked up in the field with hand held GPS. Resolve generally has a high degree of confidence in the georeferenced positions with numerous drill holes, grid confluences and landmarks identified and reconciled to within 2 metres.</li> </ul>
	<ul style="list-style-type: none"> <li>Resolve has made no adjustments or calibrations to any assay data used in this estimate.</li> </ul>
	<ul style="list-style-type: none"> <li>Collar RL's from drill hole survey are generally not available. This data was typically not available and in a number of cases, drill holes were drilled into rocks which have since been mined. With no accurate record of the original collar or the original surface, Resolve has utilized the recently acquired LiDAR to estimate a pre-mined natural ground level, after which orebody models were built and an estimate of resources within the base of the mined pits could be made.</li> <li>For deposits which have not been mined, Resolve has registered the collar heights to the LiDAR topography.</li> </ul>
	<ul style="list-style-type: none"> <li>The grid system uses GDA 94 Zone 56 and this is in metres.</li> </ul>
	<ul style="list-style-type: none"> <li>LiDAR data acquisition was flown in March of 2015 by AAM Survey Group. This covered the entirety of the Krucible Metals Ltd tenements, and utilized an Optech Pegasus laser system. This allowed for accurate delineation of the ground surface through the often dense vegetation in parts of the project area.</li> <li>This surface is corrected for vegetation and hydrological features, and is considered accurate for the reporting of resources, exploration targets and any subsequent reserves under JORC classification.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>The nominal drill hole spacing is approximately 50m by 50m, but this is variable in places. Many Pacific Copper holes have been drilled as infill to these grids as confirmation of mineralisation.</li> </ul>
	<ul style="list-style-type: none"> <li>No sample compositing has been applied.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>364 out of 436 holes were drilled vertically (83 %). The remainder were drilled at angles of between 50° and 60° and azimuths of between 0° and 350°. The orientation of the mineralisation is generally thought to be on NE and SW trends (conjugate joint sets)</li> </ul>
	<ul style="list-style-type: none"> <li>A orientation based drill design has been identified, and is considered sufficient to demonstrate general geometry of the</li> </ul>

	orebodies within the context of the confidence classification on which they are reported
Bulk Sampling	<ul style="list-style-type: none"> <li>As drilling does not provide a sufficient size sample to overcome the disseminated and joint orientated nature of the tungsten mineralisation, bulk testing, including mining and milling of 139,142 tonnes of ore was conducted primarily by Pacific Copper from 1978 to 1982, along with other historic bulk testing post and prior to this.</li> </ul>
	<ul style="list-style-type: none"> <li>Four bulk tests of 5-7 tonnes (BT7-10) were conducted by Pacific Copper at the Wild Kate deposit, resulting in an average grade of 0.255 % W. This was tested and verified by SGS laboratory in Sydney and cross-checked with the Pilbara Laboratory in Perth. Four bulk tests by Pacific Copper at the Mt Everard deposit (Laloma, BT6, BT11 and BT12) resulted in an average grade of 0.217 % W. Again these results were verified by SGS laboratory in Sydney and cross-checked with the Pilbara Laboratory in Perth.</li> </ul>
	<ul style="list-style-type: none"> <li>The mining of 139,142 tonnes of ore from Fielder's Hill, Burnt Hut &amp; Mt Everard resulted in an average head grade of 0.22 % WO<sub>3</sub> (0.175 %W)(after tails were tested as test plant had no fines recovery circuit).</li> </ul>
	<ul style="list-style-type: none"> <li>Historical mining from 1915-16 included 4000 tonnes of silicite in the Northern Upper body of Wild Kate, for a return head grade of 0.25 % WO<sub>3</sub> (0.20 %W)</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>Resolve has reviewed the historic database against new geological mapping observations and sample analysis.</li> <li>No further external reviews or audits have been carried out.</li> </ul>
Section 3: Estimation and Reporting of Mineral Resources  (Criteria listed in Section 1, also apply to this section.)	
Criteria	Explanation
Database integrity	<ul style="list-style-type: none"> <li>Data have been compiled into a relational database. Data have also been checked against original hard copies for the data, and where possible, loaded from original data sources.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>Gordon Saul, who is the Competent Person, has visited the Torrington site numerous times over a five year period. During these visits historical pits were inspected, geological units within pits compared to mapped geology, grab and bulk samples were taken, photos were taken, and GPS checks were carried out on many historical drill hole collar sites.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>The historical digital database used for the interpretation included logged intervals for the key stratigraphic zones. Detailed geological logs were available in hardcopy and reviewed where necessary.</li> </ul>

	<ul style="list-style-type: none"> <li>Petrological studies commissioned by Resolve and others when compared to historical data for some of the Pacific Copper and Australia Wide Industries holes assisted to confirm the validity of the historic stratigraphic interpretation with good confidence.</li> <li>Drill density of the Torrington area allows for confident interpretation of the geology and mineralized domains. Geological and structural controls support modeled mineralized zones. LiDAR profiles assisted in the geological interpretation to refine the identified silicite surface outcrop</li> <li>Continuity of mineralisation is affected by proximity to structural conduits (allowing flow of mineralized fluids), stratigraphic position, and lithogeochemistry of key stratigraphic units and porosity of host lithologies.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>Dimension of the individual orebodies are thought to be generally consistent with a laccolith style sill intrusion, and are represented in modelled orebodies generally as tabular bodies with an irregular shape in plan view. Dimensions are mapped as ranging between 20m and &gt;200m, however continuity of orebodies beneath the surface is generally demonstrated for drilled bodies, and must also be assumed for exploration target tonnages.</li> </ul>
Estimation modelling techniques and	<ul style="list-style-type: none"> <li>Grade estimation using Micromine geological modelling software was completed using an omnidirectional kriging method of interpolation for a small area of Wild Kate central Main orebody, and also Mt Everard (reported as Indicated Resource)</li> <li>Two additional orebodies reported as Indicated are small and utilize robust bulk samples within the orebody at surface to determine the grade.</li> <li>Grade was estimated into a block model of 1m<sup>3</sup>.</li> <li>Orebodies have been wireframed using a combination of drill hole data, surface topography and field mapping to build 3D orebody solids. Models were cut to topography, which was the recently acquired LiDAR surface which has been merged with bathymetry of relevant water filled pits (Fielders Hill &amp; Burnt Hut)</li> <li>Exploration target ranges have been estimated for tungsten and topaz, incorporating documented variation in grade, orebody size and amount of ore above the nominated (W) cut-off</li> <li>Only tungsten and topaz, and minor gold by-products have historically been produced, or are expected to be produced from Torrington.</li> <li>Topaz (fluorine content) is estimated as well as tungsten.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>Tonnes have been estimated on a dry basis.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>Deposits are to be mined by open pit method and have been wireframed to a 0.05 % W cutoff.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>The only assumptions made as to mining methods are that open pit quarrying operations will be considered. Factors such as a successful previous mining history, open pits still with stable walls after 35 years since the mine closure, successful historical</li> </ul>



	processing of ore indicate that the assumption for potential successful mining of Torrington is reasonable.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>A combination of a historical period of processing ore from Torrington plus more limited metallurgical test work by Pacific Copper, and Australia Wide Industries and Resolve Geo indicate that the assumption for potential successful processing of Torrington ore is reasonable.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>A section of the Torrington project is covered by State Conservation Area. No resources or identified exploration targets within the State Conservation Area have been reported.</li> <li>No other environmental restrictions are known or anticipated based on the current data available.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>Bulk density has previously been estimated from measurements carried out by Pacific Copper, Australia Wide Industries using drilling on core samples, using weight in air and weight in water. Samples were tested from different rock types, as well as within mineralized zones. JORC Resources are reported using a bulk density of 2.9g/cm<sup>3</sup> for silicite.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information.</li> <li>Wild Kate and Mt Everard are reported with a portion of Indicated Resource coverage, where orebody geometry and grade is well supported by bulk sampling and drill holes. A maximum extrapolation of 25m has been employed for the reporting of Indicated resources. Resolve base this distance on the identified continuity of grade between the bulk samples within the same orebody, and the demonstrated homogenous nature of the mineral emplacement.</li> <li>Inferred resources are reported for the outstanding portion of the Wild Kate central main orebody which is not reported as Indicated. The lower orebody in the north of Wild Kate is also reported as Inferred, with a grade assumed from the bulk sample collected from the upper orebody.</li> <li>Fielders Hill and Burnt Hut are reported with an Inferred Classification. The grade used is the reconciled mining grades for the mined material from each pit by Pacific Copper.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>Krucible Metals Ltd conducted a due diligence process over the project data and models, prior to completing a purchase of the project.</li> </ul>

Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</li> </ul>
	<ul style="list-style-type: none"> <li>• The statement relates to global estimates of tonnes and grade.</li> </ul>
	<ul style="list-style-type: none"> <li>• Available hardcopy production and bulk sampling data has briefly been reviewed. Further analysis of the information will be completed during the next phase of resource work.</li> </ul>

## **ANNEXURE 3**

**Resolve Geo Pty. Ltd**

**EL 8258 & EL 8355**

**Krucible Metals Ltd**

**Torrington Project**

**JORC Resource Report:**

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Contained Tungsten and Topaz within Silexite Deposits



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*August 2015*

***Resolve Geo Pty. Ltd.***

***EL 8258 & EL8355  
Krucible Metals Ltd***

***Torrington Project***

***JORC Resource Report:  
Contained Tungsten and Topaz within  
Silexite Deposits.***

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***Gordon Saul***

***Neil Biggs***

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## *1. Basis of Reporting*

This Resource estimate and report has been prepared by Resolve Geo in accordance with the 2012 edition of the JORC code for Krucible Metals Limited. Throughout this report all historical  $\text{WO}_3$  grade percentages have been converted to contained tungsten (W) utilising a ratio of 1.261 to 1 on conversion from  $\text{WO}_3$ , and all historical tonnages to tonnes.  $\text{WO}_3$  tonnages have been reported in resource tables for comparative purposes. Although not technically correct, tungsten mineralisation in historical reports is often referred to as wolframite, a convention followed in this report when referencing some historical data.



## 2. Executive Summary

EL 8258 and the adjoining EL 8355 held by Krucible Metals Limited (Krucible) comprise the Torrington Project. The project is located in northern New South Wales, 370km southwest of Brisbane, Queensland, and 550km northwest of Newcastle, NSW. Access is via sealed local roads and unsealed forestry tracks to the New England Highway (Figure 1 & Figure 2).

The Torrington region and particularly the area of the Torrington Pendant, within which the Torrington Project is located, has demonstrated economic grades of tungsten, bismuth, topaz, tin, and gold mineralisation. The area has been mined since the early 1880's, initially for tin and tungsten, and more recently for silixite for its topaz content (for refractory feedstock purposes). Numerous small rich tin and tungsten lodes have been exploited into the 1980's, but since then low prices for these commodities have restrained further exploration in the region for these metals.

Silixite (a quartz/ topaz greisen) commonly hosts tungsten and topaz in bodies with relatively simple geometries in the area, as well as widely disseminated but variable mineralisation with a focus around the dominant NW trending vertical joints. A total of 436 historical drill holes for 6700m have been drilled across the Torrington Project. A scoping study completed by the previous tenement holders had financially modelled a conceptual mine plan, deriving a tungsten cut-off grade of 0.05 % contained tungsten (W); this figure has been adopted for this JORC estimation. Tungsten is mainly contained within the mineral ferberite, the iron rich member ( $\text{FeWO}_4$ ) of the wolframite series, and topaz as fine to medium crystals often associated with quartz.

Since acquiring the Torrington tenements Krucible and its contractors have conducted work on the tenements in order to allow the update of resources to include areas previously mined, and to review the currently resourced orebodies in the light of updated mapping and new sources of data.

Key work completed:

- Acquisition of high quality LiDAR data over the tenements
- Acquisition of recent satellite imagery
- Acquisition of bathymetric data to reconcile historical mined volumes within existing pits

- Interpret the LiDAR and imagery via a desktop study and follow up with an intensive field mapping exercise based around key identified targets
- Conduct a two day trial acquisition of Deep Ground Penetrating Radar (DGPR) data to determine lateral orebody boundaries and depths to key horizons
- Update orebody and grade estimates for Wild Kate and Mt Everard deposits and produce new orebody models and estimates for the Burnt Hut and Fielders Hill deposits

Resource Estimates are shown below in Tables 1 to 4.

**Table 1: Indicated tungsten resources Torrington Project**

<b>Orebody</b>	<b>Silixite (t) &gt;0.05 % W<sup>(1)</sup></b>	<b>Grade (%) W</b>	<b>Tungsten (t)</b>	<b>WO<sub>3</sub> (t)</b>
Wild Kate	151,310	0.17	257	324
Wild Kate South	67,126	0.32	215	271
Wild Kate East (Upper)	77,474	0.20	154	194
Mt Everard	126,457	0.16	202	255
<b>Total (rounded)</b>	<b>422,000</b>	<b>0.20</b>	<b>827</b>	<b>1043</b>

**Table 2: Inferred tungsten resources Torrington Project**

<b>Orebody</b>	<b>Silixite &gt;0.05 % W<sup>(1)</sup></b>	<b>Grade (%) W</b>	<b>Tungsten (t)</b>	<b>WO<sub>3</sub> (t)</b>
Wild Kate (exc. Indicated)	941,789	0.17	1568	1978
Wild Kate East (Lower)	56,093	0.20	93	118
Fielders Hill North	134,232	0.21	287	362
Fielders Hill South	343,596	0.21	736	928
Burnt Hut	192,393	0.17	336	423
Mt Everard	55,572	0.16	89	112
<b>Total (rounded)</b>	<b>1,724,000</b>	<b>0.18</b>	<b>3110</b>	<b>3922</b>

**Table 3: Indicated topaz resources Torrington Project**

<b>Orebody</b>	<b>Silixite &gt;0.05 % W (t) <sup>(1)</sup></b>	<b>Grade (%)</b>	<b>Topaz (t)</b>
Wild Kate	151,310	17	25723
Wild Kate South	67,126	17	11411
Wild Kate East (Upper)	77,474	17	13171
Mt Everard	126,457	17	21498
<b>Total (rounded)</b>	<b>422,000</b>	<b>17</b>	<b>71740</b>

**Table 4: Inferred topaz resources Torrington Project**

<b>Orebody</b>	<b>Silixite &gt;0.05 % W (t) <sup>(1)</sup></b>	<b>Grade (%)</b>	<b>Topaz (t)</b>
<i>Wild Kate (exc indicated)</i>	941,789	17	160104
<i>Wild Kate East (Lower)</i>	56,093	17	9536
<i>Fielders Hill North</i>	134,232	17	22819
<i>Fielders Hill South</i>	343,596	17	58411
<i>Burnt Hut</i>	192,393	17	32707
<i>Mt Everard</i>	55,572	17	9447
<b>Total (rounded to 1000t)</b>	<b>1,724,000</b>	<b>17</b>	<b>293080</b>

*(1) 0.05 % W cut off used*

*(2) Topaz is not considered a standalone economic target for the purpose of this resource estimate*

An Exploration Target has been derived from modelled and mapped orebodies based on the best available information available (Table 5). A range has been provided to reflect the potential variation in silixite volumes and overall grade within the orebodies. These exploration targets have been refined considerably from previous NSW departmental and historical mapping by utilising the recent LiDAR acquisition, and further subsequent field mapping and identification of additional potential orebody clusters. Table 5 below summarises the Exploration Targets with the additional acquired data and reinterpretation taken into account.

**Table 5: Summarised Exploration Target for all identified orebodies EL 8258 & EL 8355**

Domain Name	Domain Area (m2)	Silixite Area (m2)	Silixite footprint (%)		orebody thickness (m)		Orebody Tonnes (t)		Anticipated grade range	
			Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Tungsten (W)	Topaz
Burnt Kate	714,000	11,000	7	29	5	15	770,000	8,910,000	Disseminated mineralisation 0.05 - 0.4%	Disseminated mineralisation 10 -25%
Mt Everard	568,000	177,000	8	29	5	15	685,000	7,085,000		
Fielders Hill	136,000	8,000	3	9	4	6	45,000	210,000		
D&E Bodies (orebodies)	411,000	18,000	2	7	3	5	80,000	390,000		
Bung/New Hope (orebodies)	323,000	49,000	8	23	4	8	285,000	1,705,000		
Carters East	176,000	14,000	4	12	4	8	80,000	485,000		
Locks	612,000	152,000	12	37	5	8	1,100,000	5,290,000		
Gordons	592,000	175,000	15	44	4	8	1,015,000	6,090,000		
Currawong	453,000	103,000	11	34	2	6	300,000	2,690,000		
Wolfram Hill	419,000	90,000	11	32	2	6	260,000	2,350,000		
Sheep Station	211,000	44,000	10	31	2	6	130,000	1,150,000		
Carters West	143,000	16,000	6	17	4	8	95,000	555,000		
Bob Swamp East	51,000	51,000	25	100	2	6	75,000	885,000		
The Ranch	50,000	50,000	25	100	3	9	110,000	1,305,000		
Officer	17,000	17,000	25	100	1	5	10,000	245,000		
isolated bodies (combined)	90,000	90,000	25	100	4	8	260,000	2,090,000		
<b>Massive orebody exploration target subtotal</b>	<b>4,876,000</b>	<b>975,000</b>	<b>12</b>	<b>41</b>	<b>4</b>	<b>9</b>	<b>5,040,000</b>	<b>39,345,000</b>		
Cow Flat (Vein/dyke swarm)	212,000	6,000	1.4	4.2	assumed 0.5m width * 10m depth based on field observations		2,000	6,000	Vein hosted mineralisation - 0.5 -4%	N/A - Veins not considered for Topaz potential
Elliots (Vein/Dyke swarm)	260,000	2,000	0.4	1.2			7,000	21,000		
Mt Abundance (Vein/dyke sw	263,000	7,000	1.3	4.0			3,000	9,000		
D&E Bodies (Vein/Dyke swarm	411,000	3,000	0.4	1			7,000	21,000		
Bung/New Hope (Vein/Dyke s	323,000	7,000	1.1	3			7,000	21,000		
<b>Vein-hosted orebody exploration target subtotal</b>	<b>1,146,000</b>	<b>18,000</b>	<b>1.1</b>	<b>3.3</b>			<b>4,680</b>	<b>14,040</b>		

### 3. Torrington Overview

Figure 1: Location of EL 8258 & EL 8355 Torrington in northern NSW

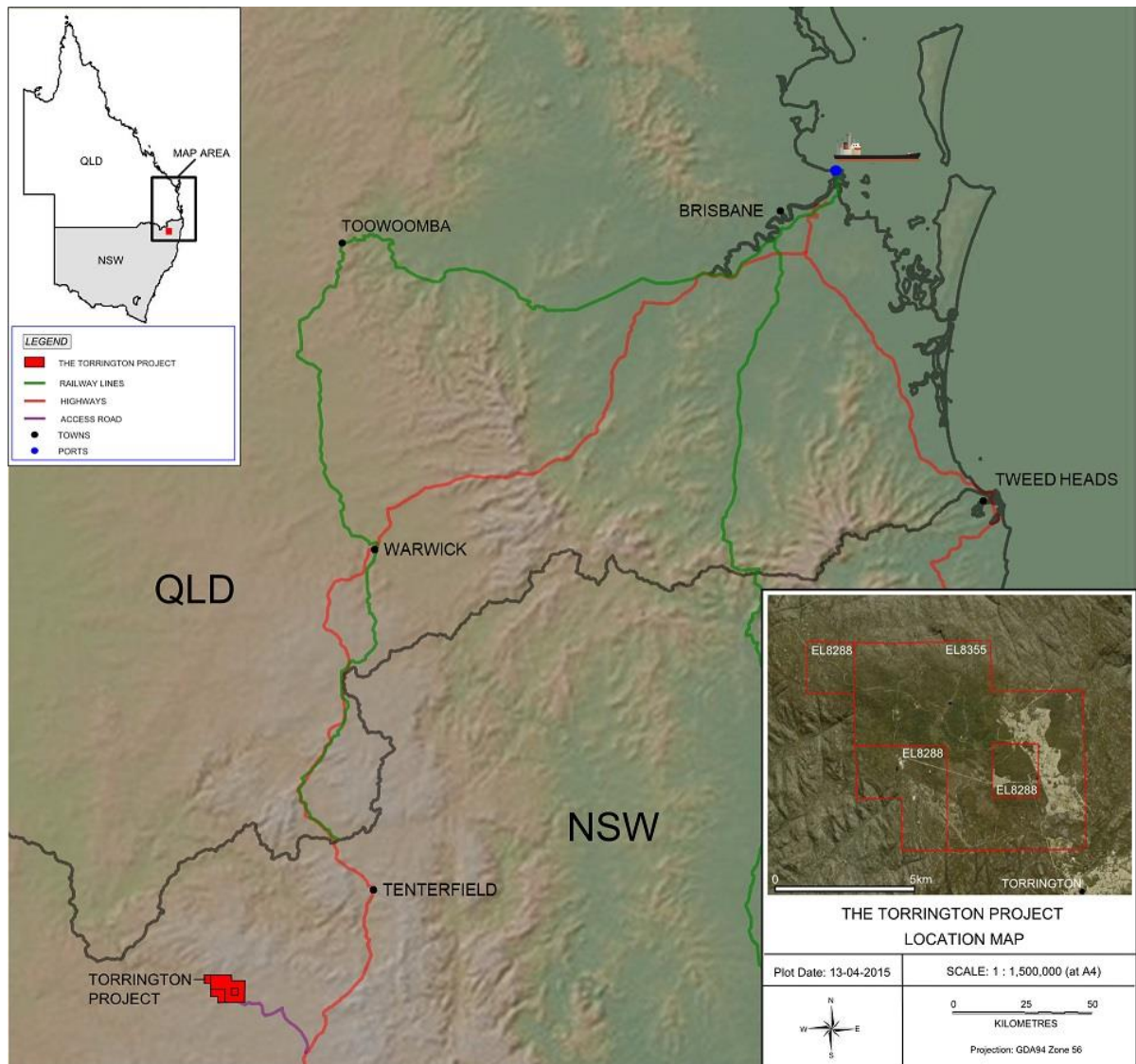
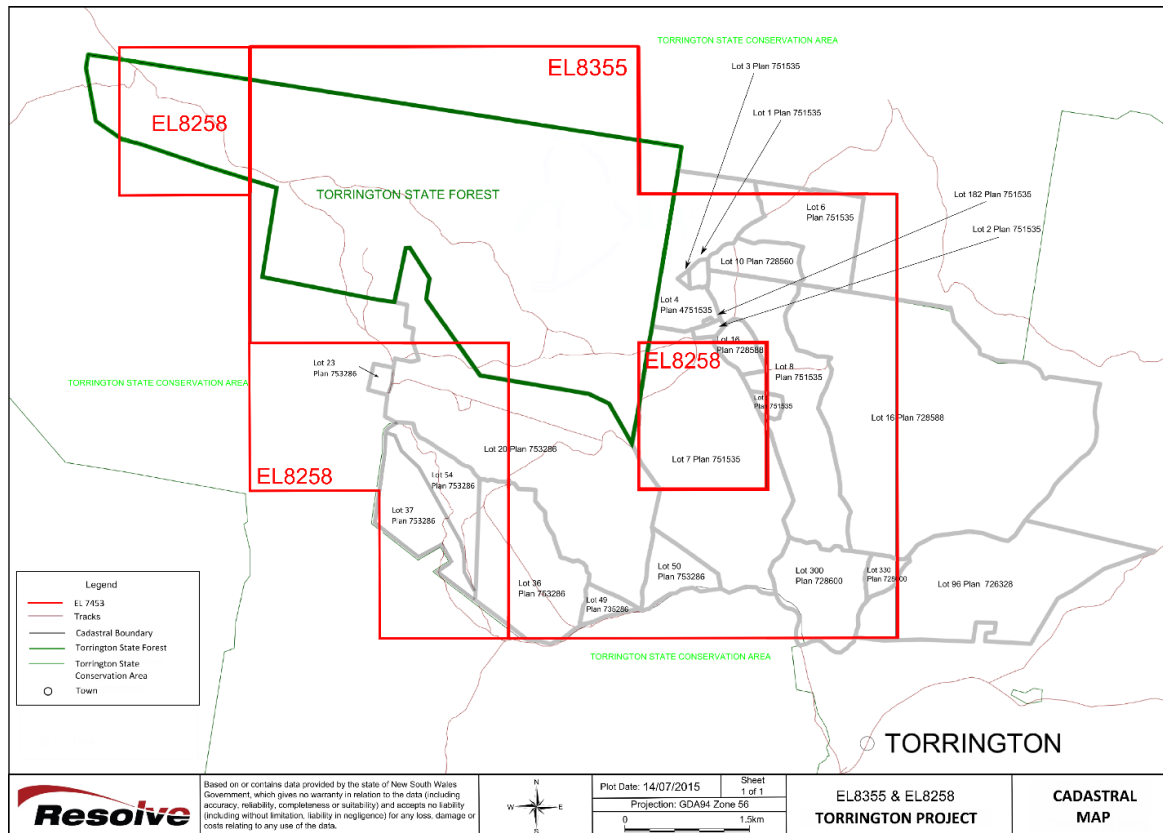


Figure 2: Cadastral parcels and land use within the Torrington Project



## 4. Overview of completed work

### 4.1 LiDAR & Bathymetry

The requirement for detailed topographic information over the Torrington area and its relationship with known silicite mineralisation and visible tungsten, was recognised at an early stage. It was also recognised as desirable for determining the resources remaining in areas drilled by previous miners and exploration companies and subsequently mined.

The objectives of this phase of work were to:

- Acquire a LiDAR survey over all of the mineralised areas of the tenement,
- Use this data together with historical records to build a three dimensional model of the natural ground level prior to mining
- Acquire the bathymetry (sub-surface topography) of the mined pits for the areas to be included in updated resources)

Bathymetry was acquired during early May 2015 with handheld bathymetric sounding equipment (Figure 3 & 4). Data points were acquired at a density of approximately 1 point per 4 square metre, which, in conjunction with the previous miners pit cross sections (Creech, M., 1988), was sufficient to produce a contoured surface for the pit floors below the water.

A LiDAR survey was flown in March 2015 by AAM Group, and covered the entirety of the Krucible tenements, covering the Torrington Pendant (Figure 5). The utilisation of an Optech Pegasus laser system allowed for accurate delineation of the ground surface through the typically dense vegetation over parts of the project area.

The LiDAR survey was undertaken with on-site ground truthing to permanent survey markers in the area local to the Project, and the vertical (Z value) level of accuracy for the LiDAR was +/- 0.06m.

Collar coordinates for historically drilled holes on subsequently mined areas were determined after the interpretation (principally from LiDAR) of the original ground level. This was necessary to determine a collar height for historical bore holes, so that digital models could be built in the correct three dimensional space, as referenced by the LiDAR survey.



**Figure 3: Bathymetry collected at Burnt Hut**

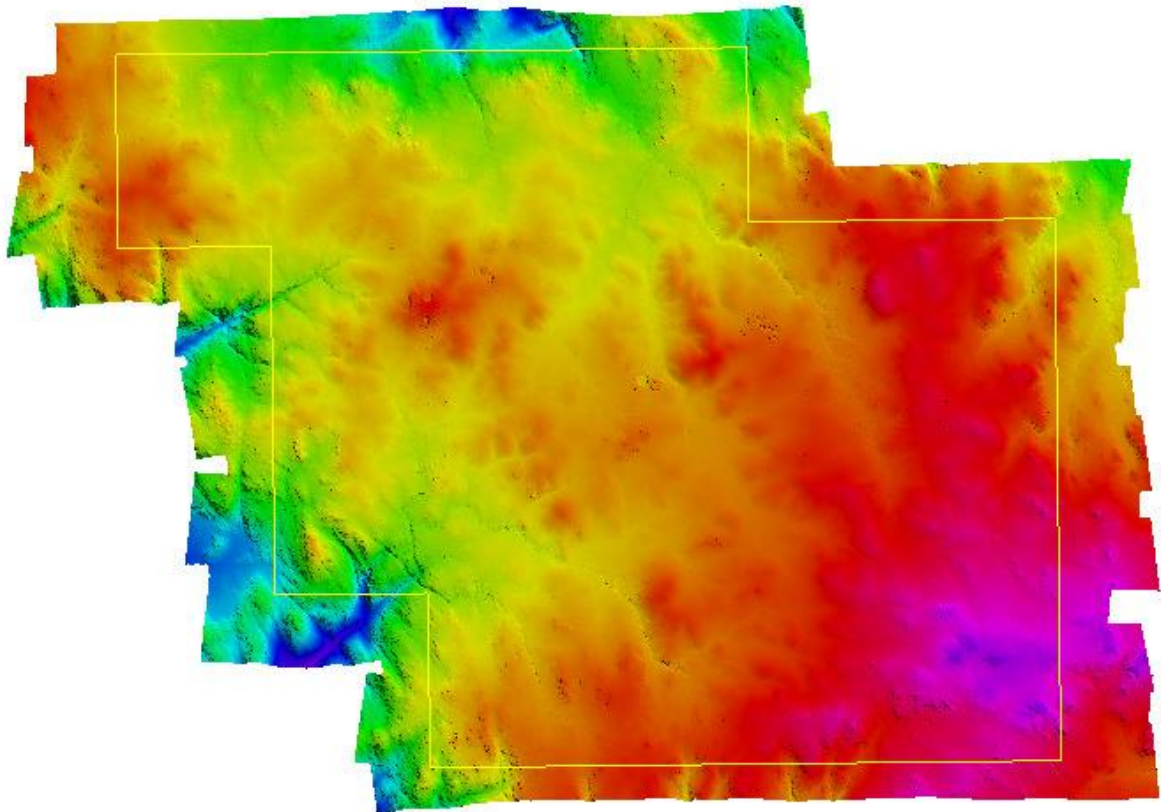


**Figure 4: Bathymetry collected at Fielders Hill**





*Figure 5: Torrington Project LiDAR capture footprint.*



## *4.2 Deposit Remodelling*

Prior to the acquisition of the LiDAR topography, several of the Torrington deposits were not able to be modelled due to the inability to correctly position the elevation of the historical bore holes. Wild Kate and Mt Everard were previously modelled as the majority of the drill holes were completed on natural ground level as it still stands, whereas in Fielders Hill and Burnt Hut, the majority of holes were drilled on ground which had subsequently been mined out (Saul, G., 2014). The poor accuracy of the original topography, coupled with poor reconciliation of mined volumes did not allow for an accurate estimate of how much of the orebody remained below and peripheral to the pit.

Acquisition of the LiDAR was followed by a desk study where known deposits of silicite were cross checked against the topography. A large suite of potential targets were then identified on the topography including topographic highs, visible workings in the form of shafts, trenches and alluvial excavations (including many that were previously unknown). A field mapping exercise then provided much better understanding of the relationship between topography and silicite outcrop,

with numerous mapping targets confirmed as silixite bodies. The mapping work also served to document areas which were predominantly exposed granite. It was noted that high density vein systems (some heavily worked) were common adjacent to the granite outcrops.

Four deposits have now been modelled and estimated for JORC resources:

- Wild Kate
- Mt Everard
- Burnt Hut
- Fielders Hill

#### *4.2.1 Wild Kate*

Wild Kate is the most thoroughly explored and understood deposit, and is a high potential target that has not yet been mined on a large scale. It has a good exposure in outcrop which allowed an extensive visual assessment of the silixite on the surface, with visible tungsten mineralisation in the vast majority of the exposed silixite. A common observation both by the current geologists, and also reported by Pacific Copper, is that visible “high grade” wolframite is apparent in silixite bodies that report low grades from drill results. Historically, RAB holes intersecting these bodies often failed to report economic tungsten grades, or very low tungsten grades. This is noted to be a factor of insufficient air circulation during drilling to recover the heavy mineral fragments, and the friable nature of the wolframite type. The most robust sources of grade data for some silixite bodies are those of the bulk sample/mining tonnes or the NQ cored / diamond drill holes. Despite this observation, the RAB holes still provide important support for determining orebody geometry, and have been incorporated into the model in this role.

NQ drill hole data and four bulk sample pits (5 tonnes +) report to a JORC resource estimate. The reliability of the bulk sample data has proven robust, and reconciles strongly to mining reconciliation data from elsewhere on the Torrington Pendant. This has allowed Resolve to project a 25m radius for Indicated Resource estimation around these bulk samples. No Measured Resources are considered at this stage.

The Wild Kate deposit is currently split into four separate identified domains (Figure 6 & Figure 7), Wild Kate, Wild Kate South, Wild Kate East and Wild Kate West. Wild Kate East contains an upper and lower body and is reported as containing Indicated and Inferred Resources, supported by

drilling, historical mining and bulk sampling. The upper silexite orebody is reported as an Indicated Resource, supported by a historical mining grade. Historical mining from 1915-16 included 4000 tonnes of silexite in the Upper body of Wild Kate East, at a head grade of 0.20 % W (Johnson, D, A., 1981). The lower orebody is classified as an Inferred Resource, and also reports the grade of 0.20 % W, as it is likely that the two orebodies are sills from the same source.

Wild Kate West is a small silexite orebody to the west of Wild Kate (Figure 6). A single inclined RAB hole confirms silexite to the depth of 39m (the hole terminates in silexite). The orebody has been modelled currently as a small circular feature, implying a pipe style of mineralisation. Further drilling will be required to confirm the lateral extents of this orebody. Wild Kate West does not have a confirmed tungsten grade through surface sampling or core drilling; therefore, it has been included within the Exploration Target classification.

Wild Kate has a large surface silexite outcrop (Figure 6), with grade control from three bulk samples (Table 6), and multiple core and RAB drill holes. A number of deep shafts are also found in this silexite body. The Indicated Resource has been confined to the section of the Wild Kate orebody with bulk sample grade control spaced at ~25m, and reports an average grade of 0.17 % W. The remainder of Wild Kate also reports a significant Inferred Resource at a grade of 0.17 % W. Wild Kate South has a significant surface expression, with the Indicated Resource supported by a bulk sample reporting a 0.32 % W grade (Table 6). Drill holes, costeans and shafts also assist in determining orebody geometry.

Cross-sectional plots are provided showing the extents of the modelled orebodies and the grades estimated where applicable (Figure 7). The relevant bulk samples and their associated grades are also provided in Table 1.

**Table 6: Wild Kate bulk tests for W content**

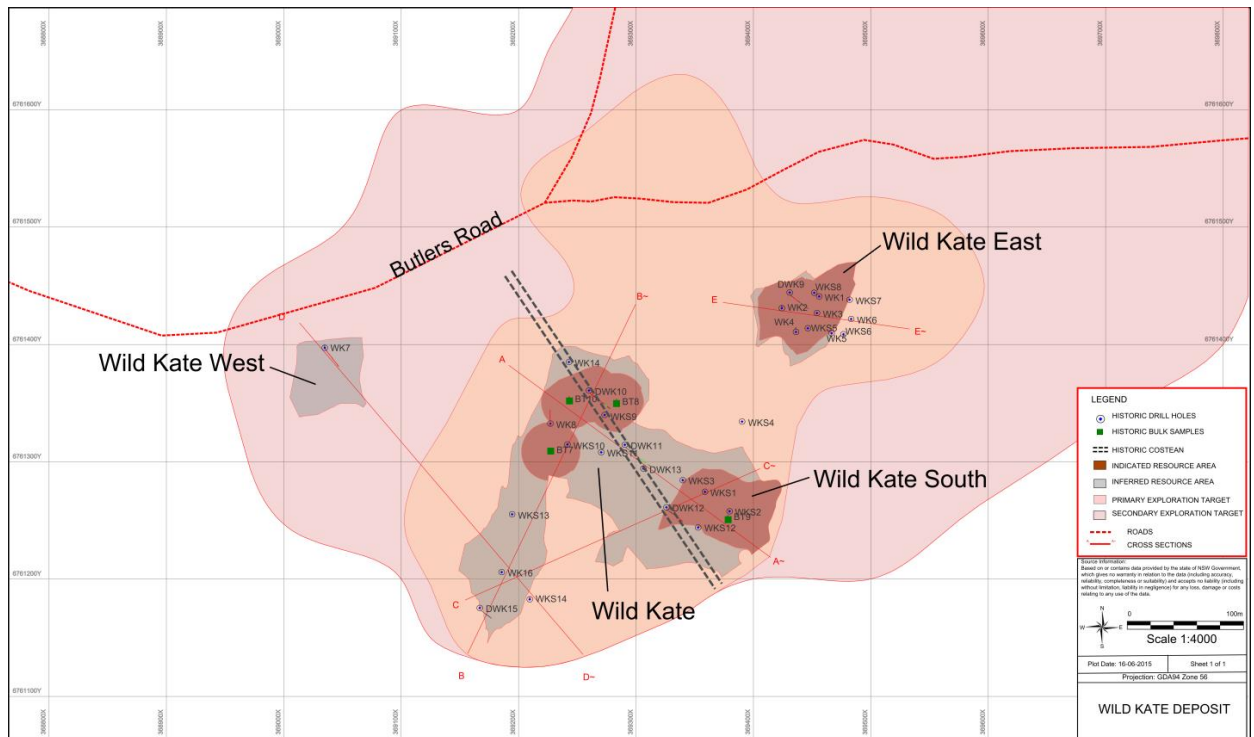
Location	Sample #	Tonnes	W %	Company
Wild Kate#	BT7	6.16	0.3	Pacific Copper
Wild Kate#^	BT8	6.82	0.27	Pacific Copper
Wild Kate South^^	BT9	4.937	0.32	Pacific Copper
Wild Kate**	BT10	5.609	0.13	Pacific Copper

# Bulldozed near old workings

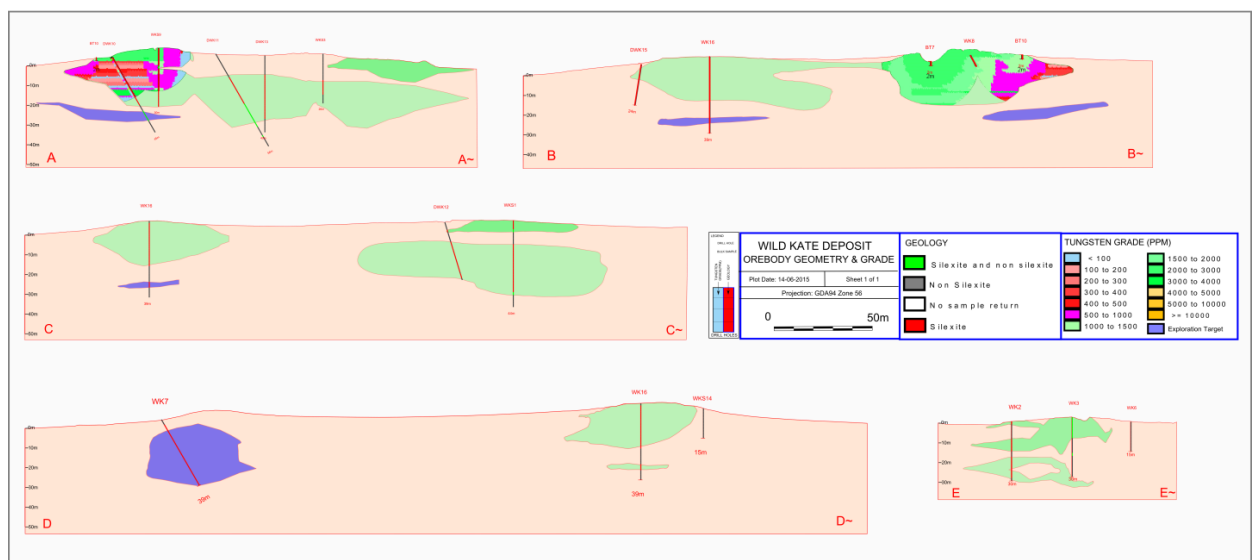
#^ Bulldozed into outcrop

^^ Blasted from outcrop near old workings. Some fine wolframite lost

\*\* Blasted from solid outcrop. Some fine wolframite lost



**Figure 6: Wild Kate Resource and cross section overview.**



**Figure 7: Wild Kate cross-sections (A to E inclusive)**

### 4.2.2 Mt Everard

The Mt Everard deposit is located approximately 1km to the south-west of Wild Kate with a small pit in place where 18,680 tonnes was mined by Pacific Copper in 1979 and 1980. These tonnes contributed to the overall head grade reported by Pacific Copper of 0.175 % W (Johnson, D. A., 1981).

Mt Everard is a high potential target because of the extent of the mapped silicite in the close vicinity of the mined orebody. Tabular bodies (potentially sills) have been identified to the south and east of the Mt Everard pit, and further silicite outcrop is also identified to the north. The update to the previous resource report (Saul, G. 2014) for the Mt Everard deposit is not significant in terms of the reported resource tonnes and grade. The key updates in Mt Everard deposit is the consideration now given to the areas surrounding the Mt Everard Pit, which constitute a primary focus for initial exploration. This will be discussed in subsequent sections of this report. Figure 8 and Figure 9 show the Resource extents and corresponding cross sections.

**Table 7: Mt Everard bulk tests for W content**

Location	Sample #	Tonnes	W %	Operator	Year
Mt Everard	Laloma	18.9	0.122	Pac Copper	1978
Mt Everard	Mining	7,960	0.05-0.08*	Pacific Copper	1979
Mt Everard	BT11	5.095	0.22	Pacific Copper	1981-2
Mt Everard	BT12	5.29	0.19	Pacific Copper	1981-2
Mt Everard	BT12 (repeat)	XRF	0.24		
Mt Everard	BT6	6.617	0.22	Pacific Copper	1981-2

\*Does not include the 0.095 % W or 0.12 % WO<sub>3</sub> in fines not recovered by the Pacific Copper Plant.

Figure 8: Mt Everard Resource and cross section overview

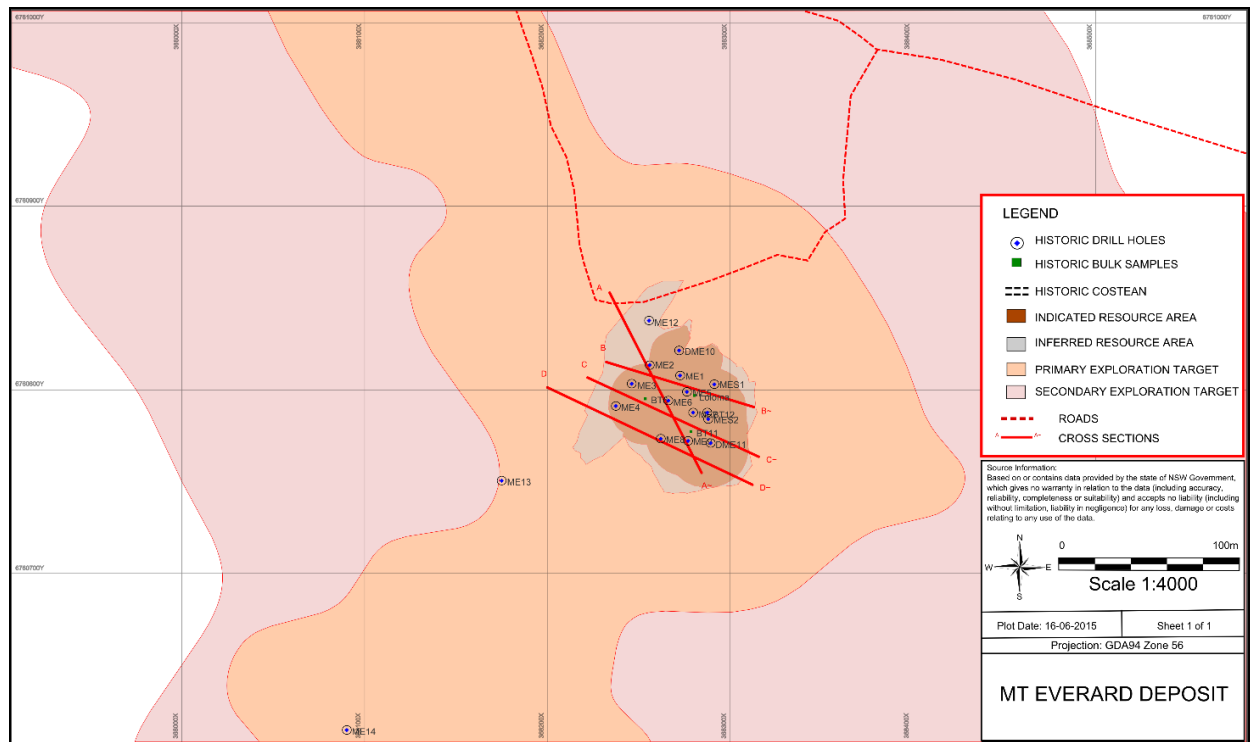
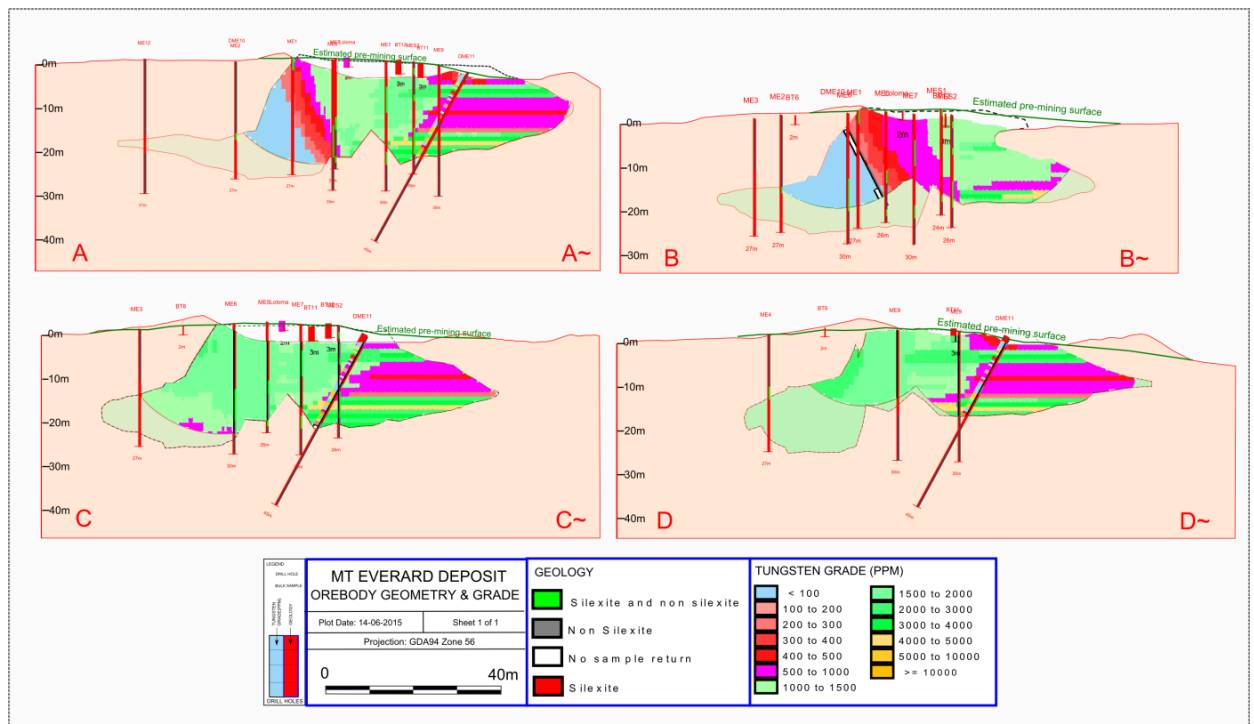


Figure 9: Mt Everard cross- sections A – D



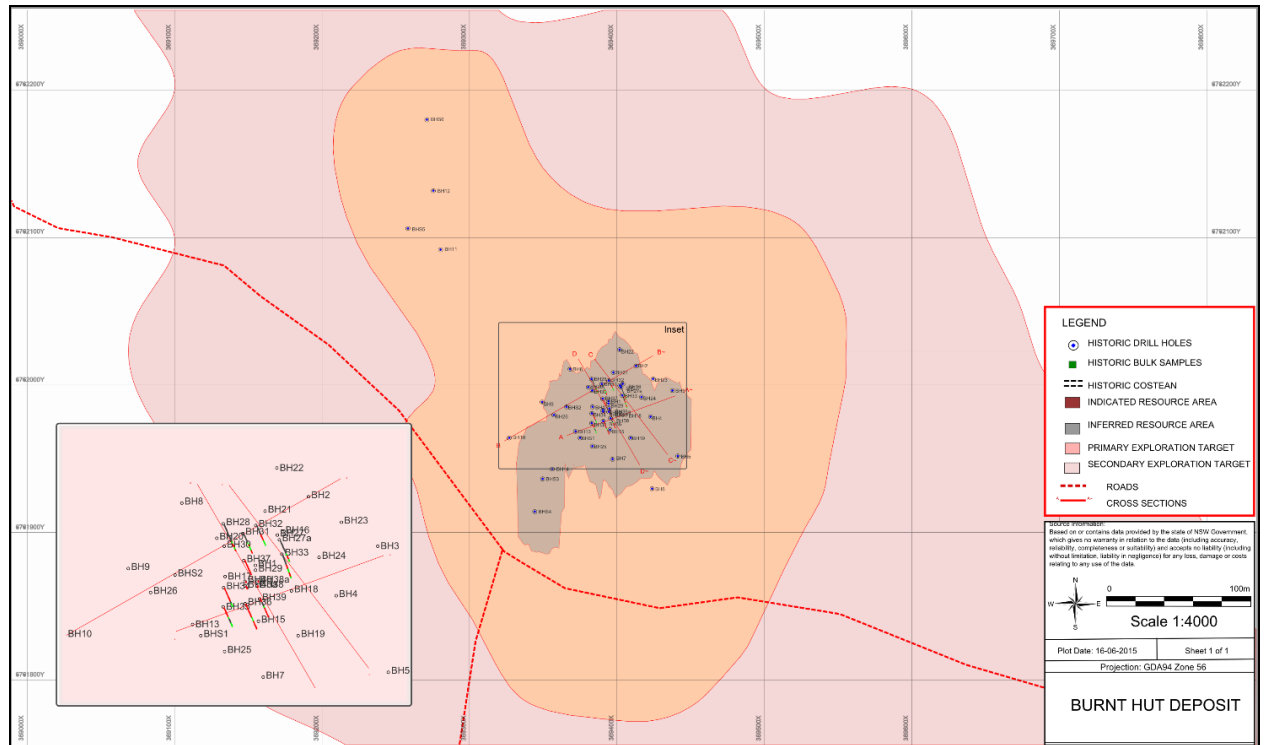
#### 4.2.3 Burnt Hut

The Burnt Hut deposit is located approximately 600m to the north of the Wild Kate deposit. The sillexite body outcropped on the top of a prominent topographic high, the top of which has been mined out historically (Figure 10 & 11). The deposit includes two large sillexite bodies (north and south), that are part of an association of north dipping sillexite sills and dykes. Pacific Copper removed 31,025 tonnes of ore (July 1979 – March 1980). The existing pit is roughly circular and has a diameter of approximately 120m (Figure 10 & 11). Mine head grade was also estimated by Pacific Copper to be 0.175 % W (Johnson, D.A., 1981).

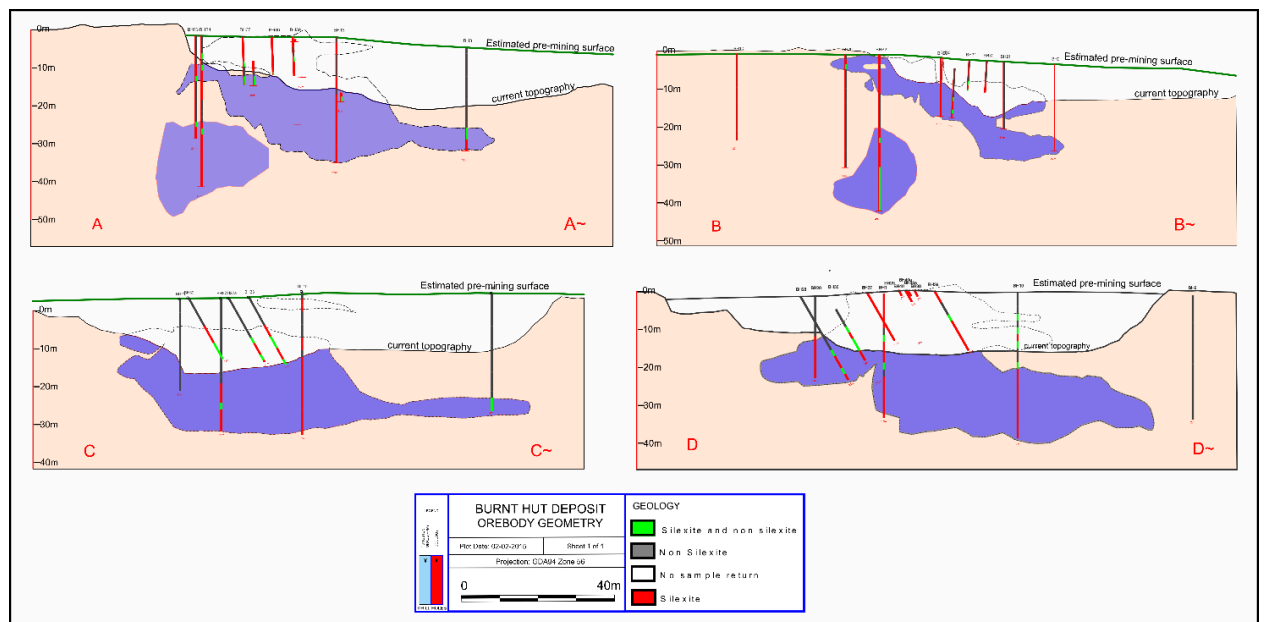
The updated model of Burnt Hut is constrained and terminated outside of the completed drilling; however the drilling at Burnt Hut is tightly focused on the section of the pit which has been mined, and the sillexite remains open in many directions.

Exploration mapping suggests that a sillexite intrusion (visible in the pit ramp wall on the north western extent of the pit) is a potential emplacement conduit for the sillexite body. High grades of visible wolframite are visible on the edges of the existing pit (filled with water).

**Figure 10: Burnt Hut Resource and cross-section overview**



**Figure 11: Burnt Hut Cross-sections A-D**





#### 4.2.4 Fielders Hill

The Fielders Hill deposit contains the largest open pit of all workings of the Torrington silicite bodies, and remains the most densely drilled area on the Torrington Pendant (Figure 12 & 13). Historic mining has occurred on the Fielders Hill deposit since the late 1800s, and approximately 68,000 tonnes of ore was mined in the period 1904-11, creating a large open pit. Pacific Copper Ltd removed 69,425 tonnes of ore (Sept 1979 – March 1980), enlarging the previously existing open pit.

A smaller open cut pit is located 150m to the south of the main pit. Pacific Copper Ltd removed 11,626 tonnes of ore from the southern pit area (May 1979 – February 1980), following a 2-3m thick silicite sill, that can be seen in the northern wall of the southern pit (Figure 14 & 15). Mine head grade from these mining operations was estimated by Pacific Copper to be 0.175 % W.

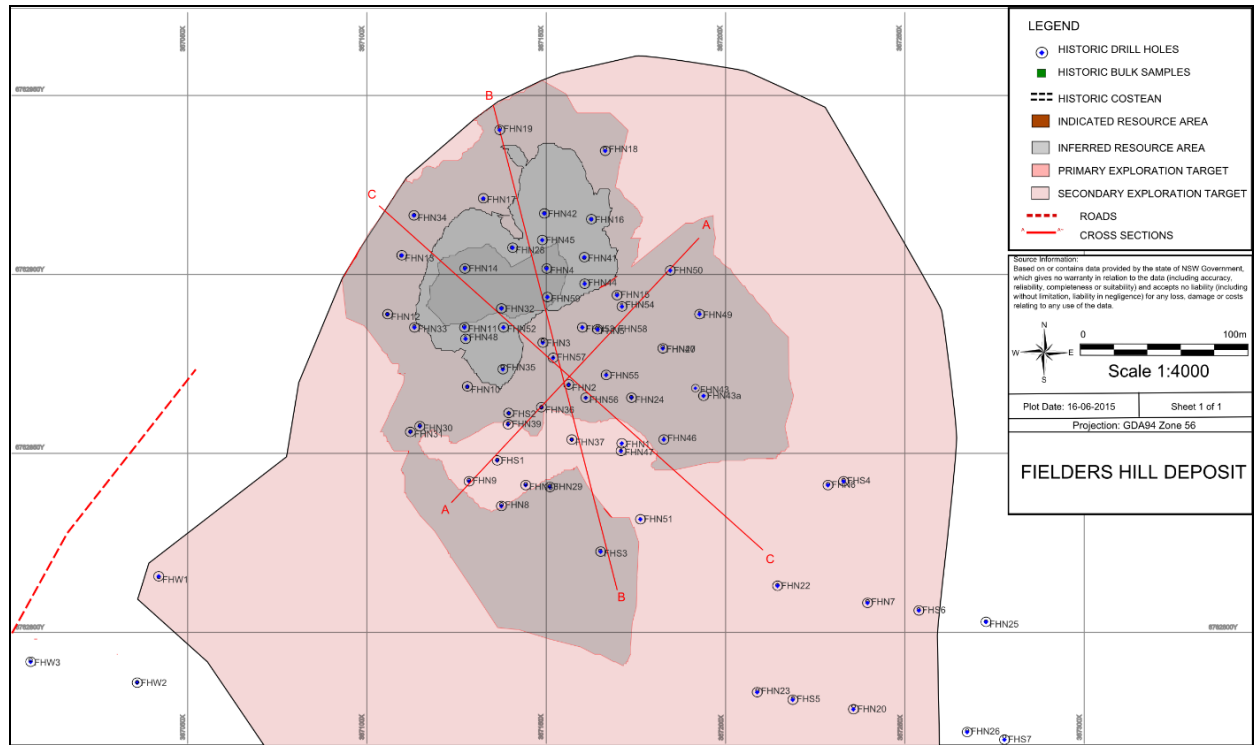
The southern pit silicite bodies themselves comprise two large irregular sills (average thickness of 3m) and at least one feeder dyke (Figure 15).

Resolve have focused their field mapping to the south of the northern pit, where continuous topographic highs, silicite outcrops and drilling support indicate a large potential endowment of silicite.

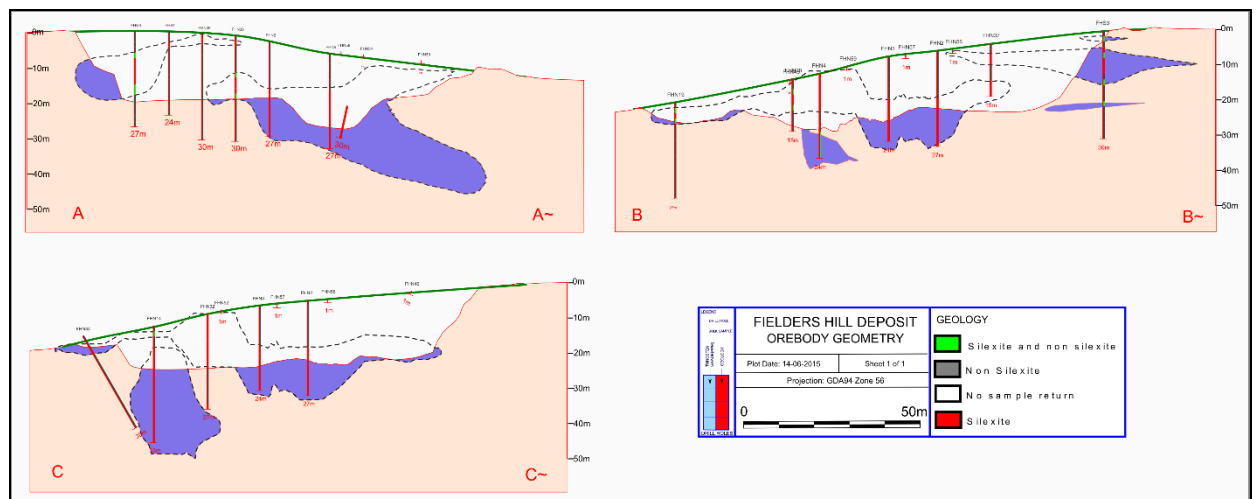
Exploration targets (Figure 12 & 14) incorporate both Resolve's field mapping and historical interpretations. Estimates of silicite thicknesses vary across the deposit and within areas which have been mined. The northern (main) pit at Fielders Hill is approximately 18m deep, however the original ground surface prior to mining is not known in detail. In addition some drill holes were drilled on benches within the pit that have subsequently been mined. Support for the broad exploration target boundaries includes drilling (typically RAB drill holes with unreliable grade information), and corresponding surface expression of topographic highs. Resolve's areas of identified silicite from surface mapping extend significantly from those previously identified by Pacific Copper.

Fielders Hill is also host to a considerable number of intersections of non-silicite ore (typically logged as metasediments) reported to have recoverable grades of tungsten (Johnson, D.A., 1981).

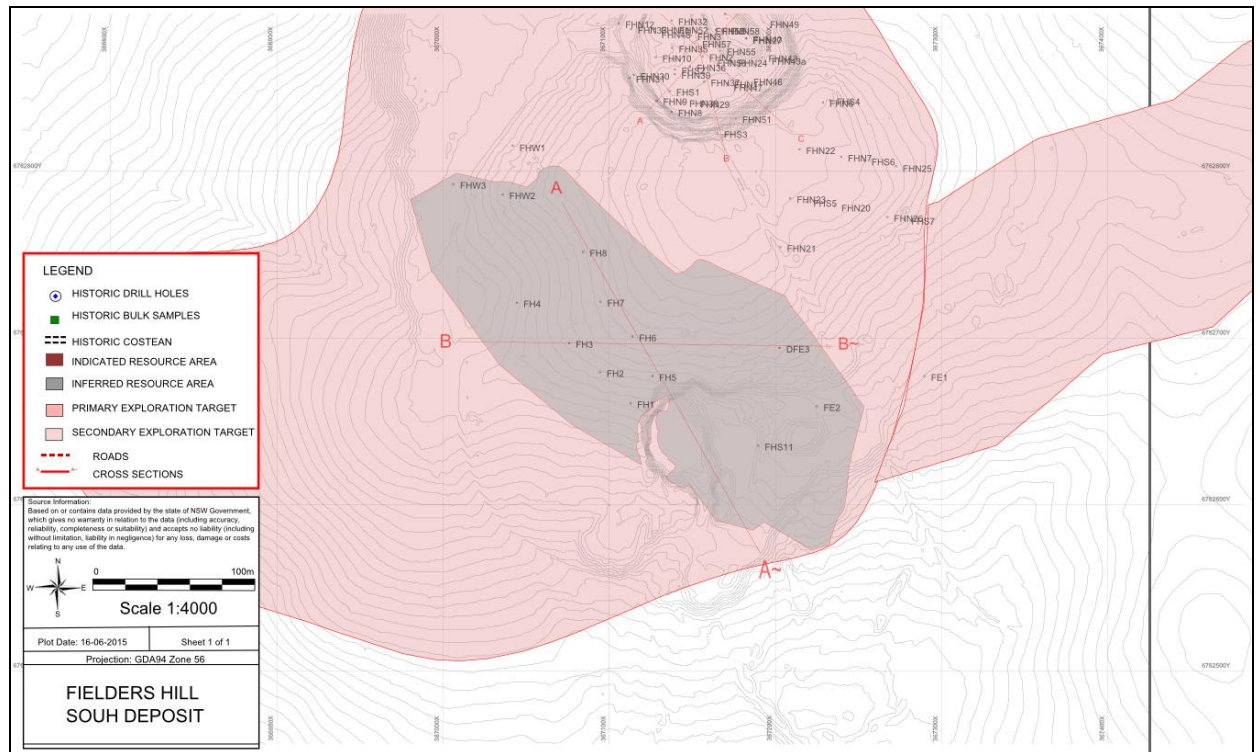
**Figure 12: Fielders Hill North Resource and cross-section overview**



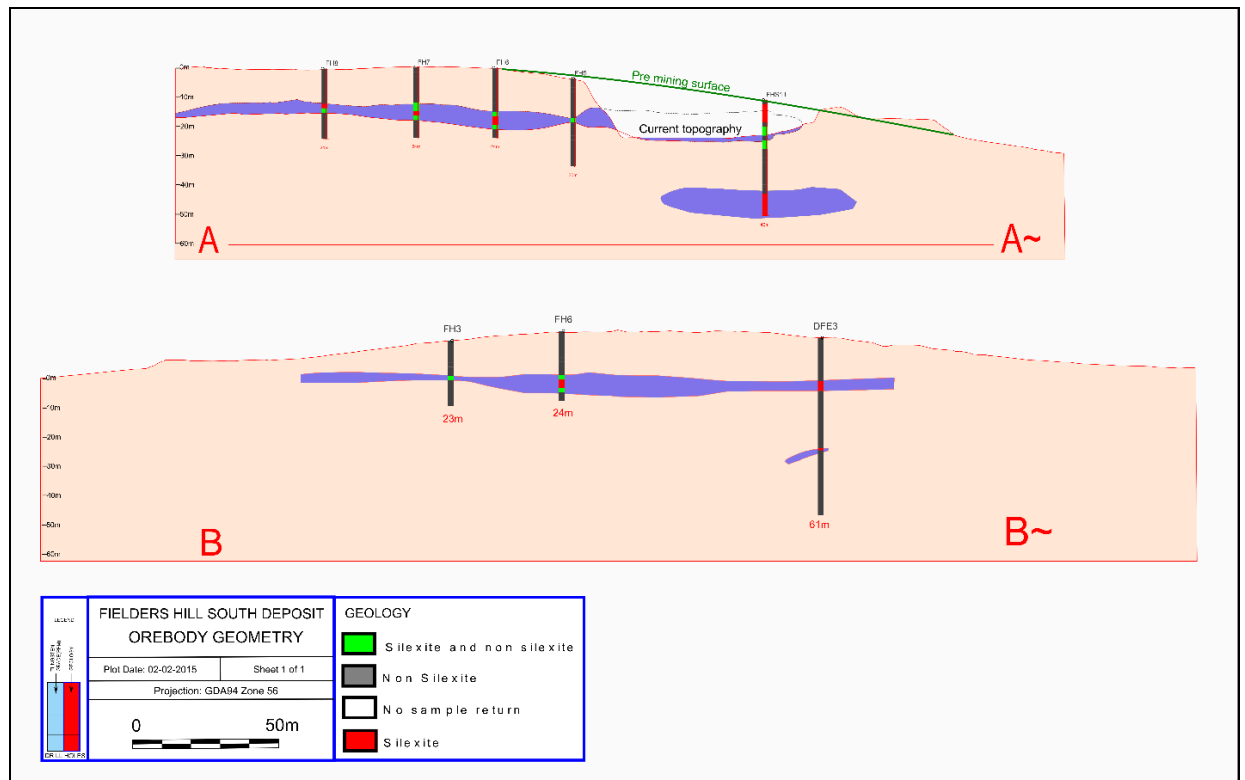
**Figure 13: Fielders Hill North cross-sections A – C**



**Figure 14: Fielders Hill South Resource and cross-section overview**



**Figure 15: Fielders Hill South cross-sections A – B**



### *4.3 DGPR Acquisition*

On the 18<sup>th</sup>/19<sup>th</sup> June, 2015, Ultramag Geophysics co-ordinated a 2 day trial acquisition of deep ground penetrating radar (DGPR). This survey was part of an exclusive 3 week trial of the DGPR technology in Australia. The scope of the survey and follow up interpretation was to assess the ability for the DGPR system to successfully image key lithological changes at Torrington. The potential to be able to accurately image the granite basement material would be a useful exploration tool.

Processing and interpretation of this data is ongoing, however early indications appear to confirm that the surveys can successfully image the basement material, as well as identify the position and widths of potential silicite host rock. The potential for the DGPR surveys to contribute in a highly efficient way towards the exploration planned at Torrington will be fully assessed in due course.

## 5. Torrington Project JORC Resource Estimate

### 5.1 Description of geology and mineralisation

The Torrington silicite deposits has been classified as typical greisen-style deposits with emplacement along joint planes within metasediments, and as sills and dykes within metasediments and granites (Plimer *et al* 1995) . The tungsten (wolframite) mineralisation is hosted predominantly within numerous silicite bodies of Permian-Triassic age (230 to 270Ma), with structure and host stratigraphy being the primary controls on tungsten mineralisation. The silicite bodies are a quartz-topaz rock formed as late stage intrusive forming sills and dykes within the surrounding country rock. Metasediments logged and sampled within drill holes frequently return tungsten grades above the 0.05 % W cut-off grade.

The Mole Granite was emplaced during the Late Permian – Early Triassic NE-NW shear couple, resulting in it featuring as a prominent series of NE trending ridges, which are easily discernible in satellite images. This structure has a strong control over mineralisation with NE and NW trending joint sets being the focus of hydrothermal mineralisation. Late carapace fracturing focused mineralising fluid release that led to the formation of shallowly to steeply dipping NE and NW sheeted silicite vein systems in the crown of the granite. Simple vein systems are also present and follow NW trending shears, faults and joints.

### 5.2 Reasonable prospects test

Resolve consider that there is no risk to the reported tungsten resources due to economic or mining modifying factors. Following several scoping studies (Bing, B, 2013, Carlile *et al*, 2013) and more recent financial analysis (Griffiths 2014) grade cut-offs are economic at US\$200/MTU WO<sub>3</sub>, below current world pricing. Reliable transport and markets are of no significant risk to project development.

Topaz resources within the silicite are also considered viable as a reasonable economic prospect, but has not been reported as a standalone resource within the Torrington deposits. The quantities of topaz have only been reported within the silicite containing >0.05 % tungsten.

Methods of mining are most likely to include standard drill and blast quarrying practices in shallow pits with ripping and dozing of blasted ore. Industry standard methods of mineral processing

including crushing and grinding, gravity and magnetic separation using existing conventional means. Topaz is anticipated to be stockpiled until such time as an offtake for it is in place. Although a demonstrated refractory (mullite) market for Torrington topaz exists, along with utilization in introducing boron into high temperature glass manufacture, both these need to be further investigated and proven.

### 5.3 Discussion around grade estimates

#### 5.3.1 Tungsten Grade

Estimating resource tonnage and grade has presented some challenges to previous estimates over the Torrington Pendant. Several characteristics have been highlighted by the previous estimates and geological reports namely the relatively simple geometry of the orebodies, and the challenges presented by the friable nature of the ferberite, the iron-rich member of the wolframite mineral series that hosts the tungsten endowment present in the project area.

The vast majority of the drilling utilised in previous resource estimations comprised rotary air blast (RAB), reverse circulation percussion (RC) and open hole percussion (OHP) all of which are cheaper techniques when compared to core drilling that also have a number of limitations, particularly as the target mineralisation is friable (liable to fragment into very fine particles) and heavy (ferberite has an SG of 7.45gm/cc). This results in a significant potential to under report tungsten grade when relying on non-core drilling, which can be reconciled with two approaches, either through extensive core drilling, or with bulk sampling. Unfortunately, relatively limited core drilling was undertaken, and this was the smaller diameter NQ (reported below), however, robust bulk sampling work has occurred, and is reported in Tables 6 and 7 above, and discussed below.

This bulk sampling has reported directly to the grade used to calculate the tungsten content within the Wild Kate and Mt Everard deposits, where current grade estimates have been undertaken, and the classification under which the resources are reported. The location of the bulk samples is shown Figure 6.

Financial modelling has delivered a 0.05 % (500ppm) cut-off grade for tungsten (W) (Bing, B., 2013; Carlile *et al*, 2013), updated in Griffiths (2014), and utilises a price of US\$200/MTU WO<sub>3</sub>. Tungsten prices are generally quoted as US dollars per MTU of tungsten trioxide (WO<sub>3</sub>). Theoretically pure WO<sub>3</sub> concentrate can contain 79.3% tungsten metal, but in practice the grade of concentrate

products acceptable for sale ranges from about 62% WO<sub>3</sub> to about 72% WO<sub>3</sub>. Saleability of concentrate depends on grade and also the impurities in the concentrate. Previous analysis of tungsten concentrates from the Torrington area report a grade of between 72 % and 74 % WO<sub>3</sub>. This model is utilises cost inputs based in part on the surficial nature of the orebodies, the simple mining techniques (quarrying operations), the mineralogy and processing of the silicite ore, recovery of wolframite, the proximity of the Port of Brisbane and the relatively low CAPEX cost for the project as a whole.

### 5.3.1.1 Bulk Test

The largest and most comprehensive bulk sample taken at Torrington comprised the milling operations conducted by Pacific Copper Limited in 1979. Johnson (1981) reports a total of 139,142 tonnes of ore from Burnt Hut, Fielders Hill North and Mt Everard were treated recovering 139.5 tonnes of concentrate at 71 to 74 % WO<sub>3</sub>. This gave an average grade of recovered WO<sub>3</sub> of 0.10 %. After operations ceased a ten hole auger drilling programme indicated resources contained within the tails at 138,595 tonnes with an average grade of 0.096 % W or 0.12 % WO<sub>3</sub>. It was suspected that this wolframite was not recovered due to an inadequate fines recovery circuit, and through poor liberation due to inadequate grinding. If this fine wolframite had also been recovered, and ore dilution of up to 20 % is assumed, an average grade of recoverable tungsten from these operations would have been closer to 0.174 % W. (Johnson, D.A., 1981). Johnson (1981) independently estimates a mill recovery of 43 % from the Pacific Copper operations. Table 8 contains information of historical mining operations completed.

**Table 8: Historical Pacific Copper Ltd bulk mining data for EL 8258 & EL 8355**

Locality	Ore Mined (t)	Period Mined	Mine head grade
Fielders Hill North	69,425	May 1979 - March 1980	<b>0.174 % W</b>
Fielders Hill South	11,626		
Burnt Hut	31,025		
Mt Everard	18,680		
Wild Kate/Bismuth Dump	1,610		
Undifferentiated ore	6,776	no data	
<b>TOTAL</b>	<b>139,142</b>		

Resolve re-evaluated the Pacific Copper mining data, including the conversion of tonnes of WO<sub>3</sub> concentrate to W tonnes, and factoring in a revised dilution from 20 % (Johnson, D.A., 1981) to 10% following detailed observations from the Pacific Copper tailings dump. This results in a calculated

mine head grade of 0.154 % W on a 10% dilution basis (Table 9). Resolve assumes in this reconciliation no contribution of tungsten from the dilution.

**Table 9: Resolve evaluation of the Pacific Copper mine data**

Processed Ore (tonnes)	139,142
Without Dilution @10 % (tonnes)	125,228
Total Concentrate (tonnes) (Plant)	139.5
Total W (tonnes) (Tailings)	106
Total W (tonnes) (Plant and Tailings)	216
W Grade % (Silexite Ore only)	0.172%
W Grade % With 10 % Dilution	0.154%

In addition to reconciliation of mining results, the 1981 bulk test programme, specifically utilising a fines circuit in analysis to overcome the bias in recovery seen in the mineral processing plant resulted in an average 90 % recovery. Tails assayed for W from bulk tests 9 to 12 averaged 100ppm, indicating a more satisfactory wolframite recovery (Table 6 & Table 7).

Previous miners in the area indicate that at least 30 % of the tungsten recovered was won through very simple fines recovery techniques including utilising a buddle and rag frames (Bill Sherrat *pers comm* 2013). These are simple mechanical devices that utilise fluid power to trap very fine particles. Evidence from subsequent size analysis of the tailings also clearly points to the Pacific Copper failure to achieve efficient mineral liberation through a failure to grind to release fine wolframite locked within larger quartz or topaz grains.

Previous tenement holders also completed a number of petrological studies showing ~16 % of the wolframite reported as grains of <0.5mm (Ashley 2014), frequently held within larger quartz and topaz grains.

Samples of the head feed, tails and non-mag tails from the bulk tests BT9-BT12 (Table 6 & Table 7) were assayed by SGS in Sydney and cross-checked by Pilbara labs in Perth. The results compared well with an average tungsten head feed grades of 0.20 % (SGS), and 0.22 % (Pilbara) previously determined through analysis of a composite RAB and core drilling program. Since no bung or strongly mineralised joint was encountered these results could be considered as indicating general background tungsten grades in the silexite. Eluvial material may have diluted each sample to a



small extent, and in the case of BT 11 a half metre wide microgranite vein was mapped in the SE wall of the sample site.

There is strong evidence for some homogeneity of tungsten grade within the silicite bodies, especially those centrally located including Burnt Hut, Fielders Hill & Wild Kate, despite their separation by several kilometres. The larger sampling size of the historic mining and bulk sampling also gives a more reliable indication of grade. A summary of the results of these programmes is shown in Table 10 below.

**Table 10: Large scale mining and grade central bodies in Torrington**

<b>Location</b>	<b>Year</b>	<b>Tonnes</b>	<b>W %</b>
<b>Wild Kate</b>	1915-16	4,000	0.20
<b>Fielders Hill N &amp; S</b>	1977	2,660	0.175
<b>Burnt Hut</b>	1977	3,100	0.175
<b>Fielders Hill North</b>	1979-80	69,425	0.175
<b>Fielders Hill South</b>	1979-80	11,626	
<b>Burnt Hut</b>	1979-80	31,025	
<b>Mt Everard</b>	1979-80	18,680	
<b>Average</b>			<b>0.18</b>

### 5.3.2 Topaz Grade

Determining the topaz grade of the silicite is problematic for several reasons, including that the topaz content is variable throughout the silicite bodies and that standard fluorine analysis for grade alone is inadequate. This is due to the potential contamination of samples by other fluorine rich minerals such as fluorite, resulting in topaz content being overestimated. Conversely silica inhibits the complexing solution of fluorine, having impact when the Specific Ion Electrode method of analysis is utilised, and leading to an underestimation of the topaz grade (Windward, 1976; Creech, M., 1988).

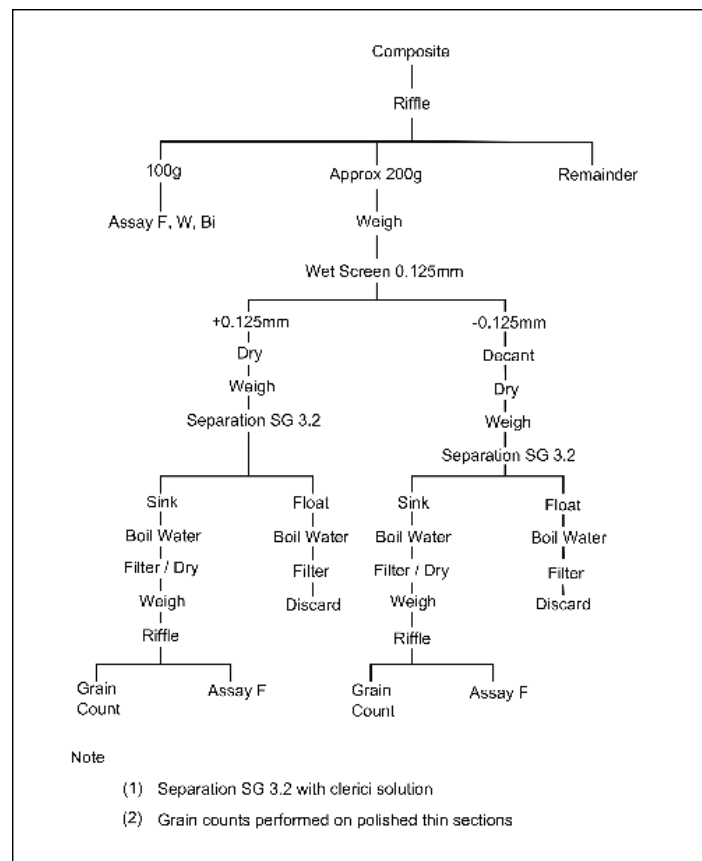
In 1976 the CSIRO undertook a study of the Torrington silicite for its topaz content for its application as a refractory raw material. Three 3-4 kg samples of silicite were collected from Locks Cut, Fielders Hill and Wild Kate. XRF analysis of these samples indicated the following topaz grades; Locks Cut 16.20 %, Fielders Hill 24.0 %, and Wild Kate 21.0 % (Windward 1976).

Pacific Copper (who controlled much of the silicite resources throughout the 1970s and 1980's) after consultation with a number of laboratories developed a heavy media separation and chemical analysis method for the determination of the topaz content of the silicite host rock. This method involves;

- Preparation of composites of selected drill samples.
- Analysis for F, W, and Bi.
- Heavy media separation at a density of approximately 3.2 to ensure any fluorite reports to the light fraction.
- Estimate of topaz content.
- F analysis of heavy fraction.

This method allows for a conversion factor relating fluorine content to topaz content (the conversion factor of 5 was previously used on a small sample number) Figure 16 & Table 11.

**Figure 16: Pacific Copper topaz analysis flowchart**



**Table 11: Bulk tests of old mine tails for topaz content**

<b>Tails (t)</b>	<b>Concentrate (t)</b>	<b>Grade % (TBE)<sup>(1)</sup></b>	<b>Recoverable Grade %</b>
100	12	96	12
300	50	75	12.5

**(1)** Tetrabromoethane heavy media separation

Pacific Copper estimated a 17 % in-situ average grade of topaz in the silixite bodies within their tenements, with a recoverable grade of 12-12.5 % (Creech, M. 1988). A demonstrated 70 % recovery indicates the *in-situ* grade in tailings was 17 % (including previous mine dilution).

Australia Wide Industries estimated a grade of 11-12 % of topaz for the L & M silixite bodies, and 13.5 % for the other bodies within their tenements (Pritchard, P. W. 1994).

Both the Pacific Copper and Australia Wide Industries topaz estimates of the silixite bodies are valid and appear to give a reasonably accurate grade for the topaz present.

## 5.4 Application of lower cut-off grades

A 0.05 % cut-off (500ppm) for tungsten has been chosen (applicable to reported tungsten and topaz), as financial modelling (Griffiths 2014) around mining & processing costs indicates that this is the minimum grade that will return a positive financial benefit to the project, supported by several earlier concept studies completed by Resolve (Bing 2013; Carlile *et al*, 2013).

Following detailed wireframing and block modelling, Resolve has determined that 86 % of the modelled Wild Kate orebody and 69 % of the modelled Mt Everard orebody report to a grade above 0.05 %W. Resolve considered that this reflects the field mapping observations, where Wild Kate contains little silixite material which does not show visible (coarse) tungsten, and Mt Everard has more evidence of finely disseminated tungsten and a higher volume of lower grade material. The remaining Wild Kate resources have had the same 86 % figure applied to the modelled orebodies, and the Inferred component of Mt Everard resource estimate uses the 69 % value. Fielders Hill and Burnt Hut do not have corresponding values, and an average of the 69 % and 86 % values determined in the Wild Kate and Mt Everard deposits has been utilized to provide an estimate of 78% above cut-off. Higher historical mining grade data (Johnson, D.A., 1981) when compared to

Wild Kate and Mt Everard may support a higher percentage figure; however, a conservative approach is taken here.

### *5.5 Mineralised domain definition*

The Torrington resources (tungsten and topaz) have been divided into the existing individual reported silixite domains (Burnt Hut, Fielder's Hill, Mt Everard & Wild Kate), based upon geological mapping and outcrop distribution (Table 12 to Table 15). A large number of additional individual bodies (including several that have been drilled, although not to the extent that they can be reported as a JORC resource) have been identified through historic exploration and reconciliation with historic mining, as well as previous tenement holders' mapping of boundaries and their relationship to topographic relief. These bodies are identified as footprints only, and criteria for exploration target ranges (i.e. thickness of silixite and mineral grades) have been assumed from work completed on orebodies with more robust data.

Named groups of identified silixite occurrences have further been categorized into individual orebodies where appropriate, particularly for those where three dimensional wireframing of the orebodies has been completed, or historical models have been referenced. Separate orebodies have been estimated in their size, shape and continuity by using a range of methods appropriate to the confidence classification in which the resources and exploration targets are reported. These groups are subdivided within Table 16, where Exploration Targets are defined.

### *5.6 Modelling methodology*

Modelling was completed within Micromine geological modelling software. A number of the previous estimates were critically reviewed and rejected in the context of the current estimate.

Orebodies were identified using down hole lithologies (as per historical logging). This data was cross referenced against tungsten grades in an attempt to identify any anomalies or errors in logging.

Silixite orebodies were wireframed based on drill hole intersections, and incorporate some assumptions around shape and the projection of strike continuity. Generally it was assumed that larger orebodies represented sills where localized continuity of silixite thickness suggested that this was the case. Where this was not the case (i.e. drill holes barren of logged silixite) orebodies were not modelled as continuous. This has resulted in some dyke structures with laterally extending sills

being modelled. Extrapolation of the orebodies beyond the areas of drilling was controlled using a combination of surface mapping (hard contacts of silicite as well as surrounding float was used, as well as historical workings and costeans as appropriate), topography (LiDAR) and aerial imagery. Clearly where orebodies are extended laterally along sills underground with no surface expression, Resolve suggests that there is a potential for error, and in this scenario considers that (a) the resources or exploration targets reported are appropriate in their confidence classification, and (b) extrapolation where drilling shows the deposit to be open in any area has been uniformly conservative.

Where quantity and quality (i.e. bulk sample and/or NQ core) grade data allowed, block models for grade estimation within the relevant orebodies have been completed. This was limited to the Central Main orebody within Wild Kate deposit, which contains four bulk samples, and the Mt Everard orebody, with a total of four bulk samples.

Resolve consider that the number of domained datapoints with grade data of sufficient integrity are not numerous enough to attempt a robust geostatistical study, and that the grade data utilized in previous Pacific Copper Ltd resource estimates is flawed due to the analytical errors outlined in Section 5.3. Resolve have utilized a 1m block size for estimation and a omni-directional kriging interpolation method to estimate grade within the Central Main orebody at Wild Kate, and Mt Everard.

Burnt Hut and Fielders Hill are reported as Inferred Resources at this stage. Resolve consider that the grades used within these deposits (sourced from the reconciled mine grades) are robust, given the demonstrated consistency of the tungsten grade within the mineralized domains, however as neither of these deposits contain reliable drill hole (NQ core) grade data or smaller bulk samples which confirm grade on smaller samples at discrete locations within the orebody, a classification higher than Inferred Resource is not justified.

Other orebodies have insufficient valid data to categorise resources at this juncture and are reported as exploration target. Generally this is due to a lack of reliable information on the mineral grade, however silicite logging is generally considered robust and the confidence in the physical shape and extents of the silicite host rock is higher than that of the tungsten grade contained within them.

## 5.7 Mineral Resource estimate

**Table 12: Indicated tungsten resources Torrington Project**

<b>Orebody</b>	<b>Silixite (t) &gt;0.05 % W</b>	<b>Grade (%) W</b>	<b>Tungsten (t)</b>	<b>WO<sub>3</sub> (t)</b>
Wild Kate	151,310	0.17	257	324
Wild Kate South	67,126	0.32	215	271
Wild Kate East (Upper)	77,474	0.20	154	194
Mt Everard	126,457	0.16	202	255
<b>Total (rounded)</b>	<b>422,000</b>	<b>0.20</b>	<b>827</b>	<b>1043</b>

**Table 13: Inferred tungsten resources Torrington Project**

<b>Orebody</b>	<b>Silixite &gt;0.05 % W</b>	<b>Grade (%) W</b>	<b>Tungsten (t)</b>	<b>WO<sub>3</sub> (t)</b>
Wild Kate (exc Indicated)	94,1789	0.17	1568	1978
Wild Kate East (Lower)	56,093	0.17	93	118
Fielders Hill North	134,232	0.21	287	362
Fielders Hill South	343,596	0.21	736	928
Burnt Hut	192,393	0.17	336	423
Mt Everard	55,572	0.16	89	112
<b>Total (rounded)</b>	<b>1,724,000</b>	<b>0.18</b>	<b>3110</b>	<b>3922</b>

**Table 14: Indicated topaz resources Torrington Project**

<b>Orebody</b>	<b>Silixite &gt;0.05 % W (t) <sup>(1)</sup></b>	<b>Grade (%)</b>	<b>Topaz (t)</b>
Wild Kate	151,310	17	25723
Wild Kate South	67,126	17	11411
Wild Kate East (Upper)	77,474	17	13171
Mt Everard	126,457	17	21498
<b>Total (rounded)</b>	<b>422,000</b>	<b>17</b>	<b>71740</b>

**Table 15: Inferred topaz resources Torrington Project**

<b>Orebody</b>	<b>Silixite &gt;0.05 % W (t) <sup>(1)</sup></b>	<b>Grade (%)</b>	<b>Topaz (t)</b>
Wild Kate (exc Indicated)	941,789	17	160104
Wild Kate East (Lower)	56,093	17	9536
Fielders Hill North	134,232	17	22819
Fielders Hill South	343,596	17	58411
Burnt Hut	192,393	17	32707
Mt Everard	55,572	17	9447
<b>Total (rounded to 1000t)</b>	<b>1,724,000</b>	<b>17</b>	<b>293080</b>

(1) 0.05 % W cutoff used. Topaz not considered a standalone economic target for the purpose of this resource estimate

## 5.8 Exploration Target

The significant majority of silicite occurrences over the Torrington Pendant are classified as Exploration Targets. Outline of the target areas are illustrated in Figure 17.

Exploration Targets are provided for tungsten (W) and topaz, based on an estimated minimum and maximum volume of silicite host rock. Estimates of minimum and maximum footprints of silicite at surface are based on mapped silicite footprints and estimated minimum and maximum thicknesses of the host rock.

Exploration Targets have been modified from previous estimates in the light of further mapping conducted on completion of the LiDAR survey. Numerous workings, including shafts to depth have also been included in the new mapping. Exploration Targets now have been updated to group within domains, which based on current interpretation, may constitute a footprint of exploration programs, designed to explore closely spaced surface features which have been mapped (both historically and recently). A number of these mapped targets have been adjusted based upon the interpretation of the LiDAR to more closely reflect the surface expression of the topography. Whilst common, no silicite body found within the Torrington State Conservation Area has been included in an Exploration Target.

Silicite thickness ranges have been estimated for each orebody on a case by case basis. These minimum and maximum thicknesses have been derived from the most reliable sources of information available, comprising drill holes, shafts, pits, trenches and costeans within the orebody and represent the general consistent minimum and maximum thicknesses observed within geological logging where available. Resolve note that a number of drill holes and shafts terminate in silicite, indicating that further silicite host rock is present in an unknown quantity at depth. This additional material is considered to be included within the upper ranges of silicite estimated.

A total of five domains (Figure 17 & Table 16) also contain Exploration Targets for tungsten contained within veins. These domains are typically silicite or pegmatitic quartz veins which in some areas, such as those included as Exploration Targets, have a density of veins (commonly identified by the LiDAR survey where historical working of linear veins is easily identifiable, and through subsequent field mapping), that they are classified as a vein swarm. NSW Departmental

assessment suggests that abundant veins in close proximity may hold the potential for sufficiently high grades to justify a bulk mining operation.

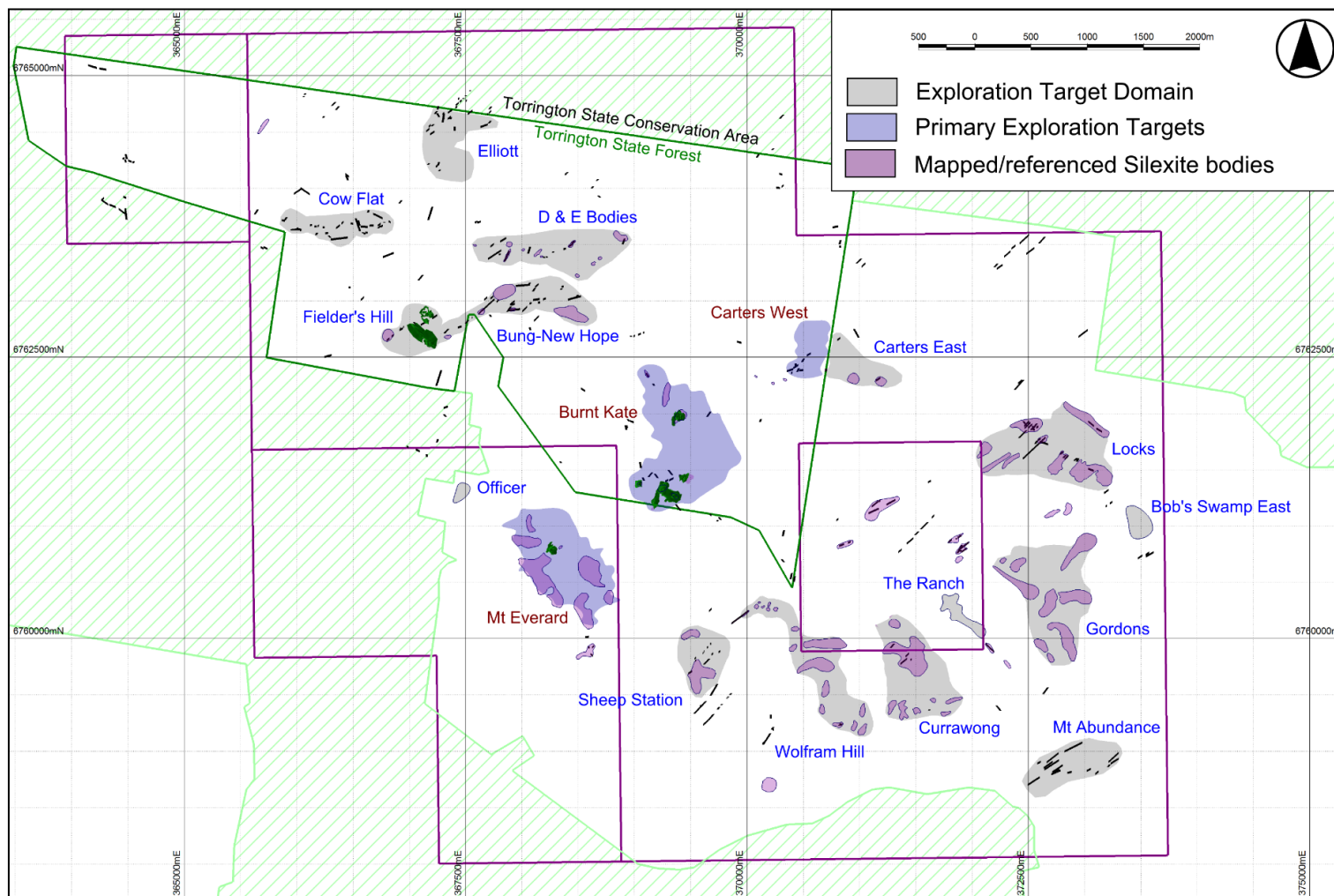
#### *5.8.1 Exploration Target grade range*

Resolve consider that bulk sample and historic mine record are the principal source of grade data available to determine realistic ranges of tungsten and topaz grade within the Exploration Target. An estimate of grades for individual orebodies in isolation is not considered warranted given the grade data available in support. 0.05 % W is the cut-off grade applied and from geological mapping completed to date, most, if not all orebodies are likely to have a percentage which is above grade cut off. A likely upper grade of 0.4 % W has been applied, which is supported by several bulk samples which approach this grade, but also from field observation of both mined and unmined areas, where extensive visible disseminated tungsten suggests that 0.4 % W grades are realistic. A large suite of grade data exists from historical workings, none of which is independently verifiable, which show grades which are generally significantly higher than those reported as Exploration Target, including historic mining activities and bulk sampling. These grade observations are illustrated in Figure 18. These grades have been considered when determining a likely grade range within the vein hosted component of the Exploration Target.

Additional wolframite occurrences are found throughout the Torrington Pendant, including individual masses up to 35 tonnes in individual bungs (Smith, W.C., 1975). Significant upside in contained metal tonnages appear to be probable within this project, an example being the Stevens Mine area, identified by the GSNSW, as having an open cut prospect area of 250m x 250m on multiple “rich” (>3 % WO<sub>3</sub>) vein intersections. These vein prospects have been quantified in the Exploration Targets where the density of the workings (easily identified on the LiDAR topography and independently verified in recent field mapping completed) are sufficient to justify a potential target (Table 16).



Figure 17: Exploration Target overview map



**Figure 18: Exploration Target – Historical support for estimated grade ranges (figures are predominantly in small vein mining)**

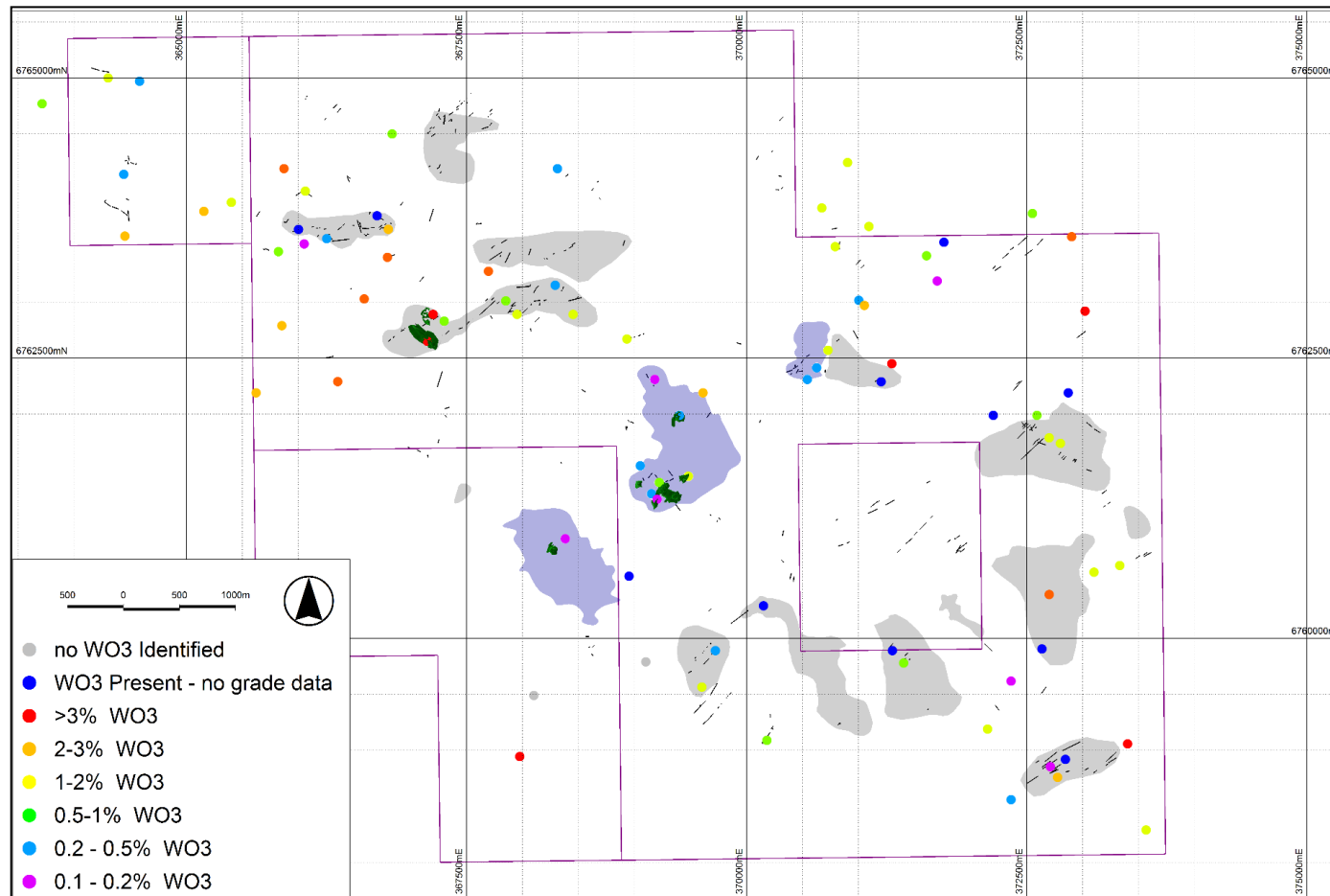


Table 16: Tungsten Exploration Targets Torrington Project

Domain Name	Domain Area (m2)	Silexite Area (m2)	Silexite footprint (%)		orebody thickness (m)		Orebody Tonnes (t)		Anticipated grade range	
			Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Tungsten (W)	Topaz
Burnt Kate	714,000	11,000	7	29	5	15	770,000	8,910,000	Disseminated mineralisation 0.05 - 0.4%	Disseminated mineralisation 10 -25%
Mt Everard	568,000	177,000	8	29	5	15	685,000	7,085,000		
Fielders Hill	136,000	8,000	3	9	4	6	45,000	210,000		
D&E Bodies (orebodies)	411,000	18,000	2	7	3	5	80,000	390,000		
Bung/New Hope (orebodies)	323,000	49,000	8	23	4	8	285,000	1,705,000		
Carters East	176,000	14,000	4	12	4	8	80,000	485,000		
Locks	612,000	152,000	12	37	5	8	1,100,000	5,290,000		
Gordons	592,000	175,000	15	44	4	8	1,015,000	6,090,000		
Currawong	453,000	103,000	11	34	2	6	300,000	2,690,000		
Wolfram Hill	419,000	90,000	11	32	2	6	260,000	2,350,000		
Sheep Station	211,000	44,000	10	31	2	6	130,000	1,150,000		
Carters West	143,000	16,000	6	17	4	8	95,000	555,000		
Bob Swamp East	51,000	51,000	25	100	2	6	75,000	885,000		
The Ranch	50,000	50,000	25	100	3	9	110,000	1,305,000		
Officer	17,000	17,000	25	100	1	5	10,000	245,000		
isolated bodies (combined)	90,000	90,000	25	100	4	8	260,000	2,090,000		
<b>Massive orebody exploration target subtotal</b>	<b>4,876,000</b>	<b>975,000</b>	<b>12</b>	<b>41</b>	<b>4</b>	<b>9</b>	<b>5,040,000</b>	<b>39,345,000</b>		
Cow Flat (Vein/dyke swarm)	212,000	6,000	1.4	4.2	assumed 0.5m width * 10m depth based on field observations		2,000	6,000	Vein hosted mineralisation - 0.5 -4%	N/A - Veins not considered for Topaz potential
Elliot's (Vein/Dyke swarm)	260,000	2,000	0.4	1.2			7,000	21,000		
Mt Abundance (Vein/dyke sw)	263,000	7,000	1.3	4.0			3,000	9,000		
D&E Bodies (Vein/Dyke swarm)	411,000	3,000	0.4	1			7,000	21,000		
Bung/New Hope (Vein/Dyke s	323,000	7,000	1.1	3			7,000	21,000		
<b>Vein-hosted orebody exploration target subtotal</b>	<b>1,146,000</b>	<b>18,000</b>	<b>1.1</b>	<b>3.3</b>			<b>4,680</b>	<b>14,040</b>		

## 6. Competent Person Statement

I, Gordon Saul, confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of the Australian Institute of Geoscientists (Membership 3440)
- I have reviewed the Report to which this Consent Statement applies.

I am a consultant and shareholder working for Resolve Geo Pty Ltd, and have been engaged by Krucible Metals to prepare the documentation for the Torrington tungsten and opaz deposit on which the Report is based, for the period ended 31 July 2015.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest. Resolve Geo are the previous holders of the tenements prior to acquisition by Krucible and have been retained in a consultant capacity. Resolve Geo Pty Ltd maintain a 15 % shareholding in the tenements at the time of reporting.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, and the information in my supporting documentation relating to Exploration Targets, Exploration Results & Mineral Resources.

I consent to the release of the Report and this Consent Statement by the directors of Krucible Metals Ltd.



\_\_\_\_\_  
Signature of Competent Person:

7<sup>th</sup> of August, 2015

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Australian Institute Of Geoscientists

\_\_\_\_\_  
Membership No. 3440

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Professional Membership

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Membership Number:

A handwritten signature in black ink, appearing to be "MSK" followed by a horizontal line.

Mike Skinner, 8 Janette St, Camp Hill, 4152

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Signature of Witness:

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Print Witness Name and Residence:

## JORC 2012 – Table 1

**Appendix 1: JORC Code (2012) supporting tables.**

<b>Section 1: Sampling Techniques and Data</b>	
<b>(Criteria in this section apply to all succeeding sections.)</b>	
<b>Criteria</b>	<b>Explanation</b>
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Samples were routinely collected at 5 foot (1.52m) intervals from Reverse Circulation Percussion (RC), Open Hole Percussion (OHP), and Rotary Air Blast (RAB) drill holes. Diamond Drill Hole (DDH) samples were collected every 1m. Southland Mining drilled 52 OHP (5") holes in 1969 on a local grid at 30-50m spacing. Pacific Copper and its associates drilled 161 holes between 1978 and 1981 as infill to these grids, as validation for the previous drilling by Southland Mining, and to test the existence and dimensions of new silicite host rock bodies (NQ core and 4 ½" OHP). Australia Wide Industries drilled 223 RAB holes (37-65mm sized bits used) between 1981 and 1995 on a local grid at 50m spacing, and as infill drilling.</li> </ul>
	<ul style="list-style-type: none"> <li>Wolframite (ferberite) occurs both as disseminated mineralisation, and with some concentration along joint and vein contacts, resulting in a moderate nugget effect. Bulk samples have been used in a number of areas to provide robust grade control, and are considered the most reliable source of grade information.</li> </ul>
	<ul style="list-style-type: none"> <li>Sampling procedures followed by all historic operators were in line with industry standards at the time (personal communication with senior staff in charge of previous work, and a review of the available data). All RC samples were split at the rig using either a riffle or cone splitter to produce between 3 and 5kg of sample for shipment to the laboratory. NQ Diamond core was cut in half over mineralized intervals, using a core-saw. All core samples were analysed.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Data from 436 drill holes (6,700 metres) were used for the interpretation, along with the bulk testing. Southland Mining drilled 52 holes using RAB. Pacific Copper drilled 161 holes of which 148 were OPH and 13 were NQ diamond core. Australia Wide Industries drilled 223 holes with RAB. All of the Southland Mining holes were drilled vertically the majority of the Pacific Copper; Australia Wide Industries holes were vertical while some were inclined.</li> <li>Core was not oriented</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Core recovery data is available for all the core holes sampled. Most of this data reports recoveries above 70 %. Core recovery in the 13 NQ holes drilled by Pacific Copper is described as "poor to good" by historic reports. No relationship between recovery and grade was observed.</li> </ul>
	<ul style="list-style-type: none"> <li>Sampling data is available for the 423 OHP, RC &amp; RAB holes drilled. More than 90 % of samples were completely collected. Difficulties were described by Pacific Copper with groundwater affecting sample return for some of their holes drilled in 1981 on the Burnt Hut deposit.</li> </ul>

<i>Logging</i>	<ul style="list-style-type: none"> <li>● Detailed lithological logs exist for most of the holes in the database. Where these only exist in hard copy, they have been scanned and stored digitally.</li> </ul>
	<ul style="list-style-type: none"> <li>● Logging of diamond core and RAB, OHP and RC samples recorded lithology, mineralogy, mineralisation, structure (DDH only), weathering and colour.</li> </ul>
	<ul style="list-style-type: none"> <li>● Lithological data exists for all 436 holes in the database. These drill holes were geologically logged in full.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>● Diamond core was cut in half on site using a diamond saw.</li> </ul>
	<ul style="list-style-type: none"> <li>● RAB, OHP &amp; RC samples were generally wet and split at the rig using a rotary device which was standard industry practice at the time.</li> </ul>
	<ul style="list-style-type: none"> <li>● Large samples weighing between 2 and 35kg each were dried, crushed and pulverized using industry best practice at that time.</li> </ul>
	<ul style="list-style-type: none"> <li>● For all drill holes, in the case of RC samples, rig duplicates were collected at regular intervals. Personal communication with senior staff supervising the Pacific Copper drilling indicates that industry best practice was employed at the time.</li> </ul>
	<ul style="list-style-type: none"> <li>● In some instances where detailed data was required for head grade reconciliation bulk samples (~5T) were obtained.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>● Historical assaying was undertaken in the SGS laboratory in Sydney, and in Pilbara Laboratories in Perth. Most of the samples were assayed for W by gravimetric and chemical methods, selected samples were analysed by XRF and Atomic Absorption.</li> <li>● QA/QC analysis was completed on multiple samples, with specific emphasis on reconciliation from bulk samples</li> </ul>
	<ul style="list-style-type: none"> <li>● No geophysical tools were used to determine any element concentrations in this resource estimate.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>● Hard copy logs of historical drilling show that umpire laboratory checks were undertaken to check the Monitor Geochemical Laboratory results. The Pacific Copper and Australia Wide Industries drilling contains QC samples including some field duplicates, coarse crush laboratory duplicates and laboratory pulp splits, certified reference materials and blanks.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>● Primary data was sourced from an existing digital database and compiled into an industry standard drill hole database software. Drill hole locations were generally sourced from maps from historical reports though with numerous drill collars identified and picked up in the field with hand held GPS. Resolve generally has a high degree of confidence in the georeferenced positions with numerous drill holes, grid confluences and landmarks identified and reconciled to within 2 metres.</li> </ul>
	<ul style="list-style-type: none"> <li>● Resolve has made no adjustments or calibrations to any assay data used in this estimate.</li> </ul>
	<ul style="list-style-type: none"> <li>● Collar RL's from drill hole survey are generally not available. This data was typically not available and in a number of cases, drill holes were drilled into rocks which have since been mined. With no accurate record of the original collar or the original surface, Resolve has utilized the recently acquired LiDAR to estimate a pre-mined natural ground level, after which orebody models were built and an estimate of resources</li> </ul>



	<p>within the base of the mined pits could be made.</p> <ul style="list-style-type: none"> <li>• For deposits which have not been mined, Resolve has registered the collar heights to the LiDAR topography.</li> </ul>
	<ul style="list-style-type: none"> <li>• The grid system uses GDA 94 Zone 56 and this is in metres.</li> </ul>
	<p>LiDAR data acquisition was flown in March of 2015 by AAM Survey Group. This covered the entirety of the Krucible Metals Ltd tenements, and utilized an Optech Pegasus laser system. This allowed for accurate delineation of the ground surface through the often dense vegetation in parts of the project area.</p> <p>This surface is corrected for vegetation and hydrological features, and is considered accurate for the reporting of resources, exploration targets and any subsequent reserves under JORC classification.</p>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• The nominal drill hole spacing is approximately 50m by 50m, but this is variable in places. Many Pacific Copper holes have been drilled as infill to these grids as confirmation of mineralisation.</li> </ul>
	<ul style="list-style-type: none"> <li>• No sample compositing has been applied.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• 364 out of 436 holes were drilled vertically (83 %). The remainder were drilled at angles of between 50° and 60° and azimuths of between 0° and 350°. The orientation of the mineralisation is generally thought to be on NE and SW trends (conjugate joint sets)</li> </ul>
	<ul style="list-style-type: none"> <li>• A orientation based drill design has been identified, and is considered sufficient to demonstrate general geometry of the orebodies within the context of the confidence classification on which they are reported</li> </ul>
<i>Bulk Sampling</i>	<ul style="list-style-type: none"> <li>• As drilling does not provide a sufficient size sample to overcome the disseminated and joint orientated nature of the tungsten mineralisation, bulk testing, including mining and milling of 139,142 tonnes of ore was conducted primarily by Pacific Copper from 1978 to 1982, along with other historic bulk testing post and prior to this.</li> </ul>
	<ul style="list-style-type: none"> <li>• Four bulk tests of 5-7 tonnes (BT7-10) were conducted by Pacific Copper at the Wild Kate deposit, resulting in an average grade of 0.255 % W. This was tested and verified by SGS laboratory in Sydney and cross-checked with the Pilbara Laboratory in Perth. Four bulk tests by Pacific Copper at the Mt Everard deposit (Laloma, BT6, BT11 and BT12) resulted in an average grade of 0.217 % W. Again these results were verified by SGS laboratory in Sydney and cross-checked with the Pilbara Laboratory in Perth.</li> </ul>
	<ul style="list-style-type: none"> <li>• The mining of 139,142 tonnes of ore from Fielder's Hill, Burnt Hut &amp; Mt Everard resulted in an average head grade of 0.22 % WO<sub>3</sub> (0.175 %W)(after tails were tested as test plant had no fines recovery circuit).</li> </ul>
	<ul style="list-style-type: none"> <li>• Historical mining from 1915-16 included 4000 tonnes of silicite in the Northern Upper body of Wild Kate, for a return head grade of 0.25 % WO<sub>3</sub> (0.20 %W)</li> </ul>

<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>● Resolve has reviewed the historic database against new geological mapping observations and sample analysis.</li> <li>● No further external reviews or audits have been carried out.</li> </ul>
<b>Section 3: Estimation and Reporting of Mineral Resources</b> <b>(Criteria listed in Section 1, also apply to this section.)</b>	
Criteria	Explanation
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>● Data have been compiled into a relational database. Data have also been checked against original hard copies for the data, and where possible, loaded from original data sources.</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>● Gordon Saul, who is the Competent Person, has visited the Torrington site numerous times over a five year period. During these visits historical pits were inspected, geological units within pits compared to mapped geology, grab and bulk samples were taken, photos were taken, and GPS checks were carried out on many historical drill hole collar sites.</li> </ul>
<i>Geological interpretation</i>	<ul style="list-style-type: none"> <li>● The historical digital database used for the interpretation included logged intervals for the key stratigraphic zones. Detailed geological logs were available in hardcopy and reviewed where necessary.</li> </ul>
	<ul style="list-style-type: none"> <li>● Petrological studies commissioned by Resolve and others when compared to historical data for some of the Pacific Copper and Australia Wide Industries holes assisted to confirm the validity of the historic stratigraphic interpretation with good confidence.</li> </ul>
	<ul style="list-style-type: none"> <li>● Drill density of the Torrington area allows for confident interpretation of the geology and mineralized domains. Geological and structural controls support modeled mineralized zones. LiDAR profiles assisted in the geological interpretation to refine the identified silicite surface outcrop</li> </ul>
	<ul style="list-style-type: none"> <li>● Continuity of mineralisation is affected by proximity to structural conduits (allowing flow of mineralized fluids), stratigraphic position, and lithogeochemistry of key stratigraphic units and porosity of host lithologies.</li> </ul>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>● Dimension of the individual orebodies are thought to be generally consistent with a laccolith style sill intrusion, and are represented in modelled orebodies generally as tabular bodies with an irregular shape in plan view. Dimensions are mapped as ranging between 20m and &gt;200m, however continuity of orebodies beneath the surface is generally demonstrated for drilled bodies, and must also be assumed for exploration target tonnages.</li> </ul>
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> <li>● Grade estimation using Micromine geological modelling software was completed using an omnidirectional kriging method of interpolation for a small area of Wild Kate central Main orebody, and also Mt Everard (reported as Indicated Resource) Two additional orebodies reported as Indicated are small and utilize robust bulk samples within the orebody at surface to determine the grade. Grade was estimated into a block model of 1m<sup>3</sup>.</li> </ul>
	<ul style="list-style-type: none"> <li>● Orebodies have been wireframed using a combination of drill hole data, surface topography and field mapping to build 3D orebody solids. Models were cut to topography, which was the recently acquired LiDAR surface which has been merged with bathymetry of relevant water filled pits (Fielders Hill &amp; Burnt Hut)</li> </ul>

	<ul style="list-style-type: none"> <li>• Exploration target ranges have been estimated for tungsten and topaz, incorporating documented variation in grade, orebody size and amount of ore above the nominated (W) cut-off</li> <li>• Only tungsten and topaz, and minor gold by-products have historically been produced, or are expected to be produced from Torrington.</li> <li>• Topaz (fluorine content) is estimated as well as tungsten.</li> </ul>
<i>Moisture</i>	<ul style="list-style-type: none"> <li>• Tonnes have been estimated on a dry basis.</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>• Deposits are to be mined by open pit method and have been wireframed to a 0.05 % W cutoff.</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>• The only assumptions made as to mining methods are that open pit quarrying operations will be considered. Factors such as a successful previous mining history, open pits still with stable walls after 35 years since the mine closure, successful historical processing of ore indicate that the assumption for potential successful mining of Torrington is reasonable.</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>• A combination of a historical period of processing ore from Torrington plus more limited metallurgical test work by Pacific Copper, and Australia Wide Industries and Resolve Geo indicate that the assumption for potential successful processing of Torrington ore is reasonable.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>• A section of the Torrington project is covered by State Conservation Area. No resources or identified exploration targets within the State Conservation Area have been reported. No other environmental restrictions are known or anticipated based on the current data available.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>• Bulk density has previously been estimated from measurements carried out by Pacific Copper, Australia Wide Industries using drilling on core samples, using weight in air and weight in water. Samples were tested from different rock types, as well as within mineralized zones. JORC Resources are reported using a bulk density of 2.9g/cm<sup>3</sup> for silicite.</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>• The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. Wild Kate and Mt Everard are reported with a portion of Indicated Resource coverage, where orebody geometry and grade is well supported by bulk sampling and drill holes. A maximum extrapolation of 25m has been employed for the reporting of Indicated resources. Resolve base this distance on the identified continuity of grade between the bulk samples within the same orebody, and the demonstrated homogenous nature of the mineral emplacement. Inferred resources are reported for the outstanding portion of the Wild Kate central main orebody which is not reported as Indicated. The lower orebody in the north of Wild Kate is also reported as Inferred, with a grade assumed from the bulk sample collected from the upper orebody. Fielders Hill and Burnt Hut are reported with an Inferred Classification. The grade used is the reconciled mining grades for the mined material from each pit by Pacific Copper.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• Krucible Metals Ltd conducted a due diligence process over the project data and models, prior to completing a purchase of the project.</li> </ul>

<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"><li>• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</li></ul>
	<ul style="list-style-type: none"><li>• The statement relates to global estimates of tonnes and grade.</li></ul>
	<ul style="list-style-type: none"><li>• Available hardcopy production and bulk sampling data has briefly been reviewed. Further analysis of the information will be completed during the next phase of resource work.</li></ul>

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