



**energia**  
minerals limited

ABN: 63 078 510 988

# ASX Announcement

18 February 2016

## **Energia on track for maiden resource and Scoping Study at Gorno as drilling continues to expand Zorzone deposit**

**Resource statement and Scoping Study on schedule for completion by end of March 2016**

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### **Board of Directors**

Alexander Burns  
Executive Chairman

Kim Robinson  
Managing Director

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Non-Executive Director

### **Company Secretary**

Jamie Armes



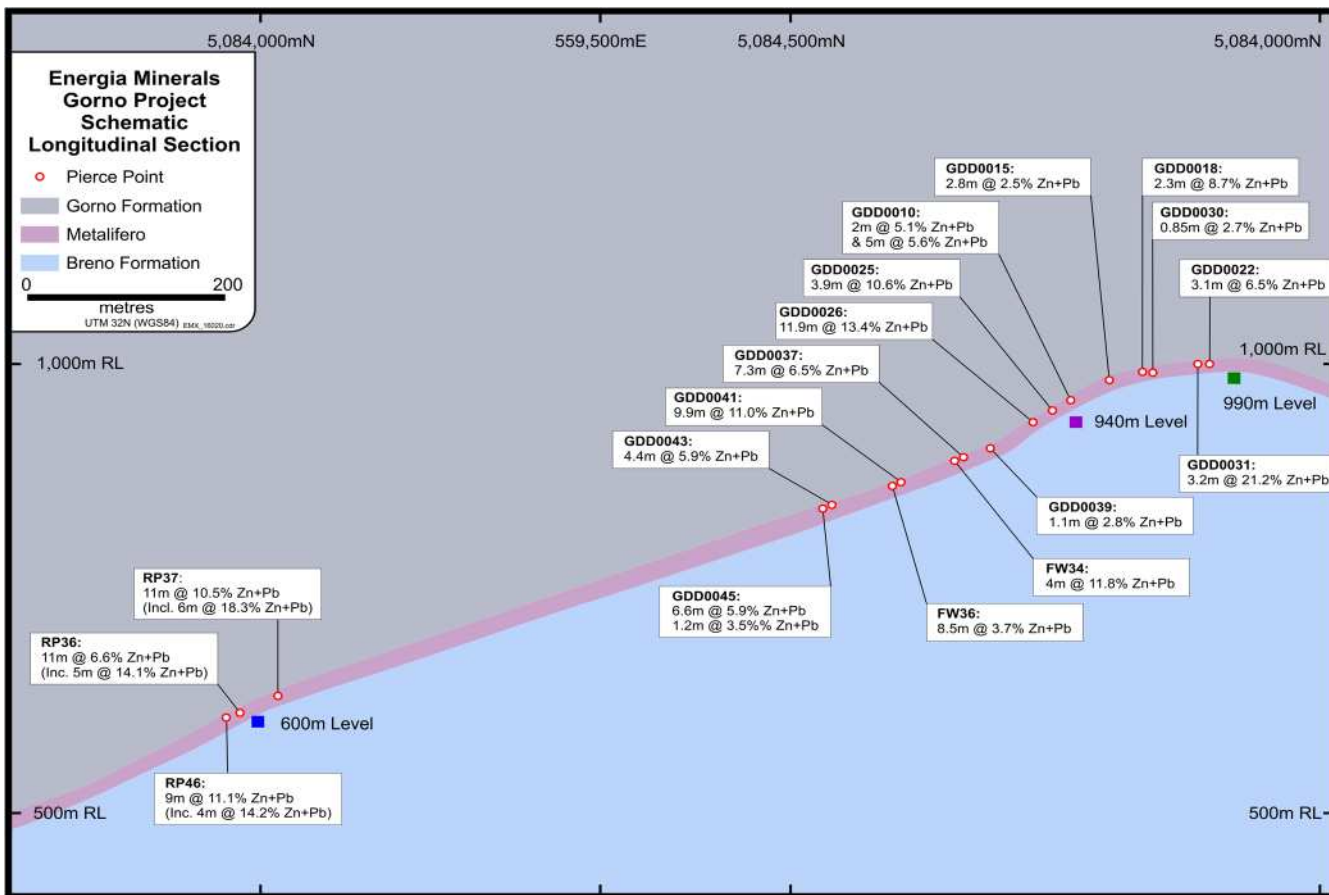
Disseminated to semi-massive zinc sulphides in GDD054

- Further high-grade intercepts from resource drilling include:
  - 9.9m at 9.0% zinc, 2.0% lead and 19 g/t silver (GDD041)
  - 3.0m at 14.8% zinc, 7.9% lead and 113 g/t silver (GDD042)
  - 8.6m at 8.2% zinc, 2.3% lead and 40 g/t silver (GDD048)
  - 3.0m at 12.4% zinc, 4.3% lead and 44 g/t silver (GDD053)
- Latest results continue to expand the newly discovered Eastern Zone

Energia Minerals Ltd (ASX: EMX or “Energia”) is pleased to report further impressive results from the ongoing resource definition diamond drilling program at its 100%-owned **Gorno Zinc Project** in northern Italy.

Building on a series of positive announcements over the past six months, the latest drilling has further expanded the known envelope of zinc mineralisation within the Colonna Zorzone deposit as well as intersecting zinc mineralization in all six additional holes completed within the newly discovered Eastern Zone.

The results continue to provide strong support for the previously announced Exploration Target for Colonna Zorzone (see figure1 below and figure 2 demonstrating both grade and continuity), confirming that Energia is **on track to achieve its objective of completing a maiden Resource Estimate and Scoping Study for the Gorno Zinc Project** by the end of March 2016.



**Figure 1: Colonna Zorzone Schematic Cross-Section (130m window)**

Additional assay results have been received from sixteen holes (see Table 1), of which ten (GDD037, GDD039 and GDD041 – GDD045, GDD048, GDD049 and GDD052) are from or peripheral to the main Colonna Zorzone deposit with the remainder (GDD046, GDD047, GDD050, GDD051, GDD053 and GDD054) being from the rapidly developing Eastern Zone.

A total of six additional holes (GDD055–GDD060) have been completed and are awaiting assays (see Figure 2 for location).

Energia’s Managing Director, Mr Kim Robinson, said the latest drilling had successfully extended the Colonna Zorzone deposit both to the north and the south, as well as delivering some exciting intersections in the Eastern Zone – which is continuing to grow in stature.



“We have also recorded a number of potentially significant intersections within the Breno Formation which may reflect feeder zones for the overlying and clearly stratabound Colonna Zorzone mineralisation,” he added.

“The overall drill program is progressing extremely well and Gorno is now moving rapidly to its next phase with preliminary metallurgical results demonstrating that high recoveries should readily be achieved and work is now well underway on both our maiden Resource Estimate and Scoping Study – which will provide the foundation for our activities over the rest of the year.”

For and on behalf of Energia Minerals Limited.



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**Competent Person Statement**

*Information in this release that relates to Exploration Targets and Exploration Results is based on information prepared by Mr David Andreatza and Mr Kim Robinson who are both Competent Persons and Members of the Australian Institute of Geoscientists. Mr Andreatza and Mr Robinson are full-time employees of Energia Minerals Limited. Mr Andreatza and Mr Robinson have sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Andreatza and Mr Robinson consent to the inclusion in this release of the matters based on their information in the form and context in which it appears.*

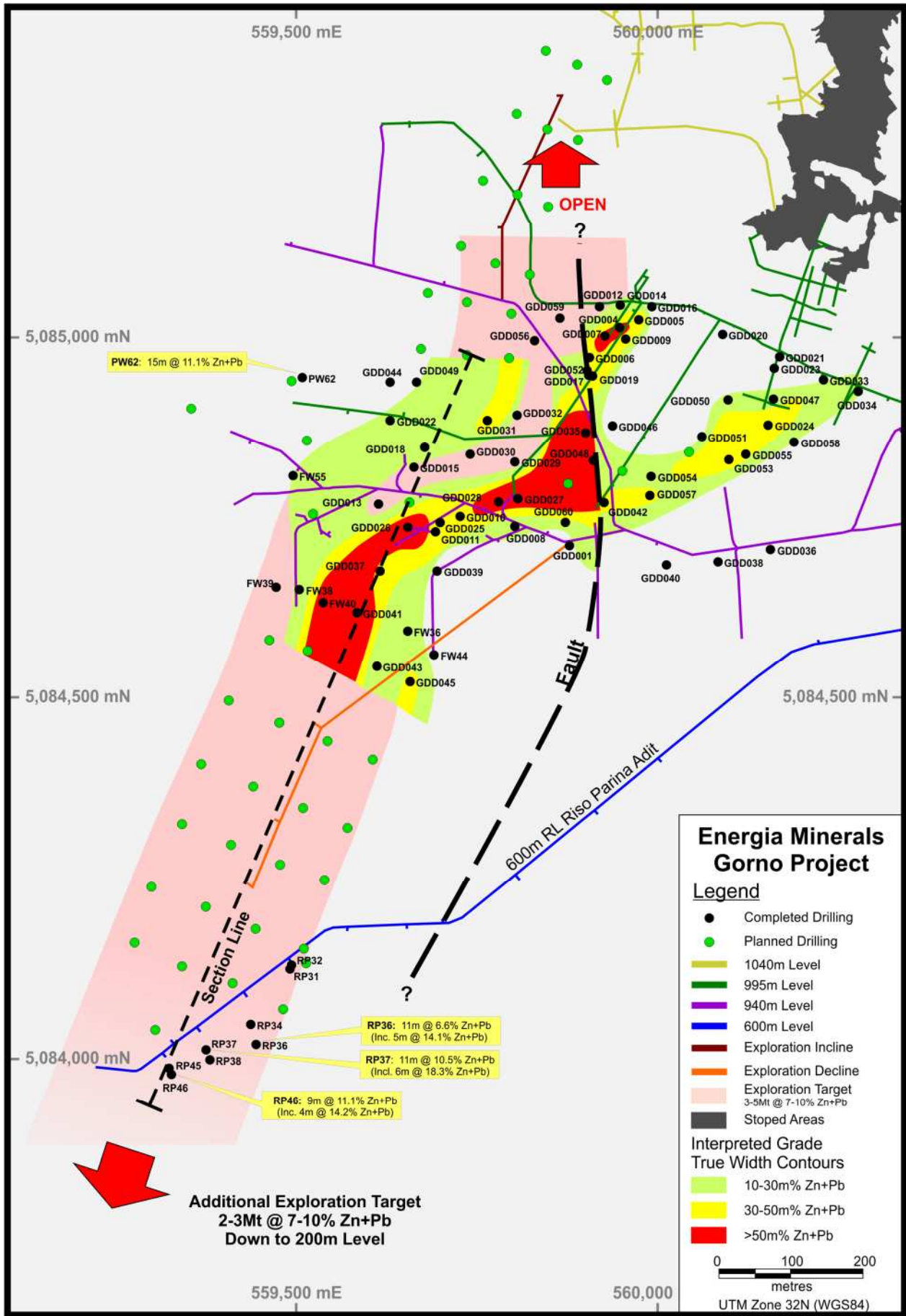


Figure 2: Colonna Zorzone Horizontal Longitudinal Projection





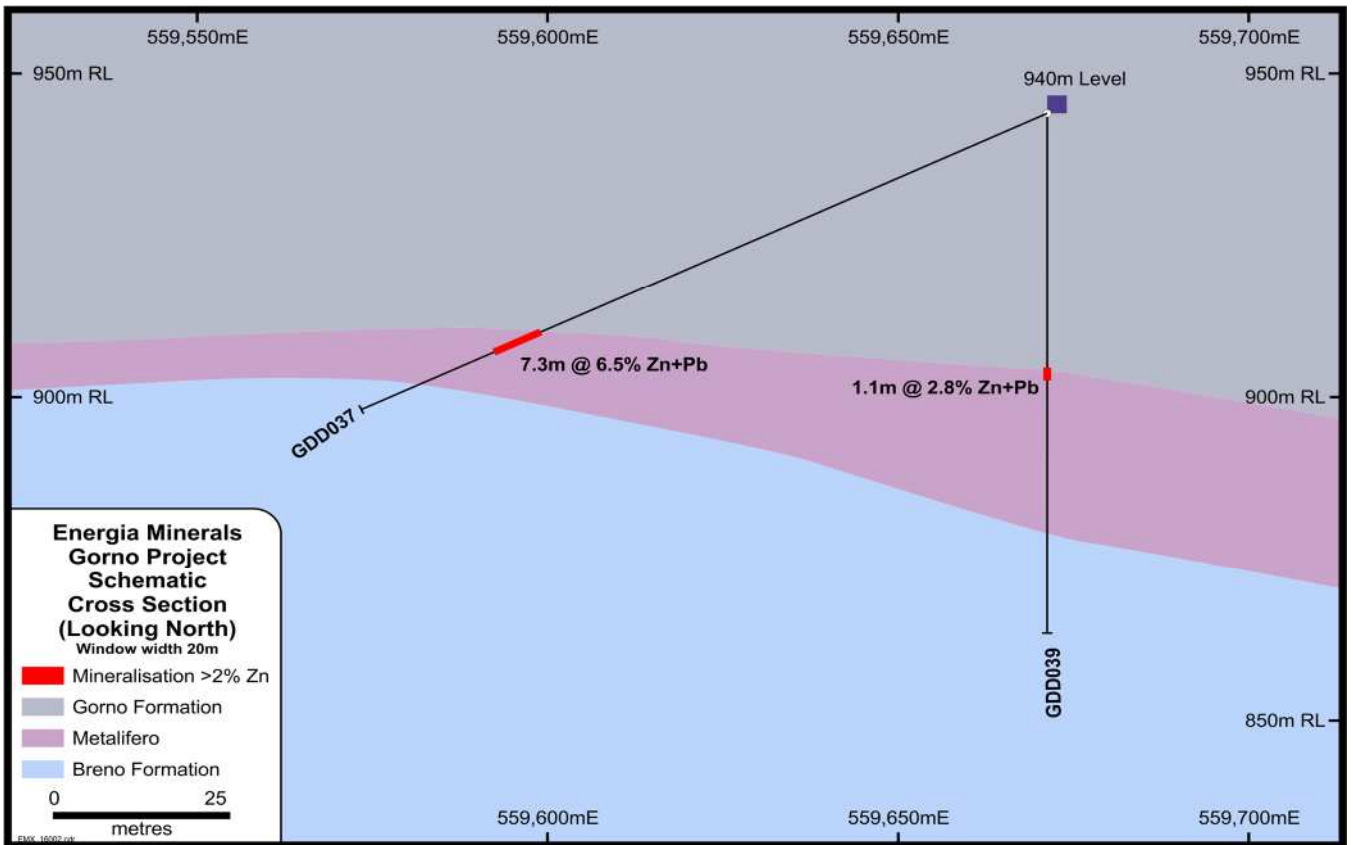


Figure 3: GDD037 and GDD039 Cross-Sections

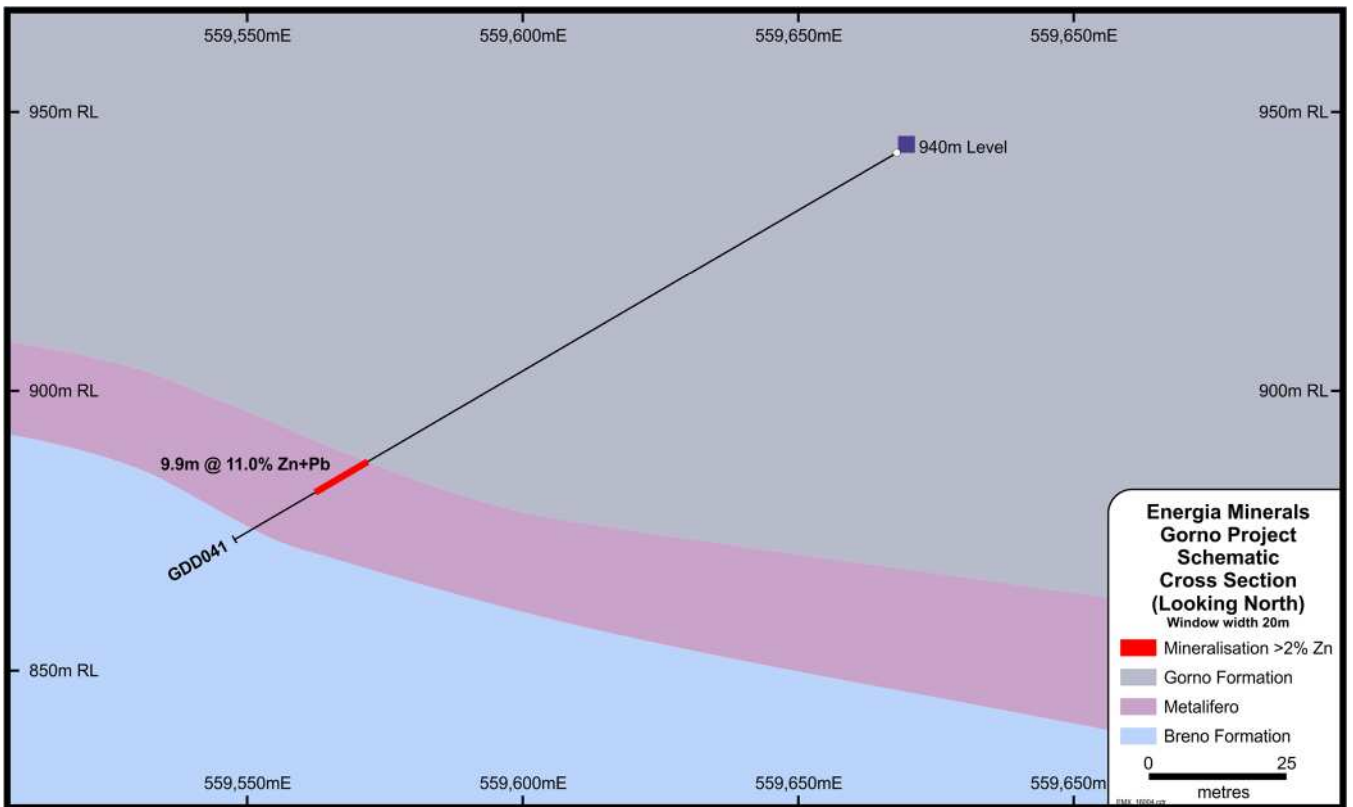


Figure 4: GDD041 Cross-Section



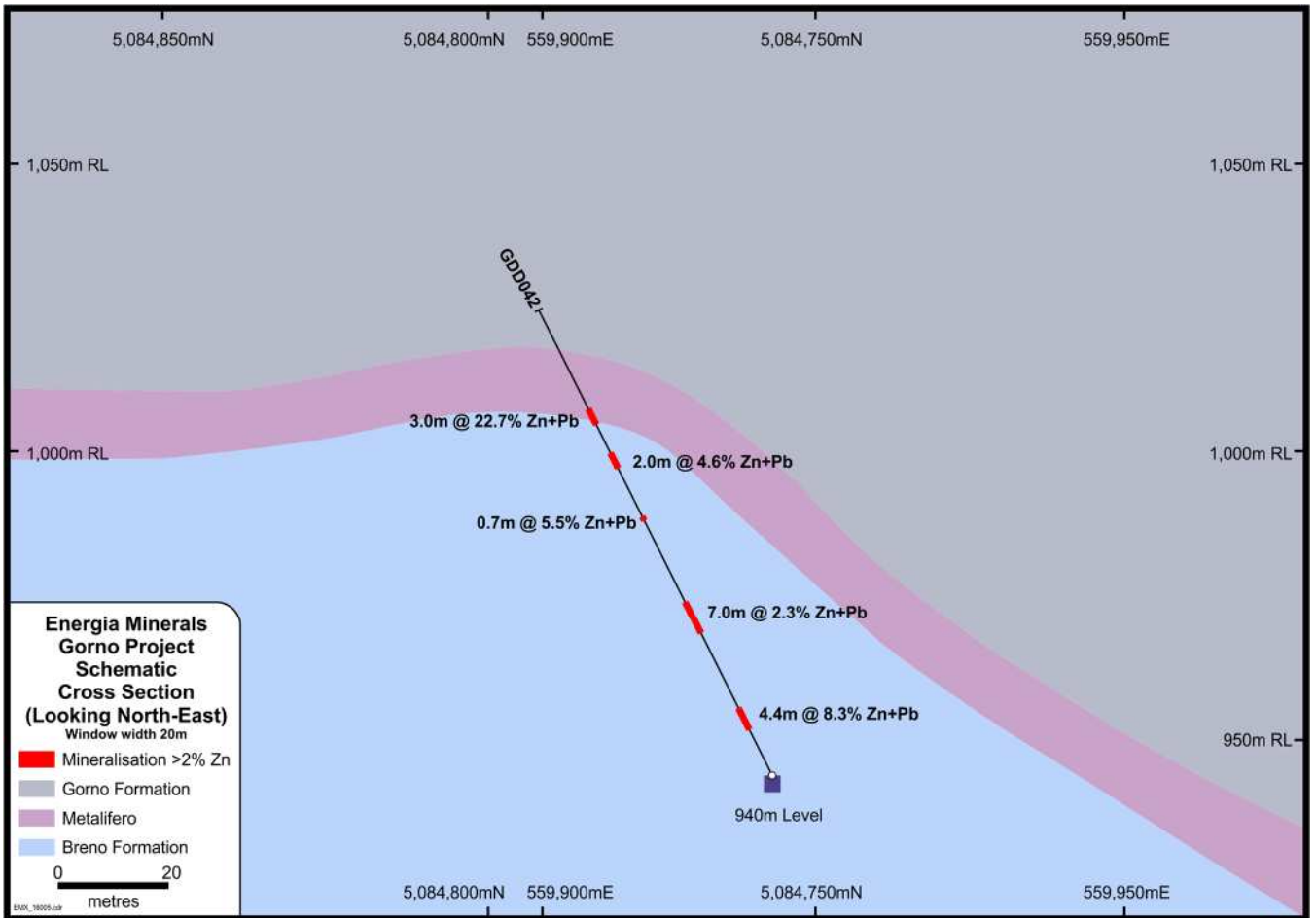


Figure 5: GDD042 Cross-Section

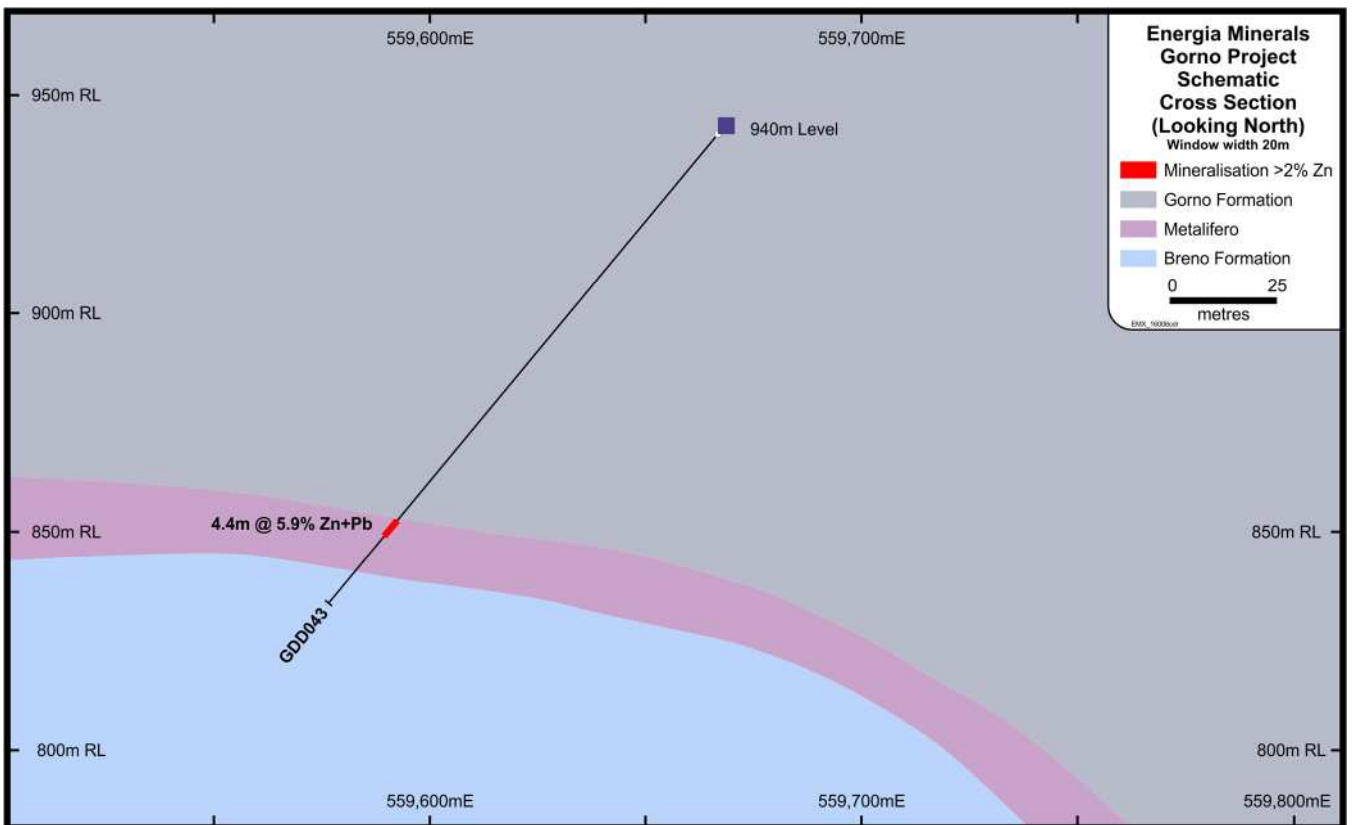


Figure 6: GDD043 Cross-Section



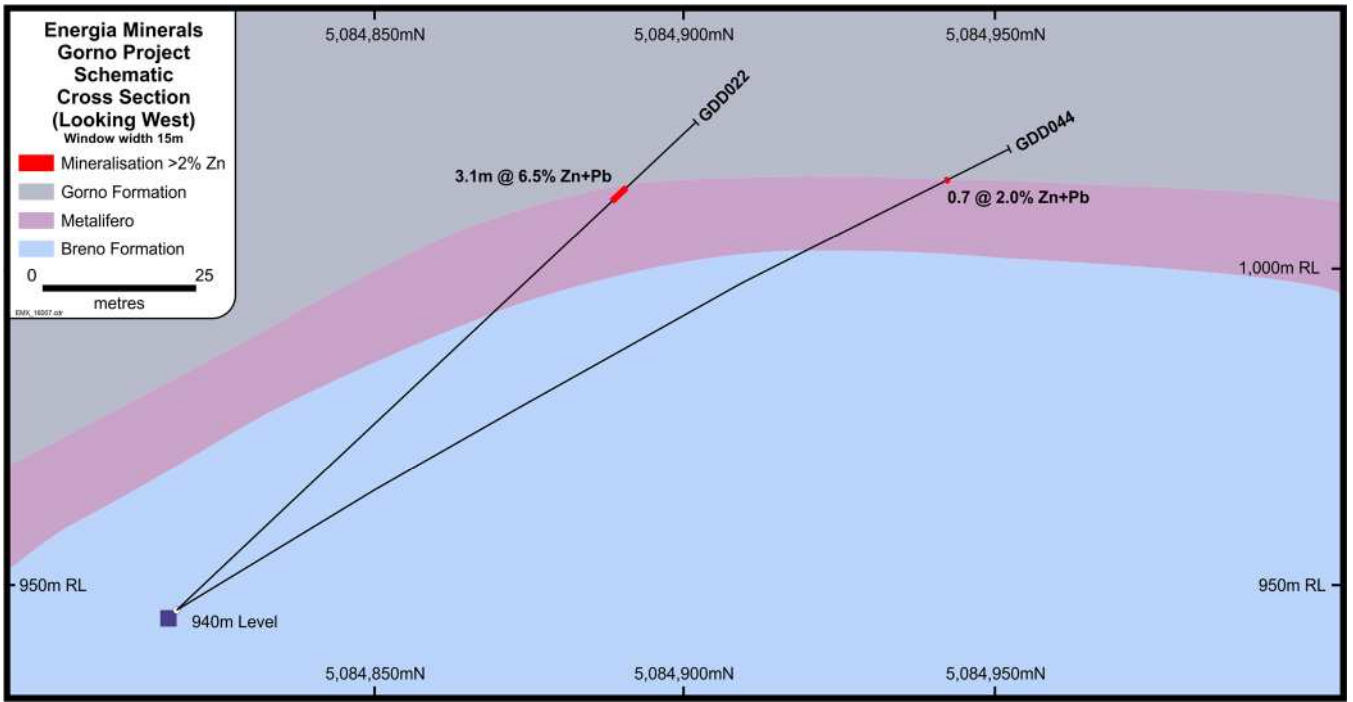


Figure 7: GDD044 Cross-Sections

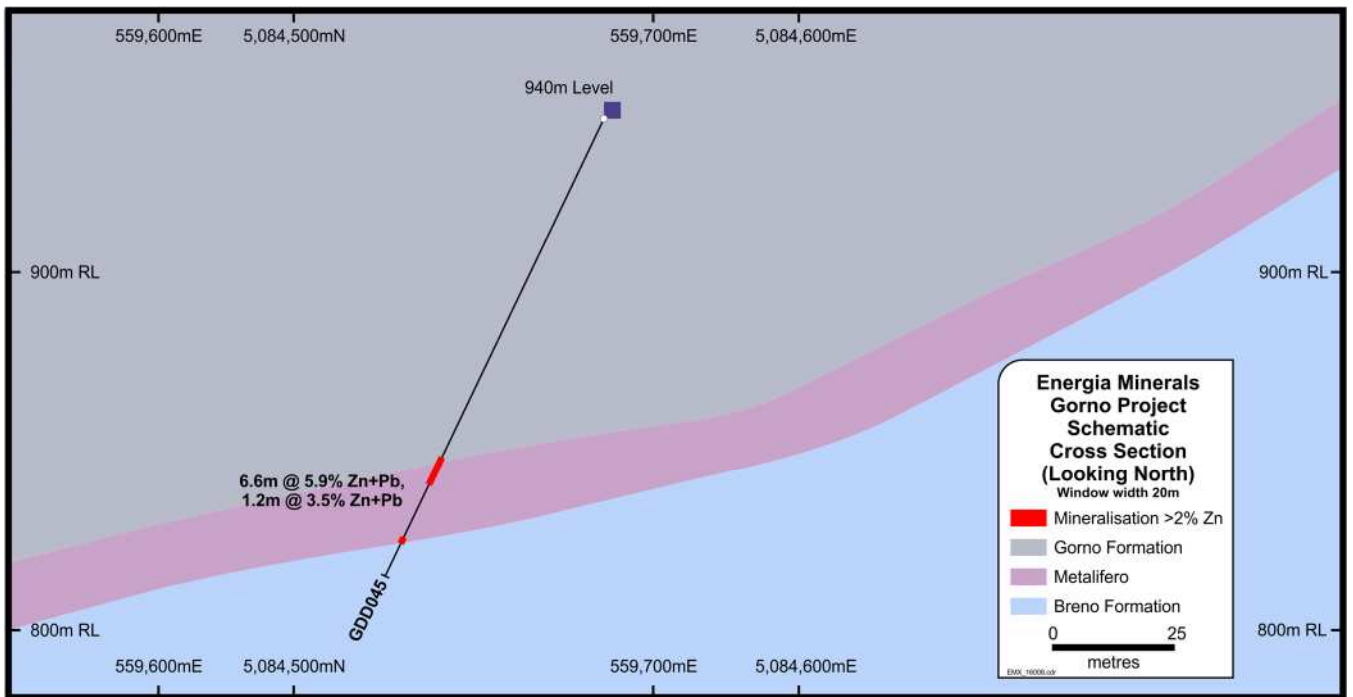


Figure 8: GDD045 Cross-Section



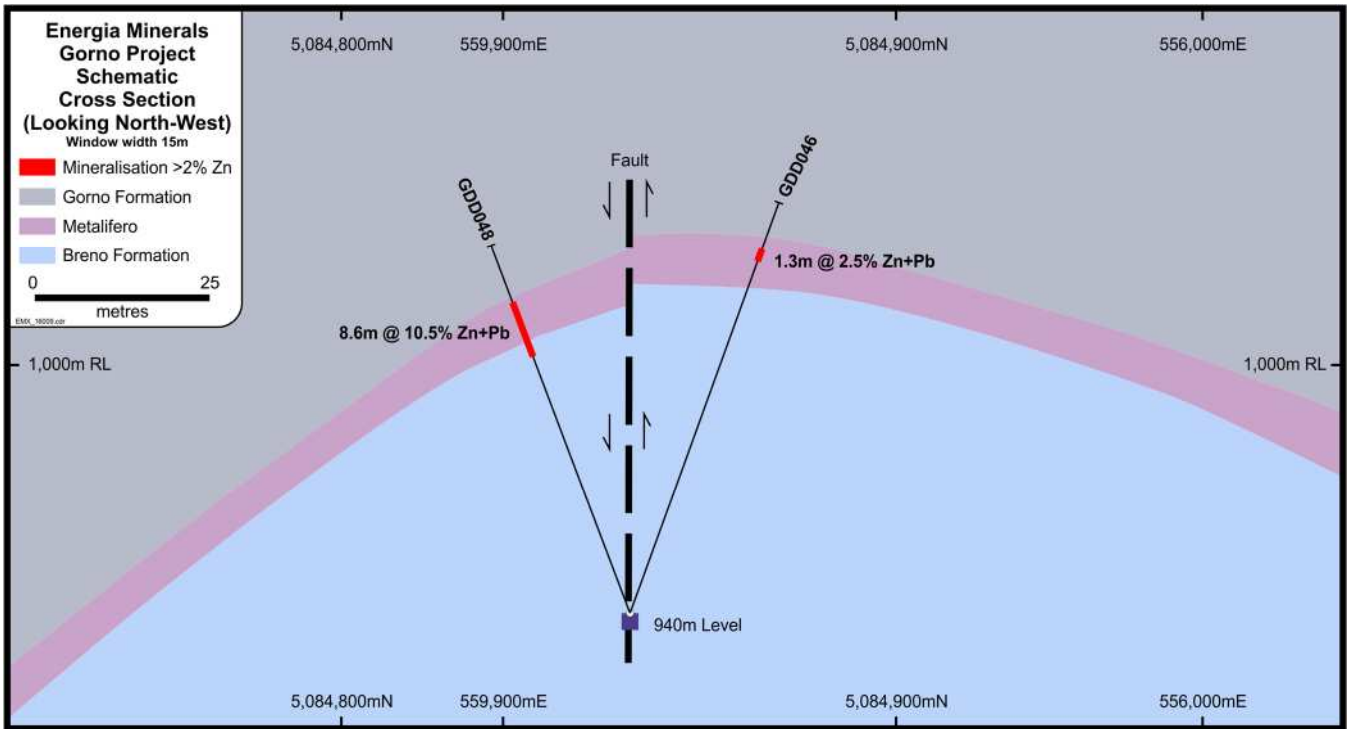


Figure 9: GDD046 and GDD048 Cross-Sections

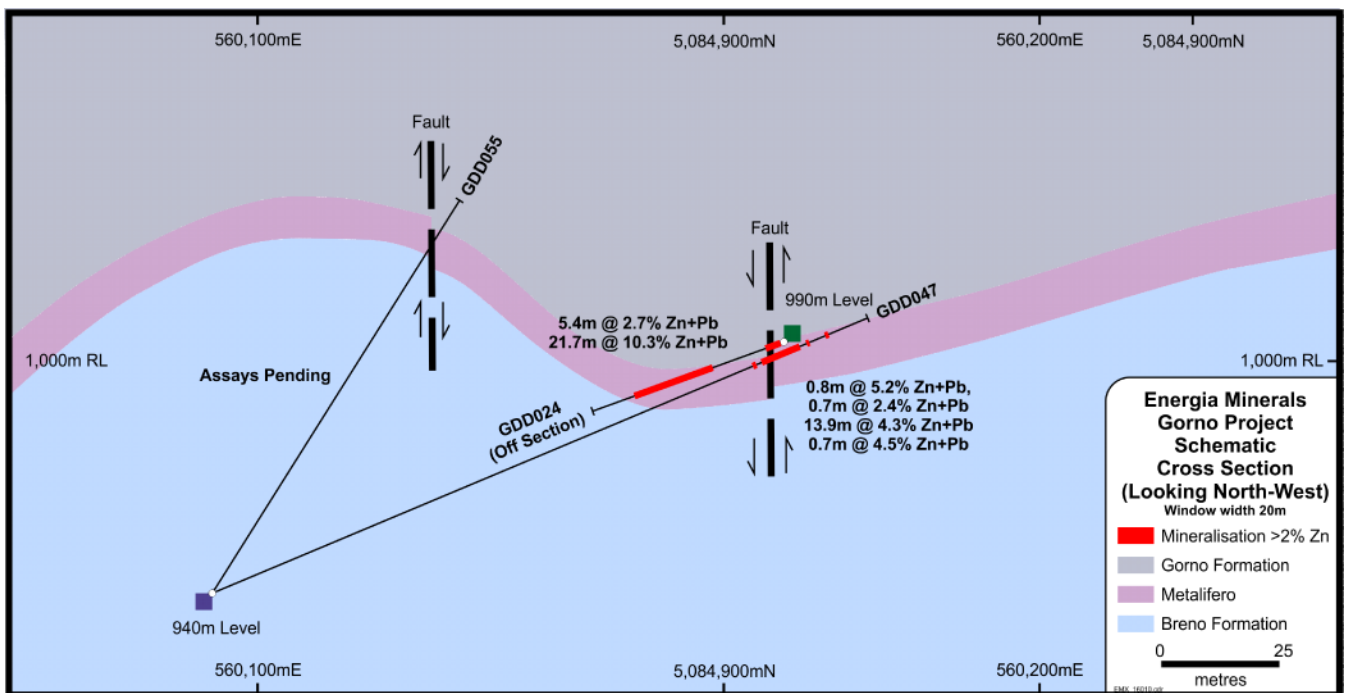


Figure 10: GDD047 and GDD055 Cross-Sections





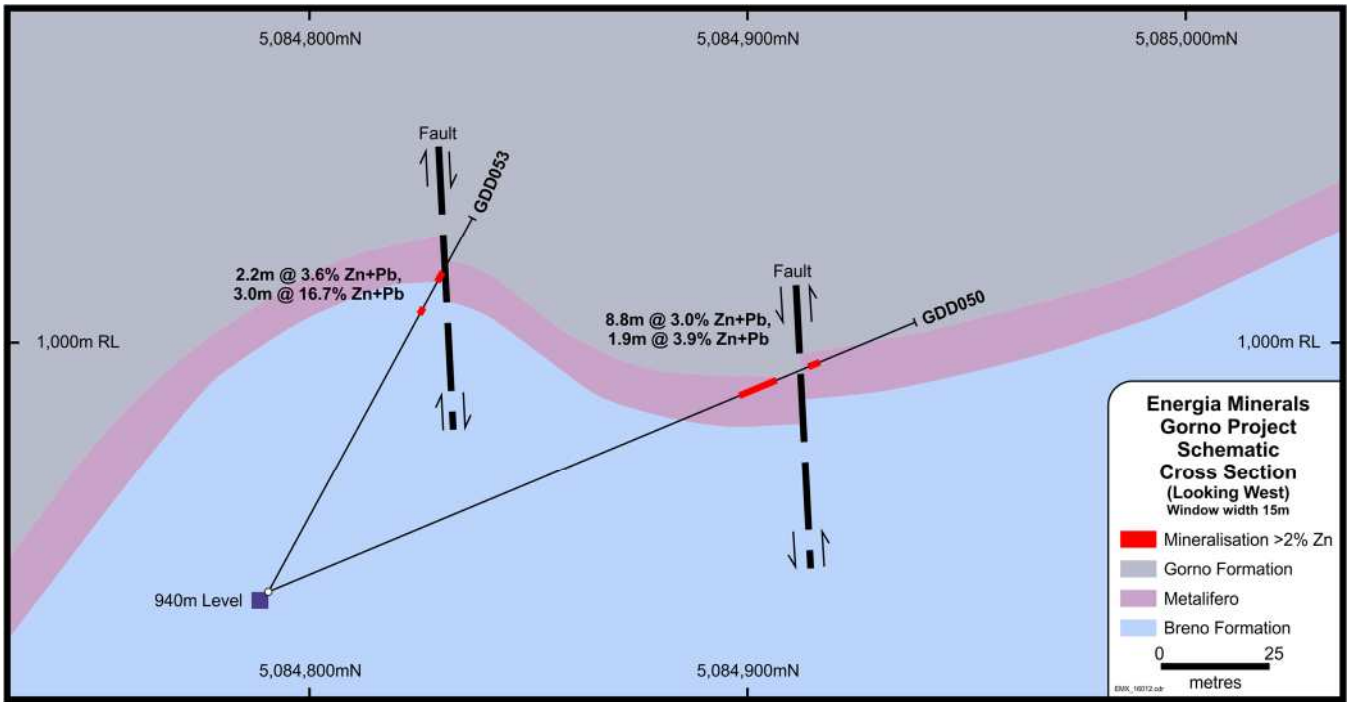


Figure 11: GDD050 and GDD053 Cross-Sections

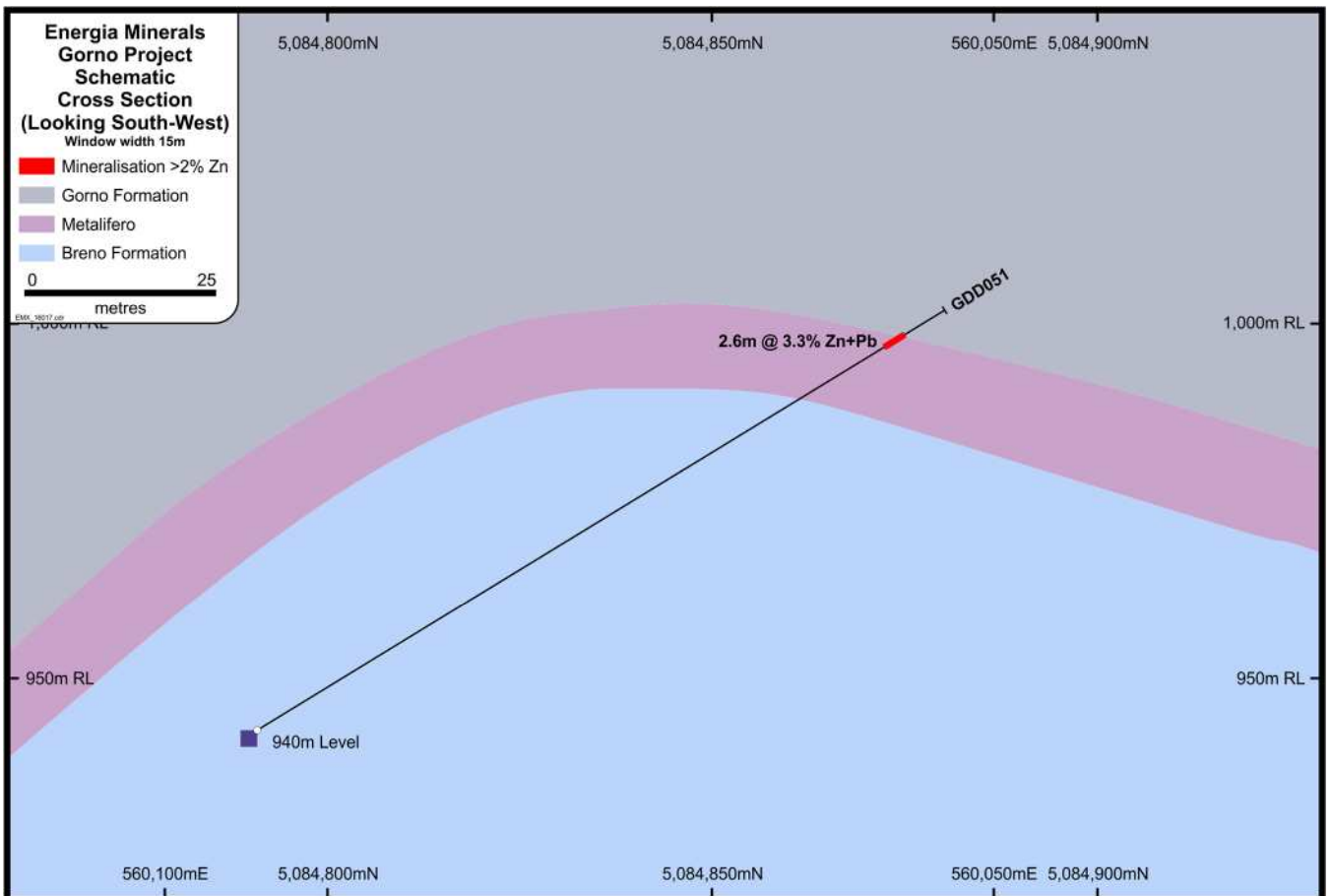


Figure 12: GDD051 Cross-Section



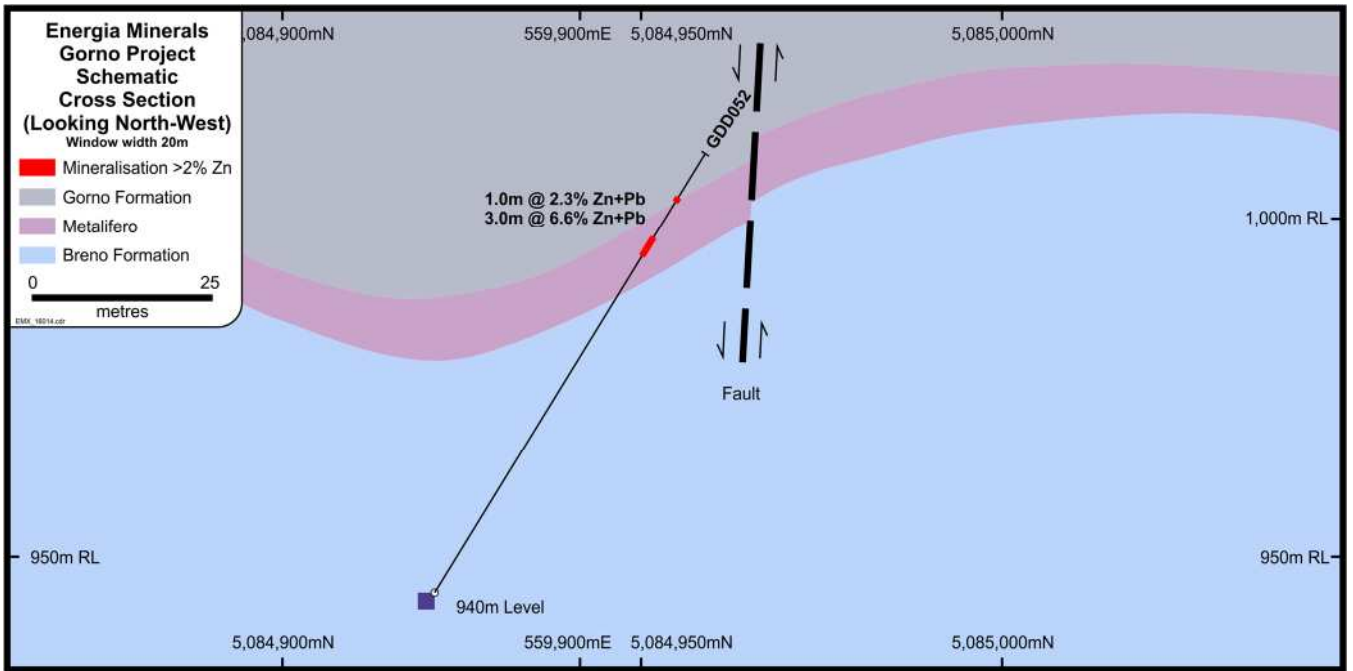


Figure 13: GDD052 Cross-Section

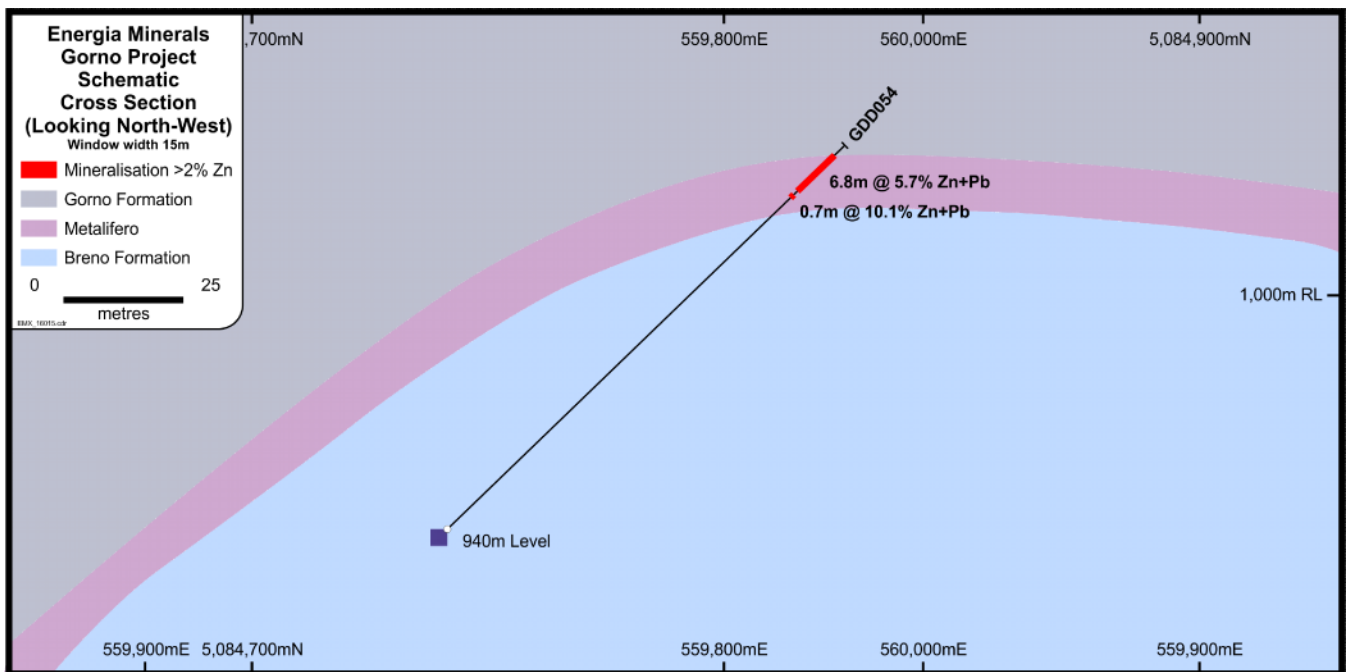


Figure 14: GDD054 Cross-Section



HOLE ID	Easting (m) WGS84Z32N	Northing (m) WGSZ32N	Collar RL (m ASL)	Dip	Azimuth	Depth (m)	From (m)	Zn %	Pb %	Ag g/t	Thickness (m)
<b>GDD037</b>	559692.6	5084675.9	943	-25	270	107.25	82.0	<b>4.9</b>	<b>1.6</b>	<b>28</b>	<b>7.3</b>
GDD039	559671	5084681	943	-90	0	79.6	37.8	2.5	0.3	5	1.1
<b>GDD041</b>	559668	5084624	943	-30	271	138.6	113.2	<b>9.0</b>	<b>2.0</b>	<b>19</b>	<b>9.9</b>
<b>GDD042</b>	559920	5084756	943	63	343	90.7	17.8	5.1	3.2	23	4.4
							31.7	1.7	0.6	2	7.0
							48.8	3.3	2.2	19	0.7
							62.8	3.7	0.9	8	2.0
							70.1	<b>14.8</b>	<b>7.9</b>	<b>113</b>	<b>3.0</b>
GDD043	559667	5084564	940	-50	256	141.5	117.6	4.5	1.4	15	4.4
GDD044	559645	5084846	942	29	348	151.5	140.3	1.3	0.7	52	0.7
<b>GDD045</b>	559667	5084564	940	-64	224	141.8	110.1	<b>4.5</b>	<b>1.4</b>	<b>28</b>	<b>6.6</b>
							128.9	3.5	0.0	0	1.2
GDD046	559913	5084854	943	70	38	98.1	84.4	1.9	0.6	30	1.3
<b>GDD047</b>	560096	5084789	940	23	32	174.8	131.0	4.1	1.1	71	0.8
							133.8	1.6	0.8	46	0.7
							143.0	<b>3.2</b>	<b>1.1</b>	<b>37</b>	<b>13.9</b>
including							143.0	5.3	1.7	46	1.6
and							147.8	3.8	1.3	43	9.1
and							158.9	3.1	1.4	59	0.7
<b>GDD048</b>	559913	5084854	943	70	219	88.5	67.4	<b>8.2</b>	<b>2.3</b>	<b>40</b>	<b>8.6</b>
GDD049	559645	5084805	942	25	4	182.1	No Significant Intercept				
GDD050	560096	5084789	943	23	7	159.6	124.3	2.1	0.9	31	8.8
							138.5	2.8	1.1	53	1.9
GDD051	560096	5084789	943	32	334	113.9	93.8	2.7	0.6	20	2.6
GDD052	559886	5084936	943	58	21	76.8	46.4	1.8	0.5	2	1.0
							64.8	5.2	1.6	37	3.0
<b>GDD053</b>	560096	5084789	943	62	6	95.5	76.0	2.7	0.9	6	2.2
							84.0	<b>12.4</b>	<b>4.3</b>	<b>44</b>	<b>3.0</b>
<b>GDD054</b>	559920	5084756	943	45	32	135.0	106.1	10.1	0.0	5	0.7
							111.7	<b>4.6</b>	<b>1.1</b>	<b>59</b>	<b>6.8</b>
Including							115.7	8.6	2.0	63	2.8
GDD055	560095	5084791	944	58	33	112.9	Assays Pending				
GDD056	559847	5085000	943	58	32	56.1	Assays Pending				
GDD057	559941	5084741	943	60	207	126.5	Assays Pending				
GDD058	560096	5084789	943	21	58	257	Assays Pending				
GDD059	559855	5084981	941	60	25	53	Assays Pending				
GDD060	559938	5084739	943	38	265	63.7	Assays Pending				

**Table 1: Collar location details and assay results for holes GDD037 to GDD060**



## JORC Code, 2012 Edition – Table 2 Gorno Historical Exploration Drilling Results

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Drill core was cored using NQ (GDD0037, 39, 41, 43, 44, 45, 47, 49, 50, 51, 53, and 54) and T2-66 (GDD038, 40, 42, 46, 48, and 53) core bits. NQ/T2-66 measurements ID of 47.6/51.7mm and an OD of 75.7/66.5mm (T2-66 is roughly equivalent to NQ). Core samples were half core cut using a diamond saw with half the core being dispatched to the laboratory, and half retained. Individual samples were taken on geological intervals with lengths ranging between 0.7m and 1.3m, and an ideal length of 1m. Core received to date is largely very competent and cuts well with little material loss or contamination. Cut core samples were dispatched using a reputable contract courier from site to the laboratory where half core is dried, then crushed and pulverised to allow 85% to pass -75µm. A 0.15g-0.25g aliquot subsample of the pulverised sample was then dissolved in a four acid digest, and then analysed using an ICP-AES or ICP-AAS technique to determine grades of the following elements Pb, Zn, As, Ag, Bi, Co, Cu, Fe, Mg, Mn, Ni. Further testworks may be carried out in the future for other analytes.</li> <li>Duplicates, blanks and certified reference materials were inserted into sample series at a rate of better than 3 in 20. In addition it is intended that at least one sample batch will be dispatched post analysis for a further umpire analysis.</li> <li>Mineralisation can be both contained in oxides and sulphide material. Historical studies and recent observations show very low levels of deleterious elements in both material types, however further studies must be completed to quantify this.</li> <li>Energia has exhaustive procedures and protocols in place to ensure that 'Industry Standard' is met as a minimum.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond Core holes description: <ul style="list-style-type: none"> <li>T2-66 and NQ diamond core</li> <li>NQ core oriented, T2-66 core not oriented.</li> <li>Coring bit used</li> <li>T2-66 Diamec 252 Atlas Copco rig NQ Sandvik 130, and Diamec 262</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximize sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• To date 60 holes have been completed, recovery on these holes has been acceptable, in excess of 97.6%. Any recovery loss was most likely the result of fine friable material being washed out from the core sample by the drilling fluid. Observations to date suggest that this fine friable fraction is weathered oxidized lead and zinc sulphides, resulting in a loss of mineralized material from the core sample.</li> <li>• Core blocks are inserted by the drillers at the end of each drilling run, noting the run length, and total depth. This data is then compared to the measured recovered core length and recoveries for each run and the entire hole are calculated. Given the nature of the drilling, and the type of mineralisation encountered to date the sample is judged as being representative.</li> <li>• Given the nature of the drilling (diamond coring), and the generally competent nature of the mineralisation and host rock observed to date it is deemed very unlikely that a bias exists due to preferential loss/gain of fine/coarse material.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All holes have been geologically logged on geological intervals with recording of lithology, grain size and distribution, sorting, roundness, alteration, mineralisation, veining, structure, oxidation state, colour and geotechnical data noted and stored in the database. All holes were logged to a level of detail sufficient to support future mineral resource estimation, scoping studies, and metallurgical investigations.</li> <li>• Oxidation, colour, alteration, roundness, sorting, sphericity, alteration and mineralisation are logged qualitatively. All other values are logged quantitatively. All holes have been photographed both wet and dry, and these photos stored in a database.</li> <li>• All holes have been logged over their entire length (100%) including any mineralised intersections. To date core loss is less than 3% and is noted in the logging.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and</i></li> </ul>	<ul style="list-style-type: none"> <li>• All core was half cut using a Diamonte table diamond saw.</li> <li>• Not applicable.</li> <li>• Mineralised core is visually identified, and then sampled in geological intervals using 0.7-1.3m intervals, the core is then half cut and half the core is wholly sampled for that interval then inserted into pre numbered calico bags along with</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation (continued)	<p><i>appropriateness of the sample preparation technique.</i></p> <ul style="list-style-type: none"> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>QA/QC samples. The sample preparation technique is deemed appropriate.</p> <ul style="list-style-type: none"> <li>• Quality control procedures include following EMX standard procedures when sampling, sampling on geological intervals, and reviews of sampling techniques in the field.</li> <li>• Field Duplicate samples are taken in the field at a rate of 1 in 20, and consist of ¼ core taken from the reserved ½ core.</li> <li>• The expected sample weight for 1m of half core T2-66 is approximately 2.7kg, and NQ is 2.4kg. This sample weight should be sufficient to appropriately describe base metal mineralisation grades from mineral particle sizes up to 5mm.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The digest method and analysis techniques are deemed appropriate for the samples. Four acid digestions are able to dissolve most minerals; however, although the term “near-total” is used, depending on the sample matrix, all elements may not be quantitatively extracted. The intended analysis techniques are ICP-AES (Atomic Emission Spectroscopy) and ICP-AAS (Atomic Absorption Spectroscopy) typically used to quantify higher grade base metal mineralisation.</li> <li>• No geophysical tools, spectrometers or XRF instruments have been used.</li> <li>• QA/QC samples (duplicates, blanks and standards) are inserted in the sample series at a rate of better than 3 in 20. These check samples are tracked and reported on for each batch. When issues are noted the laboratory is informed and an investigation begins defining the nature of the discrepancy, a suitable explanation, and whether further check assays are required. The laboratory completes its own QA/QC procedures and these are also tracked and reported on by EMX. No bias has been established to date.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant intersections, drill hole locations, and mineralisation in view have been checked by Energia Minerals personnel and consultants in June 2015, June 2012, and March 2010.</li> <li>• To date 7 historical holes have been twinned, and 5 EMX holes have been twinned for metallurgical purposes. Assays for the EMX twins are still outstanding.</li> <li>• All geological, sampling, and spatial data that is generated and captured in the field is immediately entered into a field notebook on standard Excel templates. These templates are then validated each night in Micromine. This information is then sent to Energia’s in house database manager for further validation. If corrections</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>need to be made they are corrected the following day by the person responsible for generating the data. Once complete and validated the data is then compiled into a SQL database server.</p> <ul style="list-style-type: none"> <li>• No adjustment of assay data is required</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Collar locations for all holes were designed from georeferenced paper maps. Underground surveying is underway to refine the georeferenced data and collar locations will be surveyed once drilling and surveying is completed on each level. Currently it appears the georeferenced data is located some 30m to the north-west of the surveyed data with a predominantly linear correction required across the areas surveyed so far. Once drilled drill holes are logged with a televue and EZ Trac system to define azimuth and inclination of the drill hole.</li> <li>• The grid system used at Gorno is WGS_1984_UTM_Zone_32N. Easting and Northing are stated in metres.</li> <li>• Topographic control is from control points noted on both hand drawn maps, and from RL's noted on geological logs.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill hole orientation and spacing is non-uniform with multiple holes often being proposed to be drilled from a single exploration drive.</li> <li>• The data spacing and distribution is currently <b>insufficient</b> to establish an appropriate degree of geological and grade continuity appropriate for classification of Mineral Resources.</li> <li>• No sample compositing has been applied.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• The attitude of the mineralisation is thought to be generally dipping to the south at approximately 30 degrees. However the level of confidence in this is low, and the multiple orientations of drilling suggest that some intersections may be biased. GDD044,47,49, and 50 were drilled at a low angle to the dip and these intersection are considered to be biased. True width for these intersections is considered to be approximately 35% of the widths stated in the table, however this will need to be confirmed once collar surveys, hole deviation surveys, and geological modelling finalized.</li> <li>• Sampling bias due to drilling orientation and mineralised structure orientation is probable and with information currently at hand is hard to precisely quantify. An orientation tool is now being used to orient core and this along with a more refined</li> </ul>

Criteria	JORC Code explanation	Commentary
		geological model should allow this to be better defined.
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>Samples were dispatched from the Exploration Site using a single reputable contracted courier service to deliver samples directly to the assay laboratory where further sample preparation and assay occurs.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reviews of sampling techniques and material sampled are undertaken regularly to ensure any change in geological conditions is adequately accounted for in sample preparation. Reviews of assay results and QA/QC results occur for each batch. 1 in 10 checks on all compiled and entered data are completed by Energia Minerals.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Gorno Lead Zinc deposit is located in the north of Italy, in the Lombardia Province. The Gorno Project is made up of ten (10) granted tenements: Decrees 1571, 1629, 1630, 1632, 1633, 3276, 3277, 3278, 3279, 3280; and six applications. These leases are 100% owned and operated by Energia Italia, a 100% owned subsidiary of Energia Minerals. The titles are current at the time of release of this report.</li> <li>All tenements are in good standing and no impediments to operating are currently known to exist.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>A significant amount of work was undertaken by ENI subsidiaries in the region. Drilling works completed in the period between 1964-1980 have been compiled and digitised. A significant amount of work has been completed on the Gorno deposit including the development of more than 230km of exploration drives, detailed mapping, and the mining and production of over 800,000 tonnes of high grade zinc concentrate. Large scale mining operations ceased at the Gorno deposit in 1978, and the project closed in 1980.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Gorno deposit is an Alpine Type Lead-Zinc deposit (similar to Mississippi Valley Type Lead Zinc deposits) it is broadly stratabound with some breccia bodies and veining also occurring. It displays generally simple mineralogy of low iron</li> </ul>



Criteria	JORC Code explanation	Commentary
<p>Geology (Continued)</p>		<p>sphalerite, galena, pyrite, and minor silver. Gorno lies in a part of the Italian Southern Alps named “Lombard Basin”, formed by a strong subsidence occurring in the Permian-Triassic which allowed the subsequent accumulation of a thick sedimentary pile. The sedimentary sequence is constrained laterally by the Luganese Platform to the west and by the Atesina Platform to the east. The lithotypes in the southern portion of the basin are predominantly Triassic in age. The geological sequences of importance in relation to mineralisation, from oldest to youngest are as follows:</p> <ul style="list-style-type: none"> <li>○ <b>Breno Formation:</b> a back-reef limestone composed of light grey calcareous beds, 10 to 170 m thick. The facies indicate a palaeogeographical evolution from back reef to shelf environment, in low energy water to alternating peri-tidal cycles.</li> <li>○ <b>Metalliferous Limestone:</b> composed of dark grey to black limestone deposited in stromatolitic tidal flats, with siliceous intercalations present in the upper part. The dark colour suggests a stagnant anaerobic depositional environment with bituminous beds generally present at the footwall of the Metallifero. This formation represents a transitional phase between the underlying shelf environment and the upper sequence typified by a peri-continental and detrital sedimentation. Three tuffaceous levels are present in the Metallifero stratigraphical column. The pyroclastic tuffs are submarine volcanic phases which intervened during the deposition of the limestones, and effectively represent a control for the mineralized horizons, in that they are always found at the foot wall (Tuff 1) and at the hanging wall (Tuff 2) of the productive mineralised horizons.</li> <li>○ <b>Val Sabbia Sandstone:</b> present along the southern Lombard Basin border and is composed of alternating tuffaceous sandstone and green and/or red silt-mudstone. These were possibly derived from the erosion of continental sediments present to the south. The thickness varies between 0 and 400 metres.</li> <li>○ <b>Gorno Formation:</b> alternating thinly bedded, black limestone and laminated marl deposited in protected lagoon environment with a thickness of 0-350 metres. A thin tongue, intercalated between the Metalliferous Limestone and the Val Sabbia Sandstone, is often mineralised and is referred to as the mineralised “black shales” of the Gorno deposits.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>Geology</i> <i>(Continued)</i></p>		<ul style="list-style-type: none"> <li>○ <b>San Giovanni Bianco Formation:</b> is composed of a thick alternation of marl, sandstone, siltstone and mudstone which transitions at the top of the unit to cellular limestone and evaporitic vuggy dolomite, estimated thickness to be in the order of 150 metres.</li> <li>● Structure in the basin is typified by E-W trending belts which can be subdivided in five sectors: <ul style="list-style-type: none"> <li>○ <b>Orobic Anticline,</b> in the northern part, which includes Palaeozoic successions;</li> <li>○ <b>Valtorta-Valcanale Line,</b> oriented E-W and separating the Orobic Anticline to the north from the Pb-Zn mineralised belt in the south. The line is responsible for many of the allochthonous units;</li> <li>○ <b>Camuno Autochthonous,</b> including the sedimentary cover, which is covered in the central-western part by various overthrusts and outcrops only in the east;</li> <li>○ <b>Para-autochthonous and allochthonous units,</b> present over a large area to the south of the Valtorta-Valcanale Line and formed by the double or triple superimposition of the Triassic carbonate formations;</li> <li>○ <b>Fold and fold-fault zone,</b> which constitutes the southern sector near the Po plains and includes Jurassic-Cretaceous formations.</li> </ul> </li> <li>● Mineralisation in the Gorno district occurs within the Camuno Autochthonous Zone, and the para-autochthonous, and allochthonous units. The geometry of the mineralised bodies is mainly stratabound with common characteristics in the majority of the Gorno deposits. The prevailing distribution trend is N-S and the shape, represented by tabular “columns”, which can be longitudinally developed for more than 2000 metres, with widths from 50 to 100 metres and thickness between 3 and 20 metres.</li> </ul>
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> <li>● <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Information material to the understanding of the exploration results is provided in the text of the release.</li> <li>● No information has been excluded.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill hole Information (continued)	<ul style="list-style-type: none"> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> <li>● If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	
Data aggregation methods	<ul style="list-style-type: none"> <li>● In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>● Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>● The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>● A nominal low cut grade of 2% Zn+Pb has been chosen to differentiate mineralised material from unmineralised material, once assays are returned.</li> <li>● Aggregates were calculated as weighted averages using the above cut off grade typically allowing only 10m of total internal dilution to be included, with a maximum individual length of waste thickness not exceeding 4m.</li> <li>● No metal equivalents are used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>● These relationships are particularly important in the reporting of Exploration Results.</li> <li>● If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>● If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>● All drill holes are variable orientated. Little confidence has been established in the orientation of the mineralisation at this stage other than a general dip and strike.</li> <li>● The mineralisation is currently thought to be roughly tabular and dipping to the south-south west at an angle of approximately 30 degrees.</li> <li>● True widths of intercepts are not known at this stage, however high angle intercepts are currently deemed unlikely, except as noted above results from GDD024.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>● Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>● Please refer to Figures 1 to 14 for this data.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>● Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be</li> </ul>	<ul style="list-style-type: none"> <li>● The results reported in the above text are comprehensively reported in a balance manner.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>practiced to avoid misleading reporting of Exploration Results.</i>	
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>A significant amount of mining, exploration, survey, and environmental data has been recovered from the Bergamo State Archives and is currently being translated and digitized.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Future works at Gorno would include rehabilitation of exploration drives, a 710m exploration decline from the 940 level, and drilling diamond drill holes to test for continuity of Panel 7 mineralisation across strike and down plunge.</li> <li>Please refer to Figure 1 for areas that are open to extensions, these are shown as high priority exploration targets. Release of future detailed drilling plan data is commercially sensitive, subject to change on review; and will not be detailed here.</li> </ul>