ASX Announcement

21 September 2020

NEW HIGH-GRADE RESULTS DEMONSTRATE GROWTH POTENTIAL AT THE GREATER GORNO PROJECT

HIGHLIGHTS

- **A revised structural model of the greater Gorno Project extends the current exploration target to now include the Fontanone area, extending for 2.5km of strike length and 750m down-dip, from Pian Bracca.**
- **At Fontanone, historical exploration was limited in extent but drilling results to be followed up include:**
  - **2.8m at 11.9% Zn and 2.8% Pb (14.7% Zn+Pb) from 20.7m (RP53);**
  - **3m at 13.6% Zn and 0.4% Pb (14.0% Zn+Pb) from 20.7m (RP59); and**
  - **4.5m at 5.2% Zn and 5.8% Pb (11.0% Zn+Pb) from 20.0m (RP62).**
- **High-grade zinc sulphide mineralisation has also been identified at Arera, c. 1.5km east of Pian Bracca. Arera was historically mined principally for zinc oxide mineralisation however massive sulphide mineralisation has now been identified over a 1km sampling length, demonstrating the widespread potential for new primary sulphide mineralisation. Sample results include:**
  - **42.1% Zn and 11g/t Ag (AR04) and 16.5% Zn and 9g/t Ag (AR07) from underground sidewalls;**
  - **42.8% Zn and 8g/t Ag (AR05) and 34.4% Zn and 2g/t Ag (AR06) from historic 'sulphide-waste' dumps; and**
  - **33.2% Zn and 4g/t Ag (AR09) and 31.4% Zn and 4g/t Ag (AR10) from surface outcrop samples.**
- **Drilling at Pian Bracca has now moved to the north-eastern sector with further drilling at its west-end after that. Updated drilling results will be released as assays become available.**

Alta Zinc Limited (Alta or the Company) (ASX: AZI) is pleased to announce the results of sampling from new mineralised areas that significantly expand the exploration footprint at the greater Gorno project (**Gorno or the Project**). This includes recent sampling that was undertaken at Arera and extensions at Fontanone and the Zorzone resource areas. These results confirm the presence of high-grade sulphide mineralisation throughout the greater Gorno project area and expand the range of new targets for the Company.

The analysis of historical drilling data from Fontanone and Zorzone confirms the same stratabound mineralisation style to that identified at Pian Bracca. These zones were previously considered to be discrete pods however, our recent structural analysis indicates they occur in a common stratabound horizon which has had only limited historical drilling and therefore retains the potential for more extensive high-grade areas. These extensional zones will form part of the exploration focus in the drill program for 2020/2021.

At Arera, geological reconnaissance has confirmed that whilst widespread historical mining focused on the extraction of oxide mineralisation the surrounding sulphide mineralisation remains in-situ. This work has demonstrated historical oxide-mining areas can host untapped sulphide mineralisation and provides a further useful targeting technique to guide ongoing exploration for additional areas of potential mineral resources.

Geraint Harris, MD of Alta Zinc commented:

"In addition to current drilling at Pian Bracca our geology team has been working to enhance the understanding of the wider-scale potential for additional mineralisation within the greater Gorno Project.

These results clearly demonstrate that high-grade mineralisation can be found in many areas of the Project and on several horizons of mineralisation that gives rise to multiple new targets. As we move forward, we are gaining geological insights that will guide our exploration campaign, with the goal of significantly growing the mineral resource base at Gorno".

Fontanone and Gorno Structural Analysis

Fontanone was identified by SAMIM, the previous operators of the Gorno mine, as a potential horizon for mining sulphide mineralisation and additional exploration was planned from new underground development. But this new development was started and then prematurely stopped just prior to mine closure, as such Fontanone was subjected to very limited exploration and remains open in all directions. However, the Company's recent 3-D structural modelling, and also advances in exploration technology, have now highlighted positions where Fontanone can be drilled from existing underground development.

The underground plan view shown in Figure 1 highlights significant historical drill intersections outside of the target areas of the current drilling programme. These intersections demonstrates the presence of high-grade sulphide mineralisation over a distance of more than 2.5km in potential strike length and with demonstrated down-dip extension of 750m from Pian Bracca, and which remains open both down dip and on strike.

Table 1 shows the highlighted historical drill intersections into the stratabound horizon at both the southern end of Zorzone and the Fontanone areas. These results will be followed up on with new drilling and indicate that at both locations the stratabound mineralisation can yield similarly high-grade results to those holes recently drilled in the same stratabound mineralisation horizon at Pian Bracca. Importantly, at both locations the mineralisation potential is completely open.

Table 1: Highlighted historical drill results (down hole thickness) from the stratabound mineral horizon (silver not assayed)

Hole ID	From	To	Intercept	Ag	Zn	Pb	Pb+Zn
	m	m	m	g/t	%	%	%
Fontanone Area							
RP52	32.7	35.7	3.0	No assay	5.3%	1.1%	6.4%
RP53	67.8	70.6	2.8	No assay	11.9%	2.8%	14.7%
RP59	20.7	23.7	3.0	No assay	13.6%	0.4%	14.0%
RP62	20.0	24.5	4.5	No assay	5.2%	5.8%	11.0%
RP63	16.4	19.4	3.0	No assay	8.4%	1.1%	9.6%
RP64	0.0	2.0	2.0	No assay	7.2%	1.2%	8.5%
Zorzone South Area							
RP34	46.0	50.0	4.0	No assay	2.9%	0.5%	3.4%
RP36	62.5	67.5	5.0	No assay	11.7%	2.4%	14.1%
RP37	14.0	15.0	1.0	No assay	8.5%	0.8%	9.3%
RP37	31.0	39.0	8.0	No assay	11.5%	2.7%	14.2%
RP40	174.5	176.5	2.0	No assay	4.4%	1.4%	5.9%
RP46	17.0	26.0	9.0	No assay	9.2%	1.9%	11.1%

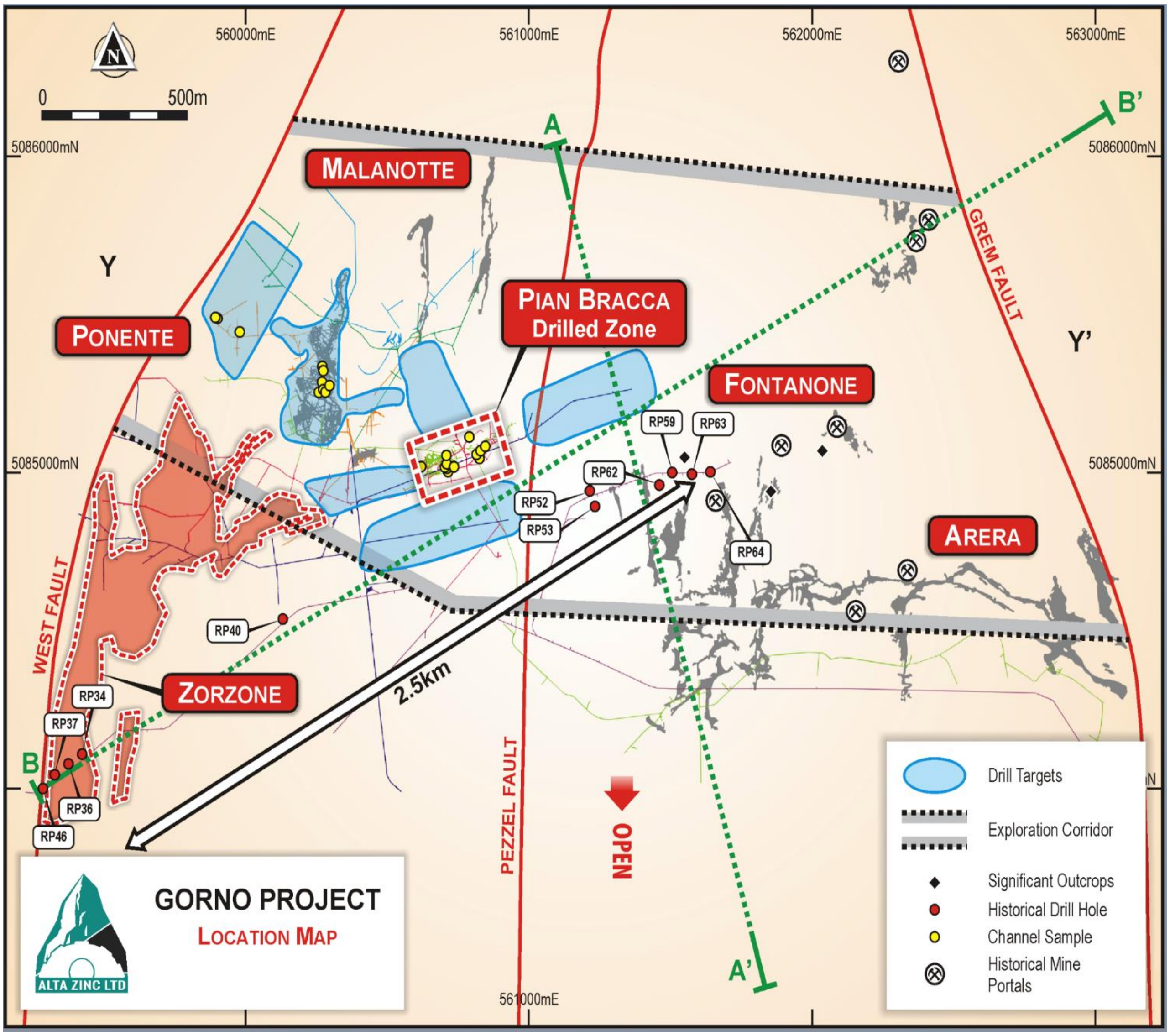


Figure 1: Underground plan view showing the highlighted historical drill holes

Alta staff and consultants have been preparing a detailed 3-D structural geological model of the greater Gorno project area, based on historical and recent data, in order to better understand the distribution of the mineralisation and specifically the higher-grade areas. This process has clearly illustrated the structural relationship and continuity between what was previously seen as discrete geological bodies.

This recent analysis of the Pian Bracca, Fontanone and Zorzone areas confirms that the limestone rocks of the Metallifero Bergamasco Formation (Metallifero) host the stratabound mineralisation. The Metallifero is part of a conformable stratigraphic sequence which is present throughout the greater Gorno project area. As such it presents a widespread and well-defined target horizon which is now being structurally analysed to identify the most prospective areas for occurrences of high-grade and thick mineralisation.

Figure 2 is an approximate NW-SE cross section through the interpreted extension of the Pian Bracca Thrust and the stratabound mineralisation. It illustrates how the same stratabound mineralisation style drilled at Pian Bracca, is also present in historical drill holes with similarly high-grades 750m down dip in the Fontanone area. This view also shows the sulphide samples taken adjacent to the historical Arera stopes.

Figure 3 is a NE-SW long section showing the 2.5km lateral extension of the stratabound mineralisation from Zorzone in the west to Fontanone in the east and the position of the highlighted historical drill holes which demonstrate that the stratabound mineralisation can host distinct zones of high grade mineralisation, similar to the stratabound mineralisation at Pian Bracca. As discussed above, detailed structural interpretation and analysis is currently being carried out by Alta's geology team and external consultants to try to better understand and predict potential locations and extensions of these and other high-grade mineralised zones.

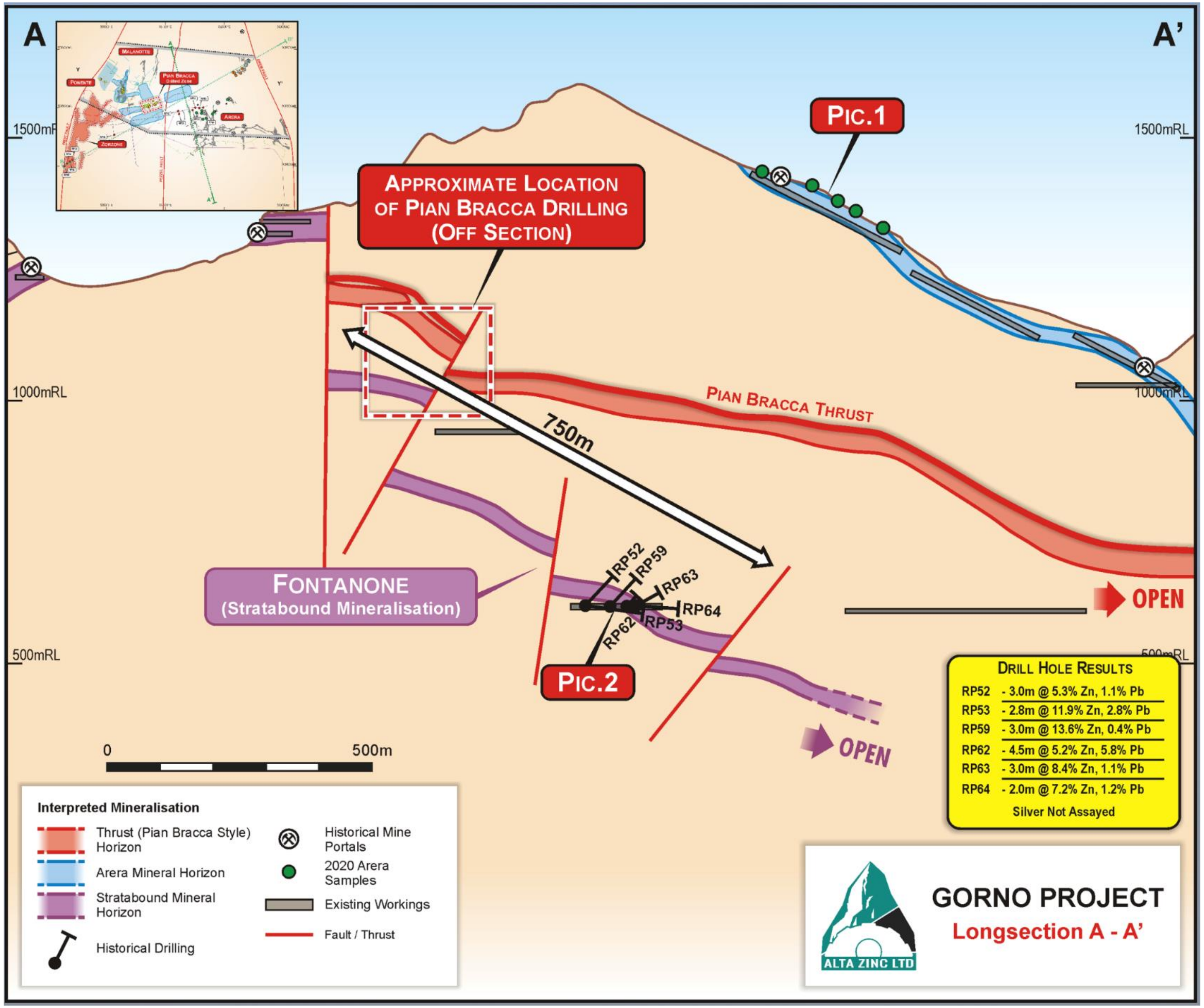


Figure 2: Cross-section showing the historical drill holes in the down-dip extension of the stratabound mineralisation, which was also drilled at Pian Bracca

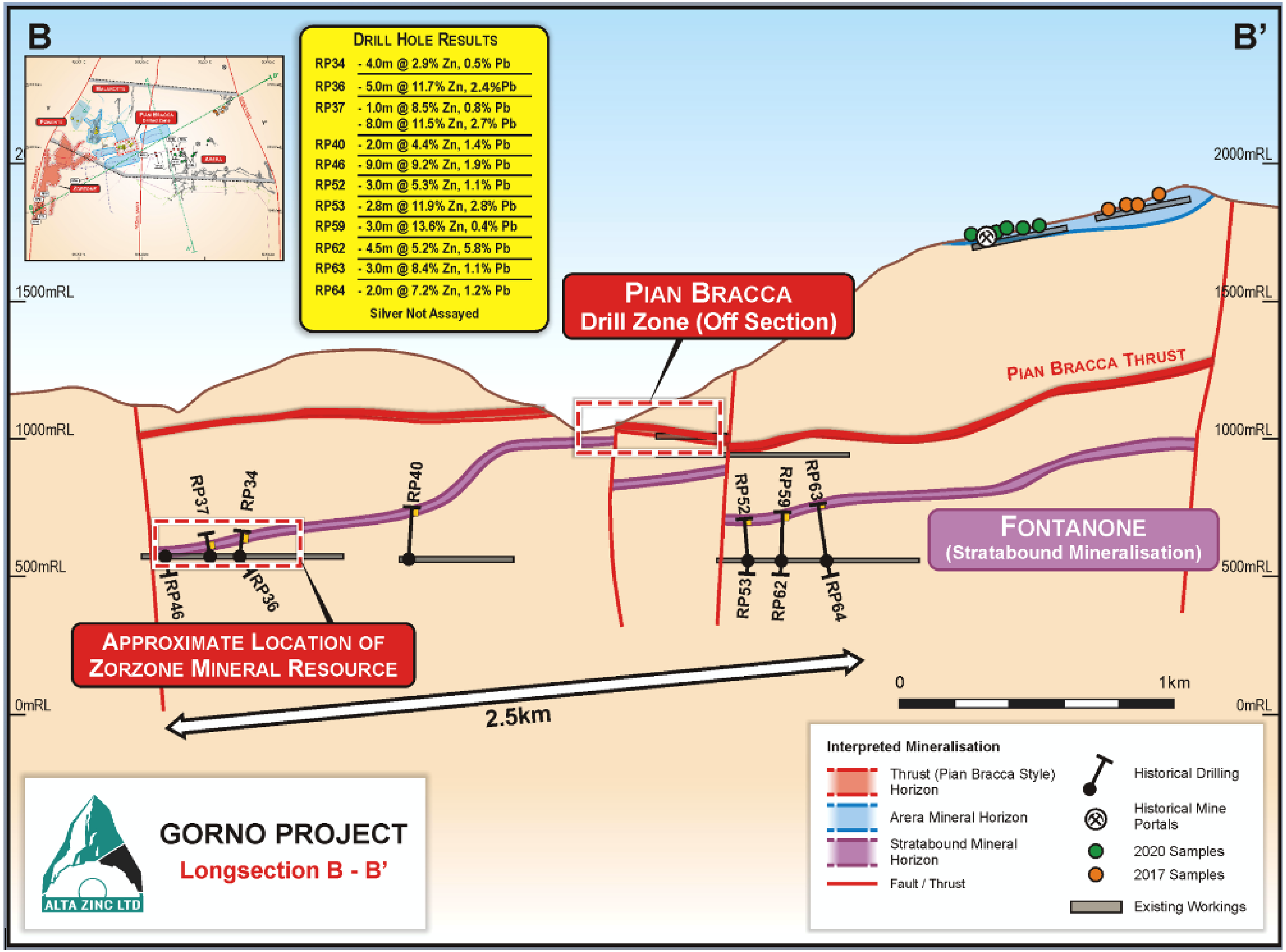


Figure 3: Long-section showing the highlighted historical drill holes & the lateral extension of the stratabound mineralisation

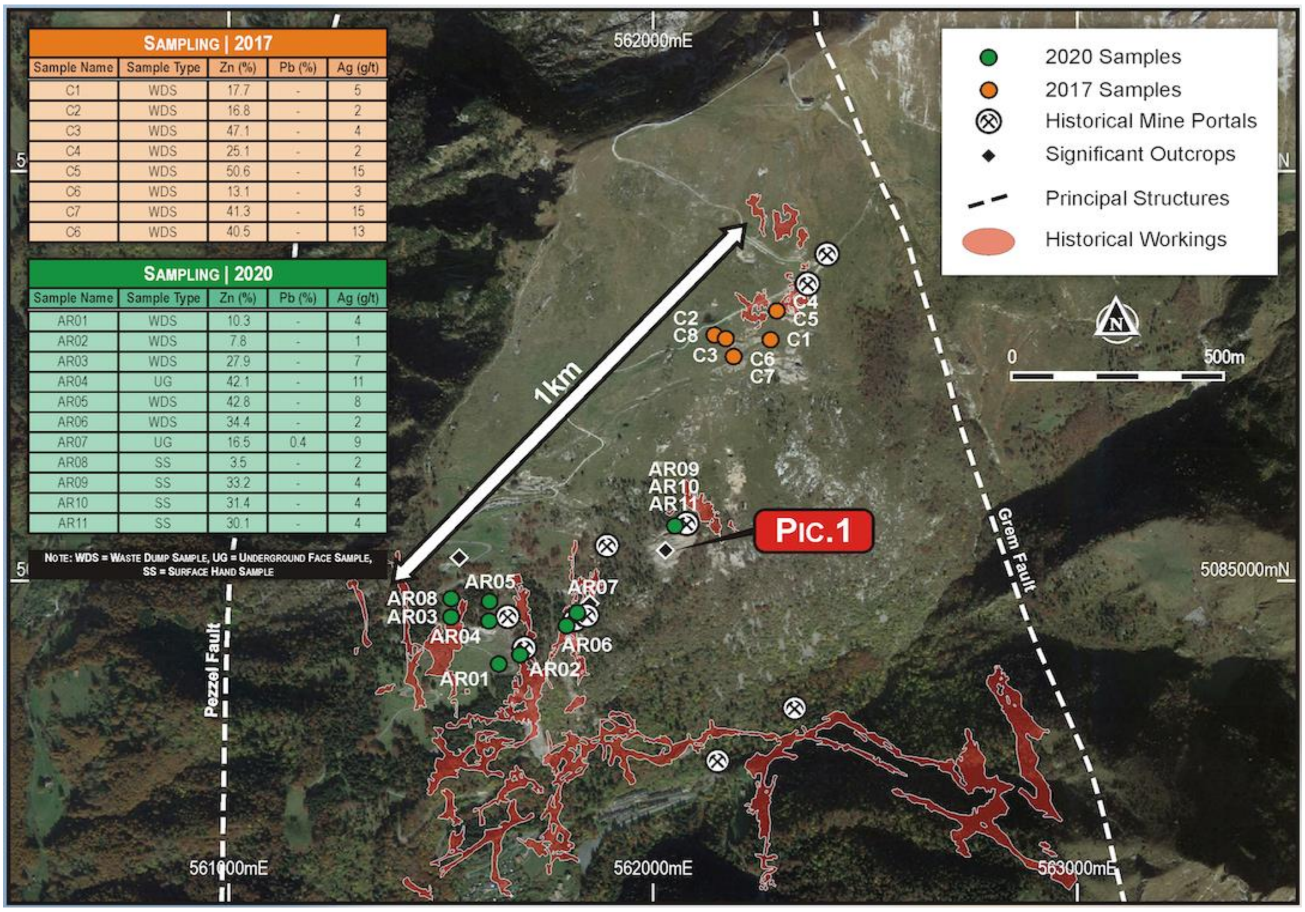
Arera Sampling Program

At Arera, Alta geologists conducted grab and chip sampling on the available outcrops, sidewalls of the underground openings and from the surface sulphide 'waste' dumps, the results are shown in Table 2 and demonstrate the generally high-grade nature of the sulphide mineralisation sampled.

Arera is an historical mining area and a part of the Gorno mining operations that started exploitation prior to WWII and with production lasting into the 1950s. Based on the Company's field investigations it is clear that the Arera mining operations ceased with the primary sulphide mineralisation remaining in-situ. Importantly, Arera is only one of several historical oxide mining areas within the Gorno exploration licence, all of which now provide opportunities for the Company to explore for their primary sulphide mineralisation.

Originally oxide material was extracted and processed at small oxide roasting plants near the towns of Oltre il Colle and Zorzone and then from 1952 at the Pontenossa hydrometallurgical plant located near the town of Gorno; which continues to operate in its present form treating residual dust collected from steel works in the north of Italy. A specific focus on the commercial mining of sulphide mineralisation only came about with the construction of the Italian zinc and lead sulphide smelters by SAMIM in the 1970s, one of which is now Glencore's Portovesme Smelter, on the island of Sardinia, prior to that there was no efficient method of extraction of zinc and lead from primary sulphide minerals available to the Gorno Mine.

Arera was chosen for sampling as the upper levels of the workings are close to surface and easily accessible from numerous underground openings. It is the intention to study the potential of the primary sulphide mineralisation at depth thereby ensuring that the Company's investigations leave no surface footprint. Figure 4 illustrates a plan view showing the sampling locations adjacent to the historical mining at Arera.



SAMPLING | 2017

Sample Name	Sample Type	Zn (%)	Pb (%)	Ag (g/t)
C1	WDS	17.7	-	5
C2	WDS	16.8	-	2
C3	WDS	47.1	-	4
C4	WDS	25.1	-	2
C5	WDS	50.6	-	15
C6	WDS	13.1	-	3
C7	WDS	41.3	-	15
C6	WDS	40.5	-	13

SAMPLING | 2020

Sample Name	Sample Type	Zn (%)	Pb (%)	Ag (g/t)
AR01	WDS	10.3	-	4
AR02	WDS	7.8	-	1
AR03	WDS	27.9	-	7
AR04	UG	42.1	-	11
AR05	WDS	42.8	-	8
AR06	WDS	34.4	-	2
AR07	UG	16.5	0.4	9
AR08	SS	3.5	-	2
AR09	SS	33.2	-	4
AR10	SS	31.4	-	4
AR11	SS	30.1	-	4

Figure 4: Surface plan view showing the Arera sampling locations & results

Table 2: All grab & chip sampling from the Arera historical mining area

Sample ID	Sample	Ag	Zn	Pb	Pb+Zn
	Location	g/t	%	%	%
2020 Campaign:					
AR01	WDS	4	10.3	0.0	10.3
AR02	WDS	1	7.8	0.0	7.8
AR03	WDS	7	27.9	0.0	27.9
AR04	UG	11	42.1	0.0	42.1
AR05	WDS	8	42.8	0.0	42.8
AR06	WDS	2	34.4	0.0	34.4
AR07	UG	9	16.5	0.4	16.9
AR08	SS	2	3.5	0.0	3.5
AR09	SS	4	33.2	0.0	33.2
AR10	SS	4	31.4	0.0	31.4
AR11	SS	4	30.1	0.0	30.1
2017 Campaign:					
C1	WDS	5	17.7	0.0	17.7
C2	WDS	2	16.8	0.0	16.8
C3	WDS	4	47.1	0.0	47.1
C4	WDS	2	25.1	0.0	25.1
C5	WDS	15	50.6	0.0	50.6
C6	WDS	3	13.1	0.0	13.1
C7	WDS	15	41.3	0.0	41.3
C8	WDS	13	40.5	0.0	40.5

Photographs of the distinctly visible sulphide mineralisation typical at both Arera and Fontanone are shown in Figure 5.

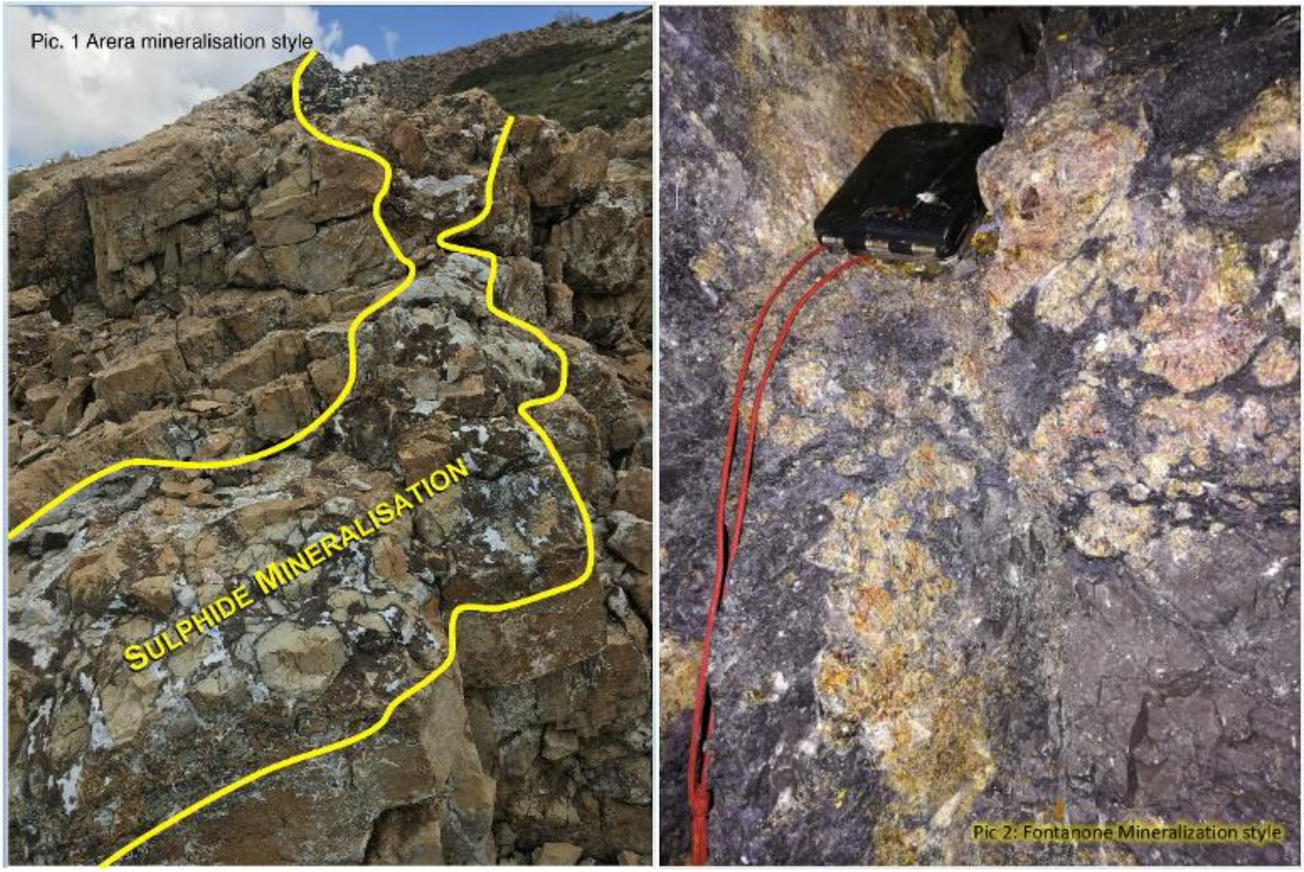


Figure 5: Photographs of the sulphide mineralisation present at Arera (left) & Fontanone (right)

Pian Bracca Drilling Update and Next Steps

Drilling has so far focussed on testing the potential mineral extensions of Pian Bracca to the west, with the next drilling now planned to test for extensions to the north-east and south-east. To maximise efficient logistics drill pad locations have so far been focussed solely on the 990m RL underground level, which has limited the extent of drill access to the west. Further western extension drilling will next take place from the 940m RL level after moving the drill-rig down to that level. Also, small tunnel dimensions relative to the drill rig size, have meant that a second (low profile drill rig) has been sourced by our contractor and will be mobilised to drill Pian Bracca south-east and thereafter the Ponente area.

Sample intersections from recent drilling have been dispatched to the laboratory and the Company will provide updates as the assay results become available.

In addition to drilling our geological field reconnaissance continues to search for new potential areas of mineralisation and to gain a better understanding of the geology to feed into the detailed structural modelling and analysis taking place.

During Q4, pole-dipole Induced-Polarity (IP) geophysics will be trialled from surface over the shallow lying Metallifero geology of the Pian Bracca north area. In 2018 this technique was used underground at Pian Bracca and clearly delineated the chargeable anomalies associated with massive sulphide mineralisation that have been successfully drilled. If also successful from surface, IP will have widespread application on the Gorno Exploration licence to explore for new massive sulphide mineralisation where mapping of outcrops has confirmed widespread occurrences of the Metallifero limestone which hosts that mineralisation.

Authorised for ASX release by Mr Geraint Harris (Managing Director).

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Competent Person Statement

Information in this release that relates to Exploration Results is based on information prepared or reviewed by Dr Marcello de Angelis, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Dr de Angelis is a Director of Energia Minerals (Italia) Srl and Strategic Minerals Italia Srl (controlled entities of Alta Zinc Limited) and a consultant of Alta Zinc Limited. Dr de Angelis has 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". Dr de Angelis consents to the inclusion in this release of the matters based on their information in the form and context in which it appears.

Table 3: Position of drill hole collars (UTM-WGS84)

Hole ID	Easting	Northing	Elevation	Azimuth (TN)	Dip
	m	m	m	degree	degree
RP34	559431.4	5084085	609.859	170	45
RP36	559431.4	5084085	609.859	170	0
RP37	559367.2	5084038	610.195	160	45
RP40	560168.8	5084544	605.721	171	55
RP46	559319.4	5084003	610.402	160	0
RP52	561318.6	5084949	607.65	170	45
RP53	561320.6	5084950	606.65	170	0
RP59	561473.9	5084990	607.4	180	15
RP62	561543.3	5084990	607.86	150	7
RP63	561544.7	5084990	608.86	130	45
RP64	561614.4	5084993	609.11	210	7

Table 4: Position of other sample locations (UTM-WGS84)

Hole ID	Easting	Northing	Elevation	Sample Type
	m	m	m	
AR01	561,634	5,084,871	1,440	WDS
AR02	561,698	5,084,884	1,440	WDS
AR03	561,619	5,084,948	1,502	WDS
AR04	561,619	5,084,948	1,476	UG
AR05	561,619	5,084,948	1,475	WDS
AR06	561,808	5,084,962	1,469	WDS
AR07	561,819	5,084,980	1,488	UG
AR08	561,524	5,084,956	1,480	SS
AR09	562,099	5,085,169	1,565	SS
AR10	562,099	5,085,169	1,565	SS
AR11	562,099	5,085,169	1,565	SS
C1	562331	5085582	1732	WDS
C2	562149	5085602	1736	WDS
C3	562192	5085573	1727	WDS
C4	562322	5085659	1764	WDS
C5	562322	5085659	1764	WDS
C6	562201	5085535	1716	WDS
C7	562201	5085535	1716	WDS
C8	562149	5085602	1736	WDS

Table 5: Assay results of all samples

Sample ID	Hole ID	From (m)	To (m)	Length (m)	Ag	Pb	Zn
					g/t	%	%
RP34_0_41	RP34	0.0	41.0	41.0	NA	0.0	0.0
RP34_41_42	RP34	41.0	42.0	1.0	NA	0.0	0.0
RP34_42_43	RP34	42.0	43.0	1.0	NA	7.1	1.4
RP34_43_44	RP34	43.0	44.0	1.0	NA	1.1	0.3
RP34_44_45	RP34	44.0	45.0	1.0	NA	0.6	0.1
RP34_45_46	RP34	45.0	46.0	1.0	NA	0.2	0.0
RP34_46_47	RP34	46.0	47.0	1.0	NA	4.0	0.6
RP34_47_48	RP34	47.0	48.0	1.0	NA	2.8	0.4
RP34_48_49	RP34	48.0	49.0	1.0	NA	1.0	0.2
RP34_49_50	RP34	49.0	50.0	1.0	NA	4.0	0.8
RP34_50_51	RP34	50.0	51.0	1.0	NA	1.0	0.2
RP34_51_52	RP34	51.0	52.0	1.0	NA	0.0	0.0
RP34_52_53	RP34	52.0	53.0	1.0	NA	0.0	0.0
RP34_53_56.5	RP34	53.0	56.5	3.5	NA	0.0	0.0
RP36_0_37	RP36	0.0	37.0	37.0	NA	0.0	0.0
RP36_37_38	RP36	37.0	38.0	1.0	NA	0.1	0.0
RP36_38_39	RP36	38.0	39.0	1.0	NA	2.0	0.4
RP36_39_40	RP36	39.0	40.0	1.0	NA	0.9	0.2
RP36_40_41	RP36	40.0	41.0	1.0	NA	0.4	0.0
RP36_41_55.5	RP36	41.0	55.5	14.5	NA	0.0	0.0
RP36_55.5_56.5	RP36	55.5	56.5	1.0	NA	0.2	0.0
RP36_56.5_57.5	RP36	56.5	57.5	1.0	NA	0.5	0.0
RP36_57.5_58.5	RP36	57.5	58.5	1.0	NA	0.6	0.3
RP36_58.5_59.5	RP36	58.5	59.5	1.0	NA	0.0	0.0
RP36_59.5_60.5	RP36	59.5	60.5	1.0	NA	0.1	0.0
RP36_60.5_61.5	RP36	60.5	61.5	1.0	NA	0.0	0.0
RP36_61.5_62.5	RP36	61.5	62.5	1.0	NA	0.4	0.1
RP36_62.5_63.5	RP36	62.5	63.5	1.0	NA	15.5	2.7
RP36_63.5_64.5	RP36	63.5	64.5	1.0	NA	14.3	3.2
RP36_64.5_65.5	RP36	64.5	65.5	1.0	NA	14.2	2.4
RP36_65.5_66.5	RP36	65.5	66.5	1.0	NA	8.1	2.5
RP36_66.5_67.5	RP36	66.5	67.5	1.0	NA	6.3	1.2
RP36_67.5_68.5	RP36	67.5	68.5	1.0	NA	0.2	0.0
RP36_68.5_69.5	RP36	68.5	69.5	1.0	NA	0.0	0.0
RP36_69.5_79.5	RP36	69.5	79.5	10.0	NA	0.0	0.0
RP37_0_14	RP37	0.0	14.0	14.0	NA	0.0	0.0
RP37_14_15	RP37	14.0	15.0	1.0	NA	8.5	0.8
RP37_15_16	RP37	15.0	16.0	1.0	NA	0.4	0.0
RP37_16_17	RP37	16.0	17.0	1.0	NA	0.4	0.0
RP37_17_18	RP37	17.0	18.0	1.0	NA	0.6	0.0
RP37_18_19	RP37	18.0	19.0	1.0	NA	0.0	0.0
RP37_19_20	RP37	19.0	20.0	1.0	NA	0.0	0.0

Sample ID	Hole ID	From (m)	To (m)	Length (m)	Ag	Pb	Zn
					g/t	%	%
RP37_20_27	RP37	20.0	27.0	7.0	NA	0.0	0.0
RP37_27_28	RP37	27.0	28.0	1.0	NA	0.0	0.0
RP37_28_29	RP37	28.0	29.0	1.0	NA	1.7	0.4
RP37_29_30	RP37	29.0	30.0	1.0	NA	0.3	0.0
RP37_30_31	RP37	30.0	31.0	1.0	NA	0.1	0.0
RP37_31_32	RP37	31.0	32.0	1.0	NA	16.3	3.9
RP37_32_33	RP37	32.0	33.0	1.0	NA	11.8	3.3
RP37_33_34	RP37	33.0	34.0	1.0	NA	12.1	3.6
RP37_34_35	RP37	34.0	35.0	1.0	NA	18.0	4.0
RP37_35_36	RP37	35.0	36.0	1.0	NA	25.3	5.2
RP37_36_37	RP37	36.0	37.0	1.0	NA	5.5	1.2
RP37_37_38	RP37	37.0	38.0	1.0	NA	1.4	0.3
RP37_38_39	RP37	38.0	39.0	1.0	NA	1.4	0.4
RP37_39_40	RP37	39.0	40.0	1.0	NA	0.0	0.0
RP37_40_41	RP37	40.0	41.0	1.0	NA	0.0	0.0
RP37_41_52.5	RP37	41.0	52.5	11.5	NA	0.0	0.0
RP40_0_173.5	RP40	0.0	173.5	173.5	NA	0.0	0.0
RP40_173.5_174.5	RP40	173.5	174.5	1.0	NA	0.6	0.2
RP40_174.5_175.5	RP40	174.5	175.5	1.0	NA	3.8	1.5
RP40_175.5_176.5	RP40	175.5	176.5	1.0	NA	5.1	1.4
RP40_176.5_177.5	RP40	176.5	177.5	1.0	NA	0.6	0.3
RP40_177.5_178.5	RP40	177.5	178.5	1.0	NA	0.7	0.0
RP40_178.5_185.2	RP40	178.5	185.2	6.7	NA	0.0	0.0
RP46_0_8	RP46	0.0	8.0	8.0	NA	0.0	0.0
RP46_8_9	RP46	8.0	9.0	1.0	NA	0.2	0.0
RP46_9_10	RP46	9.0	10.0	1.0	NA	0.4	0.0
RP46_10_11	RP46	10.0	11.0	1.0	NA	0.5	0.0
RP46_11_12	RP46	11.0	12.0	1.0	NA	1.4	0.2
RP46_12_13	RP46	12.0	13.0	1.0	NA	0.3	0.0
RP46_13_16	RP46	13.0	16.0	3.0	NA	0.0	0.0
RP46_16_17	RP46	16.0	17.0	1.0	NA	0.5	0.0
RP46_17_18	RP46	17.0	18.0	1.0	NA	1.1	0.2
RP46_18_19	RP46	18.0	19.0	1.0	NA	9.1	1.4
RP46_19_20	RP46	19.0	20.0	1.0	NA	11.5	2.2
RP46_20_21	RP46	20.0	21.0	1.0	NA	12.5	2.6
RP46_21_22	RP46	21.0	22.0	1.0	NA	11.1	2.1
RP46_22_23	RP46	22.0	23.0	1.0	NA	11.8	2.5
RP46_23_24	RP46	23.0	24.0	1.0	NA	11.2	2.8
RP46_24_25	RP46	24.0	25.0	1.0	NA	11.9	2.9
RP46_25_26	RP46	25.0	26.0	1.0	NA	2.6	0.3
RP46_26_42	RP46	26.0	42.0	16.0	NA	0.0	0.0
RP52_0_15.9	RP52	0.0	15.9	15.9	NA	0.0	0.0
RP52_15.9_17	RP52	15.9	17.0	1.1	NA	0.4	0.2

Sample ID	Hole ID	From (m)	To (m)	Length (m)	Ag	Pb	Zn
					g/t	%	%
RP52_17_32.7	RP52	17.0	32.7	15.7	NA	0.0	0.0
RP52_32.7_33.7	RP52	32.7	33.7	1.0	NA	0.6	0.2
RP52_33.7_34.7	RP52	33.7	34.7	1.0	NA	11.2	2.3
RP52_34.7_35.7	RP52	34.7	35.7	1.0	NA	4.1	0.8
RP52_35.7_36.7	RP52	35.7	36.7	1.0	NA	0.6	0.1
RP52_36.7_37.7	RP52	36.7	37.7	1.0	NA	0.1	0.0
RP52_37.7_47.8	RP52	37.7	47.8	10.1	NA	0.0	0.0
RP53_0_67.8	RP53	0.0	67.8	67.8	NA	0.0	0.0
RP53_67.8_68.8	RP53	67.8	68.8	1.0	NA	0.3	0.0
RP53_68.8_69.6	RP53	68.8	69.6	0.8	NA	41.0	9.8
RP53_69.6_70.6	RP53	69.6	70.6	1.0	NA	0.2	0.0
RP53_70.6_91	RP53	70.6	91.0	20.4	NA	0.0	0.0
RP59_0_19.7	RP59	0.0	19.7	19.7	NA	0.0	0.0
RP59_19.7_20.7	RP59	19.7	20.7	1.0	NA	0.1	0.0
RP59_20.7_21.7	RP59	20.7	21.7	1.0	NA	9.8	0.4
RP59_21.7_22.7	RP59	21.7	22.7	1.0	NA	21.5	0.4
RP59_22.7_23.7	RP59	22.7	23.7	1.0	NA	9.6	0.3
RP59_23.7_24.7	RP59	23.7	24.7	1.0	NA	0.2	0.0
RP59_24.7_85.5	RP59	24.7	85.5	60.8	NA	0.0	0.0
RP62_0_6.9	RP62	0.0	6.9	6.9	NA	0.0	0.0
RP62_6.9_8.5	RP62	6.9	8.5	1.6	NA	1.2	0.3
RP62_8.5_13.5	RP62	8.5	13.5	5.0	NA	0.0	0.0
RP62_13.5_14.5	RP62	13.5	14.5	1.0	NA	0.6	0.4
RP62_14.5_15.5	RP62	14.5	15.5	1.0	NA	0.2	0.2
RP62_15.5_20	RP62	15.5	20.0	4.5	NA	0.0	0.0
RP62_20_21.2	RP62	20.0	21.2	1.2	NA	7.0	8.9
RP62_21.2_22	RP62	21.2	22.0	0.8	NA	6.9	9.6
RP62_22_22.6	RP62	22.0	22.6	0.6	NA	3.5	3.1
RP62_22.6_23.6	RP62	22.6	23.6	1.0	NA	3.1	2.4
RP62_23.6_24.5	RP62	23.6	24.5	0.9	NA	4.8	4.0
RP62_24.5_26.3	RP62	24.5	26.3	1.8	NA	1.1	0.5
RP62_26.3_27.9	RP62	26.3	27.9	1.6	NA	1.1	0.5
RP62_27.9_28.9	RP62	27.9	28.9	1.0	NA	0.8	0.3
RP62_28.9_30	RP62	28.9	30.0	1.1	NA	0.9	0.3
RP62_30_31.5	RP62	30.0	31.5	1.5	NA	1.6	0.3
RP62_31.5_38	RP62	31.5	38.0	6.5	NA	0.0	0.0
RP63_0_16.4	RP63	0.0	16.4	16.4	NA	0.0	0.0
RP63_16.4_17.4	RP63	16.4	17.4	1.0	NA	23.5	3.0
RP63_17.4_18.4	RP63	17.4	18.4	1.0	NA	0.5	0.1
RP63_18.4_19.4	RP63	18.4	19.4	1.0	NA	1.3	0.3
RP63_19.4_20.4	RP63	19.4	20.4	1.0	NA	0.6	0.0
RP63_20.4_23.4	RP63	20.4	23.4	3.0	NA	0.4	0.0
RP63_23.4_25.4	RP63	23.4	25.4	2.0	NA	0.3	0.0

Sample ID	Hole ID	From (m)	To (m)	Length (m)	Ag	Pb	Zn
					g/t	%	%
RP63_25.4_26	RP63	25.4	26.0	0.6	NA	0.2	0.0
RP63_26_28	RP63	26.0	28.0	2.0	NA	0.5	0.0
RP63_28_29	RP63	28.0	29.0	1.0	NA	0.6	0.0
RP63_29_30	RP63	29.0	30.0	1.0	NA	0.4	0.0
RP63_30_32.35	RP63	30.0	32.3	2.3	NA	2.3	0.3
RP63_32.35_34.7	RP63	32.3	34.7	2.4	NA	1.1	0.2
RP63_34.7_37.05	RP63	34.7	37.0	2.3	NA	0.4	0.0
RP63_37.05_38.4	RP63	37.0	38.4	1.4	NA	0.5	0.0
RP63_38.4_39.4	RP63	38.4	39.4	1.0	NA	0.3	0.0
RP63_39.4_41.4	RP63	39.4	41.4	2.0	NA	0.2	0.0
RP63_41.4_42.4	RP63	41.4	42.4	1.0	NA	0.7	0.0
RP63_42.4_43.4	RP63	42.4	43.4	1.0	NA	0.8	0.0
RP63_43.4_44.4	RP63	43.4	44.4	1.0	NA	0.6	0.0
RP63_44.4_45	RP63	44.4	45.0	0.6	NA	0.7	0.0
RP64_0_1	RP64	0.0	1.0	1.0	NA	10.2	2.2
RP64_1_2	RP64	1.0	2.0	1.0	NA	4.3	0.3
RP64_2_3	RP64	2.0	3.0	1.0	NA	0.3	0.0
RP64_3_26	RP64	3.0	26.0	23.0	NA	0.0	0.0

JORC Code, 2012 Edition – Table 6 Surface Sampling

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• Samples were collected using two methods: first, samples are collected from the surface from old sphalerite dumps adjacent to historical workings, and secondly from the outcrops present on the Arera slope. The samples were dispatched using a reputable contract courier from site to the laboratory where it was 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. • No QAQC was completed by Energia, however lab QAQC was done and returned with no issues being noted. The nature of the samples is not representative of a grade thickness, it illustrates the localised peak grade the visible massive sulphide expressions can achieve. • Mineralisation can be both contained in oxide 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. • Energia has exhaustive procedures and protocols in place to ensure that 'Industry Standard' is met as a minimum.
Drilling techniques	• *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).*	• No drilling completed
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximize sample recovery and ensure representative nature of the samples.*	• Not applicable.

Criteria	JORC Code explanation	Commentary
	• *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.*	
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Basic logging including recognition of stratigraphy and type of mineralisation was carried only. • Qualitative only. • All samples were logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• No sub sampling was carried out. • Not applicable. • Not applicable. • Not applicable. • No duplicates were taken. • Sample weights were between 0.4 and 1.3 kg.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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*	• 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. • No geophysical tools, spectrometers or XRF instruments have been used. • QA/QC samples were not used.

Criteria	JORC Code explanation	Commentary
	established.	
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Samples were collected by 3 Energia Minerals personnel working in unison. • Not applicable. • Digital records and reports were generated. • No adjustment of assay data is required.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Locations were established using a hand held GPS for surface samples. • The grid system used at Gorno is WGS_1984_UTM_Zone_32N. Easting and Northing are stated in metres. • Topographic control for surface samples was established with a GPS and detailed contour maps. Topographic control for surveyed infrastructure is from a total station measurements tied into multiple Italian Survey Control Points.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Data spacing is random and reflects the location of mineral occurrences only. • This data cannot be used to establish a Mineral Resource. • No sample compositing has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Not applicable. • Not applicable.
Sample security	• *The measures taken to ensure sample security.*	• 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.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Not applicable.

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• The Gorno Lead Zinc Mineral District is located in the north of Italy, in the Lombardy Province. The Gorno Project is made up four (4) granted exploration permits and one (1) Mining Licence. These leases are 100% owned and operated by Energia Italia, a 100% owned subsidiary of Alta Zinc Ltd. All permits are valid at the time of this report. • All tenements are in good standing and no impediments to operating are currently known to exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• A significant amount of work was undertaken by ENI subsidiaries in the region, notably SAMIM, an Italian state-owned company and part of the ENI group. Drilling works completed in the period between 1964-1980 have been compiled and digitised by Alta Zinc. A significant amount of work has been completed in the Gorno Mineral District 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 Mineral District in 1978, and the project closed in 1980.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Gorno Mineral District is an Alpine Type Lead-Zinc deposit (similar to Mississippi Valley Type Lead Zinc deposits). The mineralisation is broadly stratabound with some breccia bodies and veining also observed. It displays generally simple mineralogy of low iron sphalerite, galena, pyrite, and minor silver. Mineralisation is hosted by the Metallifero Formation which consists of predominantly limestones with interbedded shales in the higher parts of the sequence. 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.
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar*	• Information material to the understanding of the exploration results is provided in the text of the release. • No information has been excluded.

Criteria	JORC Code explanation	Commentary
	○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not applicable. • Not applicable. • No metal equivalents are used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• 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. • The mineralisation is currently thought to be roughly tabular and dipping to the south-south west at an angle of approximately 5 degrees. • True widths of intercepts are not known at this stage.
Diagrams	• *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.*	• Please refer to the Figures for these data.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• The results reported in the above text are comprehensively reported in a balanced manner.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk*	• Not applicable

Criteria	JORC Code explanation	Commentary
	samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Future works at Gorno will test the continuity of mineralisation at Pian Bracca (including Pian Bracca down-plunge), the Ponente area, Colonna Fontanone, and regional exploration works. • Please refer to the Figures for areas that are open to extensions.

JORC Code, 2012 Edition – Table 7 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	• *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.* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• Samples were collected from diamond drill core for assay. Collection method is unknown. • Measures taken to ensure sample representivity are unknown. • Information gathered from publicly available reports lodged at the Bergamo State Archives by SAMIN. • Exploration work was undertaken in the period between 1978-1980 and would have been completed to industry standards at the time.
Drilling techniques	• *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).*	• Diamond Core holes: ○ AQ diamond core ○ Non oriented core ○ Coring bit used ○ Unknown rig type

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximize sample recovery and ensure representative nature of the samples.* • *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.*	• Assessment of core recoveries: Unknown not detailed in reports. • Measures to maximize sample recovery: Unknown not detailed in reports. • Not enough information is currently available to establish if a bias exists between sample recovery and grade. However twin holes twinning historical holes show good correlation with historical results.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged*	• All holes were geologically logged on geological intervals. Information pertaining to colour, grainsize, lithology and alteration were manually logged on paper. The level of detail logged would be sufficient to support Mineral Resource estimation. • All of the logging was qualitative (subjective opinion) in nature. • All holes were logged over their entire length, except where recovery was zero (which was rare, and noted in the logs as no recovery). No known core photographs exist.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Whether the core was cut or how much core was assayed was not detailed in the reports. • Non-Core, not applicable. • Sample preparation techniques are not detailed in reports. • Quality control procedures not documented in reports. • Measures taken to ensure representative nature of samples not detailed in reports. • It is not known whether sample sizes appropriate to the grain size were collected.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• The nature, quality and appropriateness of assaying techniques is unknown. • No geophysical or other tools were used. • Quality Control procedures implemented are unknown.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Significant intersections, drill hole locations, and mineralisation in view have been checked by Energia Minerals personnel and consultants in June 2012 and March 2010. • No historical twin holes are known to have been drilled. • All data has been compiled from hand written reports and entered into Excel templates. These templates are then validated in Micromine. This information is then sent to Energia's in house database manager for further validation. If corrections 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. • No adjustment of assay data is known to have be applied.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Collar locations for all holes were digitized from hand drawn maps and cross checked against multiple maps. • The grid system used at Gorno is WGS_1984_UTM_Zone_32N. Easting and Northing are stated in meters. • Topographic control is from control points noted on both hand drawn maps and from RLs noted on geological logs.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Drill hole orientation and spacing is non-uniform with multiple holes often being drilled from a single exploration adit. • The data spacing and distribution is currently insufficient to establish an appropriate degree of geological and grade continuity appropriate for classification of Mineral Resources in the Colonna Fontanone area. • Some holes have been sample composited physically (these are a minority of holes and no justification was given in the geological logs). In general, all holes are reported on a 1m assay interval. Mathematical compositing has not been applied to any data except for that compiled for reporting in ASX releases to describe intersections.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• 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. • Sampling bias due to drilling orientation and mineralised structure orientation is probable and with information currently at hand is unquantifiable. The current interpretation shown in the Figures above illustrates the most probable geometry.
Sample security	• *The measures taken to ensure sample security.*	• Measures taken to ensure sample security are unknown.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of sampling techniques or data are known to exist. 1 in 10 checks on all compiled and entered data have been completed by Energia Minerals.