

# **QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2019**

#### **Highlights**

#### First milestones completed at Hualilan Gold Project

- Results from the channel and underground stockpile sampling program of 70 bulk samples delivered an average grade of 15.0g/t gold, 75.5g/t silver and 6.8% zinc. This exceeded the gold grades in the historical foreign resource estimate by approximately 20%
- Interpretation of the channel sampling results also defined a number of new zones of highgrade gold mineralisation which have never been drilled
- Maiden 2,000 metre drilling program has commenced which will be conducted in two tranches, with first results expected during this quarter

# • Exciting First Geophysical Survey Results Received for El Guayabo Gold/Copper Project

- Two large exploration targets identified, both below the limit of historic drilling which are open at depth
- Field mapping and sampling program has commenced to follow up surface mineralisation identified during regional scale mapping

#### Stuart Munroe appointed as Exploration Manager

Challenger Exploration (ASX: CEL) ("**CEL**" or the "**Company**") is pleased to provide an update on activities at its Gold and Copper projects in Argentina and Ecuador for the period ending 30 September 2019.

#### **HUALILAN GOLD PROJECT - ARGENTINA**

#### **Sample Programme Results**

Results were received for all 70 bulk samples, submitted for assay from the preliminary underground sampling program. The final samples included four additional samples taken from Cerro Sur and the re-assaying of the 3 samples from Cerro Norte, which exceeded the 30% detection limit for zinc. The recently received assay results are shown In Table 1 below. A complete listing of all sample results for the program can be found in ASX Release 25 September 2019.



Sample	Location	Sample	Sample	Au	Ag	Zn	Pb	Cu	Au Equiv
Number		Туре	Length						
			(m)	(g/t)	(g/t)	%	%	%	(g/t)
485213	Sentazon	Bulk	-	1.2	9.0	9.09	0.05	0.06	6.9
485214	Sentazon	Bulk	-	20.8	99.0	0.91	0.36	0.13	22.7
485215	Sentazon	Bulk	-	0.1	8.0	8.84	0.39	0.10	5.7
485216	Muchilera	Bulk	-	38.8	242.0	2.28	0.22	0.03	43.0
485135	Doña Justa Pit (re-assay)	Channel	1	0.3	0.0	37.69	0.27	0.70	23.8
485141	Main Manto (re-assay)	Channel	1	0.0	66.0	42.53	0.71	4.00	31.9
485148	Main Manto (re-assay)	Channel	1	4.4	22.0	34.15	2.15	0.87	26.4

Table 1: Recent Sampling results from 2019 Hualilan Gold Project Sampling Programme

#### **Discussion of Results**

The average of all 70 bulk samples taken at the Hualilan project from the validation program were 15.0 g/t gold, 75.5 g/t silver, and 6.8% zinc. This compares favourably to the grades in the foreign resource estimate. TSE listed La Mancha Resources reported in their Foreign Resource estimate of 2004, a combined resource for the Hualilan Gold Project grading 13.7g/t gold equivalent (Source: La Mancha Resources Toronto Stock Exchange Release dated 14 May 2003). (refer to foreign resource estimate below)

#### **Mineralisation at Cerro Norte**

Eight channel samples taken in the main all decline returned significant mineralisation as outlined in Table 2. These samples define a high-grade zone of mineralisation and remains open.

Results included sample #485149, which returned 110 g/t gold, 41.0 g/t silver and 0.8% zinc with a true width of 1.5m. Sample #485146 returned 21.4 g/t gold, 106 g/t silver, 18.2% zinc and 5.9% lead had a true width of 4m. Sample #485140 was taken in the P7 decline across a 1.2m true width section and returned 77.7 g/t gold, 125 g/t silver, 2.1% zinc and 1.6% lead.

<sup>\*</sup> Gold equivalent values were calculated using a price of US\$1300 for Gold, US\$15 for Silver, US\$2500t Zinc, US\$6000t Copper. (Recoveries were not factored into the calculation of Gold equivalents given metallurgical test work is preliminary in nature)
\* Location and other data given in JORC Table 1



Sample	Location	Sample	Sample	Au	Ag	Zn	Pb	Cu	Au Equiv
Number		Туре	Length						
			(m)	(g/t)	(g/t)	%	%	%	(g/t)
485140	Main Manto	Channel	1.2	77.7	125.0	2.13	1.64	0.12	80.6
485141	Main Manto	Channel	1	0.0	66.0	42.53	0.71	4.00	31.9
485142	Main Manto	Channel	1.	2.0	89.0	7.18	0.35	3.26	12.0
485145	Main Manto	Channel	1	0.2	48.0	9.45	0.68	0.78	7.5
485146	Main Manto	Channel	1	21.4	106.0	18.20	5.87	1.75	36.0
485147	Main Manto	Channel	1	13.4	17.0	7.33	0.06	0.23	18.3
485148	Main Manto	Channel	1	4.4	22.0	34.15	2.15	0.87	26.4
485149	Main Manto	Channel	1	110.0	41.0	0.77	1.07	0.05	111.0

Table 2 - Showing Channel Sample results beneath Cerro Norte Mineralisation

#### New Zones of Mineralisation - Sentazon Cerro Sur

Sample number 485214 returned 20.8 g/t gold, 99.0 g/t silver and 0.91% zinc, samples #485213 and #485215 are bulk samples from Sentazon at Cerro Sur. **The average grade of all 11 samples from Sentazon taken by CEL is 17.3 g/t gold, 35 g/t silver, 3.9% zinc and 2.7% copper.** 

Currently, Sentazon has seen relatively few drill holes. Additional drilling is expected to extend the known mineralisation. CEL's underground sampling program at Sentazon has discovered two new previously undrilled zones of mineralisation covering 250m of strike which may join to form one larger zone. These two zones are defined by:

- i. Samples 485121-485125 define a north-south trend which covers 50m of strike and remains open in all directions and has not been drilled. CEL's sampling in this zone returned grades of up to 132 g/t gold and 65 g/t silver (sample 485121).
- ii. Samples 485127-485130 define a north-south trend which covers 60m of strike and remains open in all directions which also has never been drilled. CEL's sampling in this zone returned grades of up to 31.7 g/t gold and 133 g/t silver (sample 485127).

<sup>\*</sup> Gold equivalent values were calculated using a price of US\$1300 for Gold, US\$15 for Silver, US\$2500t Zinc, US\$6000t Copper. Recoveries were not factored into the calculation of Gold equivalents given metallurgical test work is preliminary in nature)

\* Location and other data given in JORC Table 1



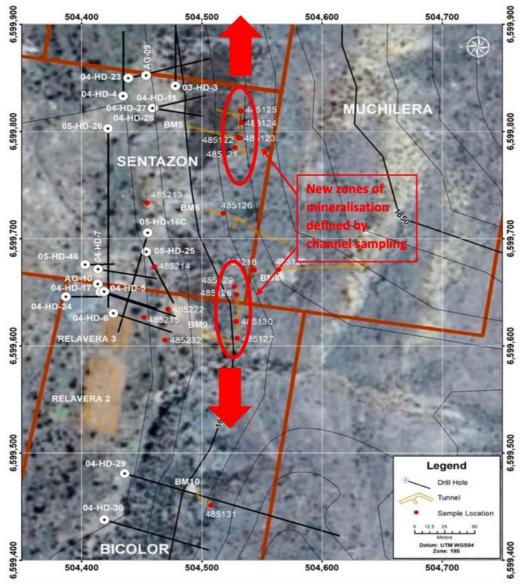


Figure 1 - Plan View Sentazon Zone Sample Locations

#### **Hualilan Maiden Drilling Program**

The Mining Ministry of San Juan issued Water Usage and Waste Licenses to allow the Company to commence its maiden drilling program. Further, the Mining Ministry approved the Environmental Impact Statements (EIS) and issued the Environmental Licence for drilling at both Cerro Sur and Cerro Norte.

The 2,000 metre drilling program at the Hualilan Gold Project in Argentina is being conducted in two tranches to allow evaluation and follow-up of results from the first campaign. The initial 1,055 metre program is progressing extremely well, comprising 9 holes, with 4 holes at Cerro Norte and 5 holes at Cerro Sur. The program includes 8 holes designed to extend the existing mineralisation and a twin hole to validate earlier drilling.



The first hole (GNDD-001) has been completed at 109m, in line with management's pre-drill prognosis. GNDD-001 was designed to test for possible extensions of the main manto mineralisation at Cerro Norte approximately 25 metres down-dip from drill hole DDH-40. Pre-drilling prognosis was for the possible extensions of this mineralisation to be encountered from 70-90 metres down hole in GNDD-001. Preliminary logging reported brecciation and veining with sulphide and strong fracture oxidation from 27-29 metres and 70-90 metres downhole in GNDD-001. The Company is currently drilling hole GNDD-008.

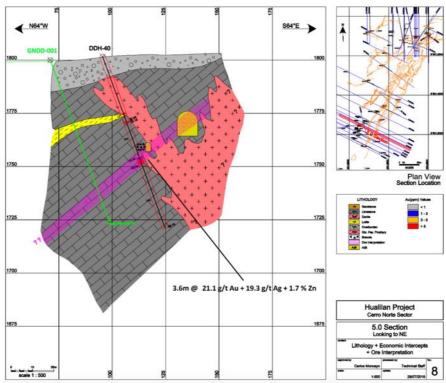


Figure 2 - Showing Location of GNDD-001

			8					
Drill hole		Interval		Total		Gold	Ag	Zn
(#)		From	То	(m)		(g/t)	(g/t)	(%)
DDH-40	from	41.7	44.6	2.9 m	@	0.4 g/t Au	5.4 g/t Ag	1.1 % Zn
	and	50.4	54.0	3.6 m	@	21.1 g/t Au	19.3 g/t Ag	1.7 % Zn
	inc	51.1	54.0	2.9 m	@	25.5 g/t Au	22.5 g/t Ag	2.0 % Zn
	and	62.1	66.6	4.6 m	@	0.1 g/t Au	2.3 g/t Ag	2.6 % Zn

Table 3 -Showing DDH-40 significant Intersections (refer ASX release 25 Feb 2019 for complete results)

					Depth		
Drill hole	Zone	East_UTM	North_UTM	(m)	Dip	dip_dir	(m)
GNDD-001	Cerro Norte	504808.00	6601332.92	1802.0	-57	115	109
DDH-40	Cerro Norte	504832.34	6601928.13	1801.7	-70	116	150

Table 4-Location data DDH-40 and GNDD-001



#### EL GUAYABO GOLD AND COPPER PROJECT - ECUADOR

#### **Geophysical Survey**

The Company contracted international geophysical company Quantec Geoscience, to conduct a distributed array 3D-MT (3D Magneto-Telluric) covering 16 square kilometres using its Spartan system. Two 2D IP/EMAP test lines were also collected using Quantec's highly acclaimed deep-earth imaging Titan electrical geophysical system. Quantec were contracted by Solgold to undertake 3DIP-MT (3D Induced Polarisation and Magneto-Telluric) survey over their Cascabel project In Ecuador.

Whilst conventional IP systems typically see to depths of around 400 metres at best, the Titan system can read IP effects to potential depths of 800 metres and beyond, and Spartan can read resistivity data to potential depths of 2 kilometres and beyond using magneto-telluric measurements.

The Spartan and Titan systems are a very sophisticated survey technique and were designed to image the existing breccia bodies (and their depth extensions), new breccia bodies, and to define porphyry targets to a depth of 2 kilometres. Only widely spaced airborne magnetics has previously been completed over the property.

#### **Discussion of Results**

Processed data has been received from Quantec, and preliminary interpretation of the chargeability (Figure 3) and resistivity data (Figure 4) completed for the north-south oriented IP test line.

The first target sits underneath some historic drill holes that confirmed a copper breccia down to 300 metres with the geophysics suggesting it goes down to at least 800 metres increasing in size and intensity at depth. It now appears that drill holes such as JDH-09, which intersected 112m @ 0.6% Copper + 0.7 g/t gold + 14.6 g/t silver, only intersected the lower intensity top of the target.

The second target has exactly the same properties as the first copper breccia target, but it is larger and there has been no exploration near it.

This field mapping program involved the collection of a number of samples of mineralised outcrop and representative rock units for measurement of MT and IP response which will be used to further refine the targets identified in the geophysics prior to drilling.

The IP Chargeability section is shown below in Figure 3. The profile extends from 0 metres (south) to 3,300 metres (north) with coverage extended  $\sim$ 800 metres beyond the concession boundary given sale / farmin approaches from surrounding concession holders. The line was designed to traverse the copper breccia to test for possible extensions at depth.



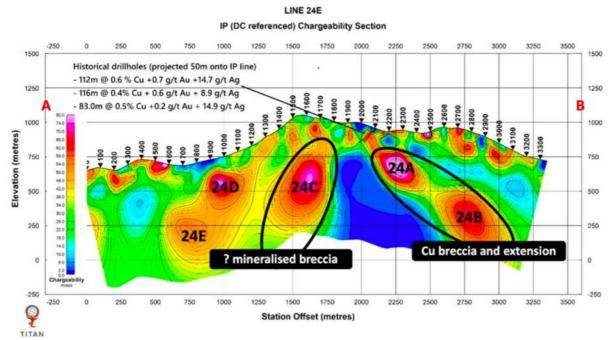


Figure 3 - IP Chargeability model along north-south IP line

The most noticeable feature on the chargeability section is a high chargeability zone starting just below site 2100 and dipping to the north (24A). This zone can be correlated with the copper breccia which was intersected by 6 drill holes as listed In Table 4. These drill holes and the known copper breccia mineralisation is shown on Figure 4. This chargeability-high increases in both width and intensity from 250m to 500m subsurface which is below the limit of the deepest drilling. This chargeability-high also shows a second higher grade zone (24B) which is approximately 500-800 metres sub surface.

The high chargeability response of the mineralised copper breccia, compared to all other known rock types intersected in the core, was confirmed by the program of measurement of chargeability, resistivity and Mag susceptibility response in the core which accompanied the survey. This program also indicated that in the copper breccia higher chargeability response also correlates with higher copper and gold grades.

A second main chargeability-high zone occurs approximately 600m south along strike (24C). This chargeability-high looks to be blind (does not reach surface), has a width of approximately 300 metres and extends at to at least 750 metres sub-surface. A program of field reconnaissance has commenced in the projected outcrop of this chargeability anomaly to check for signs of leakage from a mineralised system below. This chargeability-high could indicate another mineralised breccia analogous to the copper breccia. Additionally, there are two lower tenor chargeability anomalies further south along strike (24D) and (24E) on Figure 3.

#### IP resistivity results

The IP Resistivity section is shown below In Figure 4. Of note is that the more chargeable zone of the copper breccia (24A) can be correlated with a more conductive zone 24F. Similarly, we can also



correlate the more conductive zone 24G observed at 300-600 metres depth below site 2800N with the more chargeable zone which is interpreted as a deep extension of the copper breccia (24B).

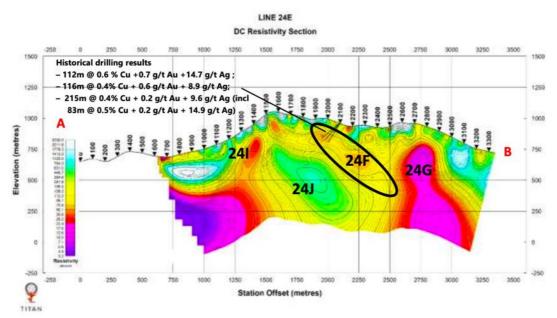


Figure 4 - DC 2D Resistivity model along north-south IP line

Drillhole (#)		Mineral	ised Inte To	Total (m)		Gold			Ag		Cu (%)		Azimuth (deg)	Ind (dea)	TD (m)
(#)		FIOIII	10	(III)		(g/t)			(g/t)		(70)		(ueg)	(deg)	(111)
JDH-006	from	17.99	89.6	71.6	m @	0.2	g/t Au	+	2.0	g/t Ag	0.10	% Cu	150	-45	302.7
	and	164.8	281	116.2	m @	0.6	g/t Au	+	8.9	g/t Ag	0.40	% Cu			
	inc	227.8	281.09	53.3	m @	1.2	g/t Au	+	13.2	g/t Ag	0.62	% Cu			
JDH-008	from	104.7	136.7	32.0	m @	0.1	g/t Au	+	3.6	g/t Ag	0.13	% Cu	150	-60	352.7
	and	249.08	316.15	67.1	m @	0.2	g/t Au	+	5.7	g/t Ag	0.21	% Cu			
	and	291.76	316.15	24.4	m @	0.5	g/t Au	+	9.2	g/t Ag	0.34	% Cu			
JDH-009	from	10.3	122.03	111.7	m @	0.7	g/t Au	+	14.6	g/t Ag	0.58	% Cu	150	-45	256.7
	inc	34.6	91.54	56.9	m @	0.2	g/t Au	+	19.1	g/t Ag	0.82	% Cu			
	and	201.4	205.4	4.0	m @	11.4	g/t Au	+	9.7	g/t Ag	0.01	% Cu			
	and	255.1	eoh	1.5	m @	0.7	g/t Au	+	1.5	g/t Ag	0.02	% Cu			
GGY-005	from	12	162	150.0	m @	0.4	g/t Au	+	11.0	g/t Ag	0.30	% Cu	145	-60	258.3
	inc	14	54	40.0	m @	0.6	g/t Au	+	25.5	g/t Ag	0.60	% Cu			
	and	180	194	14.0	m @	0.2	g/t Au	+	6.1	g/t Ag	0.22	% Cu			
GGY-008	from	16	271	255.0	m @	0.1	g/t Au	+	6.5	g/t Ag	0.24	% Cu	145	-75	312.3
	inc	235	271	36.0	m @	0.4	g/t Au	+	11.5	g/t Ag	0.50	% Cu			
GGY-011	from	14	229	215.0	m @	0.2	g/t Au	+	9.6	g/t Ag	0.36	% Cu	160	-60	241.6
	inc	14	97	83.0	m @	0.2	g/t Au	+	14.9	g/t Ag	0.50	% Cu			
	inc	202	229	27.0	m @	0.4	g/t Au	+	15.2	g/t Ag	0.80	% Cu			

Table 4 - Listing all historical drill holes targeting the copper breccia (Location data provided in JORC Table 1)



#### **KAROO BASIN - SOUTH AFRICA**

The Company continues to pursue its application for shale gas exploration rights in South Africa. As previously reported, the Department of Mineral Resources is progressing a new petroleum resources development bill, and the Minister reportedly indicated during his address in the debate on the Presidential State of the Nation Address in June that the bill will soon undergo public participation, as part of the cabinet and parliamentary approval processes.

#### **CORPORATE**

### **Exploration Manager Appointed**

Dr Stuart Munroe joined the Company in the role of Exploration Manager. Alongside Stuart, the Company has now assembled an experienced core team to progress the Hualilan Gold Project and El Guayabo Gold/Copper Project, including:

• Carlos Moncayo (Ecuador Country Manger and Chief Geologist)

Sergio Rotondo (Argentina Country Manager)
 Jorge Yunga (Senior Exploration Geologist)
 Fredy Jimenez (Senior Exploration Geologist)

Jesus Vasquez (Head of GIS - Geographical Information Systems)

Gabriela Sandoval (Geologist and Assistant GIS)Galo Guerrero (Environmental Manager)

• John King (Senior Technical Advisor) - Consultant

#### **Ends**

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#### **About Challenger Exploration**

Challenger Exploration Limited (ASX: CEL) is developing two key gold/copper projects in South America.

- 1. **Hualilan Project**, located in San Juan Province Argentina, is a near term development opportunity. It has extensive historical drilling with over 150 drill-holes and a Non-JORC historical resource (#1) of >600,000 Oz @ 13.7 g/t gold which remains open in most directions. In the 15 years prior to being acquired by CEL the project was dormant. CEL's focus over the coming 12 months will be to redefine the scope of the Hualilan Project to better determine the best means of development to seek to achieve early cash-flows.
- 2. El Guayabo Project was last drilled by Newmont Mining in 1995 and 1997 targeting gold in hydrothermal breccias. Historical drilling has demonstrated potential to host significant copper and associated gold and silver mineralisation. Historical drilling has returned a number of intersections of plus 100m of intrusion related breccia and vein hosted mineralisation. The Project has multiple targets including breccia hosted mineralization, an extensive flat lying late stage vein system and an underlying porphyry system target neither of which has been drill tested.
- 3. **Karoo Basin** provides a wildcard exposure to 1 million acres shale gas application in the world class Karoo Basin in South Africa in which Shell is the largest application holder in the basin.

#### Foreign Resource Estimate Hualilan Project

La Mancha Resources 2003 foreign resource estimate for the Hualilan Project ^									
Category	Tonnes (kt)	Gold Grade (g/t)	Contained Gold (koz)						
Measured	218	14.2	100						
Indicated	226	14.6	106						
Total of Measured & Indicated	445	14.4	206						
Inferred	977	13.4	421						
Total of Measured, Indicated & Inferred	1,421	13.7	627						

<sup>^</sup> Source: La Mancha Resources Toronto Stock Exchange Release dated 14 May 2003 - Independent Report on Gold Resource Estimate. Rounding errors may be present. Troy ounces (oz) tabled here

#### **Competent Person Statement - Exploration results**

The information in this release provided under ASX Listing Rules 5.12.2 to 5.12.7 is an accurate representation of the available data and studies for the material mining project. The information that relates to sampling techniques and data, exploration results and geological interpretation has been compiled by Mr John King who is a full-time employee of JRK Consulting Pty Ltd. Mr King is a member of the Mining and Metallurgical Society of America and a senior fellow of the Society for Economic Geologists in the USA. This is a Recognised Professional Organisation (RPO) under the Joint Ore Reserves Committee (JORC) Code.

<sup>\*\*</sup>I For details of the foreign non-JORC compliant resource and to ensure compliance with LR 5.12 please refer to the Company's ASX Release dated 22 February 2019. These estimates are foreign estimates and not reported in accordance with the JORC Code. A competent person has not done sufficient work to clarify the foreign estimates as a mineral resource in accordance with the JORC Code. It is uncertain that following evaluation and/or further exploration work that the foreign estimate will be able to be reported as a mineral resource. The company is not in possession of any new information or data relating to the foreign estimate that materially impacts on the reliability of the estimates or CEL's ability to verify the foreign estimates estimate as minimal resources in accordance with Appendix 5A [JORC Code). The company confirms that the supporting information provided in the initial market announcement on February 22 2019 continues to apply and is not materially changed



Mr King has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr King consents to the inclusion in this report of the matters based on information in the form and context in which it appears. The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

Appendix 1 - Schedule of Tenements

Project	Property Name	Tenure Title	Interest	Area	DNPM No	Status of
_		Holder	%	(ha)	of Area	Tenure
El Guayabo	El Guayabo	Torata Mining Resources S.A	earning 100%	281	COD225	Granted
Hualilan	Divisadero	Golden Mining S.R.L.	earning 75%	6	5448-M-1960	Granted
Hualilan	Flor de Hualilan	Golden Mining S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Pereyra y Aciar	Golden Mining S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Bicolor	Golden Mining S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Sentazon	Golden Mining S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Muchilera	Golden Mining S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Magnata	Golden Mining S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Pizarro	Golden Mining S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	La Toro	CIA GPL S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	La Puntilla	CIA GPL S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Pique de Ortega	CIA GPL S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Descrubidora	CIA GPL S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Pardo	CIA GPL S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Sanchez	CIA GPL S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	Andacollo	CIA GPL S.R.L.	as above	6	5448-M-1960	Granted
Hualilan	North of "Pizarro" Mine	Golden Mining S.R.L.	as above	1.9	195-152-C- 1981	Granted
Hualilan	South of "La Toro" Mine	CIA GPL S.R.L.	as above	1.9	195-152-C- 1981	Granted
Hualilan	Josefina	Golden Mining S.R.L.	as above	2570	30.591.654	Pending



						tion and	d Structure Data				
Sample ID	Coordinat	es (WGS84, U	JTM 19s)	Structu	ire		Sampling				
	East	North	Elevation	Strike	Dip_Dir	Width (m)	Sample Type	Sample Length (m)	Sample Dir		
485104	504560.4	6600127.3	1810	185	60_W	0.8	Channel	0.9	95		
485105	504578.0	6600087.0	1835	220	70_NW	5	Channel	3	140		
485106	504564.0	6600103.0	1835	95	85_SE	3?	Chip	-	-		
485107	504559.4	6600071.0	1784	170	50_SW	5	Channel	1	260		
485108	504559.8	6600071.0	1784	170	50_SW	5	Channel	1	260		
485109	504560.2	6600071.0	1784	170	50_SW	5	Channel	1	260		
485110	504560.6	6600071.0	1784	170	50_SW	5	Channel	1	260		
485111	504561.1	6600071.0	1784	170	50_SW	5	Channel	1	260		
485112	504561.3	6600063.6	1784	175	50_SW	3	Channel	1.4	300		
485113	504562.5	6600063.6	1784	175	50_SW	3	Channel	2.8	300		
485114	504559.4	6600053.8	1784	180	65_W	0.4	Channel	0.4	270		
485115	504557.9	6600053.9	1784	180	65_W	0.4	Channel	0.4	270		
485116	504555.7	6600034.0	1784	190	65_NW	0.3	Channel	0.3	270		
485117	504556.7	6600081.0	1784	230	85_NW	>10	Channel	1	45		
485118	504569.2	6600088.7	1784	260	80_NW	-	Channel	1.5	80		
485119	504573.2	6600089.1	1784	190	50_NW	-	Channel	1	260		
485120	504564.0	6599671.0	1759	30	55_E	4.5	Channel	1.5	100		
485121	504527.8	6599784.8	1769	200	50_NW	0.6	Channel	0.6	120		
485122	504530.5	6599794.3	1769	195	50_NW	0.15	Channel	0.4	280		
485123	504532.1	6599794.0	1769	165	50_SW	0.7	Channel	1.1	280		
485124	504533.0	6599808.6	1769	185	40	0.8	Channel	1.1	330		
485125	504532.6	6599819.0	1769	185	40_NW	0.4	Channel	0.6	270		
485126	504517.9	6599723.6	1780	180	50_W	0.25	Channel	0.25	280		
485127	504529.5	6599607.0	1767	195	65_NW	1	Channel	1	280		
485128	504529.1	6599647.7	1767	180	50_W	0.3	Channel	0.3	270		
485129	504527.0	6599655.3	1767	280	75_N	0.5	Channel	0.5	180		
485130	504528.6	6599622.7	1767	-	-	-	Channel	1	180		
485131	504507.5	6599451.1	1761	195	50_NW	1	Channel	1	260		
485132	504992.0	6601559.4	1802	100	50_NW	-	Channel	1	210		
485133	505002.2	6601559.7	1802	160	90_SE	FZ	Channel	1	290		
485134	505010.4	6601558.0	1802	-	-	-	Channel	1	260		
485135	505018.2	6601556.6	1802	100	45_SW	-	Channel	1	130		
485136	505013.7	6601547.9	1802	-	-	-	Channel	1	350		
485137	505004.0	6601514.9	1802	85	30_SE	1	Channel	1.3	20		
485138	504948.0	6601440.0	1820	120	50_SW	3	Channel	1	200		
485139	504948.0	6601442.0	1824	50	70_SE		Channel	1	210		
485140	504879.0	6601358.0	1782	50	50_SE	1.2	Channel	1.2	3.2		
485141	504873.8	6601465.2	1762	300	70_NE	1.2	Channel	1	180		
485142	504876.7	6601481.5	1760	50	60_SE	2	Channel	1.	320		
485143	504686.0	6600404.0	1819	-	-	_	Chip	-	-		
485144	504676.0	6600310.0	1814	-	-	-	Chip	-	-		
485145	504877.5	6601367.0	1781	40	70_SE	1.5	Channel	1	180		
485146	504888.8	6601393.7	1783	220	40_NW	4	Channel	1	40		
485147	504914.8	6601416.3	1783	210	60_NW	2	Channel	1	10		
485148	504979.6	6601472.6	1783	210	60_NW	1.5	Channel	1	290		



485149	504894.5	6601426.8	1768	50	90	1.5	Channel	1	120
485150	504891.2	6601257.1	1800	-	-	-	Bulk	-	-
485151	504835.3	6601276.5	1800	-	-	-	Bulk	-	-
485152	504833.0	6601345.7	1800	-	-	-	Bulk	-	-
485204	504875.1	6601322.5	1787	190	75W	0.4	Channel	0.4	280
485205	504875.0	6601322.9	1787	175	80W	0.8	Channel	0.8	270
485206	504854.6	6601346.2	1787	130	60SE	1.20	Channel	1.2	210
485207	504862.8	6601370.5	1787	180	50W	1.10	Channel	1.1	80
485208	504879.5	6601261.2	1787	-	-	-	Bulk	-	-
485209	504880.3	6601251.2	1787	-	-	-	Bulk	-	-
485210	504881.1	6601241.2	1787	-	-	-	Bulk	-	-
485211	504828.2	6601612.3	1802	-	-	-	Bulk	-	-
485212	504805.3	6601526.9	1802	-	-	-	Bulk	-	-
485213	504454.7	6599733.2	1702	-	-	-	Bulk	-	-
485214	504460.6	6599673.8	1695	-	-	-	Bulk	-	-
485215	504451.9	6599626.6	1695	-	-	-	Bulk	-	-
485216	504543.7	6599670.6	1759	-	-	-	Bulk	-	-
485217	504559.1	6600074.9	1784	175	60_SW	3	Channel	1	120
485218	504558.0	6600075.0	1784	175	60_SW	3	Channel	1	190
485219	504556.8	6600075.0	1784	175	60_SW	3	Channel	1	80
485220	504559.4	6600068.5	1784	175	60_SW	3	Channel	1	120
485221	504558.6	6600066.1	1784	-	-	-	Bulk	-	-
485222	504472.1	6599634.2	1695	-	-	-	Bulk	-	-
485223	504469.4	6599605.4	1695	-	-	-	Bulk	-	-
485224	504450.2	6600104.0	1784	-	-	-	Bulk	-	-



Appendix 3 - Complete table of all drilling results from El Guayabo

Drillhole			sed Inte			Gold		Ag			Cu		Au Equiv		Incl	TD
(#)		From	То	(m)	(	(g/t)		(g/t)			(%)		(g/t)	(deg)	(deg)	(m)
JDH-001	from	183	190.6	7.6	m @	0.3	g/t Au +		not a	issa	ayed	1	n/a	280	-60	236.9
JDH-002	from	7.6	152.9	145.3	m @	0.4	g/t Au +		not a	issa	ayed		n/a	280	-45	257.5
	and	199	243	44.0	m @	0.4	g/t Au +		not a	issa	yed		n/a			
JDH-003	from	35.95	71.6	35.7	m @	0.5	g/t Au +		not a	issa	yed		n/a	280	-45	261
	and	120.4	254.6	134.2	m @	0.4	g/t Au +		not a	ssa	ayed		n/a			
	inc	146.81	224.08	77.3	m @	0.5	g/t Au +		not a	issa	yed		n/a			
JDH-004	from	3.96	21.95	18.0	m @	0.4	g/t Au +		not a	issa	yed	•	n/a	280	-45	219
	and	79.74	120.42	40.7	m @	0.4	g/t Au +		not a	issa	ayed		n/a			
	and	150.9	203.7	52.8	m @	0.7	g/t Au +		not a	issa	ayed		n/a			
JDH-005	from	5.2	81.4	76.2	m @	0.4	g/t Au +		not a	issa	yed		n/a	280	-45	210.4
	and	169.7	208.5	38.8	m @	0.2	g/t Au +		not a	issa	yed		n/a			
JDH-006	from	17.99	89.6	71.6	m @	0.2	g/t Au +	2.0	g/t Ag	+	0.10	% Cu	0.42	150	-45	302.7
	and	164.8	281	116.2	m @		g/t Au +		g/t Ag			% Cu	1.37			
	inc	227.8	281.09	53.3	m @	1.2	g/t Au +	13.2	g/t Ag	+	0.62	% Cu	2.39			
JDH-007	from	39.7	84.45	44.8	m @	0.3	g/t Au +	1.4	g/t Ag	+	0.04	% Cu	0.38	150	-75	105.8
JDH-008	from	104.7	136.7	32.0	m @	0.1	g/t Au +	3.6	g/t Ag	+	0.13	% Cu	0.41	150	-60	352.7
	and	249.08	316.15	67.1	m @	0.2	g/t Au +	5.7	g/t Ag	+	0.21	% Cu	0.62			
	and	291.76	316.15	24.4	m @	0.5	g/t Au +	9.2	g/t Ag	+	0.34	% Cu	1.13			
JDH-009	from	10.3	122.03	111.7	m @	0.7	g/t Au +	14.6	g/t Ag	+	0.58	% Cu	1.85	150	-45	256.7
	inc	34.6	91.54	56.9	m @	0.2	g/t Au +	19.1	g/t Ag	+	0.82	% Cu	1.80			
	and	201.4	205.4	4.0	m @	11.4	g/t Au +	9.7	g/t Ag	+	0.01	% Cu	11.54			
	and	255.1	eoh	1.5	m @	0.7	g/t Au +	1.5	g/t Ag	+	0.02	% Cu	0.75			
JDH-10	from	1.5	50.9	49.4	m @	0.5	g/t Au +	2.5	g/t Ag	+	0.09	% Cu	0.68	270	-45	221.6
	and	90.54	119	28.5	m @	0.2	g/t Au +	3.0	g/t Ag	+	0.10	% Cu	0.40			
	and	140	203	81.6	m @	0.4	g/t Au +	1.3	g/t Ag	+	0.07	% Cu	0.53			
JDH-011	from	100.7	218	117.3	m @	0.4	g/t Au +	4.6	g/t Ag	+	0.10	% Cu	0.62	270	-45	218.0
JDH-012	from	12.2	53.96	41.8	m @	0.6	g/t Au +	6.5	g/t Ag	+	0.02	% Cu	0.67	150	-60	124.1
JDH-013	from	53.35	69.6	16.3	m @	0.5	g/t Au +	1.2	g/t Ag	+	0.01	% Cu	0.48	150	-60	239.3
	and	89.9	154.9	65.0	m @	1.4	g/t Au +	2.8	g/t Ag			% Cu	1.53			
	inc	114.32	142.76	28.4	m @	2.8	g/t Au +	4.9	g/t Ag	+	0.10	% Cu	3.03			
JDH-014	from	26.96	75.69	48.7	m @	0.4	g/t Au +	5.2	g/t Ag	+	0.10	% Cu	0.63	90	-60	239.4
	and	85.84	116.32	30.5	m @	0.2	g/t Au +	4.2	g/t Ag	+	0.1	% Cu	0.42			
	and	128.52	175.3	46.8	m @	0.5	g/t Au +	3.3	g/t Ag	+	0.08	% Cu	0.63			
	and	179.35	217.98	38.6	m @	0.1	g/t Au +	2.5	g/t Ag	+	0.08	% Cu	0.26			



Drillhole			sed Inte		Gol		Ag			Cu	Au Equiv		Incl	TD
(#)		From	То	(m)	(g/1	)	(g/t)			(%)	(g/t)	(deg)	(deg)	(m)
GGY-001	from	10	69	59.0 ı		2 g/t Au +		g/t Ag		0.07 % C		360	-90	249.2
	and	139	249.2	110.2		g/tAu +		g/t Ag		0.06 % 0				
	inc	141	174	33.0 ı		g/t Au +		g/t Ag		0.08 % C				
GGY-002	from	9.7	166	156.3		g/t Au +			_	0.16 % C		360	-90	272.9
	inc .	27	102	75.0 ı		g/t Au +		-		0.22 % 0				
	and	114	166	52.0		3 g/t Au +		g/t Ag		0.18 % 0				
551, 002	plus	244	272.9	28.9		g/t Au +		g/t Ag		0.04 % 0		205		205.0
GGY-003	from	40	260.75	220.8		2 g/t Au +		g/t Ag		0.06 % 0		305	-60	295.9
GGY-004	from	1	42	41.0	m @ 0.	g/t Au +	2.3	g/t Ag	+	0.03 % C	<b>u</b> 0.56	125	-60	172.2
GGY-005	from	12	162	150.0 ı		1 g/t Au +			_	0.30 % C	<b>u</b> 0.99	145	-60	258.3
	inc	14	54	40.0 ı		g/t Au +				0.60 % C				
	and	180	194	14.0	m @ 0.	2 g/t Au +	6.1	g/t Ag	+	0.22 % C	<b>u</b> 0.64			
GGY-006	from	72	101.9	49.0 ı	m @ 0.	1 g/t Au +	2.3	g/t Ag	+	0.03 % 0	<b>u</b> 0.45	305	-60	101.9
GGY-007	from	0.9	41	40.1 ı	m @ 1.	g/t Au +	2.6	g/t Ag	+	0.04 % C	u 1.20	305	-75	127
	inc	110	127	17.0 ı	m @ 0.	g/t Au +	1.2	g/t Ag	+	0.04 % C	u 0.98			
GGY-008	from	16	271	255.0 ı	m @ 0.	g/t Au +	6.5	g/t Ag	+	0.24 % C	u 0.62	145	-75	312.3
	inc	235	271	36.0 ı	m @ 0.	1 g/t Au +	11.5	g/t Ag	+	0.50 % C	u 1.32			
GGY-009	from	1.65	45	43.4 ı	m @ 1.	7 g/t Au +	3.0	g/t Ag	+	0.06 % 0	u 1.80	45	-75	166.2
GGY-010	from	0	69	69.0 ı	m @ 1.	g/t Au +	2.3	g/t Ag	+	0.03 % C	u 1.67	225	-75	194.5
	inc	21	50	29.0 ı	m @ 2.	g/t Au +	2.7	g/t Ag	+	0.03 % C	u 2.98			
	and	75	95	20.0 ı	m @ 0.	g/t Au +	0.8	g/t Ag	+	0.01 % C	<b>u</b> 0.33			
GGY-011	from	14	229	215.0	m @ 0.	g/t Au +	9.6	g/t Ag	+	0.36 % C	<b>u</b> 0.89	160	-60	241.6
	inc	14	97	83.0 ı	m @ 0.	2 g/t Au +	14.9	g/t Ag	+	0.50 % C	u 1.24			
	inc	202	229	27.0 ı	m @ 0.	1 g/t Au +	15.2	g/t Ag	+	0.80 % C	u 1.90			
GGY-012	from	57	192	135.0 ı	m @ 0.	g/t Au +	2.0	g/t Ag	+	0.06 % 0	<b>u</b> 0.39	125	-60	256
	and	156	192	36.0 ı	m @ 0.	2 g/t Au +	3.3	g/t Ag	+	0.13 % C	<b>u</b> 0.44			
GGY-013	from	229.7	280	50.3 ı	m @ 0.	g/t Au +	2.2	g/t Ag	+	0.05 % C	<b>u</b> 0.31	320	-65	340.9
GGY-014				nsi							0.00	320	-75	309.1
GGY-015	from	110	132.4	22.4	m @ 0.	1 g/t Au +	0.5	g/t Ag	+	0.03 % C	u 0.41	320	-60	251.1
	and	157	225.5	68.5		g/t Au +								
GGY-016	from	8	30	22.0 ı	m @ 0.	g/t Au +	0.7	g/t Ag	+	0.01 % C	u 0.26	320	-60	195.7
	and	42	57	15.0		g/t Au +		g/t Ag		0.02 % 0				
	and	105	118	13.0 ı		g/t Au +		g/t Ag		0.01 % C				
	and	185	188	3.0 ı	m @ 1.	g/t Au +	0.8	g/t Ag	+	0.02 % C	u 1.04			
GGY-017	from	0	24	24.0	m @ 0.	g/t Au +	1.3	g/t Ag	+	0.01 % C	u 0.49	125	-82	280.4
	and	69	184	115.0	m @ 0.	g/t Au +	2.1	g/t Ag	+	0.03 % C	<b>u</b> 0.53			
	inc	125	147	22.0		2 g/t Au +		g/t Ag		0.05 % C				
	and	206	241	35.0		g/t Au +		g/t Ag		0.05 % C				
	and	254	277	23.0	m @ 0.	g/t Au +	1.2	g/t Ag	+	0.04 % C				
GGY-018	from	81	136	55.0 ı	m @ 0.	g/t Au +	3.5	g/t Ag	+	0.06 % C	<b>u</b> 0.34	140	-60	160.4
GGY-019	from	89	155	66.0	m @ 0.	g/t Au +	2.0	g/t Ag	+	0.03 % C	<b>u</b> 0.36	45	-53	175.4



- (1) drill collar coordinates for all holes in Table 2.3 are provided in Section 2 of the JORC Appendix in this ASX Release
- (2) cut of grade of 0.2 g/t Au Equiv used for calculating significant intercepts with 6m of internal dilution allowed

# The above table presents all drill holes and all relevant intersections (or nsi) to ensure full picture of the results of the drilling campaign is presented.

# Drill Collar coordinates provided in JORC Table 1 - El Guayabo Concession in ASX Release dated 22 February 2019

Note - The following drill holes were drilled into the copper breccia above geophysical anomaly 24A:

- IDH-06
- JDH-08
- JDH-09
- GY-005
- GY-008
- GY-011



#### Appendix 4 - ASX Waivers

The ASX granted the Company a waiver from ASX Listing Rule 7.3.2 to permit the notice of meeting (the "Notice") seeking shareholder approval for the issue of up to 245,000,001 fully paid ordinary shares in the Company ("Waiver Securities") upon the Company satisfying the milestones in relation to each of the Projects ("Milestones") not to state that the Waiver Securities will be issued within 3 months of the date of the shareholder meeting.

The Waiver Securities must be issued no later than 60 months after the date of reinstatement of the Company's securities to official quotation.

3,333,334 Waiver Securities have been issued during the quarter.

The total Earn-In Shares will be issued progressively subject to the achievement of the following milestones:

#### El Guayabo Project Milestones

Project Interest	Cumulative Interest	Project Milestones
19.9%	19.9%	Existing interest in the project
15.1%	35%	Minimum expenditure on project of A\$2m - ~1 Year after relisting
16%	51%	Minimum expenditure on project of A\$3m - ~3 Years after relisting
49%	100%	180m CEL shares payable at the sole discretion of the Board of CEL. Shares to be issued no later than 15 December 2022.

# **Hualilan Project Milestones**

- A payment of 1.667 million shares (being shares in CEL assuming the Transaction completes) to Cerro Sur owners for assignment of Cerro Norte farmin due no later than one month after re-listing on the ASX.
- A milestone payment of 1.667 million shares (being shares in CEL assuming the Transaction completes) due on 22 June 2019.
- Minimum expenditure of A\$1 million on the Hualilan Project.
- The issue of a 11.667 million shares (being shares in CEL assuming the Transaction completes) no later than 1 July 2020 to acquire a 25% interest in the project.
- Completion of a Definitive Feasibility Study within five years and the issue of 50 million shares (being shares in CEL assuming the Transaction completes) to move from 25% to 75% of the project.

#### **Performance Shares**

The Company has 60,000,000 Class A Performance Shares and 60,000,000 Class B Performance Shares on Issue.

A summary of the terms and conditions of the Performance Shares are as follows:

The Performance Shares shall automatically convert into Shares, provided that if the number of Shares that would be issued upon such conversion is greater than 10% of the Company's Shares on issue as at the date of conversion, then that number of Performance Shares that is equal to 10% of the



Company's Shares on issue as at the date of conversion under this paragraph will automatically convert into an equivalent number of Company Shares. The conversion will be completed on a pro rata basis across each class of Performance Shares then on issue as well as on a pro rata basis for each Holder. Performance Shares that are not converted into Shares under this paragraph will continue to be held by the Holders on the same terms and conditions.

(**No Conversion if Milestone not Achieved**): If the relevant Milestone is not achieved by the required date (being seven years from the date of the Proposed Acquisition or such other date as required by ASX), then all Performance Shares held by each Holder shall lapse.

(After Conversion): The Shares issued on conversion of the Performance Shares will, as and from 5.00pm (WST) on the date of issue, rank equally with and confer rights identical with all other Shares then on issue and application will be made by the Company to ASX for official quotation of the Shares issued upon conversion (subject to complying with any restriction periods required by the ASX). (Milestones):

The Performance Shares will, convert upon the satisfaction of the following milestones:

(**Class A**): A JORC Compliant Mineral Resource Estimate of at least Inferred category on either Project of the following:

a minimum 500,000 ounces of gold (AU) or Gold Equivalent (in accordance with clause 50 of the JORC Code) at a minimum grade of 6 grams per tonne Gold Equivalent; or

a minimum 1,500,000 ounces of gold (AU) or Gold Equivalent (in accordance with clause 50 of the JORC Code) at a minimum grade of 2.0 grams per tonne Gold Equivalent; or

a minimum 3,000,000 ounces of gold (AU) or Gold Equivalent (in accordance with clause 50 of the JORC Code) at a minimum grade of 1.0 grams per tonne Gold Equivalent;

(**Class B**): The Class B Performance Shares held by the holder will convert into an equal number of Shares upon the Company:

Completion and announcement by CEL (subject to the provision of information allowable at the time of completion) of a positive Scoping Study (as defined in the JORC Code) on either Project by an independent third-party expert which evidences an internal rate of return of US Ten Year Bond Rate plus 10% (using publicly available industry assumptions, including deliverable spot commodity / mineral prices, which are independently verifiable) provided that the total cumulative EBITDA over the project life is over US\$50m.

No Performance Milestones were met during the quarter.

# JORC Code, 2012 Edition – Table 1 report template

# Section 1 Sampling Techniques and Data -El Guayabo Project

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>Newmont Mining Corp (NYSE: NEM) ("Newmont") and Odin Mining and Exploration Ltd (TSX: ODN) ("Odin") core drilled the property between February 1995 and November 1996 across two drilling campaigns.</li> <li>The sampling techniques were reviewed as part of a 43-101 Technical report on Cangrejos Property which also included the early results of the El Joven joint venture between Odin and Newmont, under which the work on the El Guayabo project was undertaken. This report is dated 27 May 2004 and found the sampling techniques and intervals to be appropriate with adequate QA/QC and custody procedures, core recoveries generally 100%, and appropriate duplicates and blanks use for determining assay precision and accuracy.</li> <li>Duplicates were prepared by the Laboratory (Bonder Cleg) which used internal standards. Newmont also inserted its own standards at 25 sample intervals as a control on analytical quality</li> <li>Diamond drilling produced core that was sawed in half with one half sent to the laboratory for assaying per industry standards and the remaining core retained on site.</li> <li>Cu assays above 2% were not re-assayed using a technique calibrated to higher value Cu results hence the maximum reported assay for copper is 2%.</li> <li>All core samples were analysed using a standard fire assay with atomic absorption finish on a 30 g charge (30 g FAA). Because of concerns about possible reproducibility problems in the gold values resulting from the presence of coarse gold, the coarse crusher rejects for all samples with results greater than 0.5 g/t were re-assayed using the "blaster" technique - a screen type fire analysis based on a pulverized sample with a mass of about 5 kg. Samples from most of these intersections were also analysed for Cu, Mo, Pb, Zn and Ag.</li> </ul>
Drilling techniques	<ul> <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</li> </ul>	<ul> <li>Diamond core drilling HQ size from surface and reducing to NQ size as necessary. The historical records do not indicate if the core was oriented</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>In a majority of cases core recovery was 100%.</li> <li>In the historical drill logs where core recoveries were less than 100% the percentage core recovery was noted.</li> <li>No documentation on the methods to maximise sample recovery was reported in historical reports however inspection of the available core and historical drilling logs indicate that core recoveries were generally 100% with the exception of the top few metres of each drill hole.</li> <li>No material bias has presently been recognised in core.</li> <li>Observation of the core from various drill holes indicate that the rock is generally fairly solid even where it has been subjected to intense, pervasive by dreth armal alteration and gave recovering are generally 100%</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>hydrothermal alteration and core recoveries are generally 100%.</li> <li>Consequently, it is expected that the samples obtained were not unduly biased by significant core losses either during the drilling or cutting processes</li> <li>Geological logging was completed at 1-3 m intervals which is appropriate given the exploration was reconnaissance in nature.</li> <li>All core was logged qualitatively at 1 to 3 m intervals depending on geology intercepted and core was photographed.</li> <li>Inspections of core and logging have concluded that the logging was representative.</li> <li>100% of all core including all relevant intersections were logged</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul> <li>Core was cut with diamond saw and half core was taken</li> <li>All drilling was core drilling as such this is not relevant</li> <li>Sample preparation was appropriate and of good quality. Each 1-3 m sample of half core was dried, crushed to a nominal – 10 mesh (ca 2mm), then 250 g of chips were split out and pulverized. A sub-sample of the pulp was then sent for analysis for gold by standard fire assay on a 30 g charge with an atomic absorption finish with a nominal 5 ppb Au detection limit.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Measures taken to ensure that the sampling is representative of the in situ material collected is not outlined in the historical documentation however a program of re-assaying was undertaken by Odin which demonstrated the repeatability of original assay results</li> <li>The use of a 1-3 m sample length is appropriate for deposits of finely disseminated mineralisation where long mineralised intersections are to be expected.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used by Newmont and Odin are still in line with industry best practice with appropriate QA/QC and chain of custody and are considered appropriate.</li> <li>Available historical data does not mention details of geophysical tools as such it is believed a geophysical campaign was not completed in parallel with the drilling campaign.</li> <li>Duplicates were prepared by the Laboratory (Bonder Cleg) which used internal standards. Newmont also inserted its own standards at 25 sample intervals as a control on analytical quality. Later Odin undertook a re-assaying program of the majority of the higher grade sections which confirmed the repeatability.</li> <li>Given the above, it is considered acceptable levels of accuracy and precision have been established</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>All intersections with results greater than 0.5 g/t were re-assayed using the "blaster" technique - a screen type fire analysis based on a pulverised sample with a mass of about 5 kg. Additionally Odin re-assayed the many of the higher grade sections with re-assay results demonstrating repeatability of the original results.</li> <li>Neither Newmont nor Odin attempted to verify intercepts with twinned holes</li> <li>Data was sourced from scanned copies of original drill logs and in some cases original paper copies of assay sheets are available. This data is currently stored in a drop box data base with the originals held on site.</li> <li>No adjustments to assay data were made.</li> </ul>

Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <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> <li>Newmont undertook survey to located drill holes in accordance with best practice at the time. No formal check surveying has been undertaken to verify drill collar locations at this stage</li> <li>Coordinate System: PSAD 1956 UTM Zone 17S Projection: Transverse Mercator Datum: Provisional S American 1956</li> <li>Quality of topographic control appears to be+ - 1 meter which is sufficient for the exploration activities undertaken.</li> </ul>
Data spacing and distribution	<ul> <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> <li>Grid drilling was exploration based and a grid was not considered appropriate at that time.</li> <li>A JORC compliant Mineral Resource Estimate has not been calculated</li> <li>Sample compositing was not used</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>Estimation bias is not evident.</li> <li>A sampling bias is not evident.</li> </ul>
Sample security	- The measures taken to ensure sample security.	<ul> <li>Newmont sent all its field samples to the Bondar Clegg sample preparation facility in Quito for preparation. From there, approximately 100 grams of pulp for each sample was air freighted to the Bondar Clegg laboratory (now absorbed by ALS-Chemex) in Vancouver, for analysis. There is no record of any special steps to monitor the security of the samples during transport either between the field and Quito, or between Quito and Vancouver. However, Newmont did insert its own standards at 25 sample intervals as a control on analytical quality</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	The sampling techniques were reviewed as part of a 43-101 Technical report on Cangrejos Property which also included the early results of the El Joven joint venture between Odin and Newmont, under which the work on the El

Criteria JOR	RC Code explanation	Commentary
		Guayabo project was undertaken. This report is dated 27 May 2004 and found the sampling techniques and intervals to be appropriate with adequate QA/QC and custody procedures, core recoveries generally 100%, and appropriate duplicates and blanks use for determining assay precision and accuracy.

# **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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The El Guayabo (Code. 225) mining concession is located within El Oro Province. The concession is held by Torata and was granted in compliance with the Mining Act ("MA") in on April 27, 2010. There are no overriding royalties on the project other than normal Ecuadorian government royalties.</li> <li>The property has no historical sites, wilderness or national park issues.</li> <li>The mining title grants the owner an exclusive right to perform mining activities, including, exploration, exploitation and processing of minerals over the area covered by the prior title for a period of 25 years, renewable for a further 25 years. Under its option agreement, the owner has been granted a negative pledge (which is broadly equivalent to a fixed and floating charge) over the concession. In addition a duly notarized Irrevocable Promise to Transfer executed by Torata in favor of AEP has been lodged with the Ecuador Mines Department.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Previous exploration on the project has been undertaken by Newmont and Odin from 1994 to 1997. This included surface pit and rock chip geochemistry, followed by the drilling of 33 drill holes for a total of 7605.52 meters) to evaluate the larger geochemical anomalies.</li> <li>The collection of all exploration data by Newmont and Odin was of a high standard and had appropriate sampling techniques and intervals, adequate QA/QC and custody procedures, and appropriate duplicates and blanks used for determining assay precision and accuracy.</li> <li>The geological interpretation of this data, including core logging and follow up</li> </ul>

Criteria	JORC Code explanation	Commentary
		geology was designed and directed by in-country inexperienced geologists. It appears to have been focused almost exclusively for gold targeting surface gold anomalies or the depth extensions of higher grade gold zones being exploited by the artisanal miners. The geologic logs for all drill holes did not record details that would have been typical, industry standards for porphyry copper exploration at that time. A number of holes which ended in economic mineralisation have never been followed up.  - In short, important details which would have allowed the type of target to be better explored were missed which in turn presents an opportunity to the current owner.
Geology	- Deposit type, geological setting and style of mineralisation.	<ul> <li>It is believed that the El Guayabo property is a "Low Sulfide" porphyry gold copper system. The host rocks for the intrusive complex is metamorphic basement and Oligocene – Mid-Miocene volcanic rocks. This suggests the intrusions are of a similar age to the host volcanic sequence, which also suggests an evolving basement magmatic system. Intrusions are described in the core logs as quartz diorite and dacite. Mineralisation has been recognized in:         <ul> <li>Steeply plunging breccia bodies and in the metamorphic host rock adjacent to the breccia (up to 200 m in diameter)</li> <li>Quartz veins and veinlets</li> <li>Disseminated pyrite and pyrrhotite in the intrusions and in the metamorphic host rock near the intrusions.</li> </ul> </li> </ul>

# 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:
  - o easting and northing of the drill hole collar
  - elevation or RL (Reduced Level

     elevation above sea level in metres) of the drill hole collar
  - o dip and azimuth of the hole
  - down hole length and interception depth
  - o 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.

Drillhole		Minerali	sed Inte	Total		Gold			Ag Cu	Au Equiv	Azimuth	Incl	TD
(#)		From	То	(m)		(g/t)		(9	y/t) (%)	(g/t)	(deg)	(deg)	(m)
JDH-001	from	183	190.6	7.6	m @	0.3	g/t Au	+	not assayed	n/a	280	-60	236.9
JDH-002	from	7.6	152.9	145.3	m @	0.4	g/t Au	+	not assayed	n/a	280	-45	257.5
	and	199	243	44.0	m @	0.4	g/t Au	+	not assayed	n/a			
JDH-003	from	35.95	71.6	35.7	m @	0.5	g/t Au	+	not assayed	n/a	280	-45	261
	and	120.4	254.6	134.2	m @	0.4	g/t Au	+	not assayed	n/a			
	inc	146.81	224.08	77.3	m @	0.5	g/t Au	+	not assayed	n/a			
JDH-004	from	3.96	21.95	18.0	m @	0.4	g/t Au	+	not assayed	n/a	280	-45	219
	and	79.74	120.42	40.7	m @	0.4	g/t Au	+	not assayed	n/a			
	and	150.9	203.7	52.8	m @	0.7	g/t Au	+	not assayed	n/a			
JDH-005	from	5.2	81.4	76.2	m @	0.4	g/t Au	+	not assayed	n/a	280	-45	210.4
	and	169.7	208.5	38.8	m @	0.2	g/t Au	+	not assayed	n/a			
JDH-006	from	17.99	89.6	71.6	m @	0.2	g/t Au	+	2.0 g/t Ag + 0.10 % Cu	0.42	150	-45	302.7
	and	164.8	281	116.2	m @	0.6	g/t Au	+	8.9 g/t Ag + 0.40 % Cu	1.37			
	inc	227.8	281.09	53.3	m @	1.2	g/t Au	+ 1	3.2 g/t Ag + 0.62 % Cu	2.39			
JDH-007	from	39.7	84.45	44.8	m @	0.3	g/t Au	+	1.4 g/t Ag + 0.04 % Cu	0.38	150	-75	105.8
JDH-008	from	104.7	136.7	32.0	m @	0.1	g/t Au	+	3.6 g/t Ag + 0.13 % Cu	0.41	150	-60	352.7
	and	249.08	316.15	67.1	m @	0.2	g/t Au	+	5.7 g/t Ag + 0.21 % Cu	0.62			
	and	291.76	316.15	24.4	m @	0.5	g/t Au	+	9.2 g/t Ag + 0.34 % Cu	1.13			
JDH-009	from	10.3	122.03	111.7	m @	0.7	g/t Au	+ 1	4.6 g/t Ag + 0.58 % Cu	1.85	150	-45	256.7
	inc	34.6	91.54	56.9	m @	0.2	g/t Au	+ 1	9.1 g/t Ag + 0.82 % Cu	1.80			
	and	201.4	205.4	4.0	m @	11.4	g/t Au	+	9.7 g/t Ag + 0.01 % Cu	11.54			
	and	255.1	eoh	1.5	m @	0.7	g/t Au	+	1.5 g/t Ag + 0.02 % Cu	0.75			
JDH-10	from	1.5	50.9	49.4	m @	0.5	g/t Au	+	2.5 g/t Ag + 0.09 % Cu	0.68	270	-45	221.6
	and	90.54	119	28.5	m @	0.2	g/t Au	+	3.0 g/t Ag + 0.10 % Cu	0.40			
	and	140	203	81.6	m @	0.4	g/t Au	+	1.3 g/t Ag + 0.07 % Cu	0.53			
JDH-011	from	100.7	218	117.3	m @	0.4	g/t Au	+	4.6 g/t Ag + 0.10 % Cu	0.62	270	-45	218.0
JDH-012	from	12.2	53.96	41.8	m @	0.6	g/t Au	+	6.5 g/t Ag + 0.02 % Cu	0.67	150	-60	124.1
JDH-013	from	53.35	69.6	16.3	m @	0.5	g/t Au	+	1.2 g/t Ag + 0.01 % Cu	0.48	150	-60	239.3
	and	89.9	154.9	65.0	m @	1.4	g/t Au	+	2.8 g/t Ag + 0.06 % Cu	1.53			
	inc	114.32	142.76	28.4	m @	2.8	g/t Au	+	4.9 g/t Ag + 0.10 % Cu	3.03			
JDH-014	from	26.96	75.69	48.7	m @	0.4	g/t Au	+	5.2 g/t Ag + 0.10 % Cu	0.63	90	-60	239.4
	and	85.84	116.32	30.5	m @	0.2	g/t Au	+	4.2 g/t Ag + 0.1 % Cu	0.42			
	and	128.52	175.3	46.8	m @	0.5	g/t Au		3.3 g/t Ag + 0.08 % Cu	0.63			
	and	179.35	217.98	38.6	m @	0.1	g/t Au	+	2.5 g/t Ag + 0.08 % Cu	0.26			

Drillhole		Mineral	ised Inte	Total	Gold		Ag			Cu		Au Equiv	Azimuth	Incl	TD
(#)		From	То	(m)	(g/t)		(g/t)			(%)		(g/t)	(deg)	(deg)	(m)
GGY-001	from	10	69	59.0 m (	0.2	g/t Au +	2.8	g/t Ag	+	0.07	% Cu	0.35	360	-90	249.2
	and	139	249.2	110.2 m (	0.4	g/t Au +	1.1	g/t Ag	+	0.06	% Cu	0.51			
	inc	141	174	33.0 m (	0.6	g/t Au +	2.0	g/t Ag	+	0.08	% Cu	0.76			
GGY-002	from	9.7	166	156.3 m (	2.6	g/t Au +	9.7	g/t Ag	+	0.16	% Cu	2.99	360	-90	272.
	inc	27	102	75.0 m (	4.6	g/t Au +	19.1	g/t Ag	+	0.22	% Cu	5.21			
	and	114	166	52.0 m (	1.3	g/t Au +	3.3	g/t Ag	+	0.18	% Cu	1.64			
	plus	244	272.9	28.9 m (	0.3	g/t Au +	2.4	g/t Ag	+	0.04	% Cu	0.37			
GGY-003	from	40	260.75	220.8 m (	0.2	g/t Au +	2.9	g/t Ag	+	0.06	% Cu	0.36	305	-60	295.9
GGY-004	from	1	42	41.0 m (	0.5	g/t Au +	2.3	g/t Ag	+	0.03	% Cu	0.56	125	-60	172.2
GGY-005	from	12	162	150.0 m (	0.4	g/t Au +	11.0	g/t Ag	+	0.30	% Cu	0.99	145	-60	258.
	inc	14	54	40.0 m (	0.6	g/t Au +	25.5	g/t Ag	+	0.60	% Cu	1.95			
	and	180	194	14.0 m (	0.2	g/t Au +	6.1	g/t Ag	+	0.22	% Cu	0.64			
GGY-006	from	72	101.9	49.0 m (	0.4	g/t Au +	2.3	g/t Ag	+	0.03	% Cu	0.45	305	-60	101.
GGY-007	from	0.9	41	40.1 m (	0 1.1	g/t Au +	2.6	g/t Ag	+	0.04	% Cu	1.20	305	-75	127
	inc	110	127	17.0 m (		g/t Au +		g/t Ag		0.04	% Cu	0.98			
GGY-008	from	16	271	255.0 m (	0.1	g/t Au +	6.5	g/t Ag	+	0.24	% Cu	0.62	145	-75	312.
	inc	235	271	36.0 m (	0.4	g/t Au +	11.5	g/t Ag	+	0.50	% Cu	1.32			
GGY-009	from	1.65	45	43.4 m (	0 1.7	g/t Au +	3.0	g/t Ag	+	0.06	% Cu	1.80	45	-75	166.
GGY-010	from	0	69	69.0 m (	0 1.6	g/t Au +		g/t Ag			% Cu	1.67	225	-75	194.
001 010	inc	21	50	29.0 m (	-	g/t Au +		g/t Ag		0.03		2.98			
	and	75	95	20.0 m (	0.3	g/t Au +	0.8	g/t Ag	+	0.01	% Cu	0.33			
GGY-011	from	14	229	215.0 m (	0.2	g/t Au +	9.6	g/t Ag	+	0.36	% Cu	0.89	160	-60	241.
	inc	14	97	83.0 m (	0.2	g/t Au +	14.9	g/t Ag	+	0.50	% Cu	1.24			
	inc	202	229	27.0 m (	0.4	g/t Au +	15.2	g/t Ag	+	0.80	% Cu	1.90			
GGY-012	from	57	192	135.0 m (	0.3	g/t Au +	2.0	g/t Ag	+	0.06	% Cu	0.39	125	-60	256
	and	156	192	36.0 m (	0.2	g/t Au +	3.3	g/t Ag	+	0.13	% Cu	0.44			
GGY-013	from	229.7	280	50.3 m (	0.2	g/t Au +	2.2	g/t Ag	+	0.05	% Cu	0.31	320	-65	340.
GGY-014				nsi								0.00	320	-75	309.
GGY-015	from	110	132.4	22.4 m (	0.4	g/t Au +	0.5	g/t Ag	+	0.03	% Cu	0.41	320	-60	251.
001 013	and	157	225.5	68.5 m (		g/t Au +		g/t Ag		0.10		0.45	320	00	251.
GGY-016	from	8	30	22.0 m (		g/t Au +		g/t Ag	_		% Cu	0.26	320	-60	195.
001 010	and	42	57	15.0 m (	_	g/t Au +		g/t Ag			% Cu	0.34	320	00	155.
	and	105	118	13.0 m (	-	g/t Au +		g/t Ag			% Cu	0.26			
	and	185	188	3.0 m (	1.0	g/t Au +		g/t Ag		0.02	% Cu	1.04			
GGY-017	from	0	24	24.0 m (	0.5	g/t Au +	1.3	g/t Ag	+	0.01	% Cu	0.49	125	-82	280.
	and	69	184	115.0 m (		g/t Au +		g/t Ag		0.03	% Cu	0.53			
	inc	125	147	22.0 m (	0.2	g/t Au +	2.0	g/t Ag	+	0.05	% Cu	0.29			
	and	206	241	35.0 m (		g/t Au +	1.7	g/t Ag	+		% Cu	0.41			
	and	254	277	23.0 m (	0.6	g/t Au +	1.2	g/t Ag	+	0.04	% Cu	0.63			
GGY-018	from	81	136	55.0 m (	0.2	g/t Au +	3.5	g/t Ag	+	0.06	% Cu	0.34	140	-60	160.
GGY-019	from	89	155	66.0 m (	0.3	g/t Au +	2.0	g/t Ag	+	0.03	% Cu	0.36	45	-53	175.

eria	JORC Code explanation	Commentary									
	-	DRILLHOLE	EAST	NORTH	ELEVATION	AZIMUTH	DIP	FINAL	DRILLED		
		CODE	(X)	(N)	(m.a.s.l)	(°)	(°)	DEPTHP	BY		
		DDHGY01	628928.09	9605517.20	839.01	360	-90.0	249.20	Odin		
		DDHGY 02	629171.15	9606025.55	983.16	360.0	-90.0	272.90	Odin		
		DDHGY 03	629041.84	9606312.81	1063.37	305.0	-60.0	295.94	Odin		
		DDHGY 04	629171.68	9606025.18	983.2	125.0	-60.0	172.21	Odin		
		DDHGY 05	628509.21	9606405.29	989.87	145.0	-60.0	258.27	Odin		
		DDHGY06	629170.56	9606025.97	983.11	305.0	-60.0	101.94	Odin		
		DDHGY 07	629170.81	9606025.80	983.16	305.0	-75.0	127.00	Odin		
		DDHGY 08	628508.95	9606405.74	989.86	145.0	-75.0	312.32	Odin		
		DDHGY 09	629171.22	9606025.88	983.22	45.0	-75.0	166.25	Odin		
		DDHGY10	629170.77	9606025.24	983.12	225.0	-75.0	194.47	Odin		
		DDHGY11	628507.97	9606405.33	989.83	160.0	-60.0	241.57	Odin		
		DDHGY12	629087.18	9606035.53	996.98	125.0	-60.0	255.7	Odin		
		DDHGY13	629242.46	9605975.42	997.292	320.0	-65.0	340.86	Odin		
		DDHGY14	629242.27	9605975.64	997.285	320.0	-75.0	309.14	Odin		
		DDHGY15	629194.67	9605912.35	977.001	320.0	-60.0	251.07	Odin		
		DDHGY16	629285.92	9606044.44	1036.920	320.0	-60.0	195.73	Odin		
		DDHGY17	629122.31	9606058.64	1021.053	125.0	-82.0	280.04	Odin		
		DDHGY18	628993.10	9606035.45	977.215	140.0	-60.0	160.35	Odin		
		DDHGY 19	629087.23	9606034.98	997.332	45.0	-53.0	175.41	Odin		

Criteria	JORC Code explanation			Commenta	ry				
		DRILLHOLE CODE	EAST (X)	NORTH (N)	ELEVATION (m.a.s.l)	AZIMUTH (°)	DIP (°)	FINAL DEPTHP	DRILLED BY
		JDH01	627185.78	9606463.27	933.47	280.0	-60.0		Newmont
		JDH02	627260.37	9606353.12		280.0	-45.0		Newmont
		JDH03	627191.61	9606200.35	952.82	280.0	-45.0		Newmont
		JDH04	627429.81	9606324.00	933.80	280.0	-45.0	219.00	Newmont
		JDH05	627755.97	9606248.70	1066.24	280.0	-45.0	210.37	Newmont
		JDH06	628356.37	9606416.13	911.58	150.0	-45.0		Newmont
		JDH07	628356.37	9606416.13	911.58	150.0	-75.0	105.79	Newmont
		JDH08	628356.37	9606416.13	911.58	150.0	-60.0	352.74	Newmont
		JDH09	628507.01	9606408.43	990.18	150.0	-45.0	256.70	Newmont
		JDH10	628897.96	9606813.62	985.60	270.0	-45.0		Newmont
		JDH11	628878.64	9606674.39	1081.96	270.0	-45.0		Newmont
		JDH12	629684.61	9606765.31	993.45	150.0	-60.0		Newmont
		JDH13	629122.61	9606058.49	1020.98	125.0	-60.0		Newmont
		JDH14	628897.15	9605562.77	852.59	90.0	-45.0	239.32	Newmont
ata ggregation nethods	<ul> <li>In reporting Exploration Results, techniques, maximum and/or mi (eg cutting of high grades) and c Material and should be stated.</li> <li>Where aggregate intercepts inco high grade results and longer lenthe procedure used for such aggrand some typical examples of such shown in detail.</li> <li>The assumptions used for any refequivalent values should be clear</li> </ul>	nimum grade trut-off grades are prorate short lengths of low grades are gation should appregations porting of metal	runcations e usually engths of de results, be stated should be	<ul> <li>Minimur intercept</li> <li>Aggregate demonst been used consister grade relimpact. If a over the constant of t</li></ul>	d averaging to me cut of grade ts. te intercepts crate the impact to determine the nature of the sults and long for example iter half of the bly 20% of the	have been react of aggreg ne the higher he mineralis ger lengths on the interce	eported with ation. A botto ation the imous of 156m aprises gold cludes grade grades	higher grade om cut of 0.5 sions. Given pact of the agresults does @ 2.6 g.t Au i	or determining the inclusions of g/t Au Equathe generall ggregation of the first of the first of the first of the first of 1 g/t cess of 1 g/t

on widths

reporting of

The preliminary interpretation is that the breccia hosted mineralisation occurs in near vertical breccia pipes. Thus

# Criteria and intercept lengths

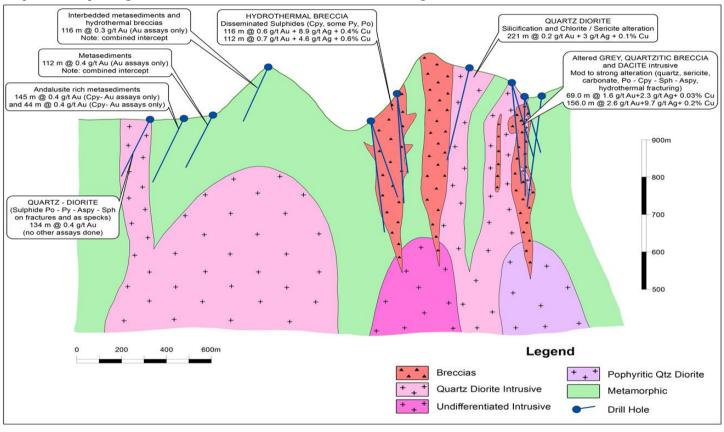
#### **JORC Code explanation**

#### Commentary

d Exploration Results. tercept - If the geometry of the mineralisation

- 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 (eg 'down hole length, true width not known').

intersections in steeply inclined holes may not be representative of the true width of this breccia hosted mineralisation. The relationship between the drilling orientation and some of the key mineralised structures and possible reporting bias in terms of true width is illustrated in the figure below.



# 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 See section above and within the body of this ASX release

Criteria	JORC Code explanation	Commentary
Balanced reporting Other	<ul> <li>locations and appropriate sectional views.</li> <li>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.</li> <li>Other exploration data, if meaningful and material, should</li> </ul>	<ul> <li>All drilling results have been reported.</li> <li>It is suggested that this reporting is fair and representative of what is currently understood of the geology of the project.</li> </ul> Quantec Geophysical services conducted a SPARTAN Broadband Magnetotelluric and
substantive exploration data	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.	TITAN IP/EMAP surveys completed February 3rd to April 1st, 2019 over the El Guayabo property by Quantec Geoscience Ltd. on behalf of AAR Resources.  The survey covered 16 square kilometersa with data collected on 300m 3D spacing on a gride oriented at 10 degerees and 100 degerees. The grid was moved 10 degrees so the survey could be orineted perpendicu;lar to the main geological srtuctures. The survey involved a total of 205 Magnetotelluric (MT) sites and 2 test TITAN IP/EMAP profiles were surveyed  The final survey results to which will be delivered will consist of:  • Inversion 2D products  • 2D model sections (for each line) of the:  • DC resistivity model;  • IP chargeability model using the DC resistivity model as a reference;  • IP chargeability model using a half-space resistivity model as a reference;  • MT(EMAP) resistivity model;  • Joint MT+DC resistivity model;  • Inversion 3D products  • 3D MT model;  • Cross-sections and Elevation Plan maps of the 3D MT models;
		Figures showing Survey Locations and Results are included in the boidy of this release  DCIP INVERSION PROCEDURES  DCIP is an electrical method that uses the injection of current and the measurement of voltage difference along with its rate of decay to determine subsurface resistivity

Criteria **IORC** Code explanation **Commentary** and chargeability respectively. Depth of investigation is mainly controlled by the array geometry but may also be limited by the received signal (dependent on transmitted current) and ground resistivity. Chargeability is particularly susceptible to data with a low signal-to-noise ratio. The differences in penetration depth between DC resistivity and chargeability are a function of relative property contrasts and relative signal-to-noise levels between the two measurements. A detailed introduction to DCIP is given in Telford, et al. (1976). The primary tool for evaluating data is through the inversion of the data in two or three dimensions. An inversion model depends not only on the data collected, but also on the associated data errors in the reading and the "model norm". Inversion models are not unique and may contain "artefacts" from the inversion process. The inversion model may not accurately reflect all the information apparent in the actual data. Inversion models must be reviewed in context with the observed data, model fit, and with an understanding of the model norm used. The DC and IP inversions use the same mesh. The horizontal mesh is set as 2 cells between electrodes. The vertical mesh is designed with a cell thickness starting from 20 m for the first hundred metres to accommodate the topographic variation along the profiles, and then increases logarithmically with depth. The inversions were generally run for a maximum of 50 iterations. The DC data is inverted using an unconstrained 2D inversion with a homogenous half-space of average input data as starting model. For IP inversions, the apparent chargeability 2 is computed by carrying out two DC resistivity forward models with conductivity distributions  $\sigma(xi,zj)$  and  $(1-\eta)\sigma(xi,zj)$  (Oldenburg and Li, 1994), where (xi,zj) specifies the location in a 2D mesh. The conductivity distributions used in IP inversions can be the inverted DC model or a half space of uniform conductivity. Two IP inversions are then calculated from the same data set and parameters using different reference models. The first inversion of the IP data uses the previously calculated DC model as the reference model and is labelled the IP dcref model. The second IP inversion uses a homogeneous half-space resistivity model as the reference model and is labelled IP hsref model. This model is included to test the validity of chargeability anomalies, and to limit the possibility of inversion artefacts in the IP model due to the use of the DC model as a reference. The results of this second IP inversion are presented on the digital archived attached to this report. MAGNETOTELLURIC INVERSIONS

**IORC** Code explanation Criteria **Commentary** The Magnetotelluric (MT) method is a natural source EM method that measures the variation of both the electric (E) and magnetic (H) field on the surface of the earth to determine the distribution at depth of the resistivity of the underlying rocks. A complete review of the method is presented in Vozoff (1972) and Orange (1989). The measured MT impedance Z, defined by the ratio between the E and H fields, is a tensor of complex numbers. This tensor is generally represented by an apparent resistivity (a parameter proportional to the modulus of Z) and a phase (argument of Z). The variation of those parameters with frequency relates the variations of the resistivity with depth, the high frequencies sampling the sub-surface and the low frequencies the deeper part of the earth. However, the apparent resistivity and the phase have an opposite behaviour. An increase of the phase indicates a more conductive zone than the host rocks and is associated with a decrease in apparent resistivity. The objective of the inversion of MT data is to compute a distribution of the resistivity of the surface that explains the variations of the MT parameters, i.e. the response of the model that fits the observed data. The solution however is not unique and different inversions must be performed (different programs, different conditions) to test and compare solutions for artefacts versus a target anomaly. An additional parameter acquired during MT survey is the Tipper. Tipper parameters Tzx and Tzy (complex numbers) represent the transfer function between the vertical magnetic field and the horizontal X (Tzx), and Y (Tzy) magnetic fields respectively (as the impedance Z represent the transfer function between the electric and magnetic fields). This tipper is a 'local' effect, mainly defined by the lateral contrast of the resistivity. Consequently, the tipper can be used to estimate the geological strike direction. Another important use of the tipper is to display its components as vectors, named induction vectors. The induction vectors (defined by the real components of Tzx and Tzy) plotted following the Parkinson-Real-Reverse-Angle convention will point to conductive zones. The tipper is then a good mapping tool to delineate more conductive zones. The depth of investigation is determined primarily by the frequency content of the measurement. Depth estimates from any individual sounding may easily exceed 20 km. However, the data can only be confidently interpreted when the aperture of the array is comparable to the depth of investigation. The inversion model is dependent on the data, but also on the associated data errors and the model norm. The inversion models are not unique, may contain artefacts of

Criteria	JORC Code explanation	Commentary
Criteria	JORC Code explanation	the inversion process and may not therefore accurately reflect all the information apparent in the actual data. Inversion models need to be reviewed in context with the observed data, model fit. The user must understand the model norm used and evaluate whether the model is geologically plausible.  For this project, 2D inversions were performed on the TITAN/EMAP profiles data. For each profile, we assume the strike direction is perpendicular to the profile for all sites: the TM mode is then defined by the inline E-field (and cross line H-field); no TE mode (crossline E-field) were used in the 2D inversions.  The 2D inversions were performed using the TM-mode resistivity and phase data interpolated at 6 frequencies per decade, assuming 10% and 5% error for the resistivity and phase respectively, which is equivalent to 5% error on the impedance component Z. No static shift of the data has been applied on the data.  The 3D inversion was carried out using the CGG RLM-3D inversion code. The 3D inversions of the MT data were completed over an area of approximately 5km x 3.5km. All MT sites from this current survey were used for the 3D inversion.  The 3D inversion was completed using a sub sample of the MT data with a maximum of 24 frequencies at each site covering the measured data from 10 kHz to 0.01 Hz with a nominal 4 frequencies per decade. At each site, the complete MT complex impedance tensors (Zxx, Zxy, Zyx, and Zyy) were used as input data with an associated error set to 5% on each parameter. The measured tipper data (Tzx, Tzy) were also used as input data with an associated error set to 0.02 on each parameter. A homogenous half space with resistivity of 100 Ohm-m was used as the starting model for this 3D MT inversion. A uniform mesh with 75 m x 75 m cell size was used in horizontal directions in the resistivity model. The vertical mesh was defined to cover the first 4 km. Padding cells were added in each direction to accommodate the inversion for boundary conditions. The 3D inversion was run for a maximum of
		Sample Core IP Tester, manufactured by Instrumentation GDD Inc. It should be noted that these measures should be taken only as first order estimate, and not as "(b) a beta" (to b) and the field several to be the field seve
		"absolute" (true) value as readings by the field crew were not repeated and

Criteria	JORC Code explanation	Commentary
		potentially subject to some errors (i.e. wrong size of the core entered in the equipment).
	-	-
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout 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> <li>Re-logging and re-assaying core including SWIR/alteration mapping to better vector on the porphyry and breccia targets – available assays 6 elements only, no SWIR, and not logged by porphyry experts. The Company understands that this is complete with assays being waitied on.</li> <li>Channel sampling of the adit and artisanal workings - &gt; 1km of underground exposure of the system which has never been systematically mapped or sampled.</li> <li>Sampling of additional breccia bodies – only 2 of the 10 known breccias have been systematically defined and properly sampled.</li> <li>Complete interpreation of the 3D MT survey (with IP lines) covering 16 sq. This will include integration of all the geological data and constrained inversion modelling</li> <li>MMI soil survey covering 16 sq kms</li> <li>The aim of the program above is to define targets for a drilling program</li> </ul>

# Section 1 Sampling Techniques and Data -Hualilan Project

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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</li> </ul>	<ul> <li>Channel Samples:</li> <li>Channel samples from underground workings were taken over widths of 12-15cm to depths of 2.5 cm and sampling was non-selective and designed to provide a representative grade of the mineralisation.</li> <li>Samples were collected dry and consisted of multiple chips dislodged and fractured by a geological pick.</li> <li>Samples were between a nominal 1-3kg weight and placed</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>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>	directly in to numbered calico bags at the collection point.  - Bulk samples of dumps and ore stockpiles were a minimum of 1kg, and sampling was non-selective and designed to provide a representative grade of the dump/stockpile  2019 Drilling:  No samples have been taken from the drilling during the quarter
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).	Drilling of HQ3 core (triple tube) is being done using a LM90, truck mounted drill machine that is operated by Foraco Argentina S.A. (Mendoza). Where possible the core is being oriented using a Reflex tool.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	Drill core is placed into wooden boxes by the drillers and depth marks indicated on wooden blocks at the end of each run. These depths are reconciled by CEL geologists to measure core recovery.  Triple tube drilling is being done to maximise core recovery. No grade data is available at this stage of the drill program
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Channel Samples:</li> <li>The channel sampling has been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation.</li> <li>Logging was quantitative for both channel and bulk sample the following logging information is recorded in the database. Date sampled, samplers' details, sample coordinates, general location description, summary and comments on visual mineralisation and alteration, Azimuth, Dip Direction and true width of structure being sampled, length and azimuth of</li> </ul>

Criteria	JORC Code explanation	Commentary
		the channel sample. A photo was taken of each sample location  - 100% of sampled intervals were logged  2019 Drilling:  - All the core is logged for RQD, weathering, lithology,
		alteration, mineralization and structure to a level that is suitable for geological modelling, resource estimation and metallurgical test work. Where possible logging is quantitative.
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Drill core is cut longitudinally using a diamond saw for sampling.</li> <li>Sample intervals are selected based on consistent lithology and mineralization for each sample with an average same length of 1m.</li> <li>The sample preparation technique is considered appropriate for the style of mineralization present in the deposits</li> <li>Standard quality control procedures are implemented, including the use of standard reference material and blank samples inserted into sample batches.</li> <li>For the channel samples, 20% of samples are duplicates</li> <li>Sample sizes were appropriate for the mineralisation style and grain size of the deposit</li> </ul>
		<ul> <li>The sample length was based on lithologic and mineralised units and where warranted samples as small at 10 cm were taken.</li> <li>This is appropriate for deposits of this nature</li> </ul>
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.	<ul> <li>Channel Samples:</li> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used were of high quality with</li> </ul>

Challenger Exploration Limited ACN 123 591 382 ASX: CEL

Issued Capital 469.2m shares 94.6m options 120m perf shares Australian Registered Office Level 1 1205 Hay Street West Perth WA 6005 **Directors**Mr Kris Knauer, MD and CEO
Mr Scott Funston, Finance Director
Mr Fletcher Quinn, Chairman

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Criteria	JORC Code explanation	Commentary
	<ul> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>appropriate QA/QC and chain of custody and are considered appropriate.</li> <li>assays were undertaken by ALS Laboratories. Samples were assayed by Au 25g fire assay ICP-MS (Au, Pt, Pd); 4-acid digest ICP-OES (Al, Ca, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, P, S, Sc, Ti, V, Zn););4-acid digest ICP-MS (Ag, As, Ba, Be, Bi, Cd, Ce, Co, Cs, Ga, Ge, Hf, In,La, Li, Mo, Nb, Pb, RB, Re, Sb, Se, Sn, Sr, Ta, Te, Th, Tl, U, W, Y, Zr). Ore grade re-assays were done where the Au, Ag, Cu, Pb, and Zn assays that were above the measuring limit for the 100ppm for Au and Ag and 1% for Cu, Pb, Zn</li> <li>Internal laboratory standards were used for each job to ensure correct calibration of elements.</li> <li>Only relevant and material element results are reported.</li> <li>Standard industry practices have been employed in the collection and assaying of samples. Internal laboratory standards and checks have passed control thresholds. The assay data has sufficient quality for the reporting of Exploration Results.</li> <li>No drill sample results have been returned</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Assay results summarised in the context of this report have been rounded appropriately.</li> <li>No assay data have been adjusted.</li> </ul>
Location of data points	<ul> <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> </ul>	<ul> <li>Channel samples:</li> <li>Sample locations were surveyed by a hand-held GPS +/-5m and underground laser scanner with an accuracy of 4mm</li> </ul>

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Criteria	JORC Code explanation	Commentary
	- Quality and adequacy of topographic control.	<ul> <li>Coordinates reported are WGS-84_19S.</li> <li>Location data is considered to be of sufficient quality for reporting of exploration results</li> <li>2019 Drilling:</li> <li>Following completion of drilling, collars will be surveyed using a differential GPS relative into the Argentinian National Survey base. The locations will be surveyed to WGS84, UTM zone 19s</li> <li>The drill machine is set-up on the drill pad using hand-held equipment according to the proposed hole design.</li> <li>Drill holes are surveyed at 30-40m intervals down hole using a Reflex tool.</li> </ul>
Data spacing and distribution	<ul> <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> <li>Data spacing was controlled by underground access and the location of previous sampling points which were being validated</li> <li>n/a</li> <li>yes</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>Unless otherwise stated the orientation of sampling achieves unbiased sampling of structures</li> <li>Drilling has been designed to provide an unbiased sample of the geology and mineralization targeted.</li> </ul>
Sample security	- The measures taken to ensure sample security.	- Samples were under 24 hour supervision of senior personnel prior to delivery to the lab
Audits or reviews	- The results of any audits or reviews of sampling techniques and data.	- n/a

## 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	<ul> <li>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.</li> <li>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.</li> </ul>	- The current Hualilan project comprises 15 Minas (equivalent of mining leases) and 2 Demasias as illustrated in as listed in the table below and shown in Figure 2-2. This covers approximately 4 km of strike and includes all of the currently defined mineralization. There are no royalties on the project at CEL is earning a 75% interest in the project by funding a DFS. Additionally an application for an Exploration Licence covering 26sqkms surrounding the 15 Minas has been accepted by the San Juan Department of Mines and is currently being processes.
Exploration done by other parties	- Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Intermittent sampling dating back over 500 years has produced a great deal of data including sampling data, geologic maps, reports, trenching data, underground workings, drill hole results, geophysical surveys, resource estimates plus property examinations and detailed studies by several geologists although no work has been completed since 2006.</li> <li>There is 6 km of underground workings that pass through mineralised zones. Records of the underground geology and sampling are currently being compiled and digitised, as are sample data, geological mapping, trench and adit exposures, and drill hole results. Geophysical surveys exist but have largely yet to be check located and digitised.</li> <li>Drilling on the Hualilan Project (Cerro Sur and Cerro Norte combined) extends to over 150 drill holes. The key historical exploration drilling and sampling results are listed below.</li> <li>1984 - Lixivia SA channel sampling &amp; 16 RC holes (AG1-AG16) for 2040m</li> <li>1995 - Plata Mining Limited (TSE: PMT) 33 RC holes (Hua- 1 to 33) + 1500 samples</li> <li>1998 - Chilean consulting firm EPROM (on behalf of Plata Mining) systematic underground mapping</li> </ul>

Criteria	JORC Code explanation (	Commentary
Geology	- Deposit type, geological setting and style of mineralisation.	<ul> <li>and channel sampling</li> <li>1999 - Compania Mineral El Colorado SA ("CMEC") 59 core holes (DDH-20 to 79) plus 1700m RC program</li> <li>2003 - 2005 - La Mancha (TSE Listed) undertook 7447m of DDH core drilling (HD-01 to HD-48)</li> <li>Detailed resource estimation studies were undertaken by EPROM Ltda. (EPROM) in 1996 and CMEC (1999,revised 2000) both of which were written to professional standards and La Mancha 2003 and 2006.</li> <li>The collection of all exploration data by the various operators was of a high standard and had appropriate sampling techniques and intervals, adequate QA/QC and custody procedures, and appropriate duplicates and blanks used for determining assay precision and accuracy.</li> <li>Mineralisation occurs in all rock types, but it preferentially replaces limestone and fault zones.</li> <li>The mineralisation has been classified as Au + Zn-Cu Skarn manto-style (distal skarn) with veinhosted mineralisation. It has been divided into three phases – prograde skarn, retrograde skarn and a late quartz-galena event.</li> <li>Gold occurs in native form, in tellurides (hessite) and as inclusions with pyrite and chalcopyrite. The mineralisation also commonly contains chalcopyrite, sphalerite and galena.</li> <li>Mineralisation is either parallel to bedding, in bedding-parallel faults or in east-west striking, steeply dipping, quartz-dominated veins that cross the bedding at a high angle. The veins have thicknesses of 1-4 m and contain sulphides. The intersection between the bedding-parallel mineralisation and the east-striking cross veins seems to be important in localising the mineralisation.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information mate to the understanding of the exploraresults including a tabulation of the following information for all Mater drill holes:         <ul> <li>easting and northing of the drill collar</li> <li>elevation or RL (Reduced Level</li> </ul> </li> </ul>	ttion e ial I hole

Criteria	JORC Code explanation	Commentary		
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are part in the reporting of Explorat</li> <li>If the geometry of the miner respect to the drill hole and nature should be reported.</li> <li>If it is not known and only the lengths are reported, there is statement to this effect (egittrue width not known').</li> </ul>	ion Results. alisation with e is known, its ne down hole should be a clear	The mineralised bodies are generally steeply dipping, strike approximately north-south and east-west and have a true width of 1-4 metres. Where the north-south striking bedding-parallel manto mineralisation and the east-striking cross veins intersect mineralisation width may increase beyond 4 metres.  True widths of the sampled structures have been recorded and are reported with the assay results	
Diagrams	- Appropriate maps and secti and tabulations of intercept included for any significant reported These should inclu limited to a plan view of dri locations and appropriate s	s should be discovery being de, but not be Il hole collar	- Data provided in the body of report and in ASX release of 25 September 2019.	
Balanced reporting	<ul> <li>Where comprehensive reporting of Exploration Results is not properties of representative reporting of grades and/or widths shoul avoid misleading reporting Results.</li> </ul>	racticable, both low and high d be practiced to	- All data have been reported.	
Other substantive exploration data	- Other exploration data, if m material, should be reported limited to): geological obser geophysical survey results; ¿	l including (but not vations;	Sample Number	SUMMARY COMMENTS OF MINERALIZATION
	results; bulk samples – size and method of		485104	50% Fe Ox. 10% Hem?
	treatment; metallurgical te density, groundwater, geote		485105	80% Fe Ox. Cct 10%, Mal? around 1%,
	characteristics; potential deleterious or contaminating substances.		485106	1% Hem, 50% Fe Ox.
			485107	20% Qtz, 20% Fe Ox.

Criteria	JORC Code explanation	Commentary		
			485108	3%Py, 2% Shp
			485109	3%Py, 2% Shp
			485110	50%Qtz, 3%Cp
			485111	50% Ox. Fe, 2% Py
			485112	2% Py, 2% Cp
			485113	50% Fe Ox., 2% Py, 1% Cp
			485114	80% Fe Ox. (Gt around 50%)
			485115	<1% Fe Ox.
			485116	<1% Fe Ox.
			485117	80% Fe Ox., <1% Cu Ox.
			485118	2% Py, 3%Cp, 10% Cu Ox.
			485119	60% Fe Ox. 10% Hem?
		_	485120	60% Fe Ox. 20% Cu Ox.
		_	485121	40% Fe Ox. 1% Cu Ox. And garnets
			485122	20% Cu Ox, 10% Fe Ox
			485123	20% Fe oxides, 15 Cu Oxides, 1% Mn oxides and 2% garnets
			485124	50% Fe Ox, 10% Cu Ox, 30% Mn Oxides
			485125	30% Fe Ox, 10% Cu oxides
			485126	40% Limonites
		_	485127	20%Qtz, 5%Py, 3%Cp, 1% Cu Ox and 50% Fe Ox.
		_	485128	5% Fe Ox
			485129	5% Fe Ox
			485130	10% Cu Ox, 30%Mn Ox. And 50% Iron Oxides

Criteria	JORC Code explanation	Commentary		
			485131	50% Fe Ox, 1% CaCO3, 10% Garnets, 1% Hem and <1% Cu Ox
			485132	5% CaCO3, 20% Cu Ox, 10% Fe Ox and 30% Mn-Cu? Ox
			485133	2% CaCO3, 20% Cu Ox, 10% Fe Ox and 30% Mn Ox
			485134	20% Cu Ox, 40% F Ox and !0% Mn Ox
			485135	Breccia shows like: 30% Mn Ox, 20% Cu Ox and 10% Fe Oxides
			485136	40% Fe Ox, 30% Mn Ox
			485137	50% Fe Ox, 40% Mn Ox
		•	485138	50% Fe Ox, 10% Jar, 2% Hem and 1% Cu Ox
		•	485139	30% Fe Ox, 20% leached Jar, 1% Cu oxides
		•	485140	70% Fe Ox and 10% Cu Ox
		•	485141	30% Fe Ox, 30% Cct and 30% Mal
			485142	40% Cu Ox, 40% Fe Ox
			485143	30% Fe Ox, 2% Cu Ox
			485144	30% Fe Ox, 2% Cu Ox
			485145	60% Fe Ox and 30% Cu Ox
			485146	80% Fe Ox, 20% Cu Ox
			485147	70% Fe Ox, 5% Cu Ox, 10% Cp, 5% Py
		•	485148	20% Cu Ox, 30% Fe Ox, 5% CaCO3
		•	485149	40% Fe Ox, 20% Qtz
		•	485150	30% Cu Ox, 40% Fe Ox, 10% Py and 5% Cp
		•	485151	30% Cu Ox, 40% Fe Ox, 10% Py and 5% Cp
		•	485152	30% Cu Ox, 40% Fe Ox, 10% Py and 5% Cp
			485204	15%CuOx, Fe Ox 20%

Criteria	JORC Code explanation	Commentary		
			485205	10%CuOx, Fe Ox 15%
			485206	5%CuOx, Fe Ox 20%
		•	485207	2% Cu Ox, 15% Fe Ox
		•	485208	5% CuOx, 10% Fe Ox
		•	485209	10% Cu Ox, 15% Fe Ox
		•	485210	8% Cu Ox, 10 Fe Ox
		•	485211	black breccia HG road float
		•	485212	black breecia in Lms
		•	485213	red and bleck UG ore float
		•	485214	-
			485215	-
			485216	-
			485217	10% PY, 5% CP, 3% Gn, 1% Sp
			485218	10% PY, 5% CP, 3% Gn, 1% Sp
			485219	10% PY, 5% CP, 3% Gn, 1% Sp
			485220	10% PY, 5% CP, 3% Gn, 1% Sp
			485221	20% PY, 10% CP, 3% Gn, 2% Sp
			485222	40% Cu Ox, 30% Fe Ox, 10% Py and 2% Cp
			485223	40% Cu Ox, 30% Fe Ox, 10% Py and 2% Cp
			485224	-
Further work	<ul> <li>The nature and scale of plann (eg tests for lateral extensions extensions or large-scale step- Diagrams clearly highlighting possible extensions, including</li> </ul>	s or depth -out drilling). 1 the areas of	<ul><li>Additi</li><li>Detail</li></ul>	to undertake the following over the next 12 months onal data precision validation as required; ed interpretation of known mineralized zones; ural interpretation and alteration mapping using high resolution satellite data

Criteria	JORC Code explanation	Commentary	
	geological interpretations a areas, provided this informa commercially sensitive.	,	<ul> <li>to better target extensions of known mineralisation.</li> <li>Field mapping program targeting extensions of known mineralisation.</li> <li>Investigate further drilling requirements to upgrade both the unclassified mineralisation and mineralisation in the existing historical resources to meet JORC 2012 requirements;</li> <li>Initial drill program comprising verification (twin holes) and targeting extensions of the historically defined mineralisation;</li> <li>Metallurgical test work.</li> </ul>

## **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>The drill hole data is stored in a drop box database is and currently being loaded into a new database. The database has been previously split into original paper components and electronic components.</li> <li>The owner's representatives have reviewed and confirmed the database structure and integrity.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>A 4-day site visit was undertaken from Wednesday Jan 17, 2018 to Saturday 20 January 2018. During this visit:         <ul> <li>a number of the historical drill collars were located, and their location confirmed</li> <li>The mineralisation was inspected and sampled in the main underground workings and also in a number of waste dumps associated with exploration adits.</li> <li>The visual investigation of the mineralisation confirmed the historically reported mineralisation,</li> <li>Assay results of representative samples from the underground workings</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>and dumps also confirmed the tenor of the reported resource grades of the various styles of mineralisation.</li> <li>In addition, SRK undertook a site visit 30 August 2018 where they reviewed much of the above. Their review confirmed the results of the first site visit</li> <li>In addition, the Competent person was on site for 3 weeks during the underground channel and bulk sampling which is the subject of this release</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The interpretation is considered appropriate given the stage of the project and the nature of activities that have been conducted. The interpretation captures the essential geometry of the mineralised structure and lithologies with drill data supporting the findings from the initial underground sampling activities.</li> <li>The most recent resource calculation (2006 and 2003 – La Mancha) used all core drilling and detailed underground channel sampling collected by EPROM, CMEC and La Mancha. Overlying assumptions included a reduction of the calculated grade in each resource block by a factor of 10% to account for possible errors in the analyses and samples. An arbitrary reduction factor was applied to the 2006 resource whereby the net reported tonnage was reduced by 25% for indicated resource blocks, 50% for inferred resource blocks, and 75% of potential mineral resource blocks. The reason for the application of these tonnage reduction factors was not outlined in the resource report. It is noted that at the time of this report La Mancha was in a legal dispute concerning the project with its joint venture partner and given the acquisition of a 200,000 Oz per annum producing portfolio the project was likely no longer a core asset for La Mancha at that time. Additionally, under the original acquisition agreement La Mancha had to issue additional acquisition shares based on resource targets.</li> <li>The effect of removing the assumptions relating to application of the arbitrary tonnage reduction factors applied increases the overall resource tonnage by in excess of 50%. Removing these correction factors would bring the overall tonnage and grade close the earlier (2003, 1999, and 1996) tonnage and grade estimates albeit in different categories (lower confidence) which are</li> </ul>

Criteria	JORC Code explanation	Commentary
Dimensions	- The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>considered more appropriate.</li> <li>The mineralisation is defined to the manto and vein bodies detailed cross section and plan maps were prepared for these bodies with their shapes used in controlling the resource estimate.</li> <li>The structure of the area is complex, and a detailed structural interpretation is recommended as this may provide a better understanding of the continuity of mineralisation and possible extensions to it. The deposit contains bonanza gold values and while very limited twinning has indicated acceptable repeatability a rigorous study of grade continuity needs to be undertaken as part of future resource calculations.</li> <li>No reliable information has been provided to the owner however through further ongoing investigation is being conducted by the owner to address this information gap.</li> </ul>
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used</li> </ul>	<ul> <li>The estimation techniques are appropriate. The 2003 and 2006 resources used a longitudinal section polygonal method was used for estimating resources, with individual blocs representing weighted averages of sampled underground and/or areas of diamond drill pierce points with zones of influence halfway to adjacent holes. The area of the block was calculated using AutoCad directly from the longitudinal sections.</li> <li>As outlined in Section 2 check assaying by PG Consulting returned values in the check assay sample which were 3.4% and 12.99% greater for Au and Ag than the original assays. A number pf previous resource estimates were available to check the 2006 resource estimate when the arbitrary tonnage reduction factors are removed brings the overall tonnage and grade close the earlier (2003, 1999, and 1996) tonnage and grade estimates albeit indifferent categories which are considered more appropriate.</li> <li>It was assumed only gold silver and zinc would be recovered and that no other by products would be recovered. This is viewed as conservative given metallurgical data pointing to the production of a salable zinc concentrate.</li> <li>Based on the preliminary metallurgy estimation of deleterious elements or other non-grade variables of economic significance was not required</li> <li>The minimum mining width of 0.8m was assumed for veins less than 0.6m and</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available</li> </ul>	<ul> <li>for wider widths a dilution of 0.2m was used to calculate the grade.</li> <li>No assumptions were made regarding correlation between variables</li> <li>The mineralisation is defined to the manto and vein bodies. Detailed cross section and plan maps were prepared for these bodies with their shapes used in controlling the resource estimate Long sections for the veins and mantos were taken and sampling was plotted, and the blocks outlined considering this.</li> <li>Grade cutting was not used in the calculation of the resource and no discussion was given as to why it was not employed. It is recommended that a study be undertaken to determine if an appropriate top cut need be applied</li> <li>No data is available on the process of validation.</li> </ul>
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul> <li>No data is available. There is unlikely to be any significant difference between dry and natural moisture results.</li> </ul>
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>The Mineral Resource Estimate is above a cut-off grade of 3.89 g/t Au. This is based on the assumed mining cost</li> </ul>
Mining factors or assumptions	- Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	- Metal prices: Au US\$550 Oz, Ag US\$10 Oz - Metallurgical Recovery: Au – 80%. Ag – 70% Zn - nil
Metallurgical factors or assumptions	- The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made	- Historical metallurgical test-work is currently under review however the assumptions used (80% Au recovery, 70% Ag and no zinc recovery) seem conservative. The most recent test work was conducted in 2000 and was a preliminary assessment only. This work was conducted at Lakefield Labs (cyanidation) and CIMM Labs (flotation) in Chile. While this work is

Criteria	JORC Code explanation	Commentary
	when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	preliminary it indicates recoveries for differential flotation in conjunction with a Knelson concentrator at 80% each for gold and silver and 50% for zinc regardless of the type of material (sulphide or oxidized).
Environmental factors or assumptions	- Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	<ul> <li>It is considered that there are no significant environmental factors, which would prevent the eventual extraction of gold from the project. Environmental surveys and assessments will form a part of future pre-feasibility.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Densities of 2.7 m³/MT were used for mineralised veins and 2.6 m³/MT for wall rock</li> <li>No data of how densities were determined in available</li> <li>The bulk densities used in the evaluation process are viewed as appropriate at this stage</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> </ul>	<ul> <li>The Mineral Resource Estimate has both Indicated and Inferred Mineral Resource classifications under the National Instrument 43-101 code and is considered foreign. These classifications are considered appropriate given the confidence that can be gained from the existing data and results from drilling.</li> <li>The reliability of input data for the 2003 and 2006 resources is acceptable as is the confidence in continuity of geology and metal values, quality, quantity and</li> </ul>

Criteria	JORC Code explanation	Commentary
	- Whether the result appropriately reflects the Competent Person's view of the deposit.	distribution of the data. Appropriate account has been taken of all relevant factors with the exception of studies into the appropriateness of the application of a top cut.  The reported 2006 NI43-101 (non-JORC Code compliant Measured and Indicated) estimate for the Hualilan Project is measured resource of 164,294 tonnes averaging 12.6 grams per tonne gold and 52.1 g/t silver and 2.5% zinc plus an indicated resource of 51,022 tonnes averaging 12.4 grams per tonne gold and 36.2 g/t silver and 2.6% zinc plus an inferred resource of 213,952 tonnes grading 11.7 grams per tonne gold and 46.6 g/t silver and 2.3% zinc. (Source La Mancha resources Toronto Stock Exchange Release April 7, 2007 - Interim Financials) – See Table 1  The 2006 estimate did not include the east-west mineralised Magnata Vein despite the known mineralisation in the Magnata Vein being drilled on a 25 x 50-metre spacing. The 2003 NI43-101 (non-JORC Code compliant) estimate attributed approximately half of its measured and indicated tonnage to the Magnata Vein. The 2006 estimate also included arbitrary tonnage reduction factors of 25% for indicated category, 50% for inferred category and 75% for potential category.  The 2006 estimate also included a significant tonnage of Potential Category Resources which have not been reported.  The reported 2003 NI43-101 (non-JORC Code compliant) estimate for the Hualilan project is a measured resource of 299,578 tonnes averaging 14.2 grams per tonne gold plus an indicated resource of 976,539 tonnes grading 14.6 grams per tonne gold plus an inferred resource of 976,539 tonnes grading
		13.4 grams per tonne gold representing some 647,809 ounces gold. (Source La
		Mancha resources Toronto Stock Exchange Release May 14, 2003 - Independent Report on Gold Resource Estimate) - See Table 1
		- The 2003 Mineral Resource classification and results appropriately reflect the

Competent Person's view of the deposit and the current level of risk associated

Criteria	JORC Code explanation	Commentary				
		with the project to date	<u>.</u>			
		Historic 2003 NI43-101 (non-JORC Code compliant)				
		CATEGORY	TONNES	Au (g/t)	Ag (g/t)	Zn%
		Measured	299,578	14.2		
		Indicated	145,001	14.6		
		Inferred	976,539	13.4		
		Historic 2006 NI43-101	(non-JORC Code com			
		CATEGORY	TONNES	Au (g/t)	Ag (g/t)	Zn%
		Measured	164,294	12.5	52.1	2.5
		Indicated	51,022	12.4	36.2	2.6
		Inferred	213,952	11.7	46.6	2.3
Audits or reviews	- The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>The most recent Miners</li> <li>The earlier (1996 and 2 stated in a 2003 resour 101 standard and the report concluded that "groups are seen to be r</li> </ul>	2000) Mineral Resource report. This independents of this report we 'Detailed resource calc	e Estimates v ndent report ere released (	were audit was done to the TSX	to NI-43- . This
Discussion of relative accuracy/ confidence	- Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	<ul> <li>There is sufficient confidence is analytical results that the data correlate well. The the confidence limits. The accuracy is grade continuity is varidemonstrated to date a understanding of the grade.</li> </ul>	hey can be relied upon e approach or procedur he main two factors wh nuity and top cut. iable in nature in this s and closer spaced drilli	. The availab re are deeme hich could af tyle of depos ng is require	le geology d appropi fect relati sit and has d to impro	and assay riate given ve not been ove the

Criteria J	JORC Code explanation	Commentary
-	<ul> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>noted that the results from the twinning of three holes by La Mancha are encouraging in terms of grade repeatability</li> <li>The deposit contains very high grades, and there is a potential need for the use of a top cut. It is noted that an arbitrary grade reduction factor of 10% has already been applied to the resource as reported.</li> <li>No production data is available for comparison</li> </ul>