



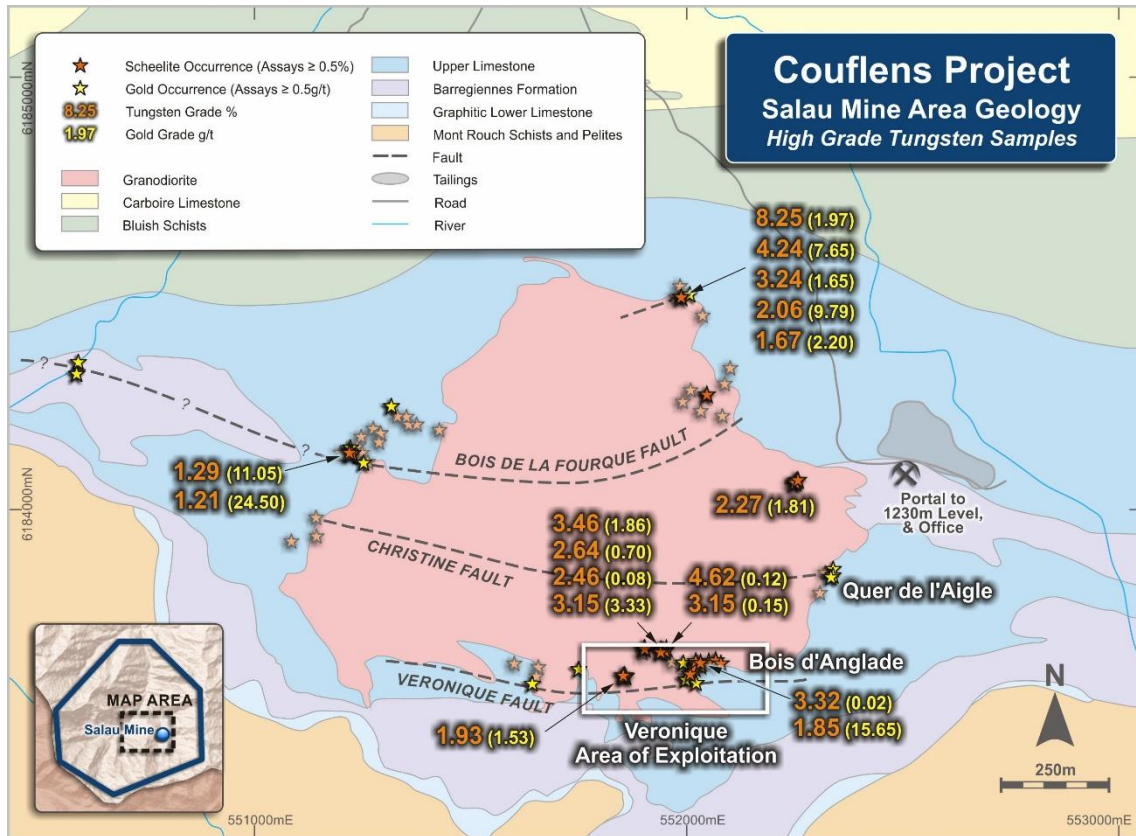
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## HIGH GRADE TUNGSTEN SAMPLING RESULTS OF UP TO 8.25% WO<sub>3</sub> AT THE COUFLENS PROJECT

Apollo Minerals Limited is pleased to report further results from the surface exploration program undertaken in late 2017 at its 80% owned Couflens Project in France, which includes the high grade historical Salau tungsten mine.

### Highlights:

- Rock chip samples collected from the Project confirmed the presence of widespread high grade tungsten mineralisation, with grades up to 8.25% WO<sub>3</sub>
- These results follow on from the previous announcement of high-grade gold of up to 24.5g/t (ASX Announcement 29 November 2017)
- Numerous tungsten skarn occurrences have been identified around the historical Salau mine on the margins of the major granodiorite intrusion
- Where these occurrences are intersected by fault structures, the mineralisation is typically sulphide-rich and contains substantially higher values of tungsten (up to 8.25% WO<sub>3</sub>), gold (up to 24.5 g/t) and copper (up to 0.94%)
- Best tungsten results from the sampling program, with the associated gold assays (previously reported), include:
  - 8.25% WO<sub>3</sub> (1.97 g/t gold)
  - 4.62% WO<sub>3</sub> (0.12 g/t gold)
  - 4.24% WO<sub>3</sub> (7.65 g/t gold)
  - 3.46% WO<sub>3</sub> (1.86 g/t gold)
  - 3.32% WO<sub>3</sub> (0.02 g/t gold)
  - 3.24% WO<sub>3</sub> (1.65 g/t gold)
  - 3.15% WO<sub>3</sub> (3.33 g/t gold)
  - 3.15% WO<sub>3</sub> (0.15 g/t gold)
  - 2.64% WO<sub>3</sub> (0.70 g/t gold)
  - 2.46% WO<sub>3</sub> (0.08 g/t gold)
  - 2.27% WO<sub>3</sub> (1.81 g/t gold)
  - 2.06% WO<sub>3</sub> (9.79 g/t gold)
  - 1.93% WO<sub>3</sub> (1.53 g/t gold)
  - 1.85% WO<sub>3</sub> (15.65 g/t gold)
  - 1.67% WO<sub>3</sub> (2.20 g/t gold)
  - 1.29% WO<sub>3</sub> (11.05 g/t gold)
  - 1.21% WO<sub>3</sub> (24.50 g/t gold)
- These high grade tungsten-gold occurrences identified at the surface on the flanks of the granodiorite intrusion, represent priority exploration targets
- Tailings samples from one of the two historical tailings disposal areas returned tungsten assay results with an average value of approximately 0.50% WO<sub>3</sub>. These tailings samples previously returned grades up to 8.94 g/t gold, confirming the presence of high grade gold associated with the tungsten ore mined at the historical Salau mine



**Figure 1: High grade tungsten results, with associated gold values, from 2017 rock chip sampling program**

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## Exploration Program and Results

Apollo Minerals is working towards the reactivation of the high grade Salau tungsten mine whilst also conducting exploration programs for gold and tungsten across the surrounding 42km<sup>2</sup> licence area.

In 2016 a surface exploration program resulted in the identification of gold occurrences associated with three main east-west trending fault structures within the Couflens licence area.

In September 2017, a follow-up surface exploration program was completed which was primarily focussed on identifying extensions to the gold occurrences along these fault structures. The majority of samples were collected on the margins of the granodiorite intrusion (Fourque granodiorite) near the historical Salau tungsten mine.

The exploration program included detailed geological and structural mapping, rock chip sampling of outcrop, and input of the data into an ArcGIS software package to facilitate data integration and interpretation.

A total of 222 select rock chip samples were collected during the field campaign and subsequently submitted for gold and multi-element (including tungsten and copper) analysis.

Assay results from the gold samples were received first and were reported to the market on 29 November 2017, demonstrating widespread gold occurrences with grades of up to 24.5 g/t.

Assay results from all other elements, including tungsten and copper, have now been received and the results are reported herein.

The tungsten assay results have confirmed the presence of widespread, outcropping, high grade skarn mineralisation around the margins of the Fourque granodiorite (Figures 1 and 2).

Where the skarns are observed to be intersected by east-west trending fault structures/shear zones, the mineralisation is typically sulphide-rich (mainly massive pyrrhotite, chalcopyrite and sphalerite) and contains substantially higher values of tungsten (up to 8.25% WO<sub>3</sub>), gold (up to 24.5 g/t) and copper (up to 0.94%).

A number of quality targets have been identified around the margins of the Fourque granodiorite in addition to the surface exposure of the Bois d'Anglade and Veronique deposits mined during the historical production (Figure 2).

Outcropping skarn mineralisation impregnated by massive sulphides, observed at the north-eastern margin of the Fourque granodiorite has returned high grade tungsten and gold assays results including:

- 8.25% WO<sub>3</sub> with 1.97 g/t gold
- 4.24% WO<sub>3</sub> with 7.65 g/t gold
- 3.24% WO<sub>3</sub> with 1.65 g/t gold
- 2.06% WO<sub>3</sub> with 9.79 g/t gold
- 1.67% WO<sub>3</sub> with 2.20 g/t gold

High grade tungsten-gold mineralisation was confirmed along the western margin of the Fourque granodiorite in spatially close association with the Bois de la Fourque fault. Best results from this target area include 1.29% WO<sub>3</sub> with 11.05 g/t gold and 1.21% WO<sub>3</sub> with 24.50 g/t gold.

An area of identified skarn mineralisation along eastern margin of the Fourque granodiorite returned high grade assay results including 2.27% WO<sub>3</sub> with 1.81 g/t gold and 1.12% WO<sub>3</sub> with 1.11 g/t gold.



Widespread high grade skarn mineralisation impregnated by massive sulphides was identified within the Bois d'Anglade embayment at the south-eastern margin of Fourque granodiorite, spatially close to the extension of the Veronique fault, with numerous samples also recording high gold values. Best results include:

- 4.62% WO<sub>3</sub> with 0.12 g/t gold
- 3.46% WO<sub>3</sub> with 1.86 g/t gold
- 3.32% WO<sub>3</sub> with 0.02 g/t gold
- 3.15% WO<sub>3</sub> with 3.33 g/t gold
- 3.15% WO<sub>3</sub> with 0.15 g/t gold
- 2.64% WO<sub>3</sub> with 0.70 g/t gold
- 2.46% WO<sub>3</sub> with 0.08 g/t gold
- 1.93% WO<sub>3</sub> with 1.53 g/t gold
- 1.85% WO<sub>3</sub> with 15.65 g/t gold

### Tailings

A total of 34 tailings samples were collected from the historical tailings disposal area adjacent to the mine portal (1230m level) during the field campaign.

These tailings samples returned gold assays up to 8.94 g/t, confirming the presence of high grade gold associated with the tungsten ore mined at the historical Salau mine. A number of tailing samples returned tungsten assay results >1% WO<sub>3</sub>, with the average value of the tailings samples being 0.49% WO<sub>3</sub> (assays ranged from 0.13 – 4.04% WO<sub>3</sub>, with one outlier excluded).

Whilst very early stage in nature, the Company plans to study the potential to reprocess the tailings to extract the tungsten and gold whilst at the same time restoring the natural landscape and habitat and improving soil conditions left over from the historical tungsten operations.

All significant tungsten and copper assay results, and the previously reported gold assay results for the rock chip and tailings samples, along with details of the sample locations and geological descriptions are summarised in Appendices A and B.

### **Work Plan – Salau Mine Area and Regional Exploration**

The Company is conducting an aggressive work program focused on the following:

#### *Salau Mine Area:*

- Review of historical data and 3D modelling of the geology, mineralisation zones and principal ore controls;
- Mine area and old tailings area risk assessments;
- Mapping and sampling of mineralisation exposed in previously developed mine areas, in order to verify the historical data for resource estimation;
- Underground drilling to confirm known zones of mineralisation and test for extensions of these zones; and
- Estimation and reporting of a Mineral Resource in accordance with the JORC Code.

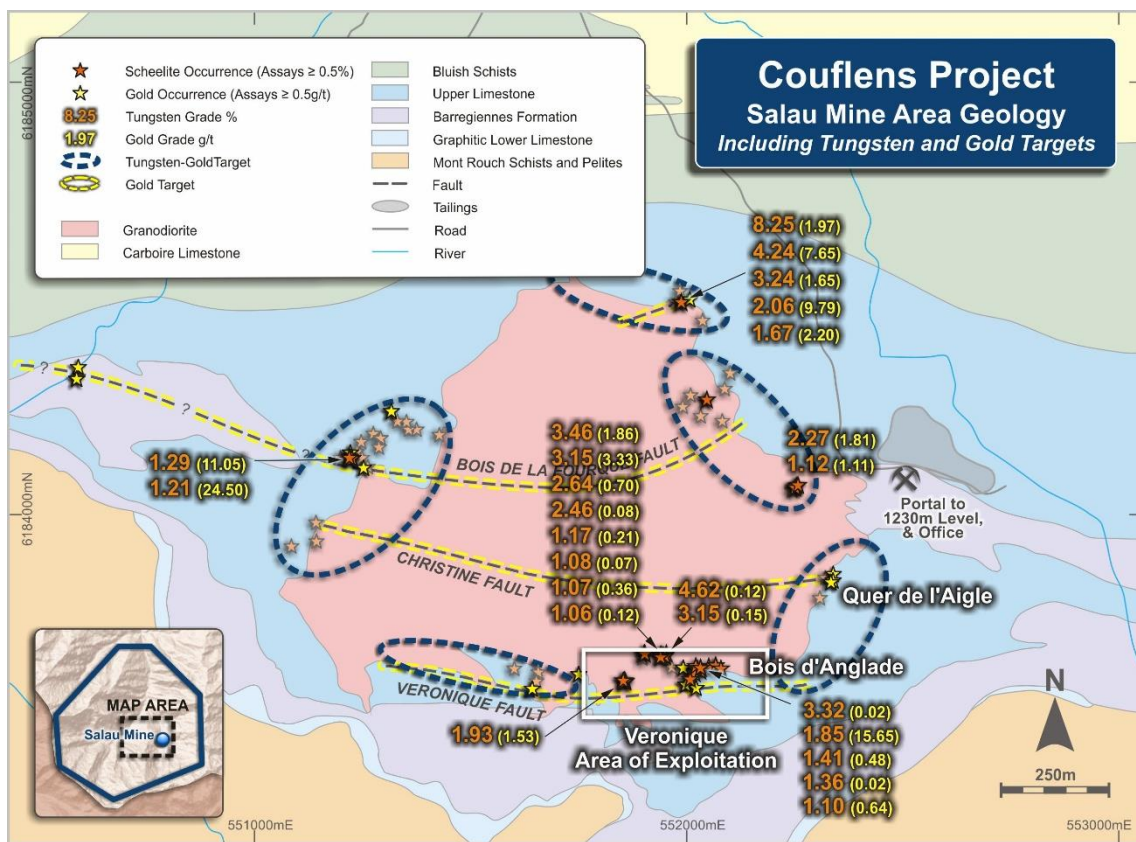


*Regional Exploration:*

- Further surface exploration programs to assess the identified tungsten and gold prospects and advance them to the drill ready stage; and
- Generation of new targets within the broader project area and extensions to already identified zones of mineralisation.

**Geological Setting and Gold Potential**

The Salau deposit is a tungsten-bearing (primarily scheelite) skarn developed at the contact between Devonian pelites and calcareous sediments of the Barregiennes Formation and a Permian-aged Fourque granodiorite stock (Figure 2). The skarn formed within both the carbonate-bearing sediments and, to a much lesser degree, the granodiorite. Mineralisation is directly related to the Fourque granodiorite which provided hot, tungsten bearing solutions that reacted with the host rocks to form the skarns and deposit metal-bearing minerals.



**Figure 2: Salau Mine Area - Geology and Exploration Targets**

Gold was not discovered in the Salau mine until very late in the mine life (and as a result was never recovered in milling). Limited sampling of material from the lower section of the Veronique ore zone indicated the presence of high grade gold associated with the tungsten mineralisation (Fonteilles *et al*, 1989).

A review of the historical and recent exploration data has demonstrated that the gold potential of the Salau mine area has potentially been largely underestimated and that the nature of the gold mineralisation had previously not been fully understood.

Recent work has shown that the gold is associated with hydrothermal fluids focused by the "Veronique" type faults. Accordingly, the main east-west trending fault structures recognised within the Fourque granodiorite (Veronique fault, Christine fault and Bois de la Fourque fault) and their extensions, along strike and at depth, represent priority gold exploration targets.



The discovery of the high grade 'gold only' occurrence in quartz veins located to the west of the Fourque granodiorite has also highlighted the potential for shear hosted gold mineralisation to be associated with regional fault structures.

### **Competent Persons Statement**

*The information in this report that relates to Exploration Results is based on information compiled by Robert Behets, a Competent Person who is a Fellow of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Behets is a holder of shares and options in, and is a director of, Apollo Minerals Limited. Mr Behets has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Behets consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

### **REFERENCES**

*Fonteilles M., Soler P., Demange M., & Derré C., 1989; "The Scheelite Skarn Deposit of Salau (Ariège, French Pyrenees)", Economic Geology, Vol 84, pp 1172 – 1209*

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## About the Couflens Project

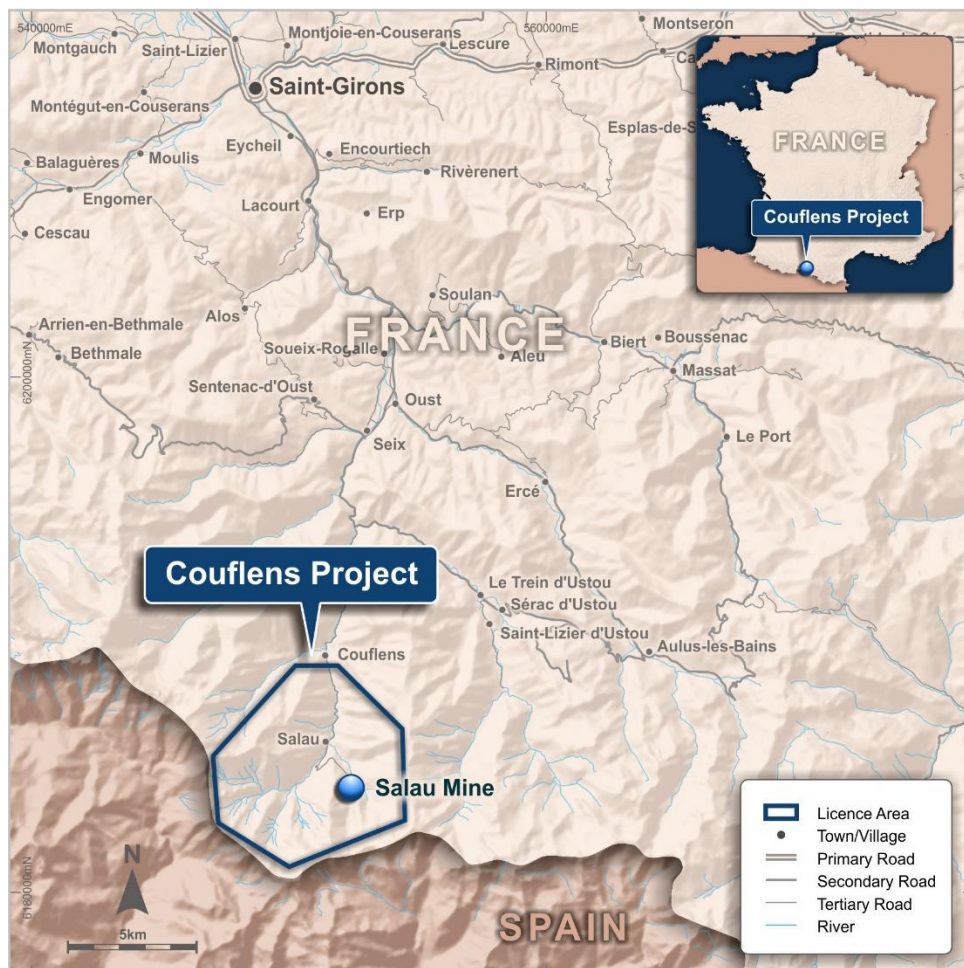
Apollo Minerals Limited owns an 80% interest in the Couflens tungsten-copper-gold project in the Pyrenees region of southern France.

Within the 42km<sup>2</sup> covered by the Couflens exploration licence lies the historical Salau mine. The mine was one of the world's highest grade tungsten mines, producing approximately 930,000 tonnes at 1.5% WO<sub>3</sub> for around 11,500 tonnes of WO<sub>3</sub> in concentrate, prior to its closure in 1986 following the rapid fall in the tungsten price caused by Chinese dumping of tungsten into global markets.

Apollo Minerals is focussed on two parallel work programs at the Couflens Project:

- (1) Brownfields activities within, and immediately adjacent to, the historical Salau tungsten mine. The deposit remains open at depth with previous drilling below the base of the existing underground development confirming continuation of the mineralised system. Both the underground development and infrastructure will be examined to determine the most efficient method to progress mine exploration, development activities and potential mine reactivation;
- (2) Continuation of an aggressive regional exploration program, focused initially on gold. Recent field campaigns have returned grades of up to 24.5 g/t gold from rock chip samples. Exploration will be focused on the multiple fault structures recognised within the major granodiorite intrusion at Salau and the discovery of shear hosted gold mineralisation associated with large regional fault structures extending along a 5km corridor to the west of the Salau mine area.

Apollo Minerals is developing the Couflens project in accordance with the highest standards of environmental, social, health and safety, and economic management. All work programs are carried out with a strong commitment to both sustainable development and proactive stakeholder engagement as the Company seeks to develop and maintain positive relationships with its host communities and stakeholders.





## Appendix A - Summary of Significant Rock Chip Sample Results

Sample number	Latitude	Longitude	Elevation (m)	WO <sub>3</sub> (%)	Au (ppm)	Cu (ppm)	Description
QM91	42.742738	1.195006	1411	0.34	0.01	< LOD	Garnet and pyroxene skarn with abundant massive sulphides (pyrrhotite, chalcopyrite, arsenopyrite)
QM92	42.742738	1.195006	997	0.85	4.55	387	Garnet and pyroxene skarn with abundant massive sulphides (pyrrhotite, chalcopyrite, arsenopyrite)
QM120	42.742872	1.177205	1298	< LOD	2.55	112	Sheared quartz vein (5-10cm) with abundant sulphides (arsenopyrite) cross-cutting the marble bedding
QM121	42.742872	1.177205	1309	< LOD	0.43	< LOD	Sheared quartz vein (5-10cm) with abundant sulphides (arsenopyrite) cross-cutting the marble bedding
QM123	42.742872	1.177205	1312	< LOD	0.58	< LOD	Sheared quartz vein (5-10cm) with abundant sulphides (arsenopyrite) cross-cutting the marble bedding
QM142	42.741005	1.197637	1315	1.12	1.11	1023	Massive sulphides / skarn (pyrrhotite, chalcopyrite)
QM143	42.740991	1.197592	1356	2.27	1.81	874	Massive sulphides (pyrrhotite, chalcopyrite)
QM145	42.741017	1.197577	1333	< LOD	0.24	375	Marble with beds of pyroxene skarn and sulphides
QM146	42.740950	1.197562	1330	0.95	1.38	2343	Massive sulphides (chalcopyrite, pyrrhotite)
QM151	42.742485	1.196107	1328	< LOD	0.10	198	Mylonitised and very silicified granodiorite with arsenopyrite
QM158	42.744363	1.195378	1352	0.40	< LOD	47	Skarnified garnet and pyroxene marble
QM160	42.744386	1.195362	1351	0.35	< LOD	59	Pyroxene and garnet marble
QM162	42.743329	1.195849	1328	< LOD	0.10	2468	Altered granodiorite cross-cut by sulphides (chalcopyrite) at contact with the massive sulphides
QM163	42.743329	1.195849	1333	0.38	0.09	559	Massive sulphides (pyrrhotite, chalcopyrite)
QM165	42.743291	1.195975	1332	0.22	0.06	66	Endoskarn cut by several grey-black quartz veins
QM168	42.743286	1.195962	1330	< LOD	0.10	80	Altered granodiorite at contact with a pyroxene and sulphides skarn (pyrrhotite, chalcopyrite)
QM169	42.743275	1.196029	1405	0.03	0.28	535	Pyroxene skarn with sulphides in the bedding (pyrrhotite, chalcopyrite)
QM170	42.743281	1.196031	1405	< LOD	0.16	350	Massive sulphides (pyrrhotite, chalcopyrite) at contact with a pyroxene skarn
QM171	42.743294	1.196014	1405	< LOD	0.18	116	Intensely oxidised and altered granodiorite (endoskarn) at contact with the disseminated sulphides skarn
QM173	42.744752	1.194219	1405	8.25	1.97	721	Oxidised massive sulphides (pyrrhotite, chalcopyrite)
QM174	42.744752	1.194219	1405	4.24	7.65	1922	Slightly altered massive sulphides (pyrrhotite, chalcopyrite)
QM175	42.744752	1.194219	1401	2.06	9.79	1439	Pyroxene skarn pervaded by massive sulphides (pyrrhotite, chalcopyrite, sphalerite, arsenopyrite)
QM176	42.744752	1.194219	1385	3.24	1.65	1209	Massive sulphides with coarse-grained scheelite and moderately abundant arsenopyrite
QM177	42.744752	1.194219	1385	1.67	2.20	883	Massive sulphides with abundant euhedral arsenopyrite and coarse-grained scheelite
QM188	42.740552	1.184736	1383	0.03	0.19	< LOD	Pyroxene skarn with disseminated sulphides (pyrrhotite, chalcopyrite)
QM192	42.741466	1.184975	1563	0.26	13.15	685	Pyroxene skarn and massive sulphides (pyrrhotite, chalcopyrite) at contact with granodiorite
QM193	42.741466	1.184975	1566	< LOD	0.11	227	Skarnified marble and very altered granodiorite with sulphides (pyrrhotite)
QM199	42.741347	1.185027	1565	1.29	11.05	684	Sulfide skarn (pyrrhotite, chalcopyrite)
QM200	42.737193	1.195233	1559	0.87	< LOD	4592	Massive sulphides (pyrrhotite, chalcopyrite) with some fine-grained scheelite crystals
QM201	42.737145	1.195003	1560	0.04	0.01	2905	Massive sulphides (pyrrhotite, chalcopyrite) with some scheelite crystals
QM202	42.736986	1.195058	1561	< LOD	0.01	5453	Massive sulphides (pyrrhotite, chalcopyrite) with some scheelite crystals
QM203	42.737105	1.195111	1561	0.29	0.02	2831	Massive sulphides (pyrrhotite, chalcopyrite) with some scheelite crystals
QM207	42.737147	1.194878	1563	1.85	15.65	2571	Massive sulphides (pyrrhotite, chalcopyrite) pervading a pyroxene skarn
QM208	42.737163	1.194826	1565	0.09	0.35	3155	Massive pyroxene skarn cross-cut by sulphide veins (pyrrhotite, chalcopyrite)
QM209	42.737191	1.194866	1570	1.41	0.48	2879	Pyroxene skarn cross-cut by sulphide veins (pyrrhotite, chalcopyrite)
QM211	42.737158	1.194996	1570	1.10	0.64	2587	Contact between fractured granodiorite (endoskarn) and massive sulphides (pyrrhotite, chalcopyrite)
QM212	42.737155	1.195006	1564	1.36	0.02	6015	Massive sulphides (pyrrhotite, chalcopyrite)
QM214	42.737141	1.194912	1570	0.83	0.10	2352	Massive sulphides (pyrrhotite, chalcopyrite)
QM217	42.737078	1.195127	1571	< LOD	< LOD	1796	Garnet and pyroxene skarn pervaded by massive sulphides (pyrrhotite, chalcopyrite)

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Sample number	Latitude	Longitude	Elevation (m)	WO <sub>3</sub> (%)	Au (ppm)	Cu (ppm)	Description
QM220	42.737218	1.195425	1571	0.86	0.57	1202	Massive sulphides (pyrrhotite, chalcopyrite)
QM221	42.737230	1.195417	1570	0.26	< LOD	858	Garnet skarn pervaded by massive sulphides (pyrrhotite, chalcopyrite)
QM222	42.737154	1.195578	1558	0.54	0.36	157	Garnet skarn in marble bedding cross-cut by a centimetric calcite and chalcopyrite vein
QM224	42.736797	1.194895	1571	0.09	0.02	5331	Garnet and pyroxene skarn pervaded by massive sulphides (pyrrhotite, chalcopyrite)
QM225	42.736692	1.194635	1570	< LOD	< LOD	2647	Garnet and pyroxene skarn pervaded by massive sulphides (pyrrhotite, chalcopyrite)
QM226	42.736723	1.194613	1570	0.49	0.01	252	Garnet and pyroxene skarn with some disseminated pyrrhotite
QM230	42.737096	1.194731	1348	< LOD	0.37	< LOD	White marble with garnet beds and coarse-grained calcite
QM231	42.737095	1.195001	1571	0.64	0.01	1492	Pyroxene skarn with some disseminated pyrrhotite
QM234	42.737096	1.194987	1571	0.26	< LOD	590	Pyroxene skarn pervaded by sulphides (pyrrhotite, chalcopyrite)
QM236	42.737080	1.194880	1348	0.33	0.18	579	Pyroxene and garnet skarn with a late garnet vein cross-cutting skarn bedding
QM240	42.737105	1.194811	1573	1.03	< LOD	1183	Pyroxene skarn pervaded by massive sulphides (pyrrhotite, chalcopyrite) at contact with endoskarn
QM241	42.737041	1.194779	1573	0.63	0.01	770	Pyroxene skarn pervaded by massive sulphides (pyrrhotite, chalcopyrite) at contact with endoskarn
QM242	42.737084	1.194784	1572	0.20	0.01	1673	Massive sulphides (pyrrhotite, chalcopyrite)
QM243	42.737118	1.194853	1573	0.63	< LOD	1281	Pyroxene skarn pervaded and cut by pyrrhotite and chalcopyrite beds
QM244	42.737119	1.194847	1573	0.44	0.01	872	Massive sulphides (pyrrhotite, chalcopyrite)
QM248	42.737040	1.194840	1558	0.62	< LOD	315	Pyroxene skarn with some traces of sulphides (pyrrhotite, chalcopyrite)
QM249	42.737034	1.194811	1382	0.05	0.34	5360	Massive sulphides (pyrrhotite, chalcopyrite)
QM251	42.736987	1.194869	1558	0.04	0.03	3899	Granodiorite pervaded by sulphides (pyrrhotite, chalcopyrite)
QM254	42.736875	1.194847	1557	0.16	< LOD	1035	Massive sulphides (pyrrhotite, chalcopyrite)
QM261	42.739038	1.198684	1382	0.01	0.98	< LOD	Pyroxene and garnet skarn pervaded by disseminated sulphides (arsenopyrite, pyrrhotite, chalcopyrite)
QM265	42.739002	1.198627	1381	0.06	0.67	112	Pyroxene and garnet skarn with disseminated sulphides (arsenopyrite, pyrrhotite, chalcopyrite)
QM269	42.741379	1.184966	1383	0.20	2.35	184	Massive sulphides (pyrrhotite, chalcopyrite) at contact between granodiorite and marble
QM270	42.741358	1.184954	1376	1.21	24.50	453	Massive sulphides (arsenopyrite, pyrrhotite, chalcopyrite)
QM271	42.741355	1.184977	1636	0.06	1.78	197	Altered granodiorite at contact with massive sulphides (pyrrhotite, chalcopyrite)
QM272	42.741340	1.185006	1636	0.50	15.20	988	Massive sulphides (pyrrhotite, chalcopyrite)
QM273	42.741469	1.185135	1636	< LOD	0.23	796	Massive sulphides (pyrrhotite, chalcopyrite)
QM279	42.737455	1.193409	1636	0.33	2.43	290	Skarn with moderately abundant sulphides (pyrrhotite, chalcopyrite) at contact with granodiorite
QM280	42.737444	1.193407	1635	0.48	0.75	132	Skarn with disseminated sulphides (pyrrhotite, chalcopyrite)
QM281	42.737436	1.193388	1635	< LOD	0.15	1129	Pyroxene skarn and sulphides (pyrrhotite, chalcopyrite)
QM282	42.737436	1.193388	1635	0.20	0.27	268	Skarn with disseminated sulphides (pyrrhotite, chalcopyrite)
QM283	42.737425	1.193415	1635	0.26	3.66	2448	Skarn with disseminated sulphides (pyrrhotite, chalcopyrite)
QM284	42.737425	1.193415	1635	0.54	0.29	759	Skarn with disseminated sulphides (pyrrhotite, chalcopyrite)
QM285	42.737425	1.193415	1661	1.07	0.36	392	Massive sulphides skarn (pyrrhotite, chalcopyrite)
QM286	42.737425	1.193415	1661	0.48	0.55	286	Massive sulphides skarn (pyrrhotite, chalcopyrite)
QM287	42.737425	1.193415	1661	0.33	1.41	522	Intensely altered granodiorite with massive sulphides (pyrrhotite, chalcopyrite)
QM288	42.736839	1.192869	1662	0.62	2.28	1362	Pyroxene skarn and abundant sulphides (pyrrhotite, chalcopyrite)
QM289	42.736843	1.192887	1662	0.87	2.06	1241	Pyroxene skarn and abundant sulphides (pyrrhotite, chalcopyrite)
QM290	42.736847	1.192863	1602	1.93	1.53	6297	Pyroxene skarn and disseminated sulphides (pyrrhotite, chalcopyrite)
QM291	42.736858	1.192828	1602	0.59	3.77	511	Pyroxene and sulphides skarn (pyrrhotite, chalcopyrite)
QM292	42.736859	1.192859	1603	0.68	1.83	526	Pyroxene and sulphides skarn (pyrrhotite, chalcopyrite)
QM293	42.737368	1.193875	1605	3.15	3.33	3417	Quartz vein with arsenopyrite and chalcopyrite cross-cutting altered granodiorite
QM294	42.737361	1.193864	1604	1.06	0.12	1302	Massive sulphides (pyrrhotite, chalcopyrite) cross-cutting altered granodiorite
QM295	42.737382	1.193854	1602	1.17	0.21	3408	Quartz vein with arsenopyrite and chalcopyrite

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Sample number	Latitude	Longitude	Elevation (m)	WO <sub>3</sub> (%)	Au (ppm)	Cu (ppm)	Description
QM296	42.737379	1.193843	1602	0.62	0.48	1389	Intensely altered granodiorite pervaded by sulphides (pyrrhotite, chalcopyrite)
QM297	42.737392	1.193857	1605	1.08	0.07	4463	Massive sulphides (pyrrhotite, chalcopyrite)
QM298	42.737414	1.193873	1602	3.46	1.86	1940	Massive sulphides (pyrrhotite, chalcopyrite)
QM299	42.737379	1.193903	1603	0.14	0.04	2033	Marble with disseminated pyrite
QM300	42.737379	1.193903	1603	2.46	0.08	4040	Altered marble pervaded by massive sulphides (pyrrhotite, chalcopyrite)
QM302	42.737403	1.193938	997	2.64	0.70	2937	Massive sulphides (pyrrhotite, chalcopyrite) at contact with intensely altered granodiorite
QM303	42.737437	1.194025	997	3.15	0.15	9429	Massive sulphides (pyrrhotite, chalcopyrite)
QM304	42.737437	1.194025	1290	4.62	0.12	7055	Oxidised massive sulphides (pyrrhotite, chalcopyrite)
QM306	42.737387	1.193994	1603	0.82	0.08	2645	Chalcopyrite and pyrite quartz vein
QM316	42.736916	1.194717	1540	0.62	0.02	3788	Massive pyrrhotite with traces of chalcopyrite and fine-grained scheelite moderately abundant
QM317	42.737140	1.194871	1541	3.32	0.02	1394	Massive pyrrhotite and chalcopyrite with some fine-grained scheelite crystals
QM319	42.742872	1.177205	1304	< LOD	2.33	< LOD	Quartz vein with sulphides (pyrrhotite, arsenopyrite) cross-cutting marble
QM320	42.742872	1.177205	997	< LOD	3.34	31	Quartz vein with arsenopyrite cross-cutting the marble bedding
QM325	42.742557	1.186180	997	< LOD	0.17	179	Pyroxene and disseminated sulphides skarn (pyrrhotite, chalcopyrite)
QM330	42.742418	1.186308	1291	0.45	0.01	1150	Massive sulphides (pyrrhotite, chalcopyrite)
QM331	42.742418	1.186299	1291	0.20	0.01	974	Massive sulphides (pyrrhotite, chalcopyrite)
QM333	42.742349	1.186110	997	< LOD	0.84	332	Pyroxene and sulphides skarn (pyrrhotite, chalcopyrite, arsenopyrite) at contact between marble and granodiorite

Coordinate system: WGS 84

LOD – Limit of Detection

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## Appendix B - Summary of Tailings Sample Results

Sample number	Latitude	Longitude	Elevation (m)	WO <sub>3</sub> (%)	Au (ppm)	Cu (ppm)
TAI01	42.741801	1.200955	1221.46	0.13	0.41	287
TAI02	42.741878	1.201230	1223.00	0.37	0.77	76
TAI03	42.741860	1.201449	1224.55	1.02	1.69	473
TAI04	42.741942	1.201692	1224.24	0.35	0.49	289
TAI05	42.741961	1.201775	1225.07	0.23	0.70	94
TAI06	42.741939	1.201819	1225.18	0.14	0.98	130
TAI07	42.741861	1.201907	1226.40	0.34	0.46	91
TAI08	42.741732	1.202001	1226.17	0.42	0.59	273
TAI09	42.741683	1.202104	1227.82	0.34	0.36	143
TAI10	42.741633	1.202123	1228.71	0.33	0.36	203
TAI11	42.741578	1.202135	1228.96	0.20	0.30	116
TAI12	42.741525	1.202239	1228.71	0.23	0.16	94
TAI13	42.741464	1.202287	1230.22	0.26	0.43	238
TAI14	42.741445	1.202310	1228.32	0.21	0.33	232
TAI15	42.741437	1.202409	1229.76	0.18	0.24	158
TAI16	42.741430	1.202451	1229.66	1.74	1.71	1974
TAI17	42.741377	1.202561	1229.23	0.18	0.76	248
TAI18	42.741347	1.202620	1229.43	0.35	0.45	934
TAI19	42.741386	1.202692	1229.96	0.32	0.34	378
TAI20	42.741359	1.202756	1229.53	0.32	0.55	371
TAI21	42.741300	1.202804	1228.71	0.28	0.35	447
TAI22	42.741275	1.202850	1228.87	0.40	0.55	332
TAI23	42.741333	1.202883	1227.03	0.16	0.21	1199
TAI24	42.741226	1.202975	1229.72	0.20	0.23	252
TAI25	42.741199	1.203053	1229.38	0.16	0.18	172
TAI26	42.741158	1.203102	1228.74	0.33	0.26	559
TAI27	42.741121	1.203149	1229.74	0.26	0.22	209
TAI28	42.741654	1.200814	1236.11	0.30	0.20	244
TAI29	42.741607	1.200706	1230.41	4.04	8.94	936
TAI30	42.741501	1.200601	1221.97	0.19	0.15	309
TAI31	42.741491	1.200458	1220.90	0.39	0.47	331
TAI32	42.741499	1.200307	1219.92	1.08	2.06	1503
TAI33	42.741475	1.200032	1218.54	26.70	3.14	378
TAI34	42.741464	1.199908	1217.45	0.85	1.01	645

Coordinate system: WGS 84

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## Appendix C: JORC Code, 2012 Edition – Table 1 Report

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>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.</i>	Rock samples were collected as grab/chip samples from outcrops as part of an exploration program undertaken within the boundaries the Couflens PER during September 2017 (222 samples). A further 34 tailings samples were also collected from a historical tailings disposal area.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Sample size was approximately 1kg in weight for rock samples and more than 2kg for tailings samples. Where mineralisation was observed, rock samples were collected from an area of approximately 50cm <sup>2</sup> to enhance representivity.  Rock and tailings sample locations were surveyed using standard Garmin GPS equipment achieving sub metre accuracy in horizontal and vertical position.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	Rock samples were collected from outcrops, with sample sizes of approximately 1kg and tailing samples from a historical tailings disposal area (1230m mine level), with sample sizes of approximately 2kg.  Rock and tailings samples were transported to the e-Mines sample preparation/assay laboratory in Dun, southern France (Dr Michel Bonnemaïson, a Director of Apollo Minerals Limited, is a director and beneficial shareholder of e-Mines). Samples were dried and crushed to -2mm. Samples were then split using a riffle splitter to recover 100g. Sample splits were pulverised to -80µm. 5g of the sample were pressed into pellets for multi-element analysis by X-ray fluorescence (XRF) using a NITON XRF analytical device.  Samples (30g of powder) were transported to the ALS laboratory in Loughrea, Ireland for gold analysis by fire assay.
<b>Drilling techniques</b>	<i>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).</i>	No drilling results reported.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No drilling results reported.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No drilling results reported.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No drilling results reported.
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	No drilling results reported.  Rock and tailings samples were described (lithology, mineralogy, texture, structures) with details entered into an Excel based Geological Database.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	No drilling results reported.
	<i>The total length and percentage of the relevant intersections logged.</i>	No drilling results reported.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling results reported.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	No drilling results reported.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Rock and tailings samples were transported to the external sample preparation/assay laboratory in Dun, southern France. Samples were dried and crushed to -2mm. Samples were then split using a riffle splitter to recover 100g.



Criteria	JORC Code explanation	Commentary
		<p>Sample splits were pulverized in a hammer mill to -80µm. 5g of the material was pressed into pellets ready for loading into a NITON XRF analytical device.</p> <p>Sample sizes and preparation techniques employed are considered to be appropriate for the generation of early stage exploration results.</p>
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<p>No sub-sampling was applied into sample batches before arriving to the external laboratory.</p> <p>External laboratories QA/QC procedures involved the use of standards, blanks and duplicates which are inserted into sample batches at a frequency of approximately 5%.</p>
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	<p>Sample size was approximately 1kg in weight for rocks and 2kg for tailings. Where mineralisation was observed, rock samples were collected from an area of approximately 50cm<sup>2</sup> to enhance representivity.</p> <p>Some field duplicates were collected for the rock samples.</p>
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<p>The scheelite can be either fine-grained (&lt; 50µm) or coarse-grained (&gt; 200µm), depending of the ore type. Electrum crystals size range from 5µm to 100µm. Previous test work carried out by e-Mines using different sample sizes has demonstrated that the selected sample size is appropriate.</p>
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<p>Samples were analysed at the e-Mines laboratory (Dun, France) using a handheld Thermoscientific NITONXL3T GOLDD+ XRF device. Readings were conducted over 90 seconds with an appropriate calibration mode for soil and rock samples. Both major and trace for 40 elements were recorded.</p> <p>222 selected rock samples were analysed at the ALS laboratory (Loughrea, Ireland) by four acid ICP-AES. Gold was analysed by Au 30g fire assay fusion with AAS finish. The technique is considered total. A further 34 tailings samples were also analysed using the same techniques.</p>
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	<p>Samples were analysed at the e-Mines laboratory using a handheld Thermoscientific NITONXL3T GOLDD+ XRF device. Readings were conducted over 90 seconds with an appropriate calibration mode for soil and rock samples.</p>
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<p>The external laboratories used maintain their own process of QA/QC using standards, sample duplicates and blanks.</p> <p>Review of the external laboratory quality QA/QC reports, has shown no sample preparation issues, acceptable levels of accuracy and precision and no bias in the analytical datasets.</p>
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<p>No drilling results reported.</p>
	<i>The use of twinned holes.</i>	<p>No drilling results reported.</p>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<p>All primary data is recorded in specifically designed templates. Assay data from the external laboratories was received in spreadsheets and downloaded directly into an Excel based Geological Database managed by the Company. Data is entered into controlled Excel templates for validation. Daily backups of all digital data are undertaken.</p>
	<i>Discuss any adjustment to assay data.</i>	<p>Tungsten (ppm) assays received from the external laboratory are converted to WO<sub>3</sub> (ppm) using the stoichiometric factor of 1.2611.</p>
<b>Location of data points</b>	<i>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.</i>	<p>GPS coordinates of rock and tailings sample locations were captured using a Garmin GPS in latitude-longitude decimal degrees with sub-metre accuracy in horizontal and vertical position.</p>
	<i>Specification of the grid system used.</i>	<p>Sample locations were projected from latitude-longitude decimal degrees and recorded into the GIS database in the RGF93-Lambert93 system.</p>
	<i>Quality and adequacy of topographic control.</i>	<p>Topographic control is based on a digital terrain model with sub metric accuracy sourced from the French Institute Geographic National (Institut Géographique National).</p>



Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Rock and tailings samples were randomly collected i.e. not on a fixed grid pattern.
	<i>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.</i>	The data spacing is not considered sufficient to assume geological and grade continuity, and will not allow the estimation of Mineral Resources.
	<i>Whether sample compositing has been applied.</i>	No compositing of samples in the field was undertaken.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	In the Salau mine area, the mineralised zone strikes east-west and is steeply dipping (70°N to sub-vertical).
	<i>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.</i>	No drilling results reported.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	In the field, samples were numbered with plastic labels and indelible ink in a tied plastic bag. Samples were counted and grouped by ten units in labelled plastic bag each day on the field base camp. Samples were then transported to the Dun facility. Upon arrival at the external laboratory, a check counting control was undertaken for each sample before commencement of sample preparation activities.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	There has been no external audit or formal review of the techniques used or data collected during the September 2017 field campaign.

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	<p>The Couflens Project comprises the granted Couflens exploration licence (permis exclusif de recherches – “PER”) which covers an area of 42km<sup>2</sup> centred on the historical Salau mine.</p> <p>The Couflens PER was applied for, and granted to, Variscan Mines SAS (“Variscan France”), a wholly owned subsidiary of Variscan Mines Limited. The PER has been granted for an initial period of five (5) years commencing 11 February 2017.</p> <p>Apollo Minerals Limited (“Apollo Minerals”) wholly owns Ariege Tungstene SAS (“Ariege”), which holds an 80% interest in Mines du Salat SAS (“MdS”). MdS is governed by a Shareholder Agreement with Variscan France, the holder of the Couflens PER, pursuant to which Variscan France will transfer the Couflens PER to MdS.</p> <p>No historical sites, wilderness or national parks are located within the Couflens PER. The Couflens PER is located within the Pyrenees Ariegeoises Regional Natural Park (which is not a National Park) and adjacent to the village of Salau.</p>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	<p>Tenure in the form of a PER (permis exclusif de recherches, a French exploration licence) has been granted and is considered secure. In accordance with the French Mining Code, the PER may be extended for two additional periods of a maximum of 5 years each.</p> <p>There are no known impediments to obtaining a licence to operate in this area.</p>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>Previous regional exploration on Couflens PER (outside Salau mine area) was undertaken by BRGM during 1960’s to 1980’s. Work completed included geological mapping, geophysical surveys, geochemical surveys, rock sampling and diamond drilling.</p> <p>Historical geophysical surveys included an airborne (helicopter) electromagnetic survey and ground based magnetic, resistivity and gravity surveys. Geochemical surveys included stream sediment sampling.</p>



Criteria	JORC Code explanation	Commentary
		A detailed assessment of the historic data is in progress. No significant issues with the data have been detected to-date.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	The tungsten skarn mineralisation of the Salau deposit is hosted within Devonian marbles adjacent to the La Fourque granodiorite. The mineralisation typically occurs as a 70°N to sub-vertical dipping lenses occurring between surface and 600m depth, and remain open at depth. The style of the tungsten mineralisation includes veins and disseminated mineralisation in a fault called Veronique related to late brittle deformation. Scheelite is the tungsten ore. Most of the mineralisation is hosted within Veronique shear zone and contact metamorphism halo in marbles. This deposit can be considered as a tungsten skarn cross-cut by a later auriferous shear-zone system.
<b>Drill hole information</b>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <li>o easting and northing of the drill hole collar</li> <li>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>o dip and azimuth of the hole</li> <li>o down hole length and interception depth</li> <li>o hole length.</li> </ul>	No drilling results reported.
	<i>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.</i>	No drilling results reported.
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	No high grade cuts have been applied to the rock or tailings sample data reported.
	<i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	No aggregation has been applied to the rock or tailings sample data reported.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values are used.
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	No drilling results reported.
	<i>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').</i>	No drilling results reported.
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Appropriate diagrams, including a geological plan, are included in the main body of this release.
<b>Balanced reporting</b>	<i>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.</i>	All results >0.1 g/t Au, >0.2% WO <sub>3</sub> or >1,000 ppm Cu are reported in Appendices A and B of this release.
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	No other substantive exploration data was collected during the September 2017 field campaign.



Criteria	JORC Code explanation	Commentary
<b>Further work</b>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Further surface exploration work planned for the Couflens PER includes ongoing review of the historical exploration datasets and systematic follow-up geological mapping, rock sampling and geophysical surveys over identified prospects and exploration targets.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	These diagrams are included in the main body of this release.

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