## ASX and Media Release

Tuesday, 29 October 2019



### Red Mountain – Drilling Extends Massive Sulphide a Further 200m Down Dip

#### ASX Code: WRM

HIGHLIGHTS

**Issued Securities** Shares: 1,636 million Options: 565 million

Cash on hand (30 June 2019) \$3.89M

**Market Cap (28 Oct 2019)** \$6.5M at \$0.004 per share

Directors & Management Peter Lester Non-Executive Chairman

Matthew Gill Managing Director & Chief Executive Officer

Jeremy Gray Non-Executive Director

Stephen Gorenstein Non-Executive Director

Shane Turner Company Secretary

Rohan Worland Exploration Manager

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- Drilling at the high-grade zinc silver lead gold Dry Creek deposit has successfully intersected massive sulphide mineralisation over 200 metres down-dip from previous drilling.
- The massive sulphide intersected is the extension to the high grade Fosters lens, the upper of two lenses in the Dry Creek deposit. Assay results are awaited.
- This deepest intersection in the Dry Creek deposit indicates a steeper dip to mineralisation than first interpreted, suggesting the deposit remains wide open down dip along its entire 1,200 metre strike length.
- Previous drilling at Dry Creek tested the deposit to a depth of 200 metres. The success of this 200 metre plus down-dip step out drill hole suggests considerable potential for the deposit to grow in size and tonnes.
- Drilling terminated due to poor ground conditions in the hangingwall chert sequence above the Discovery lens stratigraphic position.
- The 2019 field program has now concluded due to the onset of winter.

White Rock Minerals Ltd (**"White Rock"** or the **"Company"**) is pleased to provide an update on the 2019 exploration program at the Company's globally significant Red Mountain high-grade zinc and precious metals VMS project in central Alaska (**Red Mountain Project**).

There are already two high grade deposits at the Red Mountain Project, with an Inferred Mineral Resource<sup>1</sup> of **9.1 million tonnes @ 12.9% ZnEq**<sup>2</sup> for 1.1 million tonnes of contained zinc equivalent at Dry Creek and WTF.

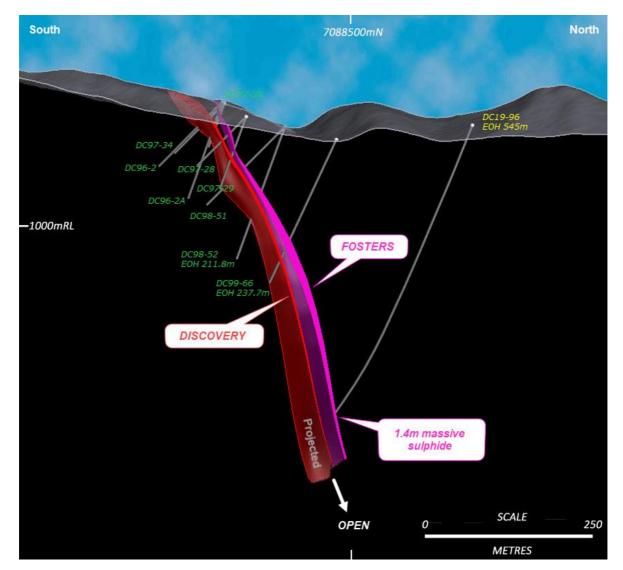
During October the last drill hole was completed for the 2019 field season. Drill hole DC19-96 tested an aggressive 200 metre plus down-dip step out from the known high-grade zinc – silver – lead – gold mineralisation of both the Fosters and Discovery lenses at the Dry Creek deposit.

Mineralisation was successfully intersected with 1.4 metres including massive sulphide containing abundant sphalerite (zinc sulphide) located within stratigraphy equivalent to the Fosters lens. Drilling was then terminated due to poor ground conditions and the end of the field season corresponding with the onset of winter. The drill hole intersected a chert horizon correlating with the hangingwall position to the lower Discovery lens of massive sulphide mineralisation, leaving the Discovery lens potentially ahead of the drill hole path and untested.

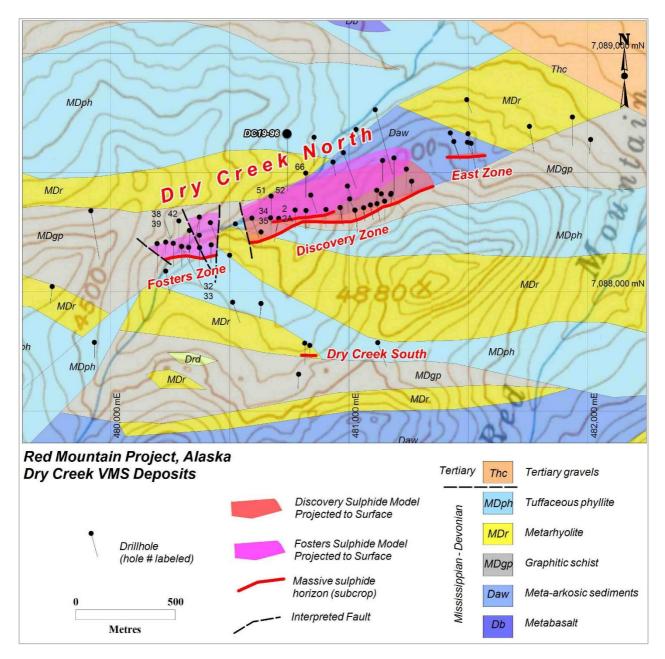
Drill hole DC19-96 targeted down-dip from historic drill holes DC19-66 and DC19-52 that contained significant mineralisation intersected in both the Fosters and Discovery lenses, as shown in Table 1 below.

HOLE ID	From (m)	To (m)	Interval (m)	Zn %	Ag g/t	Pb %	Au g/t	Cu %	ZnEq <sup>2</sup> %
DC96-2A	18.4	23.8	5.3	6.70	13	3.18	0.07	0.60	10.7
including	20.0	22.4	2.4	11.12	19	5.54	0.13	0.35	16.5
DC96-2A	54.6	57.9	3.4	3.15	38	1.27	0.20	0.08	5.4
including	54.6	55.4	0.8	10.46	17	4.04	0.28	0.28	14.8
DC97-34	8.2	9.6	1.4	10.00	67	2.07	0.28	0.18	13.8
DC97-34	30.6	31.1	0.5	1.36	37	0.02	0.02	9.03	22.2
DC97-34	53.8	54.6	0.8	6.14	28	2.53	0.39	0.55	10.4
DC97-34	65.5	68.6	3.0	2.04	282	0.82	1.39	0.06	11.3
DC97-35	13.4	15.5	2.1	6.77	13	3.26	0.10	0.21	10.0
DC98-52	118.0	123.3	5.3	2.82	147	1.22	0.25	0.07	7.5
including	122.7	123.3	0.6	10.67	691	5.43	1.68	0.22	33.2
DC98-52	136.1	142.0	5.9	3.59	25	1.58	0.07	0.09	5.6
DC98-52	142.8	147.9	5.2	3.84	11	1.88	0.11	0.12	5.9
DC99-66	164.9	165.8	0.9	2.03	154	0.72	0.20	0.06	6.4
DC99-66	170.1	187.1	17.1	2.08	4	0.77	0.06	0.07	3.0
Including	181.7	182.6	0.9	8.07	4	1.34	0.01	0.27	9.7

**Table 1:** Assay results from historical drilling on cross-section 480,745mE (Figure 1) at Dry Creek<sup>3</sup>



**Figure 1:** Dry Creek deposit: 3D cross section 480,745mE looking west, with recent drill hole DC19-96 and shallower historic drill holes across a 135m window. The cross section shows the interpreted extension of the Fosters and Discovery lenses with drill hole DC19-96 only intersecting the Fosters lens before being terminated due to poor ground conditions; the Discovery lens remains untested by DC19-96.



*Figure 2:* Dry Creek prospect showing surface projection of massive sulphide mineralisation lenses and the location of DC19-96 with respect to all historic drill hole traces on the DGGS geology map (after Freeman et al., 2016).

<sup>1</sup> Refer ASX Announcement 26<sup>th</sup> April 2017 "Maiden JORC Mineral Resource at White Rock's Red Mountain zinc-silver Project, Alaska."

<sup>2</sup> ZnEq = Zinc equivalent grades are estimated using long-term broker consensus estimates compiled by RFC Ambrian as at 20 March 2017 adjusted for recoveries from historical metallurgical test work and calculated with the formula: ZnEq =100 x [(Zn% x 2,206.7 x 0.9) + (Pb% x 1,922 x 0.75) + (Cu% x 6,274 x 0.70) + (Ag g/t x (19.68/31.1035) x 0.70) + (Au g/t x (1,227/31.1035) x 0.80)] / (2,206.7 x 0.9). White Rock is of the opinion that all elements included in the metal equivalent calculation have reasonable potential to be recovered and sold.

<sup>3</sup> Refer ASX Announcement 15<sup>th</sup> February 2016 "White Rock Acquires Red Mountain VMS Project in Alaska".

#### **Competent Persons Statement**

The information in this report that relates to exploration results is based on information compiled by Mr Rohan Worland who is a Member of the Australian Institute of Geoscientists and is a consultant to White Rock Minerals Ltd. Mr Worland 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 Worland consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

#### No New Information or Data

This announcement contains references to exploration results and Mineral Resource estimates, all of which have been cross-referenced to previous market announcements by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

For more information about White Rock and its Projects, please visit www.whiterockminerals.com.au

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#### **About White Rock Minerals**

White Rock Minerals is a diversified explorer and near-stage producer, headquartered in Ballarat, Victoria. The company's flagship exploration project is Red Mountain in central Alaska, where it has an earn-in joint venture arrangement with Sandfire Resources. At Red Mountain, there are already two high grade deposits, with an Inferred Mineral Resource<sup>1</sup> of **9.1 million tonnes** @ **12.9% ZnEq<sup>2</sup>** for 1.1 million tonnes of contained zinc equivalent.

The Mt Carrington project, located near Drake, in Northern NSW, is a near-production precious metals asset with a resource of 341,000 ounces of gold and 23.2 million ounces of silver.

White Rock Minerals is listed on the ASX:WRM.

## APPENDIX 1: JORC CODE, 2012 EDITION - TABLE 1

### Section 1 Sampling Techniques and Data

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. 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>All 2019 drilling was diamond core from surface.</li> <li>Sampling is at 0.3 to 1.5m intervals for mineralisation. Sample intervals are determined by geological characteristics.</li> <li>Core is split in half by core saw for external laboratory preparation and analysis.</li> <li>Based on the distribution of mineralisation the core sample size is considered adequate for representative sampling.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>All 2019 drilling was diamond core from surface. DC19-96 drilled HQ from surface, NQ3 and BQ. NQ3 core is triple tube wireline with core orientation using a Reflex ACTIII RD tool.</li> </ul>
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>	<ul> <li>Drilling methods are selected to ensure maximum recovery possible. The maximum core length possible in competent ground is 5 feet (1.53m).</li> <li>Core recovery is recorded on paper drill logs then transferred to the digital database.</li> <li>A link between sample recovery and grade is not apparent.</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>All diamond core undergoes geotechnical and geological logging to a level of detail (quantitative and qualitative) sufficient to support use of the data in all categories of Mineral Resource estimation.</li> <li>All core is photographed wet and dry.</li> <li>All drill holes are logged in full.</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> <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>Core is split in half by core saw and sampled.</li> <li>Core samples are submitted to ALS (Fairbanks) and undergo standard industry procedure sample preparation (crush, pulverise and split) appropriate to the sample type and mineralisation style.</li> <li>Core is cut to achieve non-biased samples.</li> <li>Full QAQC system is in place for core assays to determine accuracy and precision of assays</li> <li>No field duplicate samples are collected.</li> <li>Sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>

Criteria	JORC Code explanation	Commentary
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>Core samples are submitted to ALS (Fairbanks) for analysis. Au is assayed by technique Au-AA25 (30g by fire assay and AAS finish). Multi-element suite of 48 elements including Ag is assayed by technique ME-MS61 (1g charge by four acid digest and ICP-MS finish). Over limit samples for Ag, Cu, Pb and Zn are assayed by technique OG62 (0.5g charge by four acid digest and ICP-AES or AAS finish) to provide accurate and precise results for the target element.</li> <li>Fire assay for Au by technique Au-AA25 is considered total. Multi-element assay by technique ME-MS61 and OG62 are considered near-total for all but the most resistive minerals (not of relevance).</li> <li>The nature and quality of the analytical technique is deemed appropriate for the mineralisation style.</li> <li>Full QAQC system is in place for core sample assays including blanks and standards (relevant certified reference material). 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 assay results are checked and verified by alternative company personnel or independent consultants. Significant assay results prompt a visual review of relevant reference core for validation purposes.</li> <li>No twin holes are reported.</li> <li>All drill data is logged onto paper logs and subsequently entered into the digital database.</li> <li>All drilling logs are validated by the supervising geologist.</li> <li>All hard copy data is filed and stored. Digital data is filed and stored with routine local and remote backups.</li> <li>No adjustment to assay data is undertaken.</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> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>No adjustment to assay data is undertatent.</li> <li>All diamond drill holes are surveyed by handheld GPS in the first instance. Drill holes are subsequently surveyed using an RTK-DGPS for surface position (XYZ) of collars (accuracy ±0.1m).</li> <li>Topographic control is provided by a high resolution IFSAR DEM (high resolution radar digital elevation model) acquired in 2015. Accuracy of the DEM is ±2m. Subsequent surveying by RTK-DGPS supersedes the IFSAR DEM.</li> <li>All diamond holes are surveyed downhole via a singleshot camera at approximately 30m intervals to determine accurate drill trace locations.</li> <li>There is no magnetic interference with respect to downhole surveys.</li> <li>All coordinates are quoted in UTM (NAD27 for Alaska Zone 6 datum).</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 is variable and appropriate to the geology and to the purpose of sample survey type.</li> <li>Sample compositing is not applicable in reporting exploration results.</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>No significant orientation based sampling bias is known at this time.</li> <li>Mineralisation is dominantly orientated parallel to bedding.</li> <li>The drill holes may not necessarily be perpendicular to the orientation of the intersected mineralisation.</li> <li>Reported intersections are down-hole intervals and not true widths. Where there is sufficient geological understanding true width estimates are stated.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Core is cut and sampled on site then secured in bags with a security seal that is verified on receipt by ALS using a chain of custody form.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits or reviews have been completed to date.

# Section 2 Reporting of Exploration Results

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 Red Mountain Project comprises 760 mining claims in the State of Alaska ('the Tenements').</li> <li>The Tenements are owned by White Rock (RM) Inc., a 100% owned subsidiary of Atlas Resources Pty Ltd, which in turn is a 100% owned subsidiary of White Rock Minerals Ltd.</li> <li>The Tenements are subject to an agreement with Metallogeny Inc, that requires further cash payments of US\$750,000 over 2 years. The agreement also includes a net smelter return royalty payment to Metallogeny Inc. of 2% NSR with the option to reduce this to 1% NSR for US\$1,000,000.</li> <li>The Tenements are subject to an earn-in joint venture agreement with Sandfire Resources NL ("Sandfire") whereby Sandfire can earn 51% by funding A\$20 million over four years. Sandfire can then earn 70% by electing to fund a further \$A10 million and delivering a pre-feasibility study over an additional two years, with an option to extend the time period a further year under certain circumstances. White Rock can elect to contribute at 30% or if not Sandfire can earn 90% by sole funding to production with White Rock's retained interest of 10% earnt from project cash flow.</li> <li>All of the Tenements are current and in good standing.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>All of the Tenements are current and In good standing.</li> <li>The Red Mountain project has seen significant exploration conducted by Resource Associates of Alaska Inc. ("RAA"), Getty Mining Company ("Getty"), Phelps Dodge Corporation ("Phelps Dodge"), Houston Oil and Minerals Exploration Company ("HOMEX"), Grayd Resource Corporation ("Grayd") and Atna Resources Ltd ("Atna").</li> <li>All historical work has been reviewed, appraised and integrated into a database. A selection of historic core has been resampled for QAQC purposes. Data is of sufficient quality, relevance and applicability.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Volcanogenic massive sulphide ("VMS") mineralisation located in the Bonnifield District, located in the western extension of the Yukon Tanana terrane.</li> <li>The regional geology consists of an east-west trending schist belt of Precambrian and Palaeozoic meta-sedimentary and volcanic rocks. The schist is intruded by Cretaceous granitic rocks along with Tertiary dikes and plugs of intermediate to mafic composition. Tertiary and Quaternary sedimentary rocks with coal bearing horizons cover portions of the older rocks. The VMS mineralisation is most commonly located in the upper portions of the Totatlanika Schist which is of Carboniferous to Devonian age.</li> </ul>
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	A table of all drill hole collar information for exploration results presented here is provided below.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the</li> </ul>	No aggregation methods were used in the reporting of results.

Criteria	JORC Cod	de explanatio	on	(	Com	nentary			
	should examp shown • The as	l be stated and oles of such ag in detail. ssumptions us equivalent val	such aggregation d some typical ggregations shou red for any repor ues should be cl	ıld be ting of					
Relationship between mineralisation widths and intercept lengths	import Result If the g respect nature If it is r length clear s	ant in the repo s. geometry of th t to the drill h should be rep not known and s are reported tatement to th	are particularly orting of Explorat of e mineralisation ole angle is know ported. d only the down H , there should be his effect (eg 'dow th not known').	with vn, its nole e a		lineralisation at l 0° towards 350°		eep towards th	ne north (70° to
Diagrams	Approp scales should discov include drill ho	priate maps a ) and tabulation l be included the included	nd sections (with ons of intercepts for any significan orted These shou imited to a plan v ions and approp	t uld view of		ppropriate maps ody of the report		tables are inc	luded in the
Balanced reporting	Explor repres high gi practic	ation Results entative repor rades and/or v	ive reporting of a is not practicable ting of both low a widths should be isleading reporti	e, and o	re	laps showing indeport. Poort. Il results conside			included in the
Other substantive exploration data	materi not lim geoph survey metho results geoted	al, should be i ited to): geolo ysical survey r results; bulk d of treatment ; bulk density chnical and roo ial deleterious	ata, if meaningful reported includin ogical observation results; geochen samples – size a t; metallurgical te , groundwater, ck characteristics or contaminatin	g (but ns; nical and est s;		ther relevant an is and earlier re		mation has be	en reported in
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> <li>The 2019 field season has finished. Final dri geochemical sampling including stream sampling are awaited. Follow-up programs for the 2020 be planned in the coming months.</li> </ul>							es and rock chips	
Prospect	HoleID	East	North	RL metr	00	Azimuth	Dip	Depth	Depth feet

Prospect	HoleID	East	North	RL metres	Azimuth	Dip	Depth	Depth feet
		NAD27	NAD27		True		metres	
Dry Creek	DC19-96	480748	7088681	1152	176	-68	545.3	1789