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### ASX RELEASE 10 August 2015

## Tick Hill Surface Gold Project RESULTS – TAILINGS DRILLING PROGRAM

- Analytical results from the first stage of the tailings drilling program received.
- Better than expected gold grades justify a second stage drilling program to further define and delineate a potential gold resource within the tailings storage facility.
- Average grades of 1.04 g/t Au for the tailings dam (overall),
   1.42 g/t Au for the eastern paddock and 0.73 g/t Au for the western paddock.
- Tailings Dam covers approx. 8 ha and could contain between 600,000-650,000t of tailings material, based on historical records.
- A second stage follow-up program planned to commence during late August 2015.

Superior Resources Limited (**ASX Code: SPQ**) (**Superior** or the **Company**) is pleased to confirm that assay results from a 24 hole tailings reconnaissance drilling program have been received. The results of the initial program are encouraging with some intercepts returning better than expected gold grades.

The program also included a series of drill holes in the Tailings Decant Pond and over a soil geochemical anomaly located within an area of alluvium. A summary of the drilling program is detailed in Table 1.

Table 1. Drill program summary

Location	Number of holes (total metres drilled)	Number of samples assayed	
Tailings Dam	24 (180m)	173 geochemical 9 environmental	
Tailings Decant Pond	8 (18m)	12 geochemical 5 environmental	
Alluvium (400m NW of open cut pit)	15 (26m)	29 geochemical	

The reconnaissance drilling program was conducted by Superior together with joint venture partner Diatreme Resources Limited (**DRX**) during the period 17 July 2015 to 20 July 2015. The program utilised a DRX-owned air-core drill rig and DRX staff.

#### **Tailings Dam Morphology**

The original Tick Hill Gold Mine processing plant comprised crushing and milling circuits feeding into a carbon-in-leach (CIL) gold recovery circuit. Tailings material from the plant was discharged into the tailings dam, which comprises two "paddocks" of a "turkeys nest" construction. A perimeter embankment with a clay core retains the tailings. Wall heights range from 6m to 10.5m. A Tailings Decant pond designed to receive overflow water is located adjacent to the northern wall of the Tailings Dam (Figure 1). Since decommissioning the surface of the Tailings Dam and Tailings decant Pond have been capped and seeded.



Figure 1. Tick Hill Gold Project Tailings Dam and Tailings Decant Pond (looking West). DRX drill rig and support truck located on decant pond circled in red.

#### **Estimated Tonnage**

The total reported historical production at Tick Hill was 705,000t for 15,900kg Au at 97% recovery.

#### **Tailings Dam Drill Results**

The reconnaissance drilling program on the Tailings Dam was designed as an "orientation" program to provide an initial indication of the nature of the tailings deposit. The drilling was conducted on a 50m x 50m spaced grid over the two Tailings Dam paddocks.

Superior considers the results to be significant and encouraging. A summary of the results is set out in Table 2.

Area of Tailings Facility	Number of samples	g/t Au	Average Grade	
Tailings Dam Eastern Paddock	78	1.42	1.04 g/t Au	
Tailings Dam Western Paddock	91	0.73	1.07 g/t Au	

An overall grade of 1.04 g/t Au was achieved from a total of 173 samples. The samples showed minor variability and all tailings material is mineralised.

The eastern tailings paddock returned an average grade of 1.42 g/t Au from 78 samples, whilst the western tailings dam which has been filled to a slightly higher elevation, returned 0.73 g/t Au from 91 samples. Tailings material from the decant pond was also mineralised, with an average grade of 0.46 g/t Au returned from the 7 holes sampled (11 samples).

A summary of the drill hole details and average gold grades are set out in Table 3. Drill hole locations are diagrammatically shown in Figures 2 and 3.

Table 3. Tailings Dam drill hole information and average gold (g/t)

	gc =	n ariii noie i		Hole		<i>y</i> g (g, .)	Si	gnificant	Intersection	n
Hole ID	Easting	Northing	RL	Depth	Dip	Azimuth	From	То	Interval	Au g/t
THT001	388746	7605591	350	8.7m	-90°	0°	0.5m	8.7m	8.2m	1.20
THT002	388748	7605542	350	7.7m	-90°	0°	0.6m	7.6m	7.0m	1.34
THT003	388748	7605489	350	7.6m	-90°	0°	0.6m	7.6m	7.0m	1.35
THT004	388693	7605592	350	8.1m	-90°	0°	0.6m	8.1m	7.5m	1.06
THT005	388694	7605545	350	7.1m	-90°	0°	0.6m	7.1m	6.5m	1.54
THT006	388697	7605491	350	6.7m	-90°	0°	0.5m	6.7m	6.2m	1.85
THT007	388702	7605442	350	6.6m	-90°	0°	0.6m	6.6m	6.0m	1.58
THT008	388650	7605593	350	6.2m	-90°	0°	0.6m	6.2m	5.6m	1.15
THT009	388646	7605543	350	6.3m	-90°	0°	0.6m	6.3m	5.7m	1.61
THT010	388647	7605493	350	6.1m	-90°	0°	0.6m	6.1m	5.5m	1.27
THT011	388649	7605443	350	5.7m	-90°	0°	0.6m	5.6m	5.0m	1.82
THT012	388648	7605398	350	4.5m	-90°	0°	0.6m	4.5m	3.9m	1.51
THT013	388550	7605590	352	6.6m	-90°	0°	0.6m	5.6m	5.0m	0.66
THT014	388545	7605544	352	7.6m	-90°	0°	0.6m	6.6m	6.0m	0.48
THT015	388546	7605493	352	8.6m	-90°	0°	0.6m	8.6m	8.0m	0.85
THT016	388549	7605444	352	8.3m	-90°	0°	0.6m	8.3m	7.7m	0.80
THT017	388549	7605391	352	8.6m	-90°	0°	0.6m	8.6m	8.0m	1.08
THT018	388499	7605591	352	7.6m	-90°	0°	0.6m	7.6m	7.0m	0.62
THT019	388497	7605543	352	8.8m	-90°	0°	0.6m	8.8m	8.2m	0.58
THT020	388495	7605493	352	9.1m	-90°	0°	0.6m	9.1m	8.5m	0.82
THT021	388495	7605446	352	9.1m	-90°	0°	0.6m	9.1m	8.5m	0.74
THT022	388449	7605593	352	6.8m	-90°	0°	0.8m	6.8m	6.0m	0.46
THT023	388446	7605537	352	8.8m	-90°	0°	0.8m	8.8m	8.0m	0.64
THT024	388447	7605493	352	8.7m	-90°	0°	0.8m	8.7m	7.9m	0.83

#### Further Work - Tailings Dam

The positive results from the reconnaissance drilling program warrants the planning of a second stage follow-up drilling program. The second stage program will include infill drilling and the collection of samples for metallurgical test work to enable the assessment of potential gold processing and recovery options. Consideration will also be given to determine the most appropriate method for drilling of the tailings in order to ensure consistent and accurate recovery of sample material.

#### **Alluvium Soil Geochemical Anomaly**

Results from the reconnaissance drilling of a historical soil gold geochemical anomaly NW of the open pit to assess the alluvial/eluvial potential were generally disappointing, with only one significant assay returned from the upper section of one hole. Weathered bedrock was encountered at generally shallow depths (between 1m and 2m) and it appears that there is insufficient mineralisation and volume of alluvium to warrant further investigation at this location.

Technical details concerning the deposit, exploration drilling program and the exploration results are presented in Appendix 1 (JORC Table 1).



Figure 2. Drill hole locations on the Tailings Dam and Tailings Decant Pond.

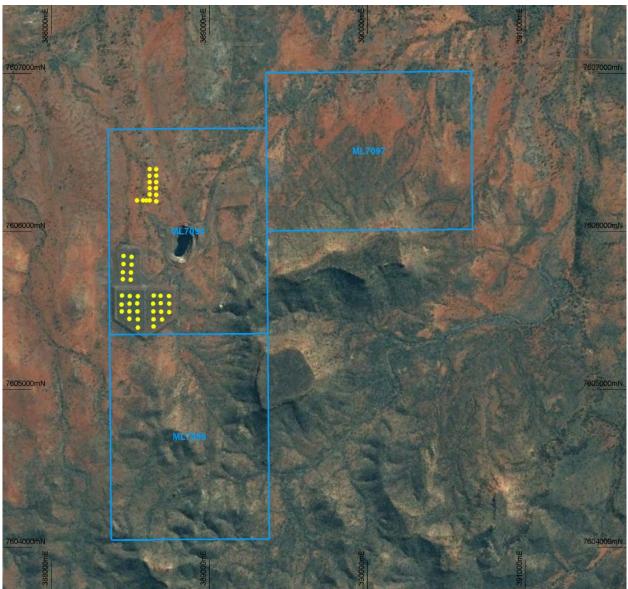


Figure 3. Overall location plan showing mining lease boundaries and drill hole locations.



Figure 4. DRX drill rig and support truck located on the Tick Hill Tailings Dam.

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The information in this report, insofar as it relates to Exploration Results is based on information compiled by Mr Ian Reudavey, who is a full time employee of Diatreme Resources Limited and a Member of the Australian Institute of Geoscientists. Mr Reudavey has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of 'The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Reudavey consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

Certain statements made in this report may contain or comprise certain forward-looking statements. Although Superior Resources Limited believes that any estimates and expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct. Accordingly, results and estimations could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in the economic and market conditions, success of business and operating initiatives and changes in the regulatory environment. Superior undertakes no obligation to update publicly or release any revisions of any forward-looking statements to reflect events or circumstances after the date of this report or to reflect the occurrence of

# 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.</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>Air core drilling was used to obtain 1m samples from which ~3kg was pulverized to produce a 50g charge for fire assay.</li> <li>Samples are 1m down hole intervals of air-core drill cuttings collected from rig-mounted cyclone, the entire sample was collected and submitted to the laboratory, with riffle splitting of those samples &gt;3.2kg in weight prior to pulverising.</li> <li>1m sample intervals are considered appropriate for first pass drilling of mineralised tailings.</li> </ul>
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).	<ul> <li>Vertical NQ air-core drilling utilizing blade bit, 3m drill runs.</li> <li>Drilling technique was continually adjusted to suit the prevailing drilling conditions (e.g. dry, moist, wet with variable clay content).</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</li> </ul>	<ul> <li>Field assessment and logging of sample recovery and sample quality.</li> <li>Sample weight from laboratory used to assess sample recovery.</li> </ul>
	representative nature of the samples.  • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential	<ul> <li>Clearance of drill string after every 1m drill interval.</li> <li>Sample chute cleaned between samples and regular cleaning of cyclone to prevent sample contamination.</li> </ul>

Criteria	JORC Code explanation	Commentary
	loss/gain of fine/coarse material.	No relationship is evident between sample recovery and grade.
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>Geological logging of the total hole by field geologist, with retention of sample in chip trays to allow subsequent re-logging / re-interpretation of data.</li> <li>Tailings dam is capped by ~0.6m rock and topsoil, with a clay base – both were readily identifiable from the tailings material.</li> <li>Qualitative logging includes material lithology and colour.</li> <li>Logging data stored in both hardcopy and digital format.</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>No sub-sampling on site, entire sample submitted to ALS laboratory in Townsville for sample preparation.</li> <li>Sample was dried, weighed, riffle split if &gt;3.2kg, and pulverised.</li> <li>50g sub-sample for assay is riffle split from homogenized pulverised sample.</li> <li>No field duplicates were submitted from this exploration program.</li> <li>Sample size is considered appropriate for the material sampled.</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</li> </ul>	<ul> <li>Analysis undertaken by ALS Townsville utilizing AA26 (50g Fire Assay), with a 0.01 ppm AU detection limit.</li> <li>Assaying and laboratory procedures are considered appropriate for gold, technique is considered a total analysis.</li> <li>The first 50 samples of the batch were assayed in duplicate to establish accuracy of the assay method (refer diagram attached).</li> <li>No external quality control procedures have been adopted at this time.</li> </ul>

Criteria	JORC Code explanation	Commentary
	of accuracy (ie lack of bias) and precision have been established.	
Verification of sampling	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections have been verified by company personnel from both Diatreme Resources Limited and Superior Resources Limited.
and assaying	The use of twinned holes.	No twinned holes have been drilled at this time.
assayiiig	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological data captured on paper and stored in electronic format, assay data stored in electronic format.
	Discuss any adjustment to assay data.	No adjustment to assay data.
Location of	Accuracy and quality of surveys used to locate drill holes (collar and	Handheld GPS survey of drill hole collars, accurate to within 5m.
data points	down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	UTM coordinates, Zone 54, GDA94 datum.
	Specification of the grid system used.	No topographic control at this time, but all drilling confined to relatively level surface of rehabilitated tailings dam.
	Quality and adequacy of topographic control.	level surface of ferrasimated tallings dam.
Data	Data spacing for reporting of Exploration Results.	Drill holes spaced at 50m x 50m.
spacing and distribution	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.	<ul> <li>Drill spacing and distribution is sufficient to allow reporting of exploration results.</li> </ul>
		Downhole sample compositing has been applied for reporting of exploration results as a total hole intersection.
	Whether sample compositing has been applied.	
Orientation of data in	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Vertical drill holes are considered appropriate for unbiased sampling of the target mineralisation.
relation to geological	If the relationship between the drilling orientation and the orientation	• Exploration drilling has been completed on a regular 50m x 50m within each paddock of the tailings dam.
structure	of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The dam was filled from the southern end, with tailings and water flowing north along the natural slope of the ground surface.
		There are no comprehensive records of the utilisation of the tailings dam.
Sample security	The measures taken to ensure sample security.	Sample collection and transport from the field was undertaken by company personnel, with samples delivered directly to the laboratory.

Criteria	JORC Code explanation	Commentary
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of the sampling techniques and data have been undertaken at this time.

## **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 Tick Hill tailings dam located within ML7094 and ML7096 in Queensland, adjoining mining leases held by Diatreme Resources Limited.</li> <li>The Tick Hill Gold Project (incorporating ML's 7094, 7096, 7097) is operated as a Joint Venture between Diatreme Resources Limited and Superior Resources Limited.</li> <li>Exploration was conducted under a Plan of Operations for exploration and rehabilitation activity approved under the <i>Environmental Protection Act 1994</i> (Qld).</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No exploration of the tailings dam has been undertaken by other parties.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Tick Hill tailings dam comprises tailings material from the Tick Hill Gold Mine CIL processing plant, which operated from 1992 to 1995.</li> <li>Mineralisation occurs within silt and clay tailings material.</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:	Drill hole collar table with significant intersections attached.
	<ul> <li>easting and northing of the drill hole collar</li> </ul>	
	o elevation or RL (Reduced Level) of the drill hole collar	
	o dip and azimuth of the hole	
	o down hole length and interception depth	

Criteria	J	ORC Code explanation	C	ommentary
		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.		
Data aggregation methods	•	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.	•	Exploration results are reported as a length weighted average of the total hole intercept, as the basal sample was truncated at the intersection of the clay base and is typically <1m.
	•	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.	•	No minimum or maximum grade truncations have been applied.
	•	The assumptions used for any reporting of metal equivalent values should be clearly stated.		
Relationship between	•	These relationships are particularly important in the reporting of Exploration Results.	•	As the mineralization is associated with tailings fill a maximum beaching slope of 2° can be assumed.
mineralisatio n widths and	•	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	•	All drilling is vertical, hence the drill intersection is essentially equivalent to the true width of mineralization.
intercept lengths	•	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').	•	However, the geometry and controls of grade distribution within the tailings are unknown at this time.
Diagrams	•	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	•	A map of the drill collar locations and the tailings dam is attached.
Balanced reporting	•	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	•	Not applicable, all results have been reported.
Other substantive	•	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	•	Geological observations suggest an increase in clay content down the tailings profile and towards the northern end of the tailings dam.

Criteria	JORC Code explanation	Commentary
exploration	treatment; metallurgical test results; bulk density, groundwater,	No bulk density measurements have been undertaken.
data	geotechnical and rock characteristics; potential deleterious or contaminating substances.	Water was encountered at the base of the tailings on the northern margin of the tailings dam and some holes could not be completed.
		No metallurgical test work has been undertaken at this time.
Further work	extensions or depth extensions or large-scale step-out drilling).	Infill drilling to determine mineralisation variability and continuity is planned.
	<ul> <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>	Samples for metallurgical assessment will be collected from infill drilling .