



1 May 2014

## About

### Board of Directors

Mr Michael Walters  
*Chairman*

Mr Peter Benjamin  
*Managing Director*

Mr Jeremy Sinclair  
*Non-Executive Director*

ASX: SRR

Capital Structure  
Shares on issue: 903,315,606  
Unlisted options: 96,800,000

Major Shareholders  
Atlas Iron: 53.45%  
OM Holdings: 4.01%

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## 265,000 TONNES IDENTIFIED FROM SURFACE SAMPLING PROGRAM

- Shaw River Manganese Limited (“Shaw River”) has completed the surface sampling program at its Otjozondou Project, in Namibia.
- Sampling at Areas: E, S-Bend & Ongorussengo have identified significant, additional tonnages of “at surface manganese lode” to underpin the Start-Up Production Plan (“SPP”).
- These three areas have increased the tonnages previously reported (SRR:ASX release March 11<sup>th</sup> & April 4<sup>th</sup>, 2014) by more than 100,000 tonnes, so that the total tonnage of “at surface” manganese bulk sample identified, for all Areas combined, is approximately 265,000 tonnes, more than three (3) times the tonnage anticipated.
- A number of areas contain manganese mineralisation in excess of 36% Mn with the highest being 53% Mn.
- Peter Benjamin, Managing Director, advised “this is an outstanding result to identify the bulk sample tonnages and grades to underpin the SPP, given this occurs in the top 5 metres from surface. Our understanding of the mineralisation has been greatly increased and will aid our plans to mine, process and explore for future production feed.”
- Shaw River is in discussion with several parties seeking to finance the SPP.



## Otjozondou Manganese Project (Figures 1 to 5)

During 2013 Shaw River built confidence in key parameters of the Otjozondou Project ("Otjo") including those deposits with higher grades and metallurgical response. Shaw River has been reviewing operational plans that aim to improve our understanding of key operational assumptions whilst advancing the Otjo Project in the most cost effective manner. Considering the time and cost taken to complete a Pre-Feasibility Study ("PFS"), Shaw River has decided to obtain this information by commencing a blast hole surface drilling and trench sampling program at Labusrus, targeting the basis of a start-up, at surface inventory. Consequently, the Company is pursuing a Start-up Production Plan ("SPP") for its Otjo Project and this SPP is targeting a low capital, staged, development option.

Shaw River has initially selected the Labusrus/Ongorussengo area which forms a subset of a broader, staged plan to subsequently scale the production up to full capacity once key physical parameters are confirmed.

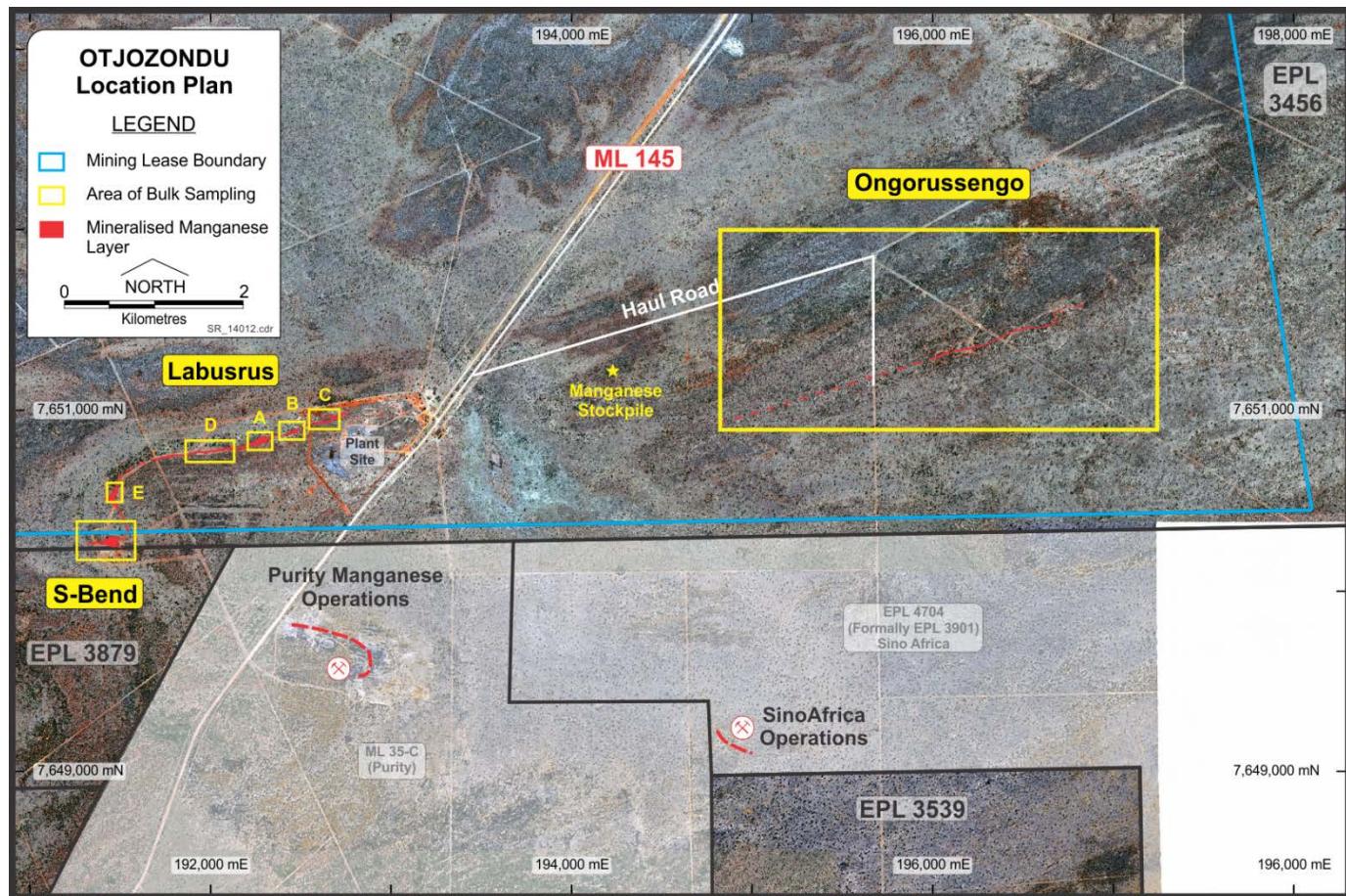


Figure 1: SPP Surface Sampling Localities at Labusrus, S-Bend & Ongorussengo

The areas chosen preferentially for this drilling and sampling program were those on the granted mining lease (ML 145), had a mineral resource reported in accordance with JORC 2004, (refer to SRR:ASX release December 11<sup>th</sup>, 2012) contained areas of higher manganese grades, were close to the planned process plant site and had



visual “at surface” manganese mineralisation. This area corresponded with the Labusrus area then westwards to S-Bend deposits and then eastwards to Ongorussengo (Figure 1).

The trenching and blast hole drilling and sampling program was completed in mid-March 2014 and these areas were tested to identify “at surface manganese mineralisation” for the basis of a start-up inventory (bulk sample) for mining and subsequent processing, to underpin the SPP.

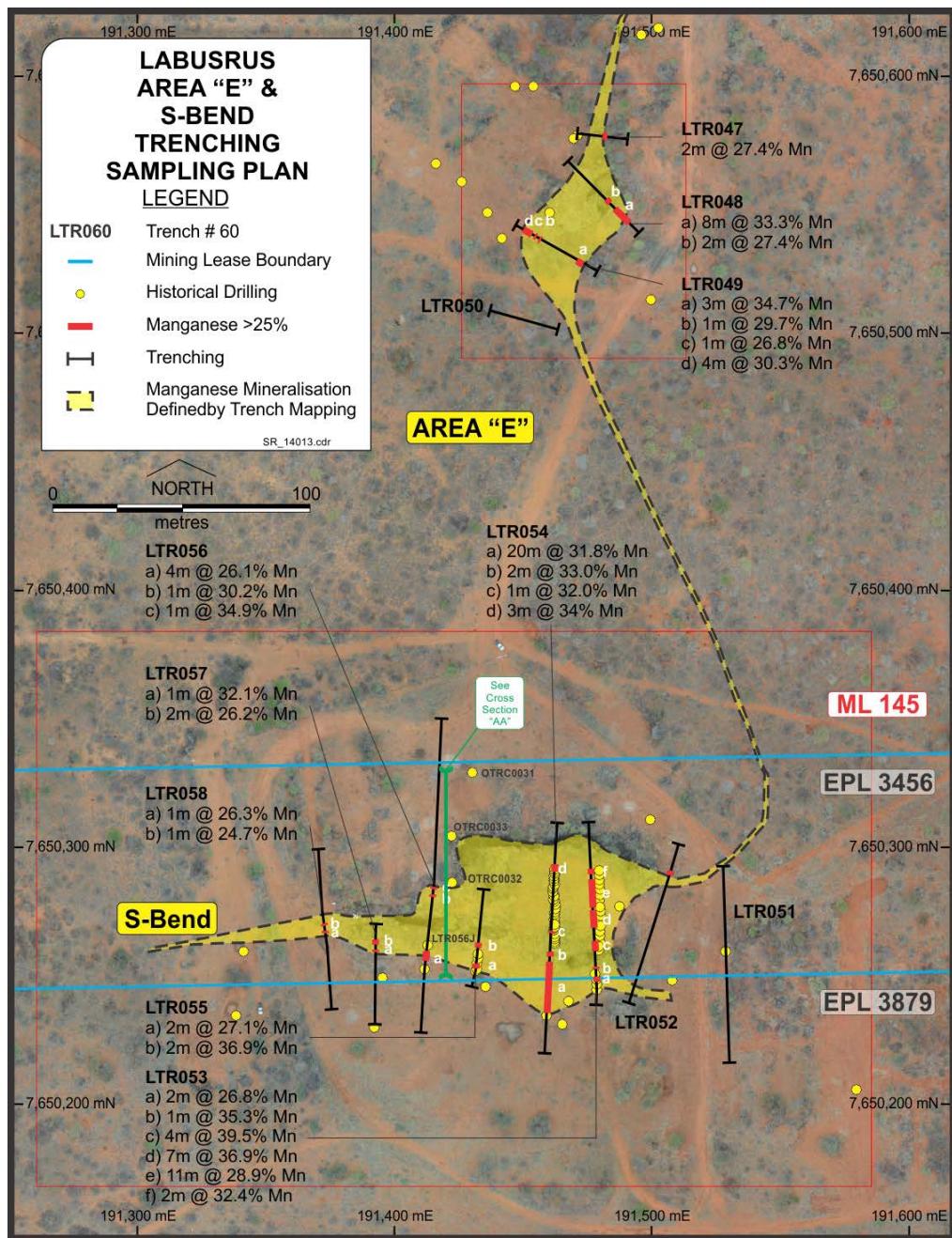
A total of 68 trenches were dug with an excavator, usually every 25 metres along strike, trenches were cleaned, mapped geologically and sampled over one metre intervals. A line of grade control holes was drilled along each trench, at one metre intervals horizontally, to test the depth to around 5 metres vertically and sampled in one metre intervals. Each sample was geologically logged and assayed using a NITON hand held analyser. A total of 2024 borehole and chip samples were collected from 505 grade control holes of which 319 samples have been sent for check assaying by XRF by an independent laboratory with results still to come.

Whilst Areas A, B, C and S-Bend were the main focus of sampling, Areas D, D “Additional” and Ongorussengo are new zones and have considerably added to the mineral inventory.

#### **Results for Area E, S Bend & Ongorussengo – Surface Trenching and Blast-Hole Drilling Sampling Program (Figures 2 to 5, & Appendices)**

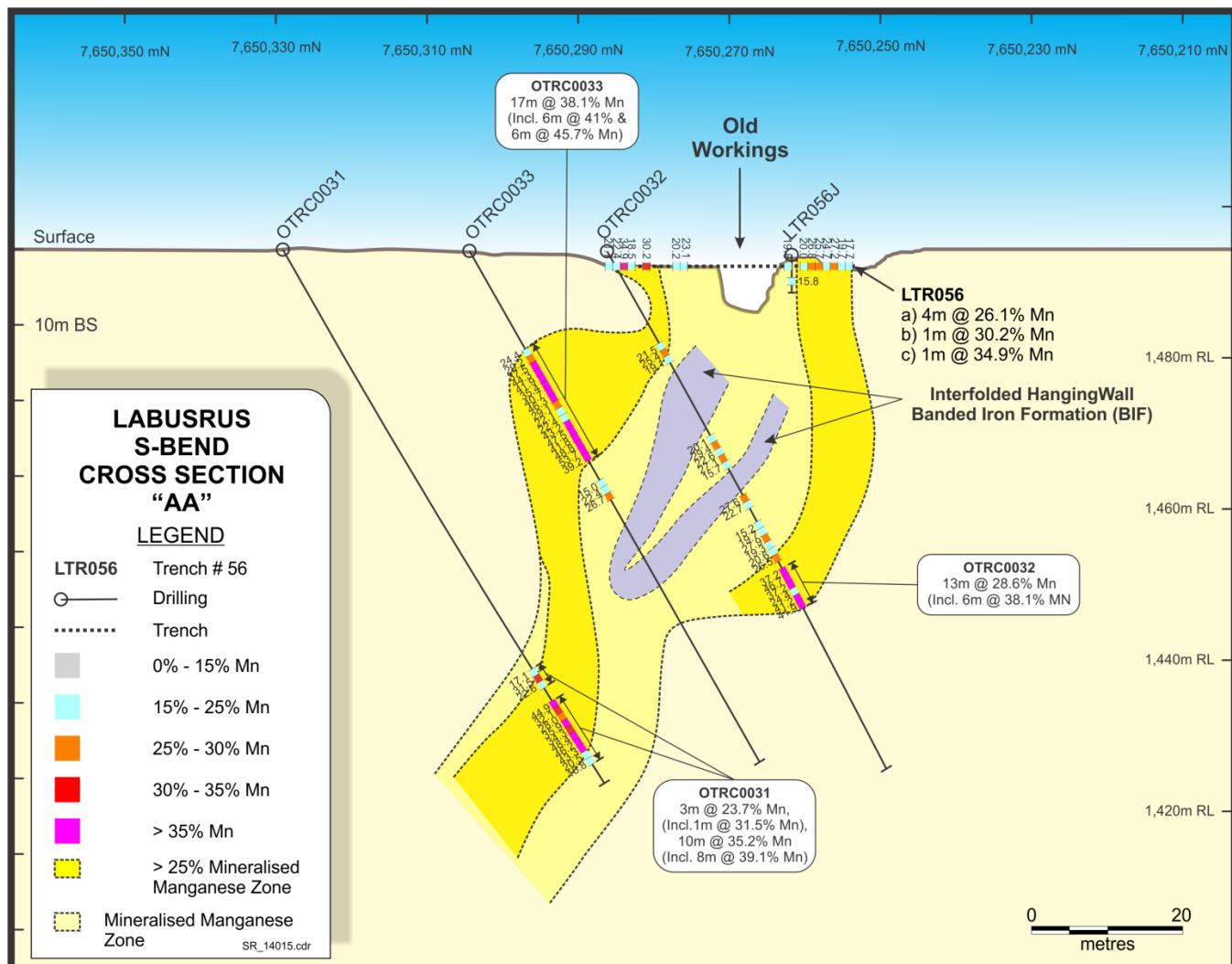
The sampling program continues to confirm the dimension of the manganese mineralised lode, with two higher grade zones of manganese mineralisation outlined, separated by a lower grade zone.

The manganese lode has now been exposed along more than 1,300 metres of strike. Detailed geological mapping put the overall thickness of the manganese lode varying between 4 and up to 40 metres, estimated horizontal width (EHW) and averaging more than 13 metres (EHW) at surface. At Ongorussengo the manganese mineralisation has been identified along 650 metres along strike and varies from 1 to around 6 metres, (EHW).



**Figure 2: Labusrus Area E and S-Bend Plan: Position of Sampled Trenches & Assays**

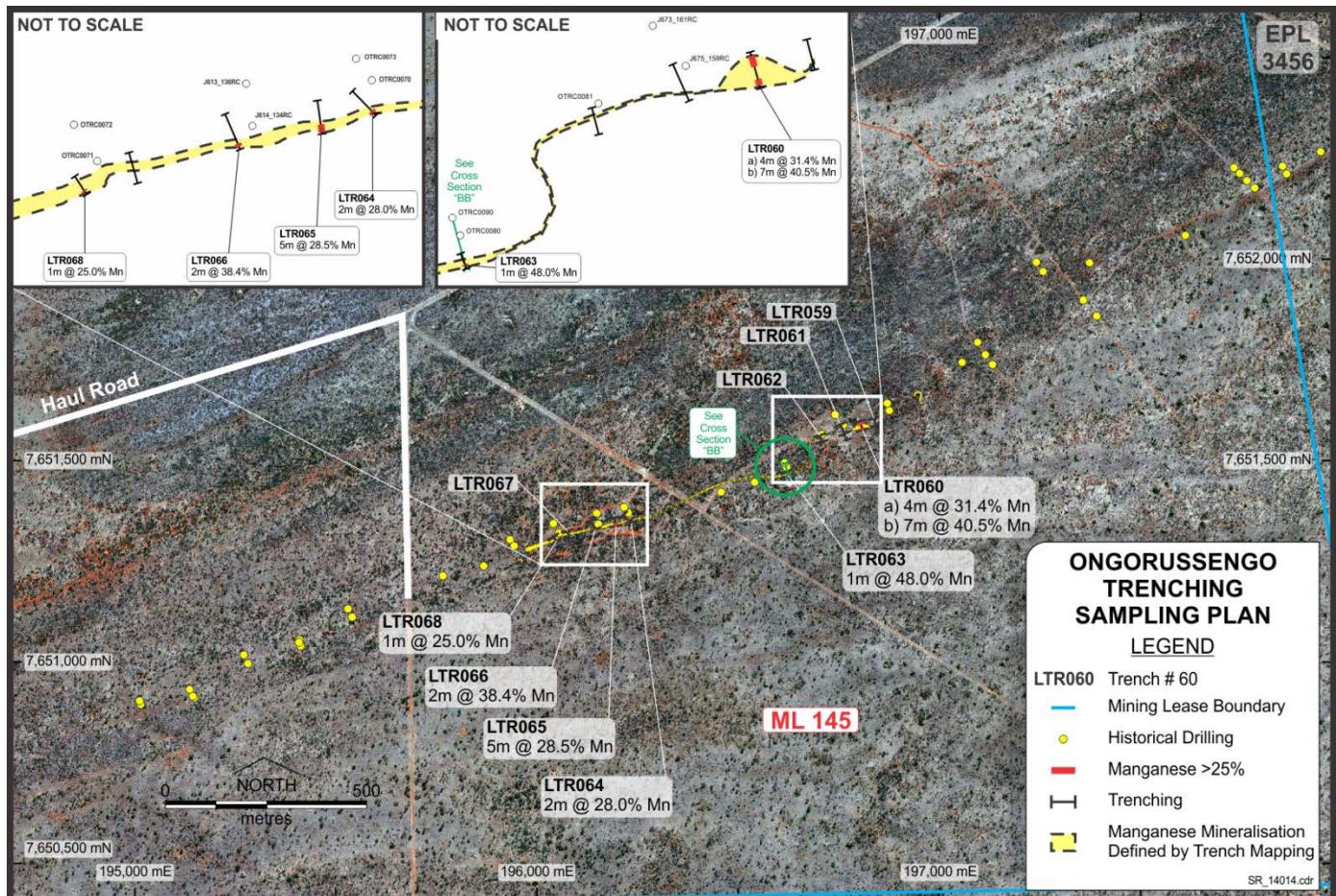
At S-Bend, a folded sequence of mineralisation which has been historically mined for high grade manganese, good thickness of mineralisation range up to 36 metres (EHW) with high grades up to 39.5% manganese and dipping steeply to the north. A significant number of individual drill assays exceed 40% manganese with the highest at 53.7% manganese (Figure 3).



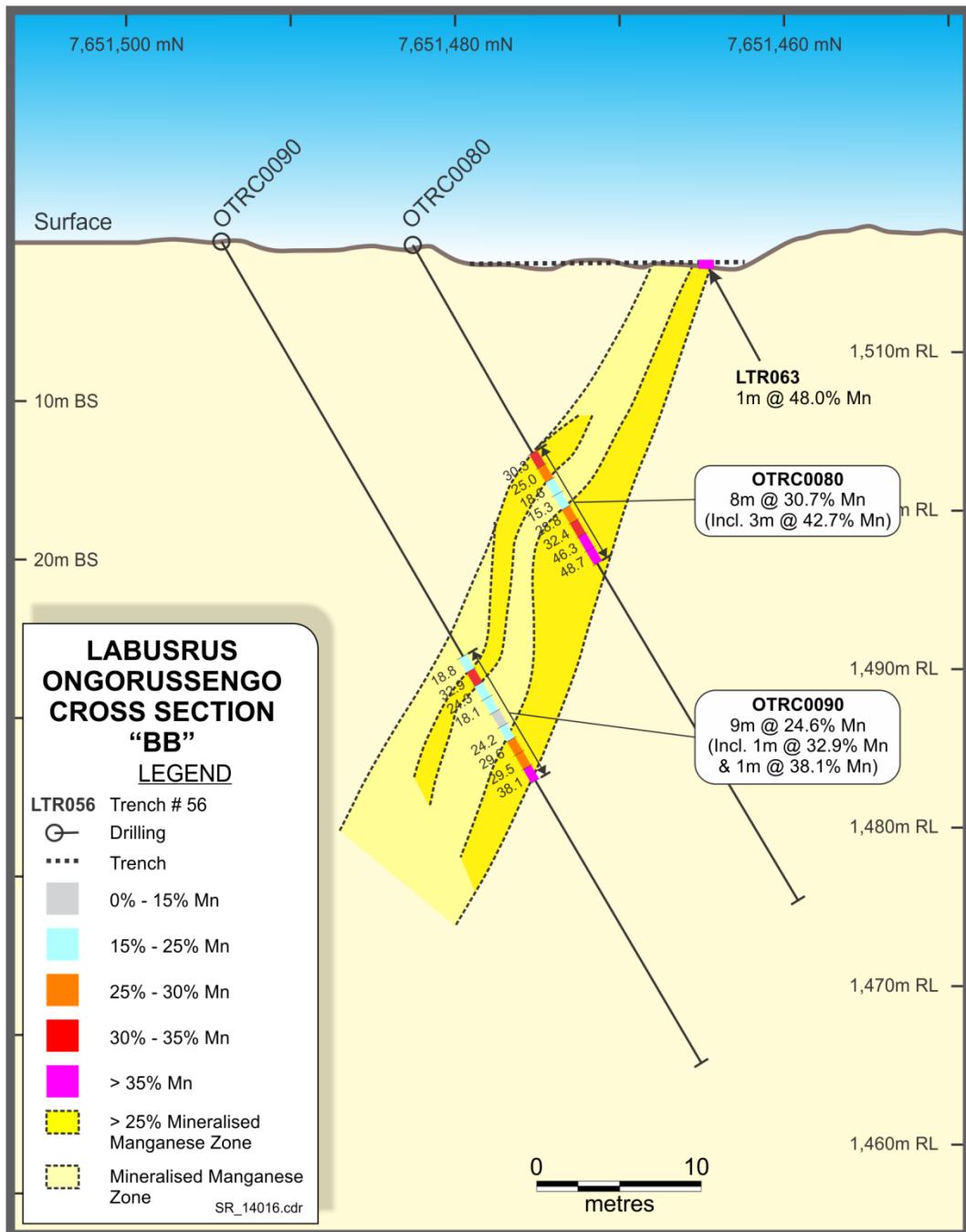
**Figure 3: S-Bend Cross Section “AA”: Drill & Blast Holes, Trenches & Assays**

At Area E, north of S-Bend , (Figures 2) the mineralised zones grade up to 33% manganese and vary from 1 to 8 metres (EHW) and appears to be separated by a lower grade manganese zone (<25% Mn) and the mineralisation dips variably to the north-west.

At Ongorussengo (Figure 4) the mineralised zones occur over a currently exposed strike length of around 650 metres, with a range of between 1 to 7 metres (EHW) and grades up to 48% manganese. On Section "BB" (Figure 5) the mineralisation dips steeply to the north and north-west.



**Figure 4: Ongorussengo Plan: Position of Sampled Trenches & Assays**



**Figure 5: Ongorussengo Cross Section "BB": Drill & Blast Holes, Trenches & Assays**

Overall, zones E, S-Bend and Ongorussengo report a combined tonnage of approximately 108,000 tonnes to a depth of 5 metres. Combined with all Areas the total is 265,000 tonnes approximately to a depth of 5 metres. This result is approximately 300 percent higher than anticipated. This material will be considered as suitable as a "bulk sample" to test for grade, geological continuity, and metallurgical yield.



The next step is to review these areas for mining, either bulk or selective and determine the order to mine and process this material.

Peter Benjamin, Managing Director, advised “this is an outstanding result to identify the bulk sample tonnages and grades to underpin the SPP, given this occurs in the top 5 metres from surface. Our confidence and understanding of the mineralisation has been greatly increased and will aid our plans to mine, process and explore for future production feed.”

### **Corporate**

Iron ore producer Atlas Iron Limited holds 53.45% of Shaw River and is a strong supporter of Shaw River's manganese strategy.

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*Join the electronic mailing list and find more information about Shaw River at: [www.shawriver.com.au](http://www.shawriver.com.au)*

### **About Shaw River**

Shaw River is a manganese-focused development and exploration company headquartered in Perth, Western Australia. The Company is targeting a low-cost, scalable start-up development of its flagship 87.2%\* owned Otjozondu Manganese Project in Namibia. (\*going to 100%)



**Competent Person Statement:**

The information in this report to which this statement is attached that relates to Exploration Results referring to an "additional 100,00 tonnes", is based on information compiled by Mr. Braam Jankowitz of Gemsbok Consulting Services CC. Mr. Jankowitz is an Independent Consultant, currently contracted to the company, and a Member of the South African Council for Natural Scientists and Professionals, and has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Jankowitz consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Some of the information in this announcement that relates to Exploration Results relating the 157,000 tonnes previously reported was extracted from Shaw River's ASX announcements dated March 11<sup>th</sup> and April 4<sup>th</sup>, 2014 entitled "First Area Successfully Tested In Blast Hole Sampling Program At Otjozondou Project" and "Three More Areas Successfully Tested In Surface Sampling Program" which are available to view on the Company's website at [www.shawriver.com.au](http://www.shawriver.com.au). The information in the original ASX announcements that related to Exploration Results is based on information compiled by Mr. Braam Jankowitz of Gemsbok Consulting Services CC. Mr Jankowitz has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Shaw River confirms that it is not aware of any new information or data that materially affects the information included in the original ASX announcements. Shaw River confirms that the form and context in which the Competent Person's findings are presented in this announcement have not been materially modified from the original ASX announcements.

**Forward Looking and Exploration Target Statements:**

Some statements in this announcement regarding future events are forward-looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include, but are not limited to, statements concerning the Company's exploration program, outlook, target sizes, resource and mineralized material estimates. They include statements preceded by words such as "potential", "target", "scheduled", "planned", "estimate", "possible", "future", "prospective" and similar expressions. The terms "Direct Shipping Ore (DSO)", "Target" and "Exploration Target", where used in this announcement, should not be misunderstood or misconstrued as an estimate of Mineral Resources and Reserves as defined by the JORC Code (2012), and therefore the terms have not been used in this context. The potential quantity and grade of Exploration Targets are conceptual in nature and it is uncertain if further exploration or feasibility study will result in the determination of a Mineral Resource or Reserve.



## APPENDIX 1: JORC Code, 2012 Edition – Table 1 (Trench & Blast Hole Drilling)

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b><i>Sampling techniques</i></b>	<ul style="list-style-type: none"><li><i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialized 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></li><li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li><li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li></ul>	<ul style="list-style-type: none"><li>All the drill chip material is collected at 1 metre intervals (a nominal 15-20kg), then riffled and split at bore hole locality to approximately 2.0 kg to 3.0 kg per sample. This sample is pulverized onsite and analysed with NITON (handheld) XRF instruments.</li><li>The NITON (handheld) XRF instruments Models XL2 &amp; XL3 are calibrated monthly as per instrument supplier instructions and daily measurements of both standards and blanks are applied every 100 measurements. Each sample is analyzed 3 times for 30 seconds each and the average of the 3 readings is reported.</li><li>Rotary air blast drilling (DTH hammer) was used to obtain 1 m samples from which 2-3 kg was pulverized to produce a 150-200g material for NITON XRF. The following used elements were analyzed at OM internal lab i.e. Mn, Fe, Ba, Ag, As, Bi, Cd, Co, Cr, Cu, Mo, Nb, Ni, Pb, Rb, Sb, Se, Sn, Ti, V, W, Zn, Zr</li></ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"><li><i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g.</i></li><li><i>‘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></li></ul>	
<b>Drilling techniques</b>	<ul style="list-style-type: none"><li><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></li></ul>	<ul style="list-style-type: none"><li>Drill type: Rotary air blast with an 89mm hammer was used on a 2.0m by 2.5m staggered drill pattern, a total of 318 vertical holes were drilled to 5.5m depth (the 0.5m subsample was not sampled).</li></ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"><li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li><li><i>Measures taken to maximise sample recovery and ensure representative nature of the</i></li></ul>	<ul style="list-style-type: none"><li>Method of recording: All material is collected for each 1m interval and the gross weight of each 1m sample has been recorded at the drill site after which it has been riffled and split down to 2-3kg – this latter weight has also been recorded and captured with the geological logging in the central OM database.</li></ul>



Criteria	JORC Code explanation	Commentary
	<p><i>samples.</i></p> <ul style="list-style-type: none"><li>• <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></li></ul>	<ul style="list-style-type: none"><li>• Flushing of each hole has been applied at 1m intervals to ensure all drilled material has been collected before commencing with the next meter.</li><li>• All material of each 1m sample has been collected, from fine to coarse chip before riffing and splitting commenced</li></ul>
<b>Logging</b>	<ul style="list-style-type: none"><li>• <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></li><li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li><li>• <i>The total length and percentage of the relevant intersections logged.</i></li></ul>	<ul style="list-style-type: none"><li>• A representative portion of chip sample for each 1m interval drilled has been geologically logged and captured on paper log sheets and then digitally recorded in a central database for future reference</li><li>• Qualitative and quantitative data of the drill chips have been recorded, all chip trays are stored in the OM store room, no photographs of the chip trays have been taken yet.</li><li>• The total length of each bore hole or trench has been logged on 1m intersections, including FW and HW host rock.</li></ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"><li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li><li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li></ul>	<ul style="list-style-type: none"><li>• All drill chip material has been collected, all dry samples</li><li>• Each 1m sample has been riffled and split through a Standard Riffler and 2-3kg of material collected (from 15-20kg)</li><li>• All the material of each chip sample was pulverized and riffled and split to 150-200g for NITON XRF. The pulverizer has been cleaned with compressed air between</li></ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"><li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li><li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li><li>• <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></li><li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li></ul>	<p>samples to minimize any potential contamination.</p> <ul style="list-style-type: none"><li>• No duplicate samples were collected either in the field and/or in the laboratory.</li><li>• A 150-200g sample of pulverized material has been taken from each 2-3kg chip sample.</li></ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"><li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li><li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations</i></li></ul>	<ul style="list-style-type: none"><li>• Each sample has been analyzed 3 times for 30 seconds per analysis using a handheld NITON XRF Model XL2 or XL3, assaying for a suite of major and trace elements (see above)</li><li>• Two NITON (Models XL2 and XL3) handheld XRF instruments have been used in determining the analysis, 3 reading times per sample for 30 seconds per reading has been applied, calibrations have been conducted monthly, standards and blanks have been read daily to ensure calibration are correct, no factors have been applied</li></ul>



Criteria	JORC Code explanation	Commentary
	<p><i>factors applied and their derivation, etc.</i></p> <ul style="list-style-type: none"><li><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></li></ul>	<ul style="list-style-type: none"><li>Standards and blanks have been inserted with every batch of 50 samples, no duplicates have been applied; A total of 200 check samples were analyzed by an external laboratory using XRF assaying techniques, acceptable levels of accuracy (ie lack of bias) and precision have been established. No standards or blanks were sent to the external lab.</li></ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"><li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li><li><i>The use of twinned holes.</i></li><li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li><li><i>Discuss any adjustment to assay data.</i></li></ul>	<ul style="list-style-type: none"><li>No external verification has been conducted, data validation has been done by alternative company personnel</li><li>No twinned holes were drilled since the drill pattern was drilled on a 2.0m by 2.5m burden and spacing</li><li>Trenches were sampled across strike at 1 metre intervals.</li><li>All physical records are kept on site, data capturing is done on site and validated by project geologists and then send to the central database at Perth HO for independent validation by the Database Manager</li><li>No adjustment to assay data</li></ul>
<b>Location of data points</b>	<ul style="list-style-type: none"><li><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></li><li><i>Specification of the grid system used.</i></li></ul>	<ul style="list-style-type: none"><li>Apart from an airborne DTM survey of a larger area, each collar was surveyed by an independent contract surveyor by Realtime GPS</li><li>UTM WGS84, Zone 34 Southern Hemisphere</li><li>9 Control Points and 24 pre-marked collars were used as reference for the topographic control</li></ul>



Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"><li><i>Quality and adequacy of topographic control.</i></li><li><i>Data spacing for reporting of Exploration Results.</i></li><li><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></li><li><i>Whether sample compositing has been applied.</i></li></ul>	<ul style="list-style-type: none"><li>The drill pattern was drilled at 2.5m by 2.0m burden and spacing</li><li>The spacing of 2.5m by 2.0m together with surface geological mapping proved to be sufficient for geological and grade continuity</li><li>No sample composition was applied at this stage</li><li>Trenches are spaced at 25 metre intervals along strike.</li></ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"><li><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></li><li><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></li></ul>	<ul style="list-style-type: none"><li>No unbiased sampling was applied since a fixed pattern of 2.5m by 2.0m was drilled across and along strike of the ore body</li><li>All blast holes were drilled vertically to 5.5m depth although the mineralized horizon dips mostly at 45° to 65°</li><li>The trenches were set across the strike of the mineralised lodes.</li></ul>
<b>Sample security</b>	<ul style="list-style-type: none"><li><i>The measures taken to ensure sample security.</i></li></ul>	<ul style="list-style-type: none"><li>Sample submission sheets sent to external lab for check assaying and pre-pulverised samples are tied up in plastic backs and shipped in boxes. 2kg sub sample at drill</li></ul>



Criteria	JORC Code explanation	Commentary
		rigs are contained in calico bags for transport to on site lab.
<b>Audits or reviews</b>	<ul style="list-style-type: none"><li><i>The results of any audits or reviews of sampling techniques and data.</i></li></ul>	<ul style="list-style-type: none"><li>No external audits have been conducted but internal reviews and adjustments of sampling techniques have been done since the drill rig was not fitted with a cyclone and sample collection facility.</li></ul>



## APPENDIX 2: 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>	<ul style="list-style-type: none"><li><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></li><li><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></li></ul>	<ul style="list-style-type: none"><li>Mining License 145, issued to Otjozondou Mining (Pty) Ltd by the Ministry of Mines and Energy, Namibia</li></ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"><li><i>Acknowledgment and appraisal of exploration by other parties.</i></li></ul>	<ul style="list-style-type: none"><li>Prior exploration results conducted by other parties, although held by the company, have not been used as part of this review</li></ul>
<b>Geology</b>	<ul style="list-style-type: none"><li><i>Deposit type, geological setting and style of mineralisation.</i></li></ul>	<ul style="list-style-type: none"><li>The Otjozondou Manganese Field is located at the eastern exposed extent of the inland branch of the late Proterozoic Damara Orogen, and situated just north of the Okahandja Lineament within the Southern Central Zone of the Damara Orogen, on Central and North Eastern Namibia.</li><li>The manganese mineralization found is associated with post-glacial BIF sequences</li></ul>



Criteria	JORC Code explanation	Commentary
		<p>on low to high grade folded and metamorphic continental margin sediments. The manganese mineralised layer is lying between a feldspathic meta-quartzite (original coarse arkosic sandstone to conglomerate) and a thinly laminated facies, composed of millimetre to centimetre thick quartz-feldspathic beds, finely crystallised iron oxide (Itabirite) beds and ferro-magnesian mineral (biotite, amphibole, clinopyroxene) beds considered as BIFs. (Itabirite, also known as banded-quartz <a href="#">hematite</a> and hematite <a href="#">schist</a>, is a laminated, metamorphosed oxide-facies iron formation in which the original <a href="#">chert</a> or <a href="#">jasper</a> bands have been recrystallized into megascopically distinguishable grains of <a href="#">quartz</a> and the iron is present as thin layers of hematite, <a href="#">magnetite</a>, or <a href="#">martite – pseudomorphs</a> of hematite after magnetite).</p> <ul style="list-style-type: none"><li>• The manganese mineralisation is found to outcrop over large areas and is exposed over a distance of at least 144km. The Neo-Proterozoic Otjosondu Mn-ore district at Otjosondu is linked to biochemical Mn-oxides deposition at a peculiar redox window, during post-glacial snowball Earth meltdown, at the margin of a hyperstratified ocean. These conditions favoured high-grade Mn concentration controlled at first order by depositional processes and paleogeography. The original manganese series was subjected to successive phases of intense tectono-metamorphism, with partial melting, folding and stretching that contorted and dislocated the ore layer without primary grade changes.</li></ul>



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"><li>• A superficial "nodule" ore layer (detrital ore) is found to be associated with most outcrop and is linked to local weathering and mechanical reworking of the primary mineralization.</li></ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"><li>• <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><ul style="list-style-type: none"><li>○ <i>easting and northing of the drill hole collar</i></li><li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li><li>○ <i>dip and azimuth of the hole</i></li><li>○ <i>down hole length and interception depth</i></li><li>○ <i>hole length.</i></li></ul></li><li>• <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</i></li></ul>	<ul style="list-style-type: none"><li>• The assay results are presented in Figure 3 and represent the composite average manganese grade over the 5 metre sampled interval. The pattern of results provide an understanding of the outline of the area for consideration of a bulk sample. Thus no requirement for a list of individual 1 metre assays was considered necessary.</li></ul>



Criteria	JORC Code explanation	Commentary
	<p><i>understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"><li><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></li><li><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></li><li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li></ul>	<ul style="list-style-type: none"><li>The grade of the 5 metre intervals was estimated using the arithmetic averages</li><li>Trench samples were individual (See table) and aggregated to represent areas with a manganese grade &gt;25% Mn with a minimum internal interval of 2 metres of waste, approximately.</li></ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"><li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li><li><i>If the geometry of the mineralisation with</i></li></ul>	<ul style="list-style-type: none"><li>All blast holes were drilled at a dip of -90° whilst the Manganese layer dips at 45° to 65°, varying dip over short distances along strike.</li><li>Drill hole composites are based on “down hole lengths” and not adjusted for true or</li></ul>



Criteria	JORC Code explanation	Commentary
	<p><i>respect to the drill hole angle is known, its nature should be reported.</i></p> <ul style="list-style-type: none"><li><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></li></ul>	<p>estimated width.</p> <ul style="list-style-type: none"><li>Trench samples were taken on surface, generally at right angles to strike and along the estimated horizontal width.</li></ul>
<b>Diagrams</b>	<ul style="list-style-type: none"><li><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></li></ul>	<ul style="list-style-type: none"><li>Maps attached</li></ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"><li><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></li></ul>	<ul style="list-style-type: none"><li>The blast hole assay results are presented in Figure 3 and represent the composite average manganese grade over the 5 metre sampled interval. The pattern of results provide an understanding of the outline of the area for consideration of a bulk sample. Thus no requirement for a list of individual 1 metre assays was considered necessary.</li><li>Refer attached table for trench results</li></ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"><li><i>Other exploration data, if meaningful and material, should be reported including (but not</i></li></ul>	<ul style="list-style-type: none"><li>Previous exploration drilling have been reported with previous resource statements</li></ul>



Criteria	JORC Code explanation	Commentary
	<p><i>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></p>	
<b>Further work</b>	<ul style="list-style-type: none"><li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li><li><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></li></ul>	<ul style="list-style-type: none"><li>Extensions both west and east of Pit A are being tested with trenching at 25m intervals with further grade control drilling after trench mapping and sampling have been completed.</li></ul>



## APPENDIX 3: Assay Results Trench/Blast Hole and Drill Sampling

Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
<b>Labusrus LTR 047-049</b>						
LTR047	LTR047A	7,650,576.2	191,485.1	1,526.1	22.7	17.1
	LTR047B	7,650,576.3	191,484.1	1,526.1	n/s	n/s
	LTR047C	7,650,576.4	191,483.1	1,526.1	22.7	13.9
	LTR047D	7,650,576.5	191,482.1	1,526.1	28.3	8.4
	LTR047E	7,650,576.6	191,481.1	1,526.0	29.7	7.3
	LTR047F	7,650,576.7	191,480.2	1,526.0	23.0	12.0
	LTR047G	7,650,576.8	191,479.2	1,526.0	24.1	8.0
	LTR047H	7,650,576.9	191,478.2	1,526.0	18.6	12.2
	LTR047I	7,650,577.1	191,477.2	1,526.0	21.0	10.6
	LTR047J	7,650,577.2	191,476.2	1,526.0	4.4	18.7
LTR048	LTR048A	7,650,543.3	191,490.6	1,526.2	33.9	5.5
	LTR048B	7,650,544.1	191,489.9	1,526.2	38.0	6.0
	LTR048C	7,650,544.8	191,489.2	1,526.2	33.2	5.7
	LTR048D	7,650,545.5	191,488.5	1,526.2	26.7	5.5
	LTR048E	7,650,546.2	191,487.8	1,526.2	32.5	7.1
	LTR048F	7,650,546.9	191,487.1	1,526.1	32.1	6.5
	LTR048G	7,650,547.6	191,486.4	1,526.1	34.9	7.4
	LTR048H	7,650,548.3	191,485.7	1,526.1	35.6	6.3
	LTR048I	7,650,549.1	191,485.0	1,526.1	16.8	15.3
	LTR048J	7,650,549.8	191,484.3	1,526.1	16.8	15.6
	LTR048K	7,650,550.5	191,483.6	1,526.1	16.1	17.6
	LTR048L	7,650,551.2	191,482.9	1,526.1	27.0	8.6
	LTR048M	7,650,551.9	191,482.2	1,526.1	27.7	7.8
	LTR048N	7,650,552.6	191,481.5	1,526.1	17.3	10.4
	LTR048O	7,650,553.3	191,480.8	1,526.0	17.2	18.9
	LTR048P	7,650,554.1	191,480.1	1,526.0	17.3	16.9
	LTR048Q	7,650,554.8	191,479.4	1,526.0	17.1	17.4
LTR049	LTR049A	7,650,527.1	191,472.4	1,525.1	32.9	6.9
	LTR049B	7,650,527.6	191,471.5	1,525.1	41.5	7.6
	LTR049C	7,650,528.1	191,470.7	1,525.2	30.7	6.2
	LTR049D	7,650,528.6	191,469.8	1,525.2	18.1	12.7



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
	LTR049E	7,650,529.1	191,468.9	1,525.3	17.2	15.4
	LTR049F	7,650,529.7	191,468.1	1,525.3	10.8	12.7
	LTR049G	7,650,530.2	191,467.2	1,525.4	3.2	36.9
	LTR049H	7,650,530.7	191,466.4	1,525.4	18.3	20.7
	LTR049I	7,650,531.2	191,465.5	1,525.5	19.1	16.4
	LTR049J	7,650,531.7	191,464.6	1,525.5	17.1	20.0
	LTR049K	7,650,532.2	191,463.8	1,525.5	22.6	13.7
	LTR049L	7,650,532.7	191,462.9	1,525.6	21.2	17.0
	LTR049M	7,650,533.2	191,462.1	1,525.6	19.5	27.9
	LTR049N	7,650,533.7	191,461.2	1,525.7	22.4	16.4
	LTR049O	7,650,534.2	191,460.3	1,525.7	16.9	21.0
	LTR049P	7,650,534.7	191,459.5	1,525.8	18.5	15.5
	LTR049Q	7,650,535.3	191,458.6	1,525.8	20.1	25.5
	LTR049R	7,650,535.8	191,457.8	1,525.8	n/s	n/s
	LTR049S	7,650,536.3	191,456.9	1,525.9	17.6	19.1
	LTR049T	7,650,536.8	191,456.0	1,525.9	29.7	17.4
	LTR049U	7,650,537.3	191,455.2	1,526.0	19.6	21.2
	LTR049V	7,650,537.8	191,454.3	1,526.0	26.8	16.8
	LTR049W	7,650,538.3	191,453.5	1,526.1	20.6	20.2
	LTR049X	7,650,538.8	191,452.6	1,526.1	28.3	17.2
	LTR049Y	7,650,539.3	191,451.7	1,526.1	29.7	17.7
	LTR049Z	7,650,539.8	191,450.9	1,526.2	21.4	25.8
	LTR049AA	7,650,540.3	191,450.0	1,526.2	42.0	16.0
	LTR049AB	7,650,540.9	191,449.2	1,526.3	22.9	28.1
	LTR049AC	7,650,541.4	191,448.3	1,526.3	3.8	10.6
	LTR049AD	7,650,541.9	191,447.5	1,526.4	2.4	17.8



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
<b>S BEND LTR 051-058</b>						
LTR052	LTR052A	7,650,240.3	191,491.4	1,525.7	n/s	n/s
	LTR052B	7,650,241.3	191,491.7	1,525.7	5.6	11.1
	LTR052C	7,650,242.2	191,492.0	1,525.6	10.5	12.2
	LTR052D	7,650,243.2	191,492.3	1,525.6	5.6	11.0
	LTR052E	7,650,244.1	191,492.6	1,525.6	8.8	13.7
	LTR052F	7,650,245.1	191,492.9	1,525.6	4.8	11.5
	LTR052G	7,650,246.0	191,493.2	1,525.6	3.7	10.6
	LTR052H	7,650,247.0	191,493.5	1,525.6	4.2	19.3
	LTR052I	7,650,248.0	191,493.8	1,525.6	2.0	14.2
	LTR052J	7,650,248.9	191,494.1	1,525.6	3.0	13.6
	LTR052K	7,650,249.9	191,494.4	1,525.6	2.4	7.2
	LTR052L	7,650,250.8	191,494.7	1,525.6	n/s	n/s
	LTR052M	7,650,251.8	191,495.0	1,525.6	n/s	n/s
	LTR052N	7,650,252.7	191,495.3	1,525.6	n/s	n/s
	LTR052O	7,650,253.7	191,495.6	1,525.6	n/s	n/s
	LTR052P	7,650,254.6	191,495.9	1,525.6	n/s	n/s
	LTR052Q	7,650,255.6	191,496.2	1,525.5	n/s	n/s
	LTR052R	7,650,256.5	191,496.5	1,525.5	n/s	n/s
	LTR052S	7,650,257.5	191,496.8	1,525.5	n/s	n/s
	LTR052T	7,650,258.5	191,497.0	1,525.5	n/s	n/s
	LTR052U	7,650,259.4	191,497.3	1,525.5	n/s	n/s
	LTR052V	7,650,260.4	191,497.6	1,525.5	n/s	n/s
	LTR052W	7,650,261.3	191,497.9	1,525.5	n/s	n/s
	LTR052X	7,650,262.3	191,498.2	1,525.5	n/s	n/s
	LTR052Y	7,650,263.2	191,498.5	1,525.5	n/s	n/s
	LTR052Z	7,650,264.2	191,498.8	1,525.5	n/s	n/s
	LTR052AB	7,650,265.1	191,499.1	1,525.5	n/s	n/s
	LTR052AC	7,650,266.1	191,499.4	1,525.5	n/s	n/s
	LTR052AD	7,650,267.0	191,499.7	1,525.5	n/s	n/s
	LTR052AE	7,650,268.0	191,500.0	1,525.4	n/s	n/s
	LTR052AF	7,650,269.0	191,500.3	1,525.4	n/s	n/s
	LTR052AG	7,650,269.9	191,500.6	1,525.4	n/s	n/s
	LTR052AH	7,650,270.9	191,500.9	1,525.4	n/s	n/s
	LTR052AI	7,650,271.8	191,501.2	1,525.4	n/s	n/s
	LTR052AJ	7,650,272.8	191,501.5	1,525.4	n/s	n/s



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
	LTR052AK	7,650,273.7	191,501.8	1,525.4	n/s	n/s
	LTR052AL	7,650,274.7	191,502.1	1,525.4	n/s	n/s
	LTR052AM	7,650,275.6	191,502.4	1,525.4	n/s	n/s
	LTR052AN	7,650,276.6	191,502.7	1,525.4	n/s	n/s
	LTR052AO	7,650,277.6	191,503.0	1,525.4	n/s	n/s
	LTR052AP	7,650,278.5	191,503.3	1,525.4	n/s	n/s
	LTR052AQ	7,650,279.5	191,503.6	1,525.4	n/s	n/s
	LTR052AR	7,650,280.4	191,503.9	1,525.4	n/s	n/s
	LTR052AS	7,650,281.4	191,504.2	1,525.3	n/s	n/s
	LTR052AT	7,650,282.3	191,504.5	1,525.3	n/s	n/s
	LTR052AU	7,650,283.3	191,504.8	1,525.3	n/s	n/s
	LTR052AV	7,650,284.2	191,505.1	1,525.3	n/s	n/s
	LTR052AW	7,650,285.2	191,505.4	1,525.3	n/s	n/s
	LTR052AX	7,650,286.1	191,505.7	1,525.3	n/s	n/s
	LTR052AY	7,650,287.1	191,506.0	1,525.3	16.1	12.0
	LTR052AZ	7,650,288.1	191,506.3	1,525.3	11.0	12.9
	LTR052BA	7,650,289.0	191,506.6	1,525.3	13.9	18.2
	LTR052BB	7,650,290.0	191,506.8	1,525.3	17.5	12.2
	LTR052BC	7,650,290.9	191,507.1	1,525.3	31.1	13.2
	LTR052BD	7,650,291.9	191,507.4	1,525.3	33.7	7.6
<b>LTR 053</b>	LTR053B	7,650,245.5	191,478.7	1,525.8	7.6	11.7
	LTR053C	7,650,246.5	191,478.6	1,525.8	25.8	14.6
	LTR053D	7,650,247.5	191,478.6	1,525.8	28.0	13.8
	LTR053E	7,650,248.5	191,478.5	1,525.8	1.5	11.2
	LTR053F	7,650,249.5	191,478.5	1,525.8	1.2	17.9
	LTR053G	7,650,250.5	191,478.4	1,525.8	1.8	11.6
	LTR053H	7,650,251.5	191,478.4	1,525.8	35.3	12.0
	LTR053I	7,650,252.5	191,478.3	1,525.7	n/s	n/s
	LTR053J	7,650,253.5	191,478.3	1,525.7	n/s	n/s
	LTR053K	7,650,254.5	191,478.2	1,525.7	n/s	n/s
	LTR053L	7,650,255.5	191,478.2	1,525.7	n/s	n/s
	LTR053M	7,650,256.5	191,478.1	1,525.7	n/s	n/s
	LTR053N	7,650,257.5	191,478.1	1,525.7	n/s	n/s
	LTR053O	7,650,258.5	191,478.0	1,525.7	39.5	12.7
	LTR053P	7,650,259.5	191,478.0	1,525.6	38.8	11.7
	LTR053Q	7,650,260.5	191,477.9	1,525.6	40.4	9.4



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
LTR 053	LTR053R	7,650,261.5	191,477.9	1,525.6	39.5	10.1
	LTR053S	7,650,262.5	191,477.8	1,525.6	19.5	16.3
	LTR053T	7,650,263.5	191,477.8	1,525.6	n/s	n/s
	LTR053U	7,650,264.5	191,477.7	1,525.6	n/s	n/s
	LTR053V	7,650,265.5	191,477.7	1,525.6	n/s	n/s
	LTR053W	7,650,266.5	191,477.6	1,525.5	n/s	n/s
	LTR053X	7,650,267.5	191,477.6	1,525.5	35.7	12.7
	LTR053Y	7,650,268.5	191,477.5	1,525.5	36.5	14.8
	LTR053Z	7,650,269.5	191,477.5	1,525.5	36.3	14.1
	LTR053AA	7,650,270.5	191,477.4	1,525.5	28.6	16.3
	LTR053AB	7,650,271.5	191,477.4	1,525.5	43.0	14.0
	LTR053AC	7,650,272.5	191,477.3	1,525.5	42.6	13.6
	LTR053AD	7,650,273.5	191,477.3	1,525.4	35.2	14.4
	LTR053AE	7,650,274.5	191,477.2	1,525.4	15.9	20.2
	LTR053AF	7,650,275.5	191,477.2	1,525.4	37.5	13.4
	LTR053AG	7,650,276.5	191,477.1	1,525.4	28.4	13.6
	LTR053AH	7,650,277.5	191,477.1	1,525.4	21.6	11.9
	LTR053AI	7,650,278.5	191,477.0	1,525.4	38.7	12.5
	LTR053AJ	7,650,279.5	191,477.0	1,525.4	28.2	16.2
	LTR053AK	7,650,280.5	191,476.9	1,525.3	30.1	13.6
	LTR053AL	7,650,281.5	191,476.9	1,525.3	35.7	15.0
	LTR053AM	7,650,282.5	191,476.8	1,525.3	22.4	17.8
	LTR053AN	7,650,283.5	191,476.8	1,525.3	27.0	17.2
	LTR053AO	7,650,284.5	191,476.7	1,525.3	19.3	17.3
	LTR053AP	7,650,285.5	191,476.7	1,525.3	28.6	15.1
	LTR053AQ	7,650,286.5	191,476.6	1,525.3	n/s	n/s
	LTR053AR	7,650,287.5	191,476.6	1,525.2	n/s	n/s
	LTR053AS	7,650,288.5	191,476.5	1,525.2	n/s	n/s
	LTR053AT	7,650,289.5	191,476.5	1,525.2	n/s	n/s
	LTR053AU	7,650,290.5	191,476.4	1,525.2	20.0	16.4
	LTR053AV	7,650,291.5	191,476.4	1,525.2	33.9	11.9
	LTR053AW	7,650,292.5	191,476.3	1,525.2	31.0	10.8
LTR 054	LTR054A	7,650,235.4	191,459.2	1,526.1	n/s	n/s
	LTR054B	7,650,236.4	191,459.2	1,526.1	35.5	5.8
	LTR054C	7,650,237.4	191,459.3	1,526.1	28.0	21.6
	LTR054D	7,650,238.4	191,459.3	1,526.1	26.9	15.8



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
	LTR054E	7,650,239.4	191,459.4	1,526.0	24.5	10.7
	LTR054F	7,650,240.4	191,459.5	1,526.0	34.5	11.5
	LTR054G	7,650,241.4	191,459.5	1,526.0	35.3	18.4
	LTR054H	7,650,242.4	191,459.6	1,526.0	31.8	19.2
	LTR054I	7,650,243.4	191,459.6	1,525.9	27.5	17.9
	LTR054J	7,650,244.3	191,459.7	1,525.9	37.6	14.2
	LTR054K	7,650,245.3	191,459.7	1,525.9	36.7	14.7
	LTR054L	7,650,246.3	191,459.8	1,525.9	27.1	24.5
	LTR054M	7,650,247.3	191,459.8	1,525.9	32.1	18.2
	LTR054N	7,650,248.3	191,459.9	1,525.8	26.8	18.8
	LTR054O	7,650,249.3	191,459.9	1,525.8	43.4	12.3
	LTR054P	7,650,250.3	191,460.0	1,525.8	33.8	19.6
	LTR054Q	7,650,251.3	191,460.0	1,525.8	29.2	22.4
	LTR054R	7,650,252.3	191,460.1	1,525.7	30.1	22.3
	LTR054S	7,650,253.3	191,460.1	1,525.7	34.5	17.9
	LTR054T	7,650,254.3	191,460.2	1,525.7	38.2	14.8
	LTR054U	7,650,255.3	191,460.2	1,525.7	26.0	19.3
	LTR054V	7,650,256.3	191,460.3	1,525.6	22.5	19.7
	LTR054W	7,650,257.3	191,460.3	1,525.6	23.6	16.2
	LTR054X	7,650,258.3	191,460.4	1,525.6	27.3	15.3
	LTR054Y	7,650,259.3	191,460.5	1,525.6	39.1	15.5
	LTR054Z	7,650,260.3	191,460.5	1,525.6	n/s	n/s
	LTR054AA	7,650,261.3	191,460.6	1,525.5	n/s	n/s
	LTR054AB	7,650,262.3	191,460.6	1,525.5	n/s	n/s
	LTR054AC	7,650,263.3	191,460.7	1,525.5	n/s	n/s
	LTR054AD	7,650,264.3	191,460.7	1,525.5	n/s	n/s
	LTR054AE	7,650,265.3	191,460.8	1,525.4	n/s	n/s
	LTR054AF	7,650,266.3	191,460.8	1,525.4	n/s	n/s
	LTR054AG	7,650,267.3	191,460.9	1,525.4	32.3	17.3
	LTR054AH	7,650,268.3	191,460.9	1,525.4	11.1	21.2
	LTR054AI	7,650,269.3	191,461.0	1,525.3	7.1	27.2
	LTR054AJ	7,650,270.3	191,461.0	1,525.3	24.4	20.6
	LTR054AK	7,650,271.3	191,461.1	1,525.3	17.3	22.1
	LTR054AL	7,650,272.3	191,461.1	1,525.3	15.9	18.0
	LTR054AM	7,650,273.3	191,461.2	1,525.3	6.3	12.2
	LTR054AN	7,650,274.3	191,461.2	1,525.2	3.5	22.0



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
	LTR054AO	7,650,275.3	191,461.3	1,525.2	18.3	18.4
	LTR054AP	7,650,276.3	191,461.3	1,525.2	19.9	16.2
	LTR054AQ	7,650,277.3	191,461.4	1,525.2	8.9	17.9
	LTR054AR	7,650,278.3	191,461.5	1,525.1	10.8	15.7
	LTR054AS	7,650,279.3	191,461.5	1,525.1	11.1	17.9
	LTR054AT	7,650,280.3	191,461.6	1,525.1	13.4	21.6
	LTR054AU	7,650,281.3	191,461.6	1,525.1	11.6	15.9
	LTR054AV	7,650,282.3	191,461.7	1,525.1	3.2	19.4
	LTR054AW	7,650,283.3	191,461.7	1,525.0	11.6	14.9
	LTR054AX	7,650,284.3	191,461.8	1,525.0	23.0	22.1
	LTR054AY	7,650,285.3	191,461.8	1,525.0	14.8	24.4
	LTR054AZ	7,650,286.3	191,461.9	1,525.0	10.3	17.0
	LTR054BA	7,650,287.3	191,461.9	1,524.9	19.9	14.5
	LTR054BB	7,650,288.3	191,462.0	1,524.9	21.4	14.4
	LTR054BC	7,650,289.3	191,462.0	1,524.9	4.3	15.1
	LTR054BD	7,650,290.3	191,462.1	1,524.9	2.3	9.9
	LTR054BE	7,650,291.3	191,462.1	1,524.8	31.6	9.4
	LTR054BF	7,650,292.3	191,462.2	1,524.8	36.6	13.7
	LTR054BG	7,650,293.3	191,462.2	1,524.8	34.0	14.1
	LTR054BH	7,650,294.3	191,462.3	1,524.8	18.1	21.4
	LTR054BI	7,650,295.3	191,462.4	1,524.8	10.6	16.8
	LTR054BJ	7,650,296.3	191,462.4	1,524.7	19.4	19.4
	LTR054BK	7,650,297.3	191,462.5	1,524.7	n/s	n/s
	LTR054BL	7,650,298.3	191,462.5	1,524.7	n/s	n/s
	LTR054BM	7,650,299.3	191,462.6	1,524.7	n/s	n/s
	LTR054BN	7,650,300.3	191,462.6	1,524.6	17.3	8.6
	LTR054BO	7,650,301.3	191,462.7	1,524.6	n/s	n/s
	LTR054BP	7,650,302.3	191,462.7	1,524.6	n/s	n/s
	LTR054BQ	7,650,303.3	191,462.8	1,524.6	n/s	n/s
	LTR054BR	7,650,304.3	191,462.8	1,524.5	n/s	n/s
	LTR054BS	7,650,305.3	191,462.9	1,524.5	n/s	n/s
	LTR054BT	7,650,306.3	191,462.9	1,524.6	n/s	n/s
	LTR054BU	7,650,307.2	191,463.0	1,524.5	23.7	13.2
LTR055	LTR055B	7,650,252.7	191,431.5	1,525.5	27.8	7.0
	LTR055C	7,650,253.7	191,431.6	1,525.5	26.4	13.2
	LTR055D	7,650,254.7	191,431.7	1,525.5	16.7	15.3



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
	LTR055E	7,650,255.7	191,431.8	1,525.5	19.2	4.4
	LTR055F	7,650,256.7	191,431.9	1,525.5	16.9	7.6
	LTR055G	7,650,257.7	191,432.0	1,525.5	20.2	14.0
	LTR055H	7,650,258.7	191,432.2	1,525.5	18.1	14.0
	LTR055I	7,650,259.7	191,432.3	1,525.5	20.0	12.8
	LTR055J	7,650,260.7	191,432.4	1,525.5	27.7	7.9
	LTR055K	7,650,261.7	191,432.5	1,525.5	46.1	7.7
	LTR055L	7,650,262.7	191,432.6	1,525.5	19.6	10.5
LTR056	LTR056B	7,650,253.7	191,411.8	1,524.5	17.7	11.2
	LTR056C	7,650,254.7	191,411.9	1,524.5	19.7	10.8
	LTR056D	7,650,255.7	191,412.0	1,524.5	27.2	8.8
	LTR056E	7,650,256.6	191,412.1	1,524.6	24.7	11.3
	LTR056F	7,650,257.6	191,412.2	1,524.6	25.7	11.5
	LTR056G	7,650,258.6	191,412.4	1,524.6	26.8	11.6
	LTR056H	7,650,259.6	191,412.5	1,524.6	20.0	19.2
	LTR056I	7,650,260.6	191,412.6	1,524.6	10.7	31.3
	LTR056J	7,650,261.6	191,412.7	1,524.6	19.8	15.2
	LTR056K	7,650,262.6	191,412.8	1,524.6	14.8	19.2
	LTR056T	7,650,271.6	191,413.8	1,524.7	10.9	22.8
	LTR056U	7,650,272.5	191,413.9	1,524.7	5.2	12.0
	LTR056V	7,650,273.5	191,414.0	1,524.8	5.6	7.0
	LTR056W	7,650,274.5	191,414.1	1,524.8	12.1	12.3
	LTR056X	7,650,275.5	191,414.2	1,524.8	23.1	7.6
	LTR056Y	7,650,276.5	191,414.4	1,524.8	20.2	15.9
	LTR056Z	7,650,277.5	191,414.5	1,524.8	7.3	13.3
	LTR056AA	7,650,278.5	191,414.6	1,524.8	4.0	14.0
	LTR056AB	7,650,279.5	191,414.7	1,524.8	3.3	9.3
	LTR056AC	7,650,280.5	191,414.8	1,524.8	30.2	4.1
	LTR056AD	7,650,281.5	191,414.9	1,524.8	4.8	10.5
	LTR056AE	7,650,282.5	191,415.0	1,524.9	18.5	8.4
	LTR056AF	7,650,283.5	191,415.1	1,524.9	34.9	7.9
	LTR056AG	7,650,284.5	191,415.2	1,524.9	22.4	9.2
	LTR056AH	7,650,285.5	191,415.3	1,524.9	21.7	5.0
LTR057	LTR057B	7,650,260.0	191,392.6	1,524.7	32.1	10.6
	LTR057C	7,650,261.0	191,392.6	1,524.7	22.3	13.7
	LTR057D	7,650,262.0	191,392.6	1,524.7	21.6	22.5



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
	LTR057E	7,650,263.0	191,392.6	1,524.7	25.8	15.1
	LTR057F	7,650,264.0	191,392.6	1,524.7	26.6	16.2
	LTR057G	7,650,265.0	191,392.6	1,524.7	22.6	18.3
	LTR057H	7,650,266.0	191,392.6	1,524.7	18.5	14.0
<b>LTR058</b>	LTR058B	7,650,262.5	191,373.7	1,523.4	5.1	12.3
	LTR058C	7,650,263.4	191,373.6	1,523.4	5.4	13.9
	LTR058D	7,650,264.4	191,373.4	1,523.5	6.8	23.1
	LTR058E	7,650,265.4	191,373.3	1,523.6	11.8	14.3
	LTR058F	7,650,266.4	191,373.1	1,523.7	26.4	25.6
	LTR058G	7,650,267.4	191,373.0	1,523.7	10.4	14.2
	LTR058H	7,650,268.4	191,372.9	1,523.8	7.8	11.4
	LTR058I	7,650,269.4	191,372.7	1,523.9	24.7	14.4
	LTR058J	7,650,270.3	191,372.6	1,524.0	19.1	14.6
	LTR058K	7,650,271.3	191,372.4	1,524.1	20.5	16.9
	LTR058L	7,650,272.3	191,372.3	1,524.1	18.5	17.9
	LTR058M	7,650,273.3	191,372.1	1,524.2	11.4	11.2
	LTR058N	7,650,274.3	191,372.0	1,524.3	12.5	10.3



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
<b>Ongorussengo LTR 059-068</b>						
OTR060	LTR060B	7,651,575.4	196,808.0	1,549.5	22.2	0.6
	LTR060C	7,651,576.3	196,807.7	1,549.4	37.3	1.0
	LTR060D	7,651,577.3	196,807.5	1,549.4	30.0	0.8
	LTR060E	7,651,578.3	196,807.2	1,549.3	22.9	0.6
	LTR060F	7,651,579.2	196,806.9	1,549.2	35.6	1.0
	LTR060G	7,651,580.2	196,806.6	1,549.2	n/s	n/s
	LTR060H	7,651,581.2	196,806.4	1,549.1	n/s	n/s
	LTR060I	7,651,582.1	196,806.1	1,549.0	n/s	n/s
	LTR060J	7,651,583.1	196,805.8	1,549.0	n/s	n/s
	LTR060K	7,651,584.0	196,805.6	1,548.9	n/s	n/s
	LTR060L	7,651,585.0	196,805.3	1,548.8	n/s	n/s
	LTR060M	7,651,586.0	196,805.0	1,548.8	n/s	n/s
	LTR060N	7,651,586.9	196,804.8	1,548.7	n/s	n/s
	LTR060O	7,651,587.9	196,804.5	1,548.7	25.5	0.7
	LTR060P	7,651,588.8	196,804.2	1,548.6	43.2	1.3
	LTR060Q	7,651,589.8	196,804.0	1,548.5	42.5	1.2
	LTR060R	7,651,590.8	196,803.7	1,548.5	38.0	1.1
	LTR060S	7,651,591.7	196,803.4	1,548.4	48.6	1.5
	LTR060T	7,651,592.7	196,803.2	1,548.3	47.6	1.4
	LTR060U	7,651,593.6	196,802.9	1,548.3	40.3	1.2
	LTR060V	7,651,594.6	196,802.6	1,548.2	24.1	0.7
	LTR060W	7,651,595.6	196,802.4	1,548.1	12.3	0.4
OTR063	LTR063A	7,651,462.8	196,624.3	1,547.8	n/s	n/s
	LTR063B	7,651,463.7	196,623.9	1,547.7	12.7	0.4
	LTR063C	7,651,464.6	196,623.6	1,547.6	48.8	1.4
OTR064	LTR064A	7,651,349.2	196,228.7	1,544.1	n/s	n/s
	LTR064B	7,651,349.9	196,228.0	1,544.1	n/s	n/s
	LTR064C	7,651,350.6	196,227.3	1,544.1	29.6	0.8
	LTR064D	7,651,351.4	196,226.6	1,544.1	n/s	n/s
	LTR064E	7,651,352.2	196,225.9	1,544.1	30.4	0.9
OTR065	LTR065A	7,651,337.7	196,195.3	1,543.6	n/s	n/s
	LTR065B	7,651,338.7	196,195.2	1,543.6	31.2	0.9
	LTR065C	7,651,339.6	196,195.0	1,543.6	29.6	0.8
	LTR065D	7,651,340.6	196,194.9	1,543.6	26.1	0.7
	LTR065E	7,651,341.6	196,194.7	1,543.6	29.3	0.8



Trench ID	Sample ID	Northing	Easting	Reduced Level	Mn (%Mn)	Fe (%Fe)
	LTR065F	7,651,342.6	196,194.6	1,543.6	26.6	0.7
	LTR065G	7,651,343.6	196,194.5	1,543.6	23.7	0.6
OTR066	OTR066A	7,651,328.0	196,144.0	1,543.7	n/s	n/s
	OTR066B	7,651,328.9	196,143.6	1,543.7	22.1	0.7
	OTR066C	7,651,329.8	196,143.3	1,543.7	37.9	1.2
	OTR066D	7,651,330.7	196,142.9	1,543.7	39.0	1.1
	OTR067A	7,651,306.8	196,080.0	1,544.2	n/s	n/s
OTR067	OTR067B	7,651,307.8	196,079.7	1,544.2	15.0	0.4
	OTR067C	7,651,308.8	196,079.4	1,544.2	n/s	n/s
	OTR067D	7,651,309.7	196,079.1	1,544.3	18.7	0.5
	OTR067E	7,651,310.7	196,078.9	1,544.3	n/s	n/s
	OTR067F	7,651,311.7	196,078.6	1,544.3	n/s	n/s
	OTR067G	7,651,312.6	196,078.3	1,544.3	7.5	0.2
	OTR068A	7,651,299.8	196,047.9	1,542.5	n/s	n/s
OTR068	OTR068B	7,651,300.6	196,047.4	1,542.4	15.9	0.5
	OTR068C	7,651,301.5	196,046.9	1,542.4	25.2	0.7



### "S" Bend Cross Section

Trench ID	Hole ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
LTR056	OTRC0031	RA0022	191430.31	7650329.14	1494.36	-56.8	192.0	0	1	2.1	1.7
	OTRC0031	RA0023	191430.31	7650329.14	1494.36	-56.8	192.0	1	2	2.5	0.1
	OTRC0031	RA0024	191430.31	7650329.14	1494.36	-56.8	192.0	2	3	2.5	0.1
	OTRC0031	RA0025	191430.31	7650329.14	1494.36	-56.8	192.0	3	4	2.1	0.1
	OTRC0031	RA0026	191430.31	7650329.14	1494.36	-56.8	192.0	4	5	1.8	0.0
	OTRC0031	RA0027	191430.31	7650329.14	1494.36	-56.8	192.0	5	6	1.4	0.0
	OTRC0031	RA0028	191430.31	7650329.14	1494.36	-56.8	192.0	6	7	1.2	0.1
	OTRC0031	RA0029	191430.31	7650329.14	1494.36	-56.8	192.0	7	8	1.1	0.0
	OTRC0031	RA0030	191430.31	7650329.14	1494.36	-56.8	192.0	8	9	1.1	0.0
	OTRC0031	RA0031	191430.31	7650329.14	1494.36	-56.8	192.0	9	10	1.2	0.0
	OTRC0031	RA0032	191430.31	7650329.14	1494.36	-56.8	192.0	10	11	1.3	0.0
	OTRC0031	RA0033	191430.31	7650329.14	1494.36	-56.8	192.0	11	12	2.2	0.1
	OTRC0031	RA0034	191430.31	7650329.14	1494.36	-56.8	192.0	12	13	3.1	0.3
	OTRC0031	RA0035	191430.31	7650329.14	1494.36	-56.8	192.0	13	14	3.8	0.1
	OTRC0031	RA0036	191430.31	7650329.14	1494.36	-56.8	192.0	14	15	3.4	0.1
	OTRC0031	RA0037	191430.31	7650329.14	1494.36	-56.8	192.0	15	16	5.9	0.3
	OTRC0031	RA0038	191430.31	7650329.14	1494.36	-56.8	192.0	16	17	5.5	0.1
	OTRC0031	RA0039	191430.31	7650329.14	1494.36	-56.8	192.0	17	18	5.7	0.1
	OTRC0031	RA0040	191430.31	7650329.14	1494.36	-56.8	192.0	18	19	4.8	0.1
	OTRC0031	RA0041	191430.31	7650329.14	1494.36	-56.8	192.0	19	20	1.5	0.0
	OTRC0031	RA0042	191430.31	7650329.14	1494.36	-56.8	192.0	20	21	4.8	0.1
	OTRC0031	RA0043	191430.31	7650329.14	1494.36	-56.8	192.0	21	22	4.3	0.1
	OTRC0031	RA0044	191430.31	7650329.14	1494.36	-56.8	192.0	22	23	3.2	0.1
	OTRC0031	RA0045	191430.31	7650329.14	1494.36	-56.8	192.0	23	24	1.7	0.1
	OTRC0031	RA0046	191430.31	7650329.14	1494.36	-56.8	192.0	24	25	3.2	0.1
	OTRC0031	RA0047	191430.31	7650329.14	1494.36	-56.8	192.0	25	26	3.1	0.1
	OTRC0031	RA0048	191430.31	7650329.14	1494.36	-56.8	192.0	26	27	3.8	0.2
	OTRC0031	RA0049	191430.31	7650329.14	1494.36	-56.8	192.0	27	28	3.2	0.1
	OTRC0031	RA0050	191430.31	7650329.14	1494.36	-56.8	192.0	28	29	4.6	0.1
	OTRC0031	RA0054	191430.31	7650329.14	1494.36	-56.8	192.0	29	30	11.4	3.8
	OTRC0031	RA0055	191430.31	7650329.14	1494.36	-56.8	192.0	30	31	9.7	0.7
	OTRC0031	RA0056	191430.31	7650329.14	1494.36	-56.8	192.0	31	32	6.0	0.2
	OTRC0031	RA0057	191430.31	7650329.14	1494.36	-56.8	192.0	32	33	4.8	0.1
	OTRC0031	RA0058	191430.31	7650329.14	1494.36	-56.8	192.0	33	34	1.2	0.1
	OTRC0031	RA0059	191430.31	7650329.14	1494.36	-56.8	192.0	34	35	1.2	0.1



### "S" Bend Cross Section

Trench ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
OTRC0031	RA0060	191430.31	7650329.14	1494.36	-56.8	192.0	49	50	2.2	0.1
OTRC0031	RA0061	191430.31	7650329.14	1494.36	-56.8	192.0	50	51	1.3	0.0
OTRC0031	RA0062	191430.31	7650329.14	1494.36	-56.8	192.0	51	52	1.1	0.0
OTRC0031	RA0063	191430.31	7650329.14	1494.36	-56.8	192.0	52	53	1.8	0.1
OTRC0031	RA0064	191430.31	7650329.14	1494.36	-56.8	192.0	53	54	1.8	0.0
OTRC0031	RA0065	191430.31	7650329.14	1494.36	-56.8	192.0	54	55	1.0	0.0
OTRC0031	RA0066	191430.31	7650329.14	1494.36	-56.8	192.0	55	56	0.8	0.0
OTRC0031	RA0067	191430.31	7650329.14	1494.36	-56.8	192.0	56	57	2.1	0.1
OTRC0031	RA0068	191430.31	7650329.14	1494.36	-56.8	192.0	57	58	0.7	0.0
OTRC0031	RA0069	191430.31	7650329.14	1494.36	-56.8	192.0	58	59	0.8	0.0
OTRC0031	RA0070	191430.31	7650329.14	1494.36	-56.8	192.0	59	60	1.0	0.0
OTRC0031	RA0071	191430.31	7650329.14	1494.36	-56.8	192.0	60	61	0.9	0.1
OTRC0031	RA0072	191430.31	7650329.14	1494.36	-56.8	192.0	61	62	5.1	0.2
OTRC0031	RA0073	191430.31	7650329.14	1494.36	-56.8	192.0	62	63	7.0	0.5
OTRC0031	RA0074	191430.31	7650329.14	1494.36	-56.8	192.0	63	64	24.4	1.5
OTRC0031	RA0075	191430.31	7650329.14	1494.36	-56.8	192.0	64	65	37.4	2.1
OTRC0031	RA0076	191430.31	7650329.14	1494.36	-56.8	192.0	65	66	16.8	17.1
OTRC0031	RA0077	191430.31	7650329.14	1494.36	-56.8	192.0	66	67	13.9	31.5
OTRC0031	RA0078	191430.31	7650329.14	1494.36	-56.8	192.0	67	68	8.1	22.6
OTRC0031	RA0079	191430.31	7650329.14	1494.36	-56.8	192.0	68	69	4.4	8.9
OTRC0031	RA0080	191430.31	7650329.14	1494.36	-56.8	192.0	69	70	4.5	9.1
OTRC0031	NA0214	191430.31	7650329.14	1494.36	-56.8	192.0	69	70	4.8	9.8
OTRC0031	NA0215	191430.31	7650329.14	1494.36	-56.8	192.0	70	71	6.1	45.5
OTRC0031	RA0081	191430.31	7650329.14	1494.36	-56.8	192.0	70	71	5.9	44.9
OTRC0031	RA0082	191430.31	7650329.14	1494.36	-56.8	192.0	71	72	6.2	32.1
OTRC0031	NA0216	191430.31	7650329.14	1494.36	-56.8	192.0	71	72	5.7	28.3
OTRC0031	RA0083	191430.31	7650329.14	1494.36	-56.8	192.0	72	73	5.5	28.0
OTRC0031	RA0084	191430.31	7650329.14	1494.36	-56.8	192.0	73	74	5.1	35.9
OTRC0031	RA0085	191430.31	7650329.14	1494.36	-56.8	192.0	74	75	6.5	34.3
OTRC0031	RA0086	191430.31	7650329.14	1494.36	-56.8	192.0	75	76	4.0	48.4
OTRC0031	RA0087	191430.31	7650329.14	1494.36	-56.8	192.0	76	77	5.7	46.2
OTRC0031	RA0088	191430.31	7650329.14	1494.36	-56.8	192.0	77	78	6.3	43.3
OTRC0031	RA0089	191430.31	7650329.14	1494.36	-56.8	192.0	78	79	13.2	20.5
OTRC0031	RA0090	191430.31	7650329.14	1494.36	-56.8	192.0	79	80	8.8	18.8
OTRC0031	RA0091	191430.31	7650329.14	1494.36	-56.8	192.0	80	81	6.7	10.0



### "S" Bend Cross Section

Trench ID	Hole ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
	OTRC0031	RA0092	191430.31	7650329.14	1494.36	-56.8	192.0	81	82	6.7	11.0
	OTRC0031	RA0093	191430.31	7650329.14	1494.36	-56.8	192.0	82	83	7.3	8.5
<b>LTR056</b>	OTRC0032	RA0094	191422.32	7650286.17	1494.11	-62.7	188.0	0	1	3.6	9.7
	OTRC0032	RA0095	191422.32	7650286.17	1494.11	-62.7	188.0	1	2	2.4	1.7
	OTRC0032	RA0096	191422.32	7650286.17	1494.11	-62.7	188.0	2	3	2.4	3.0
	OTRC0032	RA0097	191422.32	7650286.17	1494.11	-62.7	188.0	3	4	2.0	0.6
	OTRC0032	RA0098	191422.32	7650286.17	1494.11	-62.7	188.0	4	5	1.7	0.5
	OTRC0032	RA0099	191422.32	7650286.17	1494.11	-62.7	188.0	5	6	1.7	0.7
	OTRC0032	RA0100	191422.32	7650286.17	1494.11	-62.7	188.0	6	7	3.9	2.2
	OTRC0032	RA0104	191422.32	7650286.17	1494.11	-62.7	188.0	7	8	5.2	1.5
	OTRC0032	RA0105	191422.32	7650286.17	1494.11	-62.7	188.0	8	9	6.5	0.3
	OTRC0032	RA0106	191422.32	7650286.17	1494.11	-62.7	188.0	9	10	6.3	1.4
	OTRC0032	RA0107	191422.32	7650286.17	1494.11	-62.7	188.0	10	11	7.8	0.8
	OTRC0032	RA0108	191422.32	7650286.17	1494.11	-62.7	188.0	11	12	9.3	2.2
	OTRC0032	RA0109	191422.32	7650286.17	1494.11	-62.7	188.0	12	13	15.3	6.0
	OTRC0032	RA0110	191422.32	7650286.17	1494.11	-62.7	188.0	13	14	21.7	5.6
	OTRC0032	RA0111	191422.32	7650286.17	1494.11	-62.7	188.0	14	15	13.6	21.5
	OTRC0032	RA0112	191422.32	7650286.17	1494.11	-62.7	188.0	15	16	4.8	25.4
	OTRC0032	RA0113	191422.32	7650286.17	1494.11	-62.7	188.0	16	17	9.6	19.1
	OTRC0032	RA0114	191422.32	7650286.17	1494.11	-62.7	188.0	17	18	14.2	11.6
	OTRC0032	RA0115	191422.32	7650286.17	1494.11	-62.7	188.0	18	19	16.1	0.7
	OTRC0032	RA0116	191422.32	7650286.17	1494.11	-62.7	188.0	19	20	13.4	0.5
	OTRC0032	RA0117	191422.32	7650286.17	1494.11	-62.7	188.0	20	21	10.7	0.4
	OTRC0032	RA0118	191422.32	7650286.17	1494.11	-62.7	188.0	21	22	15.6	0.7
	OTRC0032	RA0119	191422.32	7650286.17	1494.11	-62.7	188.0	22	23	15.0	0.7
	OTRC0032	RA0120	191422.32	7650286.17	1494.11	-62.7	188.0	23	24	14.4	0.5
	OTRC0032	RA0121	191422.32	7650286.17	1494.11	-62.7	188.0	24	25	17.0	0.7
	OTRC0032	RA0122	191422.32	7650286.17	1494.11	-62.7	188.0	25	26	19.6	1.7
	OTRC0032	RA0123	191422.32	7650286.17	1494.11	-62.7	188.0	26	27	15.6	7.5
	OTRC0032	RA0124	191422.32	7650286.17	1494.11	-62.7	188.0	27	28	7.6	10.5
	OTRC0032	RA0125	191422.32	7650286.17	1494.11	-62.7	188.0	28	29	13.8	20.1
	OTRC0032	RA0126	191422.32	7650286.17	1494.11	-62.7	188.0	29	30	11.4	29.4
	OTRC0032	RA0127	191422.32	7650286.17	1494.11	-62.7	188.0	30	31	12.6	22.6
	OTRC0032	RA0128	191422.32	7650286.17	1494.11	-62.7	188.0	31	32	11.4	27.1
	OTRC0032	RA0129	191422.32	7650286.17	1494.11	-62.7	188.0	32	33	13.4	15.7



### "S" Bend Cross Section

Trench ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
OTRC0032	RA0130	191422.32	7650286.17	1494.11	-62.7	188.0	33	34	16.7	6.3
OTRC0032	RA0131	191422.32	7650286.17	1494.11	-62.7	188.0	34	35	18.8	0.9
OTRC0032	RA0132	191422.32	7650286.17	1494.11	-62.7	188.0	35	36	13.9	1.8
OTRC0032	RA0133	191422.32	7650286.17	1494.11	-62.7	188.0	36	37	15.3	9.3
OTRC0032	RA0134	191422.32	7650286.17	1494.11	-62.7	188.0	37	38	13.6	27.7
OTRC0032	RA0135	191422.32	7650286.17	1494.11	-62.7	188.0	38	39	14.8	22.7
OTRC0032	RA0136	191422.32	7650286.17	1494.11	-62.7	188.0	39	40	22.3	1.2
OTRC0032	RA0137	191422.32	7650286.17	1494.11	-62.7	188.0	40	41	22.4	1.6
OTRC0032	RA0138	191422.32	7650286.17	1494.11	-62.7	188.0	41	42	18.1	15.2
OTRC0032	RA0139	191422.32	7650286.17	1494.11	-62.7	188.0	42	43	20.8	19.7
OTRC0032	RA0140	191422.32	7650286.17	1494.11	-62.7	188.0	43	44	16.8	27.9
OTRC0032	RA0141	191422.32	7650286.17	1494.11	-62.7	188.0	44	45	16.7	19.3
OTRC0032	RA0142	191422.32	7650286.17	1494.11	-62.7	188.0	45	46	13.1	20.6
OTRC0032	RA0143	191422.32	7650286.17	1494.11	-62.7	188.0	46	47	10.5	26.5
OTRC0032	RA0144	191422.32	7650286.17	1494.11	-62.7	188.0	47	48	15.4	13.5
OTRC0032	RA0145	191422.32	7650286.17	1494.11	-62.7	188.0	48	49	9.4	37.2
OTRC0032	RA0146	191422.32	7650286.17	1494.11	-62.7	188.0	49	50	8.0	46.7
OTRC0032	RA0147	191422.32	7650286.17	1494.11	-62.7	188.0	50	51	11.3	37.2
OTRC0032	RA0148	191422.32	7650286.17	1494.11	-62.7	188.0	51	52	14.1	24.5
OTRC0032	RA0149	191422.32	7650286.17	1494.11	-62.7	188.0	52	53	7.9	41.2
OTRC0032	RA0150	191422.32	7650286.17	1494.11	-62.7	188.0	53	54	6.6	41.9
OTRC0032	RA0154	191422.32	7650286.17	1494.11	-62.7	188.0	54	55	14.2	1.3
OTRC0032	RA0155	191422.32	7650286.17	1494.11	-62.7	188.0	55	56	24.2	1.2
OTRC0032	RA0156	191422.32	7650286.17	1494.11	-62.7	188.0	56	57	10.2	0.8
OTRC0032	RA0157	191422.32	7650286.17	1494.11	-62.7	188.0	57	58	10.3	0.4
OTRC0032	RA0158	191422.32	7650286.17	1494.11	-62.7	188.0	58	59	10.5	0.3
OTRC0032	RA0159	191422.32	7650286.17	1494.11	-62.7	188.0	59	60	9.3	0.4
OTRC0032	RA0160	191422.32	7650286.17	1494.11	-62.7	188.0	60	61	10.5	0.4
OTRC0032	RA0161	191422.32	7650286.17	1494.11	-62.7	188.0	61	62	8.5	0.4
OTRC0032	RA0162	191422.32	7650286.17	1494.11	-62.7	188.0	62	63	13.0	0.1
OTRC0032	RA0163	191422.32	7650286.17	1494.11	-62.7	188.0	63	64	6.8	0.1
OTRC0032	RA0164	191422.32	7650286.17	1494.11	-62.7	188.0	64	65	9.3	0.1
OTRC0032	RA0165	191422.32	7650286.17	1494.11	-62.7	188.0	65	66	7.1	0.1
OTRC0032	RA0166	191422.32	7650286.17	1494.11	-62.7	188.0	66	67	10.4	0.2
OTRC0032	RA0167	191422.32	7650286.17	1494.11	-62.7	188.0	67	68	7.6	0.1



### "S" Bend Cross Section

Trench ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)	
OTRC0032	RA0168	191422.32	7650286.17	1494.11	-62.7	188.0	68	69	10.0	0.1	
	RA0169	191422.32	7650286.17	1494.11	-62.7	188.0	69	70	7.4	0.1	
	RA0170	191422.32	7650286.17	1494.11	-62.7	188.0	70	71	8.4	0.1	
	RA0171	191422.32	7650286.17	1494.11	-62.7	188.0	71	72	8.7	0.1	
	RA0172	191422.32	7650286.17	1494.11	-62.7	188.0	72	73	12.4	0.3	
	RA0173	191422.32	7650286.17	1494.11	-62.7	188.0	73	74	6.9	0.2	
	RA0174	191422.32	7650286.17	1494.11	-62.7	188.0	74	75	5.8	0.2	
	RA0175	191422.32	7650286.17	1494.11	-62.7	188.0	75	76	6.6	0.1	
	RA0176	191422.32	7650286.17	1494.11	-62.7	188.0	76	77	21.6	0.2	
	RA0177	191422.32	7650286.17	1494.11	-62.7	188.0	77	78	7.0	0.1	
LTR056	OTRC0033	RA0178	191422.09	7650304.38	1494.15	-60.2	189.0	0	1	2.0	0.7
	OTRC0033	RA0179	191422.09	7650304.38	1494.15	-60.2	189.0	1	2	1.5	0.2
	OTRC0033	RA0180	191422.09	7650304.38	1494.15	-60.2	189.0	2	3	2.3	0.2
	OTRC0033	RA0181	191422.09	7650304.38	1494.15	-60.2	189.0	3	4	3.8	0.1
	OTRC0033	RA0182	191422.09	7650304.38	1494.15	-60.2	189.0	4	5	1.8	0.2
	OTRC0033	RA0183	191422.09	7650304.38	1494.15	-60.2	189.0	5	6	1.6	0.2
	OTRC0033	RA0184	191422.09	7650304.38	1494.15	-60.2	189.0	6	7	1.6	0.1
	OTRC0033	RA0185	191422.09	7650304.38	1494.15	-60.2	189.0	7	8	0.9	0.1
	OTRC0033	RA0186	191422.09	7650304.38	1494.15	-60.2	189.0	8	9	1.1	0.1
	OTRC0033	RA0187	191422.09	7650304.38	1494.15	-60.2	189.0	9	10	1.1	0.2
	OTRC0033	RA0188	191422.09	7650304.38	1494.15	-60.2	189.0	10	11	1.7	0.2
	OTRC0033	RA0189	191422.09	7650304.38	1494.15	-60.2	189.0	11	12	3.8	0.2
	OTRC0033	RA0190	191422.09	7650304.38	1494.15	-60.2	189.0	12	13	7.2	0.2
	OTRC0033	RA0191	191422.09	7650304.38	1494.15	-60.2	189.0	13	14	5.8	1.7
	OTRC0033	RA0192	191422.09	7650304.38	1494.15	-60.2	189.0	14	15	15.4	4.4
	OTRC0033	RA0193	191422.09	7650304.38	1494.15	-60.2	189.0	15	16	12.4	24.4
	OTRC0033	RA0194	191422.09	7650304.38	1494.15	-60.2	189.0	16	17	5.7	29.2
	OTRC0033	RA0195	191422.09	7650304.38	1494.15	-60.2	189.0	17	18	6.6	37.5
	OTRC0033	RA0196	191422.09	7650304.38	1494.15	-60.2	189.0	18	19	4.6	44.3
	OTRC0033	RA0197	191422.09	7650304.38	1494.15	-60.2	189.0	19	20	4.0	41.9
	OTRC0033	RA0198	191422.09	7650304.38	1494.15	-60.2	189.0	20	21	6.2	35.4
	OTRC0033	RA0199	191422.09	7650304.38	1494.15	-60.2	189.0	21	22	4.1	40.7
	OTRC0033	RA0200	191422.09	7650304.38	1494.15	-60.2	189.0	22	23	4.6	46.3
	OTRC0033	RA0204	191422.09	7650304.38	1494.15	-60.2	189.0	23	24	12.2	29.2
	OTRC0033	RA0205	191422.09	7650304.38	1494.15	-60.2	189.0	24	25	9.1	22.2



### "S" Bend Cross Section

Trench ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
OTRC0033	RA0206	191422.09	7650304.38	1494.15	-60.2	189.0	25	26	9.1	22.5
OTRC0033	RA0207	191422.09	7650304.38	1494.15	-60.2	189.0	26	27	4.8	43.2
OTRC0033	RA0208	191422.09	7650304.38	1494.15	-60.2	189.0	27	28	5.3	47.5
OTRC0033	RA0209	191422.09	7650304.38	1494.15	-60.2	189.0	28	29	4.8	41.8
OTRC0033	RA0210	191422.09	7650304.38	1494.15	-60.2	189.0	29	30	4.5	48.8
OTRC0033	RA0211	191422.09	7650304.38	1494.15	-60.2	189.0	30	31	4.3	53.7
OTRC0033	RA0212	191422.09	7650304.38	1494.15	-60.2	189.0	31	32	7.5	39.2
OTRC0033	RA0213	191422.09	7650304.38	1494.15	-60.2	189.0	32	33	13.4	8.8
OTRC0033	RA0214	191422.09	7650304.38	1494.15	-60.2	189.0	33	34	19.6	4.8
OTRC0033	RA0215	191422.09	7650304.38	1494.15	-60.2	189.0	34	35	18.3	1.8
OTRC0033	RA0216	191422.09	7650304.38	1494.15	-60.2	189.0	35	36	17.2	15.0
OTRC0033	RA0217	191422.09	7650304.38	1494.15	-60.2	189.0	36	37	14.8	22.4
OTRC0033	RA0218	191422.09	7650304.38	1494.15	-60.2	189.0	37	38	14.0	26.7
OTRC0033	RA0219	191422.09	7650304.38	1494.15	-60.2	189.0	38	39	16.5	8.9
OTRC0033	RA0220	191422.09	7650304.38	1494.15	-60.2	189.0	39	40	14.5	1.4
OTRC0033	RA0221	191422.09	7650304.38	1494.15	-60.2	189.0	40	41	13.0	10.2
OTRC0033	RA0222	191422.09	7650304.38	1494.15	-60.2	189.0	41	42	17.4	0.4
OTRC0033	RA0223	191422.09	7650304.38	1494.15	-60.2	189.0	42	43	13.0	0.5
OTRC0033	RA0224	191422.09	7650304.38	1494.15	-60.2	189.0	43	44	12.7	0.4
OTRC0033	RA0225	191422.09	7650304.38	1494.15	-60.2	189.0	44	45	14.1	0.4
OTRC0033	RA0226	191422.09	7650304.38	1494.15	-60.2	189.0	45	46	11.8	2.9
OTRC0033	RA0227	191422.09	7650304.38	1494.15	-60.2	189.0	46	47	16.0	14.5
OTRC0033	RA0228	191422.09	7650304.38	1494.15	-60.2	189.0	47	48	15.8	8.2
OTRC0033	RA0229	191422.09	7650304.38	1494.15	-60.2	189.0	48	49	17.3	7.6
OTRC0033	RA0230	191422.09	7650304.38	1494.15	-60.2	189.0	49	50	15.2	11.7
OTRC0033	RA0231	191422.09	7650304.38	1494.15	-60.2	189.0	50	51	16.4	10.5
OTRC0033	RA0232	191422.09	7650304.38	1494.15	-60.2	189.0	51	52	16.2	4.7
OTRC0033	RA0233	191422.09	7650304.38	1494.15	-60.2	189.0	52	53	14.8	4.2
OTRC0033	RA0234	191422.09	7650304.38	1494.15	-60.2	189.0	53	54	14.4	13.5
OTRC0033	RA0235	191422.09	7650304.38	1494.15	-60.2	189.0	54	55	13.6	6.4
OTRC0033	RA0236	191422.09	7650304.38	1494.15	-60.2	189.0	55	56	18.9	13.4
OTRC0033	RA0237	191422.09	7650304.38	1494.15	-60.2	189.0	56	57	18.7	4.1
OTRC0033	RA0238	191422.09	7650304.38	1494.15	-60.2	189.0	57	58	4.8	3.4
OTRC0033	RA0239	191422.09	7650304.38	1494.15	-60.2	189.0	58	59	10.4	0.6
OTRC0033	RA0240	191422.09	7650304.38	1494.15	-60.2	189.0	59	60	10.4	0.3



### "S" Bend Cross Section

Trench ID	Hole ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
	OTRC0033	RA0241	191422.09	7650304.38	1494.15	-60.2	189.0	60	61	10.5	0.3
	OTRC0033	RA0242	191422.09	7650304.38	1494.15	-60.2	189.0	61	62	9.8	0.3
	OTRC0033	RA0243	191422.09	7650304.38	1494.15	-60.2	189.0	62	63	10.4	0.3
	OTRC0033	RA0244	191422.09	7650304.38	1494.15	-60.2	189.0	63	64	11.3	0.2
	OTRC0033	RA0245	191422.09	7650304.38	1494.15	-60.2	189.0	64	65	11.1	0.3
	OTRC0033	RA0246	191422.09	7650304.38	1494.15	-60.2	189.0	65	66	11.0	0.2
	OTRC0033	RA0247	191422.09	7650304.38	1494.15	-60.2	189.0	66	67	11.3	0.2
	OTRC0033	RA0248	191422.09	7650304.38	1494.15	-60.2	189.0	67	68	11.4	0.2
	OTRC0033	RA0249	191422.09	7650304.38	1494.15	-60.2	189.0	68	69	10.8	0.2
	OTRC0033	RA0250	191422.09	7650304.38	1494.15	-60.2	189.0	69	70	11.2	0.2
	OTRC0033	RA0254	191422.09	7650304.38	1494.15	-60.2	189.0	70	71	10.6	0.2
	OTRC0033	RA0255	191422.09	7650304.38	1494.15	-60.2	189.0	71	72	11.3	0.2
	OTRC0033	RA0256	191422.09	7650304.38	1494.15	-60.2	189.0	72	73	10.9	0.3
	OTRC0033	RA0257	191422.09	7650304.38	1494.15	-60.2	189.0	73	74	11.0	0.3
	OTRC0033	RA0258	191422.09	7650304.38	1494.15	-60.2	189.0	74	75	8.2	0.1
	OTRC0033	RA0259	191422.09	7650304.38	1494.15	-60.2	189.0	75	76	4.6	0.1
	OTRC0033	RA0260	191422.09	7650304.38	1494.15	-60.2	189.0	76	77	8.5	0.2
	OTRC0033	RA0261	191422.09	7650304.38	1494.15	-60.2	189.0	77	78	16.6	0.1
<b>LTR056</b>	OTRC0056	JA0785	175729.45	7646445.52	1484.58	-60.8	166.0	0	1	2.4	0.2
	OTRC0056	JA0786	175729.45	7646445.52	1484.58	-60.8	166.0	1	2	2.6	0.1
	OTRC0056	JA0787	175729.45	7646445.52	1484.58	-60.8	166.0	2	3	1.4	0.1
	OTRC0056	JA0788	175729.45	7646445.52	1484.58	-60.8	166.0	3	4	1.0	0.0
	OTRC0056	JA0789	175729.45	7646445.52	1484.58	-60.8	166.0	4	5	0.7	0.0
	OTRC0056	JA0790	175729.45	7646445.52	1484.58	-60.8	166.0	37	38	5.6	0.1
	OTRC0056	JA0791	175729.45	7646445.52	1484.58	-60.8	166.0	38	39	12.5	0.3
	OTRC0056	JA0792	175729.45	7646445.52	1484.58	-60.8	166.0	39	40	5.8	0.1
	OTRC0056	JA0793	175729.45	7646445.52	1484.58	-60.8	166.0	40	41	6.6	0.2
	OTRC0056	JA0794	175729.45	7646445.52	1484.58	-60.8	166.0	41	42	13.9	12.2
	OTRC0056	JA0795	175729.45	7646445.52	1484.58	-60.8	166.0	42	43	6.2	5.6
	OTRC0056	JA0796	175729.45	7646445.52	1484.58	-60.8	166.0	43	44	12.9	1.6
	OTRC0056	JA0797	175729.45	7646445.52	1484.58	-60.8	166.0	44	45	13.5	7.7
	OTRC0056	JA0798	175729.45	7646445.52	1484.58	-60.8	166.0	45	46	12.7	23.1
	OTRC0056	JA0799	175729.45	7646445.52	1484.58	-60.8	166.0	46	47	17.2	22.9
	OTRC0056	JA0800	175729.45	7646445.52	1484.58	-60.8	166.0	47	48	4.4	16.4
	OTRC0056	JA0804	175729.45	7646445.52	1484.58	-60.8	166.0	48	49	6.4	13.5



### "S" Bend Cross Section

Trench ID	Hole ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
OTRC0056	JA0805	175729.45	7646445.52	1484.58	-60.8	166.0	49	50	10.7	3.2	
OTRC0056	JA0806	175729.45	7646445.52	1484.58	-60.8	166.0	50	51	9.9	1.2	
OTRC0056	JA0807	175729.45	7646445.52	1484.58	-60.8	166.0	51	52	6.2	1.2	
OTRC0056	JA0808	175729.45	7646445.52	1484.58	-60.8	166.0	52	53	1.9	0.9	
OTRC0056	JA0809	175729.45	7646445.52	1484.58	-60.8	166.0	53	54	1.2	0.8	
OTRC0056	JA0810	175729.45	7646445.52	1484.58	-60.8	166.0	54	55	2.0	0.3	



## Ongorussengo Cross Section

Trench ID	Hole ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
LTR063	OTRC0080	TA0571	196620.63	7651483.10	1516.76	-59.0	163.0	0	1	3.1	0.4
	OTRC0080	TA0572	196620.63	7651483.10	1516.76	-59.0	163.0	1	2	2.7	0.1
	OTRC0080	TA0573	196620.63	7651483.10	1516.76	-59.0	163.0	2	3	2.7	0.2
	OTRC0080	TA0574	196620.63	7651483.10	1516.76	-59.0	163.0	3	4	4.9	0.1
	OTRC0080	TA0575	196620.63	7651483.10	1516.76	-59.0	163.0	4	5	3.7	0.1
	OTRC0080	TA0576	196620.63	7651483.10	1516.76	-59.0	163.0	5	6	5.4	0.1
	OTRC0080	TA0577	196620.63	7651483.10	1516.76	-59.0	163.0	6	7	5.2	0.1
	OTRC0080	TA0578	196620.63	7651483.10	1516.76	-59.0	163.0	7	8	4.5	0.1
	OTRC0080	TA0579	196620.63	7651483.10	1516.76	-59.0	163.0	8	9	10.6	0.2
	OTRC0080	TA0580	196620.63	7651483.10	1516.76	-59.0	163.0	9	10	7.5	0.1
	OTRC0080	TA0581	196620.63	7651483.10	1516.76	-59.0	163.0	10	11	8.8	0.1
	OTRC0080	TA0582	196620.63	7651483.10	1516.76	-59.0	163.0	11	12	4.3	0.1
	OTRC0080	TA0583	196620.63	7651483.10	1516.76	-59.0	163.0	12	13	2.8	0.2
	OTRC0080	TA0584	196620.63	7651483.10	1516.76	-59.0	163.0	13	14	4.5	0.1
	OTRC0080	TA0585	196620.63	7651483.10	1516.76	-59.0	163.0	14	15	9.6	2.4
	OTRC0080	TA0586	196620.63	7651483.10	1516.76	-59.0	163.0	15	16	9.4	30.3
	OTRC0080	TA0587	196620.63	7651483.10	1516.76	-59.0	163.0	16	17	10.7	25.0
	OTRC0080	TA0588	196620.63	7651483.10	1516.76	-59.0	163.0	17	18	14.8	18.6
	OTRC0080	TA0589	196620.63	7651483.10	1516.76	-59.0	163.0	18	19	20.1	15.3
	OTRC0080	TA0590	196620.63	7651483.10	1516.76	-59.0	163.0	19	20	10.9	28.8
	OTRC0080	TA0591	196620.63	7651483.10	1516.76	-59.0	163.0	20	21	7.6	32.4
	OTRC0080	TA0592	196620.63	7651483.10	1516.76	-59.0	163.0	21	22	3.7	46.3
	OTRC0080	TA0593	196620.63	7651483.10	1516.76	-59.0	163.0	22	23	3.5	48.7
	OTRC0080	TA0594	196620.63	7651483.10	1516.76	-59.0	163.0	23	24	30.0	10.4
	OTRC0080	TA0595	196620.63	7651483.10	1516.76	-59.0	163.0	24	25	10.0	2.3
	OTRC0080	TA0596	196620.63	7651483.10	1516.76	-59.0	163.0	25	26	2.0	0.5
	OTRC0080	TA0597	196620.63	7651483.10	1516.76	-59.0	163.0	26	27	4.0	0.8
	OTRC0080	TA0598	196620.63	7651483.10	1516.76	-59.0	163.0	27	28	4.4	0.3
	OTRC0080	TA0599	196620.63	7651483.10	1516.76	-59.0	163.0	28	29	7.3	0.5
	OTRC0080	TA0600	196620.63	7651483.10	1516.76	-59.0	163.0	29	30	8.2	0.3
LTR063	OTRC0090	TA0872	196615.69	7651494.14	1516.98	-59.5	165.0	0	1	2.1	0.4
	OTRC0090	TA0873	196615.69	7651494.14	1516.98	-59.5	165.0	1	2	1.7	2.6
	OTRC0090	TA0874	196615.69	7651494.14	1516.98	-59.5	165.0	2	3	1.4	1.2
	OTRC0090	TA0875	196615.69	7651494.14	1516.98	-59.5	165.0	3	4	1.3	0.9
	OTRC0090	TA0876	196615.69	7651494.14	1516.98	-59.5	165.0	4	5	1.7	0.6
	OTRC0090	TA0877	196615.69	7651494.14	1516.98	-59.5	165.0	5	6	1.6	0.1



### Ongorussengo Cross Section

Trench ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
OTRC0090	TA0878	196615.69	7651494.14	1516.98	-59.5	165.0	6	7	2.1	0.3
OTRC0090	TA0879	196615.69	7651494.14	1516.98	-59.5	165.0	7	8	2.9	0.2
OTRC0090	TA0880	196615.69	7651494.14	1516.98	-59.5	165.0	8	9	3.0	0.1
OTRC0090	TA0881	196615.69	7651494.14	1516.98	-59.5	165.0	9	10	3.1	0.1
OTRC0090	TA0882	196615.69	7651494.14	1516.98	-59.5	165.0	10	11	7.2	0.2
OTRC0090	TA0883	196615.69	7651494.14	1516.98	-59.5	165.0	11	12	2.9	0.1
OTRC0090	TA0884	196615.69	7651494.14	1516.98	-59.5	165.0	12	13	5.3	0.1
OTRC0090	TA0885	196615.69	7651494.14	1516.98	-59.5	165.0	13	14	3.1	0.1
OTRC0090	TA0886	196615.69	7651494.14	1516.98	-59.5	165.0	14	15	4.1	0.1
OTRC0090	TA0887	196615.69	7651494.14	1516.98	-59.5	165.0	15	16	5.7	0.4
OTRC0090	TA0888	196615.69	7651494.14	1516.98	-59.5	165.0	16	17	4.7	0.3
OTRC0090	TA0889	196615.69	7651494.14	1516.98	-59.5	165.0	17	18	6.6	0.1
OTRC0090	TA0890	196615.69	7651494.14	1516.98	-59.5	165.0	18	19	4.4	0.1
OTRC0090	TA0891	196615.69	7651494.14	1516.98	-59.5	165.0	19	20	4.1	0.1
OTRC0090	TA0892	196615.69	7651494.14	1516.98	-59.5	165.0	20	21	5.6	0.1
OTRC0090	TA0893	196615.69	7651494.14	1516.98	-59.5	165.0	21	22	5.2	0.1
OTRC0090	TA0894	196615.69	7651494.14	1516.98	-59.5	165.0	22	23	5.3	0.5
OTRC0090	TA0895	196615.69	7651494.14	1516.98	-59.5	165.0	23	24	7.1	0.3
OTRC0090	TA0896	196615.69	7651494.14	1516.98	-59.5	165.0	24	25	8.4	0.1
OTRC0090	TA0897	196615.69	7651494.14	1516.98	-59.5	165.0	25	26	3.6	0.1
OTRC0090	TA0898	196615.69	7651494.14	1516.98	-59.5	165.0	26	27	3.2	0.1
OTRC0090	TA0899	196615.69	7651494.14	1516.98	-59.5	165.0	27	28	3.4	0.1
OTRC0090	TA0900	196615.69	7651494.14	1516.98	-59.5	165.0	28	29	9.5	0.1
OTRC0090	TA0904	196615.69	7651494.14	1516.98	-59.5	165.0	29	30	12.9	9.0
OTRC0090	TA0905	196615.69	7651494.14	1516.98	-59.5	165.0	30	31	13.1	18.8
OTRC0090	TA0906	196615.69	7651494.14	1516.98	-59.5	165.0	31	32	9.8	32.9
OTRC0090	TA0907	196615.69	7651494.14	1516.98	-59.5	165.0	32	33	12.1	24.3
OTRC0090	TA0908	196615.69	7651494.14	1516.98	-59.5	165.0	33	34	15.9	18.1
OTRC0090	TA0909	196615.69	7651494.14	1516.98	-59.5	165.0	34	35	21.4	6.2
OTRC0090	TA0910	196615.69	7651494.14	1516.98	-59.5	165.0	35	36	10.0	24.2
OTRC0090	TA0911	196615.69	7651494.14	1516.98	-59.5	165.0	36	37	6.0	29.6
OTRC0090	TA0912	196615.69	7651494.14	1516.98	-59.5	165.0	37	38	7.3	29.5
OTRC0090	TA0913	196615.69	7651494.14	1516.98	-59.5	165.0	38	39	5.6	38.1
OTRC0090	TA0914	196615.69	7651494.14	1516.98	-59.5	165.0	39	40	6.3	1.0
OTRC0090	TA0915	196615.69	7651494.14	1516.98	-59.5	165.0	40	41	1.8	0.7
OTRC0090	TA0916	196615.69	7651494.14	1516.98	-59.5	165.0	41	42	1.4	0.4



## Ongorussengo Cross Section

Trench ID	Hole ID	Sample ID	Collar X	Collar Y	Collar Z	Dip	Azimuth	Depth from	Depth to	Fe (%)	Mn (%)
	OTRC0090	TA0917	196615.69	7651494.14	1516.98	-59.5	165.0	42	43	6.0	0.3
	OTRC0090	TA0918	196615.69	7651494.14	1516.98	-59.5	165.0	43	44	8.1	0.3
	OTRC0090	TA0919	196615.69	7651494.14	1516.98	-59.5	165.0	44	45	8.9	0.2
	OTRC0090	TA0920	196615.69	7651494.14	1516.98	-59.5	165.0	45	46	9.3	0.2
	OTRC0090	TA0921	196615.69	7651494.14	1516.98	-59.5	165.0	46	47	10.1	0.2
	OTRC0090	TA0922	196615.69	7651494.14	1516.98	-59.5	165.0	47	48	7.6	0.1
	OTRC0090	TA0923	196615.69	7651494.14	1516.98	-59.5	165.0	48	49	8.9	0.3
	OTRC0090	TA0924	196615.69	7651494.14	1516.98	-59.5	165.0	49	50	8.5	0.2
	OTRC0090	TA0925	196615.69	7651494.14	1516.98	-59.5	165.0	50	51	7.3	0.1
	OTRC0090	TA0926	196615.69	7651494.14	1516.98	-59.5	165.0	51	52	5.9	0.1
	OTRC0090	TA0927	196615.69	7651494.14	1516.98	-59.5	165.0	52	53	6.9	0.1
	OTRC0090	TA0928	196615.69	7651494.14	1516.98	-59.5	165.0	53	54	7.6	0.1
	OTRC0090	TA0929	196615.69	7651494.14	1516.98	-59.5	165.0	54	55	3.2	0.1
	OTRC0090	TA0930	196615.69	7651494.14	1516.98	-59.5	165.0	55	56	1.7	0.0
	OTRC0090	TA0931	196615.69	7651494.14	1516.98	-59.5	165.0	56	57	2.5	0.0
	OTRC0090	TA0932	196615.69	7651494.14	1516.98	-59.5	165.0	57	58	1.9	0.1
	OTRC0090	TA0933	196615.69	7651494.14	1516.98	-59.5	165.0	58	59	2.1	0.0
	OTRC0090	TA0934	196615.69	7651494.14	1516.98	-59.5	165.0	59	60	1.8	0.0