

# Kola Sylvinite Project Shaft Drilling underway and Multiple Thick Potash Seams Intersected in Drillhole ED\_05 at Dougou.

**Perth**, **Australia**, **10**<sup>th</sup> **November 2015** – **Elemental Minerals Ltd.** (ASX: ELM) ('Elemental' or 'the Company') is pleased to announce progress of the shaft test-work drillhole for the Kola Sylvinite Project (Kola) Bankable Feasibility (BFS), and the completion of the test-work drillhole for the Dougou Carnallite Project (Dougou) Pre-Feasibility Study (PFS). The Kola and Dougou potash deposits are within the Company's Kola Mining Lease and Sintoukola Exploration Permit, in the Republic of Congo (RoC).

# <u>Highlights</u>

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- The drilling programme is on schedule and provides additional data for the BFS for Kola and the PFS for Dougou. Both studies are being led by Hatch Goba (Hatch), a global leader in Potash mine design and construction.<sup>1</sup>
- Drillhole (EK\_48) at the Kola shaft site is well underway and will provide data for the shaft design for the BFS. The shaft site is central to the deposit (Fig. 3) to provide ease of access to the shallow high grade sylvinite<sup>2</sup> Ore Reserves (152 Mt grading 31.7% KCl)<sup>3</sup>.
  - At Dougou, drillhole ED\_05 was completed and intersected a total of 36 m of carnallitite<sup>4</sup> within the four main potash layers (Table 1). Mineralisation appears to be similar to that intersected in the other previously reported drillholes at Dougou.
- The Hangingwall Seam carnallitite in drillhole ED\_05 is 10.21 metres thick and is comprised of approximately 90% carnallite (Table 1 and Fig 1).
- The ED\_05 core is being sent to the laboratory for dissolution and geotechnical testwork to provide data for the solution mine design. The data should also support a resource update; the Measured and Indicated Mineral Resource currently stands at 1.1 billion tonnes grading 20.6% KCI (Table 4).

Drillhole EK\_48 at Kola commenced on November 1<sup>st</sup> at the shaft site and is being drilled for the acquistion of data for hydrological and geotechnical testwork in order to support the BFS shaft design. Drilling is being undertaken by Meridian Drilling Limited, and Hatch Goba are overseeing the testwork. The drillhole is currently at a depth of 160 metres. The shaft location is central to the deposit and will provide ease of access to the shallow high grade sylvinite ore reserve (152 Mt grading 31.7% KCI, Table 5) hosted by the Upper and Lower Seams. This hole is expected to be approximately 200 metres deep, ending at the top of the evaporite sequence. The shaft bottom is currently planned to be approximately 20 metres beyond this depth (220 metres) which is very shallow relative to potash mines globally.



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#### **ISSUED CAPITAL**

(As at -10 July 2015) 406.8m Ordinary Shares ASX Code: ELM



At Dougou, drillhole ED\_05 was completed at a total depth of 624.15 metres below surface. The drillhole is located at the centre of the deposit (Fig. 3) intersecting thick carnallitie of all four important layers; the Top Seam, Hanginwall Seam, Upper Seam and Lower Seam (Table 1.). Based on visual observation of mineralisation and downhole gamma data carnallite content is consistent with the narrow range encountered in the other drillholes at Dougou<sup>5</sup>. Whole core will be utilised for dissolution, geotechnical and metallurgical testwork. Samples will be sent to German solution mine experts DEEP Underground Engin. GmbH. Grade of the seams will be determined from gamma-ray logging supported by laboratory analyses. Table 3 shows the average thickness and grade of the seams at Dougou as determined for the January 2015 resource estimate. Drillhole ED\_05 should support a further significant increase in the Measured and Indicated Resource<sup>5</sup> which currently stands at 1.1 billion tonnes grading 20.6% KCI (Table 4) is scheduled to be updated during Q1 2016.

# Elemental's CEO John Sanders commented:

"The thick potash intersections in ED\_05 at Dougou are typical of this exceptionally simple and continuous deposit; a combined thickness of 36 metres of flat-lying high grade carnallitite. The commencement of the Kola shaft drillhole is on time, so we are on schedule for the delivery of the Kola BFS and Dougou PFS."

Potash Layer	Depth From (m)	Depth To (m)	Thickness (m)	Av. carnallite (% visual)
Top Seam	499.74	508.62	8.88	60-70
Hangingwall Seam	521.17	531.38	10.21	85-95
Upper Seam	588.02	595.05	7.03	75-85
Lower Seam	598.38	608.26	9.88	65-75

Table 1. Summary of carnallitite intersections in ED\_05. Carnallite content is based on inspection of core and conversion of gamma data. All intersections are true thickness as drillholes are vertical and layering is horizontal.

Drillhole ID	Easting (m)	Northing (m)	Collar elevation (masl)	final depth (m)
ED_05	792721	9529290	81.1	624.15

Table 2. Positional data for ED\_05. The hole was drilled vertically, as confirmed by downhole survey data.



# ED\_05 main potash seams



*Figure 1. Carnallite mineralisation in ED\_05. Carnallitite is orange-red mineral. Text refers to individual seams and sub-seams. Top Seam is comprised 6/IX to 8/IX, Hangingwall Seam is 3/IX, Upper Seam is 4/VIII, Lower Seam is 2/VIII and 3/VIII. Combined these have a thickness of 36 metres with an average carnallite content of between 70 and 80%.* For scale, individual core lengths are approximately 0.9 to 1.0 metres.



	Av thick (m)	Av. Grade (% KCI)	Av. carnallite (%)	Density
Top Seams	9.45	17.84	66	1.81
Hangingwall Seam	9.97	24.55	91	1.64
Upper Seam	8.92	20.69	79	1.73
Lower Seam	8.04	19.28	71	1.76

Table 3. Average thickness, grade and carnallite content of the important potash seams at Dougou, as determined from the January 9, 2015 Resource Estimate.

# About Elemental Minerals and their potash projects

Elemental Minerals Limited (ASX: ELM) is a mineral exploration and development company whose primary asset is a 97% interest In Sintoukola Potash S.A in the Republic of Congo, which holds the Dougou Project and Yangala sylvinite prospect within Sintoukola Exploration Permit of 1067 km<sup>2</sup> and the adjacent Kola Mining Lease<sup>6</sup>. These properties are easily accessed, being located approximately 80km to the north of the city of Pointe Noire. The Projects have the potential to be among the world's lowest-cost potash producers and their location near the Congolese coast of Central West Africa offers a transport cost advantage to key Brazilian and Asian fertilizer markets. The three projects are at varying stages of development; the Kola sylvinite Project is the Company's lead project.

Kola is a large sylvinite deposit, for which a Pre-Feasibility Study (PFS) defined Proven and Probable Reserves of 152 Mt of sylvinite ore<sup>3</sup> with an average grade of 31.7% KCl to be mined by conventional underground methods (at a depth of between 200 and 300 m), for a full scale production of 2 Mtpa Muriate of Potash (MoP) by 2024. A Mining License and ESIA approval for Kola were granted in August 2013<sup>6</sup>. The PFS was updated by the Phased Implementation Study<sup>7</sup> in October 2014, which reduced the initial capital requirement for the project significantly while maintaining low operating costs (Life of Mine operating cost of US\$91 per tonne MoP. The Bankable Feasibility Study (BFS) for Kola commenced August 2015 and is led by Hatch Goba (Hatch)<sup>1</sup> a world leader in potash mine design and construction. The BFS is anticipated to deliver further gains in the project economics.

The Dougou Deposit is 15 km southwest of Kola and is a very large carnallitite deposit with a Measured and Indicated Potash Mineral Resource of 1.1 billion tonnes grading 20.6% KCl (at a depth of between 400 and 600 metres) hosted by 35-40 metres of carnallitite within 4 flat-lying seams<sup>5</sup>. A Scoping Study was completed by ERCOSPLAN of Germany in February 2015 <sup>8</sup>. This Study indicates that a low capital cost, low operating cost (Life of Mine operating cost of US\$68 per tonne MoP), quick to production carnallite solution mine can be established at Dougou, taking advantage of the deposit quality and availability of cheap energy in the RoC. The Dougou PFS was initiated in August 2015 and will focus on an initial 400 ktpa MoP solution mining operation scaleable to a Phase 2 production of 800 ktpa and Phase 3 of 1.2 Mtpa MoP. The study is also led by Hatch who, together with their partners, have extensive experience in potash solution mine design.

The Yangala Sylvinite Prospect lies immediately west of Dougou. At Yangala, the Company has drilled two holes, both intersecting a flat-lying layer of over 4 to 4.5 metres thickness with a grade of between 57 and 60% KCl, a candidate for the world's highest grading potash seam <sup>9</sup>. An Exploration Target of 235 to 470 Mt grading 55 to 60 % KCl was announced on 27<sup>th</sup> January 2015 <sup>10</sup>.



Elemental's management team has a record of bringing quality African mineral projects to production. For more information contact us or visit <u>www.elementalminerals.com</u>.



Figure 2: Location of the Kola and Dougou Projects within the Sintoukola Permit in relation to available infrastructure



	Potash Mineral Resources		
Potash Deposit	Category	Million Tonnes	Grade KCI %
	Measured	264	33.75
Kola Sylvinite	Indicated	309	32.61
Kola Sylvinite	Inferred	475	32.48
	TOTAL	1,048	32.84
	Measured	295	17.83
Kola Carpallitite	Indicated	449	18.69
Kola Camaintite	Inferred	473	18.81
	TOTAL	1,217	18.53
	Measured	148	20.07
Dougou Carpallitite	Indicated	920	20.65
	Inferred	1,988	20.77
	TOTAL	3,056	20.70
	Measured	707	24.24
TOTAL MINERAL RESOURCES	Indicated	1,678	22.33
	Inferred	2,936	22.35
	TOTAL	5,321	22.59

#### Table 4. Elemental Minerals' potash Resources

**Notes:** The Kola Mineral resources were estimated by CSA Global of Perth, and reported under the JORC Code 2004. Elemental is not aware of any new information or data that materially affects the information included in the Announcement to the ASX on the 21<sup>th</sup> August titled "Elemental Announces Further Significant Mineral Resource Upgrade for Kola". In the case of the Mineral Resources the company can confirm the assumptions and the technical parameters underpinning the estimates continue to apply and have not materially changed. The form and context of the Competent Person's findings as presented in the announcement have not materially changed. The Dougou Mineral Resource was completed by ERCOSPLAN Ingenieurgesellschaft Geotechnik und Bergbau mbH ("ERCOSPLAN") and reported in accordance with the JORC 2012 code in the ASX announcement dated 9 February 2015 titled "Elemental Minerals Announces Large Mineral Resource Expansion and Upgrade for the Dougou Potash Deposit". Table entries are rounded to the appropriate significant figure. A conversion factor of 1.5837 was used to convert K<sub>2</sub>O to KCI. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.

Category	Million Tonnes	Grade KCl %
Proven	88	31.68
Probable	64	31.69
TOTAL	152	31.69

#### Table 5. Elemental Minerals' potash Ore Reserves

Notes: The Kola Sylvinite Mineral Reserves were determined by SRK Consulting and described in detail in the report titled 'NI 43-101 Technical Report for the Sintoukola Potash Project, Republic of Congo' dated 17 September 2012 and have not changed since then.





*Figure 3. Dougou deposit showing February 9, 2015 estimate classification (orange=Measured, Green=Indicated, Blue=Inferred). ED\_05 is shown located central to the deposit. Grey lines are seismic lines.* 

## Explanation of Terms and References.

1: Announcement dated 12 August 2015: Elemental Commences Bankable Feasibility Study for the Kola Sylvinite Project and the Pre-Feasibility Study for the Dougou Carnallite Project- Hatch appointed as lead consultant

2: Sylvinite: a rock comprising of the potash mineral sylvite (KCI) and other minerals such as halite (NaCI).

3: NI 43-101 Technical Report. PFS for the Kola Deposit, 17 September 2012 (SRK Consulting)

4: Carnallitite: a rock comprising of the potash mineral carnallite (KMgCl3·6H2O) and other minerals such as halite (NaCl).

5: Announcement dated 9 February 2015: Elemental Minerals Announces Large Mineral Resource Expansion and Upgrade for the Dougou Potash Deposit.

6: Announcement dated 15 August 2013: Elemental Minerals Announces Award of Mining License for the Kola Potash Project.



7: Announcement dated 23 October 2014: Results of the Kola Phased Implementation Update for the High grade Kola Sylvinite Project.

8: Announcement dated 17 February 2015: Results for the Dougou Potash Project Scoping Study

9: Announcement dated 20 October 2014: Elemental Minerals Announces results for the Phase 1B drilling programme in the Dougou-Yangala area (part of the Sintoukola Potash Project) in the Republic of Congo (RoC).

10 Announcement dated 27 January 2015: Elemental Minerals Announces an Exploration Target for the High Grade Sylvinite Hangingwall Seam at the Yangala Prospect.

### **Forward-Looking Statements**

This news release contains statements that are "forward-looking". Generally, the words "expect," "potential", "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature, forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this news release regarding the Company's business or proposed business, which are not historical facts, are "forward looking" statements that involve risks and uncertainties, such as resource estimates and statements that describe the Company's future plans, objectives or goals, including words to the effect that the Company or management expects a stated condition or result to occur. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements.

Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

## **Competent Person Statement:**

The Information in this report that relates to the ED\_05 Exploration Results is based on information compiled by Mr. Andrew Pedley, Elemental's Chief Geologist and a full-time employee of the Company. Mr. Pedley is a member of the South African Council for Natural Scientific Professions (SACNASP) being a registered Professional Natural Scientist in the field of Geological Science. Mr. Pedley has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). Mr. Pedley consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information relating to the Mineral Resources or Ore Reserves at Kola and Dougou, and the results of economic studies, is extracted from previous reports, as referred to herein, and available to view on the Company's website. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

# APPENDIX 1. Checklist of Assessment and Reporting Criteria in the format of Table 1 of the JORC code 2012 edition Section 1 - Sampling Techniques and Data

JORC Criteria	JORC Explanation	Commentary
SAMPLING TECHNIQUES	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The exploration results described in this announcement are an observation of thickness and an estimate of carnallite content, in whole core of PQ (85 mm diameter) and HQ (64mm diameter) size.</li> <li>ED_05 was logged using a gamma sonde to record data which provides additional support of the observations of carnallite content of the mineralised intervals and the depth sand thickness stated.</li> <li>Core recovery for the mineralised intervals was in excess of 98%.</li> <li>Observations were compared with those of the same seams in surrounding holes which have potassium analyses.</li> <li>The simple mineralogy (carnallite and halite comprising &gt;99%) supports robust estimation of carnallite content.</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).	• ED_05 was drilled by rotary Percussion through the 'cover sequence' then PQ (85 mm diameter) diamond coring within the evaporite host rocks to a depth of 570 metres, then HQ diameter (64 mm diameter) to the end of the hole (624.15m). Coring was by conventional diamond drilling methods with the use of tri-salt (K, Na, Mg) mud to maximise recovery.
DRILL SAMPLE RECOVERY	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material</li> </ul>	• Core recovery in ED_05 for the reported interval is over 98%. Core is full width and when checked against drillers data and downhole gamma logging data there are no sections missing.
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>The entire length of the borehole was logged in detail, from rotary chips in the 'cover sequence' and core in the evaporite. Logging is qualitative and supported by quantitative gamma data where required. All the reported potash intervals were recovered in full and logged in detail.</li> <li>The top and base of the potash seams is a distinct lithological boundary easily visible in core (Fig. 1 of the announcement) and on the historic logs; the change from potash to halite (or vice versa) is abrupt (&lt; than 50 millimeters).</li> <li>Downhole geophysical logging was completed by an independent contractor (Wireline Workshop of South Africa) to cross-reference observed mineralisation with gamma data. The gamma data also provides a check of depths of the reported mineralisation. Geophysical logging conducted included; gamma-ray, 3-arm caliper and borehole 'tilt'.</li> <li>Core was photographed to provide an additional reference.</li> </ul>

JORC Criteria	JORC Explanation	Commentary
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>	• Not relevant to this report as core has not been sampled.
QUALITY OF ASSAY DATA AND LABORATORY TESTS	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Not relevant to this report as core from ED_05 has not been analysed at a laboratory. The announcement only refers to thickness of mineralisation and carnallite content, as estimated from visual inspection of the core and from downhole gamma data.</li> </ul>
VERIFICATION OF SAMPLING AND ASSAYING	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Elemental's Chief Geologist, Mr. Andrew Pedley visited site to view the core from ED_05 and record the mineralised intervals and estimate the percent carnallite.</li> <li>Downhole gamma data for the hole was collected and reviewed by independent geophysical contractor Wireline Workshop of South Africa.</li> <li>Geological logging data for ED_05 and geophysical data is stored in a secure database. All data has been checked carefully for error and none found.</li> </ul>
LOCATION OF DATA POINTS	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>ED_05 was positioned using a handheld GPS with reference to surface features visible on LIDAR imagery. Easting, Northing and elevation are expected to be accurate to within 5 metres. The coordinate system used is UTM 32 S, WGS 84 datum. Positions are provided in Table 2 of the announcement.</li> <li>A downhole survey was conducted to establish borehole 'tilt' which is less than 1 degree from vertical for the full length of the hole.</li> </ul>

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al log for the main potash ED_05. Downhole gamma ogside (Eq. KCI)
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# Section 2 - Reporting of Exploration Results

JORC Criteria	JORC 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 license to operate in the area.</li> </ul>	<ul> <li>The Sintoukola exploration permit (permits de recherche) is owned 100% by Sintoukola Potash S.A. Elemental Minerals holds a 97% shareholding in Sintoukola Potash S.A.</li> <li>The permit was renewed in 2015 in accordance with Decree No. 2015-109 of 13 January 2015, gazetted on 22 Jan 2015, and is valid for 2 years from this date. The Dougou Deposit is entirely within this permit.</li> </ul>
EXPLORATION DONE BY OTHER PARTIES	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Potash exploration was carried out in the area in the1960's by Mines de Potasse d' Alsace S.A (MDPA), including drillholes K38, K52, K63, K64ter, K65. KOU5 and KOU6 were drilled by MDPA in 1988-89. Oil well Ngouali-1 was drilled by BP in 1992.</li> <li>Elemental is in the possession of a large database containing the historical data and this information has been reviewed in detail. The data is of a high standard.</li> <li>There are approximately 100 line kilometres of oil industry seismic data covering the Dougou Deposit for which Elemental has all SEG-Y data. Seismic data was acquired by oil exploration company's British Petroleum Congo and Chevron during the 1980's.</li> </ul>
GEOLOGY	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Dougou Deposit and the potash deposits of the region are within the Congo Basin, which is the central portion of a larger basin referred to as the Aptian salt basin of equatorial West Africa.</li> <li>A typical Stratigraphic column for the area is shown in Figure 2 of this Appendix. The Loeme Evaporite Formation at Dougou is comprised of a 400 to 500 metre thick Salt Member overlain by a 10 to 20 metre thick Anhydrite Member. Where complete or near complete, the Salt Member is comprised approximately (by volume); 30 percent carnallitite, 55 percent rock salt, 8-10 percent bischoftite/tachyhydrite and 6-7 percent insoluble material, anhydrite and lesser carbonates.</li> <li>10 primary evaporite cycles (I to X) are recognized (by historic and current workers) within the Salt Member and each between 20 and 150 meters in thickness, referred to as I to X (from lowermost to uppermost).</li> <li>The Dougou Deposit is within a broad area (10 km wide) of very little structural disturbance, bound only on its west side by the Yangala 'High', described in more detail in the Company's announcement dated 27/1/2015.</li> <li>Figure 2 of this Appendix shows the vertical distribution of the potash layers and other main lithologies of Cycles 8 and 9, which host the Dougou Deposit. From uppermost downwards these are the Top Seam (TS), Hangingwall Seam (HWS), Upper Seam (US), Lower Seam (LS). Within the Dougou deposit, seams are between 400 and 600 metres depth. The upper and lower contacts of the seams are abrupt.</li> <li>The carnallitite rock consists of an interlayering of Carnallite (KMgCl<sub>3</sub> 6 H<sub>2</sub>O) rich layers with lesser Halite (NaCl) and minor amounts (&lt;1%) of Anhydrite (CaSO<sub>4</sub>) and insoluble material. The HWS is unusually pure and homogenous with 85-95% carnallite throughout.</li> <li>Grade variation within each of the potash seams at Dougou is minimal and the seams appear to be continuous and with only moderate variation in thickness. Average seam thicknesses , grade and carnallite content is given in Tab</li></ul>

JORC Criteria	JORC Explanation	Commentary
GEOLOGY CONT'D		<ul> <li>Carnallite is a primary potash mineral, the carnallitite seams are unaffected and do not rely upon secondary processes for their formation. The seams are, the original sedimentary layers. This is</li> </ul>
		reflected in their continuity.

• In ED\_05 the interval between the TS and the overlying Anhydrite Member is 146 metres. Below the LS is an interval of 45 to 55 metres of halite below which Bischofitite of cycle 7 is present, well below the intended solution mining.



Figure 2. Typical stratigraphic column for the Dougou deposit, with the Top Seam being 4 to 8 of cycle 9, the Hangingwall Seam is 3 of cycle 9, the Upper Seam is 4 of cycle 8 and the Lower Seam is 2 and 3 of cycle 8

JORC Criteria	JORC Explanation	Commentary
DRILL HOLE INFORMATION	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>The position of ED_05 is provided in Table 3 of the announcement, along with final depth. The hole was drilled vertically and tilt does not exceed 1 degree at any depth within the hole.</li> <li>Table 1 of the announcement provides the downhole length of the potash seam intersections</li> </ul>
DATA AGGREGATION METHODS	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	• The reported intervals are average carnallite content for the full seam thickness. Without bias towards selected narrow intervals. Contacts with the underlying and overlying rocksalt are abrupt forming natural truncations for the intervals reported.
RELATIONSHIP BETWEEN MINERALISATION WIDTHS AND INTERCEPT LENGTHS	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>The layering of the potash intersections in ED_05 are a high angle (perpendicular or close to perpendicular) to the core axis, and the drillhole is vertical therefore the intersections repor6ted are considered to be of true width.</li> </ul>
DIAGRAMS	<ul> <li>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.</li> </ul>	• Figure 3 of the announcement provides a plan showing the location of the drillholes and seismic data in relation to the Dougou Deposit resource outlines. Figure 1 of this appendix shows the relative thickness and depth of the carnallitite layers in ED_05.
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.	• The mineralised intervals are reported without selectivity, carnallite content is estimated for the full thicknesses stated (Table 1 of the announcement).

JORC Criteria	JORC Explanation	Commentary
OTHER SUBSTANTIVE EXPLORATION DATA	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>All data that is meaningful to the announcement is presented. No deleterious or otherwise negative characteristics are evident.</li> </ul>
FURTHER WORK	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Downhole gamma data (in API units) will be converted to equivalent KCl, based on a relationship determined from a comparison of assay data with downhole data, for intervals of known diameter and fluid-fill density. In addition:</li> <li>All core for the seams is being prepared for freighting to DEEP. Underground Engin. GmbH of Germany who will carry out the required testwork. Remaining mineralised sample material will be submitted for analysis for potassium (along with Na, Ca, S, Mg) to add support to the equivalent KCl grades.</li> <li>Grade data will then be used to support a mineral resource update for Dougou, during Q1 2016.</li> </ul>