

ASX Release
17 November 2015

HIGHFIELD RESOURCES PROJECT OPTIMISATION DOUBLES MUGA POTASH MINE LIFE TO 47 YEARS

Highlights

- Muga Potash Project has been optimised to enhance operational efficiencies, sales and marketing activities, and life of mine in preparation to commence construction
- Life of mine increased from 24 years to **47 years at a production rate of 1.08m tonnes of K60 granular muriate of potash (MOP) per annum**
- Significant potential upside to life of mine remains from substantial untested Exploration Target (ASX Release 19 June 2015)
- Project NPV₁₀ increased from US\$1.42bn to US\$1.46bn, NPV₈ increased from US\$1.80bn to US\$2.04bn
- Proven and Probable Ore Reserves increase from 146m tonnes at an average grade of 12.7% K₂O to 253m tonnes with an average grade of 11.5%, an increase of **73%** from the DFS
- Average metallurgical recovery of 88% of KCl contained in sylvinite
- Phase 1 capex increases marginally to €267 million from €249 million (7%)
- Three parallel infrastructure drifts to be built upfront to ensure smoother ramp up and enhanced operational efficiency whilst allowing for future mine expansion
- Initial production targeted for October 2017
- Contract pricing secured for decline, site works, drying, compacting and glazing equipment are within budget and program (representing approximately 25% of direct third party costs ex contingency)
- Encouraging discussions held for sales of by-product salt into US markets likely to enhance project metrics

Spanish potash developer, Highfield Resources (ASX: HFR) ("Highfield" or "the Company") is pleased to announce significant progress in preparation for commencement of construction at its flagship Muga Potash Project (the "Project").

Highfield's Managing Director, Anthony Hall, commented:

"We have had a very productive six-month period, taking our Muga Mine from a DFS to a mine ready to be built and operated. Our initiatives have resulted in a doubling of mine life, as well as a mine which will be significantly better to operate long-term. We have factored in expansion to our Muga Mine design and also have further mine life potential that sits in our substantial Muga Project Exploration Target."

We are also delighted with the fact we now have contracts ready to be executed for over 25% of the direct costs of the mine. This pricing is below budget without any contingency which suggests we are well on track to delivering the mine within our capex estimate."

We believe that Muga's optimisation re-emphasises our steadfast commitment to constructing and operating a low-capex, high-margin potash mine as the first step in our target of becoming a significant global potash producer."

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ASX: HFR

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310.6 million shares
51.5 million performance shares
52.1 million options

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Overview of Project Optimisation Initiatives

Following the completion of the Definitive Feasibility Study (“DFS”) (refer ASX release 20 March 2015), Highfield has focussed on preparing the Muga Project for construction and, ultimately, production of potash. This work has further optimised the Project, with a focus on underground design and equipment selection to improve operational efficiencies. Initiatives and outcomes include:

- Altering the mine plan to include an additional sylvinitic seam (Capa A), resulting in an increased mine life from 24 years to 47 years. This new mine plan excludes any potential upside from the substantial Exploration Target (refer ASX release 19 June 2015);
- Electing to use a combination of continuous miners and road headers to increase productivity in production and infrastructure development;
- Increasing the number of main infrastructure galleries in the mine plan from one to three to reduce ramp up risk and increase likely operational efficiency;
- Increasing the size of the underground conveyor belt system to cater for an increase in underground tonnage and to enable better expansion options;
- Increasing the size of underground storage to enable more flexibility in smoothing grade profile to the processing plant;
- Increasing the size of the conveyor belt to surface in one decline to 1,500 tonnes per hour of material;
- Increasing the size and flexibility of the processing plant to deal with higher throughput of material;
- Altering mine and process plant design to deliver a constant 90k tonnes of granular K60 per month (1.08m tonnes per annum) for the balance of the revised 47 year mine life; and
- Factoring in potential mine expansion into design to allow seamless expansion of production in the future.

The optimisation initiatives have resulted in an increase in pre-production capex of approximately 7%, from €249.5m (€243.4m plus €6.1m escalation) to €267m. NPV₁₀ and NPV₈ have both increased due to the additional mine life to US\$1.46bn and US\$2.04bn respectively.

Resource Upgrade

Highfield’s independent competent persons, Consultores Independientes en Gestión de Recursos Naturales S.A (“CRN”), has calculated an upgraded Mineral Resource Estimate (“MRE”) which includes the results of geotechnical drill holes (refer ASX announcement dated 29 May 2015), and is an update of the MRE calculated by Agapito Associates, Inc. (“Agapito”) (refer ASX Release of 24 February 2015).

It is noted that the cutoff requirement used to calculate this Resource (and related Reserve) is an increase in comparison to the previous MRE from 24 February 2015, owing to the recognition that K₂O contained in carnallite is unlikely to be recoverable given the Company’s proposed ore treatment methods. The cutoff has been calculated in reference only to the K₂O contained in sylvinitic, ignoring any K₂O contained in carnallite. The cutoff previously used referred to total K₂O.

CRN has issued an upgraded JORC Code compliant Measured and Indicated Mineral Resource Estimate of 236.4m tonnes of sylvinitic at an average grade of 13.4% K₂O based on an 8.0% K₂O-in-sylvinitic cutoff grade at a minimum 1.5m bed true thickness (Table 1). The estimate also includes beds thinner than 1.5m where the grade-thickness product exceeds 12.0% K₂O-in-sylvinitic-m, thus satisfying the 8.0% K₂O-in-sylvinitic grade equivalency at 1.5m.

The Radius of Influence for each respective category of Resource has been adjusted to reflect a greater understanding of the orebody. The Radii used for calculation purposes are:

Measured Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 500m along strike and 250m across strike centred on an exploration core hole with assays, except where otherwise limited by geologic boundaries.

Indicated Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 1,500m along strike and 750m across strike centred on an exploration core hole with assays (excluding Resources included in the Measured category), except where otherwise limited by geologic boundaries.

Inferred Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 2,000m along strike and 1,000m centred on an exploration core hole with assays (excluding Resources included in the Measured and Indicated categories), except where otherwise limited by geologic boundaries.

Table 1: Muga JORC Mineral Resource Estimate (effective date 17 Nov 2015)

	K ₂ O (%)	MgO (%)	Na ₂ O (%)	Insolubles (%)	Average Bed Thickness (m)	Tonnes In-Place (Mt)
Measured	13.6	0.40	29.6	12.8	2.66	75.1
Indicated	13.3	0.34	29.4	12.3	2.50	149.4
TOTAL MEASURED & INDICATED	13.4	0.36	29.5	12.5	2.55	224.5
Inferred	13.8	0.38	29.7	12.0	2.59	39.2
TOTAL	13.5	0.36	29.5	12.4	2.56	263.7

Notes:

Measured and Indicated Resources are reported inclusive of Proven and Probable Reserves.

Resource Estimate does not include any out-of-bed dilution.

Resource cut-offs: (a) true thickness $\geq 1.5\text{m}$: grade cutoff $\geq 8.0\text{ K}_2\text{O-in-sylvinite}$, or (b) true thickness $< 1.5\text{m}$: grade-thickness cutoff $\geq 12.0\text{ K}_2\text{O-in-sylvinite-m}$.

Resource tonnes reduced by 5% for Measured and Indicated categories and 15% for Inferred category.

Radii of Influence are as follows

Measured Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 500m along strike and 250m across strike centred on an exploration core hole with assays, except where otherwise limited by geologic boundaries.

Indicated Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 1,500m along strike and 750m across strike centred on an exploration core hole with assays (excluding Resources included in the Measured category), except where otherwise limited by geologic boundaries.

Inferred Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 2,000m along strike and 1,000m centred on an exploration core hole with assays (excluding Resources included in the Measured and Indicated categories), except where otherwise limited by geologic boundaries.

The MRE includes 39.2m tonnes of Inferred Mineral Resource at an average grade of 13.8% K₂O based on the same thickness and grade cutoffs. Sylvinite mineralisation occurs in seven principal beds (in descending order from surface: P0, PA, PB, P1, P2, P3, and P4), ranging in depth from approximately 100m to more than 1,500m.

Although the project is at an advanced exploration stage, some ordinary degree of geologic uncertainty persists. Estimated tonnes in the resource are reduced by 5% for Measured and Indicated categories, and by 15% for Inferred category as an allowance for geologic uncertainty.

Reserve Upgrade

The Ore Reserve used for current mine design and consequent production profile is based upon the updated MRE discussed in this document (refer Table 1), as calculated by CRN.

In calculating the upgraded Ore Reserve, CRN has taken into account the following factors:

- Extraction ratios applicable to planned room and pillar mining techniques,
- Areas where mining is not deemed economically possible due to the thinness of sylvinite seams,
- Selectivity of mining equipment employed. This has resulted in a degree of dilution due to necessary mining of areas outside of the main potash seams being included in the Ore Reserve. This dilutionary material generally includes sylvinite at a grade lower than the cut-off grades used to calculate the Resources reported in this document
- A 5% reduction in tonnage due to account for unanticipated faults and geotechnical issues.

The updated Ore Reserve is shown below:

Table 2: Ore Reserve Summary

Proven Reserves		Probable Reserves		Proven and Probable Reserves	
Mt	K ₂ O (%)	Mt	K ₂ O (%)	Mt	K ₂ O (%)
81.6	11.7	172.1	11.4	253.7	11.5

Notes:

The JORC-compliant Measured and Indicated Resources reported in this document have formed the basis for the calculation of these Proven and Probable Reserves. Extraction ratios of an average 77% have been applied to the Measured and Indicated Resources reported in this document to calculate Proven and Probable Reserves. Dilutionary material of approximately 81m tonnes is included in the Reserves. This material has an average grade of 7.5% K₂O.

The current mining plan contemplates an initial mine life of 47 years as showing below

Table 3: Mining Summary

	Tonnes	%
Average per annum ROM	6,219,452	
Total Proven and Probable Ore	253,702,671	86%
Total Inferred Resources	40,430,326	14%
TOTAL ORE AND RESOURCES	294,132,997	100%
Average product per annum	1,022,029	
Total Granular MOP	48,035,356	

Mining

Similarly to the DFS, the principal mining horizons will be accessed via two straight line declines, approximately 2.5km and 2.6km in length respectively. The total cross sectional area of each decline is 35.7m², a slight increase from the DFS. The declines will access the same mining horizon at two different points. The eastern decline reaches the mineralised horizon at 440 metres below surface and the western decline approximately 452 metres below surface. It is anticipated that the decline construction will be completed by specialist Spanish contractors for which firm contract pricing has been received that is in line with the current cost plan for the mine.

Underground extraction will be via room and pillar mining using a combination of continuous miners and road headers to optimise extraction efficiency and selectivity in varying ore body heights. Additionally, continuous miners will be used for the ongoing mining development, including new transport drifts and main transport galleries. The change in machinery selected for underground mining is reflected in the higher capital cost for the underground elements of the mine.

The underground design and equipment sizing contemplates the delivery of an average of approximately 550,000 tonnes of ROM ore per month (6.6 million tonnes per annum) to the process plant. The ROM tonnages delivered to the process plant are variable over the life of mine and depend on location within the ore body taking into the account grade, mineralisation type and expected metallurgical performance of each panel being mined.

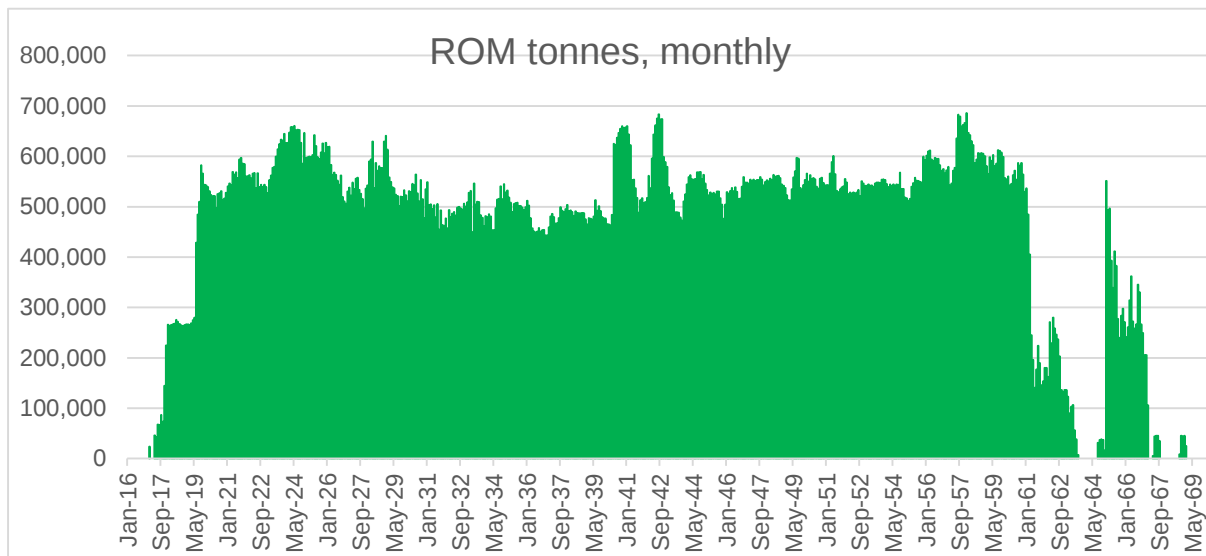


Figure 1: Monthly ROM Ore Delivered to Plant

In certain sections of the ore body, this means ROM tonnage delivered to the process plant will increase by up to 18% above the average, representing a peak of 650,000 tonnes per month (equivalent to an annualised 7.8 million tonnes per annum).

While ROM ore tonnages will vary, the mine plan has been designed to ensure the process plant will deliver a smoothed production profile of approximately 90,000 tonnes of granular K60 MOP product per month over the 47 year LOM.

To compensate for the internal variability within the ore body, the underground equipment sizing and selection has been based on a peak underground tonnage of 900,000 tonnes per month.

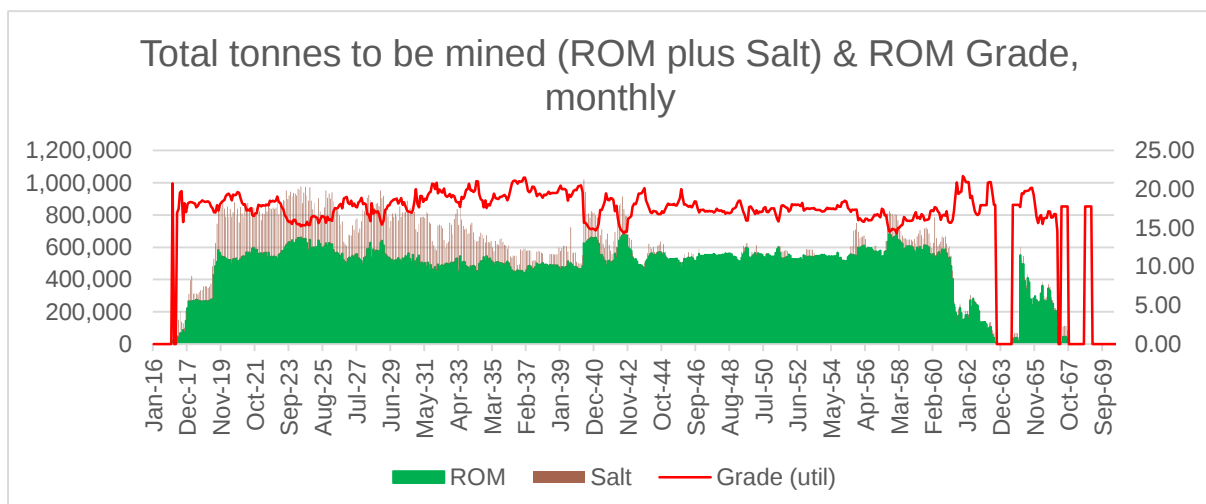


Figure 2: Monthly Tonnes of Material Moved Underground

The Company has elected to use a combination of continuous miners and road headers for its underground operations.

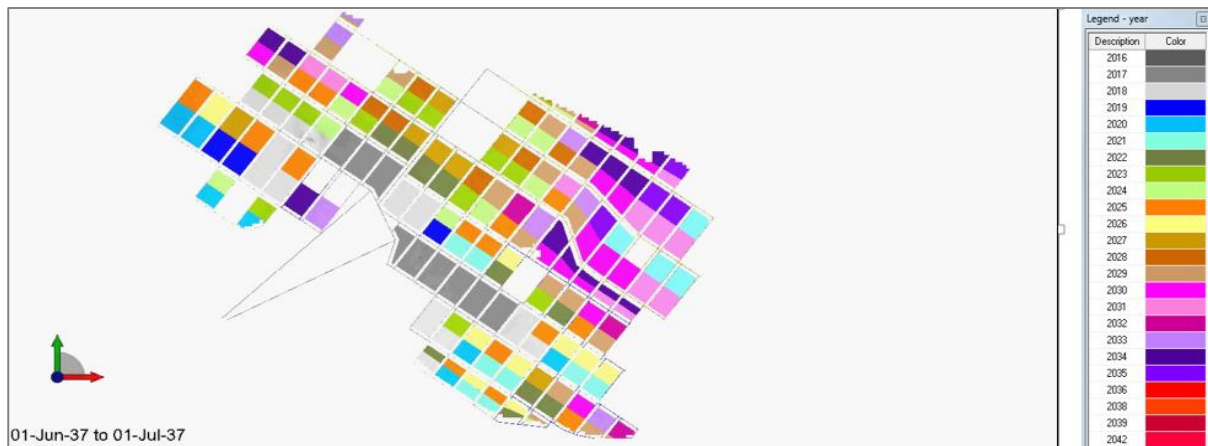


Figure 3: Mine panel configuration by east and west zones across the four principle mining seams

The Company intends to use paste backfilling underground, however, this will not be implemented until the commencement of Phase 2 construction at Muga. This will increase the LOM extraction ratios for each panel from 55.7% to approximately 80%. Benefits of backfilling include increased geotechnical stability of the mine, minimisation of surface subsidence risk and increased mineral extraction.

Metallurgy & Processing

Highfield has engaged two Canadian headquartered, globally recognised, independent specialist consultants to develop and supervise the completion of a series of detailed metallurgical test work programs. Both are world leaders in the processing of sylvinitic ores and have been involved in the design process for many plants globally.

In general, the ore exhibited a positive metallurgical response, with a clear advantage for the banded ores over the brecciated ores. The consultants confirmed the metallurgical properties of the ore at the Muga Project lends itself to a simple, proven, and technologically sound process flow sheet, which has been successfully implemented at many operations globally.

The characterisation of the ore is an important driver of overall metallurgical recovery. Highfield's ore characterisation takes into account the geochemical composition of the ore, noting in particular magnesium and insoluble contents, as well as to visual characterisation of the ore. This characterisation in turn drives a variable recovery rate depending on the section of the ore body being mined.

Both ore types show favourable reaction to standard flotation techniques associated with sylvinitic ores.

A variable recovery rate is calculated Resulting in recovery rates ranging between 90.6% for purely banded sylvinitic ore to 79% for purely brecciated ore. The weighted average recovery, based on ore texture definition of each block extracted in the mine plan, is 88.3% of utilisable KCl within the ore.

The Process Flow sheet remains unchanged from the DFS.

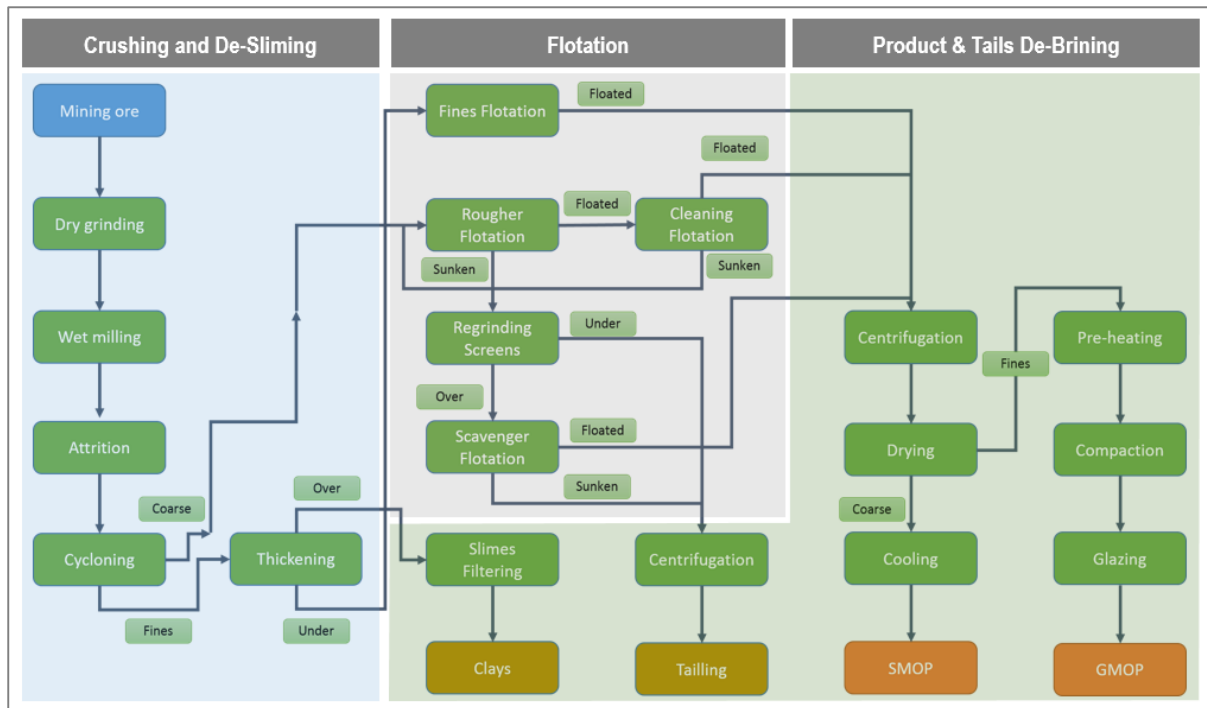


Figure 4: Process Flow Diagram

Utilities and Logistics

Utilities and logistics remain unchanged from the DFS.

The main energy source for the Project will be grid electricity and Highfield has secured 60MVA of capacity. It is estimated that less than 50MVA will be required at peak periods when in full production. This provides additional capacity for further mine expansion or by product credit salt processing.

Highfield has signed non-binding MOUs with the Port of Pasajes and the Port of Bilbao (refer ASX announcements 18 December 2014 and 20 January 2015). Both MOUs confirm the ability to ship significant quantities of product through these ports.

Highfield has elected to outsource its road transport logistics solution, which is reflected as an operating cost in the Opex estimates for the Project.

Capex

Capex estimates have been estimated in accordance with the AusIMM Cost Estimation Handbook 2012, based on first principles estimation techniques. Where possible, quoted prices for inputs have been used with all quotes obtained from reputable suppliers.

In addition, Highfield currently has contract pricing for site civil works, drying and compacting machines that represent approximately 25% of the cost plan for the mine. These contract prices are within cost plan estimates suggesting the current construction cost plan is likely to be achieved.

Capex is deployed over two phases. The first, pre-production phase is estimated to be €267 million including 5% contingency for construction costs and an additional 10% contingency for equipment related costs. This will allow the development of a mine capable of producing 544,000 tonnes per annum of K60 muriate of potash.

The design basis for the estimate includes the construction of two declines into the mining horizon, flotation and compacting capacity the ROM processing. In addition, it includes drying capacity for up to

1.1Mtpa of MOP. It also includes all surface and mine infrastructure including product storage, access roads, electricity connection, gas supply, water and communication.

Table 4: Summary of Pre-Production Capital Estimate

Pre-Production Capex Estimate Summary

<u>Component</u>	Euros (m)
Underground Installations	68,977,011
Above Ground Civil Works	26,811,698
Process Plant	33,023,554
Storage and Conveyors	19,925,399
Buildings	5,479,400
Instrumentation and Control	1,520,964
Plant Equipment	45,599,973
Utilities	16,064,189
Indirect Costs	33,769,302
Sub-Total	251,171,491
Construction Contingency	10,278,576
Engineering Contingency	1,000,000
Equipment Contingency	4,559,997
TOTAL	267,010,064

Phase 2 capex corresponds with the expansion of the underground mine and sections of the aboveground facilities to increase mining production to deliver the requisite ROM ore to the process facilities to produce an average of 1.08 million tonnes of K60 MOP product per annum. The estimates also include the requisite expansions of capacity at the process plant including new buildings, flotation circuit and compaction capacity.

Table 5: Summary of Phase 2 Capital Estimate

Phase 2 - Capex Estimate Summary

Component	Euros (m)
Underground Installations	36,885,915
Above Ground Civil Works	5,984,000
Process Plant	35,134,260
Storage and Conveyors	4,983,646
Buildings	7,065,000
Instrumentation and Control	1,520,964
Plant Equipment	40,081,173
Utilities	595,000
Indirect Costs	4,625,664
Sub-Total	136,875,622
Construction Contingency	4,839,722
Engineering Contingency	-
Equipment Contingency	4,008,117
TOTAL	145,723,461

Opex

In general, opex has been estimated on a € / tonne of ROM basis and converted to a € / tonne of granular MOP product basis assuming production of 1.08 million tonnes per annum of saleable granular K60 product.

Each of the mining, processing and transport costs have been built up from first principles utilising quoted prices where possible.

Relative to the DFS, the primary change has been an increase in the mining cost per tonne of product from €35/tonne of MOP to €55/tonne of MOP. This is primarily due to an increase in the movement of waste material and dilution due to the use of continuous miners, which are less selective at the mine face than road headers. This has been somewhat offset by the increased operating efficiency of these machines.

The Company has included general and administrative costs of a flat €7.50 / tonne of granular K60 product produced which benchmarks well against major global potash producers.

Sustaining capex has been applied at a flat €5 per tonne of MOP product produced. It should be noted that ongoing mine development and maintenance has been included in opex.

Depreciation has been applied assuming a generic useful life of 20 years, representing 5% per annum of total capex and ongoing of additional expansion or sustaining capex expended at the Project.

A €5/tonne contingency has been added to mining, processing and logistics' opex estimates.

A high level summary on a cost per tonne of granular K60 product is presented below.

Table 6: Summary of Operating Cost Estimate

Operating Cost Summary - Per tonne MOP	
Components	Euros / tonne of MOP
C1 Costs	
- Mining	55.12
- Processing	45.06
- Transport	17.43
Sub Total	117.61
- G & A	7.50
- Sustaining Capital	5.00
Total C1 Costs	130.11
C2 Costs	
- Depreciation	19.95
- C1 Costs	130.11
Total C2 Costs	150.06
C3 Costs	
- Royalties	0.00
- C2 Costs	150.06
Total C3 Costs	150.06

Financial Analysis

The optimisation has produced robust financial metrics including a post-tax, unlevered internal rate of return ("IRR") of 38.9% and a net present value ("NPV") with a discount rate of 8% of US\$2.06 billion.

The Company has run sensitivity analysis on a variety of Project parameters to ascertain any areas of increased risk and sensitivity to the projected returns. This analysis indicates the projected returns for the Project are most sensitive to changes in the received potash price.

Due to this Study being an update of the previously released DFS (see ASX release dated 30 March 2015), metrics for financial modelling purposes independent of those directly related to the project have been kept constant to allow a direct comparison.

The Company ran five scenarios assuming a parallel shift in received potash prices ranging from a fall of 25% (equivalent to 2017 FOB Vancouver of US\$236.25/tonne in real terms) to an increase of 25% in received price (equivalent to 2017 FOB Vancouver of US\$393.75/tonne in real terms). This analysis shows that even in the downside scenario, the Project still delivers a post-tax NPV₈ of US\$652.3 million.

Table 7: NPV Sensitivity to Potash Price and Discount Rate

NPV Sensitivity - Potash Price and Discount Rate - US\$ millions					
Discount Rate	Potash Price Sensitivity (Parallel Shift in Prices)				
	Potash Price Sensitivity	-25%	-10%	0%	25%
	2017 FOB Vancouver (	236.25	283.50	315.00	346.50
	5%	1,328.9	2,714.3	3,637.9	4,561.5
	8%	655.5	1,484.1	2,036.5	2,588.9
	10%	415.5	1,042.4	1,460.3	1,878.3
	12%	259.5	753.0	1,082.0	1,410.9

Changes to opex showed higher levels of sensitivity to the underlying Project financial returns relative to capex and, therefore, the Company also includes a sensitivity analysis of post-tax NPV to changes in opex ranging from a fall of 25% to a rise of 25% in underlying cost.

Table 8: NPV Sensitivity to Opex and Discount Rate

NPV Sensitivity - Opex and Discount Rate - US\$ millions					
Discount Rate	OPEX Sensitivity				
	Opex Sensitivity	-25%	-10%	0%	25%
	C3 Cost US\$/t MOP	112.55	135.05	150.06	165.07
	5%	4,623.3	4,032.1	3,637.9	3,243.7
	8%	2,630.3	2,274.0	2,036.5	1,799.0
	10%	1,911.5	1,640.8	1,460.3	1,279.9
	12%	1,438.2	1,224.5	1,082.0	939.5

Finally, given the recent depreciation of the Euro relative to the US dollar, the Company has included a sensitivity analysis for the NPV impact of exchange rate fluctuations ranging from 0.80 through to 1.10 on a USD to Euro basis.

Table 9: NPV Sensitivity to Exchange Rate and Discount Rate

NPV Sensitivity - Exchange Rate and Discount Rate - US\$ millions					
Discount Rate	Exchange Rate (USD:EUR)				
	Exchange Rate Sensitivity	0.800	0.875	0.950	1.025
	5%	3,041.6	3,365.3	3,637.9	3,870.6
	8%	1,653.7	1,861.5	2,036.5	2,185.9
	10%	1,155.6	1,321.0	1,460.3	1,579.3
	12%	829.3	966.5	1,082.0	1,180.5

Project Timeline

The finality of detailed engineering by April 2016 is the main item that sits on the critical path to achieve the target of initial production in October 2017. The Company believes it is on track to complete detailed engineering within this timeline.

Initial site works to enable decline construction are targeted to commence in February 2016 post the receipt of the environmental determination.

The current timeline sees initial production in October 2017 with full production commencing early in 2019 at the rate of 90k tonnes per month or 1.08m tonnes per annum of K60 granular potash.

Construction Contracting

The Company received nine tenders for decline construction works. It has two preferred contractors ready to commence construction activities. Site civil work contracts are ready to be executed. The Company's preferred engineer for the compaction, drying and glazing plant has commenced detailed engineering under a commitment by the Company to acquire all the equipment post the finality of the engineering.

These direct works represent over 25% of the Company's estimated capital expenditure budget. Importantly the three works packages are within budget exclusive of the contingency.

By Product Credits

The Company has been encouraged by positive discussions with substantial US-based organisations that market salt. There is currently a belief that additional earnings may be derived from salt sales to international markets. These earnings are not included in the base case financial metrics for the Project.

Competent Persons' Statement

This ASX release was prepared by Mr. Anthony Hall, Managing Director of Highfield Resources. The information in this release that relates to Ore Reserves, Mineral Resources, Exploration Results and Exploration Targets is based on information prepared by Mr. José Antonio Zuazo Osinaga, Technical Director of CRN, S.A.; Mr. Jesús Fernández Carrasco, Managing Director of CRN, S.A. and Mr Manuel Jesus Gonzalez Roldan, Geologist of CRN, S.A. Mr. José Antonio Zuazo and Mr. Jesús Fernández, are licensed professional geologists in Spain, and are registered members of the European Federation of Geologists, an accredited organisation to which the Competent Person (CP) under JORC Code Reporting Standards must belong in order to report Exploration Results, Mineral Resources, Ore Reserves or Exploration Targets through the ASX. Mr. José Antonio Zuazo-Osinaga has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a CP as defined in the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves

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About Highfield Resources

Highfield Resources is an ASX-listed potash company with five 100%-owned projects located in Spain.

Highfield's Muga, Vipasca, Pintano, Izaga and Sierra del Perdón potash projects are located in the Ebro potash producing basin in Northern Spain covering a project area of more than 550km². The Sierra del Perdón project includes two former operating potash mines.

The Company has completed a Definitive Feasibility Study for its flagship Muga Project in March 2015, which was optimised in November 2015 to enhance operational efficiencies, sales and marketing activities and the life of mine. Highfield expects to receive a positive environmental in February 2016 to enable it commence construction of the Mine.

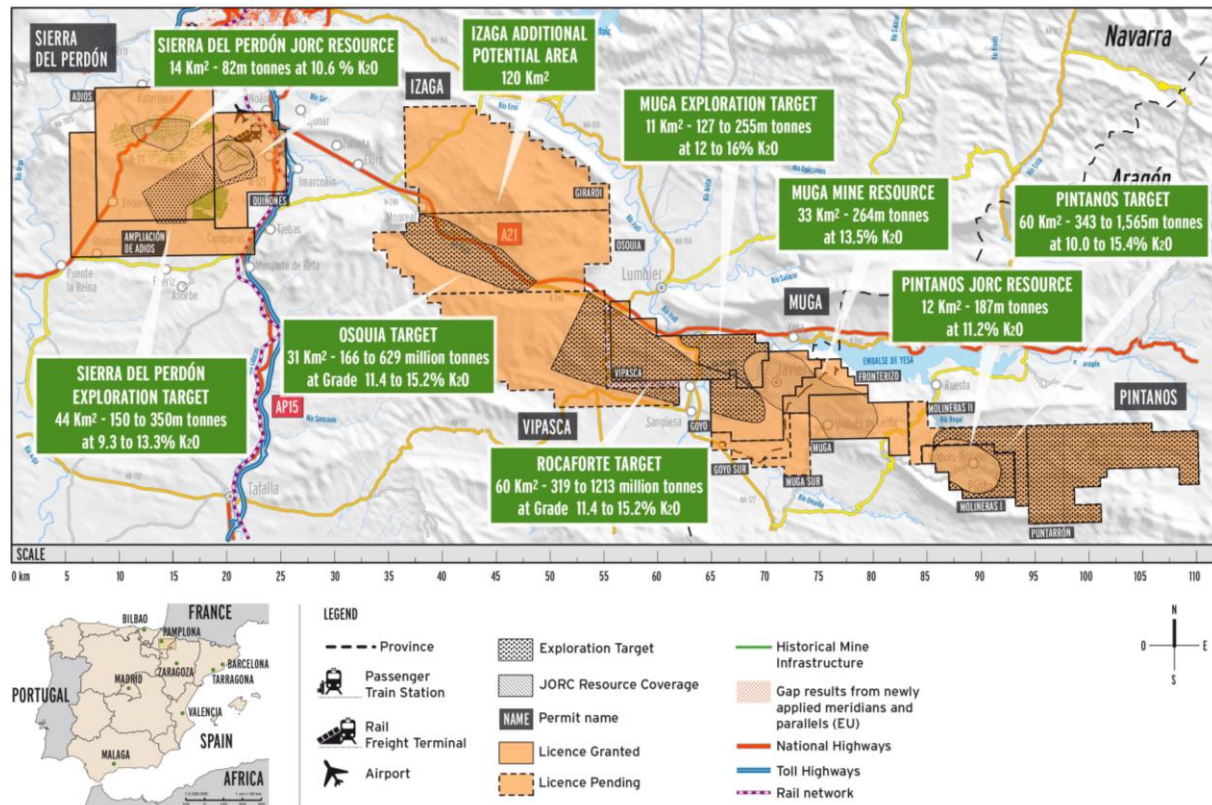


Figure 5: Location of Highfield's Muga, Vipasca, Pintano, Izaga and Sierra del Perdón Projects in Northern Spain

Appendix

Explanatory Notes to the Exploration Results for the Muga-Vipasca Project

Property Description

The project area is located in the northern portion of Spain within the Ebro Basin and is situated within the Navarra and Aragón provinces of Spain. The project area is divided into two sub-basins, Javier Basin (defined here by the Muga and Vipasca leases) and the Pintano Basin, which are separated by an elevated saddle area. The Muga-Vipasca area occupies the western extent of the property, while the Los Pintanos area extends to the east.

Tenure and Surface Rights

Spanish mining permits are split into three categories: Exploration Permit (PE), Investigation Permit (PI), and Mining Concession. A PE is for desktop studies and lasts for a period of 1 year (it may be rolled over once). A PI is necessary for drilling, allows for the sinking of shafts and driving of declines and lasts for a period of 3 years (it may also be rolled over for multiple 3-year periods). For a PI to be granted, an environmental review must be completed by the relevant government. A Mining Concession is for mineral extraction and lasts for periods of 30 years (it may be rolled over two times).

In addition to the above, if a permit sits in two provinces, it must be formally issued by the Central Government in Madrid under Article 71.3 of the Spanish Mining Code.

The Muga-Vipasca property comprises four main permits and two extension permits (Figure 2): Goyo, Fronterizo, Muga, and Vipasca. Goyo and Muga are granted PIs in Navarra. Fronterizo straddles the Navarra and Aragón border and was granted 05 February 2014. Vipasca was filed at the end of 2013, and was granted on 11 December 2014 by the province of Navarra. The Goyo Sur PI and Muga Sur PI are new applications and are pending. The CPs have reviewed the mineral tenure from documents provided by Highfield Resources (Highfield) (the "Company") including permitting requirements, but have not independently verified the permitting status, legal status, ownership of the project area, underlying property agreements or permits. Highfield is relied upon by the CPs for tenure status.

On 11 December 2014 Geoalcali lodged its mining concession application for the Muga Potash Mine with the provinces of Aragon and Navarra, and Spain's Central Government in Madrid. The application included an Environmental Assessment (EIA) and Mineral Extraction Plan.

Geology

The Upper Eocene potash deposits occur in the sub-basins of Navarra and Aragón provinces within the larger Ebro Basin (Figure A-1). The Navarrese sub-basin includes the Muga-Vipasca (Javier) and adjoining Pintano deposits. The first deposits in the region, occurring at the end of the Cretaceous period, were characterised by a regressive period with reddish continental deposits. The Eocene is marked by the beginning of tectonic compression, causing formation of subsiding basins parallel to the Pyrenees Mountains with emersion and erosion in some parts.

The different basins are separated by orogenic events developing in the north and south as turbidite basin carbonate platforms. Towards the end of the Eocene epoch, the sedimentation axis migrated south to the Jaca-Pamplona Basin, on which the Oligocene materials were deposited. The pre-evaporitic basin sedimentation occurs in a context of continuous tectonic compression during the Eocene and Oligocene epochs, as synsedimentary tectonics of the end of the orogeny, with pronounced sediment influx. The influence of the turbidites towards the end of the Eocene epoch in the Bartoniense series, are sourced from the east initially into the Pintano Basin and contained by the Flexura de Ruesta and then from the northwest into the Basin as the Belsue Formation, indicative of continued subsidence.

This potash deposit contains a 100-metre (m)-thick Upper Eocene succession of alternating claystone and evaporites (anhydrite, halite, sylvite and carnallite). The evaporites accumulated in the elongated basin at the southern foreland of the Pyrenean range (Busson and Schreiber 1997). The evaporites overlie marine deposits

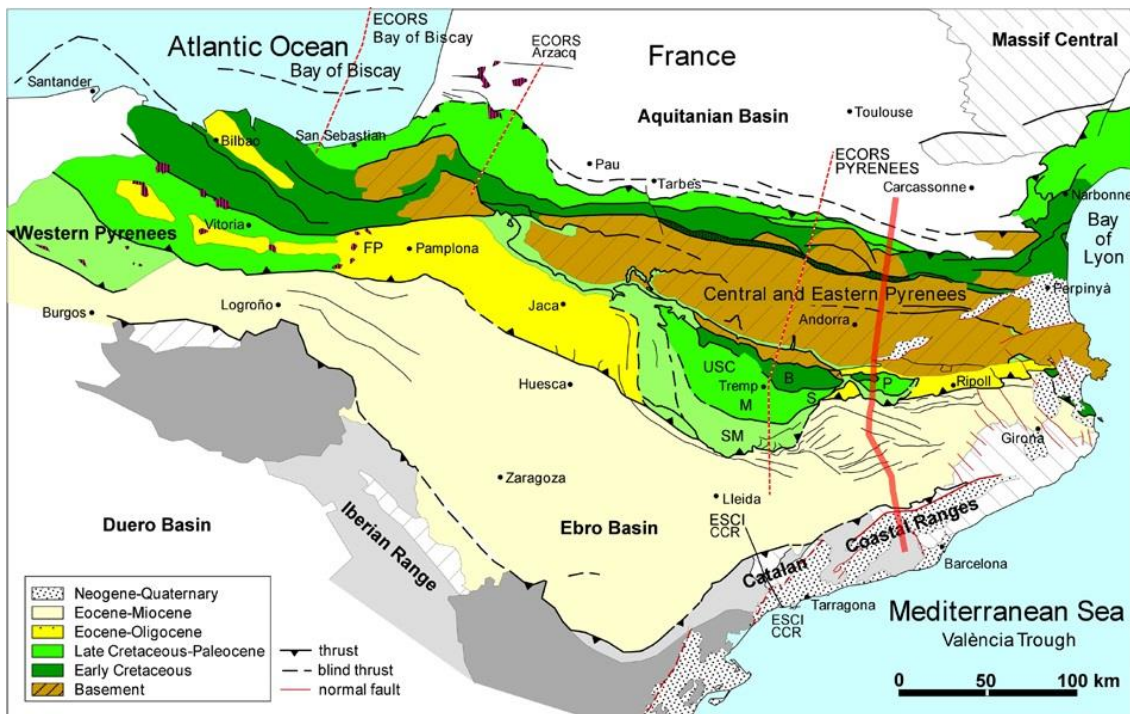


Figure A-1. Regional Geology of the Ebro and Jaca-Pamplona Basins

(from University of Michigan 2004)

and conclude in a transitional marine to non-marine environment with terrigenous influence. Open marine conditions existed in the Eocene-Oligocene epochs progressing to a more restricted environment dominated by evaporation and the deposition of marl, gypsum, halite, and potassium minerals. Later, tectonism and resulting salt deformations formed broad anticlines, synclines and overturned beds, which created outcrops of the evaporite sequence. The Basin depocenter originated in the west forming against the down-dropping Javier-Undues Syncline. In this area, the salts are thick and additional lower, less continuous beds developed in addition to a substantial thickness of P0, the uppermost potash mineralised bed. To the east, a broad basement high formed resulted in poorly developed or missing lower salt beds; the potash package is more compact and some beds are missing, particularly near the Basin edges. Basin edge influences include sediment influx, dark clays and light-coloured sand as well as soft sediment deformation and salt-veining which resulted from continued uplift and steepening beds. Basement-related faulting as well as structural influences at the Basin edge have resulted in repeated (or overturned) and thickened mineralised beds.

Two fault systems dominate and bound the Javier Basin, to the north by the extension of the thrusting Loiti Fault and to the south by the Magdalena Fault, both resulting in the cropping out of the evaporite units (Figure A-2). The Basin axis is defined by the Javier-Undues Syncline. To the east, the Basin climbs to the Flexura de Ruesta, a northwest-southeast offset block contemporaneous with evaporite deformation that resulted in a higher saddle area between the Javier-Vipasca and Pintano sub-basins. Approximately vertical faults parallel to the west of the Flexura de Ruesta have been defined by two-dimensional (2D) seismic surveys (Empresa Nacional Adaro Investigaciones Mineras [e.n. adaro] 1988–1991). Basin continuity to the west-northwest into the Vipasca PI has not been well-defined by drilling programs or seismic surveys. Surface expression shows the evaporite outcrop as offset approximate to the Aragón River but field investigation has shown an overthrust of much younger rocks at a lower angle than suggested by the offset. Two exploration holes are planned for Vipasca in FY2016

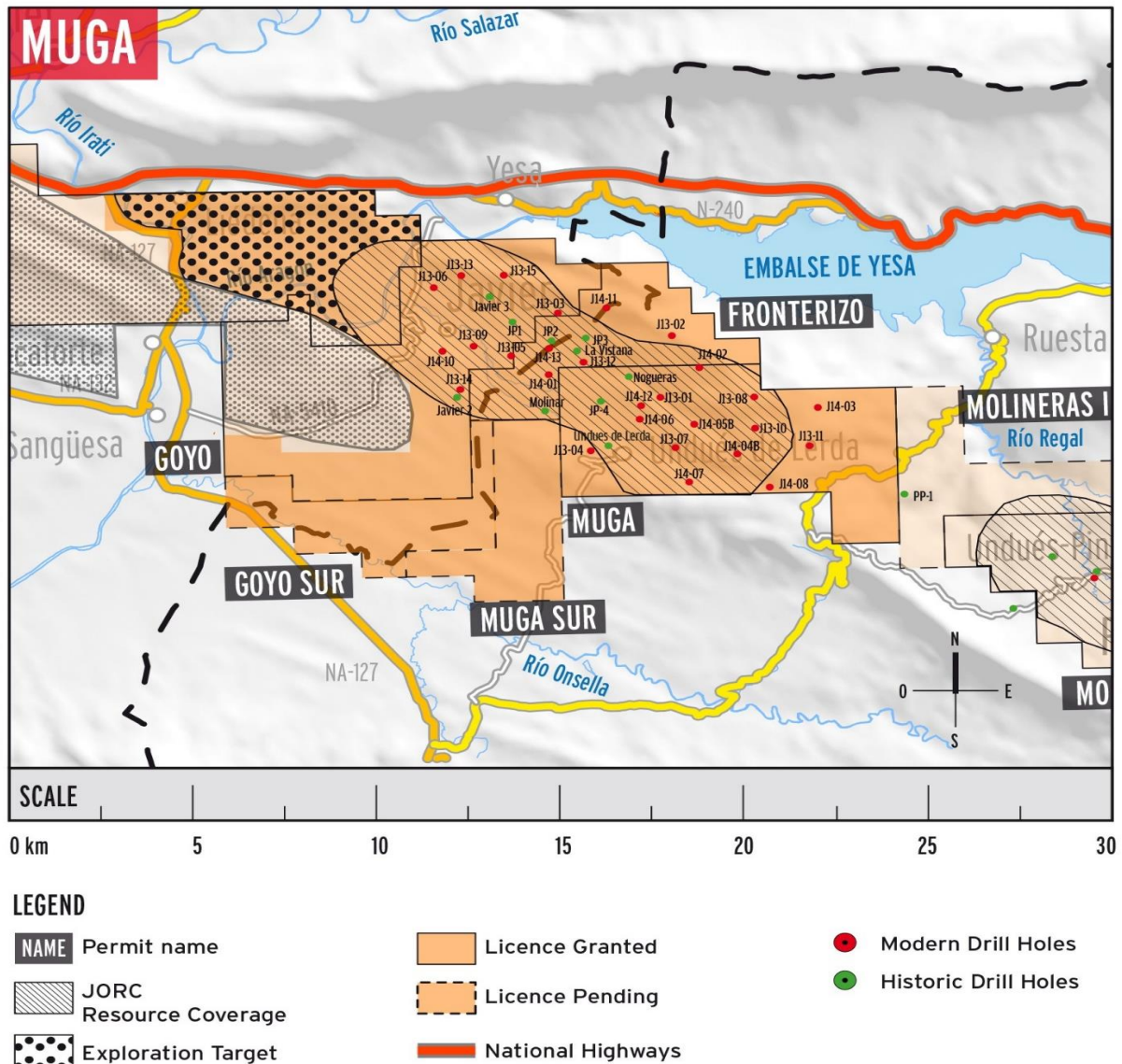


Figure A-2. Muga-Vipasca Project Permit Boundaries and Drill Hole Locations

The depositional environment is that of a restricted marine basin, influenced by eustasy, sea floor subsidence, and/or uplift and sediment input. It is suggested that the Basin is a combination of reflux and drawdown. Reflux represents a basin isolated from open marine conditions thereby characterised by restricted inflow, increased density, and increased salinity. Drawdown is simple evaporation in an isolated basin resulting in brine concentration and precipitation, consistent with the classic “bulls-eye” model (Garrett 1996). In this case, the Basin is further influenced by erosion at the Basin edges due to contemporaneous and post-depositional uplift resulting in localised shallowing and sediment influx (Ortiz and Cabo 1981).

In the classic “bulls-eye” model, a basin that is cut off from open marine conditions will experience drawdown by evaporation in an arid to semi-arid environment. In the absence of sediment influx, precipitation will proceed from limestone to dolomite to gypsum and anhydrite to halite. Depending on the composition and influences of the brine at that time, the remaining potassium, magnesium, sulfates, and chlorides will progress from potassium and magnesium sulfates to sylvite and then carnallite. It is proposed herein that the formation of carnallite and sylvite be described as primary and secondary, respectively.

Potash is used to describe any number of potassium salts. By and large, the predominant economic potash is sylvite: potassium chloride (KCl) usually occurring mixed with halite to form the rock sylvinite which may have a potassium oxide (K_2O) content of up to 63%. Carnallite, a potassium magnesium chloride ($KCl \cdot MgCl_2 \cdot 6H_2O$) is also abundant, but has K_2O content only as high as a theoretical 17%. “Carnallite” is used to refer to the mineral and the rock interchangeably, although “carnallitite” is the more correct terminology for the carnallite and halite mixture. Besides being a source of lower grade potassium, carnallite involves a more complex production process, so it is less economically attractive than is sylvite.

The regional stratigraphy is dominated by open and restricted marine conditions (Figure A-3). Evaporitic sedimentation (Guendulain Formation) directly overlies the fine marine offshore sediments (Pamplona Marls) (Ortiz and Cabo 1981; Ortiz et al. 1984). Both drill hole data and outcrop observations assign an average thickness of about 150m to the saline formation, which displays the following sequence from bottom to top:

- *Pamplona Marls.*
- *Marker anhydrite member (basal banded anhydrite).*
- *Lower salt member (sal de muro or “bottom salt”), medium to very coarse recrystallised halite, medium grey to black and lower part may be brown and sandy as described below.*
- *Multiple sylvinitic beds as the lower member and a carnallitic upper member. The potash is characterised as fine to coarse granularity, typically light to medium orange-red in colour, of crystalline structure with high insolubles and interbedded halite. The upper sylvinite exhibits brecciated structure suggesting recrystallisation after carnallite formation. Carnallite formation is limited in the Muga-Vipasca Project area and more commonly occurring in the Sierra del Perdón Project area.*
- *Upper saline member (sal de techo or “top salt”), alternating halite and clay layers, some of which exhibit deformation.*
- *Top marl member (margas fajeadas or “banded marls”) with intercalated anhydrite layers.*

Overlying the marls is a siliciclastic detrital unit, made up of the Oligocene Galar Sandstone, Javier-Pintano hard layers, the Oligocene-Miocene Rocaforte Formation and, locally, the Igaza Conglomerates (Uncastillo Formation). This unit is capped by Quaternary and Oligocene sediments. The Quaternary is made up of alluvium, glacial till and debris (Ortiz et al. 1986).

These units have been simplified in the geologic modelling database as:

- *Unidad del Oligoceno (UO) for Lutitas y Limolitas*
- *Unidad Detritica (UD) for Areniscas de Galar / Belsúe and (MF) as Margas Fajeadas (MF)*
- *Unidad Evaporitica (UE) for Sal de Techo (ST) and Sal Muro (SM) or Sal (S)*

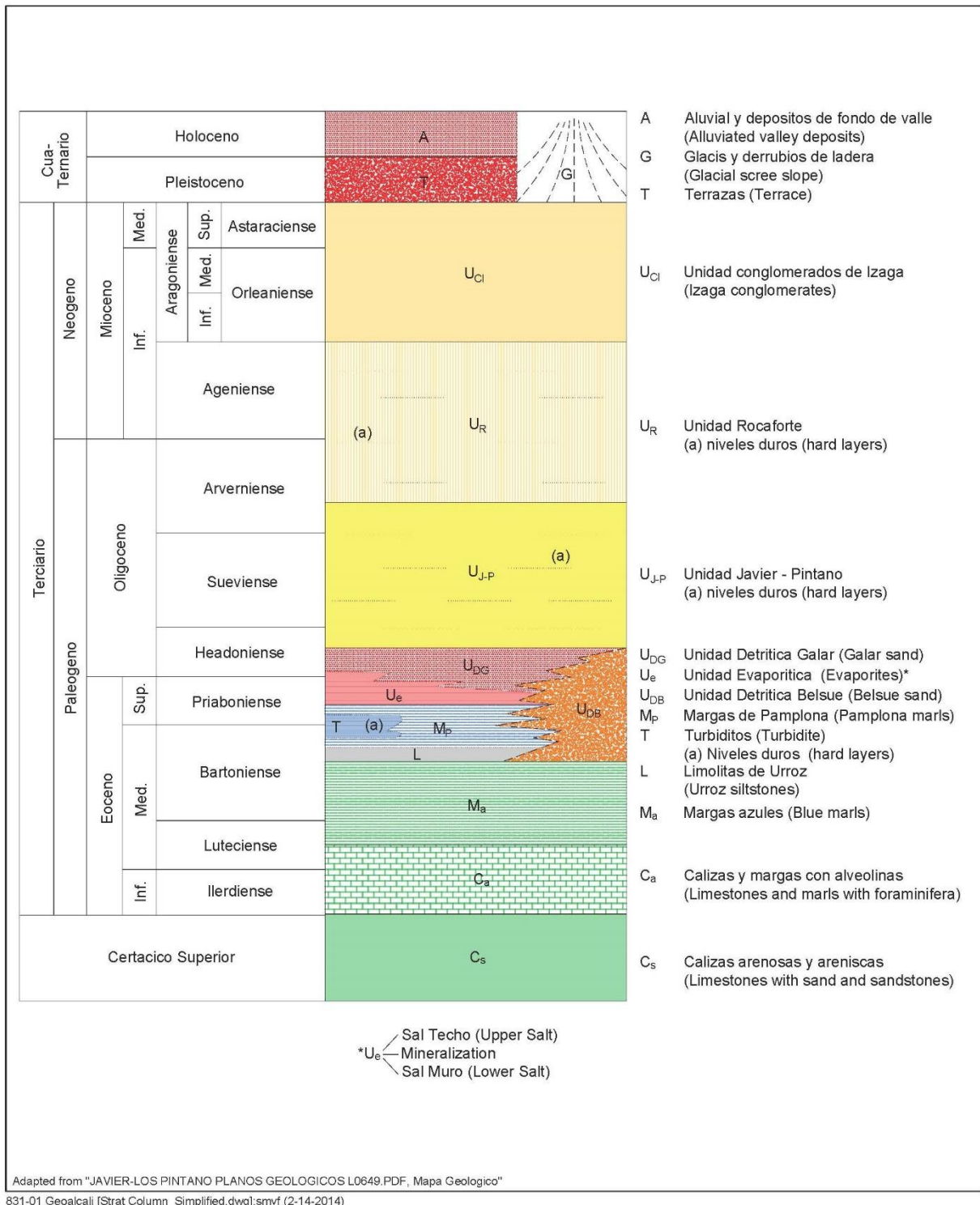


Figure A-3. Regional Stratigraphy of the Ebro Basin

In the Muga-Vipasca Project area, the mineralogy is dominated by sylvinite with some carnallite, which is medium red-orange and white, largely coarse crystalline in bands and in heavily brecciated beds containing high levels of insoluble material, largely fine-grained clays, anhydrite, and marl. The upper potash beds transition to finely banded light brown marls and clays. The salts just below the upper potash beds tend to dark grey to black. In some lower beds, halite becomes brownish, sandy to coarsely granular sand and sandstone as sediment influx from the Basin edges. In portions of the halite beds, sediment influx from the Basin edges is seen as sandy to

coarsely granular sands and sandstones. The lower salt is banded, exhibits very large cubic crystals and, in some cases, high angles and folding indicative of recrystallisation and structural deformation. The literature denotes this salt as the “sal vieja” or “old salt” (Ortiz and Cabo 1981). The evaporite beds and bands, in general, are separated by fine to very coarse crystallised and recrystallised salts, generally grey, sometimes light-to-medium honey brown or white, with anhydrite blebs, nodules, and clasts.

Exploration and Methodology for the Muga-Vipasca Property

Extensive exploration was carried out originally by Potasas de Subiza, S.A. (POSUSA) through 1987 and later by e.n. adaro (1989–1991) in the late 1980s and early 1990s. e.n. adaro, the state-owned group tasked with exploration and development of Spain’s mineral resources, produced detailed reports and “reserve” studies of the Muga-Vipasca and Pintano areas. The drilling program completed in 1989–1990 was outlined in detail in reports that are referenced herein.

For the Muga-Vipasca Project area, depositional basin bounds are defined to the west at the east-southeast/north-northwest trending Rocaforte Syncline near the margin of the Aragón River. Associated with this syncline is the Sierra de Leyre anticlinal structure that overthrusts the Pamplona Marls Formation. This thrust and two reverse faults run approximately east-west. The first fault is within the Pamplona Marls over Yesa turbidites and the second which makes the Yesa turbidites coincident with the Liédena Sandstone.

Along the south of the Muga-Vipasca property, the Basin is bound by the La Magdalena Anticline and Fault, characterised by beds steepening to periclinal structure at the crest and then to overturned beds resulting from thrusting to the east, exhibited at the surface in sandstones of the Muga-Vipasca Formation. The Magdalena anticline is sub-parallel to the Javier-Undués Syncline in the western portion of the Basin with gentle dipping on the northern flank; the southern flank dips increasingly to vertical and is overturned from Undués de Lerda to the Flexura de Ruesta. The Flexura is marked by a series of bounding normal and transverse faults to define the eastern Basin edge as it climbs to a saddle area between the Muga-Vipasca and Pintano Basins. The Pintano Syncline trends in the east-west direction for about 20km and can be considered the continuation of the Javier eastern syncline.

The northern part of the Muga-Vipasca Basin is defined by the extension of the Loiti Fault which also corresponds to the synsedimentary line between marine sediments within the Basin to the Eocene-Oligocene continental sediments at the thrust front, resulting in cropping out of the evaporites.

The formation of the evaporites is further influenced by the basin restriction, and paleo highs and lows which are perhaps defined by block faulting as well as the main structural basin bounds.

Property Stratigraphy

Potash mineralisation occurs in seven principal beds (in descending order P0, PA, PB, P1, P2, P3, and P4), ranging in depth from approximately 100m to more than 1,500m. The 08 October 2013 maiden MRE for the Muga-Vipasca property was independently developed by USA geology and mining consultants Agapito. The MRE was based on the results of geological studies, two-dimensional (2D) seismic analysis, exploration drilling, electric logging (elogs), and chemical analyses. Drill holes included in that MRE were eight holes drilled in 2013 in addition to historic holes (POSUSA 1987); the historic holes included beds P0, PA, and PB, which were combined into one bed, PAB.

Eleven holes were drilled in the 1980s (see Table A-1) (one was drilled to replace an incomplete well), and in early 1991, detailed lithology logs and assays were completed on core from those holes. The pre-1987 holes were not assayed for insolubles or for magnesium, which is an indicator of carnallite mineralisation. Twenty-five new holes (see Table A-2) have been drilled and cored since 2013 by Geocalcali Sociedad Limitada (Geocalcali) for a total of 36 holes on the property.

Table A-1. Muga-Vipasca Historic Drill Holes

Drill Hole ID	Coordinates ETRS89			Total Depth (m)	Date of Drilling Campaign*
	Easting (m)	Northing (m)	Elevation MSL (m)		
Javier-2	646902	4715320	506	896	pre-1987
Javier-3	647567	4717718	500	592	pre-1987
JP-1	648035	4717117	475	731	1989–1990
JP-2	648825	4716665	515	556	1989–1990
JP-3	649528	4716734	574	455	1989–1990
JP-3D (re-drill)	649528	4716734	574	455	1991
JP-4	649826	4715223	539	466	1989–1990
Las Noguerras (NGR)	650403	4715811	605	402	pre-1987
Molinar (MLN)	648698	4714996	520	771	pre-1987
Undues Lerda (UDL)	649798	4713910	622	616	pre-1987
La Vistana (VST)	649347	4716428	537	466	pre-1987

Note: ETRS89 = European Terrestrial Reference System 1989; MSL = mean sea level.

*Pre-1987 drill-hole locations could not be relocated and are taken from maps.

The potash beds have been correlated using a combination of assays, core photos and visual inspection, and lithological and geophysical logs. The beds vary in grade and thickness and can be discontinuous. From top to bottom, the principal beds begin with potash “zero” or P0. P0 is typically of a lower grade, averaging less than 6% K₂O over much of its thickness, and is at least partially carnallitic, specifically in J13-07, J14-04, J14-06, and J14-07 in the southeast part of the Basin. P0 represents a transitional zone generally marked by low-grade orange sylvinite and halite interbedded with light- to medium-grey and thinly bedded clay and marls exhibiting some cross-cutting, veining and recrystallisation near the top of salt.

The main beds are PA and PB, which are generally the thickest, of good grade, and most continuous across the Basin. PA generally exhibits the highest degree of recrystallisation and brecciation, and is likely the geologic equivalent of the single prominent carnallite bed in the Sierra del Perdón Basin to the northwest. It exhibits partial carnallite mineralisation in some drill holes, such as J13-05 and J13-12, and increases in thickness to the south and east in J14-06, J13-07, J14-07, and J14-04. PA and PB are typically separated by about 1m or less of halite. PB is typically banded, with breccia of lighter-coloured matrix material, of medium to high K₂O grade, and lower percent insolubles. Thicknesses are reported as downhole measured thicknesses, except where otherwise noted as corrected to true thickness (based on drill hole attitude relative to local dip of the bed).

Beds P1 and P2 are generally thinner and more discontinuous than the overlying beds and appear to represent early deposition as seen in the western part of the Basin. Grade is variable in both beds and may be as high as 29.6% (in one 0.3m intercept in J13-09). P2 commonly averages greater than 11% K₂O, including up to 13% K₂O in J13-06. P1 and P2 are usually banded and appear to represent earlier potash deposition in a deeper part of the Basin. P2 may exhibit a pink colour with decimated white anhydrite nodules and steep bedding.

Table A-2. Highfield Resources Javier-Vipasca 2013–2015 Drilling Campaign

Drill Hole ID	Start Date	End Date	Coordinates ETRS89			Total Depth (m)	Investigation Permit
			Easting (m)	Northing (m)	Elevation MSL (m)		
J13-01	5-May-14	14-May-14	651037	4715317	659	313	P.I. Muga
J13-02	13-Mar-14	31-Mar-14	651271	4716794	752	306	P.I. Fronterizo
J13-03	5-Aug-13	25-Sep-13	648952	4717328	554	421	P.I. Fronterizo
J13-04D	29-May-14	8-Jul-14	649629	4714046	624	650	P.I. Muga
J13-05	28-Sep-13	11-Nov-13	648001	4716310	492	894	P.I. Goyo
J13-06	12-Sep-13	9-Oct-13	646435	4717937	444	861	P.I. Goyo
J13-07	22-Apr-14	6-May-14	651348	4714113	629	335	P.I. Muga
J13-08	12-May-14	22-May-14	652948	4715331	855	318	P.I. Muga
J13-09	15-Nov-13	12-Dec-13	647246	4716540	471	1,093	P.I. Goyo
J13-10	31-May-14	5-Jun-14	652972	4714581	799	283	P.I. Muga
J13-11	13-Jun-14	10-Jul-14	654079	4714162	884	402	P.I. Muga
J13-12	3-Nov-14	19-Mar-14	649480	4716153	553	482	P.I. Muga
J13-13	11-Nov-13	2-Dec-13	646993	4718223	485	756	P.I. Goyo
J13-14	15-Nov-13	23-Dec-13	646972	4715501	515	1,222	P.I. Goyo
J13-15	7-Oct-14	24-Oct-14	647859	4718230	571	480	P.I. Goyo
J14-01	30-Jul-14	20-Aug-14	648771	4715856	513	632	P.I. Fronterizo
J14-02	30-Aug-14	10-Sep-14	651833	4716026	784	259	P.I. Muga
J14-03	24-Jul-14	10-Aug-14	654242	4715076	873	371	P.I. Muga
J14-04B	31-Aug-14	20-Sep-14	652606	4713966	800	309	P.I. Muga
J14-05B	14-Aug-14	29-Aug-14	651728	4714680	719	291	P.I. Muga
J14-06	24-Jul-14	9-Aug-14	650622	4714801	597	396	P.I. Muga
J14-07	9-Aug-14	23-Aug-14	651632	4713298	747	514	P.I. Muga
J14-08	27-Aug-14	11-Sep-14	653269	4713179	860	281	P.I. Muga
J14-10	21-Aug-14	24-Nov-14	646608	4716418	579	1,412	P.I. Goyo
J14-11	30-Sep-14	30-Oct-14	649947	4717450	695	203	P.I. Fronterizo
J14-12	24-Apr-15	27-May-15	650809	4715095	630	370	P.I. Muga
J14-13	16-Mar-15	10-Apr-15	648821	4716358	509	620	P.I. Fronterizo

The core in most holes reveals sylvinitic bands separated by minor beds and bands of orange salt, which are themselves bound by larger salt-brecciated bands. High-angle folding is occasionally evident in the core, suggesting steep structure and/or local deformation above the brecciated potash beds caused by secondary recrystallisation.

Beds P3 and P4 appear in the western part of the Basin in drill holes J13-06 and J13-09, but are not well-defined as to continuity. They appear as banded and partially brecciated units.

Regional correlations of the bed intervals are based on modern and historical drill hole core logs, chemical analyses, geophysical surveys, and structural/depositional modelling. Bed composite grades are calculated as length-weighted average values over continuous intervals.

Property Structure

The Muga-Vipasca Basin is divisible into three areas: the western Basin depocenter, the central saddle, and the Basin edges. The Basin itself is bound by faulting and outcropping to the north and south.

Western Basin Depocenter—The western Basin depocenter lies at the axis of the Javier-Undues Syncline in proximity to J13-09 and is defined by drill holes J13-03, J13-06, J13-13, and J13-15, as well as historic holes Javier

3, JP-1, JP3D, and Vistana. These holes exhibit additional lower, repeated and folded beds. J13-09 contains P3 and P4 but they are not of sufficient grade and thickness to be classified as resource. J13-09 shows Basin edge influences reflected in the presence of a high level of insolubles as black clay (from 974.3 to 983.3m) within P2. The Basin rises to the east where P1 is the lowermost bed in J13-03, J13-05, and in historic holes JP-1, JP-2, and Vistana.

During evaporite precipitation, the Basin continued to drop and the Basin edge continued to rise, shedding additional sediment. Final deposition in the depocenter may be reflected in the anomalous thickening of P0 seen in J13-05 and JP-3D, indicating the migration of the depocenter from the synclinal front to the northwest as the Basin filled. The oxidized upper part of the evaporite sequence in J13-13 and J13-09 suggests subaerial exposure, including the loss of PB in both holes by dissolution and the thinning of P0 and PA in J13-09. The thicknesses of all mineralised beds in J13-15 are anomalous due to extreme folding and upturning. The hole lies near the northern Basin edge at the Sierra de Leyre Overthrust Zone. Assay results and measured thicknesses have been reported in previous press releases.

The Central Saddle—The central part of the Basin is defined by a structural and depositional high where the lower salt (Sal Muro) is poorly developed which, in some cases, affects the precipitation of potash. J14-01, J13-12, historic JP-4, and Nogueras all lie within this area. J14-01 intersects low grade P0, and moderate grade PA and PB. The lower salt is less than 0.5m thick and conformably overlies the basal anhydrite with a sandy base. J14-01 may have a repeated and thickened low grade P0 layer with a thin PA layer in between; the P0 layer exhibits brecciation and mineralisation. The evaporite sequence has been foreshortened by dissolution and exhibits signs of weathering and oxidation that are indicative of a depositional or block-faulted high.

J14-05 is without mineralisation and effectively barren of salt. This is the result of a dissolution front within and above the evaporite formation, which effectively compacted it into one unit which contains minor remnants of P0 and PA salt and structure. J14-05 is similar to J13-01 where minimal potash mineralisation was intersected; both holes appear to demonstrate a depositional high within the Project area that will be important for mine design.

The Basin Edge—Barren holes J14-03, J13-11, J14-08, and J14-09 define the eastern Basin boundary. The western boundary is open but not well-defined because of an absence of exploration holes to the west. J13-14 and J13-04 on the southern Basin edge are barren. The target depth for J14-10 was not reached, so it remains undefined. The northern Basin edge is defined by the Sierra de Leyre Overthrust Zone and drill holes near that boundary exhibit folded, faulted, thickened, and repeated beds, particularly in J13-15.

J14-11 is structurally high, barren, and reflects some influence of dissolution and sediment influx at the northern Basin edge. The hole is largely barren of salt and dark clays show oxidation as red colour and lightening of colour. J13-02 is similar in character, but the basal salt is capped by a dissolution zone through what would otherwise be the mineralised zone, with strong sediment influx and oxidation. Both J14-02 and J13-08 show good development of P0, PA, and PB over a basal salt. This is likely because the holes are a sufficient distance from the Basin edge. There is still some influence of sediment influx evidenced by dark clay at the top of P0.

The southern Basin edge is bound by the Magdalena Anticline and Fault and Overthrust Zone. The drill holes are influenced by proximity to the Javier-Undues Syncline, which runs parallel to the Magdalena Zone. J14-10, J13-14, Javier-2, historical holes Molinar and Undues de Lerda, and J13-04 are located on what is interpreted as the southern side of the syncline. J14-10, the westernmost hole, shows a thickened, structurally deformed P0 with dark and light (oxidized) clays from the Basin edge, as well as thin PA and PB layers. J13-14 and Javier-2 are both in proximity to the Anticline axis and were drilled to depths of 1,222m and 895m, respectively, without reaching salt. The salt is believed to plunge below these holes on the Anticline.

Molinar is barren of evaporites. J13-04D and the historic Undues de Lerda are barren. J13-04D shows a thick, structurally deformed lower salt with evidence that the upper salt has been lost to dissolution and oxidation. Undues de Lerda is just to the southeast of J13-04D and is similar.

Seismic Surveys

A 2D high-resolution seismic survey was run for POSUSA in August–October 1988 by Compagnie Generale de Geophysique (CGG) over the Muga-Vipasca property. This consisted of 9 lines totalling 55 kilometers (km). An additional 2D seismic survey was performed at an (unknown) later date, increasing the total available seismic survey data to 16 lines covering the majority of the Muga-Vipasca and Los Pintanos properties, totalling 87.3km (RPS Energy Canada Limited [RPS] 2013). The resulting structure maps for both the top (*techo*) and bottom (*muro*) of salt were developed by CGG in combination with the regional seismic, field maps, satellite imagery and drill hole data.

RPS (formerly RPS Boyd Petrosearch) of Calgary, Alberta, Canada completed a re-interpretation in 2013 of the 2D historical seismic lines and profiles on behalf of Highfield. The re-interpretation program was designed to review the overall accuracy of the historical data in terms of good correlation to drill hole data and geological intersections, as well as identify any sub-surface structures that may adversely affect the salt-bearing strata. A total of 16 seismic survey lines were reviewed and were tied to wells with historical wireline data. The paper copies of the seismic profiles were digitized because the original tapes were unavailable. RPS interpreted that there is no indication of widespread salt removal due to faulting or dissolution. Deep structural features are noted across the Muga and Los Pintanos Project areas, but only poor quality seismic data exist over these features.

The CPs initially used these structural data but the historical map is modified and corrected to reflect updated drill hole information. The property is fairly densely drilled and the drill holes form the basis of the updated structure map.

Two surfaces are defined in the current geologic/computer model: 1) the base of the salt and 2) the top of the Pamplona Marls. The potash-bearing zones lack any velocity/density contrasts within the salt, so it is not possible to detect potash or map the structure of the zone directly. Seismic interpretation does not extend to the northwest part of the Basin.

Recent drilling has shown the seismic interpretation of structure to be generally unreliable. The base of salt surface was developed from known outcrops and drill hole intercepts for the purposes of resource modelling. Discrete features, including faults, are implied in some locations by the drill hole data, but are vague and indiscernible in the seismic record.

Quality Control and Data Confirmation

Highfield and ALS Global (ALS), the primary contract laboratory, maintained quality control procedures of standards, duplicates, and blanks. Highfield made multiple Standard or Certified Reference Material-type (SRM or CRM) samples representing low-, medium-, and high-grade (LG, MG, HG) potassium material which shows good repeatability within a 5% tolerance. SRM samples, blanks, and duplicates were inserted, both by Highfield personnel during sample preparation and by ALS as part of their own QA/QC program. ALS inserted commercial standards BCR-113 and BCR-114, both potash fertilizer materials, muriate of potash (MOP) and sulfate of potash (SOP), respectively, as well as their own internal standard, SY-4, a diorite gneiss used as a blank material. The insertion rate is one blank, one SRM, and one laboratory duplicate per 20 samples or batch.

The 2013–2015 drilling program has been managed by Highfield personnel. Details of the sampling techniques and oversight of the quality control program are summarised in Table A-6. The CPs have graphed the relevant quality assurance/quality control (QA/QC) data to support the MRE, but that is not presented here. The ALS Certificates of Analysis (COA) have been checked against the master database used for this MRE to assure agreement.

The CPs reviewed the available historical geophysical logs to compare estimated K₂O from natural gamma and/or spectral gamma logs versus the assayed values. Comparisons show good agreement, indicating that gamma can be a good indirect measure of K₂O content.

ALS assayed samples both by inductively coupled plasma (ICP) and X-ray fluorescence (XRF). In general, the ICP and XRF techniques show reasonable agreement with the XRF method exhibiting modestly elevated K₂O values over the ICP method.

Duplicates were submitted to ALS, and ICP results show good internal agreement. Check samples were tested at Saskatchewan Research Council Laboratory (SRC). In general, SRC reports K₂O values lower than reported by ALS. Because ALS and SRC show good internal agreement, the bias suggests a calibration issue.

Mineral Resource Estimate

The Mineral Resource was estimated using a computer 3D gridded-seam geologic (block) model constructed with Datamine Strat3D v2.2.75.0 and Studio 3.24.73.0 software. Historical and modern data for the property were reviewed by the competent persons for quality and completeness. Data utilized in the model include historic and modern drill hole logs and assays, historic and modern interpretations of 2D seismic surveys, surface topography in the form of a digital elevation model (DEM), permit boundary lines, historic resource analysis, and historic geological surface mapping.

Figure A-2 shows the permit boundaries and locations of the historic and modern exploration core holes used in the MRE. No drill holes were excluded from the resource model, although some holes were not drilled deep enough to provide resource definition.

To the northeast and east, the resource is bound by a non-deposition limit defined by holes J14-11, J13-02, J14-03, J13-11, and J14-08. Potash mineralisation is known to persist into Los Pintanos beyond the structural saddle separating it from Muga.

To the south, the Mineral Resource is bound by the plunging La Magdalena anticline. Drilling suggests that the strata plunge abruptly along the anticline in the vicinity of holes Javier-2 and J13-14. Potash mineralisation is further limited in the vicinity of the Molinar, Undués de Lerda, and J14-04D holes which are interpreted as a localized depositional high void of significant potash.

The Mineral Resource remains open to the north-west into the Vipasca permit area at increasing depth. The distance the resource was extrapolated into Vipasca beyond the westernmost hole (J13-06) was limited to the relevant Radii-of-influence as discussed below. In May 2015 the Company completed a gravimetric survey which demonstrated continuity of the potash bearing evaporate into the north western extension of the Project area beyond drill hole J13-06. For more information regarding this gravimetric survey see ASX release dated 19 June 2015.

Grade parameters were composited as length-weighted averages of the individual assays over a continuous bed thickness. In most instances, top and bottom bed contacts are gradational, introducing some trade-off between grade and thickness. Contacts were selected to maximize thickness while maintaining a composite grade as close as possible to 12.0% K₂O-in-sylvinite with a true thickness equal to greater than 1.5m. Depending upon the vertical grade distribution, bed thicknesses less than 1.5m and composite grades less than 8.0% K₂O-in-sylvinite were required for geologic modelling in some instances.

Bed thicknesses were corrected to true thicknesses for modelling according to local dip and downhole deviation survey data. Six historic holes lacking deviation surveys (Javier-2, Javier-3, Nogueras, Molinar, Undues de Lerda, and Vistana) were assumed vertical. Structural dip was calculated from the base-of-salt surface constructed from seismic, outcrop, and drill hole data. Dips in individual beds were adjusted locally by stacking the variable-thickness interburden and potash beds above the base-of-salt surface.

Block true thicknesses and grade parameters (K₂O, MgCl₂, and insolubles content) were interpolated/extrapolated utilizing an inverse distance cubed (ID3) model. Block estimation was conducted using an anisotropic elliptical search radius (limiting search distance) with a major axis of 4,000m oriented at an azimuth of 120 degrees, and a minor axis of 2,000m perpendicular to the major axis. Anisotropic distance scaling was applied such that sample weighting in the minor axis direction was scaled by the ratio of the axis lengths, i.e., samples were given half the weight in the minor axis direction versus the major axis direction for the same separation distance. Sampling was

limited to the 15 closest data points (drill holes) within the search ellipse. The anisotropic model showed a subtle difference compared to an isotropic model. The anisotropic model is thought to better represent geologic interpretation.

Potassium chloride (KCl) is the most common potassium source used in agriculture with over 90% of global production used for plant nutrition. Potash is known as Muriate of Potash (MOP) with a typical analysis of 0-0-60 (expressed as N-P-K, nitrogen-phosphorous-potassium) with a chemical formula of KCl. Its nutrient composition is approximately 50–52% potassium (K) and 45–47% chloride (Cl), which is the equivalent of 60–62% K₂O by weight (International Plant Nutrition Institute 2015).

Although the project is at an advanced exploration stage, some ordinary degree of geologic uncertainty persists. While drill hole and seismic demonstrate generally predictable bed continuity across the property, some variations in potash thickness, grade, and mineralogy between drill holes can be expected. Faults, folds, and other structural disturbances are known to exist and can sterilise resource locally. Potash quality can be affected by varying depositional environments or structure, including depositional highs, syngeneic faulting, basement carbonate mounds, algal reefs, post-depositional gypsum dewatering, groundwater dissolution along fault conduits, and by other complex features. Estimated tonnes in the resource are reduced by 5% for Measured and Indicated categories, and 15% for Inferred category as an allowance for geologic uncertainty.

The radii-of-influence (ROI) used for the Mineral Resource classification reflect the interpreted degree of predictability (or conversely, variability) within the deposit. Resource classifications for the deposit are stated as follows:

- **Measured Resource**—Potash meeting cutoff criteria located within an ellipse with boundaries 500m along strike and 250m across strike centred on an exploration core hole with assays, except where otherwise limited by geologic boundaries.
- **Indicated Resource**—Potash meeting cutoff criteria located within an ellipse with boundaries 1,500m along strike and 750m across strike centred on an exploration core hole with assays (excluding Resources included in the Measured category), except where otherwise limited by geologic boundaries.
- **Inferred Resource**—Potash meeting cutoff criteria located within an ellipse with boundaries 2,000m along strike and 1,000m centred on an exploration core hole with assays (excluding Resources included in the Measured and Indicated categories), except where otherwise limited by geologic boundaries.

Mineral Resource classification areas identified in Table A-[x] are shown in Figures A-[x] through A-[x] for the respective potash beds.

The criteria on which the mineral resource was based are summarized in Table A-[6] “JORC Checklist of Assessment and Reporting Criteria.”

The reader is cautioned that a Mineral Resource is an estimate only and not a precise and completely accurate calculation, being dependent on the interpretation of limited information on the location, shape, and continuity of the occurrence and on the available sampling results. Actual mineralisation can be more or less than estimated depending upon actual geological conditions.

The Mineral Resource statement includes Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there can be no certainty that further exploration work will result in the determination of Indicated or Measured Mineral Resources. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

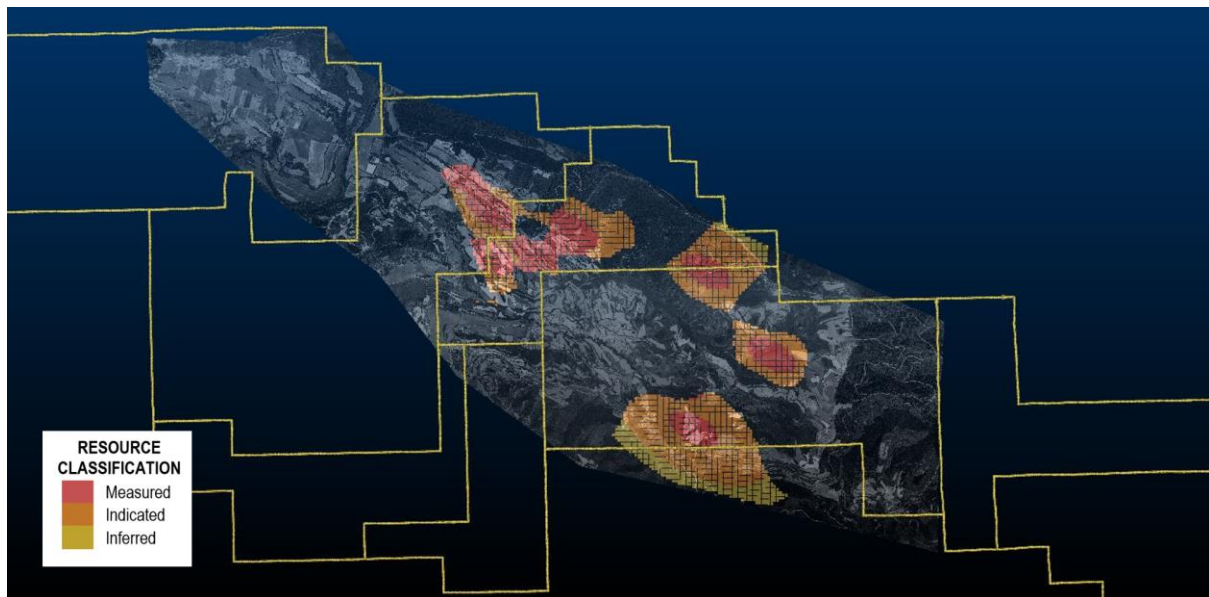


Figure A-4. Mineral Resource Areas—Bed P0 (plan view)

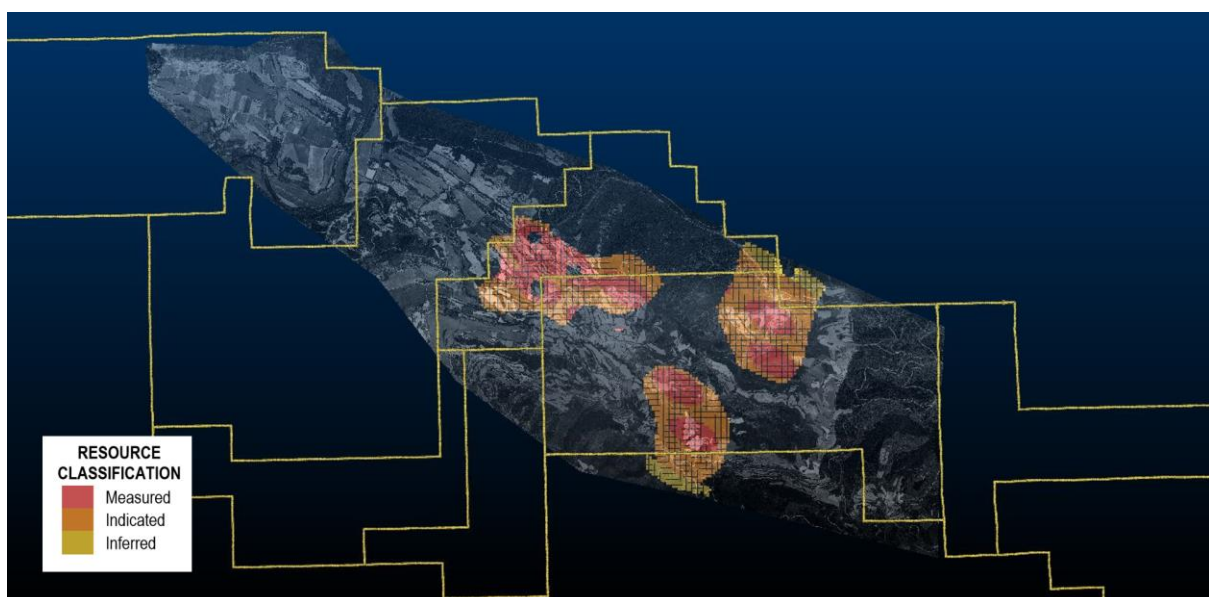


Figure A-5. Mineral Resource Areas—Bed PA (plan view)

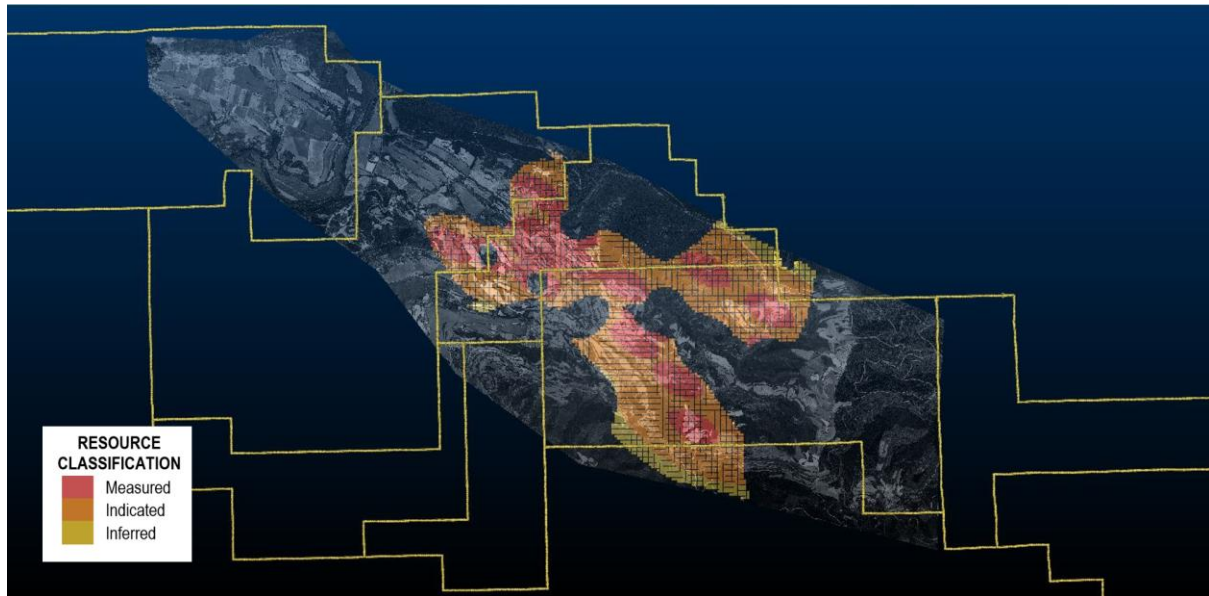


Figure A-6. Mineral Resource Areas—Bed PB (plan view)

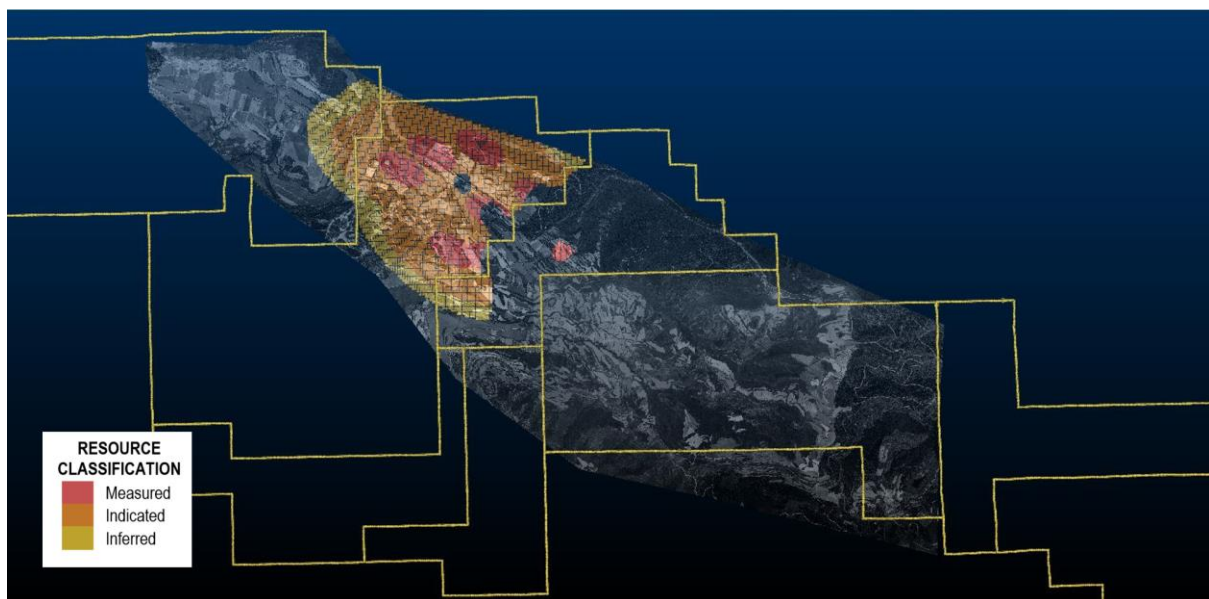


Figure A-7. Mineral Resource Areas—Bed P1 (plan view)

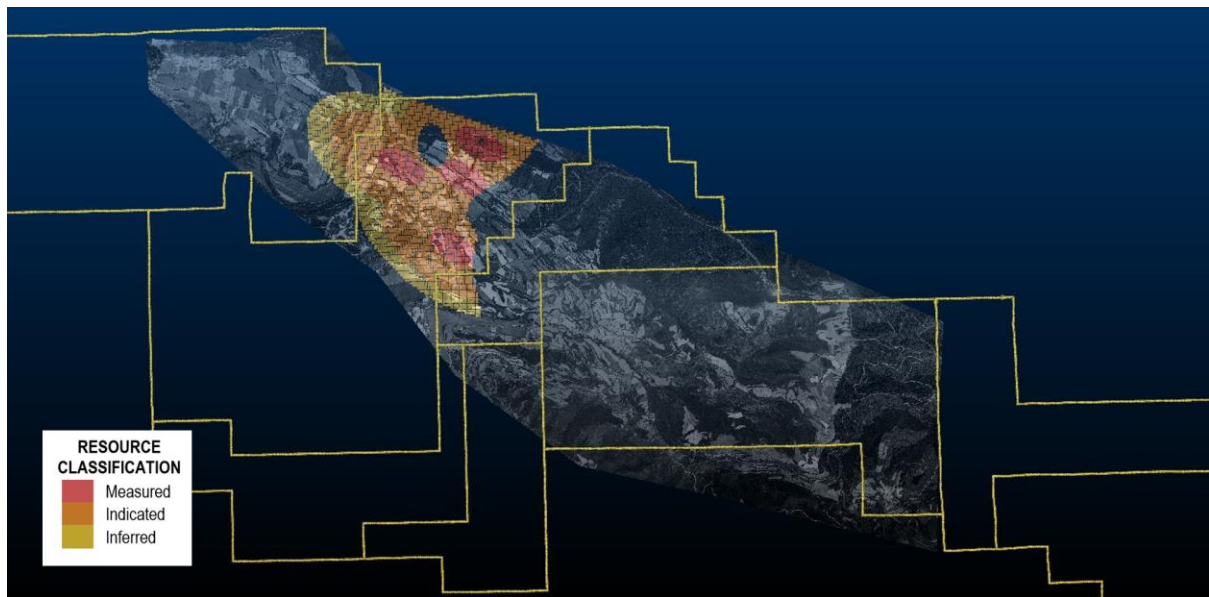


Figure A-8. Mineral Resource Areas—Bed P2 (plan view)

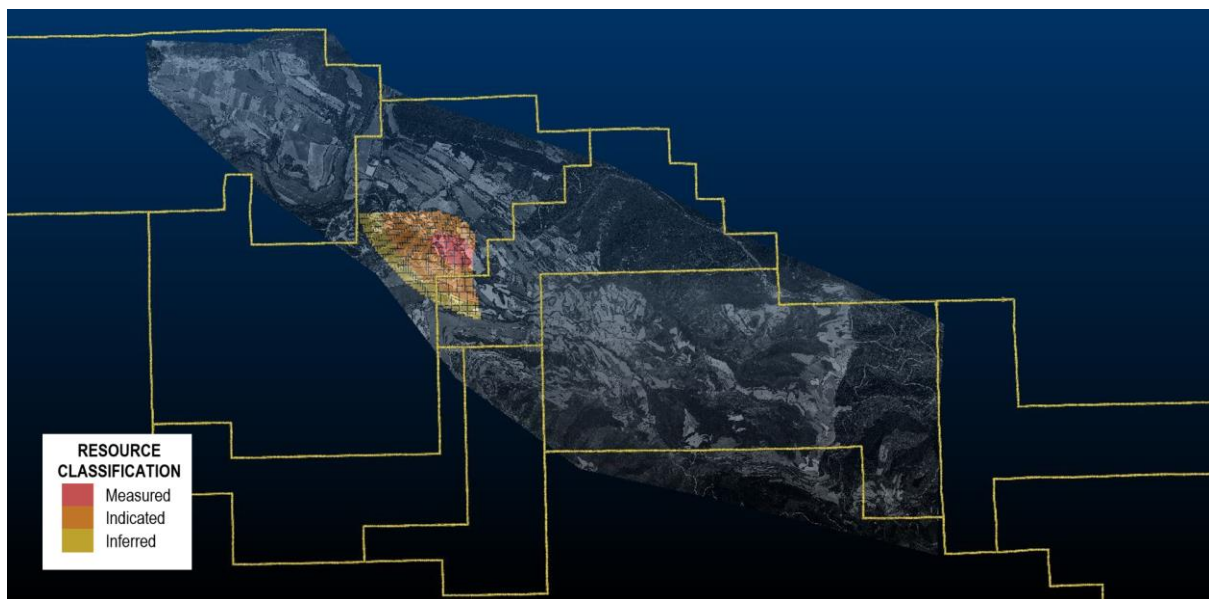


Figure A-9. Mineral Resource Areas—Bed P4 (plan view)

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Table A-6. JORC Checklist of Assessment and Reporting Criteria

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• <i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	• In Muga-Vipasca eleven historic drill holes were drilled in the 1980s and in early 1991. Detailed lithology logs and assays on core were completed. • Twenty-five new holes (see Table A-2) have been drilled and cored since 2013 by Geoalcali Sociedad Limitada (Geoalcali), 2 additional geotech drillholes were used as exploration drillholes for a total of 38 holes on the property. • The Company has received final results from the 2013–2015 drilling campaign at Muga-Vipasca. These results mark the conclusion of the 2015 exploration-related drilling activities as part of the Company’s delineation of the Project resource prior to mine design and development. Geoalcali is a 100% owned Spanish subsidiary of Highfield Limited (Highfield or the “Company”). • The historical drilling program resulted in compiled reports which are referenced in Appendix—Explanatory Notes to the Exploration Results for the Muga-Vipasca (formerly Javier-Vipasca) Potash Project. The historical programs, in general, were well-documented. • The new drill holes have been geologically logged, photographed, and assayed. Some of the holes were geophysically logged through the mineralised zone. Following logging and photographing, samples are marked and numbered for assay. Core is sawed with hydraulic oil as the lubricating agent; half core is retained and shrink-wrapped, and samples to be assayed are bagged and secured with plastic ties and boxed for shipping to ALS Global (ALS) for crushing, grinding and splitting. Cored samples are assayed by inductively coupled plasma- optical emission spectrometry (ICP-OES) and X-ray fluorescence (XRF) by ALS. Sample preparation is in Seville, Spain and assay work is completed in Loughrea, County Galway, Ireland. ALS has a documented methodology and quality assurance/quality control (QA/QC) protocol. • The historical holes contributed to a maiden Joint Ore Reserves Committee (JORC) Inferred Resource in September 2013 (Stirrett and Mayes 2013) and to this updated Mineral Resource Estimate (MRE). Of the historical holes, a comparative study to re-assay to test the quality and accuracy of the historical assays showed moderate agreement. Re-sampling of three mineralised drill holes was completed by independent advisor North Rim Exploration Ltd (North Rim).

Criteria	JORC Code explanation	Commentary
		The re-sampled assay results for J-3, Nogueras (NGR), La Vistana (VST) individually showed large degrees of variation from the historical results, but with an average difference of 3.68% K₂O overall. The results are documented in an internal report to Highfield (Stirrett and Mayes 2013) and discussed in more detail in the “Quality of Assay” section here. The report is referenced herein. Geophysical logs available on four historical holes (JP-1, -2, -3, and -4) were compared to the assay results to test the validity of those data. The Javier Pintano Project area is abbreviated as “JP.”
Drilling techniques	<i>Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., 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>	- Drilling procedures are unknown from historical Javier holes drilled prior to 1987 including drill holes J-2, J-3, VST, NGR, Molinar (MLN), and Undues de Lerda (UDR). - The drilling program completed in 1989–1990 was outlined in detail by Empresa Nacional Adaro Investigaciones Mineras (e.n. adaro 1989–1991). e.n. adaro, the state-owned group tasked with exploration and development of Spain’s mineral resources, produced detailed reports and “reserve” studies of the Muga-Vipasca area. - Historical drilling was completed with the Mayhew 1500 drill rig from June to August 1989. During this time, JP-1 through JP-4 were completed. Holes were drilled open hole to core point. The tricone bit used for open hole drilling was reduced through stages from 12 1/4-inch to 5 7/8-inch diameter. Upon completion, the hole was abandoned and cemented through the 8 1/2-inch diameter drill hole. Approximately 2,208m were drilled in Javier, not accounting for some re-drilling in JP-3 and JP-4. For JP-3 and JP-4, the mineralised zone was drilled into and not cored for assay. Both holes were re-drilled through the salt section to take the appropriate cores. No record of a re-drilled hole is available for JP-4; two assay sets were available for JP-3, listed as JP-3 and JP-3D. JP-3D was the re-drilled hole and was completely cored. Limited deviation data are available for JP-1, JP-2, JP-3, JP-3D, and JP-4 for the lower half/salt section and were used in the model. If no deviation surveys were found, then the holes were considered to be vertical. - In 2013, a drilling program was initiated in Javier. In some cases, holes were cored from surface, and in others, the holes were open holes drilled to the top of salt. When the top of salt is reached, the mud is re-formulated to a super-saturated brine to eliminate or diminish dissolution of the highly soluble evaporite

Criteria	JORC Code explanation	Commentary
		minerals. In the next phases of the 2014-2015 programmes, procedural changes have been adapted to open hole drill and case above the salt and core only beginning in the banded marls and through the salt. This should decrease the time to complete each hole and reduce the risk of drilling problems that result in reducing hole diameter and smaller core diameter. Drilling has been contracted to Geonor Servicios Tecnicos S.L. of Galicia, Spain using a Christensen CS3000 and Forida Golden Bear and Sondeos y Perforaciones Industriales del Bierzo (SPI) SPRDrill 260. Drilling was supervised by Highfield geologists. An additional company, In Situ out of Madrid has been contracted to drill deeper targets including J14-10
Drill sample recovery	• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <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>	• Detailed information on core recovery for the historical program is not available, but the assay data are largely complete over the mineralised zones. • Core recovery on the 2013–2015 drilling campaign averaged greater than 95% in Muga in the mineralised zones although some samples show dissolution due to undersaturated brine mud. Typically these samples are thought to under-report the target potassium mineralogy because of the highly soluble nature of those minerals, but it is also possible that less desirable or deleterious mineralogy (i.e. MgO) may also under-report in this situation. • PQ core is the recommended diameter for core but in some cases the hole is completed with HQ. Core sampling procedure is well-documented in the 2013–2015 drilling program.
Logging	• <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> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i>	• Lithology logs were completed for the historical drilling programs. The 1989–1990 drilling program included Javier and Los Pintanos holes: JP-1 to JP-4, PP-2/2B, and PP-3. The sample intervals were comparable to industry standards (generally <30 centimetres [cm]) but the methodology is unknown. Thirty centimetres is typically used for a maximum sample length for potash in order to assure samples are not diluted and confidence in mineralogy is maintained over the interval. Assay intervals for the unknown (pre-1987) drilling program used a much larger sampling interval (up to 2.44m) for NGR, VST, and J-3. • In the modern program, cuttings were collected from the open holes and the core was logged, photographed, sampled, and assayed in approximately 0.3m lengths. Core point, if not coring from surface, was generally within the banded marls

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> <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> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	above the salt and was completed at the base of the salt at the anhydrite marker bed to ensure complete coring through the salts and the mineralised zones. - For the historical holes, grooved samples were taken for assay through the potash mineralisation. These samples were produced by sawing a shallow channel into the core surfaces. This is not usually considered good practice, but is sometimes used to keep the core intact. Independent technical advisor North Rim (Stirrett and Mayes 2013) conducted a re-assay of available holes to test the validity of the historic data, as discussed below in “Quality of assay data and laboratory tests.” - On the 2013–2015 drilling campaign core holes, samples were halved and quartered, with a quarter sent for assay. This sampling methodology is the modern industry standard. The sample intervals of approximately 0.3m in length were taken over the length of the mineralised interval. Cores were usually PQ (85 millimeter [mm]), but in the case of difficult drilling conditions, coring was reduced to HQ (63.5mm) as was the case for J13-13 (at 642m depth below the mineralised zone) and J13-09 (from 484m depth) and J14-10 (at 1386m). J13-04D, J13-05, J13-06 (at 458m depth), J13-08, and 14-06 were HX cored through the mineralised zone. J14-01 was HQ diameter core through the mineralized zone. J14-04 used a combination of PQ and HQ through the mineralised zone. In summary, HQ/HX core through the mineralized zone is found in J13-04D, J13-05, J13-06, J13-08, J13-09, J14-01, J14-02, J14-06, J14-10, J14-12 and J14-13. - This smaller core diameter is not ideal for assay as some duplicates have shown variability. To try to mitigate this, duplicates are selected from HQ as true duplicates rather than on a quarter core sample. Quarter sample duplicates are selected for PQ core. In all cases, hole size was reduced to continue drilling in difficult hole conditions (lost circulation or kick-off) and is not part of normal procedure.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument</i>	Geochemical results are available for the 1989–1990 drilling campaign, complete with 570 assays. The results were obtained through the internal Potasas de Subiza S.A. (POSUSA) lab and were analysed for KCl, MgCl₂, NaCl, insolubles, and clay. The intervals listed for these samples reflect the thickness of the sample as measured in the drill core; however, true thicknesses for the sample intervals is outlined in the historical strip logs to account for structural dip of the intervals. Samples were typically limited to 30cm or less to maintain good sample resolution.

Criteria	JORC Code explanation	Commentary
	<i>make and model, reading times, calibrations factors applied and their derivation, etc.</i> <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	- No original assays are available for the pre-1987 drilling program. Results for P-1, J-3, VST, and NGR are summarised from the e.n. adaro comprehensive reports (e.n. adaro 1989–1991). These drill holes were only analysed for KCl, and therefore lack results pertaining to $MgCl_2$ (to determine carnallite content) or insolubles. UDR was not assayed and its mineralisation is reported to be of “insignificant grade.” In the current resource, mineralisation was interpreted to be <5% K_2O in the PAB main bed, as representative of the sampling cutoff at the time, based on a review of e. n. adaro’s assay results. This will be changed in the forthcoming resource estimation to reflect the new data from J13-04. - The “grooving” technique on the historical assay sampling was used to minimise destruction of core and may not be representative. The method of geochemical analyses used for both the 1989–1990 drilling campaign and the pre-1987 drilling program is unknown as is the identity of the lab that conducted the geochemical analyses. - A resampling program was carried out by North Rim (Stirrett and Mayes 2013). Re-sampling on VST, NGR, and J-3 was carried out at the Litoteca de Sondeos in Spain, the state-run core lab. North Rim noted that large intervals of core were not present or missing for both VST and NGR, and thus could not be re-sampled. North Rim attempted to duplicate the historical sample intervals; their methodology is described below: - For the re-sampling of historical core samples, the start and end of each sample was identified using blue corrugated plastic to ensure the proper intervals were selected for slabbing. For each sample, a line was drawn across the top after the core was fit together. Once the sample intervals were determined, one-quarter of the core was cut for sampling. A hand-held circular saw with a diamond-tipped blade was used to cut the core. Once the entire interval was cut, the cut surface was wiped down with a damp cloth to remove any rock powder generated by cutting. The quarter core was divided into individual samples by drawing straight lines across the core diameter in permanent black marker as identified by the blue plastic markers. The determination of individual samples was based entirely on the historical sample intervals. No additional sampling was completed. As the samples were chosen, they were labelled using a numbering scheme that incorporated both the drill hole number and a sample number (i.e., J3-583RS). An “RS”

Criteria	JORC Code explanation	Commentary
		was incorporated at the end of the sample to indicate “re-sample.” Each sample and its corresponding sample tag were placed into a waterproof, plastic sample bag and stapled to enclose the sample within the bag. Samples were placed into sturdy cardboard boxes and packed with styrofoam. Shipping sheets were completed that included well information, box numbers, sample numbers, and contact information and accompanied the samples to the Saskatchewan Research Council (SRC) Laboratories in Saskatoon, Saskatchewan, Canada. ○ In the re-assayed sampling program, the correlation plot between the historical samples and their re-analysed equivalents has an average difference of 3.68% K₂O overall. The results indicate a general over-estimation of grade within the historical samples, with 87% of the historical samples having higher K₂O grade than the re-sampled analyses indicate. This is not a systematic difference, but instead indicates that the variation is more likely due to sampling technique rather than a problematic analytical technique or procedure. ● In the 2013–2015 sampling program, assay was by ICP-OES and XRF. ● Highfield and ALS, the primary contract laboratory, maintained quality control procedures of standards, duplicates and blanks. SRM, blanks and duplicates were inserted, both by Highfield personnel during sample preparation and by ALS as part of their own QA/QC program. ● ALS inserted commercial standards BCR-113 and BCR-114 both potash fertilizer materials, a MOP (Muriate of Potash) and SOP (Sulfate of Potash), respectively, as well as their own internal standard as a blank material SY-4, a diorite gneiss. ● Duplicates were submitted to ALS and show good internal agreement. ● Highfield made multiple Standard or Certified Reference Material-type (SRM or CRM) samples representing low-, medium-, and high-grade (LG, MG, HG) potash material, and they show good accuracy and precision within a ± 2 standard deviation envelope based on 30, 31 and 27 for HG, LG and MG, respectively.. Insertion rate is one blank, one SRM, and one lab duplicate per 20 samples or batch. ● Check samples were tested at SRC and show good agreement for K₂O values.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i>	- The re-sampling program of historical cores was carried out under the supervision of North Rim and documented in a report to Highfield. The goal of the geochemical re-sampling program was to acquire sufficient confidence in the historical assay data to develop a JORC Code-compliant Mineral Resource estimate. Only three drill holes with cored intervals containing potash mineralisation were available for re-sampling within the project area: VST, NGR, and J-3. - Agapito reviewed the available historical geophysical logs (run by Schlumberger) to compare estimated K₂O from natural gamma and/or spectral gamma logs versus the assayed value, which showed very good agreement. - ALS assayed samples both by ICP and XRF. In general, ICP analysis shows adequate agreement with assays by XRF, which report, consistently, slightly higher values of K₂O. Other holes showed similar bias, thereby substantiating testing precision. The ICP method is the base method used for resource estimation. - Highfield receives all assay data in .XLS or .CSV format from the laboratories and one person is responsible for transferring those data into a master database and maintaining the QA/QC monitoring. - A database was built from the historical drill hole information by Highfield and checked by Agapito against the historical reporting of assays and intervals listed on the lithologic logs. - The master database was checked against the ALS-issued Certificates of Analysis (COA).
Location of data points	<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> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i>	- Historical collar locations were re-located in most cases and re-surveyed. Some historical collars could not be located as many were drilled on agricultural land. Historical drill hole location maps consistently show locations and so suggest confidence in the hole coordinates. Specifically JP-1, JP-2, MLN, and Javier 3 could not be relocated. Historical data and maps are referenced to the European Datum 50 (ED50) and have been updated to the European Terrestrial Reference System 1989 (ETRS89) datum for compatibility with modern survey information. - All new locations from the 2013–2015 drilling program are surveyed before and after drilling by a licensed surveyor.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• <i>Data spacing for reporting of Exploration Results.</i> • <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> • <i>Whether sample compositing has been applied.</i>	• Exploration drill hole spacing is illustrated on the scaled map in Figures A-2. • Samples have been composited over the thickness of identified potash beds for the reporting of exploration results. • The drill hole spacing and distribution are deemed adequate to establish geologic and grade continuity commensurate with the Resource Classifications discussed under “Section 3—Mineral Resources” in this table. Geologic restrictions, allowances for unknown geologic anomalies, and downgrades of resource classifications were applied to reasonably characterize geologic confidence.
Orientation of data in relation to geological structure	• <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> • <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>	• Some deviation data were available in the 2013–2015 drilling program. In building the new database, apparent bed dips from the lithology logs were incorporated from historical and new holes to attempt to correct to true bed thickness. • Historical holes were assumed to be vertical in the absence of deviation surveys. Deviation data show relatively vertical trajectories in surveyed holes. Data on bed orientation were incorporated into the database to calculate apparent true thickness. • The regional structure is discussed in more detail in “Geology” and in “Property Structure.” The deposit is bedded, but the historical seismic maps showed mostly vertical faults parallel to the Flexura de Ruesta, propagating to the west as well as up through the top of salt. • An historical structure map with fault offsets was used for the interpretation of bed orientation. Recent drilling has shown the seismic interpretation of structure to be generally unreliable. The base of salt surface was developed from known outcrops and drill hole intercepts for the purposes of resource modelling. Discrete features, including faults, are implied in some locations by the drill hole data, but are vague and indiscernible in the seismic record. • The northern Loiti Fault System and the south Magdalena system and anticline result in cropping out and overturning of the evaporites, and steep dips are interpreted to be in parallel to these structures.
Sample security	• <i>The measures taken to ensure sample security.</i>	• In the 2013–2015 drilling program, Highfield personnel maintained effective chain of custody procedures for the samples. Core was picked up at the drill site and brought to the secured warehouse for detailed logging and sampling. Following

Criteria	JORC Code explanation	Commentary
		sampling (see sections on sampling herein), sample bags and boxes were secured with zip ties for shipping to the laboratory.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	Besides the re-sampling program carried out by North Rim, Agapito previously compared historical assay data to estimate K₂O from geophysical records. In addition, ALS assayed samples both by ICP and XRF and these values were compared as discussed in "Verification of sampling and assaying data."

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	- 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. - 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.	- Property descriptions and land status were obtained from the list of lands as set forth in the documents provided by Highfield. - The Muga-Vipasca property is comprised of four permits (see Figure A-2). Goyo and Muga are granted Investigation Permits (PI) in Navarra. Fronterizo straddles the Navarra and Aragón border and its PI was granted 05 February 2014. Vipasca is a newer application applied for at the end of 2013 and granted on 11 December 2014. - The CPs have reviewed the mineral tenure from documents provided by Highfield including permitting requirements, but have not independently verified the permitting status, legal status, ownership of the project area, underlying property agreements or permits. Therefore, CRN has fully relied upon, and disclaims responsibility for that information. - Exploration and exploitation of mineral deposits and other geological resources in Spain are governed by the Mining Law 22/1973, which is further governed by the Royal Decree 2857/1978. All sub-surface geological structures, rocks, and minerals are considered the property of the public domain and are categorised into four sections under the Spanish law (A, B, C, and D), and must have mining authority authorisation and supervision for commercial exploitation. Section C covers the minerals of interest for Highfield, and a mining concession would need to be awarded prior to exploitation which requires the accompaniment of environmental permits and municipal licenses (electrical, water etc.). Generally exploration and investigation permits are applied for prior to applying for a mining concession (not legal obligation), and are aimed at determining the mineral resource potential of the area through exploration practices (drilling, seismic, sampling etc.). These are granted through the region's government/mining authority where the exploration or investigative work will take place.

Criteria	JORC Code explanation	Commentary
		• Exploration permits (PE) are valid for one year and can be renewed for one additional year. A PE allows only non-intrusive investigation, which is defined by the various Spanish regions and can vary. • A PI is good for up to three years and renewable in three-year terms or longer depending on the scope of the intended work. Investigation permits carry with them municipal approval as they are publically released for community discussion. To carry out work under the investigation permit, the permittee must contract with the individual the landowners to allow for access and occupation of the land during the exploration. • In order for both types of permits to remain valid, the applicable taxes must be paid and the permittee must comply with the applicable regulations and exploration plan approved by the mining authority. Investigation permits require assessment reporting which requires the permittee to submit working plans, budgets, and initiate work within certain time allotments. Exploration and investigation permits can be transferred in whole or in part to other third parties with enough technical and financial backing, but must be authorised by the proper mining authorities in Spain.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The historical drilling program completed in 1989–1990 was outlined in detail by e.n. adaro (1989–1991). e.n. Adaro, the state-owned group tasked with exploration and development of Spain's mineral resources, produced detailed reports and “reserve” studies of the Javier area. • Potash was first discovered in the Ebro Basin in the Catalonia area in 1912 at Suria after the potash discoveries in Germany (Moore 2012). Salt was first discovered through drilling, later followed by four economic potash mining zones with a combined total thickness of 2.0 to 8.0 m (Stirrett and Mayes 2013). The potash horizons in the area were identified to cover approximately 160 square kilometers (km²) at depths of approximately 500m sub-surface, unless they were brought closer to surface by anticlinal or tectonic structures (Stirrett and Mayes 2013). Several deposits were located in the Catalonia area, including, Cardona, Suria, Fodina, Balsareny, Sallent, and Manresa. Several of these areas were developed into mines and are all flanked by anticlinal structures. The potash deposits in the Navarra region were not located until later, in 1927, through comparative studies to the deposits found at Catalonia (Stirrett and Mayes 2013).

Criteria	JORC Code explanation	Commentary
		The exploration efforts later led to the development of a mine near Pamplona and Beriain. Production at Pamplona began in 1963 with a capacity of 250,000 tonnes per year (tpy) of K₂O. A thick carnallite member overlies the sylvinite, so in 1970 a refinery with the capacity for 300,000tpy was built to accommodate for carnallite from the Esparza (Stirrett and Mayes 2013). Carnallite mining was ceased in 1977. Inclined ramps for the mine were located near Esparza, reaching the centre of the mine, with further shafts located at Beriain, Guendulain and Undiano. In 1982, 2.2 million tonnes of sylvinite were extracted with an average K₂O grade of 11.7% (Stirrett and Mayes 2013). The operations in Navarra were closed in the late 1990s.
Geology	Deposit type, geological setting and style of mineralisation.	- The Upper Eocene potash deposits occur in the sub-basins of Navarra and Aragón provinces within the larger Ebro Basin (Figure A-1). The Navarrese sub-basin includes the Muga-Vipasca (Javier) and adjoining Los Pintanos deposits. The first deposits in the region, occurring at the end of the Cretaceous period, were characterised by a regressive period with reddish continental deposits. The Eocene is marked by the beginning of tectonic compression, causing formation of subsiding basins parallel to the Pyrenees Mountains with emersion and erosion in some parts. The different basins are separated by orogenic events developing in the north and south as turbidite basin carbonate platforms. Towards the end of the Eocene epoch, the sedimentation axis migrated south to the Jaca-Pamplona Basin, on which the Oligocene materials were deposited. The pre-evaporitic basin sedimentation occurs in a context of continuous tectonic compression during the Eocene and Oligocene epochs, as synsedimentary tectonics of the end of the orogeny, with pronounced sediment influx. The influence of the turbidites towards the end of the Eocene epoch in the Bartoniense series, are sourced from the east initially into the Pintano Basin and contained by the Flexura de Ruesta and then from the northwest into the Basin as the Belsue Formation, indicative of continued subsidence. - This potash deposit contains a 100-m-thick Upper Eocene succession of alternating claystone and evaporites (anhydrite, halite, sylvite and carnallite). The evaporites accumulated in the elongated basin at the southern foreland of the Pyrenean range (Busson and Schreiber 1997). The evaporites overlie marine deposits and conclude in a transitional marine to non-marine environment with

Criteria	JORC Code explanation	Commentary
		terrigenous influence. Open marine conditions existed in the Eocene-Oligocene epochs progressing to a more restricted environment dominated by evaporation and the deposition of marl, gypsum, halite, and potassium minerals. Later, tectonism and resulting salt deformations formed broad anticlines, synclines and overturned beds, which created outcrops of the evaporite sequence. The Basin depocenter originated in the west forming against the down-dropping Javier-Undues Syncline. In this area, the salts are thick and additional lower, less continuous beds developed in addition to a substantial thickness of P0, the uppermost potash mineralised bed. To the east, a broad basement high formed resulted in poorly developed or missing lower salt beds; the potash package is more compact and some beds are missing, particularly near the Basin edges. Basin edge influences include sediment influx, dark clays and light-coloured sand as well as soft sediment deformation and salt-veining which resulted from continued uplift and steepening beds. Basement-related faulting as well as structural influences at the Basin edge have resulted in repeated (or overturned) and thickened mineralised beds. - Two fault systems dominate and bound the Javier-Vipasca Basin, to the north by the extension of the thrusting Loiti Fault and to the south by the Magdalena Fault, both resulting in the cropping out of the evaporite units. The Basin axis is defined by the Javier-Undues Syncline. To the east, the Basin climbs to the Flexura de Ruesta, a northwest-southeast offset block contemporaneous with evaporite deformation that resulted in a higher saddle area between the Javier- Vipasca and Pintano sub-basins. Approximately vertical faults parallel to the west of the Flexura de Ruesta have been defined by two-dimensional (2D) seismic surveys (Empresa Nacional Adaro Investigaciones Mineras [e.n. adaro] 1988–1991). Basin continuity to the west-northwest into the Vipasca PI has not been well-defined by drilling programs or seismic surveys. Surface expression shows the evaporite outcrop as offset approximate to the Aragón River but field investigation has shown an overthrust of much younger rocks at a lower angle than suggested by the offset. - A 2D high-resolution seismic survey was run for POSUSA in August–October 1988, by CGG over most of what is now the project area. This consisted of 9 lines totalling 55km (Geoalcali 2012). The resulting structure maps for both the

Criteria	JORC Code explanation	Commentary
		top (techo) and bottom (muro) of salt were developed by CGG in combination with the regional seismic, field map, satellite imagery, and drill hole data. • The surface, defined as the base of the salt and top of the Pamplona Marls, will be used in the new geologic/computer model. The potash-bearing zones lack any velocity/density contrasts within the salt; it is not possible to detect potash or map the structure of the zone directly. Coverage of the seismic interpretation does not extend to the northwest part of the basin. • Potash is used to describe any number of potassium salts. By and large, the predominant economic potash is sylvite: a KCl usually found mixed with salt to form the rock sylvinite which may have a K₂O content of up to 63% in its purest form. Carnallite, a potassium magnesium chloride (KCl•MgCl₂•6H₂O), is also abundant, but has K₂O content only as high as 17%. “Carnallite” is used to refer to the mineral and the rock interchangeably, although “carnallitite” is the more correct terminology for the carnallite and halite mixture. Besides being a source of lower grade potassium, carnallite involves a more complex production path, so it is less economically attractive. • The depositional environment is that of a restricted marine basin, influenced by eustasy, sea floor subsidence, and/or uplift and sediment input. It is suggested that the basin is a combination of reflux and drawdown. Reflux represents a basin isolated from open marine conditions thereby restricting inflow, increasing density, and increasing salinity. Drawdown is simple evaporation in an isolated basin resulting in brine concentration and precipitation. This is the classic “bullseye” model (Garrett 1996). In this case, the basin is further influenced by erosion at the basin edges due to contemporaneous and post-depositional uplift, resulting in localised shallowing and sediment influx (Ortiz and Cabo 1981). In that classic model, a basin that is cut off from open marine conditions will experience drawdown by evaporation in an arid to semi-arid environment. In the absence of sediment influx, precipitation will proceed from limestone to dolomite to gypsum and anhydrite to halite. Depending on the composition and influences of the brine at that time, the remaining potassium, magnesium, sulfates, and chlorides will progress from potassium and magnesium sulfates to sylvite and then carnallite. The formation of sylvite and carnallite are proposed herein as secondary and primary, respectively.

Criteria	JORC Code explanation	Commentary
		• In the Muga-Vipasca Project areas, the mineralogy is dominated by sylvinite and some carnallite appearing as medium red-orange and white, largely coarse crystals in bands and in heavily brecciated beds with high insoluble material, largely fine-grained clays, anhydrite and marl. The upper potash beds transition to finely banded light brown marls and clays. The salts just below the upper potash tend to be dark grey to black. In some lower beds, halite becomes brownish, sandy to coarsely granular sand and sandstone as sediment influx from the basin edges. In portions of the halite beds, sediment influx from the basin edges is seen as sandy to coarsely granular sands and sandstones. The lower salt is banded, exhibits very large cubic crystals and, in some cases, high angles and folding indicative of recrystallisation and structural deformation. The literature denotes this salt as the “sal vieja” or “old salt” (Ortiz and Cabo 1981). The evaporite beds and bands, in general, are separated by fine to very coarse crystallised and recrystallised salts, generally grey, sometimes light to medium honey brown or white, with anhydrite blebs, nodules and clasts.

**Drill hole
information**

- A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
 - easting and northing of the drill hole collar
 - elevation or RL (Reduced Level—elevation above sea level in metres) of the drill hole collar
 - dip and azimuth of the hole
 - down hole length and interception depth
 - hole length.
- If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.
- Table A-1 summarizes the historical drill holes and Table A-2 summarizes the drill holes from the 2013–2015 drilling program. Exploration drilling results for earlier holes are summarised in Highfield’s ASX releases, dated 01 May 2014, 12 May 2014, 05 June 2014, 05 September 2014, 24 October 2014, 28 October 2014, and 29 December 2014, 24 February 2015.
- Potash mineralisation occurs in seven principal beds (in descending order P0, PA, PB, P1, P2, P3, and P4), ranging in depth from approximately 100m to more than 1,500m.
- The 08 October 2013 maiden MRE for the Muga-Vipasca property was independently developed by USA geology and mining consultants Agapito. The MRE was based on the results of geological studies, 2D seismic analysis, exploration drilling, electric logging (elogs), and chemical analyses. Drill holes included in that MRE were eight holes drilled in 2013 in addition to historic holes (POSUSA 1987); the historic holes identified beds PA, PB, P1, and P2.
- Potash bed picks and composited assays used in the MRE are exactly the ones used in the MRE done by AAI in February 2015, enhancing the geological model by including upper and lower seams above and below each main potash seam following the geological interpretation and thus giving a more realistic model. The resource composite intervals were used for resource modeling and represent the higher grade subsets of the correlated geologic (stratigraphic) intervals. Regional correlations of the bed intervals are based on modern and historical drill hole core logs, chemical analyses, geophysical surveys, and structural/depositional modelling. Bed composite grades are calculated as length-weighted average values over continuous intervals. To summarize the drill hole results the Muga-Vipasca Basin may be divided into three areas: the western Basin depocenter, the central saddle and the Basin edges. The Basin itself is bounded by faulting and cropping out to the north and south.

- Western Basin Depocenter—this depocenter lies at the axis of the Javier-Undues Syncline in proximity to J13-09 and is defined by drill holes J13-03, J13-06, J13-13, and J13-15 as well as historic holes Javier 3, JP-1, JP3D and Vistana. These holes exhibit additional lower, repeated and folded beds. J13-09 contains P3 and P4 but they are not of sufficient grade and thickness to be classified as resource. J13-09 shows Basin edge influences reflected in the presence of a high level of insolubles as black clay (from 974.3 to 983.3m) within P2. The Basin rises to the east where P1 is the lowermost bed in J13-03, J13-05 and in historic holes JP-1, JP-2 and Vistana.
- During evaporite precipitation, the Basin continued to drop and the Basin edge continued to rise, shedding additional sediment. Final deposition in the depocenter may be reflected in the anomalous thickening of P0 seen in J13-05 and JP-3D, indicating the migration of the depocenter from the synclinal front to the northwest as the Basin filled. The oxidized upper part of the evaporite sequence in J13-13 and J13-09 suggests subaerial exposure, including the loss of PB in both holes by dissolution and the thinning of P0 and PA in J13-09. The thicknesses of all mineralised beds in J13-15 are anomalous due to extreme folding and upturning. The hole lies near the northern Basin edge at the Sierra de Leyre Overthrust Zone. Assay results and measured thicknesses have been reported in previous press releases.
- The Central Saddle—this central part of the Basin is defined by a structural and depositional high where the lower salt (Sal Muro) is poorly developed which, in some cases, affects the precipitation of potash. J14-01, J13-12, historic JP-4 and Nogueras all lie within this area. J14-01 intersects low grade P0, and moderate grade PA and PB. The lower salt is less than 0.5m thick and conformably overlies the basal anhydrite with a sandy base. J14-01 may have a repeated and thickened low grade P0 layer with a thin PA layer in between; the P0 layer exhibits brecciation and mineralisation. The evaporite sequence has been foreshortened by dissolution and exhibits signs of weathering and oxidation that are indicative of a depositional or block-faulted high. J14-05 is without mineralisation and effectively barren of salt. This is the result of a dissolution front within and above the evaporite formation, which effectively compacted it into one unit which contains minor remnants of P0 and PA salt and structure. J14-05 is similar to J13-01 where minimal potash mineralisation was intersected; both holes appear to demonstrate a depositional high within the Project area that will be important for mine design.

- The Basin Edge—barren holes J14-03, J13-11, J14-08 and J14-09 define the eastern Basin boundary. The western boundary is open but not well-defined because of an absence exploration holes to the west. J13-14 and J13-04 on the southern Basin edge are barren. The target depth for J14-10 was not reached, so it remains undefined. The northern Basin edge is defined by the Sierra de Leyre Overthrust Zone and drill holes near that boundary exhibit folded, thickened faulted and repeated beds, particularly in J13-15. J14-14 is structurally high, barren, and reflects some influence of dissolution and sediment influx at the northern Basin edge. The hole is largely barren of salt and dark clays show oxidation as red colour, and lightening. J13-02 is similar in character but the basal salt is capped by a dissolution zone through what would otherwise be the mineralised zone, with strong sediment influx and oxidation. Both J14-02 and J13-08 show good development of P0, PA, and PB over a basal salt. This is likely because the holes are a sufficient distance from the Basin edge. There is still some influence of sediment influx evidenced by dark clay at the top of P0.
- The southern Basin edge is bound by the Magdalena Anticline and Fault and Overthrust Zone. The drill holes are influenced by proximity to the Javier-Undues Syncline, which runs parallel to the Magdalena Zone. J14-10, J13-14, Javier-2, historical holes Molinar and Undues de Lerda, and J13-04 are located on what is interpreted as the southern side of the syncline. J14-10, the westernmost hole, shows a thickened, structurally deformed P0 with dark and light (oxidized) clays from the Basin edge as well as thin PA and PB layers. J13-14 and Javier-2 are both in proximity to the Anticline axis and were drilled to depths of 1,222m and 895m, respectively, without reaching salt. The salt is believed to plunge below these holes on the Anticline. Molinar is barren of evaporites. J13-04D and the historic Undues de Lerda are barren. J13-04D shows a thick, structurally deformed lower salt with evidence that the upper salt has been lost to dissolution and oxidation. Undues de Lerda is just to the southeast of J13-04D and is similar.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	- In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cutoff grades are usually Material and should be stated. - 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. - The assumptions used for any reporting of metal equivalent values should be clearly stated.	- Composites by weighted average were made from the geochemical data to optimise grade and thickness of the mineralised seams in both the new and historical data. The resource composite intervals were used for resource modelling and represent the higher grade subsets of the correlated geologic (stratigraphic) intervals. - Regional correlations of the bed intervals are based on modern and historical drill hole core logs, chemical analyses, geophysical surveys, and structural/depositional modelling. Bed composite grades are calculated as length-weighted average values over continuous intervals. - All potassic values are in K₂O percent. Most cations are reported as oxides and water-soluble material on a percent basis. ICP and XRF testing reports are in elemental values, but the industry standard is to report in oxides.
Relationship between mineralisation widths and intercept lengths	- These relationships are particularly important in the reporting of Exploration Results. - If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. - If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	- Some deviation data were available in the 2013–2015 drilling program. In building the new database, apparent bed dips from the lithology logs were incorporated from historical and new holes to attempt to correct to true vertical bed thickness. In some cases, high-angled bedding is noted within the potash beds, but may be an indication of recrystallisation of carnallite to sylvinite, resulting in a volume reduction largely by the hydrous component of carnallite. In those cases, apparent dip was reduced to reflect the bed below or above the potash which in most cases was less steep. - In the absence of deviation surveys, historical holes were assumed to be vertical. Data on bed orientation were incorporated into the database to calculate apparent true thickness.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Figure A-2 illustrates Highfield's Muga property showing the current JORC Mineral Resource footprint.

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. - Detailed exploration drilling results from individual holes appear in Highfield's 1 May 2014 ASX release. Updated assay results are presented in subsequent news ASX news releases here and previous Highfield ASX releases, dated 01 May 2014, 12 May 2014, 05 June 2014, 05 September 2014, 24 October 2014, 28 October 2014, and 29 May 2015.
Other substantive exploration data	- 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. - A 2D high-resolution seismic survey was run for POSUSA in August–October 1988, by CGG over most of what is now the project area. This consisted of 9 lines totalling 55km (2012). An additional 2D seismic was run at a later date (unknown) increasing the total available seismic to 16 lines, totalling 87.3km (2013). - RPS of Calgary, Alberta, Canada completed a re-interpretation of the 2D historical seismic lines and profiles on behalf of Highfield. The re-interpretation program was designed to review the overall accuracy of the historical data in terms of good correlation to drill hole data and geological intersections, as well as identify any sub-surface structures that may adversely affect the salt-bearing strata within the project area. A total of 16 lines were reviewed and were tied to wells with historical wireline data from the 2D seismic RPS. The paper copies of the seismic were digitized as the original tapes were unavailable. - RPS interpreted that there is no indication of widespread salt removal due to faulting or dissolution. Deep structural features are noted across the project area, and only poor quality seismic data exist over these features. A large-scale structural high is present between the Javier and Los Pintanos areas, separating them geologically. - The CPs initially used these structural data but the historical map is modified and corrected to reflect updated drill hole information. The property is fairly densely drilled and the drill holes form the basis of the updated structure map. - Two surfaces are defined in the current geologic/computer model: 1) the base of the salt and 2) the top of the Pamplona Marls. The potash-bearing zones lack any velocity/density contrasts within the salt, so it is not possible to detect potash or map the structure of the zone directly. Seismic interpretation does not extend to the northwest part of the Basin. Recent drilling has shown the seismic interpretation of structure to be generally unreliable. The base of salt surface was developed from known outcrops and drill hole intercepts for the purposes of resource modelling. Discrete features, including faults, are implied in some locations by the drill hole data, but are vague and indiscernible in the seismic record.

Further work

- The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).
- Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.
- The Muga exploration drilling program is complete and it is likely that only one more exploration holes will be drilled in Q4 2015 as part of the Company's geotechnical evaluation drilling program. A regional Transient Electromagnetic Sounding (TEM) geophysical and gravimetric survey program was conducted in the Goyo area to define the continuity of the salt package. International Geophysical Technology, SL (IGT) has prepared a report which is being evaluated for possible expansion of the exploration program to the south and east.. Data resolution may be limited to a depth range of 1,000m which would limit the usefulness in the deeper parts of the Basin. The survey area has been extended to an area in the southwest Goyo PI to test for basin extension. This work is ongoing.

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	- Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. - Data validation procedures used.	- Published assays from historical holes and associated footages and hole coordinates were manually entered into spreadsheets for modelling. Entries were systematically checked against the original publications to ensure accuracy. - Composite values and hole depths/coordinates in the Strat3D geologic block model were visually compared (on screen) with values in the database values for accuracy. - Block model grade and thickness results were compared with the drill hole database to ensure a realistic representation of the composites in the vicinity of drill holes. - In modern holes, duplicate and check assay samples were prepared for select intervals in each potash cycle. Duplicate cores were quartered and sent to ALS for analysis. ALS incorporated blank, repeat, and potash standard samples in the testing protocol. Check samples were sent to a second qualified laboratory to verify results. ALS maintains its own internal procedure and chain of custody to high industry standards. There was good agreement in the duplicates. - ALS is a laboratory of international repute for the analysis of potash. ALS maintains its own QC program. QC measures, and data verification procedures applied, include the preparation and analysis of standards, duplicates, and blanks. - Check samples were sent to SRC in Saskatoon, Canada, an accredited lab, and run with the same procedure as SRC and also showed good agreement.
Site visits	- Comment on any site visits undertaken by the Competent Person and the outcome of those visits. - If no site visits have been undertaken indicate why this is the case.	The Competent Persons are based in Spain and have been to site a sufficient number of times to have the requisite confidence with respect to the geology and QA / QC procedures.

Criteria	JORC Code explanation	Commentary
Geological interpretation	- Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit - Nature of the data used and of any assumptions made. - The effect, if any, of alternative interpretations on Mineral Resource estimation. - The use of geology in guiding and controlling Mineral Resource estimation. - The factors affecting continuity both of grade and geology.	- The Mineral Resource is bound to the northwest by the evaporite outcrop or subcrop at surface. No potash resource is claimed 200m downdip of the outcrop to account for evaporite dissolution at surface. The resource estimate is constrained to Inferred only within 200m and 400m of outcrop because of uncertainty regarding the limit of the dissolution front. - To the northeast and east, the resource bound by a non-deposition limit defined by holes J14-11, J13-02, J14-03, J13-11, and J14-08. Potash mineralisation is known to persist into Pintano beyond the structural saddle separating it from Muga. - To the south, the Mineral Resource is bound by the plunging La Magdalena anticline. Drilling suggests that the strata plunge abruptly along the anticline in the vicinity of holes Javier-2 and J13-14. - Potash mineralisation is further limited in the vicinity of the Molinar, Undues de Lerda, and J14-04D holes which are interpreted as a localized depositional high void of significant potash. The resource is constrained to Inferred only in the vicinity of the La Magdalena anticline to account for uncertainty regarding potash deposition and structural disturbance of the evaporite. - The Mineral Resource remains open to the west into the Vipasca permit area at increasing depth. - Grade parameters were composited as length-weighted averages of the individual assays over a continuous bed thickness. In most instances, top and bottom bed contacts are gradational, introducing some trade-off between grade and thickness. Contacts were selected to maximize thickness while maintaining a composite grade as close as possible to 12.0% K₂O-in-sylvinite-m with a true thickness equal to greater than 1.5m. Depending upon the vertical grade distribution, bed thicknesses less than 1.5m and composite grades less than 8.0% K₂O were required for geologic modelling in some instances. - Structural dip was calculated from the base-of-salt surface constructed from seismic, outcrop, and drill hole data. Dips in individual beds were adjusted locally

by stacking the variable-thickness interburden and potash beds above the base-of-salt surface.

- Drill hole and seismic indicate generally predictable bed continuity across the property, nonetheless variation in potash thickness, grade, and mineralogy between drill holes can be expected. Faults, folds, and other structural disturbances can sterilise resource locally. Potash quality can be affected by varying depositional environments or structure, including depositional highs, syngenetic faulting, basement carbonate mounds, algal reefs, post-depositional gypsum dewatering, groundwater dissolution along fault conduits, and by other complex features.
- The radii-of-influence (ROI) used for the Mineral Resource classification reflect the interpreted degree of predictability (or conversely, variability) within the deposit. Resource classifications for the deposit are stated as follows:
 - Measured Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 500m along strike and 250m across strike centred on an exploration core hole with assays, except where otherwise limited by geologic boundaries.
 - Indicated Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 1,500m along strike and 750m across strike centred on an exploration core hole with assays (excluding Resources included in the Measured category), except where otherwise limited by geologic boundaries.
 - Inferred Resource—Potash meeting cutoff criteria located within an ellipse with boundaries 2,000m along strike and 1,000m centred on an exploration core hole with assays (excluding Resources included in the Measured and Indicated categories), except where otherwise limited by geologic boundaries.
- Classification areas for the Mineral Resource are shown in Figures [A-4 through A-9].

Dimensions	- The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource. - The Mineral Resource occurs in potash beds P0, PA, PB, P1, P2, and P4 over an area spanning approximately 25 km². - The Mineral Resource ranges in depth between 100m and 1,500m deep. (MgCl₂ and insolubles) were modelled with the block model and show a degree of variability similar to K₂O grade. - Halite (NaCl) content was computed as the remainder after modelling the sylvite, carnallite, and insolubles fractions.
Estimation and modelling techniques	- The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. - The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. - The assumptions made regarding recovery of by-products. - Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). - In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. - Any assumptions behind modelling of selective mining units. - Any assumptions about correlation between variables. - The Mineral Resource was quantitatively estimated using a computer 3D gridded-seam geologic (block) model constructed with Datamine Strat3D v2.2.75.0 and Studio 3.24.73.0 software. - Data utilized in the model include historic and modern drill hole logs and assays, historic and modern interpretations of 2D seismic surveys, surface topography in the form of a digital elevation model (DEM), permit boundary lines, historic resource analysis, and historic geological surface mapping. - Grade parameters used in the block model were composited as length-weighted averages of the individual assays over a continuous bed thickness - No drill holes or drill hole data were excluded from the model. No assay or composite outliers were identified, and none were excluded, cut, or capped in the model. - Bed thicknesses were corrected to true thicknesses for modelling according to local dip and downhole deviation survey data. Six historic holes lacking deviation surveys (Javier-2, Javier-3, Nogueras, Molinar, Undues de Lerda, and Vistana) were assumed vertical. - Block true thicknesses and grade parameters (K₂O, MgCl₂, insoluble content) were interpolated/extrapolated utilizing an inverse distance cubed (ID3) model. An ID exponent of 3.0, instead of a lower value such as 2.0, was selected to enhance local variability in the model consistent with the variability evident in the drill holes. - The potash beds of interest were gridded into single layers of 50m-square blocks of variable vertical thickness representing the local thickness of the respective potash bed.

Criteria	JORC Code explanation	Commentary
	• Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• Block estimation was conducted using an anisotropic elliptical search radius (limiting search distance) with a major axis of 4,000m oriented at an azimuth of 120 degrees, and a minor axis of 2,000m perpendicular to the major axis. • Anisotropic distance scaling was applied such that sample weighting in the minor axis direction was scaled by the ratio of the axis lengths, i.e., samples were given half the weight in the minor axis direction versus the major axis direction for the same separation distance. • Sampling was limited to the 15 closest data points (drill holes) within the search ellipse. The anisotropic model showed a subtle difference compared to an isotropic model. The anisotropic model is thought to better represent geologic interpretation. • The ID3 model was checked previously by AAI against other modelling methods. Ordinary kriging was conducted utilizing semivariogram models developed for bed true thickness and the primary grade parameters. Ordinary kriging yielded a similar estimate to ID3 (2% less total tonnes), however ID3 better match the consensus of geologic interpretation. In addition, Inverse distance to the 1.0 and 2.0 power (ID and ID2) models compared favourably with the ID3 model. Nearest neighbour modelling was found to over- predict the resource. • Comparative modelling produced expected results, thus supporting the reasonableness of the ID3 model.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated using a density of 2.12 g/cm³ based on the results obtained in more than 38 samples in the laboratory analyzed by picnometer method and water displacement method each. Tonnages are reported on a dry weight basis. • The resource comprises both sylvinite and carnallite mineralization. • Sylvinite is a mechanical mixture of halite (NaCl) and sylvite (KCl) typically with inclusions of insolubles (typically clays) and limited carnallite (KCl·MgCl₂·6H₂O). • Bed PA is predominantly carnallitic, while the remaining beds are predominantly sylvinitic. • Bed P0 contains occasional pods of high carnallite content.

Criteria	JORC Code explanation	Commentary
Cutoff parameters	The basis of the adopted cutoff grade(s) or quality parameters applied.	- The MRE is based upon the cutoffs of 8.0% K₂O-in-sylvinite-m which support reasonable prospects for economic extraction by conventional mining methods combining the different main seams. - The grade-thickness cutoff maintains the equivalent of an 8.0% K₂O-in-sylvinite-m grade at 1.5m for thin beds (<1.5m). - No cutoff is applied for insolubles or carnallite (i.e., magnesium) content.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	- The MRE does not include any out-of-bed dilution. - The MRE is reduced by 5% for Measured and Indicated categories and 15% for Inferred categories as an allowance for areas potentially rendered unmineable due to unknown geologic features. - Preliminary high-level economic modelling justifies reasonable prospects for eventual economic extraction of the Mineral Resource. - The high-level analysis assumes a base case mining scenario with multi-seam room-and-pillar mining. - Comparable room-and-pillar mining was conducted successfully at POSUSA /Adaro's Navarra and Subiza potash mines at Sierra del Perdón under similar geologic conditions from the 1970s through 1990s. - The high-level economic analysis supports positive returns on investment over a realistic, wide range of capital and operating costs, and a trailing-5-year range of potash prices. - A positive return on investment is considered a minimum for justifying reasonable prospects for eventual economic extraction and designation as a Mineral Resource, but does not necessarily represent an economically attractive mining opportunity depending upon the desired minimum return on investment. For this reason, not all parts of the Mineral Resource are necessarily suitable for inclusion in a production target or are upgradeable to a Mineral Reserve. Detailed engineering and mine planning are required to determine which parts of a Mineral Resource are suitable for mining for a specific project. - Portions of the resource deeper than 1,200m are considered to pose a higher level of risk for conventional mining than shallower areas due to the potential for reduced resource recovery, higher cost of extraction, and geotechnical challenges. Alternative mining methods, e.g. solution mining, may be necessary

Criteria	JORC Code explanation	Commentary
<i>Metallurgical factors or assumptions</i>	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	- The preliminary high-level economic analysis supporting reasonable prospects for eventual economic extraction of the Mineral Resource assumes processing with conventional crushing and flotation. - Flotation was used successfully to process similar sylvinite mineralisation at POSUSA/Adaro's Navarra and Subiza potash mines at Sierra del Perdon from the 1970s through 1990s. - Preliminary flotation testing conducted by Geoalcali on sylvinite core from Muga supports KCl recoveries in excess of 80%, similar to the historical Navarra and Subiza potash mines and sufficient to justify reasonable prospects for eventual economic extraction. - High insolubles and high magnesium (associated with carnallite) have the potential to reduce KCl recovery during the flotation process.

Section 4 Estimation and Reporting of Ore Reserves

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

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	- Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. - Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	- The Mineral Resource estimate used as a basis for the conversion to Ore Reserve is that discussed in this document, as summarised on page [3] - The Mineral Resources are reported inclusive of the Ore Reserves
Study status	- The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves - The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered	The Company has previously completed a Definitive Feasibility Study (“DFS”). The details of this study can be found in the ASX Release titled “<i>Highfield Resources DFS Confirms High Margin, Low Capex Potential for Muga Potash Mine</i>”, dated 30 March 2015. This document relates to changes made to the DFS based on optimisation studies conducted by the Company. Material changes have been explained in this document, where necessary.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	- The Ore Reserve is based upon the cutoff of 8.0% K₂O-in-sylvinite-m which support reasonable prospects for economic extraction by conventional mining methods combining the different main seams. - The grade-thickness cutoff maintains the equivalent of an 8.0% K₂O-in-sylvinite-m grade at 1.5m for thin beds (<1.5m). - No cutoff is applied for insolubles or carnallite (i.e., magnesium) content.

**Mining
factors or
assumptions**

- The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).
- The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc
- The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling
- The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).
- The mining dilution factors used
- The mining recovery factors used.
- Any minimum mining widths used
- The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.
- The infrastructure requirements of the selected mining methods.
- The method and assumptions used in this Study to convert the MRE to the Ore Reserve are as outlined in the “Project Optimisation Initiatives” and “Mining” section of this document.
- The selected mining method of room and pillar mining via both roadheaders and continuous miners has been selected to allow the optimal mix of selectivity, productivity and flexibility.
- Mining Galleries are assumed as a minimum width of 5.5m, and with a minimum height of 4.5m, as dictated by the machinery selected. Selectivity of machinery is assumed as a minimum of 1.1m for cutting of material to be sent to the processing plant
- The block model representing the MRE described in this document has been assessed on a block-by-block basis to determine whether each block meets the cut-offs. In this process seams can be assumed to be mined separately or together. In instances where multiple seams are assumed to be mined together, the inter-bed material is either assumed to be included in the Ore Reserve where the total grade the cut-off, or discarded as waste.
- The proposed mine is determined to be economic based solely on Measured and Indicated Resources as shown in the DFS. Inferred Mineral Resources are included in the mine design but represent only 12.5% of the total MRE, representing approximately 6 years of mine life.
- As the proposed mine is located in an area with extensive first world infrastructure with low current utilisation, infrastructure requirements are considered to be covered by existing facilities. Further detail can be read in the ASX Release titled “*Highfield Resources DFS Confirms High Margin, Low Capex Potential for Muga Potash Mine*”, dated 30 March 2015.

Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications? • The Company is proposing a simple two stage crushing process, an attrition scrubbing and hydro-cyclone de-sliming followed by a simple, well understood, KCl froth flotation circuit. This process is currently used for numerous similar Ore deposits world-wide. • Highfield engaged Saskatoon based, independent specialist consultants, EngComp, to develop and supervise the completion of a series of detailed metallurgical test work programs. EngComp is a world leader in the processing of sylvinitic ores and has been involved in the design process for many plants globally. The primary objective of the program was to characterise any ores within the orebody, to evaluate each of the ore's expected metallurgical response to standard processing methods ensuring a representative sample across the ore body was obtained, as well as to obtain the design parameters necessary to develop the detailed process flow sheet and mass balance. The variable recovery rate is calculated using the following equation: $\text{Flotation Recovery} = [C + (Tx * P)] / 100$ Where: C = 73.206 Tx = Weighted Average Ore Texture per Tonne of Ore Processed P = 5.8056 This gives recovery rates ranging between 90.6% for purely banded sylvinitic ore to 79% for purely brecciated ore. The weighted average recovery, based on ore texture definition of the mine plan, is 88.3% of utilisable KCl within the ore.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. • The Company submitted its application for the environmental and mining permits in December 2014 (refer ASX announcement 11 December 2014) supported by a detailed Environmental and Social Impact Assessment ("ESIA"). The Company is committed to delivering a sustainable mining project, which benefits the local regions of Aragón and Navarra and ensures all environmental risks within the Company's control are identified and mitigation strategies are put in place to manage these risks while also delivering outstanding results for its stakeholders.

Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed. • As the proposed mine is located in an area with extensive first world infrastructure with low current utilisation, infrastructure requirements are considered to be covered by existing facilities. Further detail can be read in the ASX Release titled “<i>Highfield Resources DFS Confirms High Margin, Low Capex Potential for Muga Potash Mine</i>”, dated 30 March 2015. • The Company has a detailed plan for land acquisition where necessary and has either acquired from, or is in advanced negotiations with, all land holders
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private. • Capital costs have been calculated from a detailed capital cost plan. These costs are derived from signed agreements, detailed quotes, or estimations made by competent Highfield employees. This is discussed in more detail on pages [1 and 2] of this document. • Operating costs have been calculated from a detailed operating cost plan. These costs are derived from signed agreements, detailed quotes, or estimations made by competent Highfield employees. This is discussed in more detail on pages [1 and 2] of this document. • Potash sales price estimates were provided by independent fertiliser market consultants, Integer, in a detailed markets and pricing study. Integer provided spot potash price estimates which the Company discounted by 10%. Half of the reduction (5%) is to account for sales and marketing costs and the other half (5%) represents the current potash market dynamic where contract pricing is often discounted to spot market pricing. . Further detail can be read in the ASX Release titled “<i>Highfield Resources DFS Confirms High Margin, Low Capex Potential for Muga Potash Mine</i>”, dated 30 March 2015. To allow for comparisons between the results of the optimised project and the DFS project, the Company has elected not to change its potash price assumptions. A sensitivity analysis is available on page to allow for detailed understanding of the impact of potential changes in potash prices on the financial metrics of the Project. • A USD/EUR exchange rate of .95 was used for the DFS. No adjustment has been made to the base case prices. A sensitivity analysis is available in figures 9-11 of this document • The Company has elected to outsource its transport solution and its port handling and ship loading facilities. • There are currently no royalties payable in Spain. The Company is not currently liable for any private royalties.

Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• Head grade has been determined from a detailed mine plan constructed from the block model derived from the MRE discussed in this document. The output head grade from this mine plan is reflected in the financial model on a quarter-by-quarter basis. • Potash prices, exchange rates and transportation charges remain unchanged from the DFS. Further detail can be read in the ASX Release titled “<i>Highfield Resources DFS Confirms High Margin, Low Capex Potential for Muga Potash Mine</i>”, dated 30 March 2015.
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future • A customer and competitor analysis along with the identification of likely market windows for the product • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract	• Potash sales price estimates were provided by independent fertiliser market consultants, Integer, in a detailed markets and pricing study. Integer provided spot potash price estimates which the Company discounted by 10%. Half of the reduction (5%) is to account for sales and marketing costs and the other half (5%) represents the current potash market dynamic where contract pricing is often discounted to spot market pricing. . Further detail can be read in the ASX Release titled “<i>Highfield Resources DFS Confirms High Margin, Low Capex Potential for Muga Potash Mine</i>”, dated 30 March 2015.No adjustment has been made to the base case prices. A sensitivity analysis is available in figures 9-11 of this document
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs	• Economic inputs and sensitivities are discussed in the main body of this document.
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• Community support and social licence is detailed in the recent ASX release titled “<i>Highfield Resources Progresses Flagship Muga Potash Mine</i>” dated 19 October 2015.

Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• Not relevant except for where detailed elsewhere in this document.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• Measured Resources have been converted to Proven Reserves, with a reduction for extraction ratios (averaging 77%), and with an increase in tonnes and decrease in grade due to dilutionary material. It is noted that this dilutionary material often contains Potash below the cut-off grades. • Indicated Resources have been converted to Probably Reserves, with a reduction for extraction ratios (averaging 77%), and with an increase in tonnes and decrease in grade due to dilutionary material. It is noted that this dilutionary material often contains Potash below the cut-off grades. • No Probable Reserves have been derived from Measured Resources.
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• None

**Discussion
of relative
accuracy/
confidence**

- Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.
- The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
- Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.
- It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.
- The Ore Reserve estimate is based on a detailed block model and mine plan that demonstrates very robust project economics. The block model is based on a total of 36 drill holes with relatively dense drill spacing that demonstrates strong correlation of all main potash seams across the basin. Given this, there is considered to be an appropriate level of confidence to classify a Proven and Probable Ore Reserve under the JORC Code.