ASX Release
10 October 2019

HIGHFIELD RESOURCE COMPLETES ENCOURAGING EXPLORATION DRILL HOLES AT VIPASCA PERMIT AREA

Highlights

- **Recent drillholes at the Vipasca permit area have confirmed the presence of potash at good grades and potentially mineable depths.**
- **V18-02 has confirmed the continuity of the Vipasca deposit and that the mineralisation remains open towards the West. Specifically, V18-02 intersected a total of 37 metres of potash mineralisation including:**
    - **4.8 metres at an average grade of 15.25% K_2O from 996 metres;**
    - **2.4 metres at an average grade of 14.18% K_2O from 1119 metres; and**
    - **8.1 metres at an average grade of 12.95% K_2O from 1139 metres.**
- **V18-01 intersected a total of 1.8 metres of potash mineralization at 9.32% K_2O, confirming the continuity of the mineralization towards the north-eastern edge of the Vipasca investigation permit.**
- **A further drillhole, V18-05, is planned between the Muga Project and the Vipasca Permit Areas with the aim of confirming the continuity of mineralisation between Vipasca and the already delineated Muga Mineral Resource.**

Highfield Resources CEO, Peter Albert said: "*the outstanding results from V18-02 are very encouraging, further reinforcing the interpretation of the geological model suggesting continuity between Muga and Vipasca. The results are so promising that we have decided to drill a further hole between Vipasca and Muga, which if positive will provide even more data for the development of a single Resource across Vipasca and Muga.*"

Overview

Highfield Resources (ASX: HFR) ("Highfield" or "the Company") is a Spanish potash developer. The Company's flagship Muga Project ("Muga" or "the Project") is targeting the relatively shallow sylvinite beds in the Muga Project area that cover about 60km[2] in the Provinces of Navarra and Aragon. Mining is planned to commence at a depth of approximately 350 metres from surface and is therefore ideal for a relatively low-cost conventional mine.

Vipasca Tenement Area

The Vipasca permit area ("Vipasca") (see Figure 3) is located adjacent to the Muga Project and covers approximately 27km[2]. The tenement is highly prospective for economic potash mineralisation, the focus in this case being the deeper, higher grade, P1 and P2 potash horizons (Figure 1).

The Muga Project Update (refer ASX release 15 October 2018 "Muga Project Update") confirmed the strategic importance of Vipasca as a potential extension of the Muga Project. In the eastern area, Vipasca comprises the north western extension of the Muga Project. The main aim of the current drilling campaign, which has been developed since the end of 2018, is to confirm and delineate the Muga ore deposit in its westernmost area. The geology at Vipasca is analogous to Muga, and the lithologies, seams and other geological features are similar to those previously defined by drilling at Muga.

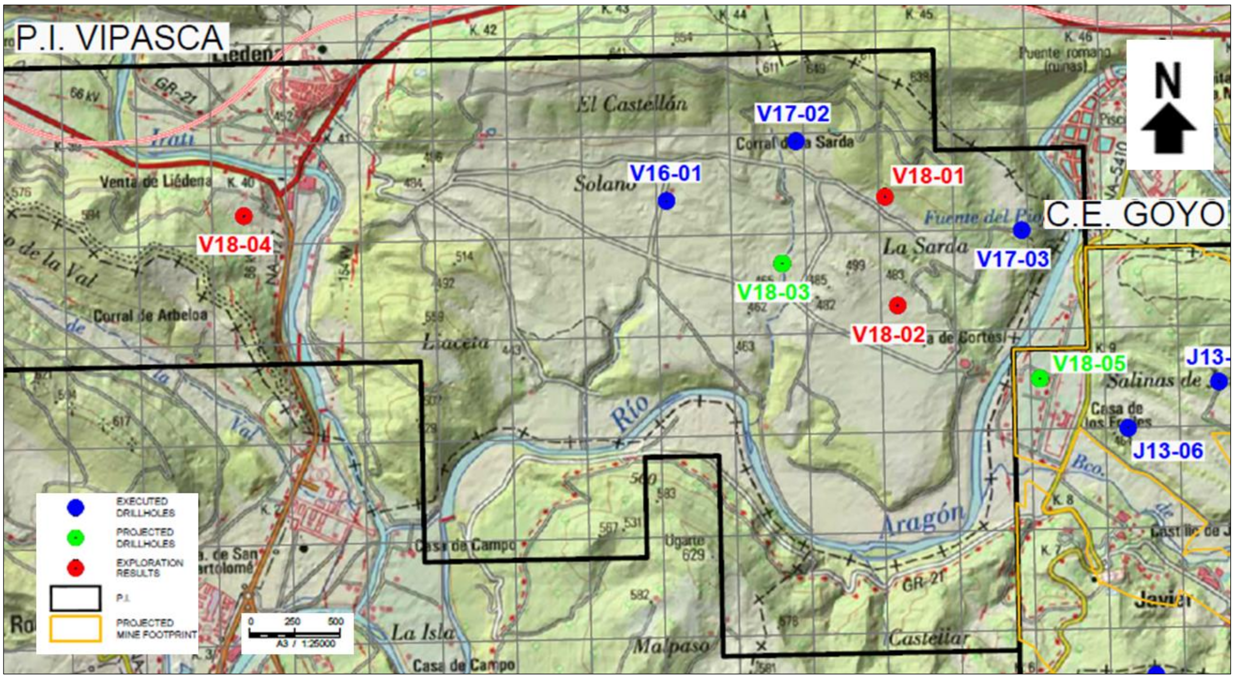

Figure 1: Location of Highfield's Vipasca drill holes.

Since the Company last reported its exploration results three exploration drillholes, V18-01 and V18-02 and V18-04, have been completed, logged, sampled, and analysed (see summarized results in Tables 2 and 3). A fourth drillhole, V18-03, has also recently been completed and will be reported in due course.

In V18-01 the Upper and Intermediate Potash intervals appear but are only a few centimetres thick and have a low K_2O content. Only the Lower Potash interval is present in the northeast limit of the basin. V18-01 intersected the whole evaporite unit reaching the basal Anhydrite and the Pamplona Marls Unit situated below the evaporite basin.

V18-02 intersected the complete evaporitic sequence, showing significant grades in the Upper, the Intermediate and the Lower Potash Intervals. Of particular note are the 4.8 metre thickness at 15.25% K_2O in the Upper Potash Interval, and more than 8 metre thickness at 12.95% K_2O in the Lower Potash Interval. At the base of the drillhole, V18-02 re-intersected the Hanging wall salt unit. The presence of a thrust has been identified at depth and this tectonic structure causes the repetition of the evaporitic sequence which leaves the deposit open at depth. Further geological information can be found in Sections 1 and 2 of the JORC Table attached in this release.

V18-04 was intended to identify the western area of Vipasca. It was drilled to a depth of 859m, and stopped prematurely as the lithologies intersected corresponded with the shallower units analogous to the ones in Muga. Although previous historical seismic information showed indications of the presence of the evaporite unit at shallower depths, it is likely that the evaporite units are present at depths not amenable to conventional underground mining.

Table 1 provides the results from drill hole V18-01. The Lower Potash Interval intersection yielded an apparent thickness of 1.8 m with a mean grade of 9.32% K_2O.

Table 2 provides the results from drill hole V18-02. The Upper Potash Interval intersection had a total apparent thickness of 15.6 m with a mean grade of 7.26% K_2O. Selected intervals yielded apparent thicknesses and grades of 4.8 m at 15.25% K_2O and 2.1 m at 12.32% K_2O. The Middle Potash Interval had a total apparent thickness of 13.3 m with a mean grade of 7.57% K_2O. Selected intervals yielded apparent thicknesses and grades of 2.4 m at 14.18% K_2O and 2.7 m at 10.79% K_2O. The Lower Potash Interval had a total apparent thickness of 8.1 m with a mean grade of 12.95% K_2O. A selected interval yielded an apparent thickness of 5.4 m at a grade of 17.27% K_2O.

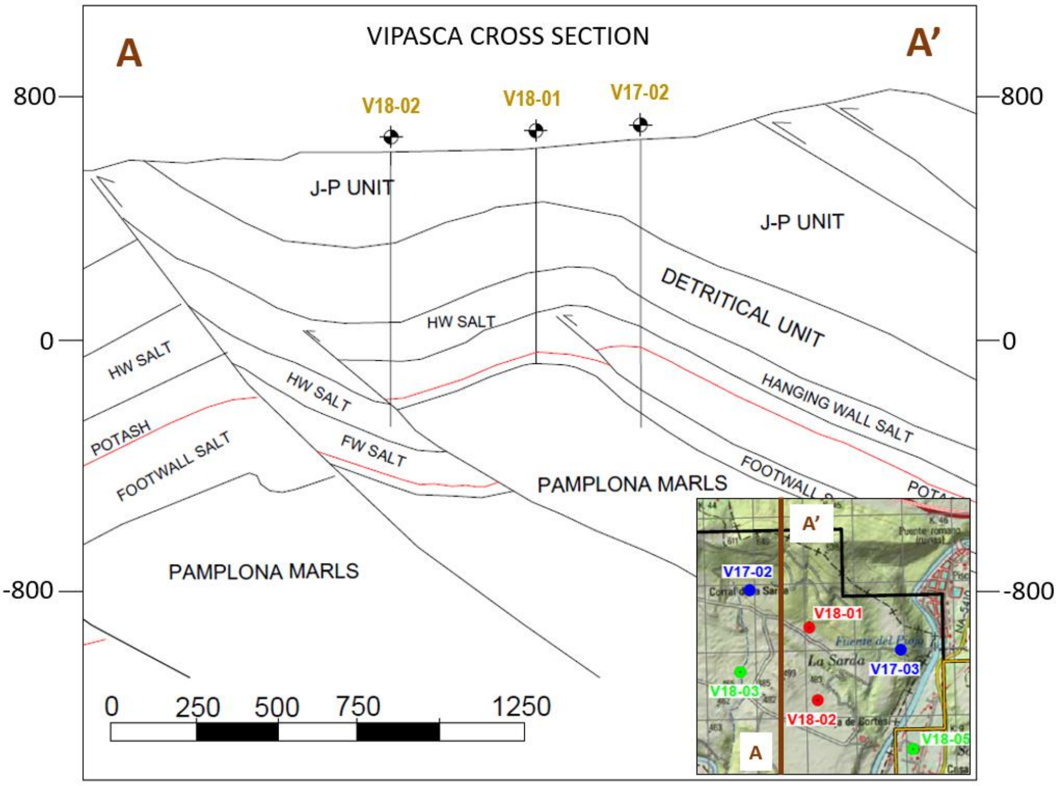

Figure 2: Cross-section showing evaporite seam (brown) correlation between projection of drill holes V17-02, V18-01 and V18-02.

Sierra del Perdón Tenement Area

Highfield's 100% owned Sierra del Perdón tenement area ("SdP") comprising the three permits of Quiñones, Adiós and Ampliación de Adiós (see Figure 3) is located south east of Pamplona and covers approximately 120km^2. SdP is a brownfield target which previously hosted two potash mines operating from the 1960s until the late 1990s producing nearly 500,000 tonnes of potash per annum. There is potential for potash exploitation in new, unmined areas in the SdP area.

The Company was advised in the fourth quarter of 2018 that the second three year extension application for the Adiós and Quiñones permits had been rejected by the mining department of the Government of Navarra. The Company has obtained legal advice and is progressing an appeal process with regards to this decision. It remains confident of a positive resolution.

Pintanos Tenement Area

Highfield´s 100% owned Pintanos Tenement Area (**Figure 3**) comprising the three permits of Molineras 1, Molineras 2 and Puntarrón also abuts the Muga Project and covers an area of some 65km^2. The mineralisation is slightly deeper than at Muga and starts at a depth of around 500 metres. The Company is building on potash exploration information from seven drill holes and ten seismic profiles completed in the late 1980s.

The Company has re-initiated the application process for the drilling permit Molineras 2 following the conclusion of the public consultation period. The Company has responded to all comments received during the consultation period and is now waiting for the award of the permit.

Izaga Tenement Area

The Company's 100% owned Izaga tenement area (see Figure 3) covers an area of more than 57km^2, where historic drill holes and 2D seismic show a relatively continuous evaporite with drill hole intersects containing potash.

Previously the Izaga tenement area comprised the three permits of Girardi, Palero and Osquia. In February 2019 the Company relinquished the less prospective areas of Girardi to the north of the Osquia permit and Palero to the west of the Osquia permit in order to focus on the more prospective Osquia permit.

During the quarter the company started drilling the Osquia permit. Once the drill hole is finished and assay analysis completed the results will be released to the market.

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About Highfield Resources

Highfield Resources is an ASX listed potash company with four 100% owned tenement areas located in Spain.

Highfield's Muga-Vipasca, Pintanos, Izaga and Sierra del Perdón projects are located in the potash producing Ebro Basin in Northern Spain and together cover a project area of more than 335km[2].

Following the granting of a positive environmental permit Highfield is now focusing on securing the Mining Concession and the construction permits necessary to take the Project into the construction phase.

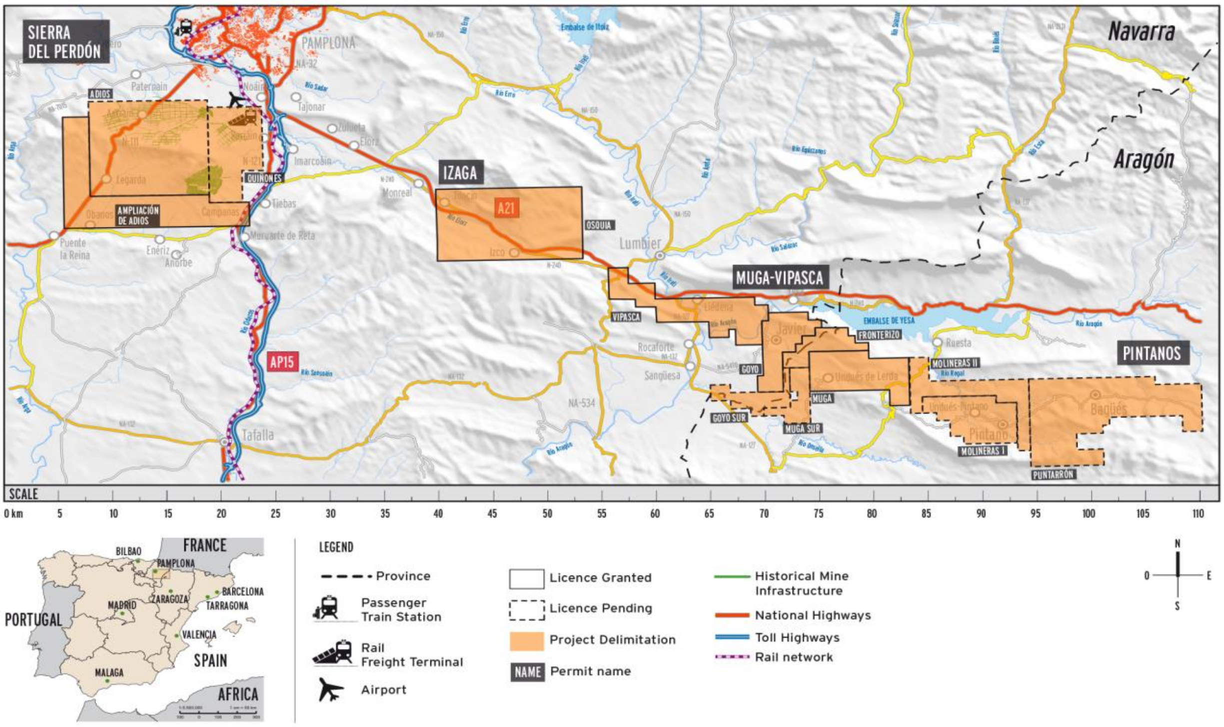

Figure 3: Location of Highfield's Muga-Vipasca, Izaga and Sierra del Perdón Projects in Northern Spain.

Competent Persons Statement

This ASX release was prepared by Mr. Peter Albert, Managing Director of Highfield Resources. The information in this document that relates to the reporting of the Exploration Results for, V18-01 and V18-02 is based on information prepared by Highfield Resources.

The exploration results as presented in Tables 1 and 2 Summary of Drill holes V18-01 and V18-02, and the supporting information presented in JORC Table 1 has been reviewed by Ms Anna Fardell, a registered member of the Australian Institute of Geoscientists (6555). Ms Fardell is a full-time employee of SRK Consulting (UK) Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Ms Fardell has reviewed this release and consents to the inclusion in the release of the matters based on his information in the form and context in which this appears.

Table 1: Summary of Drill hole V18-01

DDH V18-01 POTASH GRADES (ICP analysis)

		K_2O(%)	MgO(%)	Na_2O(%)	Cl(%)	SO_4(%)	CaO(%)	Water Insolubles
Lower Potash Interval	**Average**	**9.32**	**0.16**	**30.80**	**0.84**	**4.36**	**2.91**	**19.58**
From 740 to 741.8	max. Value	12.47	0.20	35.72	1.08	5.21	3.33	30.10
Thickness: 1.8 m	min. Value	7.31	0.07	27.23	0.55	3.27	2.43	12.00
Lower Potash Interval (Selected Interval)	**Average**	**9.63**	**0.18**	**29.82**	**0.89**	**4.38**	**2.92**	**20.34**
From 740 to 741.5	max. Value	12.47	0.20	32.62	1.08	5.21	3.33	30.10
Thickness: 1.5 m	min. Value	7.31	0.13	27.23	0.55	3.27	2.43	12.00

Notes:

1. Chemical analysis conducted by ALS Global (Galway, Ireland)
2. ICP (inductively coupled plasma) quantitative method
3. Intervals are cored intervals (versus true thickness intervals). Conversion to true thickness pending updated structural model.
   Given the shallow dipping nature of the mineralisation the true thickness correction should not have a material impact on the thicknesses reported.
4. Composite grades calculated as length-weighted averages

Table 2: Summary of Drill hole V18-02

DDH V18-02 POTASH GRADES (ICP analysis)

Zone	Interval		K_2O(%)	MgO(%)	Na_2O(%)	Cl(%)	SO_4(%)	CaO(%)	Water Insolubles
Upper Potash Interval	*Upper Potash Interval*	**Average**	**7.26**	**0.12**	**30.10**	**40.82**	**4.67**	**2.97**	**26.00**
	From 996.5 to 1012.1	max. Value	16.98	0.20	39.09	49.80	7.49	4.67	37.50
	Thickness: 15.6 m	min. Value	2.12	0.03	23.25	34.00	2.79	1.75	9.00
	Upper Potash Interval (Upper Selected interval)	**Average**	**15.25**	**0.13**	**28.51**	**43.41**	**5.32**	**3.41**	17.67
	From 996.5 to 1001.3	max. Value	29.87	0.18	34.91	49.40	7.19	4.59	27.30
	Thickness: 4.8 m	min. Value	2.23	0.07	18.94	39.50	3.33	2.13	11.40
	Upper Potash Interval (Lower Selected interval)	**Average**	**12.32**	**0.15**	**28.13**	**41.77**	**6.37**	**3.99**	**22.33**
	From 1002.2 to 1004.3	max. Value	16.98	0.20	31.68	44.80	7.49	4.67	28.10
	Thickness: 2.1 m	min. Value	9.28	0.10	23.25	38.50	4.67	2.99	17.50
Middle Potash Interval	*Middle Potash Interval*	**Average**	**7.57**	**0.27**	**29.58**	**41.51**	**5.72**	**3.76**	**23.24**
	From 1119 to 1132.3	max. Value	27.83	0.50	43.00	53.40	8.54	5.30	43.00
	Thickness: 13.3 m	min. Value	2.24	0.10	18.20	30.20	2.79	2.01	7.60
	Middle Potash Interval (Upper Selected Interval)	**Average**	**14.18**	**0.10**	**29.82**	**46.61**	**6.46**	**3.88**	**14.18**
	From 1119 to 1121.4	max. Value	27.83	0.20	36.40	50.50	8.87	3.88	26.30
	Thickness: 2.4 m	min. Value	6.81	0.05	22.44	38.90	4.10	5.46	7.50
	Middle Potash Interval (Lower Selected Interval)	**Average**	**10.79**	**0.28**	**28.35**	**41.13**	**5.53**	**3.66**	**22.94**
	From 1128.4 to 1131.1	max. Value	18.85	0.50	35.45	46.30	8.54	5.30	30.70
	Thickness: 2.7 m	min. Value	2.24	0.17	18.20	34.70	2.79	2.01	18.20
Lower Potash Interval	*Lower Potash Interval*	**Average**	**12.95**	**0.16**	**30.62**	**45.68**	**4.24**	**2.66**	**18.00**
	From 1139.2 to 1147.3	max. Value	35.42	0.33	36.94	58.10	8.57	5.23	39.00
	Thickness: 8.1 m	min. Value	2.76	0.03	19.48	36.10	2.25	1.11	5.60
	Lower Potash Interval (Selected Interval)	**Average**	**17.27**	**0.11**	**30.56**	**48.75**	**4.63**	**2.73**	**11.66**
	From 1139.2 to 1144.6	max. Value	35.42	0.25	36.94	58.10	8.57	5.23	26.40
	Thickness: 5.4 m	min. Value	6.50	0.03	19.48	40.40	2.25	1.11	5.60

Notes:

1. Chemical analysis conducted by ALS Global (Galway, Ireland)
2. ICP (inductively coupled plasma) quantitative method
3. Intervals are cored intervals (versus true thickness intervals). Conversion to true thickness pending updated structural model.
   Given the shallow dipping nature of the mineralisation the true thickness correction should not have a material impact on the thicknesses reported.
4. Composite grades calculated as length-weighted averages

Section 1 Sampling Techniques and Data – Vipasca

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.*	• Samples were obtained by diamond core drilling through the potash unit. The full potash seam was sampled where it was intersected. • The core was sampled from lithological boundaries at 0.3 metre downhole intervals.
	• *Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.*	• HQ diameter core was drilled through the potash units. This diameter meant the drilling could continue and access the potash unit with good core recovery and obtain representative minimum sample volumes. • The core recovery through the potash units is very high, with every intersection greater than 97%. This ensures the samples provide the maximum volume for the drilling technique and have no representative bias due to lack of material or large differences in sample size, relative to the sampled lengths. • Drill hole locations were surveyed using hand held detailed GPS, and by a professional surveyor prior to commencement and post the completion of drilling.
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (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.*	• Drilling was complete using a saturated brine to limit core loss as result of water based fluid contact with the salt horizons.
Drilling techniques	• *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.).*	• V18-01 was diamond drilled vertically from surface to a depth of 763 m. It was drilled with PQ diameter from surface to 420 m, then at HQ from 420m to the end of hole (763 m). • V18-02 was diamond drilled vertically from surface to a depth of 1190 m. It was drilled with PQ diameter from surface to 415 m, then with HQ from 415 m to the end of hole (1190 m).
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• In every drillhole the core was measured by the driller and checked by the geologists at the drill rig after every drill run. This measurement of core recovery and other basic geotechnical measurements such as Rock Quality Designation (RQD) were recorded into an excel logging sheet.
	• *Measures taken to maximise sample recovery and ensure the representative nature of the samples*	• The drilling was completed through the potash horizons at HQ as drilling conditions were difficult and this was deemed the best way to maximise core recovery. • Drilling through the evaporite horizon was conducted with a saturated brine drilling mud, which aims to minimise dissolution due to the use of water-based drilling fluids.
	• *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.*	• The core recovery is over 97% through the potash units which is considered by the CP to be an acceptable level for the reporting of representative exploration results in this case. • No bias between grade and core recovery has been demonstrated within these results.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a*	• Core has been logged for lithology, alteration, mineral assemblage and structure.

Criteria	JORC Code explanation	Commentary
	level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	• Geotechnical parameters logged: length recovery, RQD, bed degree, fault/fracture (length, fill and degree).
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography*	• Logging is qualitative in nature. All core was photographed and remaining half core shrink wrapped for preservation.
	• *The total length and percentage of the relevant intersections logged.*	• The total core length of 763 m for V18-01 metres was logged and photographed. Core was sampled at 0.3 metre intervals from 619.10 m to 619.70 m; 710 m to 710.30 m; 710.80 m to 711.10 m; 739.70 m to 741.8 m; a length of 3.3 m. This section represents the whole of the prospective potash unit. This length totalled 11 samples. • The total core length of 1190 m for V18-02 metres was logged and photographed. Core was sampled mostly at 0.3 metre intervals (few samples with sylvinite traces were sampled at 0.1-0.2 metre intervals) from 987.4 m to 1012.4 m; 1019.8 m to 1020.3 m; 1029.9 m to 1032.9 m; 1034 m to 1034.50 m; 1049.85 m to 1050.05 m; 1108.8 m to 1109.1 m ; 1114.9 m to 1116.1 m; 1118.7 m to 1132.9 m ; 1137.4 m to 1158.9 m down the hole, a length of 64.2 m. This section represents the whole of the prospective potash unit. This length totalled 217 samples.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• Core is sawn using hydraulic oil as the lubricating agent to minimise core loss. Half the core was retained and shrink wrapped to ensure it is well preserved should further analysis be required. • Half core samples were bagged and secured with plastic ties for shipping to ALS Seville for sample preparation.
	• *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*	• Not applicable.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• All samples were sent to ALS in Seville for sample preparation. The whole sample was dried and crushed to 70% passing -2 mm then a 250 g fraction was pulverised to 85% passing -75 µm.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.*	• Sawing of core was conducted using oil-based lubricant to minimise dissolution.
	• *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.*	• One CRM was submitted with the samples for V18-01, one additional control sample derived from coarse reject from a previous drill hole, and one certified blank. A medium grade CRM (10.53% K^+) was submitted to cover the expected range of mineralisation in the drill hole. Additionally, two crushed duplicates will be resubmitted to ALS Loughrea, and one crushed duplicate will be sent to SRC Canada. • Twelve CRMs were submitted with the samples for V18-02, eleven additional control samples derived from half core from the same drillhole interval, 987.7 m to 988 m; 1005.8 m to 1006.1 m; 1019.8 m to 1020.05 m; 1030.2 m to 1030.50 m; 1115.2 m to 1115.5 m; 1118.7 m to 1119 m; 1119 m to 1119.3 m; 1123.2 m to 1123.4 m; 1124.6 m to 1124.9 m; 1138 m to 1138.3m; 1155.4m to 1155.7 m from same drill hole and five certified blanks. Five low grade, four medium grade and three high grade CRM (5.358%, 10.53% and 22.00% K^+) were submitted to cover the expected range of mineralisation in the drillhole. Additionally, twenty-two crushed duplicates will be resubmitted to ALS Loughrea and twenty-two crushed duplicates were sent to SRC Canada. • The results from the duplicates have not yet been received by the company from the laboratory and therefore no comment on repeatability can be made at this time.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Sample sizes are considered appropriate for the mineralisation type and lithologies sampled. In addition, the quality control samples provide a duplicate check on 4.82% of the sample population which when combined with the other crushed duplicate samples represent a 22.80%, and when combined with the total control samples represents a 32.44% check on the total. This is a good number of samples to check the sampling and analysis and ensures any bias will be highlighted by the quality control checks.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• All samples were analysed by XRF (for metals and other major constituents), ICP-OES (soluble elements) and gravimetric analysis (insoluble residue) at ALS in Loughrea.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• No handheld devices were used to analyse the grade or mineralogical composition of the samples for the purposes of this release.
	• *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.*	• Both Highfield and ALS maintained independent QA/QC programs including the insertion of Certified Reference Material (CRM), duplicates and blanks. • An additional 5% check samples will be submitted in the following weeks to the “umpire” laboratory – Saskatoon Research Centre (SRC) in Canada. This will provide an additional check on the results from these drill holes. • All CRMs showed deviation on key values outside of three deviations from their certified values. They broadly correlated with the values the tight deviations and acceptable values on other control samples do not warrant reanalysis. • Duplicates showed acceptable levels of internal agreement in all key elements, K, Mg, Ca, Na, S and insolubles. • The accuracy and precision of the CRM, and blanks are in the opinion of the CP within acceptable levels for reporting of Exploration Results. The results for the duplicates cannot be commented upon as they are pending at the time of the release.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• ALS Loughrea analysed all check samples using both the ICP-OES methodology and XRF. These methods showed acceptable levels of agreement to support the precision of the testing program for blanks, CRMs and duplicates.
	• *The use of twinned holes.*	• No twin holes have been drilled to date
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• Highfield receives all analysis data directly from the laboratories in electronic format (xls or csv). This is transferred to a master database and is monitored for QA/QC purposes. • SRK checked the transcription from the original laboratory certificate pdfs and found no errors.
	• *Discuss any adjustment to assay data.*	• No adjustments have been made to the analytical results received from the laboratory
Location of data points	• *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.*	• All new locations were surveyed before and after drilling by a licenced surveyor using a differential GPS.
	• *Specification of the grid system used.*	• Grid systems used were European Datum 50, updated to European Terrestrial Reference System 1989 (ETRS89) for compatibility with modern survey information.
	• *Quality and adequacy of topographic control.*	• All new locations were surveyed before and after drilling by a licenced surveyor.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• The results reported are within 800 metres of previous explorations drillholes in Vipasca, and 1500 metres from Muga exploration drillholes. One additional drillhole (V18-05) will be developed in the following weeks in order to confirm and depict the extension of the ore deposit from Muga to Vipasca.
	• *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.*	• Not applicable.
	• *Whether sample compositing has been applied.*	• Samples have been composited over the thickness of the identified potash bed for reporting of exploration results.
Orientation of data in relation to	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and*	• The general strike of geology in the basin is NW-SE orientation.

Criteria	JORC Code explanation	Commentary
geological structure	*the extent to which this is known, considering the deposit type.*	• The drill holes were orientated vertically, broadly perpendicular to the very shallow dipping main potash seam to ensure the true potash seam thickness was intersected.
	• *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.*	• Not applicable.
Sample security	• *The measures taken to ensure sample security.*	• Chain of custody is managed by Highfield. The core is boxed at the rig and transported to a secure facility for logging, photographing and cutting. Following this, samples were bagged and secured with zip locks before they are shipped to ALS laboratories in Seville.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• SRK has completed a review of the drilling, sampling and analytical techniques used and the manner in which the exploration results have been reported and has concluded that these techniques are appropriate to the mineralisation being explored and that the resulting data has been reported in an unbiassed manner.

Section 2 Reporting of Exploration Results – Vipasca

(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 Vipasca tenement was issued as an Investigation Permit (PI) by the Spanish authorities under reference number of 35900 on 11/12/14 and extended on 09/04/18. The permit is due to be renewed for a further 3 years from December 2020. The permit covers a total area of 27.30 Km^2 and the entire Vipasca extension of Muga deposit. • Geoalcali S.L.U., a wholly owned subsidiary of Highfield Resources Limited, is the permit holder. There are no Joint Ventures, partnerships, royalties or other commitments relating to the Investigation Permit.
	• 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.	• Highfield Resources has completed a legal review which concluded its tenure to be secure.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• 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 which subsequently also confirmed the presence of up four potentially economic potash mining horizons with a combined total thickness of between 2.0 and 8.0m (Stirrett and Mayes 2013). The potash horizons in the area were identified over an area of approximately 160 square kilometers (km^2) and at depths of approximately 500m below 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 Navarre region were not located until later, in 1927, through comparative exploration programmes to the deposits found at Catalonia undertaken largely by E.N. Adaro in 1989 and1990 (Stirrett and Mayes 2013). 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 K_2O. A thick carnallite horizon overlies the sylvinite, so, in 1970, a refinery with the capacity for 300,000 tpy was built to accommodate 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 Mt of sylvinite were extracted with an average K_2O grade of 11.7% (Stirrett and Mayes 2013). The operations in Navarre were closed in the late 1990s. • A 2D high-resolution seismic survey was run for POSUSA in August–October 1988, by CGG over eastern Vipasca area, most of what is now Muga Mine project area. This consisted of 9 lines totalling 55 km (Geoalcali, 2012). An additional 2D seismic was run at a later date (unknown) increasing the total available seismic to 16 lines, totalling 87.3 km (RPS 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 programme was designed to review the overall accuracy of the historical data in terms of good correlation to drillhole 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. An historical drilling programme completed in 1989–1990 was outlined in detail by E.N. Adaro (1989–1991) over the eastern edge of Vipasca. 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-Pintanos area.
Geology	• Deposit type, geological setting and style of mineralisation.	• The geological description below is taken from the Highfield Resources ASX Release dated 24 February 2015 and details the geology of the Javier Pintano Basin in which Vipasca extension in settled. • The Upper Eocene potash deposits occur in the sub-basins of Navarre and Aragón provinces within the larger Ebro Basin (Figure A-1). The Navarrese sub-basins

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		include Sierra del Perdón, Muga-Vipasca (Javier) and adjoining Pintano deposits. This potash deposit contains a 100-m-thick Upper Eocene succession of alternating claystone and evaporites (anhydrite, halite, and sylvite). 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 terrigenous influence. Open marine conditions existed in the Eocene epoch progressing to a more restricted environment dominated by evaporation and the deposition of marl, gypsum, halite, and potassium minerals. Later, tectonism formed narrow anticlines and broad synclines, which created outcrops of the evaporite sequence. 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. • 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 from the northwest into the basin are indicative of continued subsidence. • Vipasca comprises the West end of the Muga basin. The evaporites are part of the northern limb of Javier-Pintanos synclinal structure with the main axis plunging to the west. The northern limb is compartmented in at least 2 sub-blocks which are separated by an unnamed thrust fault which outcrops in the vicinity of the last developed drill holes. The deposit has a variable slope ranging from 15-40 degrees (º), with a depth from between 40 to 250 m (elevation +500 m). Further drilling is programmed for the next months to check the extension of the deposit • The Vipasca basin is dominated by a SW-NE unnamed fault. This fault was probably active during the precipitation of potash and therefore has influenced final configuration within the basin edge delimiting two different domains where potash is present. (Fig 4) • 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 ($KCl{\bullet}MgCl_2{\bullet}6H_2O$) is also abundant, but has K_2O 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 process, so it is less economically attractive than is sylvite. • The depositional environment is that of a restricted marine basin, influenced by incipient tectonics coming from the north, causing sea floor subsidence, and/or uplift and sediment input. It is suggested that the Ebro Basin is the result of a combination of reflux and drawdown. Reflux describes a basin isolated from open marine conditions, and thereby characterised by restricted inflow, increased density, and increased salinity. Drawdown is the result of simple evaporation in an isolated basin, and brine concentration and precipitation, consistent with the classic “bulls-eye” model (Garrett 1996). In this case, the Ebro Basin is further influenced by erosion at its edges due to contemporaneous and post-depositional uplift which results in localised shallowing and sediment influx (Ortiz and Cabo 1981) transitioning from marine to continental-type deposits. 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. • In the Muga Extension of Vipasca Potash Project area, the mineralogy is dominated by sylvinite as it occurs in Muga. The upper potash beds transition to finely banded

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		light brown marls and clays which may exhibit salt veining and distortion as well as influx of dark grey clays and mudstones, representing the transition of the basin from marine to continental via basin-filling. The salts just below the 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. The literature denotes this salt as "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. • Potash seams are present in the basin which are sometimes separated by halite beds. These are the Upper Potash Interval (P0, PA and PB seams), the Intermediate Potash Interval (P1 seam) and Lower Potash Interval (P2 seam).
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.	• Analysis information is shown in the body of this release in Tables 2 and 3. • **V18-01:** X:644939.366, Y:4719359.952, RL: 488.4218, EOH: 763m, first appearance of potash: 619.10 m • **V18-02:** X: 645033.3886, Y: 4718690.5761 m, RL: 491.705 m, EOH: 1190 m, first appearance of potash: 987.40 m. • The drillholes dip at 90, with an azimuth of 000. • In **V18-01** the three potash intervals are present in this drillhole, although Upper Potash Interval and Intermediate Potash Interval only appear in centimetric beds showing traces of sylvinite. Lower Potash Interval appears at 740.00-741.65 m. • In **V18-02** the three potash intervals are present in this drillhole. Upper Potash Interval appears with first traces at 987.40 m to 1012.10 m, Intermediate Potash Interval appears at 1119.00 to 1132.30, Lower Potash Interval appears at 1139.2 to 1147.3 m
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut off grades are usually Material and should be stated. • 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. • All grades are presented in percentage of K_2O over a selected interval.
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').	• V18-01 and V18-02 are drilled vertically as to best perpendicularly intersect the expected mineralisation. • Data on bed angle and orientation will be incorporated into geological database to calculate the true thickness of the beds intersected.

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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.	• Appropriate maps and diagrams are included in the body of this release.
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.	• All results are included in the body of this release.
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.	• Not applicable.
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.	• Ongoing exploration work is intended for the interpreted extensional areas of the deposit in Vipasca, and its correlation and continuity from Muga. Vipasca is western extension of Muga Project, one drillhole (V18-03) is recently completed and one additional drillhole (V18-05) is planned in the following weeks in order to confirm and depict the extension of the ore deposit.