



## ASX Announcement

### Dark Horse Resources Limited (ASX:DHR)

6 April 2017

#### High Lithium Grades from Analysis of Spodumene from El Totoral and Los Chañares

Dark Horse Resources Limited (ASX:DHR or **Company**) is pleased to announce the results of an analytical study completed into the lithium content, composition and alteration of spodumene samples, from pegmatites collected from the Company's Las Tapias Mine, the Las Cuevas Mine, El Totoral and Los Chañares properties in Córdoba and San Luis Provinces, Argentina (refer **Figure 1**). The samples were collected during August 2016, assayed and the results reported in the Company's ASX release of 5 October 2016.

- The analytical study was carried out on behalf of DHR by CICTERRA (the Centre for Investigations in Earth Sciences) at the Universidad Nacional de Córdoba.
- Results have returned encouraging lithium contents in fresh spodumene at Las Tapias, El Totoral and Los Chañares, varying from 6.48 to 7.38 wt% Li<sub>2</sub>O.
- Most of the spodumene samples have less than 1% Fe<sub>2</sub>O<sub>3</sub>. Crystals of samples from Las Tapias have between 1.98 and 2.20 wt% Fe<sub>2</sub>O<sub>3</sub>.
- The study indicates that spodumene from El Totoral (Li<sub>2</sub>O 7.38 wt%) and Los Chañares (Li<sub>2</sub>O 7.15 wt%) is low in Fe<sub>2</sub>O<sub>3</sub> (0.6 wt % and 0.9 wt % respectively), indicating the ability to potentially produce a raw lithium product that would be low in iron.
- At this stage, there is no indication if the geochemistry reflects the whole deposit characteristics given the localized sample collection.

The full set of the results from the analytical testing is set out in the attached Table 2.

The monetary value of low-iron (Fe) spodumene is greater than the more common, higher iron spodumene, as the former is desired for high quality technical grade ore or concentrates used in the manufacture of specialty glass products such as stove tops, ceramics as well as lithium-ion batteries for laptop computers, mobile phones, electric bicycles and electric/hybrid vehicles.

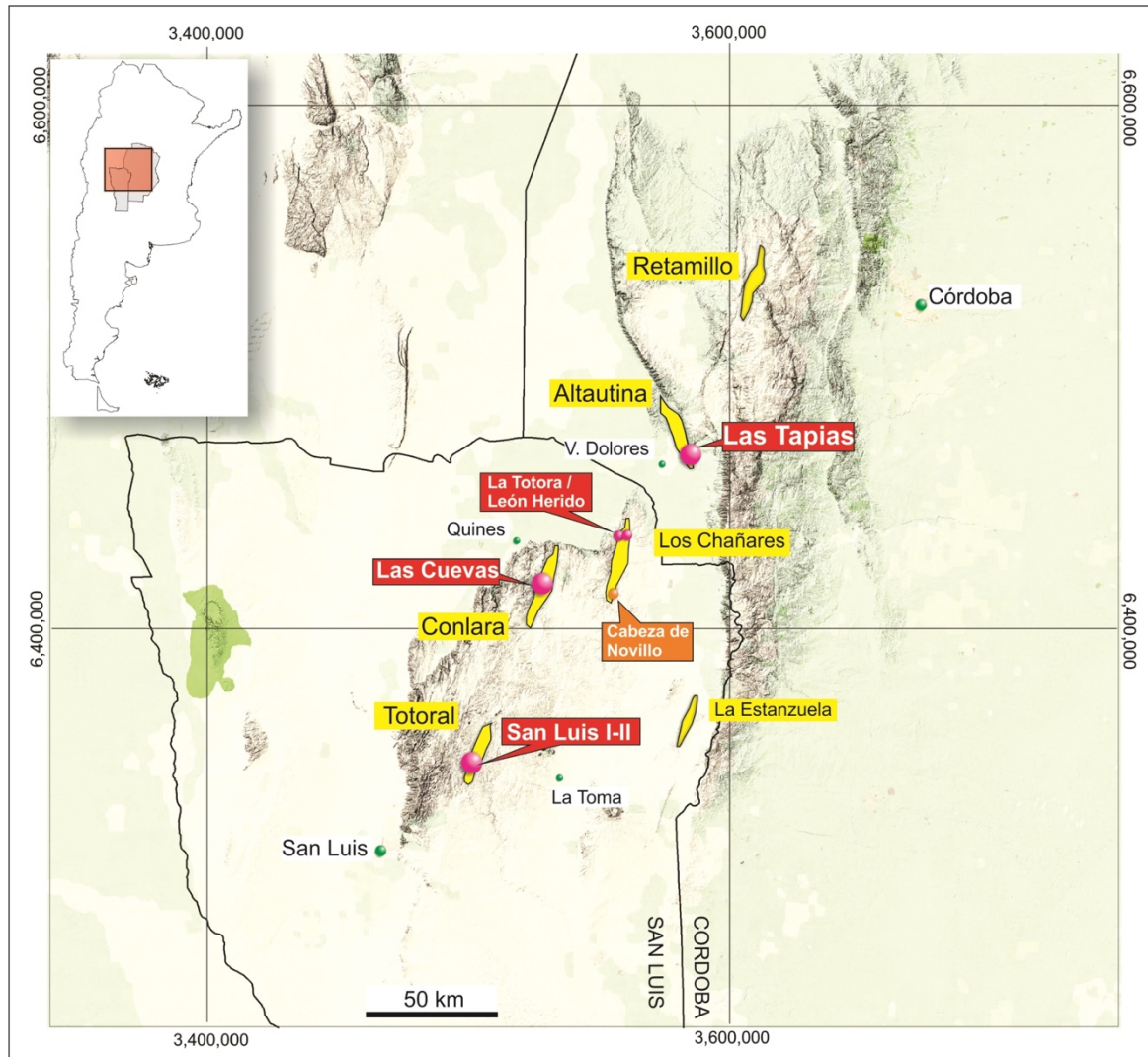
According to the study, spodumene samples from Las Cuevas were more intensely altered and contain low lithium contents. At Las Cuevas, spodumene has been altered by varying degrees to muscovite and albite, but alteration to clay minerals was not observed.

Dark Horse Resources intends to commence exploration on the significant lithium pegmatite targets of El Totoral, Los Chanars, Las Cuevas Mine and Las Tapias in the San Luis and Cordoba provinces this year. Environmental permits are expected to be complete in the second quarter of 2017 to allow commencement of exploration.



Dark Horse Resources Ltd ACN 068 958 752  
Level 27, 111 Eagle Street, Brisbane QLD 4001  
P: +61 7 3303 0650 F: + 61 7 3303 0681  
E: info@darkhorseresources.com.au  
W: www.darkhorseresources.com.au

The work program will include remote sensing interpretations, ground geophysical programs, regional and detailed geological mapping, and drilling.



**Figure 1: Map showing the location of the Las Tapias, Las Cuevas and other historic spodumene mines controlled by DHR/Pampa Litio (red dots) in the principal pegmatite districts of San Luis and Córdoba Provinces.**



On behalf of the Board  
Karl Schlobohm  
Company Secretary



#### **Competent Persons Statement**

The information herein that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Neil Stuart, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Neil Stuart is a Director of Dark Horse Resources Ltd.

Mr Stuart has more than five years experience which is relevant to the style of mineralisation and type of deposit being reported and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves' (the JORC Code). This public report is issued with the prior written consent of the Competent Person(s) as to the form and context in which it appears.

Email: [info@darkhorseresources.com.au](mailto:info@darkhorseresources.com.au)

Electronic copies and more information are available on the Company website: [www.darkhorseresources.com.au](http://www.darkhorseresources.com.au)

#### **For further information contact:**

**Mr. David Mason**

CEO, Dark Horse Resources Limited  
Ph: 07 3303 0611

**Karl Schlobohm**

Company Secretary, Dark Horse Resources Limited  
Ph: 07 3303 0680



**Dark Horse Resources Ltd** ACN 068 958 752  
Level 27, 111 Eagle Street, Brisbane QLD 4001  
**P:** +61 7 3303 0650 **F:** + 61 7 3303 0681  
**E:** [info@darkhorseresources.com.au](mailto:info@darkhorseresources.com.au)  
**W:** [www.darkhorseresources.com.au](http://www.darkhorseresources.com.au)



**Table 2.** Whole-rock chemistry for the analyzed samples from ACME Labs - Bureau Veritas Minerals.

All Schemes ...	Method	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370	PF370
Analyte		Al	As	Ca	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Ni	Pb	S	Sn	Ti	Zn
Unit		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Seq.	Sample	Type/MDL	0.01	0.01	0.05	0.002	0.01	0.005	0.05	0.01	0.001	0.01	0.01	0.005	0.03	0.01	0.005	0.01
1	PL03	Pulp	13.82	<0.01	0.09	0.009	<0.01	<0.005	0.63	0.37	3.321	0.03	<0.01	<0.005	<0.03	0.02	<0.005	0.02
2	PL011	Pulp	9.22	<0.01	0.24	0.009	<0.01	<0.005	0.23	0.45	1.559	0.03	0.03	<0.005	<0.03	<0.01	<0.005	<0.01
3	PL015	Pulp	4.28	<0.01	0.06	0.022	<0.01	<0.005	0.13	0.05	0.702	0.02	0.02	<0.005	<0.03	0.03	<0.005	<0.01
4	PL015A	Pulp	13.77	<0.01	0.06	0.003	<0.01	<0.005	0.44	0.04	3.427	0.03	0.08	<0.005	<0.03	0.01	<0.005	<0.01
5	PL015B	Pulp	6.05	<0.01	0.26	0.011	<0.01	<0.005	0.36	1.44	0.478	0.05	0.06	<0.005	<0.03	0.02	<0.005	<0.01
6	PL034	Pulp	13.31	<0.01	0.08	<0.002	<0.01	<0.005	0.5	3.24	0.026	0.02	0.1	<0.005	<0.03	<0.01	<0.005	<0.01
7	PL045	Pulp	14.28	<0.01	0.09	0.002	<0.01	<0.005	0.22	3.28	0.051	<0.01	0.19	<0.005	<0.03	0.03	<0.005	0.01
8	PL046	Pulp	19.82	<0.01	0.07	<0.002	<0.01	<0.005	0.39	9.72	0.008	0.02	0.12	<0.005	<0.03	0.06	<0.005	0.07
9	PL050	Pulp	13.05	<0.01	0.09	0.003	<0.01	<0.005	1.54	0.34	3.01	0.06	0.18	<0.005	<0.03	0.06	<0.005	<0.01
10	BLK	BLK	<0.01	<0.01	<0.05	<0.002	<0.01	<0.005	<0.05	0.04	<0.001	<0.01	<0.01	<0.005	<0.03	0.02	<0.005	<0.01
11	STD RTS-2	STD	0.8	<0.01	0.54	0.006	<0.01	0.068	36.5	0.18	<0.001	0.35	0.03	0.244	<0.03	18.27	<0.005	0.16
12	STD SU-1B	STD	4.47	<0.01	2.21	0.064	0.03	1.172	24.77	0.65	<0.001	1.82	0.07	1.955	<0.03	14.22	<0.005	0.23

Chemical analysis reported in oxides % wt. for some selected elements

	Al <sub>2</sub> O <sub>3</sub>	FeO**	K <sub>2</sub> O	Li <sub>2</sub> O	MgO	MnO	Fe <sub>2</sub> O <sub>3</sub>	
PL03	26.11	0.81	0.45	7.15	0.05	0.00	0.90	Spodumene
PL011	17.42	0.30	0.54	3.36	0.05	0.04	0.33	Pegmatite*
PL015	8.09	0.17	0.06	1.51	0.03	0.03	0.19	Pegmatite*
PL015A	26.02	0.57	0.05	7.38	0.05	0.10	0.63	Spodumene
PL015B	11.43	0.46	1.73	1.03	0.08	0.08	0.51	Pegmatite*
PL034	25.15	0.64	3.90	0.06	0.03	0.13	0.71	Green pseudomorph muscovite
PL045	26.98	0.28	3.95	0.11	0.00	0.25	0.31	Green pseudomorph muscovite
PL046	37.45	0.50	11.71	0.02	0.03	0.15	0.56	Green pseudomorph muscovite
PL050	24.66	1.98	0.41	6.48	0.10	0.23	2.20	Spodumene

\* Main magmatic assemblage: feldspar+quartz+muscovite+spodumene

\*\* : total iron reported as FeO by the lab; Fe<sub>2</sub>O<sub>3</sub> calculated for reference.



Samples		Location
PL03	Spodumene	Los Chañares
PL011	Pegmatite*	Los Chañares
PL015	Pegmatite*	El Totoral
PL015A	Spodumene	El Totoral
PL015B	Pegmatite*	El Totoral
PL034	Green pseudomorph muscovite	Las Cuevas
PL045	Green pseudomorph muscovite	Las Cuevas
PL046	Green pseudomorph muscovite	Las Cuevas
PL050	Spodumene	Las Tapias