

## **INFILL DRILLING CONFIRMS CONTINUITY OF HIGH-GRADES AT THE SINCLAIR ZONE CAESIUM DEPOSIT PREPARATIONS FOR MINING ADVANCE**

**Perth Western Australia, 19 April 2018:** Pioneer Resources Limited ("Company" or "Pioneer", ASX: PIO) is pleased to provide a drilling update for its 100%-held Pioneer Dome Project in the Eastern Goldfields of Western Australia, which includes the Sinclair Zone Caesium Deposit.

A programme of diamond-drilling was principally undertaken to infill 5 sections with the strongest caesium mineralisation (in the form of the mineral pollucite) in preparation for final open pit mine design work. Each of the key sections returned pollucite intersections in line with earlier modelling.

### **Caesium (Pollucite) intersections included:**

- **PDD162: 11.15m at 17.43% Cs<sub>2</sub>O from 38.2m**
- **PDD166: 5.70m at 29.61 Cs<sub>2</sub>O from 37.7m**
- **PDD167: 2.68m at 27.11 Cs<sub>2</sub>O from 40.82m  
and 7.18m at 16.04 Cs<sub>2</sub>O from 47.88m**
- **PDD170: 7.45m at 16.58 Cs<sub>2</sub>O from 43.6m**
- **PDD174: 4.30m at 20.89 Cs<sub>2</sub>O from 43.5m**

**Lithium mineralisation (petalite and lepidolite), which occurs peripheral to the caesium mineralisation, included:**

- **PDD161: 25.02 m at 2.14% Li<sub>2</sub>O from 41.98m**
- **PDD163: 16.43 m at 2.27% Li<sub>2</sub>O from 40.57m**
- **PDD164: 16.10 m at 2.64% Li<sub>2</sub>O from 39.9m**
- **PDD168: 16.50 m at 1.75% Li<sub>2</sub>O from 40.5m**
- **PDD173: 26.70 m at 1.82% Li<sub>2</sub>O from 34.3m**
- **PDD175: 23.10 m at 1.94% Li<sub>2</sub>O from 41.9m**
- **PDD176: 19.00 m at 1.62% Li<sub>2</sub>O from 38.0m**

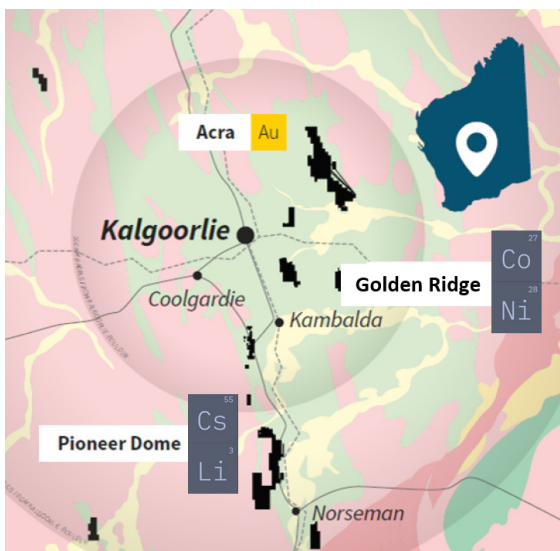
### **PRE-MINE DRILLING AT THE SINCLAIR ZONE CAESIUM DEPOSIT.**

The programme totalled 20 drill holes and produced 1,333.29m of core. Of these, 15 holes targeted caesium or lithium mineralisation, 4 holes were completed adjacent to the proposed pit walls to provide geotechnical information, and 1 hole became blocked and was abandoned. Most holes also intersected potassium (microcline).

With lithium and caesium results to hand, Pioneer's geological consultants from the Mitchell River Group are revising the Mineral Resource Estimate for caesium.

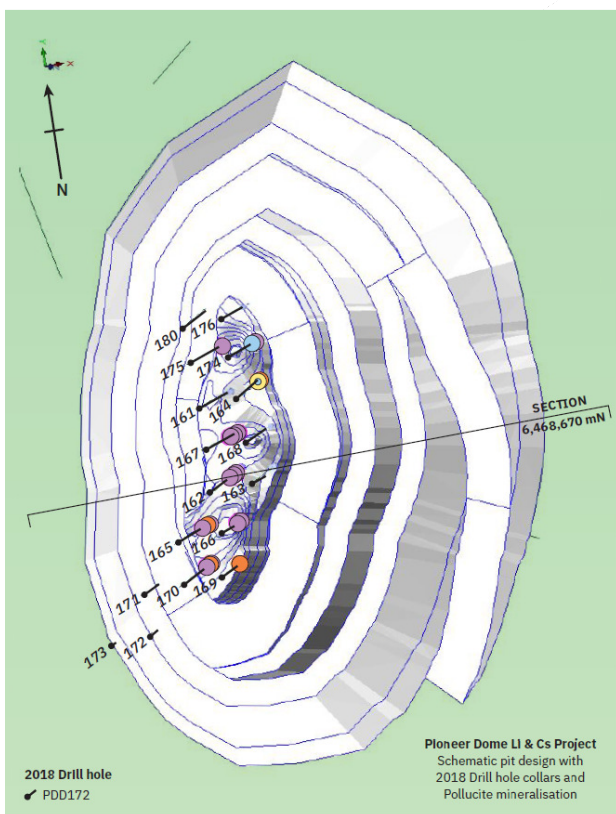
Potassium (microcline) samples, which require specialised processing, are currently being analysed, with results expected before the end of April.

The open pit design and confirmation economic study are on track to be concluded by the end of May, 2018.

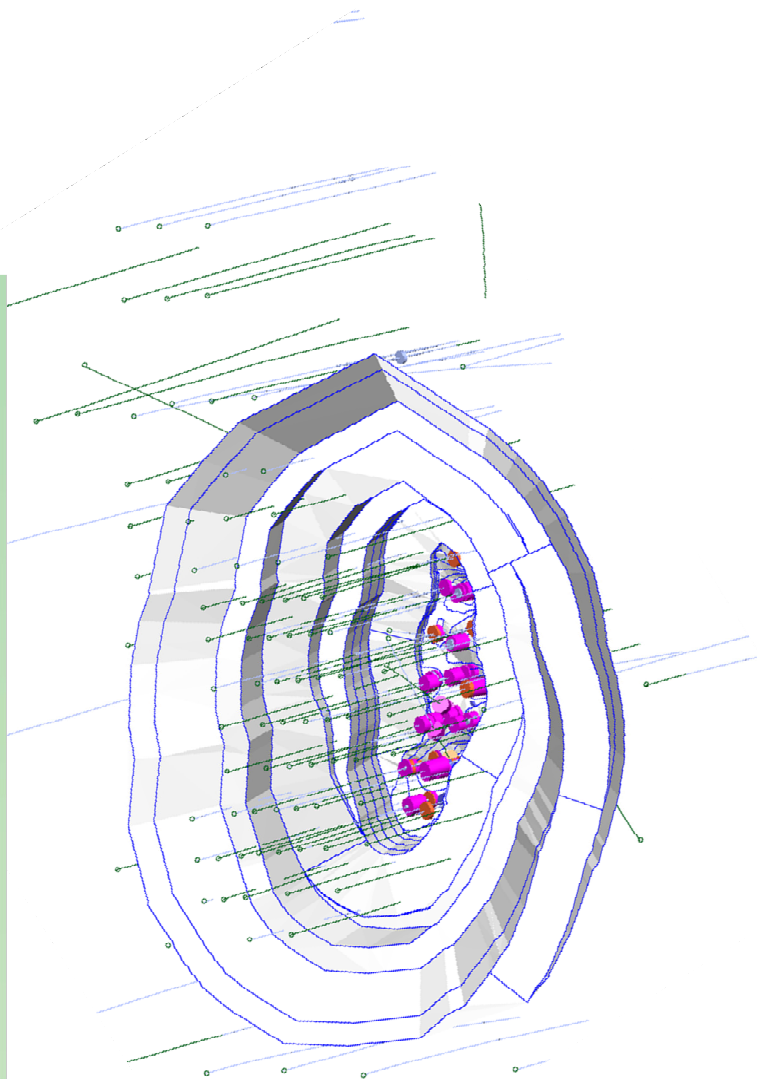


**Figure 1: Pioneer Dome Project Location**  
Pioneer 100%, Lithium, Caesium, Potassium, Nickel Sulphide.

The Pioneer Dome Project is in the Eastern Goldfields of WA. The Project is approximately 130km south of Kalgoorlie, and 200km north of the port of Esperance, in WA.

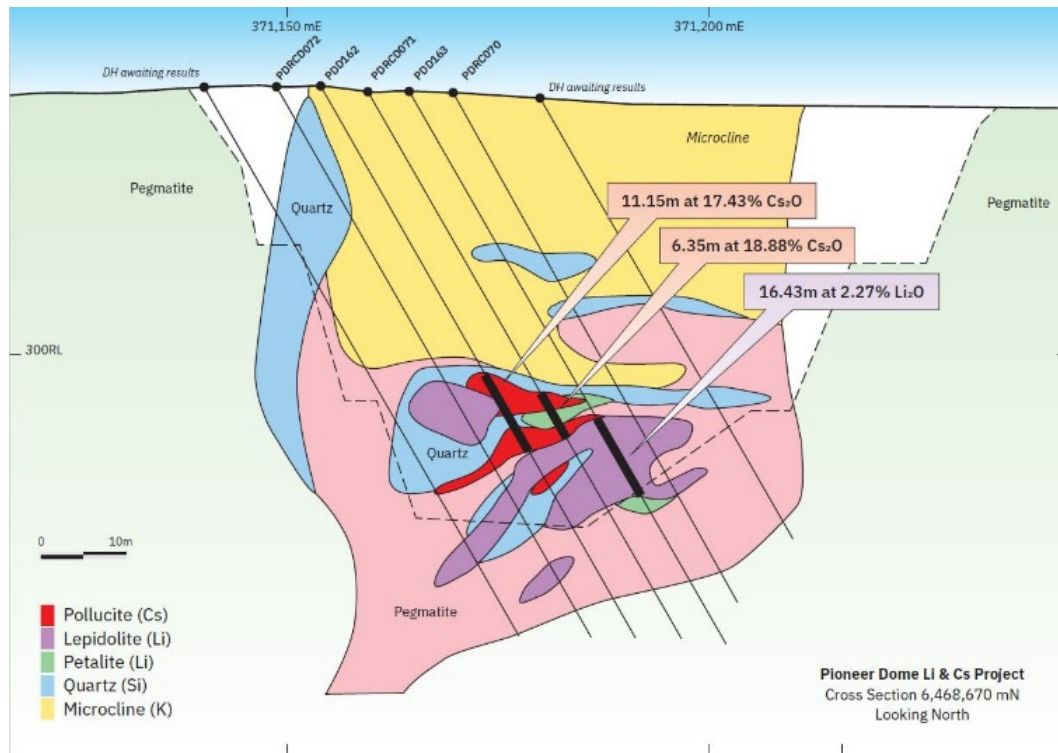


**Figure 2: Diagrammatic Sinclair Pit oblique view** showing drill holes from the reported drilling programme, with pollucite intersections as coloured disks. Cross Section is shown in Figure 4.



**Figure 3: Diagrammatic Sinclair Pit oblique view** showing all drill holes, and pollucite intersections as coloured disks.

The long axis of the pit is 160m



**Figure 4:** Sinclair Zone Caesium Deposit Cross Section at 6468670mN with diagrammatic pit outline. Drill holes intersect monomineralic phases that comprise the Sinclair Pegmatite core zone. A well-formed zone of microcline (yellow) overlies the pollucite (red) and lepidolite (purple).

## CONCURRENT WORK FOR OTHER MINERALS

In addition to the targeted caesium (pollucite) mineralisation, broad zones of a range of other alkali-metal minerals, including lithium (petalite and lepidolite) and potassium (microcline) have been consistently intersected within the Sinclair Pegmatite.

On the basis that the Board determines to proceed with mining, as the microcline, petalite and lepidolite will be 'mined through' to access the pollucite, the Company will stockpile these minerals, and is advancing commercial opportunity discussions for each with third parties.

## POTASSIUM (MICROCLINE)

In an announcement dated 21 February 2018 the Company provided information about a zone of microcline that had been intersected in drill core, overlying the Sinclair Zone Caesium Deposit.

The initial samples, from drill holes PDD125 and PDD126, plotted in the premium A-Grade Microcline field, a product that is used in the manufacture of porcelain and certain glass types.

Core from the 2018 drilling programme has continued to intersect the microcline mineralisation, which is now evident over a strike length exceeding 250m.

Currently over 400 microcline samples have been prepared for analysis using iron-free equipment, with results from fusion XRF analysis due later in April. With these results in hand, the Company can best formulate a strategy to commercialise the microcline.

## THE NEXT PHASE OF DRILLING

The next pass of RC drilling is underway, designed to test targets to the immediate north of the Sinclair Zone Caesium Deposit, principally targeting lithium minerals but also supplying information to enable future targeting for caesium. These holes will also intersect the microcline zone.

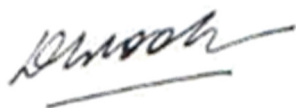
## DEVELOPMENT-FOCUSED OUTLOOK

- Regulatory documents are progressively being assembled to permit the extraction of the Sinclair Zone Caesium Deposit;
- Detailed pit design scenario work is underway. This will include variants where other pegmatite minerals (including lepidolite and microcline) are extracted for sale in addition to pollucite. From this:
- The Mine Plan and revenue estimates will be finalised, the decision to mine considered, and quotes sought from mining contractors;
- On the basis that the Board determines to proceed with mining, and receiving the required permitting, the Company is working towards extracting the Sinclair Zone Caesium Deposit during the second half of 2018.

Pioneer's Managing Director, David Crook, said *"The Sinclair Deposit is proving to be an exciting opportunity for the Company as it moves towards its first mining operation."*

*"This round of drilling confirmed the continuity of the pollucite mineralisation, significantly de-risking the project from an ore supply perspective,*

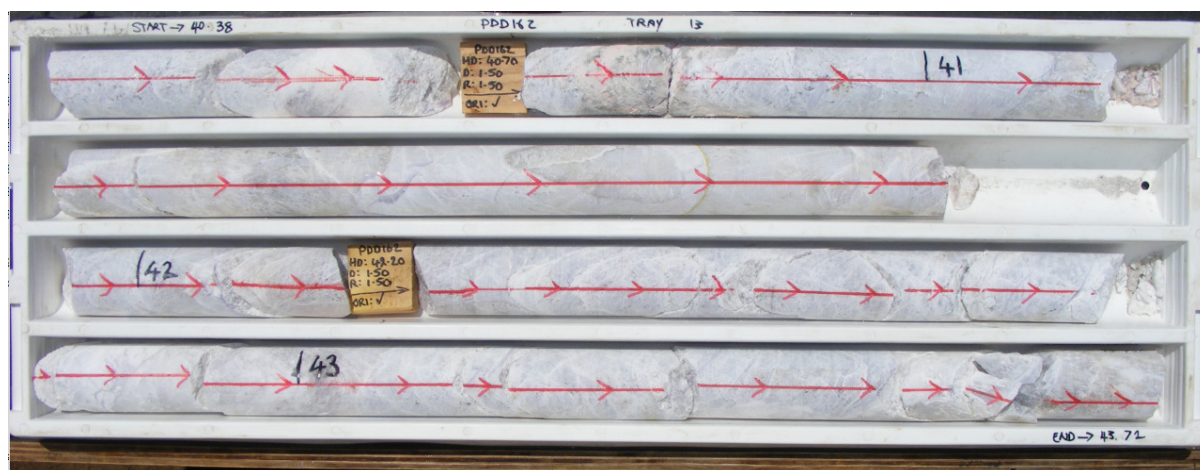
*"The Company is entirely focussed on advancing the Mine Plan (environmental) and Project Management Plan (safety), and moving towards production."*



Managing Director  
**Pioneer Resources Limited**

## ABOUT POLLUCITE – THE PRINCIPAL ORE MINERAL OF CAESIUM

Pollucite is a rare mineral of caesium that forms only in extremely differentiated zones of rare-metal lithium-caesium-tantalum pegmatite systems. It is found in commercial quantities at the Bikita Mine in Zimbabwe; and the Tanco Mine in Canada where it is mined principally for use in the manufacture of Caesium Formate, a high-density fluid used in high temperature/high pressure oil and gas drilling. The principal Caesium Formate manufacturer and dealer is Cabot Corporation (NYSE: CBT), through its Cabot Speciality Fluids division. Caesium Formate provides a number of well documented benefits including, minimal damage to the hydrocarbon-bearing formation resulting in higher production rates, where it acts as a lubricant, is non-corrosive and is considered an environmentally-friendly benign chemical when compared to alternatives. Caesium in principal commercial usage is the non-radioactive isotope. (Refer to Downs, J., et al)



**Photograph 1:** PDD162 pollucite from 40.38m to 43.72m (from a total intersection 11.15m - see Figure 4) which averages approximately 22% Cs<sub>2</sub>O.



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### About Pioneer Resources Limited

Pioneer is an active exploration company focused on key global demand-driven commodities. The Company operates a portfolio of strategically located lithium, caesium, potassium ("alkali metals"), nickel, cobalt and gold projects in mining regions in Western Australia, plus a portfolio of high quality lithium assets in Canada. Drilling is in progress, or has been recently completed, at each of these Projects:

**Pioneer Dome Project and the Sinclair Zone Caesium Deposit:** In early 2017 Pioneer reported the discovery of Australia's first caesium (in the mineral 'pollucite') deposit.

Pollucite is a high value mineral and global supply is very constrained. It is a rare caesium mineral that forms in extremely differentiated LCT pegmatite systems. The primary use of pollucite is in the manufacture of Caesium Formate brine used in high temperature/high pressure oil and gas drilling.

The Company's core focus is to advance the Sinclair Zone Caesium Deposit towards development. The Project has the potential to be a high margin operation for the Company and works programmes continued during the quarter.

With Mining Lease M63/665 and Miscellaneous Licence L63/77 granted in December 2017, mine planning permitting is well under way.

**Lithium: Mavis Lake and Raleigh Projects, Canada; Pioneer Dome Project, WA:** Lithium has been classed as a 'critical metal' meaning it has a number of important uses across various parts of the modern, globalised economy including communication, electronic, digital, mobile and battery technologies; and transportation, particularly aerospace and automotive emissions reduction. Critical metals seem likely to play an important role in the nascent green economy, particularly solar and wind power; electric vehicle and rechargeable batteries; and energy-efficient lighting.

**Cobalt: Golden Ridge Project, WA:** Cobalt demand is expanding in response to its requirement in the manufacture of cobalt-based lithium batteries in certain electric vehicles and electricity stabilisation systems (powerwalls). Other uses for cobalt include in the manufacture of super-alloys, including jet engine turbine blades, and for corrosion resistant metal applications.

**Nickel: Blair Dome/Golden Ridge Project:** The price for nickel is steadily improving. The Company owns the closed Blair Nickel Sulphide Mine located between Kalgoorlie and Kambalda, WA, where near-mine target generation is continuing. The Company recently announced a significant new nickel sulphide drilling intersection at the Leo's Dam Prospect, highlighting the prospectivity of the greater project area.

### REFERENCES

- Pioneer Dome: Refer Company's quarterly technical reports, and announcements to ASX 19 May 2016, 27 July 2016, 28 August 2016, 1 September 2016, 4 October 2016, 17 October 2016, 14 November 2016, 2 December 2016, 13 December 2016, 13 January 2017, 24 January 2017, 23 February 2017, 20 March 2017, 22 March 2017 (Sinclair Measured Resource Statement), 20 June 2017, 22 August 2017, 9 October 2017, 17 January 2018, 21 February 2018.
- Downs, J. D., Blaszczyński, M., Turner, J., and Harris, M. (2006): *"Drilling and Completing Difficult HP/HT Wells with the aid of Cesium Formate Brines – A Performance review."*
- London, David (2016) *Pegmatites, Mineralogical Association of Canada.*

The Company is not aware of any new information or data that materially affects the information included in this Report.

## **COMPETENT PERSON**

The information in this report that relates to Exploration Results is based on information supplied to and compiled by Mr David Crook.

Mr Crook is a fulltime employee of Pioneer Resources Limited. Mr Crook is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and has sufficient experience which is relevant to the exploration processes undertaken to qualify as a Competent Person as defined in the 2012 Editions of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Crook consents to the inclusion of the matters presented in the announcement in the form and context in which they appear.

## **CAUTION REGARDING FORWARD LOOKING INFORMATION**

This Announcement may contain forward looking statements concerning the projects owned or being earned in by the Company. Statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions.

Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this document are based on the Company's beliefs, opinions and estimates of the Company as of the dates the forward looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

There can be no assurance that the Company's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that the Company will be able to confirm the presence of additional mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of the Company's mineral properties. Circumstances or management's estimates or opinions could change. The reader is cautioned not to place undue reliance on forward-looking statements.

## APPENDIX 1. Drill Hole Information and Results Summary

Table 1 Diamond Core Drill Hole Collar Locations								
Hole ID	Type	Grid	East (m)	North (m)	RL (m)	Dip (°)	azimuth (°)	Depth (m)
PDD161	DD	MGA94_51	371,154.1	6,468,690.9	332.2	-60.0	90.1	70.7
PDD162	DD	MGA94_51	371,154.1	6,468,670.9	331.0	-60.5	90.1	66.2
PDD163	DD	MGA94_51	371,164.6	6,468,671.3	330.5	-60.5	90.1	63.2
PDD164	DD	MGA94_51	371,163.7	6,468,691.1	331.7	-61.0	90.1	63.2
PDD165	DD	MGA94_51	371,144.3	6,468,661.1	330.6	-60.0	90.1	63.2
PDD166	DD	MGA94_51	371,154.2	6,468,660.8	330.4	-60.0	90.1	67.7
PDD167	DD	MGA94_51	371,154.2	6,468,681.3	331.8	-60.0	91.1	64.7
PDD168	DD	MGA94_51	371,164.5	6,468,681.1	331.1	-60.5	90.1	61.7
PDD169	DD	MGA94_51	371,153.9	6,468,651.2	330.1	-60.0	90.1	61.7
PDD170	DD	MGA94_51	371,144.1	6,468,651.1	330.2	-60.0	90.1	61.7
PDD171	DD	MGA94_51	371,134.3	6,468,650.8	330.6	-60.5	90.1	54.2
PDD172	DD	MGA94_51	371,134.3	6,468,641.1	330.4	-61.0	88.1	61.8
PDD173	DD	MGA94_51	371,124.5	6,468,640.9	330.8	-60.5	90.1	64.7
PDD174	DD	MGA94_51	371,163.2	6,468,701.4	332.2	-60.5	91.1	60.0
PDD175	DD	MGA94_51	371,153.5	6,468,701.5	332.6	-60.5	90.1	70.7
PDD176	DD	MGA94_51	371,162.9	6,468,710.2	332.6	-59.5	90.1	63.0
PDD177	DD	MGA94_51	371,234.4	6,468,647.1	327.8	-50.0	300.1	70.7
PDD178	DD	MGA94_51	371,214.1	6,468,810.6	327.2	-50.0	210.1	90.0
PDD179	DD	MGA94_51	371,117.2	6,468,767.8	332.7	-50.0	145.1	85.5
PDD180	DD	MGA94_51	371,153.1	6,468,710.0	333.1	-61.0	90.1	68.7

**Notes:**

- Hole locations were measured by a licenced surveyor in MGA 94 zone 51 using a DGPS.
- The azimuth is in true north degrees.

Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD161	40.17	41.00	0.02		185	0.05	222	921		1.4	79,112
PDD161	41.00	41.98	0.04		373	0.37	1,731	1,087		6.7	61,362
PDD161	41.98	43.00	0.42		4,028	3.53	16,412	16,079		65.2	80,234
PDD161	43.00	44.00	0.40		3,769	3.56	16,537	16,569		84.8	117,277
PDD161	44.00	45.00	0.39		3,712	3.41	15,847	16,129		82.4	129,251
PDD161	45.00	46.00	0.24		2,272	2.40	11,133	11,036		50.5	80,654
PDD161	46.00	47.00	0.33		3,132	2.88	13,398	13,138		86.6	109,757
PDD161	47.00	47.74	0.26		2,522	2.51	11,666	11,473		247.8	106,160
PDD161	47.74	48.00	0.01		63	0.07	336	189		1.1	3,746
PDD161	48.00	49.00	0.01		58	0.05	224	164		2.4	4,143
PDD161	49.00	50.00	0.09		825	0.49	2,278	2,009		20.0	30,384
PDD161	50.00	50.85	0.02		146	0.05	231	433		7.7	26,196
PDD161	50.85	52.00	0.67		6,378	4.23	19,664	17,798		121.9	118,294
PDD161	52.00	53.00	0.76		7,245	4.59	21,320	19,369		260.8	126,345
PDD161	53.00	54.00	0.70		6,685	4.08	18,930	17,138		294.5	93,046
PDD161	54.00	54.85	0.39		3,731	3.07	14,280	8,363		134.6	52,686
PDD161	54.85	55.45	0.02		146	0.04	205	178		10.5	94,224
PDD161	55.45	55.95	2.58		24,578	3.04	14,141	14,569		214.3	93,346
PDD161	55.95	56.25	20.42	20.42					50		192,300
PDD161	56.25	57.00	0.73		6,928	3.75	17,414	13,183		1,113.6	121,667
PDD161	57.00	57.60	0.42		3,964	2.38	11,045	10,190		224.1	96,289
PDD161	57.60	58.43	0.16		1,553	0.82	3,788	611		44.4	23,374
PDD161	58.43	59.00	0.46		4,422	2.35	10,895	10,821		646.9	112,185
PDD161	59.00	60.00	0.46		4,384	2.58	11,972	10,481		207.2	48,644
PDD161	60.00	61.00	0.33		3,161	1.96	9,085	7,251		181.3	38,610
PDD161	61.00	62.00	0.20		1,895	1.68	7,784	7,164		93.9	46,098
PDD161	62.00	63.00	0.07		678	0.64	2,970	1,838		95.1	31,530
PDD162	37.55	38.20	0.01		64	0.03	155	41		4.8	8,135
PDD162	38.20	39.20	28.44	28.44					48		169,400
PDD162	39.20	40.20	27.12	27.12					48		173,400
PDD162	40.20	41.11	27.37	27.37					49		170,900
PDD162	41.11	41.43	1.93		18,370	2.61	12,100	361		0.9	41,243
PDD162	41.43	41.85	21.30	21.30					55		168,800
PDD162	41.85	42.50	20.30	20.30					56		167,900
PDD162	42.50	43.50	19.93	19.93					56		164,800
PDD162	43.50	44.06	1.83		17,389	0.88	4,092	393		0.3	51,248
PDD162	44.06	45.00	0.01		81	0.02	111	3		0.0	745
PDD162	45.00	45.68	0.01		101	0.02	96	19		0.1	1,427
PDD162	45.68	46.05	21.07	21.07					51		195,300
PDD162	46.05	47.00	23.83	23.83					51		180,000
PDD162	47.00	48.00	15.02	15.02					67		123,100
PDD162	48.00	48.50	1.83		17,386	0.14	656	204		4.7	15,295



Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD162	48.50	49.35	27.97	27.97					48		171,100
PDD162	49.35	50.00	0.56		5,358	1.90	8,807	8,200		206.4	41,188
PDD162	50.00	51.00	0.38		3,623	1.47	6,826	6,311		55.3	15,016
PDD162	51.00	52.00	0.18		1,752	0.89	4,112	4,138		69.3	25,579
PDD162	52.00	53.15	0.51		4,877	2.60	12,090	11,382		535.2	105,295
PDD163	39.86	40.57	0.00		29	0.03	119	20		5.5	1,299
PDD163	40.57	41.58	0.15		1,453	1.19	5,514	1,087		0.9	107,483
PDD163	41.58	41.83	0.78	0.78					52		316,500
PDD163	41.83	42.52	0.01		78	4.06	18,857	133		60.4	67,906
PDD163	42.52	43.00	0.07		708	0.87	4,028	951		74.4	83,758
PDD163	43.00	44.20	0.10		950	0.59	2,740	1,399		54.1	61,949
PDD163	44.20	45.00	0.43		4,106	2.31	10,727	10,453		113.8	94,653
PDD163	45.00	46.00	0.51		4,874	2.88	13,383	13,019		154.7	101,236
PDD163	46.00	47.00	0.51		4,838	3.23	15,016	14,196		106.9	116,495
PDD163	47.00	48.00	0.43		4,066	2.93	13,593	12,733		84.5	112,864
PDD163	48.00	49.00	0.59		5,582	4.14	19,232	18,465		115.5	140,413
PDD163	49.00	50.00	0.53		5,070	3.98	18,502	17,243		101.9	100,421
PDD163	50.00	51.00	0.34		3,220	2.58	12,001	11,064		127.7	62,458
PDD163	51.00	52.00	0.37		3,484	2.61	12,138	11,776		180.0	68,781
PDD163	52.00	53.00	0.36		3,444	2.57	11,948	11,106		191.6	53,717
PDD163	53.00	53.55	0.31		2,939	2.11	9,801	9,972		108.4	65,157
PDD163	53.55	54.60	0.10		979	0.96	4,453	3,932		27.7	41,585
PDD163	54.60	55.00	0.15		1,429	2.55	11,855	1,615		36.9	73,584
PDD163	55.00	56.00	0.14		1,336	1.30	6,029	909		25.4	63,184
PDD163	56.00	57.00	0.14		1,317	0.94	4,378	906		41.3	59,146
PDD163	57.00	58.00	0.10		932	0.63	2,945	865		30.8	53,069
PDD164	39.00	39.90									
PDD164	39.90	40.10	0.10		941	1.58	7,359	2,552		21.8	44,298
PDD164	40.10	42.00	0.17		1,613	2.50	11,611	217		0.7	54,583
PDD164	42.00	42.70	0.28		2,645	1.30	6,046	112		0.4	48,062
PDD164	42.70	43.00	1.03		9,832	2.03	9,431	793		2.4	50,953
PDD164	43.00	44.00	0.35		3,368	3.80	17,637	121		0.2	65,359
PDD164	44.00	45.00	0.16		1,550	4.76	22,122	39		0.4	83,710
PDD164	45.00	45.78	0.32		3,075	1.75	8,109	176		1.2	35,176
PDD164	45.78	46.10	10.49	10.49					65		169,100
PDD164	46.10	46.30	0.70		6,710	3.81	17,698	17,070		129.9	87,290
PDD164	46.30	46.91	20.19	20.19					52		182,400
PDD164	46.91	48.00	0.75		7,141	4.33	20,104	18,871		158.6	116,789
PDD164	48.00	49.00	0.54		5,121	3.14	14,570	13,525		89.2	86,893
PDD164	49.00	50.00	0.70		6,628	3.96	18,402	17,797		139.2	121,320
PDD164	50.00	51.00	0.53		5,057	2.83	13,152	12,619		97.3	105,254
PDD164	51.00	52.00	0.60		5,756	1.35	6,279	4,767		38.0	84,732

Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD164	52.00	53.00	0.27		2,563	1.62	7,536	6,510		73.8	53,241
PDD164	53.00	54.00	0.32		3,005	2.38	11,072	8,684		126.4	63,860
PDD164	54.00	55.00	0.36		3,463	2.51	11,673	10,345		176.9	67,091
PDD164	55.00	56.00	0.38		3,649	2.66	12,368	11,179		273.5	49,848
PDD164	57.00	57.50	0.19		1,788	1.29	6,009	5,604		96.4	27,280
PDD164	57.50	58.00	0.08		783	0.69	3,199	1,534		16.7	17,856
PDD164	58.00	59.00	0.14		1,322	1.28	5,940	793		25.3	29,177
PDD164	59.00	60.00	0.09		846	0.59	2,736	980		101.6	54,729
PDD165	45.40	46.45	0.04		409	0.04	182	1,582		4.6	29,536
PDD165	46.45	47.00	0.27		2,603	1.66	7,697	7,846		170.3	39,259
PDD165	47.00	48.00	0.70		6,643	4.73	21,963	19,604		154.3	111,791
PDD165	48.00	49.00	0.53		5,080	3.60	16,723	15,609		119.9	98,754
PDD165	49.00	50.00	0.63		5,973	4.01	18,622	17,350		93.0	69,762
PDD165	50.00	51.00	0.57		5,451	3.35	15,548	14,862		102.3	98,493
PDD165	51.00	52.30	0.60		5,691	1.71	7,962	7,460		58.2	46,263
PDD165	52.30	52.60	14.10	14.10					56		189,200
PDD165	52.60	53.27	0.86		8,148	2.85	13,241	12,319		129.8	85,549
PDD165	53.27	53.50	17.24	17.24					56		176,200
PDD165	53.50	54.10	3.19		30,385	0.83	3,860	4,147		88.4	50,583
PDD166	36.70	37.70	0.00		39	0.03	159	30		4.4	2,285
PDD166	37.70	38.00	26.48	26.48					48		185,600
PDD166	38.00	39.00	28.67	28.67					49		164,200
PDD166	39.00	40.00	30.14	30.14					47		166,200
PDD166	40.00	41.00	30.43	30.43					47		166,700
PDD166	41.00	42.00	30.36	30.36					47		168,100
PDD166	42.00	43.00	30.44	30.44					47		164,100
PDD166	43.00	43.40	26.92	26.92					48		172,500
PDD166	43.40	44.00	0.00		35	0.02	116	16		2.3	1,452
PDD166	44.00	45.00	0.00		31	0.03	120	27		4.9	1,766
PDD166	45.00	45.60	0.00		36	0.02	103	29		5.9	7,884
PDD166	45.60	46.50	0.55		5,218	3.85	17,873	17,183		125.2	125,032
PDD166	46.50	47.30	0.58		5,553	3.96	18,384	17,478		114.6	131,276
PDD166	47.30	48.20	0.01		102	0.09	399	272		0.8	2,903
PDD166	48.20	49.00	0.11		1,088	0.21	995	5,009		2.2	117,065
PDD166	49.00	50.00	0.09		847	0.17	802	4,920		4.2	114,637
PDD166	50.00	51.25	0.07		678	0.17	803	5,122		4.9	105,685
PDD166	51.25	52.00	0.47		4,501	2.60	12,065	12,933		86.1	110,973
PDD166	52.00	53.00	0.21		1,974	1.58	7,329	6,554		107.5	76,921
PDD166	53.00	54.00	0.19		1,803	1.28	5,923	5,586		61.6	59,328
PDD166	54.00	55.00	0.24		2,308	1.92	8,898	8,358		102.7	58,681
PDD166	55.00	55.65	0.25		2,424	1.95	9,057	8,847		139.9	62,093
PDD166	55.65	56.30	0.08		764	0.78	3,607	1,770		41.5	31,465

Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD167	38.33	39.00	0.01		113	0.11	522	269		29.1	99,325
PDD167	39.00	39.90	0.01		128	0.03	118	507		74.2	87,734
PDD167	39.90	40.82	0.01		53	0.02	104	140		4.2	6,379
PDD167	40.82	41.18	17.52	17.52					49		233,700
PDD167	41.18	42.00	29.18	29.18					48		166,900
PDD167	42.00	43.00	28.83	28.83					48		165,800
PDD167	43.00	43.50	27.19	27.19					49		171,600
PDD167	43.50	44.80	0.01		105	0.03	137	40		11.6	9,558
PDD167	44.80	45.50	0.63		6,033	3.51	16,314	15,119		315.1	105,656
PDD167	45.50	46.50	0.67		6,337	3.75	17,395	15,800		531.4	116,654
PDD167	46.50	47.20	0.48		4,609	2.75	12,774	11,580		365.5	81,460
PDD167	47.20	47.88	0.01		61	0.03	163	82		15.9	4,280
PDD167	47.88	48.33	15.14	15.14					54		200,900
PDD167	48.33	49.00	29.24	29.24					47		167,000
PDD167	49.00	50.00	26.08	26.08					48		175,400
PDD167	50.00	50.76	24.94	24.94					50		175,200
PDD167	50.76	51.60	0.44		4,178	1.97	9,145	10,271		187.2	67,407
PDD167	51.60	52.32	0.20		1,904	2.95	13,721	1,471		141.5	43,951
PDD167	52.32	52.72	26.13	26.13					49		170,800
PDD167	52.72	53.86	0.32		3,049	3.61	16,751	4,009		127.9	41,976
PDD167	53.86	54.46	28.64	28.64					48		166,100
PDD167	54.46	55.06	25.40	25.40					50		172,900
PDD167	55.06	56.00	0.62		5,928	0.68	3,139	3,029		38.9	42,000
PDD167	56.00	57.00	0.18		1,687	1.26	5,848	5,552		67.2	41,515
PDD167	57.00	58.26	0.16		1,555	1.11	5,157	4,655		196.9	55,830
PDD167	58.26	59.00	0.08		808	0.69	3,206	3,035		95.8	56,069
PDD168	45.00	45.86	0.00		18	0.02	114	9		0.0	781
PDD168	45.86	47.00	0.62		5,940	3.36	15,617	14,985		147.9	107,658
PDD168	47.00	48.00	0.55		5,197	3.07	14,256	13,849		185.9	103,281
PDD168	48.00	49.00	0.41		3,929	2.00	9,302	11,843		101.3	103,988
PDD168	49.00	50.00	0.39		3,690	1.95	9,068	8,987		73.4	79,051
PDD168	50.00	51.00	0.18		1,754	1.10	5,114	5,328		39.9	34,682
PDD168	51.00	52.00	0.13		1,201	0.85	3,933	3,520		30.7	51,723
PDD168	52.00	53.00	0.51		4,819	1.55	7,207	4,827		76.7	67,474
PDD168	53.00	54.00	0.39		3,710	3.12	14,494	13,027		134.7	77,872
PDD168	54.00	55.00	0.18		1,750	1.36	6,311	6,242		78.8	28,209
PDD168	55.00	56.00	0.38		3,615	1.14	5,311	2,897		39.7	73,539
PDD168	56.00	57.00	0.15		1,401	1.61	7,455	1,425		59.7	60,707
PDD168	57.00	58.00	0.04		353	0.28	1,291	1,075		20.6	34,718
PDD169	38.05	39.00	0.01		93	0.02	94	38		1.3	1,563
PDD169	39.00	39.40	0.04		387	0.02	87	26		8.7	3,740
PDD169	39.40	40.00	0.49		4,658	3.84	17,825	17,629		156.1	131,933

Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD169	40.00	41.00	0.20		1,940	1.63	7,548	7,418		200.5	86,299
PDD169	41.00	42.00	0.38		3,659	3.20	14,868	14,878		68.9	116,769
PDD169	42.00	43.00	0.41		3,871	3.38	15,677	15,440		131.6	121,630
PDD169	43.00	44.00	0.32		3,014	3.03	14,066	13,743		62.0	122,086
PDD169	44.00	44.64	0.34		3,204	2.87	13,331	13,372		70.2	125,678
PDD169	44.64	45.80	0.00		34	0.05	218	72		0.9	12,207
PDD169	45.80	46.50	0.48		4,553	3.29	15,287	14,539		93.8	116,935
PDD169	46.50	47.53	0.41		3,875	3.07	14,245	13,122		85.4	98,921
PDD169	47.53	48.00	0.13		1,215	0.74	3,439	1,429		9.1	67,866
PDD170	42.85	43.60	0.74		7,020	0.09	420	3,354		0.8	116,399
PDD170	43.60	44.00	22.14	22.14					50		182,500
PDD170	44.00	45.00	24.92	24.92					50		172,700
PDD170	45.00	46.00	27.35	27.35					50		166,800
PDD170	46.00	47.00	17.15	17.15					57		167,200
PDD170	47.00	47.62	26.74	26.74					48		172,300
PDD170	47.62	48.50	1.58		15,031	3.20	14,847	14,813		119.3	118,619
PDD170	48.50	49.32	0.70		6,631	4.06	18,848	17,976		117.3	92,652
PDD170	49.32	49.75	0.10		996	0.51	2,389	2,825		41.4	31,572
PDD170	49.75	50.05	14.25	14.25					57		186,600
PDD170	50.05	51.05	22.36	22.36					51		176,900
PDD170	51.05	52.00	0.27		2,546	1.21	5,620	6,070		102.6	35,054
PDD170	52.00	53.15	0.22		2,113	1.61	7,483	7,239		187.2	65,721
PDD170	53.15	54.00	0.12		1,171	0.85	3,926	3,751		129.9	43,559
PDD170	54.00	54.95	0.04		409	0.26	1,210	1,053		54.4	50,399
PDD172	35.95	36.90	0.01		110	4.85	22,531	25		0.6	84,837
PDD172	36.90	38.13	0.06		571	2.72	12,621	1,260		16.6	76,190
PDD172	38.13	39.40	0.18		1,737	2.08	9,652	129		0.4	82,687
PDD172	39.40	40.45	1.46		13,899	1.69	7,849	142		14.6	46,435
PDD172	40.45	40.80	5.86	5.86					65		181,300
PDD172	40.80	41.45	0.04		343	0.02	105	1,704		137.9	77,715
PDD172	41.45	42.50	0.27		2,590	1.40	6,484	8,576		555.3	97,897
PDD172	42.50	43.35	0.16		1,546	0.42	1,948	6,958		324.9	116,499
PDD172	43.35	44.70	0.16		1,520	0.40	1,848	5,566		152.5	57,294
PDD172	44.70	46.00	0.16		1,519	0.56	2,603	5,208		456.1	85,062
PDD172	46.00	47.00	0.00		16	0.02	104	30		1.1	943
PDD172	47.00	47.80	0.00		21	0.02	100	27		141.8	1,069
PDD172	47.80	49.00	0.04		407	0.15	681	761		285.7	51,848
PDD172	49.00	50.00	0.05		463	0.21	955	1,033		608.0	40,266
PDD172	50.00	51.00	0.00		29	-	18	12		369.0	95,329
PDD172	51.00	52.00	0.00		38	-	16	32		538.0	98,875
PDD172	52.00	53.00	0.16		1,507	0.41	1,913	5,021		548.8	78,411
PDD172	53.00	54.00	0.02		227	0.06	283	801		62.5	18,160

Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD172	54.00	55.00	0.01		48	0.01	49	5		534.8	39,684
PDD172	55.00	56.35	0.01		56	0.01	58	50		280.3	42,486
PDD172	56.35	57.50	0.10		986	0.71	3,281	3,763		429.5	51,979
PDD172	57.50	58.00	0.10		920	0.60	2,775	1,976		95.9	46,585
PDD173	33.75	34.30	0.02		171	0.12	551	393		4.0	25,111
PDD173	34.30	35.00	0.01		68	1.14	5,283	434		1.3	55,521
PDD173	35.00	36.00	0.05		486	3.13	14,543	1,090		12.4	38,535
PDD173	36.00	37.38	0.07		633	2.05	9,539	1,681		10.2	51,740
PDD173	37.38	38.75	0.01		97	0.11	519	257		3.9	9,543
PDD173	38.75	39.45	0.15		1,405	1.41	6,560	3,965		53.9	62,666
PDD173	39.45	40.00	0.12		1,132	2.01	9,331	3,120		31.9	79,075
PDD173	40.00	41.00	0.09		891	3.71	17,246	861		16.0	75,868
PDD173	41.00	42.23	0.11		1,037	2.97	13,781	174		2.1	65,162
PDD173	42.23	43.08	0.18		1,739	1.67	7,770	7,504		123.5	88,435
PDD173	43.08	44.00	0.04		333	3.43	15,943	1,036		81.3	73,813
PDD173	44.00	45.00	0.00		13	0.05	238	10		4.1	1,648
PDD173	45.00	46.00	0.00		7	0.04	174	3		0.5	1,000
PDD173	46.00	46.75	0.00		6	0.03	121	3		2.6	656
PDD173	46.75	47.00	0.69		6,537	3.93	18,240	17,231		142.6	96,612
PDD173	47.00	48.00	0.77		7,317	4.61	21,419	19,419		101.9	118,453
PDD173	48.00	49.00	0.75		7,102	4.52	21,005	18,827		194.0	128,004
PDD173	49.00	50.00	0.54		5,181	3.20	14,885	13,813		629.0	115,422
PDD173	50.00	51.00	0.54		5,170	3.12	14,469	13,153		582.6	112,259
PDD173	51.00	52.20	0.55		5,282	3.04	14,111	13,039		362.7	121,654
PDD173	52.20	52.80	0.07		645	0.10	457	1,985		162.3	43,806
PDD173	52.80	54.00	0.20		1,919	0.89	4,124	6,052		782.7	91,173
PDD173	54.00	55.00	0.18		1,739	0.90	4,192	4,621		328.9	58,196
PDD173	55.00	55.60	0.24		2,298	1.33	6,170	6,332		538.6	73,152
PDD173	55.60	56.50	0.01		54	0.02	85	228		660.1	92,641
PDD173	56.50	57.20	0.01		128	0.03	130	565		584.8	72,857
PDD173	57.20	58.00	0.23		2,159	1.25	5,809	6,167		317.9	65,434
PDD173	58.00	59.00	0.27		2,604	1.43	6,647	6,555		156.9	45,688
PDD173	59.00	60.00	0.19		1,788	1.38	6,405	6,086		71.9	45,938
PDD173	60.00	61.00	0.06		536	0.90	4,162	2,225		53.6	54,096
PDD174	42.00	43.13	0.07		622	0.07	308	5,057		8.3	96,744
PDD174	43.13	43.50	2.28		21,720	0.82	3,816	679		8.4	55,289
PDD174	43.50	43.87	20.94	20.94					51		179,500
PDD174	43.87	44.75	1.47		13,989	1.03	4,798	344		1.0	68,190
PDD174	44.75	45.00	23.40	23.40					51		172,800
PDD174	45.00	46.00	27.10	27.10					49		163,900
PDD174	46.00	47.00	26.57	26.57					49		172,100
PDD174	47.00	47.80	26.58	26.58					49		172,400

Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD174	47.80	48.01	1.90		18,103	0.47	2,196	2,326		20.9	31,525
PDD174	48.01	49.00	0.73		6,948	4.14	19,245	18,665		137.0	105,073
PDD174	49.00	50.00	0.59		5,599	3.78	17,540	15,661		105.6	78,412
PDD174	50.00	51.00	0.68		6,484	4.76	22,130	19,824		116.2	108,801
PDD174	51.00	52.10	0.46		4,362	3.48	16,185	14,807		105.4	81,452
PDD174	52.10	53.00	0.09		869	1.22	5,670	2,685		25.9	31,764
PDD174	53.00	54.00	0.09		862	3.00	13,926	3,056		21.5	43,118
PDD174	54.00	55.17	0.07		673	3.25	15,072	1,525		16.4	49,378
PDD174	55.17	56.44	0.06		543	1.01	4,693	842		49.0	50,428
PDD174	56.44	57.00	0.02		232	0.22	1,006	906		9.0	26,796
PDD175	40.50	41.17	0.07		684	0.48	2,217	1,855		7.9	92,774
PDD175	41.17	41.90	0.02		148	0.13	597	387		2.0	5,108
PDD175	41.90	43.00	0.44		4,196	3.66	16,981	16,682		71.2	104,267
PDD175	43.00	44.00	0.46		4,380	3.92	18,208	17,968		70.9	135,606
PDD175	44.00	45.00	0.34		3,233	3.31	15,391	14,665		82.9	101,110
PDD175	45.00	46.00	0.46		4,336	3.94	18,307	18,078		81.3	122,995
PDD175	46.00	47.00	0.43		4,103	3.86	17,950	17,427		69.8	124,408
PDD175	47.00	48.00	0.40		3,770	3.55	16,492	16,359		68.3	107,456
PDD175	48.00	48.35	0.24		2,306	2.04	9,491	10,070		90.1	72,197
PDD175	48.35	48.85	0.07		663	0.52	2,402	2,193		13.7	21,051
PDD175	48.85	49.37	0.53		5,020	4.21	19,549	18,271		94.0	119,703
PDD175	49.37	50.10	0.01		60	0.08	353	159		1.1	3,249
PDD175	50.10	50.68	0.03		310	0.39	1,788	1,146		1.8	60,333
PDD175	50.68	51.47	19.06	19.06					52		191,900
PDD175	51.47	52.75	0.61		5,823	1.11	5,136	5,384		88.2	70,095
PDD175	52.75	53.70	0.18		1,743	0.72	3,330	3,756		45.5	69,625
PDD175	53.70	54.20	0.00		20	0.03	154	33		0.8	1,417
PDD175	54.20	54.60	0.43		4,073	2.51	11,658	9,822		267.3	81,391
PDD175	54.60	55.70	0.00		44	0.04	199	64		4.6	6,813
PDD175	55.70	56.00	0.64		6,078	3.46	16,088	14,903		436.3	100,510
PDD175	56.00	57.00	0.39		3,753	2.34	10,856	9,568		674.6	98,681
PDD175	57.00	58.00	0.39		3,676	2.10	9,765	9,027		287.4	76,685
PDD175	58.00	58.90	0.35		3,311	1.97	9,144	8,272		406.5	75,171
PDD175	58.90	60.00	0.01		77	3.38	15,688	162		130.2	54,609
PDD175	60.00	61.00	0.14		1,361	0.73	3,401	3,044		127.7	27,997
PDD176	36.50	37.00	0.01		52	0.55	2,560	110		0.4	73,031
PDD176	37.00	38.00	0.02		168	0.50	2,340	259		0.9	67,999
PDD176	38.00	39.00	0.01		89	1.37	6,371	96		0.4	59,151
PDD176	39.00	40.00	0.01		68	1.98	9,217	56		0.3	53,066
PDD176	40.00	40.55	0.03		296	1.53	7,115	691		6.1	72,341
PDD176	40.55	41.00	0.01		75	0.11	498	156		2.9	6,493
PDD176	41.00	42.00	0.03		270	2.68	12,464	173		0.5	80,187



Table 2 Diamond Core Drill Hole Collar Selected Assays											
Hole ID	From (m)	To (m)	Cs <sub>2</sub> O Calc%	Cs <sub>2</sub> O (%)	Cs (ppm)	Li <sub>2</sub> O (calc%)	Li (ppm)	Rb (ppm)	SiO <sub>2</sub> (%)	Ta (ppm)	Al (ppm)
PDD176	42.00	43.00	0.09		896	1.62	7,526	98		0.1	79,256
PDD176	43.00	44.00	0.08		759	3.08	14,325	256		2.5	46,319
PDD176	44.00	45.00	0.18		1,717	2.15	9,991	283		2.2	68,699
PDD176	45.00	45.55	0.04		371	0.90	4,190	85		0.5	75,334
PDD176	45.55	46.00	0.00		11	0.05	227	7		0.4	1,216
PDD176	48.95	49.40	0.06		576	0.29	1,362	1,489		15.9	26,947
PDD176	49.40	50.00	0.23		2,224	1.06	4,931	4,927		221.0	96,484
PDD176	50.00	51.00	0.44		4,181	2.99	13,883	13,120		83.9	106,534
PDD176	51.00	52.00	0.55		5,233	4.02	18,689	17,590		108.6	103,655
PDD176	52.00	53.00	0.39		3,751	3.02	14,016	12,931		81.1	88,868
PDD176	53.00	54.00	0.28		2,627	2.06	9,546	8,817		70.1	74,772
PDD176	54.00	54.80	0.26		2,463	1.88	8,712	8,475		82.7	73,921
PDD176	54.80	55.35	0.03		285	0.27	1,271	587		4.0	78,332
PDD176	55.35	56.00	0.05		443	0.40	1,835	1,155		18.4	61,571
PDD176	56.00	57.00	0.22		2,075	1.55	7,218	6,740		107.6	83,552
PDD176	57.00	58.00	0.04		388	0.31	1,457	964		43.6	69,584

Notes:

- Selected Assay results derived from chemical analysis by Intertek-Genalysis.
- The element oxide assays were determined by fused disk - XRF.
- The element assays were determined by 4 acid digest and ICP analysis.
- Calculated oxide fields comprise the actual element oxide value when determined, or the oxide value calculated from the elemental value using the following formula: Li \* 2.153 to derive Li<sub>2</sub>O, Ta by 1.221 to derive Ta<sub>2</sub>O<sub>5</sub> and Cs by 1.06 to derive Cs<sub>2</sub>O.
- Intersections noted are 'down-hole' and do not necessarily represent a true width.

## Section 1 - Sampling Techniques and Data

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

### Pioneer Dome Project, Sinclair Caesium Prospect.

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (eg cut Faces, 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>	<ul style="list-style-type: none"> <li>HQ Core samples from holes drilled from surface.</li> </ul>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<ul style="list-style-type: none"> <li>Industry-standard diamond core drilling, using HQ diamond-set cutting tools.</li> <li>Duplicate samples and Reference Standards were inserted at regular intervals to provide assay quality checks. The standards reported within acceptable limits.</li> <li>Samples are considered 'fit for purpose', being to detect anomalous metal element occurrences.</li> </ul>
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	<ul style="list-style-type: none"> <li>Half core samples of lengths determined by geology vary in weight.</li> <li>The analytical process for a package of elements specific for exploring LCT pegmatites included digestion by a four-acid digestion with a Mass Spectrometer (MS) determination (Intertek analysis code 4A Li48-MS). Over range samples were re analysed by a sodium peroxide zirconium crucible fusion</li> <li>High Cs-containing samples analysed using lithium borate fusion XRF analysis.</li> </ul>
Drilling techniques	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	<ul style="list-style-type: none"> <li>HQ standard core drilling.</li> </ul>
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<ul style="list-style-type: none"> <li>Drill core is measured and compared with the length of core rods in use to ascertain recovery and core loss.</li> </ul>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> <li>Sample recovery is generally excellent for HQ drilling using the equipment described.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Sample recovery is mostly under the control of the drill operator and is generally influenced by the experience and knowledge of the operator.</li> <li>Sample recovery for core drilling is usually very high. Core measurements enable core recoveries to be calculated and form part of the QA/QC record.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>Because the sample recoveries are assumed to be high, any possible relationship between sample recovery and grade has not been investigated.</li> </ul>
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>	<ul style="list-style-type: none"> <li>Lithological logs exist for these holes in a database. Fields captured include lithology, mineralogy, sulphide abundance and type, alteration, texture, recovery, weathering and colour.</li> </ul>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, Face, etc) photography.</i>	<ul style="list-style-type: none"> <li>Logging has primarily been qualitative.</li> <li>Qualitative litho-geochemistry based on pXRF analyses is used to confirm rock types.</li> <li>Half core is retained in trays for future reference.</li> <li>XRD analysis of selected pulps retained from the chemical analysis may be undertaken once all chemical assays have been received.</li> </ul>
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> <li>The entire length of the drill holes was geologically logged.</li> </ul>
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<ul style="list-style-type: none"> <li>Intervals between 0.5m and 1m are sawn along orientation marks and one side of the core is consistently sampled.</li> <li>The sample collection, cutting and sampling for this style of drilling is considered to be standard industry practise and fit for purpose.</li> </ul>
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<ul style="list-style-type: none"> <li>The cut core was sampled with the right-hand side of the core always collected for chemical analysis, the orientation line was retained.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>Reference Material is included at a rate of 1 per 30 samples for all assay submissions.</li> <li>Laboratory quality control samples used and monitored by the laboratory and the company.</li> </ul>
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<ul style="list-style-type: none"> <li>The sample size is considered appropriate for the style of deposit being sampled.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<ul style="list-style-type: none"> <li>The sample preparation and assay method used is considered to be standard industry practice and is appropriate for the deposit.</li> </ul>
	<i>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.</i>	<ul style="list-style-type: none"> <li>Pioneer owns a Bruker S1 Titan 800 handheld XRF instrument which is used to provide the geologist with basic, qualitative litho-geochemistry data only. This data is not considered reportable.</li> </ul>
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<ul style="list-style-type: none"> <li>Standards and laboratory checks have been assessed. Most of the standards show results within acceptable limits of accuracy, with good precision in most cases. Internal laboratory checks indicate very high levels of precision.</li> </ul>
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes.</i>	<ul style="list-style-type: none"> <li>Significant intersections are calculated and checked by suitably qualified personnel.</li> <li>No holes have been twinned</li> </ul>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<ul style="list-style-type: none"> <li>Pioneer has a digital SQL drilling database where information is stored.</li> <li>The Company uses a range of consultants to load and validate data, and appraise quality control samples.</li> </ul>
	<i>Discuss any adjustment to assay data.</i>	<ul style="list-style-type: none"> <li>Pioneer has adjusted the elemental lithium (Li), tantalum (Ta) and caesium (Cs) assay results to provide Li<sub>2</sub>O, Ta<sub>2</sub>O<sub>5</sub> and Cs<sub>2</sub>O grades. This adjustment is a multiplication of the elemental Li, Ta and Cs assay results by 2.153, 1.221 and 1.06 to determine Li<sub>2</sub>O, Ta<sub>2</sub>O<sub>5</sub> and Cs<sub>2</sub>O grades respectively.</li> </ul>
<i>Location of data points</i>	<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>	<ul style="list-style-type: none"> <li>The collar locations of the holes have been surveyed by a licenced surveyor using a differential GPS. The new-collar surveys provide very accurate positions for all holes including the RL of each drill collar.</li> </ul>
	<i>Specification of the grid system used.</i>	<ul style="list-style-type: none"> <li>MGA94 (Zone 51)</li> </ul>
	<i>Quality and adequacy of topographic control.</i>	<ul style="list-style-type: none"> <li>Topographic control is by DGPS, carried out by a licensed surveyor.</li> </ul>
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>Individual drill hole spacing varies. This drill programme was predominantly drilled on a 10m grid.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<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>	<ul style="list-style-type: none"> <li>The data is sufficient dense to conduct the estimation of a mineral resource.</li> <li>The process to produce a mineral resource is in progress.</li> </ul>
	<i>Whether sample compositing has been applied.</i>	<ul style="list-style-type: none"> <li>Yes, for the drill intersection summary at the start of this announcement.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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>	<ul style="list-style-type: none"> <li>The strike of the mineralisation is estimated at to be broadly north – south, therefore the angled holes have been usually drilled towards East.</li> <li>Down hole intersections are estimated to closely approximately true widths based on the interpretation of the pegmatite bodies and the orientation of the drilling.</li> </ul>
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <li>Pioneer uses standard industry practices when collecting, transporting and storing samples for analysis.</li> <li>Drilling pulps are retained by Pioneer off site.</li> </ul>
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>Sampling techniques for assays have not been specifically audited but follow common practice in the Western Australian exploration industry.</li> <li>The assay data and quality control samples are periodically audited by an independent consultant.</li> </ul>

## Section 2 - Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites</i>	<ul style="list-style-type: none"> <li>The drilling reported herein is entirely within M63/665 which is a granted Mining Lease.</li> <li>The tenement is located approximately 40km N of Norseman WA.</li> <li>Pioneer Resources Limited is the registered holder of the tenement and holds a 100% unencumbered interest in all minerals within the tenement.</li> <li>The tenement is on vacant crown land.</li> <li>The Ngadju Native Title Claimant Group has a determined Native Title Claim which covers the Pioneer Dome project.</li> </ul>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	<ul style="list-style-type: none"> <li>At the time of this Statement M63/665 is in Good Standing. To the best of the Company's knowledge, other than industry standard permits to operate there are no impediments to Pioneer's operations within the tenement.</li> </ul>
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>There has been no previous LCT pegmatite exploration on the Pioneer Dome project. Previous mapping by the Western Australian Geological Survey and Western Mining Corporation (WMC) in the 1970's identified several pegmatite intrusions however these were not systematically explored for Lithium or associated elements.</li> </ul>
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>The Project pegmatites are consistent with records of highly differentiated Lithium Caesium Tantalum (LCT) pegmatite intrusion. This type of pegmatite intrusions are the target intrusions of hard rock lithium deposits.</li> </ul>
<i>Drill hole Information</i>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including 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 plus hole length.</i></p> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	<ul style="list-style-type: none"> <li>Refer to Appendix 1 of this announcement.</li> </ul>
<i>Data aggregation methods</i>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p>	<ul style="list-style-type: none"> <li>Weighted average Cs<sub>2</sub>O assays on page 1 of this release are for generally adjacent samples above 5% Cs<sub>2</sub>O.</li> <li>Weighted average Li<sub>2</sub>O assays on page 1 of this release are for generally adjacent samples above 0.8% Li<sub>2</sub>O.</li> <li>Assays in Table 2 are as per the intervals sampled.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>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 (eg 'down hole length, true width not known').</i>	<ul style="list-style-type: none"> <li>The current geological interpretation, based on drilling and mapping, suggests that the true widths approximate the down hole widths.</li> </ul>
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	<ul style="list-style-type: none"> <li>Refer to maps in this report.</li> </ul>
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>Comprehensive reporting of drill details has been provided in Appendix 1 of this announcement.</li> </ul>
<i>Other substantive exploration data</i>	<i>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.</i>	<ul style="list-style-type: none"> <li>All meaningful and material exploration data has been reported.</li> </ul>
<i>Further work</i>	<i>The nature and scale of planned further work (eg 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.</i>	<ul style="list-style-type: none"> <li>Work that is currently underway or remains outstanding includes; <ul style="list-style-type: none"> <li>Additional microcline assay results from the completed Diamond drilling</li> <li>Detailed petrography within the anomalous zones</li> <li>Selected XRD to determine the mineralogy</li> </ul> </li> <li>Potential additional work includes <ul style="list-style-type: none"> <li>Metallurgical testing</li> <li>Geological modelling</li> <li>Resource Estimation.</li> <li>Extensional drilling</li> </ul> </li> </ul>