PALADIN ENERGY LTD
ACN 061 681 098

14 October 2019

By electronic lodgement

ASX Markets Announcements
Australian Securities Exchange
20 Bridge Street
SYDNEY NSW 2000

PREFEASIBILITY STUDY DELIVERS IMPROVED FINANCIALS AND PRODUCTION CAPACITY FOR LANGER HEINRICH URANIUM MINE RESTART

Highlights

- Estimated capital of **US$80M** confirmed for restart at production levels of **~5.2Mlb per annum (pa)**
- Opportunity to increase production to **6.5Mlb pa** through additional high return, discretionary capital of **US$30M** enhancing access to offtake and financing
- Aspirational average life of mine **All in Sustaining Cost (AISC) target of US$30/lb** achievable
- Potential for **further AISC improvements of approximately US$4.50/lb** through significant process changes after restart
- Maiden Vanadium **Mineral Resource of 38.8Mlb V_2O_5** declared (122.1Mt @ 145PPM V_2O_5)
- 12-month execution lead time to restart Langer Heinrich after funding and improved uranium market conditions

Uranium developer Paladin Energy Limited (ASX:**PDN**) ("**Paladin**") is pleased to announce improved economics to re-start its flagship Langer Heinrich Mine in Namibia (refer Figure 1) following the completion of the first stream of the Pre-Feasibility Study (PFS1) which focused on a rapid, low capital and low risk restart.

Paladin CEO Scott Sullivan said, *"The Langer Heinrich mine is a world class uranium asset and this study confirms Paladin's key position as a first mover back into production in a recovering uranium market."*

"Paladin has assembled a first-class team to conduct these studies and they have systematically reviewed in detail the entire Langer Heinrich production history and processes, challenging past practices where necessary and have brought in diverse experience from other companies and commodities to envision an exciting new future for Langer Heinrich."

"Achieving production of over 5Mlb pa at a cost of under US$30/lb AISC and with a 12-month lead time on execution, were key targets of the board and executive team and will see Langer Heinrich in an enviable position when uranium prices recover. This study continues to demonstrate the high quality and potential of the asset and provides a solid foundation for a confident and successful restart."

Level 4, 502 Hay Street, Subiaco, Western Australia 6008 Postal: PO Box 201, Subiaco, Western Australia 6904
Tel: +61 (8) 9381 4366 Fax: +61 (8) 9381 4978 Email: paladin@paladinenergy.com.au Website: www.paladinenergy.com.au

"We also believe there is the opportunity for further cost improvements progressively after restart and we are excited about the prospect of vanadium production in our future. We will continue to explore these opportunities, once the market shows signs of improvement."

Figure 1 – Aerial photo of Langer Heinrich Mine March 2018

Background

Langer Heinrich was transitioned to care and maintenance (C&M) in August 2018 due to the sustained low uranium price. Subsequently, Paladin completed a concept study in February 2019, that identified multiple options to reduce operating costs, improve process plant performance and potentially recover a saleable vanadium product.

Paladin commenced a two-stream Prefeasibility Study in March 2019 (PFS1 and PFS2), to improve the details of the Langer Heinrich restart plan and to pursue further improvement options to clearly present a compelling investment case. This included Paladin conducting:

- A study of numerous initiatives to reduce operating cost and to improve operability
- Approximately 16,200m of resource verification drilling
- An update of the mineral resource model for uranium and vanadium
- Further de-risking of the rapid restart plan

Paladin has now completed PFS1, the first stage of the study, focusing on a rapid, low capital and low risk restart ahead of further initiatives being studied as part of a second phase of the Prefeasibility study (PFS2).

COMPLETION OF RAPID RESTART PREFEASIBILITY (PFS1)

PFS1 focused on confirming effective C&M plans, practices and costs, while also developing a more detailed plan to execute a rapid restart at Langer Heinrich in an improved uranium market. PFS1 has delivered a further optimised plan for the restart with a level of accuracy of +25%/-15%.

Importantly, PFS1 has confirmed that Langer Heinrich could be back in production within 12-months of financing being in place. This assumes an appropriate return on investment for shareholders and that studies have been fully completed during the C&M period.

Capital requirements and AISC for rapid restart at ~5.2Mlb pa production capacity

Paladin estimates the initial capital for the rapid restart to be US$80M, including US$38M for plant repair and improvement and US$42M for working capital. This is consistent with the restart capital estimate from the concept study.

Upon restart, Langer Heinrich would have a production capacity on average of 5.2Mlb pa while processing high and medium grade ores for approximately an eight-year period (after a 12-month ramp-up period) followed by a production capacity of 2.7Mlb pa while processing low grade ores for approximately 12 years. This would result in an average life of mine AISC of approximately US$33/lb, consisting of:

- Life-of-asset mining costs of US$8.40/lb
- Processing costs of US$18.20/lb
- Other operating costs of US$2.60/lb
- Capital costs of US$3.80/lb

Expansion of Langer Heinrich's Production to 6.5Mlb pa

In addition, Paladin has identified opportunities to significantly debottleneck existing mining and mineral processing operations for a modest and discretionary additional capex of approximately US$30M to achieve an increase in production capacity to 6.5Mlb pa. This can be done during execution of the rapid restart plan and does not extend our commissioning time of 12 months from a restart decision. This would initially target processing high and medium grade ore for approximately a six-year period. Processing of low-grade ores for a further ten-year period yields a production capacity of approximately 3.4Mlb pa, resulting in a reduction in overall average life of mine AISC to US$29/lb, compared to Paladin's aspirational AISC target of US$30/lb. This reduced AISC estimate consists of:

- Life-of-asset mining costs of US$6.10/lb
- Processing costs of US$17.20/lb
- Other operating costs of US$2.50/lb
- Capital costs of US$3.20/lb

The proposed improvements are illustrated in Table 1.

Option	Total Life of Asset		High and Medium Grade Ore		Low Grade Ore		Restart Cost (US$ real)	Improvement Cost (US$ real)
	Timeframe (years)	AISC (US$/lb)	Production Rate (Mlb per annum)	Timeframe (years) AISC (US$/lb)	Production Rate (Mlb per annum)	Timeframe (years) AISC (US$/lb)		
Restart 5.2Mlb	20	33	5.2	8	2.7	12	80	0
Restart 6.5Mlb expansion	16	29	6.5	6	3.4	10	80	30
Delta	**-4**	**-4**	**+1.3**	**-2**	**+0.7**	**-2**	**0**	**+30**

Table 1 – Summary of Langer Heinrich PFS1 Outcomes for Production & AISC

This improvement results from a review and reconciliation of ten years of operating history and data by an experienced and diversely skilled technical team, specifically mandated to identify opportunities in the operation by overlaying current best practice for optimising mineral processing and mining systems.

Opportunities that were identified in the PF1 plan include:

- Increasing process plant surge capacity to enable the leach facility to operate at full rate as the primary bottleneck
- Increasing water storage capacity on site to avoid production interruptions from pipeline maintenance and supply disruptions
- Increasing automation to enable remote, semi-automatic monitoring and operation
- Making numerous operational configuration and management changes that will enable the entire facility to increase rate and reliability to operate at its full potential. Refer to Figure 2 for an illustration of key changes

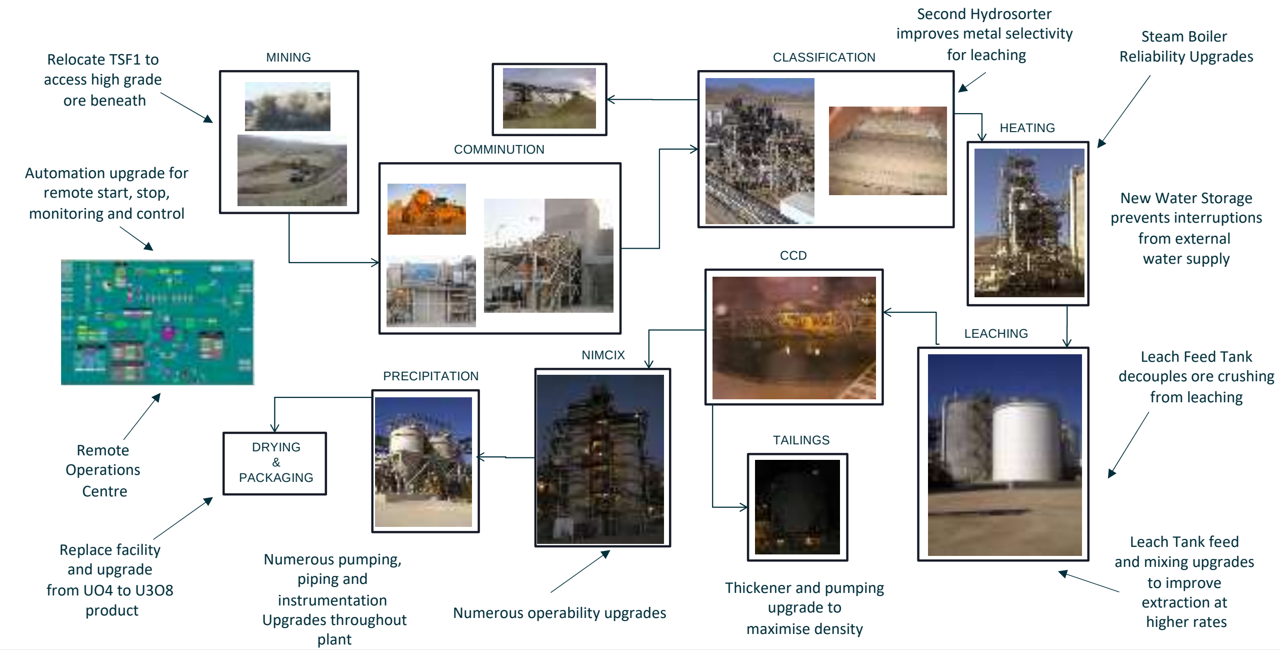

Figure 2 – Key improvements from PFS1 to generate expanded production rate.

PFS drilling programme completed

The PFS1 Mineral Resource definition programme has been completed and has achieved its aims of:

- Drilling high grade mineralised zones to basement to confirm and ensure the Mineral Resource is included in the restart mine plan
- Verifying the grade and characteristics of mineralisation that is beneath an original, above ground dry tailings storage facility to increase confidence of inclusion in the mine plan
- Obtaining samples for assaying to support the Vanadium Mineral Resources Estimate
- Verifying medium and low-grade material quality and structure on stockpiles that will feed the process plant in the later phase of its life
- Providing samples for the geo-metallurgical processing response testing programme, which has increased knowledge of the processing response of ores not yet processed, de-risking future production

Maiden Vanadium Mineral Resource (JORC 2012)

Paladin has declared a maiden Vanadium Mineral Resource estimate as part of the updated Langer Heinrich Mineral Resource. Based on the updated Mineral Resource estimate, when mining was suspended in December 2016, there was 31.0Mlb V_2O_5 remaining in the ground and, at the suspension of processing in August 2018, an additional 7.8Mlb V_2O_5 contained in 30.8Mt of medium and low-grade stockpiles giving a combined total of 122.1Mt @ 145 PPM V_2O_5 for 38.8Mlb V_2O_5. Table 2 provides information on Mineral Resources remaining in ground by Classification.

Measured Category					Indicated Category					Inferred Category				
Mt	Grade ppm U_3O_8	t U_3O_8	Grade ppm V_2O_5	t V_2O_5	Mt	Grade ppm U_3O_8	t U_3O_8	Grade ppm V_2O_5	t V_2O_5	Mt	Grade ppm U_3O_8	t U_3O_8	Grade ppm V_2O_5	t V_2O_5
66.2	490	32,595	160	10,560	18.8	435	8,145	140	2,640	6.3	420	2,625	135	850

Table 2 – Mineral Resources shown by Classification at 250 PPM cut-off grade, depleted for mining and do not include ROM stockpiles noted above.

The Vanadium values within the Mineral Resource estimate are based on the ratio of U_3O_8 to V_2O_5 within the mineral carnotite. The Langer Heinrich deposit mineralisation is essentially monomineralic, in that the mineralisation consists of the uranium vanadate mineral carnotite. Refer to the final section of this announcement for additional information on the Mineral Resource estimate update.

Access to Utilities and Permits

The PFS1 work has confirmed that all permits required for restart are, or are reasonably expected to be, in place for production and that Langer Heinrich has contractual and legislative access to critical Government supplied services of water and power.

Low Risk Start-up

The rapid restart provides Paladin with a low risk start-up of Langer Heinrich. Langer Heinrich has previously produced over 43.3Mlb in Namibia over its ten-year operating history. The rapid restart plan maintains the existing processing approach with high confidence, conventional changes.

Namibia as an investment destination provides a stable government and a well-regulated resources industry including a well-established uranium mining sector. Mining is important to its economy, contributing approximately 12% to GDP.

PROCESSING UPGRADE STUDY (PFS 2) AND RAPID RESTART FEASIBILITY STUDY

Further opportunities were identified during the concept study for additional value to be created by committing to more substantial process changes to Langer Heinrich's mineral processing flowsheet after restart. These include:

- Reagent recovery and recycling (Back-End Upgrade or BUP)
- Vanadium production
- Ore sorting to improve uranium selectivity from ore
- Crushing and ore beneficiation expansion to enable more uranium to be fed to leach particularly when processing low grade ore (Front-End Upgrade or FEU)

These are being studied in PFS2 and hold promise to generate further AISC savings of US$4.50/lb as identified in the concept study, in addition to the PFS1 outcomes of optimising the current process.

NEXT STEPS

The PFS2 scope has been reduced to focus on completing in-progress test work and updating the pipeline of improvements for further development after Langer Heinrich is restarted.

The scope of the proposed rapid restart Feasibility Study (FS1) in FY2020 has also been reduced to focus on further optimisation and governance of C&M and the rapid restart plans. Completion of the full scope of feasibility study work to Paladin's standards has been deferred to when restart is imminent. The feasibility study work was budgeted to take nine months (June 2020) with the reduced scope now expected to be completed in March 2020.

The estimated cost from commencement to completion of the prefeasibility study and the proposed feasibility study scope to be conducted in FY2020 is US$5.2M, compared to an original budget of US$6.2M for the prefeasibility study, a saving of approximately US$1M, all fully funded from existing cash.

OWNERSHIP

Paladin owns 75% of Langer Heinrich Mauritius Holdings Limited, with 25% owned by CNNC Overseas Uranium Holdings Limited (CNNC) since January 2014. Langer Heinrich Mauritius Holdings Limited is the holding company of Langer Heinrich Uranium (Pty) Ltd that holds 100% of the Langer Heinrich tenements.

All information on Langer Heinrich included in this release is provided for on a 100% basis, with Paladin's interest being 75%.

MINERAL RESOURCE STATEMENT ADDITIONAL TECHNICAL INFORMATION

Mineral Resources[1] have been estimated at a number of cut-off grades using multiple indicator kriging with block support correction. Primary model panel dimensions are 50m E x 50m N x 3m RL. Estimates assume that final grade control sampling at approximately 3.5m E x 3.56m N x 1m RL spacing will be available prior to final mining and a selective mining unit of approximately 4m E x 4m N x 3m RL. Estimates for the entire deposit are summarised in the table below.

In all tables where Mineral Resource estimates are detailed, metal content in terms of tonnes U_3O_8 are based on contained metal in the ground and take no account of mining or metallurgical recoveries, mining dilution or other economic parameters. As at the end of June 2018 there were 4.7Mt at a grade of 520ppm U_3O_8 for 2,415t U_3O_8 and 170ppm V_2O_5 for 780t V_2O_5 contained in medium grade ROM stockpiles and 26.1Mt at a grade of 325ppm U_3O_8 for 8,485t U_3O_8 and 105ppm V_2O_5 for 2,750t V_2O_5 contained in low grade ROM stockpiles.

The assumed degree of selectivity that can be achieved during mining and subsequent haulage is regarded as reasonable. Comparison to mining grade control and processing indicates that the mineral resource model tends to be conservative in relation to tonnes mined but is consistent with the mineral resource grade above a 250ppm U_3O_8 cut off. The 250ppm U_3O_8 grade is the demarcation value used by Langer Heinrich mine to separate ore and waste.

Within the Mineral Resource estimate, V_2O_5 values are quoted based on the ratio between carnotite uranium and vanadium and will therefore represent an equivalent vanadium value. From the partial leach testwork it is expected that the vanadium values within the Mineral Resource will represent a minimum value of vanadium expected to be present in processing leach liquors. It can be assumed, but is not present within the Mineral Resource estimate, that additional vanadium from other sources (potentially 10-15%) will be leached from the processing feed.

Measured Category					Indicated Category					Inferred Category				
Mt	Grade ppm U_3O_8	t U_3O_8	Grade ppm V_2O_5	t V_2O_5	Mt	Grade ppm U_3O_8	t U_3O_8	Grade ppm V_2O_5	t V_2O_5	Mt	Grade ppm U_3O_8	t U_3O_8	Grade ppm V_2O_5	t V_2O_5
66.2	490	32,595	160	10,560	18.8	435	8,145	140	2,640	6.3	420	2,625	135	850

Note: Values may not add due to rounding, Mineral Resources are depleted for mining and do not include ROM stockpiles.

Table 3 – Mineral Resources shown by Classification.

[1] As defined by JORC (2012).

Competent Persons Statement

The Mineral Resource estimates for the Langer Heinrich deposit were prepared by David Princep of Gill Lane Consulting. Mr. Princep has visited the Project on numerous occasions since 2003, with the most recent being in July 2016. Mr. Princep is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist. Mr. Princep has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration 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 (JORC 2012). Mr Princep approves of and consents to the inclusion of the information in this announcement in the form and context in which it appears.

For further information:

Anna Sudlow
Chief Financial Officer
anna.sudlow@paladinenergy.com.au or +61 (8) 9423 8119

Underlying data

After derivation of preferred U_3O_8 sample grades, weighted average grades were calculated for uniform one-metre down-hole composite intervals in all drillholes and test shafts. Residuals less than 0.25m length were discarded. Composited intervals receiving negative U_3O_8 grade from the deconvolution process were assigned a zero value. Numeric codes for sample type and assay method were carried across in the compositing process. Composites were then assigned by their mid-point locations.

In all, the sample dataset used within the Mineral Resource estimate consists of 1,331,762 1m samples distributed over the entire length of the deposit with a minimum drill spacing of 12.5m x 12.5m over a significant proportion of the mineralisation. The drill spacing widens to 50m x 50m in areas that are yet to be subject to delineation drilling and to 100m x 200m in the periphery to the west. For the mineralisation figure below, the colour scheme is as follows; blue = 250 – 400ppm U_3O_8, green = 400 – 650ppm U_3O_8, red = 650 - 900ppm U_3O_8 and magenta >900ppm U_3O_8 and is shown at a 250ppm U_3O_8 cut-off grade.

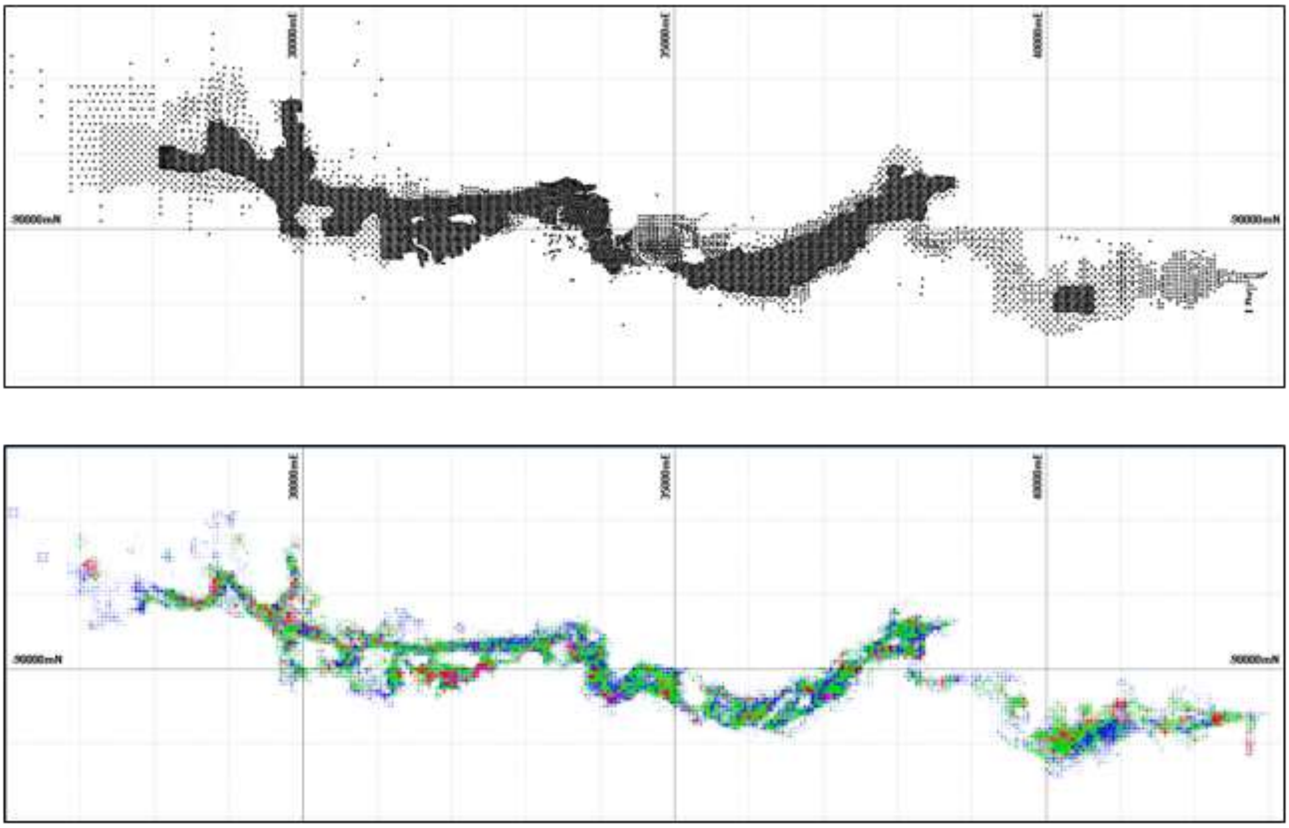

Figure 3: Langer Heinrich sample locations and uranium mineralisation

During the 2019 drilling programme, a number of assays were acquired from samples distributed throughout the deposit in order to confirm whether the U:V molar ratio was reasonable throughout the deposit. A specific alkaline partial leach assay method was devised and was utilised by Actlabs in order to confirm that, as a minimum, the carnotite U:V ratio could be relied upon to provide a proxy for processable vanadium within the deposit. Of the 1,446 samples analysed, only two (at a grade of 79 and 102ppm U_3O_8) reported at less than the expected ratio. All of the other samples reported vanadium results that were at or higher than the expected ratio - it is believed that this additional vanadium was present in clays in particular and may or may not be reported to the actual processing leach solutions.

Analysis of historical plant uranium and vanadium values also supports the use of a carnotite vanadium value within the Mineral Resource estimate. It should be noted that the reported vanadium values will represent a minimum value and it is expected that, during processing, an additional 5–10% vanadium would be expected to be present in leach liquors.

Figure 3 shows the comparison between uranium and vanadium determined by the defined partial leach methodology and illustrates the minimum value of vanadium that can be expected to report to leach within the current LHM processing circuit. Additional analysis of the comparison between conventional 4 acid digest uranium values and those obtained via the partial leach methodology confirms the leach recoveries encountered during normal processing and gives validity to the partial leach analysis. Given that carnotite vanadium would be expected to be leached at the same rate as carnotite based uranium, there is no impact on the values used for confirmation of the U:V molar ratio.

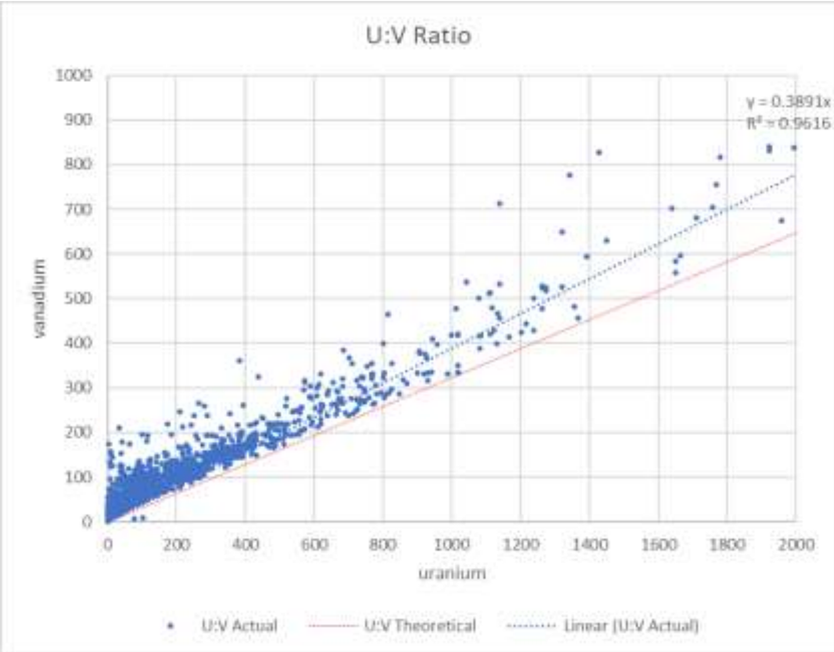

Figure 4: Partial leach uranium and vanadium results

2019 Drilling data

In the table of drilling results, drill holes have been composited with a target grade of 250ppm U_3O_8 to reflect the Mineral Resource cut-off grade, a minimum length of 3m, a maximum length of waste within the interval of 3m, a maximum consecutive length of waste of 2m and a maximum gap of 2m. Where no U_3O_8 results are reported for a drill hole, the drill hole contains no significant intercepts.

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
LH6150	13.0					34,424.98	-90,474.97	635.63
LH6151	13.0					34,478.18	-90,479.04	635.75
LH6152	13.0					34,525.09	-90,474.95	636.79
LH6153	13.0					34,574.78	-90,470.18	637.26
LH6154	13.0					34,624.76	-90,474.84	637.45
LH6155	19.0					34,674.95	-90,474.93	638.39
LH6156	19.0					34,722.97	-90,475.36	638.64
LH6157	19.0					34,774.72	-90,474.92	639.62
LH6158	13.0					34,824.89	-90,475.04	640.53
LH6159	7.0					34,874.67	-90,475.13	641.25
LH6161	22.0					35,125.15	-90,450.65	645.08

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
LH6162	13.0					35,175.52	-90,453.21	646.13
LH6163	13.0					34,474.52	-90,428.65	632.29
LH6164	13.0					34,524.90	-90,425.22	635.12
LH6165	13.0					34,572.18	-90,428.52	636.81
LH6166	19.0	9.0	12.0	3.0	252	34,475.01	-90,374.97	631.68
LH6167	13.0					34,525.00	-90,374.99	637.46
LH6176	52.0	0.0	6.0	6.0	295	34,474.96	-90,125.03	641.84
LH6176		7.0	10.0	3.0	281			
LH6176		10.0	20.0	10.0	396			
LH6178	46.0	0.0	22.0	22.0	641	34,474.99	-90,075.07	642.07
LH6180	22.0	4.0	12.0	8.0	598	34,475.06	-89,975.03	641.33
LH6181	40.0	6.0	16.0	10.0	588	34,525.05	-89,974.98	643.76
LH6182	64.0	14.0	21.0	7.0	521	34,574.99	-89,974.98	649.87
LH6182		23.0	28.0	5.0	491			
LH6183	34.0					35,275.81	-89,975.03	660.23
LH6184	22.0	7.0	14.0	7.0	428	34,525.02	-89,925.04	643.43
LH6185	40.0	13.0	19.0	6.0	282	34,575.04	-89,924.98	647.85
LH6186	52.0	2.0	7.0	5.0	880	34,624.89	-89,924.95	650.17
LH6187	46.0					35,125.54	-89,937.61	661.22
LH6188	52.0					35,171.02	-89,942.89	661.14
LH6189	52.0					35,224.98	-89,925.40	655.20
LH6190	46.0					35,274.95	-89,924.45	660.53
LH6191	16.0					34,524.94	-89,875.08	647.45
LH6192	28.0					34,573.90	-89,876.36	646.79
LH6193	34.0					34,625.06	-89,874.98	649.47
LH6194	40.0					34,675.03	-89,875.04	656.13
LH6195	40.0					34,725.08	-89,875.02	651.48
LH6196	46.0					34,775.09	-89,874.71	650.74
LH6197	40.0					34,825.04	-89,873.55	650.90
LH6198	40.0					34,874.91	-89,874.92	650.78
LH6199	34.0					34,924.72	-89,874.76	651.83
LH6200	34.0					34,974.98	-89,875.01	649.75
LH6201	34.0					35,024.94	-89,874.90	649.94
LH6202	34.0					35,075.01	-89,874.51	650.08
LH6203	28.0					35,125.06	-89,874.99	652.51
LH6204	34.0					35,174.16	-89,876.58	657.38
LH6205	34.0					35,225.14	-89,874.63	659.70
LH6206	28.0					35,275.30	-89,874.86	656.90
LH6207	40.0					35,324.93	-89,874.94	658.94
LH6210	10.0					34,525.02	-89,824.99	650.95
LH6211	28.0					34,575.00	-89,824.97	651.27
LH6212	40.0					34,624.98	-89,825.01	652.54
LH6213	28.0					34,674.98	-89,825.00	653.04
LH6214	28.0					34,721.99	-89,824.51	653.07
LH6215	34.0					34,775.03	-89,824.97	652.51
LH6216	40.0					34,825.09	-89,825.06	652.00
LH6217	34.0					34,875.06	-89,824.97	652.09
LH6218	40.0					34,924.93	-89,824.90	657.96

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
LH6219	28.0					34,975.16	-89,825.35	650.22
LH6220	28.0					35,024.98	-89,824.94	650.81
LH6221	34.0					35,074.72	-89,825.05	651.25
LH6222	22.0					35,124.89	-89,825.11	651.59
LH6225	46.0					35,375.43	-89,824.84	661.02
LH6227	46.0					35,425.36	-89,799.97	663.85
LHR0001	43.0					28,500.05	-89,225.17	594.72
LHR0002	85.0	41.0	45.0	4.0	258	28,499.95	-89,175.04	594.20
LHR0002		60.0	63.0	3.0	251			
LHR0003	109.0	58.0	62.0	4.0	379	28,499.95	-89,125.33	593.69
LHR0004	91.0	56.0	62.0	6.0	609	28,500.00	-89,075.11	593.65
LHR0005	61.0					28,500.19	-89,025.27	593.17
LHR0006	43.0					29,000.08	-89,175.28	599.72
LHR0007	49.0					29,000.18	-89,125.24	599.31
LHR0008	49.0					29,000.22	-89,074.59	597.86
LHR0009	49.0					29,000.01	-89,024.88	596.47
LHR0010	49.0					29,000.11	-88,974.98	593.90
LHR0011	49.0					29,000.09	-88,925.08	593.47
LHR0011	49.0	29.0	32.0	3.0	308	29,000.09	-88,925.08	593.47
LHR0012	79.0	47.0	58.0	11.0	565	29,000.06	-88,875.12	594.39
LHR0012		63.0	69.0	6.0	339			
LHR0013	91.0	54.0	65.0	11.0	812	29,000.38	-88,824.96	593.52
LHR0014	91.0	51.0	59.0	8.0	302	29,000.20	-88,775.33	593.74
LHR0015	55.0	38.0	43.0	5.0	274	28,999.97	-88,725.03	592.16
LHR0016	37.0					29,000.00	-88,675.54	589.31
LHR0017	19.0	7.0	11.0	4.0	269	37,340.06	-90,340.03	677.82
LHR0018	31.0	14.0	19.0	5.0	620	37,307.89	-90,301.60	677.62
LHR0019	37.0	16.0	22.0	6.0	258	37,275.84	-90,263.30	677.93
LHR0020	31.0	12.0	18.0	6.0	269	37,243.82	-90,224.93	677.25
LHR0020		19.0	24.0	5.0	259			
LHR0021	31.0	12.0	20.0	8.0	298	37,218.50	-90,181.79	676.08
LHR0022	43.0	9.0	17.0	8.0	288	37,188.81	-90,140.22	675.81
LHR0023	46.0	12.0	23.0	11.0	715	37,147.67	-90,109.81	675.24
LHR0024	43.0	13.0	17.0	4.0	499	37,115.55	-90,071.47	675.13
LHR0025	31.0	3.0	6.0	3.0	261	37,083.47	-90,033.07	674.92
LHR0026	15.0					37,059.97	-90,005.07	674.74
LHR0027	40.0	30.0	33.0	3.0	260	40,149.67	-91,248.13	726.29
LHR0028	40.0	28.0	33.0	5.0	338	40,150.00	-91,199.96	725.34
LHR0029	46.0					40,149.97	-91,150.00	724.96
LHR0030	46.0	30.0	36.0	6.0	384	40,149.99	-91,100.00	725.09
LHR0031	46.0	19.0	36.0	17.0	462	40,149.51	-91,047.87	725.35
LHR0032	46.0	19.0	35.0	16.0	408	40,149.97	-91,000.02	725.30
LHR0033	46.0	18.0	30.0	12.0	478	40,149.82	-90,947.94	724.67
LHR0034	40.0	11.0	30.0	19.0	504	40,150.02	-90,900.01	724.26
LHR0035	34.0	7.0	17.0	10.0	372	40,149.83	-90,847.87	723.58
LHR0036	34.0	7.0	15.0	8.0	312	40,150.01	-90,799.96	723.12
LHR0037	34.0	6.0	12.0	6.0	261	40,150.52	-90,747.81	722.63

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
LHR0038	34.0	1.0	5.0	4.0	261	40,150.03	-90,700.00	722.30
LHR0038		6.0	12.0	6.0	284			
LHR0039	28.0					40,149.66	-90,648.62	721.50
LHR0040	34.0					40,149.90	-90,599.99	722.22
LHR0041	22.0	8.0	13.0	5.0	375	40,498.17	-91,199.50	728.45
LHR0042	34.0	8.0	13.0	5.0	290	40,499.21	-91,148.24	730.63
LHR0043	46.0	14.0	17.0	3.0	294	40,499.49	-91,097.64	730.53
LHR0043		18.0	23.0	5.0	258			
LHR0044	46.0	13.0	17.0	4.0	279	40,499.61	-91,047.98	729.90
LHR0044		17.0	31.0	14.0	577			
LHR0045	46.0	18.0	24.0	6.0	310	40,499.63	-90,998.04	729.35
LHR0045		24.0	30.0	6.0	329			
LHR0045		36.0	41.0	5.0	1,258			
LHR0046	40.0	18.0	23.0	5.0	250	40,499.82	-90,947.78	728.92
LHR0047	40.0	16.0	27.0	11.0	304	40,499.04	-90,898.48	728.46
LHR0048	40.0	8.0	24.0	16.0	522	40,499.50	-90,747.61	728.05
LHR0049	40.0	5.0	17.0	12.0	503	40,500.23	-90,798.23	727.23
LHR0050	34.0	1.0	16.0	15.0	368	40,499.60	-90,748.29	726.81
LHR0051	28.0	0.0	4.0	4.0	254	40,499.97	-90,700.01	726.30
LHR0052	28.0	0.0	5.0	5.0	293	40,499.42	-90,648.64	725.94
LHR0052		13.0	21.0	8.0	507			
LHR0053	28.0	8.0	16.0	8.0	317	40,499.62	-90,598.44	726.20
LHR0054	28.0	0.0	6.0	6.0	250	40,499.99	-90,550.01	725.86
LHR0055	22.0					40,499.59	-90,498.04	725.27
LHR0056	16.0					40,499.96	-90,450.02	725.26
LHR0057	28.0					41,000.03	-90,974.95	735.52
LHR0058	34.0	23.0	29.0	6.0	321	41,000.03	-90,924.98	735.13
LHR0059	28.0					41,000.01	-90,875.00	734.86
LHR0060	34.0	17.0	26.0	9.0	480	41,000.01	-90,825.02	734.40
LHR0061	34.0	16.0	25.0	9.0	355	40,999.99	-90,775.01	733.83
LHR0061		25.0	31.0	6.0	260			
LHR0062	40.0	17.0	21.0	4.0	255	41,000.01	-90,725.01	733.15
LHR0062		21.0	28.0	7.0	296			
LHR0062		30.0	34.0	4.0	312			
LHR0063	40.0	22.0	27.0	5.0	400	40,999.97	-90,675.02	732.59
LHR0064	40.0	17.0	23.0	6.0	284	41,000.02	-90,624.98	732.08
LHR0065	34.0					41,000.03	-90,574.96	731.87
LHR0066	40.0	2.0	11.0	9.0	302	41,000.00	-90,525.00	731.38
LHR0067	34.0	0.0	11.0	11.0	369	41,000.03	-90,474.97	731.18
LHR0068	34.0					41,000.03	-90,424.98	730.31
LHR0069	28.0					40,999.98	-90,374.97	729.92
LHR0071	10.0					41,549.98	-90,825.02	737.36
LHR0072	34.0	2.0	5.0	3.0	259	41,550.03	-90,775.04	736.43
LHR0072		10.0	15.0	5.0	319			
LHR0072		20.0	30.0	10.0	278			
LHR0073	34.0	1.0	9.0	8.0	259	41,549.96	-90,725.00	735.27
LHR0073		10.0	13.0	3.0	257			

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
LHR0073		17.0	27.0	10.0	487			
LHR0074	28.0					41,550.07	-90,675.01	735.04
LHR0075	22.0	8.0	11.0	3.0	259	41,550.01	-90,625.03	734.24
LHR0076	16.0					42,000.00	-90,974.89	737.65
LHR0077	22.0					42,000.03	-90,924.90	736.78
LHR0078	22.0	13.0	20.0	7.0	430	42,000.02	-90,875.00	735.36
LHR0079	22.0	13.0	17.0	4.0	289	41,999.99	-90,824.94	734.54
LHR0080	28.0	11.0	21.0	10.0	799	41,999.98	-90,774.95	733.07
LHR0081	28.0	0.0	12.0	12.0	324	41,999.98	-90,724.97	730.82
LHR0081		12.0	15.0	3.0	261			
LHR0081		15.0	20.0	5.0	283			
LHR0082	22.0	1.0	11.0	10.0	310	41,999.98	-90,674.97	730.72
LHR0085	4.0					42,000.11	-90,524.93	730.58
LHR0086	10.0					42,000.00	-90,474.83	731.46
LHR0087	10.0	6.0	9.0	3.0	263	42,298.77	-90,770.75	733.17
LHR0088	22.0	2.0	12.0	10.0	695	42,300.01	-90,724.95	730.27
LHR0089	22.0	0.0	12.0	12.0	577	42,299.83	-90,674.74	729.55
LHR0090	22.0	0.0	12.0	12.0	1,014	42,300.12	-90,624.99	727.89
LHR0091	4.0					42,299.91	-90,574.99	726.26
LHR0093	37.0					29,609.84	-89,570.37	604.78
LHR0094	61.0	34.0	46.0	12.0	686	29,646.44	-89,536.09	604.80
LHR0094		46.0	54.0	8.0	362			
LHR0095	73.0	45.0	49.0	4.0	340	29,682.88	-89,501.85	605.58
LHR0095		50.0	57.0	7.0	323			
LHR0096	49.0					29,719.21	-89,467.71	606.42
LHR0097	97.0	52.0	64.0	12.0	486	29,755.90	-89,433.39	608.34
LHR0097		73.0	81.0	8.0	415			
LHR0098	91.0	33.0	40.0	7.0	560	29,793.74	-89,399.18	605.63
LHR0098		47.0	61.0	14.0	525			
LHR0098		72.0	76.0	4.0	448			
LHR0099	79.0	33.0	36.0	3.0	460	29,827.01	-89,364.39	604.58
LHR0099		51.0	57.0	6.0	698			
LHR0100	79.0	29.0	35.0	6.0	307	29,865.43	-89,330.75	606.45
LHR0100		56.0	59.0	3.0	385			
LHR0100		64.0	67.0	3.0	275			
LHR0101	61.0	38.0	43.0	5.0	416	29,902.27	-89,296.36	604.52
LHR0101		50.0	53.0	3.0	256			
LHR0102	55.0	29.0	37.0	8.0	434	29,925.17	-89,275.22	604.43
LHR0103	46.0					37,269.99	-89,829.95	678.83
LHR0104	46.0					37,301.21	-89,869.06	679.09
LHR0105	43.0	16.0	25.0	9.0	607	37,332.30	-89,908.25	679.20
LHR0106	40.0					37,363.41	-89,947.30	679.43
LHR0107	37.0	15.0	24.0	9.0	419	37,394.61	-89,986.45	680.90
LHR0108	34.0	13.0	23.0	10.0	710	37,425.76	-90,025.56	681.01
LHR0108		24.0	28.0	4.0	497			
LHR0109	25.0	15.0	22.0	7.0	537	37,457.04	-90,064.67	681.89
LHR0110	22.0					37,484.99	-90,100.00	682.40

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
LHR0111	73.0					29,752.16	-89,754.45	612.23
LHR0112	67.0					29,779.09	-89,790.75	612.96
LHR0113	55.0	34.0	41.0	7.0	274	29,808.17	-89,831.39	614.74
LHR0113		47.0	51.0	4.0	423			
LHR0114	55.0	39.0	44.0	5.0	269	29,837.21	-89,872.11	616.79
LHR0115	61.0	33.0	36.0	3.0	271	29,866.47	-89,914.34	615.87
LHR0116	61.0	31.0	34.0	3.0	263	29,895.65	-89,953.39	616.66
LHR0116		37.0	52.0	15.0	409			
LHR0117	49.0	37.0	43.0	6.0	480	29,924.26	-89,994.06	617.59
LHR0118	49.0	32.0	40.0	8.0	364	29,953.33	-90,034.83	619.59
LHR0119	55.0	33.0	46.0	13.0	317	29,982.54	-90,075.28	621.05
TSF1_012	37.0					34,626.84	-90,389.45	658.17
TSF1_013	43.0					34,674.62	-90,397.35	658.21
TSF1_014	46.0	23.0	30.0	7.0	269	34,724.98	-90,375.25	656.96
TSF1_015	34.0	23.0	27.0	4.0	302	34,775.18	-90,395.54	658.16
TSF1_016	28.0					34,825.24	-90,394.87	658.16
TSF1_017	34.0	19.0	28.0	9.0	359	34,875.13	-90,394.65	658.19
TSF1_018	34.0	17.0	30.0	13.0	423	34,924.11	-90,394.70	658.26
TSF1_019	64.0	18.0	30.0	12.0	360	34,974.99	-90,396.40	658.29
TSF1_020	58.0					35,024.40	-90,394.42	658.43
TSF1_021	52.0					35,077.02	-90,368.53	659.92
TSF1_022	58.0	19.0	22.0	3.0	295	35,474.97	-90,364.49	661.19
TSF1_023	34.0	15.0	24.0	9.0	963	35,574.98	-90,364.03	661.16
TSF1_024	46.0					35,424.62	-90,351.21	659.93
TSF1_025	43.0					35,524.74	-90,350.62	659.94
TSF1_026	40.0					35,625.12	-90,351.12	661.61
TSF1_028	37.0					34,579.28	-90,350.28	658.11
TSF1_029	37.0	11.0	20.0	9.0	612	34,619.44	-90,323.09	655.97
TSF1_031	49.0	11.0	18.0	7.0	743	34,724.95	-90,324.75	655.63
TSF1_031		20.0	30.0	10.0	577			
TSF1_032	40.0	11.0	17.0	6.0	980	34,774.95	-90,325.19	655.73
TSF1_032		17.0	27.0	10.0	401			
TSF1_033	37.0	11.0	28.0	17.0	721	34,825.13	-90,325.10	655.87
TSF1_034	34.0	11.0	26.0	15.0	883	34,874.97	-90,325.20	655.73
TSF1_035	34.0	11.0	28.0	17.0	900	34,925.54	-90,325.16	656.06
TSF1_036	61.0	11.0	15.0	4.0	427	34,975.02	-90,324.71	656.30
TSF1_036		16.0	23.0	7.0	458			
TSF1_037	58.0	17.0	25.0	8.0	374	35,025.01	-90,324.27	656.57
TSF1_037		28.0	36.0	8.0	379			
TSF1_037		47.0	52.0	5.0	265			
TSF1_038	49.0					35,088.89	-90,328.31	660.99
TSF1_039	55.0					35,679.15	-90,329.97	661.80
TSF1_041	52.0	27.0	37.0	10.0	1,288	34,531.72	-90,274.42	658.11
TSF1_042	52.0	11.0	19.0	8.0	772	34,575.31	-90,275.79	656.28
TSF1_042		26.0	32.0	6.0	489			
TSF1_043	49.0	11.0	18.0	7.0	540	34,625.01	-90,274.44	655.70
TSF1_043		27.0	32.0	5.0	336			

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
TSF1_044	37.0	11.0	17.0	6.0	543	34,675.00	-90,274.85	655.38
TSF1_044		18.0	31.0	13.0	1,168			
TSF1_045	37.0	11.0	17.0	6.0	596	34,725.00	-90,274.90	655.68
TSF1_045		17.0	32.0	15.0	358			
TSF1_046	34.0	11.0	16.0	5.0	827	34,775.06	-90,275.16	655.55
TSF1_046		17.0	29.0	12.0	616			
TSF1_047	34.0	11.0	16.0	5.0	704	34,825.12	-90,274.36	655.18
TSF1_047		16.0	25.0	9.0	785			
TSF1_047		25.0	28.0	3.0	271			
TSF1_048	37.0	11.0	28.0	17.0	833	34,875.01	-90,275.31	655.50
TSF1_049	40.0	11.0	28.0	17.0	518	34,925.08	-90,275.22	655.66
TSF1_050	61.0	11.0	27.0	16.0	599	34,975.61	-90,274.39	655.87
TSF1_051	58.0	18.0	28.0	10.0	700	35,025.17	-90,275.14	655.99
TSF1_051		28.0	33.0	5.0	608			
TSF1_052	46.0	31.0	36.0	5.0	618	35,073.81	-90,276.87	656.23
TSF1_053	22.0					35,374.96	-90,274.98	659.36
TSF1_054	46.0					35,425.04	-90,275.13	659.66
TSF1_055	55.0	19.0	24.0	5.0	251	35,473.43	-90,274.87	660.21
TSF1_055		24.0	29.0	5.0	536			
TSF1_056	55.0					35,524.85	-90,274.91	659.91
TSF1_057	55.0	14.0	28.0	14.0	585	35,574.96	-90,274.87	660.64
TSF1_057		28.0	31.0	3.0	258			
TSF1_058	52.0					35,624.96	-90,274.95	660.44
TSF1_059	46.0	16.0	23.0	7.0	348	35,676.26	-90,274.89	661.17
TSF1_060	64.0	23.0	37.0	14.0	466	34,531.37	-90,224.59	658.03
TSF1_060		38.0	44.0	6.0	325			
TSF1_061	58.0	11.0	18.0	7.0	450	34,574.78	-90,223.32	656.22
TSF1_061		19.0	33.0	14.0	654			
TSF1_062	49.0	11.0	18.0	7.0	377	34,624.70	-90,224.40	655.87
TSF1_062		23.0	32.0	9.0	790			
TSF1_063	37.0	11.0	17.0	6.0	453	34,674.85	-90,224.44	655.79
TSF1_063		19.0	25.0	6.0	271			
TSF1_063		28.0	32.0	4.0	309			
TSF1_064	34.0	11.0	16.0	5.0	396	34,724.74	-90,225.02	655.03
TSF1_064		21.0	31.0	10.0	651			
TSF1_065	40.0	11.0	15.0	4.0	548	34,775.05	-90,225.69	655.07
TSF1_065		16.0	30.0	14.0	736			
TSF1_066	37.0	11.0	15.0	4.0	578	34,824.93	-90,224.63	655.22
TSF1_066		18.0	30.0	12.0	646			
TSF1_067	34.0	11.0	14.0	3.0	357	34,875.23	-90,225.52	654.82
TSF1_067		20.0	26.0	6.0	472			
TSF1_068	40.0	11.0	14.0	3.0	478	34,925.21	-90,225.20	655.36
TSF1_068		17.0	23.0	6.0	394			
TSF1_068		28.0	33.0	5.0	468			
TSF1_069	58.0	18.0	28.0	10.0	476	34,975.70	-90,224.38	655.69
TSF1_069		33.0	38.0	5.0	623			

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
TSF1_070	64.0	23.0	29.0	6.0	765	35,025.14	-90,224.95	655.59
TSF1_070		29.0	38.0	9.0	675			
TSF1_071	43.0	24.0	34.0	10.0	432	35,075.13	-90,225.16	656.11
TSF1_072	28.0	19.0	23.0	4.0	297	35,118.84	-90,226.67	661.09
TSF1_073	16.0					35,274.95	-90,225.03	658.72
TSF1_074	16.0					35,324.93	-90,224.97	658.94
TSF1_075	22.0					35,375.02	-90,225.22	659.04
TSF1_076	34.0					35,424.90	-90,225.17	659.44
TSF1_077	46.0					35,473.86	-90,224.87	660.03
TSF1_078	49.0					35,524.85	-90,224.73	660.00
TSF1_079	55.0	20.0	23.0	3.0	295	35,574.49	-90,225.39	661.17
TSF1_080	40.0					35,625.10	-90,225.41	660.81
TSF1_081	22.0					35,676.44	-90,224.92	661.82
TSF1_083	73.0	28.0	37.0	9.0	995	34,531.84	-90,175.21	658.95
TSF1_084	58.0	11.0	18.0	7.0	445	34,575.13	-90,174.52	656.22
TSF1_084		26.0	34.0	8.0	349			
TSF1_084		38.0	44.0	6.0	480			
TSF1_085	43.0	11.0	17.0	6.0	391	34,624.86	-90,174.65	656.25
TSF1_085		23.0	26.0	3.0	263			
TSF1_085		27.0	33.0	6.0	285			
TSF1_085		34.0	38.0	4.0	287			
TSF1_086	34.0	11.0	16.0	5.0	337	34,675.08	-90,174.81	655.76
TSF1_086		27.0	31.0	4.0	276			
TSF1_087	37.0	11.0	15.0	4.0	266	34,724.95	-90,175.09	655.19
TSF1_087		24.0	30.0	6.0	337			
TSF1_088	34.0	11.0	14.0	3.0	357	34,775.06	-90,175.25	654.90
TSF1_088		18.0	29.0	11.0	465			
TSF1_089	37.0	21.0	28.0	7.0	956	34,824.93	-90,174.95	654.40
TSF1_090	40.0	23.0	28.0	5.0	1,336	34,875.04	-90,175.07	654.48
TSF1_090		29.0	33.0	4.0	263			
TSF1_091	52.0	23.0	28.0	5.0	256	34,925.24	-90,175.48	654.92
TSF1_092	64.0	24.0	27.0	3.0	251	34,974.92	-90,174.83	655.06
TSF1_092		27.0	34.0	7.0	497			
TSF1_093	64.0	17.0	22.0	5.0	263	35,025.13	-90,175.35	655.33
TSF1_093		22.0	33.0	11.0	867			
TSF1_093		34.0	39.0	5.0	418			
TSF1_094	46.0	23.0	37.0	14.0	545	35,075.00	-90,175.04	655.75
TSF1_095	22.0					35,124.35	-90,174.34	661.23
TSF1_096	16.0					35,277.11	-90,173.80	658.36
TSF1_097	28.0					35,325.16	-90,175.04	658.67
TSF1_098	37.0					35,377.28	-90,174.52	659.70
TSF1_099	40.0					35,425.06	-90,174.99	660.85
TSF1_100	37.0					35,473.92	-90,174.45	661.22
TSF1_101	31.0					35,525.15	-90,174.94	661.60
TSF1_102	46.0	15.0	18.0	3.0	325	35,574.23	-90,175.00	662.06
TSF1_103	34.0					35,625.25	-90,174.94	662.33
TSF1_104	16.0					35,674.38	-90,173.36	662.49

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
TSF1_105	73.0	19.0	24.0	5.0	285	34,533.66	-90,125.02	658.43
TSF1_105		26.0	36.0	10.0	429			
TSF1_106	58.0	17.0	22.0	5.0	337	34,574.48	-90,124.42	656.42
TSF1_106		25.0	32.0	7.0	273			
TSF1_106		38.0	44.0	6.0	339			
TSF1_107	43.0	11.0	16.0	5.0	262	34,625.07	-90,125.08	656.43
TSF1_107		25.0	32.0	7.0	441			
TSF1_108	40.0	26.0	30.0	4.0	254	34,675.14	-90,125.01	655.95
TSF1_109	43.0	11.0	14.0	3.0	281	34,724.53	-90,125.00	655.52
TSF1_109		29.0	32.0	3.0	475			
TSF1_110	34.0	22.0	29.0	7.0	570	34,774.95	-90,125.02	655.46
TSF1_111	43.0	24.0	28.0	4.0	257	34,824.82	-90,124.93	654.73
TSF1_111		30.0	37.0	7.0	413			
TSF1_112	55.0	25.0	28.0	3.0	394	34,875.08	-90,125.26	654.69
TSF1_112		28.0	34.0	6.0	331			
TSF1_113	58.0	24.0	29.0	5.0	1,255	34,925.18	-90,125.27	654.92
TSF1_114	64.0	26.0	39.0	13.0	783	34,975.01	-90,124.57	654.73
TSF1_115	58.0	26.0	31.0	5.0	281	35,025.25	-90,124.87	655.11
TSF1_116	37.0	23.0	33.0	10.0	577	35,075.04	-90,124.90	655.64
TSF1_117	22.0					35,124.76	-90,125.06	661.10
TSF1_118	28.0					35,274.89	-90,125.18	658.39
TSF1_119	40.0					35,325.03	-90,124.95	660.14
TSF1_120	40.0					35,377.82	-90,123.87	660.25
TSF1_121	28.0					35,425.42	-90,125.08	660.27
TSF1_122	28.0					35,474.89	-90,124.66	661.00
TSF1_123	19.0					35,526.39	-90,125.25	660.99
TSF1_124	25.0					35,573.30	-90,124.52	661.98
TSF1_125	34.0					35,624.87	-90,124.92	662.10
TSF1_126	19.0					35,673.22	-90,124.61	662.88
TSF1_127	7.0					35,725.17	-90,124.81	663.26
TSF1_128	70.0	18.0	21.0	3.0	310	34,539.63	-90,075.45	658.12
TSF1_128		23.0	33.0	10.0	340			
TSF1_129	58.0	12.0	24.0	12.0	2,058	34,574.85	-90,076.57	657.33
TSF1_129		24.0	31.0	7.0	318			
TSF1_129		46.0	49.0	3.0	262			
TSF1_130	43.0	25.0	29.0	4.0	275	34,625.07	-90,074.87	656.91
TSF1_130		35.0	38.0	3.0	294			
TSF1_131	37.0	11.0	14.0	3.0	283	34,674.91	-90,074.89	656.40
TSF1_131		26.0	29.0	3.0	268			
TSF1_132	55.0	22.0	31.0	9.0	421	34,724.79	-90,075.22	656.31
TSF1_132		32.0	37.0	5.0	396			
TSF1_133	46.0	22.0	29.0	7.0	505	34,775.16	-90,075.06	655.70
TSF1_133		33.0	36.0	3.0	257			
TSF1_134	55.0	26.0	31.0	5.0	256	34,824.99	-90,074.80	655.60
TSF1_134		31.0	38.0	7.0	691			
TSF1_135	61.0	22.0	28.0	6.0	255	34,875.17	-90,074.96	655.46

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
TSF1_136	75.0	21.0	36.0	15.0	1,232	34,924.23	-90,075.09	656.23
TSF1_137	64.0	19.0	38.0	19.0	737	34,975.23	-90,074.82	655.36
TSF1_138	64.0	19.0	25.0	6.0	270	35,025.38	-90,075.12	655.43
TSF1_138		26.0	33.0	7.0	852			
TSF1_138		35.0	39.0	4.0	286			
TSF1_139	31.0					35,074.84	-90,075.26	656.06
TSF1_140	22.0					35,120.59	-90,074.30	661.14
TSF1_141	46.0					35,271.93	-90,075.25	659.51
TSF1_142	34.0					35,324.78	-90,074.89	659.05
TSF1_143	10.0					35,526.27	-90,074.74	661.40
TSF1_144	13.0					35,572.54	-90,075.12	662.39
TSF1_145	22.0					35,625.24	-90,075.01	662.53
TSF1_146	16.0					35,673.41	-90,074.73	663.36
TSF1_147	10.0					35,724.73	-90,075.20	663.38
TSF1_148	40.0	11.0	17.0	6.0	268	34,475.04	-90,025.09	642.78
TSF1_149	58.0	11.0	19.0	8.0	418	34,526.55	-90,027.57	650.28
TSF1_149		19.0	28.0	9.0	346			
TSF1_150	73.0	22.0	30.0	8.0	317	34,574.93	-90,025.03	658.17
TSF1_151	58.0	23.0	36.0	13.0	1,127	34,624.84	-90,024.95	657.42
TSF1_151		44.0	49.0	5.0	451			
TSF1_152	58.0	23.0	30.0	7.0	486	34,675.00	-90,024.97	656.87
TSF1_152		43.0	49.0	6.0	1,227			
TSF1_153	64.0	24.0	29.0	5.0	262	34,724.93	-90,024.73	656.66
TSF1_153		39.0	44.0	5.0	380			
TSF1_153		47.0	51.0	4.0	432			
TSF1_154	70.0	21.0	29.0	8.0	536	34,774.88	-90,025.13	656.29
TSF1_154		40.0	43.0	3.0	283			
TSF1_154		43.0	52.0	9.0	540			
TSF1_155	64.0	23.0	31.0	8.0	250	34,824.94	-90,024.80	656.18
TSF1_156	67.0	23.0	27.0	4.0	274	34,875.17	-90,025.11	655.61
TSF1_156		31.0	34.0	3.0	266			
TSF1_157	70.0	23.0	37.0	14.0	437	34,924.91	-90,024.88	657.14
TSF1_158	58.0	22.0	30.0	8.0	350	34,974.94	-90,024.90	655.69
TSF1_158		36.0	45.0	9.0	733			
TSF1_159	55.0	20.0	35.0	15.0	579	35,024.98	-90,025.13	655.84
TSF1_159		37.0	42.0	5.0	650			
TSF1_160	52.0	24.0	29.0	5.0	293	35,093.33	-90,017.92	661.25
TSF1_162	40.0					35,174.74	-90,025.18	658.59
TSF1_163	40.0					35,225.23	-90,025.26	658.86
TSF1_164	34.0					35,274.87	-90,025.05	659.92
TSF1_165	73.0	24.0	29.0	5.0	309	34,625.09	-89,974.84	658.26
TSF1_166	70.0	24.0	31.0	7.0	1,008	34,675.13	-89,974.55	657.46
TSF1_167	67.0	24.0	33.0	9.0	672	34,725.19	-89,974.84	657.18
TSF1_169	61.0	27.0	32.0	5.0	258	34,824.98	-89,974.81	656.60
TSF1_170	58.0					34,874.98	-89,975.27	656.45
TSF1_171	58.0	42.0	51.0	9.0	685	34,924.78	-89,974.66	657.16
TSF1_172	52.0					34,974.74	-89,974.60	656.10

Hole	Depth	From	To	Length	Grade U_3O_8 ppm	East	North	RL
TSF1_173	46.0					35,028.30	-89,948.54	661.23
TSF1_174	58.0					35,074.45	-89,977.83	659.44
TSF1_175	58.0					35,125.03	-89,975.02	658.66
TSF1_176	52.0					35,175.08	-89,975.26	659.39
TSF1_177	58.0					35,225.07	-89,974.90	660.05
TSF1_178	55.0					34,676.38	-89,926.90	658.34
TSF1_179	52.0					34,725.04	-89,922.95	658.18
TSF1_180	49.0					34,774.98	-89,923.02	658.21
TSF1_181	43.0					34,825.14	-89,923.26	658.31
TSF1_182	43.0					34,874.90	-89,922.76	658.27
TSF1_183	40.0					34,924.93	-89,922.00	658.28
TSF1_184	46.0					34,975.17	-89,922.49	658.44
TSF1_185	46.0					35,025.06	-89,925.08	661.08
TSF1_186	46.0					35,071.94	-89,934.23	661.27
TSF1_187	19.0					35,374.99	-90,325.08	659.62
TSF1_188	52.0					35,425.09	-90,324.99	659.83
TSF1_189	55.0					35,474.25	-90,325.00	659.94
TSF1_190	49.0					35,525.03	-90,324.88	659.77
TSF1_191	49.0	11.0	26.0	15.0	605	35,575.62	-90,325.27	660.45
TSF1_192	58.0					35,625.10	-90,325.32	661.22
TSF1_194	40.0	11.0	18.0	7.0	621	34,674.54	-90,321.61	655.42
TSF1_194		20.0	25.0	5.0	257			
TSF1_195	64.0	24.0	31.0	7.0	387	34,774.97	-89,969.35	657.18

Table 3 -Estimated Mineral Resource (JORC 2012) depleted for mining and excluding stockpiles

Cut-off	Measured Mineral Resource					Indicated Mineral Resource					Inferred Mineral Resource				
U_3O_8		U_3O_8		V_2O_5			U_3O_8		V_2O_5			U_3O_8		V_2O_5	
ppm	Mt	ppm	t	ppm	t	Mt	ppm	t	ppm	t	Mt	ppm	t	ppm	t
100	126.5	335	42,690	110	13,830	45.0	280	12,520	90	4,055	26.0	220	5,710	70	1,850
150	102.2	390	39,665	125	12,850	34.4	325	11,195	105	3,625	15.7	280	4,445	90	1,440
200	82.3	440	36,210	140	11,730	25.5	380	9,645	125	3,125	9.8	350	3,405	115	1,105
250	**66.2**	**490**	**32,595**	**160**	**10,560**	**18.8**	**435**	**8,145**	**140**	**2,640**	**6.3**	**420**	**2,625**	**135**	**850**
300	53.1	545	28,990	175	9,390	13.9	490	6,795	160	2,200	4.2	485	2,050	160	665
350	42.4	600	25,520	195	8,270	10.2	550	5,615	180	1,820	2.9	560	1,630	180	530
400	33.8	660	22,290	215	7,220	7.6	610	4,620	195	1,495	2.1	630	1,315	205	425
450	26.9	720	19,390	235	6,280	5.7	670	3,810	215	1,235	1.5	705	1,085	230	350
500	21.6	780	16,855	255	5,460	4.3	735	3,160	240	1,025	1.2	775	905	250	295
550	17.5	840	14,670	270	4,755	3.3	795	2,645	255	855	0.9	845	770	275	250
600	14.2	900	12,795	290	4,145	2.6	855	2,225	275	720	0.7	910	665	295	215
650	11.6	960	11,190	310	3,625	2.1	915	1,885	295	610	0.6	975	575	315	185
900	4.8	1,255	5,990	405	1,940	0.7	1,205	870	390	285	0.2	1,275	310	415	100

Note: Values in the table above may not add due to rounding

PALADIN ENERGY LTD

ACN 061 681 098

JORC Code, 2012 Edition – Langer Heinrich deposit 2018

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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.	The vast majority of drilling used in the mineral resource estimate comprises RC drilling and downhole radiometric logging. A number of additional factors were determined used to deconvolve an equivalent U_3O_8 grade, according to a well-defined and documented procedure. For Paladin drilling in the period 2010 – 2016 sleeve calibrations on radiometric probes were completed prior to logging each drill hole. RC chip samples were collected for all mineralised holes to validate down hole gamma results if required. The routine aim is for approximately 10% of all mineralised holes to be validated by assay. Samples were selected on a 'whole of hole' basis. Pre-Paladin sampling protocols: Aimed at 1m samples for all drilling, some drill holes were composited within the historical dataset to longer intervals. Paladin sampling protocols: Drilling was sampled at the drill rig using a cyclone and rotary or riffle splitter and placed into calico bags, all un-split sample was retained on site for a limited period of time. Samples were also sieved into chip trays to ensure a permanent record was maintained. Sample preparation, crush (where required) – split - pulverize, of the 1m sampled intervals at the laboratory in either by either Bureau Veritas in Swakopmund or Intertek Laboratories in Walvis Bay or Actlabs in Windhoek. Samples were analysed by either XRF or ICP.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	All holes were RC As no core was drilled orientation was not recorded. Pre-Paladin;

Criteria	JORC Code explanation	Commentary
		Historical drilling included a combination of percussion, RC and diamond core, this drilling now only forms a minor portion of the mineral resource dataset. All drilling since 2000 has been RC.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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.	RC sample recoveries have been periodically assessed, especially when samples have been taken to validate downhole radiometric logging. Checks have been undertaken during the life of the project to confirm that fine grained mineralisation is not lost during the drilling process. There is no relationship between RC recovery and grade. The use of down-hole radiometrics to derive an assay grade mitigates against any issues with drilling recoveries.
Logging	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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.	All RC chips are logged by geologists. RC drill chips are stored in chip trays on site. The deposit is currently considered to have minimal metallurgical variability however the geological logging is conducted in detail and is considered appropriate for all future studies. Drilling is continued until approximately 2-5m of basement material has been penetrated ensuring that the entire thickness of the potential mineralisation have been sampled and logged.
Sub-sampling techniques and sample preparation	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. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled.	RC samples are split on the drill rig, should any duplicates be taken they are split from the bulk residue sample by riffle splitter. Sample preparation was undertaken by either Bureau Veritas in Swakopmund or Intertek Laboratories in Walvis Bay or Actlabs in Windhoek, using industry standard methods (crush–split-pulverize) and is considered appropriate to the style of mineralisation present in the deposit. When required, standard, blank and split duplicates were inserted into the sample stream with the aim being every 20 samples. The material sample is relatively fine grained and the sample size taken is deemed to be appropriate. Analysis of duplicates has indicated some potential for a bias to be introduced during the splitting process and,

Criteria	JORC Code explanation	Commentary
		because of this, additional care is taken setting up the drill rig. In order to confirm that the U:V ratio in carnotite was uniform throughout the deposit additional samples were sourced from historical (since 2006) drilling where small representative samples were retained (~250g). These samples were inserted into the routine multi element analysis stream and were specifically assayed for vanadium by partial leach.
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. 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. 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.	Where required, U_3O_8 was analysed predominantly by pressed powder XRF methods or, in 2019, four acid digest with ICP-MS finish. A scoping study was done prior to the re-commencement of drilling, to determine most appropriate assay method: matrix-matched standard material was analysed by various methods and the method returning the most appropriate results (XRF) was identified. In 2019, due to the requirement to obtain a more comprehensive multi element analysis for geometallurgical studies four acid digest ICP-MS was used for the analysis of 2019 drill samples. Down hole radiometric probes are calibrated at a primary calibration facility each year to confirm both the dead-time and K-factor's to be applied to calculate the equivalent U_3O_8 value. All probes are subject to routine sensitivity checks to identify instrument drift and confirm the reliability of readings. Where radiometric logging is conducted inside drill rods, appropriate casing factors are defined from both in-rod and open hole logs. It is company policy to use open hole logs wherever possible. Standard, blank and split duplicate are submitted into the sample stream with the target being one set for every 20 samples. Analysis of the drilling programmes undertaken between 2010 and 2016 indicates that the standards and blanks performed very well however duplicate analysis showed some spread in results and investigation suggested this was due to potential excess pressures used during the RC drilling process. A partial leach analysis method was defined for laboratory use. The method match as reasonably as possible the leach processes encountered during routine processing of ore material. This partial leach digest was used to

Criteria	JORC Code explanation	Commentary
		confirm that the amount of vanadium reporting to solution was, at a minimum, equivalent to that expected from the molar equivalence between uranium and vanadium in carnotite. Evidence from >1,500 assays indicates that this ratio is maintained at a minimum and that there is the potential for minor additional vanadium to report to leach liquors.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	As both assaying and down hole logging are performed, along with scintillometry of sample bags following geological logging, the identification of mineralized intersections has been confirmed by a number of methodologies and personnel. Other than during the historical, original exploration work, limited twinning of holes has been undertaken however analysis of close spaced pre-mining grade control drilling and mining blast hole drilling (both using the same radiometric logging techniques and equipment) indicates that there is minimal grade variation when sample data is aggregated into mining block sizes. Original work undertaken by Gencor using diamond drilling of the corners around the centre of 2m x 1m test pits indicates that there is significant short scale local grade variability, however when all the sample data from the 5 drill holes was averaged for each vertical metre the results were equivalent to the test pit samples metre. As the RC drill holes are radiometrically logged it is expected that the local variability relative to diamond (in particular) and RC drill sampling will be considerably reduced. Data has been routinely entered into an Access logging database during data capture at the mine. When all data has been collected for a hole, it is transferred to the Paladin main office where the database administrator imports it into the server based Geobank drilling database. Data is verified by geologists after it has been collected, prior to import into Geobank, and regularly by geologists during geological modelling as well as and prior to resource estimates. The server-based database has restricted access and is internally audited. U converted to U_3O_8 in the database where required on export by x1.1798.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches,	As all holes are drilled vertically, are relatively short (with the majority being in the 30-50m

Criteria	JORC Code explanation	Commentary
	mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	range) and the mineralisation is horizontal, only very limited down hole deviation surveys have been carried out. All recent (post 2007) collars were surveyed by DGPS by the minesite surveyor. Historical collars have been re-surveyed when located using DGPS with most locations being accurate. Where discrepancies have occurred these have been traced to original data entry issues or miss locations of holes in previous surveys.
Data spacing and distribution	Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied.	The original exploration drilling was targeted at a nominal 50m x 50m grid but is dependent on final drill rig location. Spacing currently increases to approximately 100m at the far western end of the deposit. Pre-mining grade control which currently covers over 60% of the deposit has been conducted at a nominal 12.5m x 12.5m spacing. For down hole radiometrics the information used for mineral resources are based on 1m composites of 5cm gamma data. For geochemical assays, samples were split to a 1m interval. All geochemical data has been composited to 1m.
Orientation of data in relation to geological structure	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.	The majority of mineralisation boundaries are gradational (and the sampling process either includes material either side of the mineralisation or, in the case of radiometrics, the entire drill hole) so not relevant to this style of mineralisation. Orientation of mineralisation is well known and drilling is, in most cases, near perpendicular to the mineralisation.
Sample security	The measures taken to ensure sample security.	Geochemical samples are dispatched with security tags on each container and each receiver signs off to confirm those samples have not been tampered with.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	A review of the mineral resource estimate was conducted as part of the LHM re-start concept study. No audits of the mineral resource have been completed since mining commenced.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The vast majority of the drilling used in this mineral resource estimate was carried out on tenement ML140 which was granted 26th July 2005 and has an expiry date of 25th July 2030 with a minor proportion on ML172 which was granted 24th June 2015 and has an expiry date of 23rd June 2040. ML140 has an area of 4,375Ha and ML172 has an area of 2,999Ha. The tenements are 100% owned by Langer Heinrich Uranium Pty Ltd which, in turn, is 75% owned by Paladin Energy Limited. All tenements are in good standing and there are no current impediments to operating in the area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The area has been explored on and off from the mid/late 1970's through to the present with the majority of historical drilling taking place in the 1980's by Gencor, 2000-2002 by Acclaim and most recently from 2003 by Paladin. All work undertaken by the proceeding companies was performed to a very high standard.
Geology	Deposit type, geological setting and style of mineralisation.	Langer Heinrich is a calcrete-hosted secondary uranium deposit associated with valley-fill sediments in an extensive Tertiary palaeodrainage system.
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.	Information on previous drilling can be found in the 2005, 2007 and 2010 NI43-101 Technical reports submitted by Paladin. The extent of the drilling can be seen in the plan figures included in the body of the report. To date 39,207 drill holes have been completed on various spacings – 100m x 100m down to 12.5m x 12.5m throughout the deposit. In the majority of cases, at least for the post Gencor work, the drill holes have been to the full depth of the palaeochannel plus a small allowance. All drilling has been vertical as the mineralisation is effectively horizontal. Intercept depths vary between 0m and approximately 70m depending upon location within the strike length of the deposit – in general intercepts are shallow to the east and at depth to the west due to topographic surface erosion.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and	Downhole radiometric logging derived uranium grades (5cm intervals) were composited into uniform 1m intervals (with a 0.75m minimum

Criteria	JORC Code explanation	Commentary
	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.	length) and incorporated into the existing LHM Mineral Resource dataset. Any short residuals at the end of the drill hole were discarded. As drilling is designed to penetrate 2m of un-mineralised basement the removal of short residuals has no subsequent effect on the Mineral Resource estimate
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 (eg 'down hole length, true width not known').	Due to the use of vertical drilling and the horizontal, layered nature of the deposit all drill intercepts can be considered to represent the true width of the mineralisation.
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.	See attached plan
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 drill holes completed during the 2019 drilling programme are reported
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.	No additional work was undertaken other than that already described.
Further work	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.	It is expected that, as mining is undertaken, the programme of 12.5m x 12.5m pre-mining grade control drilling will continue until the entirety of the deposit has been drilled out. Currently the only area of the deposit not closed off is that to the west of ML140 within ML172. It is expected that, as the mineralisation within ML140 is mined out, additional wide spaced exploration drilling will be undertaken in ML172.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	All data has been extensively validated back to the original paper and electronic logs and any issues have been resolved. The geological database contains extensive validation tools for automatic flagging of a significant number of potential validation issues. Data validation procedures are visual (based on comparison of printed logs and sections) and electronic (on database upload of electronic information – assay results, gamma and down hole survey logs etc.)
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	The project has been repeatedly visited by the CP since 2003 with the most recent being for a period of 14 days during July 2016.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	The geological setting of the deposit is well understood having been subject to extensive exploration over a significant period and mining over the 10 year period from 2006 to 2016. Additional information has routinely been sourced from in-pit mapping of the mineralisation during mining. The mineral resource was defined by a combination of the modelled geological sequence and mineral resource grade shells. The local geology appears to be relatively simple in the main and it is not expected that any alternative interpretation would substantially alter either the gross geological model or the contained metal within the mineral resource estimate.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The current Mineral Resource is modelled to be approximately 16Km in strike, 0m to 100m in depth and varies in width from 300m to 900m depending on the position of the paleo channel walls.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	The Mineral Resource was estimated using Multi Indicator Kriging (MIK) techniques with a specific variance adjustment correction applied to allow for the level of selectivity expected during the mining process. Estimation search distances range from 50mE x 50mN x 3mRL to 100mE x 100mN x 5.2mRL in three passes. Searches were conducted on an octant basis with a minimum of 4 octants for Measured and Indicated material and two octants for Inferred

Criteria	JORC Code explanation	Commentary
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	material. In addition a minimum of 16 samples (and maximum of 48) were required for Measured and Indicated estimates, this was relaxed to a minimum of 8 samples for Inferred material. The full MIK model has been used to report the open pit portion of the mineral resource at a 250ppm U_3O_8 cut-off grade. The Mineral Resource reported here has been compared to the previous mineral resource estimate and compared favourably in terms of total contained tonnes and metal. Grade wireframes were used to define distinct geology and mineralisation domains and these were used to control the MIK estimation. The only potential by-product is V_2O_5, a constituent part of carnotite, the only uranium mineral currently contained within the deposit. V_2O_5 has been estimated within the mineral resource based on the stoichiometric ratio between U and V within carnotite. It is acknowledged that there may be additional vanadium within the ore processed however it is currently assumed that the majority of this material would be refractory relative to the existing flowsheet. Test work undertaken to date suggests that there are no deleterious elements or other non-grade variables of economic significance. The primary block sizes are 50m (E) x 50m (N) x 3m (RL) and are orientated in the direction of the strike of the mineralisation and are considered appropriate to both the average width of the mineralisation and the current drilling density. The selective mining unit (SMU) size of 4m x 4m x 3m was determined on the basis of the likely size of equipment used to mine the deposit and likely bench height for mining open pit. As the Mineral Resource estimation technique was MIK no grade capping or cutting was undertaken. Swath plots of the Mineral Resource and underlying sample data (in North, East and RL directions) was used to assess the validity of the Mineral Resource estimate. In all cases it is believed that the Mineral Resource estimate is reasonable.

Criteria	JORC Code explanation	Commentary
		Basic reconciliation between the resource, mined and mill feed grades indicated a good to very good correlation between all grade sources.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated dry.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	Cut off parameters are based on the likelihood of open pit mining of the Mineral Resource. Pit optimisation calculations were undertaken at a number of commodity prices to determine both the likely size and scale of the deposit. A uranium price of US$40/lb indicates a marginal cut-off grade of 250ppm U_3O_8 using budgeted mining and processing costs from the PFS.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	It is assumed that the mineralisation is likely to be extracted by open pit mining techniques. As the mineral resource estimation technique is MIK no additional dilution or recovery adjustments have been made over those contained in the original estimation. Refinement of the MIK variance adjustment have been undertaken over and above the calculated values based on mining experience since 2007. The additional variance adjustment reduced the averages grades by approximately 1% relative to the previous Mineral Resource estimate.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Existing metallurgical testwork indicates that the mineralisation is amenable to conventional alkaline leach extraction at reasonable cost. Testwork to determine the amenability of the process flowsheet to the production of a vanadium product was undertaken prior to the transition of the site to care and maintenance and is a continuing part of the PFS. Work completed to date indicates that a saleable vanadium product can be reasonably produced within the current flowsheet with only moderate modification to the processing plant within the product recovery area. As such, the inclusion of vanadium within the resource is deemed reasonable and meets the criteria of 'Reasonable prospects for eventual economic extraction'. As vanadium will represent purely by-product production no additional value has been placed upon it other

Criteria	JORC Code explanation	Commentary
		than marginal revenue recovery in order to determine RPEEE.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Environmental baseline work was undertaken prior to the commencement of mining operations and this has been continued by Paladin. A full environmental impact assessment on the project has been completed and the operation continues to meet all existing environmental requirements. There are no other known legal, political or other risks that could materially affect the potential development of the mineral resources.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The bulk density value used in the Mineral Resource estimate was determined from analysis of diamond drill core, mining and processing samples using standardised techniques. A large number of bulk density determinations were used and these are distributed throughout the mineralisation. The main method employed was weighing in air and water following drying and sealing of the sample. This method is considered to appropriately deal with void, moisture and rock type differences. The valued applied to the mineral resource estimate is based on the predominant mineralised rock type.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resource has been classified on the basis of drilling density throughout the deposit as well as the validity of the underlying data. All relevant factors have been taken into account when determining the Mineral Resource classification. The current classification of the deposit reflects the opinion of the Competent Person.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The Mineral Resource estimate has been reviewed by Company specialists and the current values reflect this review. The Mineral Resource estimate was also reviewed as part of

Criteria	JORC Code explanation	Commentary
		the PFS Independent Peer Review and no material issues were found
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Based on the current understanding of the deposit it is believed that the Mineral Resource estimate reasonably reflects the accuracy and confidence levels within the deposit. Due to the nature and style of the mineralisation it is expected that additional, detailed, infill drilling will locally modify grades and thicknesses however the global tonnages and grades are expected to remain consistent.