

# Deep Yellow Limited

ASX Announcement

ASX & NSX: DYL / OTCQX: DYLLF

28 January 2020

## QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDING 31 DECEMBER 2019

### HIGHLIGHTS

#### REPTILE PROJECT

- Resource extension drilling success at Tumas 1 East delivered an impressive 34% increase in resource growth with the Inferred Mineral Resource Estimate now 24.8Mlb grading 319ppm eU<sub>3</sub>O<sub>8</sub>.
- Resources within the Tumas palaeochannel system now 92.5Mlb at 303ppm eU<sub>3</sub>O<sub>8</sub> representing a near three-fold increase since November 2016.
- Exploration drilling west of Tumas 3 successfully identified several target areas for resource upgrade drilling in 2020.
- To date, only 56% of the known, highly prospective Tumas palaeochannel system has been drilled with 55km of this target still to be tested.

#### POST QUARTER

- Positive Scoping Study completed on Reptile Project.
- Encouraging results provided confidence for the Board to approve proceeding, with immediate effect, to a formal Pre-Feasibility Study to assess viability of a mining operation associated with the near-surface Tumas uranium deposits.
- Nova JV Project - exploration drilling successfully identified targets for follow-up drilling in 2020.

### Resource Upgrade at Tumas 1 East

In November 2019, Deep Yellow Limited (ASX: DYL) (**Deep Yellow**) announced an updated Mineral Resource Estimate (**MRE**) for the Tumas 1 East deposit (**Tumas 1 East**), located within the Reptile Project.

Successful resource extension drilling resulted in a 34% increase in resource growth at Tumas 1 East, with Inferred Mineral Resources now 24.8Mlb at 319ppm eU<sub>3</sub>O<sub>8</sub> (at a 200ppm eU<sub>3</sub>O<sub>8</sub> cut-off).

Total combined measured, indicated and inferred calcrete resources in the Tumas palaeochannel (Tumas 1 East, 1, 2, 3 and Tubas Red Sand/calcrete deposits) now stand at 92.5Mlb at 303ppm eU<sub>3</sub>O<sub>8</sub>. (Figure 1).

The uranium mineralisation defined to date in the Tumas palaeochannel system occurs as three distinct mineralised bodies: the Tumas 1 and 2 deposits, now including the Tumas 1 East tributary extensions, the Tumas 3 deposit and the Tubas Red Sand/Calcrete deposits.

These deposits occur on EPLs 3496 and 3497, held by Deep Yellow's wholly owned subsidiary, Reptile Uranium Namibia (Pty) Ltd.

With the combined overall Tumas palaeochannel resource totalling 92.5Mlb eU<sub>3</sub>O<sub>8</sub> at 303ppm over EPLs 3496/97 (see Table 1), the overall total surficial calcrete-related Mineral Resources across the Company's Namibian projects, including the Aussinanis Deposit on EPL3498, have more than doubled since 2017 to 110.5Mlb U<sub>3</sub>O<sub>8</sub>.

Resource extension RC drilling programs succeeded in closing off the Tributary 5 deposit in the Tumas 1 East area (Figure 4), with Deep Yellow also completing some limited infill drilling within the Tributary 4 channel. A total of 591 RC holes were drilled for 6,281m during the Tumas 1 East drilling campaigns, with 291 holes returning positive results, a pleasing overall success rate of 50%.

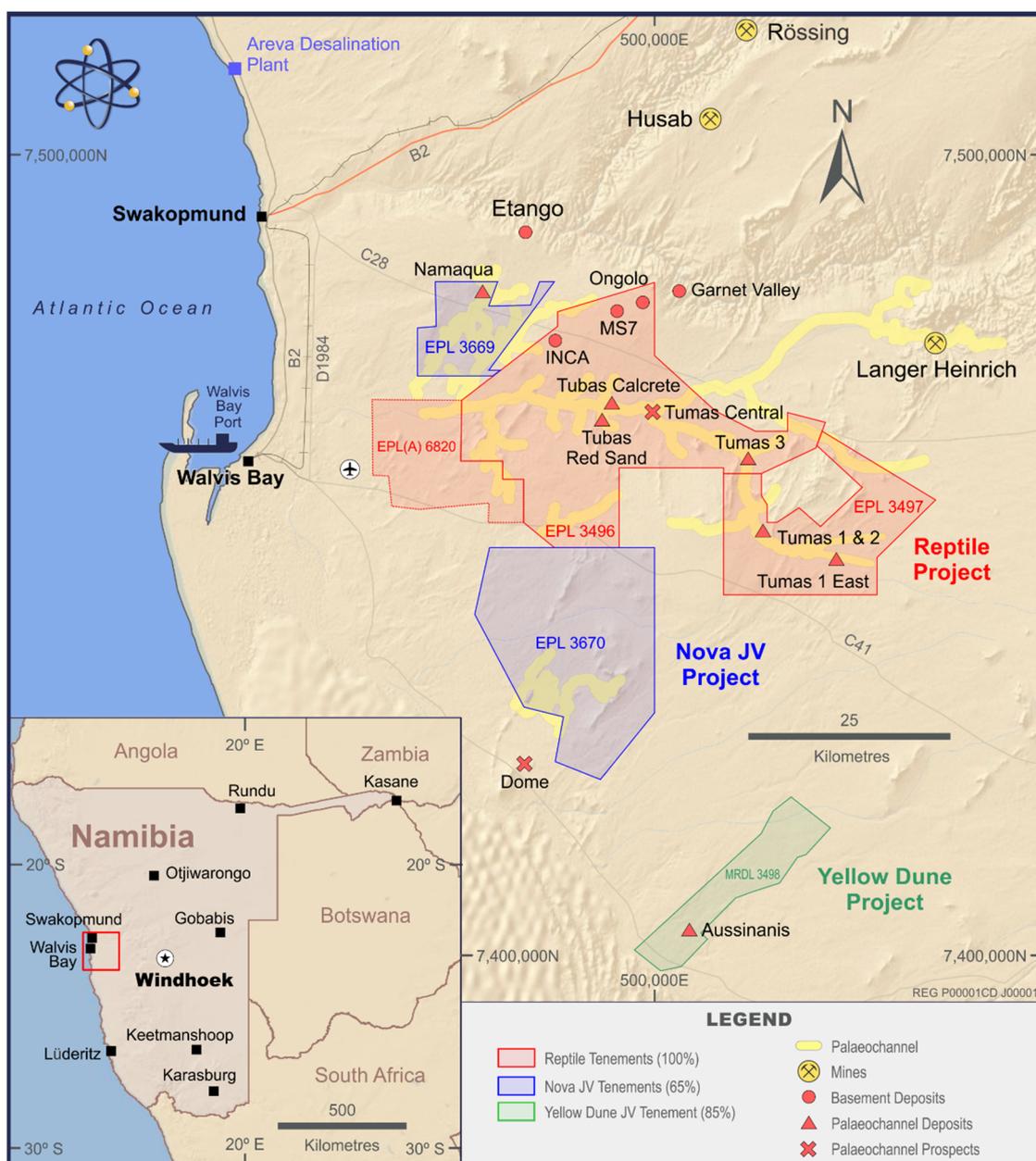


Figure 1: Namibian locality map showing position of the Tumas Project.

**Table 1: Total Measured, Indicated and Inferred Mineral Resource Estimates: 92.5Mlb at 303ppm eU<sub>3</sub>O<sub>8</sub>**

Tumas 1, 2 and 3 Resources					March 2019 Status			October 2019 Status		
<b>Tumas 3 Deposit - JORC 2012</b>					<b>Tumas 3 Deposit</b>			<b>Tumas 3 Deposit</b>		
Deposit	Category		Tonnes (M)	Grade (ppm)	U <sub>3</sub> O <sub>8</sub> Mlb	Tonnes (M)	Grade (ppm)	U <sub>3</sub> O <sub>8</sub> Mlb		
Tumas 3 Expanded	Inferred		39.7	378	33.1	39.7	378	33.1		
<b>Sub Total</b>			<b>39.7</b>	<b>378</b>	<b>33.1</b>	<b>39.7</b>	<b>378</b>	<b>33.1*</b>		
<b>Tumas Project - JORC 2012</b>					<b>Tumas Project</b>			<b>Tumas Project</b>		
Tumas 1&2 Deposit	Measured		10.8	383	9.1	10.8	383	9.1		
Tumas 1&2 Deposit	Indicated		5.5	333	4.0	5.5	333	4.0		
Tumas 1&2 Deposit	Inferred		5.7	211	2.3	5.7	211	2.7		
Tumas 1 – East	Inferred		25	335	18.5	35.2	319	24.8		
<b>Sub Total</b>			<b>47</b>	<b>331</b>	<b>34.3</b>	<b>57.2</b>	<b>322</b>	<b>40.6*</b>		
<b>Tubas Sand Project - JORC 2012</b>					<b>Tubas Sand Project</b>			<b>Tubas Sand Project</b>		
Tubas Sand Deposit #	Indicated		10.0	187	4.1	10.0	187	4.1		
Tubas Sand Deposit #	Inferred		24.0	163	8.6	24.0	163	8.6		
<b>Sub Total</b>			<b>34.0</b>	<b>170</b>	<b>12.7</b>	<b>34.0</b>	<b>170</b>	<b>12.7</b>		
<b>Tubas Calcrete Resource – JORC 2004</b>					<b>Tubas Calcrete Resource</b>			<b>Tubas Calcrete Resource</b>		
Tubas Calcrete Deposit	Inferred		7.4	374	6.1	7.4	374	6.1		
<b>Sub Total</b>			<b>7.4</b>	<b>374</b>	<b>6.1</b>	<b>7.4</b>	<b>374</b>	<b>6.1</b>		
<b>Tumas 1, 2, 3 &amp; Tubas Total</b>			<b>128.1</b>	<b>305</b>	<b>86.2</b>	<b>137.8</b>	<b>303</b>	<b>92.5</b>		

**Note:** Figures have been rounded and totals may reflect small rounding errors. eU<sub>3</sub>O<sub>8</sub> - equivalent uranium grade as determined by downhole gamma logging. Gamma probes were calibrated at the Langer Heinrich uranium mine test pit. During drilling, probes were checked daily against a standard source.

### Tumas 1 East Mineral Resource Estimate Summary

Exploration and infill resource drilling, carried out in conjunction with geological studies in 2017 and 2018, has substantially improved the Company's understanding of the palaeochannel-associated calcrete-type targets and its uranium mineralisation.

The upgraded MRE over the Tumas 1 East deposit, incorporating newly discovered tributaries, was the result of successful 2018 and 2019 drilling programs.

The MRE was estimated by Ordinary Kriging. Cut-off grades used for the expanded MRE included 100, 150, 200, and 250ppm eU<sub>3</sub>O<sub>8</sub> and the Measured, Indicated and Inferred Mineral Resource Estimates derived from these cut-off grades indicate the mineralisation remains robust and consistent. Table 2 shows the MRE results at various cut-offs and Table 3 shows the MRE results for the combined Tumas 1, 2 and 3 resource at a 200ppm eU<sub>3</sub>O<sub>8</sub> cut-off in comparison to the previous MRE.

**Table 2: Tumas 1 East - JORC 2012 MRE - Indicated, Measured and Inferred Resource Estimates at various cut-off grades**

Cut-off (ppm U <sub>3</sub> O <sub>8</sub> )	Tonnes (M)	U <sub>3</sub> O <sub>8</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (Mlb)
100	51.4	270	30.5
150	46.3	285	29.0
<b>200</b>	<b>35.2</b>	<b>319</b>	<b>24.8</b>
250	21.9	379	18.3

**Note:** Figures have been rounded and totals may reflect small rounding errors.  
eU<sub>3</sub>O<sub>8</sub> - equivalent uranium grade as determined by downhole gamma logging.  
Gamma probes were calibrated at the Langer Heinrich uranium mine test pit.  
During drilling, probes were checked daily against a standard source.

The upgraded MRE for the extended Tumas 1, 2, 3 and Tumas 1 East deposits at a 200ppm cut-off gives a combined Measured, Indicated and Inferred Mineral Resource of 73.7Mlb at 345ppm eU<sub>3</sub>O<sub>8</sub> as shown in Table 3 and Figure 2.

The 200ppm eU<sub>3</sub>O<sub>8</sub> cut-off has been selected as being the most appropriate for headline reporting of the resource estimations.

**Table 3: Tumas 1, 2, 3 and 1 East deposits - current and previous JORC 2012 MRE - Indicated, Measured and Inferred Resource Estimates at 200ppm eU<sub>3</sub>O<sub>8</sub> cut off**

Tumas 1, 2 and 3 Resources						March 2019 Status			October 2019 Status		
Tumas 3 Deposit - JORC 2012						Tumas 3 Deposit					
Deposit	Category		Tonnes (M)	Grade (ppm)	U <sub>3</sub> O <sub>8</sub> Mlb	Tonnes (M)	Grade (ppm)	U <sub>3</sub> O <sub>8</sub> Mlb			
Tumas 3 Expanded	Inferred		39.7	378	33.1	39.7	378	33.1			
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Tumas 1&2 Deposit	Indicated		5.5	333	4.0	5.5	333	4.0			
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Tumas 1 – East	Inferred		25	335	18.5	35.2	319	24.8			
<b>Sub Total</b>			<b>47</b>	<b>331</b>	<b>34.3</b>	<b>57.2</b>	<b>322</b>	<b>40.6</b>			
<b>Tumas 1, 2 and 3</b>	<b>Total</b>		<b>86.7</b>	<b>352</b>	<b>67.4</b>	<b>96.9</b>	<b>345</b>	<b>73.7</b>			

**Note:** Figures have been rounded and totals may reflect small rounding errors.  
eU<sub>3</sub>O<sub>8</sub> - equivalent uranium grade as determined by downhole gamma logging.  
Gamma probes were calibrated at the Langer Heinrich uranium mine test pit.  
During drilling, probes were checked daily against a standard source.

## Exploration Drilling

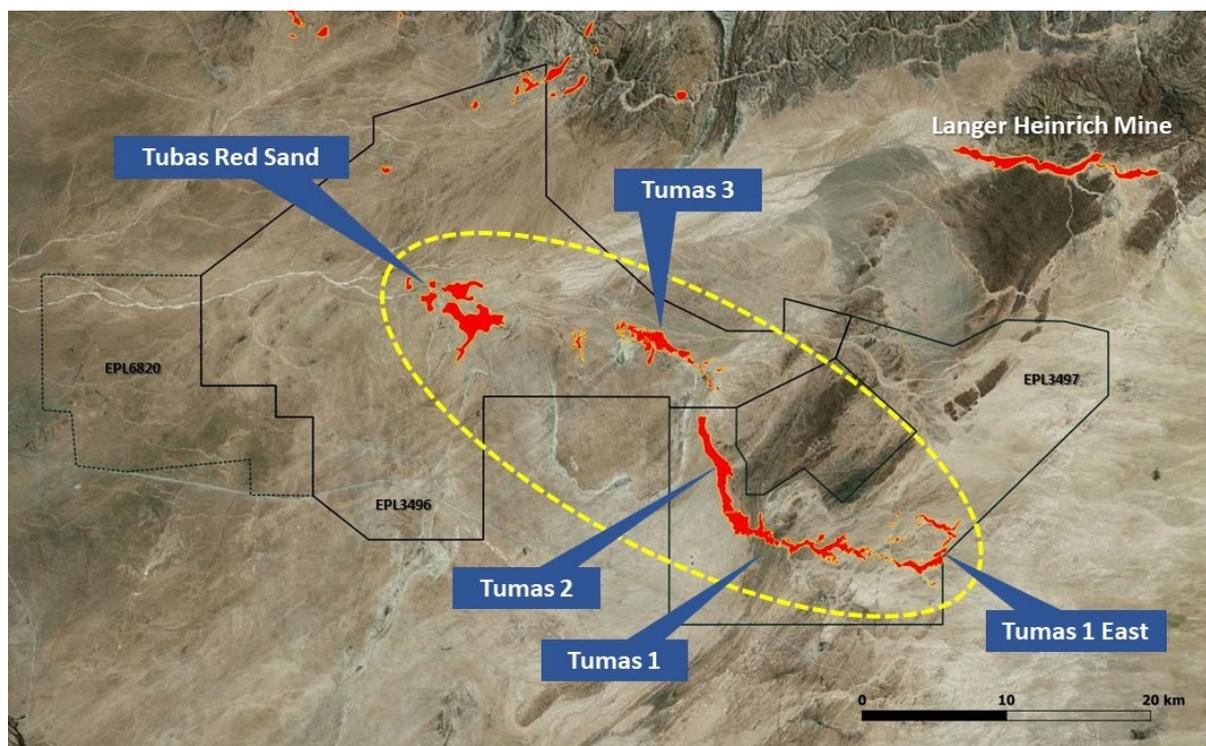
In December 2019, Deep Yellow announced the completion of the exploration drilling program west of the Tumas Central area on EPL3498. The program was successful in outlining additional calcrete-type uranium mineralisation below the surficial Red Sand deposit. Importantly, exploration drill testing of the Tubas Red Sand and Calcrete areas succeeded in extending the previous depth limits of the known mineralisation of the palaeochannel in this area. Drilling also identified the potential to further extend the mineralisation in this channel to the west and along other parts of the palaeochannel system including tributary channels.

Significantly this work delineated new zones for future resource in-fill drilling within this part of the main Tumas channel.

In October, Deep Yellow completed the 2019 drilling program at Tumas 3 West and Central. Drill hole locations are shown in Figure 5.

Mineralisation was identified at depths between 1m to 40m below surface. In the exploration drilling area, uranium mineralisation >100ppm/m eU<sub>3</sub>O<sub>8</sub> was identified in 75 (51%) of the 147 holes drilled in this zone. At >200ppm/m cut-off, the average grade returned is 335ppm eU<sub>3</sub>O<sub>8</sub>.

Each of these areas are will be subject to follow-up work.



**Figure 2:** Area showing potential operational footprint and current deposits.

Only 56% of the 125km of the targeted channels has been sufficiently explored over the past three years and, to date, the Inferred uranium resource base in the Tumas channel system has been increased by 280% from 32.2Mlb U<sub>3</sub>O<sub>8</sub> at 252ppm to 92.5Mlb U<sub>3</sub>O<sub>8</sub> at 303ppm. Approximately 55km of this palaeochannel system, which deepens to the west, remains to be tested.

Deep Yellow has resumed its planned drilling programs for the first half of 2020. Initially, the program will focus on resource infill drilling to upgrade areas of Tumas 3 to the Indicated Mineral Resource JORC reporting category. This will be followed by resource drilling at Tumas Central and Tubas Red Sand areas to enable an updated Mineral Resource Estimate to be completed for these areas of the paleochannel.

### **Tumas 3 Diamond Core Drilling**

The triple tube diamond core drilling program at Tumas 3 is focused on obtaining ~1,000kg of mineralised material suitable for metallurgical test work. By the end of December, 21 holes for 416m had been completed in 2019. A further 200m are planned to be drilled in January to February 2020 to complete this program. A total of 590kg of mineralised core material has been collected and sent to Australia.

The drill core obtained from this work will be used to refine the geological model and obtain approximately 500 density determinations to be used in future resource estimations to upgrade to Indicated and Measured JORC reporting status.

## POST QUARTER

### **Tumas Scoping Study Delivers Pre-Feasibility Study Go-Ahead**

On 21 January Deep Yellow announced the completion of a Scoping Study focused on the Reptile Project Tumas palaeochannel calcrete deposits. Encouraging results from the Study provided the Board with confidence to approve proceeding, with immediate effect, to a formal Pre-Feasibility Study which is expected to be completed in the December 2020 quarter.

The decision to proceed to a Pre-Feasibility Study was based on the economic benchmarks indicated in the Tumas Scoping Study. In view of the stipulations in the *ASX interim guidance: Reporting Scoping Studies (November 2016)* and the Deep Yellow use of predominantly Inferred Resources on which to base the economic outcomes, the Company is prohibited from divulging any production targets and associated financial parameters hence the qualified, cautionary nature of that release.

Deep Yellow Managing Director, Mr John Borshoff and the management and technical team involved in development of the Tumas Scoping Study were also instrumental in the successful development of Paladin Energy Ltd. This team is the only group to have established two successful, conventional uranium operations in two countries on the African continent after a 20-year global uranium industry hiatus. One of these operations was Paladin's Langer Heinrich uranium operation in Namibia, which successfully mined deposits similar to those which occur in the Tumas palaeochannel system. Consequently, the Company is confident with the expertise this team is able to bring to these studies to give high credibility to the conclusions that have been made.

### Tumas Scoping Study

The Scoping Study was undertaken to determine the potential viability of mining and processing the Tumas deposits, contained within a 10km radius of a purpose-built processing facility, (yet to be constructed) - see Figure 3.

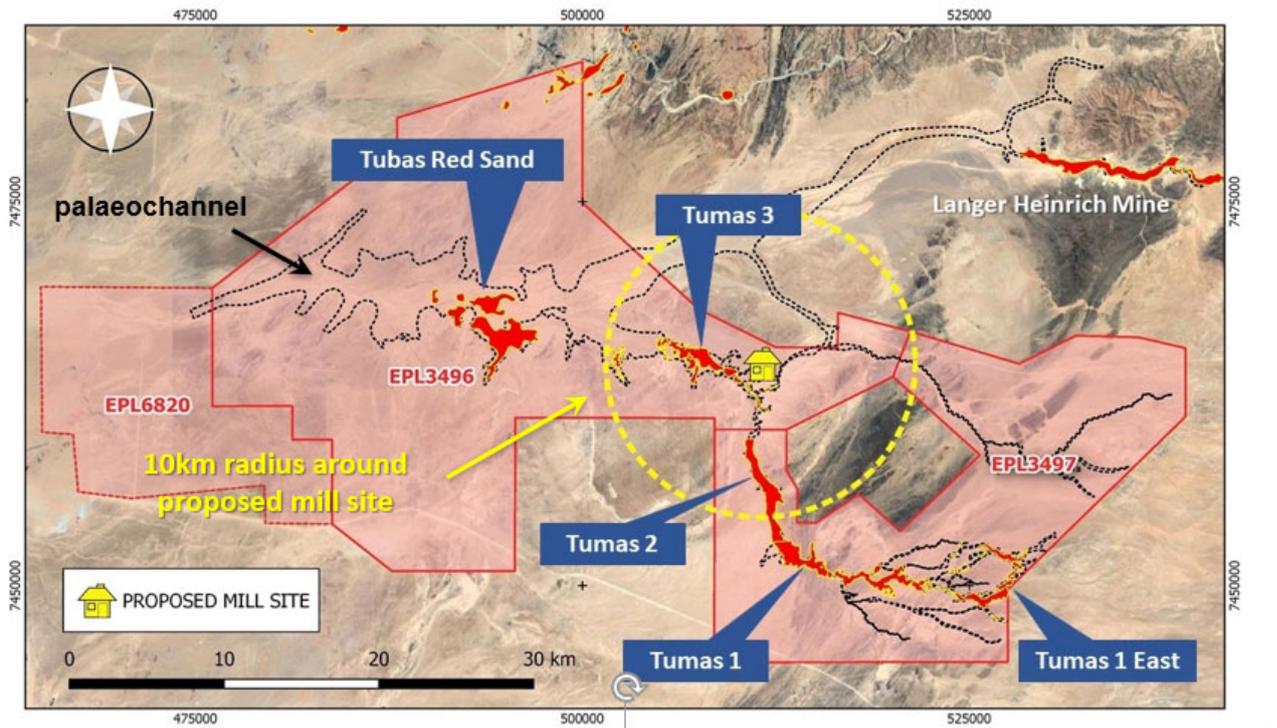
The Study considered the timing and cost associated with permitting, site establishment, mining, material haulage, processing, administration and closure associated with the development concept. It is based on a combination of directly gathered project data together with highly relevant assumptions derived from the adjacent Langer Heinrich uranium deposit. (The current Deep Yellow management team had direct executive management involvement in establishing the Langer Heinrich operation from resource establishment, mining, processing design, operations, optimisation, ESG management and product marketing).

### Uranium Resources

The Study was based on a high proportion of Inferred Resources.

The overall Inferred, Indicated and Measured Resources in Tumas 3, Tumas 1 & 2 and Tumas 1 East is 73.7Mlb eU<sub>3</sub>O<sub>8</sub> grading 345ppm (See Table 3) of which 13.1Mlb eU<sub>3</sub>O<sub>8</sub> grading 362ppm eU<sub>3</sub>O<sub>8</sub> are Measured and Indicated Resources.

The base case model in the Scoping Study utilises the Tumas 3 deposit containing 33.1Mlb eU<sub>3</sub>O<sub>8</sub> grading 378ppm lying adjacent to the proposed plant site (see Figure 3), with significant potential for upside growth when considering the other nearby deposits.



**Figure 3: Tubas Deposits in relation to conceptual central processing plant**

The Company is confident in converting a sufficient amount of the Inferred Resource to Indicated to establish an Ore Reserve Statement for the Pre-Feasibility Study for the following reasons:

- the depth of geological knowledge the Company holds regarding these palaeochannel-related uranium deposits is very high; and
- the management team’s working familiarity with the resource base of the adjacent Langer Heinrich uranium mine deposits (the Company believes that the Tumas Project Resources are an extension of the palaeochannel system and resources located at the Langer Heinrich Mine).

The Inferred Resource mineralisation established at Tumas is delineated in four discrete deposits occurring over a 40km long zone within the prospective palaeochannel system. 83% of the Tumas 1 & 2 deposits (occurring east-adjacent to the Tumas 3 deposit) is in an Indicated and Measured Resource status. This type of mineralisation is remarkably consistent over an extensive length.

The Company is confident that the Inferred Resources at Tumas 3 will convert to a sufficiently large Indicated Resource for the purposes of Ore Reserve estimation during the Pre-Feasibility Study.

#### Development Timing

The timing of both the Study and the Pre-Feasibility Study, as advised previously (see ASX release dated 24 September 2019), has been developed for a possible development decision (should all subsequent studies prove positive) which is at least two to three years away and based on the uranium price reaching US\$60/lb to US\$70/lb on a predicted supply/demand dynamic, where shortages are anticipated at that time in the global uranium market. These studies are structured to provide Deep Yellow with sufficient time to align with a potential development in the period 2023-24.

## The Deep Yellow Growth Strategy

The Deep Yellow strategic growth plan is focused on establishing the Company as a low-cost, tier-one global uranium platform. The dual-pillar strategy has been developed to deliver organic and inorganic growth through advancing the development of its Namibian projects and secondly, via sector consolidation, to acquire additional projects through merger and acquisition. This utilises the strong uranium project development, operational and corporate capabilities and proven track record of the Deep Yellow management team.

The Company remains well-funded to continue the execution of this strategy over the next 12 months.

## Scoping Study Outcomes

The analysis undertaken for the Study relies on many assumptions to be assessed in follow-on studies based on emerging project data as well as the relevant experience of the Deep Yellow management team. This evaluation indicates the Tumas Project meets the Company's investment criteria having the potential to achieve the stated corporate benchmarks required by the Deep Yellow growth strategy.

## Approval to Proceed to Pre-Feasibility

The Pre-Feasibility Study, which is expected to be completed in the December 2020 quarter, will represent a further significant milestone in the Company fulfilling its stated ambition of becoming a multi-platform, low-cost, global uranium company.

## Nova Joint Venture

On 10 January 2020, Deep Yellow announced that in December 2019 the exploration drilling program on its Nova Joint Venture project (**Nova JV**) on EPL3670 was completed. JOGMEC is earning a 39.5% interest on expenditure of A\$4.5M within 4 years, which commenced in November 2016.

The overall drilling campaign was designed to test four previously unexplored palaeochannels in addition to one extensive basement target defined by the 2018 airborne spectrometric and magnetic survey.

The exploration drilling on EPL3670 totalled 3,009m for 153 RC holes. Figure 1 shows the Nova JV tenements – EPLs 3669 and 3670.

Results of palaeochannel drilling at Day Gecko, Bibron and STD 24 and Komodo 2 basement target zones, with the exception of one hole, recorded below cut-off uranium mineralisation. At the STD 24 target, notable uranium mineralisation was encountered in calcrete located in a palaeochannel as referred to in Figure 6. A moderate intersection of 130ppm eU<sub>3</sub>O<sub>8</sub> over 1m from 5m depth was encountered at the southern end of the drill line. The intersection lines up with uranium mineralisation encountered at Skink prospect, 1.5km to the north-west and as such some follow-up work may be required.

Basement target drilling focussed on the Komodo 2 target approximately 9km by 3km beneath Tertiary and Quaternary cover sediments. 96 shallow RC exploration holes for 1,980m were drilled, returning only minor anomalism and all below 100ppm eU<sub>3</sub>O<sub>8</sub> over 1m.

On EPL3669, Namaqua remains open to the north-east and is earmarked for follow-up drill testing as previously reported. In addition, prospective leucogranite at Barking Gecko will require follow-up work.

Yours faithfully



**JOHN BORSHOFF**  
Managing Director/CEO  
Deep Yellow Limited

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[www.deepyellow.com.au](http://www.deepyellow.com.au)

**ABOUT DEEP YELLOW LIMITED**

*Deep Yellow Limited is a specialist differentiated uranium company implementing a new contrarian strategy to grow shareholder wealth. This strategy is founded upon growing the existing uranium resources across the Company's uranium projects in Namibia and the pursuit of accretive, counter-cyclical acquisitions to build a global, geographically diverse asset portfolio. The Company's cornerstone suite of projects in Namibia is situated within a top-ranked African mining destination in a jurisdiction that has a long, well regarded history of safely and effectively developing and regulating its considerable uranium mining industry.*

**Competent Person's Statement**

*The information in this announcement that relates to the **Tumas Mineral Resources Estimate and the Mineral Resource Database** is based on work completed by Mr. Martin Hirsch, M.Sc. Geology, who is a member of the Institute of Materials, Minerals and Mining (UK) and the South African Council for Natural Science Professionals. Mr. Hirsch is now the Manager for Resources and Pre-Development for Reptile Mineral Resources (Pty) Ltd and, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012 Edition). Mr. Hirsch consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.*

*Where the Company refers to the other JORC 2012 resources and JORC 2004 resources in this report, it confirms that it is not aware of any new information or data that materially affects the information included in the original announcements and all material assumptions and technical parameters underpinning the resource estimates in those original announcements continue to apply and have not materially changed.*

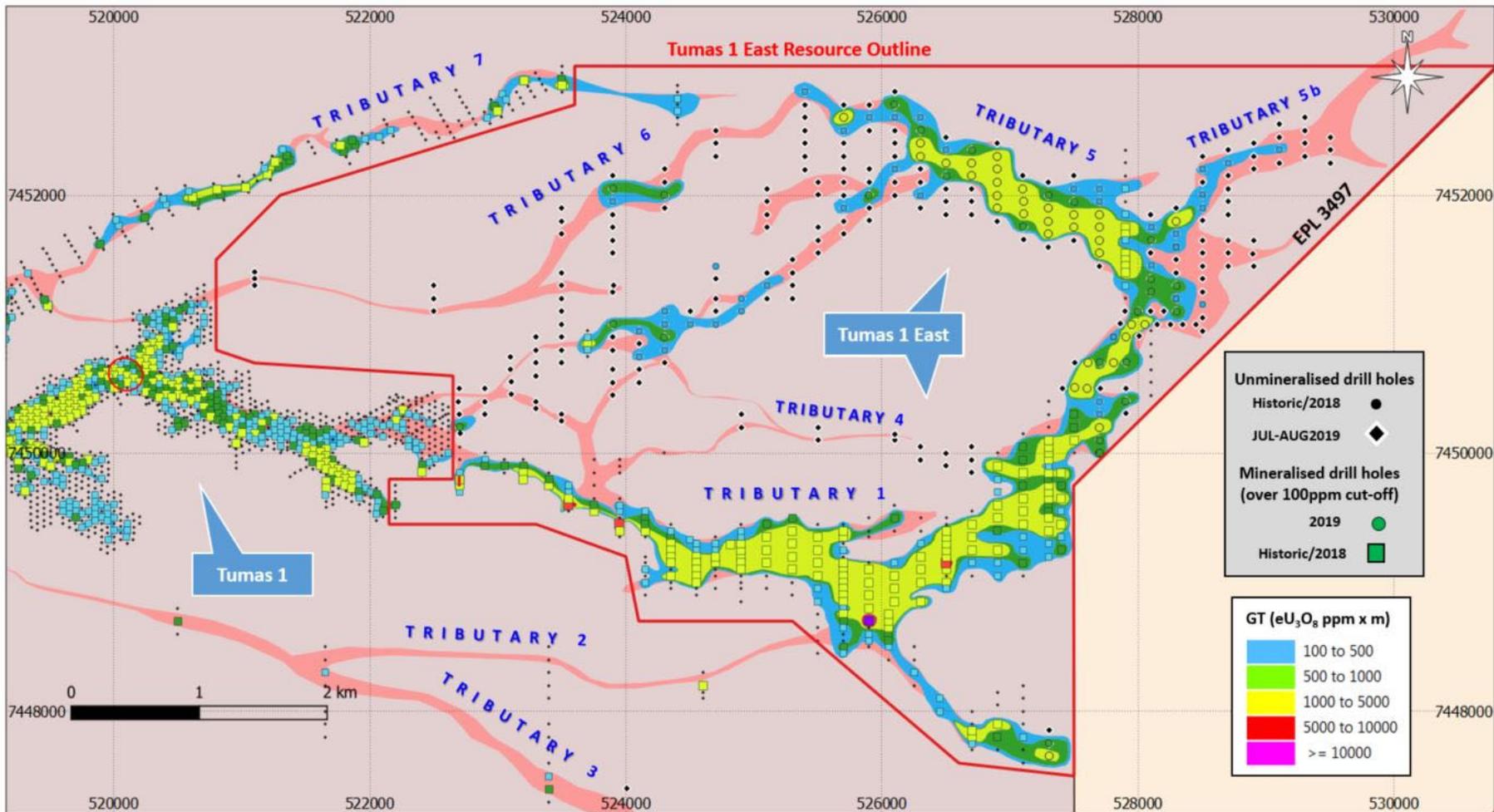
*The JORC 2004 classified resources have not been updated to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported, however they are being progressively reviewed to bring all resources up to JORC 2012 standard.*

### **Project and Technical Expertise**

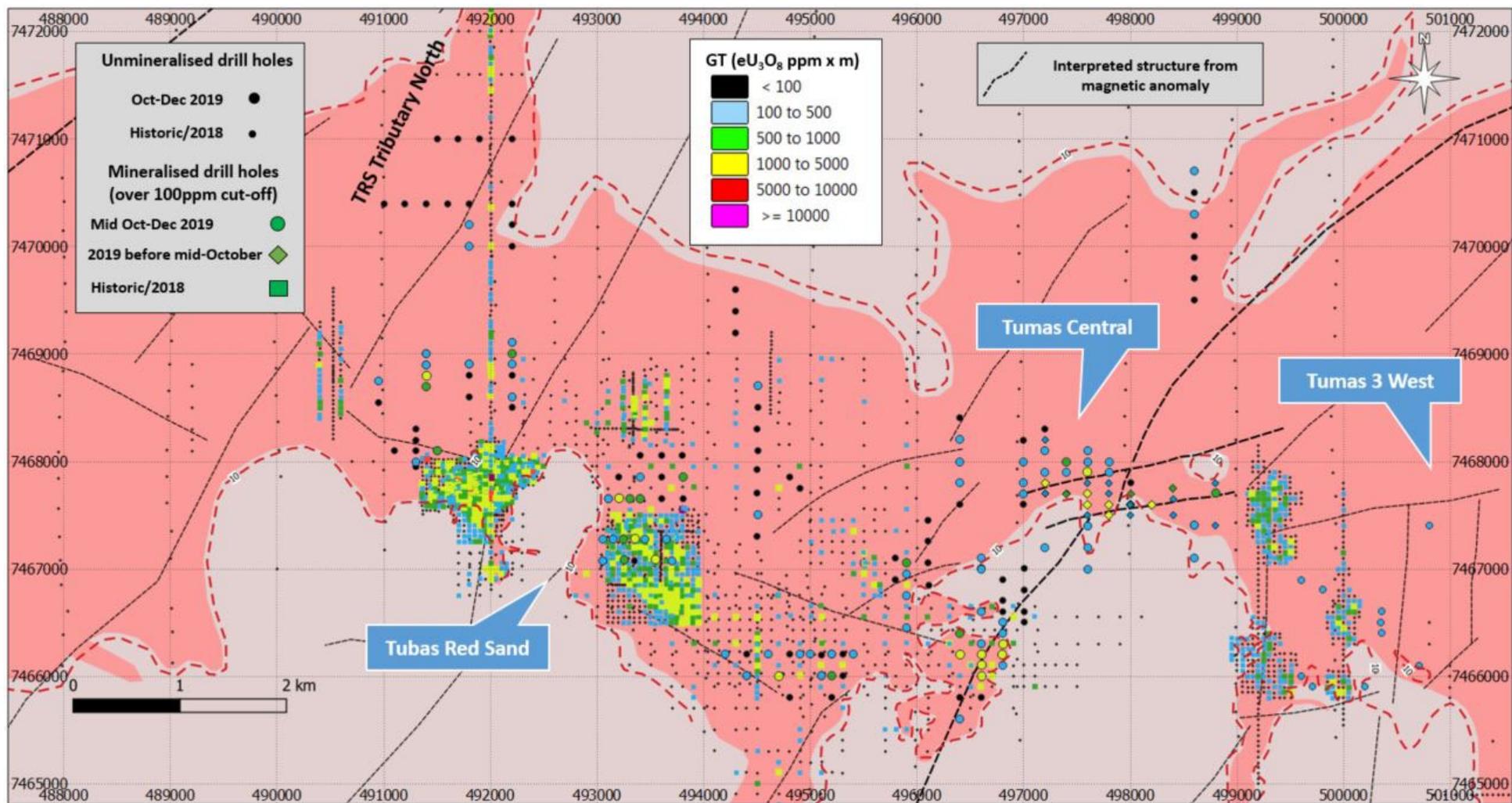
*Mr Darryl Butcher is a process engineer/metallurgist working for Deep Yellow and has sufficient relevant experience to advise the Company on matters relating to mine development and uranium processing, project scheduling, processing methodology and project capital and operating costs. Mr Butcher is satisfied that the information provided in this ASX announcement has been determined to a scoping study level of accuracy and, based on the data provided by the Company and experience in development of similar deposits, considers that progress to a pre-feasibility study can be justified.*

### **Forward Looking Statement**

*Any statements, estimates, forecasts or projections with respect to the future performance of Deep Yellow and/or its subsidiaries contained in this presentation are based on subjective assumptions made by Deep Yellow's management and about circumstances and events that have not yet taken place. Such statements, estimates, forecasts and projections involve significant elements of subjective judgement and analysis which, whilst reasonably formulated, cannot be guaranteed to occur. Accordingly, no representations are made by Deep Yellow or its affiliates, subsidiaries, directors, officers, agents, advisers or employees as to the accuracy of such information; such statements, estimates, forecasts and projections should not be relied upon as indicative of future value or as a guaranteed of value or future results; and there can be no assurance that the projected results will be achieved.*



**Figure 4:** Drill hole locations showing the drilling program at Tumas 1 East. The drill hole collars and the resource contours are coloured in eU<sub>3</sub>O<sub>8</sub> grade thickness values (GT: eU<sub>3</sub>O<sub>8</sub> ppm x m).



**Figure 5:** Drill hole locations showing the recent drilling program at Tubas Red Sand/Calcrete area and Tumas Central. The drill hole collars are coloured in eU<sub>3</sub>O<sub>8</sub> grade thickness values (GT: eU<sub>3</sub>O<sub>8</sub> ppm x m).

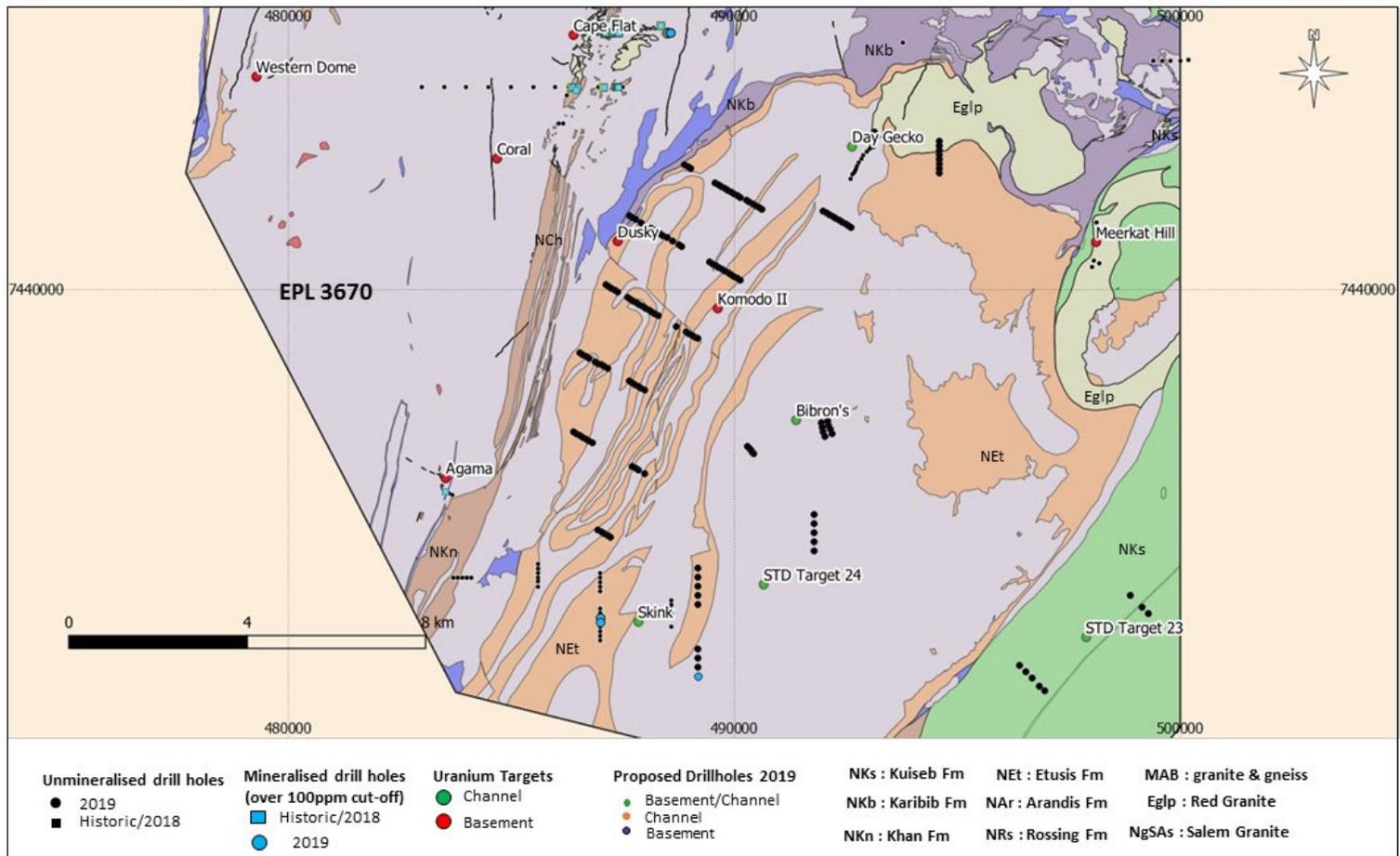


Figure 6: EPL3670: Drill hole locations showing the recent and previous drill hole locations. The drill hole collars are coloured in  $eU_3O_8$  grade thickness values (GT:  $eU_3O_8$  pmm x m).