

# quarterly report

FOR THE PERIOD ENDING  
31 DECEMBER 2019



## CORPORATE

### Cash and Cash Equivalents

As at 31 December 2019, Tanami Gold NL ("Tanami" or the "Company") had available cash of \$28,188,361.

### Northern Star Resources Limited Shares ("NST")

As at 31 December 2019, the Company has 500,000 NST shares remaining.

### Joint Venture with Northern Star Resources Limited

The respective interests in the CTP of Tanami and NST at the date of this report remain at 60% and 40%.

## EXPLORATION

### Central Tanami Project (60% Tanami)

NST have advised that the December quarter of 2019 was dominated by drill testing of exploration and resource targets. A total of 11,578m of regional AC drilling was completed over three prospect areas, with 9,548m of RC drilling completed over four exploration resource areas.

Samples were despatched from site on an irregular basis due to limited freight options. Drilling ceased late in the quarter, with minimal interpretation and review of results completed before quarters end. This work will continue during the monsoonal period. Further assay results are pending.

#### *Air core drilling:*

- *Dropzone*

A total of forty one (41) AC holes for 1,974m were drilled at Dropzone during the quarter. The program focussed on identifying the orientation of mineralised structures with structures oriented both north-south and east-west targeted in this phase of AC drilling.

Assay results showed a best intersection of 4m @ 141 ppb Au in DZAC082 in addition to 24m @ 41 ppb Au intersected in DZAC077. Both holes are centred around a similar location in the south of the prospect area. Interpretation is underway to determine the relationship between these results and assess the potential for economic gold mineralisation in this area.

- *Groundrush West*

A reconnaissance program of 138 AC holes for 5,545m was drilled at Groundrush West during the quarter. Drilling targeted two main areas as a second phase to previous AC drilling conducted in early 2019. Both targeted areas focussed on interpreted east-west oriented structures, testing mineralisation potential both within and adjacent to these features.

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Significant assay results included a best result of 4 metres @ 83 ppb Au in GWAC0150 and 8 metres @ 65 ppb Au in GWAC0190. Each of these results represent anomalous intercepts in the southern and northern focus areas respectively. Further investigation is required to assess the anomalism identified in this phase of drilling.

- *Ripcord – Groundrush Link*

A reconnaissance AC program totalling 87 holes for 4,239m was drilled in the Ripcord-Groundrush corridor areas during the quarter targeting multiple features including the northern and southern extension of the Ripcord Dolerite, the southern extension of the Groundrush Dolerite and the southern extension of the Western Dolerite in the Ripcord prospect area. This AC drilling program successfully returned a number of geochemical anomalous gold results highlighting several zones of further interest for review. Detailed geological interpretation is underway throughout these areas to assess future drilling targets to define further mineralisation potential.

**Reverse circulation drilling:**

- *Solaris*

At Solaris, previous AC drilling defined a zone of probable supergene gold mineralisation within a northwest-southeast trend with a steep SW dip. Four RC drill holes for 764m were drilled by Mt Magnet Drilling (MMD) in October. The RC drilling program was designed to test the potential for primary, fresh rock mineralisation beneath the supergene zone at a depth between 80m and 140m.

All four RC holes at Solaris intersected significant gold mineralisation, however the grade and continuity of mineralisation appears limited at this early stage. The best significant intersection of 8m @1.031g/t Au from 92m in SORC0004 is interpreted to be primary mineralisation, hosted within interbedded siltstone-sandstone (see Table 1).

HOLE ID	EAST (MGA)	NORTH (MGA)	RL (AHD)	DIP (Deg)	AZI (MGA)	HOLE DEPTH (m)	FROM (m)	TO (m)	WIDTH (m)	GRADE g/t Au
SORC001	559799	7771929	413	-60	60	208	190	191	1	2.51
SORC002	559757	7772015	410	-65	60	230	138	139	1	0.79
							196	197	1	1.01
SORC003	559815	7772056	409	-67	58	130	16	20	4	0.64
							92	96	4	0.50
SORC004	559740	7772101	411	-65	63	196	92	100	8	1.03
							108	112	4	0.74
							156	160	4	0.60

Table 1 - Solaris significant RC drilling results (nominal 0.5 g/t Au cut-off and up to 2 metres internal waste)

RC drilling confirmed a sub-vertical interpretation, dipping steeply to the south west. Mineralisation appears to be hosted by a series of stacked quartz vein arrays associated with larger subvertical structures oblique to bedding, which dips moderately to the south west. Geochemical analysis shows a strong felsic signature coincident with mineralisation with the deep and intense weathering profile possibly obscuring a granite intrusion in geological logging, potentially responsible for the local remobilisation and concentration of gold.

- *Ripcord*

At Ripcord, gold mineralisation is interpreted to be hosted within the Ripcord Dolerite, which is interpreted as either the southern extension, or coeval intrusion, of the Groundrush Dolerite. Gold mineralisation is hosted within stacked quartz vein arrays, similar to that of the Groundrush deposit.

The existing Ripcord resource has a significant component of supergene mineralisation, with most of the primary mineralisation intersections being too widely spaced for inclusion in the current resource model.

A RC drilling program was undertaken at Ripcord to test both the mineralisation potential at depth and possible extensions along strike. A total of 12 RC drill holes for 3,887m were completed during November and December.

Geological logging revealed zones of quartz veining with associated sulphides, notably pyrite and trace arsenopyrite, within both the Ripcord Dolerite and adjacent hanging wall sediments. Partial assay results received up to the end of the quarter, show most significant intersections focussed in the northern extension of the deposit contrary to the current model of mineralisation plunging to the south.

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Significant intersections received to date include 5m at 18.53g/t Au from 143m in RIRC0013 and 4m at 2.54g/t Au from 150m in RIRC0005. The intersection in RIRC0013 represents an extension of approximately 220m along strike to the northwest from the current resource envelope (see Table 2).

HOLE ID	EAST (MGA)	NORTH (MGA)	RL (AHD)	DIP (Deg)	AZI (MGA)	HOLE DEPTH (m)	FROM (m)	TO (m)	WIDTH (m)	GRADE g/t Au
RIRC0002	605769	7816760	413	-60	80	282	154	155	1	1.58
							172	173	1	0.65
							233	234	1	0.68
RIRC0005	605704	7816983	419	-60	58	298	123	124	1	0.55
							135	137	2	1.64
							150	154	4	2.54
RIRC0008	605663	7816964	418	-60	60	323	205	206	1	0.53
RIRC0013	605660	7817086	410	-58	65	250	89	92	3	1.52
							122	123	1	1.30
							126	127	1	0.78
							143	148	5	18.53
							155	156	1	2.45
RIRC0014	605619	7817054	410	-60	63	290	175	179	4	0.93
							205	206	1	1.48

**Table 2** – Ripcord RC drilling significant intersections (nominal 0.5 g/t Au cut-off and up to 2 metres internal waste)

The intersections in both RIRC0013 and RIRC0005 are of interest as both are hosted within greywacke sediments in the hanging wall to the Ripcord Dolerite. Whilst high grade gold mineralisation has been noted in hanging wall sediments at Groundrush previously, this is the first indication of similar mineralisation at Ripcord. It's likely a flexure in the Ripcord dolerite has generated greater compressional force in the sediments in this area, resulting in ramping against the dolerite hanging wall contact creating zones of dilation along bedding horizons. Once all assays are received, a detailed geological review and interpretation will be undertaken.

- *Supplejack*

The Supplejack area is located approximately 120 kilometres north of the Central Tanami mill site and is host to the Crusade deposit.

The Crusade deposit is hosted along the north-south oriented contact between basalt and dacite sequences within the area of the Supplejack Fault corridor. Gold mineralisation is hosted specifically within stacked quartz vein arrays, like that of the Groundrush deposit, however some disseminated sulphide mineralisation has been observed within the eastern basalt unit. The Crusade deposit has a current resource of 1,414,709 tonnes at 2.6 g/t Au for 119,114oz with no additional work completed since Tanami's resource estimation in 2011.

Recent surface geological mapping and geochemical sampling confirmed the existing extent of the Crusade mineralisation and an RC drill program to test the down-dip and along strike mineralisation potential of the deposit was completed during the quarter.

A total of 16 RC holes for 3,239m was completed at the Crusade deposit in October and November targeted extensions of the current resource envelope and validation of historic drilling by twinning a hole containing significant mineralisation.

Partial assay results received to date indicate several holes have intersected significant gold mineralisation with a best intersection of 47m @at 3.66g/t Au from 82m in SJRC0005. This is one of the validation holes twinning previous drilling to confirm mineralisation which significantly exceeded the previous intersection on this section (see Table 3).

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HOLE ID	EAST (MGA)	NORTH (MGA)	RL (AHD)	DIP (Deg)	AZI (MGA)	HOLE DEPTH (m)	FROM (m)	TO (m)	WIDTH (m)	GRADE g/t Au
SJRC0001	612772.2	7883179.1	408	-60	116	250	108	112	4	0.66
							243	244	1	5.39
SJRC0002	612922.8	7883146.2	425	-60	107	256	24	28	4	3.03
							32	36	4	1.72
							44	52	8	0.75
SJRC0003	613041.6	7883115.2	416	-60	107	208	201	202	1	0.76
SJRC0004	612857	7883365	414	-60	111	250	174	175	1	1.30
							183	190	7	1.82
							194	216	22	1.07
							220	221	1	0.52
SJRC0005	612985.9	7883336.6	413	-60	112	150	38	42	4	0.75
							46	58	12	0.61
							62	70	8	0.65
							82	129	47	3.66
SJRC0006	612998.61	7883370.94	416	-62	112	155	17	18	1	1.14
							24	26	2	1.65
							36	37	1	0.67
							40	41	1	2.67
							62	82	20	1.92
							86	104	18	2.76
							109	121	12	4.15
							124	141	17	3.63
SJRC0007	613104.3	7883294.2	415	-60	116	200	32	36	4	0.77
							115	116	1	0.90
							174	178	4	0.76
SJRC0008	612895.2	7883557.2	415	-60	116	262	171	172	1	1.20
							175	177	2	0.60
SJRC0010	613144	7883485	420	-60	116	180	105	106	1	0.56
							136	140	4	0.71
SJRC0011	612997	7883651	415	-60	110	298	114	118	4	1.45
							198	199	1	0.84
							207	208	1	1.54
							221	222	1	1.08
SJRC0013	613214	7883672	416	-60	117	200	136	137	1	0.70
							151	152	1	5.40
							159	160	1	1.01

**Table 3 - Crusade deposit significant RC drilling intersections (nominal 0.5 g/t Au cut-off and up to 2 metres internal waste)**

Down-dip extensions to the existing Crusade resource are indicated by intersections in holes RIRC0001 (1m at 5.39g/t Au from 243m) and RIRC0004 (22m at 1.07g/t Au from 194m) while intersections in RIRC0011 (1.45g/t Au from 114m and) and RIRC0013 (4m at 1m at 5.4g/t Au from 151m) represent an approximate 200m northern extension to the current resource envelope.

The Crusade mineralisation is found both within quartz-sulphide (pyrite-arsenopyrite- galena) veins and as disseminated sulphides in micro-fractures within the basalt.

Single metre re-splits of composite mineralised samples have been submitted for re-assay and a full review of the Crusade mineralisation will be undertaken once all results have been received. Several petrology samples have also been collected and metallurgical samples will be collected for recovery testing in the coming quarter.

Due to the difficulty in accessing the Suplejack area, an additional four RC drill holes (820m) were completed at the Kokoda prospect, approximately 4km north of Crusade, to test the mineralisation potential at depth. Kokoda is a small exploration prospect that has only been tested by historic RAB drilling.

Assay results indicate scattered thin intersections from the four Kokoda drill holes. These included SJRC0020 - 2m at 2.82g/t Au from 65m, SJRC0020 - 2m at 2.07g/t Au from 112m, SJRC0019 - 1m at 3.57g/t Au from 141m and SJRC0018 - 4m at 1.05g/t from 104m (see Table 4).

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HOLE ID	EAST (MGA)	NORTH (MGA)	RL (AHD)	DIP (Deg)	AZI (MGA)	HOLE DEPTH (m)	FROM (m)	TO (m)	WIDTH (m)	GRADE g/t Au
SJRC0017	614107	7887047	410	-60	92	250	138	139	1	0.85
							149	150	1	2.86
							156	157	1	0.84
							186	187	1	0.92
SJRC0018	614140	7887047	420	-61	100	160	92	94	2	1.32
							98	100	2	1.50
							104	108	4	1.05
							146	147	1	0.52
SJRC0019	614167	7887278	422	-60	110	250	124	125	1	1.22
							141	142	1	3.57
							158	159	1	0.75
							171	172	1	1.82
SJRC0020	614220	7887264	428	-60	113	160	53	54	1	0.72
							61	62	1	0.79
							65	67	2	2.82
							82	83	1	0.55
							95	96	1	2.52
						112	114	2	2.07	

**Table 4 - Kokoda prospect significant RC drilling intersections (nominal 0.5 g/t Au cut-off and up to 2 metres internal waste)**

A full review of the Kokoda drill results will be completed next quarter.

## **Earthworks and rehabilitation**

A total of 347 AC drill holes were rehabilitated during the quarter at Channel Four, Dropzone, Groundrush West, Jims Return, Solaris and Terminus. Rehabilitation was suspended in mid-December due to monsoonal weather with work is planned to resume next quarter weather permitting.

Earthworks undertaken during the quarter included track and drill site preparation at Ripcord, Groundrush West, Dropzone and Suplejack.

## **Planned work for next quarter:**

Next quarter will see the in-depth review and interpretation of the December quarter programs completed, followed by target ranking and 2020 program design.

- RC drilling review and interpretation:
  - Ripcord – interpretation and resource estimation review.
  - Suplejack (Crusade and Kokoda) – interpretation and resource estimation review.
  - Solaris.
- AC drilling review and interpretation:
  - Groundrush West, Ripcord – Groundrush, Dropzone.
- 2020 Exploration target ranking, program design and approvals.
- Ongoing site maintenance and repairs.

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## MINERAL RESOURCES

**Table 5: Tanami Gold NL Mineral Resources as at 31 December 2019 (60% Tanami)**

Project	Resource Category											
	Measured			Indicated			Inferred			Total		
	Tonnes	Grade g/t Au	Ounces	Tonnes	Grade g/t Au	Ounces	Tonnes	Grade g/t Au	Ounces	Tonnes	Grade g/t Au	Ounces
CTP <sup>9</sup>	6,255,000	2.9	579,000	11,075,000	2.8	1,001,000	12,106,000	2.9	1,133,000	29,436,000	2.9	2,713,000
CTP Stockpile <sup>9</sup>	1,400,000	0.7	31,000	-	-	-	-	-	-	1,400,000	0.7	31,000
<b>Total</b>	<b>7,655,000</b>	<b>2.5</b>	<b>610,000</b>	<b>11,075,000</b>	<b>2.8</b>	<b>1,001,000</b>	<b>12,106,000</b>	<b>2.9</b>	<b>1,133,000</b>	<b>30,836,000</b>	<b>2.8</b>	<b>2,744,000</b>

### Notes to accompany Table 5

- CTP is Central Tanami Project.
- Resource estimations completed using MineMap, Vulcan, Surpac, Datamine and Micromine software packages comprising a combination of ellipsoidal inverse distance and ordinary kriging grade interpolation methods.
- Variable gold assay top cuts were applied based on geostatistical parameters and historical production reconciliation.
- Resources reported above relevant cut-offs based on economic extractions, varying between 0.7g/t Au and 5.0g/t Au block model grade.
- Stockpile figures from previously reported Otter Gold Mines NL 2001 Mineral Resource estimate less recorded treatment by Newmont Asia Pacific.
- Tonnes and ounces rounded to the nearest thousand and grade rounded to 0.1g/t Au. Rounding may affect tallies.
- The information in this report pertaining to Mineral Resources was compiled by Mr Bill Makar (MAusIMM), former Consultant Geologist – Tanami Gold NL, Mr Michael Thomson (MAusIMM), former Principal Geologist for Tanami Gold NL, Mr Steven Nicholls (MAIG), former Senior Geologist for Tanami Gold NL, Mrs Claire Hillyard (MAusIMM), former Resource Geologist for Tanami Gold NL, Mr Mark Drabble (MAusIMM) – Principal Consultant Geologist, Optiro Pty Ltd and Mr Peter Ball (MAusIMM), Director of Datageo Geological Consultants, and Mr Brook Ekers, a Competent Person who is a Member of the Australian Institute of Geoscientists and a full-time employee of Northern Star Resources Limited. Mr Makar, Mr Thomson, Mr Nicholls, Mrs Hillyard, Mr Drabble, Mr Ball and Mr Ekers have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as Competent Persons as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Makar, Mr Thomson, Mr Nicholls, Mrs Hillyard, Mr Drabble, Mr Ball and Mr Ekers consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.
- The dates referred to in this table represents the date of the most recent update of a Resource (ML22934 Groundrush) within this table, all other Mineral Resources except for ML22934 Groundrush remain unchanged.
- On 4th of August 2015, an unincorporated joint venture (“JV”) was formed between the Company and Northern Star Resources Limited who purchased an initial 25% interest in the Company’s CTP. On 14 September 2018, the Company exercised the first put option available to it under the JV to sell a further 15% in the CTP. As at 31 December 2019, the Company retains a 60% interest in the CTP Resources stated in this table.

**Table 6: Central Tanami Project Mineral Resources as at 31 December 2019 (60% Tanami)**

Mineral Lease	Resource Category											
	Measured			Indicated			Inferred			Total		
	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
MLS153 <sup>8</sup>	1,051,000	2.2	73,000	3,046,000	2.2	217,000	849,000	2.7	74,000	4,946,000	2.3	365,000
MLS167 <sup>8</sup>	2,709,000	3.4	293,000	2,613,000	2.9	244,000	2,050,000	2.9	191,000	7,372,000	3.1	728,000
MLS168 <sup>8</sup>	854,000	2.2	60,000	314,000	1.6	16,000	1,094,000	1.6	58,000	2,262,000	1.8	133,000
MLS180 <sup>8</sup>	545,000	3.3	57,000	872,000	2.7	76,000	269,000	2	18,000	1,685,000	2.8	151,000
MLSA172 <sup>8</sup>	1,096,000	2.7	96,000	176,000	1.8	10,000	142,000	2.7	12,000	1,415,000	2.6	119,000
ML22934 – Groundrush <sup>9</sup>	-	-	-	4,054,000	3.4	438,000	6,602,000	3.3	691,000	10,656,000	3.3	1,129,000
ML22934 – Ripcord <sup>8</sup>	-	-	-	-	-	-	1,100,000	2.5	89,000	1,100,000	2.5	89,000
<b>Sub Total</b>	<b>6,255,000</b>	<b>2.9</b>	<b>579,000</b>	<b>11,075,000</b>	<b>2.8</b>	<b>1,001,000</b>	<b>12,106,000</b>	<b>2.9</b>	<b>1,133,000</b>	<b>29,436,000</b>	<b>2.9</b>	<b>2,713,000</b>
<b>Stockpiles<sup>9</sup></b>	<b>1,400,000</b>	<b>0.7</b>	<b>31,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,400,000</b>	<b>0.7</b>	<b>31,000</b>
<b>Total</b>	<b>7,655,000</b>	<b>2.5</b>	<b>610,000</b>	<b>11,075,000</b>	<b>2.8</b>	<b>1,001,000</b>	<b>12,106,000</b>	<b>2.9</b>	<b>1,133,000</b>	<b>30,836,000</b>	<b>2.8</b>	<b>2,744,000</b>

### Notes to accompany Table 6

- Resource estimations completed using MineMap, Vulcan and Micromine software packages comprising a combination of ellipsoidal inverse distance and ordinary kriging grade interpolation methods.
- Grade estimation was constrained to material within >0.7g/t mineralisation outlines.
- Variable gold assay top cuts were applied based on geostatistical parameters and historical production reconciliation.
- Resources reported above 0.7g/t block model grade.
- Resources reported above 1.0g/t block model grade.
- Stockpile figures from previously reported Otter Gold Mines NL 2001 Mineral Resource estimate less recorded treatment by Newmont Asia Pacific.

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7. Tonnes and ounces rounded to the nearest thousand and grade rounded to 0.1g/t. Rounding may affect tallies.
8. The information in this report pertaining to Mineral Resources for the Central Tanami Project (excluding ML22934 Groundrush) was compiled by Mr Bill Makar (MAusIMM), former Consultant Geologist – Tanami Gold NL, Mr Michael Thomson (MAusIMM), former Principal Geologist for Tanami Gold NL, Mr Steven Nicholls (MAIG), former Senior Geologist for Tanami Gold NL, Mrs Claire Hillyard (MAusIMM), former Resource Geologist for Tanami Gold NL and Mr Peter Ball (MAusIMM), Director of Datageo Geological Consultants. Mr Makar, Mr Thomson, Mr Nicholls, Mrs Hillyard and Mr Ball have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as Competent Persons as defined in the December 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Makar, Mr Nicholls, Mrs Hillyard and Mr Ball consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.
9. ML22934 Resource consists of two Resources - Groundrush Deposit (10.7million tonnes at 3.3g/t for 1,129,000 ounces of gold) and the Ripcord Deposit (1.1 Million tonnes at 2.5g/t for 89,000oz). The information in this report pertaining to Mineral Resources for ML22934 Groundrush was compiled by Mr Brook Ekers, a Competent Person who is a Member of the Australian Institute of Geoscientists and a full-time employee of Northern Star Resources Limited. Mr Ekers has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as Competent Persons as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Ekers consents to the inclusion in the public report of the matters based on this information in the form and context in which it appears.
10. The dates referred to in this table represents the date of the most recent update of a Resource (ML22934 Groundrush) within this table, all other Mineral Resources except for ML22934 Groundrush remain unchanged.

## ESTIMATION GOVERNANCE STATEMENT

The Company ensures that all Mineral Resource calculations are subject to appropriate levels of governance and internal controls.

Exploration results are collected and managed by an independent competent qualified geologist. All data collection activities are conducted to industry standards based on a framework of quality assurance and quality control protocols covering all aspects of sample collection, topographical and geophysical surveys, drilling, sample preparation, physical and chemical analysis and data and sample management.

Mineral Resource estimates are prepared by qualified independent Competent Persons. If there is a material change in the estimate of a Mineral Resource, the estimate and supporting documentation in question is reviewed by a suitable qualified independent Competent Persons.

The Company reports its Mineral Resources on an annual basis in accordance with JORC Code 2004 and 2012.

## COMPETENT PERSON'S STATEMENT

The information in this report that relates to all Mineral Resources (other than ML22934 Groundrush) is based on information compiled by consultant geologist Mr Michael Thomson of MiGeo Enterprise Pty Ltd. Mr Thomson is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the December 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Thomson consents to the inclusion in this report of the matters based on his information in the form and context in which they appear. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

The information in this report that relates to the Mineral Resource for ML22934 Groundrush is based on information compiled Mr Brook Ekers, a Competent Person who is a full-time employee of Northern Star Resources Limited. Mr Ekers is a member of the Australian Institute of Geoscientists and has sufficient experience which 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 Code). Mr Ekers consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this announcement that relates to exploration results for the Company's Central Tanami Project Joint Venture is based on information compiled by Michael Mulrone, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Northern Star Resources Limited. Mr Mulrone has sufficient experience that is relevant to the styles of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" for the Company's Central Tanami Project Joint Venture. Mr Mulrone consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

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Table 7: Schedule of Mineral Tenements - Northern Territory

Tenement	Name	Status	Interest	Registered Holder
EL8797	Gamma	Granted	60%	Tanami (NT) Pty Ltd
EL9763	Red Hills	Granted	60%	Tanami (NT) Pty Ltd
EL9843	Chapmans Hill	Granted <sup>1</sup>	60%	Tanami (NT) Pty Ltd
EL10355	Red Hills North	Granted	60%	Tanami (NT) Pty Ltd
EL10411	Tanami Downs North	Granted	60%	Tanami (NT) Pty Ltd
EL22061	Farrands Hill South	Granted <sup>1</sup>	60%	Tanami (NT) Pty Ltd
EL22229	Question Mark Bore East	Granted	60%	Tanami (NT) Pty Ltd
EL22378	Question Mark Bore Far	Granted	60%	Tanami (NT) Pty Ltd
EL23342	Aperta Far East	Granted <sup>1</sup>	60%	Tanami (NT) Pty Ltd
EL26925	Goanna 2	Granted	60%	Tanami (NT) Pty Ltd
EL26926	Black Hills 2	Granted	60%	Tanami (NT) Pty Ltd
EL28282	Suplejack	Granted	60%	Tanami (NT) Pty Ltd
EL28474	Rushmore	Granted	60%	Tanami (NT) Pty Ltd
EL28613	Gamma East	Withdrawn <sup>2</sup>	60%	Tanami (NT) Pty Ltd
ELA32149	Gamma East	Application <sup>2</sup>	60%	Tanami (NT) Pty Ltd
ML22934	Groundrush	Granted <sup>3</sup>	60%	Tanami (NT) Pty Ltd
MLS119	Reward	Granted	60%	Tanami (NT) Pty Ltd
MLS120	No.1 South	Granted	60%	Tanami (NT) Pty Ltd
MLS121	No.2 South	Granted	60%	Tanami (NT) Pty Ltd
MLS122	No.3 South	Granted	60%	Tanami (NT) Pty Ltd
MLS123	No.4 South	Granted	60%	Tanami (NT) Pty Ltd
MLS124	No.1 North	Granted	60%	Tanami (NT) Pty Ltd
MLS125	No.2 North	Granted	60%	Tanami (NT) Pty Ltd
MLS126	No.3 North	Granted	60%	Tanami (NT) Pty Ltd
MLS127	No.4 North	Granted	60%	Tanami (NT) Pty Ltd
MLS128	No.5 North	Granted	60%	Tanami (NT) Pty Ltd
MLS129	No.6 North	Granted	60%	Tanami (NT) Pty Ltd
MLS130	East Block	Granted	60%	Tanami (NT) Pty Ltd
MLS131	No. 5 South	Granted	60%	Tanami (NT) Pty Ltd
MLS132	No. 6 South	Granted	60%	Tanami (NT) Pty Ltd
MLS133	South East Block	Granted	60%	Tanami (NT) Pty Ltd
MLS153	Tanami Extended	Granted	60%	Tanami (NT) Pty Ltd
MLS167	Matilda	Granted	60%	Tanami (NT) Pty Ltd
MLS168	Enterprise	Granted	60%	Tanami (NT) Pty Ltd
MLS180	Molech	Granted	60%	Tanami (NT) Pty Ltd

<sup>1</sup> Renewal application lodged 17 December 2019 – pending decision.

<sup>2</sup> Application for EL28613 withdrawn and replaced with new application for same ground with ELA32149

<sup>3</sup> Annual Technical Report lodged 12 November 2019.

## Tanami (Ripcord and Crusade Exploration) JORC Code, 2012 Edition – Table 1 Report Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Sampling is Reverse Circulation (RC) drilling completed by NSR. RC samples are collected via rig-mounted static cone splitter, splitting the sample in an 88%/12% ratio. 12% split retained for 1m composites and 88% split retained as a bulk reject. All 1m samples are sent for analysis. 1m samples are collected through zones of mineralisation, at the discretion of the supervising geologist. 4m composite samples are collected in all other zones using the spear method. Spear sample collection is undertaken by using a 30cm length of 50mm PVC pipe, spearing the pipe through the bulk reject sample to acquire a cross-section of the entire bag contents. Where 4m composite samples return a grade greater than 0.5g/t Au the rig split 1m samples are despatched for analysis.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	RC metre intervals are captured on hard copy paperwork and are cross-checked by the supervising geologist to ensure accuracy. Sample rejects are left on the sample pad to indicate metres drilled for the hole.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	RC sampling to industry standard at the time of drilling where ~4kg samples are pulverised to produce a ~200g pulp sample to utilise in the assay process. RC samples were fire assayed (50g charge).
<b>Drilling techniques</b>	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	RC drilling is carried out using a face sampling hammer with a 130mm diameter bit.
<b>Drill sample recovery</b>	Method of recording and assessing core and chip sample recoveries and results assessed.	RC – Approximate recoveries are recorded as percentage ranges based on a visual and weight estimate of the sample.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC drilling recovery is supervised on the rig and any recovery issues are recorded and rectified.
	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.	There is no known relationship between sample recovery and grade.
<b>Logging</b>	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.	RC chip samples have been logged by qualified geologists to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies RC hole logging was carried out on a metre by metre basis and at the time of drilling.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is Qualitative and Quantitative. Visual estimates are made of sulphide, quartz and alteration as percentages.
	The total length and percentage of the relevant intersections logged.	100% of all RC drilling is logged.
<b>Sub-sampling techniques and sample preparation</b>	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable to this report
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	RC drilling uses a cyclone mounted inverted cone splitter.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	RC samples are dried at 100°C to constant mass, all samples below approximately 3kg are totally pulverised in LM5's to nominally 85% passing a 75µm screen. Samples generated above 4kg are crushed to <6mm and cone split to nominal mass prior to pulverisation. For RC samples, no formal heterogeneity study has been carried out or monographed. An informal analysis suggests that the sampling protocol currently in use are appropriate to the mineralisation encountered and should provide representative results.

	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Repeat analysis of pulp samples (all sample types) occurs at an incidence of 1 in 20 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.	Field duplicates, (i.e. other half of cut core) are routinely assayed. NSR routinely collects field duplicates during RC drilling.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate. No formal monograph study has been conducted on the RC primary sub sample split. Industry standard practice supports splitting of primary sub samples at particle sizes of <6mm and P <sub>80</sub> 75µm.
<b>Quality of assay data and laboratory tests</b>	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	For all drill samples, gold concentration was determined by fire assay using the lead collection technique with a 50-gram sample charge weight. MP-AES instrument finish was used to be considered as total gold. Various multi-element suites are analysed using a four-acid digest with an AT/OES finish.
	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.	Not applicable to this report.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	The QAQC protocols used include the following for all drill samples: <ul style="list-style-type: none"> <li>- Field QAQC protocols used for all drill samples include commercially prepared certified reference materials (CRM) inserted at an incidence of 1 in 20 samples. The CRM used is not identifiable to the laboratory with QAQC data is assessed on import to the database and reported monthly, quarterly and yearly.</li> <li>- NSR RC Resource definition drilling routinely inserts field blanks and monitor their performance.</li> <li>- Laboratory QAQC protocols used for all drill samples include repeat analysis of pulp samples occurs at an incidence of 1 in 20 samples and screen tests (percentage of pulverised sample passing a 75µm mesh) are undertaken on 1 in 40 samples.</li> <li>- The laboratories' own standards are loaded into the database and the laboratory reports its own QAQC data monthly.</li> <li>- In addition to the above, approximately 2% of RC drill samples are sent to a check laboratory. Samples for check -assay are selected automatically from holes based on the following criteria: grade above 1gpt or logged as a mineralized zone or is followed by feldspar flush or blank.</li> <li>- Failed standards are generally followed up by re-assaying a second 30g pulp sample of all samples in the fire above 0.1ppm by the same method at the primary laboratory.</li> </ul> Both the accuracy component (CRM's and third-party checks) and the precision component (duplicates and repeats) of the QAQC protocols are thought to demonstrate acceptable levels of accuracy and precision.
<b>Verification of sampling and assaying</b>	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections verified by corporate NSR personnel.
	The use of twinned holes.	There were purpose-drilled RC twinned holes to check selected legacy RC holes, with strong correlation of geological and assay results.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data is imported into an SQL database using semi-automated or automated data entry with hard copies of core assays and surveys are stored at site. Visual checks are part of daily use of the data in geological modelling software including Vulcan and Leapfrog.
	Discuss any adjustment to assay data.	The first gold assay is almost always utilised for any Resource estimation except where evidence from re-assaying and/or check-assaying dictates. A systematic procedure utilizing several re-assays and/or check assays is in place to determine when the final assay is changed from the first gold assay.
<b>Location of data points</b>	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	RC collar positions are recorded using conventional survey methods based on Trimble R10 GNSS instruments. The location of each station is referenced to state-wide network of Standard Survey Marks (SSM) established and coordinated by the Department of Land Administration (WA Government). Where regional drill hole positions are distant from the SSM network, the worldwide Global Navigational Satellite System (GNSS) network is used, this includes Air Core collars.  Where acquisition of location data using a Trimble R10 GNSS instrument has not be undertaken or is not possible, location data is acquired using a handheld Garmin GPS.  Positional checks are carried out using a combination of existing known positions (usually based on prominent landmarks) and grid referenced information such as ortho-linear rectified photogrammetry based on the Map Grid of Australia MGA94.

		Multi shot cameras and North-seeking gyro units were used for down-hole survey.
	Specification of the grid system used.	Collar coordinates are recorded in MGA94 Zone 52. The difference between magnetic north (MN) and true north (TN) is 0° 14' 38". The difference between true north and GDA is zero.
	Quality and adequacy of topographic control.	Topographic control is from Digital Elevation Contours (DEM) 2017, 1m contour data.
<b>Data spacing and distribution</b>	Data spacing for reporting of Exploration Results.	Exploration results in this report range from 40m x 40m drill hole spacing to 250m x 250m.
	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.	The data spacing and distribution is sufficient to establish geological and/or grade continuity appropriate for the Mineral Resource and classifications to be applied.
	Whether sample compositing has been applied.	RC samples are taken as either 1m rig cone-split or 4m spear samples. For RC Resource definition drilling 1 m samples are routinely collected in zones of mineralisation.
<b>Orientation of data in relation to geological structure</b>	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The orientation of sampling is generally on a high angle to the main mineralisation trends as these are vertical to sub-vertical. RC Drill holes are drilled on an approximately 60-degree angle, or thereabouts.
	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 drill orientation to mineralised structures biases the number of samples per drill hole. It is not thought to make a material difference in the Resource estimation.
<b>Sample security</b>	The measures taken to ensure sample security.	All samples are selected and bagged in tied numbered calico bags, grouped in larger tied plastic bags, and placed in large bulka bags with a sample submission sheet. The bulka bags are sent via freight truck to Perth, with consignment note and receipted by external and independent laboratory All sample submissions are documented, and all assays are returned via email and secure FTP. Sample pulp splits from Perth are stored at the Malaga lab. RC samples processed at ALS have had the bulk residue retained and pulp packets sent to Central Tanami Mine for storage.
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	Historical audits of all Tanami data were carried out by NST. All recent NSR sample data has been extensively QAQC reviewed both internally and externally.

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	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 Central Tanami Project consists of 20 Mining Leases, 1 Access Agreement Lease and 12 Exploration Leases covering a total area of approximately 149,942 Ha. All are registered jointly in the name of Northern Star (Tanami) Proprietary Limited and Tanami Gold NL. The Project also includes 1 Bore Field License. There are no heritage issues with the current operation.
	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.	All leases and licences to operate are granted and in the order for between 2 and 20 years.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	Not Applicable, all the exploration work has been completed by NSR.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	The Crusade deposit is a Palaeo-Proterozoic, mafic hosted vein-mineralized deposit that is part of the Granites-Tanami Inlier. Gold mineralisation is controlled by a brittle fracture-system associated with larger regional scale structures both parallel and discordant to bedding orientations and is predominantly hosted in dacite and basalt. Mineralisation can be disseminated or vein style host.  The Ripcord deposit is a Palaeo-Proterozoic, dolerite and sediment hosted vein-mineralized deposit that is part of the Granites-Tanami Inlier. Gold mineralisation is controlled by a brittle fracture-system associated with larger regional scale structures that crosscut a regional scale south east, shallowly plunging anticline. Mineralisation is predominantly hosted in dolerite and sediment, in either quartz vein or shear hosts respectively.

Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	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: <ul style="list-style-type: none"> <li>o easting and northing of the drill hole collar</li> <li>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>o dip and azimuth of the hole</li> <li>o down hole length and interception depth</li> <li>o hole length.</li> </ul>	All relevant information is part of this release.
	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.	Not applicable to this report
<b>Data aggregation methods</b>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	Results are reported using a nominal 0.5 g/t Au cut-off and up to 2 metres internal waste.
	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.	RC samples may include both 4m and 1m length composites.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are reported.
<b>Relationship between mineralisation widths and intercept lengths</b>	These relationships are particularly important in the reporting of Exploration Results.	RC drill holes have been drilled on a variety of angles, these average 60-degrees.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Mineralisation structures are vertical to sub-vertical.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	All intercepts are reported as downhole width, true width is not known.
<b>Diagrams</b>	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.	Diagrams from part of the main release.
<b>Balanced reporting</b>	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All results for this period are listed, including those labelled NSI (no significant intersection)
<b>Other substantive exploration data</b>	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 other meaningful data available
<b>Further work</b>	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Review of drilling completed is required before further work is planned.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Plans and sections of the Ripcord and Crusade deposit and RC drill hole locations are included in this report.