

# quarterly report

FOR THE PERIOD ENDING  
31 DECEMBER 2019



## COMPANY ENQUIRIES

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## CENTRAL TANAMI PROJECT DRILLING UPDATE

Tanami Gold NL (ASX: TAM) (“**Tanami**” or the “**Company**”) is pleased to announce the following significant results from the following recent drilling at the Central Tanami Project in its JV with Northern Star Resources (ASX: NST) (“**Northern Star**”).

### Summary

**RC Drilling at both Ripcord and Supplejack (Crusade) returned numerous significant intersections. Further assay results are still pending.**

### HIGHLIGHTS

#### *Ripcord*

RIRC0005	2m @ 1.64 g/t Au from 135m 4m @ 2.54 g/t Au from 150m
RIRC0013	3m @ 1.50 g/t Au from 89m 5m @ 18.53 g/t Au from 143m

#### *Supplejack (Crusade)*

SJRC0002	4m @ 3.03 g/t Au from 24m 4m @ 1.72 g/t Au from 32m
SJRC0004	7m @ 1.82 g/t Au from 183m 22m @ 1.07 g/t Au from 194m
SJRC0005	47m @ 3.66 g/t Au from 82m
SJRC0006	20m @ 1.92 g/t Au from 62m 18m @ 2.76 g/t Au from 86m 12m @ 4.15 g/t Au from 109m 17m @ 3.63 g/t Au from 124m

The Central Tanami Project is part of an ongoing JV with Northern Star (Tanami 60%; Northern Star 40%) in which Northern Star can earn a 75% interest by bringing the Central Tanami Project into commercial production. The exact terms and conditions of the JV Agreement have previously been announced.

**Brett Montgomery**  
Director

## Significant Intercepts – Ripcord and Supplejack (Crusade)

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
RIRC0005	605704	7816983	419	-60	58	298	123	124	1	0.55
							135	137	2	1.64
							150	154	4	2.54
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
<i>Ripcord RC drilling significant intersections (nominal 0.5 g/t Au cut-off and up to 2 metres internal waste)</i>										

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
SJRC0002	612922.8	7883146.2	425	-60	107	256	24	28	4	3.03
							32	36	4	1.72
							44	52	8	0.75
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
<i>Crusade deposit significant RC drilling intersections (nominal 0.5 g/t Au cut-off and up to 2 metres internal waste)</i>										

## 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.

## **ESTIMATION GOVERNANCE STATEMENT**

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# 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 been 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.