

# More strong drilling results extend high-grade Paradigm discovery to 1km long

*Paradigm and adjacent Carbine deposits emerging as key contributors to Northern Star's strategy to grow production at its Kalgoorlie operations*

## KEY POINTS

- ▶ **Paradigm-Carbine emerging as key deposits in the plan to grow production at Kalgoorlie; this in turn is part of Northern Star's strategy to grow production to 600,000ozpa by 2018**
- ▶ **Outstanding drilling results from 100%-owned Paradigm discovery at Kalgoorlie, including:**
  - 3.2m at 207gpt from 189m
  - 10.0m at 54.3gpt from 165m
  - 14.0m at 14.8gpt from 98m
  - 7.0m at 11.0gpt from 162m
  - 5.0m at 12.6gpt from 93m
  - 5.2m at 156gpt from 92m
  - 15.0m at 15.2gpt from 72m
  - 15.0m at 7.3gpt from 57m
  - 4.8m at 14.9gpt from 218m
  - 3.0m at 17.8gpt from 24m
- ▶ **Paradigm high-grade system now outlined over a 1km strike length and open in all directions**
- ▶ **Results highlight potential for both open-pit and underground operations**
- ▶ **Regional drilling defines new structural corridors at Explemar and Eremenco, both part of the Paradigm/Carbine centre**
  - 8.0m at 5.5gpt
  - 2.0m at 3.2gpt
- ▶ **Analysis of historical Paradigm drilling data reveals high-grade mineralisation up to 350m below current workings, with results such as 0.6m at 429.1gpt**
- ▶ **Drilling results beneath Carbine and nearby Phantom open pits highlight potential for further resource growth**
- ▶ **Northern Star expands footprint by acquiring 61km<sup>2</sup> of additional tenements in the Paradigm-Carbine mining centre**
- ▶ **Recently announced Acra Gold Project Joint Venture doubles regional exploration footprint of the Kanowna Belle Project, adding numerous high-priority targets**

Northern Star Resources Limited (ASX: NST) is pleased to announce more strong progress in its strategy to grow production to 600,000oz a year by 2018, this time with high-grade results at the Paradigm discovery near Kalgoorlie (see figure 1).

The latest results extend the known high-grade mineralisation at Paradigm to 1km and the deposit trend remains open in all directions.

The results highlight the strong potential for Paradigm and the adjacent Carbine deposit, both of which are 100 per cent-owned by Northern Star, to play an important role in the Company's growth strategy.

Recent exploration has delivered major advances in the geological understanding of this area.

**ASX ANNOUNCEMENT**  
14 November 2016

**Australian Securities**  
Exchange Code: **NST**

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### Issued Capital

Shares 601M

Options 3M

Current Share Price A\$4.15

Market Capitalisation

A\$2.5 billion

Cash and Cash Equivalents

31 Sep 2016 - A\$350 million

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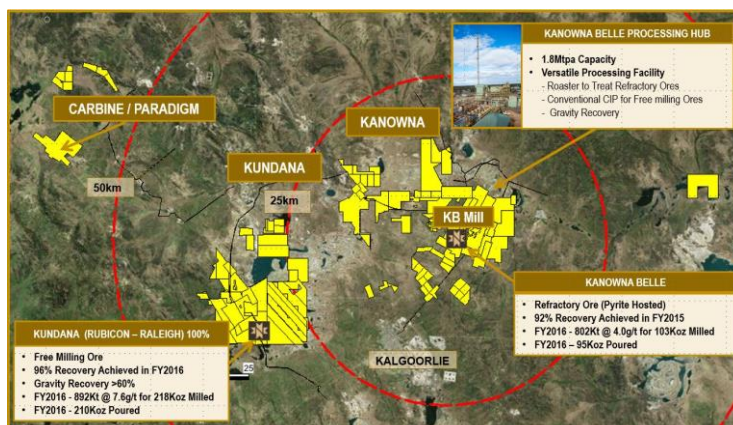


Figure 1: NST Kalgoorlie operations with Carbine/Paradigm Projects

## Exploration and Geological Details

At Paradigm North, located 150m north of the existing Paradigm open pit, further RC and diamond drilling in the original discovery area has continued to intersect broad zones of very high grade gold mineralisation at the Treasure Chest zone (see figure 2).

Within the Treasure Chest, gold mineralisation occurs in a north trending complex array of stacked quartz veins and quartz-sulphide stock work with exceptional gold grades. Drilling has defined high grade mineralisation over a strike length of 350m from near surface to approximately 250m vertical depth and remains open in all directions.

Infill resource definition drilling of the Treasure Chest zone has commenced in preparation for an initial resource estimate for the project. Consideration of potential development options has commenced with preliminary metallurgical analysis indicating the mineralisation is free-milling.

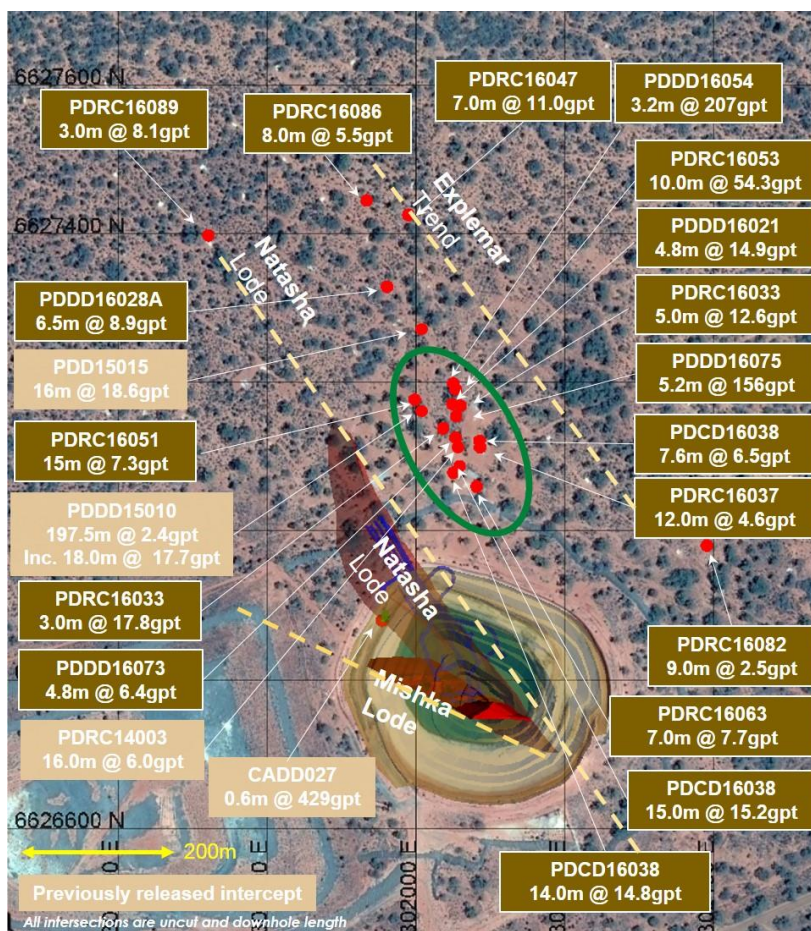


Figure 2: High grade drilling results at the Paradigm deposit highlighting the Treasure chest in green

In addition, RC drilling approximately 300m north-east of the Treasure Chest zone has recently identified a new, subparallel mineralised zone (Exemplar Trend) within a sediment horizon. Early assay results include PDRC16086 – 8.0m at 5.5gpt and PDRC16092 – 2.0m at 3.2gpt with the zone completely open along strike.

At Paradigm, the north-west trending Lincancebur Fault is associated with the high-grade Natasha and Mischa Lodes previously mined in the open pit and from underground workings. While historical drilling intersected the Natasha Lode up to 350m below the existing underground workings (CADD027 – 0.60m at 429.1gpt from 388.4m).

Recent RC drilling on the Natasha trend successfully intersected significant mineralisation approximately 400m north (PDRC16089 - 3.0m at 8.1gpt) and 300m south (assays pending) of the Natasha underground workings, outlining significant extensions to the mineralised trend.

Regional exploration west of Paradigm, between the existing Paradigm and Carbine open pits, has identified a further sub-parallel structural trends with associated geochemical anomalism over a 1km-long corridor. Initial results from regional aircore drilling along this new Eremenco trend has outlined areas of significant quartz veining in sediments over a strike of approximately 350m. Assay results are pending.

At the adjacent Carbine open pit, limited historical drilling beneath the existing 312,000oz Resource has traced the mineralised Carbine structure to a vertical depth of 300m. An initial broad-spaced diamond drilling program (5 holes) drilled beneath the Carbine and adjacent Phantom open pits all intersected scattered zones of significant mineralisation (including visible gold) highlighting the potential of these structures to host significant zones of high grade mineralisation at depth. Assay results are pending, with further drilling planned to significantly extend the existing open pit resource at depth.

With the continued exploration success, Northern Star has significantly expanded its exploration footprint within the broader Kalgoorlie region through a series of transactions.

## **Tenement acquisitions and Acra Joint Venture**

In the Carbine area, Northern Star has entered into agreements with several private prospecting groups to acquire a further 61.5km<sup>2</sup> of tenements in the Carnage area covering prospective regional trends.

In addition, Northern Star has acquired a 20% interest and farm-in rights for a further 55% interest in the Acra Gold Project held by Pioneer Resources Limited (ASX:PIO) located ~45km north east of Northern Star's Kanowna Belle Mine. Under the terms of the binding agreement, Northern Star will acquire a 20% interest in the Project and the right to earn a further 55% interest in the Project by sole funding \$3 million of exploration expenditure over three years.

The Acra Project contains a range of lightly tested prospects and anomalies along the 20km structural corridor which will be the focus of an aggressive exploration program. The 290km<sup>2</sup> tenement package represents a lightly tested gold system located on prospective domain boundaries with possible analogies to the Kundana district.

Historic shallow drilling on this trend has encountered >1gpt gold intersections in over 100 holes with scattered high grade results from predominantly shallow drilling with historic exploration programs focused predominately on base metal exploration.

Yours faithfully



**BILL BEAMENT**  
**Managing Director**  
**Northern Star Resources Limited**

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## **Competent Persons Statements**

The information in this announcement that relates to exploration results, data quality and geological interpretations, is based on information compiled by Nicholas Jolly, 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 Jolly has sufficient experience that is relevant to the style of mineralisation and type of deposit 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 Group reporting. Mr Jolly 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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## APPENDIX 1 – DRILL RESULTS

PARADIGM SIGNIFICANT INTERSECTIONS											
Drill Hole #	Easting (MGA Grid)	Northing (MGA Grid)	Drill hole collar RL (Mine Grid)	Dip (degrees)	Azimuth (degrees, Mine Grid)	End of hole depth (m)	Downhole From (m)	Downhole To (m)	Downhole Intersection (m)	Au (gpt) uncut	
PDCD16024	301979	6627058	420	-59	38	350	109.9	110.8	0.9	41.2	
PDCD16024	301979	6627058	420	-59	38	350	217.7	220.7	3.0	11.1	
PDCD16031	301889	6627228	424	-60	41	358	65.0	66.0	1.0	2.6	
							181.7	187.0	5.3	3.3	
PDCD16038	302022	6627049	418	-60	45	216	184.4	192.0	<b>7.6</b>	<b>6.5</b>	
							Including	186.0	187.3	1.3	28.8
								72.0	87.0	<b>15.0</b>	<b>15.2</b>
							Including	73.0	79.0	<b>6.0</b>	<b>34.0</b>
								98.0	112.0	<b>14.0</b>	<b>14.8</b>
							Including	99.0	104.0	<b>5.0</b>	<b>37.7</b>
								147.0	152.0	5.0	5.8
PDDD16021	301970	6627089	420	-60	42	375	136.8	143.0	6.2	7.8	
								218.2	223.0	<b>4.8</b>	<b>14.9</b>
							Including	220.1	221.8	<b>1.7</b>	<b>37.3</b>
								349.0	355.0	6.0	5.0
PDDD16022	301968	6627166	421	-60	39	345	134.5	135.3	0.8	23.7	
								219.6	226.3	6.7	5.7
PDDD16023	302046	6627257	420	-60	221	339	64.0	65.0	1.0	6.5	
PDDD16027	301964	6626972	420	-63	40	462	344.0	368.0	24.0	1.0	
PDDD16028A	301844	6627191	423	-60	41	417	350.0	356.5	<b>6.5</b>	<b>8.9</b>	
PDDD16029a	301828	6627255	424	-63	37	464	181.0	183.0	2.0	2.2	
								285.0	297.0	12.0	1.3
PDDD16054	301977	6627138	422	-60	50	231	46.0	50.0	4.0	7.6	
								188.7	191.9	<b>3.2</b>	<b>207.0</b>
							Including	189.8	191.9	<b>2.2</b>	<b>304.8</b>
							Including	190.4	190.6	<b>0.2</b>	<b>2895</b>
PDDD16059	302008	6627087	421	-60	51	224	149.6	152.9	3.3	3.4	
								159.1	161.7	2.6	2.2
PDDD16066	302055	6627027	421	-60	52	200	31.0	36.0	5.0	2.2	
PDDD16067	301994	6627116	421	-70	52	252	93.0	94.0	1.0	5.8	
PDDD16073	302007	6627087	421	-71	51	258	147.1	149.0	1.9	2.2	
								183.1	183.3	0.2	9.8
								188.2	193.0	4.8	6.4
							Including	189.9	191.0	1.2	21.9
								198.8	199.4	0.6	3.4
								225.2	225.4	0.2	18.0
PDDD16074	301988	6627094	421	-60	52	342	37.0	39.6	2.6	15.1	
								181.0	188.7	7.7	5.0
								272.4	273.5	1.1	21.9
PDDD16075	302016	6627125	421	-60	53	249	92.2	97.4	<b>5.2</b>	<b>156.0</b>	
PDDD16076	301976	6627137	422	-69	52	255	106.0	106.3	0.3	6.9	
								197.9	198.5	0.6	6.8
								215.9	219.0	3.1	7.8
								250.9	251.2	0.3	4.5
PDRC16032	302009	6627155	422	-59	40	150	131.0	150.0	19.0	2.1	
PDRC16033	302040	6627129	422	-60	38	150	24.0	27.0	<b>3.0</b>	<b>17.8</b>	
								57.0	76.0	19.0	3.5
								93.0	98.0	<b>5.0</b>	<b>12.6</b>
PDRC16034	302014	6627099	422	-59	42	156	43.0	48.0	5.0	1.9	
PDRC16035	301988	6627068	422	-60	40	150	45.0	54.0	9.0	1.1	
							Including	53.0	54.0	1.0	4.7
								137.0	138.0	1.0	5.4
PDRC16036	302070	6627104	422	-60	40	120	46.0	61.0	15.0	1.3	
								72.0	107.0	35.0	2.3
							Including	106.0	107.0	1.0	15.4
PDRC16037	302046	6627072	420	-58	43	177	41.0	43.0	2.0	14.5	
								96.0	108.0	<b>12.0</b>	<b>4.6</b>
								117.0	122.0	5.0	2.2
								127.0	133.0	6.0	4.3
								140.0	155.0	15.0	2.4
								164.0	165.0	1.0	11.0
PDRC16039	302101	6627078	422	-59	41	150	41.0	44.0	3.0	1.6	
								122.0	128.0	6.0	1.3
PDRC16040	302134	6626984	421	-59	40	150	95.0	99.0	4.0	1.0	
PDRC16042	302181	6626978	421	-61	41	150	59.0	64.0	5.0	0.8	
PDRC16043	302164	6626959	421	-62	44	150	89.0	92.0	3.0	1.6	
PDRC16046	301838	6627346	425	-55	60	192			NSI		

## PARADIGM SIGNIFICANT INTERSECTIONS

Drill Hole #	Easting (MGA Grid)	Northing (MGA Grid)	Drill hole collar RL (Mine Grid)	Dip (degrees)	Azimuth (degrees, Mine Grid)	End of hole depth (m)	Downhole From (m)	Downhole To (m)	Downhole Intersection (m)	Au (gpt) uncut	
PDRC16047	301916	6627387	425	-61	60	180	162.0	169.0	7.0	11.0	
PDRC16048	301988	6627427	424	-60	58	150	NSI				
PDRC16051	301974	6627158	422	-59	52	222	50.0	52.0	2.0	2.0	
							57.0	72.0	15.0	7.3	
							Including	58.0	60.0	2.0	45.2
							159.0	173.0	14.0	2.7	
PDRC16053	301989	6627138	421	-60	52	218	165.0	175.0	10.0	54.3	
							Including	165.0	169.0	4.0	129.0
PDRC16060	302066	6627091	421	-60	52	222	40.0	41.0	1.0	10.9	
							87.0	88.0	1.0	3.9	
							140.0	141.0	1.0	8.8	
PDRC16061	302005	6627041	421	-60	51	220	174.0	176.0	2.0	5.1	
PDRC16062	301979	6627024	421	-60	51	210	184.0	186.0	2.0	2.6	
PDRC16063	302026	6627016	421	-58	52	216	65.0	66.0	1.0	2.9	
							68.0	71.0	1.0	4.5	
							133.0	140.0	7.0	7.7	
PDRC16079	302283	6626701	418	-60	21	168	NSI				
PDRC16080	302312	6626770	418	-59	22	150	NSI				
PDRC16081	302327	6626844	418	-61	19	164	NSI				
PDRC16082	302371	6626927	418	-59	21	151	107.0	116.0	9.0	2.5	
PDRC16083	302414	6627013	419	-60	24	126	NSI				
PDRC16084	301955	6627410	423	-61	63	180	73.0	74.0	1.0	1.8	
PDRC16085	301881	6627364	424	-60	63	222	NSI				
PDRC16086	301895	6627425	424	-61	62	200	40.0	41.0	1.0	3.6	
							86.0	94.0	8.0	5.5	
							149.0	150.0	1.0	2.7	
PDRC16087	301940	6627350	423	-60	60	200	NSI				
PDRC16089	301662	6627373	426	-61	67	204	129.0	132.0	3.0	8.1	
PDRC16090	301734	6627405	425	-61	64	204	NSI				
PDRC16091	301809	6627444	425	-61	65	204	79.0	80.0	1.0	4.4	
							79.0	80.0	1.0	4.4	
							152.0	154.0	2.0	2.6	
PDRC16092	301878	6627477	425	-60	64	192	147.0	149.0	2.0	3.2	
PDRC16093	301951	6627513	425	-60	64	214	60.0	63.0	3.0	1.3	
PDRC16094	301653	6627720	430	-61	15	204	NSI				
PDRC16095	301809	6627654	427	-60	27	222	NSI				
PDRC16096	302136	6627403	422	-59	48	200	NSI				
PDRC16098	302428	6627106	419	-59	46	210	NSI				

## PARADIGM PREVIOUSLY RELEASED INTERSECTIONS

Drill Hole #	Easting (MGA Grid)	Northing (MGA Grid)	Drill hole collar RL (Mine Grid)	Dip (degrees)	Azimuth (degrees, Mine Grid)	End of hole depth (m)	Downhole From (m)	Downhole To (m)	Downhole Intersection (m)	Au (gpt) uncut
CADD027	301871	6626777	421	-70	43	430	388.4	389.0	0.6	429.0
PDDD15010	301978	6627107	424	-60	40	273	65.0	83.0	18.0	17.7
PDBD15015	301932	6627146	422	-60	40	395.8	254.5	270.5	16.0	18.6
PDRC14003	302056	6627028	422	-55	360	250	192.0	208.0	16.0	6.0

## APPENDIX 2 – JORC TABLE 1

### JORC Code, 2012 Edition – Table 1 Report: Paradigm Drill Results November 2016

#### 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 (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Sampling was historically completed using a combination of Reverse circulation (RC), Rotary air blast (RAB) and diamond (DD) drilling.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	RC samples were split using a rig-mounted cone splitter on 1m intervals to obtain a sample for assay. Diamond core was placed in core trays for logging and sampling. Half core samples were nominated by the geologist from diamond core with a minimum sample width of either 20cm (HQ) or 30cm (NQ2).
	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 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 (e.g. submarine nodules) may warrant disclosure of detailed information.	Samples were sent to two laboratories. Genalysis Kalgoorlie, and MinAnalytical Kalgoorlie. Both laboratories utilise the same sample preparation. Drying, crushing to <3mm, and pulverising the entire sample to <75µm. 300g Pulps splits were then dispatched to Perth for 50g Fire assay charge and AAS analysis.
Drilling techniques	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.).	Both RC and diamond techniques were used for recent drilling. Diamond core was typically NQ, (UG) HQ and RC drilling was completed using a 5.75" drill bit.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Moisture content and sample recovery is recorded for each RC sample.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC drilling contractors adjust their drilling approach to specific conditions to maximise sample recovery. Moisture content and sample recovery is recorded for each RC sample. No recovery issues were identified during 2016 RC drilling. Recovery was poor at the very beginning of each hole, as is normal for this type of drilling in overburden.
	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.	No relationship or bias has identified between grade and sample recovery.
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.	RC sample chips are logged in 1m intervals. For the entire length of each hole. Regolith, Lithology, alteration, veining and mineralisation are all recorded. Core is logged geologically and geotechnically.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	All logging is quantitative where possible and qualitative elsewhere. A photograph is taken of every core tray
	The total length and percentage of the relevant intersections logged.	In all instances, the entire drill hole is logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	For recent Paradigm results, all holes were cut and half core sent to the lab. The remained was stored for reference.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	All RC samples are split using a rig-mounted cone splitter to collect a 1m sample 3-4kg in size. All samples were intended and assumed to be dry, moisture content was recorded for every sample.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation was conducted at Genalysis Kalgoorlie, or MinAnalytical Kalgoorlie commencing with sorting, checking and drying at less than 110°C to prevent sulphide breakdown. Samples are jaw crushed to a nominal -6mm particle size. If the sample is greater than 3kg a Boyd crusher with rotary splitter is used to reduce the sample size to less than 3kg (typically 1.5kg) at a nominal <3mm particle size. The entire crushed sample (if less than 3kg) or sub-sample is then pulverised to 90% passing 75µm, using a Labtechnics LMS bowl pulveriser. 300g Pulp subsamples are then taken with an aluminium scoop and stored in labelled pulp packets
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Grind checks are performed at both the crushing stage(3mm) and pulverising stage (75µm), requiring 90% of material to pass through the relevant size.
	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 were taken for RC samples at a rate of 1 in 50.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate.

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Criteria	JORC Code explanation	Commentary
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.	A 50g Fire assay charge is used with a lead flux, dissolved in the furnace. The prill is totally digested by HCl and HNO <sub>3</sub> acids before Atomic absorption spectroscopy (AAS) determination for gold analysis.
	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.	No geophysical tools were used to determine any element concentrations.
	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.	Certified reference materials (CRMs) are inserted into the sample sequence randomly at a rate of 1 per 20 samples to ensure correct calibration. Any values outside of 3 standard deviations are re-assayed with a new CRM.  Blanks are inserted into the sample sequence at a rate of 1 per 20 samples, this is random, except where high grade mineralisation is expected. Here, a Blank is inserted after the high grade sample to test for contamination. Failures above 0.2gpt are followed up and re-assayed. New pulps are prepared if failures remain.  Field Duplicates are taken for all RC samples (1 in 50 samples). No Field duplicates are submitted for diamond core.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All significant intersections are verified by another Northern Star geologist during the drill hole validation process, and later by a Competent person to be signed off.
	The use of twinned holes.	No Twinned holes were drilled for this data set.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging is directly entered into an Acquire database. Assay files are received in csv format and loaded directly into the database by the project's responsible geologist with an Acquire importer object. Hardcopy and electronic copies of these are stored.
	Discuss any adjustment to assay data.	No adjustments are made to this assay data.
Location of data points	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.	A planned hole is pegged using a Differential GPS by the field assistants.  The final collar is picked up after hole completion by Differential GPS in the MGA 94_51 grid.  During drilling single-shot surveys are every 30m to ensure the hole remains close to design. This is performed using the Reflex Ez-Trac system which measures the gravitational dip and magnetic azimuth results are uploaded directly from the Reflex software export into the Acquire database.
	Specification of the grid system used.	Collar coordinates are recorded in MGA94 Zone 51.
	Quality and adequacy of topographic control.	The Differential GPS returns reliable elevation data which has been confirmed against recent, 2015 Aerial topographic surveys.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill hole spacing across the area varies.
	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.	Exploration results only being reported.
	Whether sample compositing has been applied.	No compositing has been applied to these exploration results, although composite intersections are reported.
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.	The orientation of the target is still to be determined. But knowledge of previous orebodies in the area suggests drilling direction is perpendicular to the orientation of mineralisation.
	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.	No sampling bias is considered to have been introduced by the drilling orientation.
Sample security	The measures taken to ensure sample security.	Prior to laboratory submission samples are stored by Northern Star Resources in a secure yard. Once submitted to the laboratories they are stored in a secure fenced compound, and tracked through their chain of custody and via audit trails.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No such exercise has been undertaken for the drill holes at this stage.

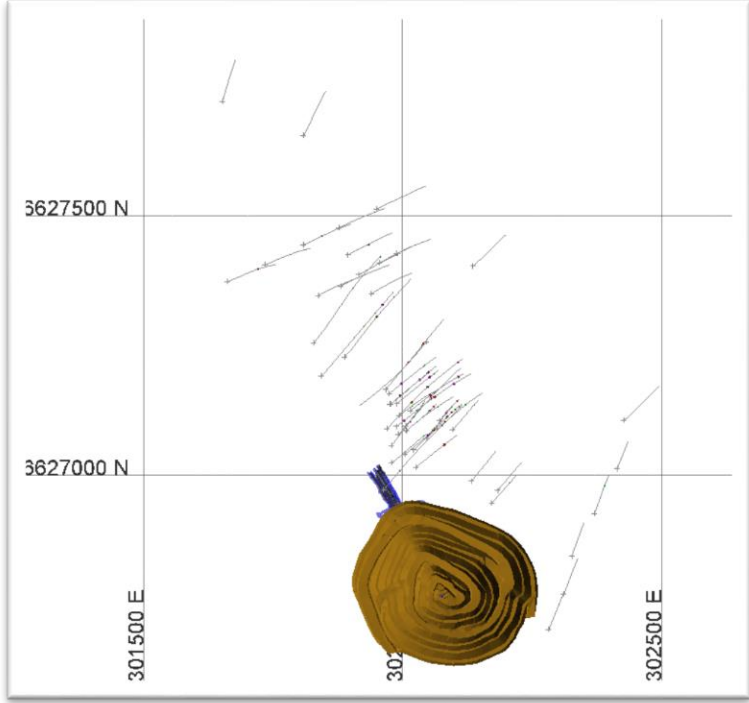


## Section 2 Reporting of Exploration Results

(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.	All drill holes mentioned in this report are located within the Mining Leases 16/239 and 16/411, which are owned by Kundana Gold Pty Ltd, a wholly owned subsidiary of Northern Star Resources. The mining tenements are located on pastoral leases owned by Northern Star Resources Limited. There are numerous access agreements in place. The leases containing the deposit are currently not subject to Native Title claims.
	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.	No known impediments exist and the tenements are in good standing
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Carbine/Paradigm area has been explored since the late 1800's. Numerous companies, including BHP, Newcrest, Centaur Mining, Goldfields, Placer Dome and Barrick have been active in the area. Drilling reported with this release is adjacent to the Paradigm underground and open cut mines.
Geology	Deposit type, geological setting and style of mineralisation.	The Carbine / Paradigm areas are considered to be northern extensions of the regionally significant Zuleika Shear Zone. The tenements are located in the Norseman-Wiluna Archaean greenstone belt in the Eastern Goldfields province of the Yilgarn Craton, Western Australia. Gold mineralisation in the Zuleika Shear Zone and adjacent greenstone sequences occurs in all rock types, although historical and recent production is dominated by two predominant styles: <ul style="list-style-type: none"> <li>• Brittle D2 faults with laminated (multiple crack-seal) quartz veining containing gold and trace base metal sulphides (galena, sphalerite, chalcocopyrite, scheelite),</li> <li>• Brittle quartz vein stockwork developed within granophyric gabbro within the Powder Sill</li> </ul> Paradigm mineralisation is hosted in at least three main orientations and styles typically hosted in volcanoclastics sediments or on shale-contacts At the Carbine main deposit, gold is hosted in veins and disseminated sulphides associated with structural disruption caused by a series of thrust faults, where the lower mafic/ultramafic sequence has been thrust over younger sediments.
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: <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>	See attached Appendix 1 for a table of results.
	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.	No drilling has been excluded from this report.
Data aggregation methods	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.	All reported assay results have been length weighted to provide an intersection width. Barren material between mineralised samples has been permitted in the calculation of these widths where the resultant average composite grade of samples beyond (and not including) the core mineralised zone exceeds the 1gpt cut-off grade used for intercept calculation.
	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.	No assay results have been top-cut for the purpose of this report. A lower cut-off of 1gpt has been used to identify significant results. Where the target zone does not exceed the 1gpt cut-off the intercept has been calculated across the target structure with no cut-off grade applied.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used for the reporting of these exploration results.
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.	The exact orientation of the Paradigm vein system and width has yet to be determined, however the dominant vein sets trend north-north east and dip steeply to the west. Early studies are also indicating a moderate northerly plunge

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Criteria	JORC Code explanation	Commentary
	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').	Downhole widths have not been reported due to the three variable vein orientations.
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.	Appropriate plans and section have been included in this release.
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.	Both high and low grades have been reported accurately, clearly identified with the drill hole attributes and 'From' and 'To' depths. All target zone intercepts for all eight holes have been reported for this drill program regardless of grade.
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 other material exploration data has been collected for this drill program.
Further work	<p>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	<p>Further work will continue in 2016 to determine the extents of the Paradigm North system and define the orientation of mineralisation.</p>  <p>All holes related to this release, Plan view</p>