



High-grade results of up to 57gpt from outside Paulsens' existing resource estimate

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Code: NST

Board of Directors

Mr Chris Rowe
Non-Executive Chairman

Mr Bill Beament
Managing Director

Mr Michael Fotios
Non-Executive Director

Mr Peter Farris
Non-Executive Director

Ms Karen Brown
Company Secretary

Issued Capital

Shares
300 M

Options 78M (\$6.3M Funding)

Current Share Price
\$0.29

Market Capitalisation
\$87 million

Projects

Paulsens
Ashburton
Golden Crown
Range
Emull

Commodities

gold
gold
gold
gold, silver
Zn, Cu, gold

Highlights

- ▶ Numerous high-grade hits of up to 57gpt gold achieved outside the recently upgraded Voyager 1 resource at Paulsens
- ▶ Latest results extend Voyager 1 to 670m deep, where it remains open. This is 190m below the current production level; Paulsens has historically produced more than 1000oz per vertical metre
- ▶ High-grade hits of up to 54gpt in the Voyager 2 lode. Voyager 2 is totally excluded from current resource
- ▶ The significant results highlight considerable scope for further resource increases
- ▶ Voyager 1 results include (all true width):

1.0 m @ 56.6 g/t gold	(550mRL) UZ2
1.1 m @ 46.5 g/t gold	(595mRL) UZ
2.5 m @ 33.4 g/t gold	(530mRL) UZ
2.4 m @ 27.4 g/t gold	(598mRL) UZ2
2.8 m @ 23.4 g/t gold	(580mRL) UZ
3.0 m @ 16.4 g/t gold	(648mRL) UZ
4.5 m @ 14.5 g/t gold	(630mRL) UZ
2.5 m @ 10.5 g/t gold	(530mRL) LZ
- ▶ Voyager 2 results include (all true width):

1.1 m @ 53.6 g/t gold	(471mRL) LZ
2.4 m @ 7.2 g/t gold	(512mRL) UZ
3.5 m @ 5.9 g/t gold	(509mRL) UZ2
- ▶ Further assays for Voyager 1 and 2 pending; drilling continuing

Northern Star Resources Ltd (ASX: NST) is pleased to advise that a host of significant high-grade drilling results has again extended the known depth of the key Voyager 1 lode at its Paulsens Gold Mine in WA, opening the door to further increases in resources, production and mine life.

Drilling results of up to 57g/t show that Voyager 1, which has provided all the ore mined at Paulsens to date, extends to a depth of at least 670m below surface (530mRL) and remains open down plunge.

This is 190m vertically below the current production level at Paulsens. With Paulsens historically producing in excess of 1,000 ounces per vertical metre, these results paint a very positive picture for the future of Paulsens.

Northern Star announced last week that the resource estimate at Paulsens has increased to 226,000oz. It also revealed that the 2011 mine plan provided for production of 60,000-75,000oz this year, generating surplus cash of \$20-\$40 million.

The most important results from the latest Voyager 1 drilling are the two significant intersections of 2.5m at 33.4g/t (530mRL Upper Zone) and 2.5m at 10.5g/t (530mRL Lower Zone), refer to Figure 1.

These results are from the Voyager 1 upper and lower zone ore positions, well below the previously modelled geological interpretation and outside the recently released resource upgrade (ASX release March 08, 2011).

This is strong evidence that the Voyager 1 lode extends deeper than predicted and is extremely positive for maintaining gold production and extending the mine life at Paulsens.

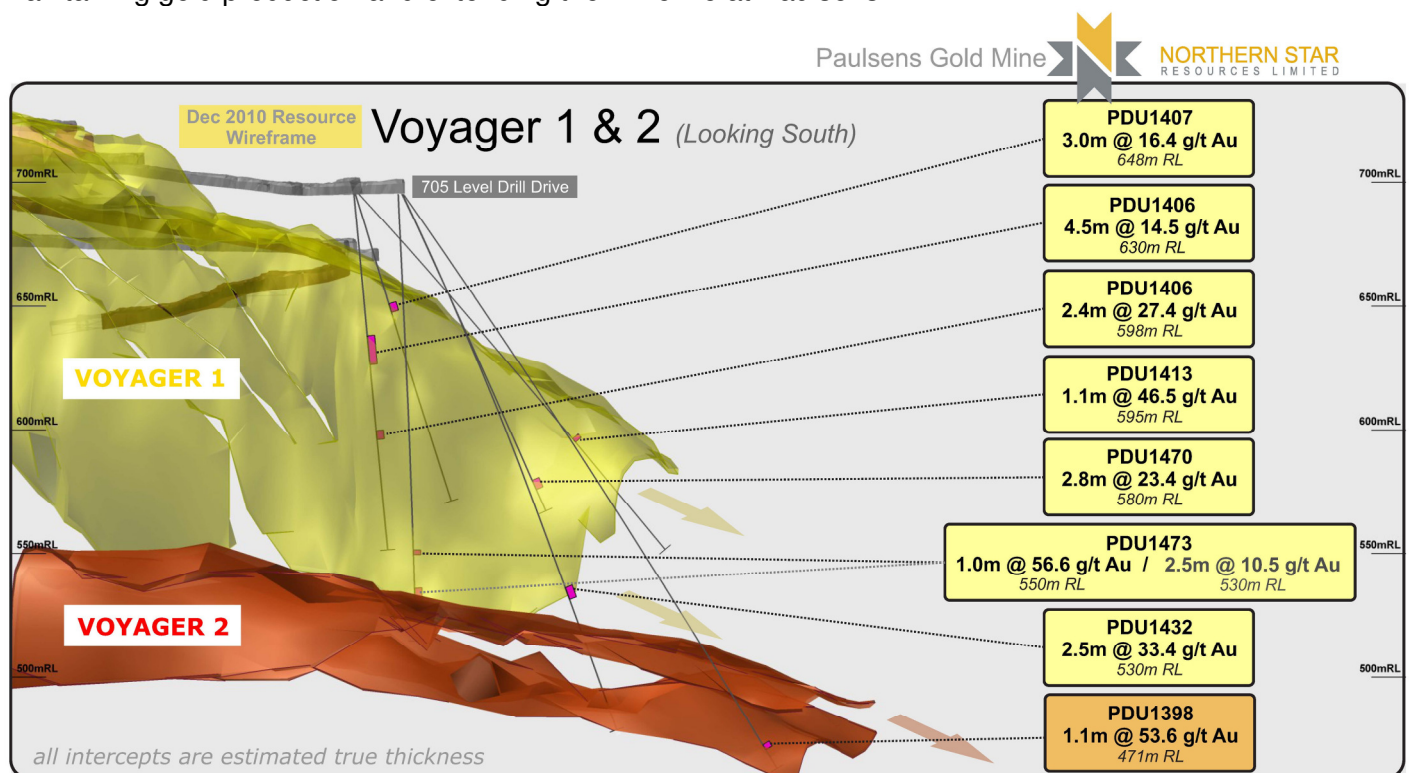


FIGURE 1 - VOYAGER ONE AND TWO SIGNIFICANT DRILL INTERSECTIONS

The prospect of a further substantial resource upgrade has been encouraged by another round of high-grade results from the Voyager 2 lode.

Voyager 2 is the next ore position down plunge of, and beneath, the Voyager 1 lode. It has an exploration target of 100,000-250,000¹ ounces. All the known mineralisation at Voyager 2 (see ASX releases October 14, December 2 and January 4), is excluded from the current Paulsens resource estimate,

The latest results from Voyager 2, with grades as high as 53.6gpt, highlight the potential to grow the resource inventory further, with subsequent increases in production and mine life.

Drilling continues at both Voyager 1 and Voyager 2, with more results expected shortly.

Northern Star Managing Director Bill Beament said the significant results continued to highlight the prospect of further resource upgrades and increases to the production profile.

"These high-grade results extend the down-plunge extent of the Voyager 1 lode and are set to support an expansion of the recently released resource and mine plan," Mr Beament said. "Combine these with the early drilling success of Voyager 2 and Northern Star is in great shape for a year of solid production, cash flow and further exploration upside."

Assay results from underground diamond drilling completed since the last release on January 06 2011 are listed in the attached table. Please note the additional column in the table indicating which results were included and used in the 31 December 2010 Paulsens resource estimate. Further announcements will be released regarding ongoing underground diamond drilling as results become available.

Yours faithfully,



Bill Beament
Managing Director
Northern Star Resources Ltd

Competent Persons Statements

The information in this announcement that relates to Paulsens mineral resource estimation, exploration results, data quality, geological interpretations, potential for eventual economic extraction and estimates of exploration potential, is based on information compiled by or under the supervision of Brook Ekers, (Member AIG), who is a full-time employee of Northern Star Resources Ltd. Mr. Ekers has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

Forward Looking Statements

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This announcement is not an offer, invitation, solicitation or other recommendation with respect to the subscription for, purchase or sale of any security, and neither this announcement nor anything in it shall form the basis of any contract or commitment whatsoever. This announcement may contain forward looking statements that are subject to risk factors associated with gold exploration, mining and production businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.

¹ Exploration Potential

The information in this announcement that relates to exploration and production targets refers to targets that are conceptual in nature, where there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. The information on exploration targets in this presentation are based on a conceptual range of targets as follows:

Tonnage range: 350,000 to 600,000 tonnes

Grade range: 9 g/t Au to 13 g/t Au

Ounces: 100,000 to 250,000

VOYAGER ONE RESOURCE DEFINITION							
Hole #	Downhole Intersection (m)	Est. True Thickness (m)	Grade (g/t) cut to (100g/t)	Gram/mts	Ore zone and comments	RL of intersection	Included in Resource
PDU1361	6	2	12.7	25.4	VOY UZ	645mRL	Yes
PDU1405	5.76	3.5	3.9	13.6	VOY UZ	630mRL	
PDU1406	3.86	2.4	27.4	65.8	VOY UZ2? LZ?	598mRL	
PDU1406	0.89	0.5	23.8	11.9	VOY LZ	570mRL	
PDU1406	12.1	4.5	14.5	65.3	VOY UZ	630mRL	
PDU1407	4	3	16.4	49.2	VOY UZ	648mRL	
PDU1407	3.7	2.8	8.7	24.4	VOY UZ2	630mRL	
PDU1409	2.66	2	5.5	11.0	VOY UZ SPLAY	650mRL	
PDU1409	1	0.8	11.1	8.9	VOY UZ	640mRL	
PDU1409	0.86	0.5	3.2	1.6	VOY LZ	573mRL	
PDU1409	0.8	0.5	1.4	0.7	VOY UZ2	625mRL	
PDU1409	2	1.2	7.2	8.7	VOY UZ2	605mRL	
PDU1409	1.09	0.6	1.5	0.9	VOY UZ2	602mRL	
PDU1409	2.06	1.25	2	2.5	VOY UZ2	587mRL	
PDU1410	0.36	0.3	17.8	5.3	VOY UZ SPLAY	662mRL	
PDU1410	0.54	0.3	2.4	0.7	vein in gabbro	623mRL	
PDU1410	0.95	0.8	3.9	3.1	VOY UZ	637mRL	
PDU1411	NSR				VOY UZ	626mRL	
PDU1412	0.83	0.6	1.6	0.9	VOY UZ SPLAY	644mRL	
PDU1412	1	0.8	3.1	2.4	VOY UZ2	582mRL	
PDU1412	2.1	0.7	9.4	6.6	VOY UZ	595mRL	
PDU1412	0.3	0.3	2.5	0.8	VOY LZ	550mRL	
PDU1413	1.92	1.1	46.5	51.2	VOY UZ	595mRL	Yes
PDU1414	0.43	0.1	1.8	0.2	VOY UZ	569mRL	Yes
PDU1418	0.6	0.4	23.2	9.3	VOY LZ	633mRL	
PDU1418	4.5	2.4	6	14.4	VOY UZ2	609mRL	
PDU1418	0.7	0.4	5.4	2.2	VOY UZ	602mRL	
PDU1428	0.47	0.4	6.3	2.5	VOY UZ	621mRL	
PDU1429	1.4	1.2	14.2	17.0	VOY UZ	585mRL	
PDU1432	5.08	2.5	33.4	83.5	VOY UZ	530mRL	
PDU1468	NSR				VOY UZ	550mRL	
PDU1469	4	3	4.6	13.7	VOY UZ	570mRL	
PDU1470	4.32	2.8	23.4	65.4	VOY UZ	580mRL	
PDU1471	4	1.35	3.4	4.6	VOY UZ	629mRL	
PDU1473	2	1	56.6	56.6	VOY UZ2	550mRL	
PDU1473	5.76	2.5	10.5	26.2	VOY LZ	530mRL	

VOYAGER TWO EXPLORATION DRILLING						
Hole #	Downhole Intersection (m)	Est. True Thickness (m)	Grade (g/t) cut to (100g/t)	Gram/mts	Ore zone and comments	RL of intersection
PDU1395	4.19	3.5	5.9	20.7	VOY 2 UZ2	509mRL
PDU1396	0.76	0.64	2.6	1.7	VOY 2 UZ	512mRL
PDU1397	NSR					
PDU1398	2.35	1.1	53.6	58.9	VOY 2 LZ	471mRL
PDU1399	2.46	2.4	7.15	17.2	VOY 2 UZ	512mRL
PDU1430	0.9	0.8	1.7	1.4	VOY 2 UZ - affected by dyke	518mRL
PDU1431	NSR					
PDU1432	NSR					
PDU1433	1.66	1.5	6.1	9.2	VOY 2 UZ	499mRL
PDU1433	2	1.8	4.85	8.7	VOY 2 UZ2	487mRL

VOYAGER 1 OFFSET LIMB (ECCO) GRADE CONTROL						
Hole #	Downhole Intersection (m)	Est. True Thickness (m)	Grade (g/t) cut to (100g/t)	Gram/mts	Ore zone and comments	RL of intersection
PDU1463	1.1	1.1	5.8	6.6	ECHO LZ	741mRL
PDU1463	0.6	0.6	2.6	1.6	ECHO UZ	747mRL
PDU1464	2.0	2.0	1.9	3.8	ECHO UZ	749mRL
PDU1466	0.7	0.4	8.9	3.6	ECHO UZ	749mRL
PDU1467	NSR					
PDU1479	1.0	0.8	4.75	3.8	ECHO SPLAY	751mRL
PDU1491	1.7	1.4	12	16.8	ECHO UZ	733mRL
PDU1491	3.2	2.5	3.1	7.8	ECHO UZ 2	729mRL

At a nominal 3g/t lower cut off and a 100g/t upper cut off
 NSR means no significant result

Quality Control - Paulsens

All core is logged and whole core samples (if LTK48 size, NQ2 sized core is cut and half cored) are marked and prepared for shipping at the Paulsens Mine Property and sent to an independent Laboratory for assay. The remaining half core is stored on site. All samples from which information in this document is derived were received by ALS Chemex – Australian Laboratory Services Pty ('ALS') Limited in Karratha, Western Australia. Samples are weighed and crushed to 70% passing -6mm mesh. The crushed material is split and a portion is pulverised. A 100-gram pulp is sent to ALS Perth, Western Australia for assay. A 30-gram portion of the pulp is treated by fire assay method with atomic absorption finish (Au-AA25). A second pulp sample split (150-200 g) is kept in Karratha. Sample rejects are discarded after 90 days.

Limit samples (>100 grams per tonne gold) are re-analysed using ALS' dilution method (Au-DIL). Northern Star Resources inserts one standard in each hole, and one blank is now inserted in each ore zone, although this practice has only recently been adopted. Laboratory standards and blanks are inserted by ALS and several pulp duplicates are also assayed as a determinant of mineralisation variability.

ALS has AS/NZS ISO 9001:2000 certification in Perth. This does not cover the sample preparation facilities; however these preparation laboratories follow the same quality management system. They are not audited by NCSI but are audited internally.