



NORTHERN STAR  
RESOURCES LIMITED

# Outstanding hits show Paulsens gold grades increasing at depth

*Voyager 1: 14.2m at 84.5gpt*

*Voyager 2: 1.6m at 89.2gpt*

## Highlights

- ▶ Latest intersections at Paulsens' flagship Voyager 1 lode show the grade continues to increase at depth.
- ▶ Results highlight the growing potential of the Voyager 1 extension zone
- ▶ Outstanding results also received from Voyager 2 lode at Paulsens, including 1.6m at 89.2gpt, which is the deepest intersection in the mine to date
- ▶ Latest results from Voyager 1 and all results from Voyager 2 are excluded from the current 318,000oz<sup>2</sup> resource estimate
- ▶ Increased resource estimate will underpin upgraded mine plan, production and cashflow projections
- ▶ Significant results from Voyager 1 include (uncut);
 

14.2 m @ 84.5 g/t gold	(true width 1.1m) 524mRL UZ
19.7 m @ 21.5 g/t gold	(true width 4.0m) 485mRL UZ2
11.4 m @ 14.8 g/t gold	(true width 2.1m) 496mRL UZ
12.4 m @ 12.0 g/t gold	(true width 6.4m) 520mRL UZ
4.0 m @ 83.0 g/t gold	(true width 3.2m, 597mRL UZ2
1.0 m @ 83.5 g/t gold	(true width 0.8m) 595mRL LZ
3.0 m @ 71.7 g/t gold	(true width 1.1m) 563mRL LZ
0.8 m @ 37.0 g/t gold	(true width 0.8m) 547mRL LZ
- ▶ Significant results from Voyager 2 include (uncut);
 

1.6 m @ 89.2 g/t gold	(true width 0.6m) 390mRL UZ
7.0 m @ 19.6 g/t gold	(true width 6.8m) 427mRL LZ
6.0 m @ 15.0 g/t gold	(true width 5.7m) 484mRL UZ
- ▶ Further assays pending for Voyager 1 and 2

Northern Star Resources (ASX: NST) is pleased to announce that more high-grade drilling results from its Paulsens Gold Mine in WA have highlighted the outstanding potential for further increases in resources and mine life.

The results provide more evidence that the grade at the key Voyager 1 lode continues to increase with depth.



ASX ANNOUNCEMENT  
29 MAY 2012

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Code: NST

### Board of Directors

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Managing Director

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Non-Executive Director

Ms Karen Brown  
Company Secretary

### Issued Capital

Shares  
402 M

Options 25M

Current Share Price  
\$0.665

Market Capitalisation  
\$267 million

Cash/Bullion in Bank: 31 Mar 2012  
\$84.1 million

### Projects

Paulsens  
Ashburton  
Range  
Emull

### Commodities

gold  
gold  
gold, silver  
Zn, Cu, gold

### Investments

Venturex (13%)

### Commodities

Cu, Zn, Ag & gold

They also show that the extension zone at Voyager 1 is proving to be considerably larger than previously thought, providing great upside for production.

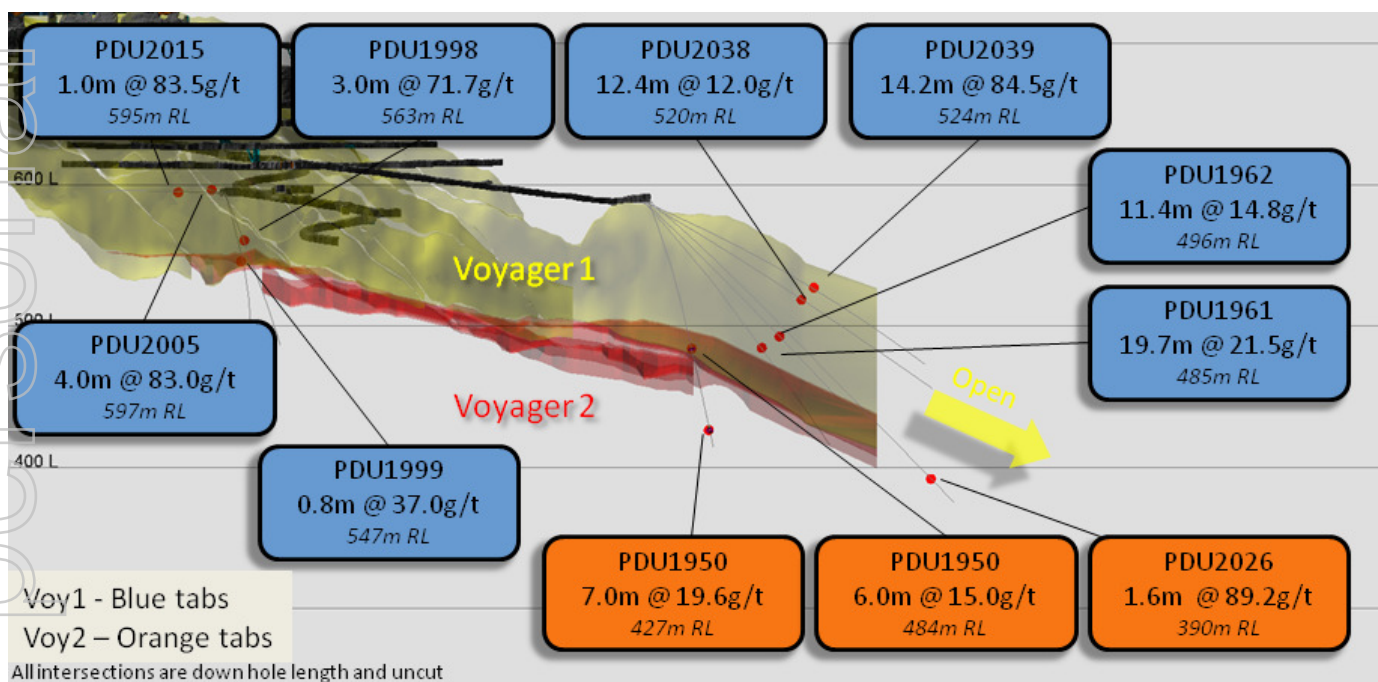
More high-grade results have also been returned from the latest drilling at the Voyager 2 lode.

None of the latest results from Voyager 1 or any of the results from Voyager 2 are included in the current 318,000-ounce<sup>2</sup> resource estimate at Paulsens.

These results will form part of a resource upgrade, which will in turn help underpin Northern Star's plan to grow production at Paulsens from ~80,000 to ~100,000ozpa.

And in addition to Paulsens, Northern Star is advancing plans to establish a 100,000ozpa stand-alone operation at its neighbouring Ashburton Project, where it recently increased resources by 50 per cent to 1Moz<sup>3</sup> (refer to ASX announcement 2<sup>nd</sup> April 2012).

Some of these very high grade resource/grade control drilling intersections, as well as those released on 6<sup>th</sup> March and 12<sup>th</sup> April 2012 show the significant potential for much higher grades to be mined in the Voyager 1 lode extension position than previously seen in the Voyager orebody (Figure 1).



**Figure 1 - Long Section View of Significant drill results for Voyager One and Voyager Two lodes**

Voyager 1 with its extension zone is still open at depth and down plunge. Due to this, the bulk of the mine's drilling and geological team continue to be focused on defining more of this lode.

With only 140,000oz mined to date out of Voyager 1, extensional and grade control drilling is ongoing with numerous assays pending, the Company believes this lode will continue to grow and be the mainstay for production for a number of years.

The latest results from drilling on the Voyager 2 lode at Paulsens augur exceptionally well for the maiden resource calculation due later this year, with a host of high-grade intersections highlighting the growing value of this lode.

Importantly, the high-grade Voyager 2 intersection of 1.6m at 89.2gpt is now the deepest mineralised intercept in the history of the mine and is 270m vertically below the current production level.

Further announcements will be released regarding the ongoing underground diamond drilling as results become available.

Assay results from underground diamond drilling completed on Voyager 1 and 2 since the last release on 12<sup>th</sup> April 2012 are listed in the attached tables.

Yours faithfully,



Bill Beament  
Managing Director  
Northern Star Resources Ltd

### **Competent Persons Statements**

*The information in this announcement that relates to Paulsens Project and Ashburton 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". Mr Ekers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

### **<sup>1</sup> 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*

### **Forward Looking Statements**

*Northern Star Resources Limited has prepared this announcement based on information available to it. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this announcement. To the maximum extent permitted by law, none of Northern Star Resources Limited, its directors, employees or agents, advisers, nor any other person accepts any liability, including, without limitation, any liability arising from fault or negligence on the part of any of them or any other person, for any loss arising from the use of this announcement or its contents or otherwise arising in connection with it.*

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VOYAGER ONE RESOURCE DRILLING							
Hole #	Downhole Intersection (m)	Est. True Thickness (m)	Uncut Grade (g/t)	Grade (g/t) cut to (150g/t)	Gram/mts (cut)	Ore zone and comments	RL of intersection
PDU1961	2.7	1.0	14.3	14.3	14.3	VOY1_UZ	503mRL
<b>PDU1961</b>	<b>19.7</b>	<b>4.0</b>	<b>21.5</b>	<b>20.2</b>	<b>80.7</b>	<b>VOY1_UZ2</b>	<b>485mRL</b>
<b>PDU1962</b>	<b>11.4</b>	<b>2.1</b>	<b>14.8</b>	<b>14.8</b>	<b>31.4</b>	<b>VOY1_EXT_UZ</b>	<b>496mRL</b>
PDU1964	14.3	1.2	7.8	7.8	9.3	VOY1_EXT_UZ	483mRL
PDU1969	3.3	1.2	6.4	6.4	7.7	VOY1_EXT_UZ	482mRL
PDU2037	10.9	3.0	5.2	5.2	15.6	VOY1_UZ	495mRL
PDU2037	4.7	1.2	9.6	9.6	11.5	VOY1_UZ	490mRL
PDU2037	0.4	0.2	13.1	13.1	2.6	VOY1_UZ2	485mRL
PDU2037	0.4	0.2	40.2	40.2	8.0	VOY1_LZ	470mRL
<b>PDU2038</b>	<b>12.4</b>	<b>6.4</b>	<b>12.0</b>	<b>12.0</b>	<b>77.2</b>	<b>VOY1_UZ</b>	<b>520mRL</b>
PDU2038	4.9	2.3	3.8	3.8	8.6	VOY1_UZ2	504mRL
PDU2039	1.7	1.7	32.0	32.0	52.8	Veins in Gabbro / Voy1 Ext UZ	507mRL
PDU2039	0.4	0.4	17.9	17.9	7.9	Veins in Gabbro / Voy1 Ext UZ	499mRL
<b>PDU2039</b>	<b>14.2</b>	<b>1.1</b>	<b>84.5</b>	<b>38.9</b>	<b>42.8</b>	<b>VOY1_EXT_UZ</b>	<b>524mRL</b>
PDU2039	1.0	1.0	42.6	42.6	41.7	Veins in Gabbro	515mRL

VOYAGER ONE GRADE CONTROL DRILLING							
Hole #	Downhole Intersection (m)	Est. True Thickness (m)	Uncut Grade (g/t)	Grade (g/t) cut to (150g/t)	Gram/mts (cut)	Ore zone and comments	RL of intersection
PDU1993	1.2	0.5	7.3	7.3	3.7	VOY2_UZ	540mRL
PDU1993	1.4	1.1	3.6	3.6	3.9	VOY2_LZ	527mRL
PDU1994	2.5	2.2	5.1	5.1	11.3	VOY1_LZ	560mRL
PDU1994	0.8	0.6	9.1	9.1	5.8	VOY1_UZ	550mRL
<b>PDU1998</b>	<b>3.0</b>	<b>1.1</b>	<b>71.7</b>	<b>56.7</b>	<b>62.4</b>	<b>VOY1_LZ</b>	<b>563mRL</b>
<b>PDU1999</b>	<b>0.8</b>	<b>0.8</b>	<b>37.0</b>	<b>37.0</b>	<b>28.1</b>	<b>VOY1_LZ</b>	<b>547mRL</b>
PDU2001	1.3	1.0	3.7	3.7	3.7	VOY1_UZ2	585mRL
PDU2001	0.7	0.6	6.7	6.7	4.0	VOY1_UZ	583mRL
PDU2002	1.1	1.1	6.0	6.0	6.8	VOY1_LZ	577mRL
PDU2005	4.8	4.0	6.5	6.5	25.9	VOY1_LZ	597mRL
<b>PDU2005</b>	<b>4.0</b>	<b>3.2</b>	<b>83.0</b>	<b>72.4</b>	<b>231.6</b>	<b>VOY1_UZ2</b>	<b>597mRL</b>
PDU2006	0.8	0.6	17.8	17.8	10.7	VOY1_UZ	583mRL
PDU2010	1.6	1.2	5.6	5.6	6.7	VOY1_LZ	595mRL
PDU2010	1.0	0.8	7.7	7.7	6.2	VOY1_UZ2	596mRL
PDU2010	1.0	0.8	11.0	11.0	8.3	VOY1_UZ	596mRL
PDU2011	4.2	3.7	3.6	3.6	13.3	VOY1_UZ	583mRL
PDU2011	0.4	0.4	3.7	3.7	1.5	VOY1_LZ	587mRL
<b>PDU2015</b>	<b>1.0</b>	<b>0.8</b>	<b>83.5</b>	<b>83.5</b>	<b>66.8</b>	<b>VOY1_LZ</b>	<b>595mRL</b>
PDU2016	3.7	3.2	7.8	7.8	24.9	VOY1_GABBRO_ORE	580mRL
PDU2019	1.0	1.0	7.9	7.9	7.9	VOY1_LZ	596mRL
PDU2019	1.8	1.1	3.8	3.8	4.2	VOY1_LZ	596mRL
PDU2019	1.8	1.1	5.5	5.5	6.1	VOY1_LZ	596mRL
PDU2020	0.9	0.9	21.2	21.2	19.5	VOY1_LZ	585mRL

VOYAGER TWO RESOURCE DRILLING							
Hole #	Downhole Intersection (m)	Est. True Thickness (m)	Uncut Grade (g/t)	Grade (g/t) cut to (150g/t)	Gram/mts (cut)	Ore zone and comments	RL of intersection
<b>PDU1950</b>	<b>6.0</b>	<b>5.7</b>	<b>15.0</b>	<b>15.0</b>	<b>85.4</b>	<b>VOY2_UZ</b>	<b>484mRL</b>
PDU1950	0.9	0.9	3.3	3.3	3.0	Internal sulphide vein mineralisation	444mRL
<b>PDU1950</b>	<b>7.0</b>	<b>6.8</b>	<b>19.6</b>	<b>19.6</b>	<b>132.6</b>	<b>VOY2_LZ</b>	<b>427mRL</b>
<b>PDU2026</b>	<b>1.6</b>	<b>0.6</b>	<b>89.2</b>	<b>76.1</b>	<b>45.6</b>	<b>VOY2_UZ</b>	<b>390mRL</b>
PDU2027	1.1	1.1	8.6	8.6	9.8	VOY2_UZ	393mRL

At a nominal 3g/t lower cut off and a 150g/t upper cut off

NSR means no significant result

#### Quality Control - Paulsens

All core is logged and whole core samples (if LTK60 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 (150-200g) 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. 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 by ALS.

31 December 2011	Measured		Indicated		Inferred		Total		
	Tonnes (.000)	Grade (g/t)	Tonnes (.000)	Grade (g/t)	Tonnes (.000)	Grade (g/t)	Tonnes (.000)	Grade (g/t)	Oz Au (.000)
Open Pit			573	2.5	169	2.5	742	2.5	61
Paulsens Upper Levels			136	7.1	32	5.0	168	6.7	36
Voyager 1	57	11.1	318	8.9	101	15.5	476	10.5	161
Paulsens Stockpiles									5
Belvedere			45	2.8	123	3.5	168	3.3	18
Merlin					523	1.4	523	1.4	24
Mt Clement JV					226	1.8	226	1.8	13
<b>Total</b>	<b>57</b>	<b>11.1</b>	<b>1073</b>	<b>5.0</b>	<b>1174</b>	<b>3.2</b>	<b>2304</b>	<b>4.3</b>	<b>318</b>

<sup>2</sup>Table 1 - Paulsens Resources @ 2.5g/t Au Lower Cut-Off Underground and 1.0g/t Au Lower Cut-Off Open Pit

31 December 2011	Measured		Indicated		Inferred		Total		
	Tonnes (.000)	Grade (g/t)	Tonnes (.000)	Grade (g/t)	Tonnes (.000)	Grade (g/t)	Tonnes (.000)	Grade (g/t)	Oz Au (.000)
Mt Olympus	1,712	2.5	1,533	2.3	4,956	2.8	8,201	2.6	695
Peake			95	5.6	794	4.2	889	4.3	123
Waugh			347	3.6	240	3.6	587	3.6	68
Zeus			508	2.1	532	2.2	1,040	2.2	72
Electric Dingo			98	1.6	444	1.2	542	1.3	22
Romulus					329	2.6	329	2.6	27
<b>Total</b>	<b>1,712</b>	<b>2.5</b>	<b>2,581</b>	<b>2.5</b>	<b>7,295</b>	<b>2.8</b>	<b>11,588</b>	<b>2.7</b>	<b>1,007</b>

<sup>3</sup>Table 2 - Ashburton Mineral Resources Inclusive of Reserves - 0.7g/t lower cut used for Mt Olympus and 0.9g/t lower cut for others.