Northern Star acquires 668,000oz Ashburton Gold Project

Deal delivers successful WA gold miner its second major deposit with numerous walk-up drilling targets on highly prospective 961km² tenement package

Highlights

▶ Northern Star agrees to an exclusive option to acquire the Ashburton Gold Project, located within trucking distance of its existing Paulsens gold mine in WA, from Sipa Resources

▶ Deal includes 668,000oz Resource and the Mt Olympus Gold Mine, which has produced 340,000oz previously

▶ Ashburton provides excellent potential for Northern Star to increase production rates, project life and create shareholder wealth through exploration

▶ Tenements already known to host numerous walk-up drilling targets as well as additional extensive exploration upside

▶ Acquisition comes with large, organised drilling, geological, geochemical and geophysical database

▶ Work to start immediately updating previous feasibility studies using current gold price, reviewing metallurgical data and conducting an exploration review on several key prospects

Northern Star Resources (ASX: NST) is pleased to announce that it has agreed on an exclusive option to purchase the Ashburton Gold Project in Western Australia from Sipa Resources, complete with a 668,000oz Resource and numerous walk-up drilling targets.

The acquisition, which Northern Star will pay for via a royalty on future production, marks the next milestone in the Company’s strategy to build a major mining house underpinned by strong production, robust cash-flow and substantial exploration success.

The Ashburton Gold Project comprises 961km² of mining and exploration tenements stretching about 200km in a north-west linear trend from about 50km south-east of Paraburdoo to within 5km of Northern Star’s Paulsens Gold Mine, where the Company has enjoyed immense production and exploration success since acquiring the project last year.
Under the terms of the agreement, Northern Star will pay Sipa:
1. a 1.75% royalty on all gold production from the tenements, excluding the Merlin tenement and the first 250,000 ounces of gold produced
2. a 0.75% royalty on all gold production from the Merlin tenement, excluding the first 250,000 ounces of gold produced, and
3. Replace environmental bonds estimated at $445,000.

Heritage and Mining Agreements are in place with all Native Title applicants.

Once the acquisition is completed, Northern Star will immediately focus on bringing Ashburton into production. This will involve updating previous feasibility studies based on the current gold price and, investigating metallurgical options for the sulphide resource. Northern Star will also conduct an exploration review to generate drilling programs on the key prospects to increase the mining inventory.

Northern Star Managing Director Bill Beament said Ashburton was a quality exploration and mining opportunity in the emerging gold province of north-west Western Australia with geological affinities to Nevada’s Carlin Trend.

"The Ashburton Project will provide Northern Star with another key plank of its growth strategy, giving the Company an excellent opportunity to increase production rates as well as create substantial shareholder wealth through the highly prospective exploration targets we already know exist there," Mr Beament said.

"We will proceed as quickly as possible to fully review the project, outline the key opportunities and implement a plan that generates wealth for Northern Star shareholders."

Sipa discovered five deposits at Ashburton in 1996 and 1997. It produced about 340,000oz of profitable gold from 3.2 million tonnes of ore grading 3.3 g/t between 1998 and 2004. There were five open pits on four deposits— Mt Olympus, West Olympus, Zeus, Peake and Waugh. The plant was sold in 2006 and site rehabilitation was completed in 2007.

When Mt Olympus was last operating, there was a Reserve of 50,000 ounces (estimated in 2003 at a gold price of A$525/oz) within a Resource of 92,000 ounces grading 2.4 g/t containing mainly oxide and transitional material that could be accessed by a pit cut-back.

This is part of the overall Resource of 668,000oz within the Mount Olympus mining leases (refer Table 1).

The tectonic setting, host lithologies, alteration, geochemistry and mineralisation have similarities with the Nevada Carlin Trend and as such a Carlin-Model has to an extent driven previous exploration. The Project is considered to have excellent exploration potential and there are walk-up drill targets at many prospects.

Northern Star notes that two of the non-core tenements included in the acquisition are subject to plaints by a third party. These tenements do not host any of the mineralisation contained in the JORC estimate. Northern Star will address this issue in due course.

**Background / Historical Performance**

The Ashburton Gold Project is located in the Ashburton Region of Western Australia and is well accessed from the iron ore mining town of Paraburdoo, which has several jet services a day from Perth, as well as excellent road supply and local light industrial logistics.

The tenements, which are in three groups, form a north-westerly linear belt covering about 200km from about 50 km south-east of Paraburdoo to within 5km of the Paulsens Gold Mine and totals about 961km², as shown on Figure 1.
Sipa commenced exploration in late 1996 and by mid-1997 had established a 680,000-ounce resource at Mount Olympus (Sipa 1997 Annual Report) and discovered what were to become the Zeus, Peake and Waugh Deposits, which were later mined by Sipa.

Mount Olympus, Zeus, Peake and Waugh produced approximately 340,000 ounces of gold from 3.2 million tonnes of oxide (and minor transition) ore at an average grade of 3.3g/t between December 1998 and April 2004 (refer to Figure 2).

- Mount Olympus produced 242,000 ounces from 2.5 million tonnes at an average grade of 3 g/t with a recovery of 92% and a strip ratio of 3:1
- Zeus produced 15,000 ounces from 0.23 million tonnes at an average grade of 2.3g/t with a recovery of ~92% and a strip ratio of 3:1
- Peake produced 15,000 ounces from 0.08 million tonnes at an average grade of 7g/t with a recovery of ~91% and a strip ratio of 12:1
- Waugh produced 67,000 ounces from 0.35 million tonnes at an average grade of 6g/t with a recovery of 92% and a strip ratio of 15:1

Sipa and Newcrest entered into Farm-in and Joint Venture Agreements in June 1998 covering all Sipa tenements except for those covering Mount Olympus, Zeus, Peake and Waugh deposits. Newcrest
withdrew from the project in May 2009 after spending in-excess of $20 million of which best estimates are that 60% of this expenditure was spent on field activities.

Figure 2 – Past Production

Gold Resources & Reserves

Mineral resources were estimated for Ashburton project in 2004 by Sipa. The estimates are reported in compliance with the JORC code (1999) and total 7.15 million tonnes grading 2.9g/t gold containing 668,000 ounces as per Table 1. The majority of this resource is refractory in nature.

Table 1 - Ashburton Resources @ 0.9g/t Au Lower Cut-Off

There was a Reserve estimated for Ashburton project in 2004 by Sipa as per Table 2. The estimates are reported in compliance with the JORC code (1999) and total 495,000 tonnes grading 3.1 g/t gold containing 50,000 ounces, estimated in March 2004 at a gold price of A$525/ounce, mostly beneath the floor of the Mount Olympus open pit that could be accessed by a pit cut-back. This Reserve was estimated from within the oxide and transitional Resource of 1.2 million tonnes grading 2.4 g/t gold containing 92,000 ounces.
Geology of Gold Deposits

The Mt Olympus, Zeus and Peake gold deposits are situated within the Neerambah Complex of the Lower Proterozoic Wyloo Group, on the southern, and faulted, margin of the Diligence Dome. The Dome is cored by the Cheela Springs Basalt and is overlain by clastic sedimentary rocks of the Mt McGrath Formation. The Waugh Deposit is situated on the northern limb of the Dome.

- The Mt Olympus Deposit (pre-mining Resource of 1.94 million tonnes grading 3.2 g/t Au), which was mined from two pits, Mt Olympus itself, and the much smaller West Olympus pit, is mainly hosted by sandstone and pebbly sandstone of the Mt McGrath Formation, with lesser mineralisation in an underlying mudstone unit. The West Olympus mineralisation is partly within the underlying Cheela Springs Basalt.

- The Zeus Deposit (pre-mining Resource of 230,000 tonnes grading 2.3 g/t Au) is hosted by medium grained sandstones of the Mt McGrath Formation within the Zoe Fault system. Mineralisation is again disseminated gold-bearing arsenical pyrite, with a little more gold bearing quartz than at Mount Olympus.

- The Peake Deposit (pre-mining Resource of 85,000 tonnes grading 8.8 g/t Au) is a steep southerly dipping lode of banded, layer-parallel (that is, parallel to the Fault) sericitised siltstone-mudstone and centimetre thick arsenical pyrite and minor gold-bearing quartz layers, cutting moderately southerly dipping siltstones of the Mt McGrath Formation.

- The Waugh Deposit (pre-mining Resource of 708,000 tonnes grading 6 g/t Au) is situated 3km northeast of Mt Olympus. It is hosted by moderately north dipping siltstones of the Mt McGrath Formation, but most of the mineralisation is within a slightly discordant ironstone breccia, which in very few primary zone drill intersections is dominated by arsenical pyrite. Each of the deposits is typified by sericite alteration and bleaching, and sometimes silicification, with highly elevated As and generally elevated Sb and Hg, and in some cases Cu (e.g. Mount Olympus).

Exploration Model

The preferred gold exploration model for the Ashburton Gold Project is sediment hosted Carlin-style. The Ashburton Basin shares a number of similarities with the Carlin trend (> 110 million ounces of past production and Reserves) of the Great Basin, Nevada including:

- Carbonates and carbonaceous siltstones
- Evidence of de-calcification of dolomite and limestone units
- Au-As-Sb-Hg geochemical signature
- Silicification and jasperoid development
- Mineralised structures (possible feeders)
- Evidence of intrusive activity includes the Boolaloo Granodiorite intruding the Ashburton Formation in the northwest and a large magnetic anomaly beneath the central Ashburton Basin.
Exploration Potential

Despite the past exploration, this large project is still regarded as having excellent exploration potential for very large gold deposits. Mt Olympus is effectively a million-ounce deposit and there is extensive ‘smoke’ spread over some 200km of strike with many walk-up drill targets. Some of the more obvious targets are briefly described below:

- **Peake**

  The high grade (7 g/t recovered from the open pit) Peake Deposit has been drilled over 500m of strike, and to approximately 150m depth and averages 2.5m wide grading 9 g/t Au and contains about 1,000 ounces of gold per vertical metre, as shown on Figure 4.

  An intriguing conceptual target is the intersection of the Peake Lode with the southerly dipping Titus alteration zone and the northerly dipping Sparta alteration zone at about 300m vertical depth.

  The Peake deposit is open down dip and the mineralisation is very consistent along strike and dip, as shown on Figure 5. Some of the significant drill intercepts below existing open pit, or outside pit but adjacent along strike are listed below:

  - 5m @ 11.04 g/t Au from 25m
  - 5m @ 10.37 g/t Au from 12m
  - 7m @ 9.06 g/t Au from 26m
  - 8m @ 8.47 g/t Au from 23m

![Figure 4 – Peake Lode Long Section](image-url)
Figure 5 – Peake Lode Schematic Cross Section

- Mt Olympus and Zeus,

The Mount Olympus and Zeus deposits remain ‘open’ down plunge to the southeast, as shown on Figure 6. Some of the significant intercepts are listed below:

- 76m @ 2.4 g/t gold
- 51m @ 3.5 g/t gold
- 55m @ 2.4 g/t gold

Figure 6 – West Olympus to Zeus Long Section
• **Waugh**

The Waugh deposit is open down dip. A review will be conducted to determine any potential extension to the high grade lode that was previously mined. Some significant drill intercepts below existing open pit, or outside pit but adjacent along strike are listed below:

- 4m @ 37.6 g/t Au from 77m
- 3m @ 15.1 g/t Au from 122m
- 4m @ 9.4 g/t Au from 74m

• **Electric Dingo Oxide Prospect**

Electric Dingo, located about 100km from Paulsens Gold Mine and 100km north-west of Mt Olympus, was discovered by systematic RAB drilling beneath shallow cover within the 25km long 'Cheela Chain of Anomalies'. Significant RAB intersections (refer to Figure 7) within the Duck Creek Dolomite include:

- 17m @ 3.5 g/t gold from 16m
- 40m @ 1.8 g/t gold from 24m
- 44m @ 1.1 g/t gold from 24m

![Figure 7 – Electric Dingo Cross Section centred on 48,9500E](image)

• **Merlin Prospect**

Merlin is located about 5km from Paulsens Gold Mine and 200km northwest of Mt Olympus. Figures 8 and 9 show Merlin geology and a cross section. RAB drilling has returned a number of >1 g/t intersections. Follow-up RC and core drilling returned intersections including:

- 27m @ 1.4 g/t gold from 4m
- 23m @ 1.6 g/t gold from 92m (including 8m grading 4.3 g/t from 97m)
- 108m @ 0.6 g/t gold from 20m

![Figure 8 – Merlin Geological Map](image)

![Figure 9 – Merlin Cross Section](image)
• Other Exploration Prospects

The Romulus prospect located about 20km northwest of Mt Olympus in the Duck Creek Dolomite, is a 5km long gold-in-saprolite RAB anomaly (at >0.1 g/t) with a central core of RAB intersections including 8m at 3.4 g/t from 60m and 16m at 1.1 g/t from 52m. Follow-up RC intersections include 17m at 3.2 g/t from 74m and 39m at 1.3 g/t from 76m. Other prospects include Diligence (6m at 4.1 g/t from 154m in ironstone).

Commercial

The Mount Olympus CIL treatment plant and associated infrastructure was sold and removed in 2006 and the entire site was comprehensively rehabilitated by 2007.

There is still $445,000 in Environmental Bonds outstanding – most of which relate to the Tailings Storage Facility. The Company believes these bonds can be greatly reduced with minimal rehabilitation.

The Merlin prospect has a 2.5% royalty Payable to Newcrest for any minerals extracted from this tenement.

Summary

The acquisition of the highly prospective Ashburton Gold Project with estimated resources of 668,000 ounces from Sipa has provided the ideal strategic asset that the Company has been seeking since acquiring Paulsens Gold Mine last year. It provides Northern Star Resources with an immediate boost to the Company's resource base and gives the opportunity to increase mining inventory available for processing at Paulsens.

NST would like to thank Sipa Resources Limited for the opportunity to acquire this asset and for the professionalism shown by its executive and operational staff throughout the sale process.

Yours faithfully,

Bill Beament
Managing Director
Northern Star Resources Ltd

Competent Persons Statements

The information in this announcement that relates to exploration results, data quality, geological interpretations and potential for eventual economic extraction, is based on information compiled by or under the supervision of Mike Doepel, (Member AusIMM), who is a full-time employee of Sipa Resources Limited. Mr. Doepel 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. Doepel consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

Some of the information contained in this Announcement has been obtained from third parties and has not been independently verified by NST. In particular the financial projections model on which the forward looking statements included in this Announcement has not been prepared by the Company and the Company has not undertaken any verification of the model. The Company takes no responsibility and is not liable for the projections in any way. Given the risks and uncertainties that may cause the Company's actual future results, performance or achievements to be materially different from that expected, expressed or implied by the forward looking statements included in this announcement, undue reliance should not be placed on these statements. Nothing contained in this Announcement is a promise or representation as to the future. No assurance or representation is made by any person that any forecast or projection will be achieved. Accordingly, investors must make their own investigations and inquiries regarding all assumptions, uncertainties and contingencies, which may affect the future operations of the Company.