# NORTHERN GOLD NL

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## SUMMARY OF THE BRIDGE CREEK RESOURCE EVALUATION JUNE 2005
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A resource review of the Bridge Creek deposit has been carried out. Exploration drilling has been carried out over a strike extent of 2000m from 56000N to 59250N. Cross-sections were generated and both the geology and gold mineralized lodes were interpreted. The nominal lower cut-off grade of 0.7g/t Au was used for the sectional interpretation. The block model generated contained a **Global Resource of 584,000t @ 1.81g/t Au.**

Based the initial interpretations carried out it was highlighted that the main zone of gold mineralization occurs between 58700N to 59225N. The main mineralized lodes were interpreted as steeply dipping pods within the sedimentary units along or near the footwall contact of the west limb of the dolerites. The main resource is associated with the two major zones developed within the sediments. Minor lodes with limited continuity were interpreted within the dolerite unit. (See the 3D views below.) Drilling on the southern sections showed very weak gold mineralization with poor or no strike continuity between sections.

The block model generated for this analysis covered the extents between 58600N to 59300N and 44750E to 44910E. The vertical extent was 110m from surface (90RL) to -20RL.

The main criteria used in creating **the wire-framed ore shapes** were;

- Lower gold cut-off of 0.7g/t applied.
- An upper cut of 14g/t Au.
- Minimum intersection width of 2m above the lower cut-off, internal dilution in general a maximum of 2m but may be greater to allow ease of wire-framing where drillholes were scissored.

The block modeling parameters applied in generating **the block model** were;

- Cell size; 10m (Y) by 2.5m (X) by 2.5m (Z)
- No. of cells in Y; 73, No. cells in X; 65, No. cells in Z; 47.
- Rotation; none
- Search type; Ellipsoidal.
- Algorithm; Ellipsoidal 3D IDW
- Parameters of the Ellipsoidal Search Algorithm;
    - ID Power, 2
    - Minimum number of samples, 2
    - Search radius; 50 along strike, 40m down dip and 10m across.
    - Rotation along strike was 0°, dip 90°, plunge 0°.

The SG (cell density) was modeled by level based on values used in previous resource modeling;

- Surface – 75RL 2.05
- 75RL – 65RL 2.40
- 65RL – 55RL 2.50
- 55RL – 40RL 2.60
- 40RL – 20RL 2.70
- Below 20RL 2.80

The contained Global Resource of 584,000t @ 1.81 g/t Au for 34,000oz gold was generated between surface (92.5RL) and 0RL, over a 92.5m vertical extent. ***(Note: The area used in this study is a subset of the model area upon which the published Inferred Mineral Resource of 1,038,000t @ 1.6g/t Au (53,400oz gold) is based)***

By comparison a block model generated by A Gillman, 2002 contained a Global Resource of 667,727t @ 1.97g/t Au, from surface (90RL) down to the -70RL, 160m vertical extent. In direct comparison the A Gillman block model Global Resource from surface to 0RL contains 532,000t @ 1.99g/t Au (34,000oz gold).

Pit Optimizations (using MineMap) were run at $550, $575 and $600/oz gold on the entire block model. In each case the optimizations indicated economic mineralization to be contained within 3 separate (pit) shells. See plan below. A summary of the results are tabulated below.

| **Bridge Creek Pit Optimization Comparisons - Total Pits Summary** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ore Volumes | | | | Waste Volumes | | Strip Ratio | | **cost** | Optimized | Optimized |
| $/oz gold | BCM | Tonnes | Grade | Ounces | BCM | Tonnes | /bcm | /t | **$/oz Au** | Pit Value | Pit Depth |
| $ 550.00 | 15,979 | 36,582 | 2.40 | 2,823 | 79187 | 168248 | 4.96 | 4.60 | **$ 454** | **$ 247,587** | 45m |
| $ 575.00 | 18,577 | 42,598 | 2.33 | 3,191 | 92213 | 196044 | 4.96 | 4.60 | **$ 468** | **$ 314,590** | 45m |
| $ 600.00 | 34,389 | 82,110 | 2.23 | 5,887 | 211833 | 471739 | 6.16 | 5.75 | **$ 524** | **$ 422,739** | 45m |

A second optimization scenario was run at the 3 gold prices but constrained to the 3 pit areas. Results are tabulated below.
Pit rankings based on the optimization results;

1. North Pit
2. South Pit
3. Central Pit

***Pit optimization results of the North Pit, South Pit, Central Pit (listed by judged ranking) and a combined Pit Summary.***

| **Bridge Creek Pit Optimization Comparisons - North Pit** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ore Volumes | | | | Waste Volumes | | Strip Ratio | | **cost** | Optimized | Optimized |
| $/oz gold | BCM | Tonnes | Grade | Ounces | BCM | Tonnes | /bcm | /t | **$/oz Au** | Pit Value | Pit Depth |
| $ 550 | 4,511 | 9,445 | 2.60 | 790 | 14067 | 28903 | 3.12 | 3.06 | **$ 379** | **$121,260** | 20m |
| $ 575 | 4,963 | 10,415 | 2.54 | 851 | 16528 | 33949 | 3.33 | 3.26 | **$ 394** | **$139,664** | 20m |
| $ 600 | 5,088 | 10,671 | 2.52 | 865 | 16711 | 34323 | 3.28 | 3.22 | **$ 396** | **$159,446** | 20m |

| **Bridge Creek Pit Optimization Comparisons - Southern Pit** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ore Volumes | | | | Waste Volumes | | Strip Ratio | | **cost** | Optimized | Optimized |
| $/oz gold | BCM | Tonnes | Grade | Ounces | BCM | Tonnes | /bcm | /t | **$/oz Au** | Pit Value | Pit Depth |
| $ 550 | 10,655 | 25,253 | 2.19 | 1,778 | 50634 | 109300 | 4.75 | 4.33 | **$ 489** | **$101,342** | 45m |
| $ 575 | 12,551 | 29,742 | 2.13 | 2,037 | 58714 | 126822 | 4.68 | 4.26 | **$ 499** | **$143,851** | 45m |
| $ 600 | 28,176 | 68,870 | 2.13 | 4,716 | 177879 | 401587 | 6.31 | 5.83 | **$ 552** | **$225,249** | 45m |

| **Bridge Creek Pit Optimization Comparisons - Central Pit** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ore Volumes | | | | Waste Volumes | | Strip Ratio | | **cost** | Optimized | Optimized |
| $/oz gold | BCM | Tonnes | Grade | Ounces | BCM | Tonnes | /bcm | /t | **$/oz Au** | Pit Value | Pit Depth |
| $ 550 | 813 | 1,884 | 4.20 | 254 | 14485 | 30045 | 17.82 | 15.95 | **$ 442** | **$ 24,985** | 22.5m |
| $ 575 | 1,063 | 2,441 | 3.81 | 299 | 16971 | 35272 | 15.97 | 14.45 | **$ 462** | **$ 31,048** | 22.5m |
| $ 600 | 1,125 | 2,569 | 3.71 | 306 | 17243 | 35829 | 15.33 | 13.95 | **$ 465** | **$ 37,981** | 22.5m |

| Bridge Creek Pit Optimization Comparisons - Total Pits Summary | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ore Volumes | | | | Waste Volumes | | Strip Ratio | | **cost** | Optimized | Optimized |
| $/oz gold | BCM | Tonnes | Grade | Ounces | BCM | Tonnes | /bcm | /t | **$/oz Au** | Pit Value | Pit Depth |
| $ 550 | 15,979 | 36,582 | 2.40 | 2,823 | 79187 | 168248 | 4.96 | 4.60 | **$ 454** | **$247,587** | 45m |
| $ 575 | 18,577 | 42,598 | 2.33 | 3,191 | 92213 | 196044 | 4.96 | 4.60 | **$ 468** | **$314,590** | 45m |
| $ 600 | 34,389 | 82,110 | 2.23 | 5,887 | 211833 | 471739 | 6.16 | 5.75 | **$ 524** | **$422,739** | 45m |

## CONCLUSSIONS and RECOMMENDATIONS

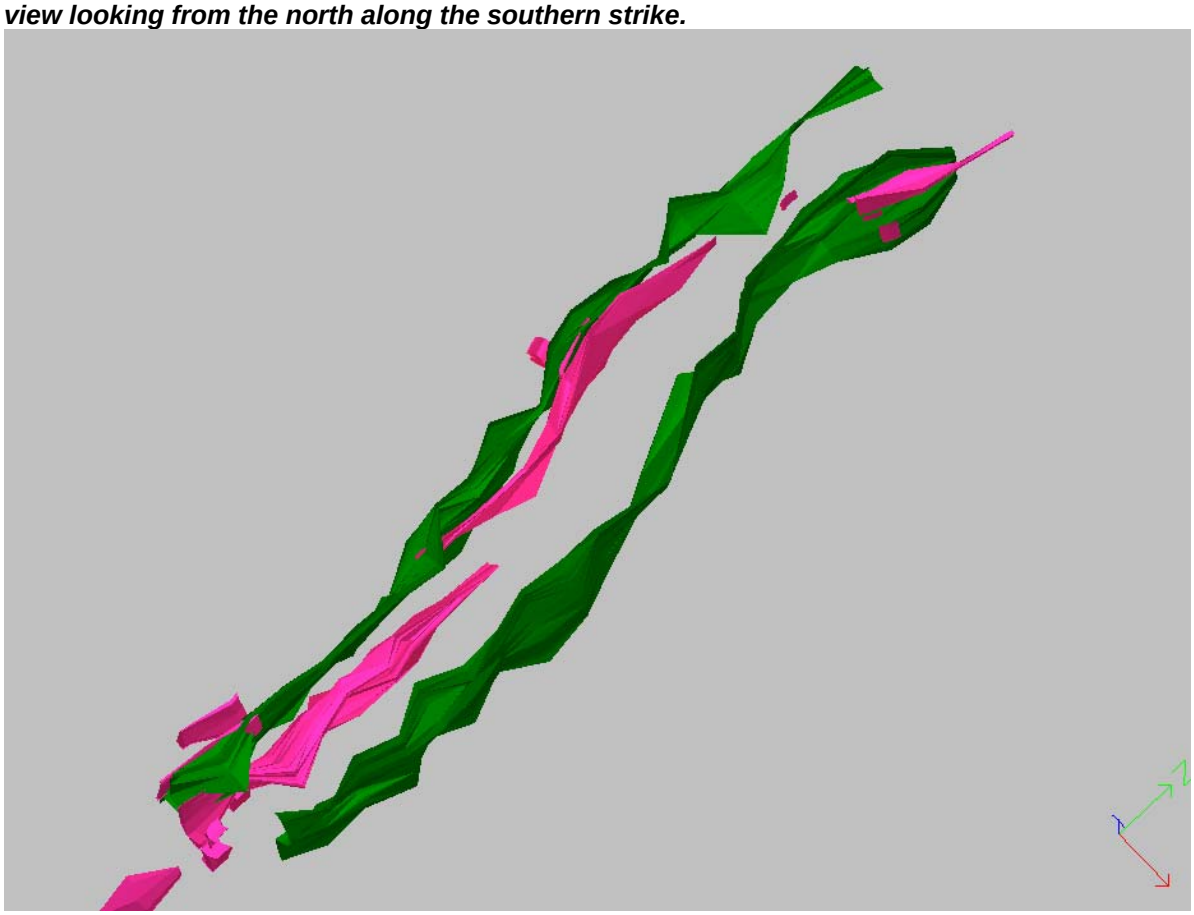
1. **Pit (optimizations) evaluations carried out suggest the Bridge Creek deposit is marginal at best producing a small reserve at a high risk. Any variation in grade or tonnes can have a significant impact on return.**

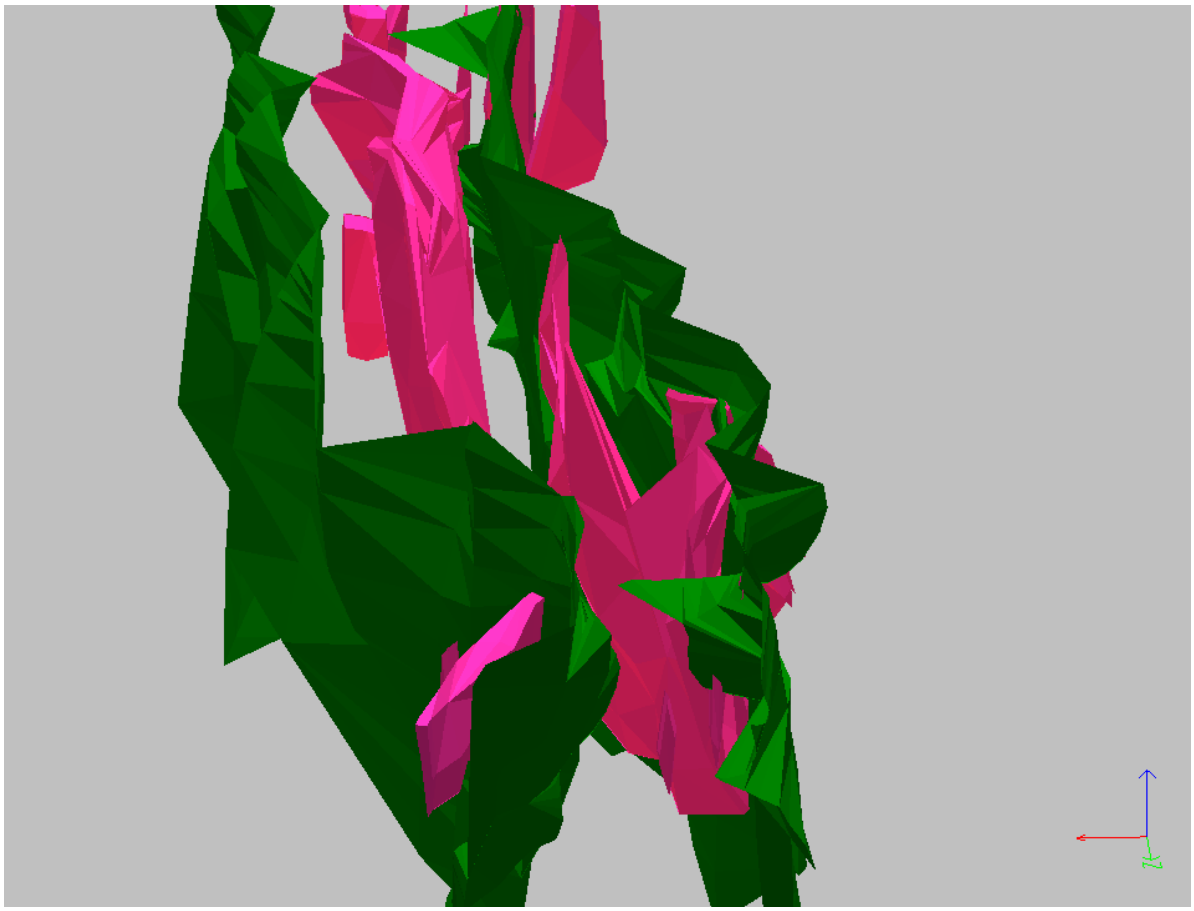
2. **Only the North and South optimized shells may prove marginally economic once final pits are designed. Due to the high strip ratio of the Central Pit compounded with small ore tonnage <2,500t it is recommended that it is not included in any planning.**

3. **If mining of the North and South pits is considered that the pit areas are grade drilled to confirm the near surface ore (top 20m) exist before committing to mining.**

4. **No further exploration potential exists within the strike extent drilled. Limited high-grade intersection and intercept widths downgrade any underground potential.**

***3D images of the interpreted wire-framed ore pods (magenta) in relation to the footwall contact with the dolerite unit (green). The top view is looking down from the southeast. The bottom view looking from the north along the southern strike.***





***Plan showing the $600 optimized pit shell. The optimization produces 3 discrete "pits" at the 3 gold prices; $550, $575, and $600.***