A Near Surface, High Grade Gold Discovery
Dixie Project, Red Lake, Ontario

Structure, Geochemistry and Geology (June 2019)
Forward Looking Statement

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Qualified Person

R. (Bob) Singh, P.Geo and Andrea Diakow P.Geo, are the Qualified Person as defined by NI 43-101 standards responsible for reviewing the technical content of this presentation.
Red Lake: High grade near surface gold

100% owned – Road Access – Powerlines – Commercial Gravel Pits – Royalty Free

20 minute drive to Tim Hortons....
Red Lake: Property History

- **1984 - 2012**: 88-4 zone discovered in 1988
- **2004**: Fronteer begins to describe the structural setting
- **2005-2012**: Grandview gold drills for gold and intersects high grade gold (2008)

**Dec 2015**
- Acquire 67% of Dixie Project including Royalty – begin data compilation

**Nov 2016**
- Dixie Data review identifies drill targets

**July 2017**
- Negotiate 100% interest in Dixie Property from Newmont (6 month process) – Drilling begins at DL
- Dixie re-logging and field mapping reveals new targets and updated geological model.

**Sept 2017**
- 16.84 g/t Au / 10.4m in Dixie Limb

**2018**
- Drill DHZ and DNW – new high grade hits (15 holes drilled)
- 26.91 g/t Au / 16.35m
- And
- 68.76 g/t Au / 7.0m in Hinge Zone

**2019**
- BR Zone Discovery
  - 194.21 g/t Au / 2.0m
  - And
  - 30.90 g/t Au / 4.6m

**2019**
- 1602.73 g/t Au / 0.70 m

**28 YEARS**
- 171 holes – 32,000m

**3 YEARS (1.5 years drilling)**
- 79 holes – 17,000m
Red Lake: Red Lake Claim status

2015 ~104,810 ha  (claims in view area)

2015 ~266,440 ha  (claims in view area)

~154%  (since 2015)
Gold Mineralization

- Gold is localized in D2 structures, quartz veins, lithological contacts and favorable host rocks. Localized near a property wide deep-seated deformation zone.

- Hinge Zone ("DHZ") – high grade quartz veins controlled by D2 related structures

- Dixie Limb ("DL") intersection of high grade veins/structures with a favorable contact zone.

- BR Zone – high grade gold in silicified felsic lapilli tuff associated with wide-spread anomalous gold and a regional scale deformation zone.
Dixie Project: Regional Geology

• Tectonostratigraphic assemblages surrounding the Uchi and English River subprovinces.

English River: 2.704 – 2.696 Ga
Uchi: 2.75 – 2.99 Ga

Some district wide isolated greenstone belts are un-classified.
- Belts lack age date data, geological mapping and correlation.
- Dixie Greenstones are comprised of basalts, sediments, andesite, ultramafics, rhyolite, QFP and lamprophyre dykes.

- How extensive is the Dixie mafic volcanic package?
- How deep are the structures?
- How does it compare to other mafic sequences in the district?

Dixie Project: Regional Geology

How deep are the structures?

- Lithoprobe transect – 3D travel time tomography (Zeng & Calvert, 2006).
- Identifies deep structure “unnamed fault” > 12km depth signal.
- SRK (2006) interprets a thrust fault at the same location.
Dixie Host Rocks vs. Other District Rocks: Lithogeochemical comparison

- Primitive-mantle-normalized REE profiles for Balmer, Confederation and Dixie stratigraphy (after Sanborn-Barrie et al., 2001, Dixie data collected by Great Bear).

- High Fe-basalt has a distinct signature when compared with confederation assemblage (> 1wt % Ti).

- Andesite, rhyolite and other basalts compare well (depleted Ti and Nb).
Dixie Project: Property Geology

- Lithology dominated by mafic sequence of texturally and chemically distinct basalt - some are more foliated than others with various degrees of metamorphic overprint.

- Gold mineralization occurs within specific rock units and near contacts

**Jensen Cation Plot**

<table>
<thead>
<tr>
<th>Ti+Fe (tot) Cation %</th>
<th>Mg Cation %</th>
<th>Si Cation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>(from left to right)</td>
<td>(from top to bottom)</td>
<td></td>
</tr>
<tr>
<td>High Ti-Fe Tholeiite</td>
<td>High Mg Basalt</td>
<td></td>
</tr>
<tr>
<td>Basalt</td>
<td>Felsics</td>
<td></td>
</tr>
<tr>
<td>Komatiite</td>
<td>Ulamafic</td>
<td></td>
</tr>
</tbody>
</table>

- Foliated Basalt - tholeiite
- Btc Pillow Basalt - tholeiite
- M Basalt – calc-alkaline
- Felsics
- Ultramafic – peridotitic komatiite

> 3 g/t Au samples

basaltic – komatiite (dykes?)
Dixie Project: Structural Geology

- D1/D2 deformation events are sub-parallel to each other. S1 & S2 foliation fabrics are not easily distinguished.
- The latest geological event includes intrusion of lamprophyre and QFP dykes which cross-cut S1/S2 fabrics.
- Younging direction is to the northeast (determined from graded bedding).
- S1/S2 fabrics are rotated – suggests a later D3 event which has broadly modified D2 fabrics including D2 related fold hinges.
- Regional scale deformation zone likely source for gold mineralization.

*Early quartz veins deformed by D2*
Dixie Project: Structural Geology

- Rotated S2 (foliation) fabric - change in orientation is assigned to D3 deformation
- Large structures are affected by D3 including D2 Axial Planes and faults
- Large Deformation zone is warped by D3
Oriented core data show geology offset by a fault zone which is sub-parallel to the D2 Axial plane. Sediments form marker horizons. The Fault Zone has formed along a talc-serpentine altered komatiite. Axial trace of D2 is dominantly E-W, faults are E-W to NW-SE trending.
High grade gold is localized within silicified coarse grained felsic volcaniclastic rocks. The zone is proximal to a large fault zone (LP Fault) the fault zone is marked by anomalous gold values with a strong quartz-sericite alteration zone.
Dixie Project: Gold Mineralization - model

- The regional scale LP Fault zone (identified in the Lithoprobe Seismic study), marks a contact zone between Mafic and intermediate-Felsic volcanic rocks and is a significant deformation zone.

- The fault zone has acted as a hydrothermal fluid conduit marked by a quartz-sericite alteration zone with anomalous gold values.

- The conduit has been drilled by GBR and historically sporadically across 2.5km of strike length.

- All holes intersected the quartz sericite alteration zone with anomalous gold values.

- DNW-011 is the only hole to drill into the silica alteration zone.

- The DL and DHZ zones intersect the fault at a project depth of ~3km
Dixie Project: Gold Mineralization – Model

HYPOTHESES

• Deep seated Fault Zone identified in Lithoprobe transect – 3D travel time tomography (Zeng & Calvert, 2006).
• Identifies deep structure > 12km depth signal.
• Fault acts as a fluid conduit bringing mantle derived gold rich hydrotectial fluids to surface

EVIDENCE

• Drilling intersects up to 220m wide quartz sericite alteration zone with anomalous gold values in footwall of Fault Zone (~ 15 drillholes drilled between 1997 – 2019)
• Fault zone marks major lithological contact
• High grade gold occurs in discreet veins, structures and alteration zones dipping towards the Fault Zone. (determined from oriented core data)
• Numerous lamprophyre dykes on property
Dixie Project: DL Geological Model

Pre-2016 proposed structural model for the gold distribution in the 88-4 zone (now termed the DL Zone).

Current interpretation of the same cross section using updated downhole and collar survey data.

Re-Survey results:

- Maximum +/- 83m E and +/- 51m N-S shift of collars.
- Average shift of 7.95m at the end of each hole after gyroscopic survey.
Section A shows alteration zonation in intermediate/felsic rocks near the LP Fault – deformation zone. Zone is up to 100m wide and consists of quartz-sericite (QS) alteration with anomalous to disseminated gold values. High grade gold occurs in silicified zone north of QS zone.
Section B shows alteration zonation in intermediate/felsic rocks near the LP Fault – deformation zone. Zone is up to 220m wide and consists of quartz-sericite (QS) alteration with anomalous to disseminated gold values. Holes stopped short of the interpreted Silica Zone.

* Historic holes have numerous un-sampled intervals
Section C shows alteration zonation in intermediate/felsic rocks near the LP Fault – deformation zone. Zone is up to 190m wide and consists of quartz-sericite (QS) alteration with anomalous to disseminated gold values. Holes stopped short of the interpreted Silica Zone.
Dixie Project: Gold Mineralization DL and DHZ

- Cross section shows relationship between Fault Zone and DL (Dixie Limb Zone) and DHZ (Hinge Zone).

- DL is continuous at depth from historical work and is confined to a contact zone between two distinct mafic volcanic packages. Gold occurs in silica-sulphide replacement zones +/- quartz veins.

- DHZ forms a vein zone with multiple NE dipping veins which form a “vein swarm”. The predictive model suggest that veins will merge, change dip and pinch & swell both along strike and at depth.
Dixie Project: Gold Mineralization & Alteration

• Silica Sulphide replacement and cross cutting sulphide veins associated with gold.
• Earlier D2 fabric is truncated by gold bearing sulphide veins.

Drill core from hole DL-005 = 10.5 g/t gold / 1.0m. (basalt host rock)

Drill core from hole DL-013 = 5.36 g/t gold / 1.0m. (Argillite host rock)

• Sulphide (aspy, sph, po, py) replacement of earlier fabrics- overprinting earlier folded veins.
• Au mineralized veins both cross cut and are transposed into D2 fabric.
Gold overprinting fabric in coarse grained silicified felsic Lapilli Tuff (759.38 g/t Au over 0.50m)

Intense Quartz Sericite alteration – proximal to fault zone.
Recrystallized amphibole (possible actinolite) and biotite.

Red-brown biotite occurs proximal to Quartz veins with visible gold.

Garnet and amphibole proximal to high grade gold bearing quartz veins.

DHZ-004
341.78 g/t Au / 0.50 m
delicate texture

DHZ-014
1602.73 g/t Au / 0.7m
Dixie Project, Hinge Zone evolution

2017

March 2019
Dixie Project, Exploration Plans

DHZ
• Continue to step to west and below zone, use oriented structural data to predict and test plunges to individual high grade shoots.

DL
• Test high grade shoots within DL Zone, test for E-W oriented (parallel to DHZ) gold bearing veins along strike. The intersection of these E-W veins and the DL zone are key elements to controlling high grade gold shoots.

BR
• Test for silicified lappilli tuff zones northeast of the LP Fault zone. Current fault interpretation suggests that the fault zone and favorable stratigraphy extend for approximately 14 kms. Current drilling identifies quartz-sericite alteration along 2.5km of this zone.

Regional
• Continue to test for Ultramafic/Mafic contact zones south of the LP Fault, test for additional contact and alteration zones north of the LP Fault.
Regional Exploration strategy

- Identify the right geology:
  - Tholeiitic and calc alkaline mafic rocks
  - Basaltic and peridotitic komatiites

- Identify the right structure:
  - D2 Axial Plane – limbs of folds are less important.

- Identify the right alteration:
  - Potassic alteration zones (red-brown biotite), widespread quartz veining with anomalous gold. Silica sulphide replacement zones.
Red Lake: High Grade Near Surface Gold

**Core relogging, geochemical sampling & re-survey work**
- Show continuity of geology and mineralization model.
- Targets prove predictable.

**Public domain data including Seismic work (Zeng & Calvert (2006), SRK (2006), GSC open file (2004))**
- Provide data to support the presence of a large greenstone sequence.
- Provide support of deep-seated crustal structures.

**GBR whole rock geochemistry, petrography and rare earth data**
- Indicate the presence of unique primitive mantle related mafic volcanic rocks.
- Support evidence of long-lived metamorphic event which may be coincident with the gold mineralization.

**GBR structural data, drill core logging and interpretation**
- Identify key controls to mineralization used to target drilling.
- Structures identified as through-going and related to predictable D2/D3 deformation.

**GBR drilling finds gold!**
- High Grade near surface gold.
- Continuous down-plunge extensions to high grade shoots.
Red Lake: High grade near surface gold

Thank you

Wabauskang First Nation
LAC SEUL FIRST NATION