Pillar Recovery at Platosa Mine

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Forward Looking Statements
World Class Silver Prospects

Platosa: +10 years of the highest grade silver production in Mexico

Mexico’s CRD Belt

<table>
<thead>
<tr>
<th>Major CRDs</th>
<th>CRDs</th>
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<tbody>
<tr>
<td>1 Cerro San Pedro: 151 Mt (New Gold)</td>
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<tr>
<td>2 San Martín-Sabinas: 120 Mt (Peñoles)</td>
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<tr>
<td>3 Terrazas: 87 Mt (Andromeda)</td>
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<tr>
<td>4 Santa Eulalia: 50 Mt (Grupo Mex.)</td>
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<td>5 Penasquito: 45 Mt+ (Goldcorp)</td>
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<td>6 Naica: 35 Mt (Peñoles)</td>
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<tr>
<td>7 Santa Barbara: 30 Mt+ (Grupo Mex.)</td>
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<tr>
<td>8 Charcas: 25 Mt (Grupo Mex.)</td>
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<tr>
<td>9 Velardena: 18 Mt (Peñoles)</td>
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<tr>
<td>10 Bismarck: 15 Mt (Peñoles)</td>
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<tr>
<td>11 Cinco de Mayo: 12 Mt (MAG Silver)</td>
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<tr>
<td>12 Catorce La Paz: 10 Mt</td>
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<tr>
<td>13 Cananea: 10 Mt + CRD (Grupo Mex.)</td>
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<tr>
<td>14 Zimapán: 8 Mt</td>
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<tr>
<td>15 Mapimi-Ojuela: 6 Mt (Peñoles)</td>
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<tr>
<td>16 San Pedro Corralitos: 5 Mt+</td>
<td></td>
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<tr>
<td>17 La Negra: 5 Mt (Aurcana)</td>
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<tr>
<td>18 Sierra Almoloya: 1 Mt+</td>
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La Platosa: 1.2 Mt
(mined & remaining resources)

LARGE SCALE
Avg. of 10-15M tonnes with the largest well in excess of 50M tonnes

HIGH GRADE
Polymetallic, with metal contents ranging from 1-12% Pb; 1-18%Zn; 60-600 g/t Ag; up to 2% Cu and 6 g/t Au

SIMPLE MINING AND METALLURGY
Large, continuous individual ore bodies averaging 0.5M to 2M tonnes in size, with some up to 20M tonnes, favourable metallurgy with minimal environmental footprint

La Platosa: +10 years of the highest grade silver production in Mexico
Geology

Structurally controlled mantos hosted in limestone

Underground silver-lead-zinc mine, began production in 2005

Previously constrained by water issues. Currently ramping up production to 250 tpd

Transitioned from room and pillar mining to cut and fill mining in 2018
Opportunity

Significant resource left in historical pillars

- Room and Pillar method achieved 80-85% recovery of resource
- Objective is to recover valuable mineralization left behind during room and pillar mining
- Estimated 25,500 tonnes in 5 mantos at ~615 g/t Ag, 6.7% Pb, 8% Zn
- Necessary to rethink previous approach to recovery
Opportunity

Recovery commencing in most recently mined areas

• 14 pillars in Rodilla and Pierna identified for extraction

• Introduced cable bolts and remote scoop at Platosa

• Started UCS testing of core
Geotechnical Considerations

Shallow mining conditions resulting in low stress regime

- Gravity/wedges most likely failure modes
- Numerous, persistent structures
Geotechnical Considerations

Historical grouting

- Improved rockmass due to grouting
- GSI ~50-70 (fair-good)
- Rock Strength
  - UCS: 50-60 MPa
  - Tensile: 2.0-2.5 MPa
Numerical Modeling – Map3D

Used to predict changes in loading

Pierna plan view

Isometric view
Numerical Modeling – Map3D

Deformation deeper than support if all pillars removed

Stress (tensile) - MPa

Deformation (vertical) - mm
Safety Considerations: Change Management

Hazards identified in risk assessment

- Exclusion zones required the procurement of a remote operated LHD (a first for Platosa)
- Design and construction of remote stands
- Extra lighting to improve visibility
- Development of protocols and subsequent training
Safety Considerations

Remote operated LHD most significant change for workers
Pillar Recovery Preparation

Extensometers installed to monitor ground movement
Pillar Recovery Preparation

Before extraction, spans were pre-supported

5 meter cable bolts:
- 2-3 rings around pillar
- 2.5m spacing between rings
- Tensioned to 4-5 tonnes
Pillar Recovery Preparation

Voids around pillars backfilled with unconsolidated waste
Results to date

Pierna

- Pillars recovered:
  - Q-02
  - P-04
  - South half of P-03
Results: Pillar Q-02, blasted 4 Sept 2018

Before

After
Results: Pillar P-04, blasted 26 Sept 2018

Before

After

Large pillar presented some challenges
Pillar P-04 Back Failure – 1 Oct 2018

Mucking suspended when extensometer indicated motion, failure occurred after an additional blast.
Mucking was suspended when extensometer indicated motion, failure occurred after an additional blast.
Pillar P-03 – Blasted 21 March 2019

Large pillar that was deemed “too big to fail”

Large pillar in Pierna – half was blasted with remaining left in place for stability
Pillar P-03, blasted 21 March 2019

After blasting, remaining portion of pillar was stable
Pillar P-03, blasted 21 March 2019

After blasting, remaining portion of pillar was stable
Path Forward

Continue to extract pillars and assess historical pillars

• Continue with 500 – 600 tonnes per month through 2019
• Finish Pierna and begin in Rodilla
• Additional areas to be assessed:
  • Mantos Guadalupe North and South
  • Manto 4, 5, and 6
Conclusions

Continue to extract pillars and assess historical pillars

• Benefits to date
  • 1,350 tonnes at 650g/t Ag, 6.5% Pb, and 10% Zn for an additional 100,000 AgEqOz
  • Added production during transition to cut and fill mining

• Additional Recovery:
  • Originally ~85% recovery of mineralization in Pierna
  • Additional 10% recovery with all planned pillars extracted
Partners

Helped make pillar recovery possible

- Geotechnical Engineering: John Henning
- Extensometers: YieldPoint Sensing the future
- Bolters: Cymac TMCC
- Ground support elements:
- Rock Testing:
To become a premier precious metals producer by capitalizing on generative opportunities and striving to always do better for our shareholders, employees, and neighbouring communities.

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