



December 2010

Gryphon Gold Corporation



Cautionary Note

This presentation does not constitute an offer to sell or a solicitation of an offer to buy any of the securities of Gryphon Gold Corporation. Any future offer and sale will be subject to the registration requirements of the United States Securities Act of 1933, as amended, and any applicable state securities laws unless otherwise exempt from such registration requirements. All amounts in US\$ unless otherwise stated.

This presentation contains "forward-looking statements" and "forward-looking information" within the meaning of Canadian and United States securities laws, which may include, but is not limited to: 1) resource estimates on the Borealis project, exploration plans and other plans, projections, estimates and expectations; 2) statements regarding the Freedom Flats re-leach program and confirmation of the grade of the 1.8 million tons of the stockpiles; 3) statements with respect to the expected timeline and capital requirements; 4) statements related to permitting status and approval requirements; 5) projected cash flow from production, if any; 6) ability to obtain financing on acceptable terms, and; 7) other statements related to plans, estimates, timing and objectives. Such forward-looking statements and forward-looking information reflect our current views with respect to future events and are subject to certain risks, uncertainties and assumptions, including, the risk that reserves and resource estimates may not result in commercially viable gold production, the risk that further exploration, and if warranted, development will not be completed as currently anticipated or at all, that financing for the development of the Borealis Project may not be available on terms satisfactory to Gryphon and the risks and uncertainties outlined under the section headings "Forward-Looking Statements" and "Risks Factors" in Gryphon's annual report on Form 10-K, as filed with the SEC on June 28, 2010, under the section heading "Risk Factors" and in Gryphon's most recent financial statements, reports and registration statements filed with the SEC (available at www.sec.gov) and with Canadian securities administrators (available at www.sedar.com). Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated or expected. We do not undertake to update forward-looking statements or forward-looking information, except as may be required by law. Full financial statements and securities filings are available on Gryphon's website: www.gryphongold.com and www.sec.gov or www.sedar.com.

Cautionary Note to U.S. Investors concerning estimates of Reserves and Measured, Indicated and Inferred Resources: This presentation and the Pre-Feasibility Study referenced in this presentation use the terms "proven and probable reserves", "Measured Resources", "Indicated Resources", "Measured & Indicated Resources" and "Inferred Resources" as defined under NI 43-101. *NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosures an issuer makes of scientific and technical information concerning mineral projects.* We advise U.S. investors that while these terms are defined in and required by Canadian regulations, these terms are not defined terms under the U.S. Securities and Exchange Commission ("SEC") Industry Guide 7 and are normally not permitted to be used in reports and registration statements filed with the SEC. "Measured Resources", "Indicated Resources", "Measured & Indicated Resources" and "Inferred Resources" are not recognized under SEC Industry Guide 7. "Inferred resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of a feasibility study or pre-feasibility study, except in rare cases. The SEC normally only permits issuers to report mineralization that does not constitute SEC Industry Guide 7 compliant "reserves" as in-place tonnage and grade without reference to unit measures. Under SEC Industry Guide 7 standards, a "final" or "bankable" feasibility study is required to report reserves, the three-year historical average price is used in any reserve or cash flow analysis to designate reserves and the primary environmental analysis or report must be filed with the appropriate governmental authority. **U.S. investors are cautioned not to assume that any part or all of mineral deposits in these categories will ever be converted into reserves.**

All information presented herein has been derived from Gryphon Gold's public disclosure filed with the United States Securities Commission and must be read in conjunction therewith. The Borealis property is described in the technical report (the "technical report" or the "2009 Pre-Feasibility Study") dated September 21, 2009 titled Pre Feasibility Study on the Mineral Resources of the Borealis Gold Project Located in Mineral County, Nevada, U.S.A prepared in accordance with National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101"). The technical report describes the exploration history, geology and style of gold mineralization at the Borealis property. Disclosure in this presentation of mineral resources is based on the technical report. Details of the quality or grade of each category of mineral resources and key assumptions, parameters and methods used to estimate the mineral resources is included in the technical report. The report also include a description of environmental and permitting matters

ABOUT GRYPHON GOLD: Gryphon Gold is a Nevada-focused gold exploration and potentially a production company. Its principal gold resource, the 1.4 million ounce (measured and indicated) and 1.1 million ounce (inferred) Borealis deposits, is located in the Walker Lane gold belt of western Nevada. The Borealis gold system is one of the largest known volcanic-hosted high-sulphidation gold bearing mineralized systems in Nevada. The Borealis Property is described in a technical report dated September 17, 2009 and titled "NI 43-101 Pre-Feasibility Study of the Mineral Resources of the Borealis Gold Project located in Mineral County, Nevada, U.S.A." This report is prepared in accordance with NI 43-101 filed on www.sedar.com. This technical report describes the exploration history, geology, and gold resources at the Borealis Property. Disclosure in this press release of mineral resources is based on the technical report. Details of the quality or grade of each category of mineral resources and key assumptions, parameters, and methods used to estimate the mineral resources is included in the technical reports. The technical report also includes a description of environmental and permitting matters.

The technical information in this press release was approved by Mr. Steven Craig, VP of Exploration of Gryphon Gold Corporation, and is a Qualified Person as defined by National Instrument 43-101 of the Canadian Securities Administrators.

This presentation prepared by John K. Key, Manager & Projects of Gryphon Gold Corporations, off: (775) 883-1456, 611 N. Nevada St., Carson City, NV 89703

This presentation reviewed by the following Qualified Person in accordance with National Instrument 43-101 of the Canadian Securities Administrators: Jonathan Brown, C.P.G., MBA, Environmental and Permitting Manager, Teleso Nevada Inc., off: (775) 853-7776, 5490 Longley Lane, Reno, NV 89511

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Introduction

- Gryphon Gold Corporation is a US corporation focused on mine development and gold exploration in Nevada. Gryphon completed its IPO in December of 2005
 - There is currently a total of 89,710,132 shares issued and outstanding (GGN:TSX and GYPH:OTC.BB)
- Gryphon's management team is blue chip. They have built and operated world class mines and made major exploration discoveries. The Board of Directors is seasoned and is very experienced in all aspects of mining. Together they account for over 170 years of experience in the mining industry.
- The restart of the Borealis gold mine is the company's top priority. Borealis has the necessary operating permits for its oxide, heap-leach operation. Engineering is 80-90%, and construction of the mine can commence upon the completion of financing. First doré is expected to be produced nine months after completion of financing.
- There is significant upside for investors from successful expansion of Borealis' current 377,356⁽¹⁾ oz.. P&P oxide gold reserve, 350,044⁽¹⁾ oz.. inferred oxide gold resource, and 1.8 million oz.. (1,084,000⁽²⁾ oz. M&I and 715,000⁽²⁾ oz. inferred) sulphide gold resource on the property. Our goal is to expand the gold resource to 5+ million ounces.

(1) Proven reserves of 283,017 oz., probable reserves of 94,339 oz., and 350,044 oz.. inferred oxide gold resource per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See "Cautionary Note" on Slide 2 of this presentation.

(2) Per [April 28, 2008 Technical Report on Mineral Resources of the Borealis Gold Project](#) in accordance with NI 43-101 of the Canadian Securities Administrators. See "Cautionary Note" on Slide 2 of this presentation.

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The Management and Directing Team

Management

John Key (President, CEO, Director) - Successful Project Manager for Teck-Cominco and General Manager at the Red Dog, Polaris and Magmont mines. Graduate mining engineer with 30+ years experience. Successfully completed the \$300 million production expansion at Red Dog doubling production and making it the worlds largest zinc mine, producing 1.2 mm tons of zinc concentrate per year.

Matt Fowler (Interim CFO) - AB degree in economics and a Certificate in Accounting, six years of investment, corporate finance and Securities and Exchange Commission accounting experience.

Lisanna Lewis (VP, Secretary, Treasurer) - Formerly Administration and Operations Manager for Danka Canada Inc., Commercial Accounting certificate, Accounting Technician Diploma, Student in the Certified General Accountants of British Columbia.

Steve Craig (VP, Exploration) - Highly experienced exploration geologist in various types of gold systems, copper and molybdenum intrusive systems, and base metal deposits. Craig spent 23 years with Kennecott and another 13 years with junior companies. Co-developed the successful 2007 Borealis drill campaign. Has an M. S. in economic geology.

John K. Key (Manager, Projects) - Has a B.S. in Metallurgical Engineering and an M.S. in Engineering Management. Has over 8+ years experience in mineral processing operations at the Red Dog Concentrator in Alaska and, most recently, at the Asarco Ray Copper Concentrator as the Metallurgical General Supervisor and the Crusher/Concentrator Maintenance Supervisor.

Independent Directors

Don Gentry - Retired Professor Emeritus, Dean of Engineering of the Colorado School of Mines

Marvin Kaiser - Former CFO for Ranchers Exploration, Amax Gold and The Doe Run Company. Currently, Mr. Kaiser operates Whippoorwill Consulting, LLC and serves as a director for several public mining/exploration companies and as a director for The Southern Illinois University Foundation.

Terence Cryan - Managing director at Paine Webber (Kidder,Peabody) and then served as Senior Managing Director at Bear Stearns & Co. Currently, Mr. Cryan serves as the Managing Director to Concert Energy Partners, LLC.

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Borealis History

- Borealis was owned and operated in the 1980's by Echo Bay Mines, and produced a total of **600,000 ounce of gold** over a 10 year period
- The mine was closed and reclaimed in 1990 with gold at \$383 per ounce⁽¹⁾ and subsequently returned to lease holders in 1995 when gold was \$384⁽¹⁾ per ounce
- Under Echo Bay, the mine's production facility was solely focused on mining high grade oxide gold
- The current proven and probable oxide reserve (377,356 ounces⁽²⁾) was not mined due to implied negative production margins at the then low gold prices
- Potential sulphide gold resource was left unexplored due to limited cost effective technology at the time. Additional known, un-oxidized, gold bearing resources were intentionally not defined at the time
- Current known sulphide resource is 1.1M ounces of measured and indicated and 0.7M ounces of inferred and is expected to be expanded further

(1) Source: Bloomberg Avg. Price

(2) Proven reserves of 283,017 oz.. and probable reserves of 94,339 oz.. per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See "Cautionary Note" on Slide 2 of this presentation.

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Borealis and the Walker Lane Trend

Sedimentary hosted deposits:

➤ North-Central Nevada:

- ◆ Goldstrike 50 M Au
- ◆ Carlin 44 M Au
- ◆ Cortez 15 M Au
- ◆ Pipeline 20 M Au

Volcanic hosted deposits:

➤ Mexico

- ◆ Mulatos 4 M Au

➤ Papua New Guinea

- ◆ Lihir 40 M Au

➤ Peru

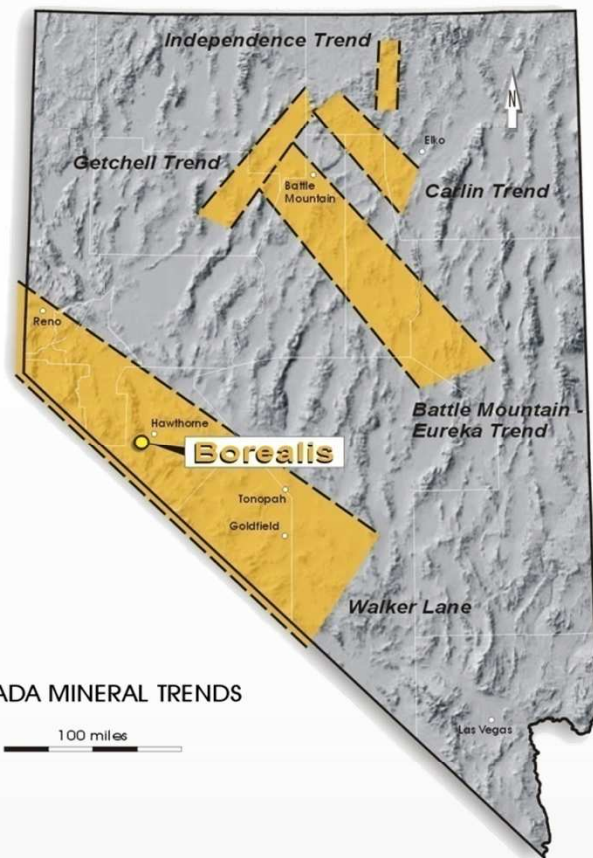
- ◆ Yanacocha 50 M Au
- ◆ Arikupa 9 M Au

➤ Walker Lane Nevada:

- ◆ Comstock 13 M Au eq
- ◆ Goldfields-Tonopah 11 M Au eq
- ◆ Round Mtn 16 M Au

◆ **Borealis**

3.1 M Au & counting



NEVADA MINERAL TRENDS

100 miles

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Borealis Reserves/Resources

	Tons	Gold Grade (oz./ton)	Gold Oz. Contained
Proven and Probable Gold Reserves ⁽¹⁾	16,650,000	0.023	377,356
Oxide/Mixed Resources ⁽²⁾			
Inferred In-Situ	11,064,000	0.019	211,344
Inferred Heaps and Lean Ore	14,064,000	0.010	138,700
Sulphide Resources ⁽²⁾			
Measured	4,319,000	0.064	276,700
Indicated	16,697,000	0.048	807,500
Inferred	22,457,000	0.032	715,800

(1) Proven reserves of 283,017 oz., and probable reserves of 94,339 oz., per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See “Cautionary Note” on Slide 2 of this presentation.

(2) Per [April 28, 2008 Technical Report on Mineral Resources of the Borealis Gold Project](#) in accordance with NI 43-101 of the Canadian Securities Administrators. See “Cautionary Note” on Slide 2 of this presentation.

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Development Plan for the Borealis Property

Road to Production

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Road to Production

The “Road to Production” plan is an engineered approach to bring the Borealis Oxide Heap Leach Mine as published in the [September 21, 2009 Independent Pre-Feasibility Study](#) to production in a phased manner.

While total capital required is expected to be in line with the [September 21, 2009 Independent Pre-Feasibility Study](#), the phased approach allows for early gold production with a reduced initial capital requirement. Revenues are expected to provide financing for the development of the 50,000 oz.. per year heap leach operation.

For the “Road to Production” to be implemented management will reconfirm certain reserve grades and contract metallurgical testing for certain reserves that provide the feed for Phase 1.

All operating cost estimates are derived from the [September 21, 2009 Independent Pre-Feasibility Study](#).

All major operating permits are in place. For Phase 1 to proceed some additional minor permits or permit modifications will have to be secured.

For Gryphon Gold to commence construction a successful financing will be required to finance Phase 1. It is expected that future capital requirements could be financed from operating revenue.

The “Road to Production” evaluation is an internal evaluation using the defined engineering and economic parameters of the [September 21, 2009 Independent Pre-Feasibility Study](#).

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Oxides = Opportunity

Proven and Probable Reserve = **377,356⁽¹⁾ oz.. Au**

Inferred Resource = 350,044⁽¹⁾ oz.. Au

Full Oxide Heap Leach Production of Project Reserves is expected to generate Positive Operating Revenue⁽²⁾

The proposed oxide heap leach operation is expected to provide the working capital⁽²⁾ for Borealis reserve expansion and exploration

(1) Per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See “Cautionary Note” on Slide 2 of this presentation.

(2) See Figure 23G2.3 of the 2009 Pre-Feasibility Study for Statement of Cash Flow and Assumptions on which it is based

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Production Phase 1

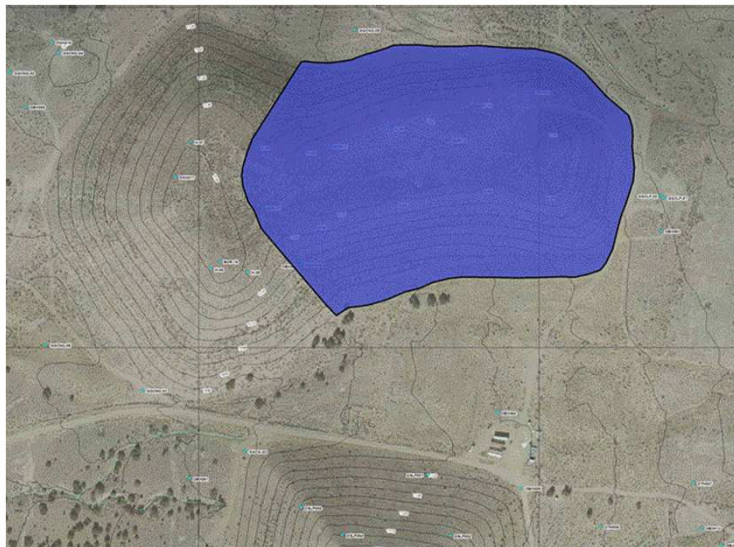
- Construct Leach Pad
- Mine, agglomerate, and place Freedom Flats Re-Leach
(1.03⁽¹⁾ M tons @ 0.026⁽¹⁾ oz.. /ton Au)
- Process pregnant gold solution through Carbon Columns
- Recovery of gold from heap to carbon = 40%⁽¹⁾
- Toll recovery of gold and silver to bullion

(1) Per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See “Cautionary Note” on Slide 2 of this presentation.

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Freedom Flats [Historical Leach Pad Shown]



Basis of economic calculations

- Operating cost/ton ore - \$4.00/ton⁽¹⁾
- Production rate - 6,000 tpd
- Gold content - 0.026 oz./t
- Tons available - 1.03 Mt
- Approximate Recovery - 40%
- Processing Days - ~ 172 days
- Royalty - 1%/\$100 Price of Gold

	Freedom Flats Re-Leach		
Price of Gold (\$/oz..) ⁽²⁾	\$1000	\$1200	\$1400
Approx. Gross Profit (millions)	\$5.53	<u>\$7.21</u>	\$8.79

(1) Section 23G2.0 of the [September 21, 2009 Independent Pre-Feasibility Study](#) estimates the operating \$/ton to be \$3.64/ton for the Freedom Flats Heap.

(2) The 2009 Pre-Feasibility Study was based on an assumed price of gold of \$800/oz. The projected revenue has been adjusted to reflect recent market pricing.

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Production Phase 2

- Expand Leach pad
- Mine East Ridge Pit (North Block Model)
(2.192⁽¹⁾ M tons @ 0.018⁽¹⁾ oz../ton Au)
- Process pregnant gold solution through Carbon Columns
- Recovery of gold from heap to carbon = 75%⁽¹⁾
- Toll recovery of gold and silver to bullion

(1) Per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See “Cautionary Note” on Slide 2 of this presentation.

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North Block Model [East Ridge Pit Shown]



Basis of economic calculations

- Operating cost/ton ore - \$7.50/ton⁽¹⁾
- Production rate - 6,000 tpd
- Gold content - 0.018 oz./t
- Tons available - 2.192 Mt
- Approximate Recovery - 75%
- Processing Days - ~ 366 days
- Royalty - 1%/\$100 Price of Gold

	North Block Model In-Situ Ore		
Price of Gold (\$/oz.) ⁽²⁾	\$1000	\$1200	\$1400
Approx. Gross Profit (millions)	\$10.21	<u>\$14.84</u>	\$19.22

(1) Section 23G2.0 of the [September 21, 2009 Independent Pre-Feasibility Study](#) estimates the operating \$/ton to be \$7.28/ton for the North Block Model Operation

(2) The 2009 Pre-Feasibility Study was based on an assumed price of gold of \$800/oz. The projected revenue has been adjusted to reflect recent market pricing.

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Phase 1 and 2

Tons available - 3.222 Mt, Processing Days - ~ 538 days, Gold ounces recovered - ~ 40,283

\$4.00/ton operating cost⁽¹⁾	Freedom Flats Re-Leach		
Price of Gold (\$/oz..) ⁽²⁾	\$1000	\$1200	\$1400
Approx. Gross Profit (millions)	\$5.53	<u>\$7.21</u>	\$8.79
\$7.50/ton operating cost	North Block Model In-Situ Ore		
Price of Gold (\$/oz..) ⁽³⁾	\$1000	\$1200	\$1400
Approx. Gross Profit (millions)	\$10.21	<u>\$14.84</u>	\$19.22
Total Est. Gross Profit (millions)	\$15.74	<u>\$22.04</u>	\$28.02
Project Startup IRR	34%	<u>105%</u>	173%

(1) Section 23G2.0 of the [September 21, 2009 Independent Pre-Feasibility Study](#) estimates the operating \$/ton to be \$3.64/ton for the Freedom Flats Heap.

(2) The 2009 Pre-Feasibility Study was based on an assumed price of gold of \$800/oz. The projected revenue has been adjusted to reflect recent market pricing.

(3) Section 23G2.0 of the [September 21, 2009 Independent Pre-Feasibility Study](#) estimates the operating \$/ton to be \$7.28/ton for the North Block Model Operation

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Capital Requirements

- Phase 1 - March 2011

Capital Equipment and Leach Pad Projected Costs ⁽¹⁾	\$2,059,052
Working Capital ⁽¹⁾	\$3,410,689
Bonding ⁽²⁾	\$1,400,000
Contingency	\$1,130,259
<hr/>	
Phase 1 Subtotal ⁽³⁾	\$8,000,000
Phase 2 - September 2011 ^(1,2,4)	\$3,100,000
Full Production (10/2011 - 06/2012) ^(1,2,4)	\$9,000,000
<hr/>	
Total	\$20,100,000

(1) Per August 2009 Bid Estimate.

(2) Per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See "Cautionary Note" on Slide 2 of this presentation.

(3) To be funded from external sources. No funding has been sought or commitments obtained at this time.

(4) To be funded from projected cash flow from operations and/or external funding. No funding has been sought or commitments obtained at this time.

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Gold Production Plan

	Recoverable ⁽¹⁾ Gold Ounces Placed	Gold Ounces Recovered ⁽²⁾
Year 1	18,172	13,818
Year 2	32,973	35,441
Year 3	52,738	46,635
Year 4	57,043	56,080
Year 5	48,954	50,320
Year 6	34,560	36,677
Year 7	2,480	7,949
Total	246,920	246,920

(1) Based on recoveries stated in the [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See “Cautionary Note” on Slide 2 of this presentation.

(2) Time to market from placement is based on a 4 month recovery process for full recovery of recoverable ounces placed.

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Estimated Timeline

- December 2010 - Metallurgical Testing and Grade Confirmation
- March 2011 - Initial Pad/Service/Support Construction
- April 2011 - Initial Pad Completion Process Releach Ore
- May 2011 - Process Fluid Return
- July 2011 - Toll Carbon Stripping for Gold Sales
- September 2011 - Secondary Pad Construction
- October 2011 - ADR Construction Start
- October 2011 - Mine East Ridge Pit
- March 2012 - In-Situ Ore Mining
- **June 2012 - Full Production**

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The Borealis Property

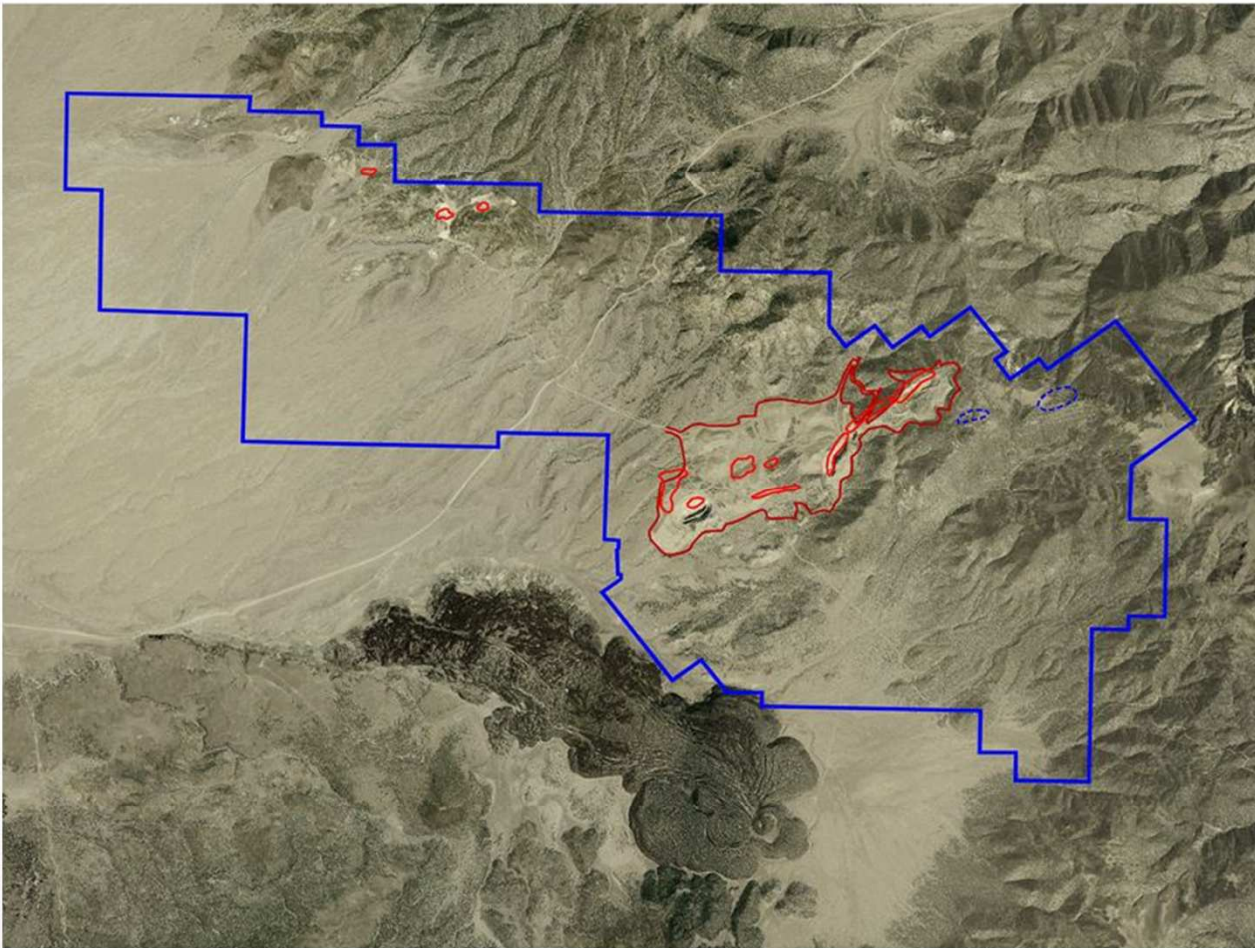
Exploration Potential

One of the best exploration targets in Nevada

Confirmed by: Past Successful Exploration Drilling, Geophysics, Successful Mining History

The Historically Prolific Walker Lane Gold Belt

Past Success, Identified Targets - Fertile Ground for Discoveries



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23.5 Square Miles of Potential

Gold Discoveries

Opportunity to...

- Expand Oxide Proven and Probable Gold Ounces
- Expand Graben Sulphide Gold Resource
- Identify new, potentially large, deposits in the Western Pediments

We believe we have the opportunity to build the sulphide resource to 5+ million oz.. of mineable gold.

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Borealis Oxide Gold Targets

- The areas outlined are the prime targets for expanding the oxide gold resource
- All defined areas are on major controlling structures and contain mineralized silicified host rock
- Some targets contain mineralized drill holes that currently define inferred mineralization
- There is currently **377,356⁽¹⁾ oz.. proven and probable gold reserves.** Exploration potential in this zone is expected to add significant minable oxide gold ounces.



(1) Per [September 21, 2009 Independent Pre-Feasibility Study](#) prepared in accordance with NI 43-101 of the Canadian Securities Administrators. See “Cautionary Note” on Slide 2 of this presentation.

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Main Borealis Sulphide Gold Targets

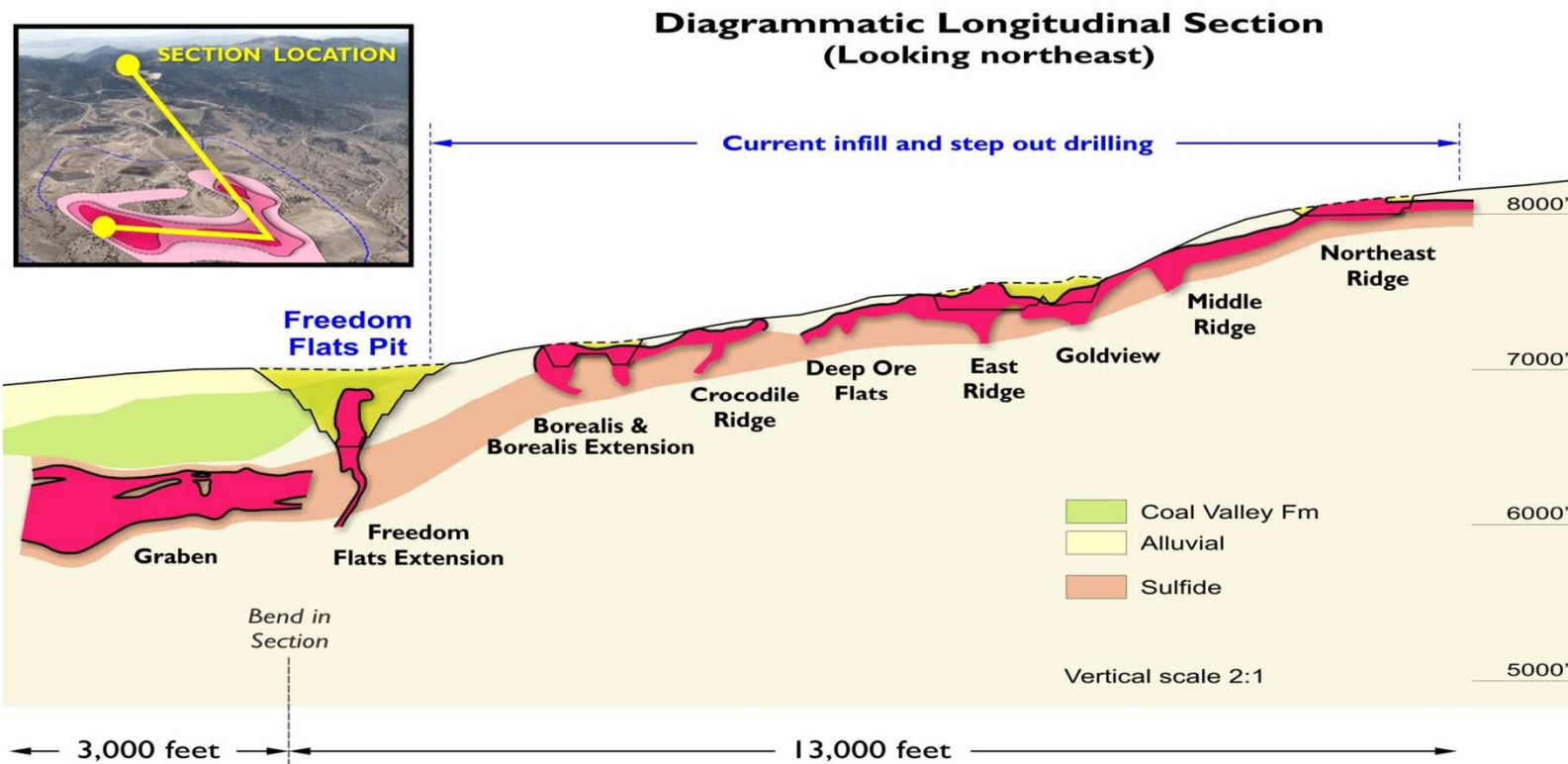
- Graben area activities to increase sulphide resources
 - Infill drilling
 - Structural extension drilling outside the identified deposit
- Four other Target Areas to extend sulphide resources
 - Drilling below existing pit floors
 - Drilling on structural projections from existing pits

(Targets include Deep Borealis, Deep Freedom Flats, East and Northeast Ridge Pit floor)

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Gold Resources: Longitudinal View



Undefined gold bearing sulphides underlie the oxide gold occurrences - Known sulphide gold mineralization in the low strip ratio Borealis pit will provide access to the Graben through a series of pushbacks - Drill programs will define the low strip ratio resource that extends from Graben to Northeast Ridge.

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Future Western Pediments Gold Targets

- Lucky Boy Target
 - Positive structural and geophysical signatures
 - Drill holes in area show strong sulphide silica alteration
- Sunset Wash Target
 - Similar in size, structure, and signature to Lucky Boy

(Although targets have limited drill intercepts, they are defined by structural controls, multiple geophysical anomalies and favorable geology)

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Western Pediments

- Controlled source audio-frequency magnetotelluric survey (CSAMT) was calibrated over the known Graben resource
- CSAMT results in Graben showed a +90% correlation to drill results
- CSAMT identified 3 new strong anomalies
- Each anomaly is significantly larger and shallower than the Graben
- These targets present the current best opportunity to significantly grow the gold resource, both oxide and sulphide.

