

Butte Highlands Joint Venture Project Update

May 7, 2013

www.timberline-resources.com

**NYSE Amex: TLR
TSX-V: TBR**

Legal Disclaimers

Statements contained herein that are not based upon current or historical fact are forward-looking in nature. Such forward-looking statements reflect the Company's expectations about its future operating results, performance and opportunities that involve substantial risks and uncertainties. These statements include but are not limited to statements regarding the Company's 50/50 joint venture with Highland Mining LLC, the development and production at the Company's Butte Highlands project and the development and production at the South Eureka Property, the targeted permit and production dates and estimated economics for the Butte Highlands project, terms, possible growth of the Company and the Company's expected operations. When used herein, the words "anticipate," "believe," "estimate," "targeted," "upcoming," "plan," "intend" and "expect" and similar expressions, as they relate to Timberline Resources Corporation, or its management, are intended to identify such forward-looking statements. These forward-looking statements are based on information currently available to the Company and are subject to a number of risks, uncertainties, and other factors that could cause the Company's actual results, performance, prospects, and opportunities to differ materially from those expressed in, or implied by, these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, such factors, including risk factors, discussed in the Company's Annual Report on Form 10-K for the year ended September 30, 2012. Except as required by Federal Securities law, the Company does not undertake any obligation to release publicly any revisions to any forward-looking statements.

The Company's JV partner at Butte Highlands has decided to advance the project into production without first establishing mineral resources supported by an independent technical report or completing a feasibility study. A production decision without the benefit of a technical report independently establishing mineral resources or reserves and any feasibility study demonstrating economic and technical viability creates increased uncertainty and heightens economic and technical risks of failure.

All mineral resource estimates contained herein, including the terms "historical", "measured", "indicated" and "inferred" mineral resources, have been prepared in accordance with Canadian standards, and these standards differ significantly from the requirements of the SEC. U.S. investors are cautioned not to assume that all or any part of such mineral resources will ever be converted into SEC compliant reserves, or any part of an inferred mineral resource exists. A qualified person has not done sufficient work to classify the historical estimates as current mineral resources. The Company is not treating the historical estimates as current mineral resources and the historical estimates should not be relied upon.

The management estimates of the potential quantity and grade of the mineralization at Butte Highlands, South Eureka and Iron Butte were determined based on drill results and geologic modeling using polygonal grade shells with a 0.01 ounce per ton cut-off and a non-statistical average grade calculation based on a weighted average grade within each polygon. The estimates are conceptual in nature, and there has been insufficient exploration drilling to define a mineral resource that may be categorized as an indicated, measured, or inferred resource. It is uncertain if further exploration will result in the target being delineated as a mineral resource as defined in NI 43-101.

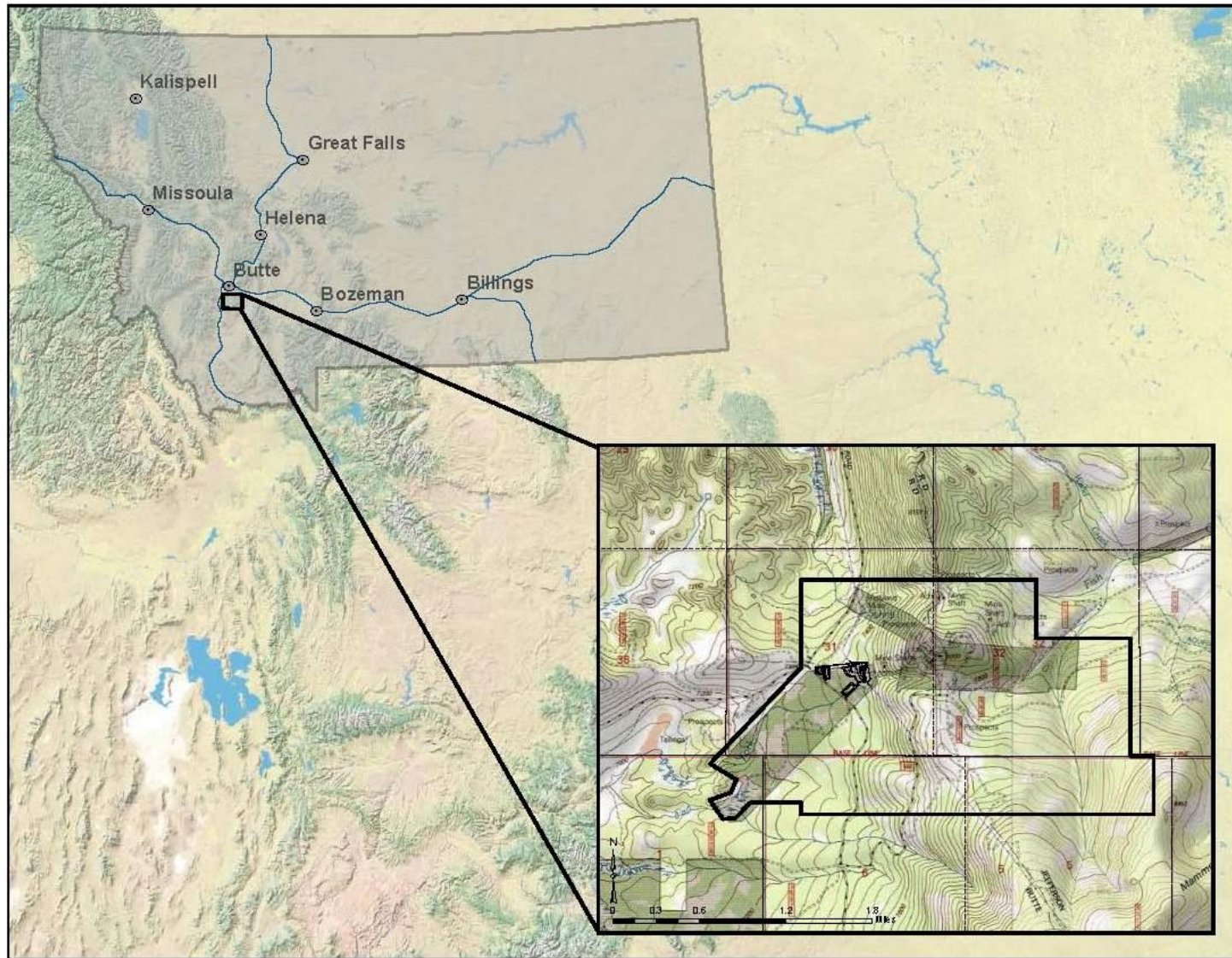
➤ **Timberline Resources**

- Gold Focused Advanced-Stage Exploration & Development in Western U.S.
- Butte Highlands Joint Venture in Montana
 - Near-term gold production at Butte Highlands Project
 - 50% Carried-to-Production interest in Joint Venture
- Lookout Mountain Project at South Eureka Property in Nevada
 - NI 43-101 Gold Resource:
 - Measured: 106,000 oz (3,043,000 tons @ 0.035 opt)
 - Indicated: 402,000 oz (25,897,000 tons @ 0.016 opt)
 - Inferred: 141,000 oz (11,709,000 tons @ 0.012 opt)
 - ~750K oz historic (non-compliant) resource in other projects
 - Ongoing exploration for resource upgrade and expansion
 - Permitting, metallurgical, and geotechnical studies continue

➤ **Highland Mining (ISR Capital)**

- ISR Capital — a private investment and merchant-banking firm headquartered in Boise, Idaho
- Fund development to commencement of commercial production

Project Location



Highlands History

- 1866—discovery of placer gold on Fish Creek 1866
- Highlands City grew to 4000 +
- Nevins discovers bedrock gold. By 1868 the shafts and arrastras are established
- 1919 Highlands Consolidated takes over claims and begins Highlands Mine Tunnel



- Intermittent mining and development into the 1930's. By late 1937 Highlands Mine operating and producing ore from a modern cyanide mill
 - Approximately 63,000 oz of gold was produced from the lode mines at Nevin Hill and another 150,000 oz from nearby placers
 - Several historic lode mines and claims: Murphy, Only Chance, Diamond T, Mother Lode, Gold Excel, Purchase, Goldbug, Gold Run, Bankers Dream
 - 1942 Butte Highlands terminates operations due to L - 208
- Ore reported in veins, pipes/chimneys, and "contact type"
 - Quartz veins and siliceous breccia, grey quartz/ chalcedony, Au, Ag, Cu, and Pb



Modern Exploration

➤ **1980's-1990's: Several Companies**

- Battle Mountain, Placer Dome, Orvana, Asarco
10 core holes, 55 RC Holes (30,000 feet)
- 100+ drill holes (core and RC)

➤ **2007: Timberline Resources acquires property and initiates exploration**

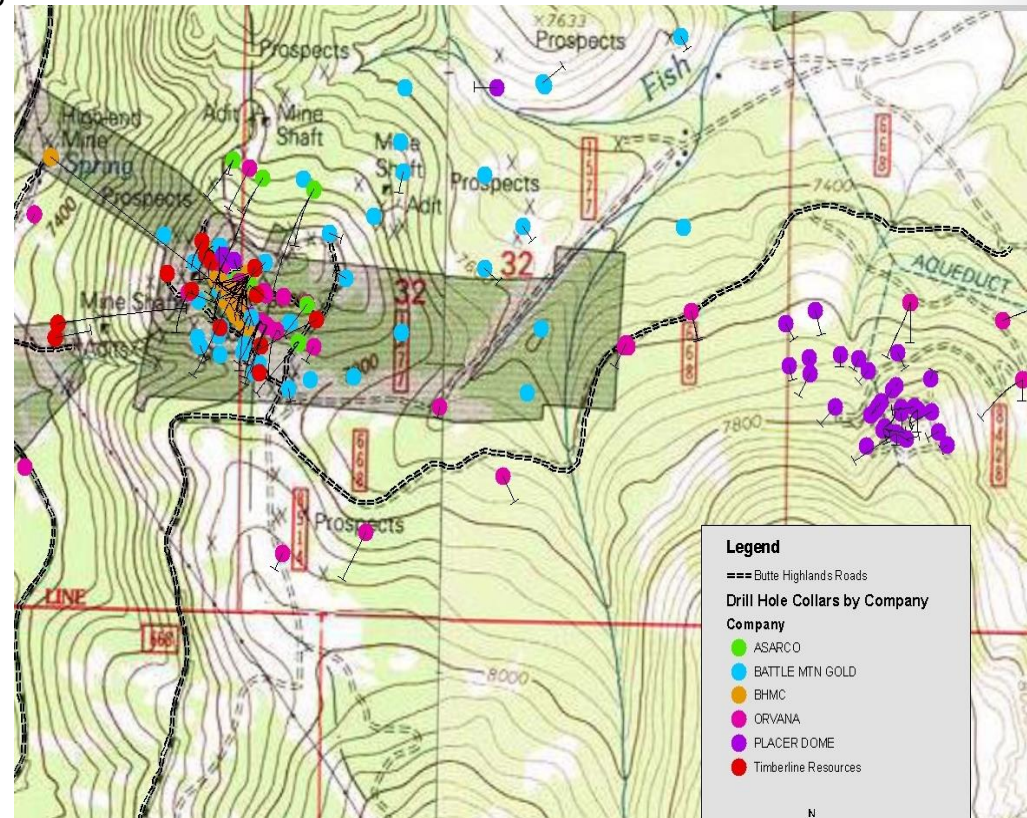
- Surface drilling – 9 Core holes and 6 Reverse Circulation (totaling 19,573 ft)

➤ **2009: Joint Venture Established**

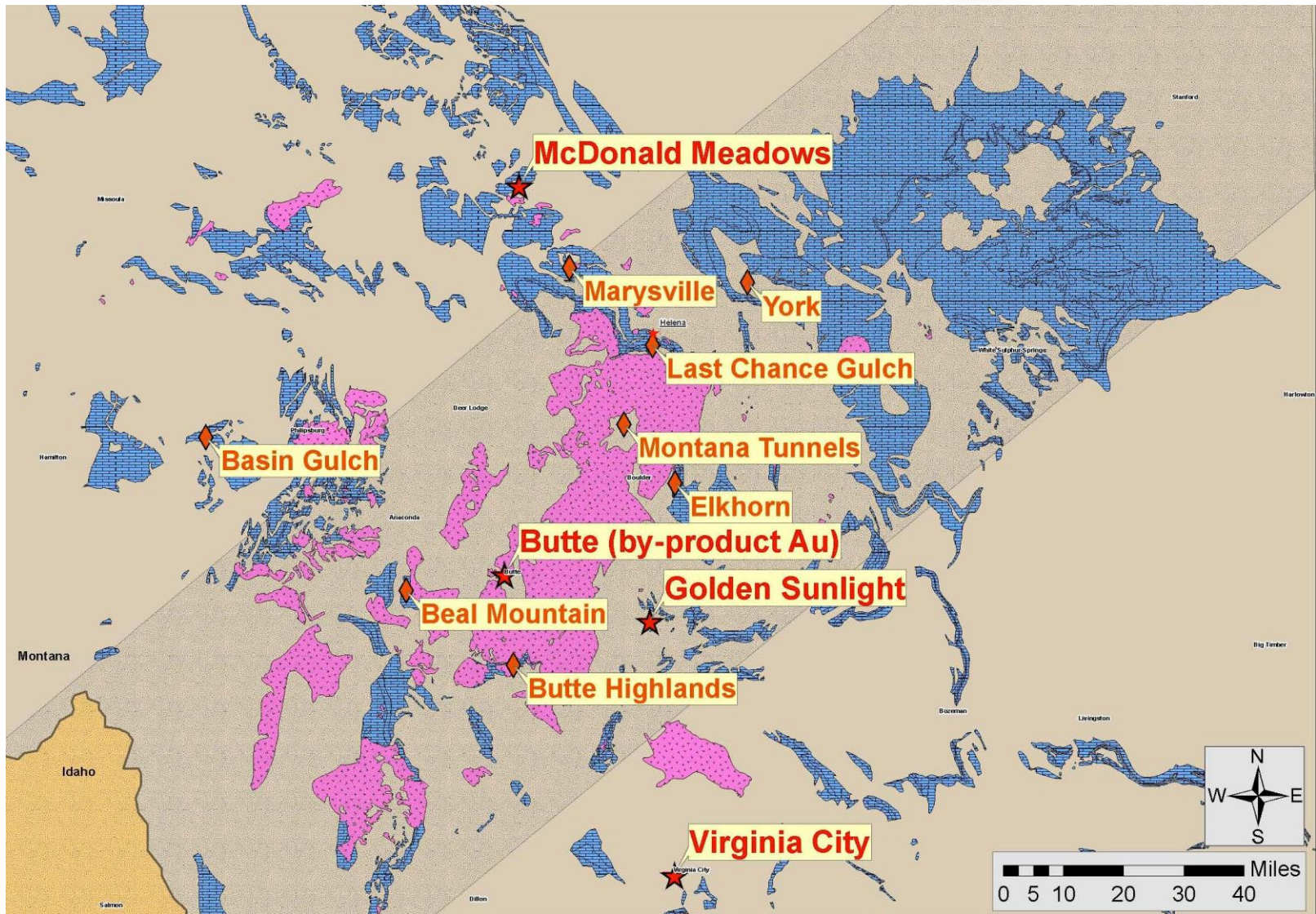
- Acquires Exploration Permit and initiates baseline studies
- Site facilities established and decline started

➤ **2010-2011: Advanced Exploration Development**

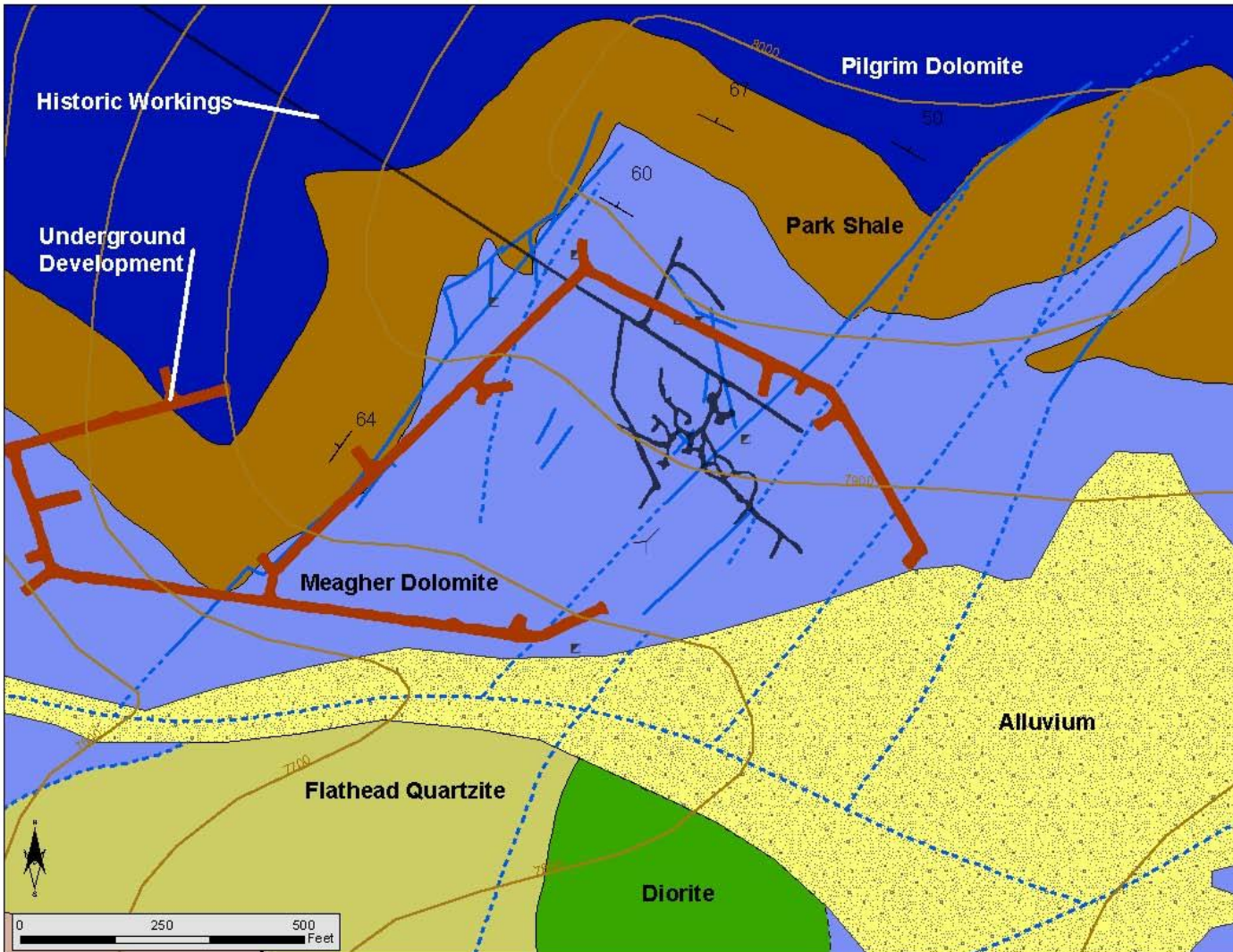
- Completes 4,500 ft of development work
- 99 underground drill holes
- 6 hydrology holes



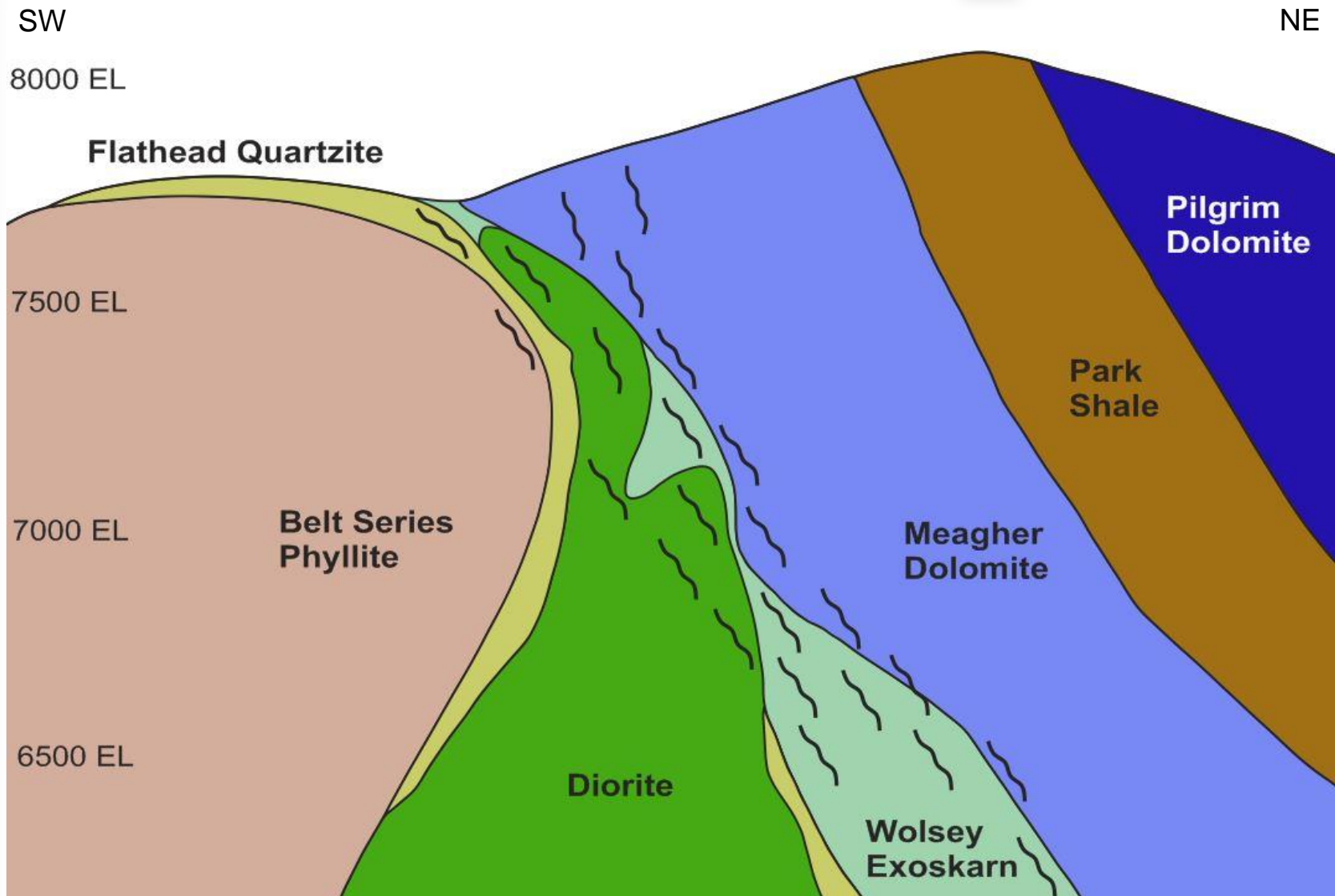
Regional Geology and Major Gold Occurrences



Surface Geology



Geology, Typical Section Looking 310°



Host Strata



Intrusive Rocks



Alteration: Schematic Section Looking 310°

SW

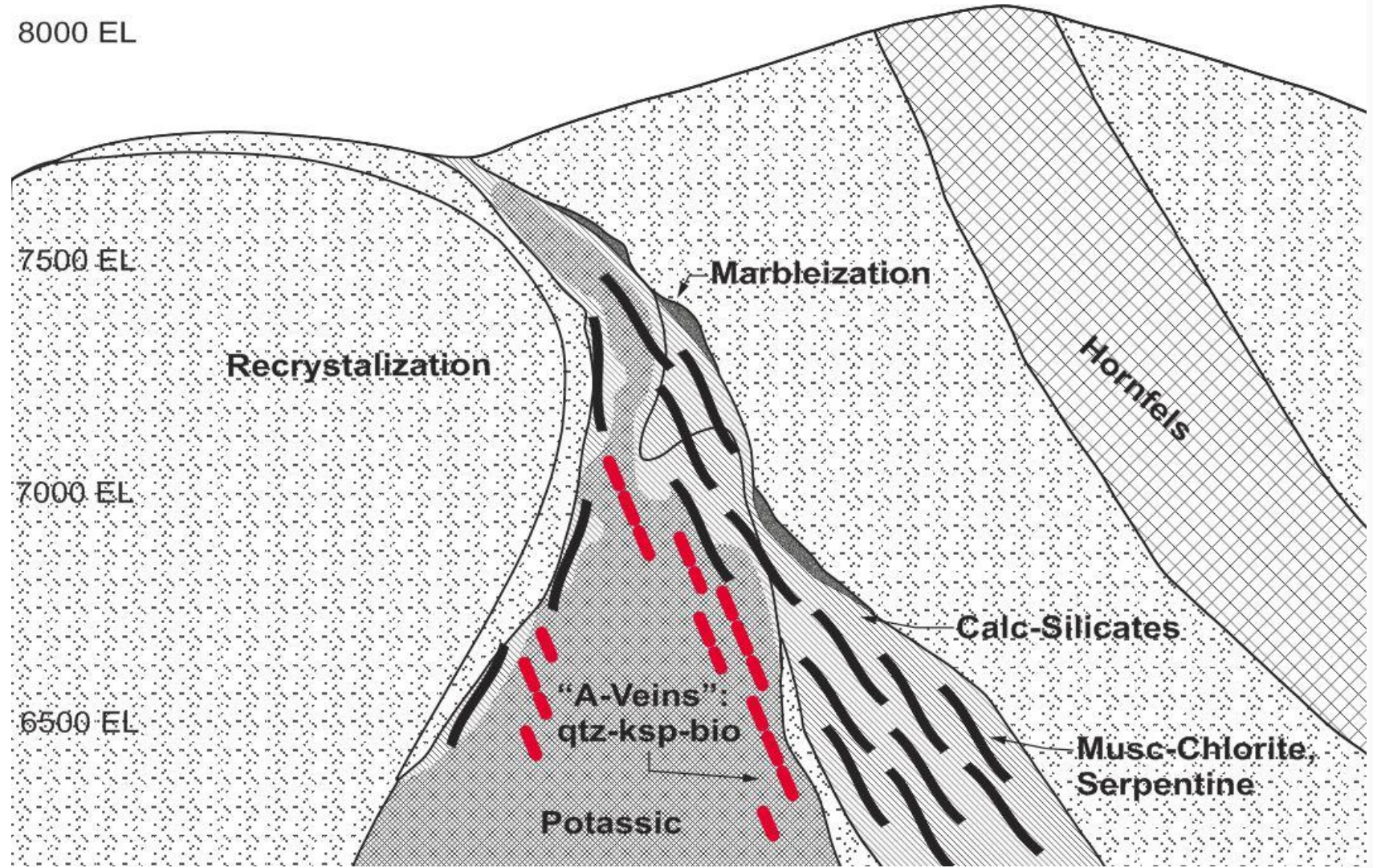
NE

8000 EL

7500 EL

7000 EL

6500 EL

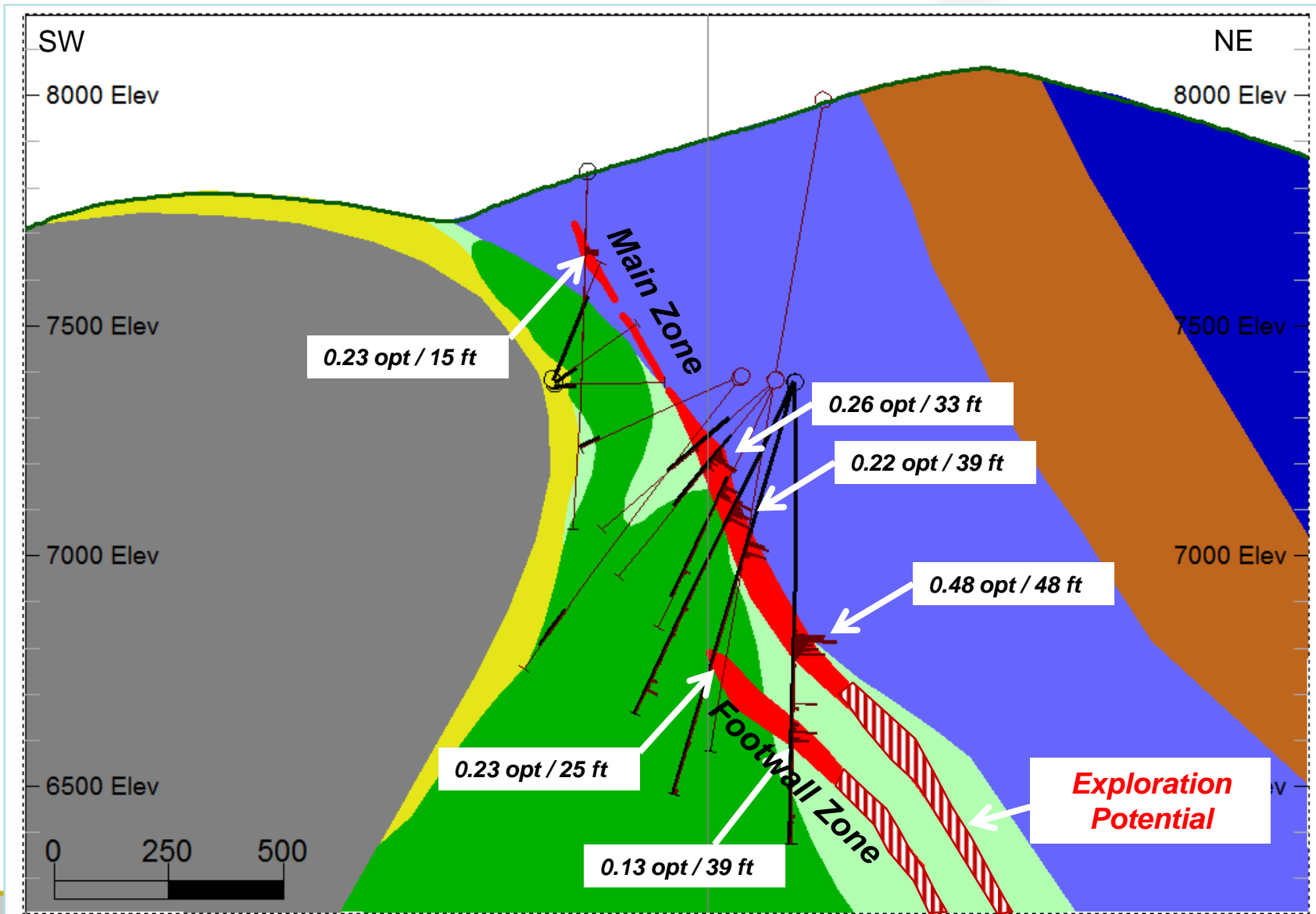


Alteration—Key Observations

- **Pervasive potassic: biotite - K-feldspar in Diorite with disseminated pyrrhotite**
- **Cross-cutting “A-Veins”:** quartz - K-feldspar-diopside + biotite envelopes
- **Pro-grade Skarn**
 - Diopside and/or Olivine:
 - veining to pervasive in Diorite
 - bedding-selective to pervasive in Wolsey Formation
 - Marblization — vein to massive calcite
- **Retrograde Skarn**
 - Mica: muscovite-chlorite
 - Serpentine
 - Pyrrhotite veining
 - Gold deposition(?)

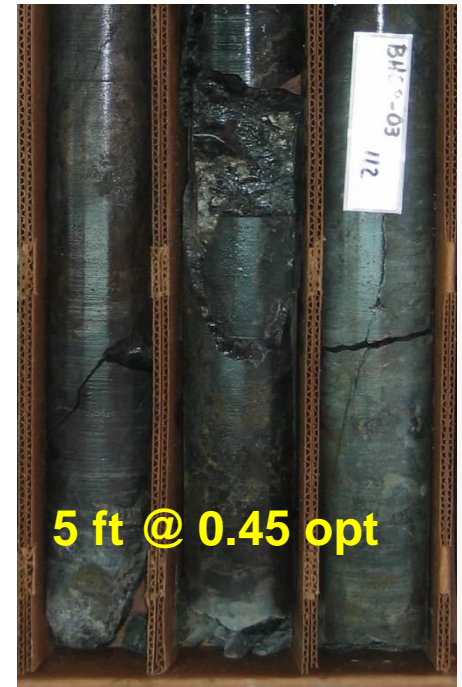


Mineralization, Typical Section Looking 310°



Mineralization

- Historic mining in oxidized breccia — (avg ~0.60 opt)
- Host rock variations: exoskarn, dolomite, marble, diorite
- Wide grade variation: <0.10 opt to 27 opt!
- Cryptic gold—even very high grades
- Very rare trace chalcopyrite and molybdenite
- No silver mineralization



➤ Potential Quantity and Grade of Butte Highlands Mineralization

- 170,000 – 200,000 gold ounces initial target
 - Average resource grade of 0.25 – 0.36 opt of gold
 - Approximately 4-5 years of estimated initial production at 400 tpd
 - Approximately 470,000 – 800,000 tons

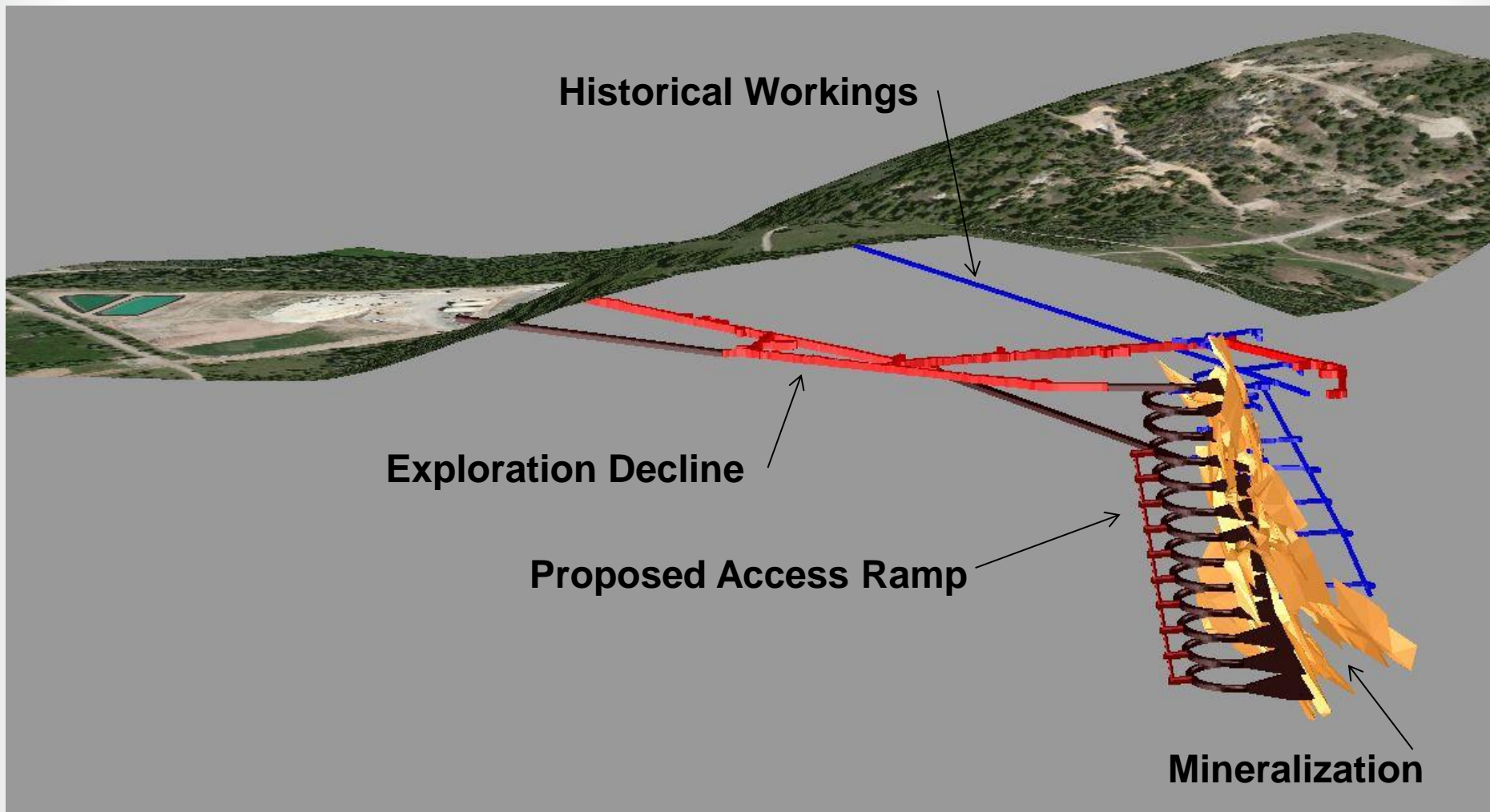
- 200,000 – 300,000 gold ounces additional geologic target potential
 - Internal analysis of additional drill intersections and geologic projections
 - Increases would take mine life to approximately 10 years
 - Approximately 560,000 – 1,200,000 tons

Cautionary Note: *These management estimates of the potential quantity and grade of the mineralization at Butte Highlands were determined based on drill results and geologic modeling using polygonal grade shells with a 0.14 ounce per ton cut-off and a non-statistical average grade calculation based on a weighted average grade within each polygon. The estimates are conceptual in nature, and there has been insufficient exploration drilling to define a mineral resource that may be categorized as an indicated, measured, or inferred resource. It is uncertain if further exploration will result in the target being delineated as a mineral resource as defined in Canadian NI 43-101.*

- **Skarn—but not related to diorite emplacement**
- **Multi-staged hydrothermal system**
 - Early, porphyry-related(?) stage(s) of potassic alteration
 - Follow-up “overprint” stages of skarn formation
 - Retrograde stage(s)
- **Gold deposition probably multi-staged**
 - Stratigraphic-intrusive-structural control: Main Zone
 - Structural control: Footwall Zone
 - Veining: pyrrhotite, quartz-K-feldspar
- **On-going structure and remobilization(?)**

Development Concept

3D Model Looking Northwest

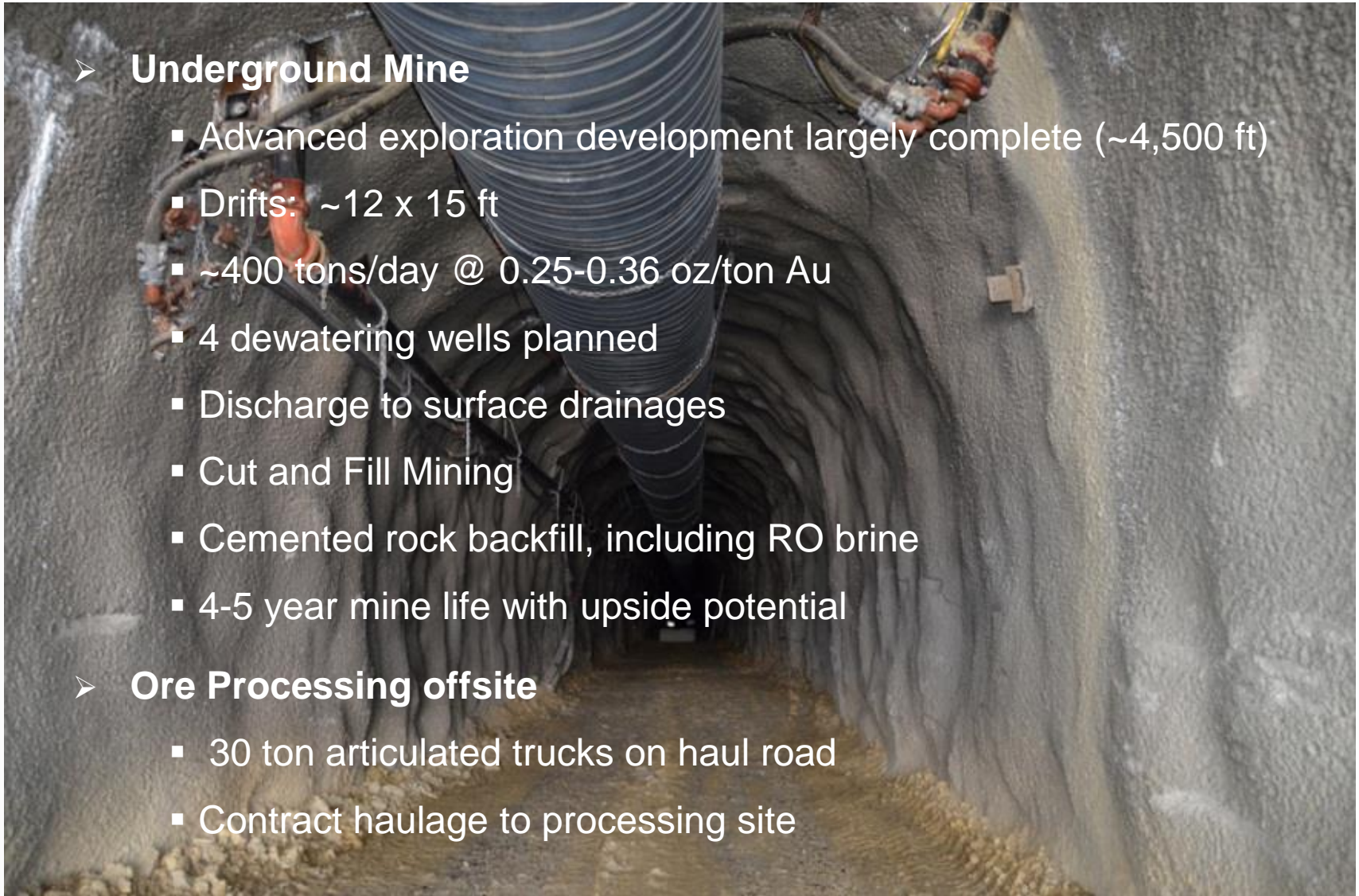


➤ **Underground Mine**

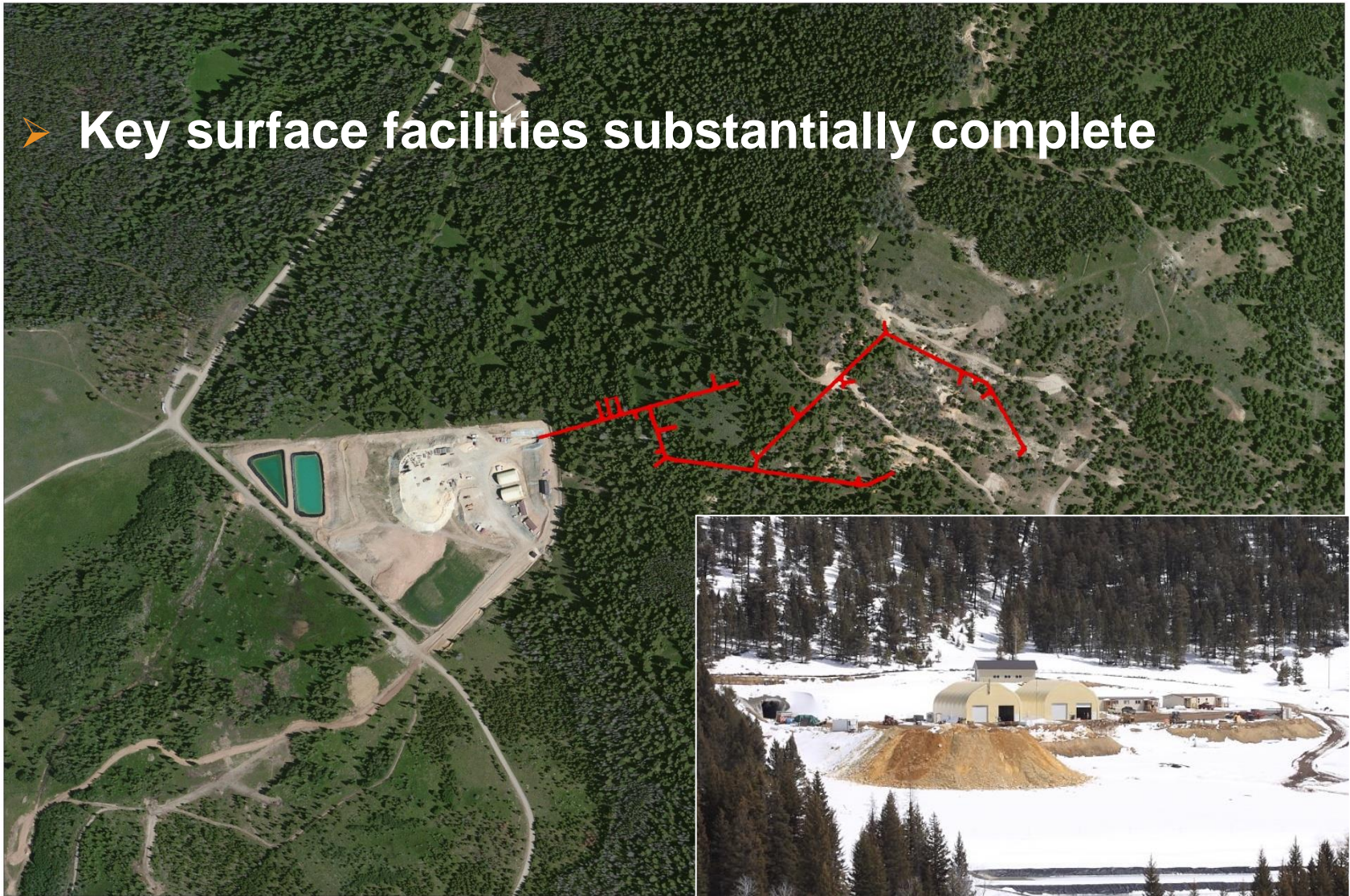
- Advanced exploration development largely complete (~4,500 ft)
- Drifts: ~12 x 15 ft
- ~400 tons/day @ 0.25-0.36 oz/ton Au
- 4 dewatering wells planned
- Discharge to surface drainages
- Cut and Fill Mining
- Cemented rock backfill, including RO brine
- 4-5 year mine life with upside potential

➤ **Ore Processing offsite**

- 30 ton articulated trucks on haul road
- Contract haulage to processing site



- Key surface facilities substantially complete



➤ Exploration License

- Allows underground development with no/limited dewatering discharge
- Allows drilling and collection of a 10,000 ton bulk sample

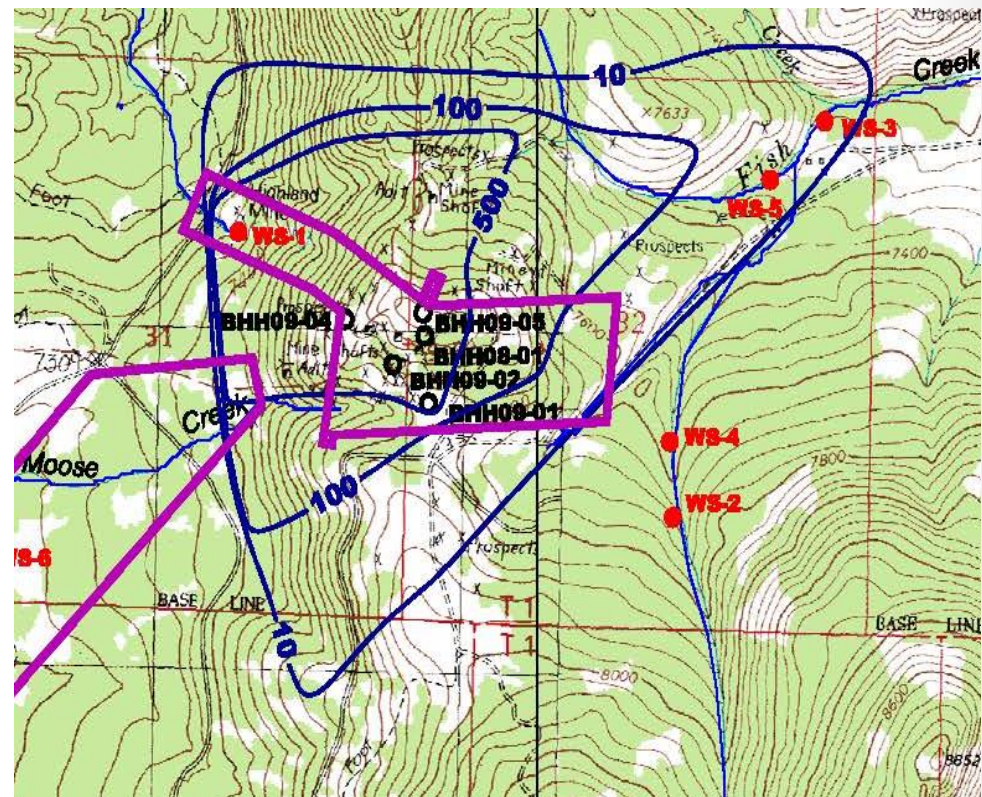
➤ Baseline Studies for EIS

- Climate and Air Quality
- Water Monitoring
- Wetlands
- Wildlife
- Aquatic Habitat and Biology
- Vegetation and Soils
- Land Use and Visual Resources
- Socioeconomics and Cultural Resources
- Hydrology: Groundwater and Surface
- Environmental Geochemistry



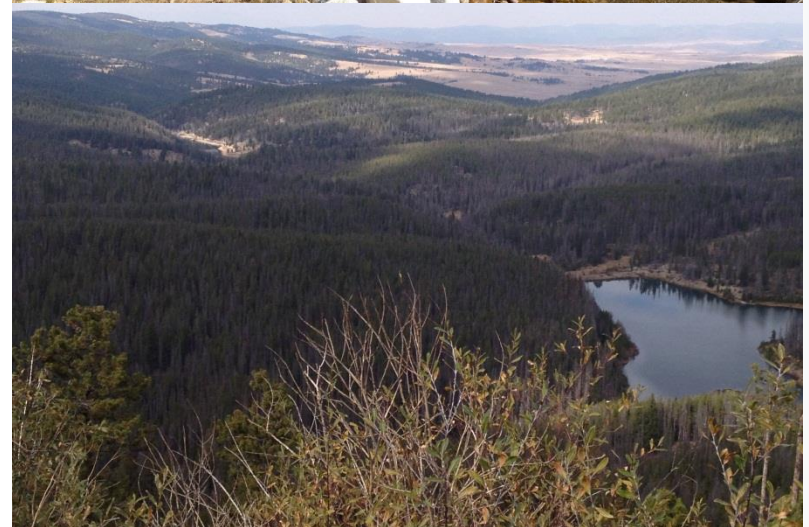
Permitting: Hydrogeology and Discharge

- **Current groundwater surface at ~7,339 ft,**
 - Controlled by historic Old Highlands Mine adit
- **Dewatering well pumping test**
- **Numerical modeling**
 - Up to 750 gpm dewatering rate
 - Clear boundary conditions
 - No impacts to wetlands anticipated
 - ~7-8 years post-mining groundwater recovery



➤ MPDES Non-degradation requirement

- Water Quality
 - Current contributor to Butte Silver Bow water supply
 - Required “polish” for: As, Ba, Cu, F, Fe, Pb, Mn, Ni, N (total) Sr, U, Zn
- Excess flow: 750 GPM
- Application support
 - Hydrology/geomorphology analysis
 - Wetland piezometers



➤ Surface Water and Groundwater Monitoring

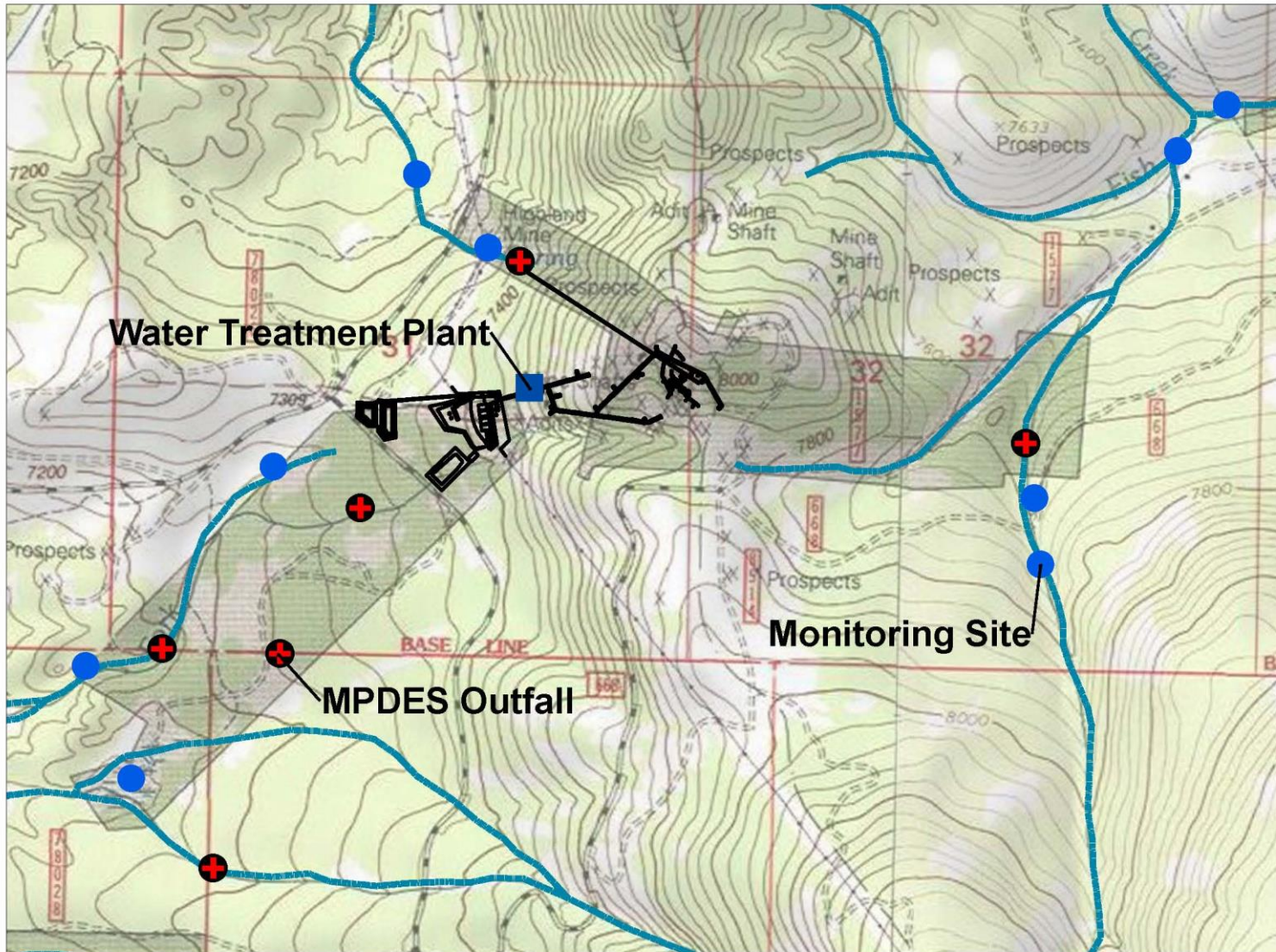
- 2008–2013: 16 sites
- Monthly to quarterly sampling
- >350 samples collected
- Up to 51 parameters analyzed at Pace Analytical

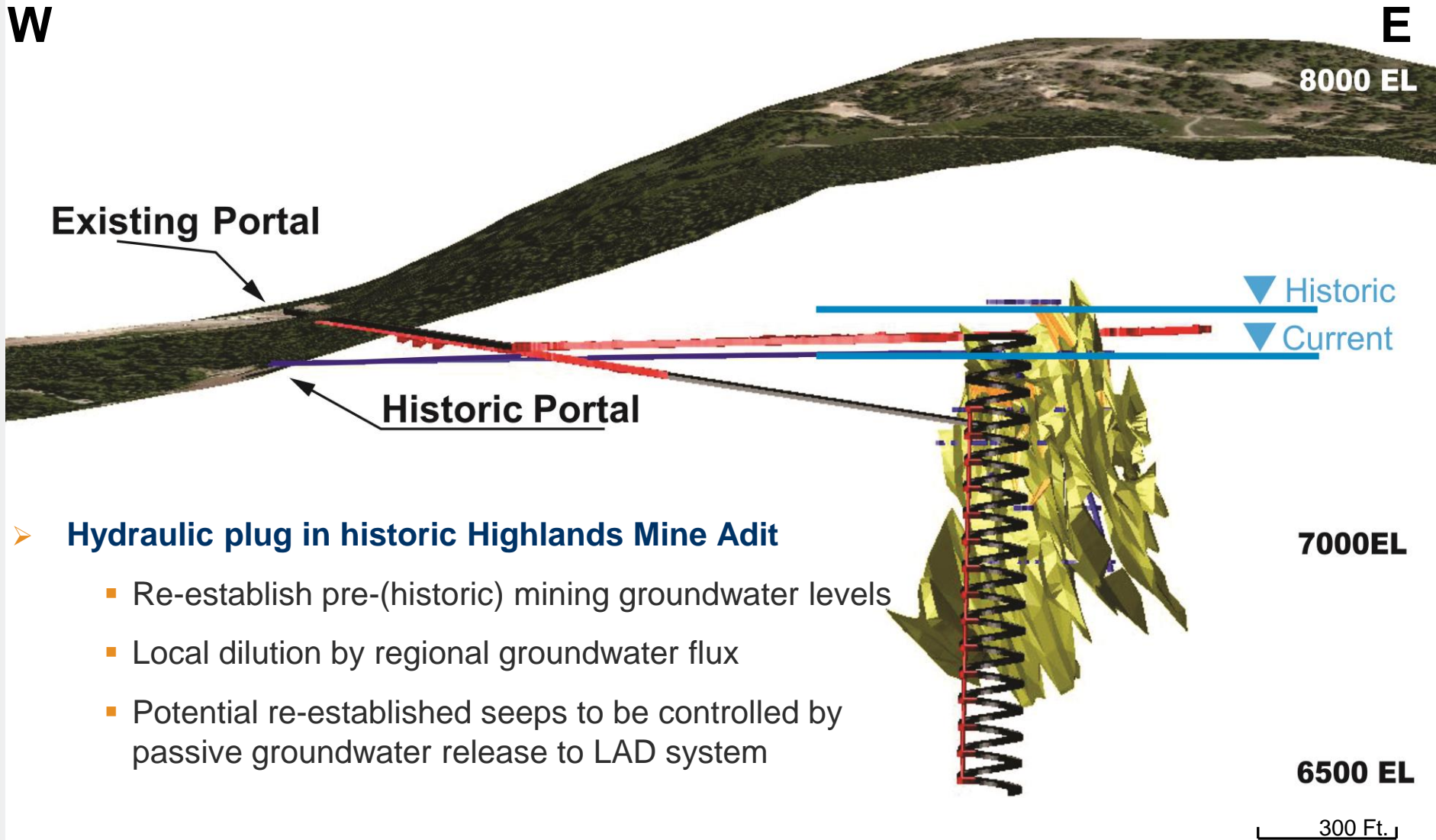
➤ MPDES Permit

- RO Water Treatment
- Hydrology/geomorphology analysis



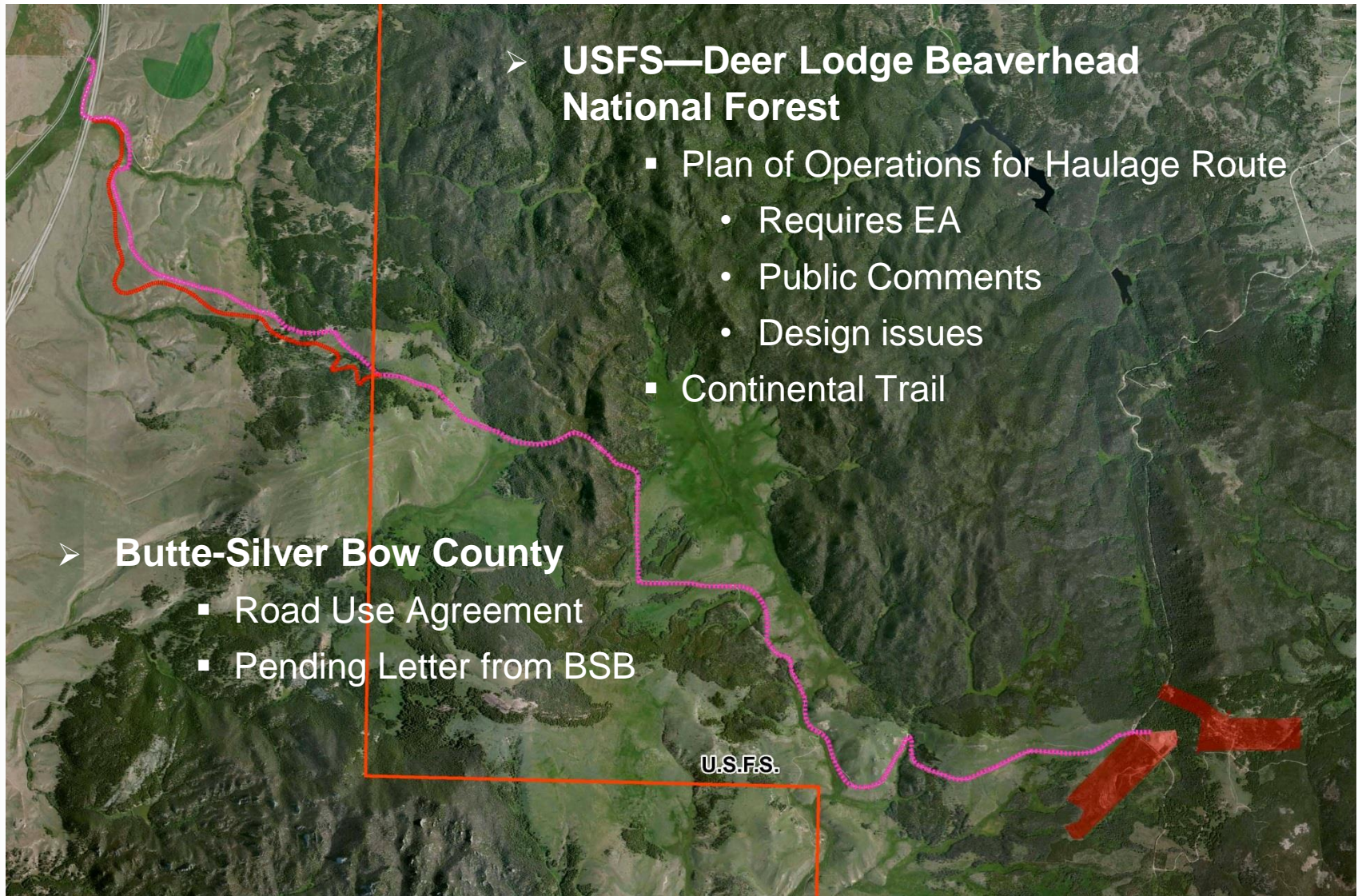
Surface Water Monitoring and Planned Discharge





➤ **Hydraulic plug in historic Highlands Mine Adit**

- Re-establish pre-(historic) mining groundwater levels
- Local dilution by regional groundwater flux
- Potential re-established seeps to be controlled by passive groundwater release to LAD system



Permitting Status

➤ MDEQ: MPDES Permit

- DRAFT: issued April 15, 2013
- Public Scoping: ends May 30th
- Public Meeting: May 20th

➤ MDEQ: Hard Rock Operating Permit

- DRAFT: issued December 7, 2012
- Draft EIS target: Q2, 2013
- EIS ROD target: late Q3, 2013

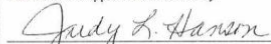
➤ USFS: Ore Haulage Plan of Operations

- EA in-progress
- ROD target: Q3, 2013

STATE OF MONTANA

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL MANAGEMENT BUREAU
Hard Rock Mining Program
PO BOX 200901
Helena, MT 59620-0901
(406) 444-2074

OPERATING PERMIT NO. 00178
Pursuant to Montana Metal Mine Reclamation Act
(Title 82, Chapter 4, Part 3, MCA)

NAME & ADDRESS OF PERMITTEE: Butte Highlands Joint Venture, LLC PO Box 4959 Butte, MT 59702	LEGAL DESCRIPTION OF PERMIT AREA LOCATION: MINE SITE: PORTIONS OF SECTIONS 31 & 32, TOWNSHIP 1 NORTH, RANGE 7 WEST, SECTIONS 5 & 6, TOWNSHIP 1 SOUTH, RANGE 7 WEST, AND SECTION 1, TOWNSHIP 1 SOUTH, RANGE 8 WEST HAUL ROAD AND ORE TRANSFER FACILITY: SECTIONS 18, 19 AND 20, TOWNSHIP 1 NORTH, RANGE 8 WEST AND SECTIONS 11, 12 AND 13, TOWNSHIP 1 NORTH, RANGE 9 WEST COUNTY: Silver Bow MILES AND DIRECTION FROM NEAREST TOWN: 15 miles south of Butte, MT
MINERALS TO BE MINED: Gold	TOTAL ACRES COVERED BY THIS PERMIT: <u>.659 acres</u> See Maps In Application TOTAL ACRES TO BE DISTURBED: <u>80.8 acres</u>
PERFORMANCE BOND AMOUNT: (The bond amount will be calculated prior to issuance of the final permit.)	
This Permit authorizes the Permittee to conduct mining activities as specified in:	
<ol style="list-style-type: none"> 1. The operating and reclamation plan set forth in the application for an operating permit submitted by the Permittee and any responses submitted by the Permittee to deficiencies in the application identified by the Department. 2. The Metal Mine Reclamation Act (Title 82, chapter 4, part 3, MCA) and the administrative rules adopted pursuant thereto. 3. Any stipulations placed in the Permit under Section 82-4-337(2)(b), MCA, that are attached hereto. 4. If incremental bonding is allowed under ARM 17.24.140, any conditions of the incremental bonding. 	
As a condition of the issuance of this draft permit, the Permittee is required to obtain other permits required by law but not provided for in the Metal Mine Reclamation Act. The other permits include, but are not limited to, any necessary air quality permits and water discharge permits.	
Pursuant to Section 82-4-337(h), MCA, a final permit may not be issued until:	
<ol style="list-style-type: none"> 1. Sufficient bond has been submitted pursuant to Section 82-4-338, MCA; 2. The information and certification have been submitted pursuant to Section 82-4-335(10); 3. The Department has found that permit issuance is not prohibited by Section 82-4-335(9), MCA; 4. The review pursuant to the Montana Environmental Policy Act (Title 75, chapter 1, MCA) is completed or 1 year has elapsed after the date the draft permit was issued, whichever is less. The applicant may by written waiver extend this time period; 5. The Department has made a determination that the application and the final permit meet the substantive requirements of the Metal Mine Reclamation Act and the rules adopted pursuant thereto. 	
The reclamation plan may be modified by the Department, upon proper application of the Permittee or after timely notice and opportunity for hearing, at any time during the term of the Permit and for any of the following reasons:	
<ol style="list-style-type: none"> 1. To modify the requirements so that they will not conflict with existing laws; 2. When the previously adopted reclamation plan is impossible or impracticable to implement and maintain; 3. When significant environmental problem situations not permitted under the terms of regulatory permits held by the Permittee are revealed by field inspection and the Department has the authority to address them under the provisions of the Metal Mine Reclamation Act. 	
A Person who violates any of the provisions of Title 82, Chapter 4, Part 3, MCA, or any administrative rule adopted or order issued under this part, on a term or condition of a permit issued under this part, shall pay a civil penalty of not less than \$100 or more than \$1,000 for the violation and an additional administrative penalty of not less than \$100 or more than \$1,000 for each day during which a violation continues.	
Within thirty (30) days after completion or abandonment of operations on an area under permit or within thirty (30) days after each anniversary date of the Permit, whichever is earlier, or at such later date as may be provided by the Board of Environmental Review and each year thereafter until reclamation is completed and approved, the Permittee shall pay the annual fee of one hundred dollars (\$100.00) and shall file a report of activities completed during the preceding year on a form available from the Department.	
This Permit is approved and issued by:	
for  Richard Oppen, Director Department of Environmental Quality	Date <u>December 7, 2012</u>

