

**APPROVED JURISDICTIONAL DETERMINATION FORM  
U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 12, 2015**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, Arturo Mine, SPK-2000-25139**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Nevada** County/parish/borough: **Elko** City: **Elko**

Center coordinates of site (lat/long in degree decimal format): Lat. **41.0312087671993°**, Long. **-116.432881884448°**  
Universal Transverse Mercator: **11 547673.11 4542376.43**

Name of nearest waterbody: **Boulder Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Humboldt River**

Name of watershed or Hydrologic Unit Code (HUC): **Rock, Nevada., 16040106**

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form:

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date: **January 13, 2015**

Field Determination. Date(s):

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):** <sup>1</sup>

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet, wide, and/or acres.

Wetlands: acres.

**c. Limits (boundaries) of jurisdiction based on: Pick List**

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):**<sup>3</sup>

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **The water identified as Channel A6 is an ephemeral drainage that flows into Antelope Creek. Antelope Creek is a tributary to the Humboldt River. Due to limited flows during rain and snow melt events and the distance to the Humboldt River (30 miles) and Rye Patch Reservoir (120 miles) any flows**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

would be lost due to evaporation and infiltration. Channel A6 has no significant nexus to a downstream TNW. The waters identified as Channels 1, 2, 3, 4, 5, 6a, 6b, 6 constructed, 7, 8a, 8b, 8c, 8d, 8e, 8 constructed, Channel 8, Channel 8 impoundment, Channel 11 Upper, Channel 11 Lower, Channel A6, Wetlands AR01, AR05, AR05a, AR09, AR16, AR17, and AR27 are intrastate isolated waters. Flows either terminate and infiltrate within the project area or flow to Boulder Creek. Boulder Creek loses its definition in lower Boulder Valley, 17.4 stream miles downstream from the project boundary. The last observation of jurisdictional features (scour, bed/bank, ordinary high water mark, etc) is 6.7 miles north of Rock Creek Ditch, a tributary of the Humboldt River.

### **SECTION III: CWA ANALYSIS**

#### **A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

##### **1. TNW**

Identify TNW:

Summarize rationale supporting determination:

##### **2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent":

#### **B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

##### **1. Characteristics of non-TNWs that flow directly or indirectly into TNW**

###### **(i) General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

###### **(ii) Physical Characteristics:**

###### **(a) Relationship with TNW:**

Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Project waters are **Pick List** river miles from TNW.  
Project waters are **Pick List** river miles from RPW.  
Project waters are **Pick List** aerial (straight) miles from TNW.  
Project waters are **Pick List** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>:  
Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

**Tributary** is:  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

**Tributary** properties with respect to top of bank (estimate):

Average width:            feet  
Average depth:           feet  
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts                            Sands                            Concrete  
 Cobbles                       Gravel                        Muck  
 Bedrock                       Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:  
Presence of run/riffle/pool complexes. Explain:  
Tributary geometry: **Pick List**  
Tributary gradient (approximate average slope):            %

(c) Flow:

Tributary provides for: **Pick List**  
Estimate average number of flow events in review area/year: **Pick List**  
Describe flow regime:  
Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:  
 Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank    the presence of litter and debris  
 changes in the character of soil            destruction of terrestrial vegetation  
 shelving    the presence of wrack line  
 vegetation matted down, bent, or absent    sediment sorting  
 leaf litter disturbed or washed away    scour  
 sediment deposition                        multiple observed or predicted flow events  
 water staining                                abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:            Mean High Water Mark indicated by:  
 oil or scum line along shore objects    survey to available datum;  
 fine shell or debris deposits (foreshore)    physical markings;

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

<sup>6</sup> A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

- physical markings/characteristics
- tidal gauges
- other (list):
- vegetation lines/changes in vegetation types.

**(iii) Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:  
Identify specific pollutants, if known:

**(iv) Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

**2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

**(i) Physical Characteristics:**

**(a) General Wetland Characteristics:**

Properties:

Wetland size: \_\_\_\_\_ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

**(b) General Flow Relationship with Non-TNW:**

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

**(c) Wetland Adjacency Determination with Non-TNW:**

- Directly abutting
- Not directly abutting
  - Discrete wetland hydrologic connection. Explain:
  - Ecological connection. Explain:
  - Separated by berm/barrier. Explain:

**(d) Proximity (Relationship) to TNW**

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

**(ii) Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:  
Identify specific pollutants, if known:

**(iii) Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

**3. Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately \_\_\_\_\_ acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
  - TNWs: \_\_\_\_\_ linear feet, \_\_\_\_\_ wide, Or \_\_\_\_\_ acres.
  - Wetlands adjacent to TNWs: \_\_\_\_\_ acres.
2. **RPWs that flow directly or indirectly into TNWs.**
  - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
  - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters:            linear feet            wide.
  - Other non-wetland waters:            acres.
- Identify type(s) of waters:

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters:            linear feet,            wide.
  - Other non-wetland waters:            acres.
- Identify type(s) of waters:

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
  - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
  
  - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area:            acres.

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area:            acres.

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area:            acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters:            linear feet,            wide.

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.



River (30 miles) and Rye Patch Reservoir (120 miles) any flows from Channel A6 would be lost due to evaporation and infiltration prior to reaching Rye Patch Reservoir. Channel A6 has no significant nexus to a downstream TNW.

In November 2006, the Corps reviewed the Barrick Goldstrike Mine, Inc., 2006 Boulder Creek Jurisdictional Assessment, and on November 20, 2006 determined 11.5 miles of waters, identified as Boulder, Bell, Brush, and Rodeo Creeks are intrastate isolated waters with no apparent interstate or foreign commerce connection. According to the Corps' 2006 evaluation, the Boulder Creek channel lost definition approximately 3 miles north of Rock Creek Ditch. In the 2001 delineation report, Boulder Creek channel lost definition between 5.2 and 7.4 miles north of Rock Creek Ditch.

In September 2008, a waters delineation was prepared for the project area. The waters identified as Channel 4 (0.020 acres), Channel 5 (0.202 acres), Channel 6a (0.019 acres), Channel 6b (0.010 acres), Channel 6 Constructed (0.124 acres), and Wetland AR27 (0.014 acres) were determined to terminate within the project area and infiltrate into the ground. Since surface water flows terminate within the project boundaries, Channels 4, 5, 6a, 6b, and 6, West Swale, Wetland AR27 and its associated seep were determined to be isolated waters since they are approximately 28 miles from Rock Creek Ditch, the nearest potential jurisdictional waterway.

The waters identified as Channel 1 (0.147 acres), Channel 2 (0.020 acres), Channel 3 (0.002 acres), Channel 7 (0.051 acres), Channel 8a (0.272 acres), Channel 8b (0.052 acres), Channel 8c (0.036 acres), Channel 8d (0.005 acres), Channel 8e (0.010 acres), Channel 8 Constructed (0.220 acres), Wetland AR01 (0.059 acres), Wetland AR05 (1.431 acres), Wetland AR05a (0.206 acres), Wetland AR09 (2.006 acres), Wetland AR16 (0.250 acres), Wetland AR17 (0.256 acres), were determined to flow to Boulder Creek.

In April 2014, a redelineation of the waters delineated in September 2008 was conducted as well as a delineation of new the new Barrick Claim Area. In the new area, Channel 8 (0.070 acres), Channel 8 impoundment (3.168 acres), and Channel 11 Lower (0.183) were also identified within the Boulder Creek Watershed.

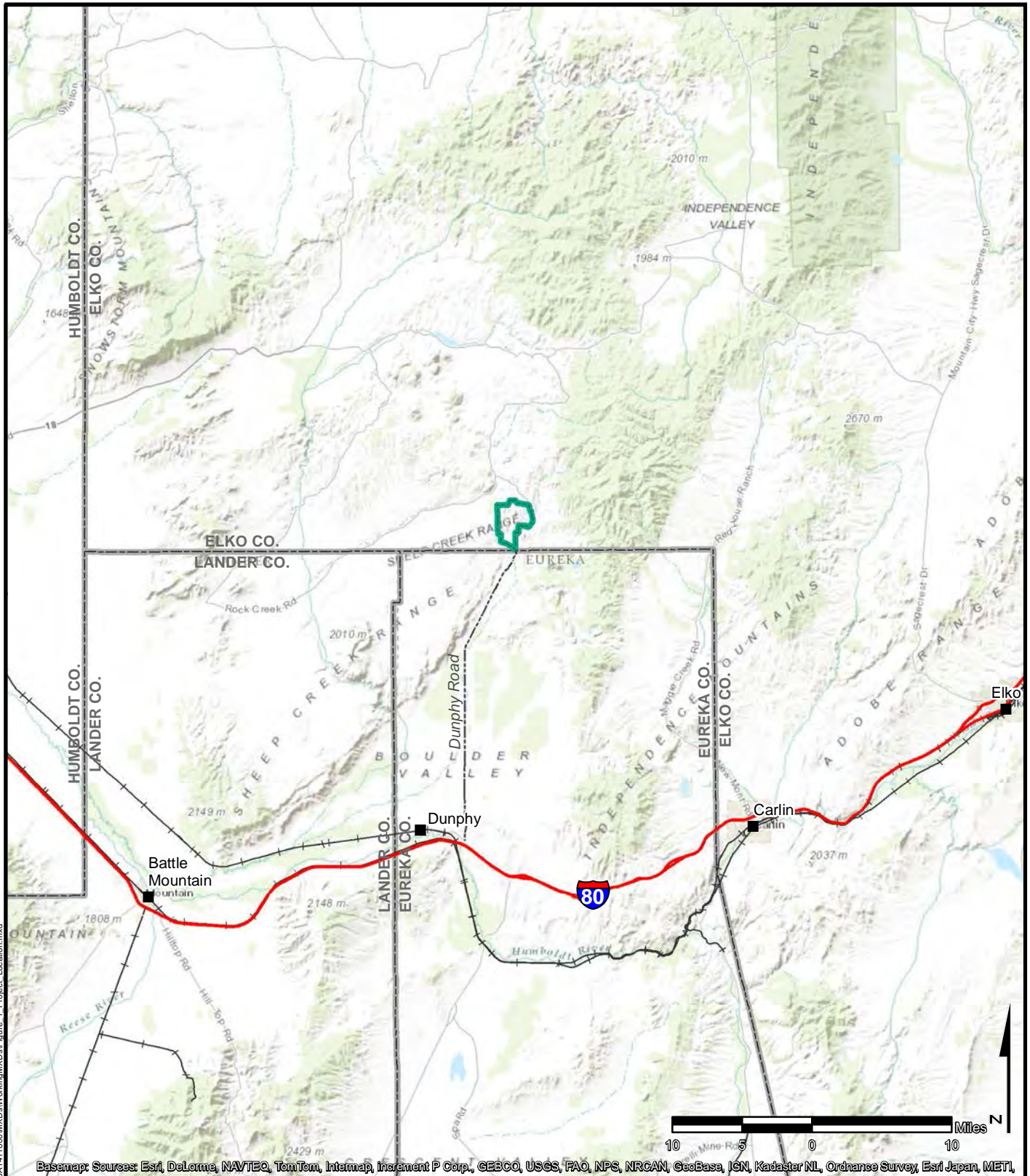
According to the 2008 delineation for the project area, the gradient in Boulder Valley, between the point where Boulder Creek crosses Dunphy Road in northern Boulder Valley to the creek's mapped confluence with Rock Creek Ditch is very flat, averaging approximately 11 feet per mile or a 0.2% slope. In this flat valley setting, the Boulder Creek channel braids and meanders considerably as it flows south through the valley, greatly increasing the distance over which water must pass to reach a tributary to the Humboldt River. The USGS mapped Boulder Creek channel terminates at a diversion of Rock Creek. In the project vicinity, Boulder Creek is a cobble and boulder-bedded channel averaging approximately 8 feet in width. The channel widens downstream, to approximately 30 feet wide at the point the channel crosses to the western side of Boulder Valley Road. As the channel continues through the side part of the valley, the channel width decreases. A 6-foot active channel was observed approximately 14.5 stream miles downstream of the project area. A discontinuous 3-foot OHWM channel was observed approximately 16.9 miles from the project. At approximately 17.8 miles from the project area, no evidence of OHWM was found. The 2008 report documents a 6.7-mile gap between Boulder Creek and Rock Creek Ditch. The distance from Rock Creek Ditch to the Humboldt River, the nearest potential jurisdictional tributary to Rye Patch Reservoir is 23-30 miles.

In 2014 the 2011 Flow Frequency Assessment for Boulder Creek was updated and included as part of the delineation report. This analysis found that the OHWM was correctly identified the terminus of Boulder Creek prior to connection with the Humboldt River.

The waters identified as Channels 1, 2, 3, 4, 5, 6a, 6b, 6 constructed, 7, 8a, 8b, 8c, 8d, 8e, 8 constructed, Channel 8, Channel 8 impoundment, Channel 11 Upper, Channel 11 Lower, Channel A6, and Wetlands AR01, AR05, AR05a, AR09, AR16, AR17, and AR27 are intrastate isolated waters. Flows either terminate and infiltrate within the project area or flow to Boulder Creek. Boulder Creek loses its definition in lower Boulder Valley, 17.4 stream miles downstream from the project boundary. The last observation of jurisdictional features (scour, bed/bank, ordinary high water mark, etc) is 6.7 miles north of Rock Creek Ditch, a tributary of the Humboldt River. These waters have limited or intermittent surface water flow and do not support recreation, fishery, commercial, or industrial uses. No interstate commerce connections were found that would be adversely affected as a result of degradation or destruction of these waters. In April 2014, a redelineation of the waters delineated in September 2008 was conducted and found no changes from the previous 2008 delineation.

Therefore, the Corps has determined that the waters identified as 1, 2, 3, 4, 5, 6a, 6b, 6 constructed, 7, 8a, 8b, 8c, 8d, 8e, 8 constructed, Channel 8, Channel 8 impoundment, Channel 11 Upper, Channel 11 Lower, Channel A6, Wetlands AR01, AR05, AR05a, AR09, AR16, AR17, and AR27 are non-jurisdictional because they are intrastate isolated, non-navigable waters with no interstate commerce connection





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 Arturo Mine Plan of Operations



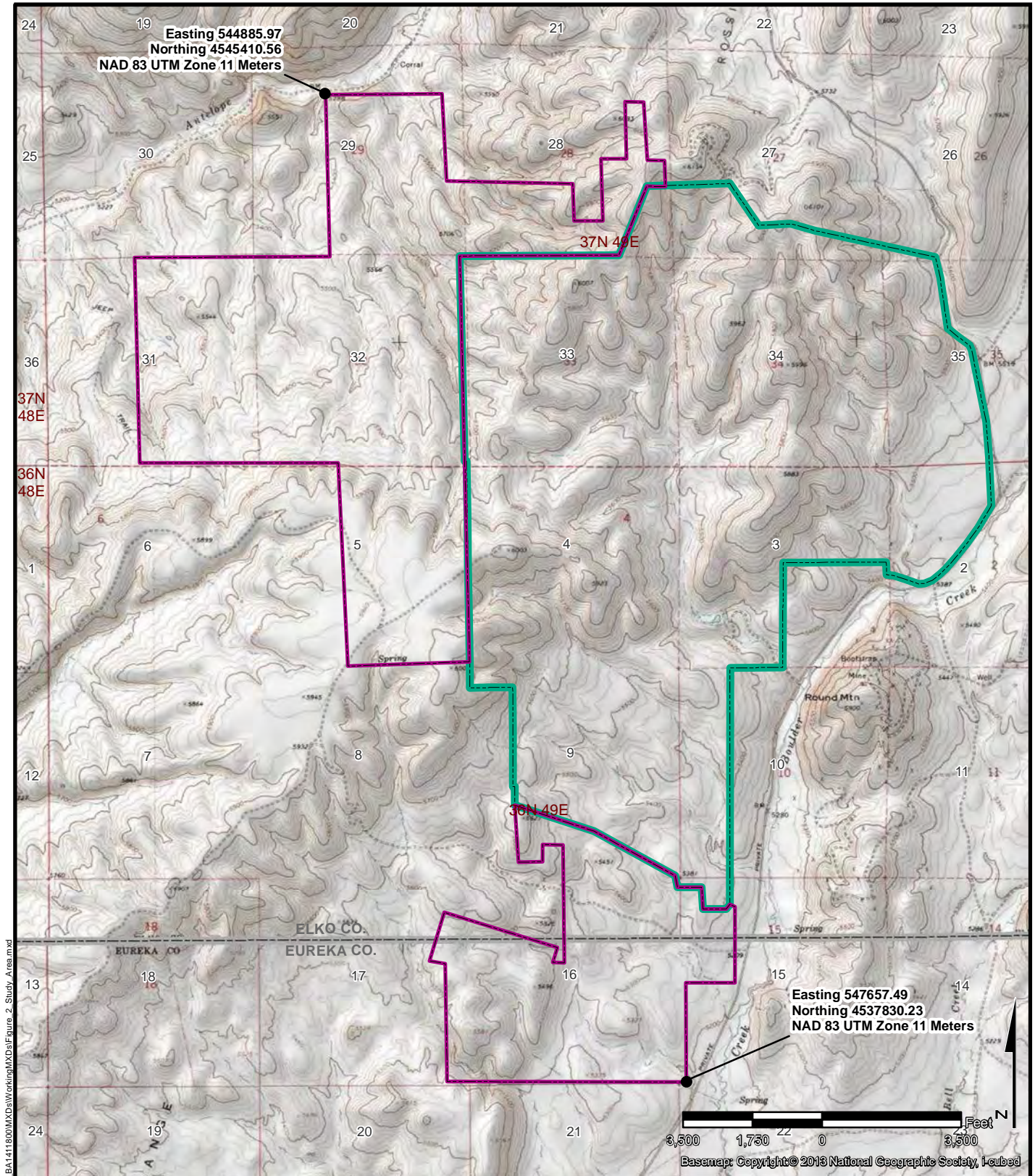
## BARRICK DEE MINING VENTURE 2014 ARTURO PROJECT WOUS

**FIGURE 1  
PROJECT LOCATION**



DRAWN BY	CHJ	DATE DRAWN	8/8/2014
SCALE	1 in = 10 miles		
PROJECT	203714118		





X:\NVI\Clients\Barrick\Arturo-Jurisdictional\Determinations\BA1411800\MXD\Working\MXD\Figure 2 Study Area.mxd

- Arturo Mine (3,510 acres)
- Barrick Claim Areas (2,596 acres)

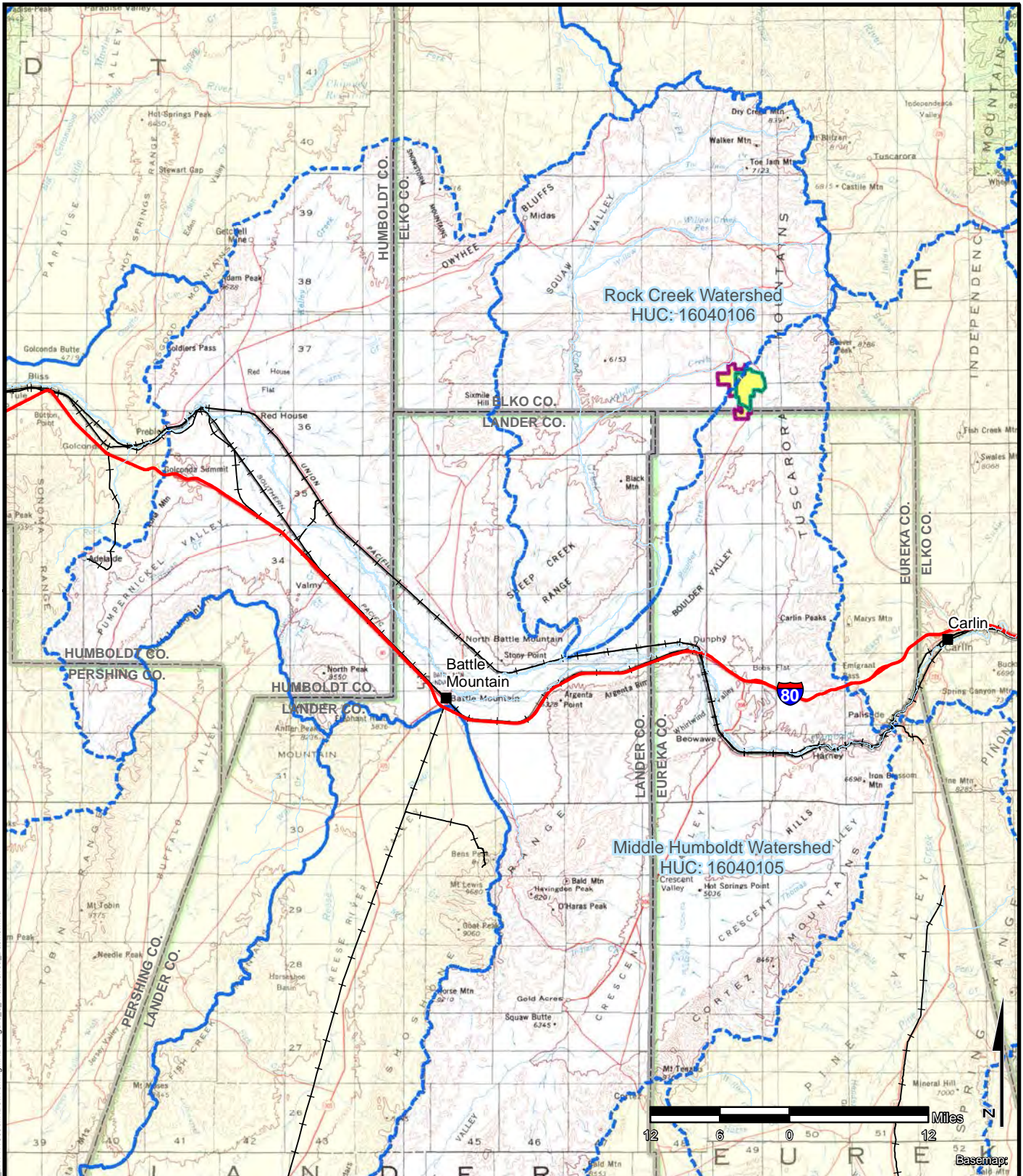
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


### FIGURE 2 STUDY AREA



DRAWN BY	CHJ	DATE DRAWN	9/11/2014
SCALE	1 in = 3,500 feet		
PROJECT	203714118		





-  Arturo Mine Plan of Operations
-  Barrick Claim Areas
-  Watershed Basins

**BARRICK DEE MINING VENTURE  
2014 ARTURO PROJECT WOUS**

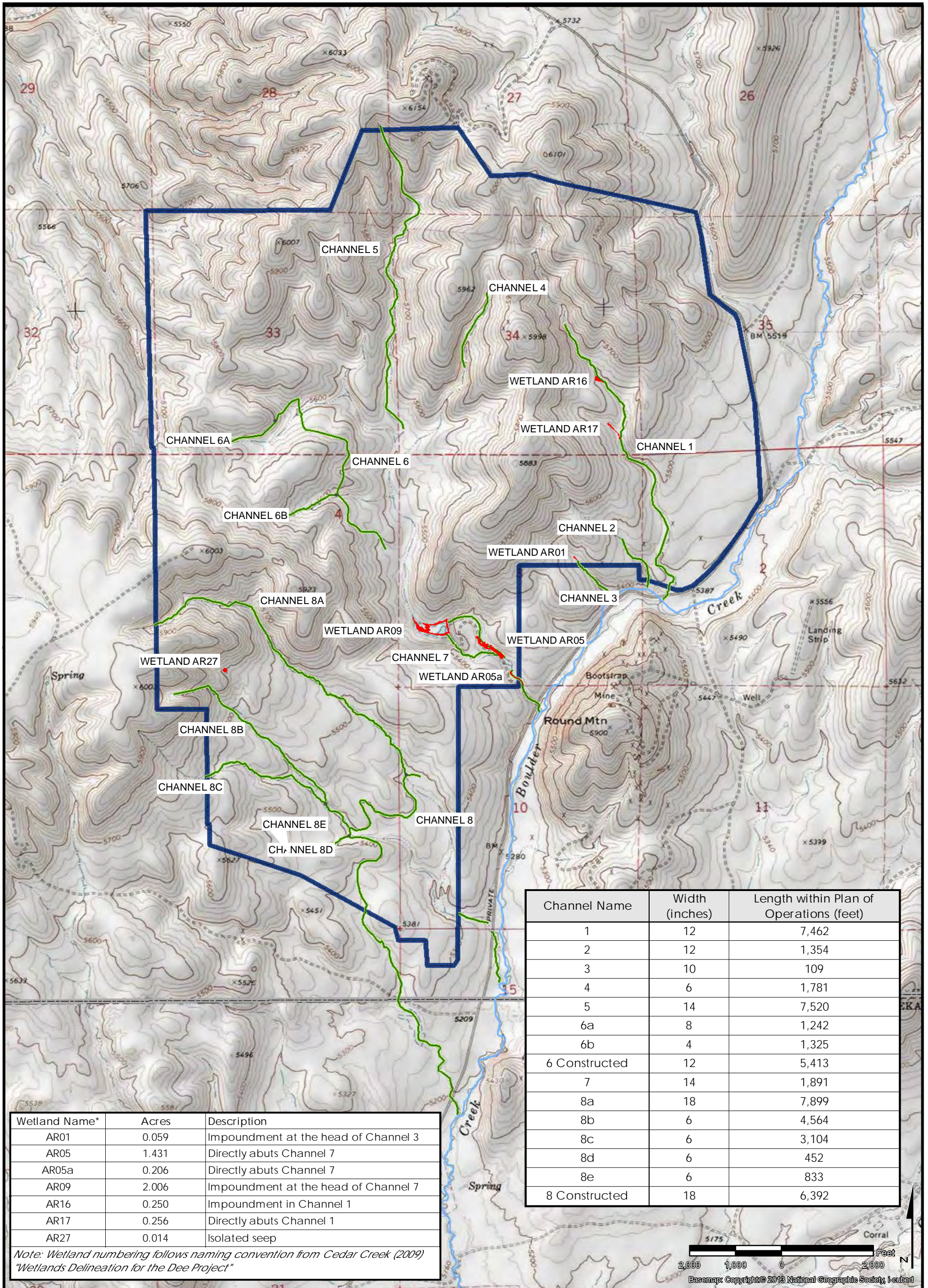
**FIGURE 3  
WATERSHED BASINS**



DRAWN BY	CHJ	DATE DRAWN	8/8/2014
SCALE	1 in = 12 miles		
PROJECT	203714118		

X:\NVI\Clients\Barrick\Arturo-jurisdictional\Determination\_BA1411800\MXD\Working\MXD\Figure\_3\_Watershed\_Basins.mxd





Channel Name	Width (inches)	Length within Plan of Operations (feet)
1	12	7,462
2	12	1,354
3	10	109
4	6	1,781
5	14	7,520
6a	8	1,242
6b	4	1,325
6 Constructed	12	5,413
7	14	1,891
8a	18	7,899
8b	6	4,564
8c	6	3,104
8d	6	452
8e	6	833
8 Constructed	18	6,392

Wetland Name*	Acres	Description
AR01	0.059	Impoundment at the head of Channel 3
AR05	1.431	Directly abuts Channel 7
AR05a	0.206	Directly abuts Channel 7
AR09	2.006	Impoundment at the head of Channel 7
AR16	0.250	Impoundment in Channel 1
AR17	0.256	Directly abuts Channel 1
AR27	0.014	Isolated seep

Note: Wetland numbering follows naming convention from Cedar Creek (2009) "Wetlands Delineation for the Dee Project"

- Isolated Channel Verified by the Corps (Not Jurisdictional)
- Isolated Wetland Verified by the Corps (Not Jurisdictional)
- Arturo Mine Plan of Operations

**BARRICK DEE MINING VENTURE  
2014 ARTURO PROJECT WOUS**

**FIGURE 5  
2010 APPROVED  
JURISDICTIONAL DETERMINATION**

**Stantec**

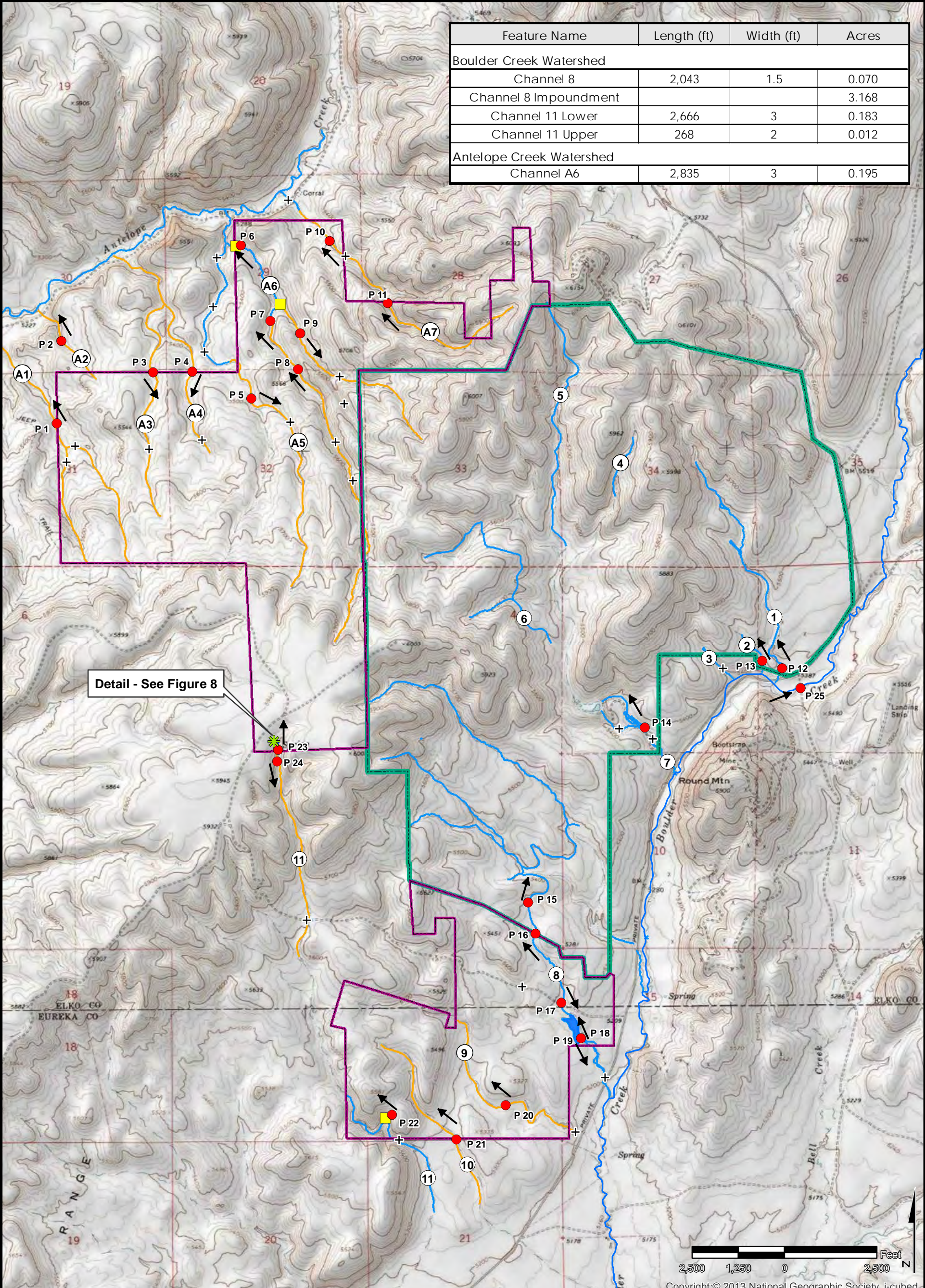
DRAWN BY	CHJ	DATE DRAWN	9/4/2014
SCALE	1 in = 2,000 feet		
PROJECT	203714118		

Path: X:\MV\Clients\Barrick\Arturo-JurisdictionalDetermination\_BA1411800\MXD\Working\MXD\Figure\_5\_Preview\_Jurisdictional\_Determination\_11X17.mxd

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Feature Name	Length (ft)	Width (ft)	Acres
Boulder Creek Watershed			
Channel 8	2,043	1.5	0.070
Channel 8 Impoundment			3.168
Channel 11 Lower	2,666	3	0.183
Channel 11 Upper	268	2	0.012
Antelope Creek Watershed			
Channel A6	2,835	3	0.195



Detail - See Figure 8



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- Arturo Mine Plan of Operations
- Barrick Claim Areas
- Photo Point and Direction
- ✱ Wetland Data Point
- OHW Data Point
- + Observation Point (data available upon request)
- Channel with OHW
- Swale (no OHW)
- 11 Channel or Swale Number

**BARRICK DEE MINING VENTURE  
2014 ARTURO PROJECT WOUS**

**FIGURE 6  
CHANNELS - TOPOGRAPHIC**

	DRAWN BY	CHJ	DATE DRAWN	8/8/2014
	SCALE	1 in = 2,500 feet		
	PROJECT	203714118		

Path: X:\NV\Clients\Barrick\Arturo-JurisdictionalDetermination\_BA1411800\MXD\Working\MXD\Figure\_6\_Channels\_Topo\_v4.mxd