



**QUESTA TAILINGS PIPELINE REMOVAL
STAGE 3 WORK PLAN
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
QUESTA MINE**

August 13, 2018

Project #: 476-027-002

SUBMITTED BY: Trihydro Corporation

707 West 1st Street, Casper, WY 82601

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1.0 INTRODUCTION

Chevron Mining Inc. (CMI) submitted the revised “Questa Tailings Pipeline Removal, Mining Minerals Division (MMD) / New Mexico Environmental Department (NMED) Work Plan, Chevron Environmental Management Company, Questa Mine” (Removal Work Plan) (Trihydro 2017) to New Mexico Energy, Minerals and Natural Resources Department (EMNRD), MMD, NMED Groundwater Bureau and U.S. Environmental Protection Agency, Region 6 (USEPA) on May 19, 2017. Approval for this Removal Work Plan was received from MMD and NMED on June 5, 2017 and from USEPA on June 14, 2017. The Removal Work Plan provides an overarching plan for the removal of the Questa tailings pipeline. The Removal Work Plan states that specific work plans will be developed to detail the removal plans for individual pipeline segments.

The pipeline removal project has been divided into eight stages. Stage 1 activities entail the removal of high density polyethylene (HDPE) and steel pipe from the existing tailings facility. Stage 1 work was performed solely under the process described in the Removal Work Plan. Stage 1 work commenced July 10, 2017 and was completed July 24, 2017. Stage 2 through Stage 8 work activities will be conducted under the Removal Work Plan as well as individual stage specific work plans. Stages 2 through Stage 8 are outlined in Table 1-1 and are not anticipated to be completed in numerical order.

This document represents the individual plan for Stage 3 removal of the tailings pipeline. The work identified in this plan will result in the removal of approximately 12,700 feet (ft) of pipe. The pipe will be removed principally from CMI owned property, thereby limiting the number of additional permits and access agreements required.

TABLE 1-1. PIPELINE SEGMENT PRIORITIZATION AND STAGE IDENTIFICATION

Pipeline Segment Description	Approximate Length of Segment (feet)	Stage
Tailing Facility	10000	1
Columbine Wells Area	4000	2
Tailing Facility Entrance	2800	2
Corny's Corner hillside	1200	2
4th Road Crossing (State Road) plus Embargo Road	1100	2
Singleton's Cut	2900	2
Robinson's Property	850	2
East of Molycorp baseball field	1400	2
Upstream of the lower Dump Sump	1600	2
Pressure vessels to underground	500	3
East of Middle Pile	1000	3
Goat Hill Entrance Area	2350	3
Bear Cut	2500	3
USFS Office Area	3200	4
Forest Service Property west of Molycorp field	950	4
East of Sulphur gulch	650	5
West of Sulphur gulch	1200	5
Sugar Shack South	4100	5
1st Road Crossing (East Hwy 38 road)	90	5
Columbine Curve	1400	5
2nd Road Crossing	90	5
Admin Section	1800	5
Between Goat Hill and Bear Cut	2500	5
3rd Road Crossing	90	5
Rock Wall (Between Bear Cut and Forest Service) (aka "Rock and Hard Place")	3300	5
Lower Embargo Road Crossing		5
Rael Property	1500	6
1st River Crossing (by Columbine Park)	60	6
2nd River Crossing (aka Thunder Bridge)	100	6
3rd River Crossing	100	6
Elevated Trestle	1300	7
Lower Dump Sump	0	8
Downstream of 1st River Crossing- Columbine Park Entrance	600	

2.0 AGENCY PERMITS AND NOTIFICATIONS

The bulk of Stage 3 activities will be covered by the MMD Mining Act Permit TA001RE, Revision 96-1 and NMED Discharge Permit DP-933. Any historic tailing spills encountered during the pipeline removal will be removed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Administrative Order on Consent for Removal Actions (Removal AOC), Docket No. 06-09-12.

Additional permits/notifications required may include:

- An excavation permit from Taos County will be required if tailings removal will exceed 50 cubic yards. The amount of tailings to be removed will be calculated during the pipe removal process. If the estimated quantity exceeds 50-cubic yards CMI will apply to Taos County for an excavation permit.
- An asbestos notification form under the National Emission Standards for Hazardous Air Pollutants (NESHAP) submitted to the NMED Air Quality Bureau (AQB) will be filed before any asbestos removal is undertaken. The pipeline and associated structures have been sampled for the presence of asbestos and lead under the guidelines presented in the Removal Work Plan. Stage 3 piping was found to be non-detect for asbestos during August 2017 sampling events.
- A Storm Water Pollution Prevention Plan (SWPPP), 2012 Construction General Permit (CGP) will be obtained before starting work.
- Consultation with the New Mexico Historic Preservation Division (NMHPD) of the New Mexico Department of Cultural Affairs regarding the historic structures survey being completed at the site. A survey was completed and submitted to NMHPD.

Work will not begin until approval to proceed has been received.

3.0 STAGE 3 AREAS

A description of the areas included in the Stage 3 pipeline removal plan are illustrated below in Table 3-1. Figure 3-1 provides an overall view of the Stage 3 project areas. Detailed views of individual pipe sections are included as Figures 3-2, 3-3 and 3-4.

TABLE 3-1. AREAS INCLUDED IN STAGE 3 PIPELINE REMOVAL PLAN

Pipeline Segment Description	Approximate Length of Segment (feet)	Seasonal Considerations or Preferred Months (Alternative 1)	Above (A) or Underground (U)?	CMI Ownership?	Figure
Pressure Vessel to Underground	500	End of summer, early fall - Weather and seasonal traffic	A	Y	3-2
East of Middle Pile	1000	End of summer, early fall - Weather and seasonal traffic	A	Y	3-2
Goat Hill Entrance Area	2350	End of summer, early fall - Weather and seasonal traffic	A	Y	3-3
Bear Cut	2500	End of summer, early fall - Weather and seasonal traffic	A	Y	3-4

4.0 REMOVAL ACTIVITIES

Prior to pipe removal activities, the pipe and associated structures were sampled and analyzed for lead based paint and asbestos using the methods detailed in the Removal Work Plan. Results from analysis showed that lead based paint was used to coat piping along the alignment. Concentrations of lead ranged between 450 milligram/kilogram (mg/kg) and 590 mg/kg along Stage 3 pipe alignments. Results from asbestos sampling and analysis showed non-detect along the Stage 3 alignment. Sample locations and detection results are shown in Figures 4-1 and 4-2. Pipe or pipeline structures found to contain lead based paint or asbestos will be disposed of according to State and Federal requirements as well as Chevron's Third Party Waste Stewardship (TWS) requirements. A complete data set of lead and asbestos analytical results can be found in Appendix A.

Utility locates, and any necessary surveying will be conducted prior to pipe removal activities. Although unlikely in Stage 3 activities, road closures will be negotiated with the pertinent stakeholders prior to undertaking any closure activities.

Pipe removal will be conducted under the guidelines specified under Section 4.1 of the Removal Work Plan (Trihydro 2017). Stage 3 pipeline areas are located on CMI property.

The Stage 3 pipeline is on the surface. This pipe will be removed by separating the pipe at its couplings. In areas where de-coupling is impractical the pipe will be cut using a hydraulic shear mounted on an excavator. The pipe will then be loaded and trucked to a laydown area on the tailings facility.

Structures such as pipe couplings, anchor structures, pipe bend structures, and concrete thrust blocks will be removed in accordance with Section 4.2 of the Removal Work Plan (Trihydro 2017).

All waste will be disposed of according to the methods outlined in Sections 2.3.3 and 4.0 in the Removal Work Plan.

Approximate quantities of material to be removed are detailed in Table 4-1.

TABLE 4-1. QUANTITIES OF DEMOLITION MATERIALS

Pipeline Segment Description	Approximate Quantity of Pipe to be Removed (feet)	Approximate Quantity of Concrete (tons)	Approximate Quantity of Steel (tons)
Pressure Vessels to Underground	1000	20	0.2
East of Middle Pile	2000	40	0.3
Goat Hill Entrance Area	4700	94	0.7
Bear Cut	5000	100	0.8

5.0 RECLAMATION

Areas disturbed during pipe removal, tailing removal and other demolition activities conducted under this work plan will be reclaimed according to the procedures outlined in Section 4.2.10 of the Removal Work Plan (Trihydro 2017). The pipeline right of way will be regraded to match the natural grade of the area or to meet the needs of future planned land use, such as a trail. Clean fill, if necessary, will be imported from previously approved borrow sources. A map indicating the locations of borrow material is included as Appendix B.

Once the grading has been completed disturbed areas will be reseeded using the mix detailed in Table 5-1. Alternate seed mixes may be used depending upon the anticipated land use or if availability of certain seed species is limited. The seed mix may be negotiated with the proper regulatory agencies based on the area of application.

TABLE 5-1. SEED MIXTURE

Grasses		lbs./acre
Western Wheatgrass, var. Arriba	<i>Pascopyrum smithii</i>	5.0
Slender Wheatgrass, var. Sna Luis	<i>Elymus trachycaulus</i>	3.0
Bluebush Wheatgrass, var. Goldar	<i>Pseudoroegneria spicata</i>	4.0
Sand Dropseed	<i>Sporobolus cryptandrus</i>	1.0
Prairie Junegrass	<i>Koeleria macrantha</i>	2.0
Forbs		
Western Yarrow	<i>Achillea millefolium</i>	2.0
Rocky Mountain Penstemon, var. Bandera	<i>Penstemon strictus</i>	4.0
Prairie Coneflower	<i>Ratibida Columnifera</i>	4.0
Showy Evening Primrose	<i>Oenothera speciose</i>	2.0
Shrubs		
Big Rabbitbrush	<i>Ericameria nauseosa</i>	2.0
Apache Plume	<i>Fallugia paradoxa</i>	1.0

6.0 STAKEHOLDER ENGAGEMENT

The key stakeholders for this stage of pipeline removal include:

- Taos County
- NMHPD
- NMDOT
- Village of Questa, NM

Outreach to the key stakeholders has begun and will continue throughout the pipeline removal project. Stage 3 activities will be discussed with the public during the scheduled monthly meetings with the Village of Questa.

7.0 SCHEDULE

The schedule for Stage 3 of the Questa pipeline removal project is detailed below in Table 7-1

TABLE 7-1. STAGE 3 PIPELINE REMOVAL SCHEDULE

Pipeline Segment Description	Target Date of Commencement for Pipe Removal
Pressure Vessels to Underground	2018 Q3/Q4
East of Middle Pile	2018 Q3/Q4
Goat Hill Entrance Area	2018 Q3/Q4
Bear Cut	2018 Q3/Q4

8.0 HEALTH AND SAFETY

CMI and its contractors put safety first and foremost in all operations. A project specific Health and Safety Plan (HASP) will be developed for the pipeline removal activities. The project specific HASP will be similar in scope and detail as presented in the December 20, 2016 HASP (Trihydro 2016) prepared for coordination, sampling, and surveying activities completed in the initial phases of the pipeline dismantling and stabilization. The project specific HASP will include the following details:

- Emergency response procedures and reporting
- Project team organization and responsibilities
- Training, orientation, and medical monitoring requirements
- A site hazard analysis
- Analysis of chemical, physical, and biological hazards
- Required personal protective equipment
- Air monitoring requirements
- Site control measures
- Waste management
- Motor vehicle safety requirements

Other documents used to identify and mitigate hazards associated with the project will include the forms listed below. Examples of the listed forms are included in Appendix C.

- Pre-fieldwork safety readiness reviews. This document provides project management an opportunity to interact with field personnel prior to commencement of field activities.
- Job Safety Analysis (JSA) forms. JSA forms are drafted for each task. Job steps, potential hazards and mitigation steps are identified and communicated to team members. The JSA form is included in Appendix C.
- Field observations. Observations will be conducted throughout the project to verify compliance with operational safety standards.
- Near Miss investigations. Near misses identified by team members will be investigated to determine root causes and means to avoid similar incidents in future operations. The outcome of these investigations will be shared with all team members.

- Daily tailgate safety meetings. Daily tailgate safety meeting will be conducted every day prior to commencement of operations. The meetings are an opportunity to review JSA forms, discuss changing conditions, lessons learned and operational details.
- Weekly management safety meetings. This meeting is an opportunity for the project leadership to discuss upcoming operations, lessons learned, near loss investigations and other potential issues covered in the weekly project meeting.
- Journey management plans (JMPs). JMPs are used to identify hazards associated with transportation. These plans identify hazard and provide mitigation steps for enhancing vehicle operational safety.

The utilization of these documents creates the foundation for hazard awareness and mitigation. Our companies have embedded their use into our respective corporate cultures and freely share best practices and lesson learned.

9.0 CONTRACTORS KEY PERSONNEL

Trihydro Corporation (Trihydro) will be responsible for engineering, contractor oversight, environmental sampling, permitting and regulatory support. Key Trihydro personnel include:

- **Shaun Harshman.** Shaun is the project manager and primary project contact for Trihydro. Shaun has a Bachelor of Science degree in Soil Science. He has over 30 years of experience in the environmental field, with over 18 years of experience on Chevron projects. He can be reached at (307) 259-5909 or sharshman@trihydro.com.
- **Tony Kupilik.** Tony will be Trihydro's primary construction oversight and health and safety manager. Tony has over 25 years of experience in heavy construction and mining. He is a certified MSHA instructor, New Mexico Surface Coal Foreman, Excavation Competent Person, 3D Driving instructor and has OSHA 40-hour HAZWOPER training. He is also certified in Red Cross CPR, AED, and First Aid. He can be reached at (307) 760-8082 or tkupilik@trihydro.com.

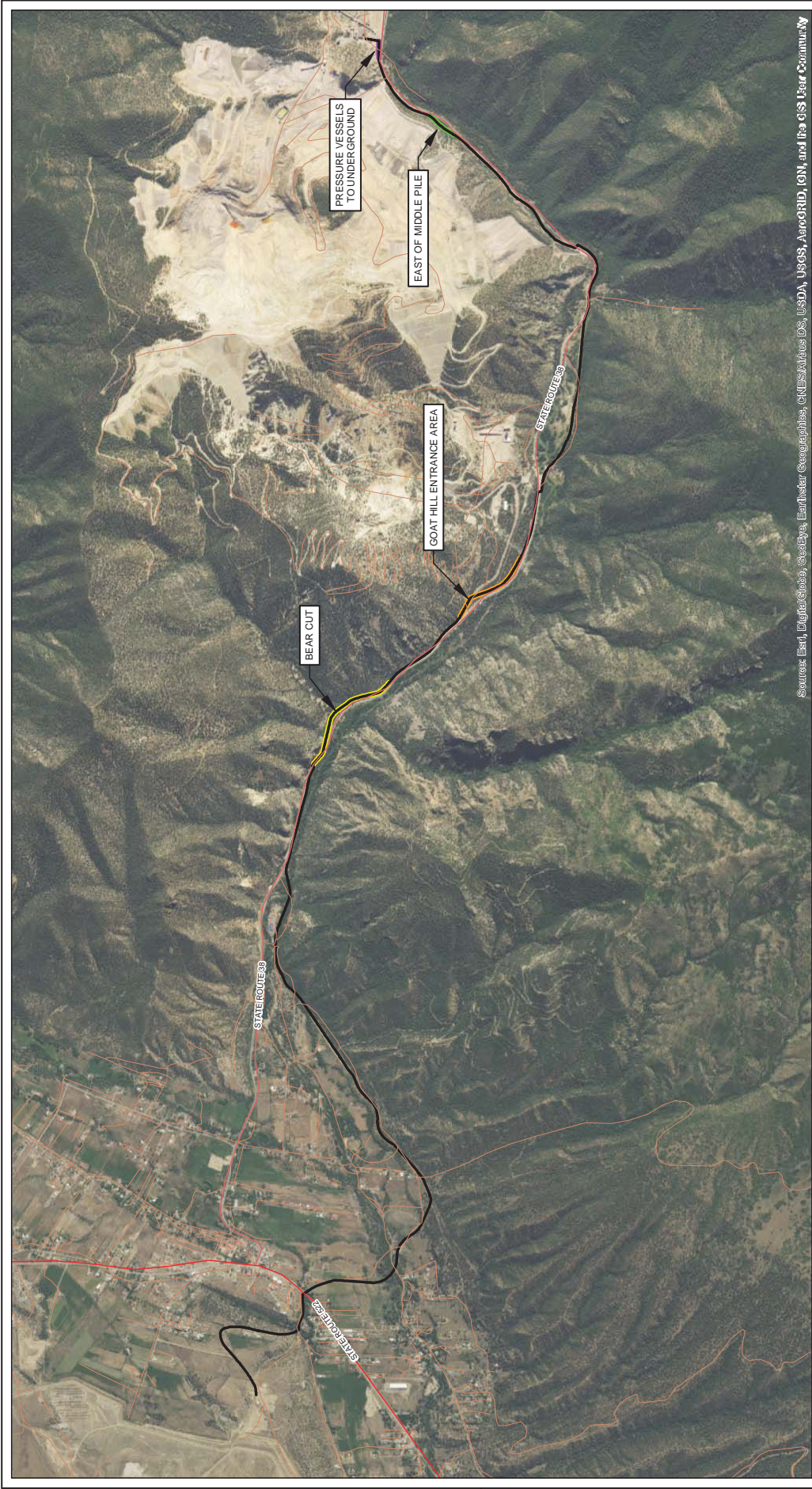
The primary contractor for Stage 3 has not been identified. This section will be updated upon contractor project award.

10.0 REFERENCES

Trihydro Corporation (Trihydro). 2016. Health and Safety Plan (HASP), Field Summary, Chevron Environmental Management Company (CEMC), Environmental Activities, Questa Mine. December 20, 2016.

Trihydro. 2017. Questa Tailings Pipeline Removal MMD/NMED Work Plan, Chevron Environmental Management Company, Questa Mine. May 19, 2017.

FIGURES



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EXPLANATION

- | | |
|---|------------------------------------|
| PIPELINE REMOVAL LOCATIONS | PIPELINE |
| BEAR CUT | PRIMARY STATE HIGHWAY |
| GOAT HILL ENTRANCE AREA | SECONDARY STATE HIGHWAY |
| EAST OF MIDDLE PILE | LOCAL, NEIGHBORHOOD, OR RURAL ROAD |
| PRESSURE VESSELS TO UNDERGROUND AND EAST OF MIDDLE PILE | |

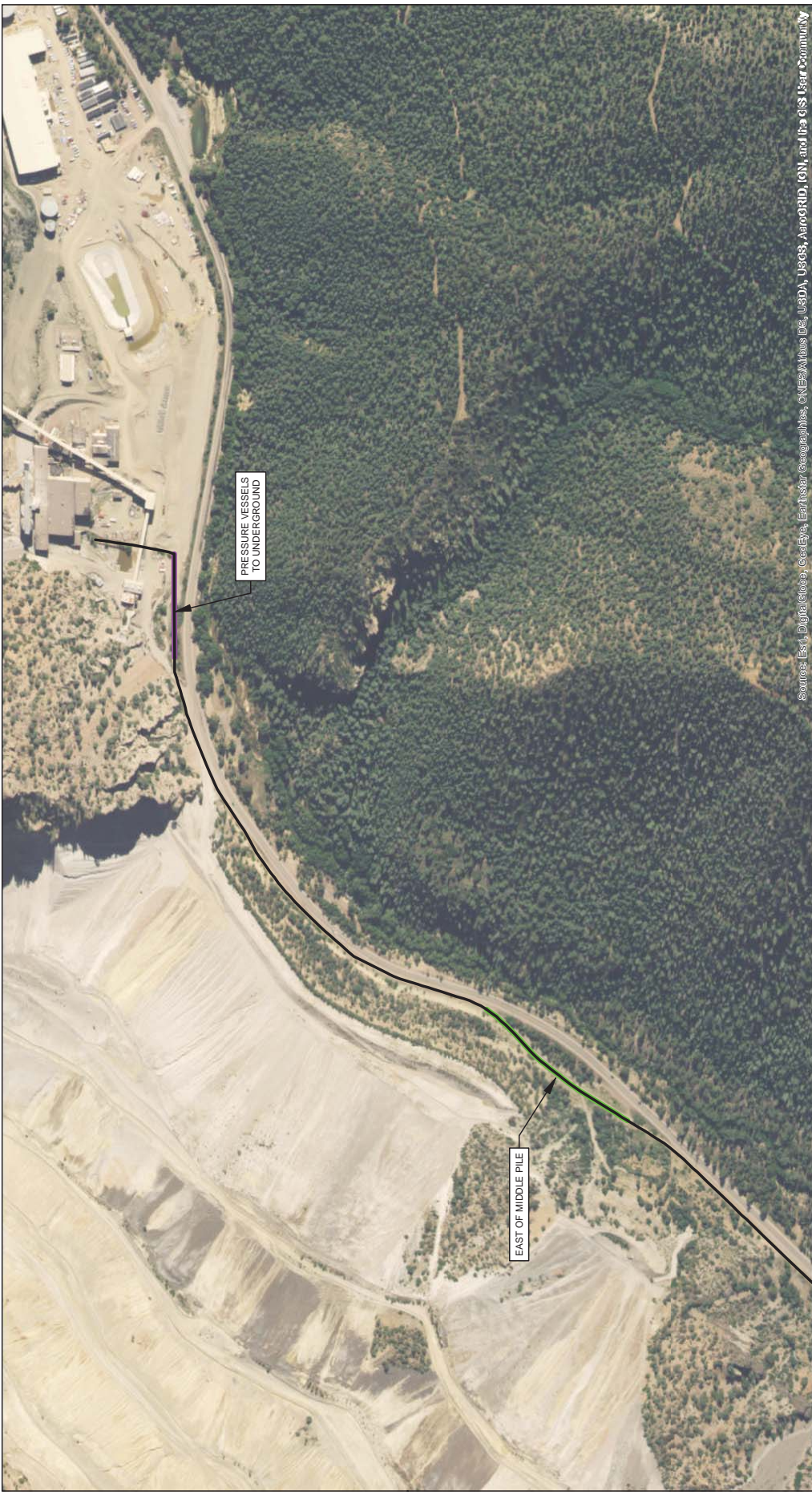


FIGURE 3-1

STAGE 3 PIPELINE REMOVAL LOCATIONS

CEMC QUESTA MINE
QUESTA, NEW MEXICO

Drawn By: DH	Checked By: RN	Scale: 1" = 2,400'	Date: 1/8/18	File: Fig3_1_Stage3PipelineWP.mxd
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

- EXPLANATION**
- PIPELINE
 - PIPELINE REMOVAL LOCATIONS
 - East of Middle Pile
 - Pressure Vessels to Underground and East of Middle Pile




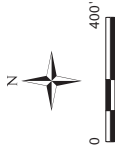
Trihydro
CORPORATION
1252 Commerce Drive
Laramie, WY 82070
(P) 307.745.3474 (F) 307.745.7729

FIGURE 3-2	
STAGE 3 PIPELINE REMOVAL LOCATION PRESSURE VESSELS TO UNDERGROUND AND EAST OF MIDDLE PILE	
CEMC QUESTA QUESTA, NEW MEXICO	
Drawn By: DH	Checked By: BH
Scale: 1" = 400'	Date: 1/8/18
File: Fig3-2_Stage3PipelineWP.mxd	



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


 <p>1252 Commerce Drive Laramie, WY 82070 (P) 307.745.7474 (F) 307.745.7729 www.trihydro.com</p>	<p>FIGURE 3-3</p> <p>STAGE 3 PIPELINE REMOVAL LOCATION GOAT HILL ENTRANCE AREA</p>
<p>CEMC QUESTA QUESTA, NEW MEXICO</p>	<p>Drawn By: DH Checked By: BH Scale: 1" = 400' Date: 12/11/17 File: Fig3-3_Stage3PipelineWP.mxd</p>



<p>EXPLANATION</p>	<p>PIPELINE</p> <p>PIPELINE REMOVAL LOCATIONS</p> <p>GOAT HILL ENTRANCE AREA</p>
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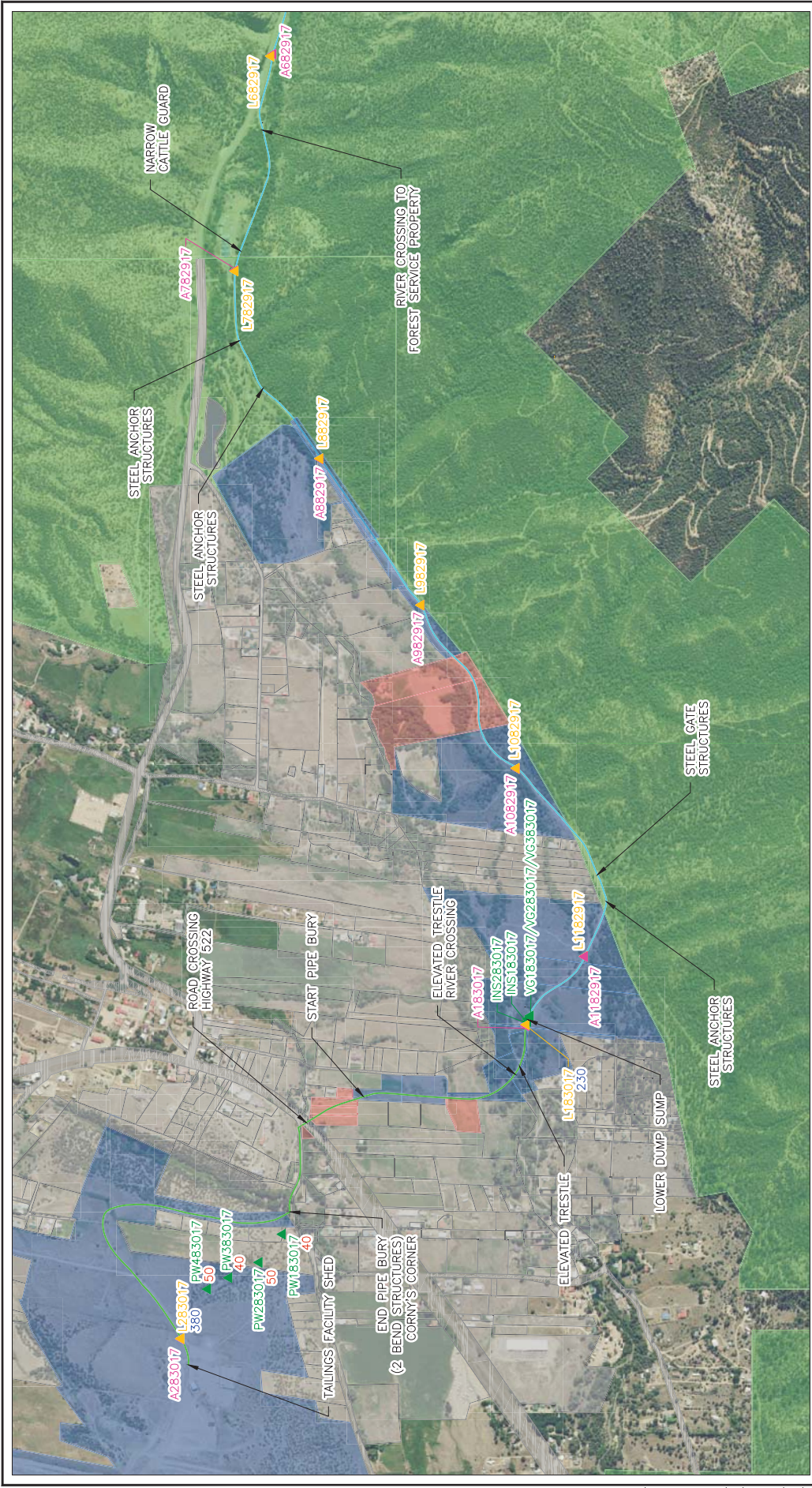


Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

 <p>1252 Commerce Drive Laramie, WY 82070 (P) 307.745.3474 (F) 307.745.7729 www.tribhydro.com</p>		FIGURE 3-4 STAGE 3 PIPELINE REMOVAL LOCATION BEAR CUT	
CEMC QUESTA QUESTA, NEW MEXICO		Date: 1/8/18 Scale: 1" = 400' Checked By: BH Drawn By: DH	
		File: Fig3-4_Stage3PipelineWP.mxd	



EXPLANATION	
	PIPELINE
	PIPELINE REMOVAL LOCATIONS
	BEAR CUT



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FIGURE 4-1

PIPELINE SAMPLING LOCATIONS

EXISTING SITE PLAN - WEST AREA DETAIL

CMI TAILINGS PIPELINE

CENCO QUESTA

QUESTA, NEW MEXICO

Drawn By: PC

Checked By: CS

Date: 6/18/18

Scale: 1" = 1000'

File: 476-QM-PRMT-SITEDETAIL201806

Image Cite: USDA National Agriculture Imagery Program (NAIP) Colored Orthophoto, Tooe County, New Mexico, 2016