

**ANDALEX**  
**RESOURCES, INC.**

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Utah Division of Oil, Gas & Mining  
Utah Coal Program  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, UT 84114-5801

May 14, 2019

Attn: Steve Christensen  
Permit Supervisor

Re: Tower Mine 007/019  
Drilling Execution Plan for Plugging of 7 GVHs (DO-19A)

Dear Mr. Christensen,

In reference to the Division's letter dated January 31<sup>st</sup>, 2019 Division Order (DO-19A) requiring Andalex Resources, Inc. to plug and reclaim the following Gob Vent Holes (GVHs): #3, #4, #5a, #6, #7, #7a, and #11. Included is Boart Longyear's proposed drilling execution plan that explains the process they would use to plug the wells. The project will begin as soon as the area is accessible for the drill rigs, and will be completed by August 1<sup>st</sup>, as required by the DO.

If you have any questions, or need any additional information regarding this project, please contact me directly at 435-888-4000.

Sincerely,

UtahAmerican Energy, Inc.

Execution Plan for the plugging and abandonment GVH Wells at the Andalex Mine for 2019.

### Project Description

The work shall consist of the plugging and abandonment of 7 wells, drilled for various purposes at the mine. The wells to be sealed will be GVH #s 3, 4, 5A, 6, 7, 7A, and 11. A staging area for materials will be required for offloading and storage at a suitable site at the base of the mine. Materials will likely be off-loaded from over the road trucks at this point and taken from there up to the drill sites approximately 5 miles from the laydown yard.

### Plug & Abandonment Procedure

Boart Longyear shall provide all equipment, labor and supplies to successfully plug and abandon up to 7 (seven) wells as directed by Andalex Company. All of these holes are 7 5/8" diameter. Boart Longyear shall provide the necessary equipment and materials to plug the wells in accordance with the well plugging and abandoning plan as follows:

1. Bleed open valve and vent well to relieve pressure. During this process the valve shall be open to vent any gases coming up the well bore away from the work area. Wipers may be utilized to prevent the gases coming through the top of the wellhead. Contractor shall continuously sample during this process to confirm that the work area is free from buildup of explosive and/or flammable gases.
2. Remove Wellhead assembly and salvage the valve, the 9 5/8" nipple, \*' flanged tee and attached fittings if still in place.
3. Set rubber plug packer at the top of the 7" casing or the point of damage in the casing (due to subsidence). Dump a minimum of 18 bags of Hole Plug in the hole on top of the plug 9.625" diameter holes.
4. Run in tremmie line to tag hole plug and pump 1 supersack of cement w/one bag of Calcium Chloride on top of hole plug.
5. Install Super Plug (Abantonite) grout product with tremmie line to within 8' of the top of the surface casing @ 33 gals H2O/50#bag mixture.
6. Install cement plug to within 3' of the top of the casing.
7. Cut off the top 3' of casing.
8. Refill the hole around the top of the casing and compact back to finished grade.
9. Clean up site to as-found condition.

The purpose of the Work is to plug and abandon the 7 wells, such that the entire area can be reclaimed to approximate original contours. All of these holes are completed into gas bearing zones and as such should be plugged and abandoned with due consideration to that potential. A successful completion is defined as a hole plugged and abandoned in accordance with the plan with no delay time or injuries. Boart Longyear shall perform

additional aspects of the Services upon the mutual consent of Andalex Company and Boart.

Prices and quantities are estimates only and actual quantities used will be invoiced for.

Contractor shall provide other services and equipment including but not limited to:

1. Transportation of plugging supplies and consumables from laydown yard to the plug and abandon sites.
2. Removal of wellhead plumbing and valve equipment and transportation to the laydown yard.
3. Additional equipment as deemed necessary for the successful completion of the Work at the mutual consent of Andalex and Boart.
4. Transport of water from Mine site to P&A sites if not provided by Mine.
5. Provide completed Plugging and Abandonment Reports to Mine once finished with abandonment procedures with each well.

Andalex shall provide for the Work the following:

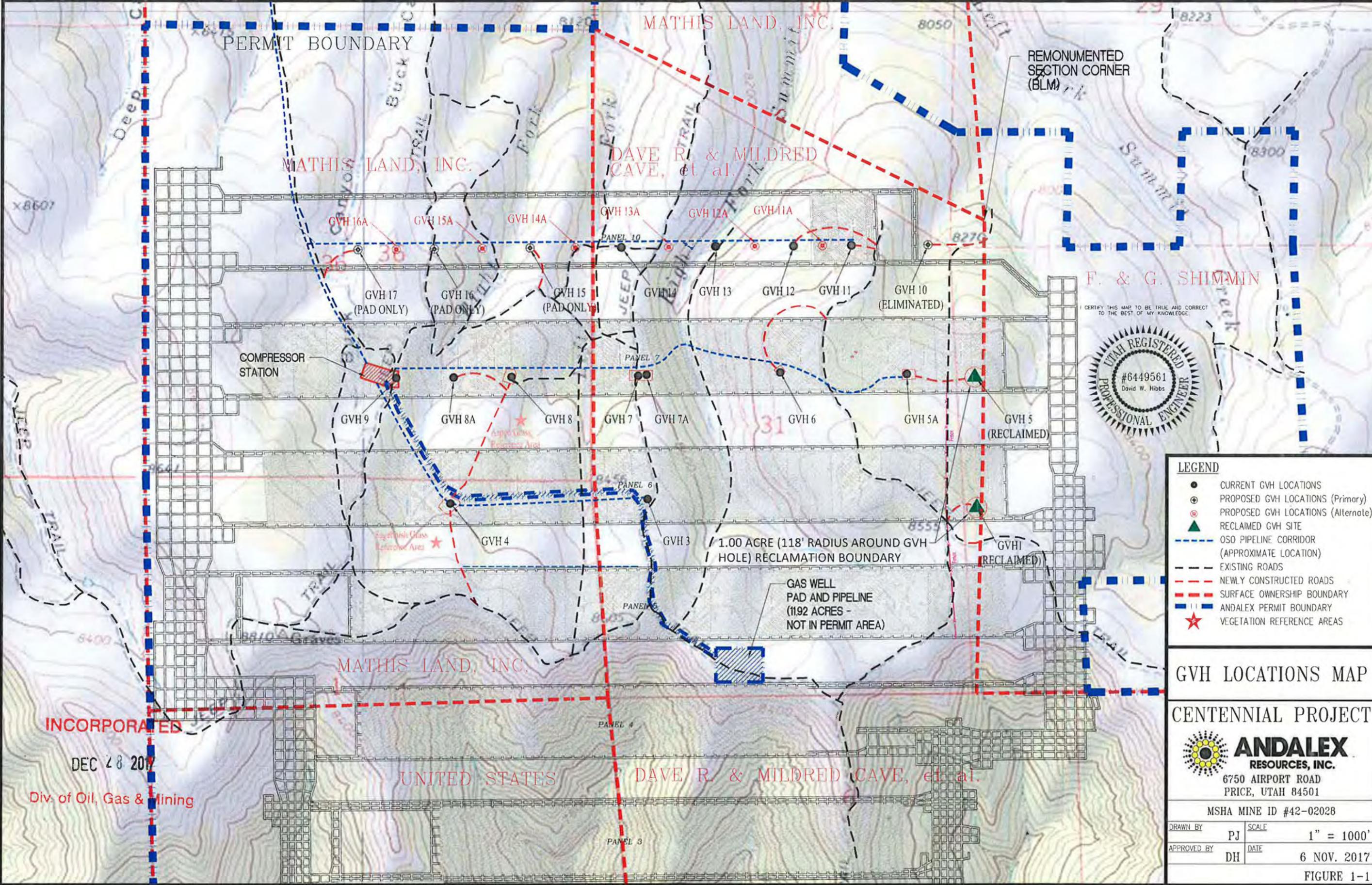
1. Roads maintained to allow Contractor reasonable access to the Work area.
2. All necessary state and federal permits related to ingress and egress on private and federal lands.
3. Andalex has water rights for sufficient water to plug these wells.

### **SCHEDULE**

The Work shall commence on or about summer 2019 and continue until the holes have been completed. The Work is estimated to take approximately two weeks total. The schedule may be modified at the mutual agreement between Andalex and Boart.

### **DAILY REPORTS**

Contractor will provide daily drill log reports to Andalex representative from each shift worked. Reports shall be signed by Contractor's representative and countersigned by Andalex's representative at the end of each day. Discrepancies in the report shall be resolved, if at all possible, prior to crews leaving the work site.



**LEGEND**

- CURRENT GVH LOCATIONS
- ⊕ PROPOSED GVH LOCATIONS (Primary)
- ⊕ PROPOSED GVH LOCATIONS (Alternate)
- ▲ RECLAIMED GVH SITE (APPROXIMATE LOCATION)
- OSO PIPELINE CORRIDOR (APPROXIMATE LOCATION)
- - - EXISTING ROADS
- - - NEWLY CONSTRUCTED ROADS
- - - SURFACE OWNERSHIP BOUNDARY
- - - ANDALEX PERMIT BOUNDARY
- ★ VEGETATION REFERENCE AREAS

**GVH LOCATIONS MAP**

**CENTENNIAL PROJECT**



MSHA MINE ID #42-02028

DRAWN BY	PJ	SCALE	1" = 1000'
APPROVED BY	DH	DATE	6 NOV. 2017

FIGURE 1-1

G:\Current Drawings\Buildings & Construction\Tower Mine\GVH Drawings\Figure 1-9-22-09 Rev1.dwg, 11x17, 11/6/2017 2:21:36 PM

DEC 28 2017  
Div. of Oil, Gas & Mining

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