

**Bill Barrett Corporation  
Mamm Creek Field, Colorado**

**Exploration and Production Waste Management Plan  
Management of Sand Removed from Production Separators**

This Waste Management Plan (WMP) outlines the operational requirements to be followed when temporarily storing sand on the Porter Federal 14-28 pad location (Site) in support of lease operations. Sand removed from production separators from multiple production sites within Bill Barrett Corporation's (BBC) Mamm Creek Field will be temporarily stored at the Site. Once a full truck load of sand has accumulated, the sand will be transported to a licensed treatment and recycling facility. A topographic and aerial photographic map with the site boundaries is provided on Figures 1 and 2, respectively. Only sand removed from separators in the Mamm Creek field will be temporarily stored at the Site. No other exploration and production (E&P) waste will be stored or managed at the Site except for wastes directly associated with the operation of the Porter Federal 14-28 pad wells and production equipment. Any changes made to this E&P WMP will be provided to the Colorado Oil and Gas Conservation Commission (COGCC) via a Sundry Notice.

**Transportation Operations to Temporary Storage Facility (Porter Federal 14-28)**

Sand removed from separators will be transported to the Site by contractors hired by BBC. Personnel designated to handle this sand will be trained and informed of the nature and risks posed by this type of waste. In addition, these individuals shall be required to wear appropriate personal protective equipment while handling the sand. All employees involved with the handling of the sand will be trained to understand and implement the WMP components that are relevant to their responsibilities.

Any spills or releases occurring during transport will be reported to BBC Environmental staff immediately. Contractors hired to transport the sand to the Site will not be responsible for reporting spills or releases to the COGCC. This will be the responsibility of BBC Environmental staff.

**Site Security and Containment**

Once the sand has been transported to the Site, it will be deposited in a storage container designated to store only this sand. This container will be labeled accordingly. All personnel responsible for transporting and hauling this sand will be trained and made aware of this container. BBC staff will communicate all necessary information to the contractors responsible for safely depositing the sand.

While storing this sand, this container should be:

- In good condition and not leaking;
- Compatible with the materials it is storing to avoid corrosion or chemical reactions that could result in fire;
- Kept closed except when adding waste;

- Not opened, handled, or operated in ways that could cause leaks or spills; and
- Clearly marked and labeled to identify what is being stored.

The storage container will be placed within double-lined secondary containment to contain any accidental releases during loading, unloading and precipitation events. Please reference Figure 3 which details the storage container and the secondary containment system. The Site will be visited daily by BBC staff. They will conduct daily inspections on the volume of sand being stored in the container, presence of any liquids, and the integrity of the secondary containment. Bill Barrett Corporation is the surface property owner and access to the Site is limited to staff responsible for the Site and its associated production infrastructure.

### **Permanent Disposal Operations (Shipping)**

Procedures for loading the sand for transportation will be designed to reduce the risk of loss, leakage, or exposure to hazardous materials during loading and shipment.

Shipments will be tracked and documented to communicate potential hazards. Specific requirements include manifesting, placarding transport vehicles, choosing appropriate waste transporters and shipment destinations, recordkeeping, and reporting.

After being temporarily stored at the Site, the sand will be transported by BBC contractors to Reams E&P Treatment and Recycling Facility in Naturita, Colorado. This facility specializes in the treatment and recycling of down-hole E&P waste streams. The following documentation procedures will be followed to comply with COGCC regulations:

1. A Waste Generation Manifest Log will be generated and maintained for a period of no less than five years after the project completion date for the transportation of the materials from the Site to the disposal location mentioned above. The Waste Generation Manifest Log will include the following information:
  - The date of the transport;
  - The identity of the waste generator;
  - The identity of the waste transporter;
  - The location of the waste pickup site;
  - The type and volume of waste; and
  - The name and location of the treatment or disposal site.
2. A certificate of delivery will be obtained from Reams E&P Treatment and Recycling Facility.
3. All records will be available to the COGCC upon request.

Attachments:

Figure 1 – Site Location Map

Figure 2 – Site Map

Figure 3 – Containment Detail

## FIGURES

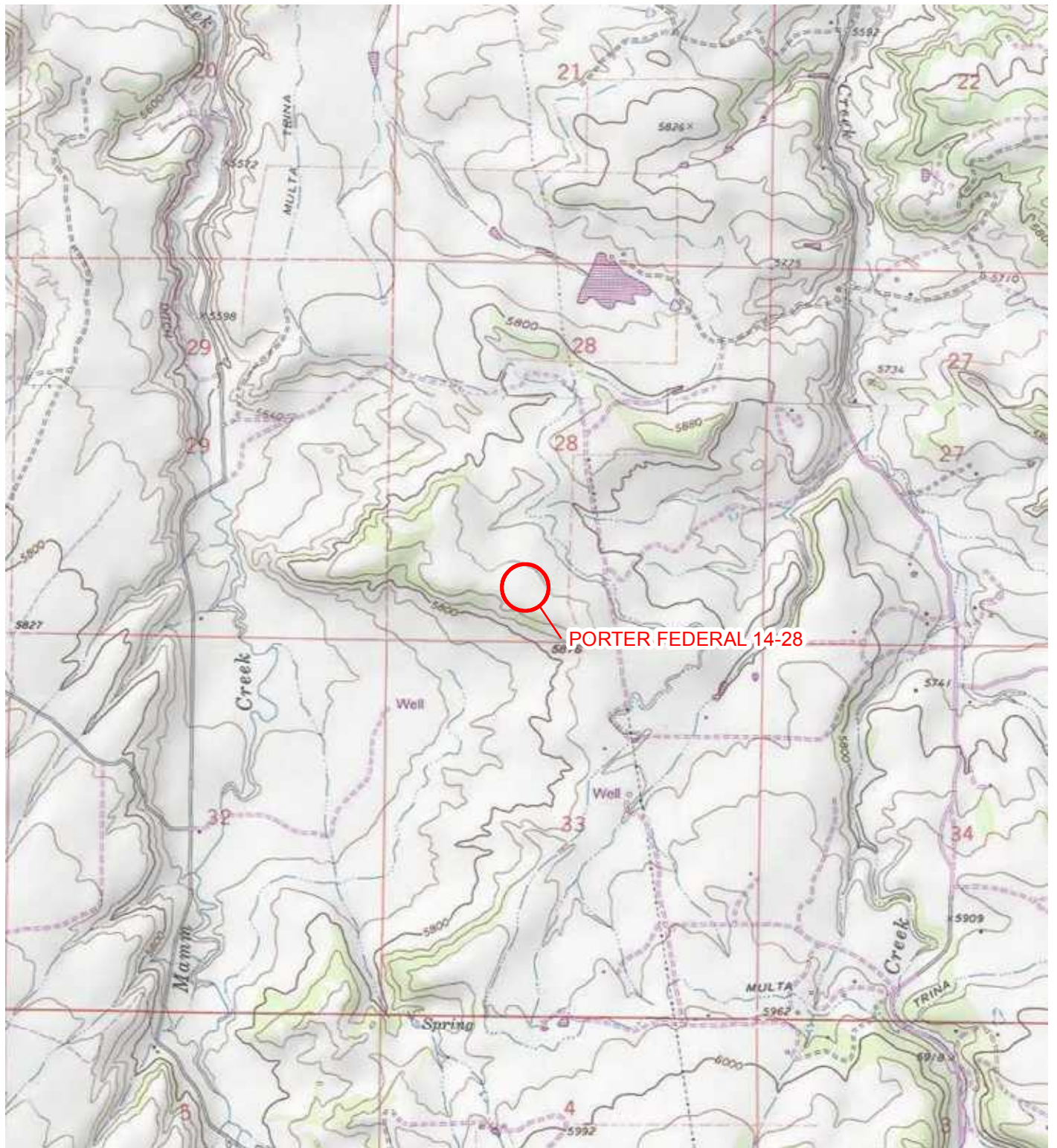


IMAGE COURTESY OF ESRI/USGS

# LEGEND

○ SITE LOCATION

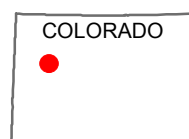
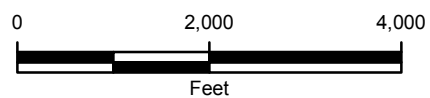
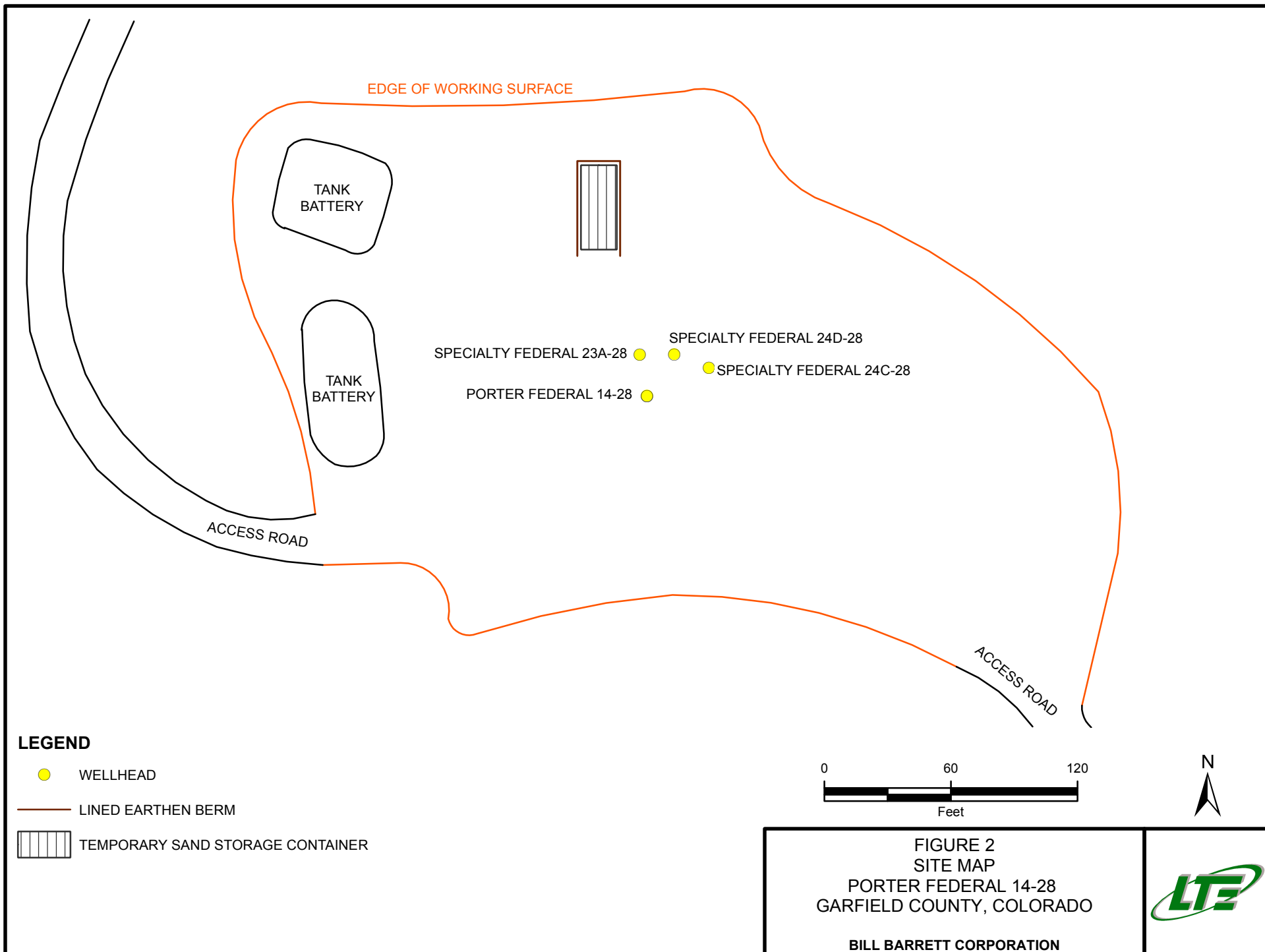
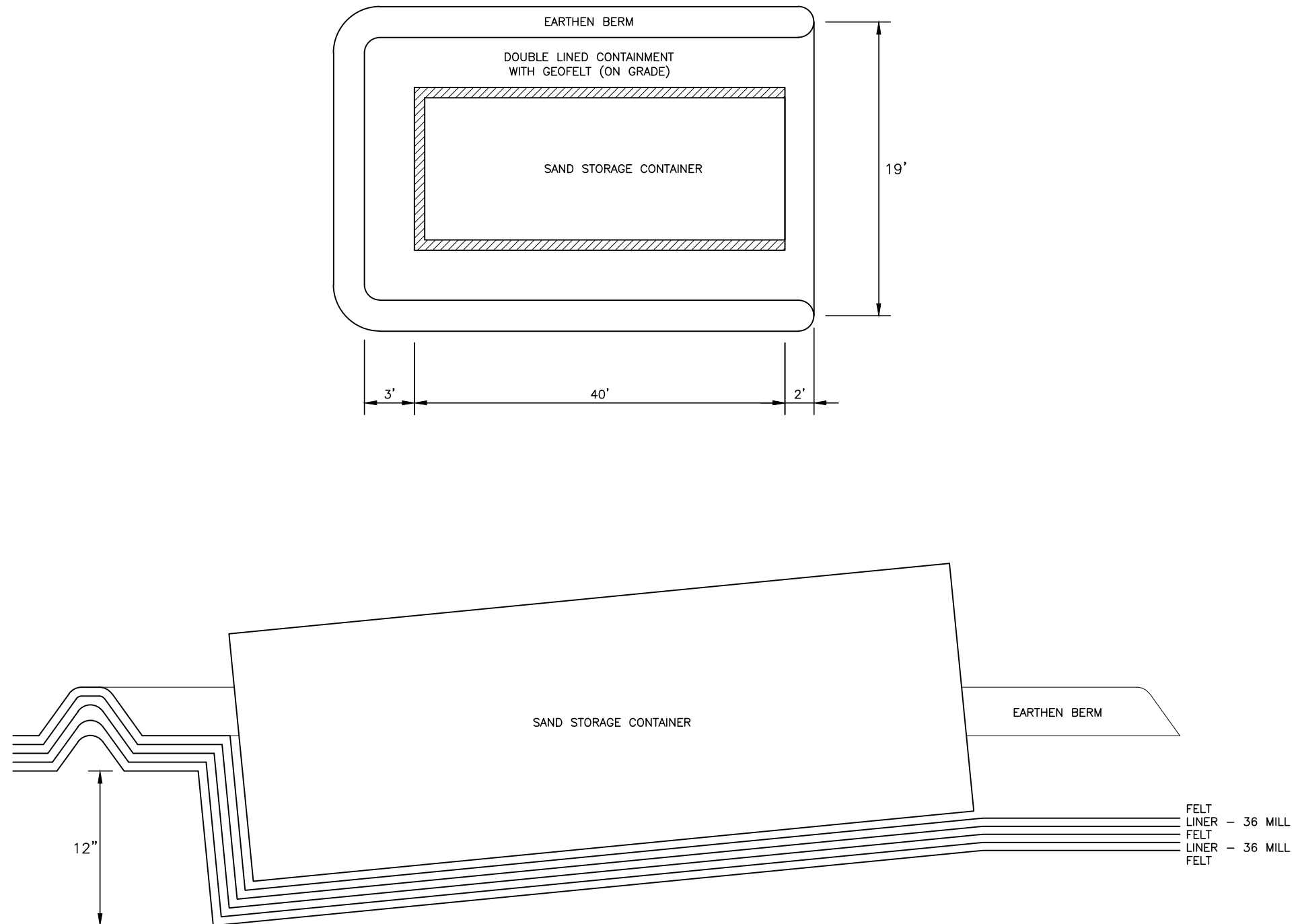


FIGURE 1  
SITE LOCATION MAP  
PORTER FEDERAL 14-28  
GARFIELD COUNTY, COLORADO

BILL BARRETT CORPORATION







NOT TO SCALE

FIGURE 3  
CONTAINMENT DETAIL  
PORTER FEDERAL 14-28  
GARFIELD COUNTY, COLORADO  
BILL BARRETT CORPORATION

