
TOPSOIL PROTECTION PLAN

BNL | ENTERPRISE

Enterprise State 16-1 (2962)

Sec. 16 T29S R62W (NE/4 SE/4)

Las Animas County, Colorado

Surface: State

Submitted as an accompaniment to the Form 2A Application, this
Topsoil Protection Plan is consistent with the requirements of Rule 1002.c.

Original Submittal: April 14, 2021

Revised: June 30, 2021

Revised: October 13, 2021

BNL (Enterprise) Inc. Las Animas County, Colorado

Topsoil Protection Plan

Purpose:

Topsoil protection and stabilization is key to successful reclamation. The objective of BNL (Enterprise) Inc.'s ("Enterprise") topsoil protection and stabilization is to ensure as much topsoil can remain intact with minimal erosions caused by wind, storm events, traffic, and other activities that might cause topsoil erosion or degradation. Good topsoil protection and stabilization ensures successful reclamation and the restoration of the natural vegetative community, hydrology, and wildlife habitats. Salvaging and reuse of all topsoil in a timely manner will not only maintain viable topsoil but will allow for successful reclamation. Best Management Practices (BMPs), where applicable, mixed with other protection and stabilization measures ensure topsoil is maintained in its best condition to be used for both interim and final reclamation.

In areas that are disturbed by construction, topsoil will be stripped and stockpiled near the site. All brush, limbs, and other woody material will be stockpiled separately from the topsoil. Soil materials will be managed so that erosion and sediment transport are minimized.

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Topsoil will be monitored throughout all phases of the helium project, including construction, production, and reclamation. The surrounding topography is relatively flat. As construction progresses, BMPs will be assessed, installed, and/or replaced as needed.

During active construction and drilling the following BMPs will be implemented on the Enterprise State 16-1 (2962):

- Earthen Swale: An earthen swale shall be constructed around the west and partially south side of the pad to direct any surface run-on around the pad and away from any construction disturbance.
- Wattle: (Synthetic or straw) will be placed in the southeast corner of the pad in the earthen swale to filter sediment from any stormwater. Wattles will also be placed on the south side of the pad, again in the earthen swale, to filter any sediment.
- Silt Fence: There shall be a perimeter silt fence installed around the entire pad, less the entrance location, to control run-on to the pad, and any stormwater flow to runoff the pad uncontrolled.
- Rock Rip-Rap: Rock rip-rap placed on both sides of the entrance road to the pad will slow/filter any stormwater runoff from the road itself.
- Portable containment liners will be used under the drilling rig during drilling activities. This liner will protect the underlying soils and vegetation from potential spills surrounding the rig during drilling and negate any topsoil clearing. Any liquid release will be vacuumed up from the liner. Upon completion of drilling activities, the liner will be removed.

- Two-Track Roads will be used as is until the well is drilled and tested.
 - Two-Track - $\pm 3,140'$ (Sufficient for rig move in)
 - New Access - $\pm 1,130'$ (Sufficient for rig move in)
 - Total Road for Productive well - $\pm 4,270' \times 30'$ ROW = ~ 3.0 acres
- During facility construction topsoil should be piled no higher than 3 to 5 feet high and slopes of the stockpiles should not exceed 2:1 (horizontal:vertical) to minimize erosion potential and facilitate interim stabilization.
- The construction area is $360' \times 360'$ (± 3.0 acres). Please see wellsite diagrams. Topsoil material will be placed south of the cleared pad and will be approximately 1,200 CY ($180' \times 35' \times 5.5'$).
- Top soil stockpiled for more than six months will be seeded and mulched with a temporary grass cover or will be stabilized using structural and/or non-structural control measures.
- To negate surface disturbance test pit size will be $12'' \times 12''$ in the northwest corner of the wellpad. If the well becomes a producer, this test pit will already be in cut and will not require any compaction or settling if done in fill.

General Construction Guidelines for Producing Well

No facilities will be on location until after the well has been drilled and tested. If the well is deemed a “dry hole” the well will be plugged within six months. If the well is favorable for completion and production, the well will be shut in for a period of six to nine months until production facilities have been procured and installed. At this point, the wellpad and road will be fully constructed with gravel to protect the surface and all topsoil. If the well is a dry hole, the access road will be left in its original state and per surface use agreement.

Following the drilling and completion activities, the well pad may be reduced, thus minimizing the area of disturbance for the production life of the well. The pad will be recontoured, topsoil reapplied, and the reduced area stabilized with seed, hydro-seed, bonded fiber matrix, mulch, etc. as deemed appropriate for the site.

- To negate topsoil erosion from storm events, the first site inspection must be completed within seven (7) calendar days of the commencement of construction activities.
- Active construction sites will be inspected at one of the two following frequencies:
 - At least one inspection every 7 calendar days;
 - At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Note that post-storm inspections may be used to fulfill the 14-day routine inspection requirement.

Wellpad and access road construction will be performed using conventional cut and fill construction. Enterprise will begin with the clearing of vegetation and removal of available topsoil material to a depth of six inches or maximum available. Basic construction activities conducted during this phase include clearing and grubbing, grading and excavation, compaction, final grading and contouring, and installation of surfacing materials such as gravel or road-base.

To the extent feasible, surface vegetation would be cleared by mowing, raking, and burning in preference to scraping to facilitate topsoil protection and stabilization and reclamation potential. If removed, topsoil will be windrowed on either side of the alignment adjacent to the construction limits as staked. Upon commencement of road construction, the topsoil will be replaced in the borrow ditches. Removed soil and overburden would be stored for reclamation purposes. No removed soil or overburden would be pushed into drainages or stored where transport into drainages could occur.

The wellpad may be recontoured, topsoil reapplied, and the reduced area stabilized with seed, hydro-seed, bonded fiber matrix, mulch, etc. as deemed appropriate for the site. The borrow ditches will be reseeded to promote topsoil stabilization and will reduce the area utilized by this location. All seed mix will be done per surface owner request.

Topsoil would be segregated from cut areas for use in reclamation.

Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts more than four inches deep, the soil will be deemed too wet.

The wellpad would be constructed of native materials with application of gravel as required to allow all-weather operations. Signs will be placed on the topsoil pile and the pile will be clearly separated. Topsoil not needed for interim reclamation on wellpads with favorable wells will be seeded and crimped with straw to promote vegetative growth until final reclamation. All seed mix will be done per surface owner request.

Test pits for topsoil determination will be hand dug to a depth of one-foot or less. Topsoil in this area is not expected to exceed six-inches.

Additional Best Management Practices that may be used for General Topsoil Protection and Stabilization:

- Employee Training
- Seeding
- Mulching
- Mulch Tackifier
- Soil Binder
- Construction Phasing/Sequencing
- Rock Sock
- Rolled Erosion Control Products
- Silt Fence
- Stockpile Management
- Erosion Bale
- Grading Techniques
- Surface Roughening
- Berm/Diversion
- Temporary Drainage Swale
- Temporary and Permanent Seeding
- Terracing
- Vegetative Buffer
- Wind Erosion/Dust Control

PROPOSED RECLAMATION MAP

ENTERPRISE STATE 16-1 (2962) WELL PAD

SECTION 16, TOWNSHIP 29 SOUTH, RANGE 62 WEST OF THE 6TH P.M.

