

INTERIM RECLAMATION PLAN

Twin Bridges Resources LLC has prepared this Interim Reclamation Plan for the Red Rocks 1-13 exploratory helium gas well development in Las Animas County, Colorado. The sections below correspond to Colorado Oil & Gas Conservation Commission (COGCC) requirements in Rule 304.c.(16) to prepare an Interim Reclamation Plan, the criteria listed in Rule 1003, and guidance provided by COGCC.

1. SITE DESCRIPTION

The proposed Oil and Gas Location will support a single conventional vertical helium gas well in the NW1/4NW1/4 Section 1, Township 30 South, Range 55 West, 6th P.M. The location is on fee surface. It will access fee minerals. The location is private ranchland that was previously disturbed from historical ranching operations, dirt roads, and a dry and abandoned oil and gas well. The Oil and Gas Location will occupy approximately 1.1 acres. The Working Pad Surface (WPS) will be approximately 1 acre. After interim reclamation, the production pad will be reduced to an estimated 0.2 acre. The site elevation is 5,557 feet. The estimated duration for well pad preparation is 1 day; for drilling and completion 7 to 10 days; for interim reclamation 1 day; and for production approximately 10 years. Approximately 1 day will be needed for interim reclamation and revegetation, which will occur during the first favorable growing season.

2. SOILS DESCRIPTION

Soil map units and their boundaries are shown on the Form 2A, Soil Unit Map. Soil map units are identified for all potential disturbance areas, including the Oil and Gas Location, access road, and buried helium gas flowline. The affected soil map units are:

WC – Plughat-Villegreen Complex, 1 to 4 percent slopes

DaE – Dalerose-Rock Outcrop Complex, 3 to 25 percent slopes

CC – Chacuaco-Capulin Loams, 1 to 4 percent slopes

The soils are further described in Table 1.

Table 1. Soil Properties

Soil Type	Drainage Class	Available Water Capacity	Depth to Restrictive Feature
WC – Plughat-Villegreen Complex	Well drained	6.0 – 9.6 inches	30 – 51 inches
DaE – Dalerose-Rock Outcrop Complex	Well drained	About 1.0 inch	6 – 20 inches
CC – Chacuaco-Capulin Loams	Well drained	4.8 – 9.5 inches	20 – 40 inches

3. OIL AND GAS LOCATION PRE-DISTURBANCE VEGETATION COMPOSITION

The predominant plant species are blue grama, western wheatgrass, snakeweed, globemallow, and yucca. There is an approximately 75 percent vegetative cover. The vegetative cover and percent cover were provided by a site-specific on-site evaluation conducted on behalf of Twin Bridges by the District Conservationist and Resource Team Lead, NRCS-Walsenburg and Trinidad Field Office, on July 1, 2021.

4. IDENTIFICATION OF REFERENCE AREA AND VEGETATION COMPOSITION

The Reference Area is located at 37.471798, -103.538466. The Reference Area was determined based on a nearby location with similar soil properties, vegetation, and vegetative cover.

5. KNOWN WEED INFESTATIONS

There are no observed Colorado List A or B weed infestations on the Oil and Gas Location and flowline corridor.

6. GATHERING LINES

There are no utilities planned for the Oil and Gas Location. A buried helium gas flowline will transport helium gas from the wellhead to a skid-mounted helium purification unit located approximately 3 miles from the Oil and Gas Location. The flowline will be composed of polyethylene. It will be 6 inches in diameter. The flowline corridor will be an estimated 6 feet wide and 18 inches deep. After trenching and installation, the flowline corridor will be reclaimed. The disturbed area will be backfilled, revegetated, and monitored for vegetation growth. The flowline corridor is shown on the Form 2A, Related Location and Flowline Map.

7. ACCESS ROAD

An existing dirt road will be used to access the Oil and Gas Location from CR 177.9. Improvement to the access road is not anticipated to support the water well sized drill rig and other equipment needed for a shallow vertical helium gas well. The access road is shown on the Form 2A, Access Road Map. The access road will not be reclaimed. It will remain in place to provide access for location operation and maintenance. The access road pre-dates the Oil and Gas Location and will remain after final reclamation for the landowner's continued use.

8. REMOVAL OF DRILLING, RE-ENTRY, COMPLETION EQUIPMENT AND ALL ASSOCIATED DEBRIS AND WASTE MATERIALS (1003.a)

After well drilling and completion, the well pad will be downsized to approximately 0.2 acre. The well driller will clear equipment and stored materials in preparation for interim reclamation. Any open holes, cellars, rat holes, or other boreholes will be backfilled per industry standards.

9. MANAGEMENT OF WASTE MATERIAL

Waste materials will not be left onsite after well drilling and completion. Waste material, volume, and final disposal is described in the Waste Management Plan.

10. IDENTIFICATION OF INTERIM RECLAMATION AREAS NO LONGER IN USE (1003.b)

An approximately 0.2-acre area surrounding the helium gas wellhead will not be reclaimed. This area will support well operation and maintenance during production. There will be no storage tanks or equipment other than the wellhead and buried helium gas flowline on the location during production.

11. COMPACTION ALLEVIATION (1003.c)

To decompact soil layers and promote root growth, areas to be reclaimed will be ripped to an estimated depth of 18 inches, unless restrictive features are encountered at a shallower depth.

12. RECONTOURING

The Oil and Gas Location is relatively flat, with an elevation change of approximately 8 feet across a 1-acre area. A water well-sized drill rig will be used to drill the shallow vertical helium gas well. As a result, minimal cut and fill and topsoil removal from blading are anticipated to support the drilling operation. Topsoil will be stockpiled on the location and will be restored on the reclaimed area. The reclaimed area will be blended with the surrounding surface to restore the natural grade and hydrology patterns. Wattles will be placed, as needed, along the downgradient perimeter of the Oil and Gas location to prevent runoff of soils and sediment from disturbed areas.

13. RE-ESTABLISH AND STABILIZE DRAINAGE FEATURES

During interim reclamation, the Oil and Gas Location will be recontoured to blend with the pre-disturbance surface and restore natural drainage patterns. Reclamation during the first growing season will stabilize the soils to avoid stormwater runoff. While vegetation is establishing, wattles will be placed, as needed, along the downgradient perimeter to prevent erosion runnels and avoid soils or sediment from leaving the Oil and Gas Location.

14. ESTABLISH DESIRED SELF-PERPETUATING PLANT COMMUNITY (1003.e)

The anticipated seed mix was identified as a site-specific seed mix in coordination with the Natural Resource Conservation Service District Conservationist, the Las Animas County Extension Service, and the surface owner. The seed mix is listed in Table 2. The seed weight (pounds/acre) and application rate will be provided by the seed mix provider and implemented on the Oil and Gas Location. The seed mix will be certified weed-free.

Table 2. Anticipated Seed Mix

Anticipated Species	Mix
Western Wheatgrass	30%
Sideoats Grama	25%
Blue Grama	20%
Buffalo Grass	15%
Green Needlegrass	10%
TOTAL	100%

15. SEEDBED PREPARATION AND SEEDING (1003.e)

Salvaged topsoil will be replaced and contoured to maximize erosion control and soil stability. Soil amendment may be introduced at this stage to promote moisture retention and soil stabilization. Seedbed preparation will be conducted immediately before seeding to ensure that the seedbed provides the maximum benefit for revegetation success. The reclamation provider will confirm whether drill seeding will be performed to further promote vegetation. Drill seeding is typically conducted on slopes flatter than 3:1. Interim reclamation will be performed during the first favorable growing season after well drilling is complete and within the anticipated 6 months described in Rule 1003.b. Early spring and fall typically are preferred seeding periods to coincide with increased precipitation and conditions favorable to seed germination.

16. FENCING

Fencing is anticipated to surround only the wellhead area because there will be no storage tanks or additional equipment on the Oil and Gas Location during production. The area does not contain livestock.

17. MANAGEMENT OF INVASIVE PLANTS (1003.f)

The site operator will be trained on noxious and invasive weeds to monitor at the location. Weed treatment will be conducted, as needed, to prevent establishment and spread of noxious weeds. The weed treatment will be conducted according to Colorado Department of Agriculture recommendations by weed species.

18. PROPOSED INTERIM RECLAMATION DRAWING

The interim reclamation area is shown on the Form 2A, Oil and Gas Facilities Layout. It shows best management practices (BMPs) for control of erosion and stormwater runoff.

19. RECLAMATION MONITORING, INSPECTION, MAINTENANCE, AND REPORTING

The site operator will be on location approximately three times per week to monitor the helium gas well, flowline, location, and helium purification unit. The vegetative success will be monitored as part of these routine site visits. Invasive weeds, evidence of erosion, and areas requiring reseeding will be identified and addressed through weed treatment, adapting stormwater controls, and application of additional seed and potential amendment or fertilizer, as needed. Vegetative success will be considered at least 80 percent of pre-disturbance reference area levels, consistent with Rule 1003.e.(2).

20. INTERIM RECLAMATION COMPLETION NOTICE, FORM 4 [1003.e.(3)]

Twin Bridges will submit a Form 4 Sundry Notice describing the reclamation procedures, any mitigation measures, any changes to the final land use, and the total vegetative cover. A minimum four photos will be taken during the growing season for each cardinal direction to document the success of the interim reclamation. One photo will document the total cover of live perennial vegetation of adjacent or nearby undisturbed land or the reference area.

21. SITE-SPECIFIC INTERIM RECLAMATION BMPs

Site-specific BMPs are listed below.

- Topsoil - Topsoil will be stockpiled on the location and will be restored on the reclaimed area. Salvaged topsoil will be replaced and contoured to maximize erosion control and soil stability.
- Recontouring - The Oil and Gas Location has an elevation change of approximately 8 feet across the 1-acre surface. Disturbed areas will be recontoured to blend with the pre-disturbance surface and restore natural drainage patterns.
- Seed mix – The operator will use the certified weed-free seed mix identified by NRCS and approved by the landowner.
- Seeding method and Timing – Drill seeding or other method appropriate to promote vegetative success will be conducted during the first favorable growing season after well drilling is complete.
- Fencing – Fencing will be installed around the wellhead.

- Erosion control – Erosion controls will be installed, where needed, and maintained to prevent stormwater runoff and erosion. Erosion controls are shown on Form 2A, Construction Layout Drawing and Oil and Gas Facilities Layout.
- Weed control – The location will be monitored for the presence of invasive weeds and treated, as needed, to prevent invasive weeds from establishing.
- Monitoring – The location will be monitored for vegetative success and reseeded, as necessary, to establish 80 percent of pre-disturbance cover.

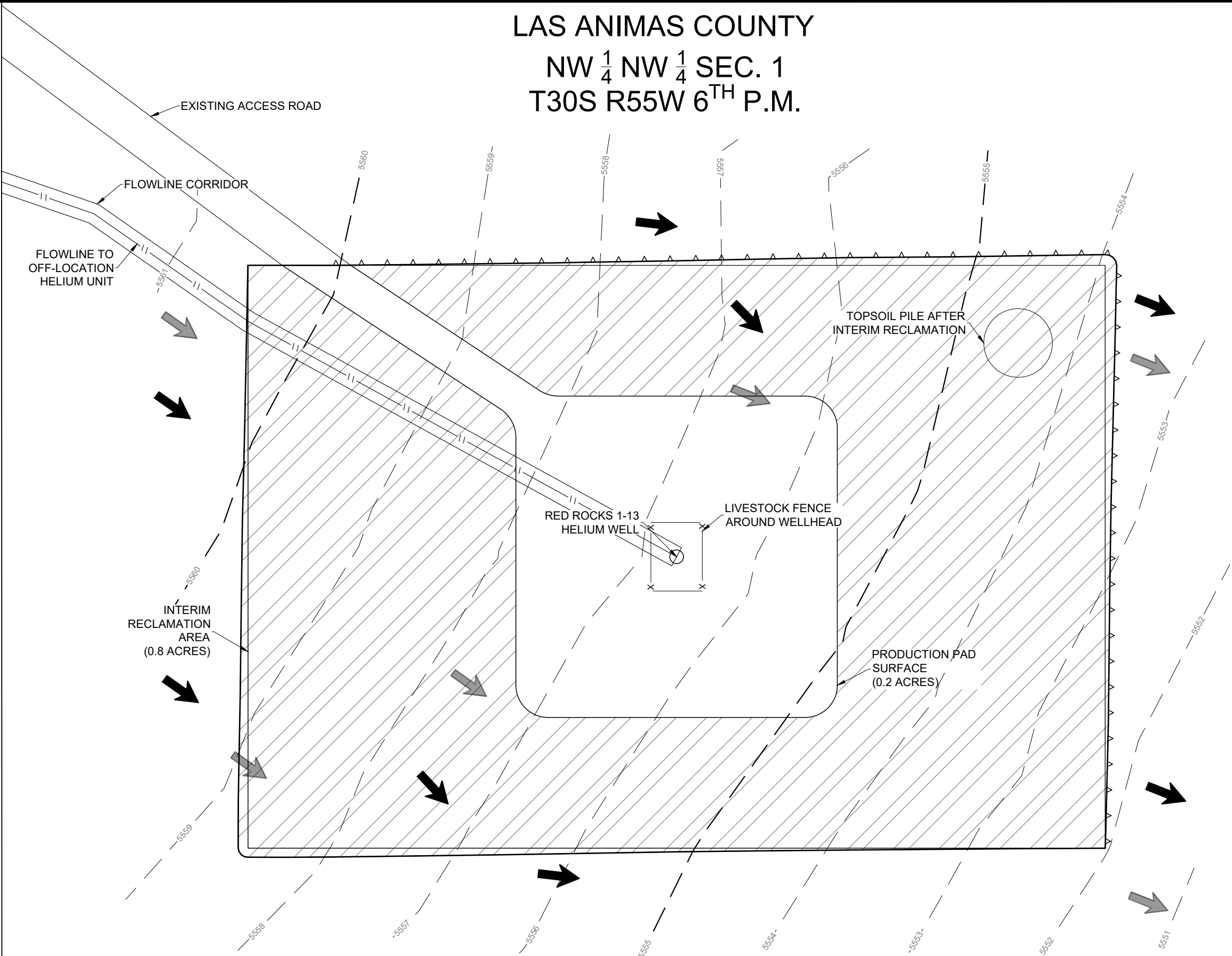
LAS ANIMAS COUNTY
NW ¼ NW ¼ SEC. 1
T30S R55W 6TH P.M.



SCALE: 1" = 30'
0' 15' 30'

- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- STORMWATER CONTROLS: FENCE OR WATTLES
- RECLAMATION AREA
- WELLHEAD
- PROPOSED DRAINAGE
- EXISTING DRAINAGE

WELLHEAD ELEVATIONS
GRADED ELEVATION: 5,556.70'
UNGRADED ELEVATION: 5,556.70'



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OIL AND GAS FACILITIES LAYOUT

RED ROCKS 1-13

Twin Bridges LLC

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL ENGINEERING OR SURVEY DOCUMENT.

DATE:	08/10/21
DRAWN BY:	ARG
REVIEWED BY:	COC
SCALE:	1" = 30'
SHEET:	4 OF 4
REVISION:	
XXX	XX/XX/XX
XXX	XX/XX/XX
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