



Kerr-McGee Oil & Gas Onshore LP

Interim Reclamation Plan

**DB Farms 40-12HZ Well Pad and Facility
SE/4 NE/4 Section 12, 3N 67W**

Weld County, Colorado

August 2021

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1.0 INTRODUCTION

Kerr-McGee Oil & Gas Onshore LP (KMOG) has developed this site-specific Interim Reclamation Plan to establish proper planning and execution for reclamation of the land within areas that are affected by oil and gas location construction and operations, but no longer in use by production operations. When all wells on a pad are completed and turned over to production, the drilling footprint will be reduced, and areas not needed for production will be restored and re-vegetated in accordance with Colorado Oil and Gas Conservation Commission (COGCC) Series 1000 Reclamation Rules and consistent with the requirements of Rule 1003. Interim Reclamation. Reference shall also be made to Rules 304.c(14) Topsoil Protection Plan and 304.c(15) Stormwater Management Plan within this process.

Soil and aggregate mix used to build a compacted drilling pad will be removed. All segregated soil horizons removed from the disturbance area shall be replaced to their original relative positions and contour based on final land use and shall be tilled adequately to alleviate compaction and re-establish a proper seedbed. Final contour, irrigation, and landscape construction, including plantings and perennial seeding, will occur in the first favorable season. The area shall be treated as necessary to prevent invasion of undesirable species and noxious weeds as practicable. The site will be stabilized, inspected, and maintained to control erosion.

2.0 SITE DESCRIPTION

Operator ID	Kerr-McGee Oil & Gas Onshore LP
Project Site Name:	DB Farms 40-12HZ
Location:	Sec 12, T3N, Range 67W, Weld County, Colorado Elevation: 4792.4' Land Type: Fee, Surface Owner: DB Farms, LLC
Total Area of Project:	14.04 acres during construction phase, 7.85 acres will be used as the working pad surface during drilling phase, 10.69 acres will be reclaimed during interim reclamation, leaving 3.35 acres of graded production surface
Description of Existing Vegetation:	Existing vegetation on the subject location is winter wheat, land use is agriculture
Soil Type(s):	1 - Altvan Loam 0-1% slopes 8 - Ascalon Loam 0-1% slopes
Operator ID:	47120
Reclamation Manager Contact:	Lynna Scranton Occidental Petroleum Corporation 720-929-6317
Major Equipment List:	The DB Farms 40-12HZ location will be a (12) well pad, with (5) tanks, (7) separators, (2) LACTS, (2) air compressors, and (2) meter buildings.

Estimated Schedule for Operational Phases

Phase	Work Activity	Estimated Start Date*
1	Pad construction	Jan. 2022
2	Surface drilling operations	Feb. 2022
3	Horizontal drilling	March 2022
4	Hydraulic fracturing operations	Jan. 2023
5	Production facility construction	Jan. 2023
6	Interim Reclamation	Sept. 2023

* Based on pending receipt of required permits, and drilling rig availability. Schedule is subject to change

3.0 PROPOSED SEQUENCE OF MAJOR ACTIVITIES

- 1) Surface Owner Consultation and Timing:** Surface owner consultation shall be conducted to minimize disruption of agricultural operations and designate final land use. Interim reclamation shall occur approximately no later than 10/30/2023 after conclusion of subsequent operations. If soil conditions are not conducive due to weather conditions, a Sundry Notice Form 4 shall be submitted, and reclamation commenced as soon as conditions allow and as practicable.
- 2) Removal of Drilling, Re-entry, Completion Equipment and all Associated Debris and Waste Materials:** Debris and non-exploration and production (E&P) waste materials (concrete, sack bentonite and other drilling mud additives, sand, plastic, pipe and cable) will be removed and cellars, rat holes, and other boreholes unnecessary for further lease operations will be backfilled.
- 3) Recontouring, Compaction Relief and Topsoil Redistribution:** All segregated soil horizons removed from crop lands will be replaced to their original relative positions and contour and will be tilled adequately to re-establish a proper seedbed and treated as needed for erosion control. Operator will be responsible for segregating the topsoil, backfilling, re-compacting any backfill, reseeding, and re-contouring the surface on all disturbed areas of an Oil, and Gas Location including that which is not being used for production or processing of E&P materials so as not to interfere with Surface Owner's operations.
- 4) Soil Preparation:** Equipment to be cleaned from soil or debris prior to mobilizing and commencing soil preparation operations between properties.
 - a) **Compaction Alleviation:** After topsoil redistribution, the interim reclamation area shall be cross ripped to a depth of eighteen inches with an agricultural ripper/subsoiler; however, this depth may be adjusted in rocky or shallow soils. Chiseling/ripping will be performed at the minimum depth of topsoil. Cultipacking or disking may be required to reduce soil clod size. Ripping with construction style shanks, for the purpose of surface ridge roughness as a stormwater BMP, is only allowed to a six-inch depth.
 - b) **Leveling:** All areas will be leveled and graded to drain properly and blend to the adjacent undisturbed land.
 - c) **Soil Amendments:** Necessary amendments will be determined by soil analysis completed during Topsoil Protection Plan Site Investigation, land use, site conditions at time of interim reclamation, and surface owner consultation.
 - d) **Seedbed Preparation:** Incorporate soil amendments by disking, harrowing or cultipacking and to provide a seedbed that is firm and friable, and properly crimp straw mulch material.
 - e) **Surface Rock Removal:** Surface rocks that interfere with agricultural operations, seeding equipment or future mowing operations will be removed.

- 5) Seeding:** Seed mix is considered based on consultations with NRCS, CPW, and Surface Owner; also, by soil type, land use, adjacent reference area vegetation and in accordance with Rule 1202.a.6. Seeding shall not occur in windy conditions or when the soil is frozen or wet. Equipment to be cleaned from previous mixes, soil, or debris, prior to mobilizing and commencing seeding operations between properties. Seed shall be applied using appropriate equipment that can place the specified seed at the specified rate and depth included as Appendix B.
- 6) Mulching:** Mulch to be applied within 48 hours after seeding on non-cropland. Mulch application in cropland shall be applied as requested by surface owner. If using straw or hay mulch, only mulch that has been certified as weed-free forage may be used. All mulch types must be anchored properly by methods such as crimping, disking and/or tackifier. Contractor may adjust the rate of mulch and type based on site location, soils, slopes, and time of year to maximize seeding and erosion control success.
- 7) Implement Post-Construction Stormwater Control Measures:** Additional erosion control measures and materials should include consideration of land use, surface owner grazing practices, and potential damage to materials. Refer to a site-specific stormwater management plan prior to implementation.
- 8) Weed control:** Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act.
- a) Weed control measures shall be conducted in consultation with the Surface Owner and County Weed Management Specialist(s) based on site specific conditions. KMOG will monitor and control noxious weeds until achieving reclamation threshold for release within reclaimed disturbance areas, including monitoring to measure success of treatments. Weed control measures employed may include mowing or removal and herbicide treatment during the appropriate growing season. During drilling, production, and reclamation operations, all disturbed areas shall be kept reasonably free of noxious weeds and undesirable species.
- 9) Interim Reclamation Completion Notice:** Upon reaching the desired vegetative goals based on COGCC Rule 1003.e, a Form 4 IRCN, to document the successful interim reclamation and adjacent reference locations.

4.0 INSPECTION AND MAINTENANCE PROCEDURES

4.1 Inspections

Post-construction stormwater inspections will be conducted in accordance with COGCC Rules 1002.f and 1003.e, to document the status of the location, maintenance needs, effectiveness of stormwater control measures, to evaluate pollution sources, and to document reclamation / final stabilization progress. Inspections will be managed by the Reclamation Contact and conducted by their designated representative(s). Inspection forms will document current conditions, including evidence of or potential for off-site erosion, additional control measures that are needed, or repair and maintenance issues.

Findings, inspection records and site maps are documented electronically and available within 24 hours of any inspection.

4.2 Best Management Practices

Measures for stormwater, erosion and sediment control will be accomplished through a combination of construction techniques, structural and non-structural controls, vegetation and re-vegetation, administrative controls and good housekeeping practices. Control measures will be implemented and adjusted with changing site conditions, as well as phases of construction. All control measures deployed throughout construction, shall be identified on site specific stormwater management plan as-built maps.

The following list of control measures will be implemented during the interim phases of construction on the Project:

BMP / Control Measure	Intended Use/Purpose	Installation Timing	Removal Timing
Spill Way (SW)	<i>Provides a controlled release of stored water to meet state and county standards</i>	Prior to construction	Final Reclamation
Diversion Ditch (DD)	<i>To divert and effectively manage run-on/run-off from the project.</i>	Prior to Construction	Final Reclamation
Culverts (C)	<i>Divert water under a crossing, or to direct flow to a designated point.</i>	During Construction	Final Reclamation
Inlet Protection (IP)	<i>Reduce erosion and sediment loading into a designated culvert or inlet.</i>	During Construction	Final Reclamation
Outlet Protection (OP)	<i>Reduce velocity and erosion from a designated culvert or outlet.</i>	During Construction	Final Reclamation
Permanent Seeding (PS)	<i>Stabilize disturbed areas no longer in use or intended for construction and development (including stockpiles)</i>	Construction and Interim Reclamation	N/A

4.3 Maintenance

For maintenance items discovered, proposed repairs or upgrades to stormwater control measures, and reclamation areas will be documented and coordinated with production crews. Timeline for completion of maintenance items are a priority and will depend on scope; but in all cases, shall not be completed until field conditions allow for safe access, and utility clearance has been confirmed for items requiring ground disturbance / earthwork.

APPENDIX A
Soil Map
and Soil
Description

Soil Map



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Altvan loam, 0 to 1 percent slopes	11.3	78.5%
8	Ascalon loam, 0 to 1 percent slopes	3.1	21.5%
Totals for Area of Interest		14.4	100.0%

Weld County, Colorado, Southern Part

1—Altvan loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 361j
Elevation: 4,500 to 4,900 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Altvan and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altvan

Setting

Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Old alluvium

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 25 inches: clay loam
H3 - 25 to 60 inches: gravelly sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Minor Components

Cascajo

Percent of map unit: 9 percent

Hydric soil rating: No

Aquic haplustolls

Percent of map unit: 1 percent

Landform: Swales

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Weld County, Colorado, Southern Part

Survey Area Data: Version 19, Jun 5, 2020

Weld County, Colorado, Southern Part

8—Ascalon loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tlnq
Elevation: 3,870 to 6,070 feet
Mean annual precipitation: 13 to 16 inches
Mean annual air temperature: 47 to 54 degrees F
Frost-free period: 135 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Ascalon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ascalon

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wind-reworked alluvium and/or calcareous sandy eolian deposits

Typical profile

Ap - 0 to 6 inches: loam
Bt1 - 6 to 12 inches: sandy clay loam
Bt2 - 12 to 19 inches: sandy clay loam
Bk - 19 to 35 inches: fine sandy loam
C - 35 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline (0.1 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: B
Ecological site: Loamy Plains (R067BY002CO)

Minor Components

Olnest

Percent of map unit: 10 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Plains (R067BY024CO)

Nunn

Percent of map unit: 5 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Loamy Plains (R067BY002CO)

Data Source Information

Soil Survey Area: Weld County, Colorado, Southern Part
Survey Area Data: Version 14, Sep 22, 2015

APPENDIX B

Seed Mix

FORM 2B INTERIM RECLAMATION PLAN
(Appendix B): Seed Mix

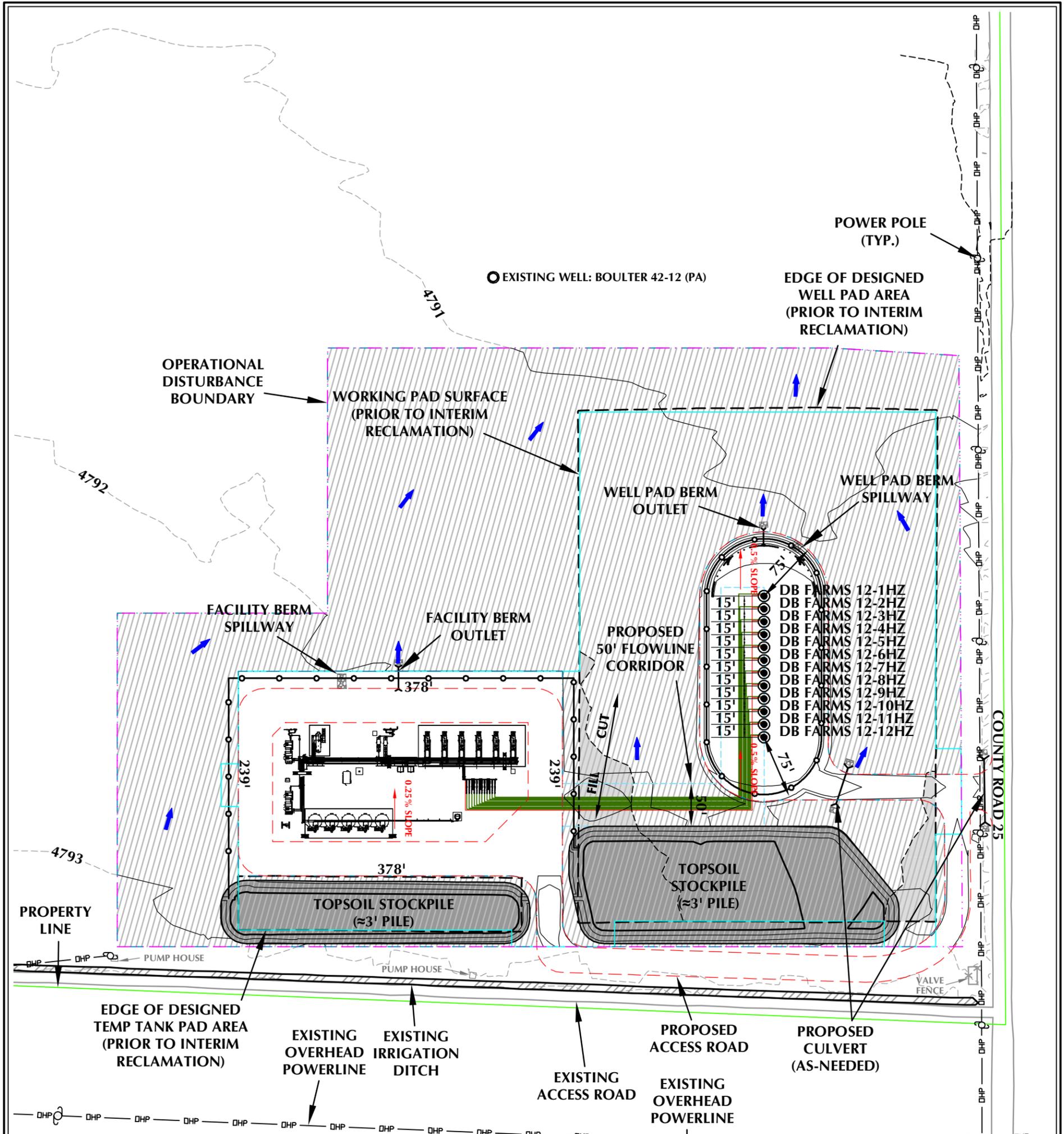
Project/Site Name	Location	Existing Vegetation	Operator ID
DB Farms 40-12HZ	T 3N: 67W Sec 12	Winter wheat, agricultural field	47120

Landowner Requested Seed Mix
Crop Location

Due to the existing agricultural nature of the surrounding land to the proposed project, reclamation will be done to meet the requirements of Rule 1003.e.1. Segregated soil horizons will be replaced to their relative positions and contour, compaction alleviated, and proper preparation of the seed bed will occur.

APPENDIX C

Interim Reclamation Grading
Plan



NOTE:

1. PIPELINE AND UTILITY CORRIDOR INFORMATION WILL BE DETERMINED CLOSER TO THE DATE OF START OF OPERATIONS BASED ON CONTRACT AND RIGHT-OF-WAY NEGOTIATIONS.
2. EXISTING UTILITIES DISPLAYED ON THE GRADING PLAN ARE FOR REFERENCE PURPOSES ONLY. PRIOR TO CONSTRUCTION OR EARTHWORK, CONTRACTOR WILL BE RESPONSIBLE TO CALL FOR LOCATES: (800) 922-1987
3. RECLAIMED AREA WILL BE RE-SEEDING AND RE-VEGETATED DURING INTERIM RECLAMATION.
4. ENTIRE ACCESS ROAD WILL REMAIN IN PLACE DURING INTERIM RECLAMATION.

**FACILITY REVISION: DB FARMS-PP-2020 REV 1B
LAND USE: IRRIGATED CROPLAND**

DB FARMS 40-12HZ INTERIM RECLAMATION PLAN

QUANTITIES AND DESIGN PARAMETERS

SHRINKAGE FACTOR = 1.00
 SWELL FACTOR = 1.00
 TOTAL DISTURBANCE AREA = 14.04 ACRES
 AREA RECLAIMED DURING INTERIM RECLAMATION = 10.69 ACRES
 TOTAL WELL PAD AREA AFTER INTERIM RECLAMATION = 1.28 ACRES
 TOTAL FACILITY PAD AREA AFTER INTERIM RECLAMATION = 2.07 ACRES

WELL PAD QUANTITIES

TOTAL CUT = 14,049 C.Y.
 TOTAL FILL = 510 C.Y.
 TOPSOIL @ 13" DEPTH FROM WELL PAD = 10,504 C.Y.
 TOPSOIL @ 13" DEPTH FROM FACILITY/TEMP TANK PAD = 4,521 C.Y.
 TOTAL TOPSOIL = 15,025 C.Y.
 TOPSOIL USED FOR INTERIM REC = 9,105 C.Y.
 TOPSOIL STORED FOR FINAL REC = 5,920 C.Y.
 TOTAL EXPORT = 13,539 C.Y.

LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (1' INTERVAL)
- PROPOSED CONTOURS (1' INTERVAL)
- EPL EXISTING PIPELINE
- PROPOSED FLOWLINE
- EXISTING FENCE
- RECLAMATION AREA
- DIVERSION DITCH
- BERM
- PLANNED FLOW DIRECTION

0 60' 120' 1" = 120'

1' CONTOURS

DB FARMS 40-12HZ

INTERIM RECLAMATION PLAN
 DB FARMS 12-1HZ, DB FARMS 12-2HZ, DB FARMS 12-3HZ,
 DB FARMS 12-4HZ, DB FARMS 12-5HZ, DB FARMS 12-6HZ,
 DB FARMS 12-7HZ, DB FARMS 12-8HZ, DB FARMS 12-9HZ,
 DB FARMS 12-10HZ, DB FARMS 12-11HZ & DB FARMS 12-12HZ
 LOCATED IN SECTION 12, T3N, R67W, 6TH P.M.
 WELD COUNTY, COLORADO

**Kerr-McGee Oil &
Gas Onshore L.P.**

1099 18th Street
Denver, Colorado 80202

LOVELAND OFFICE
6706 North Franklin Avenue
Loveland, Colorado 80538
Phone 970-776-4331

SHERIDAN OFFICE
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609

CONSULTING, LLC

SCALE: 1"=120' DATE: 8/19/2020 SHEET NO:
 REVISED: SRS 8/6/21 **1** 1 OF 1

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