

# Interim Reclamation Plan

## North Cheyenne Oil and Gas Development

### Pfaffly 1-12

This Interim Reclamation Plan has been prepared by Navex Resources, LLC (Navex) for its North Cheyenne Pfaffly 1-12 Oil and Gas Location in Kit Carson County, Colorado. The Plan addresses the Colorado Oil & Gas Conservation Commission (COGCC) requirement at Rule 304.c.(16) to prepare an Interim Reclamation Plan, the criteria in Rule 1003, and COGCC guidance.

#### 1.0 Site Description

Navex will develop one shallow conventional vertical well on the Oil and Gas Location. The location will be in the NW ¼ SW ¼ Section 12, Township 11 South, Range 46 West. The location is on fee surface and will produce fee minerals. The land use is dryland farming for row crops. The Oil and Gas Location will be approximately 3.0 acres. The Working Pad Surface will be approximately 2.7 acres. After interim reclamation, the production pad will be reduced to approximately 2.0 acres. The site elevation is 4,467 feet. The estimated duration for well pad preparation is 2 days; for drilling 7-14 days; for completion 6 days; for interim reclamation 2 days; and for production approximately 20 years.

#### 2.0 Soil Description

Soil map units and their boundaries are shown on the Form 2A, Soil Unit Map. Soil units are listed in Table 1.

**Table 1. Soil Units**

Soil Unit	Drainage Class	Available Water Capacity	Depth to Restrictive Feature
52: Norka 0 to 3 percent slopes	Well drained	10.6 inches	More than 60 inches
56: Norka-Colby 5 to 15 percent slopes	Well drained	10.6 inches	More than 60 inches

#### 3.0 Oil and Gas Location Pre-Disturbance Vegetation Composition

The location is used for non-irrigated dryland farming. According to an on-site environmental review conducted September 29 – October 1, 2021, the most recent cover was a wheat crop. The percent cover was an estimated 30 percent.

#### 4.0 Identification of Reference Area

The Reference Area is located at 39.1049224, -102.5164828. The reference area was determined based on a location with soil properties, vegetation, and cover consistent with the Oil and Gas Location.

#### 5.0 Known Weed Infestations

There were no weed infestations identified on the Oil and Gas Location during the environmental review conducted September 29 – October 1, 2021.

## 6.0 Flowlines

A 2-inch gas flowline will be buried south of the location to a tie in with the Ladder Creek Gathering System operated by Tumbleweed Midstream. The flowline trench will be an estimated 200 feet long. The trench will be an estimated 8 inches wide and 4 feet deep with approximately 3 feet of soil cover. Soil removed during flowline trenching will be segregated based on changes in physical characteristics and windrowed alongside to the trench. After flowline installation and integrity testing, the trench will be backfilled. The soil layers will be replaced in the order in which they were removed. In cooperation with the surface owner, the operator will identify appropriate soil amendments to promote vegetative growth. A perennial or crop will be identified in cooperation with the surface owner and Kit Carson County agricultural extension to provide cover and prevent blowing soil, erosion, and weed propagation. The area will be monitored for vegetation growth. Where needed, the soil will be amended or reseeded to promote revegetation. The flowline is shown on the Form 2A, Related Location and Flowline Map.

## 7.0 Access Road

The access road will be cleared and bladed sufficient to support the drill rig and equipment. The access road is shown on the Form 2A, Access Road Map. The access road will remain in place during production. During final reclamation, the access road will be reclaimed in the same manner as the Oil and Gas Location.

## 8.0 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 2.0 acres. 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. During final reclamation, surface equipment, tanks, abandoned flowline risers, and any debris will be removed from the location.

## 9.0 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.

## 10.0 Identification of Interim Reclamation Areas no Longer in Use (1003.b)

An approximately 2.0-acre production pad will not be reclaimed. During production, this area will support well operation, process equipment, on-location flowlines, tank storage inside of secondary containment, an off-location gas line, and maintenance activities.

## 11.0 Compaction Alleviation (1003.c)

To decompact soil layers, areas to be reclaimed will have any gravel or surface material removed. It will be redistributed during interim reclamation and trucked off site during final reclamation. Areas to be reclaimed will be ripped to an estimated depth of 18 inches unless restrictive features are encountered at a shallower depth. Decompaction will be used to improve the soil structure and to promote soil aeration, water infiltration, and microbial activity, which will promote plant growth.

## 12.0 Recontouring

The Oil and Gas Location is relatively flat, as shown on the attached Construction Layout Drawing. There will be minimal cut, fill, and topsoil disturbance. 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 and silt fence will be placed to protect the area from stormwater run on and runoff.

### **13.0 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 location.

### **14.0 Establish Desired Plant Community (1003.e)**

The segregated soil horizons will be replaced in their original relative positions and contoured to support continued agricultural use of the location. The area will be tilled to re-establish a seedbed. In cooperation with the surface owner, the operator will identify appropriate soil amendments to promote vegetative growth. A perennial or crop will be identified in cooperation with the surface owner and, as appropriate, Kit Carson County agricultural extension to provide cover and prevent blowing soil, erosion, and weed propagation.

### **15.0 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 growing season after well drilling is complete and within the anticipated 3 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.

### **16.0 Fencing**

Fencing will be installed with approval from the landowner if needed to restrict unauthorized access and discourage unnecessary surface disturbance, in accordance with Rules 603.h and 1002.a.(1).

### **17.0 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, where 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.

### **18.0 Proposed Interim Reclamation Drawing**

The interim reclamation area is shown on the attached Facility Layout Drawing. It shows surface flow direction and stormwater controls for control of erosion and stormwater runoff.

### **19.0 Reclamation Monitoring, Inspection, Maintenance, and Reporting**

The site operator will be on location daily to monitor the wellhead, equipment, tanks, location, and flowlines. 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 soil amendment or fertilizer. Vegetative success will be considered at least 80 percent of pre-disturbance reference area cover, consistent with Rule 1003.e.(2). A plant count for plant density will be conducted to assess percent cover and to gauge plant height. Documentation will include the operator's maintenance records for the location, stormwater inspections, and Change Management Checklist.

**20.0 Interim Reclamation Completion Notice, Form 4 [1003.e.(3)]**

Navex 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 of four photos will be taken during the growing season showing each cardinal direction to document the success of interim reclamation. One photo will document the total cover of live perennial vegetation of adjacent or nearby undisturbed land or the reference area.

**21.0 Interim Reclamation Best Management Practices**

**Table 2. Best Management Practices**

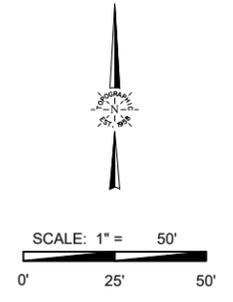
<b>Best Management Practices</b>
<ul style="list-style-type: none"> <li>• <b>Topsoil</b> - Topsoil will be stockpiled on the location and will be restored on the reclaimed area. Salvaged topsoil will be replaced and contoured to maximize erosion control and soil stability.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Erosion control</b> – Erosion controls will be installed and maintained to prevent stormwater run on, runoff, and erosion. Erosion controls are shown on the attached Facility Layout Drawing.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Weed control</b> – The location will be monitored for the presence of invasive weeds. Invasive weeds will be treated to prevent them from establishing or spreading.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Seed mix</b> – The operator will use the certified weed-free seed mix identified in coordination with the surface owner and, as appropriate, local agricultural extension office.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Seeding method and Timing</b> – Drill seeding or other method to promote vegetative success will be conducted during the first favorable growing season and within 3 months of completion of well development.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Fencing</b> – Fencing will be installed with approval from the landowner if needed to restrict unauthorized access and discourage unnecessary surface disturbance.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Recontouring</b> - Disturbed areas will be recontoured to blend with the pre-disturbance surface and restore natural drainage patterns.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Monitoring</b> – The location will be monitored for vegetative success. It will be reseeded where needed to establish 80 percent of pre-disturbance cover.</li> </ul>

**Attachments**

- Construction Layout Drawing
- Facility Layout Drawing showing Interim Reclamation

KIT CARSON COUNTY

NW 1/4 SW 1/4 SEC. 12  
T11S R46W 6<sup>TH</sup> P.M.



- - - - - EXISTING 1' CONTOUR
- - - - - EXISTING 5' CONTOUR
- — — — PROPOSED 1' CONTOUR
- — — — PROPOSED 5' CONTOUR
- — — — WATTLES
- █ FILL AREA
- WELLHEAD
- ➔ PROPOSED DRAINAGE
- ➔ EXISTING DRAINAGE

**WELLHEAD ELEVATIONS**

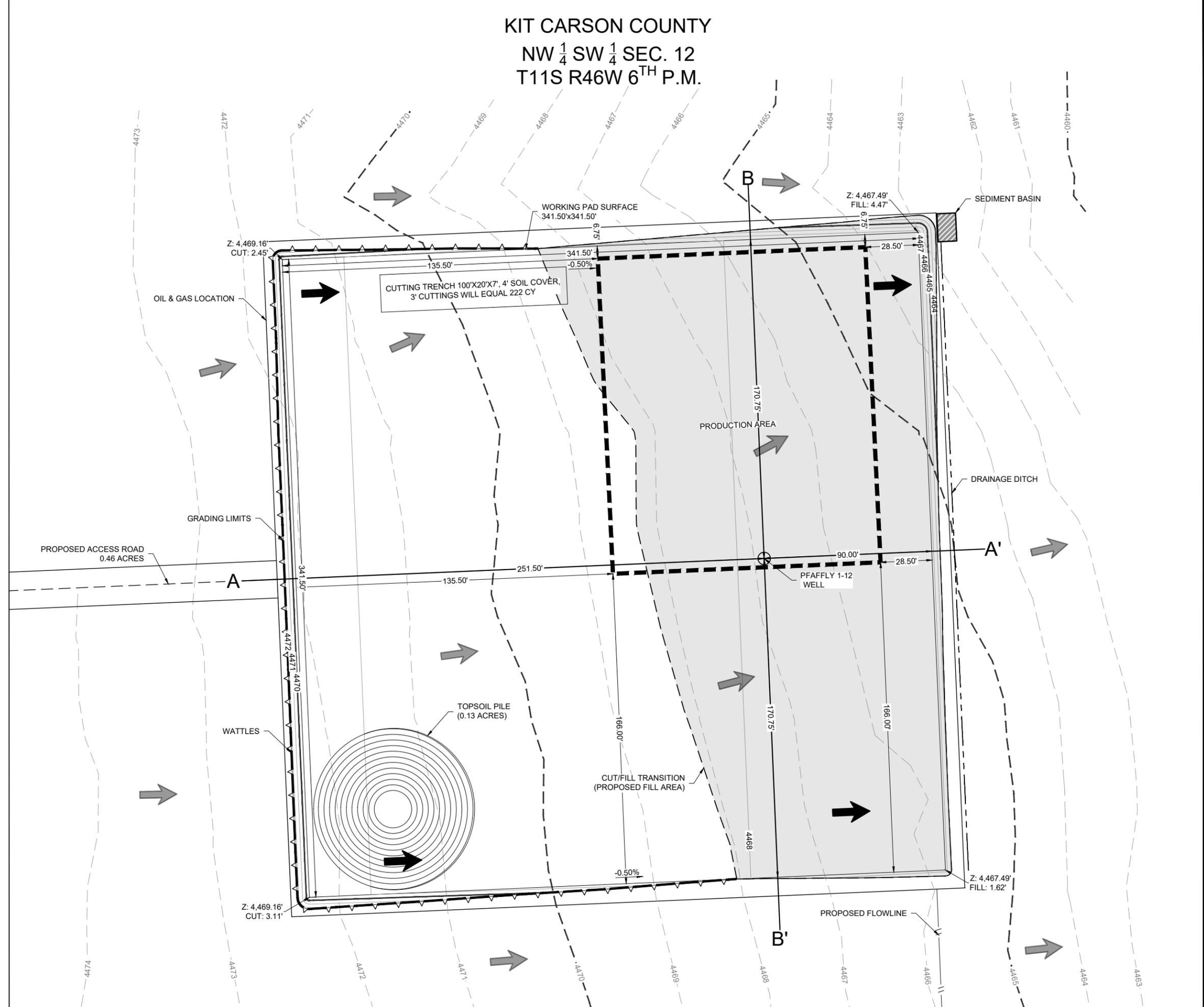
GRADED ELEVATION: 4,467.93'  
UNGRADED ELEVATION: 4,466.88'

**EARTHWORK QUANTITIES:**

CUT: 4,270 CY  
FILL: 3,100 CY  
TOPSOIL (3"): 1,140 CY  
EXPORT: 30 CY  
FILL FACTOR: 1.10

**DISTURBANCE ACREAGES:**

WORKING PAD SURFACE (AC): 2.68  
OIL & GAS LOCATION (AC): 3.00  
PROPOSED ACCESS ROAD (AC): 0.46  
FLOWLINE ROW (AC): 0.003



**TOPOGRAPHIC**  
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**CONSTRUCTION LAYOUT - PLAN VIEW**

**PFAFFLY #1-12**

**NAVEX RESOURCES, LLC**

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DATE:	05/05/22
DRAWN BY:	TJM
REVIEWED BY:	CCC
SCALE:	1" = 50'
SHEET:	9 OF 1
REVISION:	
XXX/XXX/XX	XXX
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KIT CARSON COUNTY  
 NW 1/4 SW 1/4 SEC. 12  
 T11S R46W 6TH P.M.

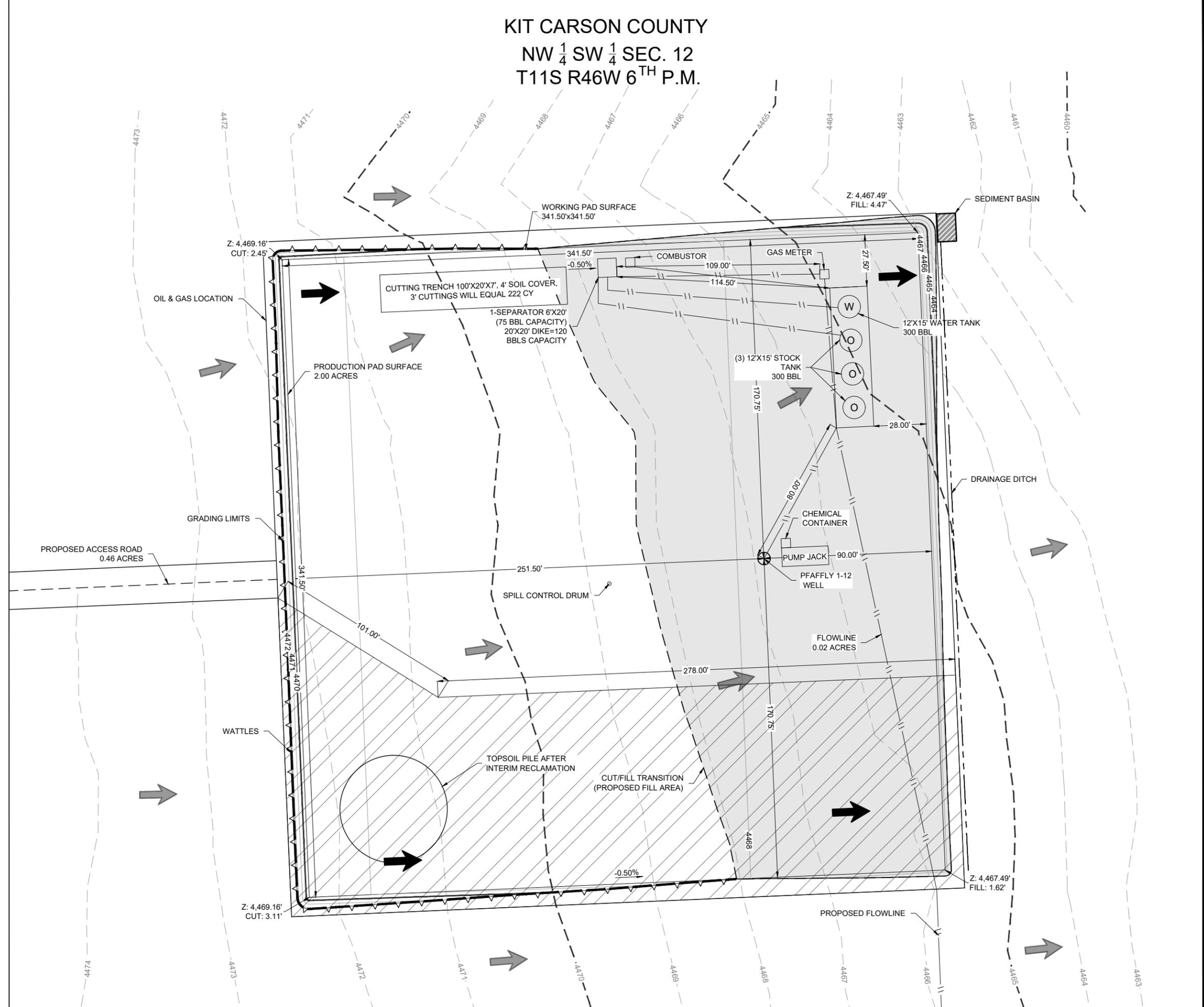


SCALE: 1" = 50'  
 0' 25' 50'

- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- WATTLES
- PROPOSED PIPELINE
- RECLAMATION AREA
- WELLHEAD
- ➔ PROPOSED DRAINAGE
- ➔ EXISTING DRAINAGE

WELLHEAD ELEVATIONS  
 GRADED ELEVATION: 4,467.93'  
 UNGRADED ELEVATION: 4,466.88'

DISTURBANCE ACREAGES:  
 ORIGINAL DISTURBANCE (AC): 3.00  
 INTERIM RECLAIM AREA (AC): 1.00  
 UNRECLAIMED AREA (AC): 2.00  
 FLOWLINE ROW (AC): 0.003



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FACILITY LAYOUT

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SCALE:	1" = 50'
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