



Site-Specific Waste Management Plan

Janet 0780 S5 Pad

NE ¼, NE ¼, Section 5, T7N, R 80W 6th P.M.

Jackson County, Colorado

Prepared for:

Fulcrum Energy Operating
240 Saint Paul Street, Suite 502
Denver, CO 80206

Prepared by:

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January 23, 2024



FEO.CO.0700



Joel Mason
Senior Project Manager



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1 SCOPE AND PURPOSE

The purpose of this Waste Management Plan (WMP) is to provide a basic framework for Fulcrum Energy Operating (Fulcrum) personnel in managing and handling waste with the intent to provide practical, accurate, and consistent guidelines that ensure compliance with applicable regulations and company policies in reference to the Janet 0780 S5 Location (**Attachment B**). Fulcrum will ensure that E&P Waste is properly stored, handled, transported, treated, recycled, or disposed to prevent potential or actual adverse environmental impacts to air, water, soil, or biological resources, or to the extent necessary to ensure compliance with Colorado Energy and Carbon Management Commission (ECMC) 905 Management of E&P Waste Rules and Table 915-1 constituents of concern the concentrations. This also includes radiation control standards, and Colorado Department of Public Health & Environment (CDPHE) Water Quality Control Commission (WQCC) Regulation 41 numeric and narrative groundwater quality standards and classifications, as incorporated by reference in Rule 901.b. and EPA CFR 40 & 49, including 40 CFR 261.4(B)(5).

2 WASTE STORAGE, HANDLING, AND BEST MANAGEMENT PRACTICES

Company personnel are responsible for the proper identification, handling, and storage of wastes, both at the facility and throughout the transporting process. Waste will only be disposed of at approved and permitted disposal or recycling facilities. The proper handling and storage of waste is essential to ensuring protection of human health and the environment.

The following guidelines identify proper waste handling and storage practices to be employed by personnel at the Janet Location:

- Characterizing and classifying all waste generated.
- Developing and maintaining a list of waste generated.
- Documenting volumes generated, recycled and/or disposed.
- Wastes will be stored in containers or within lined containment chosen for compatibility and checked periodically for leaks or integrity problems.
- Proper personal protective equipment (PPE) will be worn when handling waste. Employees will refer to applicable Safety Data Sheets (SDS) for additional information.
- Ensuring and documenting that all waste generated is properly handled, stored, transported, and disposed, including review of approved disposal facilities.
- Implementing and maintaining the WMP.
- Maintaining all manifests and recycling dockets, or copies thereof for not less than five years.
- Training staff in waste minimization efforts.
- Good housekeeping measures will be implemented in the operating area and to ensure safety and environmental well-being.

- Completing and documenting periodic storage area inspections.
- When feasible, wastes will be recycled, re-used, or treated onsite. No onsite treatment or recycling is planned onsite for the Janet Location. In the event that onsite treatment or recycling is feasible, a written management plan will be submitted to the ECMC for approval via a Form 4.

3 WASTE CHARACTERIZATION

Wastes will be characterized in accordance with local, state, and federal requirements. Different types of wastes will be characterized by means of process knowledge, safety data sheets, and laboratory analysis in accordance with regulations and the requirements of the permitted facility to which they will be taken for ultimate disposition. Different types of wastes have different classifications such as hazardous, non-hazardous, and E&P exempt. Volumes of wastes will be variable and can vary greatly throughout the life of the well.

In accordance with Rule 906a, all non-E&P waste will be identified in accordance with State and Federal regulations. Each non-E&P waste will be fully characterized including performing a hazardous waste determination. All non-hazardous E&P waste will be disposed of in accordance with 6 C.C.R. 1007-2.

4 GENERAL OPERATIONAL WASTES

Several wastes are anticipated to be generated during all phases of operations. A description of each waste stream is provided below. Additional information is provided in **Attachment A - Waste Handling Summary Table**.

4.1 Sewage Waste

Chemical toilets (i.e., porta-potties) will be provided on site for personnel. Porto-potties will be staked down and positioned at least 50-feet from possible drainage areas. Porta-potties will be emptied weekly by an approved sanitary waste contractor and hauled to an approved sanitary waste disposal facility.

4.2 Municipal Waste

Municipal waste or trash will be collected onsite in receptacles that will be staked down (as required) and positioned at least 50-feet from possible drainage areas. Trash receptacles will be emptied as necessary and hauled to an approved disposal facility.

5 OPERATIONAL PHASES WASTE MANAGEMENT

Below is a list of operation phases associated with exploration and production of the location:

1. Construction
2. Drilling

3. Completion & Flowback
4. Production
5. Facility Decommissioning & Abandonment

Multiple wastes may be generated during a particular phase of operations. A description of each waste stream and applicable management is provided below for each operational phase. Additional information is provided in **Attachment A - Waste Handling Summary Table**. These do not include general wastes described in Section 4.

5.1 Construction

During construction the possibility for spills/releases is unlikely due to the lack of fluids being on location but may be possible from onsite equipment. Fulcrum does not anticipate spills/releases. Spills/releases will be reported to the appropriate regulatory agencies in accordance with Rule 912 as applicable. Impacted surface stormwater from a spill will be recovered using a hydro-vac truck and transported to the nearest class II injection well. Impacted soils will be removed and transported to a commercial landfill for disposal.

5.2 Drilling

In accordance with Rule 905.g.(2).a, all oil-based drill cuttings will be disposed of at a permitted commercial solid waste disposal facility. The waste will be transported to a permitted commercial soil waste disposal facility via roll-off containers or haul trucks. Before transportation, the oil-based drill cuttings will be solidified to not contain any free liquids. Drilling fluids will be recycled and reused and if disposal is required, the oil-based drilling fluids will be disposed of at a Class II injection well that is permitted in accordance with Rule 905.d.(2). Or disposed of at a permitted commercial solid waste disposal facility. The waste will be transported in a vacuum truck or similar vehicle designed to transport liquids.

During drilling spills/releases are not expected onsite. Spills/releases will be reported to the appropriate regulatory agencies in accordance with Rule 912 as applicable. Impacted groundwater or surface water that is recovered as a result of a spill is typically transported to the nearest class II injection well. Impacted soils are typically removed and transported to a commercial landfill for disposal.

5.3 Completions & Flow-Back

Completion flow-back fluids will be properly stored, handled, and transported to a permitted commercial landfill that is permitted for disposal.

During completions spills/releases are not expected onsite. Spills/releases occurring during this phase will be reported to the appropriate regulatory agencies in accordance with Rule 912 as applicable. Impacted groundwater or surface water that is recovered as a result of a spill is typically transported to the nearest class II injection well. Impacted soils are typically removed and transported to a commercial landfill for disposal.

Disposal records will be maintained for E&P waste transported to the facility in accordance with ECMC Rule 905.b.(3).

5.4 Production

Produced water will be separated and conveyed to a tank battery on an adjacent location or disposal injection wells. Vacuum trucks may collect produced water in the event the produced water disposal lines are non-operational due to maintenance or unplanned events. Produced water is properly transported, stored, and handled to prevent adverse environmental impacts. Disposal records will be maintained for E&P waste transported to and from facilities in accordance with ECMC Rule 905.b.(3).

During production the possibility for spills/releases is not expected. Spills/releases occurring during this phase will be reported to the appropriate regulatory agencies in accordance with rule 912 as applicable. Impacted groundwater or surface water that is recovered as a result of a spill is typically transported to the nearest class II injection well. Impacted soils are typically removed and transported to a commercial landfill for disposal.

5.5 Facility Decommissioning & Abandonment

Historic spills/releases discovered during this phase will be reported to the appropriate regulatory agencies in accordance with rule 912 as applicable. Impacted groundwater or surface water that is recovered as a result of a spill is typically transported to the nearest class II injection well. Impacted soils are typically removed and transported to a commercial landfill for disposal.

6 WASTE TRANSPORTATION AND DISPOSAL

As per Rule 905.b, wastes will be transported to facilities authorized by the ECMC, to permitted commercial waste disposal facilities, permitted commercial waste facilities, or permitted beneficial use sites. All E&P wastes transported offsite will be manifested, signed by the generator and transporter, and maintained to be provided upon request for a minimum of five (5) years. Each ticket & manifest will include the information listed below.

- 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.
- The name and location of the treatment or disposal site.

Most facilities will require samples for specific laboratory analyses and/or a statement of process knowledge for waste generation. A waste profile typically requires an estimate of volume and a date range for delivery.

Following approval of a waste profile, the disposal company will provide the manifests for transport of the waste. Fulcrum has established waste characterization profiles on file with two disposal facilities for regular deliveries that are listed below:

- Solid Waste Disposal Facility - Twin Enviro Services, 20650 Co Rd 205, Steamboat Springs, CO 80487
- Tank Bottoms Disposal Facility - Pawnee Waste LLC 47368 Co Rd 118, Grover, CO 80729

Attachment A – Waste Handling Summary Table

Attachment A - Waste Handling Summary Table							
Operational Phase	Waste Type	Storage Container	Waste Disposal or Centralized E&P Management Facility	Waste Characterization	Potential Hazard	Volumes	Classification
Drilling	Water-based drilling fluids and associated drill cuttings	Steel bins, roll-offs, or tanks	Twin Enviro Services, Steamboat Springs, Colorado	Landfill requirements	None	11,041,701 yd3	E&P Waste
			Pawnee Waste, Grover, Colorado				
Drilling	Oil-based drilling fluids and associated drill cuttings	Steel bins, roll-offs, or tanks	Twin Enviro Services, Milner, Colorado	Landfill requirements	Ingitable/Combustible, Toxic	11,041,701 yd3	E&P Waste
			Pawnee Waste, Grover, Colorado				
Completions & Flowback	Flowback and produced water	Steel tanks	Big Horn 0780 1-17 (AKA Bighorn-Pintail Entrada SWD) / Facility ID 160017	ECMC UIC permit requirements	Ingitable/Combustible, Toxic	Approximately 1,500 bbls/well/day	E&P Waste
			Lupine 0880 1-32D SWD / Facility ID TBD				
			Pintail SWD 0780 #1-16D & #2-16D / Facility ID 160027				
			Vaneta 1-32D / Facility ID 159446				
Production	Tank bottoms, oily waste, and workover fluids	Steel bins, roll-offs, tanks, containment , or loaded directly into transportation	Pawnee Waste, Grover, Colorado	Landfill requirements	Ingitable/Combustible, Toxic	10-20 cubic yards per year	E&P Waste
			Clean Harbors, Deer Trail, Colorado				
All	Oil and produced fluid impacted soil	Containment, steel roll-offs, or loaded directly into transportation	Twin Enviro Services, Milner, Colorado	Landfill requirements	Ingitable/Combustible, Toxic	Variable cubic yards per year	E&P Waste
All	General trash municipal solid waste	Steel bins or roll-offs	Jackson County Transfer Station or Landfill, Walden CO	No characterization required	None	20 - 200 cubic yards per year	Non-hazardous
All	Sewage waste	Portable Toilets	Wastewater Plant, Walden CO	No characterization required	None	50 - 300 barrels per year	Non-hazardous
All	Hazardous materials	Plastic drum or container	Clean Harbors, Deer Trail, Colorado	Resource, Conservation, and Recovery Act (RCRA) and Landfill requirements	Ignitable/Combustible, Corrosive, Reactive, Toxic	< 1 cubic yard per year	Hazardous
All	Universal hazardous waste	Plastic drum or container	Yampa Valley Recycles Steamboat Springs, CO (W & F 10 AM - 4PM) - All batteries, lamps, electronics, mercury. Ace Hardware, Sherwin Williams, Steamboat Springs - Oil-based & latex paints. Routt County Bi-Annual Hazardous Waste Drop Off - Pesticides, aerosol cans (partially used) - ~Oct. 14 of calendar year. Advanced Auto Parts, Steamboat Springs - Used motor oil, antifreeze.	No characterization required	Toxic	< 1 cubic yards per year	Hazardous

Attachment B – Janet 0780 S5 Site Figures

Figure 1 – Location Map

Figure 2 – North Park Basin Class II Injection Wells Map

Figure 3 – Haul Route Maps

Figure 4 – Construction Layout

Figure 5 – Construction Well Head Location Layout

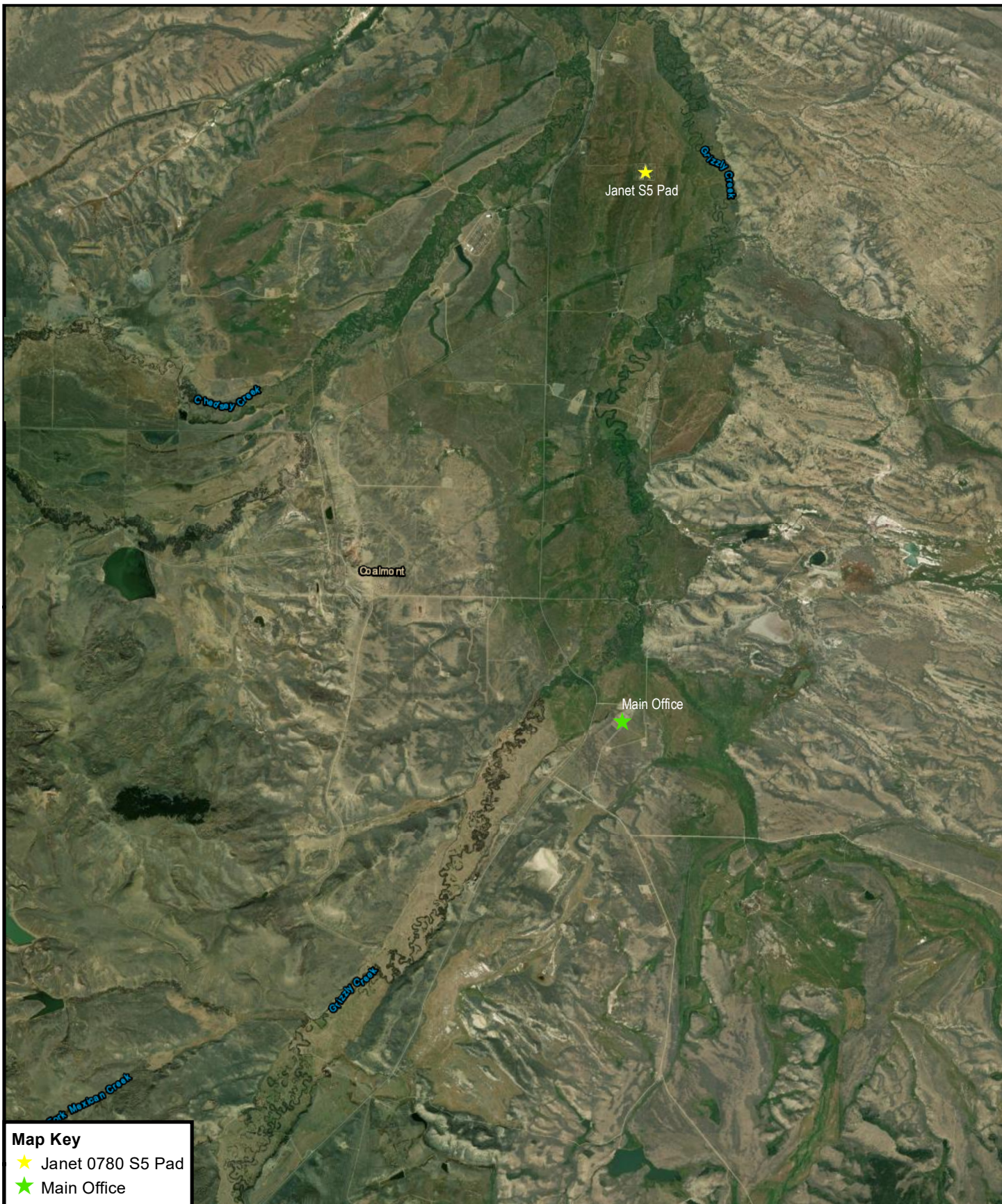
Figure 6 – Preliminary Drilling Layout

Figure 7 – Preliminary Well Completion & Stimulation Layout

Figure 8 – Preliminary Flowback Equipment Layout

Figure 9 – Facilities Layout

Figure 10 – Interim Reclamation Layout



Map Key

- ★ Janet 0780 S5 Pad
- ★ Main Office



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Buffalo, Wyoming 82834
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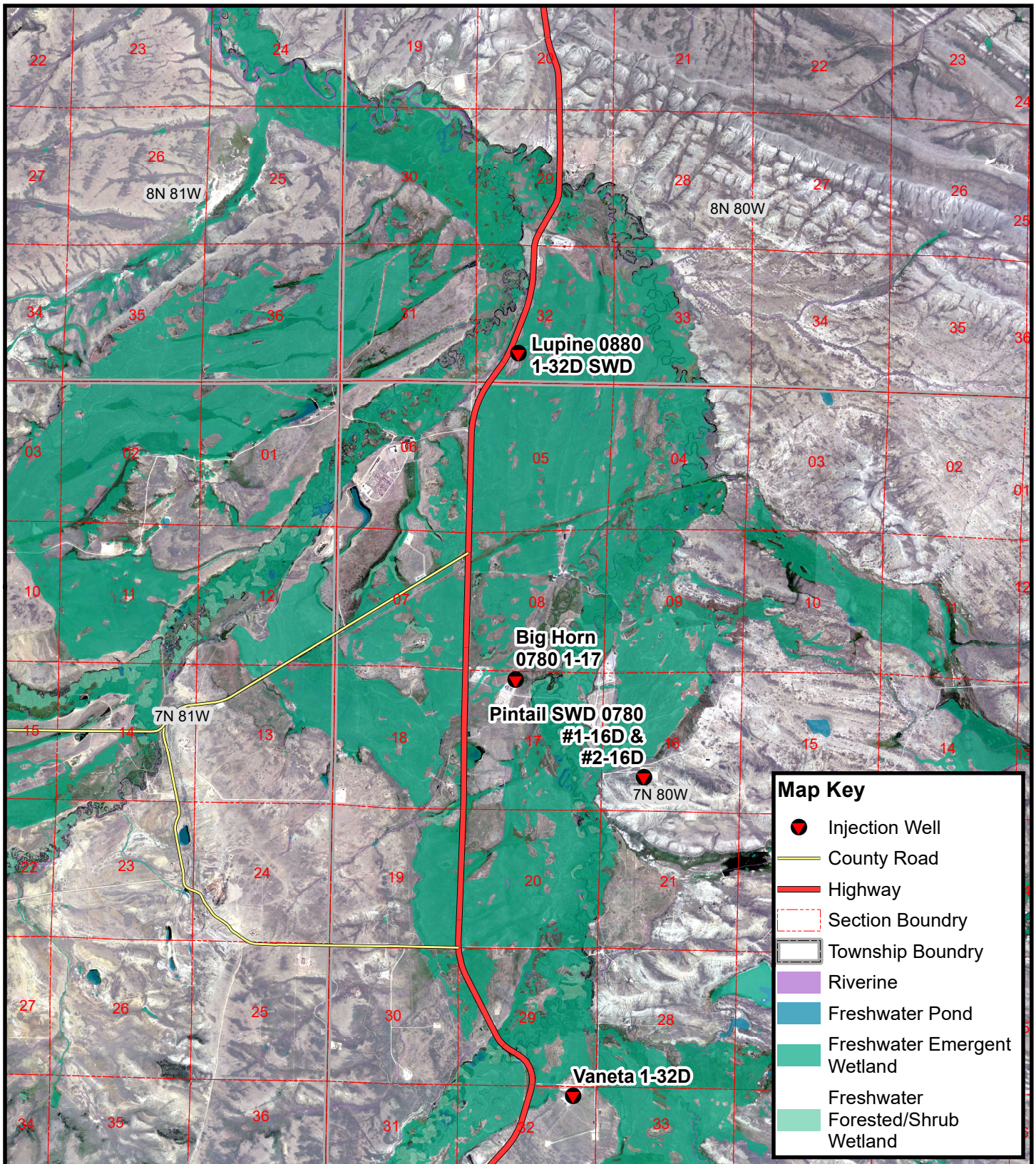
**Fulcrum Energy Operating
Janet 0780 S5 Pad**

Jackson County, Colorado
Scale:1:80,000

Coordinate System: WGS 1984 UTM Zone 13N



Date: 9/29/2023



Map Key

- Injection Well
- County Road
- Highway
- Section Boundry
- Township Boundry
- Riverine
- Freshwater Pond
- Freshwater Emergent Wetland
- Freshwater
- Forested/Shrub Wetland



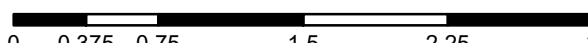
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**Fulcrum Energy Operating
Class II Injection Wells
North Park Basin**

Jackson County, State of Colorado




0 0.375 0.75 1.5 2.25 3 Miles

Coordinate System: WGS 1984 UTM Zone 13N

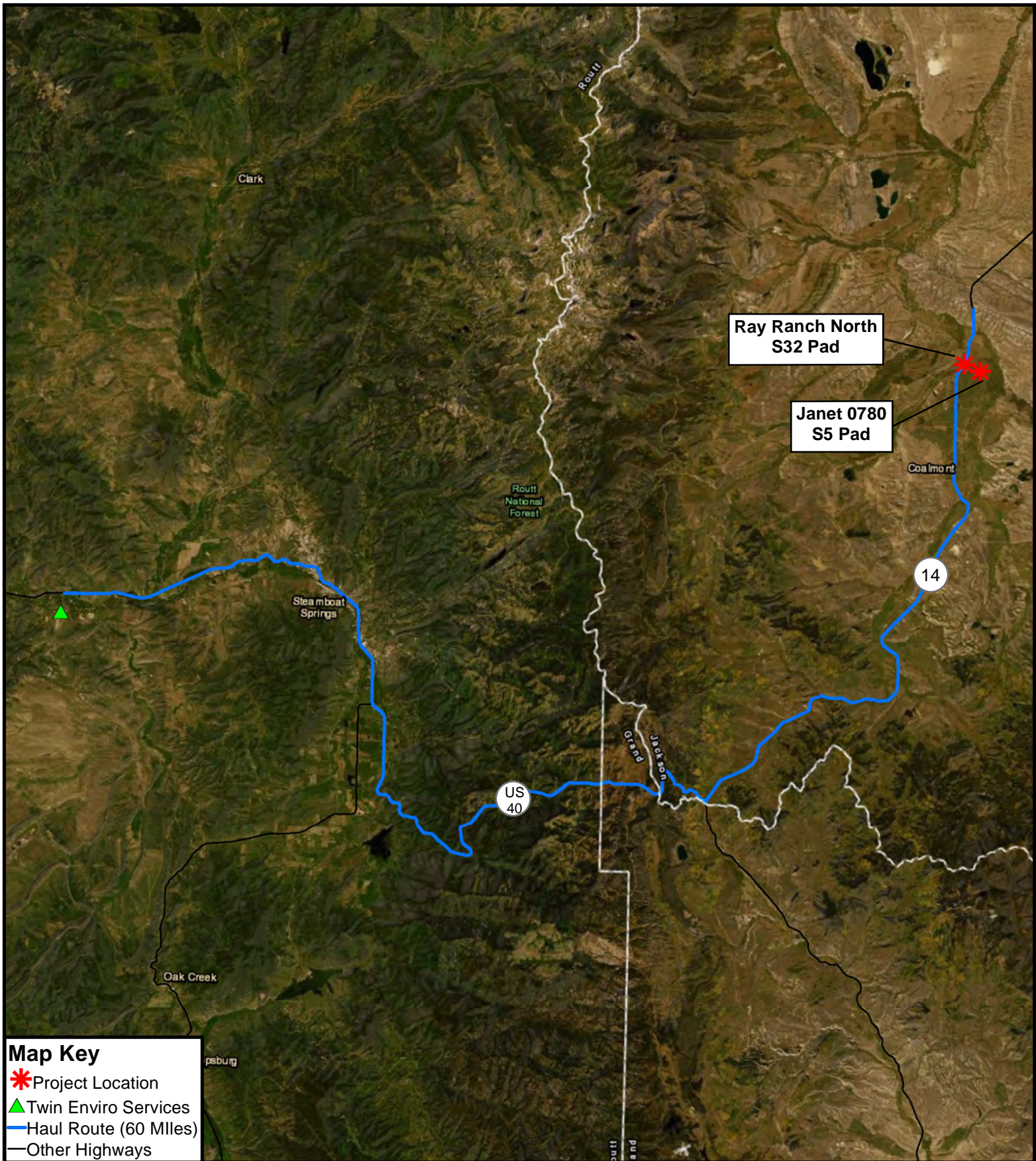


N



Scale: 1:63,000

Date: 9/29/2023



Map Key

- * Project Location
- ▲ Twin Enviro Services
- Haul Route (60 Miles)
- Other Highways



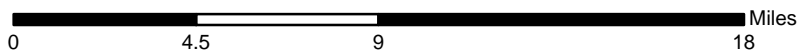
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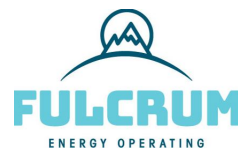
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Janet 0780 S5 Pad & Ray Ranch North S32 Pad Haul Route Map to Twin Enviro Services

State of Colorado

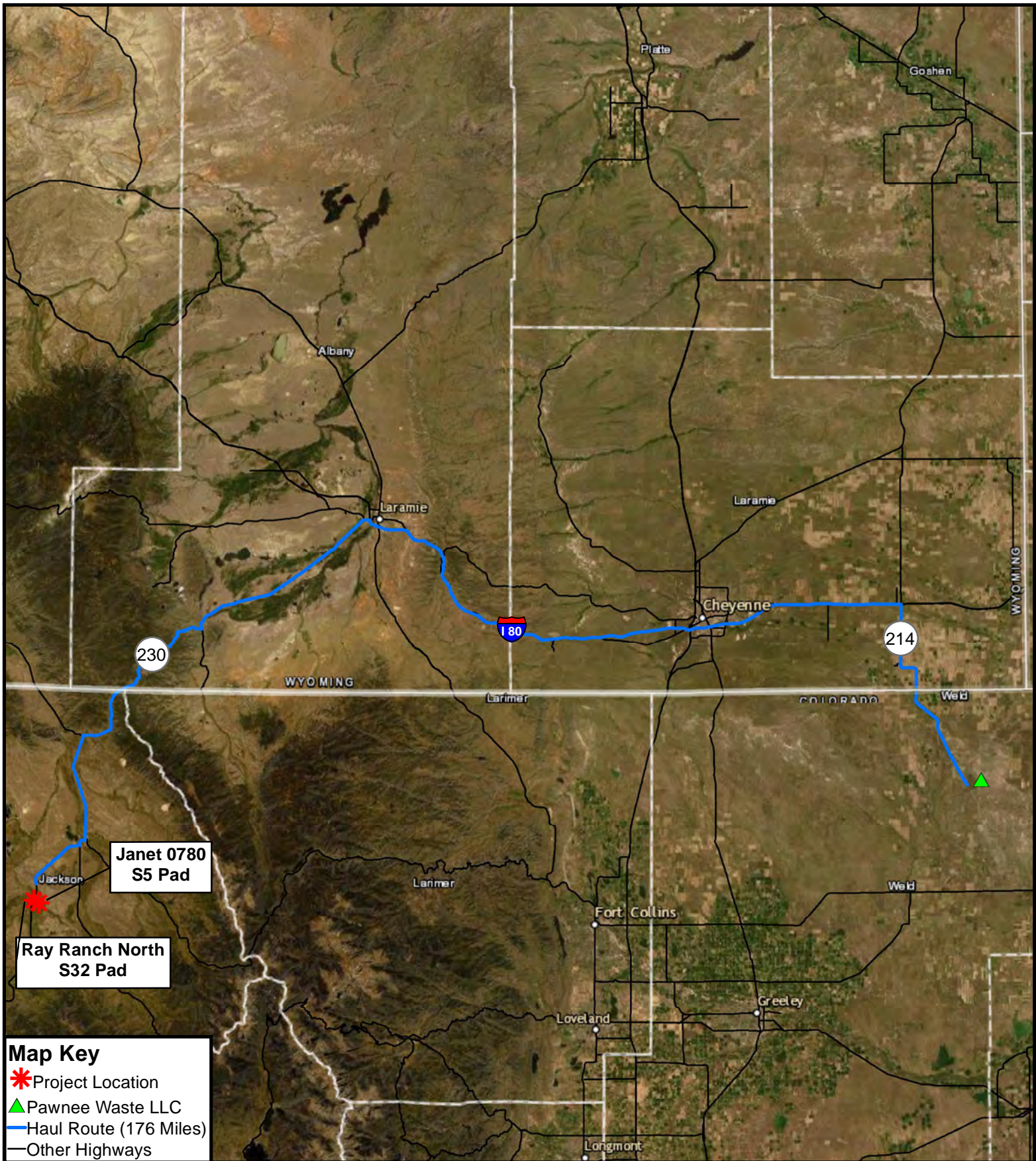


Coordinate System: WGS 1984 UTM Zone 13N





Date: 9/29/2023

Scale: 1:300,000



Map Key

- * Project Location
- ▲ Pawnee Waste LLC
- Haul Route (176 Miles)
- Other Highways

 <p>112 High Street Buffalo, Wyoming 82834 855.684.5891</p> <p>www.absarokasolutions.com</p> <p>FEO.CO.0700</p>	<p>Janet 0780 S5 Pad & Ray Ranch North S32 Pad Haul Route Map to Pawnee Waste LLC</p> <p>State of Colorado</p> <p>0 15 30 60 Miles</p> <p>Coordinate System: WGS 1984 UTM Zone 13N</p>	 <p>Date: 9/29/2023</p> <p>Scale: 1:1,000,000</p>
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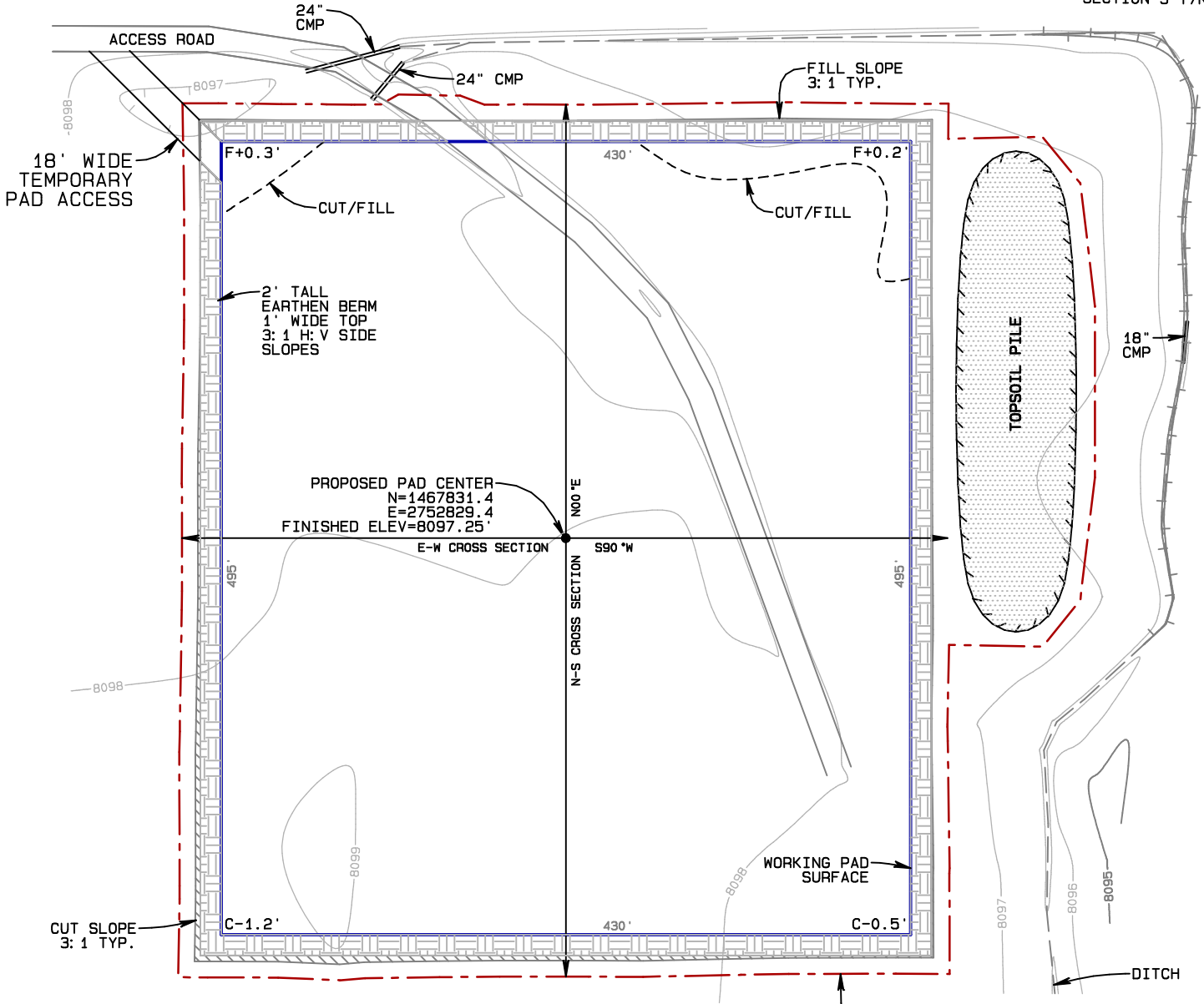
CONSTRUCTION LAYOUT

DATED: 9/30/2023

Janet 0780 S5 Pad
NE1/4NE1/4 of Section 5, T7N, R80W, 6th P.M.,
Jackson County, Colorado.

SECTION 32 T8N

SECTION 5 T7N



PAD AFTER CONSTRUCTION

Working Pad Surface = 4.89 acres
Oil & Gas Location = 6.61 acres
(total area of disturbance)
Access Road disturbance = 1.32 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

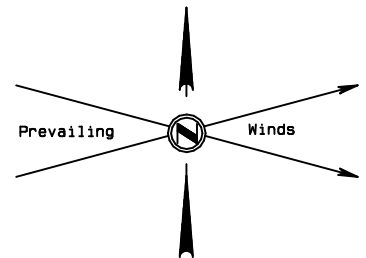
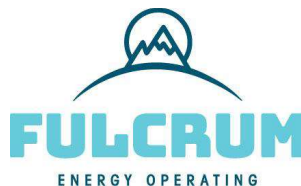
PAD AFTER INTERIM RECLAMATION

Working Pad Surface = 3.11 acres
Oil & Gas Location = 4.39 acres
(total area of disturbance)
Access Road disturbance = 1.28 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

Estimated Earthwork:
Total Excavation - 6,504.2 Cu. Yd.
Pad Fill/Borrow - 54.4 Cu. Yd.
Topsoil Stockpile - 4,630 Cu. Yd.
Berm Stockpile - 1,819.8 Cu. Yd.
Final Pad Elevation = 8097.25'

BASIS OF ELEVATION

NAVD88 Computed using GEOID12B as measured
using a combination of Static and Kinematic GPS
based on an OPUS Solution Report.



GRAPHIC SCALE 1"=100'

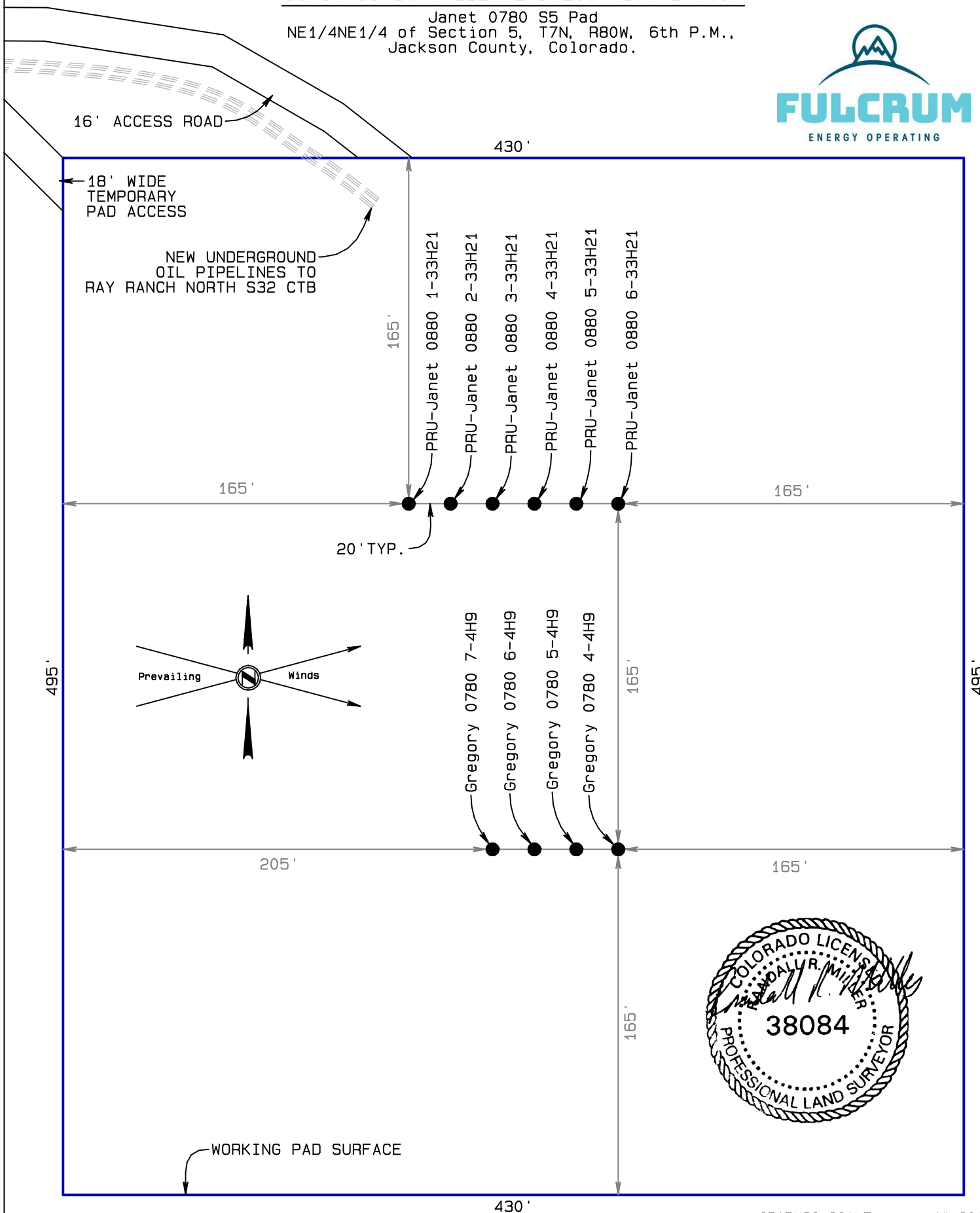
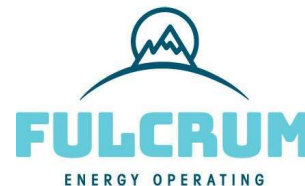


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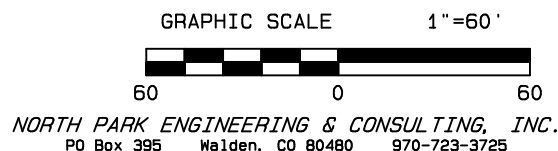
CONSTRUCTION WELL HEAD LOCATION LAYOUT

DATED: 9/30/2023

Janet 0780 S5 Pad
NE1/4NE1/4 of Section 5, T7N, R80W, 6th P.M.,
Jackson County, Colorado.

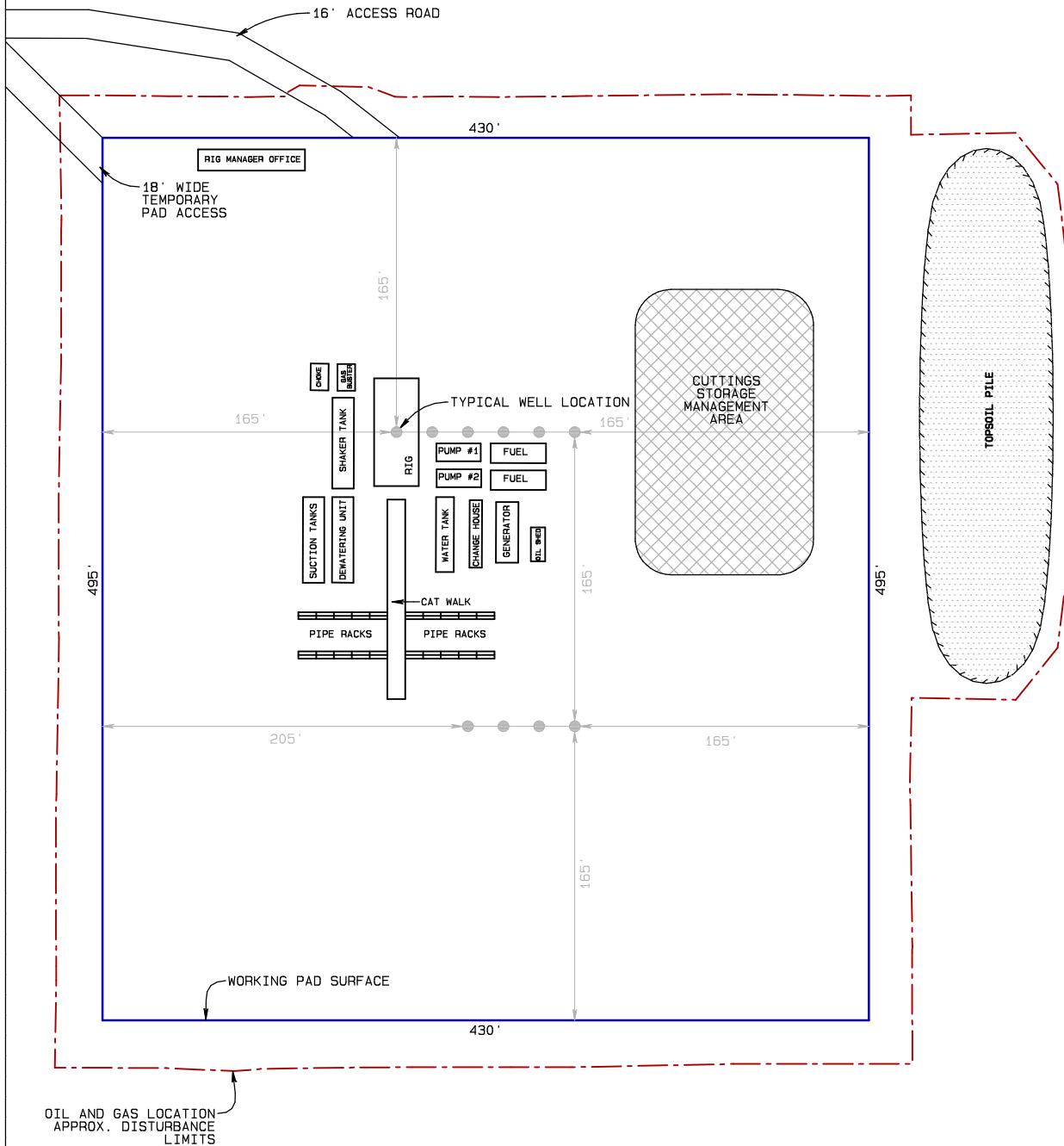


Final Pad Elevation = 8097.25'
All Elev. for Surface Locations
at Ungraded Ground are 8098'



PRELIMINARY DRILL RIG LAYOUT

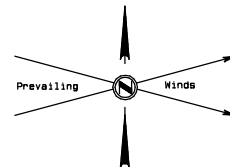
Janet 0780 S5 Pad
NE1/4NE1/4 of Section 5, T7N, R80W, 6th P.M.,
Jackson County, Colorado.



OIL AND GAS LOCATION
APPROX. DISTURBANCE
LIMITS

PAD AFTER CONSTRUCTION
Working Pad Surface = 4.89 acres
Oil & Gas Location = 6.61 acres
(total area of disturbance)
Access Road disturbance = 1.32 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

PAD AFTER INTERIM RECLAMATION
Working Pad Surface = 3.11 acres
Oil & Gas Location = 4.39 acres
(total area of disturbance)
Access Road disturbance = 1.28 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres



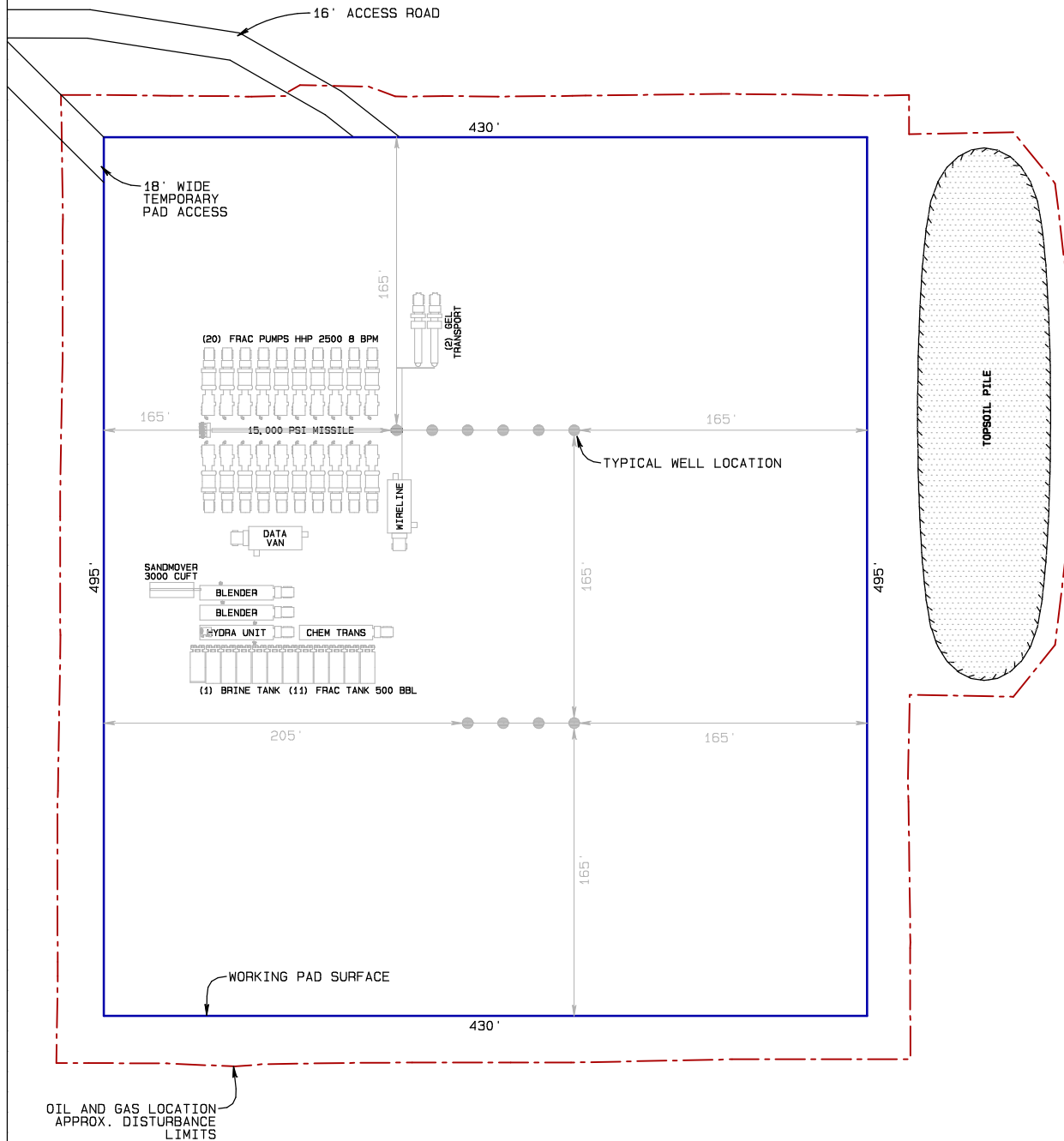
GRAPHIC SCALE 1"=60'



Final Pad Elevation = 8097.25'

PRELIMINARY WELL COMPLETION AND STIMULATION LAYOUT

Janet 0780 S5 Pad
NE1/4NE1/4 of Section 5, T7N, R80W, 6th P.M.,
Jackson County, Colorado.



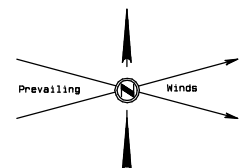
PAD AFTER CONSTRUCTION

Working Pad Surface = 4.89 acres
Oil & Gas Location = 6.61 acres
(total area of disturbance)
Access Road disturbance = 1.32 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

PAD AFTER INTERIM RECLAMATION

Working Pad Surface = 3.11 acres
Oil & Gas Location = 4.39 acres
(total area of disturbance)
Access Road disturbance = 1.28 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

Final Pad Elevation = 8097.25'



GRAPHIC SCALE 1"=60'

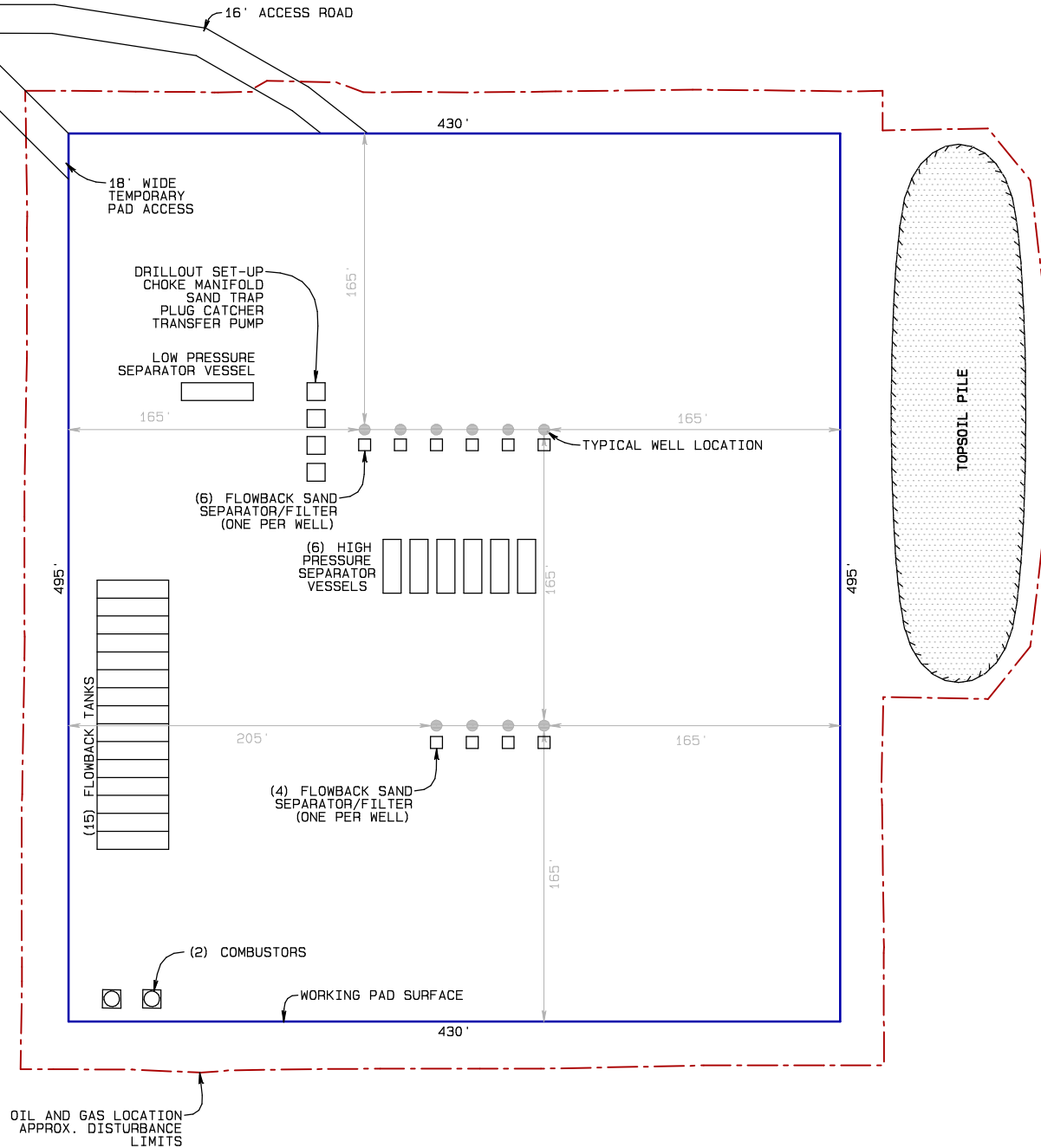
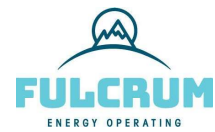


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DATED: 12/7/2023

PRELIMINARY FLOWBACK EQUIPMENT LAYOUT

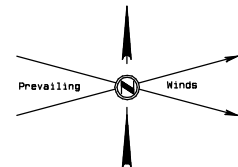
Janet 0780 S5 Pad
NE1/4NE1/4 of Section 5, T7N, R80W, 6th P.M.,
Jackson County, Colorado.



PAD AFTER CONSTRUCTION
Working Pad Surface = 4.89 acres
Oil & Gas Location = 6.61 acres
(total area of disturbance)
Access Road disturbance = 1.32 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

PAD AFTER INTERIM RECLAMATION
Working Pad Surface = 3.11 acres
Oil & Gas Location = 4.39 acres
(total area of disturbance)
Access Road disturbance = 1.28 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

Final Pad Elevation = 8097.25'



GRAPHIC SCALE 1"=60'

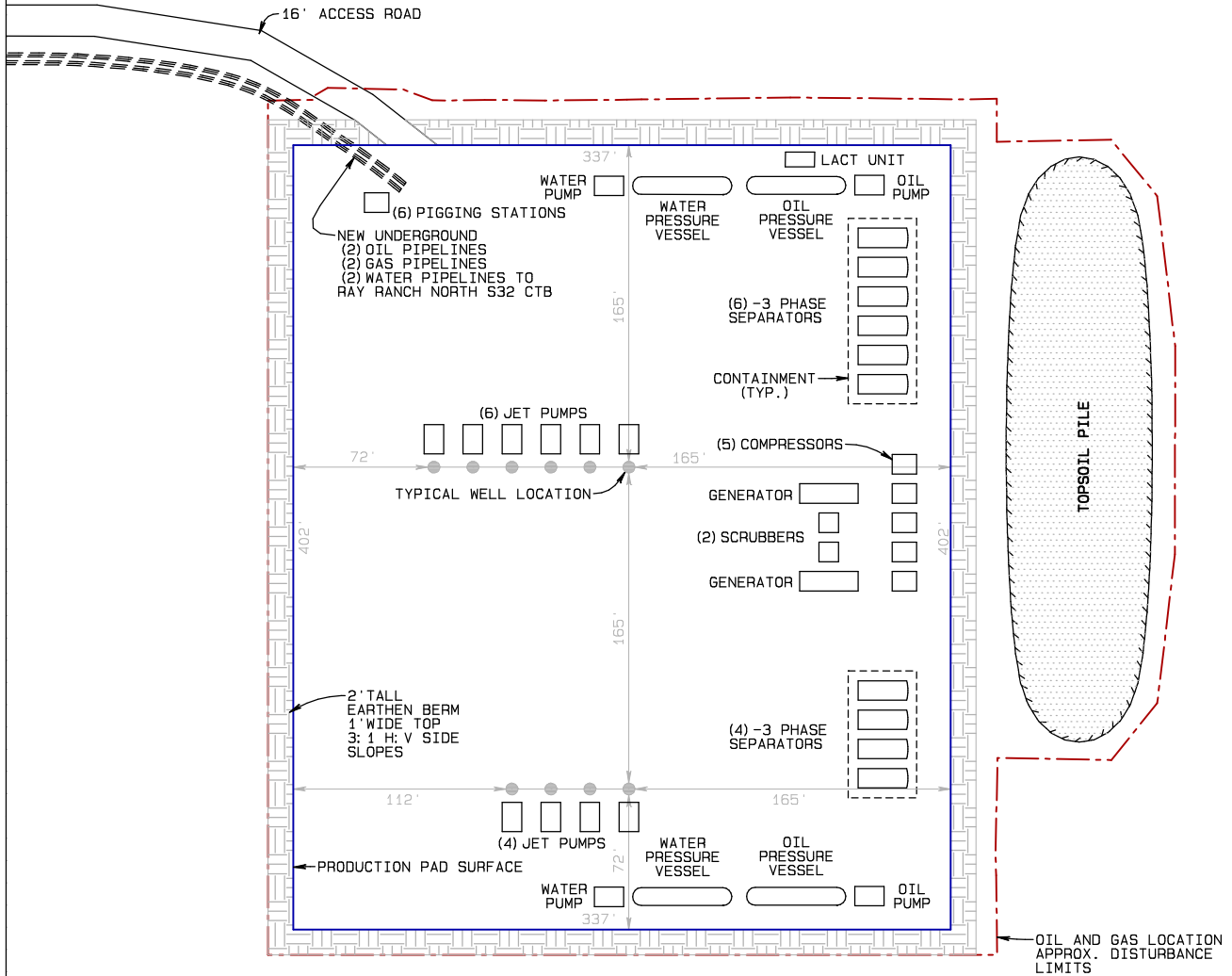


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DATED: 12/7/2023

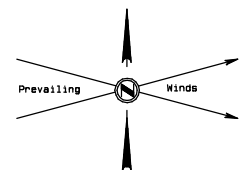
FACILITIES LAYOUT

Janet 0780 S5 Pad
NE1/4NE1/4 of Section 5, T7N, R80W, 6th P.M.,
Jackson County, Colorado.



PAD AFTER INTERIM RECLAMATION
Working Pad Surface = 3.11 acres
(Production Pad Surface)
Oil & Gas Location = 4.39 acres
(total area of disturbance)
Access Road disturbance = 1.28 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

Final Pad Elevation = 8097.25'



GRAPHIC SCALE 1"=60'

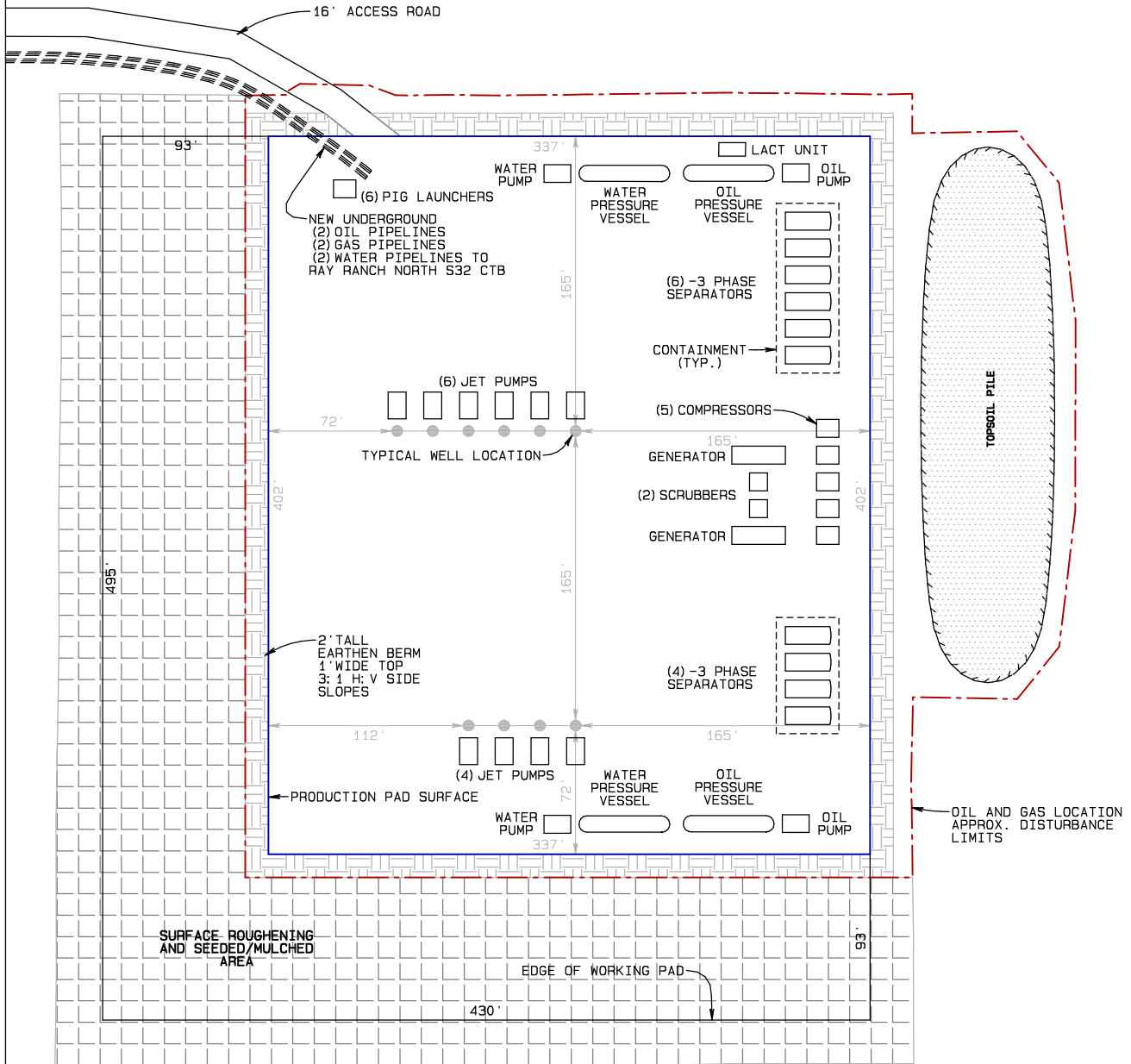


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DATED: 10/2/2023

INTERIM RECLAMATION LAYOUT

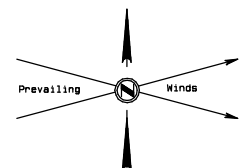
Janet 0780 S5 Pad
NE1/4NE1/4 of Section 5, T7N, R80W, 6th P.M.,
Jackson County, Colorado.



PAD AFTER CONSTRUCTION
Working Pad Surface = 4.99 acres
Oil & Gas Location = 6.61 acres
(total area of disturbance)
Access Road disturbance = 1.32 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

PAD AFTER INTERIM RECLAMATION
Working Pad Surface = 3.11 acres
(Production Pad Surface)
Oil & Gas Location = 4.39 acres
(total area of disturbance)
Access Road disturbance = 1.28 acres
Pipeline and/or Utility Corridor
disturbance = 3.02 acres

Final Pad Elevation = 8097.25'



GRAPHIC SCALE 1"=60'

60 0 60

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