

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
Revised April 3, 2017

**For temporary pits, below-grade tanks, and multi-well fluid management pits**, submit to the appropriate NMOCD District Office.  
**For permanent pits** submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☐ Below grade tank registration  
☒ Permit of a pit or proposed alternative method  
☐ Closure of a pit, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit/or registration  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

**Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request**

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.

Operator: Steward Energy II LLC

OGRID #: 371682

Address: 2600 N Dallas Pkwy Suite 400 Frisco, TX 75034

Facility or well name: Saul Goodman Fee #2H

API Number: 30-025-45129

OCD Permit Number: \_\_\_\_\_

U/L or Qtr/Qtr A Section 2 Township 14S Range 38E County: Lea

Center of Proposed Design: Latitude 33.14055 Longitude 103.06249 NAD83

Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2.

☒ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC

Temporary: ☒ Drilling ☐ Workover

☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management

Low Chloride Drilling Fluid ☐ yes ☒ no

☒ Lined ☐ Unlined Liner type: Thickness **30 mil** ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

☒ String-Reinforced 2- Slit Pits One Fresh & One Brine

Liner Seams: ☐ Welded ☒ Factory ☐ Other \_\_\_Slit Pit\_\_\_ Volume: 6400 bbl/pit Dimensions: 2 x (150' x 20' x 12' (deep))

3.

☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC

Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_

Tank Construction material: \_\_\_\_\_

☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off

☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_

Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

4.

☐ **Alternative Method:**

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.

**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)

☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify \_\_\_\_\_

6.

**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☐ Screen ☐ Netting ☐ Other \_\_\_\_\_
- ☐ Monthly inspections (If netting or screening is not physically feasible)

7.

**Signs:** Subsection C of 19.15.17.11 NMAC

- ☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☐ Signed in compliance with 19.15.16.8 NMAC

8.

**Variations and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

**Please check a box if one or more of the following is requested, if not leave blank:**

- ☒ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** *The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.*

**General siting**

**Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.**

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No  
☒ NA

**Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit .**

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No  
☐ NA

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area. **(Does not apply to below grade tanks)**

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain. **(Does not apply to below grade tanks)**

- FEMA map

☐ Yes ☒ No

**Below Grade Tanks**

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

**Temporary Pit using Low Chloride Drilling Fluid** (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

### **Temporary Pit Non-low chloride drilling fluid**

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☒ No

Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 300 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

### **Permanent Pit or Multi-Well Fluid Management Pit**

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

10.

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** *Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☒ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design)    API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

11.

**Multi-Well Fluid Management Pit Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** *Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design)    API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

12.

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Climatological Factors Assessment  
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Quality Control/Quality Assurance Construction and Installation Plan  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan  
☐ Emergency Response Plan  
☐ Oil Field Waste Stream Characterization  
☐ Monitoring and Inspection Plan  
☐ Erosion Control Plan  
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.

**Proposed Closure:** 19.15.17.13 NMAC

**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit  
☐ Alternative
- Proposed Closure Method: ☐ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☒ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☒ In-place Burial ☐ On-site Trench Burial  
☐ Alternative Closure Method

14.

**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC  
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.

**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	



adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map "On Site Observation and Landowner Experience"

☐ Yes ☒ No

16.

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC  
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC  
☒ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC  
☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC  
☒ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC  
☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)  
☒ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Wayne Price- mgm Price LLC Title: Agent for SEII

Signature: 

Date: Sept 28, 2018

e-mail address: [wayneprice@q.com](mailto:wayneprice@q.com)

Telephone: 505-715-2809

18.

**OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature:  Approval Date: 10/2/18

Title: Environmental Bureau Chief OCD Permit Number: \_\_\_\_\_

19.

**Closure Report (required within 60 days of closure completion):** 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☐ Closure Completion Date: \_\_\_\_\_

20.

**Closure Method:**

- ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

21.

**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Proof of Closure Notice (surface owner and division)  
☐ Proof of Deed Notice (required for on-site closure for private land only)  
☐ Plot Plan (for on-site closures and temporary pits)  
☐ Confirmation Sampling Analytical Results (if applicable)  
☐ Waste Material Sampling Analytical Results (required for on-site closure)  
☐ Disposal Facility Name and Permit Number  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique  
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: ☐ 1927 ☐ 1983

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

# **Attachment to C-144 for Steward Energy II LLC Saul Goodman Fee**

August 21, 2018-resubmitted September 28, 2018 which incorporates OCD draft comments and recommendations.

Note: The below text is descriptive in nature, Steward Energy II will ensure that all aspects of the Pit Rule 19.15.17 NMAC are complied with concerning installing Slit Pits. Steward's personal and consultants has made a good faith effort to investigate and supply the actual facts, but cannot discount certain unintended omissions or errors.

## **Pit Design and Construction:**

Steward Energy plans to use two separate “**Slit Pits (i.e Trenches)**”, one for fresh water drilling and the other for brine/mud drilling. Each pit will be approximately 150 feet long by 20 feet wide and 12 feet deep. Each end will be sloped for access and the sidewalls will be shear. The pit contents will not be co-mingled.

Akome Liner Company located in Hobbs NM will be the installer. The excavation of pits will ensure that all virgin top and vadose zone soils (i.e. non-contaminated soils) are segregated and retained for future backfill. Additional soils may be utilized in and around the drill and production site. The end slopes (3:1 maximum) and bottom of the pits will be compacted to a minimum of 2000 lbs/ft<sup>2</sup>. Sidewall stability will be ensured by measuring the wall compression and making sure it exceeds 1000 lbs/ft<sup>2</sup>, along with site field judgments. Soils Classified as Class C (USCS) will have safety shoring if encountered. All stocked-piled soils and heavy loads will be maintained a minimum of 10 feet from the the pit sidewalls.

Geo-textile materials will be installed first and then a continuous liner with no field seams will be installed with appropriate slack on the surface and in the trench side walls, and anchor trenches to exceed the design required pursuant to 19.15.17.11 (F)(7) (24” deep x 24” wide) and compacted to exceed the rule requirements for temporary pits. (Anchor trench design is included in Fig. 1B)

(a field pocket penetrometer will be used to take compaction readings or the field thumb test will be used.)

The liner will be an extra heavy-duty 30 mil string reinforced LLDPE (spec sheet attached). The pump in-out areas will have a double liner (30 mil) installed for impingement to meet the requirements under 19.15.17.11 (F)(8) and 19.15.17.12 (A)(6).

To meet the requirements of 19.15.17.12.A.6, piping in and out of the pit will be supported by a header system where the discharge and suction piping will be 6” from the liner bottom and in the double liner area.

Attached hereto is a typical rig site layout and sketch of the cross-sections. (See Fig 1&1A) A berm will be installed to ensure no run-on or run-off.

Pursuant to the current rule 19.15.17 requirements concerning side slopes, Steward is requesting a variance for the vertical sidewalls of the Slit Pits. To ensure equal or better protection requirement, we have chosen to use a liner with 50% more thickness than is required. In addition, we plan on ensuring that slack liner materials are installed to prevent undue tensional stresses. Please find attached the liner specification sheet that is planned on being used for OCD review.

## **Operating/Maintenance Procedures:**

The rig water/mud pumps will pump fluids from the pits and discharge down hole with fluid drill cuttings returning to the opposite end of the pits. Exit and entry points will ensure protection of the liner, as these areas will have a double liner installed.

The pit fluid levels shall maintain a minimum of 2 feet freeboard at all times. While not expected, If any oils collect on the pits, they will be skimmed off and recycled within 48 hours. Appropriate equipment will be on hand to accomplish this feat. Flags will be used to deter migratory birds. A daily inspection record will be maintained and monitored for any damage to the liner, any breach of fluids, any skim oils, freeboard measurements, pit fluid levels, and any other pertinent issues, especially unexpected loss or gain.

Pursuant to 19.15.17.12 (A)(5) any release or damage to liner shall be reported to OCD pursuant to the 19.15.29 (Release rule). The pit system shall be shut down immediately and not returned to operation until OCD approves repair of the liner.

The site will be fenced to prevent un-authorized entry and protection of livestock and wildlife, in addition, per OCD Draft response recommendation, a safety ladder will be installed in the pits for emergency egress.

### **Hydro-Geologic Data:**

The primary aquifer in the vicinity of the well and pit sites is the High Plains Aquifer, which is generally an unconsolidated and unconfined aquifer composed of clay, silt, sand, and gravel. The sediments have been cemented locally near the land surface forming a caliche. Top soils in the area are typical sandy loam.

Based on well records in the area and a map of the bedrock geology underlying the high plains aquifer by Weeks and Gutentag (1981), it appears that there are cretaceous-age geological formations that lie between the High Plains Aquifer and Triassic-age red beds in some locations. It is reported that the lower Cretaceous rocks are generally composed of sandstones, shales, and limestones that have a lower permeability and storage relative to the High Plains Aquifer.

Price LLC, (Steward's Consultant) has previous experience in this area and would like to point out that generally the Lower Cretaceous aquifer is confined and when comingled with the upper aquifer, water levels can rise indicating a false shallow depth to groundwater in the area. The groundwater gradient for both formations dips to the southeast into Texas. (Ref Ash 1963 Groundwater Contours of Northern Lea County-USGS see Attached map Fig 2)

The Saul Goodman Fee well will be located in the far northeastern part of Section 2- TS 14S-R38E. The closest active known water well in New Mexico is a crop-circle irrigation well located approximately 1800 feet to the southeast of the site. (See attached aerial photo Fig 3.)

This well has been identified from the NM Office of the State Engineer as L559-POD6. Included herein is a copy of the well log record, which indicates the well was drilled to depth of 250 feet and the static water level was noted at 110 feet BGL. (See Fig 4)

Steward Energy's field personal confirmed the depth to water from the current landowner to be approximately 110 feet BGL. In addition, Steward's field personal shot water levels in other wells located to the southeast and obtained field measurements in Section 10; Well #1 water level at 96.4' Lat 33° 07' 21.2088" Long 103° 04' 49.7604 and Well #2 water Level at 90.3' Lat 33° 06' 55.0620" Long 103° 04' 49.9008.

In addition, when OCD reviewed the draft C-144 permit, it noted the following findings: E-mail dated 9-24-18 JGriswold OCD to WPrice-Steward Agent.

**"On Page 2, in Box 9 for General Siting, you checked the "No" box to the question "Groundwater is less than 50 feet below the bottom..." Stated depth of pits is 12 feet below surface, that would place the depth to groundwater limitation at no deeper than 62 feet. Your attachment Figures 3, and 4 are about the water supply well in the center of the crop irrigation circle and comes from the Office of the State Engineer (L 00559 POD6). The well was initially drilled in 2008 to a total depth of 185 feet and a depth to water of 125 feet. The well was re-entered to deepen via cable tool during 2011 to a total depth of 253 ft with a static level of 110 ft. Perforations in the well are from 133 to 253 ft.**

**There is another well (OSE L 11623) in Section 2 that was drilled in 2004 with a total depth of 150 ft and a depth to water of 70 ft. Perforations are from 110 to 150 ft. The driller's log notes the shallowest water bearing unit as a fine sand beginning at 80 ft.**



**There is a third well in the Section (OSE L 12263 POD1) drilled in 2008 with a total depth of 170 ft. It says the depth to water is 170 feet, but I think this is in error. Perforations are from 105 to 170 ft. The log indicates a water bearing sand at a depth of 105 ft.**

**The two other wells you speak of are between 1.5 to 2 miles to the southwest (not southeast) in Section 10 of the same township and have water levels of 96 and 90 feet and appear to be at higher surface elevation (~20 ft).**

**In all cases, depth to groundwater is greater than 62 feet, so you appear good.**

### **Siting Compliance Demonstration:**

Steward's field personal has reviewed the entire area and looked at Google aerial views to demonstrate there are no free flowing streams, playa lakes, wetlands, buildings in proximately, water wells within 300 ft., no surface-subsurface mines, unstable areas, not in a town or sub-division, or in an area that would flood.

**OCD Draft Comments agree with this assessment.**

### **Closure Plan:**

Once the drilling of the well is complete, the pits will be decanted of all free fluids and disposed of at an approved facility or recycled into Steward's SWD disposal system located in Texas, all within the time constraints of the rule. The drill cuttings will be allowed to dry for 30 days and tested to determine if they will pass a paint filter test.

The solid contents will then be sampled pursuant to EPA SW-846 random stratified composite protocols for pits and tested for the constituents found in Table II (51-100 ft) of 19.15.17.

If the sample results show the levels exceed the levels allowed in Table II then Steward will mix clean soil with the contents at a ratio not to exceed a 3:1 until the Table II constituents are met. If cannot be met, then Steward will dispose of the pit contents at the Gandy-Marley landfill NMOCD permit #NM1-19.

All notifications will be made per the Rule (19.15.17) and landowner notifications at the timing required in the rule.

Once the pit contents have been stabilized and meet the closure standards, including the paint filter test, then the pit liner shall be folder over the left-in-place solids, and then clean backfill soil shall be placed and compacted over the drill cuttings. A 30 mil SR-LLDPE liner will be used to cover the pits in a convex manner so drainage will be directed away from the pits. The overlay shall be a 3-foot minimum. OCD will be notified and invited to inspect and/or witness sampling, or any aspect of the job, before covering or final backfilling.

Then a minimum of four feet of virgin top soil (i.e. "non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg..." as required in 19.15.17 and 19.15.29) shall be placed over the top liner and contoured to the existing surface. (See Fig 1A for a graphic representation of closure with recommended engineering specifications).

Once closed, Steward will submit a final C-144 closure report items 19-22, with GPS readings, plats, required markers, closure progress photos, deed verification, landowner and OCD notifications, confirmation lab samples, details on soil covers, and any pertinent information that OCD may require for approval.

**Final Site Reclamation and Re-Vegetation:**

Steward Energy II will perform final site closure requirements as described above when the drilling and completion operations are completed within allowed rule time frames. The final reclamation and re-vegetation, pursuant to the rule 19.15.17.13.H (5), will be implemented when the well site area is no longer in use, i.e. right after P&A of the well.

OCD made the following observation and commented as follows”

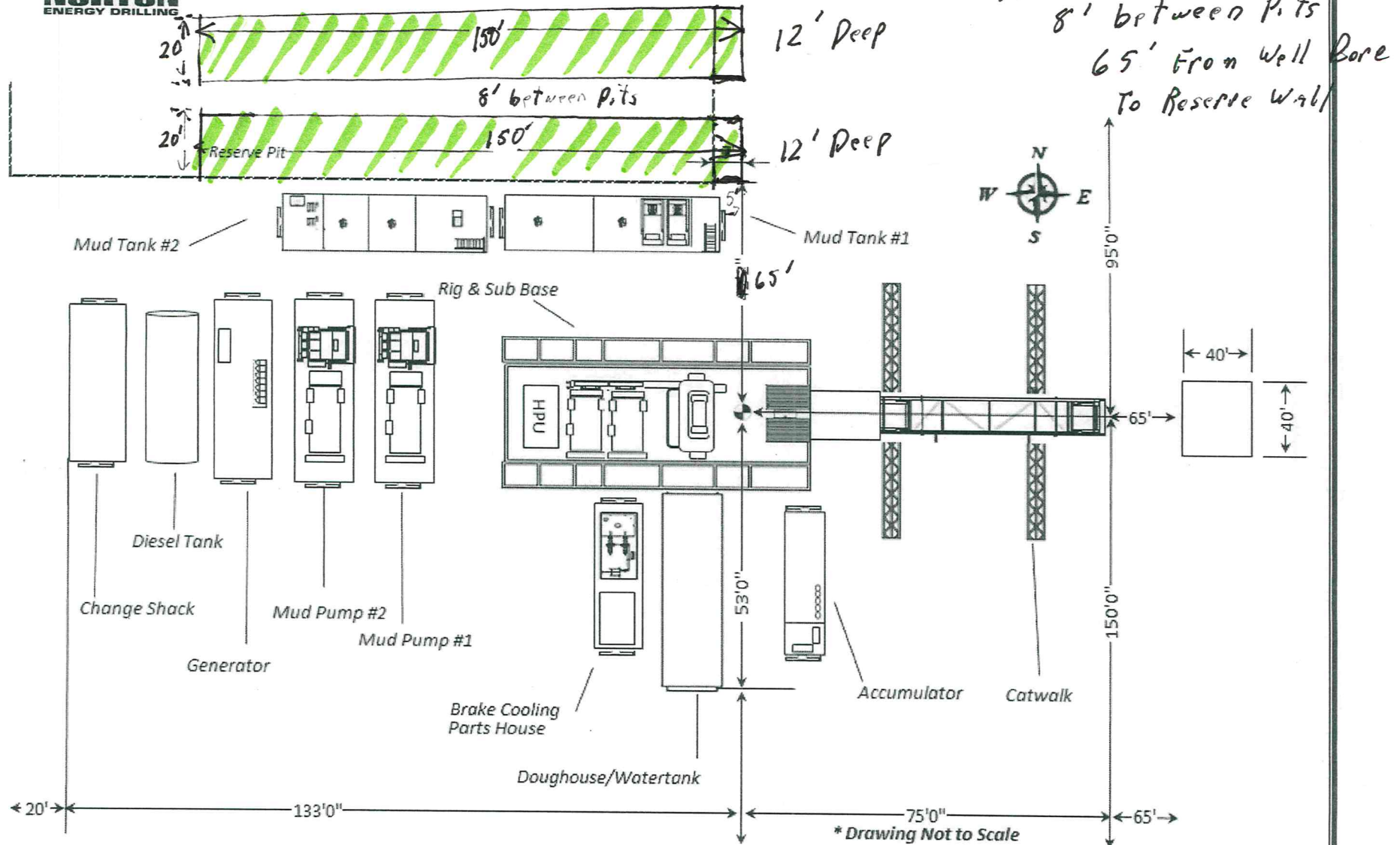
***“For instance, Section (H)(1)(c) says even a production pad still in use “shall be compacted, covered, paved, or otherwise stabilized and maintained in a way as to minimize dust and erosion to the extent practicable.” If the surface contouring is not properly established and maintained, you WILL get ponding on top of the buried pit simply due to subsidence. “***

Steward Energy hereby acknowledges the requirements and will perform actions as required.

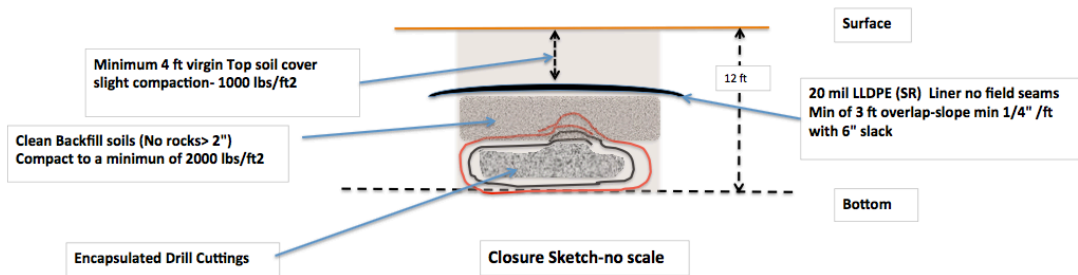
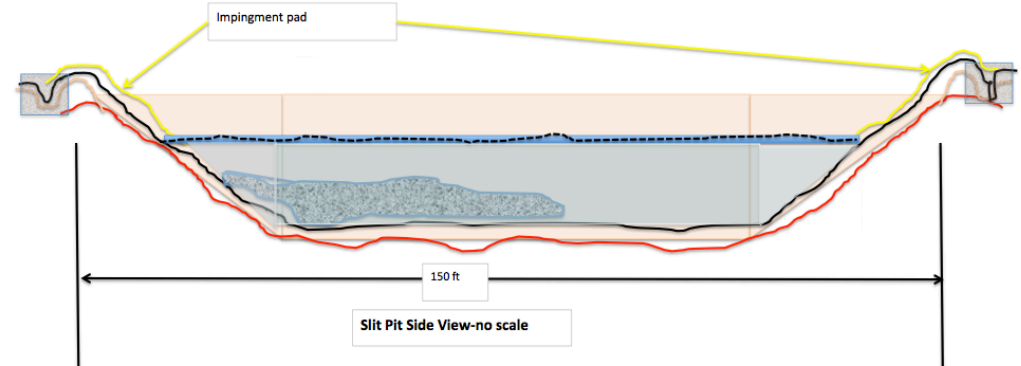
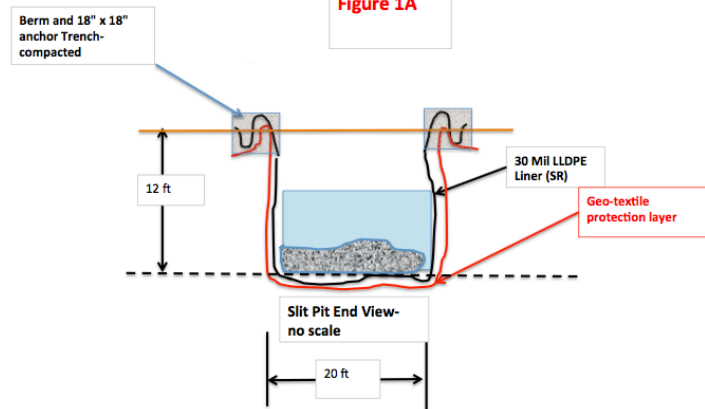


**Fig 1**

**Norton Energy Drilling Rig #4**



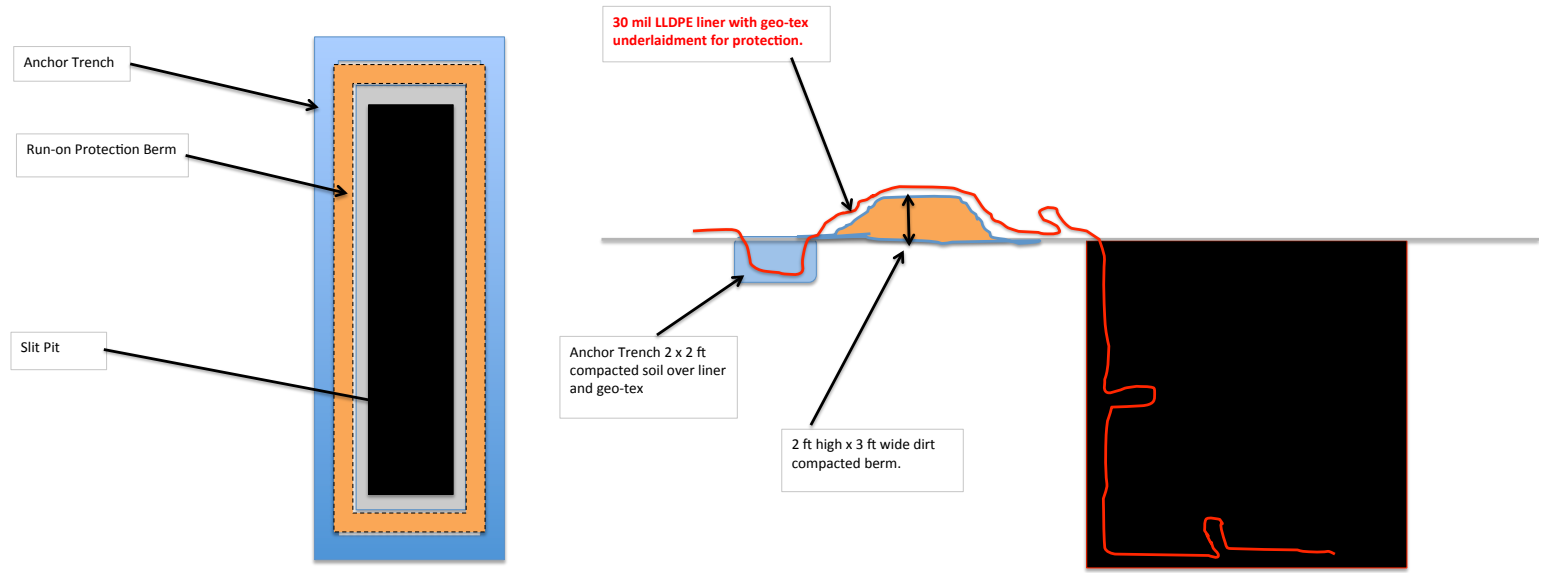
**Figure 1A**

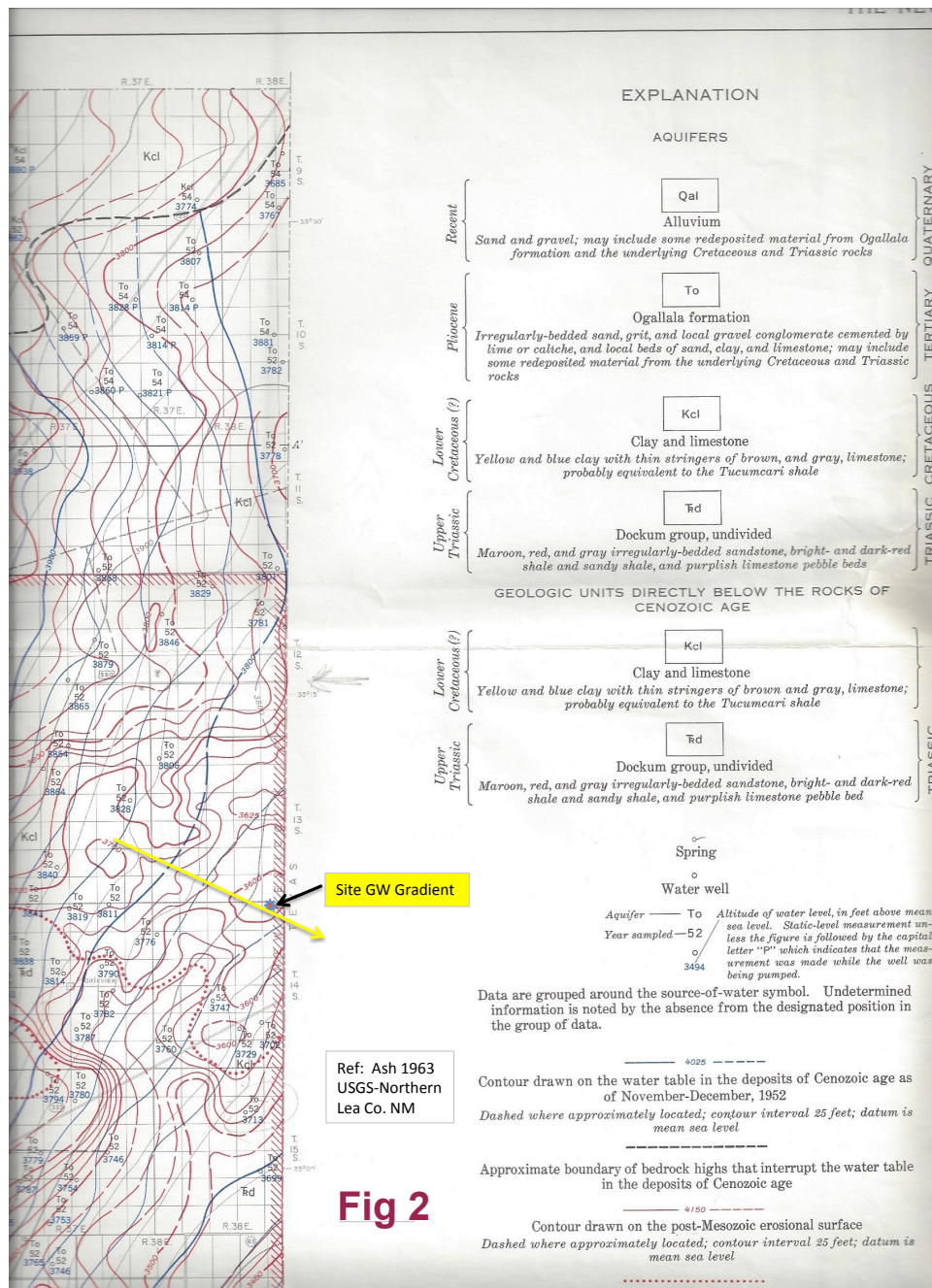


\*\*\*\*Specification for the Steward Energy II Saul Goodman Site Only Located in UL A Sec 2-Ts14s-R38e



Fig 1B





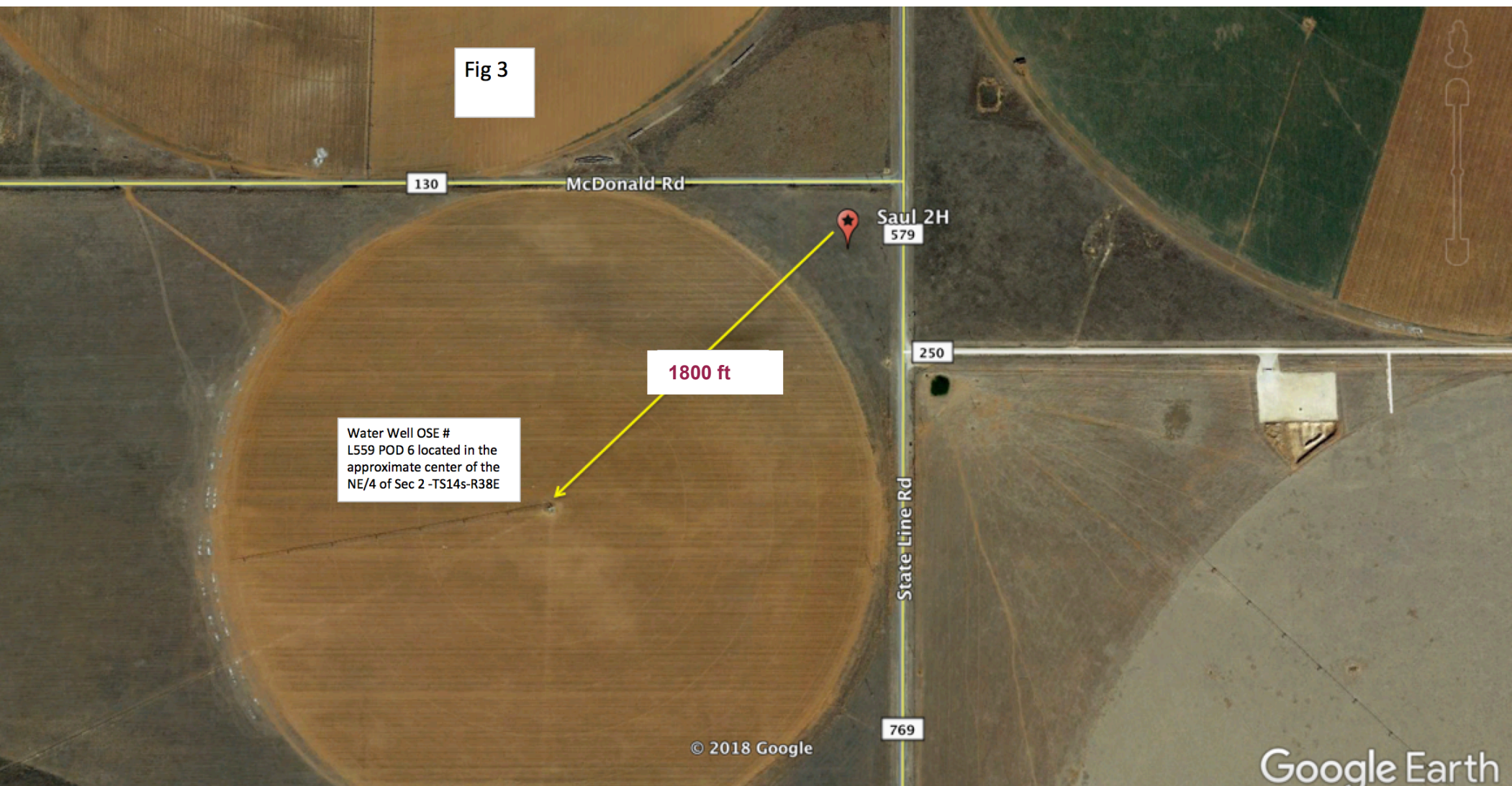


Fig 3

130

McDonald Rd

Saul 2H  
579

250

State Line Rd

769

1800 ft

Water Well OSE #  
L559 POD 6 located in the  
approximate center of the  
NE/4 of Sec 2 -TS14s-R38E

© 2018 Google

Google Earth



Fig 4

Revised June 1972

STATE ENGINEER OFFICE  
WELL RECORD#561800  
PDDC

## Section 1. GENERAL INFORMATION

(A) Owner of well Nathan Lowe Owner's Well No. L-559(T)  
 Street or Post Office Address 2813 Broadway  
 City and State Lubbock, TX 79401  
 Well was drilled under Permit No. L-559 (T) and is located in the:  
 a. CTR  $\frac{1}{4}$  NE  $\frac{1}{4}$  of Section 2 Township 14S Range 39E N.M.P.M.  
 b. Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the 33 08 34S  
 c. Lot No. \_\_\_\_\_ of Block No. \_\_\_\_\_ of the 103 04 016  
 Subdivision, recorded in LCA County.  
 d. X= \_\_\_\_\_ feet, Y= \_\_\_\_\_ feet, N.M. Coordinate System \_\_\_\_\_ Zone in  
 the \_\_\_\_\_ Grant.  
 (B) Drilling Contractor DURAN DRILLING License No. WD-1607  
 Address Po Box 1561 Serrinole TX 79360  
 Drilling Began 5/13/11 Completed 5/17/11 Type tools Cable Tool Size of hole 14 in.  
 Elevation of land surface or \_\_\_\_\_ at well is \_\_\_\_\_ ft. Total depth of well 253 ft.  
 Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 110 ft.

## Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			
175	185	10	Sand	50
210	225	15	Lime Stone	50
225	250	25	Sand & Gravel	200

## Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
10	28		0	253	253	—	133	253

## Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				

## Section 5. PLUGGING RECORD

Plugging Contractor \_\_\_\_\_  
 Address \_\_\_\_\_  
 Plugging Method \_\_\_\_\_  
 Date Well Plugged \_\_\_\_\_  
 Plugging approved by: \_\_\_\_\_

State Engineer Representative

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

are Received

FOR USE OF STATE ENGINEER ONLY

Qued \_\_\_\_\_ FWL \_\_\_\_\_ FSL \_\_\_\_\_

File No. \_\_\_\_\_ Use Repair Location No. \_\_\_\_\_Deepen







Certified Return Receipt # 7017 1000 0000 6421 7624

August 20, 2018

To: El Ray Salt Co.  
2313 Broadway  
Lubbock, TX 79401

From: Steward Energy II LLC  
2600 N Dallas Pkwy Suite 400  
Frisco, Tx 75034

Reference: Saul Goodman 2H Well  
NE/4 NE/4 Section 2-Ts 14S-R38E

Dear Mr. Lowe

Please note Steward Energy II is planning on drilling a well located on your private land at the location referenced above. The planned drilling of this well will commence in October of 2018 with an anticipated spud date of October 15, 2018.

In order to improve and have better control of the well, Steward is planning on using what's called Slit Pits (i.e. trenches). These trenches will be 150 ft x 20 ft x 12 ft (deep). There will be one for fresh water drilling and one for drilling with brine-laden mud. They will not be co-mingled.

The trenches will be lined with a protection fabric and 30 mil string reinforced polyethylene heavy duty liner. The closure of the pits will consist of making sure the contents of the pit meets OCD closure standards and the liner will be folded over the pit contents and then another liner will be placed over the pits. The rule requires we provide a minimum of four feet virgin soils over the entire pit to ensure that you may farm the area if every anticipated. Actual re-seeding of the site will not occur until the well site is deemed closed.

Per the New Mexico State rules administered by the Oil Conservation Division (19.15.17) requires Steward to make notification to the landowner. In addition, Steward is required to provide you and the OCD a pre-notification of a minimum of 72 hours. We will notify you again when this

In addition, the State requires a certified mail return receipt and a certified mail return receipt.

If you have any questions, please contact Maxey Brown District Supervisor.

Sincerely,

Taylor Warren  
Steward Energy  
Land Manager

**U.S. Postal Service™**  
**CERTIFIED MAIL® RECEIPT**  
Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)™.

**OFFICIAL USE**

Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total P \$  
Sent To \$  
Street \$  
City, St. \$

Postmark Here

El Ray Salt Company  
2313 Broadway  
Lubbock, TX 79401

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

**SENDER: COMPLETE THIS SECTION**

1. Article Addressed to:  
El Ray Salt Company  
2313 Broadway  
Lubbock, TX 79401

2. Article Number (Transfer from service label)  
7017 1000 0000 6421 7624

3. Service Type  
☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail®  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery

☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
☐ Return Receipt for Merchandise  
☐ Signature Confirmation™  
☐ Signature Confirmation Restricted Delivery

4. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below: ☐ No

5. Signature  
X *Saul Goodman* ☐ Agent  
☐ Addressee

6. Received by (Printed Name)  
9-5-18

7. Date of Delivery

8. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below: ☐ No

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**DRAFT**

Hand Delivered:

Certified Return Receipt # \_\_\_\_\_

August 20, 2018

To: \_\_\_\_\_

From: Steward Energy II LLC  
2600 N Dallas Pkwy Suite 400  
Frisco, Tx 75034

Reference: Saul Goodman 2H Well  
NE/4 NE/4 Section 2-Ts 14S-R38E

Dear Mr. \_\_\_\_\_

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Per the New Mexico State rules administered by the Oil Conservation Division (19.15.17) requires Steward to make notification to the landowner. In addition, Steward is required to provide you and the OCD a pre-notification of a minimum of 72 hours, but not more than a week, before the pit closure begins. So we will notify you again when this occurs.

In addition, the State requires that we file a deed with the county clerk specifying the exact location of the pit burier and place an on-site marker and file a plat with OCD.

If you have any questions please do not hesitate to call me at \_\_\_\_\_ or feel free to contact the Mr. Maxey Brown District Supervisor, Hobbs OCD office at 575-393-6161 x102.

Sincerely,

Taylor Warren  
Steward Energy Landman



## PRODUCT DESCRIPTION

DURA♦SKRIM® J30BD is a linear-low-density polyethylene geomembrane with an encapsulated polyester scrim reinforcement. In addition to excellent dimensional stability the tri-directional reinforcement provides exceptional tear and puncture resistance.

DURA♦SKRIM® J30BD is a versatile black/gray geomembrane. The gray outer layer minimizes thermal expansion while providing a cooler working surface. The black layer includes carbon black and thermal stabilizers to assure exposed longevity. Contrasting colors also provide a vital function for ease of damage detection during installation.

## PRODUCT USE

DURA♦SKRIM® J30BD is used in applications that demand high tear strength and resistance to thermal expansion.

DURA♦SKRIM® J30BD is manufactured from a chemically-resistant, linear-low-density polyethylene with excellent environmental stress crack resistance.

## SIZE & PACKAGING

DURA♦SKRIM® J30BD is available in a variety of widths and lengths to meet the project requirements. Large diameter mill rolls are available to assure an efficient seaming process. Factory welded panels are produced in a quality controlled environment and are accordion folded and tightly rolled on a heavy-duty core for ease of handling and time saving installation.

# DURA♦SKRIM®



Irrigation Canal Liner

## PRODUCT

## PART #

DURA♦SKRIM..... J30BD

## APPLICATIONS

Waste Lagoon Liners	Interim Landfill Covers
Floating Covers	Remediation Covers
Daily Landfill Covers	Erosion Control Covers
Modular Tank Liners	Canal Liners
Tunnel Liners	Disposal Pit Liners
Remediation Liners	Water Containment Ponds
Earthen Liners	Heap Leach Liners



# DURA♦SKRIM® J30BD

SCRIM REINFORCED POLYETHYLENE

		DURA♦SKRIM® J30BD	
		TYPICAL	
PROPERTIES	TEST METHOD	IMPERIAL	METRIC
APPEARANCE		Black/Gray	
THICKNESS, NOMINAL	ASTM D5994	30 Mil	0.76 mm
WEIGHT	ASTM D751	125 lbs/MSF	610 g/m <sup>2</sup>
CONSTRUCTION		Extrusion laminated with scrim reinforcement	
<sup>2</sup> GRAB TENSILE STRENGTH	ASTM D7004	150 lbs	667 N
<sup>2</sup> GRAB TENSILE ELONGATION	ASTM D7004	50 %	50 %
<sup>3</sup> TONGUE TEAR	ASTM D5884	50 lbs	222 N
CBR PUNCTURE RESISTANCE	ASTM D6241	375 lbs	1668 N
WVTR	ASTM E96	0.011 grains/ft <sup>2</sup> •hr	0.184 g/m <sup>2</sup> •day
PERM RATING	ASTM E96	0.027 Perms	0.018 g/m <sup>2</sup> •day•mm Hg
HYDRAULIC CONDUCTIVITY	ASTM E96	2.2x10 <sup>-10</sup> cm/sec	
MAXIMUM STATIC USE TEMPERATURE		180° F	82° C
MINIMUM STATIC USE TEMPERATURE		-70° F	-57° C

<sup>2</sup> Tests are an average of primary reinforcement directions.

<sup>3</sup> Tests are an average of machine and transverse directions.

## DURA♦SKRIM®

DURA♦SKRIM® J30BD is a linear-low-density polyethylene geomembrane with an encapsulated polyester scrim reinforcement. In addition to excellent dimensional stability the tri-directional reinforcement provides exceptional tear and puncture resistance.

DURA♦SKRIM® J30BD is a versatile black/gray geomembrane. The gray outer layer minimizes thermal expansion while providing a cooler working surface. The black layer includes carbon black and thermal stabilizers to assure exposed longevity. Contrasting colors also provide a vital function for ease of damage detection during installation.



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Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at [www.RavenEFD.com](http://www.RavenEFD.com)

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[www.ravenefd.com](http://www.ravenefd.com)

**RAVEN**

062817 EFD 1371



STEWARD  
ENERGY

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Re. Non-Employee Agent Listing

This letter is to inform the New Mexico Oil Conservation Division of our agreement with Price LLC, Wayne Price, a non-employee of Steward Energy II, LLC, to represent our organization regarding any and all matters pertaining to the State of New Mexico. Price LLC has the authority to sign documents for the OCD representing Steward Energy, LLC.

Contact Information:

Price LLC  
Wayne Price  
312 Encantado Ridge Ct NE  
Rio Rancho, NM 87124  
505-715-2809  
[wayneprice@q.com](mailto:wayneprice@q.com)

Thank you,

William McMann

Executive Vice President – Engineering  
214-297-0500