

Form 3160-3  
(June 2015)

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

|   |  |   |
|---|--|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER<br>1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other<br>1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |  | 5. Lease Serial No.<br>NMLC064605A<br>6. If Indian, Allottee or Tribe Name<br><br>7. If Unit or CA Agreement, Name and No.<br><br>8. Lease Name and Well No.<br>FRING FEDERAL<br>3H<br>9. API Well No.<br><b>30-025-52749</b> |
| 2. Name of Operator<br>STEWARD ENERGY II LLC  |  | 10. Field and Pool, or Exploratory<br>BITTER LAKE-SAN ANDRES, SOUTH/BF<br>11. Sec., T. R. M. or Blk. and Survey or Area<br>SEC 23/T13S/R38E/NMP   |
| 3a. Address<br>2600 DALLAS PARKWAY SUITE 400, FRISCO, TX 75034  | 3b. Phone No. (include area code)<br>(214) 297-0500                          |   |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At surface NENW / 190 FNL / 2234 FWL / LAT 33.183982 / LONG -103.0689718<br>At proposed prod. zone NWNE / 100 FNL / 1815 FEL / LAT 33.198666 / LONG -103.066548   |  |   |
| 14. Distance in miles and direction from nearest town or post office*<br>20 miles   |  | 12. County or Parish<br>LEA<br>13. State<br>NM  |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)<br>190 feet   | 16. No of acres in lease<br>17. Spacing Unit dedicated to this well<br>254.0 |   |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.<br>2120 feet   | 19. Proposed Depth<br>5247 feet / 11012 feet                                 | 20. BLM/BIA Bond No. in file<br>FED: NMB001879  |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3796 feet  | 22. Approximate date work will start*<br>11/01/2021                          | 23. Estimated duration<br>30 days   |
| 24. Attachments   |  |   |

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |   |   |
|---|---|
| 1. Well plat certified by a registered surveyor.<br>2. A Drilling Plan.<br>3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).<br>5. Operator certification.<br>6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

|  |  |                    |
|--|--|--------------------|
| 25. Signature (Electronic Submission)                                      | Name (Printed/Typed)<br>LARA THOMPSON / Ph: (214) 297-0500 | Date<br>04/16/2021 |
| Title<br>Project Manager   |  |                    |
| Approved by (Signature) (Electronic Submission)                            | Name (Printed/Typed)<br>Cody Layton / Ph: (575) 234-5959   | Date<br>02/02/2022 |
| Title<br>Assistant Field Manager Lands & Minerals<br>Carlsbad Field Office |  |                    |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



(Continued on page 2)

\*(Instructions on page 2)



# Operator Certification Data Report

02/10/2022

U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

**NAME:** LARA THOMPSON

**Signed on:** 04/02/2021

**Title:** Project Manager

**Street Address:** 5647 JEFFERSON ST., NE

**City:** ALBUQUERQUE

**State:** NM

**Zip:** 87109

**Phone:** (505)431-2678

**Email address:** LARA.THOMSPON@SWCA.COM

## Field Representative

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# Application Data Report

02/10/2022

APD ID: 10400071996

Submission Date: 04/16/2021

Highlighted data  
reflects the most  
recent changes

Operator Name: STEWARD ENERGY II LLC

Well Name: FRING FEDERAL

Well Number: 3H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400071996

Tie to previous NOS? N

Submission Date: 04/16/2021

BLM Office: Carlsbad

User: LARA THOMPSON

Title: Project Manager

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMLC064605A

Lease Acres:

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? YES

APD Operator: STEWARD ENERGY II LLC

Operator letter of designation:

## Operator Info

Operator Organization Name: STEWARD ENERGY II LLC

Operator Address: 2600 DALLAS PARKWAY SUITE 400

Zip: 75034

Operator PO Box:

Operator City: FRISCO

State: TX

Operator Phone: (214)297-0500

Operator Internet Address:

## Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: FRING FEDERAL

Well Number: 3H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: BITTER LAKE-SAN ANDRES, SOUTH

Pool Name: BRONCO

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**Is the proposed well in an area containing other mineral resources?** NATURAL GAS,OIL

**Is the proposed well in a Helium production area?** N    **Use Existing Well Pad?** N    **New surface disturbance?**

**Type of Well Pad:** SINGLE WELL

**Multiple Well Pad Name:**

**Number:**

**Well Class:** HORIZONTAL

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** APPRAISAL

**Describe sub-type:**

**Distance to town:** 20 Miles

**Distance to nearest well:** 2120 FT

**Distance to lease line:** 190 FT

**Reservoir well spacing assigned acres Measurement:** 254 Acres

**Well plat:** FRING\_FEDERAL\_3H\_CERTIFIED\_FORM\_C\_102\_20210402141409.pdf

**Well work start Date:** 11/01/2021

**Duration:** 30 DAYS

**Section 3 - Well Location Table**

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:**

**Reference Datum:** GROUND LEVEL

| Wellbore     | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude   | Longitude    | County | State       | Meridian    | Lease Type | Lease Number | Elevation | MD   | TVD  | Will this well produce from this lease? |
|--------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|------------|--------------|--------|-------------|-------------|------------|--------------|-----------|------|------|---|
| SHL Leg #1   | 190     | FNL          | 2234    | FWL          | 13S  | 38E   | 23      | Aliquot NENW      | 33.183982  | -103.0689718 | LEA    | NEW MEXI CO | NEW MEXI CO | F          | FEE          | 3796      | 0    | 0    | Y                                       |
| KOP Leg #1   | 771     | FNL          | 1686    | FEL          | 13S  | 38E   | 23      | Aliquot NWNE      | 33.1823897 | -103.0664758 | LEA    | NEW MEXI CO | NEW MEXI CO | F          | FEE          | -720      | 4516 | 4516 | Y                                       |
| PPP Leg #1-1 | 100     | FSL          | 1705    | FEL          | 13S  | 38E   | 14      | Aliquot SWSE      | 33.184784  | -103.0664867 | LEA    | NEW MEXI CO | NEW MEXI CO | F          | FEE          | -1541     | 5929 | 5337 | Y                                       |

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

| Wellbore     | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude   | Longitude    | County | State      | Meridian   | Lease Type | Lease Number | Elevation | MD    | TVD  | Will this well produce from this lease? |
|--------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|------------|--------------|--------|------------|------------|------------|--------------|-----------|-------|------|---|
| PPP Leg #1-2 | 1313    | FSL          | 1731    | FEL          | 13S  | 38E   | 14      | Aliquot SWSE      | 33.1881171 | -103.0665015 | LEA    | NEW MEXICO | NEW MEXICO | F          | NMLC64605A   | -1519     | 7172  | 5315 | Y                                       |
| EXIT Leg #1  | 100     | FNL          | 1815    | FEL          | 13S  | 38E   | 14      | Aliquot NWNE      | 33.198666  | -103.066548  | LEA    | NEW MEXICO | NEW MEXICO | F          | NMLC64605A   | -1451     | 11012 | 5247 | Y                                       |
| BHL Leg #1   | 100     | FNL          | 1815    | FEL          | 13S  | 38E   | 14      | Aliquot NWNE      | 33.198666  | -103.066548  | LEA    | NEW MEXICO | NEW MEXICO | F          | NMLC64605A   | -1451     | 11012 | 5247 | Y                                       |

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**Choke Diagram Attachment:**

Norton\_Rig\_6\_BOP\_and\_Choke\_Manifold\_10.29.21\_20211122143116.pdf

**BOP Diagram Attachment:**

Norton\_Rig\_6\_BOP\_and\_Choke\_Manifold\_10.29.21\_20211122143125.pdf

**Section 3 - Casing**

| Casing ID | String Type    | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|-----------|----------------|-----------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|-----------------------------|-------|--------|------------|-------------|----------|---------------|----------|--------------|---------|
| 1         | SURFACE        | 12.25     | 9.625    | NEW       | API      | N              | 0          | 2460          | 0           | 2400           | 3796        | 1396           | 2460                        | J-55  | 36     | LT&C       | 1.76        | 3.28     | BUOY          | 7.4      | BUOY         | 7.4     |
| 2         | PRODUCTI<br>ON | 8.75      | 7.0      | NEW       | API      | Y              | 0          | 5600          | 0           | 5236           | 0           | -1440          | 5600                        | L-80  | 29     | BUTT       | 2.49        | 2.89     | BUOY          | 2.79     | BUOY         | 2.79    |
| 3         | PRODUCTI<br>ON | 8.75      | 5.5      | NEW       | API      | Y              | 5600       | 11012         | 5236        | 5247           | -1440       | -1451          | 5412                        | L-80  | 20     | BUTT       | 3.17        | 3.22     | BUOY          | 4.64     | BUOY         | 4.64    |

**Casing Attachments**

**Casing ID:** 1      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Casing\_Design\_Assumptions\_20210331105737.pdf

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**Casing Attachments**

**Casing ID:** 2      **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

FringFederal3H\_TaperedStringSpecSheet\_20210402143247.pdf

**Casing Design Assumptions and Worksheet(s):**

Casing\_Design\_Assumptions\_20210331105807.pdf

**Casing ID:** 3      **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

FringFederal3H\_TaperedStringSpecSheet\_20210402143135.pdf

**Casing Design Assumptions and Worksheet(s):**

Casing\_Design\_Assumptions\_20210331105705.pdf

**Section 4 - Cement**

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity (sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|-------------|-----------|------------------|--------|-----------|---------------|-------|---------|-------|---------|-------------|-----------|
| SURFACE     | Lead      |                  | 0      | 2460      | 830           | 1.67  | 12.8    | 1386  |         | Class C     | 35/65 Poz |
| SURFACE     | Tail      |                  | 0      | 2460      | 275           | 1.33  | 14.8    | 366   |         | Class C     | none      |
| PRODUCTION  | Lead      |                  | 0      | 4534      | 750           | 2.68  | 11.5    | 2010  |         | Class C     | 50/50 Poz |
| PRODUCTION  | Tail      |                  | 4354   | 1101<br>2 | 2050          | 1.24  | 14.5    | 2542  |         | Class H     | 50/50 Poz |
| PRODUCTION  | Lead      |                  | 0      | 4534      | 750           | 2.68  | 11.5    | 2010  |         | Class C     | 50/50 Poz |

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|-------------|-----------|------------------|--------|-----------|--------------|-------|---------|-------|---------|-------------|-----------|
| PRODUCTION  | Tail      |                  | 4534   | 1101<br>2 | 2050         | 1.24  | 14.5    | 2542  |         | Class H     | 50/50 Poz |

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** The highest mud weight needed to balance formation is expected to be 10-11 ppg. Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

**Describe the mud monitoring system utilized:** An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

### Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type            | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|---------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 80        | 2460         | OTHER : Fresh water | 8.4                  | 8.9                  |                     |                             |    |                |                |                 |                            |
| 2460      | 1091<br>7    | SALT SATURATED      | 10                   | 10.2                 |                     |                             |    |                |                |                 |                            |

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

### Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

none

**List of open and cased hole logs run in the well:**

GAMMA RAY LOG, MEASUREMENT WHILE DRILLING,

**Coring operation description for the well:**

none

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 2200

**Anticipated Surface Pressure:** 1025

**Anticipated Bottom Hole Temperature(F):** 105

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

Emergency\_Response\_Plan\_Contingency\_Plan\_Steward\_Energy\_II\_12.10.20\_20210330122556.pdf

### Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

Fring\_Federal\_3H\_BLM\_Plan\_20210402143527.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

Fring\_Federal\_3H\_Drilling\_Prog\_20210402143545.pdf

Fring\_Federal\_3H\_Mud\_Program\_20210402143545.pdf

**Other Variance attachment:**



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# SUPO Data Report

02/10/2022

APD ID: 10400071996

Submission Date: 04/16/2021

Highlighted data reflects the most recent changes

Operator Name: STEWARD ENERGY II LLC

Well Name: FRING FEDERAL

Well Number: 3H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

FringFederalWells\_ExistingRoadsDiagram\_10.20.21\_20211020173653.JPG

Existing Road Purpose: ACCESS

Row(s) Exist? NO

**ROW ID(s)**

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

## Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

57554p04\_Prj\_Area\_20210401172124.jpg

East\_Pad\_New\_Access\_Road\_Plat\_6.4.21\_20210604141055.pdf

West\_Pad\_New\_Access\_Road\_Plat\_6.4.21\_20210604141058.pdf

New road type: RESOURCE

Length: 102 Feet

Width (ft.): 50

Max slope (%): 2

Max grade (%): 3

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 30

**New road access erosion control:** Newly constructed roads will be constructed as agreed to with the landowner to meet the anticipated traffic flow and weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.

New road access plan or profile prepared? N

New road access plan attachment:

Operator Name: STEWARD ENERGY II LLC

Well Name: FRING FEDERAL

Well Number: 3H

Access road engineering design? N

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: blading

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: CROSSING

Drainage Control comments: Since the access road is on level ground, no lead off ditches will be constructed for the proposed access road.

Road Drainage Control Structures (DCS) description: When the road travels on fairly level ground the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The access road will be constructed with a ditch on each side of the road. The ditches will be 3 feet wide with 3:1 slopes.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

FringFederal3H\_ExistingWellsMap\_4.7.21\_20210407113727.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Products from the Fring Federal Unit wells will run to an existing collection facility that has already been permitted by the State of New Mexico.

Production Facilities map:

20210527\_R4097\_001\_FRING\_FEDERAL\_NM\_LE\_0001.00000\_REV.

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

\_2\_\_CERTIFIED\_NEW\_TEX\_PARTNERSHIP\_20210604141158.pdf

20210527\_R4097\_001\_FRING\_FEDERAL\_NM\_LE\_0002.00000\_REV.\_2\_\_CERTIFIED\_NEW\_TEX\_PARTNERSHIP\_20210604141159.pdf

### Section 5 - Location and Types of Water Supply

#### Water Source Table

**Water source type:** GW WELL

**Water source use type:** SURFACE CASING  
STIMULATION  
INTERMEDIATE/PRODUCTION CASING

**Source latitude:** **Source longitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT

**Water source transport method:** PIPELINE

**Source land ownership:** PRIVATE

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 125000 **Source volume (acre-feet):** 16.11163704

**Source volume (gal):** 5250000

**Water source and transportation map:**

FringFederal\_WaterTransportMap\_3.29.21\_20210330125106.JPG

**Water source comments:**

**New water well?** N

#### New Water Well Info

**Well latitude:** **Well Longitude:** **Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):** **Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):** **Well casing type:**

**Well casing outside diameter (in.):** **Well casing inside diameter (in.):**

|   |                        |
|---|------------------------|
| <b>Operator Name:</b> STEWARD ENERGY II LLC | <b>Well Number:</b> 3H |
| <b>Well Name:</b> FRING FEDERAL             |                        |

|   |                                |
|---|--------------------------------|
| <b>New water well casing?</b>             | <b>Used casing source:</b>     |
| <b>Drilling method:</b>                   | <b>Drill material:</b>         |
| <b>Grout material:</b>                    | <b>Grout depth:</b>            |
| <b>Casing length (ft.):</b>               | <b>Casing top depth (ft.):</b> |
| <b>Well Production type:</b>              | <b>Completion Method:</b>      |
| <b>Water well additional information:</b> |                                |
| <b>State appropriation permit:</b>        |                                |
| <b>Additional information attachment:</b> |                                |

**Section 6 - Construction Materials**

**Using any construction materials:** YES

**Construction Materials description:** Clean caliche will be hauled from existing BLM or 3rd party pit as depicted on the attached map.

**Construction Materials source location attachment:**

FringFederal\_CalichePitRoadMap\_3.26.21\_20210401172539.JPG

**Section 7 - Methods for Handling Waste**

**Waste type:** DRILLING

**Waste content description:** Drill cuttings, mud/fluids, salts and other chemicals from the well during drilling and completion operations

**Amount of waste:** 2000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** steel tanks

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY     **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** NMOCD approved disposal facility

**Waste type:** GARBAGE

**Waste content description:** garbage and trash produced during drilling and completion operations

**Amount of waste:** 200 pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY     **Disposal location ownership:** STATE

|   |                        |
|---|------------------------|
| <b>Operator Name:</b> STEWARD ENERGY II LLC | <b>Well Number:</b> 3H |
| <b>Well Name:</b> FRING FEDERAL             |                        |

**Disposal type description:**

**Disposal location description:** local landfill

**Waste type:** SEWAGE

**Waste content description:** black and grey water

**Amount of waste:** 20000 gallons

**Waste disposal frequency :** Weekly

**Safe containment description:** poly tanks

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY     **Disposal location ownership:** STATE

**Disposal type description:**

**Disposal location description:** local wastewater treatment plant

**Reserve Pit**

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?** NO

**Reserve pit length (ft.)**                      **Reserve pit width (ft.)**

**Reserve pit depth (ft.)**    **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

**Cuttings Area**

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** Y

**Description of cuttings location** Drill cuttings, mud/fluids, salts and other chemicals from the well during drilling and completion operations will be stored safely in steel tanks onsite until hauled away and disposed of properly at an NMOCD approved disposal facility.

**Cuttings area length (ft.)**    **Cuttings area width (ft.)**

**Cuttings area depth (ft.)**    **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

### Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** N

**Ancillary Facilities attachment:**

**Comments:**

### Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Well\_Site\_Layout\_Diagram\_20210330125958.pdf

**Comments:**

### Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:**

**Multiple Well Pad Number:**

**Recontouring attachment:**

**Drainage/Erosion control construction:** As agreed to with landowner - construction will include ditching, draining, crowning and capping or sloping and dipping as necessary.

**Drainage/Erosion control reclamation:** The areas planned for interim reclamation will be recontoured to the original contour if feasible. If not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to reseeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations, including cut and fills.

|   |  |  |
|---|--|--|
| <b>Well pad proposed disturbance (acres):</b> 5.6 | <b>Well pad interim reclamation (acres):</b> 0   | <b>Well pad long term disturbance (acres):</b> 5.6 |
| <b>Road proposed disturbance (acres):</b> 0.2     | <b>Road interim reclamation (acres):</b> 0       | <b>Road long term disturbance (acres):</b> 0.2     |
| <b>Powerline proposed disturbance (acres):</b> 0  | <b>Powerline interim reclamation (acres):</b> 0  | <b>Powerline long term disturbance (acres):</b> 0  |
| <b>Pipeline proposed disturbance (acres):</b> 6.5 | <b>Pipeline interim reclamation (acres):</b> 6.5 | <b>Pipeline long term disturbance (acres):</b> 0   |
| <b>Other proposed disturbance (acres):</b> 0      | <b>Other interim reclamation (acres):</b> 0      | <b>Other long term disturbance (acres):</b> 0      |
| <b>Total proposed disturbance:</b> 12.3           | <b>Total interim reclamation:</b> 6.5            | <b>Total long term disturbance:</b> 5.8            |

**Disturbance Comments:**

**Reconstruction method:** All disturbed areas, including roads, pipelines, pads, production facilities and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape.

**Topsoil redistribution:** Grass, forbs, and small woody vegetation such as mesquite will be excavated as the topsoil is

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

removed. Large woody vegetation will be stripped and stored separately and re-spread evenly on the site following topsoil respreading. In areas to be heavily disturbed, the top 6 inches of soil material will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

**Soil treatment:** Areas will be reseeded and erosion prevented to landowner standards

**Existing Vegetation at the well pad:** agricultural fields with interspersed Chihuahuan desertscrub

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** agricultural fields with interspersed Chihuahuan desertscrub

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** agricultural fields with interspersed Chihuahuan desertscrub

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** agricultural fields with interspersed Chihuahuan desertscrub

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** N

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** N

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** N

**Seed harvest description:**

**Seed harvest description attachment:**

**Seed Management**

**Seed Table**

| Seed Summary |             |
|--------------|-------------|
| Seed Type    | Pounds/Acre |

**Total pounds/Acre:**

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**Seed reclamation attachment:**

**Operator Contact/Responsible Official Contact Info**

**First Name:**

**Last Name:**

**Phone:**

**Email:**

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** N

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** To landowner standards

**Weed treatment plan attachment:**

**Monitoring plan description:** All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed and that erosion is controlled, to landowner standards.

**Monitoring plan attachment:**

**Success standards:** To landowner standards

**Pit closure description:** N/A

**Pit closure attachment:**

**Section 11 - Surface Ownership**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Fee Owner:** Fee Owner Depercated

**Fee Owner Address:**

**Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** AGREEMENT

**Surface Access Agreement Need description:** New Tex Partnership, LTD, LP has granted Steward Energy permission to develop on their property.

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

**Fee Owner:** Fee Owner Depercated

**Fee Owner Address:**

**Phone:** (999)999-9999

**Email:** none@aol.com

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** AGREEMENT

**Surface Access Agreement Need description:** New Tex Partnership, LTD, LP has agreed to allow Steward Energy II, LLC to utilize their land for the proposed development.

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

**Section 12 - Other Information**

**Right of Way needed?** N

**Use APD as ROW?**

**ROW Type(s):**

**ROW Applications**

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**SUPO Additional Information:**

**Use a previously conducted onsite?** N

**Previous Onsite information:**

**Other SUPO Attachment**

Executed\_SUA\_\_\_New\_Tex\_Partnership\_Ltd\_20211021093411.pdf

**SURFACE USE AGREEMENT**

STATE OF NEW MEXICO           §  
  §  
COUNTY OF LEA                   §

**THIS SURFACE USE AGREEMENT** (*"Agreement"*) is entered into this 1st day of March 2021 by and between **STEWARD ENERGY II, LLC** (*"Steward"*), whose address for the purposes of this Agreement is 2600 N. Dallas Parkway, Suite 400, Frisco, Texas 75034, and **New Tex Partnership, LTD, LP** (*"Surface Owner"*), whose address for the purposes of this Agreement is P.O. Box 175, Newcastle, Texas 76372.

NOW, THEREFORE, FOR AND IN CONSIDERATION of the sum of Ten and No/100 Dollars (\$10.00), and other good and valuable consideration provided by Steward to Surface Owner, Surface Owner does hereby grant, bargain, sell and convey to Steward its successors and assigns, (a) a subsurface easement providing for and allowing Steward to drill into and through the subsurface and/or subsurface formations underlying the Lands with a drill bit and string, set casing and/or liners within the wellbore and utilize the wellbore for all purposes necessary and incidental to producing, re-working, operating, maintaining, inspecting, testing, repairing, and the eventual plugging and abandonment of the wells(s); (b) surface easement for the construction of roads, building of the drill site location, drilling, testing, completion, recompletion, reworking, re-entry, pumping, operation and maintenance and other activities, such as laying of pipelines, flow lines and salt-water disposal lines upon said lands and in accordance with the provision of this Agreement, on the lands described below:

**Township 13 South, Range 38 East, N.M.P.M., Lea County, New Mexico**  
Section 14: W/2 less 7.46 acres; S/2 of SE/4  
Section 22: N/2  
Section 23: N/2

collectively (*"Lands"*)

1. Steward shall have the non-exclusive right to construct, operate and maintain one (1) or more well locations and associated reserve pits upon the Lands for drilling, completing, operating, maintaining, and producing one or more directional, deviated, and/or horizontal oil and gas wells (*"Drill Pad"*). Steward agrees to pay Surface Owner twenty-five thousand dollars (\$25,000.00) for each Drill Pad that is constructed on the Lands. Steward shall pay ten thousand dollars (\$10,000.00) for each successive well placed on the same Drill Pad. Drill Pad(s) shall not exceed 3.50 acres. All Drill Pads will be located outside the radius of any center pivot irrigation systems existing at the execution of this Agreement.
2. Roads shall not exceed twenty feet (20') in width and shall be established as a 12-foot-wide driving surface. Steward shall pay fifty dollars (\$50.00) per rod for newly constructed roads built by Steward. When Steward no longer uses new roads to access its wells, Steward shall, within six (6) months thereof, remove any such road and restore the surface to its condition prior to Steward's activities, if requested to do so by the Surface Owner.
3. Steward shall have the non-exclusive right to construct, operate and maintain one (1) or more central tank battery locations with necessary facilities and equipment upon the Lands for separating, handling, storing, pumping, compressing, and marketing oil, gas, and substances (*"Production Facility"*). Steward agrees to pay Surface Owner fifteen thousand dollars (\$15,000.00) for each Production Facility construction

on the Lands. Each Production Facility shall not exceed 1.50 acres and will be located outside the radius of any center pivot irrigation systems existing at the execution of this Agreement. Steward shall place containment walls around tank batteries located within each Production Facility.

4. Steward shall have the non-exclusive right to construct, operate and maintain one (1) or more frac pits upon the Lands for receiving, storing, and supplying fresh water for Steward's drilling, completion, and other operations upon the Lands ("Frac Pit"). Steward agrees to pay Surface Owner fifteen thousand dollars (\$15,000.00) for each frac pit located on the Lands for a period of five (5) years. Thereafter, Steward shall have the right to renew use of the frac pit for an additional five years upon payment of another fifteen-thousand-dollar (\$15,000.00) fee. No Frac Pit shall exceed 1.50 acres in area. Steward shall maintain the Frac Pit in a good and workmanlike manner in accordance with the rules and regulations of the State of New Mexico Oil Conservation Division.

5. Steward will consult with Surface Owner as to the location of any pipelines and/or power lines associated with Steward's operations. Steward agrees to pay Surface Owner two hundred dollars (\$200.00) per rod for all pipeline right-of-way installed for Steward's benefit and one hundred dollars (\$100.00) per rod for electrical poles and lines erected on the Lands.

6. Steward agrees to pay Surface Owner seventy-five cents (\$0.75) per barrel of fresh water delivered by Surface Owner if Surface Owner supplies such water. Steward shall supply any water line necessary to deliver water from Surface Owner to a Steward Drill Pad or Frac Pit. Steward agrees to keep and maintain accurate records of the number of barrels used. Such records shall be available for Surface Owner's inspection and shall be furnished to Surface Owner upon request.

7. Steward agrees that any Drill Pad, Production Facility, road or cattle guards, either used or constructed by Steward, shall be maintained and kept in good condition at all times and that all vehicle traffic will be restricted to remain on the improved surface of the Drill Pad and roads at all times. If Steward's operations or activities on Surface Owner's Land should cause disturbance of the surface area surrounding or off of the agreed size for Drill Pads, existing roads, pipelines, powerlines, or frac ponds as well as other authorized areas, Steward agrees to (a) promptly repair and restore disturbed area or (b) pay Surface Owner \$0.50 per square foot for the disturbed area in excess of the authorized use area.

8. Steward agrees to install fencing sufficient to turn cattle of ordinary disposition around each Drill Pad, Production Facility and items of equipment, which present a threat to animals owned by Surface Owner, and/or any surface lessee; and to pay all costs of relocating any fences, which must be moved in order to accommodate Steward's operations. Steward agrees to install cattle guards and/or gates sufficient to keep cattle of ordinary disposition from exiting the Lands at Steward's road access to the Lands, Drill Pad and Production Facility. In the event Surface Owner's livestock enters upon a Drill Pad or Production Facility and becomes injured due to Steward's negligence in fencing off the particular area or maintaining the fence around such area, Steward shall be liable for livestock damages at current market value, provided however, any payment for damages to livestock or as a result of spills or leaks shall be paid within thirty (30) days of such occurrence. Surface Owner currently leases some or a portion of the Lands or lands adjacent or near the Lands for agricultural purposes and utilizes center pivot irrigation systems. Should Steward cause damage by its operations to crops or otherwise obstructs the use of the center pivot irrigation systems on the Lands, Steward shall deal directly with Surface Owner's agricultural lessee to reimburse, compensate, or otherwise settle for losses incurred by such agricultural lessee caused by Steward or its contractors and affiliated entities. Steward shall indemnify Surface Owner under the provisions of Paragraph 14 hereof for any action taken against Surface Owner by such agricultural lessee for damages caused by Steward or its contractors and affiliated entities.

9. Steward shall notify Surface Owner of any spills, leaks, or other releases from Steward's pipelines or other equipment, or as a result of Steward's operations on the Lands. Steward agrees to contact Surface Owner as soon as any leak, spill, or release is found, and within thirty (30) days to begin remediation of the soil and to continue such remediation operations by blending the contaminated soil with uncontaminated soil.

10. Steward shall provide trash receptacles at Drill Pads and Production Facility and shall make reasonable and diligent efforts to keep trash and debris arising out of and from its operations picked-up and removed from the Lands. Steward shall remove any large rocks, mesquite roots and other similar items, which are overturned or up-rooted or brought in as a result of Steward's operations. Steward shall maintain the areas around Steward's operations so as to minimize noxious weeds or grasses.

11. Upon completion of any operations or abandonment of any Drill Pad, Production Facility, Frac Pit, or other surface disturbance, Steward shall *i)* remove all rock, gravel, caliche or other materials foreign to the natural condition of the Land, *ii)* level or till all ruts or other surface disturbances in such a manner as to restore the area to the natural contour of the Land, *iii)* clean the area to the end that all objects, materials and structures not reasonable necessary to the production of oil and/or gas are removed and/or eliminated, *iv)* not store any type of tubing, drill pipe, or other pipe in the Land, and *v)* otherwise restore the surface of the Land to its original condition as nearly as reasonably possible.

12. Steward shall conduct all operations and activities on the Lands in accordance with all existing federal, state, and local laws, rules, regulations, and ordinances. In addition, prior to conducting construction operations under Paragraphs 1, 2, 3, 4, and 5 hereunder, Steward Energy shall give Surface Owner and Surface's Owner's agricultural lessee notice of at least ten (10) working days of its intentions of commencing construction operations as provided in such paragraphs. Surface Owner agrees to notify Steward of the identity, mailing address, and telephone number of its agricultural lessee and any changes to such lessee identity of information.

13. Steward shall not erect any buildings or houses on the Lands without Surface Owner's prior written consent.

14. GRANTEE HEREBY INDEMNIFIES AND HOLDS HARMLESS GRANTOR AND ITS REPRESENTATIVES, SUCCESSORS, AND ASSIGNS AND AFFILIATES AGAINST ALL EXPENSES, CLAIMS, DEMANDS, LIABILITIES, DAMAGES, AND CAUSES OF ACTION OF EVERY NATURE AND CHARACTER, INCLUDING, BUT NOT LIMITED TO, INJURY TO OR DEATH OF PERSONS, AND LOSS OR DAMAGE TO PROPERTY, CAUSED BY GRANTEE'S OPERATIONS AND ACTIVITY ON THE LANDS. THE TERM GRANTEE INCLUDES GRANTEE, ITS AGENTS, EMPLOYEES, SERVANTS, CONTRACTORS, AFFILIATES AND ANY OTHER PERSON ACTING UNDER ITS DIRECTION AND CONTROL, AND ITS INDEPENDENT CONTRACTORS.

15. All provisions of this Agreement shall inure to the benefit of and be binding upon the parties hereto, their heirs, devisees, personal representatives, successors, and assigns. The rights and obligations of Steward and Surface Owner under this Agreement are divisible and may be assigned or transferred, in whole or in part.

16. Any notice required to be given under this Agreement, may be given by delivery to the physical addresses stated in the first paragraph of this Agreement by United States Mail or any other manner of direct delivery.

17. Any designated sum of money to be paid Surface Owner by Steward pursuant to this Agreement shall be due and payable immediately prior to the constructed of the designated activity, provided however, any payment for damage to livestock or as a result of spills or leaks shall be paid within thirty (30) days of Steward's use thereof or such occurrence.

EXECUTED THIS 1st day of March 2021.

New Tex Partnership, LTD, LP

Steward Energy II, LLC

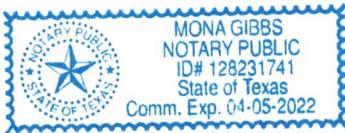
By: Ronda Maines  
Ronda Maines, General Partner

By: M. Taylor Warren, II  
M. Taylor Warren, II, Land Manager

STATE OF Tx

COUNTY OF Young

This instrument was acknowledged before me this 5<sup>th</sup> day of March 2021 by Ronda Maines, General Partner of New Tex Partnership, LTD, LP.

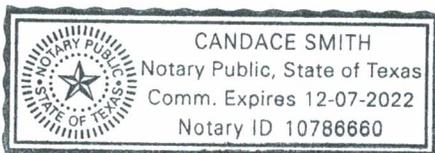


Mona Gibbs  
Notary Public in and for the State of Texas  
Printed Name: Mona Gibbs  
Commission Expires: 4-5-2022

STATE OF TEXAS

COUNTY OF COLLIN

This instrument was acknowledged before me this 11 day of March 2021 by M Taylor Warren, II, Land Manager of Steward Energy II, LLC.



Candace Smith  
Notary Public in and for the State of Texas

Printed Name: CANDACE SMITH  
Commission Expires: 12-7-2022



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# PWD Data Report

02/10/2022

APD ID: 10400071996

Submission Date: 04/16/2021

Operator Name: STEWARD ENERGY II LLC

Well Name: FRING FEDERAL

Well Number: 3H

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - General

Would you like to address long-term produced water disposal? NO

## Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information attachment:**

### Section 3 - Unlined Pits

**Would you like to utilize Unlined Pit PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD disturbance (acres):**

**PWD surface owner:**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit specifications:**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule attachment:**

**Unlined pit reclamation description:**

**Unlined pit reclamation attachment:**

**Unlined pit Monitor description:**

**Unlined pit Monitor attachment:**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user confirmation:**

**Estimated depth of the shallowest aquifer (feet):**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic evidence:**

**State authorization:**

**Unlined Produced Water Pit Estimated percolation:**

**Unlined pit: do you have a reclamation bond for the pit?**

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information attachment:**

**Section 4 - Injection**

**Would you like to utilize Injection PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

**Section 5 - Surface Discharge**

**Would you like to utilize Surface Discharge PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

**Section 6 - Other**

**Would you like to utilize Other PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# Bond Info Data Report

02/10/2022

**APD ID:** 10400071996

**Submission Date:** 04/16/2021

Highlighted data reflects the most recent changes

**Operator Name:** STEWARD ENERGY II LLC

**Well Name:** FRING FEDERAL

**Well Number:** 3H

[Show Final Text](#)

**Well Type:** OIL WELL

**Well Work Type:** Drill

## Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** NMB001879

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|  |  |   |  |  |  |
|--|--|---|--|--|--|
| <sup>1</sup> API Number<br><b>30-025-52749</b> |  | <sup>2</sup> Pool Code<br><b>7500</b>                       |  | <sup>3</sup> Pool Name<br><b>BRONCO; SAN ANDRES, SOUTH</b> |  |
| <sup>4</sup> Property Code<br><b>332899</b>    |  | <sup>5</sup> Property Name<br><b>FRING FEDERAL</b>          |  |  | <sup>6</sup> Well Number<br><b>3H</b>  |
| <sup>7</sup> OGRID No.<br><b>371682</b>        |  | <sup>8</sup> Operator Name<br><b>STEWARD ENERGY II, LLC</b> |  |  | <sup>9</sup> Elevation<br><b>3796'</b> |

<sup>10</sup> Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| C             | 23      | 13S      | 38E   |         | 190           | NORTH            | 2234          | WEST           | LEA    |

<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| B             | 14      | 13S      | 38E   |         | 100           | NORTH            | 1815          | EAST           | LEA    |

|  |                               |                                  |                         |
|--|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br><b>253.52</b> | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |
|--|-------------------------------|----------------------------------|-------------------------|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

**17 OPERATOR CERTIFICATION**  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order here (or) entered by the division.

Signature: *[Signature]* Date: **3-19-21**

Printed Name: **Ben Barton**

E-mail Address: **benbarton@stewardenergy.net**

**18 SURVEYOR CERTIFICATION**  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

March 19, 2021  
Date of Survey

Signature and Seal of Professional Surveyor: *[Signature]*

Certificate Number: **David W. Myers 11403**

**CORNER COORDINATES**  
NAD 83, SPCS NM EAST  
A - X: 930659.48' / Y: 802289.73'  
B - X: 930628.68' / Y: 797037.07'  
C - X: 928579.01' / Y: 797007.20'  
D - X: 928512.97' / Y: 802258.45'

**CORNER COORDINATES**  
NAD 27, SPCS NM EAST  
A - X: 889483.60' / Y: 802226.96'  
B - X: 889452.78' / Y: 796974.46'  
C - X: 887403.12' / Y: 796944.49'  
D - X: 887337.10' / Y: 802195.59'

**LAST TAKE POINT/BOTTOM HOLE LOCATION**  
100' FNL 1815' FEL, SECTION 14  
NAD 83, SPCS NM EAST  
X: 928844.19' / Y: 802163.27'  
LAT: 33.19866600N / LON: 103.06654808W  
NAD 27, SPCS NM EAST  
X: 887668.32' / Y: 802100.42'  
LAT: 33.19855921N / LON: 103.06604919W

**FIRST TAKE POINT**  
100' FSL 1705' FEL, SECTION 14  
NAD 83, SPCS NM EAST  
X: 928924.09' / Y: 797112.24'  
LAT: 33.18478409N / LON: 103.06648678W  
NAD 27, SPCS NM EAST  
X: 887748.20' / Y: 797049.54'  
LAT: 33.18467729N / LON: 103.06598805W

**KICK OFF POINT**  
771' FNL 1686' FEL, SECTION 23  
NAD 83, SPCS NM EAST  
X: 928937.97' / Y: 796241.05'  
LAT: 33.18238977N / LON: 103.06647587W  
NAD 27, SPCS NM EAST  
X: 887762.08' / Y: 796178.38'  
LAT: 33.18228296N / LON: 103.06597717W

**SURFACE HOLE LOCATION**  
190' FNL 2234' FWL, SECTION 23  
NAD 83, SPCS NM EAST  
X: 928167.26' / Y: 796811.19'  
LAT: 33.18398200N / LON: 103.06897188W  
NAD 27, SPCS NM EAST  
X: 886991.37' / Y: 796748.46'  
LAT: 33.18387511N / LON: 103.06847310W

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99990013 Convergence Angle: 00°41'16.54001"

State of New Mexico  
 Energy, Minerals and Natural Resources Department

Submit Electronically  
 Via E-permitting

Oil Conservation Division  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** Steward Energy II, LLC **OGRID:** 371682 **Date:** 04 / 04 / 2024

**II. Type:**  Original  Amendment due to  19.15.27.9.D(6)(a) NMAC  19.15.27.9.D(6)(b) NMAC  Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name        | API | ULSTR            | Footages            | Anticipated Oil BBL/D | Anticipated Gas MCF/D | Anticipated Produced Water BBL/D |
|------------------|-----|------------------|---------------------|-----------------------|-----------------------|----------------------------------|
| Fring Federal 3H |     | Sec 23-T13S-R38E | 190 FSL<br>2234 FWL | 650                   | 1400                  | 1900                             |
|                  |     |                  |                     |                       |                       |                                  |

**IV. Central Delivery Point Name:** Fring [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name        | API | Spud Date | TD Reached Date | Completion Commencement Date | Initial Flow Back Date | First Production Date |
|------------------|-----|-----------|-----------------|------------------------------|------------------------|-----------------------|
| Fring Federal 3H |     |           |                 |                              |                        |                       |
|                  |     |           |                 |                              |                        |                       |

**VI. Separation Equipment:**  Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:**  Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:**  Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

**Section 2 – Enhanced Plan**

**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

**IX. Anticipated Natural Gas Production:**

| Well | API | Anticipated Average Natural Gas Rate MCF/D | Anticipated Volume of Natural Gas for the First Year MCF |
|------|-----|--|--|
|      |     |  |  |
|      |     |  |  |

**X. Natural Gas Gathering System (NGGS):**

| Operator | System | ULSTR of Tie-in | Anticipated Gathering Start Date | Available Maximum Daily Capacity of System Segment Tie-in |
|----------|--------|-----------------|----------------------------------|---|
|          |        |                 |                                  |   |
|          |        |                 |                                  |   |

**XI. Map.**  Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system  will  will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator  does  does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

Attach Operator’s plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:**  Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.**  Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.**  Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

|  |
|--|
| Signature:      |
| Printed Name: Ryan DeLong  |
| Title: Vice President - Planning & Regulatory  |
| E-mail Address: rdelong@titusoil.com   |
| Date:  |
| Phone: 817-852-6370  |
| <b>OIL CONSERVATION DIVISION</b><br><b>(Only applicable when submitted as a standalone form)</b> |
| Approved By:   |
| Title:   |
| Approval Date:   |
| Conditions of Approval:  |

### Natural Gas Management Plan - Attachment

- VI. Separation equipment will be sized by engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing modelling software to ensure adequate capacity for anticipated production volumes and conditions.
  
- VII. Steward Energy II, LLC (SEII) will take the following actions to comply with the regulations listed in 19.15.27.8:
  - A. SEII will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. SEII will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
  - B. All drilling operations will be equipped with a rig flare located at least 100' from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
  - C. During completion, SEII does not allow the well to flow during CO so there will be nothing to flare. Immediately following the finish of completion operations. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, SEII will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. SEII will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will be analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
  - D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(I) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
  - E. SEII will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(I) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs to minimize the waste. Production storage tanks constructed after May 25, 2021, will be equipped with automatic gauging system. Flares constructed after May 25, 2021, will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the

well and storage tanks unless otherwise approved by the division. SEII will conduct AVO (LDAR) inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.

- F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared, or beneficially used during production operations, will be measured, or estimated. SEII will install equipment to measure the volume of natural gas flared from existing process piping, or a flowline piped from equipment such as high-pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021, that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, SEII will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

- VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.

**Fring Federal 3H  
Drilling Program**

1. Drill and set 40' of 16", 65 #/ft, H40 Conductor and cement to surface. Drill and set mouse hole.
2. Move in and rig up Norton Drilling Rig #6 and closed loop mud system. Pick up motor and 12.25" bit, drill collars and drill pipe and spud well utilizing MWD/GR and drill with fresh water to a depth of +/- 2,400'. Circulate hole and trip out with drill pipe, drill collars, motor and 12.25" bit.
3. Rig up casing crew and run float shoe, one joint of 9 5/8", 36 #/ft, J55, LTC, ERW casing, float collar and remaining 9 5/8" casing to surface. Circulate casing and rig down casing crew.
4. Rig up cementing company and pump 30 bbl fresh water spacer, 830 sx (volume is 100% excess) of 12.8 ppg lead followed by 275 sx (volume is 120% excess) of 14.8 ppg tail, bump plug and circulate excess cement back to surface. Rig down cementing company.
5. Cut off conductor and 9 5/8" casing and weld on 9 5/8" x 11", 5000 psi Casing Head ("A" section) wellhead.
6. Wait 24 hour on cement.
7. Pick up 8 3/4" bit, motor, drill collars and drill pipe and trip in hole and tag cement above float collar in 9 5/8" casing. Adjust mud weight per program and drill cement and through float shoe and 20' of formation and perform surface casing shoe test.
8. Utilize MWD/GR and continue to drill according to directional plan to a depth of 4,648' and start curve at an 8°/100' build to a depth of 5,398' MD at which point a 250' tangent at a 60-degree inclination will be drilled to a depth of 5,698' MD. Continue to drill curve at an 10°/100' build and land at 90-degree inclination at a depth of 5,959' MD (5,337' TVD).
9. Continue drill lateral to a depth of 11,011' MD (5,247' TVD) and pump sweep and circulate same to surface. Trip out of hole laying down drill pipe, drill collars, motor and 8 3/4" bit.
10. Rig up casing crew and run float shoe, one joint of 5 1/2", 20 #/ft, L80, BTC, ERW casing, float collar, one joint of casing, toe sleeve and remaining 5 1/2" casing to +/- 5,500' MD in the tangent and crossover to 7", 29 #/ft, L80, BTC, ERW to surface. Circulate casing and rig down casing crew.
11. Rig up cementing company and pump 30 bbl fresh water spacer, 750 sx of 11.5 ppg lead followed by 2,050 sx of 14.5 ppg tail, bump plug and circulate excess cement back to surface. Rig down cementing company.
12. Nipple down BOP, set casing in tension in slips and cutoff casing. Install 11" 5000 psi x 7 1/16", 10,000 psi Tubing Head ("B" section) wellhead. Test to 4,500 psi. Release Norton Rig #6 and rig down and move out.
13. Shut-in well and await frac completion.



# **Drilling Fluids Proposal**

## **Fring Federal 3H**

**Lea County, New Mexico**

**Well Data**

|                                   |                         |
|-----------------------------------|-------------------------|
| <b>Operator</b>                   | <b>Steward Energy</b>   |
| <b>Well Name</b>                  | <b>Fring Federal 3H</b> |
| <b>Location</b>                   | <b>Lea County, NM</b>   |
| <b>Max Anticipated Mud Weight</b> | <b>10.2 ppg</b>         |
| <b>Estimated Days</b>             | <b>9</b>                |
| <b>Primary Formation Target</b>   | <b>San Andres</b>       |
| <b>Planned TD – MD/TVD</b>        | <b>11,011' / 5,247'</b> |

**Fluid System Overview**

| <b>Depth</b>            | <b>Fluid System</b> | <b>Anticipated MW</b> | <b>Potential Hazards</b>             | <b>Solutions</b>                            |
|-------------------------|---------------------|-----------------------|--------------------------------------|---|
| <b>80' – 2,400'</b>     | <b>Fresh Water</b>  | <b>8.4 – 8.9</b>      | <b>Red Beds – Bit Balling</b>        | <b>Native Oil – Nut plug Sweeps</b>         |
| <b>2,400' – 11,011'</b> | <b>Brine</b>        | <b>10.0 – 10.2</b>    | <b>CO2 – Torque/Drag – Deviation</b> | <b>pH &gt;9.5 Sweeps<br/>Lube as needed</b> |

## 12 1/4" Hole 40' – 2,400' ~ 9 5/8" Casing

### Surface Interval Drilling Fluid Properties & Discussion

#### Fluid System: Freshwater & Bentonite Sweeps

| Interval Depth (ft) | Mud Weight (ppg) | Funnel Viscosity (Sec/qt) | pH (value) | Yield Point (lb/100ft <sup>2</sup> ) | API Fluid Loss (cc/30min) | Cl ppm | LGS (%) |
|---------------------|------------------|---------------------------|------------|--------------------------------------|---------------------------|--------|---------|
| 40' – 2,400'        | 8.4-8.9          | 28-32                     | 9.5-10.0   | 1-6                                  | N/C                       | <3K    | <5      |

- Spud in drilling with closed loop system through rig pits with fresh water
- Sweep hole every 300' or as hole dictates with pre-hydrated **Bentonite** sweeps
- Gradual mud up will occur, run fresh water at the suction for volume and solids control
- If bit balling becomes an issue, **SAPP Sticks** are recommended as well as 5-7 lbs/bbl **Nut Plug M** in sweeps
- Add 2-3 quarts **Basin Fluids PHPA** down the drill pipe on connections for additional hole cleaning and clay inhibition as needed
- **Sweeps**- recommend using 50-60 bbls of 80-90 sec/qt viscosity pre-hydrated **Bentonite** sweep to ensure proper hole cleaning. Sweeps should be built utilizing 1-2 lbs/bbl **Soda Ash** to reduce hardness and **Bentonite** for viscosity.
- 1-2 **SAPP Sticks** in the drill pipe on connections as needed and 5-7 lb/bbl **Nut Plug M** can be added to sweeps to aid in the reduction of bit balling if needed
- Upon reaching interval TD, pump a 80-100 bbl high viscosity (80 – 90 sec/qt) pre-hydrated **Bentonite** sweep. Monitor shakers and circulate until clean prior to pulling out for casing run

## Interval Objectives

The surface section will be drilled utilizing a Fresh Water system with Bentonite sweeps to clean the wellbore. Hole cleaning may become a factor in the success and drilling performance of this hole section due to the cuttings volume generated. High viscosity **Bentonite** sweeps should be pumped as necessary to ensure hole cleaning. 50-60 bbls every 300' should be sufficient to clean hole, however, sweeps may need to be increased if shakers do not show sufficient cuttings removal.

It is imperative to closely monitor cuttings volume/size at shakers. The cuttings trend will indicate down hole conditions and will allow for proper adjustments in sweep frequency.

Prior to trips, circulate a hi-vis sweep followed by a minimum of two bottoms up. Once the shakers have cleaned up, trip out and monitor hole conditions.

## Maintenance Considerations

**Bit/BHA Balling:** Bit/BHA balling due to hydrophilic shales/clays may occur in this interval as could unconsolidated sand packages. If encountered, agglomerations of these shales and clays could result in packing-off/forcing fluid into upper hole formations due to reduction(s) in hydraulic diameters. The use of **Soap Sticks** and/or **SAPP Sticks** dropped down the DP on connections should be sufficient to mitigate this issue. Sweeps consisting of pre-hydrated **Bentonite** and 5-7 lb/bbl of **Nut Plug Medium** may also be required.

- **Lost Circulation:** Lost circulation may be encountered. If seepage/severe losses occur, vis up 30-50 bbl of fresh water with **Bentonite** to ~45 sec/qt viscosity and add 5 lb/bbl **Drilling Paper** and **5-7 lb/bbl Fiber Seal**. Fluids Advisor on location will adjust LCM treatment as needed

## Primary Products and Functions

| Product                     | Description             | Function                       |
|-----------------------------|-------------------------|--------------------------------|
| <b>SAPP / Soap Sticks</b>   | Dispersant / Surfactant | Bit Balling Prevention         |
| <b>Soda Ash</b>             | Sodium Carbonate        | Calcium Precipitant            |
| <b>Basin Fluids Poly-55</b> | Flocculent              | Viscosifier/Encapsulator       |
| <b>Nut Plug M</b>           | Pecan Shell LCM         | LCM / Bit Balling Prevention   |
| <b>Bentonite Gel</b>        | Bentonite               | Viscosifier/Fluid Loss Control |

## 8 3/4" Hole 2,400' – 11,011' ~ 5 1/2" x 7" Casing

### Production Interval Drilling Fluid Properties & Discussion Fluid System: Brine w/ Salt Gel – Xan D sweeps

| Interval Depth (ft) | Mud Weight (ppg) | Funnel Viscosity (Sec/qt) | pH (value) | Yield Point (lb/100ft <sup>2</sup> ) | API Fluid Loss (cc/30min) | Cl (mg/L) | LGS (%) |
|---------------------|------------------|---------------------------|------------|--------------------------------------|---------------------------|-----------|---------|
| 2,400'- 11,011'     | 10.0 – 10.2      | 28 – 34                   | 9.5 – 10.5 | 1-6                                  | N/C                       | 160-185k  | <6      |

- Drill out with closed loop system through rig pits using 10.0 ppg Brine fluid
- Build and maintain a pH of 9.5-10.5 with additions of **Caustic Soda**
- Sweep hole every 300' – 400' or as hole dictates with combination **Salt Gel/Xanthan Gum** sweeps
- After landing curve, sweeps should be **Xanthan Gum only**.
- Solids Control will be necessary for close loop system to maintain mud weight and LGS%. Recommend a centrifuge and maintaining finest screens flow will allow on shakers.
- Add 1-2 quarts **Basin Fluids PHPA** down the drill pipe on connections as needed for additional hole cleaning and shale stabilization
- If Torque and Drag become problematic, additions of **Graphite** to sweeps may help.
- If Torque and Drag issues continue, additions of **Basin LLX lube** or **Onyx Lube King** in sweeps at 2-4% should be pumped with **Xanthan Gum** only sweeps
- **Sweeps-** recommend using **40-50 bbls** of **80-90 sec/qt** viscosity. Mix 10-12 lb/bbl **Salt Gel** and .25-.5 lb/bbl **Xanthan Gum**. Pump every 300' – 400' or as hole dictates. If Torque and Drag become an issue, add 2 – 4 lb/bbl **Graphite** to sweeps.
- **Lube additions** – If Torque and Drag continue to be an issue, Basin Fluids recommends a clean up cycle prior to making lube additions. If clean up cycle doesn't alleviate issues, build 50 bbl lube pill with .25 lb/bbl **Xanthan Gum** and mix 4% by volume of **Basin LLX or Onyx Lube King**. Pump lube pill and monitor hole for Torque and Drag improvements. Pump lube pills as needed when Torque and Drag increase.
- Upon reaching interval TD, pump a 80-100 bbl high viscosity (80 – 90 sec/qt) pre-hydrated **Salt Gel / Xanthan Gum** sweep. Monitor shakers and circulate until clean prior to pulling out for casing run

## Interval Objectives

This section will be drilled utilizing Brine with Salt Gel/Xanthan Gum sweeps to clean the wellbore. Hole cleaning may become a factor in the success and drilling performance of this hole section due to the cuttings volume generated. High viscosity **Salt Gel/Xanthan Gum** sweeps should be pumped as necessary to ensure hole cleaning. 40-50 bbls hi-vis per 400' should be sufficient to clean hole, however, sweeps may need to be increased if shakers do not show sufficient cuttings.

Minimize the build-up of LGS to <6% by utilizing the solids control equipment on location. If dewatering operations are an option it is recommended. Screen up the shakers as tight as flow allows.

It is imperative to closely monitor cuttings volume/size at shakers. The cuttings trend will indicate down hole conditions and will allow for proper adjustments in sweep frequency.

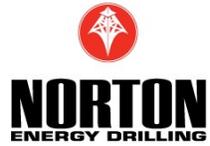
Prior to trips, circulate a hi-vis sweep followed by a minimum of two bottoms up. Once the shakers have cleaned up, trip out and monitor hole conditions.

## Maintenance Considerations

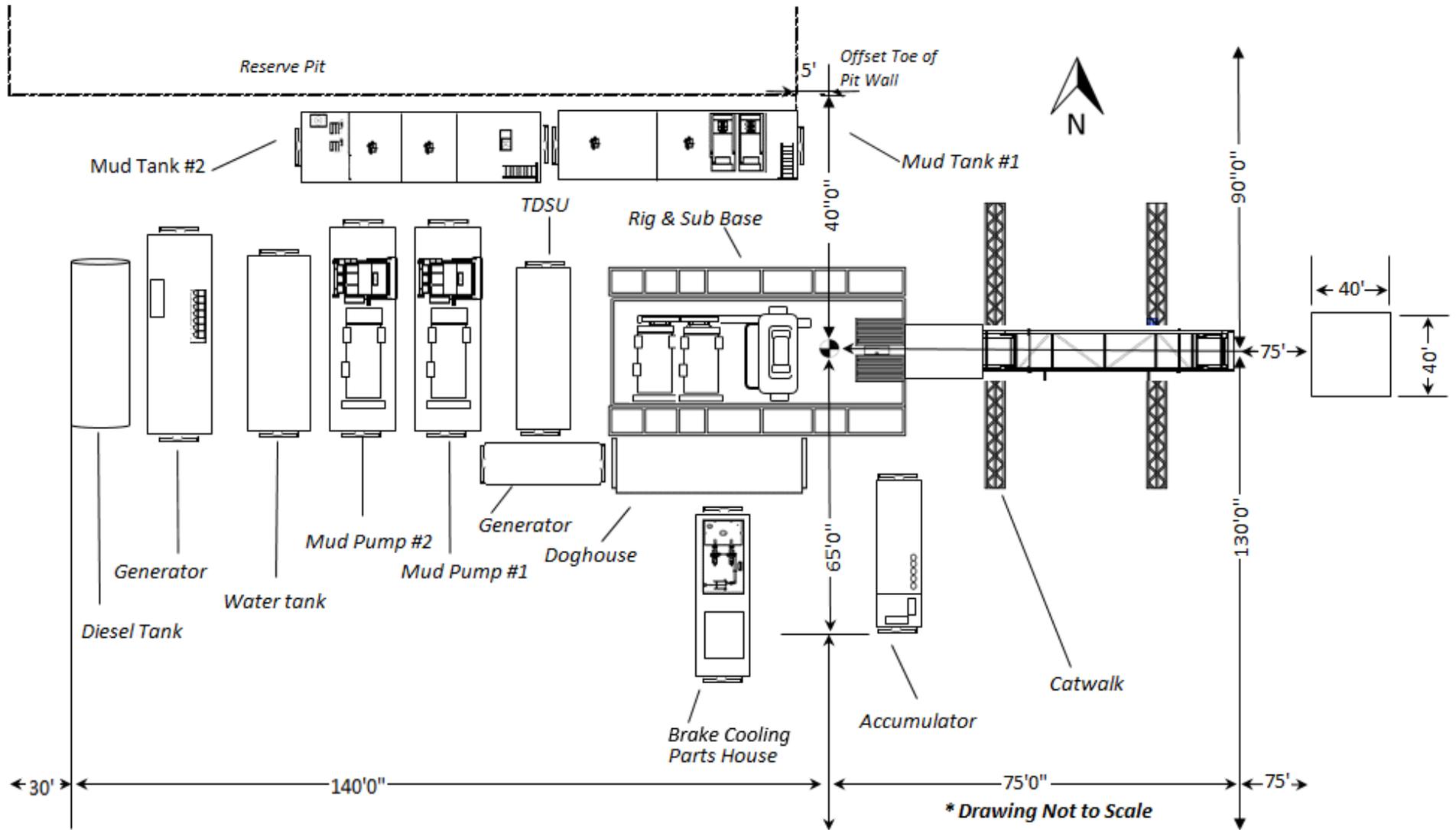
- **Lost Circulation:** Lost circulation may be encountered. If seepage/severe losses occur, vis up 30-50 bbl LCM sweeps with **5 lb/bbl No Bull, 5 lb/bbl Fiber Seal, 5 lb/bbl Pecan Hulls Med.** Fluids Advisor on location will adjust LCM treatment as needed
- **Maintain pH at 9.5 – 10.5:** Use **Caustic Soda** to maintain pH for corrosion inhibition.

## Primary Products and Functions

| Product           | Description            | Function                  |
|-------------------|------------------------|---------------------------|
| Caustic Soda      | Caustic Soda           | Alkalinity Control        |
| Graphite          | Graphite               | Lubricant                 |
| Xanthan Gum       | Xanthan Gum            | Viscosifier               |
| Basin Fluids PHPA | Inhibitor              | Inhibitor/Encapsulator    |
| Salt Gel          | Attapulgate            | Viscosifier               |
| No Bull           | Mixed fibrous material | Lost circulation Material |
| Basin MLX         | Drilling Lube          | Lubrication               |
| Pecan Hulls Med   | Med grind pecan hulls  | Lost circulation Material |



# Norton Energy Drilling Rig #6



**STEWARD ENERGY II, LLC  
PROPOSED CASING DESIGN**

|                          |                  |                             |        |
|--------------------------|------------------|-----------------------------|--------|
| <b>LEASE &amp; WELL:</b> | Fring Federal 3H | <b>DRILLING CONTRACTOR:</b> | Norton |
| <b>FIELD:</b>            | Bronco           |                             |        |
| <b>COUNTY/STATE:</b>     | Lea County, NM   |                             |        |

| O.D.<br>(IN.)                    | WT.<br>(PPF) | GRADE | CONN. | SETTING<br>DEPTH<br>(TVD FT.) | SECTION<br>LENGTH<br>(FT.) | SECTION<br>WEIGHT<br>(MLBS.) | STRING<br>WEIGHT<br>(MLBS.) | DRIFT<br>(IN.) | RATED<br>COLLAPSE<br>(PSI) | S.F.<br>[1.125] | RATED<br>BURST<br>(PSI) | S.F.<br>[1.25] | RATED<br>TENSILE<br>(MLBS.) | S.F.<br>[1.80] |
|----------------------------------|--------------|-------|-------|-------------------------------|----------------------------|------------------------------|-----------------------------|----------------|----------------------------|-----------------|-------------------------|----------------|-----------------------------|----------------|
| 16.00<br>Conductor               | 65.0         | H-40  | STC   | 40                            | 40                         | 2.6                          | 2.6                         |                |                            |                 |                         |                |                             |                |
| 9.625<br>Surface                 | 36.0         | J-55  | LTC   | 2,400                         | 2,400                      | 86.4                         | 86.4                        | 8.765          | 2,020                      | 1.76            | 3,520                   | 3.28           | 639                         | 7.40           |
| 7.0<br>Tapered Production String | 29.0         | L-80  | BTC   | 5,421                         | 5,500                      | 159.5                        | 159.5                       | 6.059          | 7,020                      | 2.49            | 8,160                   | 2.89           | 746                         | 2.79           |
| 5.5<br>Tapered Production String | 20.0         | L-80  | BTC   | 5,361                         | 5,417                      | 108.3                        | 108.3                       | 4.653          | 8,830                      | 3.17            | 8,990                   | 3.22           | 503                         | 4.64           |

**NOTES:**

Collapse - Assume full mud evacuation from inside casing with a full column of mud behind the casing utilizing true vertical depth  
 Burst - Assume full mud evacuation from inside casing with no mud on outside but facing full pore pressure utilizing true vertical depth  
 Tensile - Assume total hanging string weight of casing as run in hole with no buoyancy factor utilizing measured depth

**GENERAL INFORMATION:**

|            |       |      |        |       |           |      |                      |                                |      |      |  |  |  |
|------------|-------|------|--------|-------|-----------|------|----------------------|--------------------------------|------|------|--|--|--|
| Conductor  | 16.00 | inch | set at | 40    | feet with | 40   | feet of penetration. |                                |      |      |  |  |  |
| Surface    | 9.625 | inch | set at | 2,400 | TVD in    | 9.2  | ppg mud.             | Estimated pore pressure equals | 8.6  | ppg. |  |  |  |
| Production | 7.0   | inch | set at | 5,421 | TVD in    | 10.0 | ppg mud.             | Estimated pore pressure equals | 10.0 | ppg. |  |  |  |
| Production | 5.5   | inch | set at | 5,361 | TVD in    | 10.0 | ppg mud.             | Estimated pore pressure equals | 10.0 | ppg. |  |  |  |

**STEWARD ENERGY II, LLC  
PROPOSED CASING DESIGN**

|                          |                  |                             |        |
|--------------------------|------------------|-----------------------------|--------|
| <b>LEASE &amp; WELL:</b> | Fring Federal 3H | <b>DRILLING CONTRACTOR:</b> | Norton |
| <b>FIELD:</b>            | Bronco           |                             |        |
| <b>COUNTY/STATE:</b>     | Lea County, NM   |                             |        |

| O.D.<br>(IN.)                    | WT.<br>(PPF) | GRADE | CONN. | SETTING<br>DEPTH<br>(TVD FT.) | SECTION<br>LENGTH<br>(FT.) | SECTION<br>WEIGHT<br>(MLBS.) | STRING<br>WEIGHT<br>(MLBS.) | DRIFT<br>(IN.) | RATED<br>COLLAPSE<br>(PSI) | S.F.<br>[1.125] | RATED<br>BURST<br>(PSI) | S.F.<br>[1.25] | RATED<br>TENSILE<br>(MLBS.) | S.F.<br>[1.80] |
|----------------------------------|--------------|-------|-------|-------------------------------|----------------------------|------------------------------|-----------------------------|----------------|----------------------------|-----------------|-------------------------|----------------|-----------------------------|----------------|
| 16.00<br>Conductor               | 65.0         | H-40  | STC   | 40                            | 40                         | 2.6                          | 2.6                         |                |                            |                 |                         |                |                             |                |
| 9.625<br>Surface                 | 36.0         | J-55  | LTC   | 2,400                         | 2,400                      | 86.4                         | 86.4                        | 8.765          | 2,020                      | 1.76            | 3,520                   | 3.28           | 639                         | 7.40           |
| 7.0<br>Tapered Production String | 29.0         | L-80  | BTC   | 5,421                         | 5,500                      | 159.5                        | 159.5                       | 6.059          | 7,020                      | 2.49            | 8,160                   | 2.89           | 746                         | 2.79           |
| 5.5<br>Tapered Production String | 20.0         | L-80  | BTC   | 5,361                         | 5,417                      | 108.3                        | 108.3                       | 4.653          | 8,830                      | 3.17            | 8,990                   | 3.22           | 503                         | 4.64           |

**NOTES:**  
 Collapse - Assume full mud evacuation from inside casing with a full column of mud behind the casing utilizing true vertical depth  
 Burst - Assume full mud evacuation from inside casing with no mud on outside but facing full pore pressure utilizing true vertical depth  
 Tensile - Assume total hanging string weight of casing as run in hole with no buoyancy factor utilizing measured depth

**GENERAL INFORMATION:**

|            |       |      |        |       |           |      |                      |                                |  |      |      |  |  |
|------------|-------|------|--------|-------|-----------|------|----------------------|--------------------------------|--|------|------|--|--|
| Conductor  | 16.00 | inch | set at | 40    | feet with | 40   | feet of penetration. |                                |  |      |      |  |  |
| Surface    | 9.625 | inch | set at | 2,400 | TVD in    | 9.2  | ppg mud.             | Estimated pore pressure equals |  | 8.6  | ppg. |  |  |
| Production | 7.0   | inch | set at | 5,421 | TVD in    | 10.0 | ppg mud.             | Estimated pore pressure equals |  | 10.0 | ppg. |  |  |
| Production | 5.5   | inch | set at | 5,361 | TVD in    | 10.0 | ppg mud.             | Estimated pore pressure equals |  | 10.0 | ppg. |  |  |

## Casing Design Assumptions

**Surface Casing**

- Will consist of 9 5/8", 36#/ft, J55, LTC set at +/- 2,400'
- Cement will consist of 12.8 ppg of 35/65 Poz/Class C lead and 14.8 ppg Class C tail with designed excess to circulate cement to surface
- Collapse, burst and tensile are designed with a worst-case scenario, i.e. where applicable full evacuation, greater of mud weight or pore pressure, no cement backing and not utilizing buoyancy

**Collapse**

- Design for running with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of 9.2 ppg mud weight on the outside and assuming full evacuation
- Effects of axial load considered in design
- Design for cementing with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of planned cement slurries on the outside of the casing and 9.2 ppg mud weight inside of the casing

**Burst**

- Design for a burst force greater the calculated burst of the casing plus a 1.25 safety factor assuming full evacuation on the inside of the casing and with no mud on outside of the casing but facing the full pore pressure equivalent to 9.2 ppg
- Internally pressure test the casing to allow for a force greater than the external force of the 9.2 ppg mud weight in which the casing will be run

**Tensile**

- Design for a tensile force greater than the calculated joint strength of the casing joint plus a 1.8 safety factor with no buoyancy calculated
- Design for a tensile force greater than the calculated body strength of the casing plus a 1.8 safety factor with no buoyancy calculated
- Design for a tensile force greater than the calculated joint strength of the casing joint and body strength of the casing joint plus 100,000 lbs overpull as well as a 1.8 safety factor with no buoyancy calculated

**Production Casing**

- Will be a tapered string consisting of 5 1/2", 20#/ft, L80, BTC set at TD to a depth at the base of the 60 degree tangent section with a 5 1/2", L80, BTC x 7", L80, BTC crossover to 7", 29#/ft, L80, BTC to surface  
Cement will consist of 11.5 ppg of 50/50 Poz/Class C lead and 14.5 ppg 50/50 Poz/Class H tail with designed excess to circulate cement to surface
- Collapse, burst and tensile are designed with a worst-case scenario, i.e. where applicable full evacuation, greater of mud weight or pore pressure and assuming no buoyancy

**Collapse**

- Design for running with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of 10.0 ppg mud weight on the outside and assuming full evacuation
- Effects of axial load considered in design
- Design for cementing with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of planned cement slurries on the outside of the casing and 10.0 ppg mud weight inside of the casing

**Burst**

- Design for a burst force equal to the maximum frac pressure of 0.8696 times the calculated burst rating assuming no cement on the outside of the casing.
- This design will calculate to be far greater than the calculated burst of the casing plus a 1.25 safety factor assuming full evacuation on the inside of the casing and with no mud on outside of the casing but facing the full pore pressure equivalent to 10.0 ppg
- Internally pressure test the casing to allow for a force greater than the external force of the 10.0 ppg mud weight in which the casing will be run

**Tensile**

- Design for a tensile force greater than the calculated joint strength of the casing joint plus a 1.8 safety factor with no buoyancy calculated
- Design for a tensile force greater than the calculated body strength of the casing plus a 1.8 safety factor with no buoyancy calculated
- Design for a tensile force greater than the calculated joint strength of the casing joint and body strength of the casing joint plus 100,000 lbs overpull as well as a 1.8 safety factor with no buoyancy calculated

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- Will consist of 9 5/8", 36#/ft, J55, LTC set at +/- 2,400'
- Cement will consist of 12.8 ppg of 35/65 Poz/Class C lead and 14.8 ppg Class C tail with designed excess to circulate cement to surface
- Collapse, burst and tensile are designed with a worst-case scenario, i.e. where applicable full evacuation, greater of mud weight or pore pressure, no cement backing and not utilizing buoyancy

**Collapse**

- Design for running with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of 9.2 ppg mud weight on the outside and assuming full evacuation
- Effects of axial load considered in design
- Design for cementing with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of planned cement slurries on the outside of the casing and 9.2 ppg mud weight inside of the casing

**Burst**

- Design for a burst force greater the calculated burst of the casing plus a 1.25 safety factor assuming full evacuation on the inside of the casing and with no mud on outside of the casing but facing the full pore pressure equivalent to 9.2 ppg
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**Tensile**

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- Design for a tensile force greater than the calculated body strength of the casing plus a 1.8 safety factor with no buoyancy calculated
- Design for a tensile force greater than the calculated joint strength of the casing joint and body strength of the casing joint plus 100,000 lbs overpull as well as a 1.8 safety factor with no buoyancy calculated

**Production Casing**

- Will be a tapered string consisting of 5 1/2", 20#/ft, L80, BTC set at TD to a depth at the base of the 60 degree tangent section with a 5 1/2", L80, BTC x 7", L80, BTC crossover to 7", 29#/ft, L80, BTC to surface  
Cement will consist of 11.5 ppg of 50/50 Poz/Class C lead and 14.5 ppg 50/50 Poz/Class H tail with designed excess to circulate cement to surface
- Collapse, burst and tensile are designed with a worst-case scenario, i.e. where applicable full evacuation, greater of mud weight or pore pressure and assuming no buoyancy

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- Design for a tensile force greater than the calculated joint strength of the casing joint and body strength of the casing joint plus 100,000 lbs overpull as well as a 1.8 safety factor with no buoyancy calculated

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- Collapse, burst and tensile are designed with a worst-case scenario, i.e. where applicable full evacuation, greater of mud weight or pore pressure, no cement backing and not utilizing buoyancy

**Collapse**

- Design for running with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of 9.2 ppg mud weight on the outside and assuming full evacuation
- Effects of axial load considered in design
- Design for cementing with a collapse force greater than the calculated collapse of the casing plus a 1.125 safety factor utilizing the force of planned cement slurries on the outside of the casing and 9.2 ppg mud weight inside of the casing

**Burst**

- Design for a burst force greater the calculated burst of the casing plus a 1.25 safety factor assuming full evacuation on the inside of the casing and with no mud on outside of the casing but facing the full pore pressure equivalent to 9.2 ppg
- Internally pressure test the casing to allow for a force greater than the external force of the 9.2 ppg mud weight in which the casing will be run

**Tensile**

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Cement will consist of 11.5 ppg of 50/50 Poz/Class C lead and 14.5 ppg 50/50 Poz/Class H tail with designed excess to circulate cement to surface
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- Design for a tensile force greater than the calculated joint strength of the casing joint and body strength of the casing joint plus 100,000 lbs overpull as well as a 1.8 safety factor with no buoyancy calculated

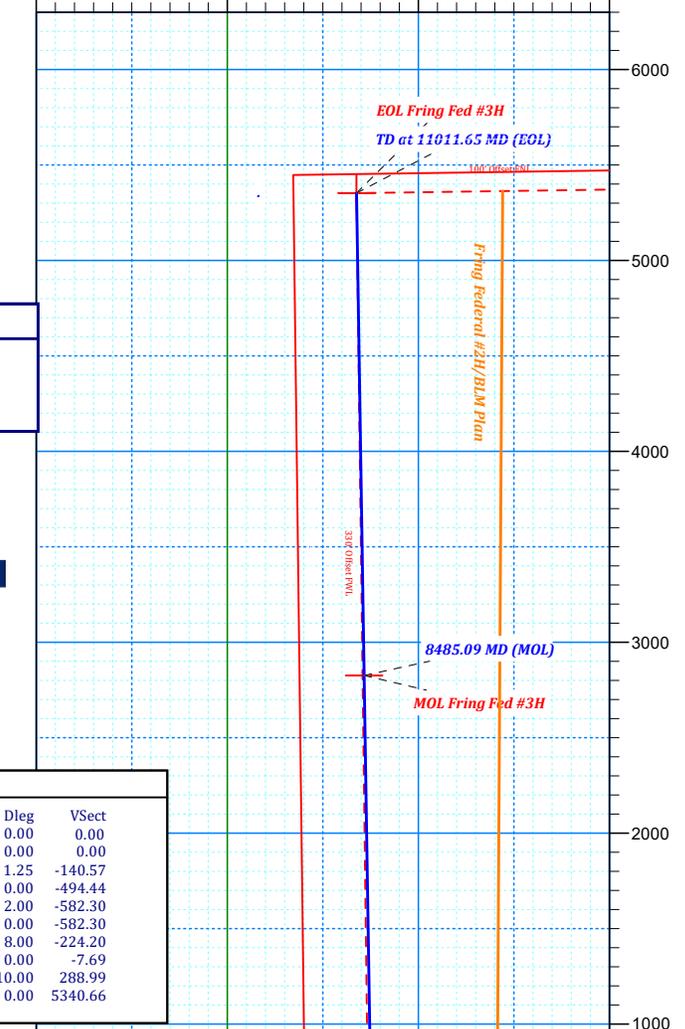
# Steward Energy II, LLC

# DrilTech, LLC

Lea County, NM (NAD 83) NM East Zone  
 Fring Federal Site  
 Fring Federal #3H  
 Wellbore #1  
 BLM Plan

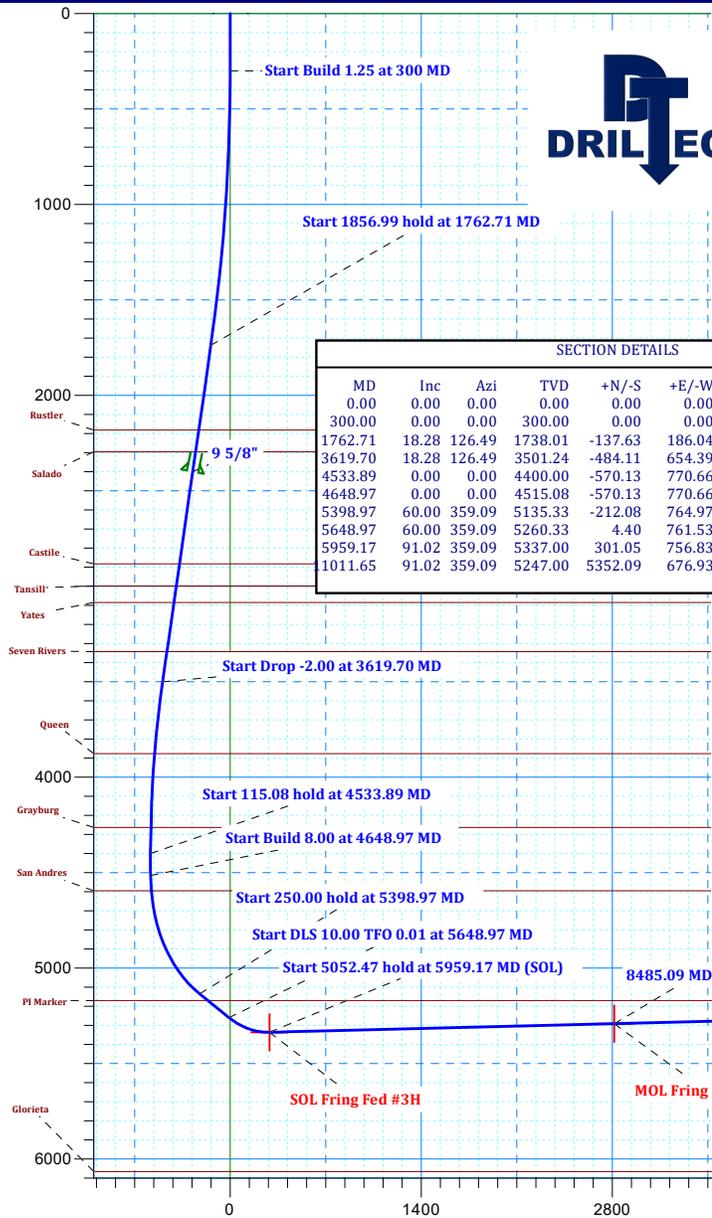


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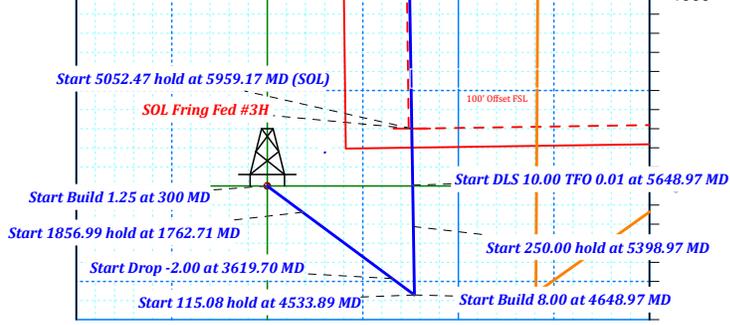


| SURFACE LOCATION  |                      |                    |                       |
|---|----------------------|--------------------|-----------------------|
| US State Plane 1983<br>New Mexico Eastern Zone<br>Elevation: GL 3796' + RKB 17' @ 3813.00ft |                      |                    |                       |
| Northing<br>796811.19   | Easting<br>928167.26 | Latitude<br>33.184 | Longitude<br>-103.069 |

| WELLBORE TARGET DETAILS (MAP CO-ORDINATES) |         |         |        |           |           |
|--|---------|---------|--------|-----------|-----------|
| Name                                       | TVD     | +N/-S   | +E/-W  | Northing  | Easting   |
| EOL Fring Fed #3H                          | 5247.00 | 5352.09 | 676.93 | 802163.27 | 928844.19 |
| MOL Fring Fed #3H                          | 5292.00 | 2826.25 | 716.89 | 799637.44 | 928884.14 |
| SOL Fring Fed #3H                          | 5337.00 | 301.05  | 756.83 | 797112.24 | 928924.09 |



| SECTION DETAILS |       |        |         |         |        |       |         |
|-----------------|-------|--------|---------|---------|--------|-------|---------|
| MD              | Inc   | Azi    | TVD     | +N/-S   | +E/-W  | Dleg  | Vsect   |
| 0.00            | 0.00  | 0.00   | 0.00    | 0.00    | 0.00   | 0.00  | 0.00    |
| 300.00          | 0.00  | 0.00   | 300.00  | 0.00    | 0.00   | 0.00  | 0.00    |
| 1762.71         | 18.28 | 126.49 | 1738.01 | -137.63 | 186.04 | 1.25  | -140.57 |
| 3619.70         | 18.28 | 126.49 | 3501.24 | -484.11 | 654.39 | 0.00  | -494.44 |
| 4533.89         | 0.00  | 0.00   | 4400.00 | -570.13 | 770.66 | 2.00  | -582.30 |
| 4648.97         | 0.00  | 0.00   | 4515.08 | -570.13 | 770.66 | 0.00  | -582.30 |
| 5398.97         | 60.00 | 359.09 | 5135.33 | -212.08 | 764.97 | 8.00  | -224.20 |
| 5648.97         | 60.00 | 359.09 | 5260.33 | 4.40    | 761.53 | 0.00  | -7.69   |
| 5959.17         | 91.02 | 359.09 | 5337.00 | 301.05  | 756.83 | 10.00 | 288.99  |
| 1011.65         | 91.02 | 359.09 | 5247.00 | 5352.09 | 676.93 | 0.00  | 5340.66 |



Vertical Section at 359.09° (1400 ft/in)

# **Steward Energy II, LLC**

**Lea County, NM (NAD 83) NM East Zone**

**Fring Federal Site**

**Fring Federal #3H**

**Wellbore #1**

**Plan: BLM Plan**

## **Standard Planning Report**

**04 December, 2020**

Planning Report

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD 83) NM East Zone |                      |                |
| <b>Map System:</b> | US State Plane 1983                  | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983            |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone              |                      |                |

|                              |                    |                     |                 |                   |          |
|------------------------------|--------------------|---------------------|-----------------|-------------------|----------|
| <b>Site</b>                  | Fring Federal Site |                     |                 |                   |          |
| <b>Site Position:</b>        |                    | <b>Northing:</b>    | 796,777.26 usft | <b>Latitude:</b>  | 33.184   |
| <b>From:</b>                 | Map                | <b>Easting:</b>     | 930,302.14 usft | <b>Longitude:</b> | -103.062 |
| <b>Position Uncertainty:</b> | 0.00 ft            | <b>Slot Radius:</b> | 13.200 in       |                   |          |

|                             |                   |         |                            |                 |                      |             |
|-----------------------------|-------------------|---------|----------------------------|-----------------|----------------------|-------------|
| <b>Well</b>                 | Fring Federal #3H |         |                            |                 |                      |             |
| <b>Well Position</b>        | <b>+N/-S</b>      | 0.00 ft | <b>Northing:</b>           | 796,811.19 usft | <b>Latitude:</b>     | 33.184      |
|                             | <b>+E/-W</b>      | 0.00 ft | <b>Easting:</b>            | 928,167.26 usft | <b>Longitude:</b>    | -103.069    |
| <b>Position Uncertainty</b> |                   | 0.00 ft | <b>Wellhead Elevation:</b> | ft              | <b>Ground Level:</b> | 3,796.00 ft |
| <b>Grid Convergence:</b>    |                   | 0.69 °  |                            |                 |                      |             |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2020          | 11/16/2020         | 6.44                   | 60.86                | 48,168.91085192            |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | BLM Plan                     |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PROTOTYPE         | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 359.09               |

|                                 |                      |                                  |                  |                |
|---------------------------------|----------------------|----------------------------------|------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>          | 12/4/2020                        |                  |                |
| <b>Depth From (ft)</b>          | <b>Depth To (ft)</b> | <b>Survey (Wellbore)</b>         | <b>Tool Name</b> | <b>Remarks</b> |
| 1                               | 0.00                 | 11,011.65 BLM Plan (Wellbore #1) | MWD              |                |
|                                 |                      |                                  | MWD - Standard   |                |

Planning Report

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Plan Sections       |                 |             |                     |            |            |                       |                      |                     |         |                   |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target            |
| 0.00                | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 300.00              | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 1,762.71            | 18.28           | 126.49      | 1,738.01            | -137.63    | 186.04     | 1.25                  | 1.25                 | 0.00                | 126.49  |                   |
| 3,619.70            | 18.28           | 126.49      | 3,501.24            | -484.11    | 654.39     | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 4,533.89            | 0.00            | 0.00        | 4,400.00            | -570.13    | 770.66     | 2.00                  | -2.00                | 0.00                | 180.00  |                   |
| 4,648.97            | 0.00            | 0.00        | 4,515.08            | -570.13    | 770.66     | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 5,398.97            | 60.00           | 359.09      | 5,135.33            | -212.08    | 764.97     | 8.00                  | 8.00                 | 0.00                | 359.09  |                   |
| 5,648.97            | 60.00           | 359.09      | 5,260.33            | 4.40       | 761.53     | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 5,959.17            | 91.02           | 359.09      | 5,337.00            | 301.05     | 756.83     | 10.00                 | 10.00                | 0.00                | 0.01    |                   |
| 11,011.65           | 91.02           | 359.09      | 5,247.00            | 5,352.09   | 676.93     | 0.00                  | 0.00                 | 0.00                | 0.00    | EOL Fring Fed #3H |

Planning Report

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Planned Survey                          |                 |             |                     |            |            |                       |                       |                      |                     |  |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft)                     | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 0.00                                    | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |  |
| 100.00                                  | 0.00            | 0.00        | 100.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |  |
| 200.00                                  | 0.00            | 0.00        | 200.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |  |
| 300.00                                  | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |  |
| <b>Start Build 1.25 at 300 MD</b>       |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 400.00                                  | 1.25            | 126.49      | 399.99              | -0.65      | 0.88       | -0.66                 | 1.25                  | 1.25                 | 0.00                |  |
| 500.00                                  | 2.50            | 126.49      | 499.94              | -2.59      | 3.51       | -2.65                 | 1.25                  | 1.25                 | 0.00                |  |
| 600.00                                  | 3.75            | 126.49      | 599.79              | -5.84      | 7.89       | -5.96                 | 1.25                  | 1.25                 | 0.00                |  |
| 700.00                                  | 5.00            | 126.49      | 699.49              | -10.37     | 14.02      | -10.59                | 1.25                  | 1.25                 | 0.00                |  |
| 800.00                                  | 6.25            | 126.49      | 799.01              | -16.20     | 21.90      | -16.55                | 1.25                  | 1.25                 | 0.00                |  |
| 900.00                                  | 7.50            | 126.49      | 898.29              | -23.32     | 31.52      | -23.82                | 1.25                  | 1.25                 | 0.00                |  |
| 1,000.00                                | 8.75            | 126.49      | 997.28              | -31.73     | 42.89      | -32.40                | 1.25                  | 1.25                 | 0.00                |  |
| 1,100.00                                | 10.00           | 126.49      | 1,095.94            | -41.42     | 55.98      | -42.30                | 1.25                  | 1.25                 | 0.00                |  |
| 1,200.00                                | 11.25           | 126.49      | 1,194.23            | -52.38     | 70.80      | -53.50                | 1.25                  | 1.25                 | 0.00                |  |
| 1,300.00                                | 12.50           | 126.49      | 1,292.09            | -64.62     | 87.35      | -66.00                | 1.25                  | 1.25                 | 0.00                |  |
| 1,400.00                                | 13.75           | 126.49      | 1,389.47            | -78.12     | 105.60     | -79.79                | 1.25                  | 1.25                 | 0.00                |  |
| 1,500.00                                | 15.00           | 126.49      | 1,486.34            | -92.89     | 125.56     | -94.87                | 1.25                  | 1.25                 | 0.00                |  |
| 1,600.00                                | 16.25           | 126.49      | 1,582.64            | -108.91    | 147.21     | -111.23               | 1.25                  | 1.25                 | 0.00                |  |
| 1,700.00                                | 17.50           | 126.49      | 1,678.33            | -126.17    | 170.55     | -128.86               | 1.25                  | 1.25                 | 0.00                |  |
| 1,762.71                                | 18.28           | 126.49      | 1,738.01            | -137.63    | 186.04     | -140.57               | 1.25                  | 1.25                 | 0.00                |  |
| <b>Start 1856.99 hold at 1762.71 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 1,800.00                                | 18.28           | 126.49      | 1,773.42            | -144.59    | 195.44     | -147.67               | 0.00                  | 0.00                 | 0.00                |  |
| 1,900.00                                | 18.28           | 126.49      | 1,868.37            | -163.24    | 220.66     | -166.73               | 0.00                  | 0.00                 | 0.00                |  |
| 2,000.00                                | 18.28           | 126.49      | 1,963.32            | -181.90    | 245.88     | -185.79               | 0.00                  | 0.00                 | 0.00                |  |
| 2,100.00                                | 18.28           | 126.49      | 2,058.27            | -200.56    | 271.10     | -204.84               | 0.00                  | 0.00                 | 0.00                |  |
| 2,200.00                                | 18.28           | 126.49      | 2,153.22            | -219.22    | 296.33     | -223.90               | 0.00                  | 0.00                 | 0.00                |  |
| 2,230.31                                | 18.28           | 126.49      | 2,182.00            | -224.87    | 303.97     | -229.67               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Rustler</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 2,300.00                                | 18.28           | 126.49      | 2,248.17            | -237.88    | 321.55     | -242.96               | 0.00                  | 0.00                 | 0.00                |  |
| 2,350.37                                | 18.28           | 126.49      | 2,296.00            | -247.28    | 334.25     | -252.55               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Salado</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 2,400.00                                | 18.28           | 126.49      | 2,343.13            | -256.54    | 346.77     | -262.01               | 0.00                  | 0.00                 | 0.00                |  |
| 2,459.90                                | 18.28           | 126.49      | 2,400.00            | -267.71    | 361.87     | -273.43               | 0.00                  | 0.00                 | 0.00                |  |
| <b>9 5/8"</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 2,500.00                                | 18.28           | 126.49      | 2,438.08            | -275.20    | 371.99     | -281.07               | 0.00                  | 0.00                 | 0.00                |  |
| 2,600.00                                | 18.28           | 126.49      | 2,533.03            | -293.85    | 397.21     | -300.12               | 0.00                  | 0.00                 | 0.00                |  |
| 2,700.00                                | 18.28           | 126.49      | 2,627.98            | -312.51    | 422.43     | -319.18               | 0.00                  | 0.00                 | 0.00                |  |
| 2,800.00                                | 18.28           | 126.49      | 2,722.93            | -331.17    | 447.65     | -338.24               | 0.00                  | 0.00                 | 0.00                |  |
| 2,900.00                                | 18.28           | 126.49      | 2,817.88            | -349.83    | 472.87     | -357.29               | 0.00                  | 0.00                 | 0.00                |  |
| 2,968.58                                | 18.28           | 126.49      | 2,883.00            | -362.62    | 490.17     | -370.36               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Castile</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 3,000.00                                | 18.28           | 126.49      | 2,912.83            | -368.49    | 498.09     | -376.35               | 0.00                  | 0.00                 | 0.00                |  |
| 3,090.75                                | 18.28           | 126.49      | 2,999.00            | -385.42    | 520.98     | -393.64               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Tansill</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 3,100.00                                | 18.28           | 126.49      | 3,007.79            | -387.15    | 523.31     | -395.41               | 0.00                  | 0.00                 | 0.00                |  |
| 3,181.32                                | 18.28           | 126.49      | 3,085.00            | -402.32    | 543.82     | -410.90               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Yates</b>                            |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 3,200.00                                | 18.28           | 126.49      | 3,102.74            | -405.80    | 548.54     | -414.46               | 0.00                  | 0.00                 | 0.00                |  |
| 3,300.00                                | 18.28           | 126.49      | 3,197.69            | -424.46    | 573.76     | -433.52               | 0.00                  | 0.00                 | 0.00                |  |
| 3,400.00                                | 18.28           | 126.49      | 3,292.64            | -443.12    | 598.98     | -452.58               | 0.00                  | 0.00                 | 0.00                |  |
| 3,453.04                                | 18.28           | 126.49      | 3,343.00            | -453.02    | 612.35     | -462.68               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Seven Rivers</b>                     |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 3,500.00                                | 18.28           | 126.49      | 3,387.59            | -461.78    | 624.20     | -471.63               | 0.00                  | 0.00                 | 0.00                |  |

Planning Report

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Planned Survey                                |                 |             |                     |            |            |                       |                       |                      |                     |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)                           | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 3,600.00                                      | 18.28           | 126.49      | 3,482.54            | -480.44    | 649.42     | -490.69               | 0.00                  | 0.00                 | 0.00                |
| 3,619.70                                      | 18.28           | 126.49      | 3,501.24            | -484.11    | 654.39     | -494.44               | 0.00                  | 0.00                 | 0.00                |
| <b>Start Drop -2.00 at 3619.70 MD</b>         |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,700.00                                      | 16.68           | 126.49      | 3,577.84            | -498.46    | 673.78     | -509.10               | 2.00                  | -2.00                | 0.00                |
| 3,800.00                                      | 14.68           | 126.49      | 3,674.11            | -514.53    | 695.50     | -525.51               | 2.00                  | -2.00                | 0.00                |
| 3,900.00                                      | 12.68           | 126.49      | 3,771.27            | -528.59    | 714.51     | -539.87               | 2.00                  | -2.00                | 0.00                |
| 4,000.00                                      | 10.68           | 126.49      | 3,869.20            | -540.63    | 730.78     | -552.17               | 2.00                  | -2.00                | 0.00                |
| 4,007.94                                      | 10.52           | 126.49      | 3,877.00            | -541.50    | 731.96     | -553.05               | 2.00                  | -2.00                | 0.00                |
| <b>Queen</b>                                  |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,100.00                                      | 8.68            | 126.49      | 3,967.77            | -550.63    | 744.30     | -562.38               | 2.00                  | -2.00                | 0.00                |
| 4,200.00                                      | 6.68            | 126.49      | 4,066.87            | -558.57    | 755.04     | -570.49               | 2.00                  | -2.00                | 0.00                |
| 4,300.00                                      | 4.68            | 126.49      | 4,166.37            | -564.45    | 762.99     | -576.50               | 2.00                  | -2.00                | 0.00                |
| 4,397.84                                      | 2.72            | 126.49      | 4,264.00            | -568.21    | 768.06     | -580.34               | 2.00                  | -2.00                | 0.00                |
| <b>Grayburg</b>                               |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,400.00                                      | 2.68            | 126.49      | 4,266.16            | -568.27    | 768.15     | -580.40               | 2.00                  | -2.00                | 0.00                |
| 4,500.00                                      | 0.68            | 126.49      | 4,366.11            | -570.01    | 770.50     | -582.18               | 2.00                  | -2.00                | 0.00                |
| 4,533.89                                      | 0.00            | 0.00        | 4,400.00            | -570.13    | 770.66     | -582.30               | 2.00                  | -2.00                | 0.00                |
| <b>Start 115.08 hold at 4533.89 MD</b>        |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,600.00                                      | 0.00            | 0.00        | 4,466.11            | -570.13    | 770.66     | -582.30               | 0.00                  | 0.00                 | 0.00                |
| 4,648.97                                      | 0.00            | 0.00        | 4,515.08            | -570.13    | 770.66     | -582.30               | 0.00                  | 0.00                 | 0.00                |
| <b>Start Build 8.00 at 4648.97 MD</b>         |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,700.00                                      | 4.08            | 359.09      | 4,566.07            | -568.31    | 770.63     | -580.48               | 8.00                  | 8.00                 | 0.00                |
| 4,729.06                                      | 6.41            | 359.09      | 4,595.00            | -565.66    | 770.59     | -577.82               | 8.00                  | 8.00                 | 0.00                |
| <b>San Andres</b>                             |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,800.00                                      | 12.08           | 359.09      | 4,664.99            | -554.27    | 770.41     | -566.43               | 8.00                  | 8.00                 | 0.00                |
| 4,900.00                                      | 20.08           | 359.09      | 4,761.00            | -526.59    | 769.97     | -538.75               | 8.00                  | 8.00                 | 0.00                |
| 5,000.00                                      | 28.08           | 359.09      | 4,852.22            | -485.82    | 769.32     | -497.98               | 8.00                  | 8.00                 | 0.00                |
| 5,100.00                                      | 36.08           | 359.09      | 4,936.88            | -432.76    | 768.48     | -444.91               | 8.00                  | 8.00                 | 0.00                |
| 5,200.00                                      | 44.08           | 359.09      | 5,013.33            | -368.43    | 767.46     | -380.57               | 8.00                  | 8.00                 | 0.00                |
| 5,300.00                                      | 52.08           | 359.09      | 5,080.09            | -294.09    | 766.28     | -306.22               | 8.00                  | 8.00                 | 0.00                |
| 5,398.97                                      | 60.00           | 359.09      | 5,135.33            | -212.08    | 764.97     | -224.20               | 8.00                  | 8.00                 | 0.00                |
| <b>Start 250.00 hold at 5398.97 MD</b>        |                 |             |                     |            |            |                       |                       |                      |                     |
| 5,400.00                                      | 60.00           | 359.09      | 5,135.84            | -211.18    | 764.96     | -223.31               | 0.00                  | 0.00                 | 0.00                |
| 5,468.32                                      | 60.00           | 359.09      | 5,170.00            | -152.03    | 764.02     | -164.14               | 0.00                  | 0.00                 | 0.00                |
| <b>PI Marker</b>                              |                 |             |                     |            |            |                       |                       |                      |                     |
| 5,500.00                                      | 60.00           | 359.09      | 5,185.84            | -124.59    | 763.58     | -136.70               | 0.00                  | 0.00                 | 0.00                |
| 5,600.00                                      | 60.00           | 359.09      | 5,235.84            | -38.00     | 762.21     | -50.10                | 0.00                  | 0.00                 | 0.00                |
| 5,648.97                                      | 60.00           | 359.09      | 5,260.33            | 4.40       | 761.53     | -7.69                 | 0.00                  | 0.00                 | 0.00                |
| <b>Start DLS 10.00 TFO 0.01 at 5648.97 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 5,700.00                                      | 65.10           | 359.09      | 5,283.84            | 49.67      | 760.82     | 37.58                 | 10.00                 | 10.00                | 0.00                |
| 5,800.00                                      | 75.10           | 359.09      | 5,317.83            | 143.57     | 759.33     | 131.49                | 10.00                 | 10.00                | 0.00                |
| 5,900.00                                      | 85.10           | 359.09      | 5,335.00            | 241.94     | 757.77     | 229.88                | 10.00                 | 10.00                | 0.00                |
| 5,959.17                                      | 91.02           | 359.09      | 5,337.00            | 301.05     | 756.83     | 288.99                | 10.00                 | 10.00                | 0.00                |
| <b>Start 5052.47 hold at 5959.17 MD (SOL)</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,000.00                                      | 91.02           | 359.09      | 5,336.27            | 341.86     | 756.19     | 329.81                | 0.00                  | 0.00                 | 0.00                |
| 6,100.00                                      | 91.02           | 359.09      | 5,334.49            | 441.84     | 754.61     | 429.79                | 0.00                  | 0.00                 | 0.00                |
| 6,200.00                                      | 91.02           | 359.09      | 5,332.71            | 541.81     | 753.02     | 529.78                | 0.00                  | 0.00                 | 0.00                |
| 6,300.00                                      | 91.02           | 359.09      | 5,330.93            | 641.78     | 751.44     | 629.76                | 0.00                  | 0.00                 | 0.00                |
| 6,400.00                                      | 91.02           | 359.09      | 5,329.14            | 741.75     | 749.86     | 729.75                | 0.00                  | 0.00                 | 0.00                |
| 6,500.00                                      | 91.02           | 359.09      | 5,327.36            | 841.72     | 748.28     | 829.73                | 0.00                  | 0.00                 | 0.00                |
| 6,600.00                                      | 91.02           | 359.09      | 5,325.58            | 941.69     | 746.70     | 929.72                | 0.00                  | 0.00                 | 0.00                |
| 6,700.00                                      | 91.02           | 359.09      | 5,323.80            | 1,041.66   | 745.12     | 1,029.70              | 0.00                  | 0.00                 | 0.00                |

Planning Report

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Planned Survey                 |                 |             |                     |            |            |                       |                       |                      |                     |
|--------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)            | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 6,800.00                       | 91.02           | 359.09      | 5,322.02            | 1,141.64   | 743.54     | 1,129.68              | 0.00                  | 0.00                 | 0.00                |
| 6,900.00                       | 91.02           | 359.09      | 5,320.24            | 1,241.61   | 741.95     | 1,229.67              | 0.00                  | 0.00                 | 0.00                |
| 7,000.00                       | 91.02           | 359.09      | 5,318.46            | 1,341.58   | 740.37     | 1,329.65              | 0.00                  | 0.00                 | 0.00                |
| 7,100.00                       | 91.02           | 359.09      | 5,316.68            | 1,441.55   | 738.79     | 1,429.64              | 0.00                  | 0.00                 | 0.00                |
| 7,200.00                       | 91.02           | 359.09      | 5,314.89            | 1,541.52   | 737.21     | 1,529.62              | 0.00                  | 0.00                 | 0.00                |
| 7,300.00                       | 91.02           | 359.09      | 5,313.11            | 1,641.49   | 735.63     | 1,629.60              | 0.00                  | 0.00                 | 0.00                |
| 7,400.00                       | 91.02           | 359.09      | 5,311.33            | 1,741.47   | 734.05     | 1,729.59              | 0.00                  | 0.00                 | 0.00                |
| 7,500.00                       | 91.02           | 359.09      | 5,309.55            | 1,841.44   | 732.47     | 1,829.57              | 0.00                  | 0.00                 | 0.00                |
| 7,600.00                       | 91.02           | 359.09      | 5,307.77            | 1,941.41   | 730.88     | 1,929.56              | 0.00                  | 0.00                 | 0.00                |
| 7,700.00                       | 91.02           | 359.09      | 5,305.99            | 2,041.38   | 729.30     | 2,029.54              | 0.00                  | 0.00                 | 0.00                |
| 7,800.00                       | 91.02           | 359.09      | 5,304.21            | 2,141.35   | 727.72     | 2,129.53              | 0.00                  | 0.00                 | 0.00                |
| 7,900.00                       | 91.02           | 359.09      | 5,302.43            | 2,241.32   | 726.14     | 2,229.51              | 0.00                  | 0.00                 | 0.00                |
| 8,000.00                       | 91.02           | 359.09      | 5,300.64            | 2,341.30   | 724.56     | 2,329.49              | 0.00                  | 0.00                 | 0.00                |
| 8,100.00                       | 91.02           | 359.09      | 5,298.86            | 2,441.27   | 722.98     | 2,429.48              | 0.00                  | 0.00                 | 0.00                |
| 8,200.00                       | 91.02           | 359.09      | 5,297.08            | 2,541.24   | 721.40     | 2,529.46              | 0.00                  | 0.00                 | 0.00                |
| 8,300.00                       | 91.02           | 359.09      | 5,295.30            | 2,641.21   | 719.81     | 2,629.45              | 0.00                  | 0.00                 | 0.00                |
| 8,400.00                       | 91.02           | 359.09      | 5,293.52            | 2,741.18   | 718.23     | 2,729.43              | 0.00                  | 0.00                 | 0.00                |
| 8,485.09                       | 91.02           | 359.09      | 5,292.00            | 2,826.25   | 716.89     | 2,814.51              | 0.00                  | 0.00                 | 0.00                |
| <b>8485.09 MD (MOL)</b>        |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,500.00                       | 91.02           | 359.09      | 5,291.74            | 2,841.15   | 716.65     | 2,829.41              | 0.00                  | 0.00                 | 0.00                |
| 8,600.00                       | 91.02           | 359.09      | 5,289.96            | 2,941.13   | 715.07     | 2,929.40              | 0.00                  | 0.00                 | 0.00                |
| 8,700.00                       | 91.02           | 359.09      | 5,288.18            | 3,041.10   | 713.49     | 3,029.38              | 0.00                  | 0.00                 | 0.00                |
| 8,800.00                       | 91.02           | 359.09      | 5,286.39            | 3,141.07   | 711.91     | 3,129.37              | 0.00                  | 0.00                 | 0.00                |
| 8,900.00                       | 91.02           | 359.09      | 5,284.61            | 3,241.04   | 710.33     | 3,229.35              | 0.00                  | 0.00                 | 0.00                |
| 9,000.00                       | 91.02           | 359.09      | 5,282.83            | 3,341.01   | 708.74     | 3,329.33              | 0.00                  | 0.00                 | 0.00                |
| 9,100.00                       | 91.02           | 359.09      | 5,281.05            | 3,440.98   | 707.16     | 3,429.32              | 0.00                  | 0.00                 | 0.00                |
| 9,200.00                       | 91.02           | 359.09      | 5,279.27            | 3,540.96   | 705.58     | 3,529.30              | 0.00                  | 0.00                 | 0.00                |
| 9,300.00                       | 91.02           | 359.09      | 5,277.49            | 3,640.93   | 704.00     | 3,629.29              | 0.00                  | 0.00                 | 0.00                |
| 9,400.00                       | 91.02           | 359.09      | 5,275.71            | 3,740.90   | 702.42     | 3,729.27              | 0.00                  | 0.00                 | 0.00                |
| 9,500.00                       | 91.02           | 359.09      | 5,273.93            | 3,840.87   | 700.84     | 3,829.26              | 0.00                  | 0.00                 | 0.00                |
| 9,600.00                       | 91.02           | 359.09      | 5,272.14            | 3,940.84   | 699.26     | 3,929.24              | 0.00                  | 0.00                 | 0.00                |
| 9,700.00                       | 91.02           | 359.09      | 5,270.36            | 4,040.81   | 697.67     | 4,029.22              | 0.00                  | 0.00                 | 0.00                |
| 9,800.00                       | 91.02           | 359.09      | 5,268.58            | 4,140.79   | 696.09     | 4,129.21              | 0.00                  | 0.00                 | 0.00                |
| 9,900.00                       | 91.02           | 359.09      | 5,266.80            | 4,240.76   | 694.51     | 4,229.19              | 0.00                  | 0.00                 | 0.00                |
| 10,000.00                      | 91.02           | 359.09      | 5,265.02            | 4,340.73   | 692.93     | 4,329.18              | 0.00                  | 0.00                 | 0.00                |
| 10,100.00                      | 91.02           | 359.09      | 5,263.24            | 4,440.70   | 691.35     | 4,429.16              | 0.00                  | 0.00                 | 0.00                |
| 10,200.00                      | 91.02           | 359.09      | 5,261.46            | 4,540.67   | 689.77     | 4,529.14              | 0.00                  | 0.00                 | 0.00                |
| 10,300.00                      | 91.02           | 359.09      | 5,259.68            | 4,640.64   | 688.19     | 4,629.13              | 0.00                  | 0.00                 | 0.00                |
| 10,400.00                      | 91.02           | 359.09      | 5,257.89            | 4,740.62   | 686.60     | 4,729.11              | 0.00                  | 0.00                 | 0.00                |
| 10,500.00                      | 91.02           | 359.09      | 5,256.11            | 4,840.59   | 685.02     | 4,829.10              | 0.00                  | 0.00                 | 0.00                |
| 10,600.00                      | 91.02           | 359.09      | 5,254.33            | 4,940.56   | 683.44     | 4,929.08              | 0.00                  | 0.00                 | 0.00                |
| 10,700.00                      | 91.02           | 359.09      | 5,252.55            | 5,040.53   | 681.86     | 5,029.07              | 0.00                  | 0.00                 | 0.00                |
| 10,800.00                      | 91.02           | 359.09      | 5,250.77            | 5,140.50   | 680.28     | 5,129.05              | 0.00                  | 0.00                 | 0.00                |
| 10,900.00                      | 91.02           | 359.09      | 5,248.99            | 5,240.47   | 678.70     | 5,229.03              | 0.00                  | 0.00                 | 0.00                |
| 11,000.00                      | 91.02           | 359.09      | 5,247.21            | 5,340.44   | 677.12     | 5,329.02              | 0.00                  | 0.00                 | 0.00                |
| 11,011.65                      | 91.02           | 359.09      | 5,247.00            | 5,352.09   | 676.93     | 5,340.66              | 0.00                  | 0.00                 | 0.00                |
| <b>TD at 11011.65 MD (EOL)</b> |                 |             |                     |            |            |                       |                       |                      |                     |

Planning Report

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Design Targets  |           |          |          |          |        |            |            |          |           |
|---|-----------|----------|----------|----------|--------|------------|------------|----------|-----------|
| Target Name   | Dip Angle | Dip Dir. | TVD      | +N/-S    | +E/-W  | Northing   | Easting    | Latitude | Longitude |
| - hit/miss target   | (°)       | (°)      | (ft)     | (ft)     | (ft)   | (usft)     | (usft)     |          |           |
| - Shape   |           |          |          |          |        |            |            |          |           |
| EOL Fring Fed #3H<br>- plan hits target center<br>- Point | 0.00      | 0.00     | 5,247.00 | 5,352.09 | 676.93 | 802,163.27 | 928,844.19 | 33.199   | -103.067  |
| MOL Fring Fed #3H<br>- plan hits target center<br>- Point | 0.00      | 0.00     | 5,292.00 | 2,826.25 | 716.89 | 799,637.44 | 928,884.15 | 33.192   | -103.067  |
| SOL Fring Fed #3H<br>- plan hits target center<br>- Point | 0.00      | 0.00     | 5,337.00 | 301.05   | 756.83 | 797,112.24 | 928,924.09 | 33.185   | -103.066  |

| Casing Points  |                |        |                 |               |  |
|----------------|----------------|--------|-----------------|---------------|--|
| Measured Depth | Vertical Depth | Name   | Casing Diameter | Hole Diameter |  |
| (ft)           | (ft)           |        | (in)            | (in)          |  |
| 2,459.90       | 2,400.00       | 9 5/8" | 9.625           | 12.250        |  |

| Formations     |                |              |           |     |               |
|----------------|----------------|--------------|-----------|-----|---------------|
| Measured Depth | Vertical Depth | Name         | Lithology | Dip | Dip Direction |
| (ft)           | (ft)           |              |           | (°) | (°)           |
| 2,230.31       | 2,182.00       | Rustler      |           |     |               |
| 2,350.37       | 2,296.00       | Salado       |           |     |               |
| 2,968.58       | 2,883.00       | Castile      |           |     |               |
| 3,090.75       | 2,999.00       | Tansill      |           |     |               |
| 3,181.32       | 3,085.00       | Yates        |           |     |               |
| 3,453.04       | 3,343.00       | Seven Rivers |           |     |               |
| 4,007.94       | 3,877.00       | Queen        |           |     |               |
| 4,397.84       | 4,264.00       | Grayburg     |           |     |               |
| 4,729.06       | 4,595.00       | San Andres   |           |     |               |
| 5,468.32       | 5,170.00       | PI Marker    |           |     |               |

| Plan Annotations |                |                   |            |  |  |
|------------------|----------------|-------------------|------------|--|--|
| Measured Depth   | Vertical Depth | Local Coordinates |            | Comment                                |  |
| (ft)             | (ft)           | +N/-S (ft)        | +E/-W (ft) |  |  |
| 300.00           | 300.00         | 0.00              | 0.00       | Start Build 1.25 at 300 MD             |  |
| 1,762.71         | 1,738.01       | -137.63           | 186.04     | Start 1856.99 hold at 1762.71 MD       |  |
| 3,619.70         | 3,501.24       | -484.11           | 654.39     | Start Drop -2.00 at 3619.70 MD         |  |
| 4,533.89         | 4,400.00       | -570.13           | 770.66     | Start 115.08 hold at 4533.89 MD        |  |
| 4,648.97         | 4,515.08       | -570.13           | 770.66     | Start Build 8.00 at 4648.97 MD         |  |
| 5,398.97         | 5,135.33       | -212.08           | 764.97     | Start 250.00 hold at 5398.97 MD        |  |
| 5,648.97         | 5,260.33       | 4.40              | 761.53     | Start DLS 10.00 TFO 0.01 at 5648.97 MD |  |
| 5,959.17         | 5,337.00       | 301.05            | 756.83     | Start 5052.47 hold at 5959.17 MD (SOL) |  |
| 8,485.09         | 5,292.00       | 2,826.25          | 716.89     | 8485.09 MD (MOL)                       |  |
| 11,011.65        | 5,247.00       | 5,352.09          | 676.93     | TD at 11011.65 MD (EOL)                |  |

# **Steward Energy II, LLC**

**Lea County, NM (NAD 83) NM East Zone**

**Fring Federal Site**

**Fring Federal #3H**

**Wellbore #1**

**Plan: BLM Plan**

## **Standard Planning Report - Geographic**

**04 December, 2020**

Planning Report - Geographic

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD 83) NM East Zone |                      |                |
| <b>Map System:</b> | US State Plane 1983                  | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983            |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone              |                      |                |

|                              |                    |                     |                 |                   |          |
|------------------------------|--------------------|---------------------|-----------------|-------------------|----------|
| <b>Site</b>                  | Fring Federal Site |                     |                 |                   |          |
| <b>Site Position:</b>        |                    | <b>Northing:</b>    | 796,777.26 usft | <b>Latitude:</b>  | 33.184   |
| <b>From:</b>                 | Map                | <b>Easting:</b>     | 930,302.14 usft | <b>Longitude:</b> | -103.062 |
| <b>Position Uncertainty:</b> | 0.00 ft            | <b>Slot Radius:</b> | 13.200 in       |                   |          |

|                             |                   |         |                            |                 |                      |             |
|-----------------------------|-------------------|---------|----------------------------|-----------------|----------------------|-------------|
| <b>Well</b>                 | Fring Federal #3H |         |                            |                 |                      |             |
| <b>Well Position</b>        | <b>+N/-S</b>      | 0.00 ft | <b>Northing:</b>           | 796,811.19 usft | <b>Latitude:</b>     | 33.184      |
|                             | <b>+E/-W</b>      | 0.00 ft | <b>Easting:</b>            | 928,167.26 usft | <b>Longitude:</b>    | -103.069    |
| <b>Position Uncertainty</b> |                   | 0.00 ft | <b>Wellhead Elevation:</b> | ft              | <b>Ground Level:</b> | 3,796.00 ft |
| <b>Grid Convergence:</b>    |                   | 0.69 °  |                            |                 |                      |             |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2020          | 11/16/2020         | 6.44                   | 60.86                | 48,168.91085192            |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | BLM Plan                     |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PROTOTYPE         | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 359.09               |

|                                 |                      |                                  |                  |                |
|---------------------------------|----------------------|----------------------------------|------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>          | 12/4/2020                        |                  |                |
| <b>Depth From (ft)</b>          | <b>Depth To (ft)</b> | <b>Survey (Wellbore)</b>         | <b>Tool Name</b> | <b>Remarks</b> |
| 1                               | 0.00                 | 11,011.65 BLM Plan (Wellbore #1) | MWD              | MWD - Standard |

Planning Report - Geographic

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Plan Sections       |                 |             |                     |            |            |                       |                      |                     |         |                   |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target            |
| 0.00                | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 300.00              | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 1,762.71            | 18.28           | 126.49      | 1,738.01            | -137.63    | 186.04     | 1.25                  | 1.25                 | 0.00                | 126.49  |                   |
| 3,619.70            | 18.28           | 126.49      | 3,501.24            | -484.11    | 654.39     | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 4,533.89            | 0.00            | 0.00        | 4,400.00            | -570.13    | 770.66     | 2.00                  | -2.00                | 0.00                | 180.00  |                   |
| 4,648.97            | 0.00            | 0.00        | 4,515.08            | -570.13    | 770.66     | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 5,398.97            | 60.00           | 359.09      | 5,135.33            | -212.08    | 764.97     | 8.00                  | 8.00                 | 0.00                | 359.09  |                   |
| 5,648.97            | 60.00           | 359.09      | 5,260.33            | 4.40       | 761.53     | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 5,959.17            | 91.02           | 359.09      | 5,337.00            | 301.05     | 756.83     | 10.00                 | 10.00                | 0.00                | 0.01    |                   |
| 11,011.65           | 91.02           | 359.09      | 5,247.00            | 5,352.09   | 676.93     | 0.00                  | 0.00                 | 0.00                | 0.00    | EOL Fring Fed #3H |

Planning Report - Geographic

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Planned Survey                          |                 |             |                     |            |            |                     |                    |          |           |  |
|---|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|----------|-----------|--|
| Measured Depth (ft)                     | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |  |
| 0.00                                    | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 796,811.19          | 928,167.26         | 33.184   | -103.069  |  |
| 100.00                                  | 0.00            | 0.00        | 100.00              | 0.00       | 0.00       | 796,811.19          | 928,167.26         | 33.184   | -103.069  |  |
| 200.00                                  | 0.00            | 0.00        | 200.00              | 0.00       | 0.00       | 796,811.19          | 928,167.26         | 33.184   | -103.069  |  |
| 300.00                                  | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 796,811.19          | 928,167.26         | 33.184   | -103.069  |  |
| <b>Start Build 1.25 at 300 MD</b>       |                 |             |                     |            |            |                     |                    |          |           |  |
| 400.00                                  | 1.25            | 126.49      | 399.99              | -0.65      | 0.88       | 796,810.54          | 928,168.14         | 33.184   | -103.069  |  |
| 500.00                                  | 2.50            | 126.49      | 499.94              | -2.59      | 3.51       | 796,808.59          | 928,170.77         | 33.184   | -103.069  |  |
| 600.00                                  | 3.75            | 126.49      | 599.79              | -5.84      | 7.89       | 796,805.35          | 928,175.15         | 33.184   | -103.069  |  |
| 700.00                                  | 5.00            | 126.49      | 699.49              | -10.37     | 14.02      | 796,800.81          | 928,181.28         | 33.184   | -103.069  |  |
| 800.00                                  | 6.25            | 126.49      | 799.01              | -16.20     | 21.90      | 796,794.99          | 928,189.16         | 33.184   | -103.069  |  |
| 900.00                                  | 7.50            | 126.49      | 898.29              | -23.32     | 31.52      | 796,787.87          | 928,198.79         | 33.184   | -103.069  |  |
| 1,000.00                                | 8.75            | 126.49      | 997.28              | -31.73     | 42.89      | 796,779.46          | 928,210.15         | 33.184   | -103.069  |  |
| 1,100.00                                | 10.00           | 126.49      | 1,095.94            | -41.42     | 55.98      | 796,769.77          | 928,223.24         | 33.184   | -103.069  |  |
| 1,200.00                                | 11.25           | 126.49      | 1,194.23            | -52.38     | 70.80      | 796,758.81          | 928,238.06         | 33.184   | -103.069  |  |
| 1,300.00                                | 12.50           | 126.49      | 1,292.09            | -64.62     | 87.35      | 796,746.57          | 928,254.61         | 33.184   | -103.069  |  |
| 1,400.00                                | 13.75           | 126.49      | 1,389.47            | -78.12     | 105.60     | 796,733.06          | 928,272.86         | 33.184   | -103.069  |  |
| 1,500.00                                | 15.00           | 126.49      | 1,486.34            | -92.89     | 125.56     | 796,718.30          | 928,292.82         | 33.184   | -103.069  |  |
| 1,600.00                                | 16.25           | 126.49      | 1,582.64            | -108.91    | 147.21     | 796,702.28          | 928,314.47         | 33.184   | -103.068  |  |
| 1,700.00                                | 17.50           | 126.49      | 1,678.33            | -126.17    | 170.55     | 796,685.02          | 928,337.81         | 33.184   | -103.068  |  |
| 1,762.71                                | 18.28           | 126.49      | 1,738.01            | -137.63    | 186.04     | 796,673.56          | 928,353.30         | 33.184   | -103.068  |  |
| <b>Start 1856.99 hold at 1762.71 MD</b> |                 |             |                     |            |            |                     |                    |          |           |  |
| 1,800.00                                | 18.28           | 126.49      | 1,773.42            | -144.59    | 195.44     | 796,666.60          | 928,362.70         | 33.184   | -103.068  |  |
| 1,900.00                                | 18.28           | 126.49      | 1,868.37            | -163.24    | 220.66     | 796,647.94          | 928,387.92         | 33.184   | -103.068  |  |
| 2,000.00                                | 18.28           | 126.49      | 1,963.32            | -181.90    | 245.88     | 796,629.28          | 928,413.14         | 33.183   | -103.068  |  |
| 2,100.00                                | 18.28           | 126.49      | 2,058.27            | -200.56    | 271.10     | 796,610.63          | 928,438.36         | 33.183   | -103.068  |  |
| 2,200.00                                | 18.28           | 126.49      | 2,153.22            | -219.22    | 296.33     | 796,591.97          | 928,463.59         | 33.183   | -103.068  |  |
| 2,230.31                                | 18.28           | 126.49      | 2,182.00            | -224.87    | 303.97     | 796,586.31          | 928,471.23         | 33.183   | -103.068  |  |
| <b>Rustler</b>                          |                 |             |                     |            |            |                     |                    |          |           |  |
| 2,300.00                                | 18.28           | 126.49      | 2,248.17            | -237.88    | 321.55     | 796,573.31          | 928,488.81         | 33.183   | -103.068  |  |
| 2,350.37                                | 18.28           | 126.49      | 2,296.00            | -247.28    | 334.25     | 796,563.91          | 928,501.51         | 33.183   | -103.068  |  |
| <b>Salado</b>                           |                 |             |                     |            |            |                     |                    |          |           |  |
| 2,400.00                                | 18.28           | 126.49      | 2,343.13            | -256.54    | 346.77     | 796,554.65          | 928,514.03         | 33.183   | -103.068  |  |
| 2,459.90                                | 18.28           | 126.49      | 2,400.00            | -267.71    | 361.87     | 796,543.48          | 928,529.13         | 33.183   | -103.068  |  |
| <b>9 5/8"</b>                           |                 |             |                     |            |            |                     |                    |          |           |  |
| 2,500.00                                | 18.28           | 126.49      | 2,438.08            | -275.20    | 371.99     | 796,535.99          | 928,539.25         | 33.183   | -103.068  |  |
| 2,600.00                                | 18.28           | 126.49      | 2,533.03            | -293.85    | 397.21     | 796,517.33          | 928,564.47         | 33.183   | -103.068  |  |
| 2,700.00                                | 18.28           | 126.49      | 2,627.98            | -312.51    | 422.43     | 796,498.68          | 928,589.69         | 33.183   | -103.068  |  |
| 2,800.00                                | 18.28           | 126.49      | 2,722.93            | -331.17    | 447.65     | 796,480.02          | 928,614.91         | 33.183   | -103.068  |  |
| 2,900.00                                | 18.28           | 126.49      | 2,817.88            | -349.83    | 472.87     | 796,461.36          | 928,640.13         | 33.183   | -103.067  |  |
| 2,968.58                                | 18.28           | 126.49      | 2,883.00            | -362.62    | 490.17     | 796,448.56          | 928,657.43         | 33.183   | -103.067  |  |
| <b>Castile</b>                          |                 |             |                     |            |            |                     |                    |          |           |  |
| 3,000.00                                | 18.28           | 126.49      | 2,912.83            | -368.49    | 498.09     | 796,442.70          | 928,665.35         | 33.183   | -103.067  |  |
| 3,090.75                                | 18.28           | 126.49      | 2,999.00            | -385.42    | 520.98     | 796,425.77          | 928,688.24         | 33.183   | -103.067  |  |
| <b>Tansill</b>                          |                 |             |                     |            |            |                     |                    |          |           |  |
| 3,100.00                                | 18.28           | 126.49      | 3,007.79            | -387.15    | 523.31     | 796,424.04          | 928,690.57         | 33.183   | -103.067  |  |
| 3,181.32                                | 18.28           | 126.49      | 3,085.00            | -402.32    | 543.82     | 796,408.87          | 928,711.08         | 33.183   | -103.067  |  |
| <b>Yates</b>                            |                 |             |                     |            |            |                     |                    |          |           |  |
| 3,200.00                                | 18.28           | 126.49      | 3,102.74            | -405.80    | 548.54     | 796,405.38          | 928,715.80         | 33.183   | -103.067  |  |
| 3,300.00                                | 18.28           | 126.49      | 3,197.69            | -424.46    | 573.76     | 796,386.73          | 928,741.02         | 33.183   | -103.067  |  |
| 3,400.00                                | 18.28           | 126.49      | 3,292.64            | -443.12    | 598.98     | 796,368.07          | 928,766.24         | 33.183   | -103.067  |  |
| 3,453.04                                | 18.28           | 126.49      | 3,343.00            | -453.02    | 612.35     | 796,358.17          | 928,779.61         | 33.183   | -103.067  |  |
| <b>Seven Rivers</b>                     |                 |             |                     |            |            |                     |                    |          |           |  |
| 3,500.00                                | 18.28           | 126.49      | 3,387.59            | -461.78    | 624.20     | 796,349.41          | 928,791.46         | 33.183   | -103.067  |  |

Planning Report - Geographic

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Planned Survey                                |                 |             |                     |            |            |                     |                    |          |           |  |
|---|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|----------|-----------|--|
| Measured Depth (ft)                           | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |  |
| 3,600.00                                      | 18.28           | 126.49      | 3,482.54            | -480.44    | 649.42     | 796,330.75          | 928,816.68         | 33.183   | -103.067  |  |
| 3,619.70                                      | 18.28           | 126.49      | 3,501.24            | -484.11    | 654.39     | 796,327.08          | 928,821.65         | 33.183   | -103.067  |  |
| <b>Start Drop -2.00 at 3619.70 MD</b>         |                 |             |                     |            |            |                     |                    |          |           |  |
| 3,700.00                                      | 16.68           | 126.49      | 3,577.84            | -498.46    | 673.78     | 796,312.73          | 928,841.04         | 33.183   | -103.067  |  |
| 3,800.00                                      | 14.68           | 126.49      | 3,674.11            | -514.53    | 695.50     | 796,296.66          | 928,862.76         | 33.183   | -103.067  |  |
| 3,900.00                                      | 12.68           | 126.49      | 3,771.27            | -528.59    | 714.51     | 796,282.60          | 928,881.77         | 33.183   | -103.067  |  |
| 4,000.00                                      | 10.68           | 126.49      | 3,869.20            | -540.63    | 730.78     | 796,270.56          | 928,898.04         | 33.182   | -103.067  |  |
| 4,007.94                                      | 10.52           | 126.49      | 3,877.00            | -541.50    | 731.96     | 796,269.69          | 928,899.22         | 33.182   | -103.067  |  |
| <b>Queen</b>                                  |                 |             |                     |            |            |                     |                    |          |           |  |
| 4,100.00                                      | 8.68            | 126.49      | 3,967.77            | -550.63    | 744.30     | 796,260.56          | 928,911.55         | 33.182   | -103.067  |  |
| 4,200.00                                      | 6.68            | 126.49      | 4,066.87            | -558.57    | 755.04     | 796,252.62          | 928,922.29         | 33.182   | -103.067  |  |
| 4,300.00                                      | 4.68            | 126.49      | 4,166.37            | -564.45    | 762.99     | 796,246.73          | 928,930.25         | 33.182   | -103.066  |  |
| 4,397.84                                      | 2.72            | 126.49      | 4,264.00            | -568.21    | 768.06     | 796,242.98          | 928,935.32         | 33.182   | -103.066  |  |
| <b>Grayburg</b>                               |                 |             |                     |            |            |                     |                    |          |           |  |
| 4,400.00                                      | 2.68            | 126.49      | 4,266.16            | -568.27    | 768.15     | 796,242.92          | 928,935.40         | 33.182   | -103.066  |  |
| 4,500.00                                      | 0.68            | 126.49      | 4,366.11            | -570.01    | 770.50     | 796,241.18          | 928,937.76         | 33.182   | -103.066  |  |
| 4,533.89                                      | 0.00            | 0.00        | 4,400.00            | -570.13    | 770.66     | 796,241.06          | 928,937.92         | 33.182   | -103.066  |  |
| <b>Start 115.08 hold at 4533.89 MD</b>        |                 |             |                     |            |            |                     |                    |          |           |  |
| 4,600.00                                      | 0.00            | 0.00        | 4,466.11            | -570.13    | 770.66     | 796,241.06          | 928,937.92         | 33.182   | -103.066  |  |
| 4,648.97                                      | 0.00            | 0.00        | 4,515.08            | -570.13    | 770.66     | 796,241.06          | 928,937.92         | 33.182   | -103.066  |  |
| <b>Start Build 8.00 at 4648.97 MD</b>         |                 |             |                     |            |            |                     |                    |          |           |  |
| 4,700.00                                      | 4.08            | 359.09      | 4,566.07            | -568.31    | 770.63     | 796,242.88          | 928,937.89         | 33.182   | -103.066  |  |
| 4,729.06                                      | 6.41            | 359.09      | 4,595.00            | -565.66    | 770.59     | 796,245.53          | 928,937.85         | 33.182   | -103.066  |  |
| <b>San Andres</b>                             |                 |             |                     |            |            |                     |                    |          |           |  |
| 4,800.00                                      | 12.08           | 359.09      | 4,664.99            | -554.27    | 770.41     | 796,256.92          | 928,937.67         | 33.182   | -103.066  |  |
| 4,900.00                                      | 20.08           | 359.09      | 4,761.00            | -526.59    | 769.97     | 796,284.60          | 928,937.23         | 33.183   | -103.066  |  |
| 5,000.00                                      | 28.08           | 359.09      | 4,852.22            | -485.82    | 769.32     | 796,325.37          | 928,936.58         | 33.183   | -103.066  |  |
| 5,100.00                                      | 36.08           | 359.09      | 4,936.88            | -432.76    | 768.48     | 796,378.43          | 928,935.74         | 33.183   | -103.066  |  |
| 5,200.00                                      | 44.08           | 359.09      | 5,013.33            | -368.43    | 767.46     | 796,442.76          | 928,934.72         | 33.183   | -103.066  |  |
| 5,300.00                                      | 52.08           | 359.09      | 5,080.09            | -294.09    | 766.28     | 796,517.10          | 928,933.53         | 33.183   | -103.066  |  |
| 5,398.97                                      | 60.00           | 359.09      | 5,135.33            | -212.08    | 764.97     | 796,599.11          | 928,932.23         | 33.183   | -103.066  |  |
| <b>Start 250.00 hold at 5398.97 MD</b>        |                 |             |                     |            |            |                     |                    |          |           |  |
| 5,400.00                                      | 60.00           | 359.09      | 5,135.84            | -211.18    | 764.96     | 796,600.00          | 928,932.22         | 33.183   | -103.066  |  |
| 5,468.32                                      | 60.00           | 359.09      | 5,170.00            | -152.03    | 764.02     | 796,659.16          | 928,931.28         | 33.184   | -103.066  |  |
| <b>PI Marker</b>                              |                 |             |                     |            |            |                     |                    |          |           |  |
| 5,500.00                                      | 60.00           | 359.09      | 5,185.84            | -124.59    | 763.58     | 796,686.60          | 928,930.84         | 33.184   | -103.066  |  |
| 5,600.00                                      | 60.00           | 359.09      | 5,235.84            | -38.00     | 762.21     | 796,773.19          | 928,929.47         | 33.184   | -103.066  |  |
| 5,648.97                                      | 60.00           | 359.09      | 5,260.33            | 4.40       | 761.53     | 796,815.59          | 928,928.79         | 33.184   | -103.066  |  |
| <b>Start DLS 10.00 TFO 0.01 at 5648.97 MD</b> |                 |             |                     |            |            |                     |                    |          |           |  |
| 5,700.00                                      | 65.10           | 359.09      | 5,283.84            | 49.67      | 760.82     | 796,860.86          | 928,928.07         | 33.184   | -103.066  |  |
| 5,800.00                                      | 75.10           | 359.09      | 5,317.83            | 143.57     | 759.33     | 796,954.76          | 928,926.59         | 33.184   | -103.066  |  |
| 5,900.00                                      | 85.10           | 359.09      | 5,335.00            | 241.94     | 757.77     | 797,053.13          | 928,925.03         | 33.185   | -103.066  |  |
| 5,959.17                                      | 91.02           | 359.09      | 5,337.00            | 301.05     | 756.83     | 797,112.24          | 928,924.09         | 33.185   | -103.066  |  |
| <b>Start 5052.47 hold at 5959.17 MD (SOL)</b> |                 |             |                     |            |            |                     |                    |          |           |  |
| 6,000.00                                      | 91.02           | 359.09      | 5,336.27            | 341.86     | 756.19     | 797,153.05          | 928,923.45         | 33.185   | -103.066  |  |
| 6,100.00                                      | 91.02           | 359.09      | 5,334.49            | 441.84     | 754.61     | 797,253.02          | 928,921.86         | 33.185   | -103.066  |  |
| 6,200.00                                      | 91.02           | 359.09      | 5,332.71            | 541.81     | 753.02     | 797,352.99          | 928,920.28         | 33.185   | -103.066  |  |
| 6,300.00                                      | 91.02           | 359.09      | 5,330.93            | 641.78     | 751.44     | 797,452.96          | 928,918.70         | 33.186   | -103.066  |  |
| 6,400.00                                      | 91.02           | 359.09      | 5,329.14            | 741.75     | 749.86     | 797,552.94          | 928,917.12         | 33.186   | -103.066  |  |
| 6,500.00                                      | 91.02           | 359.09      | 5,327.36            | 841.72     | 748.28     | 797,652.91          | 928,915.54         | 33.186   | -103.066  |  |
| 6,600.00                                      | 91.02           | 359.09      | 5,325.58            | 941.69     | 746.70     | 797,752.88          | 928,913.96         | 33.187   | -103.066  |  |
| 6,700.00                                      | 91.02           | 359.09      | 5,323.80            | 1,041.66   | 745.12     | 797,852.85          | 928,912.38         | 33.187   | -103.066  |  |
| 6,800.00                                      | 91.02           | 359.09      | 5,322.02            | 1,141.64   | 743.54     | 797,952.82          | 928,910.79         | 33.187   | -103.066  |  |

Planning Report - Geographic

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Planned Survey                 |                 |             |                     |            |            |                     |                    |          |           |  |
|--------------------------------|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|----------|-----------|--|
| Measured Depth (ft)            | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |  |
| 6,900.00                       | 91.02           | 359.09      | 5,320.24            | 1,241.61   | 741.95     | 798,052.79          | 928,909.21         | 33.187   | -103.066  |  |
| 7,000.00                       | 91.02           | 359.09      | 5,318.46            | 1,341.58   | 740.37     | 798,152.76          | 928,907.63         | 33.188   | -103.066  |  |
| 7,100.00                       | 91.02           | 359.09      | 5,316.68            | 1,441.55   | 738.79     | 798,252.74          | 928,906.05         | 33.188   | -103.066  |  |
| 7,200.00                       | 91.02           | 359.09      | 5,314.89            | 1,541.52   | 737.21     | 798,352.71          | 928,904.47         | 33.188   | -103.066  |  |
| 7,300.00                       | 91.02           | 359.09      | 5,313.11            | 1,641.49   | 735.63     | 798,452.68          | 928,902.89         | 33.188   | -103.066  |  |
| 7,400.00                       | 91.02           | 359.09      | 5,311.33            | 1,741.47   | 734.05     | 798,552.65          | 928,901.31         | 33.189   | -103.066  |  |
| 7,500.00                       | 91.02           | 359.09      | 5,309.55            | 1,841.44   | 732.47     | 798,652.62          | 928,899.72         | 33.189   | -103.067  |  |
| 7,600.00                       | 91.02           | 359.09      | 5,307.77            | 1,941.41   | 730.88     | 798,752.59          | 928,898.14         | 33.189   | -103.067  |  |
| 7,700.00                       | 91.02           | 359.09      | 5,305.99            | 2,041.38   | 729.30     | 798,852.56          | 928,896.56         | 33.190   | -103.067  |  |
| 7,800.00                       | 91.02           | 359.09      | 5,304.21            | 2,141.35   | 727.72     | 798,952.54          | 928,894.98         | 33.190   | -103.067  |  |
| 7,900.00                       | 91.02           | 359.09      | 5,302.43            | 2,241.32   | 726.14     | 799,052.51          | 928,893.40         | 33.190   | -103.067  |  |
| 8,000.00                       | 91.02           | 359.09      | 5,300.64            | 2,341.30   | 724.56     | 799,152.48          | 928,891.82         | 33.190   | -103.067  |  |
| 8,100.00                       | 91.02           | 359.09      | 5,298.86            | 2,441.27   | 722.98     | 799,252.45          | 928,890.24         | 33.191   | -103.067  |  |
| 8,200.00                       | 91.02           | 359.09      | 5,297.08            | 2,541.24   | 721.40     | 799,352.42          | 928,888.65         | 33.191   | -103.067  |  |
| 8,300.00                       | 91.02           | 359.09      | 5,295.30            | 2,641.21   | 719.81     | 799,452.39          | 928,887.07         | 33.191   | -103.067  |  |
| 8,400.00                       | 91.02           | 359.09      | 5,293.52            | 2,741.18   | 718.23     | 799,552.36          | 928,885.49         | 33.191   | -103.067  |  |
| 8,485.09                       | 91.02           | 359.09      | 5,292.00            | 2,826.25   | 716.89     | 799,637.43          | 928,884.15         | 33.192   | -103.067  |  |
| <b>8485.09 MD (MOL)</b>        |                 |             |                     |            |            |                     |                    |          |           |  |
| 8,500.00                       | 91.02           | 359.09      | 5,291.74            | 2,841.15   | 716.65     | 799,652.34          | 928,883.91         | 33.192   | -103.067  |  |
| 8,600.00                       | 91.02           | 359.09      | 5,289.96            | 2,941.13   | 715.07     | 799,752.31          | 928,882.33         | 33.192   | -103.067  |  |
| 8,700.00                       | 91.02           | 359.09      | 5,288.18            | 3,041.10   | 713.49     | 799,852.28          | 928,880.75         | 33.192   | -103.067  |  |
| 8,800.00                       | 91.02           | 359.09      | 5,286.39            | 3,141.07   | 711.91     | 799,952.25          | 928,879.17         | 33.193   | -103.067  |  |
| 8,900.00                       | 91.02           | 359.09      | 5,284.61            | 3,241.04   | 710.33     | 800,052.22          | 928,877.58         | 33.193   | -103.067  |  |
| 9,000.00                       | 91.02           | 359.09      | 5,282.83            | 3,341.01   | 708.74     | 800,152.19          | 928,876.00         | 33.193   | -103.067  |  |
| 9,100.00                       | 91.02           | 359.09      | 5,281.05            | 3,440.98   | 707.16     | 800,252.16          | 928,874.42         | 33.193   | -103.067  |  |
| 9,200.00                       | 91.02           | 359.09      | 5,279.27            | 3,540.96   | 705.58     | 800,352.14          | 928,872.84         | 33.194   | -103.067  |  |
| 9,300.00                       | 91.02           | 359.09      | 5,277.49            | 3,640.93   | 704.00     | 800,452.11          | 928,871.26         | 33.194   | -103.067  |  |
| 9,400.00                       | 91.02           | 359.09      | 5,275.71            | 3,740.90   | 702.42     | 800,552.08          | 928,869.68         | 33.194   | -103.067  |  |
| 9,500.00                       | 91.02           | 359.09      | 5,273.93            | 3,840.87   | 700.84     | 800,652.05          | 928,868.10         | 33.195   | -103.067  |  |
| 9,600.00                       | 91.02           | 359.09      | 5,272.14            | 3,940.84   | 699.26     | 800,752.02          | 928,866.51         | 33.195   | -103.067  |  |
| 9,700.00                       | 91.02           | 359.09      | 5,270.36            | 4,040.81   | 697.67     | 800,851.99          | 928,864.93         | 33.195   | -103.067  |  |
| 9,800.00                       | 91.02           | 359.09      | 5,268.58            | 4,140.79   | 696.09     | 800,951.96          | 928,863.35         | 33.195   | -103.067  |  |
| 9,900.00                       | 91.02           | 359.09      | 5,266.80            | 4,240.76   | 694.51     | 801,051.94          | 928,861.77         | 33.196   | -103.067  |  |
| 10,000.00                      | 91.02           | 359.09      | 5,265.02            | 4,340.73   | 692.93     | 801,151.91          | 928,860.19         | 33.196   | -103.067  |  |
| 10,100.00                      | 91.02           | 359.09      | 5,263.24            | 4,440.70   | 691.35     | 801,251.88          | 928,858.61         | 33.196   | -103.067  |  |
| 10,200.00                      | 91.02           | 359.09      | 5,261.46            | 4,540.67   | 689.77     | 801,351.85          | 928,857.03         | 33.196   | -103.067  |  |
| 10,300.00                      | 91.02           | 359.09      | 5,259.68            | 4,640.64   | 688.19     | 801,451.82          | 928,855.44         | 33.197   | -103.067  |  |
| 10,400.00                      | 91.02           | 359.09      | 5,257.89            | 4,740.62   | 686.60     | 801,551.79          | 928,853.86         | 33.197   | -103.067  |  |
| 10,500.00                      | 91.02           | 359.09      | 5,256.11            | 4,840.59   | 685.02     | 801,651.76          | 928,852.28         | 33.197   | -103.067  |  |
| 10,600.00                      | 91.02           | 359.09      | 5,254.33            | 4,940.56   | 683.44     | 801,751.74          | 928,850.70         | 33.198   | -103.067  |  |
| 10,700.00                      | 91.02           | 359.09      | 5,252.55            | 5,040.53   | 681.86     | 801,851.71          | 928,849.12         | 33.198   | -103.067  |  |
| 10,800.00                      | 91.02           | 359.09      | 5,250.77            | 5,140.50   | 680.28     | 801,951.68          | 928,847.54         | 33.198   | -103.067  |  |
| 10,900.00                      | 91.02           | 359.09      | 5,248.99            | 5,240.47   | 678.70     | 802,051.65          | 928,845.96         | 33.198   | -103.067  |  |
| 11,000.00                      | 91.02           | 359.09      | 5,247.21            | 5,340.44   | 677.12     | 802,151.62          | 928,844.37         | 33.199   | -103.067  |  |
| 11,011.65                      | 91.02           | 359.09      | 5,247.00            | 5,352.09   | 676.93     | 802,163.27          | 928,844.19         | 33.199   | -103.067  |  |
| <b>TD at 11011.65 MD (EOL)</b> |                 |             |                     |            |            |                     |                    |          |           |  |

Planning Report - Geographic

|                  |                                      |                                     |                                |
|------------------|--------------------------------------|-------------------------------------|--------------------------------|
| <b>Database:</b> | EDM                                  | <b>Local Co-ordinate Reference:</b> | Well Fring Federal #3H         |
| <b>Company:</b>  | Steward Energy II, LLC               | <b>TVD Reference:</b>               | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Project:</b>  | Lea County, NM (NAD 83) NM East Zone | <b>MD Reference:</b>                | GL 3796' + RKB 17' @ 3813.00ft |
| <b>Site:</b>     | Fring Federal Site                   | <b>North Reference:</b>             | Grid                           |
| <b>Well:</b>     | Fring Federal #3H                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Wellbore:</b> | Wellbore #1                          |                                     |                                |
| <b>Design:</b>   | BLM Plan                             |                                     |                                |

| Design Targets  |           |          |          |          |        |            |            |          |           |
|---|-----------|----------|----------|----------|--------|------------|------------|----------|-----------|
| Target Name   | Dip Angle | Dip Dir. | TVD      | +N/-S    | +E/-W  | Northing   | Easting    | Latitude | Longitude |
| - hit/miss target   | (°)       | (°)      | (ft)     | (ft)     | (ft)   | (usft)     | (usft)     |          |           |
| - Shape   |           |          |          |          |        |            |            |          |           |
| EOL Fring Fed #3H<br>- plan hits target center<br>- Point | 0.00      | 0.00     | 5,247.00 | 5,352.09 | 676.93 | 802,163.27 | 928,844.19 | 33.199   | -103.067  |
| MOL Fring Fed #3H<br>- plan hits target center<br>- Point | 0.00      | 0.00     | 5,292.00 | 2,826.25 | 716.89 | 799,637.44 | 928,884.15 | 33.192   | -103.067  |
| SOL Fring Fed #3H<br>- plan hits target center<br>- Point | 0.00      | 0.00     | 5,337.00 | 301.05   | 756.83 | 797,112.24 | 928,924.09 | 33.185   | -103.066  |

| Casing Points  |                |        |                 |               |  |
|----------------|----------------|--------|-----------------|---------------|--|
| Measured Depth | Vertical Depth | Name   | Casing Diameter | Hole Diameter |  |
| (ft)           | (ft)           |        | (in)            | (in)          |  |
| 2,459.90       | 2,400.00       | 9 5/8" | 9.625           | 12.250        |  |

| Formations     |                |              |           |     |               |
|----------------|----------------|--------------|-----------|-----|---------------|
| Measured Depth | Vertical Depth | Name         | Lithology | Dip | Dip Direction |
| (ft)           | (ft)           |              |           | (°) | (°)           |
| 2,230.31       | 2,182.00       | Rustler      |           |     |               |
| 2,350.37       | 2,296.00       | Salado       |           |     |               |
| 2,968.58       | 2,883.00       | Castile      |           |     |               |
| 3,090.75       | 2,999.00       | Tansill      |           |     |               |
| 3,181.32       | 3,085.00       | Yates        |           |     |               |
| 3,453.04       | 3,343.00       | Seven Rivers |           |     |               |
| 4,007.94       | 3,877.00       | Queen        |           |     |               |
| 4,397.84       | 4,264.00       | Grayburg     |           |     |               |
| 4,729.06       | 4,595.00       | San Andres   |           |     |               |
| 5,468.32       | 5,170.00       | PI Marker    |           |     |               |

| Plan Annotations |                |                   |        |  |  |
|------------------|----------------|-------------------|--------|--|--|
| Measured Depth   | Vertical Depth | Local Coordinates |        | Comment                                |  |
| (ft)             | (ft)           | +N/-S             | +E/-W  |  |  |
|                  |                | (ft)              | (ft)   |  |  |
| 300.00           | 300.00         | 0.00              | 0.00   | Start Build 1.25 at 300 MD             |  |
| 1,762.71         | 1,738.01       | -137.63           | 186.04 | Start 1856.99 hold at 1762.71 MD       |  |
| 3,619.70         | 3,501.24       | -484.11           | 654.39 | Start Drop -2.00 at 3619.70 MD         |  |
| 4,533.89         | 4,400.00       | -570.13           | 770.66 | Start 115.08 hold at 4533.89 MD        |  |
| 4,648.97         | 4,515.08       | -570.13           | 770.66 | Start Build 8.00 at 4648.97 MD         |  |
| 5,398.97         | 5,135.33       | -212.08           | 764.97 | Start 250.00 hold at 5398.97 MD        |  |
| 5,648.97         | 5,260.33       | 4.40              | 761.53 | Start DLS 10.00 TFO 0.01 at 5648.97 MD |  |
| 5,959.17         | 5,337.00       | 301.05            | 756.83 | Start 5052.47 hold at 5959.17 MD (SOL) |  |
| 8,485.09         | 5,292.00       | 2,826.25          | 716.89 | 8485.09 MD (MOL)                       |  |
| 11,011.65        | 5,247.00       | 5,352.09          | 676.93 | TD at 11011.65 MD (EOL)                |  |

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

|                              |                                    |
|------------------------------|------------------------------------|
| <b>OPERATOR'S NAME:</b>      | <b>STEWARD ENERGY II LLC</b>       |
| <b>LEASE NO.:</b>            | <b>NMLC064605A</b>                 |
| <b>WELL NAME &amp; NO.:</b>  | <b>FRING FEDERAL 3H</b>            |
| <b>SURFACE HOLE FOOTAGE:</b> | 190'/N & 2234'/W                   |
| <b>BOTTOM HOLE FOOTAGE:</b>  | 100'/N & 1815'/E                   |
| <b>LOCATION:</b>             | Section 23, T.13 S., R.38 E., NMPM |
| <b>COUNTY:</b>               | LEA County, New Mexico             |

COA

|                             |   |   |                                     |
|-----------------------------|---|---|-------------------------------------|
| <b>H2S</b>                  | <input type="radio"/> Yes                     | <input checked="" type="radio"/> No     |                                     |
| <b>Potash</b>               | <input checked="" type="radio"/> None         | <input type="radio"/> Secretary         | <input type="radio"/> R-111-P       |
| <b>Cave/Karst Potential</b> | <input checked="" type="radio"/> Low          | <input type="radio"/> Medium            | <input type="radio"/> High          |
| <b>Cave/Karst Potential</b> | <input type="radio"/> Critical                |   |                                     |
| <b>Variance</b>             | <input checked="" type="radio"/> None         | <input type="radio"/> Flex Hose         | <input type="radio"/> Other         |
| <b>Wellhead</b>             | <input checked="" type="radio"/> Conventional | <input type="radio"/> Multibowl         | <input type="radio"/> Both          |
| <b>Other</b>                | <input type="checkbox"/> 4 String Area        | <input type="checkbox"/> Capitan Reef   | <input type="checkbox"/> WIPP       |
| <b>Other</b>                | <input type="checkbox"/> Fluid Filled         | <input type="checkbox"/> Cement Squeeze | <input type="checkbox"/> Pilot Hole |
| <b>Special Requirements</b> | <input type="checkbox"/> Water Disposal       | <input type="checkbox"/> COM            | <input type="checkbox"/> Unit       |

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

### B. CASING

#### Casing Design:

1. The **9-5/8** inch surface casing shall be set at approximately **2,173 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **7 X 5 1/2** inch production casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

**C. PRESSURE CONTROL**

- 1.
  - a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

**GENERAL REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Eddy County  
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

Lea County  
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)  
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

#### B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic

pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
  - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to

Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

#### C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

#### D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**OTA12132021**

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## 1. INTRODUCTION

The following Steward Energy II (“Company”) Emergency Response Plan (ERP) is designed to fulfill the obligations outlined in the Texas Railroad Commission, Rule 36 §3.36 (c)(9), OSHA and other applicable local, state and federal agencies.

The key component of emergency preparedness and response is the development of an ERP, which is defined as a document developed to ensure quick access to critical information necessary to effectively respond to an emergency.

### 1.1. Purpose

- 1.1.1. The purpose of an ERP is to ensure a quick, effective and logical response to emergencies to protect the public from fatalities and irreversible health effects and minimize impacts to the environment.
- 1.1.2. The objective of the ERP is to enable Company to adhere to the following:
  - 1.1.2.1. Be well organized to ensure quick access to critical information;
  - 1.1.2.2. Coordinate activities among industry responders, emergency services, local authorities, governments and others who have a role in providing an effective response;
  - 1.1.2.3. Ensure communication with all parties involved in or potentially affected by the emergency;
  - 1.1.2.4. Assist personnel in determining and performing remedial actions;
  - 1.1.2.5. Clearly establish roles and responsibilities of all responders;
  - 1.1.2.6. Identify response organizations and command control structures
  - 1.1.2.7. Identify predetermined resources and required personnel, equipment and services; and
  - 1.1.2.8. Eliminate or minimize the effects of emergency incidents to increase public confidence in the ability of industry to handle emergencies.
- 1.1.3. This ERP compliments emergency response plans administered by local, state and federal government agencies and applicable government regulations.
- 1.1.4. Public and local government involvement in emergency preparedness and response must take place at various stages in the emergency preparedness and response must take place at various stages of resource development including:
  - 1.1.4.1. Developing site specific ERP for new wells, pipelines and facilities or major modifications to existing ones resulting in significant change to emergency planning or procedures;
  - 1.1.4.2. Prior to completion, servicing or testing operations that are not carried out consecutive to drilling operations;
  - 1.1.4.3. Once every two years for existing wells and facilities with approved site specific ERPs; and
  - 1.1.4.4. After finalization of sale of agreement and prior to the transfer from one licensee to another of wells, pipelines and facilities requiring specific ERPs.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## 1.2. Emergency Response Objectives

1.2.1. The objective will be met by focusing for the following areas:

- 1.2.1.1. Ensure immediate competent response to, and handling of an emergency occurrence;
- 1.2.1.2. Minimize danger to the public, employees, contractors and environment;
- 1.2.1.3. Establish and maintain effective communications with all parties in an emergency;
- 1.2.1.4. Make maximum use of the combined resources of Company, government agencies and other non-company services; and
- 1.2.1.5. Preserve relevant records and equipment for any subsequent inquiry into the cause and circumstances of the emergency.

## 1.3. Emergency Response Positive Consequences

1.3.1. The positive consequences of having a diligent response plan/protocol are as follows:

- 1.3.1.1. Safety of employees, contractors, visitors, customers and the public;
- 1.3.1.2. Continued security of licensee's wells and facilities;
- 1.3.1.3. An effective incident reporting system;
- 1.3.1.4. Minimizing damage to the environment; and
- 1.3.1.5. Proper development of oil and gas resources.

## 1.4. Plan Maintenance and Updates

- 1.4.1. Company will hold an internal exercise for each operating area and include the head office staff in at least one exercise per year. The exercise must include tabletop and field simulation involving all individuals identified in the plan.
- 1.4.2. Emergency response information will be readily available to all Company employees. All field operations employees are expected to be familiar with their area-specific emergency response information.

## 2. COMPANY EMERGENCY CONTACTS

- 2.1. The Company main office phone number is 214-297-0500
- 2.2. The emergency phone number is 1-214-297-0500, and it handles all 24-hour emergency calls; this number is noted on all facility signage in the field as per applicable regulations.
- 2.3. For Company contact information, refer to:
  - 2.3.1. Appendix 1 – Company Head Office address.
  - 2.3.2. Appendix 2 – Company Organizational Chart.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## 3. CURRENT COMPANY WELL LOCATIONS & FACILITIES

3.1. For Company well locations in Texas and facilities information, refer to:

3.1.1. Appendix 3 – Company Current Summary of Wells and Facilities.

3.1.2. Appendix 4 – Company Current Pipeline Details, if applicable.

3.2. In the event of a license transfer, Company will contact the appropriate agencies within 30 days of the transfer of the licenses.

3.3. Company will also provide notification to the appropriate local, state and federal agencies and the following information will be provided:

3.3.1. corporate structure change;

3.3.2. contact members;

3.3.3. internal communication changes

3.3.4. signing authority changes.

## 4. STATE EMERGENCY CONTACTS

### Texas Railroad Commission Field Centers Contact Information

Operators are required to follow the Railroad Commission's (RRC) disposal regulations administered by the agency's Technical Permitting Section-Underground Injection Control (UIC) Program. Underground Injection Control is a program that is federally delegated by the U.S. Environmental Protection Agency (EPA) to Texas, and it follows national guidelines under the federal Safe Drinking Water Act for surface and groundwater protection. EPA awarded the Railroad Commission "primary enforcement responsibility" over oil and gas injection and disposal wells on April 23, 1982.

4.1. This well is located in TRRC Region 8A

4.2. For TRRC contact information, refer to:

4.2.1. Appendix 5 – TRRC Field Contact Information

4.2.2. Emergency Authorities Contact List

4.2.3. Refer to Appendix 6 – Emergency Authorities Contact Information.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## 5. COMMUNICATION PLAN

- 5.1. Communication with Response Team, Support Services and Government  
Company will contact agencies and services required to assist with the initial response, which may include contacting the local authorities at a level 1 emergency, if required. At a Level 2 or Level 3 emergency, Company will contact additional agencies as required per specific response plans
- 5.1.1. Media Affairs
  - 5.1.1.1. Media release must be generated and released as significant developments occur during alerts and Level 1-3 emergencies. Company will coordinate media releases with the TRRC, prior to the media release, to ensure consistency and information accuracy. This information will be communicated through written news releases, news conferences and any other effective means Company chooses to implement.
  - 5.1.1.2. Company will keep all notified and evacuated persons and the media informed of the status of an emergency.
- 5.1.2. Downgrading Emergency Levels
  - 5.1.2.1. The decision to downgrade a level 2 or 3 Emergency will be decided upon jointly by Company personnel, the TRRC or other respective state and federal government agencies, and local disaster services authorities.
  - 5.1.2.2. Company will keep all notified and evacuated persons and the media informed of the status of an emergency.
  - 5.1.2.3. Emergency 2 or 3 incidents are defined as:
    - 5.1.2.3.1. Any sized uncontained refined or unrefined petroleum spill or leak;
    - 5.1.2.3.2. Fire or explosion;
    - 5.1.2.3.3. Blowout; and
    - 5.1.2.3.4. Serious injury or loss of life.
  - 5.1.2.4. Minor incidents typically involve incidents where no danger exists outside of the company or contractor property and where the situation can be handled entirely by Company personnel.
  - 5.1.2.5. Major Incidents usually involve situations where safe operating control has been lost resulting in or potentially resulting in fatalities; serious injury to Company personnel, contractors or general public; serious property damage; serious impact to the environment; or major impact to surrounding communities.
  - 5.1.2.6. Appropriate emergency procedures and action must be initiated immediately after discovery that an emergency exists.
  - 5.1.2.7. Any potential or existing emergency events should be directed immediately to the Company emergency main contact: William McMann.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 5.1.2.8. In the event the Company emergency main contact is off duty or unavailable, the individual who has noticed the emergency must notify the next available position of authority on location as noted in Appendix 1 - Company Contacts.
- 5.1.2.9. Within 30 days of the end of a Level 2 or 3 emergency incidents, Company must file a report with the TRRC and/other appropriate local, state and federal agencies.
- 5.1.2.10. After a review of the incident, the agency or agencies will have a closing review meeting with the parties' privy to the incident as a learning and debriefing exercise.
  - 5.1.2.10.1. Such things as the following will be discussed:
    - 5.1.2.10.1.1. incident cause;
    - 5.1.2.10.1.2. a review of the emergency actions taken at the time of the incident; and
    - 5.1.2.10.1.3. areas of improvement regarding the emergency incident, and if the responses, in comparison to the response plan, was fulfilled.

## 5.1.3. General Public News Release Information

- 5.1.3.1. The following information must be released to the general public as soon as possible during an incident:
  - 5.1.3.1.1. Type and status of the incident;
  - 5.1.3.1.2. Location and proximity of the incident to people in the vicinity;
  - 5.1.3.1.3. Areas impacted by the incident;
  - 5.1.3.1.4. Effects the incident may have on people in the vicinity;
- 5.1.4. Actions the general public should take if they experience adverse effects;
- 5.1.5. Description of the products involved and their short and long term effects;
- 5.1.6. Public protection measures to follow evacuation direction and any other emergency response measures to consider;
- 5.1.7. Actions being taken to correct the situation and time period anticipated; and
- 5.1.8. Contacts for additional information.
  - 5.1.8.1. Appendix 7 – Information Disseminated to the Public at the Onset and During an Incident, for a complete list of the public news release information.
  - 5.1.8.2. Appendix 8 – Incident Response Classification.

## 5.2. Initial Company Telephone Caller of the Alert/Emergency

The company telephone caller upon the declaration of a level 2 or 3 Emergency will assist in contacting occupants in the affected area.

### 5.2.1. Level 1 Emergency

- 5.2.1.1. Upon notification from the On-Scene Commander notify sensitive residents of a Level 1 Emergency within the affected area.
- 5.2.1.2. Upon completion of the notifications, update the On-Scene Commander and Evacuation Coordinator with the following information:

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 5.2.1.2.1. Persons who wish to be evacuated;
- 5.2.1.2.2. Persons who require assistance; and
- 5.2.1.2.3. Person who cannot be contacted.
- 5.2.2. Level 2 and 3 Emergency
- 5.2.2.1. Upon notification from the On-Scene Commander, notify all residents and industrial operators of a Level 2 or 3 Emergency within the defined affected area. Request emergency response assistance, if required, by on site personnel.
- 5.2.2.2. Upon completion of the notifications, update the On-Scene Commander and Evacuation Coordinator with the following information:
  - 5.2.2.2.1. Persons who wish to be evacuated;
  - 5.2.2.2.2. Persons who require assistance; and
  - 5.2.2.2.3. Person(s) who cannot be contacted.
  - 5.2.2.2.4. Only after proper downgrading of the emergency (refer to Section 11) inform residents and industry of the reduced status.

## 5.3. Inquiries

- 5.3.1. Refer to Appendix 1 for the Public Affairs/Media Liaison contact for Company, who is to interact with the TRRC and other applicable government agencies.
- 5.3.2. Calls or visits received by Company from the public, media and government must be directed to William McMann.
- 5.3.3. At the time of public affairs inquiry, the individual taking the call should take a descriptive message, including name, number and subject material and inform William McMann of the call.

## 6. ASSESSMENT MATRIX FOR CLASSIFYING INCIDENTS

- 6.1. Refer to Appendix 9 – Assessment Matrix for Classifying Incidents.

## 7. EMERGENCY RESPONSE PROCEDURES

Company Emergency Response Policy is to be proactive in identifying and addressing any situations that may cause an alert or an emergency event. Any Company staff noting an alert or emergency on a Company location must report it immediately to the Site Emergency Contact or the alternative personnel listed in Section 8.2.

### 7.1. Level 1 Emergency

- 7.1.1. This Level emergency is an incident that can be entirely handled by Company personnel on-site. An immediate control of the hazard becomes progressively more complex because of deteriorating conditions.
- 7.1.2. The following criteria can be used to classify a Level 1 emergency:
  - 7.1.2.1. There is no immediate danger to public or environment as no H2S has been released;
  - 7.1.2.2. Release of Hazardous substances is confined to the lease or company property.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 7.1.2.3. Control and relief systems are functioning correctly;
- 7.1.2.4. Creates little to no media interest;
- 7.1.2.5. Immediate control of the hazard source is possible, but is becoming progressively more complex because of the deteriorating conditions. A Level 1 Emergency has the potential to escalate into a Level 2 Emergency; and
- 7.1.2.6. No immediate threat to workers.
- 7.1.3. Examples of a Level 1 Emergency include the following:
  - 7.1.3.1. Equipment failure during routine operations with no emissions of H<sub>2</sub>S;
  - 7.1.3.2. Any fire around an Company worksite (i.e. grassfire);
  - 7.1.3.3. Odor complaint from operators/ locals;
  - 7.1.3.4. A small gas release (no emissions of H<sub>2</sub>S) which can be contained by manual valve closure for flaring; and
  - 7.1.3.5. Injury to a worker without medical aid to maintain life.
  
- 7.2. Level 2 Emergency
  - 7.2.1. This Level Emergency is an incident where there is no immediate danger outside of Company property but potential danger exists that government agencies must be notified of the situation and updated if the potential escalates. It is an imminent and/or intermittent control of the hazard is possible.
  - 7.2.2. The following criteria can be used to classify Level 2 emergencies:
    - 7.2.2.1. There is a potential for risk to the public or environment due to the fact the damage could extend off lease of the site;
    - 7.2.2.2. Containment of Hazardous substance is obtainable. Containment and control mechanisms are in place and functioning properly;
    - 7.2.2.3. May create media interest;
    - 7.2.2.4. The risk of the event could escalate; and
    - 7.2.2.5. May require the involvement of government agencies.
  - 7.2.3. Examples of level 2 Emergency include, but are not restricted, to the following:
    - 7.2.3.1. Failure of control system with emission of H<sub>2</sub>S to the atmosphere;
    - 7.2.3.2. Liquid release (i.e. spill) near a body of water;
    - 7.2.3.3. On site personnel are in the activity of controlling a release (e.g. well blow out);
    - 7.2.3.4. Explosion of fire which can be brought under control; and
    - 7.2.3.5. Injury to a worker with medical attention required immediately in order to maintain life.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 7.3. Level 3 Emergency
- 7.3.1. This level Emergency is an incident where safe control has been lost, thereby causing or having the potential to cause severe injuries or fatalities among employees, contractors or the general public; serious harm to the environment; or serious damage to surrounding communities. The imminent control of the hazard is not possible. This includes situations where safe control has been restored but the potential to cause severe injuries or fatalities still exists.
- 7.3.2. The following criteria can be used to classify Level 3 emergencies:
- 7.3.2.1. There exists an immediate danger to the environment or public;
- 7.3.2.2. A loss of control regarding the situation. Key equipment is not properly functioning (e.g. blowout prevention system);
- 7.3.2.3. Media attention is created by it;
- 7.3.2.4. Uncontrolled release of hazardous substances with serious environment impact; and
- 7.3.2.5. Extensive involvement of external emergency services where, federal, provincial or local agencies is required.
- 7.3.3. Examples of Level 3 Emergencies include, but are not limited to, the following:
- 7.3.3.1. Uncontrolled release of H<sub>2</sub>S or SO<sub>2</sub> gas;
- 7.3.3.2. H<sub>2</sub>S concentrations in the emergency planning zone (EPZ) reach ignition criteria;
- 7.3.3.3. Uncontrolled flow of flammable gas;
- 7.3.3.4. Report of bomb or terrorist attack;
- 7.3.3.5. An uncontrolled fire on the plant site or a facility; and
- 7.3.3.6. Death of a worker on site.

## 8. INCIDENT MANAGEMENT SYSTEM

- 8.1. Reception Center
- 8.1.1. The Local Health Safety and Environment (HSE) Coordinator will ensure the Reception Center is a safe distance from the emergency site and that the evacuation is completed properly.
- 8.1.2. All evacuees will be contacted by a Company visit or by phone and asked to travel to the designated Reception Center to be registered. Company will provide assistance to public who cannot travel to the Reception Center.
- 8.1.3. Temporary accommodations will be supplied, if required.
- 8.1.4. The Reception Center information is detailed in the field specific information in Appendix 3.
- 8.2. Responsibilities of Personnel
- 8.2.1. Company employees and representatives are responsible for the implementation of the ERP. The responsibility to respond to the emergency shall be assumed by the closest and available Company employee or representative on-site. The first responder must assess the situation before entering the site and then consult with his supervisor and the ERP must be activated as warranted.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.2.2. Two groups must be formed to respond to the incident, which are the Field Response Team and the Corporate Response Team.
- 8.2.2.1. For any Emergency follow these simple rules:
- 8.2.2.2. Stop, think and remain calm;
- 8.2.2.3. Ensure the safety of all people in the immediate vicinity;
- 8.2.2.4. Identify the hazard and categorize the level of Emergency response;
- 8.2.2.5. Report details to your immediate supervisor;
- 8.2.2.6. Assume your role within the ERP response;
- 8.2.2.7. Complete your duties with the ERP response;
- 8.2.2.8. Direct any media questions to the appropriate personnel; and
- 8.2.2.9. Log all details of the incident for later reference.
- 8.2.3. The following roles will be used to co-ordinate Company emergency response activities:
- 8.2.3.1. The On-Site Command Post (OSCP) will be established by the On-Scene Incident Commander in his vehicle or at a mobile office on or next to the emergency incident. The purpose of the On-Site Command Post is to manage emergency response actions and safety of the personnel on site. The On-Site Command Post, government agencies, the off-site command center and senior Company staff will maintain communications. The On-Scene Commander and any individuals necessary for support activities will man the On-Site Command Post.
- 8.2.3.2. The Off-Site Command Center called a Regional Emergency Operations Center (REOC) will be established by the Off-Site Commander at the nearest field office outside the Emergency Planning Area equipped with communication equipment. The Off-Site Commander will direct any field response activities not directly related to on- site procedures including evacuation, communications and mobile air monitoring. This position will ensure proper equipment and trained staff are utilized.
- 8.2.4. The REOC can be combined with the Emergency Operations Center (EOC) for effectiveness.
- 8.2.5. All response personnel will report to the Off-Site REOC prior to entering the affected area.
- 8.2.6. The Command Centre maybe established by a senior managerial staff member of Company for all Level 2 or 3 defined emergencies.
- 8.2.7. Company should assign a company representative to interact with the appropriate TRRC field office.
- 8.2.8. The following responsibilities are acknowledged by Company as key roles regarding emergency response and will be filled by the appropriate staff and alternatives will be assigned.
- 8.2.9. Refer to Appendix 1 – Company Emergency Contacts for phone numbers and email addresses for the personnel referenced below.
- 8.2.10. Refer to Appendix 10 - Company Key Roles and Responsibilities.
- 8.3. On-Scene Commander Duties
  - 8.3.1. Level 1 Emergency
    - 8.3.1.1. The On-Scene Commander along with the first responder, Off-Site Commander and Corporate Emergency shall determine the severity of the situation along with the size and location of the affected area and must:

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.3.1.1.1. Immediately attend to protecting life and ensuring the safety of all personnel;
  - 8.3.1.1.2. Notify the Off-Site Commander of an Alert or Level 1 Emergency;
  - 8.3.1.1.3. Notify telephone caller of Level 1 Emergency;
  - 8.3.1.1.4. Notify Evacuation Coordinator of Level 1 Emergency.
  - 8.3.1.1.5. Notify sensitive individuals of a Level 1 Emergency;
  - 8.3.1.1.6. Notify the Rover of Level 1 Emergency;
  - 8.3.1.1.7. Place Ignition team on standby;
  - 8.3.1.1.8. Notify Air monitoring personnel of Level 1 Emergency;
  - 8.3.1.1.9. Confirm that roadblock crews are equipped with such things as:
    - 8.3.1.1.9.1. SCBA (self-contained breathing apparatus);
    - 8.3.1.1.9.2. Hand held H<sub>2</sub>S /SO<sub>2</sub> detector;
    - 8.3.1.1.9.3. Stop traffic;
    - 8.3.1.1.9.4. Area map;
    - 8.3.1.1.9.5. Communication radio with extra batteries;
    - 8.3.1.1.9.6. Flashlight with extra batteries;
    - 8.3.1.1.9.7. Ten H<sub>2</sub>S/SO<sub>2</sub> detection record forms.
  
  - 8.3.2. Level 2 Emergency
    - 8.3.2.1. Continue with Level 1 activities, and must:
    - 8.3.2.2. Set up the On-Site Command Post (OSCP) at the closest field office or in the vehicle;
    - 8.3.2.3. Supervise emergency response activities from the On-Site Command Post (OSCP);
    - 8.3.2.4. Notify the Off-Site Commander of a Level 2 Emergency. Initiate evacuation of the area or sheltering;
    - 8.3.2.5. Notify Evacuation Coordinator of Level 2 Emergencies. Initiate evacuation of the area or sheltering;
    - 8.3.2.6. Request the police have roadblocks crews be dispatched to isolate the facility site or affected area;
    - 8.3.2.7. Set up roadblocks at designated locations. Establish additional roadblocks, as necessary;
    - 8.3.2.8. Dispatch the Rover; and
    - 8.3.2.9. Direct the ignition of a gas release if directed from senior company response personnel.
  
  - 8.3.3. Level 3 Emergency
    - 8.3.3.1. Continue Level 1 and 2 activities, and must:
      - 8.3.3.1.1. Confirm evacuation of all non-essential personnel from the affected area;
      - 8.3.3.1.2. Expand air monitoring activities, as needed;
      - 8.3.3.1.3. Assist government officials or police agencies during the investigation of any fatalities or serious injuries;
      - 8.3.3.1.4. Upon downgrading of the emergency from the Corporate Emergency Response Commander, advise the first responders and other emergency personnel;
      - 8.3.3.1.5. Debrief on-site personnel;
      - 8.3.3.1.6. Review emergency response capabilities and document areas of improvement; and
      - 8.3.3.1.7. Attend an emergency debriefing meeting to discuss the following:
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# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.3.3.1.8. The cause of the incident;
- 8.3.3.1.9. Details of the emergency response actions;
- 8.3.3.1.10. Response action efficiency; and
- 8.3.3.1.11. Response personnel and support services were able to fulfill their emergency responsibilities.
  
- 8.4. Off-Site Commander Duties
  - 8.4.1. Level 1 Emergency
    - 8.4.1.1. Communicate with the On-Scene Commander and assist with the development and implementation of specific response actions, and must:
      - 8.4.1.1.1. Notify the Corporate Emergency Response Commander (not for Alert type Emergencies);
      - 8.4.1.1.2. Notify TRRC of Level 1 Emergency.
      - 8.4.1.1.3. Notify the government agencies if the public is contacted;
      - 8.4.1.1.4. Prepare mobile air monitoring plan in conjunction with the designated Air Monitoring person; and
    - 8.4.1.2. Notify support services of Level 1 Emergency and place response units on stand-by including:
      - 8.4.1.2.1. Ambulance;
      - 8.4.1.2.2. Firefighting crews;
      - 8.4.1.2.3. Local spill response units;
      - 8.4.1.2.4. Mobile air monitoring services; and
      - 8.4.1.2.5. Well blow out crews.
  - 8.4.2. Level 2 Emergency
    - 8.4.2.1. Continue Level 1 activities, and must:
      - 8.4.2.1.1. Set up the Off-Site Command Center (OSCC) at the nearest field office outside the established emergency planning area;
      - 8.4.2.1.2. Supervise emergency response activities from the Off-Site Command Center (OSCC);
      - 8.4.2.1.3. Notify the Corporate Emergency Response Commander of a Level 2 Emergency;
      - 8.4.2.1.4. Notify TRRC of Level 2 Emergency;
      - 8.4.2.1.5. Notify local government representatives:
        - 8.4.2.1.6. Municipal District/ County/ Special Area;
        - 8.4.2.1.7. Regional District; and
        - 8.4.2.1.8. Rural Municipality.
      - 8.4.2.2. Notify non-local government representatives:
        - 8.4.2.2.1. Federal Emergency Management Agency (FEMA);
        - 8.4.2.2.2. Occupational Safety and Health Administration (OSHA)
        - 8.4.2.2.3. Texas Environmental Quality Control (TCEQ); and
        - 8.4.2.2.4. Local Board of Health.
      - 8.4.2.2.5. Dispatch support services including (as required):
        - 8.4.2.2.6. Ambulance;
        - 8.4.2.2.7. Firefighting crews;
        - 8.4.2.2.8. Local spill response units;
        - 8.4.2.2.9. Mobile air monitoring services; and

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.4.2.2.10. Well blowout crews.
  
- 8.4.3. Level 3 Emergency
  - 8.4.3.1. Continue Level 1 and 2 activities, and must:
    - 8.4.3.1.1. Notify the Corporate Emergency Response Commander of a Level 3 Emergency;
    - 8.4.3.1.2. Notify TRRC of Level 3 Emergency;
    - 8.4.3.1.3. Re-contact local government representatives;
    - 8.4.3.1.4. Upon downgrading the emergency from the Corporate Emergency Response Commander, advise the first responders, the On-Site Commander and other emergency personnel; and
    - 8.4.3.1.5. Attend and participate in the debriefing exercise.
  
- 8.5. Emergency Planning - Rover Duties
  - 8.5.1. Level 1 Emergency
    - 8.5.1.1. The Emergency Planning – Rover shall review maps of the affected area, and must:
      - 8.5.1.1.1. Review maps of the affected area;
      - 8.5.1.1.2. Contact helicopter companies and put on stand-by if required;
      - 8.5.1.1.3. Gather and check emergency response equipment including:
        - 8.5.1.1.4. SCBA (self-contained breathing apparatus);
        - 8.5.1.1.5. 4X4 vehicle;
        - 8.5.1.1.6. Flashlight with extra batteries;
        - 8.5.1.1.7. Communication radio with extra batteries or cellphones
        - 8.5.1.1.8. Hand held H2S /SO2 detectors;
  
  - 8.5.2. Level 2 Emergency
    - 8.5.2.1. Continue Level 1 activities, and must:
      - 8.5.2.1.1. Initiate continuous tours of the affected area;
      - 8.5.2.1.2. Confirm roadblocks are operational and relay this information to the On-Scene Commander;
      - 8.5.2.1.3. Maintain radio contact with the On-Site Command Post (OSCP), the Off-Site Command Center (OSCC) and the Evacuation Center;
      - 8.5.2.1.4. Evacuate transients in the affected area; and
      - 8.5.2.1.5. Instruct evacuees of evacuation procedures, if required.
  
  - 8.5.3. Level 3 Emergency
    - 8.5.3.1. Continue Level 1 & 2 activities, and must:
      - 8.5.3.1.1. Confirm evacuation of the affected area;
      - 8.5.3.1.2. After downgrading the emergency and on instruction of the On-Site Commander, notify transients in the affected area of the end of the emergency;
      - 8.5.3.1.3. Clean up and recharge equipment batteries;
      - 8.5.3.1.4. Attend debriefing, if required; and
      - 8.5.3.1.5. Participate in the review of the emergency response regarding creating improvements for future incidents.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## 8.6. HSE Evacuation Coordinator Duties

The Evacuation Coordinator should be a member of the Health and Safety Group within the Corporation, or at least, coordinated from the Corporation.

### 8.6.1. Level 1 Emergency

8.6.1.1. Upon notification from the On-Scene Commander, carefully review and document the following information:

8.6.1.1.1. Categorize the Level of Emergency;

8.6.1.1.2. Location of the incident and the affected area size;

8.6.1.1.3. Weather conditions (wind speed and direction);

8.6.1.1.4. Area Map (road systems and resident locations);

8.6.1.1.5. Names and map numbers of the affected area occupants and contact information; and

8.6.1.1.6. Specific message to be relayed to occupants advising them of the emergency status as the appropriate prepared statement

### 8.6.2. Level 2 & 3 Emergency

8.6.2.1. Continue Level 1 activities, and the following:

8.6.2.1.1. When directed to commence evacuation proceedings:

8.6.2.1.1.1. Contact the appropriate Municipal District and request that the evacuation center be opened. Dispatch an available field operator to represent Company at the Evacuation Center;

8.6.2.1.1.2. Maintain communication with the On-Scene Commander and Off-Site Commander;

8.6.2.1.1.3. Co-ordinate Field Operators in the event evacuation and roadblock procedures are implemented;

8.6.2.1.1.4. Ensure that a record is maintained of all persons who arrive at the evacuation center and acquire a list of those not accounted for using the Evacuation Log.

8.6.2.1.1.5. Arrange temporary accommodations for evacuees and address any concerns they may have regarding residence security and feeding of pets and livestock;

8.6.2.1.1.6. Provide evacuees with a copy of a Daily Expense form to claim for incurred expenses. The Head Office staff will handle re-imbusement, after the incident is controlled.

8.6.2.1.1.7. Obtain and record a telephone number from all evacuees for post emergency follow up.

8.6.2.2. Upon completion of the designated contacts, relay the following information to the On-Scene Commander and Off-Site Commander:

8.6.2.2.1. Persons who wish to evacuate;

8.6.2.2.2. Persons who require assistance; and

8.6.2.2.3. Persons who cannot be contacted

8.6.2.2.4. Ensure all resident locations are visited to confirm evacuation. Dispatch vehicles to locations, as required.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.7. Air Monitoring Personnel Duties  
Similar to the evacuation efforts, the duties of coordinating the air monitoring efforts should be handled by personnel within the HSE Group of the Corporation
- 8.7.1. Level 1 Emergency
  - 8.7.1.1. The Air Monitoring Personnel shall obtain required information and equipment (maps, report forms, communications, safety, monitoring and breathing apparatus), and must:
    - 8.7.1.1.1. Monitor nearest downwind public location;
    - 8.7.1.1.2. Prepare mobile monitoring plan in conjunction with the Corporate Emergency Response Commander; and
    - 8.7.1.1.3. Record and report all readings at established intervals.
  - 8.7.2. Level 2 and 3 Emergency
    - 8.7.2.1. Continue with Level 1 activities, and the following:
      - 8.7.2.1.1. Attempt to locate plume with continuous mobile monitor;
      - 8.7.2.1.2. Advise On-Scene Commander of affected area boundary changes;
      - 8.7.2.1.3. Document all activities;
      - 8.7.2.1.4. Once the incident considered secure by the On-Scene Commander return all monitoring equipment to its designated location. Ensure all batteries are charged prior to storage;
      - 8.7.2.1.5. Attend emergency response debriefing; and
      - 8.7.2.1.6. Ensure all the air monitoring information and documents are organized and file accordingly.
- 8.8. Roadblock Personnel Duties
  - 8.8.1. Level 1 Emergency
    - 8.8.1.1. Roadblock Personnel shall obtain required information and equipment (maps, report forms, communications, safety, monitoring and breathing apparatus), and the following:
      - 8.8.1.2. Secure the On-Site Command Post and incident site;
      - 8.8.1.3. Monitor for H2S/SO2 at roadblocks and reposition, as required; and
      - 8.8.1.4. Record incoming and outgoing personnel and equipment.
    - 8.8.2. Level 2 Emergency
      - 8.8.2.1. Continue the Level 1 activities, and the following:
        - 8.8.2.2. Establish and maintain roadblocks at required sites to secure the affected area; and
        - 8.8.2.3. Monitor for H2S/SO2 at roadblocks and reposition, as required.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.8.3. Level 3 Emergency
  - 8.8.3.1. Continue the Level 2 activities, and the following:
  - 8.8.3.2. Record incoming and outgoing personnel and equipment;
  - 8.8.3.3. Once the incident is complete remove and return all roadblocks upon instruction from the On-Scene Commander;
  - 8.8.3.4. Attend the emergency debriefing; and
  - 8.8.3.5. Ensure roadblock information is properly organized and file for retention purposes.
  
- 8.9. Corporate Response Team Duties
  - 8.9.1. The Corporate Response Team is responsible for:
    - 8.9.1.1. Coordinating and managing the company's emergency response to the incidents via the direction of the Corporate Emergency Response Commander. The team will act as the main liaison between Calgary and the field personnel.
    - 8.9.1.2. The Corporate Commander will maintain communication with the Corporate Emergency Response Commander in order to update him on field levels and emergency levels;
    - 8.9.1.3. Provide direction and support to the Corporate Emergency Response Commander;
    - 8.9.1.4. Monitor and approve all public and media communications. Coordinate the media releases with the Media consultant and the TRRC prior to releasing it;
    - 8.9.1.5. Designate a senior Company representative to the lead government Emergency Operations Center(s);
    - 8.9.1.6. Liaise with government and regulatory agencies and stakeholders;
    - 8.9.1.7. Notify senior corporate offices, legal counsel and partners to ensure internal and external approval is received before resuming operations; and
    - 8.9.1.8. In conjunction with the local authorities or DPS, direct notification of next of kin, if required.
    - 8.9.1.9. The Corporate Emergency Response Commander will coordinate response issues and supports the Field Response team at the Regional Emergency Operations Center, along with the following:
    - 8.9.1.10. Provide direction and support to the Off-Site Emergency Response Commander, verify that the appropriate response and control procedures are being implemented to ensure on-site personnel and public safety;
    - 8.9.1.11. Mobilize personnel to the EOC or REOC;
    - 8.9.1.12. Assist the Off-Site Emergency Response Commander with the government agency notification, if required;
    - 8.9.1.13. TRRC Field Office;
    - 8.9.1.14. OSHA
    - 8.9.1.15. Department of Public Safety (DPS) State Troopers and local police authorities; and
    - 8.9.1.16. FEMA
    - 8.9.1.17. If warranted, coordinate telephone personnel, designate senior personnel to assume role of the telephone coordinator and other available personnel to act as callers. The caller will provide the following information:

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.9.1.18. Level of Emergency (1,2,3);
  - 8.9.1.19. Area and occupants affected; and
  - 8.9.1.20. Telephone number to relay back information.
  - 8.9.1.21. Upon completion of the telephone contacts relay the following information to the Off- Site Emergency Response Commander:
    - 8.9.1.22. Persons who wish to evacuate/shelter;
    - 8.9.1.23. Those who require assistance; and those who cannot be contacted.
  - 8.9.1.24. Alert the Corporate Commander, communication details of the emergency situation and establish the EOC and place Media and Safety Consultants on stand-by;
  - 8.9.1.25. Periodically direct the telephone team to update the residents using the appropriate message;
  - 8.9.1.26. Provide support to the Off-Site Emergency Response Commander as resumption of normal operating procedures occurs verifying the clearance has been received from the appropriate government agencies;
  - 8.9.1.27. Continue to assess the emergency situation verifying appropriate procedures are being implemented and mobilized additional personnel, consultants and equipment, as required;
  - 8.9.1.28. Document all activities as appropriates in logbook.
  - 8.9.1.29. All response personnel will report to the Off-Site REOC prior to entering the affected area.
  - 8.9.1.30. The Command Centre maybe established by a senior managerial staff member of Company for all Level 2 or 3 defined emergencies.
  
  - 8.9.2. Alert/ Level 1 Emergency
    - 8.9.2.1. The Corporate Response Team shall review the incident with the Off-Site Commander. Request a copy of the incident report, and the following:
      - 8.9.2.2. Verify with the Off-Site Commander that the appropriate response and control procedures are being implemented to ensure the safety of on-site personnel and the public;
      - 8.9.2.3. Review all government notifications with the Off-site Commander; and
      - 8.9.2.4. Oversee field response activities and verify the ongoing emergency status. Provide direction and support when required or requested.
  
  - 8.9.3. Level 2 Emergency
    - 8.9.3.1. Continue the Level 1 Emergency duties, and the following:
      - 8.9.3.1.1. Fully activate the Corporate Emergency Response Plan;
      - 8.9.3.1.2. Set up the Command Center at the Frisco office. Install additional phone lines and/or computer terminals as the Center, if required;
      - 8.9.3.1.3. Inform and review the incident with the receptionist to ensure this individual is certain of where all incoming calls must be directed for follow up. Inform the receptionist no comments should be given to any callers regarding status of the incident;
      - 8.9.3.1.4. Contact the President and assist the president with media relations. Contact the TRRC and request assistance from the respective government in preparation of a media release, if required;
      - 8.9.3.1.5. Contact the appropriate engineer for the area where the incident is occurring and have them locate to the Command Center;
      - 8.9.3.1.6. Contact senior corporate officers and advise them of the situation; and
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# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.9.3.1.7. Notify Legal counsel.
  
- 8.9.4. Level 3 Emergency
  - 8.9.4.1. Continue with the Level 2 Emergency duties, and the following:
    - 8.9.4.1.1. Contact upper management and advise them of the situation;
    - 8.9.4.1.2. Maintain communications with the government emergency operations centers, if established;
    - 8.9.4.1.3. Send a designated company employee to the government Consequence Management Operations Center (COMOC), if established;
    - 8.9.4.1.4. Co-ordinate Next-of-Kin notification of a fatality, in person with the designated police or department of public safety representative
    - 8.9.4.1.5. Once the incident is considered complete, downgrade the emergency as noted in Section 5.1.2;
    - 8.9.4.1.6. Debrief local emergency response personnel;
    - 8.9.4.1.7. Review emergency response and document areas of improvement; and
    - 8.9.4.1.8. Ensure all emergency response information is documented and file accordingly for retention for easy access, if needed, at a later date.
  
- 8.10. Corporate Spokesperson Duties
  - 8.10.1. In the event of an emergency, the President will prepare an information release to identify the emergency situation and appropriate response to be taken by Company. Each news release will be focused on obtaining information as per the Information Dissemination noted in Appendix 7 – Information Disseminated to the Public at the Onset and During an Incident. As new additional information is available the President will disclose the information in a timely manner to the public, press and other pertinent audiences.
  
- 8.11. Receptionist Emergency Duties
  - 8.11.1. In the event of an emergency, the receptionist most likely will be the first point of contact at the Frisco and field offices. The receptionist should follow these instructions in an emergency situation:
    - 8.11.1.1. Document all incoming phone calls with name of caller, time of call, location of caller and the details of their conversation;
    - 8.11.1.2. Direct all calls to the Corporate Emergency Response Commander or the Off-Site Commander;
    - 8.11.1.3. Immediately report any problems to the Corporate Emergency Response Commander or the Off-Site Commander; and
    - 8.11.1.4. Under no circumstances should any information be given out regarding the incident unless it is an authorized statement from the President or Corporate Emergency Response Commander.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 8.12. Return of Evacuees
- 8.12.1. The Evacuation Coordinator shall notify all persons previously requested to evacuate that an emergency conditions no longer exists and all persons may return.
- 8.12.2. Company shall provide transportation and assistance where required and instructions to residence who have expense claim re-imbusement questions.

## 9. SITE SPECIFIC INCIDENT RESPONSES

- 9.1. Minor Spill
  - 9.1.1. The Operator must conduct the following:
    - 9.1.1.1. assess the spill situation to determine the source and the degree of hazard potential (i.e. vapor release, chemical reaction, corrosiveness, flammability);
    - 9.1.1.2. shut in the source of the spill, if possible;
    - 9.1.1.3. determine the flow rate of the gas release or volume of substance spilled; and
    - 9.1.1.4. contact and inform the On-Site Emergency Commander and provide the incident details.
  - 9.1.1.5. The On-Scene Commander must conduct the following:
    - 9.1.1.6. take appropriate action in the event of an injury or fatality by assessing the situation, applying appropriate recourse and conducting the proper emergency agents;
    - 9.1.1.7. confirm the spill source, spill material and the volume of the spill;
    - 9.1.1.8. if required, organize response team and contain LVP (not HVP liquid spills) liquid spill by using trenches, bell holes, straw bales, booms, blocking culvert openings and implement the proper clean up with absorbent material and vacuum truck equipment; and
    - 9.1.1.9. ensure spill recovery efforts are complete.
  - 9.1.2. The HSE Coordinator must conduct the following:
    - 9.1.2.1. complete the Incident Report and contact Company management, if necessary, regarding report details;
    - 9.1.2.2. contact authorities immediately (within 12 hours); refer to Section 4 – Provincial Emergency Contacts;
    - 9.1.2.3. don personal protective equipment to investigate the spill; and
    - 9.1.2.4. ensure spill is contained properly.
- 9.2. Major Spill
  - 9.2.1. The operator must conduct the following:
    - 9.2.1.1. take appropriate action in the event of an injury or fatality; refer to Section 9.4 - Injury Response;
    - 9.2.1.2. shut in the source and any operating equipment or processes that maybe affecting the spill release issue; for HVP liquid spills attempt to dissipate the liquid and isolate the area and DO NOT attempt to contain the HVP liquid spills; and
    - 9.2.1.3. contact the On-Scene Commander person; refer to Appendix 10 – Key Roles and Responsibilities.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 9.2.1.4. The On-Scene Commander must conduct the following:
- 9.2.1.5. confirm the identification and volume of the spill and the containment of the spill. The spill should be contained by using trenches, bell holes, straw bales, booms, blocking culvert openings and absorbent material;
- 9.2.1.6. proceed with the Crisis Communication Schedule (refer to Section 10 – Crisis Communication Schedule);
- 9.2.1.7. contact Authorities (refer to Section 4 – Local, State and Federal Emergency Contacts); and
- 9.2.1.8. organize the response team for cleanup.
- 9.2.2. The HSE Coordinator must conduct the following:
  - 9.2.2.1. continue the Communication Schedule (refer to Section 10 – Crisis Communication Schedule)
  - 9.2.2.2. notify residents of crisis, if applicable;
  - 9.2.2.3. complete the Incident Report and Spill Report and contact management if necessary;
  - 9.2.2.4. put on the necessary personal protective equipment;
  - 9.2.2.5. confirm containment of the spill or leak with the appropriate equipment; and
  - 9.2.2.6. monitor recovery of the spill being cleaned up.

- 9.3. Fire Response  
For any potential of fire or explosion, ensure that IRP 18: Fire and Explosion Hazard Management recommendations are observed.

- 9.3.1. Minor Fire
  - 9.3.1.1. The operator should:
    - 9.3.1.1.1. shut down equipment in location of fire, if possible;
    - 9.3.1.1.2. attempt to extinguish fire with available extinguishers;
    - 9.3.1.1.3. if needed, call for help from available personnel to help extinguish fire;
    - 9.3.1.1.4. contact Site Emergency Contact; and
    - 9.3.1.1.5. if fire is out of control then evacuate site immediately.

Note: Do not attempt to extinguish truck containers, vessels, or tanks.

- 9.3.1.2. The On-Scene Commander shall:
  - 9.3.1.2.1. assess the situation to determine if authorities are required;
  - 9.3.1.2.2. if required, organize a response team to extinguish the fire;
  - 9.3.1.2.3. take appropriate action in the event of an injury or fatality; and
  - 9.3.1.2.4. organize a Response Team, if necessary.
- 9.3.1.3. The HSE Coordinator shall:
  - 9.3.1.3.1. complete the Incident report and contact management;
  - 9.3.1.3.2. contact authorities within 12 hours;
  - 9.3.1.3.3. don protective equipment to assess the situation; and
  - 9.3.1.3.4. assist with On-Scene Commander duties.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 9.3.2. Major Fire/ Explosion
  - 9.3.2.1. The On-Scene Commander shall:
    - 9.3.2.1.1. initiate evacuation Plan (refer to Section 11 – Evacuation Plan);
    - 9.3.2.1.2. take action in the event of an injury or fatality;
    - 9.3.2.1.3. organize a response team, if required;
    - 9.3.2.1.4. contact authorities;
    - 9.3.2.1.5. proceed with Crisis Communication Schedule (Section 10); and
    - 9.3.2.1.6. preserve and protect the accident site until investigation is complete and the emergency is secure.
  - 9.3.2.2. The HSE Coordinator shall:
    - 9.3.2.2.1. continue the Crisis Communication Schedule (Section 10);
    - 9.3.2.2.2. notify area residents of crisis if the event is classified as an emergency, if required (refer to Section 6 – Assessment Matrix for Classifying Incidents);
    - 9.3.2.2.3. complete Incident report and contact management, if necessary;
    - 9.3.2.2.4. don personal protective equipment, if required;
    - 9.3.2.2.5. ensure operating equipment and/or processes is shut down;
    - 9.3.2.2.6. ensure the scene is secure; and
    - 9.3.2.2.7. confirm all necessary power shut off.
- 9.4. Injury Response
  - 9.4.1. Minor Injuries
    - 9.4.1.1. The On-Scene Commander shall:
      - 9.4.1.1.1. organize a response team;
      - 9.4.1.1.2. contact authorities (refer to Section 4.2 - Emergency Authorities Contact List);
      - 9.4.1.1.3. contact crisis communication schedule (refer to Section 10 – Crisis Communication Schedule);
      - 9.4.1.1.4. ensure unobstructed access for emergency response personnel;
      - 9.4.1.1.5. receive and direct emergency response personnel to the accident site; and
      - 9.4.1.1.6. preserve and protect the accident site until investigations are complete. The HSE Coordinator shall:
        - 9.4.1.1.7. continue the Crisis Communication Schedule;
        - 9.4.1.1.8. notify injured person’s family;
        - 9.4.1.1.9. complete the Incident Report and contact management if necessary;
        - 9.4.1.1.10. put on the necessary personal protective equipment and first aid equipment;
        - 9.4.1.1.11. ensure of arrange to shut down operating equipment and/or processes in location of injured person or persons;
        - 9.4.1.1.12. if required, contain source of leak or extinguish small fires; and
        - 9.4.1.1.13. move injured person or persons to safety and start first aid treatment.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 9.4.2. Major Injuries or Fatality(s)
- 9.4.2.1. The On-Scene Commander shall:
  - 9.4.2.1.1. organize a response team;
  - 9.4.2.1.2. contact Authorities (refer to Section 4.2 - Emergency Authorities Contact List);
  - 9.4.2.1.3. follow the Crisis Communication Schedule (refer to Section 10);
  - 9.4.2.1.4. preserve and protect the accident site until the investigations are complete;
  - 9.4.2.1.5. receive and direct the emergency response personnel to the accident site; and
  - 9.4.2.1.6. continue with the Crisis Communication Schedule, if needed.

Note: As appropriate, DPS, City or County Police to be notified immediately. ONLY a member of these organizations will notify family members in the event of fatality.

- 9.4.2.2. The HSE Coordinator shall:
  - 9.4.2.2.1. put on the necessary personal protective equipment;
  - 9.4.2.2.2. shut down equipment and/or processes in location of the fatality;
  - 9.4.2.2.3. if required, contain source leak or extinguish the small fire;
  - 9.4.2.2.4. do not move person or persons, if it is not necessary; and
  - 9.4.2.2.5. Complete Incident Report and notify management, if necessary.

- 9.5. H2 S or Gas Release, LEL Condition
- 9.5.1. Upon discovery of a release, staff is to acknowledge and react immediately to the release condition.
- 9.5.2. The individual who initially acknowledges the release should sound the on-site alarm, if available, to notify other staff on location.
- 9.5.3. All persons are to take appropriate action and clear the work area and proceed to the meeting point upwind away from the hazardous area.
- 9.5.4. Conduct a head count to ensure everyone is accounted for at the meeting point.
- 9.5.5. If all are not accounted for, then:
  - 9.5.5.1. 2 persons are to gather self-contained breathing apparatus.
  - 9.5.5.2. One individual dons the equipment and goes back into the site, if safe to do so; and the other individual stays back at the meeting point as a back up, monitoring the individual going back into the site.
  - 9.5.5.3. Upon rescue of all personnel the following steps must be completed:
  - 9.5.5.4. contact the On-Scene Commander and provide details regarding the incident (i.e. wind direction, H2S concentration, any fires, worker injuries and/or fatalities); and
  - 9.5.5.5. discuss ignition of the gas release source with the On-Scene Commander.
- 9.5.6. The On-Scene Commander shall:
  - 9.5.6.1. take appropriate action in the event of an injury or fatality;
  - 9.5.6.2. organize a response team, if necessary;

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 9.5.6.3. contact Authorities, if required (refer to Section 4.2);
  - 9.5.6.4. proceed with Crisis Communication Schedule, if required; and
  - 9.5.6.5. protect the incident site until investigations are complete.
  - 9.5.7. The HSE Coordinator shall:
    - 9.5.7.1. continue the Crisis Communication Schedule, if required;
    - 9.5.7.2. notify residents of crisis, if required;
    - 9.5.7.3. complete the Incident Report and contact management, if necessary;
    - 9.5.7.4. put on the necessary personal protective equipment;
    - 9.5.7.5. ensure or arrange to shut down operating equipment and/or processes, if possible;
    - 9.5.7.6. ensure source of leak is contained; and
    - 9.5.7.7. monitor site and surround area outside of site.
  
  - 9.6. Well Kick
    - 9.6.1. The drilling crew should proceed with the blowout prevention procedures they have been trained on if a kick should result. Any well kicks should be circulated out when safe to do so.
    - 9.6.2. The On-Site Supervisor should be notified of the kick immediately by the rig crew (Derrick man).
  
  - 9.7. Major Property Damage
    - 9.7.1. The Operator Shall:
      - 9.7.1.1. shut down operating equipment and/or processes in the affected area, if safe to do so;
      - 9.7.1.2. stay clear of effected area; and
      - 9.7.1.3. contact On-Site Commander personnel (refer to Section 8.2 – Responsibilities of Personnel).
      - 9.7.1.4. The On-Scene Commander contact shall:
        - 9.7.1.5. take appropriate action in the event of an injury or fatality (refer to Section 9.4.2); and
        - 9.7.1.6. organize the response team to stabilize effected area to allow for continued operation, if possible.
    - 9.7.2. The HSE Coordinator Shall:
      - 9.7.3. cordon off affected area until repair can be made;
      - 9.7.4. complete the Incident Report and contact management, if necessary;
      - 9.7.5. put on the necessary personal protective equipment; and
      - 9.7.6. help with stabilizing the affected area.
  
  - 9.8. Natural Disasters
    - 9.8.1. Lightning Storm
      - 9.8.1.1. Prepare:
        - 9.8.1.1.1. shut down equipment and processes if working outside.
      - 9.8.1.2. Action:
        - 9.8.1.2.1. during an electrical storm, work activity (i.e. yard work) immediately around the equipment should be temporarily stopped until danger has passed.
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# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 9.8.2. Tornado Warnings
    - 9.8.2.1. Prepare:
      - 9.8.2.1.1. shut down equipment processes.
    - 9.8.2.2. Action:
      - 9.8.2.2.1. in the event of a public announced tornado watch, the site staff is to be notified by the site supervisor. Work activities to be conducted in recognition of short notice stoppage;
      - 9.8.2.2.2. in the event of a public announced tornado warning employees are to take cover. Find a building and move to the center where there are no windows present; and
      - 9.8.2.2.3. off duty staff should not go to the site to notify staff of a possible tornado in the immediate area.
  
  - 9.8.3. Flood
    - 9.8.3.1. Prepare:
      - 9.8.3.1.1. empty out or reduce tanks of oil and fill tanks with water;
      - 9.8.3.1.2. empty sumps and underground tanks;
      - 9.8.3.1.3. shut off power to site shacks;
      - 9.8.3.1.4. move all sensitive equipment on the floor by at least 2 feet; and
      - 9.8.3.1.5. secure the site.
    - 9.8.3.2. Action:
      - 9.8.3.2.1. close front gate; and
      - 9.8.3.2.2. evacuate to safe area.
  
  - 9.8.4. Grass/Forest Fires
    - 9.8.4.1. Prepare:
      - 9.8.4.1.1. contact fire department to protect the site equipment from the fire;
      - 9.8.4.1.2. secure site upon announcement of the warning/alert;
      - 9.8.4.1.3. ensure no open hydrocarbons are left on site;
      - 9.8.4.1.4. close any tank lid hatches, if applicable; and
      - 9.8.4.1.5. shut down the equipment and processes.
    - 9.8.4.2. Action:
    - 9.8.4.3. Evacuate employees to nearest safe area.
  
  - 9.8.5. High Winds or Hail Storm
    - 9.8.5.1. Prepare:
      - 9.8.5.1.1. secure light objects and equipment; and
      - 9.8.5.1.2. protect equipment.
    - 9.8.5.2. Action:
      - 9.8.5.2.1. take cover.
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# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## 9.8.6. Earthquake

### 9.8.6.1. Action:

9.8.6.1.1. If you are indoors and the earthquake is apparently sizable then drop down to the floor and take cover under a sturdy desk, table or other furniture. Hold on to it and be prepared to move with it. Hold the position until the ground stops shaking and it is safe to move. Stay clear of the windows or heavy furniture, appliances or equipment that may fall over on to you. Stay inside to avoid being injured by falling glass or building parts.

### 9.8.6.1.2. If you are outside:

9.8.6.1.3. get into the open and away from buildings and power lines. If you are driving:

9.8.6.1.4. stop if it is safe but stay inside your car. Stay away from bridges overpasses and tunnels. Move your vehicle as far out of the normal traffic as possible. Avoid stopping under trees, light posts, power lines and signs;

9.8.6.1.5. if you are in a mountainous area or near unstable slopes or cliffs be alert for falling rock and other debris that could be loosened by the earthquake; and

9.8.6.1.6. if you are near a large body of water move quickly to higher ground or several hundred yards inland.

## 9.8.7. Plane Crash

### 9.8.7.1. Action:

9.8.7.2. call 911; and

9.8.7.3. evacuate to the muster point. It will be determined at that time if evacuation of the area is needed. Airport officials will initiate their Emergency Response Plan.

## 9.8.8. Bomb and Terrorist Threats

9.8.8.1. Consider all bomb and terrorist threats seriously.

### 9.8.8.2. Action:

9.8.8.2.1. If a threat is received by phone call then conduct the following:

9.8.8.2.2. listen carefully and keep the caller talking while someone else is instructed to call 911;

9.8.8.2.3. record as much information as possible;

9.8.8.2.4. do not hang up the call after the caller hangs up;

9.8.8.2.5. shut in the facility that is suspect;

9.8.8.2.6. evacuate all persons from the site or office that is targeted; and

9.8.8.2.7. notify the On-Scene Commander of a Level 3 Bomb or Terrorist Threat.

## 10. CRISIS COMMUNICATION SCHEDULE

10.1. In the event of an emergency, the emergency contact must notify the people in Appendix 1.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 10.2. The person being notified will discuss the situation with the person providing notice and this individual will jointly decide if the notification process shall escalate and who will be responsible for proceeding with further notification.

## 11. EVACUATION PLAN

- 11.1. Company will set up their reception center as indicated in Section 8.1 - Reception Center.
- 11.2. In the event of an emergency that requires evacuation, all employees, customers, visitors and contractors must immediately leave the work site and report to the site evacuation muster point.
- 11.3. At the entrance of the site will be the location of the muster point at each well location.
- 11.4. The site evacuation muster point will be posted at the main facility. In the event of an alarm or announcement of evacuation.
- 11.5.1. The On-Scene Commander shall:
  - 11.5.1.1. take all work permits, if necessary;
  - 11.5.1.2. move to the entrance of the site and report to the Site Supervisor;
  - 11.5.1.3. account for all site personnel;
  - 11.5.1.4. organize a response team, if required;
  - 11.5.1.5. contact Authorities, if required ( refer to Section 4.2 - Emergencies Authorities Contact List); and
  - 11.5.1.6. proceed with Crisis Communication Schedule, if required (refer to Section 10 – Crisis Communication Schedule).
- 11.5.2. The Employees shall:
  - 11.5.2.1. advise all visitors, customers and contractors of alarm, if possible;
  - 11.5.2.2. shut down operating equipment and/or processes, if possible; and
  - 11.5.2.3. report to the front site entrance on location.

Note: No person shall be allowed to return to his or her respective work areas until, and “all clear” has been given by the On-Site Emergency Contact or designate.

## 12. TRAINING AND PRACTICE DRILLS

All employees will receive orientation on their first day of being on location. All training records will be filed in an employee file by the HSE Coordinator.

- 12.1. Personnel Training
  - 12.1.1. Appropriate personnel will have the following training:
  - 12.1.2. H2S Basic End-User training in accordance with ANSI Z-390.1 (Latest Revisions)
  - 12.1.3. CPR/First Aid
  - 12.1.4. Confined Space

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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- 12.1.5. Lockout-Tagout
- 12.1.6. SafeLand®
- 12.1.7. Hazard Communications
- 12.1.8. Incipient Firefighting
- 12.1.9. Hazard Recognition / Reporting
- 12.1.10. Review of all company Safety Policies, Rules and Safe Work Procedures.
- 12.1.11. Complete orientations of the vehicle that will be assigned to them.
- 12.1.12. Personal protective equipment for their particular job duties obtained.
- 12.1.13. Defensive Driving.
  
- 12.2. Practice Exercises and Drills
  - 12.2.1. Exercises
    - 12.2.1.1. Exercises will be conducted at least once every (12) months. These exercises may be of significant scope involving appropriate outside agencies (minimum telephone contact to verify emergency contact numbers). The scenarios for the exercises will be both relevant and realistic based on current activities.
    - 12.2.1.2. Each exercise will be reviewed upon completion for the effectiveness of the planned response(s). The minutes of the review will be recorded at a safety meeting and the findings will have action items assigned and follow up will be documented.
  - 12.2.2. Drills
  - 12.2.3. Fire drills/ site evacuation planning will be carried out at least (6) months prior to the first on-site safety meeting and at the first on-site safety meeting. Each drill will be reviewed for effectiveness of planning and execution and the review will be recorded in the minutes of the meeting. Any action plans arising from this review will be recorded and implemented.

## **13. PLAN EVALUATION AND UPDATES**

- 13.1.1. Based on actual Incident Reports and practical drills, revisions of the plan will be conducted, reviewed and implemented. Amendments will be dated in the appropriate manuals and improvements will be reviewed with personnel.
- 13.1.2. Note that Public and Local Authority Involvement in Emergency Preparedness and Response can be triggered after a plan evaluation or a specific situation.
- 13.1.3. Refer to Appendix 13 for Public and Local Authority Involvement Triggers.

## **14. WATER SUPPLY FOR FIRE DEPARTMENT**

- 14.1. Water trucks from the site operation must be notified of any fire at the time in order to be on standby in order to be utilized for the water demands to put the fire out. Trucks must be within a half hour of response time from the location while the fire is occurring to be efficient in supporting the fire department on site.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

## APPENDIX 1 – COMPANY CONTACTS

- President and CEO: Lance Taylor
- Operations: William McMann
- Health, Safety and Environment Consultant: Timothy Wells
- Operations: Ben Barton

### 24-Hour Emergency Phone Number: 1-214-297-0500

- Head Office / Mailing Address: 2600 North Dallas Parkway, Suite 400 Frisco, TX 75034
- Head Office Phone Number: 214-297-0500 Fax Number: 214-297-0499
- Field Office: 1354 US Hwy 82 Plains, TX 79355
- Field Office Phone Number: 806.752.7076

Table A1–1. Company Contacts

| Name            | Position                             | Phone Number |
|-----------------|--------------------------------------|--------------|
| Lance Taylor    | CEO/President                        | 214-297-0501 |
| William McMann  | Executive Vice President Engineering | 214-297-0516 |
| Lee Weatherford | Production Superintendent            | 432-301-5043 |
| Timothy Wells   | HSE Consultant                       | 281-408-4262 |
| Susan Randall   | Administrator                        | 214-297-0500 |
| Ben Barton      | Operations                           | 214-529-1786 |

Table A1–2. Company Emergency Contacts

| Task   | Name            | Phone Number | E-mail                            |
|--|-----------------|--------------|-----------------------------------|
| Public Affairs/Media Liaison                 | Lance Taylor    | 214-297-0501 | lance.taylor@stewardenergy.net    |
| Potential or Existing Emergency Main Contact | William McMann  | 817-313-5668 | bill.mcmann@stewardenergy.net     |
| Production Superintendent                    | Lee Weatherford | 432-301-5043 | Lee.weatherford@stewardenergy.com |
| Health Safety & Environment (HSE) Consultant | Timothy Wells   | 832-797-9144 | twells@stss-i.com                 |
| Operations                                   | Ben Barton      | 214-529-1786 | ben.barton@stewardenergy.net      |
| 24 Hour Emergency                            |                 | 214-297-0500 |                                   |

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 2 – COMPANY ORGANIZATIONAL CHART

- Lance Taylor, CEO/President
  - William McMann, Executive Vice President Engineering
    - Ben Barton, Operations
    - Lee Weatherford, Production Superintendent
  - Tim Hilton, Operations Manager

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 3 – COMPANY CURRENT SUMMARY OF WELLS AND FACILITIES - RECEPTION CENTER

The following facilities/wells locations in Texas: Well locations:

- Arrowhead 717 – 33.36554722/102.8206028 – API:42-501-36671 – Yoakum County
- Browning 5063 – 33.13988889/102.7602639 – API:42-501-36667 – Yoakum County
- Colt 3867 – 33.19792222/102.7517361 – API:42-501-36668 – Yoakum County
- Banjo Bill 452 2H – 33.093723/102.595552 – API: 42-501-36778 - Yoakum County
- Weatherby 433 4H – 33.114542/102.434403 – API: 42-501-36764 - Yoakum County
- Blanton 208 2H – 32.545228/102.405613 – API: 42-165-38503 - Gaines County
- Paradise City 583 4H – 33.1248273/103.0242835 – API: 42-501-36803 – Yoakum County
- Nevermind 451 3H – 33.100113/102.591860 – API: 42-501-36789 – Yoakum County
- Moondance 534 1H – 33.1236200/103.0430545 – API: 42-501-36805 – Yoakum County
- Road Dirt 534 #4H – 33.122221/103.060998 – API: 42-501-36810 – Yoakum County
- Squints 523 5H – 33.140203/103.055679 – API: 42-501-36950 – Yoakum County
- Squints 523 3H – 33.152797/103.055728 – API: 42-501-36795 – Yoakum County
- Squints 523 1H – 33.153223/103.055732 – API: 42-501-36765 – Yoakum County

The following facilities/wells locations in New Mexico:

- Saul Goodman Unit
- Krazy Eight Unit
- Shrader Unit
- Fring Unit
- Saul Goodman Fed 1H
- Krazy Eight Fed 4H
- Krazy Eight Fed 5H
- Krazy Eight Fed 6H
- Shrader Fed 1H
- Shrader Fed 2H
- Shrader Fed 3H
- Fring Fed 1H
- Fring Fed 2H
- Fring Fed 3H

Offices:

- 2600 North Dallas Parkway, Suite 400 Frisco, TX 75034
- 1354 US Hwy 82 Plains, TX 79355

Reception Centers:

- Arrowhead 717
- TBD

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 5 – TRRC FIELD OFFICE CONTACTS

Table A5–1. TRRC Field Centers Contact Information

- 8A Midland
  - 10 Desta Dr., Suite 500 E Midland, TX 79705
  - Telephone: 432-684-5581 or 432-684-6005

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 6 – EMERGENCY AUTHORITIES CONTACT INFORMATION

Table A6–1. Emergency Authorities Information

| Emergency Authority        | Location          | Phones                                |
|----------------------------|-------------------|---------------------------------------|
| Gaines County Police       | Seagraves, TX     | 806-546-0520/911                      |
| Yoakum County Police       | Denver City, TX   | 806-592-2747/911                      |
| Gaines County Fire         | Seminole, TX      | 432-758-9871/911                      |
| Yoakum County Fire         | Seagraves, TX     | 806-387-3086/911                      |
| Ambulance                  | Denver City, TX   | 806-592-3600/911                      |
| Hospital                   | Lubbock, TX       | 806-791-2582/911                      |
| Poison Control Central     |                   |                                       |
| DPS                        | Denver City, TX   | 806-592-2873                          |
| TCEQ                       | Lubbock, TX       | 806-796-7107                          |
| FEMA                       | Wichita Falls, TX | 940-763-0820                          |
| Lea County Emergency Mgmt. | Hobbs, NM         | 575-391-2983                          |
| Lea County Sheriff         | Lovington, NM     | 575-396-8201/911                      |
| Lea County Fire            | Lovington, NM     | 575-396-2359                          |
| Hobbs Fire                 | Hobbs, NM         | 575-397-9308                          |
| Lovington Ambulance        | Lovington, NM     | 575-396-2359/911                      |
| Hobbs Ambulance            | Hobbs, NM         | 575-397-9308/911                      |
| Hospital                   | Hobbs, NM         | 575-492-5000                          |
| Hospital                   | Lovington, NM     | 575-396-6611                          |
| NMEnv.Dept.                | Santa Fe, NM      | 505-827-2855                          |
| USDOT                      |                   |                                       |
| Worker Compensation Board  |                   |                                       |
| Local Spill Services       | Plains, TX        | 806-456-7456 24 hour Emergency Number |

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 7 – INFORMATION DISSEMINATED TO THE PUBLIC AT THE ONSET AND DURING AN INCIDENT

Table A7–1. Information Disseminated to the Public

To those evacuated or sheltered-at the onset

- type and status of the incident
- description of the products involved and their short-term and long-term effects
- location and proximity of the incident to people in the vicinity
- effects the incident may have on people in the vicinity

To those evacuated or sheltered-during

- public protection measures to follow, evacuation instructions, and any other emergency response measures to consider
- areas impacted by the incident
- Actions being taken to respond to the situation, including anticipated time period

Contacts for additional information

- 214-297-0500

Actions the affected public should take if they experience adverse effects

- Contact 214-297-0500

To the general public – during

- type and status of the incident
- location of the incident
- areas impacted by the incident
- description of the products involved
- contacts for additional information
- actions being taken to respond to the situation, including anticipated time period

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 8 – INCIDENT RESPONSE CLASSIFICATION

Table A8–1. Possible Responses for Specified Incidents

### Emergency

#### Responses

Alert

Level 1

Level 2

Level 3

#### Communications: Internal

Discretionary, depending on company policy.

Discretionary, depending on company policy.

Immediate notification of off site management.

Immediate notification of off-site management.

#### External public

Courtesy at company discretion.

Mandatory for individuals within the EPZ requiring notification.

Planned and instructive as per the specific ERP.

Planned and instructive as per the specific ERP.

#### Media

Reactive, as required.

Reactive, as required.

Proactive-media management to local or regional interest.

Proactive-media management to national interest.

#### Government

Notify TRRC if public contacted.

Notify TRRC and local authority, if required for initial response.

Notify TRRC and local authority.

Notify TRRC and local authorities.

#### Actions: Internal

On site, as required by company.

On site, as required by company. Initial response undertaken in accordance with the specific or corporate-level ERP.

Predetermined public safety actions are under way. Corporate management team alerted and maybe appropriately engaged to support on-scene responders.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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Full implementation of emergency management system.

External

On site, as required by company.

On site, as required by company.

Potential for multi- agency (operator, municipal, provincial or federal) response.

Immediate multi-agency (operator, municipal, provincial, or federal) responses.

Resources: Internal

Immediate and local. No additional personnel required.

Establish what resources would be required.

Limited supplemental resources or personnel required.

Significant incremental resources required.

External

None.

Begin to establish resources that maybe required.

Possible assistance from government agencies and external support services, as required.

Assistance from government agencies and external support services, as required.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 9 – ASSESSMENT MATRIX FOR CLASSIFYING INCIDENTS

Table A9–1. Assessment Matrix for Incidents

\* What is the likelihood that the incident will escalate, resulting in an increased exposure to public health, safety, or the environment?

Table 2. Likelihood of incident escalating\*

Rank Description

1 Unlikely

The incident is contained or controlled and it is unlikely that the incident will escalate. There is no chance of additional hazards. Ongoing monitoring required.

2 Moderate

The Control of the incident may have deteriorated but imminent control of the hazard by the licensee is probable. It is unlikely that the incident will further escalate.

3 Likely

Imminent and/or intermittent control of the incident is possible. The licensee has the capability of using internal and/or external resources to manage and bring the hazard under control in the near term.

4 Almost certain or currently occurring

The incident is uncontrolled and there little chance that the licensee will be able to bring the hazard under control the near term. The license will gain assistance from outside parties to remedy the situation.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 10 – COMPANY KEY ROLES AND RESPONSIBILITIES

Table A10–1. Key Roles and Responsibilities

Role

Personnel Contact

Alternative Contact

Field On-Scene (Site) Commander

Field Operator 1

Field Operator 2

Off-Site Commander

Field Operator 3

Field Operator 4

Consequence Management Operations Center (COMOC) Corporate Commander

Lance Taylor

Company Command Center - Emergency Commander

William McMann

Public Health, Safety & Env.

Coordinator (includes evacuation and sheltering duties)

William McMann

Timothy Wells

Security (roadblocks, rovers, etc.)

Field Contractor 1

Field Contractor 2

Air Quality monitoring

Field Contractor 3

Field Contractor 4

Communication Relations Personnel; Media/Public

Lance Taylor

Susan Randall

## APPENDIX 11 – FIRST CALL COMMUNICATION FORM

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# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 12 – EMERGENCY RESPONSE FLOWCHART

First Call:

William McMann who will then notify additional team members according to emergency.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## APPENDIX 13 – PUBLIC AND LOCAL AUTHORITY INVOLVEMENT SITUATION TRIGGERS

Table A12–1. Public and Local Involvement Triggers

To be determined by William McMann and Lance Taylor

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## GLOSSARY

### Emergency

- It is a present or imminent event outside the scope of normal operations that requires prompt coordination of resources to protect the health, safety and welfare of people and to limit damage to property and the environment.

### Incident

- It is an unexpected occurrence or event that requires action by emergency personnel to prevent or minimize the impact on the safety and health of people and on property and the environment.

### Definition of an Alert

- It is an incident that can be handled on site by the licensee through normal operating procedures and is deemed to be very low risk to members of the public.

### Lower Explosive Limit (LEL)

- It is the lowest concentration of gas or vapor (percent volume in the air, 4.4 to 5 % for Methane) that burns or explodes if an ignition source is present at ambient temperature.

### On-Site Command Post

- It is an emergency operations center established in the immediate vicinity of the incident to provide immediate and direct response to the emergency and initially staffed by company personnel.

### Regional Emergency Operations Center (REOC)

- It is an operations center established in a suitable location off site near the emergency to manage the larger scale aspects of the emergency response and staffed jointly by government and industry personnel.

### Emergency Planning Zone (EPZ)

- It is the area surrounding a facility, pipeline or well where residents or other members of the public may be at highest risk during the early stages of an uncontrolled release of toxic materials such as H<sub>2</sub>S or explosions or fire and the area for which the licensee must have a specific emergency response plan.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## Emergency Operations Center (EOC)

- It is an operations center established in a suitable location to manage the larger aspects of the emergency. In a high impact emergency there maybe a number of EOC's established to support the responses. These may include corporate EOC's (regional, headquarters), a municipal EOC, a joint off-site regional EOC and the provincial government consequence Management Operations Center (COMOC).

## Incident Management Systems

- A system used to coordinate preparedness and incident management.

## High Vapor Pressure (HVP) Pipeline

- It is a pipeline system containing hydrocarbon mixtures in the liquid or quasi-liquid state with a vapor pressure greater than 110 kpa absolute at 38 degrees Celsius. Examples would be liquid ethane, ethylene, propane, butane and pentanes plus.

## Hydrogen Sulphur (H2S)

- It is a naturally occurring gas found in a variety of geological formations and also formed by the natural decomposition of organic matter in the absence of oxygen. It is colorless, dense (heavier than air) and has a rotten egg smell at low concentrations. At high concentrations it cannot be smelled.

## Sulfur Dioxide (SO2)

- It is a colorless, water soluble suffocating gas formed by burning sulfur in the air; also used in manufacture of sulfuric acid. SO2 has a pungent smell similar to a burning match.

## Gas Release (Sweet or Sour)

- It is the potential for or uncontrolled flow of gas from a well, pipeline or facility affecting Company operations and/or threatening adjoining property.

## Oil/Salt Water/ Chemical Spills and Releases

- The potential for or actual hydrocarbon, produced water or chemical spill affecting company operations and/or threatening adjoining property and the environment.

# EMERGENCY RESPONSE PLAN/CONTINGENCY PLAN

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## Injuries/Fatalities and/or Vehicle Equipment Accidents

- It is any event that results or could result in loss of life, serious injury, missing personnel or causes a potential hazard to property.

## Explosions and/or Fires

- It is the potential for an explosion/fire or actual explosions/fire that cannot be extinguished or controlled by readily available means and which is affecting Company operations and/or threatening adjoining property.

## 8 3/4" Hole 2,400' – 11,011' ~ 5 1/2" x 7" Casing

### Production Interval Drilling Fluid Properties & Discussion

#### Fluid System: Brine w/ Salt Gel – Xan D sweeps

| Interval Depth (ft) | Mud Weight (ppg) | Funnel Viscosity (Sec/qt) | pH (value) | Yield Point (lb/100ft <sup>2</sup> ) | API Fluid Loss (cc/30min) | Cl (mg/L) | LGS (%) |
|---------------------|------------------|---------------------------|------------|--------------------------------------|---------------------------|-----------|---------|
| 2,400'- 11,011'     | 10.0 – 10.2      | 28 – 34                   | 9.5 – 10.5 | 1-6                                  | N/C                       | 160-185k  | <6      |

- Drill out with closed loop system through rig pits using 10.0 ppg Brine fluid
- Build and maintain a pH of 9.5-10.5 with additions of **Caustic Soda**
- Sweep hole every 300' – 400' or as hole dictates with combination **Salt Gel/Xanthan Gum** sweeps
- After landing curve, sweeps should be **Xanthan Gum only**.
- Solids Control will be necessary for close loop system to maintain mud weight and LGS%. Recommend a centrifuge and maintaining finest screens flow will allow on shakers.
- Add 1-2 quarts **Basin Fluids PHPA** down the drill pipe on connections as needed for additional hole cleaning and shale stabilization
- If Torque and Drag become problematic, additions of **Graphite** to sweeps may help.
- If Torque and Drag issues continue, additions of **Basin LLX lube** or **Onyx Lube King** in sweeps at 2-4% should be pumped with **Xanthan Gum** only sweeps
- **Sweeps-** recommend using **40-50 bbls** of **80-90 sec/qt** viscosity. Mix 10-12 lb/bbl **Salt Gel** and .25-.5 lb/bbl **Xanthan Gum**. Pump every 300' – 400' or as hole dictates. If Torque and Drag become an issue, add 2 – 4 lb/bbl **Graphite** to sweeps.
- **Lube additions** – If Torque and Drag continue to be an issue, Basin Fluids recommends a clean up cycle prior to making lube additions. If clean up cycle doesn't alleviate issues, build 50 bbl lube pill with .25 lb/bbl **Xanthan Gum** and mix 4% by volume of **Basin LLX or Onyx Lube King**. Pump lube pill and monitor hole for Torque and Drag improvements. Pump lube pills as needed when Torque and Drag increase.
- Upon reaching interval TD, pump a 80-100 bbl high viscosity (80 – 90 sec/qt) pre-hydrated **Salt Gel / Xanthan Gum** sweep. Monitor shakers and circulate until clean prior to pulling out for casing run



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# Drilling Plan Data Report

02/10/2022

APD ID: 10400071996

Submission Date: 04/16/2021

Highlighted data  
reflects the most  
recent changes

Operator Name: STEWARD ENERGY II LLC

Well Name: FRING FEDERAL

Well Number: 3H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies   | Mineral Resources | Producing Formation |
|--------------|----------------|-----------|---------------------|----------------|---|-------------------|---------------------|
| 3389270      | ---            | 3796      | 0                   | 0              | OTHER : unconsolidated                              | NONE              | N                   |
| 7833519      | RUSTLER        | 1614      | 2182                | 2230           | ANHYDRITE   | NONE              | N                   |
| 3389271      | SALADO         | 1500      | 2296                | 2350           | ANHYDRITE,<br>LIMESTONE,<br>SANDSTONE,<br>SILTSTONE | NONE              | N                   |
| 3389272      | CASTILE        | 913       | 2883                | 2969           | ANHYDRITE   | NONE              | N                   |
| 3389273      | TANSILL        | 797       | 2999                | 3091           | DOLOMITE,<br>SANDSTONE                              | NATURAL GAS, OIL  | N                   |
| 3389274      | YATES          | 711       | 3085                | 3181           | DOLOMITE,<br>SANDSTONE, SHALE                       | NATURAL GAS, OIL  | N                   |
| 3389275      | SEVEN RIVERS   | 453       | 3343                | 3453           | DOLOMITE, GYPSUM,<br>SANDSTONE, SHALE               | NATURAL GAS, OIL  | N                   |
| 3389276      | QUEEN          | -81       | 3877                | 4008           | ANHYDRITE,<br>DOLOMITE,<br>SANDSTONE                | NATURAL GAS, OIL  | N                   |
| 3389277      | GRAYBURG       | -468      | 4264                | 4398           | ANHYDRITE,<br>DOLOMITE,<br>SANDSTONE                | NATURAL GAS, OIL  | N                   |
| 3389278      | SAN ANDRES     | -799      | 4595                | 4729           | ANHYDRITE,<br>DOLOMITE, SHALE                       | NATURAL GAS, OIL  | Y                   |
| 7833544      | GLORIETA       | -2254     | 6050                | 6050           | ANHYDRITE,<br>DOLOMITE, SHALE                       | NATURAL GAS, OIL  | N                   |

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M

Rating Depth: 6000

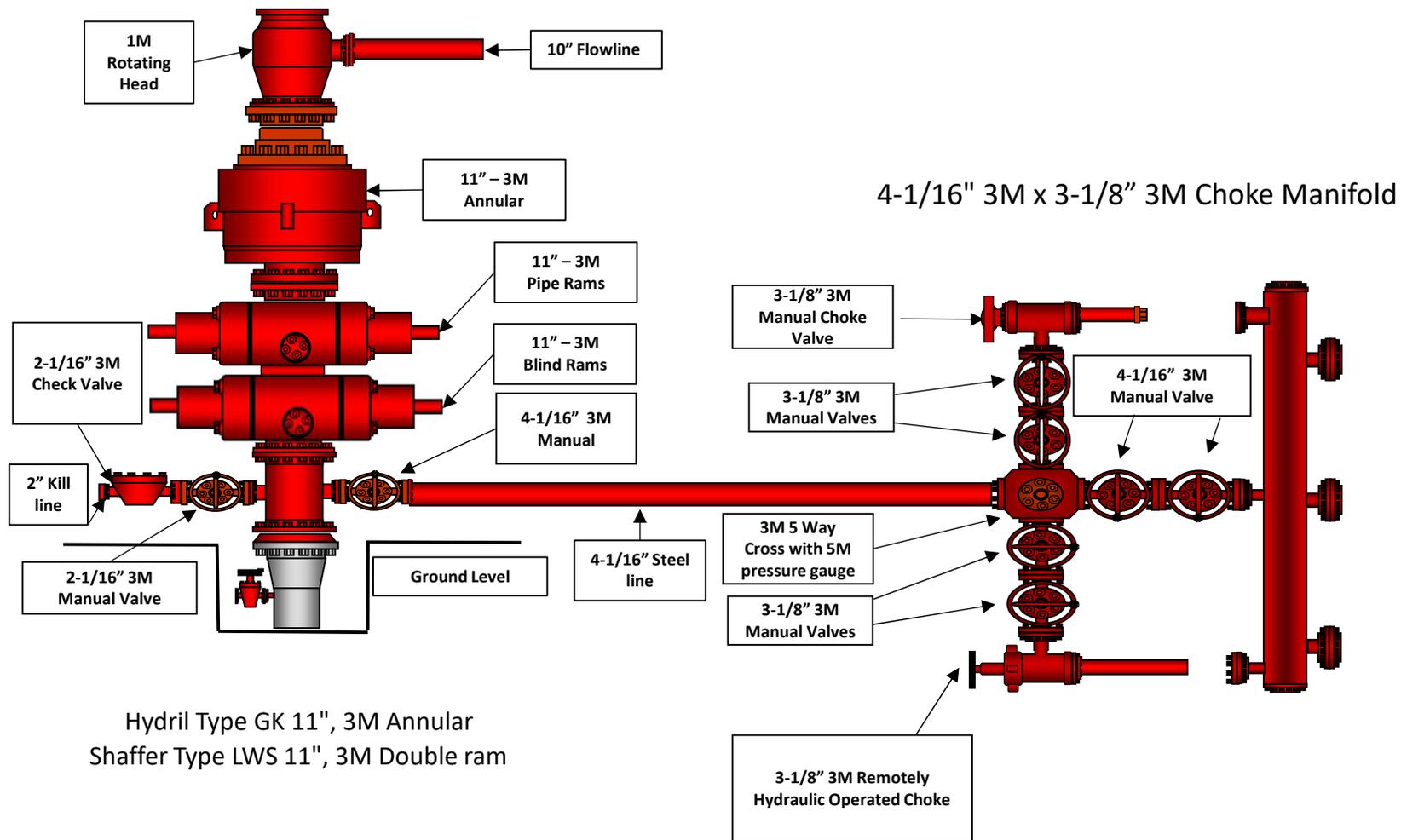
**Equipment:** 1000# Rotating Head -3000# Hydraulically Operated Annular Preventer -3000# Double Hydraulically Operated Rams with the Blind rams on bottom -3000# Mud Cross with 1 3000 psi Manually Operated 4-1/6 Valve, 1-3000 psi Manually Operated 2-1/16 Valve 1-3000 psi Check Valve

Requesting Variance? NO

Variance request:

**Testing Procedure:** After nipple up, we will test with rig pump to 1500 psi for 30 minutes on all components, including floor valves and choke manifold; Furthermore, we will function test on all bit trips; Weekly BOP drills will be performed by each crew. These drills will be noted on the daily tour sheets and by electronic means as well.

# BOP and Choke Manifold Diagrams



# BOP Equipment and Testing Procedure

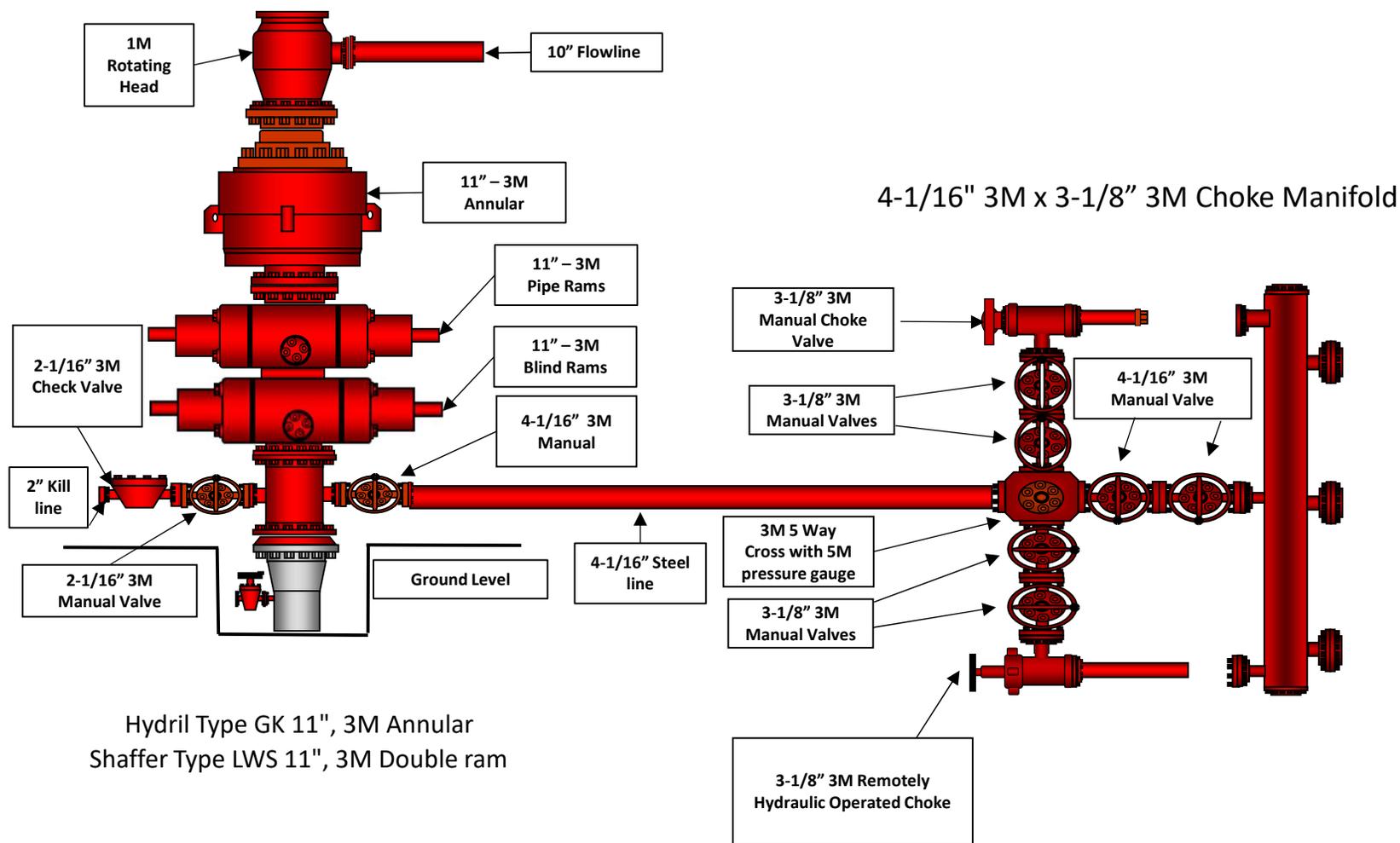
## **Blowout Prevention Equipment will consist of:**

- 1M Rotating Head
- 3M Hydraulically Operated Annular Preventer
- 3M Double Hydraulically Operated Rams with the Blind rams on bottom
- 3M Mud Cross with 1 – 3M Manually Operated 4-1/6" Valve, 1- 3M Manually Operated 2-1/16" Valve 1- 3M 2-1/16" Check Valve

## **Testing Procedure:**

- After nipple up, we will test with rig pump to 1500 psi for 30 minutes on all components, including floor valves and choke manifold;
- Furthermore, we will function test on all bit trips;
- Weekly BOP drills will be preformed by each crew. These drills will be noted on the daily tour sheets and by electronic means as well.

# BOP and Choke Manifold Diagrams



# BOP Equipment and Testing Procedure

## **Blowout Prevention Equipment will consist of:**

- 1M Rotating Head
- 3M Hydraulically Operated Annular Preventer
- 3M Double Hydraulically Operated Rams with the Blind rams on bottom
- 3M Mud Cross with 1 – 3M Manually Operated 4-1/6" Valve, 1- 3M Manually Operated 2-1/16" Valve 1- 3M 2-1/16" Check Valve

## **Testing Procedure:**

- After nipple up, we will test with rig pump to 1500 psi for 30 minutes on all components, including floor valves and choke manifold;
- Furthermore, we will function test on all bit trips;
- Weekly BOP drills will be performed by each crew. These drills will be noted on the daily tour sheets and by electronic means as well.

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 319380

**CONDITIONS**

|   |  |
|---|--|
| Operator:<br>STEWARD ENERGY II, LLC<br>420 Throckmorton<br>Fort Worth, TX 76102 | OGRID: 371682  |
|   | Action Number: 319380  |
|   | Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3) |
|   |  |

**CONDITIONS**

| Created By | Condition  | Condition Date |
|------------|--|----------------|
| pkautz     | Will require a File As Drilled C-102 and a Directional Survey with the C-104   | 4/4/2024       |
| pkautz     | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string | 4/4/2024       |
| pkautz     | Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system                  | 4/4/2024       |
| pkautz     | Cement is required to circulate on both surface and production strings of casing   | 4/4/2024       |
| pkautz     | If cement does not circulate on any string, a CBL is required for that string of casing  | 4/4/2024       |