

15-041

OCD Hobbs  
HOBBS OOD

Form 3160-3  
(March 2012)

DEC 02 2015

RECEIVED

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

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                                                                                                                           |                                                    | 5. Lease Serial No.<br>NMNM106916                                                       |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |                                                    | 6. If Indian, Allottee or Tribe Name                                                    |
| 2. Name of Operator Regeneration Energy Corp. (280240)                                                                                                                                                                 |                                                    | 7. If Unit or CA Agreement, Name and No.                                                |
| 3a. Address PO Box 210<br>Artesia, NM 88211-0210                                                                                                                                                                       | 3b. Phone No. (include area code)<br>(575)736-3535 | 8. Lease Name and Well No. 713373<br>E. Livingston 31 Federal #7H                       |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)<br>At surface 190' FSL 1862' FWL Unit letter N SHL<br>At proposed prod. zone 330' FNL 1850' FWL Unit letter C BHL         |                                                    | 9. API Well No.<br>30-025-42975                                                         |
| 14. Distance in miles and direction from nearest town or post office*<br>30 miles from Carlsbad                                                                                                                        |                                                    | 10. Field and Pool, or Exploratory<br>Grand Dunes, Livingston Ridge Bone Spring (53800) |
| 15. Distance from proposed* 190' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)                                                                                             |                                                    | 11. Sec., T. R. M. or Blk. and Survey or Area<br>Sec. 31 T22S R32E                      |
| 16. No. of acres in lease<br>660.720                                                                                                                                                                                   |                                                    | 12. County or Parish<br>Lea County                                                      |
| 17. Spacing Unit dedicated to this well<br>160 acres                                                                                                                                                                   |                                                    | 13. State<br>NM                                                                         |
| 18. Distance from proposed location* About 1262' to nearest well, drilling, completed, applied for, on this lease, ft.                                                                                                 |                                                    |                                                                                         |
| 19. Proposed Depth<br>MD: 14844.1'<br>TVD: 10290.0'                                                                                                                                                                    |                                                    |                                                                                         |
| 20. BLM/BIA Bond No. on file<br>NMB000764                                                                                                                                                                              |                                                    |                                                                                         |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3505' GL                                                                                                                                                        |                                                    |                                                                                         |
| 22. Approximate date work will start*<br>07/01/2015                                                                                                                                                                    |                                                    | 23. Estimated duration<br>22 days                                                       |

UNORTHODOX  
LOCATION

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- |                                                                                                                                                |                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Well plat certified by a registered surveyor.                                                                                               | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.                                                                                                                            | 5. Operator certification                                                                       |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM.             |

|                                                                                                             |                                              |                     |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------|
| 25. Signature            | Name (Printed/Typed)<br>William Miller       | Date<br>05/06/2015  |
| Title<br>Landman                                                                                            |                                              |                     |
| Approved by (Signature)  | Name (Printed/Typed)<br>IS/STEPHEN J. CAFFEY | Date<br>NOV 23 2015 |
| Title<br>FOR FIELD MANAGER                                                                                  |                                              |                     |
| Office<br>BLM-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.

APPROVAL FOR TWO YEARS

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)

Carlsbad Controlled Water Basin

K2  
12/08/15

Witness Surface Casing

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

DEC 09 2015

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**Regeneration Energy Corp.  
DRILLING AND OPERATIONS PROGRAM**

**E. Livingston 31 Federal #7H**

**SHL: 190' FSL & 1862' FWL**

**BHL: 330' FNL & 1850' FWL**

**Section 31 T22S R32E**

**Lea County, New Mexico**

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Regeneration Energy Corp. submits the following eleven items of pertinent information in accordance with BLM requirements.

1. Geological surface formation: Permian
2. The estimated tops of geologic markers & estimated depths at which anticipated water, oil or gas formations are expected to be encountered are as follows:

|                    |         |     |
|--------------------|---------|-----|
| Fresh Water        | ~ 350'  |     |
| Rustler            | 725'    |     |
| Top of Salt        | 1170'   |     |
| Fletcher Anhydrite | 4260'   |     |
| Delaware           | 4500'   | Oil |
| Bone Spring        | 8410'   | Oil |
| Wolfcamp           | 11850'  |     |
| TD TVD             | 10,290  |     |
| TD MD              | 14,844' |     |

No other formations are expected to give up oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13-3/8" casing at 830' and circulating cement back to surface. All intervals will be isolated by setting 5 1/2" casing to total depth and tying back cement to a minimum of 500' into 9-5/8" csg shoe.

*See COA* **3. Proposed Casing Program: All casing is new and API approved**

| Hole Size | Depths                     | Section                    | OD Casing | New/Used | Wt    | Collar | Grade | Collapse Design Factor | Burst Design Factor | Tension Design Factor |
|-----------|----------------------------|----------------------------|-----------|----------|-------|--------|-------|------------------------|---------------------|-----------------------|
| 17 1/2"   | 0' - 830' <i>870'</i>      | Surface                    | 13 3/8"   | New      | 54.5# | STC    | J-55  | 3.08                   | 1.66                | 3.61                  |
| 12 1/4"   | 0' - 3500'                 | Intrmd                     | 9 5/8"    | New      | 36#   | BTC    | J-55  | 1.22                   | 1.125               | 2.43                  |
| 12 1/4"   | 3500' - 4400' <i>4500'</i> | Intrmd                     | 9 5/8"    | New      | 40#   | BTC    | N-80  | 1.48                   | 1.125               | 2.43                  |
| 8 3/4"    | 0' - 14,844'               | Production Curve & Lateral | 5 1/2"    | New      | 17#   | LTC    | P-110 | 1.53                   | 1.61                | 1.62                  |

- While running all casing strings, the pipe will be kept a minimum of 1/3 full at all times to avoid approaching the collapse pressure of casing.

#### 4. Proposed Cement Program

- a. 13-3/8" Surface
- Lead: 370 sx Class C + 4% Gel + 2% CaCl<sub>2</sub>  
(13.5 ppg, 1.75 cuft/sx, 9.2 gal/sx)  
Cmt: 250 sx Class C + 2% CaCl<sub>2</sub>  
(14.8 ppg, 1.35 cuft/sx, 6.3 gal/sx)  
\*\*Calculated w/50% excess on OH volumes
- b. 9 5/8" Intermediate:
- Lead: 1050 sx 35:65:6 C +Salt+Gilsonite+CFR-3+ HR601  
(12.9 ppg, 1.89 cuft/sx, 9.61 gal/sx)  
Tail: 300 sx Class C  
(14.8 ppg, 1.35 cuft/sx, 6.3 gal/sx)  
\*\*Calculated w/35% excess on OH volumes
- d. 5 1/2" Production
- Stg. 1 Lead: 450 sx 50:50:10 C +Salt+Gilsonite+CFR-3+ HR601  
(12.9 ppg, 1.9 cuft/sx, 9.56 gal/sx)  
Tail: 1050 sx 50:50:2 H +Salt+GasStop +HR601 +CFR-3  
(14.4 ppg, 1.22 cuft/sx, 5.44 gal/sx)  
\*\*Calculated w/35% excess on OH volumes  
DV Tool @ 6500'
- Stg. 2 Lead: 800 sx 50:50:10 C +Salt+Gilsonite+CFR-3+ HR601  
(8.4 ppg, 2.26 cuft/sx, 12.91 gal/sx)  
Tail: 100 sx 50:50:2 H +Salt+GasStop +HR601 +CFR-3  
(14.8 ppg, 1.36 cuft/sx, 6.34 gal/sx)  
\*\*Calculated w/35% excess on OH volumes
- See CoA*

- The above cement volumes could be revised pending the caliper measurements.
- The 13-3/8" surface cement is designed to circulate to surface.
- The 9-5/8" intermediate cement is designed to circulate to surface.
- The production TOC will tie back a minimum 500' into previous shoe.

### 5. Minimum Specifications for Pressure Control:

A 13 5/8" 2000 psi Hydril type annular preventer with mud cross, choke manifold, chokes, kill line, Kelly cock, safety valve and subs to fit all drill strings in use as provided for in Onshore Order #2 will be nipped up on the 13 3/8" x 2000 psi SOW X 13 5/8" x 2000 psi casing head (see attached BOPE drawings). This unit will be hydraulically operated and will be tested by independent tester using test plug to 250 psig/300 psig low and 1000 psig high. Choke line valve, chokes, upper Kelly cock valve, safety valve shall also be tested to 250 psig/300 psig low and 2000 psig high by independent tester.

After setting the 9 5/8" intermediate casing the following BOPE as provided for in Onshore Order #2 will be rigged up on the 9 5/8" intermediate casing spool (13 5/8" 2000 psi x 13 5/8" 3000 psi): 13 5/8" X 3000 psi annular, 13 5/8" X 3000 psi double ram type preventer with blind rams on top and 4 1/2" drill pipe rams on the bottom, choke, mud cross, choke manifold, 4" diameter choke line, 2" kill line, kelly cock, safety valve with proper subs for all drill string connections in use (see attached BOPE drawings).

The BOPE including auxiliary equipment (chokes, choke manifold etc.) will be tested by independent tester.

Test plug will be used and all BOPE tested to 250 psig/ 300 psig low pressure and 3000 psig high pressure for 10 minutes. Annular preventer will be tested to 1500 psig. BOP stack will be used continuously until total depth is reached. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Any time a component of the BOP stack or choke manifold is changed or installed BOPE will be re-tested as required.

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string depth or 1500 psig, whichever is greater, but not to exceed 70 percent of casing's minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken. If H<sub>2</sub>S is monitored with 100 ppm in the gas stream while drilling intermediate, we will shut in and install a remote operated choke.

#### 6. Estimated BHP & BHT:

4466 psi  
152°F

#### 7. Mud Program: The applicable depths and properties of this system are as follows:

See COA

| Depth           | Type System | Mud Weight | Viscosity (sec) | Waterloss (cc) |
|-----------------|-------------|------------|-----------------|----------------|
| 0' - 830'       | Fresh Water | 8.4        | 29              | N.C.           |
| 830' - 4400'    | Brine       | 10         | 29              | N.C.           |
| 4400' - 14,844' | Cut Brine   | 8.9 - 9.2  | 29              | N.C.           |

870'  
4550'

- The necessary mud products for weight addition and fluid loss control will be on location at all times.
- A visual and electronic mud monitoring system will be rigged up prior to spud to detect changes in the volume of mud system. The electronic system consists of a pit volume totalizer, stroke counter and flow sensor at flow line.
- If weight and/or viscosity are introduced to the mud system a daily mud check will be performed by mud contractor, along with tourly check by rig personnel.
- After setting intermediate casing, a third party gas unit detection system will be installed at the flow line.

#### 8. Auxiliary Well Control and Monitoring Equipment:

- See COA
- a. A Kelly cock will be in the drill string at all times.
  - b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
  - c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

#### 9. Testing, Logging and Coring Program:

- a. Drill stem tests will be based on geological sample shows.
- b. If open hole electrical logging is performed, the program will be:

- i. Total Depth to Intermediate Casing: Dual Laterolog-Micro Laterolog and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
- ii. Total Depth to Surface: Compensated Neutron with Gamma Ray
- iii. No coring program is planned
- iv. Additional testing will be initiated subsequent to setting the 5 1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

**10. Potential Hazards:**

- a. No abnormal pressures or temperatures are expected. There is no known presence of H<sub>2</sub>S in this area. If H<sub>2</sub>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. No H<sub>2</sub>S is anticipated to be encountered.

see  
COA

**11. Anticipated starting date and Duration of Operations:**

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days.

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*Surface Casing*

**Stage 1**

Fluid 1: Water Based Spacer

Gel Spacer w/Red Dye

2.50 lbm/bbl FWCA

2.50 lbm/bbl K-35

0.25 lbm/Mgal Rhodamine Red Dye No. 2

Fluid Density: 8.4 lbm/gal

Volume: 20 bbl

Fluid 2: Lead Slurry

EXTENDACEM (TM) SYSTEM

Fluid Weight: 13.5 lbm/gal

Volume: 115.1 bbl

Slurry Yield: 1.746 ft<sup>3</sup>/sack

Total Mixing Fluid: 9.2 Gal

Top Of Fluid: 0 ft

Calculated Fill: 340 ft

Calculated Sacks: 370 Sacks

Proposed Sacks: 370 Sacks

Fluid 3: Tail Slurry

HALCEM (TM) SYSTEM

2 % Calcium Chloride - Flake

Fluid Weight: 14.8 lbm/gal

Volume: 60 bbl

Slurry Yield: 1.347 ft<sup>3</sup>/sack

Total Mixing Fluid: 6.39 Gal

Top Of Fluid: 340 ft

Calculated Fill: 435 ft

Calculated Sacks: 250 Sacks

Proposed Sacks: 250 Sacks

Fluid 4: Fresh Water

Displacement

Fluid Density: 8.34 lbm/gal

Volume: 113.6 bbl

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*Intermediate Casing*

**Stage 1**

Fluid 1: Water Based Spacer

Gel Spacer

2.50 lbm/bbl FWCA

2.50 lbm/bbl K-35

0.25 lbm/Mgal Rhodamine Red Dye No. 2

Fluid Density: 8.4 lbm/gal

Volume: 20 bbl

Fluid 2: Lead Slurry

ECONOCEM (TM) SYSTEM

5 % Salt

5 lbm Kol-Seal

0.1250 lbm Poly-E-Flake

Fluid Weight: 12.9 lbm/gal

Volume: 351.4 bbl

Slurry Yield: 1.879 ft<sup>3</sup>/sack

Total Mixing Fluid: 9.61 Gal

Top Of Fluid: 0 ft

Calculated Fill: 3176 ft

Calculated Sacks: 1050 Sacks

Proposed Sacks: 1050 Sacks

Fluid 3: Tail Slurry

HALCEM (TM) SYSTEM

1 % Calcium Chloride - Flake

Fluid Weight: 14.8 lbm/gal

Volume: 71.4 bbl

Slurry Yield: 1.336 ft<sup>3</sup>/sack

Total Mixing Fluid: 6.36 Gal

Top Of Fluid: 3176 ft

Calculated Fill: 1224 ft

Calculated Sacks: 300 Sacks

Proposed Sacks: 300 Sacks

Fluid 4: Fresh Water

Displacement

Fluid Density: 8.34 lbm/gal

Volume: 337.1 bbl

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*Production Casing*

**Stage 1**

Fluid 1: Water Based Spacer

Gel Spacer w/Red Dye

2.50 lbm/bbl FWCA

2.50 lbm/bbl K-35

0.25 lbm/Mgal Rhodamine Red Dye No. 2

Fluid Density: 8.4 lbm/gal

Volume: 20 bbl

Fluid 2: Lead Slurry

ECONOCHEM (TM) SYSTEM

3 % Salt

5 lbm Kol-Seal

0.30 % CFR-3

0.1250 lbm Poly-E-Flake

0.20 % HR-601

Fluid Weight: 12.9 lbm/gal

Volume: 149.3 bbl

Slurry Yield: 1.863 ft<sup>3</sup>/sack

Total Mixing Fluid: 9.56 Gal

Top Of Fluid: 3254 ft

Calculated Fill: 4205 ft

Calculated Sacks: 450 Sacks

Proposed Sacks: 450 Sacks

Fluid 3: Tail Slurry

VERSACHEM (TM) SYSTEM

0.50 % Halad(R)-344

0.40 % CFR-3

Fluid Weight: 14.4 lbm/gal

Volume: 228.7 bbl

Slurry Yield: 1.223 ft<sup>3</sup>/sack

Total Mixing Fluid: 5.44 Gal

Top Of Fluid: 7459 ft

Calculated Fill: 7382 ft

Calculated Sacks: 1050 Sacks

Proposed Sacks: 1050 Sacks

Fluid 4: Fresh Water

Displacement

Fluid Density: 8.34 lbm/gal

Volume: 344.1 bbl

Multiple Stage Cementer

6500 ft(MD)

**Stage 2**

Fluid 1: Water Based Spacer

Gel Spacer w/Red Dye

2.50 lbm/bbl FWCA

2.50 lbm/bbl K-35

0.25 lbm/Mgal Rhodamine Red Dye No. 2

Fluid Density: 8.4 lbm/gal

Volume: 20 bbl

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Fluid 2: Lead Slurry

VERSACEM (TM) SYSTEM

8 % Bentonite

0.50 lbm D-AIR 5000

0.70 % HR-601

0.1250 lbm Poly-E-Flake

Fluid Weight: 11.9 lbm/gal  
Volume: 321.9 bbl  
Slurry Yield: 2.259 ft<sup>3</sup>/sack  
Total Mixing Fluid: 12.91 Gal  
Top Of Fluid: 0 ft  
Calculated Fill: 5735 ft  
Calculated Sacks: 800 Sacks  
Proposed Sacks: 800 Sacks

Fluid 3: Tail Slurry

HALCEM (TM) SYSTEM

Fluid Weight: 14.8 lbm/gal  
Volume: 23.6 bbl  
Slurry Yield: 1.326 ft<sup>3</sup>/sack  
Total Mixing Fluid: 6.34 Gal  
Top Of Fluid: 5735 ft  
Calculated Fill: 765 ft  
Calculated Sacks: 100 Sacks  
Proposed Sacks: 100 Sacks

Fluid 4: Fresh Water

Displacement

Fluid Density: 8.34 lbm/gal  
Volume: 151.1 bbl

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# **Regeneration Energy Corporation**

Lea County, NM (NAD1983)

E. Livingston 31 Federal

#7H

OH

Plan: Plan #1

## **Standard Planning Report**

08 May, 2015





# TDS Planning Report



|           |                                 |                              |                   |
|-----------|---------------------------------|------------------------------|-------------------|
| Database: | EDM 5000.1 Single User Db       | Local Co-ordinate Reference: | Well #7H          |
| Company:  | Regeneration Energy Corporation | TVD Reference:               | KB @ 3523.0usft   |
| Project:  | Lea County, NM (NAD1983)        | MD Reference:                | KB @ 3523.0usft   |
| Site:     | E. Livingston 31 Federal        | North Reference:             | Grid              |
| Well:     | #7H                             | Survey Calculation Method:   | Minimum Curvature |
| Wellbore: | OH                              |                              |                   |
| Design:   | Plan #1                         |                              |                   |

|             |                           |               |                |
|-------------|---------------------------|---------------|----------------|
| Project     | Lea County, NM (NAD1983)  |               |                |
| Map System: | US State Plane 1983       | System Datum: | Mean Sea Level |
| Geo Datum:  | North American Datum 1983 |               |                |
| Map Zone:   | New Mexico Eastern Zone   |               |                |

|                       |          |                          |                 |                   |                  |
|-----------------------|----------|--------------------------|-----------------|-------------------|------------------|
| Site                  |          | E. Livingston 31 Federal |                 |                   |                  |
| Site Position:        |          | Northing:                | 488,427.20 usft | Latitude:         | 32° 20' 28.506 N |
| From:                 | Map      | Easting:                 | 731,706.30 usft | Longitude:        | 103° 43' 0.941 W |
| Position Uncertainty: | 0.0 usft | Slot Radius:             | 13-3/16 "       | Grid Convergence: | 0.33 °           |

|                      |       |          |                     |                 |               |                  |
|----------------------|-------|----------|---------------------|-----------------|---------------|------------------|
| Well                 | #7H   |          |                     |                 |               |                  |
| Well Position        | +N/-S | 0.0 usft | Northing:           | 488,427.20 usft | Latitude:     | 32° 20' 28.506 N |
|                      | +E/-W | 0.0 usft | Easting:            | 731,706.30 usft | Longitude:    | 103° 43' 0.941 W |
| Position Uncertainty |       | 0.0 usft | Wellhead Elevation: | 0.0 usft        | Ground Level: | 3,505.0 usft     |

|           |            |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore  | OH         |             |                    |                  |                        |
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | IGRF2010   | 5/8/2015    | 7.18               | 60.17            | 48,281                 |

|                   |                            |                 |                 |                  |
|-------------------|----------------------------|-----------------|-----------------|------------------|
| Design            | Plan #1                    |                 |                 |                  |
| Audit Notes:      |                            |                 |                 |                  |
| Version:          | Phase:                     | PLAN            | Tie On Depth:   | 0.0              |
| Vertical Section: | Depth From (TVD)<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Direction<br>(°) |
|                   | 0.0                        | 0.0             | 0.0             | 359.62           |

| Plan Sections               |                    |                |                             |                 |                 |                               |                              |                             |            |                    |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|------------------------------|-----------------------------|------------|--------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) | TFO<br>(°) | Target             |
| 0.0                         | 0.00               | 0.00           | 0.0                         | 0.0             | 0.0             | 0.00                          | 0.00                         | 0.00                        | 0.00       |                    |
| 9,812.5                     | 0.00               | 0.00           | 9,812.5                     | 0.0             | 0.0             | 0.00                          | 0.00                         | 0.00                        | 0.00       |                    |
| 10,562.5                    | 90.00              | 359.62         | 10,290.0                    | 477.5           | -3.2            | 12.00                         | 12.00                        | -0.05                       | 359.62     |                    |
| 14,844.1                    | 90.00              | 359.62         | 10,290.0                    | 4,759.0         | -31.6           | 0.00                          | 0.00                         | 0.00                        | 0.00       | BHL (EL31F #7H/OH) |



# TDS Planning Report



|           |                                 |                              |                   |
|-----------|---------------------------------|------------------------------|-------------------|
| Database: | EDM 5000.1 Single User Db       | Local Co-ordinate Reference: | Well #7H          |
| Company:  | Regeneration Energy Corporation | TVD Reference:               | KB @ 3523.0usft   |
| Project:  | Lea County, NM (NAD1983)        | MD Reference:                | KB @ 3523.0usft   |
| Site:     | E. Livingston 31 Federal        | North Reference:             | Grid              |
| Well:     | #7H                             | Survey Calculation Method:   | Minimum Curvature |
| Wellbore: | OH                              |                              |                   |
| Design:   | Plan #1                         |                              |                   |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 100.0                 | 0.00            | 0.00        | 100.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 200.0                 | 0.00            | 0.00        | 200.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 300.0                 | 0.00            | 0.00        | 300.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 400.0                 | 0.00            | 0.00        | 400.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 500.0                 | 0.00            | 0.00        | 500.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 600.0                 | 0.00            | 0.00        | 600.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 700.0                 | 0.00            | 0.00        | 700.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 800.0                 | 0.00            | 0.00        | 800.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 900.0                 | 0.00            | 0.00        | 900.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,000.0               | 0.00            | 0.00        | 1,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,100.0               | 0.00            | 0.00        | 1,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,200.0               | 0.00            | 0.00        | 1,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,300.0               | 0.00            | 0.00        | 1,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,400.0               | 0.00            | 0.00        | 1,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,500.0               | 0.00            | 0.00        | 1,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,600.0               | 0.00            | 0.00        | 1,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,700.0               | 0.00            | 0.00        | 1,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,800.0               | 0.00            | 0.00        | 1,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,900.0               | 0.00            | 0.00        | 1,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,000.0               | 0.00            | 0.00        | 2,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,100.0               | 0.00            | 0.00        | 2,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,200.0               | 0.00            | 0.00        | 2,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,300.0               | 0.00            | 0.00        | 2,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,400.0               | 0.00            | 0.00        | 2,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,500.0               | 0.00            | 0.00        | 2,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,600.0               | 0.00            | 0.00        | 2,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,700.0               | 0.00            | 0.00        | 2,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0               | 0.00            | 0.00        | 2,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0               | 0.00            | 0.00        | 2,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0               | 0.00            | 0.00        | 3,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0               | 0.00            | 0.00        | 3,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,200.0               | 0.00            | 0.00        | 3,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0               | 0.00            | 0.00        | 3,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0               | 0.00            | 0.00        | 3,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,500.0               | 0.00            | 0.00        | 3,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0               | 0.00            | 0.00        | 3,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,700.0               | 0.00            | 0.00        | 3,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0               | 0.00            | 0.00        | 3,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,900.0               | 0.00            | 0.00        | 3,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,000.0               | 0.00            | 0.00        | 4,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,100.0               | 0.00            | 0.00        | 4,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,200.0               | 0.00            | 0.00        | 4,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,300.0               | 0.00            | 0.00        | 4,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0               | 0.00            | 0.00        | 4,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0               | 0.00            | 0.00        | 4,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0               | 0.00            | 0.00        | 4,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0               | 0.00            | 0.00        | 4,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0               | 0.00            | 0.00        | 4,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 4,900.0               | 0.00            | 0.00        | 4,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,000.0               | 0.00            | 0.00        | 5,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,100.0               | 0.00            | 0.00        | 5,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,200.0               | 0.00            | 0.00        | 5,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,300.0               | 0.00            | 0.00        | 5,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |



# TDS Planning Report



|           |                                 |                              |                   |
|-----------|---------------------------------|------------------------------|-------------------|
| Database: | EDM 5000.1 Single User Db       | Local Co-ordinate Reference: | Well #7H          |
| Company:  | Regeneration Energy Corporation | TVD Reference:               | KB @ 3523.0usft   |
| Project:  | Lea County, NM (NAD1983)        | MD Reference:                | KB @ 3523.0usft   |
| Site:     | E. Livingston 31 Federal        | North Reference:             | Grid              |
| Well:     | #7H                             | Survey Calculation Method:   | Minimum Curvature |
| Wellbore: | OH                              |                              |                   |
| Design:   | Plan #1                         |                              |                   |

| Planned Survey                   |                 |             |                       |              |              |                         |                         |                        |                       |
|----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)            | Inclination (") | Azimuth (") | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate ("/100usft) | Build Rate ("/100usft) | Turn Rate ("/100usft) |
| 5,400.0                          | 0.00            | 0.00        | 5,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,500.0                          | 0.00            | 0.00        | 5,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,600.0                          | 0.00            | 0.00        | 5,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,700.0                          | 0.00            | 0.00        | 5,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,800.0                          | 0.00            | 0.00        | 5,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 5,900.0                          | 0.00            | 0.00        | 5,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,000.0                          | 0.00            | 0.00        | 6,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,100.0                          | 0.00            | 0.00        | 6,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,200.0                          | 0.00            | 0.00        | 6,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,300.0                          | 0.00            | 0.00        | 6,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,400.0                          | 0.00            | 0.00        | 6,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,500.0                          | 0.00            | 0.00        | 6,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,600.0                          | 0.00            | 0.00        | 6,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,700.0                          | 0.00            | 0.00        | 6,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,800.0                          | 0.00            | 0.00        | 6,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,900.0                          | 0.00            | 0.00        | 6,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,000.0                          | 0.00            | 0.00        | 7,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,100.0                          | 0.00            | 0.00        | 7,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,200.0                          | 0.00            | 0.00        | 7,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,300.0                          | 0.00            | 0.00        | 7,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,400.0                          | 0.00            | 0.00        | 7,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,500.0                          | 0.00            | 0.00        | 7,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,600.0                          | 0.00            | 0.00        | 7,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,700.0                          | 0.00            | 0.00        | 7,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,800.0                          | 0.00            | 0.00        | 7,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 7,900.0                          | 0.00            | 0.00        | 7,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,000.0                          | 0.00            | 0.00        | 8,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,100.0                          | 0.00            | 0.00        | 8,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,200.0                          | 0.00            | 0.00        | 8,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,300.0                          | 0.00            | 0.00        | 8,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,400.0                          | 0.00            | 0.00        | 8,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,500.0                          | 0.00            | 0.00        | 8,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,600.0                          | 0.00            | 0.00        | 8,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,700.0                          | 0.00            | 0.00        | 8,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,800.0                          | 0.00            | 0.00        | 8,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 8,900.0                          | 0.00            | 0.00        | 8,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,000.0                          | 0.00            | 0.00        | 9,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,100.0                          | 0.00            | 0.00        | 9,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,200.0                          | 0.00            | 0.00        | 9,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,300.0                          | 0.00            | 0.00        | 9,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,400.0                          | 0.00            | 0.00        | 9,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,500.0                          | 0.00            | 0.00        | 9,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,600.0                          | 0.00            | 0.00        | 9,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,700.0                          | 0.00            | 0.00        | 9,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,800.0                          | 0.00            | 0.00        | 9,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 9,812.5                          | 0.00            | 0.00        | 9,812.5               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| KOP - Start DLS 12.00 TFO 359.62 |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,825.0                          | 1.50            | 359.62      | 9,825.0               | 0.2          | 0.0          | 0.2                     | 12.00                   | 12.00                  | 0.00                  |
| 9,850.0                          | 4.50            | 359.62      | 9,850.0               | 1.5          | 0.0          | 1.5                     | 12.00                   | 12.00                  | 0.00                  |
| 9,875.0                          | 7.50            | 359.62      | 9,874.8               | 4.1          | 0.0          | 4.1                     | 12.00                   | 12.00                  | 0.00                  |
| 9,900.0                          | 10.50           | 359.62      | 9,899.5               | 8.0          | -0.1         | 8.0                     | 12.00                   | 12.00                  | 0.00                  |
| 9,925.0                          | 13.50           | 359.62      | 9,924.0               | 13.2         | -0.1         | 13.2                    | 12.00                   | 12.00                  | 0.00                  |
| 9,950.0                          | 16.50           | 359.62      | 9,948.1               | 19.7         | -0.1         | 19.7                    | 12.00                   | 12.00                  | 0.00                  |



TDS  
Planning Report



|           |                                 |                              |                   |
|-----------|---------------------------------|------------------------------|-------------------|
| Database: | EDM 5000.1 Single User Db       | Local Co-ordinate Reference: | Well #7H          |
| Company:  | Regeneration Energy Corporation | TVD Reference:               | KB @ 3523.0usft   |
| Project:  | Lea County, NM (NAD1983)        | MD Reference:                | KB @ 3523.0usft   |
| Site:     | E. Livingston 31 Federal        | North Reference:             | Grid              |
| Well:     | #7H                             | Survey Calculation Method:   | Minimum Curvature |
| Wellbore: | OH                              |                              |                   |
| Design:   | Plan #1                         |                              |                   |

Planned Survey

| Measured Depth (usft)                 | Inclination (") | Azimuth (") | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate ("/100usft) | Build Rate ("/100usft) | Turn Rate ("/100usft) |
|---------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,975.0                               | 19.50           | 359.62      | 9,971.9               | 27.4         | -0.2         | 27.4                    | 12.00                   | 12.00                  | 0.00                  |
| 10,000.0                              | 22.50           | 359.62      | 9,995.2               | 36.3         | -0.2         | 36.3                    | 12.00                   | 12.00                  | 0.00                  |
| 10,025.0                              | 25.50           | 359.62      | 10,018.1              | 46.5         | -0.3         | 46.5                    | 12.00                   | 12.00                  | 0.00                  |
| 10,050.0                              | 28.50           | 359.62      | 10,040.3              | 57.9         | -0.4         | 57.9                    | 12.00                   | 12.00                  | 0.00                  |
| 10,075.0                              | 31.50           | 359.62      | 10,062.0              | 70.4         | -0.5         | 70.4                    | 12.00                   | 12.00                  | 0.00                  |
| 10,100.0                              | 34.50           | 359.62      | 10,082.9              | 84.0         | -0.6         | 84.0                    | 12.00                   | 12.00                  | 0.00                  |
| 10,125.0                              | 37.50           | 359.62      | 10,103.2              | 98.7         | -0.7         | 98.7                    | 12.00                   | 12.00                  | 0.00                  |
| 10,150.0                              | 40.50           | 359.62      | 10,122.6              | 114.4        | -0.8         | 114.4                   | 12.00                   | 12.00                  | 0.00                  |
| 10,175.0                              | 43.50           | 359.62      | 10,141.2              | 131.1        | -0.9         | 131.1                   | 12.00                   | 12.00                  | 0.00                  |
| 10,200.0                              | 46.50           | 359.62      | 10,158.8              | 148.8        | -1.0         | 148.8                   | 12.00                   | 12.00                  | 0.00                  |
| 10,225.0                              | 49.50           | 359.62      | 10,175.6              | 167.4        | -1.1         | 167.4                   | 12.00                   | 12.00                  | 0.00                  |
| 10,250.0                              | 52.50           | 359.62      | 10,191.3              | 186.8        | -1.2         | 186.8                   | 12.00                   | 12.00                  | 0.00                  |
| 10,275.0                              | 55.50           | 359.62      | 10,206.0              | 207.0        | -1.4         | 207.0                   | 12.00                   | 12.00                  | 0.00                  |
| 10,300.0                              | 58.50           | 359.62      | 10,219.6              | 228.0        | -1.5         | 228.0                   | 12.00                   | 12.00                  | 0.00                  |
| 10,325.0                              | 61.50           | 359.62      | 10,232.1              | 249.6        | -1.7         | 249.6                   | 12.00                   | 12.00                  | 0.00                  |
| 10,350.0                              | 64.50           | 359.62      | 10,243.5              | 271.9        | -1.8         | 271.9                   | 12.00                   | 12.00                  | 0.00                  |
| 10,375.0                              | 67.50           | 359.62      | 10,253.6              | 294.7        | -2.0         | 294.7                   | 12.00                   | 12.00                  | 0.00                  |
| 10,400.0                              | 70.50           | 359.62      | 10,262.6              | 318.1        | -2.1         | 318.1                   | 12.00                   | 12.00                  | 0.00                  |
| 10,425.0                              | 73.50           | 359.62      | 10,270.3              | 341.8        | -2.3         | 341.9                   | 12.00                   | 12.00                  | 0.00                  |
| 10,450.0                              | 76.50           | 359.62      | 10,276.8              | 366.0        | -2.4         | 366.0                   | 12.00                   | 12.00                  | 0.00                  |
| 10,475.0                              | 79.50           | 359.62      | 10,282.0              | 390.4        | -2.6         | 390.5                   | 12.00                   | 12.00                  | 0.00                  |
| 10,500.0                              | 82.50           | 359.62      | 10,285.9              | 415.1        | -2.8         | 415.1                   | 12.00                   | 12.00                  | 0.00                  |
| 10,525.0                              | 85.50           | 359.62      | 10,288.5              | 440.0        | -2.9         | 440.0                   | 12.00                   | 12.00                  | 0.00                  |
| 10,550.0                              | 88.50           | 359.62      | 10,289.8              | 465.0        | -3.1         | 465.0                   | 12.00                   | 12.00                  | 0.00                  |
| 10,562.5                              | 90.00           | 359.62      | 10,290.0              | 477.5        | -3.2         | 477.5                   | 12.00                   | 12.00                  | 0.00                  |
| EOC - Start 4281.6 hold at 10562.5 MD |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,600.0                              | 90.00           | 359.62      | 10,290.0              | 515.0        | -3.4         | 515.0                   | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0                              | 90.00           | 359.62      | 10,290.0              | 615.0        | -4.1         | 615.0                   | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0                              | 90.00           | 359.62      | 10,290.0              | 714.9        | -4.7         | 715.0                   | 0.00                    | 0.00                   | 0.00                  |
| 10,900.0                              | 90.00           | 359.62      | 10,290.0              | 814.9        | -5.4         | 815.0                   | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0                              | 90.00           | 359.62      | 10,290.0              | 914.9        | -6.1         | 915.0                   | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0                              | 90.00           | 359.62      | 10,290.0              | 1,014.9      | -6.7         | 1,015.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0                              | 90.00           | 359.62      | 10,290.0              | 1,114.9      | -7.4         | 1,115.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0                              | 90.00           | 359.62      | 10,290.0              | 1,214.9      | -8.1         | 1,215.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,400.0                              | 90.00           | 359.62      | 10,290.0              | 1,314.9      | -8.7         | 1,315.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,500.0                              | 90.00           | 359.62      | 10,290.0              | 1,414.9      | -9.4         | 1,415.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,600.0                              | 90.00           | 359.62      | 10,290.0              | 1,514.9      | -10.1        | 1,515.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,700.0                              | 90.00           | 359.62      | 10,290.0              | 1,614.9      | -10.7        | 1,615.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,800.0                              | 90.00           | 359.62      | 10,290.0              | 1,714.9      | -11.4        | 1,715.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,900.0                              | 90.00           | 359.62      | 10,290.0              | 1,814.9      | -12.1        | 1,815.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,000.0                              | 90.00           | 359.62      | 10,290.0              | 1,914.9      | -12.7        | 1,915.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,100.0                              | 90.00           | 359.62      | 10,290.0              | 2,014.9      | -13.4        | 2,015.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,200.0                              | 90.00           | 359.62      | 10,290.0              | 2,114.9      | -14.0        | 2,115.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,300.0                              | 90.00           | 359.62      | 10,290.0              | 2,214.9      | -14.7        | 2,215.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,400.0                              | 90.00           | 359.62      | 10,290.0              | 2,314.9      | -15.4        | 2,315.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0                              | 90.00           | 359.62      | 10,290.0              | 2,414.9      | -16.0        | 2,415.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0                              | 90.00           | 359.62      | 10,290.0              | 2,514.9      | -16.7        | 2,515.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0                              | 90.00           | 359.62      | 10,290.0              | 2,614.9      | -17.4        | 2,615.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0                              | 90.00           | 359.62      | 10,290.0              | 2,714.9      | -18.0        | 2,715.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0                              | 90.00           | 359.62      | 10,290.0              | 2,814.9      | -18.7        | 2,815.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0                              | 90.00           | 359.62      | 10,290.0              | 2,914.9      | -19.4        | 2,915.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,100.0                              | 90.00           | 359.62      | 10,290.0              | 3,014.9      | -20.0        | 3,015.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,200.0                              | 90.00           | 359.62      | 10,290.0              | 3,114.9      | -20.7        | 3,115.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,300.0                              | 90.00           | 359.62      | 10,290.0              | 3,214.9      | -21.3        | 3,215.0                 | 0.00                    | 0.00                   | 0.00                  |



TDS  
Planning Report



|           |                                 |                              |                   |
|-----------|---------------------------------|------------------------------|-------------------|
| Database: | EDM 5000.1 Single User Db       | Local Co-ordinate Reference: | Well #7H          |
| Company:  | Regeneration Energy Corporation | TVD Reference:               | KB @ 3523.0usft   |
| Project:  | Lea County, NM (NAD1983)        | MD Reference:                | KB @ 3523.0usft   |
| Site:     | E. Livingston 31 Federal        | North Reference:             | Grid              |
| Well:     | #7H                             | Survey Calculation Method:   | Minimum Curvature |
| Wellbore: | OH                              |                              |                   |
| Design:   | Plan #1                         |                              |                   |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 13,400.0              | 90.00           | 359.62      | 10,290.0              | 3,314.9      | -22.0        | 3,315.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,500.0              | 90.00           | 359.62      | 10,290.0              | 3,414.9      | -22.7        | 3,415.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0              | 90.00           | 359.62      | 10,290.0              | 3,514.9      | -23.3        | 3,515.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0              | 90.00           | 359.62      | 10,290.0              | 3,614.9      | -24.0        | 3,615.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0              | 90.00           | 359.62      | 10,290.0              | 3,714.9      | -24.7        | 3,715.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0              | 90.00           | 359.62      | 10,290.0              | 3,814.9      | -25.3        | 3,815.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0              | 90.00           | 359.62      | 10,290.0              | 3,914.9      | -26.0        | 3,915.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0              | 90.00           | 359.62      | 10,290.0              | 4,014.9      | -26.7        | 4,015.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0              | 90.00           | 359.62      | 10,290.0              | 4,114.9      | -27.3        | 4,115.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0              | 90.00           | 359.62      | 10,290.0              | 4,214.9      | -28.0        | 4,215.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0              | 90.00           | 359.62      | 10,290.0              | 4,314.9      | -28.7        | 4,315.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,500.0              | 90.00           | 359.62      | 10,290.0              | 4,414.9      | -29.3        | 4,415.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0              | 90.00           | 359.62      | 10,290.0              | 4,514.9      | -30.0        | 4,515.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0              | 90.00           | 359.62      | 10,290.0              | 4,614.9      | -30.6        | 4,615.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0              | 90.00           | 359.62      | 10,290.0              | 4,714.9      | -31.3        | 4,715.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,844.1              | 90.00           | 359.62      | 10,290.0              | 4,759.0      | -31.6        | 4,759.1                 | 0.00                    | 0.00                   | 0.00                  |
| TD at 14844.1         |                 |             |                       |              |              |                         |                         |                        |                       |

Design Targets

| Target Name               | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude        |
|---------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|------------------|
| - hit/miss target         |               |              |            |              |              |                 |                |                  |                  |
| - Shape                   |               |              |            |              |              |                 |                |                  |                  |
| EOC (EL31F #7H/OH PI      | 0.00          | 0.00         | 10,290.0   | 477.5        | -3.2         | 488,904.66      | 731,703.13     | 32° 20' 33.231 N | 103° 43' 0.946 W |
| - plan hits target center |               |              |            |              |              |                 |                |                  |                  |
| - Point                   |               |              |            |              |              |                 |                |                  |                  |
| BHL (EL31F #7H/OH)        | 0.00          | 0.00         | 10,290.0   | 4,759.0      | -31.6        | 493,186.20      | 731,674.70     | 32° 21' 15.600 N | 103° 43' 0.990 W |
| - plan hits target center |               |              |            |              |              |                 |                |                  |                  |
| - Point                   |               |              |            |              |              |                 |                |                  |                  |

Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                               |
|-----------------------|-----------------------|-------------------|--------------|---------------------------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                       |
| 9,812.5               | 9,812.5               | 0.0               | 0.0          | KOP - Start DLS 12.00 TFO 359.62      |
| 10,562.5              | 10,290.0              | 477.5             | -3.2         | EOC - Start 4281.6 hold at 10562.5 MD |
| 14,844.1              | 10,290.0              | 4,759.0           | -31.6        | TD at 14844.1                         |



Regeneration Energy Corporation  
Project: Lea County, NM (NAD1983)  
Site: E. Livingston 31 Federal

Well: #7H  
Wellbore: OH  
Plan: Plan #1 (#7H/OH)

#### Section Details

| Sec | MD      | Inc   | Azi    | TVD     | +N/-S  | +E/-W | Dleg  | TFace  | VSec   |
|-----|---------|-------|--------|---------|--------|-------|-------|--------|--------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0     | 0.0    | 0.0   | 0.00  | 0.00   | 0.0    |
| 2   | 9812.5  | 0.00  | 0.00   | 9812.5  | 0.0    | 0.0   | 0.00  | 0.00   | 0.0    |
| 3   | 10562.5 | 90.00 | 359.62 | 10290.0 | 477.5  | -3.2  | 12.00 | 359.62 | 477.5  |
| 4   | 14844.1 | 90.00 | 359.62 | 10290.0 | 4759.0 | -31.6 | 0.00  | 0.00   | 4759.1 |

BHL (EL31F #7H/OH)

#### WELL DETAILS: #7H

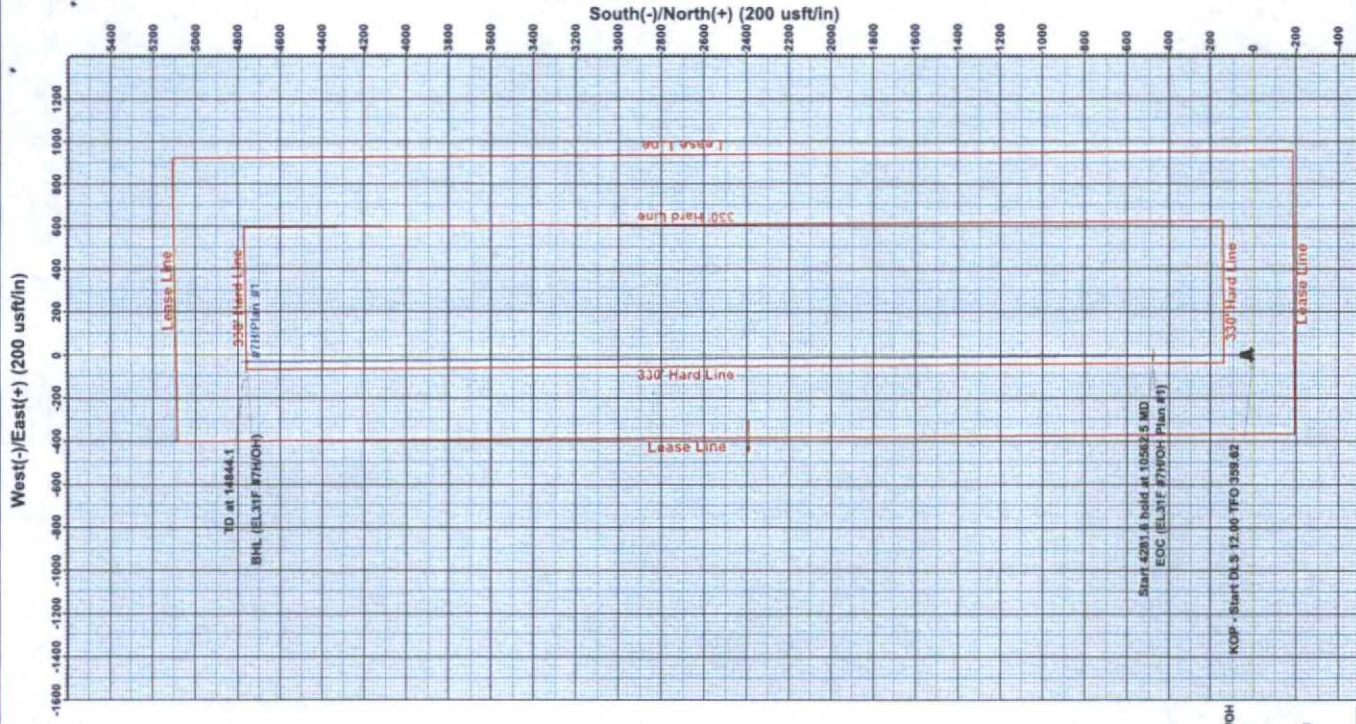
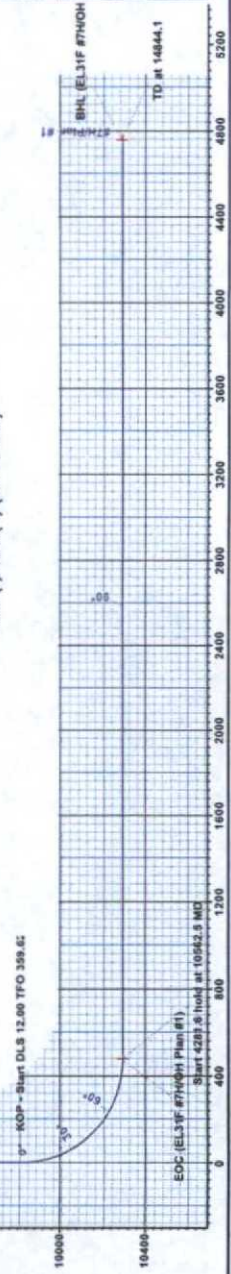
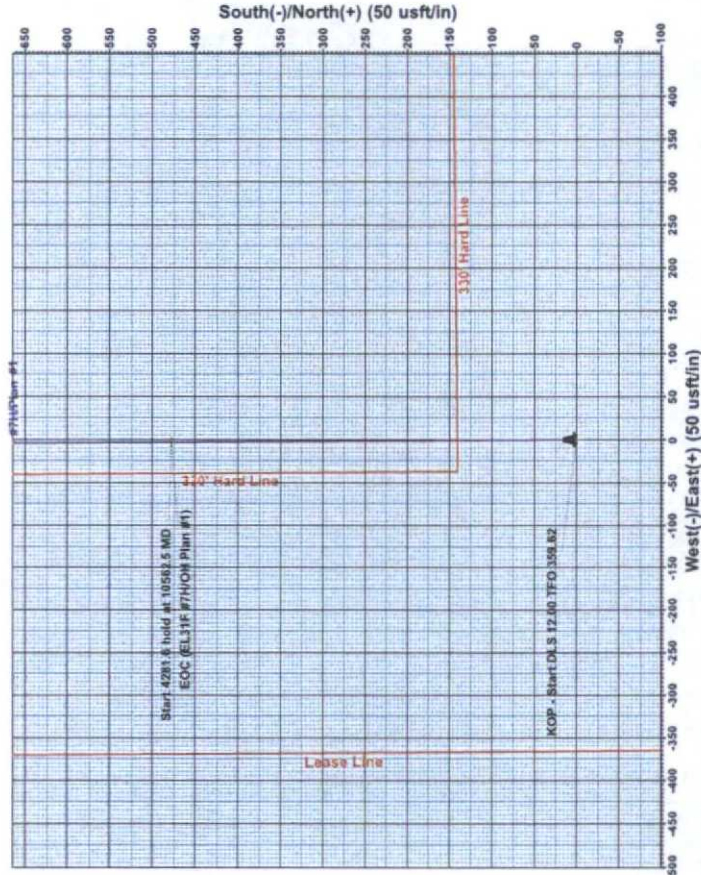
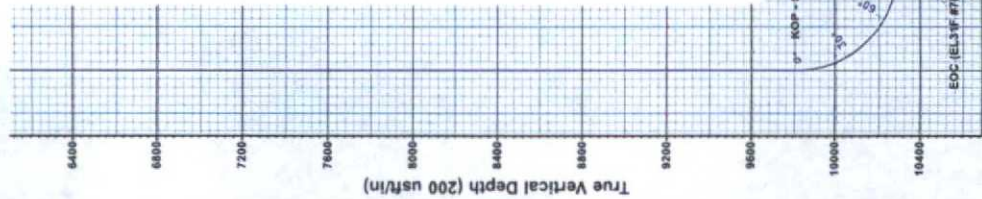
Ground Elevation: 3505.0  
RKB Elevation: KB @ 3523.0usft  
Rig Name:

Northings  
488427.20

Easting  
731706.30

Latitude  
32° 20' 28.506 N

Longitude  
103° 43' 0.941 W



PROJECT DETAILS: Lea County, NM (NAD1983)  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone  
System Datum: Mean Sea Level  
Local North: Grid

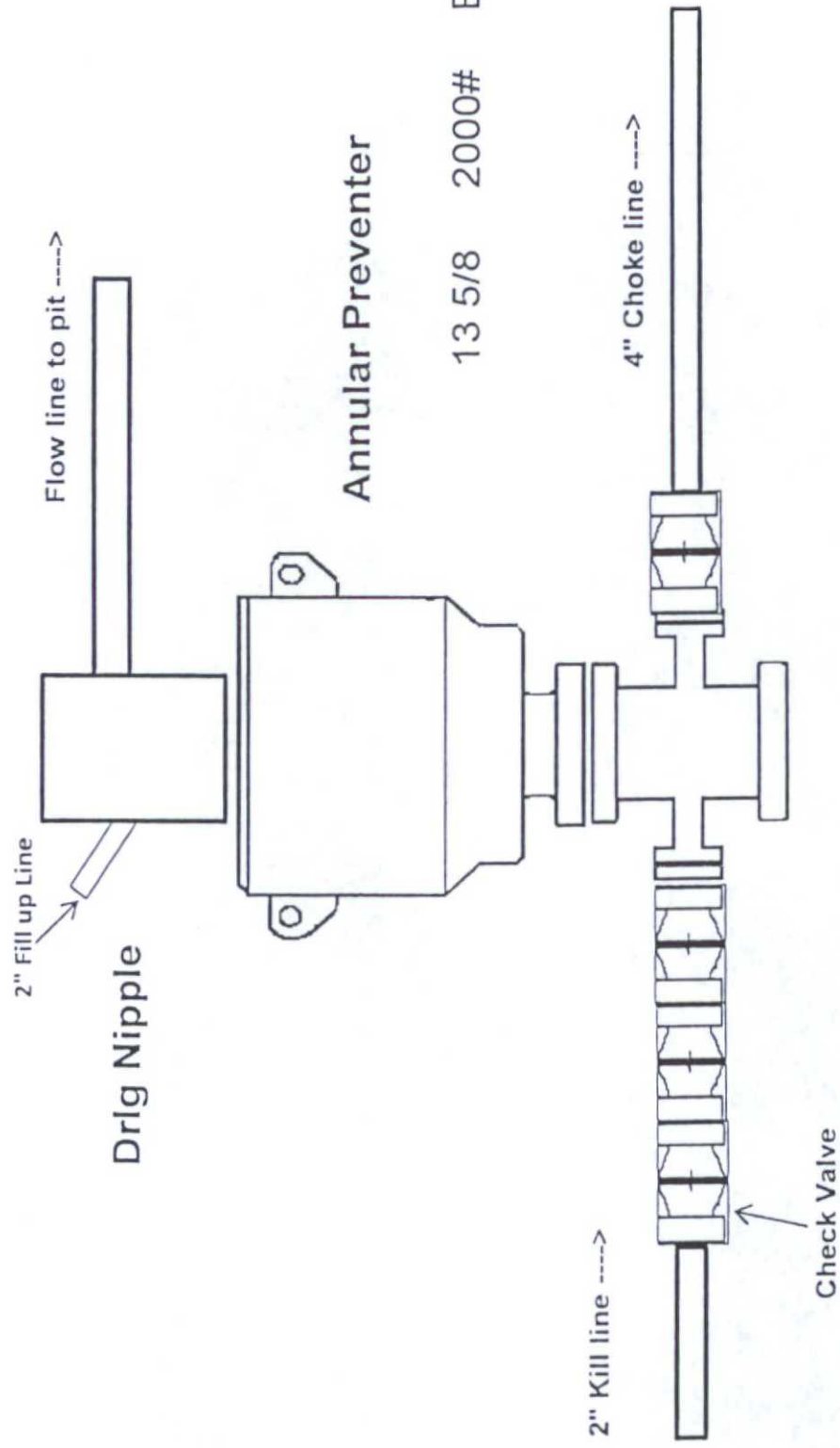
#### Vertical Section at 359.62° (200 usft/in)

Terra Directional Services  
322 Spring Hill Drive, Suite A100, Spring, Texas 77386  
432.425.7532

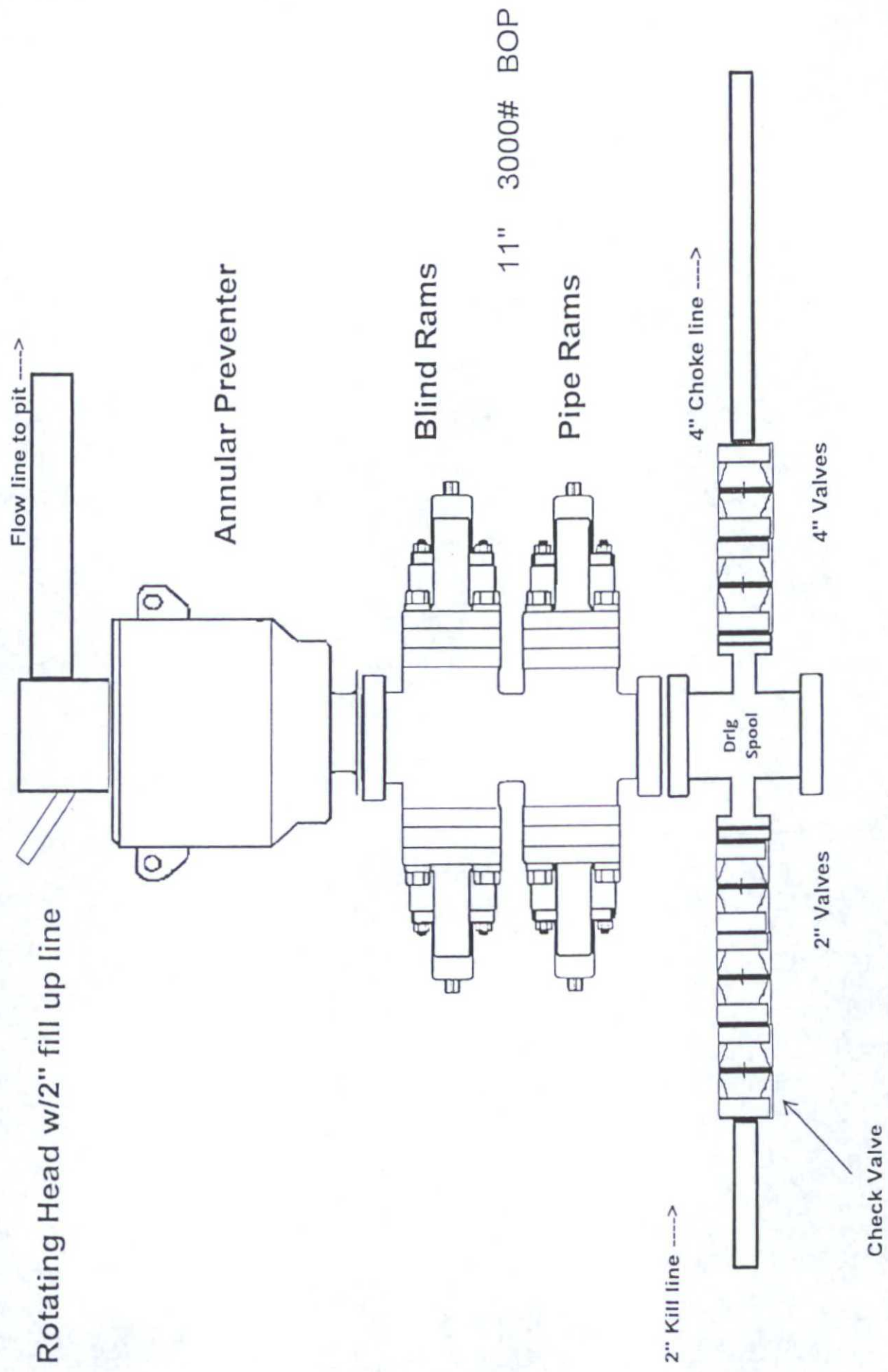
Plan: Plan #1 (#7H/OH)  
Created By: Well Planner Date: 16.03, May 08 2015



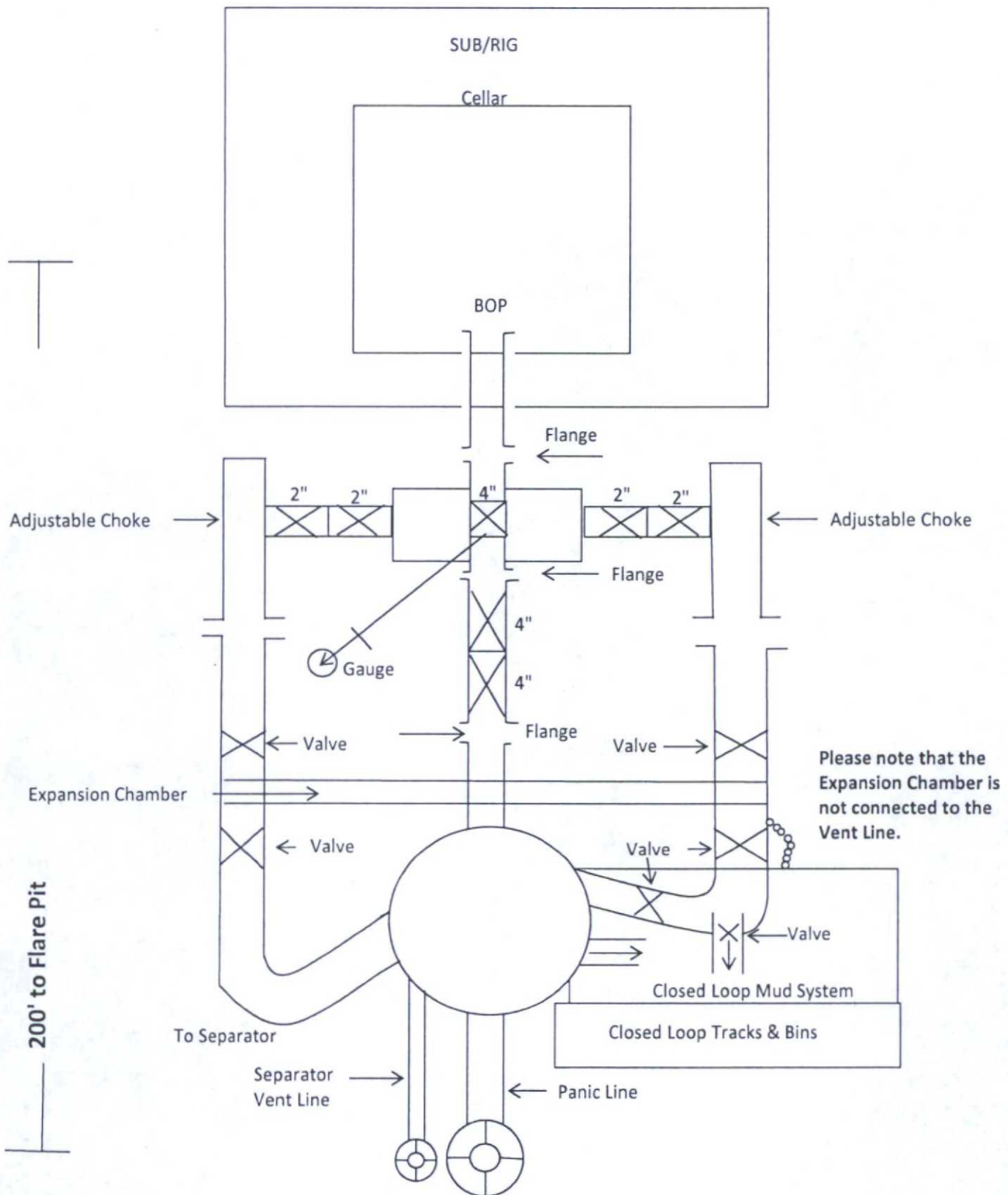
# 2,000 psi BOP Schematic



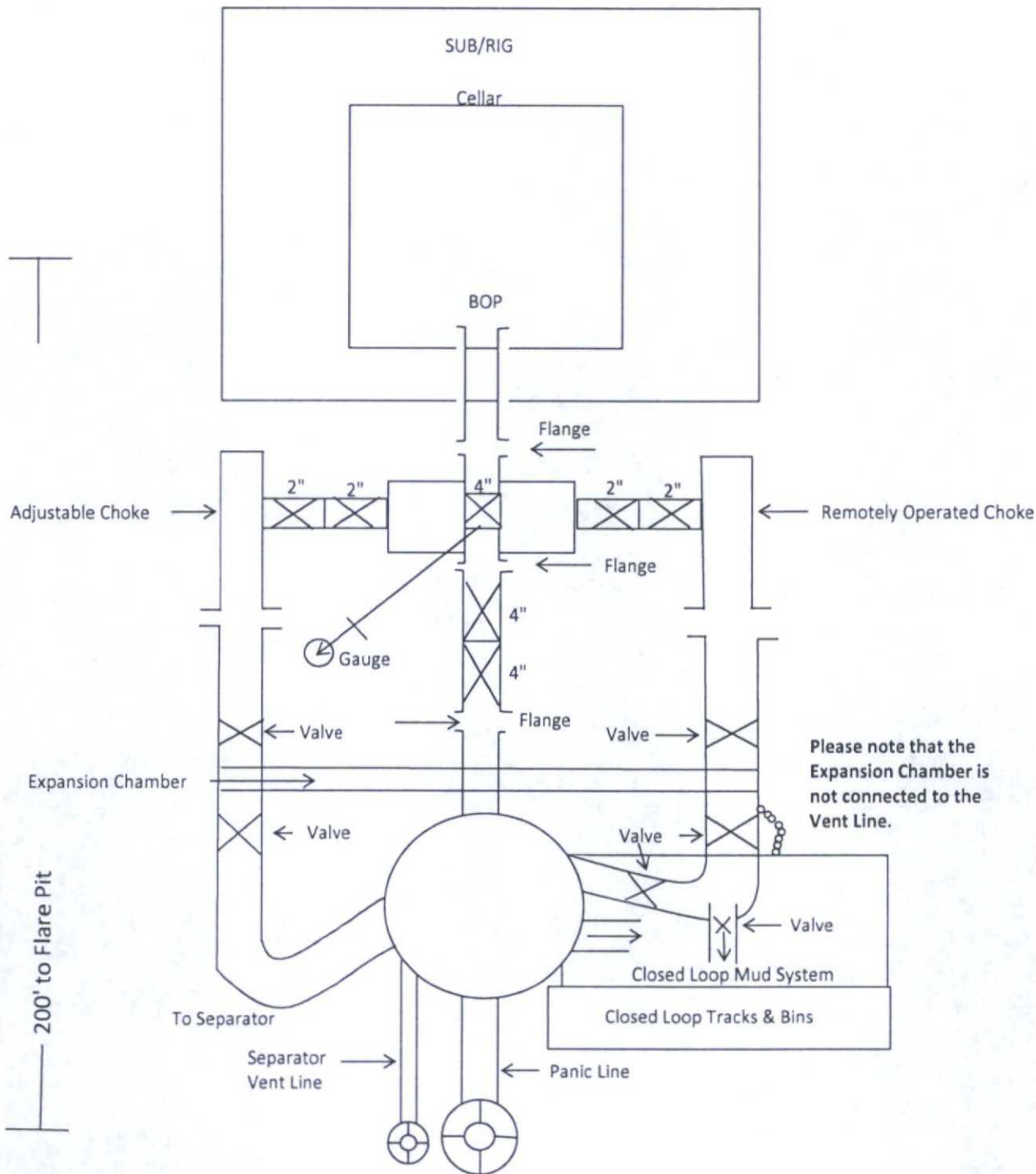
# 3,000 psi BOP Schematic



## 2M Choke Manifold Equipment

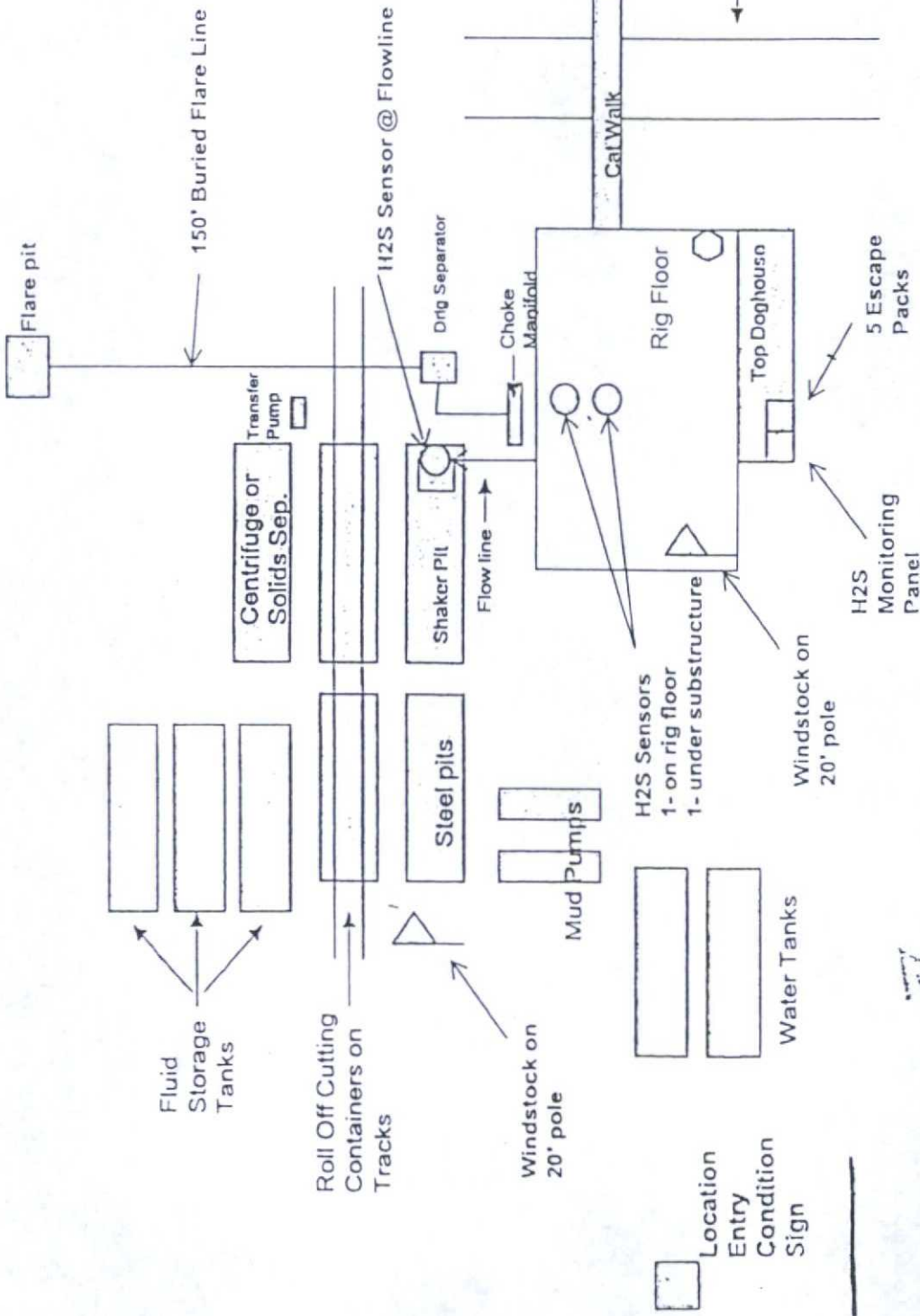


# 3M Choke Manifold Equipment



Secondary egress.

Well pad will be 300'x 300'  
with cellar in center of pad



Regeneration Energy Corp  
H<sub>2</sub>S Equipment Schematic  
Terrain: Mesquite grasslands.

Company Representative's Trailer

Prevailing Wind  
Direction in SEM

Primary Briefing  
Area w/SCBA

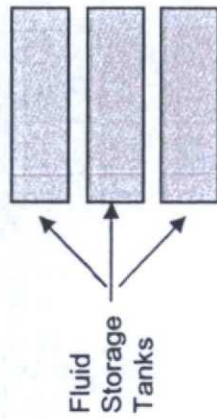
# Regeneration Energy Corp.

## Rig Plat & Closed Loop Equipment Diagram

Well pad will be 300' X 300'  
with cellar in center of pad

Flare Lines will be from both Choke  
Manifold & Separator to edge of  
location which is +/- 200'

15' 0"



Centrifuge or Solids Sep.

Transfer Pump

Shakers

Flow line

Steel pits

Mud Pumps

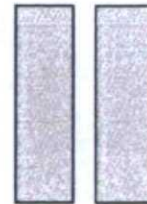
Drig Separator

Choke Manifold

Cellar

15' 0"

15' 0"



Pipe Racks

15' 0"

Trailer

Exhibit 1

\* I further certify that Regen will comply with Rule 19.15.17 NMAC by using a Closed Loop System.