

Form 3160-3  
(March 2012)HOBBS OCD  
OCD Hobbs  
SEP 17 2013FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

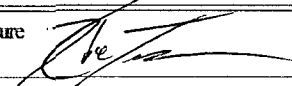
## APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

|                                                                                                                                                                                                                        |  |                                                                                                                                               |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER                                                                                                                           |  | 5. Lease Serial No.<br>NMNM 18306                                                                                                             |  |
| 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: Endurance Resources LLC                                                                                                                                                                           |  | 7. If Unit or CA Agreement, Name and No.                                                                                                      |  |
| 3a. Address: P.O. Box 1466, Artesia, NM 88211                                                                                                                                                                          |  | 8. Lease Name and Well No.<br>Stratocaster 20 Fed 3H <39925>                                                                                  |  |
| 3b. Phone No. (include area code): 575.308.0722                                                                                                                                                                        |  | 9. API Well No.<br>30-025-41447                                                                                                               |  |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)<br>At surface: SW/SE 330' FSL & 1980' FEL Lot O<br>At proposed prod. zone: NW/NE 330' FNL & 1980' FEL Lot B               |  | 10. Field and Pool, or Exploratory<br>Bon Lake, Bone Spring, West <2209>                                                                      |  |
| 11. Sec., T. R. M. or Blk. and Survey or Area<br>Sec 20-T23S-34E                                                                                                                                                       |  | 12. County or Parish<br>Lea                                                                                                                   |  |
| 13. State<br>NM                                                                                                                                                                                                        |  | 14. Distance in miles and direction from nearest town or post office*<br>Approximately 25 miles northwest of Jal, NM                          |  |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)<br>SHL 330'                                                                                      |  | 16. No. of acres in lease<br>640                                                                                                              |  |
| 17. Spacing Unit dedicated to this well<br>160 acres                                                                                                                                                                   |  | 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.<br>1320' (Stratocaster 20-2H & 4H) |  |
| 19. Proposed Depth<br>10,500 TVD; 14,875 MD                                                                                                                                                                            |  | 20. BLM/BIA Bond No. on file<br>NMB000640                                                                                                     |  |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3512' GL                                                                                                                                                        |  | 22. Approximate date work will start*<br>07/01/2013                                                                                           |  |
| 23. Estimated duration<br>45 days                                                                                                                                                                                      |  | 24. Attachments                                                                                                                               |  |

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

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

|                                                                                                    |                                    |                  |
|----------------------------------------------------------------------------------------------------|------------------------------------|------------------|
| 25. Signature:  | Name (Printed/Typed): Kale Jackson | Date: 05/06/2013 |
|----------------------------------------------------------------------------------------------------|------------------------------------|------------------|

Title: Sr. Completions Engineer

|                                                       |                       |                   |
|-------------------------------------------------------|-----------------------|-------------------|
| Approved by (Signature): <b>/s/ STEPHEN J. CAFFEY</b> | Name (Printed/Typed): | Date: SEP 13 2013 |
|-------------------------------------------------------|-----------------------|-------------------|

Title: FIELD MANAGER Office: 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.

Carlsbad Controlled Water Basin

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)

APPROVAL FOR TWO YEARS

SEE ATTACHED FOR  
CONDITIONS OF APPROVALApproval Subject to General Requirements  
& Special Stipulations Attached

OCT 15 2013



**Endurance Resources LLC**

**DRILLING & OPERATIONS PROGRAM**

**Stratocaster 20 Fed #3H**

**SHL: 330' FSL & 1980' FEL**

**BHL: 330' FNL & 1980' FEL**

**Sec 20-T23S-R34E**

**Lea Co, NM**

**1. Geological Name of Surface Formation**

Quaternary

**2. Estimated Tops of Important Geological Markers**

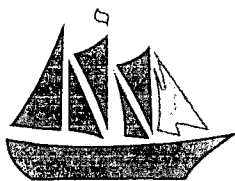
|                             |         |
|-----------------------------|---------|
| Fresh Water                 | 311'    |
| Rustler                     | 1,040'  |
| Top of Salt                 | 1,650'  |
| Base of Salt                | 4,454'  |
| Lamar Limestone             | 5,100'  |
| Delaware                    | 5,150'  |
| Bone Spring                 | 8,630'  |
| 1 <sup>st</sup> Bone Spring | 9,750'  |
| 2 <sup>nd</sup> Bone Spring | 10,275' |
| TVD: 10,500' ; MD: 14,875'  |         |

**3. Estimated Depths of Anticipated Fresh Water, Oil or Gas**

The estimated depths at which water, oil and gas will be encountered are as follows:

Water: Average depth to water: 311'. Minimum depth: 255'. Max: 430'. As reported from the New Mexico Office of the State Engineer website.

Oil & Gas: 5,150' – 10,500' (Delaware through Bone Spring) No other formations are expected to give up oil, gas, or fresh water in measurable quantities.



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#### 4. Proposed Casing Program:

| Hole Size | <i>See COA</i><br>Depths | Section         | OD Casing | Wt | Collar | Grade | Collapse DF | Burst DF | Tension DF |
|-----------|--------------------------|-----------------|-----------|----|--------|-------|-------------|----------|------------|
| 17-1/2"   | 0' - 1,250' / 685        | Surface         | 13-3/8"   | 48 | STC    | H-40  | 1.125       | 1.125    | 1.6        |
| 12-1/4"   | 0' - 2,500'              | Intermediate    | 9-5/8"    | 36 | LTC    | J-55  | 1.125       | 1.125    | 1.6        |
|           | 2,500' - 5,100'          |                 |           | 40 | LTC    | N-80  | 1.125       | 1.125    | 1.6        |
| 8-3/4"    | 0' - 9,750'              | Production      | 5-1/2"    | 17 | LTC    | P-110 | 1.125       | 1.125    | 1.6        |
|           | 9,750' - 14,875'         | Curve & Lateral |           | 17 | BTC    | P-110 | 1.125       | 1.125    | 1.6        |

NOTE: ALL CASING IS NEW & API APPROVED. WHILE RUNNING CASING, PIPE WILL BE KEPT A MINIMUM OF 1/3 FULL AT ALL TIMES TO AVOID APPROACHING COLLAPSE PRESSURE OF THE CASING.

#### 5. Proposed Cement Program:

##### a. 13-3/8" Surface

Lead: 450sks ExtendaCem-CZ (Class C) (13.5ppg / 1.75cuft/sk)

Tail: 415sks HalCem-C (Class C) + 2% CaCl (14.80ppg / 1.35cuft/sk)

\*\*Calculated w/ 50% excess on OH volumes

##### b. 9-5/8" Intermediate

Lead: 985sks EconoCem-HLC (Class C) +5% salt + 5 #/sk lost circulation additive (12.70ppg/ 1.97cuft/sk)

Tail: 175sks HalCem-C (Class C) +1% CaCl (14.80ppg/ 1.34cuft/sk)

\*\*Calculated w/ 35% excess on OH volumes

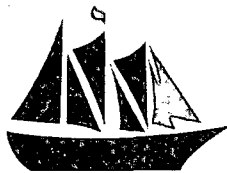
##### c. 5-1/2" Production

Lead: 680sks VersaCem-H (Class H) +0.6% retarder +0.25#/sk defoamer (11.90ppg/ 2.25cuft/sk)

Tail: 620sks SoluCem-H (Class H) +0.4% retarder +0.25#/sk defoamer (15ppg/ 2.62cuft/sk)

\*\*Calculated w/ 25% excess on OH volumes

NOTE: THE ABOVE CEMENT VOLUMES COULD BE REVISED PENDING FLUID CALIPER & CALIPER LOG DATA. ALL VOLUMES ARE DESIGNED TO CIRCULATE TO SURFACE.



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6. Minimum Specifications for Pressure Control:

13-5/8 (5M) working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer (please see BOP schematic). A 5M choke manifold & 120 gallon accumulator with floor and remote operating stations & auxiliary power system. Rotating head as needed. A Kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be NU and operated at least once a day while drilling and the blind rams will be operated when out of the hole during trips. From the base of the 13-3/8" csg through running of production casing, the well will be equipped with a 5M BOP system. Below the 9-5/8 csg shoe, this 5M system will be equipped with a HCR valve, remote kill line, & annular to match. The remote kill line will be installed prior to testing the system & tested to stack pressure.

Before drilling out of the 13-3/8 surface casing, BOP will be tested by an independent surface company to 250 psi low & 3000 psi high. Hydril will be tested to 250 psi low and 1500 psi high. Before drilling out the 9-5/8 intermediate shoe BOP will be tested by an independent service company to 250psi low and 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high. These low pressure tests from 250 to 300 psi will be held a minimum of 10 minutes if test is done with a test plug & 30 minutes without a test plug.

7. Estimated BHP:

4586 psi @ 10,500' TVD



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8. Mud Program: The applicable depths & properties of this system are as follows:

| Depth                         | Type of System | Mud Weight | Viscosity (sec) | Waterloss (cc) |
|-------------------------------|----------------|------------|-----------------|----------------|
| 0' - 1,200' <del>1,115'</del> | Fresh Water    | 8.4        | 29              | NC             |
| <del>1,200'</del> - 5,100'    | Brine          | 9.8 - 10.0 | 28-32           | NC             |
| 5,100' - 14,875'              | Cut Brine      | 8.6 - 9.2  | 28-32           | NC-12          |

NOTE: NECESSARY MUD PRODUCTS FOR WEIGHT ADDITION & FLUID LOSS WILL BE ON LOCATION AT ALL TIMES. VISUAL MUD MONITORING EQUIPMENT (I.E. TRIP TANK) WILL BE IN PLACE TO DETECT VOLUME CHANGES INDICATING LOSS OR GAIN OF CIRCULATION VOLUME WITH ALARMS.

9. Auxiliary Well Control & Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times
- H2S detection equipment will be in operation & breathing apparatuses will be on location after the drill out of the 13-3/8" casing shoe until the 5-1/2" casing is cemented.

10. Testing, Logging & Coring Program:

- No drill stem tests are planned.
- GR/N well log ran from KOP to surface.
- Triple combo logs from KOP to intermediate casing shoe.
- No coring is planned.

11. Potential Hazards:

No abnormal pressures or temperatures are expected. The existing Paloma 20-1 (20-23S-34E) has been producing in this prospective horizontal target area since 2011. If H2S is encountered, Endurance Resources LLC will comply with Onshore Order #6. Regardless, all personnel will be trained & qualified with H2S safety. Rig safety equipment will all also be checked daily once drill out of the 13-3/8" casing shoe to TD.



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**12. Anticipated starting date & Duration of Operations:**

Road & location construction will begin after the BLM has approved the APD. Anticipated spud date will begin after BLM approval & after a drilling rig is secured. Move in operations & drilling is expected to take no more than 45 days. An additional 30-50 days will be needed to complete this well & construct surface facilities and/or lay flow lines in order to place well on production. A battery will be built on the Stratocaster 20-1H location to handle this well, as well as 3 other potential new drills in this section.



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

| POD Number    | POD Sub-Code | basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X      | Y        | Depth Well | Depth Water | Water Column |
|---------------|--------------|-------|--------|------|------|-----|-----|-----|-----|--------|----------|------------|-------------|--------------|
| CP 00556      |              |       | LE     | 4    | 4    | 3   | 08  | 23S | 34E | 641762 | 3576206  | 497        | 255         | 242          |
| CP 00580      |              |       | LE     | 3    | 4    | 3   | 23  | 23S | 34E | 646524 | 3572948* | 220        |             |              |
| CP 00606      |              |       | LE     |      | 4    | 1   | 23  | 23S | 34E | 646613 | 3573854* | 650        | 265         | 385          |
| CP 00618      |              |       | LE     | 1    | 2    | 4   | 22  | 23S | 34E | 645713 | 3573539* | 428        | 295         | 133          |
| CP 00637      |              |       | LE     | 3    | 3    | 4   | 15  | 23S | 34E | 645293 | 3574541* | 430        | 430         | 0            |
| CP 00872      |              |       | LE     | 1    | 1    | 1   | 08  | 23S | 34E | 641225 | 3577504* | 500        | 305         | 195          |
| CP 01120 POD1 |              |       | LE     | 2    | 3    | 3   | 14  | 23S | 34E | 646366 | 3574753  | 397        | 318         | 79           |

Average Depth to Water: **311 feet**

Minimum Depth: **255 feet**

Maximum Depth: **430 feet**

**Record Count: 7**

**Basin/County Search:**

County: Lea

**PLSS Search:**

Township: 23S

Range: 34E

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

# Endurance Resources LLC

HALLIBURTON

Sperry Drilling Services

Project: Lea County, NM (NAD 83)  
Site: Stratocaster 20 Fed  
Well: Stratocaster 20 Fed #3H  
Wellbore: Wellbore #1  
Plan: Plan #1  
Rig: Original Well Elev

## SECTION DETAILS

| MD       | Inc   | Azi    | TVD      | +N/S    | +E/W   | DLog  | TFace  | VSec    | Annotation  |
|----------|-------|--------|----------|---------|--------|-------|--------|---------|-------------|
| 0.00     | 0.00  | 0.00   | 0.00     | 0.00    | 0.00   | 0.00  | 0.00   | 0.00    |             |
| 9927.04  | 0.00  | 0.00   | 9927.04  | 0.00    | 0.00   | 0.00  | 0.00   | 0.00    | Start Build |
| 10827.04 | 90.00 | 359.50 | 10500.00 | -572.94 | -4.97  | 10.00 | 359.50 | 572.93  | End Build   |
| 14875.11 | 90.00 | 359.50 | 10500.00 | 4820.85 | -40.10 | 0.00  | 0.00   | 4821.02 | TD          |

## WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

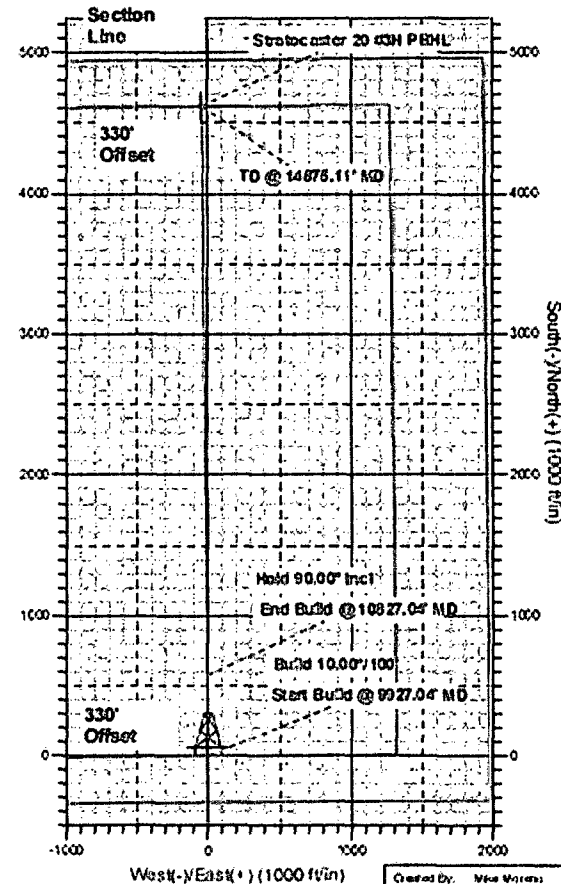
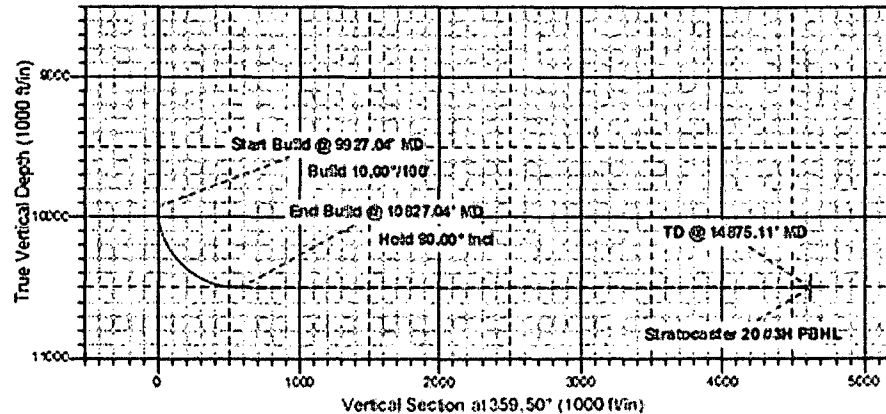
| Name                     | TVD      | +N/S    | +E/W   | Northing  | Easting   |
|--------------------------|----------|---------|--------|-----------|-----------|
| Stratocaster 20 03H PBNL | 10500.00 | 4820.85 | -40.10 | 472610.68 | 801932.56 |

## Surface Location:

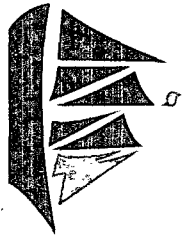
US State Plane 1083  
New Mexico Eastern Zone  
Bearing: WELL @ 3637.408 (Original Well Bore)  
Northing 467089.81 Easting 801972.06  
Latitude 32° 17' 01.541 N Longitude 103° 29' 23.812 W

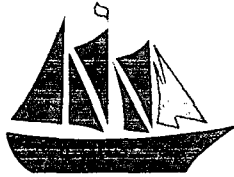
To convert a Magnetic Direction to a Grid Direction, Add 6.97°

Magnetic Model: BGSN2012 Date: 08-May-13  
Azimuths to Grid North



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## **Endurance Resources LLC**

Lea County, NM (NAD 83)  
Stratocaster 20 Fed  
Stratocaster 20 Fed #3H

Wellbore #1

Plan: Plan #1

## **Sperry Drilling Services Standard Report**

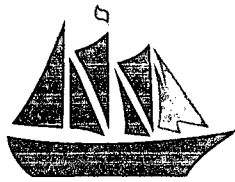
08 May, 2013

Well Coordinates: 467,989.81 N, 801,972.66 E (32° 17' 01.54" N, 103° 29' 23.81" W)  
Ground Level: 3,512.40 ft

|                          |                                          |
|--------------------------|------------------------------------------|
| Local Coordinate Origin: | Centered on Well Stratocaster 20 Fed #3H |
| Viewing Datum:           | WELL @ 3537.40ft (Original Well Elev)    |
| TVDs to System:          | N                                        |
| North Reference:         | Grid                                     |
| Unit System:             | API - US Survey Feet                     |

Version: 2003.16 Build: 431

HALLIBURTON



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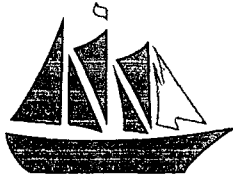
Endurance Resources LLC

Lea County, NM (NAD 83)

HALLIBURTON

Plan Report for Stratocaster 20 Fed #3H - Plan #1

| Measured<br>Depth<br>(m) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(m) | -N/-S<br>(m) | -E/-W<br>(m) | Vertical<br>Section<br>(m) | Dogleg<br>Rate<br>(°/100m) |
|--------------------------|--------------------|----------------|--------------------------|--------------|--------------|----------------------------|----------------------------|
| 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                       |
| 200.00                   | 0.00               | 0.00           | 200.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 300.00                   | 0.00               | 0.00           | 300.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 400.00                   | 0.00               | 0.00           | 400.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 500.00                   | 0.00               | 0.00           | 500.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 600.00                   | 0.00               | 0.00           | 600.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 700.00                   | 0.00               | 0.00           | 700.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 800.00                   | 0.00               | 0.00           | 800.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 900.00                   | 0.00               | 0.00           | 900.00                   | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,000.00                 | 0.00               | 0.00           | 1,000.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,100.00                 | 0.00               | 0.00           | 1,100.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,200.00                 | 0.00               | 0.00           | 1,200.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,300.00                 | 0.00               | 0.00           | 1,300.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,400.00                 | 0.00               | 0.00           | 1,400.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,500.00                 | 0.00               | 0.00           | 1,500.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,600.00                 | 0.00               | 0.00           | 1,600.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,700.00                 | 0.00               | 0.00           | 1,700.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,800.00                 | 0.00               | 0.00           | 1,800.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 1,900.00                 | 0.00               | 0.00           | 1,900.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,000.00                 | 0.00               | 0.00           | 2,000.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,100.00                 | 0.00               | 0.00           | 2,100.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,200.00                 | 0.00               | 0.00           | 2,200.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,300.00                 | 0.00               | 0.00           | 2,300.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,400.00                 | 0.00               | 0.00           | 2,400.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,500.00                 | 0.00               | 0.00           | 2,500.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,600.00                 | 0.00               | 0.00           | 2,600.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,700.00                 | 0.00               | 0.00           | 2,700.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,800.00                 | 0.00               | 0.00           | 2,800.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 2,900.00                 | 0.00               | 0.00           | 2,900.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,000.00                 | 0.00               | 0.00           | 3,000.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,100.00                 | 0.00               | 0.00           | 3,100.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,200.00                 | 0.00               | 0.00           | 3,200.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,300.00                 | 0.00               | 0.00           | 3,300.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,400.00                 | 0.00               | 0.00           | 3,400.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,500.00                 | 0.00               | 0.00           | 3,500.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,600.00                 | 0.00               | 0.00           | 3,600.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,700.00                 | 0.00               | 0.00           | 3,700.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,800.00                 | 0.00               | 0.00           | 3,800.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 3,900.00                 | 0.00               | 0.00           | 3,900.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,000.00                 | 0.00               | 0.00           | 4,000.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,100.00                 | 0.00               | 0.00           | 4,100.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,200.00                 | 0.00               | 0.00           | 4,200.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,300.00                 | 0.00               | 0.00           | 4,300.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,400.00                 | 0.00               | 0.00           | 4,400.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,500.00                 | 0.00               | 0.00           | 4,500.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,600.00                 | 0.00               | 0.00           | 4,600.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,700.00                 | 0.00               | 0.00           | 4,700.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,800.00                 | 0.00               | 0.00           | 4,800.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |
| 4,900.00                 | 0.00               | 0.00           | 4,900.00                 | 0.00         | 0.00         | 0.00                       | 0.00                       |



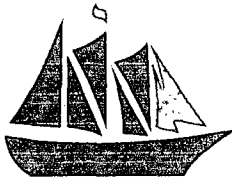
ENDURANCE  
RESOURCES, LLC

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Endurance Resources LLC  
Lea County, NM (NAD 83)

Plan Report for Stratocaster 20 Fed #3H - Plan #1

| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | -N-S<br>(ft) | -E-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(%/100ft) |
|---------------------------|--------------------|----------------|---------------------------|--------------|--------------|-----------------------------|-----------------------------|
| 5,000.00                  | 0.00               | 0.00           | 5,000.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,100.00                  | 0.00               | 0.00           | 5,100.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,200.00                  | 0.00               | 0.00           | 5,200.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,300.00                  | 0.00               | 0.00           | 5,300.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,400.00                  | 0.00               | 0.00           | 5,400.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,500.00                  | 0.00               | 0.00           | 5,500.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,600.00                  | 0.00               | 0.00           | 5,600.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,700.00                  | 0.00               | 0.00           | 5,700.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,800.00                  | 0.00               | 0.00           | 5,800.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 5,900.00                  | 0.00               | 0.00           | 5,900.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,000.00                  | 0.00               | 0.00           | 6,000.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,100.00                  | 0.00               | 0.00           | 6,100.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,200.00                  | 0.00               | 0.00           | 6,200.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,300.00                  | 0.00               | 0.00           | 6,300.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,400.00                  | 0.00               | 0.00           | 6,400.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,500.00                  | 0.00               | 0.00           | 6,500.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,600.00                  | 0.00               | 0.00           | 6,600.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,700.00                  | 0.00               | 0.00           | 6,700.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,800.00                  | 0.00               | 0.00           | 6,800.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 6,900.00                  | 0.00               | 0.00           | 6,900.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,000.00                  | 0.00               | 0.00           | 7,000.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,100.00                  | 0.00               | 0.00           | 7,100.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,200.00                  | 0.00               | 0.00           | 7,200.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,300.00                  | 0.00               | 0.00           | 7,300.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,400.00                  | 0.00               | 0.00           | 7,400.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,500.00                  | 0.00               | 0.00           | 7,500.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,600.00                  | 0.00               | 0.00           | 7,600.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,700.00                  | 0.00               | 0.00           | 7,700.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,800.00                  | 0.00               | 0.00           | 7,800.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 7,900.00                  | 0.00               | 0.00           | 7,900.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,000.00                  | 0.00               | 0.00           | 8,000.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,100.00                  | 0.00               | 0.00           | 8,100.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,200.00                  | 0.00               | 0.00           | 8,200.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,300.00                  | 0.00               | 0.00           | 8,300.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,400.00                  | 0.00               | 0.00           | 8,400.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,500.00                  | 0.00               | 0.00           | 8,500.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,600.00                  | 0.00               | 0.00           | 8,600.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,700.00                  | 0.00               | 0.00           | 8,700.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,800.00                  | 0.00               | 0.00           | 8,800.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 8,900.00                  | 0.00               | 0.00           | 8,900.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,000.00                  | 0.00               | 0.00           | 9,000.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,100.00                  | 0.00               | 0.00           | 9,100.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,200.00                  | 0.00               | 0.00           | 9,200.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,300.00                  | 0.00               | 0.00           | 9,300.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,400.00                  | 0.00               | 0.00           | 9,400.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,500.00                  | 0.00               | 0.00           | 9,500.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,600.00                  | 0.00               | 0.00           | 9,600.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,700.00                  | 0.00               | 0.00           | 9,700.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,800.00                  | 0.00               | 0.00           | 9,800.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |
| 9,900.00                  | 0.00               | 0.00           | 9,900.00                  | 0.00         | 0.00         | 0.00                        | 0.00                        |



ENDURANCE  
RESOURCES, LLC

Endurance Resources LLC  
Lea County, NM (NAD 83)

## HALLIBURTON

### Plan Report for Stratocaster 20 Fed #3H - Plan #1

| Measured<br>Depth<br>(ft)                            | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | -N/-S<br>(ft) | -E/-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) |
|------------------------------------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|
| 9,927.04                                             | 0.00               | 0.00           | 9,927.04                  | 0.00          | 0.00          | 0.00                        | 0.00                        |
| <b>Start Build @ 9927.04' MD - Build 10.00°/100'</b> |                    |                |                           |               |               |                             |                             |
| 9,950.00                                             | 2.30               | 359.50         | 9,949.99                  | 0.46          | 0.00          | 0.46                        | 10.00                       |
| 10,000.00                                            | 7.30               | 359.50         | 9,999.80                  | 4.64          | -0.04         | 4.64                        | 10.00                       |
| 10,050.00                                            | 12.30              | 359.50         | 10,049.06                 | 13.14         | -0.11         | 13.14                       | 10.00                       |
| 10,100.00                                            | 17.30              | 359.50         | 10,097.39                 | 25.91         | -0.22         | 25.91                       | 10.00                       |
| 10,150.00                                            | 22.30              | 359.50         | 10,144.42                 | 42.83         | -0.37         | 42.84                       | 10.00                       |
| 10,200.00                                            | 27.30              | 359.50         | 10,189.79                 | 63.80         | -0.55         | 63.80                       | 10.00                       |
| 10,250.00                                            | 32.30              | 359.50         | 10,233.17                 | 88.63         | -0.77         | 88.64                       | 10.00                       |
| 10,300.00                                            | 37.30              | 359.50         | 10,274.21                 | 117.16        | -1.02         | 117.16                      | 10.00                       |
| 10,350.00                                            | 42.30              | 359.50         | 10,312.62                 | 149.15        | -1.29         | 149.15                      | 10.00                       |
| 10,400.00                                            | 47.30              | 359.50         | 10,348.09                 | 184.36        | -1.60         | 184.37                      | 10.00                       |
| 10,450.00                                            | 52.30              | 359.50         | 10,380.35                 | 222.54        | -1.93         | 222.55                      | 10.00                       |
| 10,500.00                                            | 57.30              | 359.50         | 10,409.17                 | 263.38        | -2.29         | 263.39                      | 10.00                       |
| 10,550.00                                            | 62.30              | 359.50         | 10,434.31                 | 306.58        | -2.66         | 306.59                      | 10.00                       |
| 10,600.00                                            | 67.30              | 359.50         | 10,455.60                 | 351.80        | -3.05         | 351.81                      | 10.00                       |
| 10,650.00                                            | 72.30              | 359.50         | 10,472.86                 | 398.71        | -3.46         | 398.72                      | 10.00                       |
| 10,700.00                                            | 77.30              | 359.50         | 10,485.97                 | 446.94        | -3.88         | 446.96                      | 10.00                       |
| 10,750.00                                            | 82.30              | 359.50         | 10,494.83                 | 496.13        | -4.31         | 496.15                      | 10.00                       |
| 10,800.00                                            | 87.30              | 359.50         | 10,499.36                 | 545.91        | -4.74         | 545.93                      | 10.00                       |
| 10,827.04                                            | 90.00              | 359.50         | 10,500.00                 | 572.94        | -4.97         | 572.96                      | 10.00                       |
| <b>End Build @ 10827.04' MD - Hold 90.00° Incl</b>   |                    |                |                           |               |               |                             |                             |
| 10,900.00                                            | 90.00              | 359.50         | 10,500.00                 | 645.89        | -5.61         | 645.92                      | 0.00                        |
| 11,000.00                                            | 90.00              | 359.50         | 10,500.00                 | 745.89        | -6.47         | 745.92                      | 0.00                        |
| 11,100.00                                            | 90.00              | 359.50         | 10,500.00                 | 845.89        | -7.34         | 845.92                      | 0.00                        |
| 11,200.00                                            | 90.00              | 359.50         | 10,500.00                 | 945.88        | -8.21         | 945.92                      | 0.00                        |
| 11,300.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,045.88      | -9.08         | 1,045.92                    | 0.00                        |
| 11,400.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,145.87      | -9.94         | 1,145.92                    | 0.00                        |
| 11,500.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,245.87      | -10.81        | 1,245.92                    | 0.00                        |
| 11,600.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,345.87      | -11.68        | 1,345.92                    | 0.00                        |
| 11,700.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,445.86      | -12.55        | 1,445.92                    | 0.00                        |
| 11,800.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,545.86      | -13.42        | 1,545.92                    | 0.00                        |
| 11,900.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,645.86      | -14.28        | 1,645.92                    | 0.00                        |
| 12,000.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,745.85      | -15.15        | 1,745.92                    | 0.00                        |
| 12,100.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,845.85      | -16.02        | 1,845.92                    | 0.00                        |
| 12,200.00                                            | 90.00              | 359.50         | 10,500.00                 | 1,945.84      | -16.89        | 1,945.92                    | 0.00                        |
| 12,300.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,045.84      | -17.75        | 2,045.92                    | 0.00                        |
| 12,400.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,145.84      | -18.62        | 2,145.92                    | 0.00                        |
| 12,500.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,245.83      | -19.49        | 2,245.92                    | 0.00                        |
| 12,600.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,345.83      | -20.36        | 2,345.92                    | 0.00                        |
| 12,700.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,445.83      | -21.23        | 2,445.92                    | 0.00                        |
| 12,800.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,545.82      | -22.09        | 2,545.92                    | 0.00                        |
| 12,900.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,645.82      | -22.96        | 2,645.92                    | 0.00                        |
| 13,000.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,745.81      | -23.83        | 2,745.92                    | 0.00                        |
| 13,100.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,845.81      | -24.70        | 2,845.92                    | 0.00                        |
| 13,200.00                                            | 90.00              | 359.50         | 10,500.00                 | 2,945.81      | -25.56        | 2,945.92                    | 0.00                        |
| 13,300.00                                            | 90.00              | 359.50         | 10,500.00                 | 3,045.80      | -26.43        | 3,045.92                    | 0.00                        |
| 13,400.00                                            | 90.00              | 359.50         | 10,500.00                 | 3,145.80      | -27.30        | 3,145.92                    | 0.00                        |
| 13,500.00                                            | 90.00              | 359.50         | 10,500.00                 | 3,245.80      | -28.17        | 3,245.92                    | 0.00                        |
| 13,600.00                                            | 90.00              | 359.50         | 10,500.00                 | 3,345.79      | -29.03        | 3,345.92                    | 0.00                        |
| 13,700.00                                            | 90.00              | 359.50         | 10,500.00                 | 3,445.79      | -29.90        | 3,445.92                    | 0.00                        |



Lea County, NM (NAD 83)

## Plan Report for Stratocaster 20 Fed #3H - Plan #1

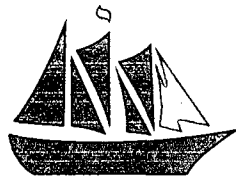
| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | -N-S<br>(ft) | -E-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) |
|---------------------------|--------------------|----------------|---------------------------|--------------|--------------|-----------------------------|-----------------------------|
| 13,800.00                 | 90.00              | 359.50         | 10,500.00                 | 3,545.78     | -30.77       | 3,545.92                    | 0.00                        |
| 13,900.00                 | 90.00              | 359.50         | 10,500.00                 | 3,645.78     | -31.64       | 3,645.92                    | 0.00                        |
| 14,000.00                 | 90.00              | 359.50         | 10,500.00                 | 3,745.78     | -32.51       | 3,745.92                    | 0.00                        |
| 14,100.00                 | 90.00              | 359.50         | 10,500.00                 | 3,845.77     | -33.37       | 3,845.92                    | 0.00                        |
| 14,200.00                 | 90.00              | 359.50         | 10,500.00                 | 3,945.77     | -34.24       | 3,945.92                    | 0.00                        |
| 14,300.00                 | 90.00              | 359.50         | 10,500.00                 | 4,045.77     | -35.11       | 4,045.92                    | 0.00                        |
| 14,400.00                 | 90.00              | 359.50         | 10,500.00                 | 4,145.76     | -35.98       | 4,145.92                    | 0.00                        |
| 14,500.00                 | 90.00              | 359.50         | 10,500.00                 | 4,245.76     | -36.84       | 4,245.92                    | 0.00                        |
| 14,600.00                 | 90.00              | 359.50         | 10,500.00                 | 4,345.75     | -37.71       | 4,345.92                    | 0.00                        |
| 14,700.00                 | 90.00              | 359.50         | 10,500.00                 | 4,445.75     | -38.58       | 4,445.92                    | 0.00                        |
| 14,800.00                 | 90.00              | 359.50         | 10,500.00                 | 4,545.75     | -39.45       | 4,545.92                    | 0.00                        |
| 14,875.11                 | 90.00              | 359.50         | 10,500.00                 | 4,620.85     | -40.10       | 4,621.02                    | 0.00                        |

| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Local Coordinates |              | Comment                   |
|---------------------------|---------------------------|-------------------|--------------|---------------------------|
|                           |                           | -N+S<br>(ft)      | -E+W<br>(ft) |                           |
| 9.927.04                  | 9.927.04                  | 0.00              | 0.00         | Start Build @ 9927.04' MD |
| 9.927.04                  | 9.927.04                  | 0.00              | 0.00         | Build 10.00' / 100'       |
| 10.827.04                 | 10.500.00                 | 572.94            | -4.97        | End Build @ 10527.04' MD  |
| 10.827.04                 | 10.500.00                 | 572.94            | -4.97        | Hold 90.00' Incl          |
| 14.875.11                 | 10.500.00                 | 4,620.85          | -40.10       | TD @ 14875.11' MD         |

| Angle Type | Target               | Azimuth (°) | Origin Type | Origin    |           | Start TVD (m) |
|------------|----------------------|-------------|-------------|-----------|-----------|---------------|
|            |                      |             |             | -N/-S (m) | -E/-W (m) |               |
| User       | No Target (Freehand) | 359.50      | Slot        | 0.00      | 0.00      | 0.00          |

| From<br>(n) | To<br>(n) | Survey/Plan | Survey Tool |
|-------------|-----------|-------------|-------------|
| 0.00        | 14,575.11 | Plan #1     | MWD+SC      |

| Target Name<br>- hit/miss target<br>- Shape                 | Dip<br>Angle<br>(°) | Dip<br>Dir.<br>(°) | TVD<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Northing<br>(ft) | Easting<br>(ft) | Latitude         | Longitude         |
|-------------------------------------------------------------|---------------------|--------------------|-------------|---------------|---------------|------------------|-----------------|------------------|-------------------|
| Stratocaster 20 #3H<br>- plan hits target center<br>- Point | 0.00                | 0.00               | 10,500.00   | 4,620.85      | -0.10         | 472,610.66       | 801,932.56      | 32° 17' 47.267 N | 103° 29' 23.856 W |



ENDURANCE  
RESOURCES, LLC

Endurance Resources LLC  
Lea County, NM (NAD 83)

## HALLIBURTON

### North Reference Sheet for Stratocaster 20 Fed - Stratocaster 20 Fed #3H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to WELL @ 3537.40ft (Original Well Elev). Northing and Easting are relative to Stratocaster 20 Fed #3H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W", Longitude Origin:0° 0' 0.000 E", Latitude Origin:0° 0' 0.000 N"

False Easting: 541,337.50ft, False Northing: 0.00ft, Scale Reduction: 0.99998688

Grid Coordinates of Well: 467,589.81 ft N, 801,972.66 ft E

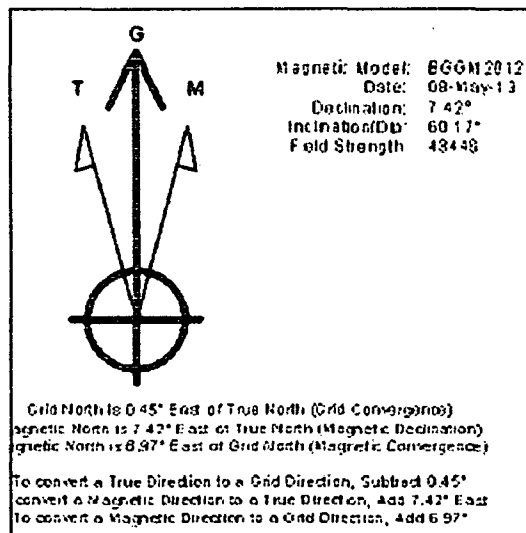
Geographical Coordinates of Well: 32° 17' 01.54" N, 103° 29' 23.81" W

Grid Convergence at Surface is: 0.45°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,875.11ft

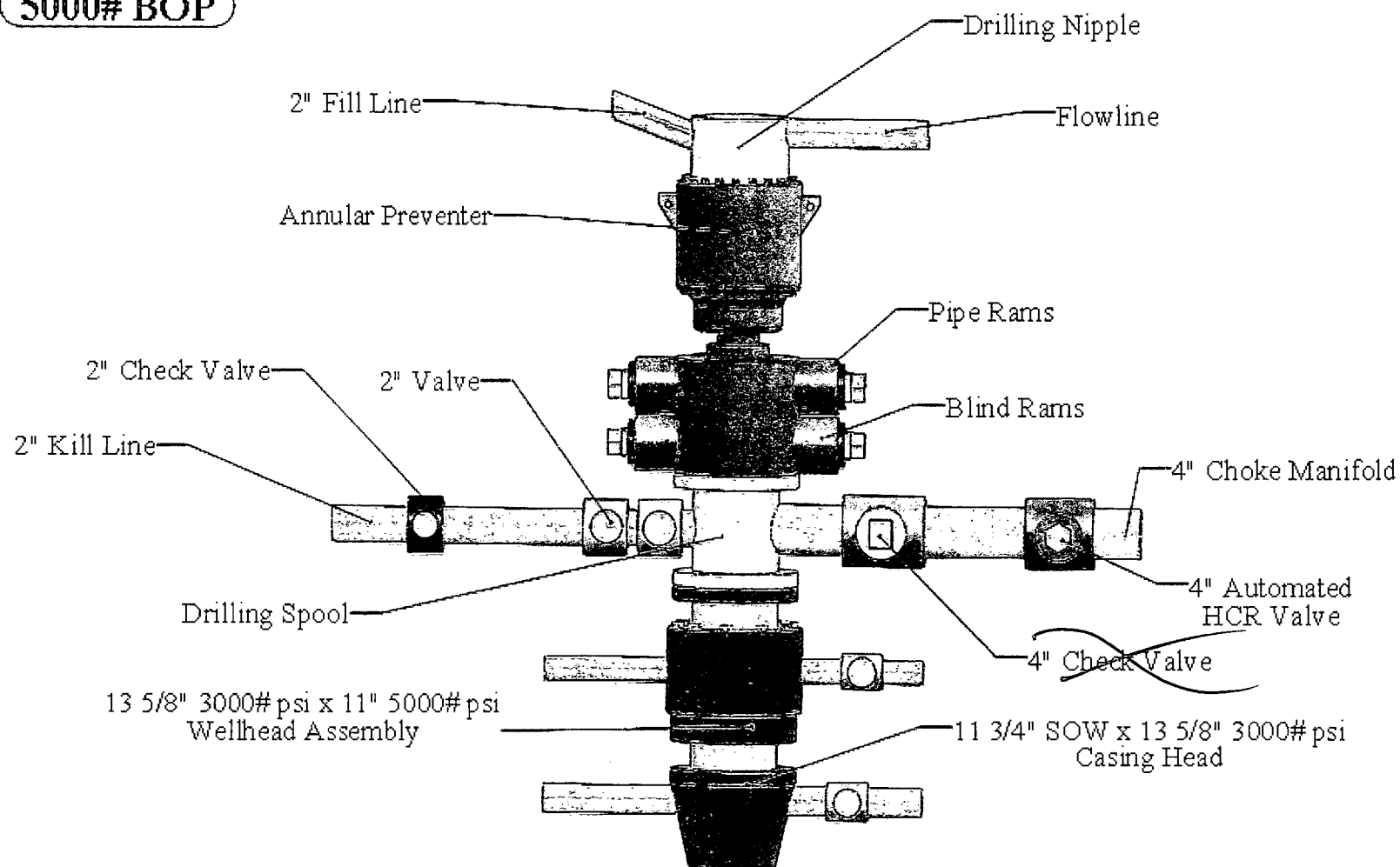
the Bottom Hole Displacement is 4,621.02ft in the Direction of 359.50° (Grid).

Magnetic Convergence at surface is: -6.97° ( 8 May 2013, . BGGM2012)

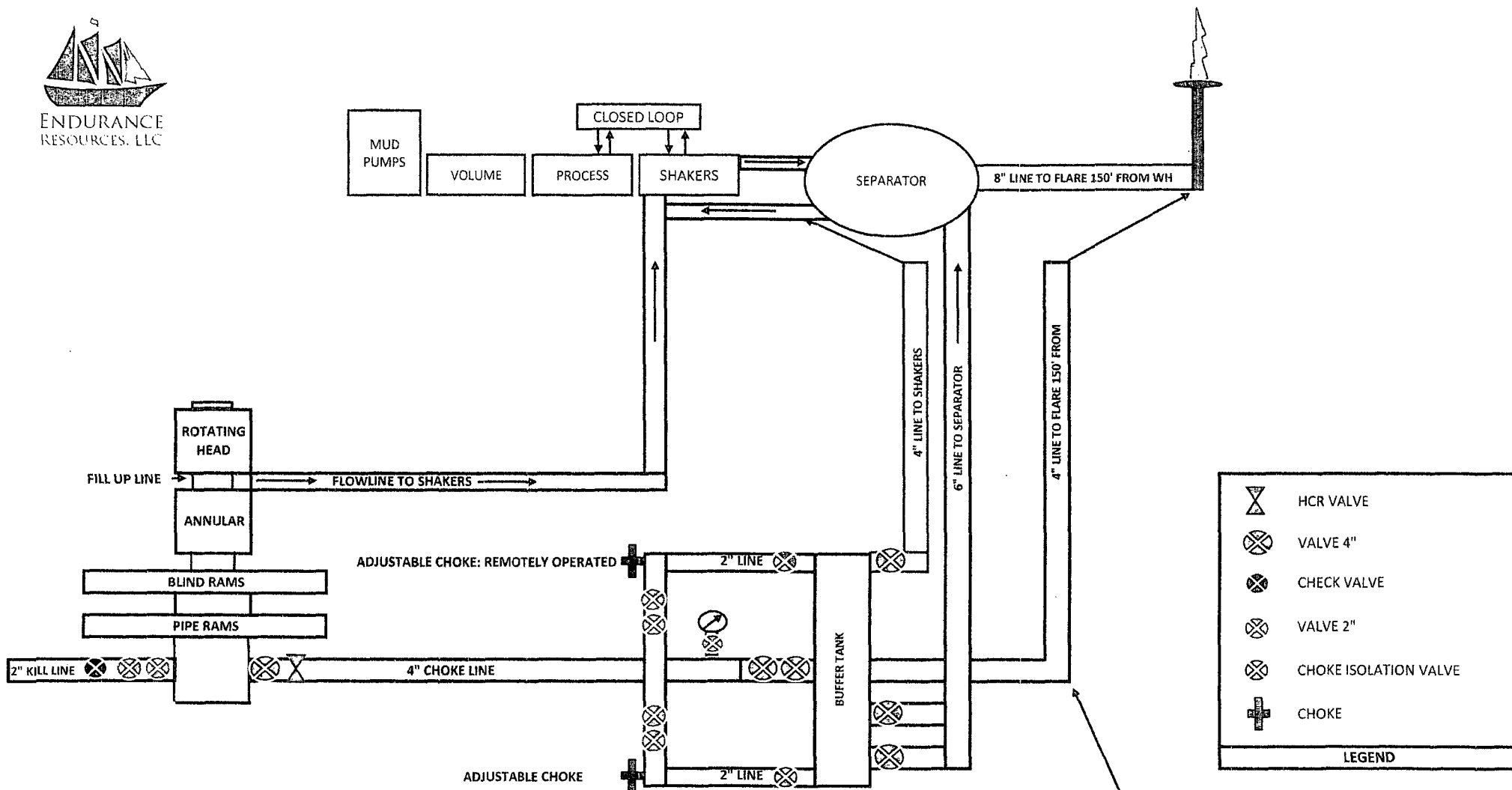




## 5000# BOP



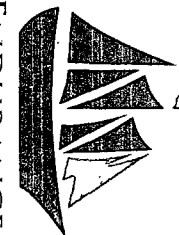
5M BOPE AND CLOSED LOOP EQUIPMENT SCHEMATIC FOR 13-5/8 AND 11" BOP SYSTEMS TESTED TO 3M PER ONSHORE ORDER #2



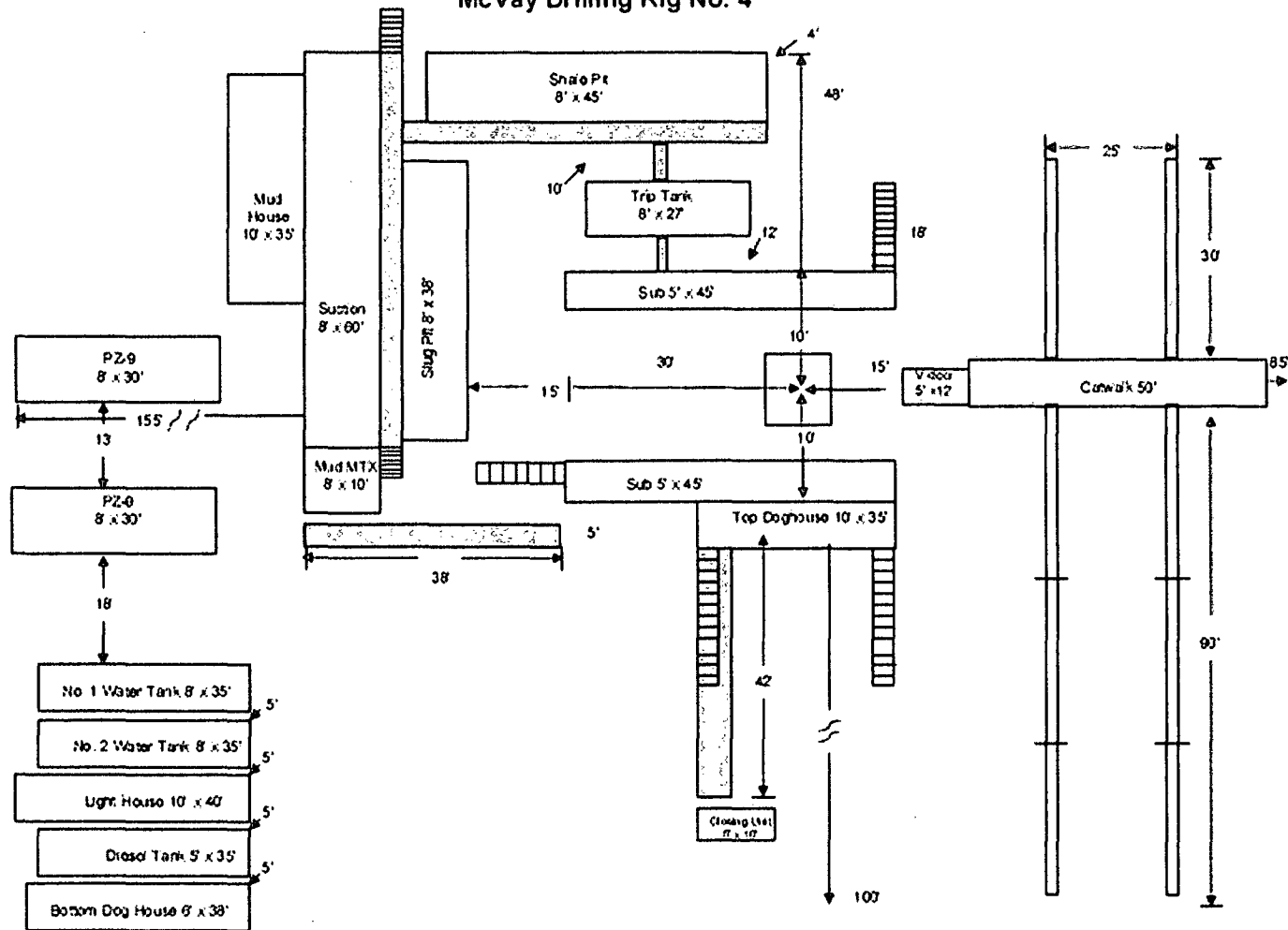
TARGETED T'S. ALL TURNS WILL BE TARGETED. *see C&A*

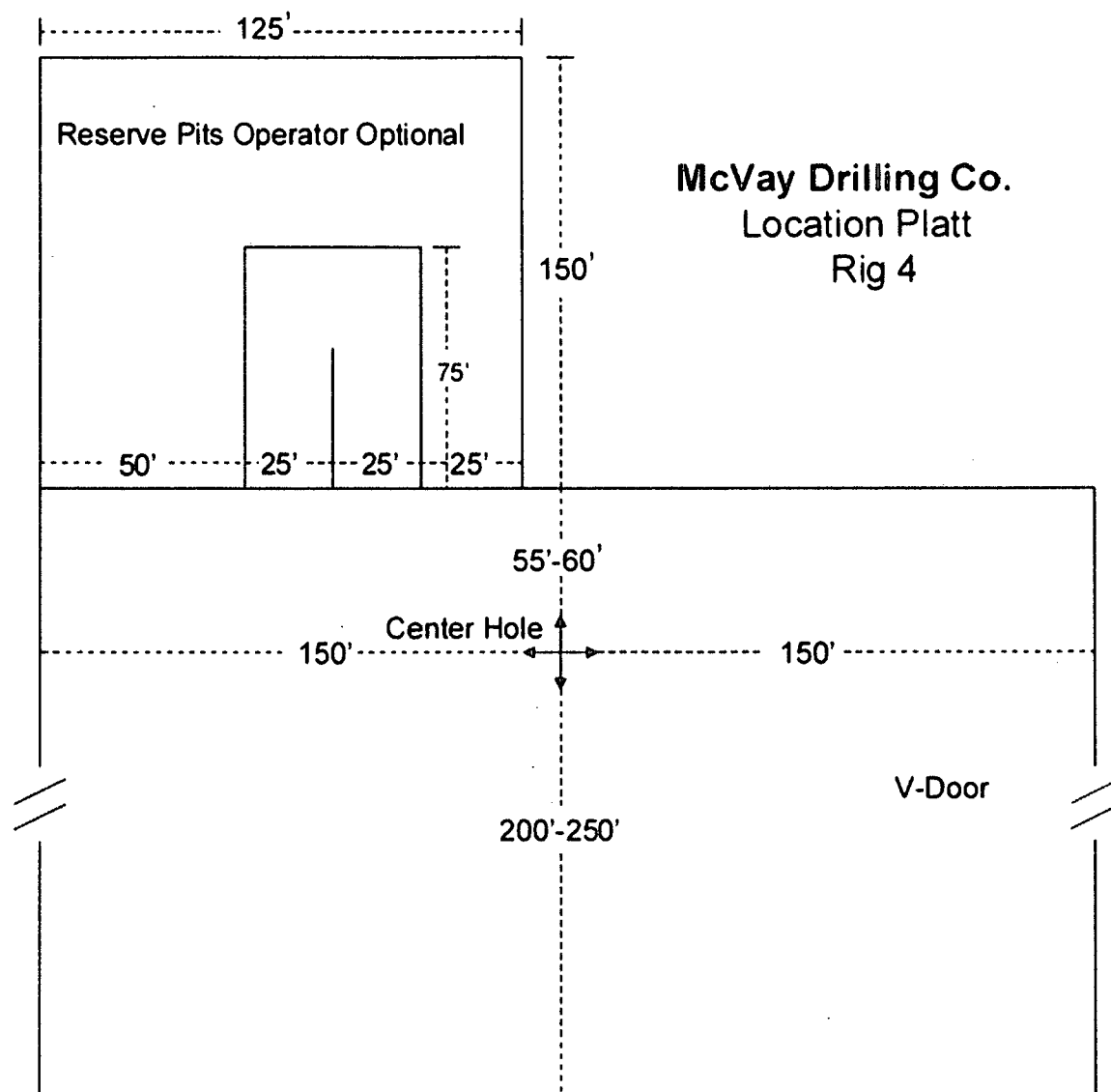
OPTION TO USE FLEX HOUSE. TBD ONCE DRILLING RIG IS SECURED. WILL SUNDRY.

ALL CHOKE LINES WILL BE STRAIGHT LINES UNLESS TURNS THAT USE TEE BLOCKS OR ARE TARGETED WITH RUNNING TEES, AND WILL BE ANCHORED TO PREVENT WHIP & REDUCE VIBRATION



# McVay Drilling Rig No. 4





# McVay Drilling Co.

Rig # 4 – Pit System

