

N.M. Oil Cons. DIV-Dist. 2

1301 W. Grand Avenue

Artesia, NM 88210

This APD replaces old APD API #30-015-26275

F-06-33  
3/13/06

S

Form 3160-3  
(August 1999)

0635

RECEIVED

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MAY 25 2006

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☐ DRILL ☒ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator  
HARVEY E. YATES COMPANY

3a. Address  
PO BOX 1933, ROSWELL, NM 88202-1933

3b. Phone No. (include area code)  
505-623-6601

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface 990' FSL & 990' FEL

At proposed prod. Zone 1,260' FNL & 330' FEL

SUBJECT TO LIKE  
APPROVAL BY STATE

14. Distance in miles and direction from nearest town or post office\*  
16 miles south east of Loco Hills, New Mexico

12. County or Parish  
Eddy

13. State  
NM

16. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drlg. Unit line, if any)  
990'

18. No. of Acres in lease  
160.12

17. Spacing Unit dedicated to this well  
160.12 acres

18. Distance from proposed location\*  
to nearest well, drilling, completed  
applied for, on this lease, ft.  
3,850'

19. Proposed Depth  
TVD 8,630'  
TMD 11,275'

20. BLM/BIA Bond No. on file  
NM-B001795 NM B000317

21. Elevations (Show whether DF, KDB, RT, GL, etc)  
3,751.8' GL

22. Approximate date work will start\*  
June 16, 2006

23. Estimated duration  
45 days after construction starts

24. Attachments

| Csg: | Hole size | Grade, Size Csg | Wt / ft | Depth      | Quantity of cement                  |
|------|-----------|-----------------|---------|------------|-------------------------------------|
|      | 17 1/2"   | 13 3/8" J-55    | 54.5#   | 350'       | In place - cmt circ'd               |
|      | 12 1/4"   | 8 5/8" J-55     | 32.0#   | 2,316'     | In place - cmt circ'd               |
|      | 7 7/8"    | 5 1/2" J-55     | 17.0#   | 6,000'     | Circulate Cement                    |
|      | 4 3/4"    | 3 1/2" P-110    | 9.3#    | 11,275' MD | Bring Cement to top of Liner Hanger |

Mud:

7920 to 11,275' MD Horizontal, mud up with Barazan D, MW 8.4 to 8.8, Vis 34-36

25. Signature  
*Keith Cannon*  
Title Drilling Superintendent

Name (Printed/Typed)  
Keith Cannon

Date  
3-10-06

Approved by *Tony J. Herrell*  
Title FIELD MANAGER

Name (Printed/Typed)  
/s/ Tony J. Herrell

Date  
MAY 23 2006

Office  
CARLSBAD FIELD OFFICE

Application approval does not warrant or certify 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 1 YEAR

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.

\*(Instructions on reverse)

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

If earthen pits are used in  
association with the drilling of this  
well, an OCD pit permit must be  
obtained prior to pit construction.

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

# OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 1960, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

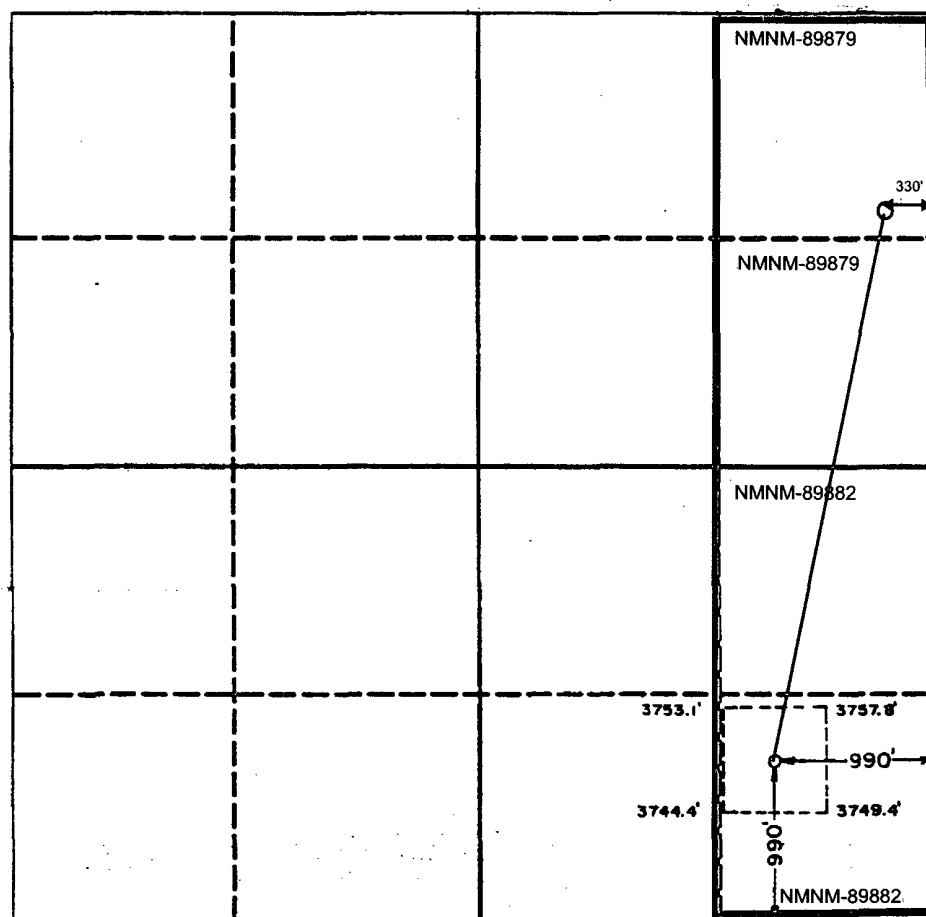
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

## WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

|  |  |                             |  |                            |                      |
|--|--|-----------------------------|--|----------------------------|----------------------|
| Operator<br><b>Harvey E. Yates Company</b>   |  |                             | Lease<br><b>Mesquite Federal</b>       |                            | Well No.<br><b>3</b> |
| Unit Letter<br><b>P</b>  | Section<br><b>3</b>                    | Township<br><b>18 South</b> | Range<br><b>31 East</b>                | County<br><b>NMNM Eddy</b> |                      |
| Actual Footage Location of Well:<br><b>990</b> feet from the <b>South</b> line and <b>990</b> feet from the <b>East</b> line |  |                             |  |                            |                      |
| Ground level Elev.<br><b>3751.8</b>  | Producing Formation<br><b>Wolfcamp</b> | Pool<br><b>Wildcat</b>      | Dedicated Acreage:<br><b>160</b> Acres |                            |                      |

1. Outline the acreage dedicated to the subject well by colored pencil or lacquer marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
☐ Yes ☐ No If answer is "yes" type of consolidation \_\_\_\_\_  
 If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary).  
 No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



### OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature  
*Keith Cannon*  
Printed Name  
**Keith Cannon**  
Position  
**Drilling Superintendent**  
Company  
**Harvey E. Yates Company**  
Date  
**3/09/2006**

### SURVEYOR CERTIFICATION

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

Date Surveyed  
**December 18, 1989**  
Signature & Title  
Professional Surveyor

Professional Surveyor  
**JOHN W. WEST**  
No. **676**  
State of New Mexico  
**JOHN W. WEST**  
No. **3239**

**Surface Use Plan**  
Harvey E. Yates Company  
Mesquite 3 Fed #3  
Section 3, T18S, R31E  
Eddy County, New Mexico

**1. Existing Roads:**

Exhibit A is a portion of a New Mexico map showing the location of the proposed location. The location is approximately 16 miles Southeast of Loco Hills, NM. Leave Artesia on US 82 & travel East 31 miles & turn South on NM 222. Go 3.3 mile & turn left on caliche road. Go 1.6 turn right. Go .9 miles turn right into location.

**2. Planned Access Roads:**

No new road will be built to access this location.

**3. Location of Existing Wells:**

See EXHIBIT B From the surveying company / vicinity map

**4. Location of Tank Batteries, Electric Lines, Etc:**

In the event a producing well is drilled, a tank battery will be built on the location. See EXHIBIT D

**5. Location and Type of Water Supply:**

Water will be obtained from commercial sources.

**6. Source of Construction Material:**

We will use materials from a state or blm approved pits to build the location.

**7. Methods of Handling Waste Disposal:**

Waste will be handled in an approved manner. The wellsite will be cleaned of all waste within 30 days of final completion of the well.

**8. Ancillary Facilities:**

N/A

**9. Wellsite Layout:**

a. EXHIBIT D shows the relative location and dimensions of the well pad, reserve pits, and major rig components.

b. The land is relatively flat with sandy soil and sand dunes.

c. The pad and pit area have been staked.

**10. Plan for Restoration of the Surface:**

a. After drilling and completion operations are completed, all equipment and other materials not needed for further operations will be removed. Pits will be back filled and the location cleaned of all trash to leave the wellsite as pleasant in appearance as possible.

b. If the proposed operation is nonproductive, all restoration and/or vegetation requirements of the BLM will be complied with, and will be accomplished as quickly as possible. All pits will be filled and leveled within 90 days after abandonment.

**11. Other Information:**

- a. The mineral and surface owner is the Federal Government.
- b. The topography consists of sandy soil with native grasses. No wildlife was observed, but the usual inhabitants of this region are Jackrabbits, Reptiles, Coyotes, etc.
- c. There are no ponds, lakes, or rivers in this area.
- d. An Archaeological Survey has been made and a copy has been sent to the Carlsbad BLM office. There is no evidence of any significant archaeological, historical, or cultural sites in the area. Further, there are no occupied dwellings or windmills in the area.
- e. Should any incidental oil be recovered during testing of this well, this oil will be considered waste oil and not sellable due to contamination by drilling and/or completion fluids.

**12. Operator's Representative:**

I certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; that the work associated with operations proposed herein will be performed by Harvey E. Yates Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Keith Cannon, Drilling Superintendent  
Harvey E. Yates Company  
P.O. Box 1933  
Roswell, NM  
505-623-6601



March 8, 2006

Application  
Harvey E. Yates Company  
Mesquite 3 Federal #3  
990' FSL & 990' FEL  
Eddy County, New Mexico

In conjunction with Form 3160-3, Application For Permit To Drill Or Deepen subject well, Harvey E. Yates Company submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No. 10.

1. Geologic Name of Surface Formation:  
Quaternary Alluvium and Bolson deposits

2. Estimated Tops of Significant Geologic Markers:

| <u>Formation</u>            | <u>Depth</u> |        |
|-----------------------------|--------------|--------|
| Rustler                     | 765'         |        |
| Yates                       | 2185'        |        |
| Seven Rivers                | 2595'        |        |
| Bowers                      | 3045'        |        |
| Queen                       | 3290'        |        |
| Penrose                     | 3505'        |        |
| Grayburg                    | 3780'        |        |
| San Andres                  | 4410'        |        |
| Bone Spring                 | 5145'        |        |
| Kick Off Point              | 7920'        | T.V.D. |
| BSPG2 <sup>nd</sup> Sands   | 8020'        | 8020'  |
| Base A Sands                | 8139'        | 8130'  |
| Top B Sands                 | 8384'        | 8300'  |
| 1 <sup>st</sup> Horz. Point | 8630'        | 8350'  |
| BHL Target @ TD             | 11,274'      | 8150'  |

3. Estimated Depths at which Water, Oil, or Gas Formations are expected:

| <u>Formation</u>          | <u>Depth</u> | <u>Remarks</u> |
|---------------------------|--------------|----------------|
| BSPG 2 <sup>nd</sup> sand | 8020'        |                |

4. Proposed Casing Program:  
See Form 3160-3

5. Pressure Control Equipment:  
This well will be rated 2m but actual BOP is rated 5m

6. Drilling Fluid Program:  
See Form 3160-3

7. Auxiliary Equipment:  
H2S Compliance Package

8. Testing, Logging, & Coring Program:  
Mud log and gamma ray mwd.

9. Abnormal Conditions, Pressures, Temperature, or Potential Hazards:  
Possibility of H2S. Will have H2S Compliance Package

10. Anticipated Starting Date & Duration of Operation:  
The anticipated starting date is set for as soon as possible after examination and approval of all drilling requirements.  
Duration of this project will be approximately 50 days from start of  
Construction of drilling pad until finish of completion operations

**United States Department of the Interior**

**BUREAU OF LAND MANAGEMENT  
Roswell Resource Area  
P.O. Drawer 1857  
Roswell, New Mexico 88202-1857**

**Statement Accepting Responsibilities for Operations**

**Operator Name: Harvey E. Yates Company  
Street or Box: P.O. Box 1933  
City, State: Roswell, New Mexico  
Zip Code: 88202**

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

**Lease No.: NMNM-89879 and NMNM-89882**

**Lease Name: Mesquite 3 Fed #3H  
Legal description of land: Sec 3, T18S, R31E, Eddy County, New Mexico**

**Formation(s) (if applicable): 2<sup>ND</sup> SAND "B"**

**Bond Coverage: Statewide Bond**

**BLM Bond File No.: NM-B001795** NMB000317 *JD*

**Authorized Signature:**

**Title: Drilling Superintendent**

**Date: March 8, 2006**

# **HYDROGEN SULFIDE CONTINGENCY PLAN**

## **SCOPE**

**THIS CONTINGENCY PLAN ESTABLISHES GUIDELINES FOR THE PUBLIC, ALL COMPANY EMPLOYEES WHO'S WORK ACTIVITIES MAY INVOLVE EXPOSURE TO HYDROGEN SULFIDE (H<sub>2</sub>S) GAS.**

## **OBJECTIVE**

- 1. PREVENT ANY AND ALL ACCIDENTS, AND PREVENT THE UNCONTROLLED RELEASE OF HYDROGEN SULFIDE INTO THE ATMOSPHERE.**
- 2. PROVIDE PROPER EVACUATION PROCEDURES TO COPE WITH EMERGENCIES.**
- 3. PROVIDE IMMEDIATE AND ADEQUATE MEDICAL ATTENTION SHOULD AN INJURY OCCUR.**

## **H<sub>2</sub>S CONTINGENCY PLAN**

## **DISCUSSION**

### **GEOLOGICAL PROGNOSIS**

#### **IMPLEMENTATION:**

**THIS PLAN WITH ALL DETAILS IS TO BE FULLY IMPLEMENTED AFTER DRILLING TO INTERMEDIATE CASING POINT.**

#### **EMERGENCY RESPONSE PROCEDURE:**

**THIS SECTION OUTLINES THE CONDITIONS AND DENOTES STEPS TO BE TAKEN IN THE EVENT OF AN EMERGENCY.**

#### **EMERGENCY EQUIPMENT PROCEDURE:**

**THIS SECTION OUTLINES THE SAFETY AND EMERGENCY EQUIPMENT THAT WILL BE REQUIRED FOR THE DRILLING OF THIS WELL.**

#### **TRAINING PROVISIONS:**

**THIS SECTION OUTLINES THE TRAINING PROVISIONS THAT MUST BE ADHERED TO PRIOR TO DRILLING TO INTERMEDIATE CASING POINT.**

#### **DRILLING EMERGENCY CALL LISTS:**

**INCLUDED ARE THE TELEPHONE NUMBERS OF ALL PERSONS TO BE CONTACTED SHOULD AN EMERGENCY EXIST.**

#### **BRIEFING:**

**THIS SECTION DEALS WITH THE BRIEFING OF ALL PEOPLE INVOLVED IN THE DRILLING OPERATION.**

#### **PUBLIC SAFETY:**

**PUBLIC SAFETY PERSONNEL WILL BE MADE AWARE OF THE DRILLING OF THIS WELL.**

#### **CHECK LISTS:**

**STATUS CHECK LISTS AND PROCEDURAL CHECK LISTS HAVE BEEN INCLUDED TO INSURE ADHERENCE TO THE PLAN.**

#### **GENERAL INFORMATION:**

**A GENERAL INFORMATION SECTION HAS BEEN INCLUDED**

**TO SUPPLY SUPPORT INFORMATION.**

**EMERGENCY PROCEDURES**

- A. IN THE EVENT OF ANY EVIDENCE OF H<sub>2</sub>S LEVEL ABOVE 10 PPM, TAKE THE FOLLOWING STEPS:**
- 1. SECURE BREATHING EQUIPMENT.**
  - 2. ORDER NON-ESSENTIAL PERSONNEL OUT OF DANGER ZONE.**
  - 3. TAKE STEPS TO DETERMINE IF THE H<sub>2</sub>S LEVEL CAN BE CORRECTED OR SUPPRESSED AND, IF SO, PROCEED IN NORMAL OPERATION.**
- B. IF UNCONTROLLABLE CONDITIONS OCCUR:**
- 1. TAKE STEPS TO PROTECT AND/OR REMOVE ANY PUBLIC IN THE DOWN-WIND AREA FROM THE RIG – PARTIAL EVACUATION AND ISOLATION. NOTIFY NECESSARY PUBLIC SAFETY PERSONNEL AND THE BUREAU OF LAND MANAGEMENT OF THE SITUATION.**
  - 2. REMOVE ALL PERSONNEL TO SAFE BREATHING AREA.**
  - 3. NOTIFY PUBLIC SAFETY PERSONNEL TO SAFE BREATHING AREA.**
  - 4. PROCEED WITH BEST PLAN (AT THE TIME) TO REGAIN CONTROL OF THE WELL. MAINTAIN TIGHT SECURITY AND SAFETY PROCEDURES.**
- C. RESPONSIBILITY:**
- 1. DESIGNATED PERSONNEL.**
    - a. SHALL BE RESPONSIBLE FOR THE TOTAL IMPLEMENTATION OF THIS PLAN.**
    - b. SHALL BE IN COMPLETE COMMAND DURING ANY EMERGENCY.**
    - c. SHALL DESIGNATE A BACK-UP.**



## **EMERGENCY PROCEDURES**

**\*(Procedures are the same for both Drilling and Tripping)**

**ALL PERSONNEL:**

1. ON ALARM, DON ESCAPE UNIT AND REPORT IN UP WIND BRIEFING AREA.
2. CHECK STATUS OF PERSONNEL (BUDDY SYSTEM).
3. SECURE BREATHING EQUIPMENT.
4. AWAIT ORDERS FROM SUPERVISOR.

**DRILLING FOREMAN:**

1. REPORT TO UP WIND BRIEFING AREA.
2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH TOOL PUSHER OR DRILLER (BUDDY SYSTEM).
3. DETERMINE H<sub>2</sub>S CONCENTRATIONS.
4. ASSESS SITUATION AND TAKE CONTROL MEASURES.

**TOOL PUSHER:**

1. REPORT TO UP WIND BRIEFING AREA.
2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH DRILLING FOREMAN OR DRILLER (BUDDY SYSTEM).
3. DETERMINE H<sub>2</sub>S CONCENTRATION.
4. ASSESS SITUATION AND TAKE CONTROL MEASURES.

**DRILLER:**

1. DON ESCAPE UNIT.
2. CHECK MONITOR FOR POINT OF RELEASE.
3. REPORT TO BRIEFING AREA.
4. CHECK STATUS OF PERSONNEL (IN AN ATTEMPT TO RESCUE, USE THE BUDDY SYSTEM).
5. ASSIGNS LEAST ESSENTIAL PERSON TO NOTIFY DRILLING FOREMAN AND TOOL PUSHER BY QUICKEST MEANS IN CASE OF THEIR ABSENCE.
6. ASSUMES THE RESPONSIBILITIES OF THE DRILLING FORMAN AND TOOL PUSHER UNTIL THEY ARRIVE SHOULD THEY BE ABSENT.

## **EMERGENCY PROCEDURES**

**DERRICK MAN  
FLOOR MAN #1  
FLOOR MAN #2**

1. **WILL REMAIN IN BRIEFING AREA UNTIL INSTRUCTED BY SUPERVISOR.**

**MUD ENGINEER:**

1. **REPORT TO BRIEFING AREA.**
2. **WHEN INSTRUCTED, BEGIN CHECK OF MUD FOR PH AND H2S LEVEL. (GARETT GAS TRAIN.)**

**SAFETY PERSONNEL:**

1. **MASK UP AND CHECK STATUS OF ALL PERSONNEL AND SECURE OPERATIONS AS INSTRUCTED BY DRILLING FOREMAN AND REPORT TO BRIEFING AREA.**

## **TAKING A KICK**

**WHEN TAKING A KICK DURING AN H2S EMERGENCY, ALL PERSONNEL WILL FOLLOW STANDARD BOP PROCEDURES AFTER REPORTING TO BRIEFING AREA AND MASKING UP.**

## **OPEN-HOLE LOGGING**

**ALL UNNECESSARY PERSONNEL OFF FLOOR. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD MONITOR CONDITION, ADVISE STATUS AND DETERMINE NEED FOR USE OF AID EQUIPMENT.**

## **RUNNING CASING OR PLUGGING**

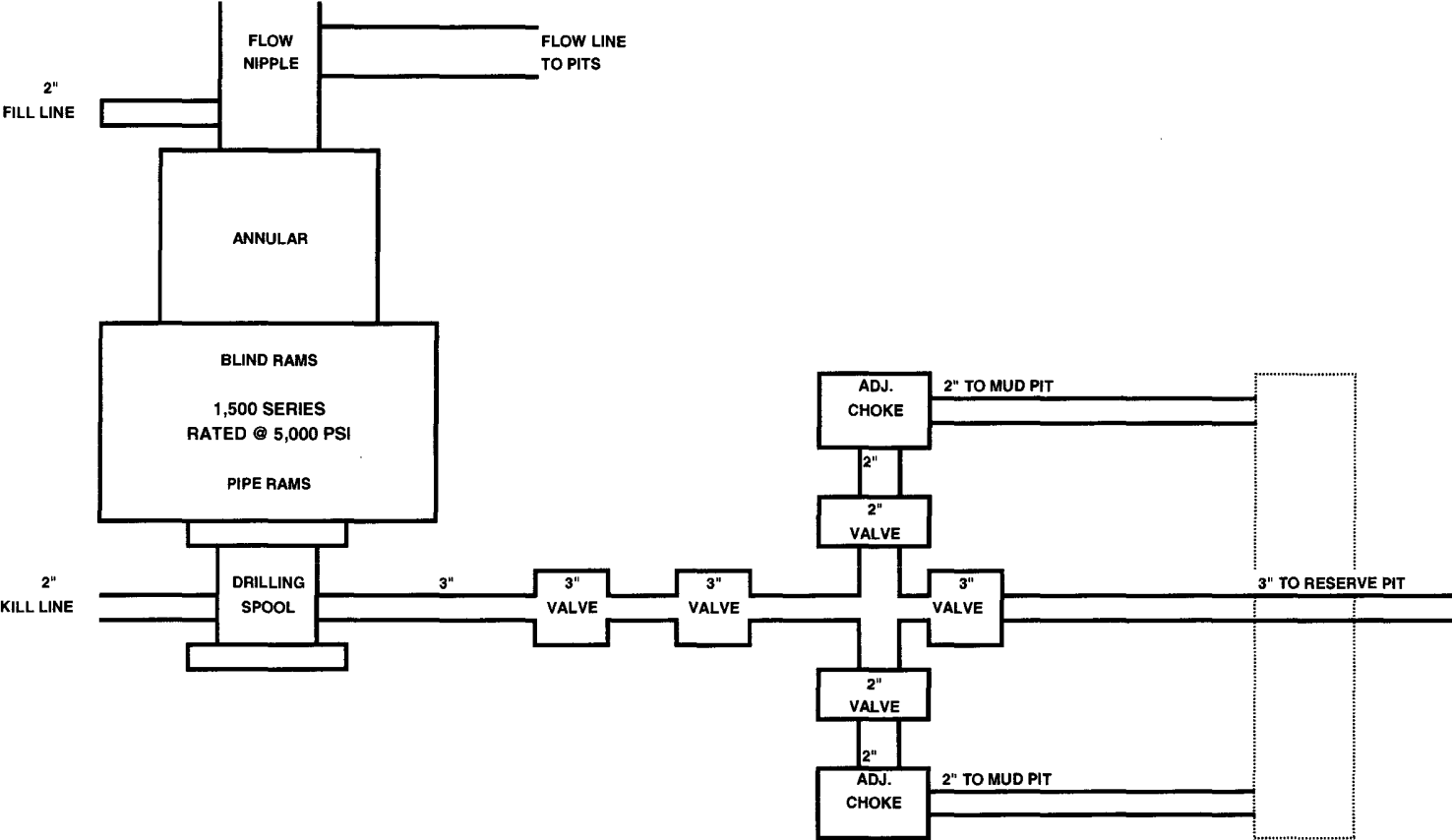
**FOLLOWING THE SAME "TRIPPING" PROCEDURE AS ABOVE. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD DETERMINE IF ALL PERSONNEL HAVE ACCESS TO PROTECTIVE EQUIPMENT.**

## Mesquite 3 Fed #3H – Procedure

1. Build Location.
2. Dig out cellar and weld on 8-5/8" head.
3. NU BOP & RU reverse equipment.
4. Drill out surface plug. Pressure test.
5. Drill out cmt plug @ 400'. Pressure test.
6. Drill out 5-1/2" csg stub plug.
7. Change out to 4-3/4" bit.
8. Attempt to enter 5-1/2" csg stub.
9. If successful, POOH & GIH w/ csg spear. Set spear inside csg stub. Pull to check casing.
10. If okay, release spear & POOH. GIH and drill out plug @ 3,470-3,685' & plug @ 5,987'-6,237'. POOH.
11. GIH to approx. 6000' and chemical cut.
12. POOH and lay down csg.
13. GIH w/ slipover jt & 5-1/2" csg. Circulate cement.
14. Drill out CIBP @ 7424'.
15. Test CIBP @ 7700'.
16. Cmt squeeze perfs @ 7467' – 7481'.
17. Drill out & test squeezed perfs.
18. Drill out CIBP @ 7700'.
19. Set new CIBP @ 7900' +/-.
20. Set whipstock on CIBP @ 7900', kick off, build curve and be horizontal in accordance with geoprog and drill lateral.

**EXHIBIT "C" BOP STACK**

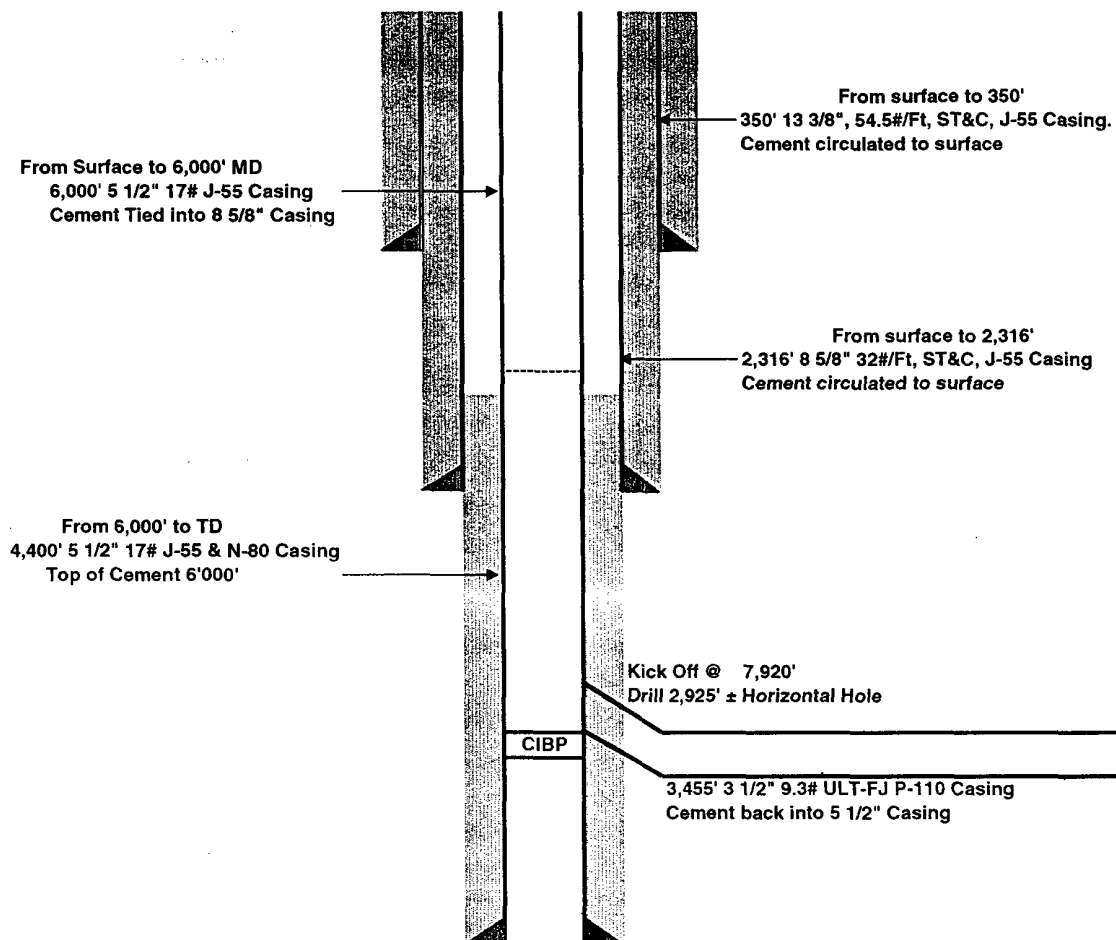
Mesquite 3 Fed #3  
990' FSL & 990' FEL  
Sec 3, T18S, R31E  
Eddy County, NM



# EXHIBIT "E" CASING DESIGN

Mesquite 3 Fed #3  
990' FSL & 990' FEL  
Sec 3, T18S, R31E  
Eddy County, NM

13 3/8", 8 5/8" Casings are in place and cemented.





**INTEQ**

2105 market Street Midland, TX 79703 Ph. (432)694-9517 Fax. (432)694-5648

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## **Directional/Horizontal Plan Report**

**Heyco Energy**

**Mesquite 3 Federal #3**

**Eddy County, NM**

**Plan #1**

**Prepared By Oscar Gomez  
Friday, February 24, 2006**

Heyco Energy  
Mesquite 3 Federal #3, slot #1  
, Eddy County New Mexico

PROPOSAL LISTING Page 1  
Your ref : Plan 1  
Last revised : 24-Feb-2006

| Measured<br>Depth | Inclin.<br>Degrees | Azimuth<br>Degrees | True Vert<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S |        | Dogleg<br>Deg/100ft | Vert<br>Sect |
|-------------------|--------------------|--------------------|--------------------|--|--------|---------------------|--------------|
| 0.00              | 0.00               | 12.28              | 0.00               | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 100.00            | 0.00               | 12.29              | 100.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 200.00            | 0.00               | 12.29              | 200.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 300.00            | 0.00               | 12.29              | 300.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 400.00            | 0.00               | 12.29              | 400.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 500.00            | 0.00               | 12.29              | 500.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 600.00            | 0.00               | 12.29              | 600.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 700.00            | 0.00               | 12.29              | 700.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 800.00            | 0.00               | 12.29              | 800.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 900.00            | 0.00               | 12.29              | 900.00             | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1000.00           | 0.00               | 12.29              | 1000.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1100.00           | 0.00               | 12.29              | 1100.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1200.00           | 0.00               | 12.29              | 1200.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1300.00           | 0.00               | 12.29              | 1300.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1400.00           | 0.00               | 12.29              | 1400.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1500.00           | 0.00               | 12.29              | 1500.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1600.00           | 0.00               | 12.29              | 1600.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1700.00           | 0.00               | 12.29              | 1700.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1800.00           | 0.00               | 12.29              | 1800.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 1900.00           | 0.00               | 12.29              | 1900.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2000.00           | 0.00               | 12.29              | 2000.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2100.00           | 0.00               | 12.29              | 2100.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2200.00           | 0.00               | 12.29              | 2200.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2300.00           | 0.00               | 12.29              | 2300.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2400.00           | 0.00               | 12.29              | 2400.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2500.00           | 0.00               | 12.29              | 2500.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2600.00           | 0.00               | 12.29              | 2600.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2700.00           | 0.00               | 12.29              | 2700.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2800.00           | 0.00               | 12.29              | 2800.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 2900.00           | 0.00               | 12.29              | 2900.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3000.00           | 0.00               | 12.29              | 3000.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3100.00           | 0.00               | 12.29              | 3100.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3200.00           | 0.00               | 12.29              | 3200.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3300.00           | 0.00               | 12.29              | 3300.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3400.00           | 0.00               | 12.29              | 3400.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3500.00           | 0.00               | 12.29              | 3500.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3600.00           | 0.00               | 12.29              | 3600.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3700.00           | 0.00               | 12.29              | 3700.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3800.00           | 0.00               | 12.29              | 3800.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 3900.00           | 0.00               | 12.29              | 3900.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4000.00           | 0.00               | 12.29              | 4000.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4100.00           | 0.00               | 12.29              | 4100.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4200.00           | 0.00               | 12.29              | 4200.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4300.00           | 0.00               | 12.29              | 4300.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4400.00           | 0.00               | 12.29              | 4400.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4500.00           | 0.00               | 12.29              | 4500.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4600.00           | 0.00               | 12.29              | 4600.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4700.00           | 0.00               | 12.29              | 4700.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4800.00           | 0.00               | 12.29              | 4800.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |
| 4900.00           | 0.00               | 12.29              | 4900.00            | 0.00 N   | 0.00 E | 0.00                | 0.00         |

All data is in feet unless otherwise stated.  
Coordinates from structure and TVD from rotary table.  
Bottom hole distance is 3101.00 on azimuth 12.29 degrees from wellhead.  
Vertical section is from N 0.00 E 0.00 on azimuth 12.29 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ

Heyco Energy  
Mesquite 3 Federal #3, slot #1  
Eddy County New Mexico

PROPOSAL LISTING Page 2  
Your ref : Plan 1  
Last revised : 24-Feb-2006

| Measured<br>Depth | Inclin.<br>Degrees | Azimuth<br>Degrees | True Vert<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S |          | Dogleg<br>Deg/100ft | Vert<br>Sect |
|-------------------|--------------------|--------------------|--------------------|--|----------|---------------------|--------------|
| 5000.00           | 0.00               | 12.29              | 5000.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5100.00           | 0.00               | 12.29              | 5100.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5200.00           | 0.00               | 12.29              | 5200.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5300.00           | 0.00               | 12.29              | 5300.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5400.00           | 0.00               | 12.29              | 5400.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5500.00           | 0.00               | 12.29              | 5500.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5600.00           | 0.00               | 12.29              | 5600.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5700.00           | 0.00               | 12.29              | 5700.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5800.00           | 0.00               | 12.29              | 5800.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 5900.00           | 0.00               | 12.29              | 5900.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6000.00           | 0.00               | 12.29              | 6000.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6100.00           | 0.00               | 12.29              | 6100.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6200.00           | 0.00               | 12.29              | 6200.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6300.00           | 0.00               | 12.29              | 6300.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6400.00           | 0.00               | 12.29              | 6400.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6500.00           | 0.00               | 12.29              | 6500.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6600.00           | 0.00               | 12.29              | 6600.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6700.00           | 0.00               | 12.29              | 6700.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6800.00           | 0.00               | 12.29              | 6800.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 6900.00           | 0.00               | 12.29              | 6900.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7000.00           | 0.00               | 12.29              | 7000.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7100.00           | 0.00               | 12.29              | 7100.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7200.00           | 0.00               | 12.29              | 7200.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7300.00           | 0.00               | 12.29              | 7300.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7400.00           | 0.00               | 12.29              | 7400.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7500.00           | 0.00               | 12.29              | 7500.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7600.00           | 0.00               | 12.29              | 7600.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7700.00           | 0.00               | 12.29              | 7700.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7800.00           | 0.00               | 12.29              | 7800.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7900.00           | 0.00               | 12.29              | 7900.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 7920.00           | 0.00               | 12.29              | 7920.00            | 0.00 N   | 0.00 E   | 0.00                | 0.00         |
| 8000.00           | 10.62              | 12.29              | 7999.54            | 7.23 N   | 1.58 E   | 13.28               | 7.40         |
| 8100.00           | 23.90              | 12.29              | 8094.82            | 36.16 N  | 7.88 E   | 13.28               | 37.01        |
| 8200.00           | 37.18              | 12.29              | 8180.75            | 85.71 N  | 18.67 E  | 13.28               | 87.72        |
| 8300.00           | 50.46              | 12.29              | 8252.74            | 153.21 N                                       | 33.38 E  | 13.28               | 156.81       |
| 8400.00           | 63.74              | 12.29              | 8306.93            | 235.07 N                                       | 51.21 E  | 13.28               | 240.59       |
| 8500.00           | 77.02              | 12.29              | 8340.43            | 326.90 N                                       | 71.22 E  | 13.28               | 334.57       |
| 8600.00           | 90.30              | 12.29              | 8351.44            | 423.80 N                                       | 92.33 E  | 13.28               | 433.74       |
| 8630.41           | 94.34              | 12.29              | 8350.21            | 453.46 N                                       | 98.79 E  | 13.28               | 464.65       |
| 9000.00           | 94.34              | 12.29              | 8322.22            | 813.56 N                                       | 177.24 E | 0.00                | 832.65       |
| 9500.00           | 94.34              | 12.29              | 8284.37            | 1300.70 N                                      | 283.36 E | 0.00                | 1331.21      |
| 10000.00          | 94.34              | 12.29              | 8246.52            | 1787.84 N                                      | 389.49 E | 0.00                | 1829.78      |
| 10500.00          | 94.34              | 12.29              | 8208.66            | 2274.98 N                                      | 495.61 E | 0.00                | 2328.34      |
| 11000.00          | 94.34              | 12.29              | 8170.81            | 2762.12 N                                      | 601.73 E | 0.00                | 2826.91      |
| 1274.88           | 94.34              | 12.29              | 8150.00            | 3029.99 N                                      | 660.08 E | 0.00                | 3101.00      |

All data is in feet unless otherwise stated.  
Coordinates from structure and TVD from rotary table.  
Bottom hole distance is 3101.00 on azimuth 12.29 degrees from wellhead.  
Vertical section is from N 0.00 E 0.00 on azimuth 12.29 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ



Heyco Energy  
 Mesquite 3 Federal #3,slot #1  
 ,Eddy County New Mexico

PROPOSAL LISTING Page 3  
 Your ref : Plan 1  
 Last revised : 24-Feb-2006

Comments in wellpath

| MD       | TVD     | Rectangular Coords. | Comment             |
|----------|---------|---------------------|---------------------|
| 7920.00  | 7920.00 | 0.00 N 0.00 E       | KOP                 |
| 8020.92  | 8020.00 | 11.48 N 2.50 E      | Top BSPG 2nd Sand   |
| 8139.33  | 8130.00 | 53.31 N 11.61 E     | Base BSPG2 'A' Sand |
| 8384.87  | 8300.00 | 221.93 N 48.35 E    | Top BSPG2 'B' Sand  |
| 8630.41  | 8350.21 | 453.48 N 98.79 E    | EOC                 |
| 11274.88 | 8150.00 | 3029.93 N 660.08 E  | TD                  |

Targets associated with this wellpath

| Target name | Geographic Location | T.V.D.  | Rectangular Coordinates | Revised    |
|-------------|---------------------|---------|-------------------------|------------|
| TD          |                     | 8150.00 | 3029.93N 660.08E        | 6-Sep-2005 |



INTEQ

Created By OscarG  
Date plotted : 24-Feb-2006  
Plot Reference is Plan 1.  
Coordinates are in feet reference structure.  
True Vertical Depths are reference structure.  
--- Baker Hughes INTEQ ---

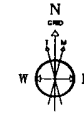
# Heyco Energy

Structure : Mesquite 3 Federal #3

Slot : slot #1

Field :

Location : Eddy County New Mexico

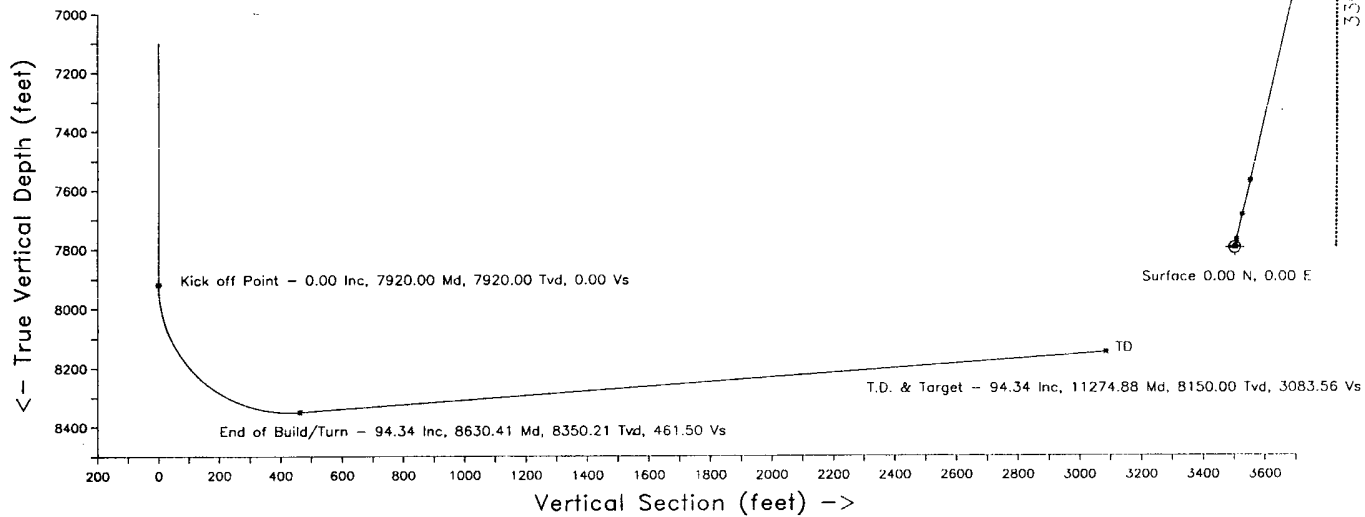


24-Feb-2006 (Source: BGSN)  
Magnetic North is 8.40 degrees East of True North  
GRID North is 0.28 degrees East of True North  
To convert azimuth from True to GRID subtract 0.28 deg  
To convert azimuth from Magnetic to GRID add 8.14 deg

<- West (feet)

2800 2400 2000 1600 1200 800 400 0 400 800 1200

<- North (feet)  
4400  
4000  
3600  
3200  
2800  
2400  
2000  
1600  
1200  
800  
400  
0  
400  
800



Azimuth 6.21 with reference 0.00 N, 0.00 E from structure

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Harvey E Yates Company  
Well Name & No. Mesquite 3 Federal #3H - REENTRY  
SH Location: 990' FSL, 990 FEL, Section 3, T. 18 S., R. 31 E., Eddy County, New Mexico  
BH Location: 1260' FNL, 330' FEL, Section 3, T. 18 S., R. 31 E., Eddy County, New Mexico  
Lease: NM-89879

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

A. Well spud

B. Casing in place: 13-3/8 inch at 350', cement circulated  
8-5/8 inch at 2316', cement circulated  
5-1/2 inch from approximately 1428' to 10,400', TOC @ 6000'

C. BOP tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Operation Contingency Plan shall be activated prior to drilling into the Queen formation. A copy of the plan shall be posted at the drilling site.

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15-day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

### II. CASING:

1. The minimum required fill of cement behind the 5-1/2 inch production casing is to reach at least 500 feet above the top of the uppermost hydrocarbon productive interval.

2. the minimum required fill of cement behind the 3-1/2 inch production liner is to reach the top of the liner.

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 8-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.