District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-101
May 27, 2004

Submit to appropriate District Office

☐ AMENDED REPORT

RCVD JAN12'07

# APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

| [1] Operator Name and Address | [2] OGRID Number / [3] API Number |
|---|---|
| Devon Energy Production Company, L.P.<br>PO Box 6459<br>Navajo Dam, NM 87419 | 6137<br>30 - 045 - 34144 |

OIL CONS. DIV.
DIST. 3

| [5] Property Code | [5] Property Name | [6] Well No. |
|---|---|---|
| 19641 | Northeast Blanco Unit | 346 |

| [9] Proposed Pool 1 | [10] Proposed Pool 2 |
|---|---|
| Basin Dakota | |

## [7] Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 36 | 31N | 8W | | 1240 | South | 1205 | East | San Juan |

## [8] Proposed Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| J | 36 | 31N | 8W | | 2240 | South | 1560 | East | San Juan |

## Additional Well Information

| [11] Work Type Code | [12] Well Type Code | [13] Cable/Rotary | [14] Lease Type Code | [15] Ground Level Elevation |
|---|---|---|---|---|
| N | G | Rotary | State | 6,414' |
| **[16] Multiple** | **[17] Proposed Depth** | **[18] Formation** | **[19] Contractor** | **[20] Spud Date** |
| N | 8,193' | Dakota | | Unknown |

| Depth to Groundwater >100' | Distance from nearest fresh water well >1,000' | Distance from nearest surface water >1,000' |
|---|---|---|

Pit: Liner: Synthetic ☒ 12 mils thick Clay ☐ Pit Volume: _____ bbls
Closed-Loop System ☐

Drilling Method:
Fresh Water ☒ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☒

## [21] Proposed Casing and Cement Program

| Hole Size | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|---|---|---|---|---|---|
| 12 ¼" | 9 5/8" | 32# | 0-285' | 200 | Surface |
| 8 ¾" | 7" | 23# | 0-3,766' | 575 | Surface |
| 6 ¼" | 4 ½" | 11.6# | 0-TD | 700 | Surface |
| | | | | | |
| | | | | | |

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

HOLD C104 FOR Directional survey + BH survey

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Sign:

Printed name: Melisa Castro

Title: Senior Staff Operations Technician

E-mail Address: Melisa.castro@dvn.com

Date: 1-9-07 Phone: 405-552-7917

**OIL CONSERVATION DIVISION**

Approved by:

Title: DEPUTY OIL & GAS INSPECTOR, DIST. ☐

Approval Date: JAN 17 2007 Expiration Date: JAN 17 2008

Conditions of Approval Attached ☐

S/S

B 1/17

District I
PO Box 1980, Hobbs NM 88241-1980
District II
PO Drawer KK, Artesia, NM 87211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

RCVD JAN12'07
OIL CONS. DIV.
DIST. 3

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| 1 API Number | 2 Pool Code | 3 Pool Name |
|---|---|---|
| 30-045-34144 | 71599 | Basin Dakota |

| 4 Property Code | 5 Property Name | 6 Well Number |
|---|---|---|
| 19641 | NEBU | # 346 |

| 7 OGRID No. | 8 Operator Name | 9 Elevation |
|---|---|---|
| 6137 | Devon Energy Production Company, L.P. | 6414 |

## 10 Surface Location

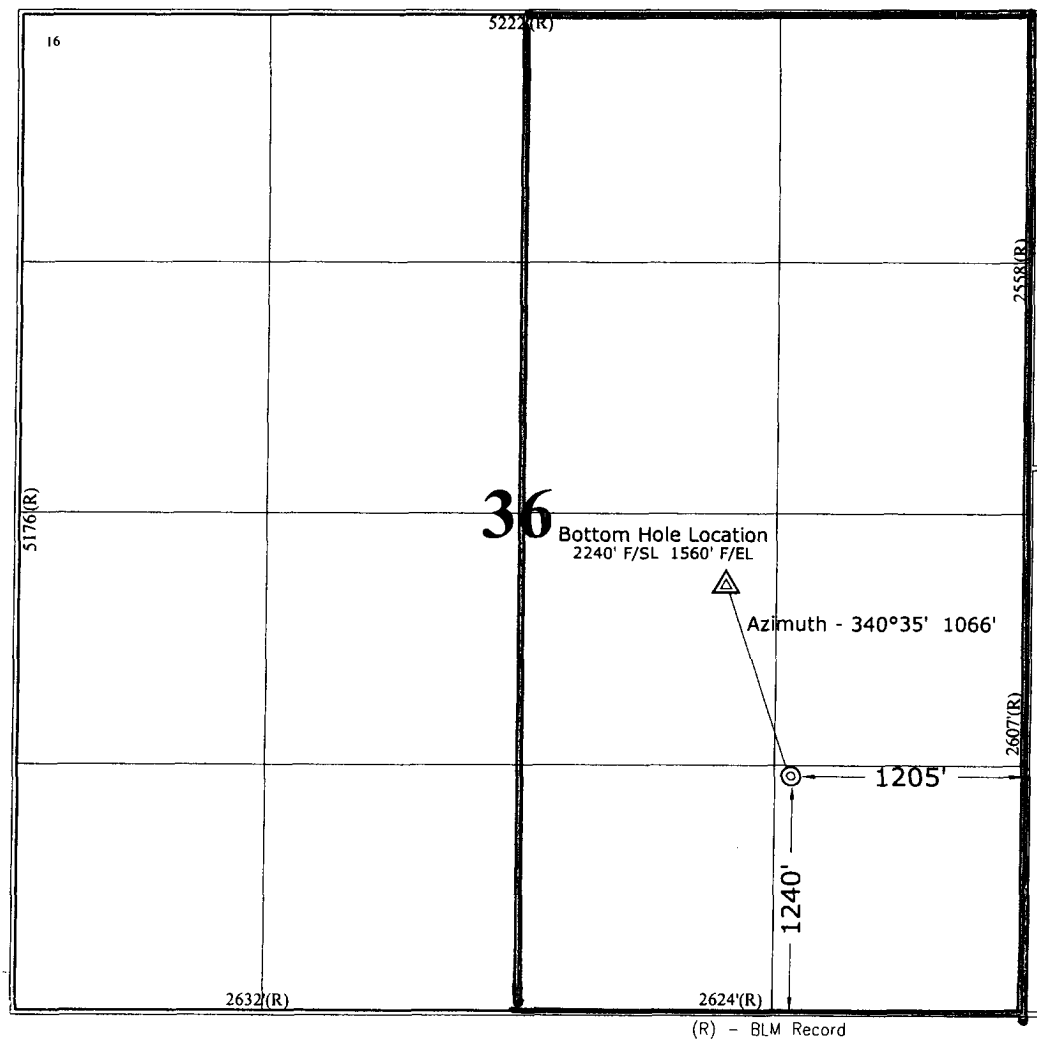
| UL or Lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 36 | 31 N | 8 W | | 1240 | SOUTH | 1205 | EAST | SAN JUAN |

## 11 Bottom Hole Location If Different From Surface

| 7 UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| J | 36 | 31 N | 8 W | | 2240 | SOUTH | 1560 | EAST | SAN JUAN |

| 12 Dedicated Acres | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|---|---|---|---|
| E/2 - 320 | | | |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION




(R) - BLM Record

## 17 OPERATOR CERTIFICATION

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

Signature

Melisa S. Castro
Printed Name

Sr. Staff Operations Technician
Title

January 9, 2007
Date

## 18 SURVEYOR CERTIFICATION

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

July 10, 2006
Date of Survey

Signature and Seal of Professional Surveyor

GARY D. VANN
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

7016
Certificate Number

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
March 4, 2004

WELL API NO. 30-045-34144

5. Indicate Type of Lease STATE ☒ FEE ☐

6. State Oil & Gas Lease No. E-3707-5

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
NORTHEAST BLANCO UNIT

1. Type of Well:
Oil Well ☐ Gas Well ☒ Other

8. Well Number
346

2. Name of Operator
**Devon Energy Production Company, L.P.**

9. OGRID Number
6137

3. Address of Operator
**PO Box 6459, Navajo Dam, NM 87419**

10. Pool name or Wildcat
Basin Dakota

4. Well Location

Unit Letter P : 1,240 feet from the South line and 1,205 feet from the East line

Section 36 Township 31N Range 8W NMPM County - SAN JUAN

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
GR 6,414'

**Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached)** >200'

**Pit Location: UL P Sect 36 Twp 31N Rng 8W Pit type** Drilling **Depth to Groundwater** >100' **Distance from nearest fresh water well** >1000'

**Distance from nearest surface water** >1000' **Below-grade Tank Location UL Sect Twp Rng ;**

**feet from the line and feet from the line**

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | ☐ | PLUG AND ABANDON | ☐ | REMEDIAL WORK | ☐ | ALTERING CASING | ☐ |
| TEMPORARILY ABANDON | ☐ | CHANGE PLANS | ☐ | COMMENCE DRILLING OPNS. | ☐ | PLUG AND ABANDONMENT | ☐ |
| PULL OR ALTER CASING | ☐ | MULTIPLE COMPLETION | ☐ | CASING TEST AND CEMENT JOB | ☐ | | |
| OTHER: **CONSTRUCT DRILLING PIT** | | | ☒ | OTHER: | | | ☐ |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

14.

**Devon Energy will be constructing a lined drilling pit. The closure of said pit will be in accordance with the NMOCD regulations with the cutting of the liner applying to the BLM rules.**

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE _____ TITLE Sr. Staff Operations Technician DATE 1-9-07

Type or print name Melisa Castro E-mail address: Melisa.castro@dvn.com Telephone No. 405-552-7917

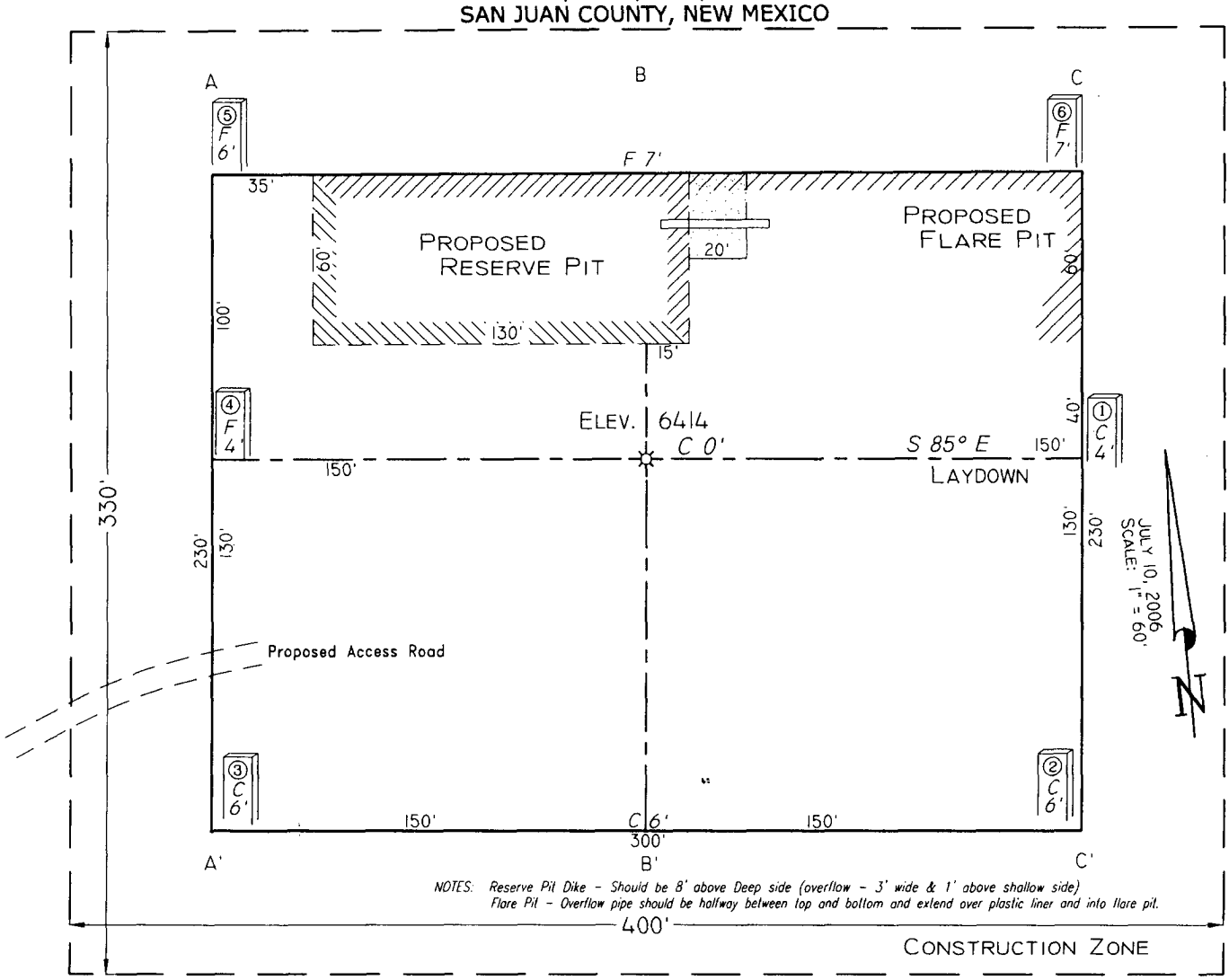
(This space for State use)

APPPROVED BY _____ TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE 1/17/07

Conditions of approval, if any:

# PAD LAYOUT PLAN & PROFILE
## DEVON ENERGY PRODUCTION COMPANY, L.P.
Nebu # 346
1240' F/SL 1205' F/EL
SEC. 36, T31N, R8W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

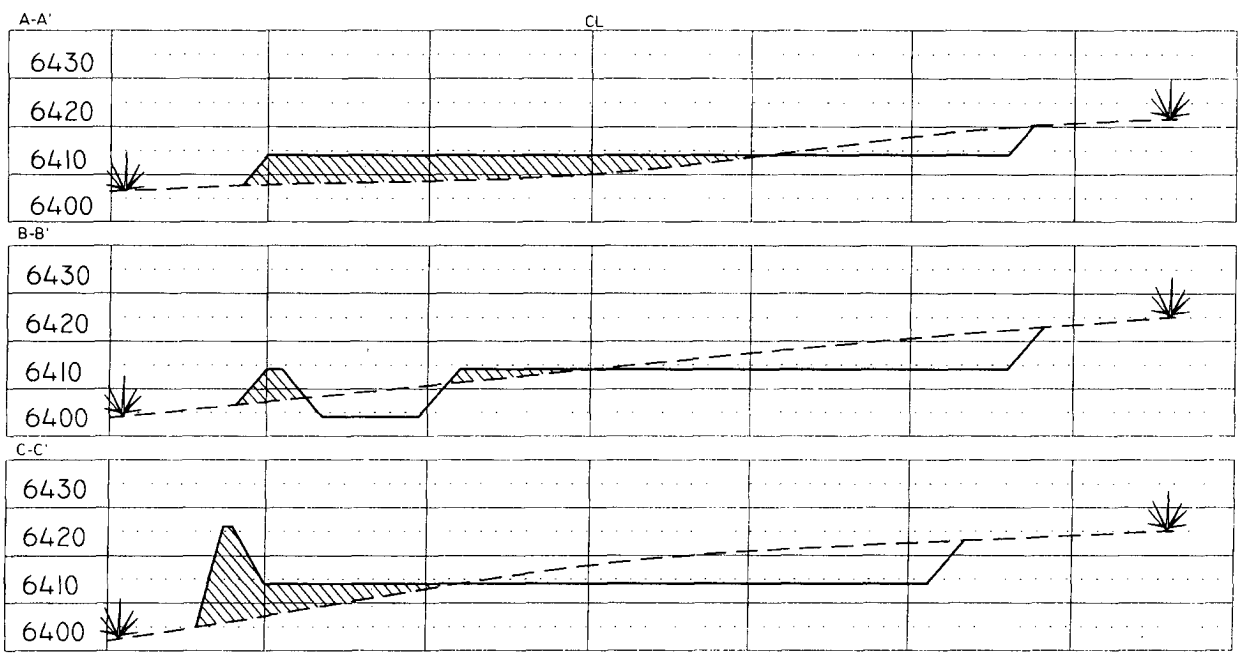
Lat: 36.85075°
Long: 107.62210° (83)




NOTES: Reserve Pit Dike - Should be 8' above Deep side (overflow - 3' wide & 1' above shallow side)
Flare Pit - Overflow pipe should be halfway between top and bottom and extend over plastic liner and into flare pit.

Area of Construction Zone - 330'x400' or 3.03 acres, more or less.

SCALE: 1"=60'-HORIZ.
1"=40'-VERT.




NOTE: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction.

Cuts and fills shown are approximate - final finished elevation is to be adjusted so earthwork will balance. Corner stakes are approximate and do not include additional areas needed for sideslopes and drainages. Final Pad Dimensions are to be verified by Contractor.

VANN SURVEYS
P. O. Box 1306
Farmington, NM

# NEBU 346
# Unit P 36-31N-8W
# San Juan Co., NM

## DRILLING PLAN

1. **ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS & ANTICIPATED WATER, OIL, GAS OR MINERAL FORMATIONS:**

| Formation | TMD (ft) | TVD (ft) | Hydrocarbon/Water Bearing Zones |
|---|---|---|---|
| San Jose | Surface | Surface | |
| Ojo Alamo | 2408 | 2228 | Aquifer |
| Kirtland | 2515 | 2323 | |
| Fruitland | 3038 | 2813 | Gas |
| Fruitland 1st Coal | 3289 | 3060 | Gas |
| Pictured Cliffs Tongue | 3574 | 3344 | Gas |
| Pictured Cliffs Main | 3579 | 3349 | Gas |
| Lewis | 3666 | 3436 | Gas |
| **Intermediate TD** | 3766 | 3536 | |
| Huefanito Bentonite | 4305 | 4075 | Gas |
| Chacra / Otera | 4675 | 4445 | Gas |
| Cliff House | 5180 | 4950 | Gas |
| Menefee | 5528 | 5298 | Gas |
| Point Lookout | 5819 | 5589 | Gas |
| Mancos | 6218 | 5988 | Gas |
| Gallup | 7113 | 6883 | Gas |
| Greenhorn | 7845 | 7615 | |
| Graneros | 7898 | 7668 | Gas |
| Paguate | 8014 | 7784 | |
| Cubero | 8024 | 7794 | |
| Oak Canyon | 8101 | 7871 | |
| Encinal Canyon | 8117 | 7887 | |

| | | | |
|---|---|---|---|
| TD | 8193 | 7963 | |

*All shows of fresh water and minerals will be adequately protected and reported.

## 2. PRESSURE CONTROL EQUIPMENT:

All well control equipment shall be in accordance with Onshore Order #2 for 2M systems.

The minimum specifications for pressure control equipment that will be provided are included on the attached schematic diagram, with a size of 2", and pressure ratings.

- 2000# BOP With Pipe Rams and 2000# BOP With Blind Rams

Auxiliary equipment to be used:

- Upper kelly cock with handle available.

The manifold includes appropriate valves and adjustable chokes. The kill line will have one check valve. Ram type preventers will be pressure tested to full working pressure (utilizing a test plug) or 70% of the internal yield pressure (without a test plug) at:

- Initial installation
- Whenever any seal subject to test pressure is broken
- Following related repairs
- At 30 day intervals

Pipe and blind rams shall be activated each trip.

A BOPE pit level drill will be conducted weekly for each drilling crew.
All tests and drills will be recorded in the drilling log.

The accumulator will have sufficient capacity to close all rams and retain 200 psi above pre-charge pressure without the use of closing unit pumps.

Master controls will be at the accumulator. Anticipated bottom hole pressure is 3400 psi.

## 3. CASING & CEMENTING PROGRAM:

A. The proposed casing program will be as follows:

| TMD | TVD | Hole Size | Size | Grade | Weight | Thread | Condition |
|---|---|---|---|---|---|---|---|
| 0-285' | 0-285' | 12-1/4" | 9-5/8" | H-40 | 32# | STC | New |
| 0-3766 | 0-3536 | 8-3/4" | 7" | K-55 | 23# | LTC | New |
| 0- TD | 0- TD | 6-1/4" | 4-1/2" | J-55 | 11.6 # | LTC | New |

The 9-5/8" surface pipe will be tested to 750 psi. All casing strings below the surface shoe shall be pressure tested to 0.22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% minimum internal yield.

**Surface**: The bottom three joints of the surface casing will have a minimum of one centralizer per joint and one centralizer every joint thereafter (Total 5 centralizers estimated)

**Intermediate**: The bottom three joints of the 7" casing will have a minimum of one centralizer per joint and one centralizer every fifth joint thereafter to above Ojo Alamo with turbolizers below and throughout the Ojo Alamo. (Total 12 centralizers, 3 turbolizers estimated).
**Production**: The bottom three joints will have a minimum of one centralizer per joint and one centralizer every fifth joint to 3500' (estimated 25 centralizers used). Centralizers will be open bow spring or basket bow spring type.

B. The proposed cementing program will be as follows:

**Surface String:** Cement will be circulated to surface.

**Lead:** 200 sx Class "B" with 100% Standard Cement, 2.00% CaCl2, .25 #/sx Flocele. Density: 15.6 lb/gal; Yield: 1.18 cuft/sx; Water: 5.24 gal/sx
* ***Minor variations possible due to existing conditions***

**Intermediate String:** Cement will be circulated to surface.

**Lead:** 500 sx 50/50 Poz, Yd-1.45, Water Gal/sx 6.8, Mixed @ 13ppg Foamed W/ N2 Down To 9.0# Additives 2% Gel, 0.2% Versaset, 0.1% Diacel Lwl.
**Tail:** 75 sx 50/50 Poz, Yd-1.45, Water Gal/Sk 6.8, Additives 2% Gel, 0.2% Versaset, 0.1% Diacel Lwl.
* ***Minor variations possible due to existing conditions***

**If hole conditions dictate, an alternate, cement design will be used**:

**Lead:** 575 sx 50/50 Poz with 50% Class B Cement, 50% San Juan Poz, .4% Halad-344, .1% CFR-3, 3% Bentonite, 5#/sx Gilsonite, .25#/sx Flocele. Density: 13.0 lb/gal; Yield: 1.46 cuft/sx; Water: 6.42 gal/sx
**Tail:** 75 sx 50/50 Poz with 94#/sx Standard Cement, 0.3% Halad-344, .25 #/sx Flocele. Density: 15.6 lb/gal; Yield: 1.18 cuft/sx; Water: 5.23 gal/sx
* ***Minor variations possible due to existing conditions***

**Production String:** **TOC designed to circulate 1000' into intermediate string, cement will tie into the intermediate casing as a minimum. Volumes may vary with actual well characteristics.**

**Lead:** 250 sx 50/50 Poz with 2% Gel, 0.2% Halad, 0.1% CFR-3, 5 #/sx Gilsonite, 0.25 #/sx Flocele. Mixed at 13 ppg, 1.47 ft 3/sx foamed to 9 ppg, 2.18 ft 3/sx.
**Tail:** 450 sx 50/50 Poz with 50% Standard Cement, 50% San Juan Poz, 3% Bentonite, 1.40% Halad-9, .10% CFR-3, .10% HR-5, 5 #/sx Gilsonite, 0.25 #/sx Flocele. Density: 13.0 lb/gal; Yield: 1.47 cuft/sx; Water: 6.35 gal/sx *
* ***Minor variations possible due to existing conditions***

**Actual volumes will be calculated and adjusted with caliper log prior to cementing.**

## 4. DRILLING FLUIDS PROGRAM:

| TMD Interval | TVD Interval | Type | Weight (ppg) | Viscosity | pH | Water Loss | Remarks |
|---|---|---|---|---|---|---|---|
| 0-285' | 0-285' | Spud-foam | 8.4-9.0 | 29-70 | 8.0 | NC | FW gel, LSND or stiff foam |
| 285'-3,766' | 285'-3,536' | Air | | | | NC | |
| 3,766' - TD | 3,536' - TD | Air/N2 or Mud | 8.5-9.0* | 30-50 | 8.0-10.0 | 8-810cc @ TD | Low solids-non-dispersed. * min Wt. to control formation pressure |

NC = no control

Sufficient quantities of mud material will be maintained on site or be readily accessible for the purpose of assuring well control. SPR will be recorded on daily drilling report after mudding up. Visual mud monitoring will be conducted during operations.

## 5. EVALUATION PROGRAM:

**Logs:** Density
Neutron
Induction

In the event open hole logs are not run in the well, a cased hole evaluation log will Be run.

**Survey:** Deviation surveys will be taken every 500' from 0-TD or first succeeding bit change. The hole will be air drilled from intermediate casing point to TD. The equipment used in this type of operation will not allow for single shot surveys without considerable operational delays. A survey will be taken at TD. Similar wells in this area have not shown significant deviation in this section of the hole.

**Cores:** None anticipated.

**DST's:** None anticipated.

## 6. ABNORMAL CONDITIONS:

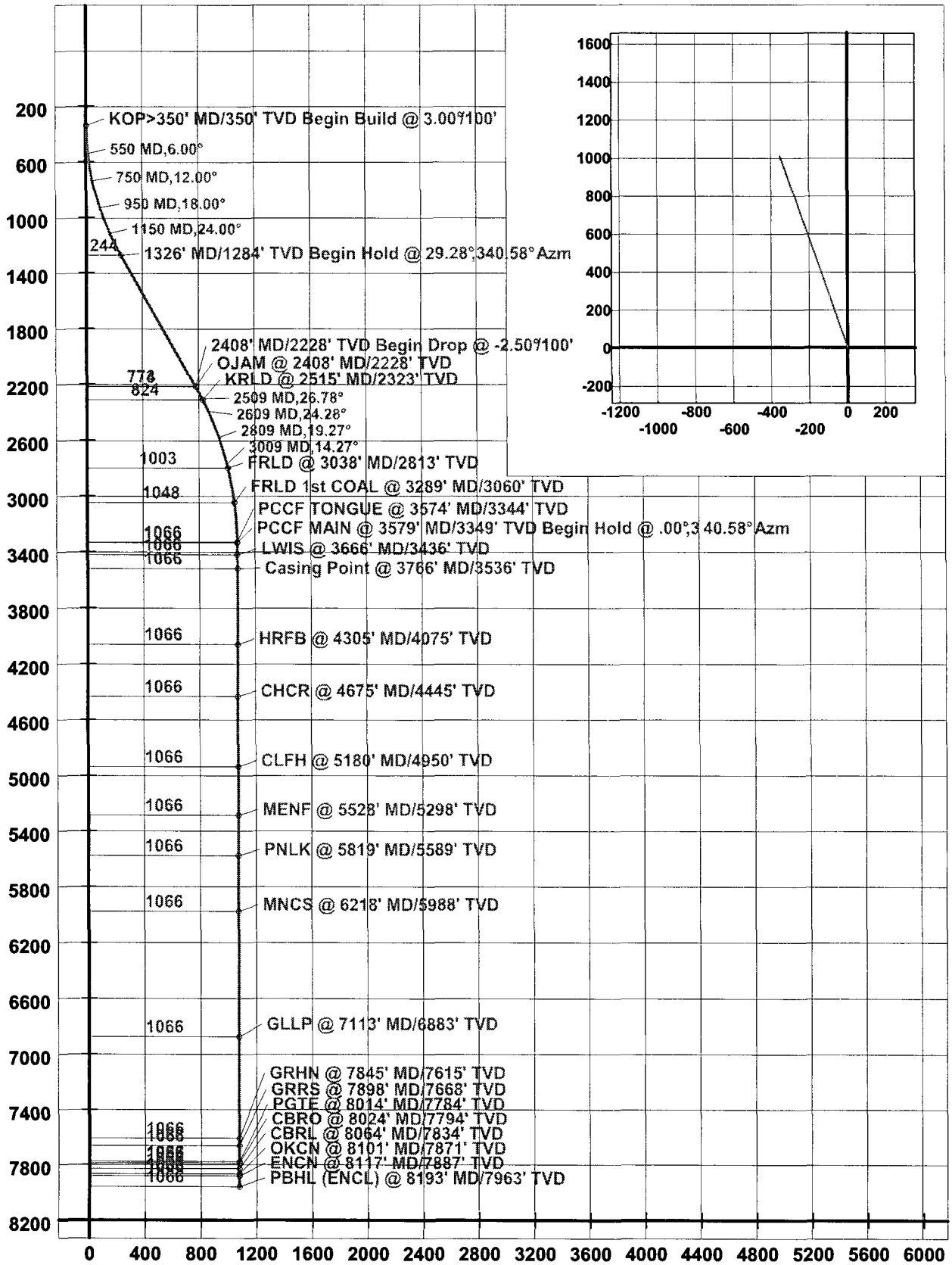
The Fruitland Coal will be encountered in the 8-3/4" hole. Estimated formation pressure is 300 psi. No other abnormal pressures and/or temperatures are expected. No hydrogen sulfide should be present.

## 7. OTHER INFORMATION:

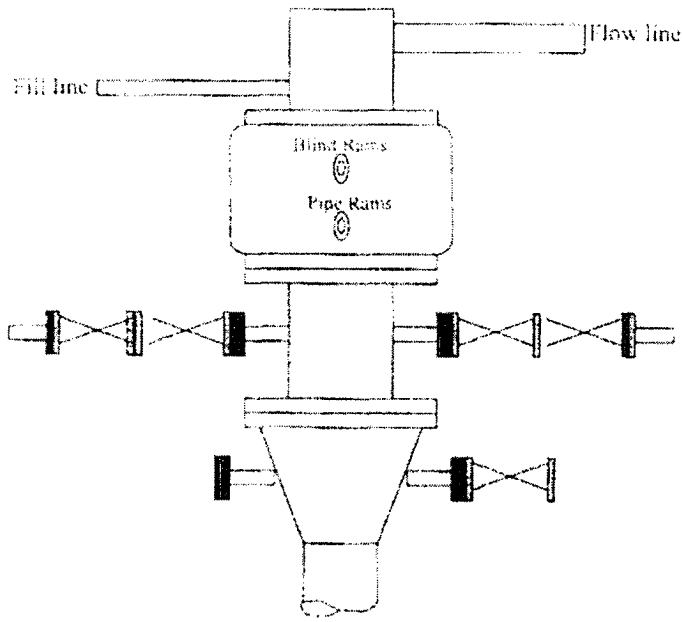
The anticipated starting date and duration of the operation will be as follows:

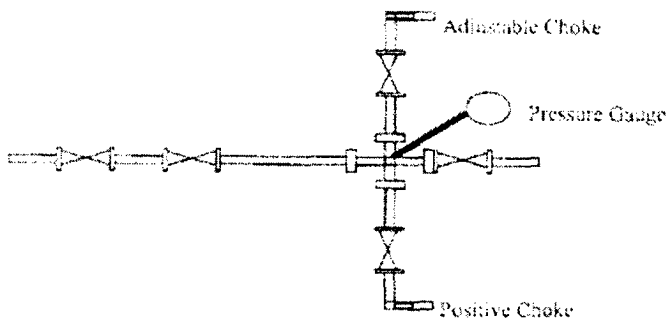
Starting Date: Upon Approval

**Company:** Devon Energy
**Lease/Well:** NEBU 346
**Location:** San Juan County
**State/Country:** NM



# Well Control Equipment
# 2,000 psi Configuration




All well control equipment designed to meet or exceed the Onshore Oil and Gas Order No. 2, BLM 43 CFR 3160 requirements for 2M systems.