

## 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

Form C-101

May 27, 2004

## Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address Devon Energy Production Company, L.P. PO Box 6459 Navajo Dam, NM 87419		<sup>2</sup> OGRID Number 6137
<sup>3</sup> Property Code 19641		<sup>4</sup> API Number 30 - 045-33305
<sup>5</sup> Property Name Northeast Blanco Unit		<sup>6</sup> Well No. 49M
<sup>9</sup> Proposed Pool 1 Basin Dakota		<sup>10</sup> Proposed Pool 2 Blanco Mesaverde

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	30	31N	7W		2,450	North	2'	East	San Juan

<sup>8</sup> 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
I	30	31N	7W		1,990'	South	870'	East	San Juan

## Additional Well Information

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code G	<sup>13</sup> Cable/Rotary Rotary	<sup>14</sup> Lease Type Code Private	<sup>15</sup> Ground Level Elevation 6,382'
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 8,275'	<sup>18</sup> Formation Dakota/Mesaverde	<sup>19</sup> Contractor	<sup>20</sup> Spud Date Unknown
Depth to Groundwater >100'		Distance from nearest fresh water well >1,000'		Distance from nearest surface water >1,000'
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume: _____ bbls Drilling Method: Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input checked="" type="checkbox"/>				

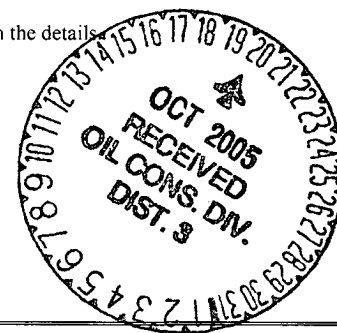
<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12 1/4"	9 5/8"	32#	0-285'	200	Surface
8 3/4"	7"	23#	0-3,776'	575	Surface
6 1/4"	4 1/2"	11.6#	0-TD	700	Surface

<sup>22</sup> 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.

Original BLM approved APD is dated 9/7/2005. There was an error in the directional drilling of this well, a letter is attached with the details.

HOLD C104 FOR Directional Survey



<sup>23</sup> 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: M.S. Zimmerman

Printed name: Melisa Zimmerman

Title: Senior Operations Technician

E-mail Address: Melisa.zimmerman@dmn.com

Date: 10-19-05

Phone: 505-632-0244

## OIL CONSERVATION DIVISION

Approved by:

Title: DEPUTY OIL & GAS INSPECTOR, DIST. 3Approval Date: OCT 20 2005 Expiration Date: OCT 20 2006Conditions of Approval Attached ☐

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number <b>30-045-33305</b>		2 Pool Code <b>71599 + 72319</b>		3 Pool Name <b>Basin Dakota + Blanco Mesaverde</b>		
4 Property Code <b>19641</b>		5 Property Name <b>NEBU</b>			6 Well Number <b># 49M</b>	
7 OGRID No. <b>6137</b>		8 Operator Name <b>Devon Energy Production Company, L.P.</b>			9 Elevation <b>6382</b>	

10 Surface Location

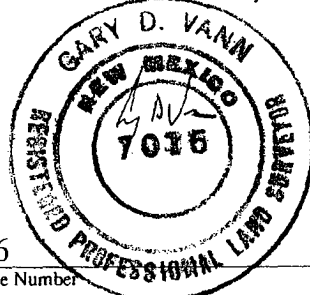
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>H</b>	<b>30</b>	<b>31 N</b>	<b>7 W</b>		<b>2450</b>	<b>NORTH</b>	<b>2</b>	<b>EAST</b>	<b>SAN JUAN</b>

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>I</b>	<b>30</b>	<b>31 N</b>	<b>7 W</b>		<b>1990</b>	<b>SOUTH</b>	<b>870</b>	<b>EAST</b>	<b>SAN JUAN</b>

12 Dedicated Acres <b>335.28</b>	13 Joint or Infill	14 Consolidation Code	15 Order No. <b><del>2046</del> NO</b>
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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

16	323(R)	1320(R)	2640(R)	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature <i>M.S. Zimmerman</i> Printed Name <b>Melisa Zimmerman</b> Title <b>Sr. Operations Technician</b> Date <b>AUG 23-2005</b>	
	Lot 5				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. Rev Btm Hole: April 24, 2005 Restaked: April 7, 2005 November 8, 2004 Date of Survey Signature and Seal of Professional Surveyor  7016 Certificate Number
	Lot 6				
	Lot 9				
	5280(R)	30	Azimuth -225°56' 1208' Bottom Hole Location 1990' F/SL 870' F/EL		
	Lot 10				
	314(R)	1320(R)	2640(R)		

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

Form C-103  
March 4, 2004

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

WELL API NO. 30-045-33305
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. SF 080557
7. Lease Name or Unit Agreement Name NORTHEAST BLANCO UNIT
8. Well Number 49M
9. OGRID Number 6137
10. Pool name or Wildcat Basin Dakota / Blanco Mesaverde

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.)

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

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

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

4. Well Location

Unit Letter H : 2,450' feet from the North line and 2' feet from the East line

Section 30 Township 31N Range 7W NMPM County - SAN JUAN

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
GR 6,382'

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

Pit Location: UL H Sect 30 Twp 31N Rng 7W 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:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: CONSTRUCT DRILLING PIT ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

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 ☐.

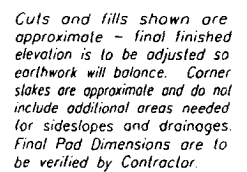
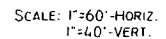
SIGNATURE M.S. Zimmerman TITLE Sr. Operations Technician DATE 10-19-05

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

(This space for State use)

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. IV DATE OCT 20 2005  
Conditions of approval, if any:

Lat: 36°52'16"  
Long: 107°36'12"



VANN SURVEYS  
P. O. Box 1306  
Farmington, NM



Devon Energy Corporation  
20 North Broadway  
Oklahoma City, OK 73102-8260

October 19, 2005

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
Attn: Steve Hayden  
1000 Rio Brazos Road  
Aztec, NM 87410

Re: NEBU 49M

Dear Mr. Hayden,

The first APD submitted by Devon Energy Production Company, LP had a bottom hole location of 1,990' FSL & 870' FEL. DEPCO was notified by the BLM that this bottom hole location would not be federal minerals but fee minerals. In speaking with our contractor DEPCO chose to move the bottom hole location to 2,150' FSL & 870' FEL (keeping the original depth) due to the surface location being 50% BOR and 50% BLM. At this time another directional plan was created and submitted with a sundry of the changes intended.

While the drilling rig was moving to the location of the 49M (over the weekend) it was noticed that the directional plan for this well was to steep. At this time a request was made for a more workable directional plan. Apparently the directional company inadvertently used the first directional plan with the incorrect bottom hole location. Thus the NEBU 49M is not on federal minerals but fee minerals.

Sincerely,

Melisa Zimmerman  
Senior Operations Technician  
Devon Energy Production Company, LP

Cc: The Bureau of Land Management



**NEBU 49M**  
**Unit H 30-31N-7W**  
**San Juan Co., NM**

**DRILLING PLAN**

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

<b>Formation</b>	<b>TVD (ft)</b>	<b>TMD (ft)</b>	<b>Hydrocarbon/Water Bearing Zones</b>
San Jose	Surface	Surface	
Ojo Alamo	2226	2402	Aquifer
Kirtland	2322	2510	
Fruitland	2815	3059	Gas
Pictured Cliffs Tongue	3226	3486	Gas
Pictured Cliffs Main	3317	3577	Gas
Lewis	3415	3676	Gas
<b>Intermediate TD</b>	3515	3776	
Mesaverde	4072	4333	Gas
Chacra / Otera	4451	4712	Gas
Cliff House	5257	5518	Gas
Menefee	5318	5579	Gas
Point Lookout	5599	5860	Gas
Mancos	5992	6253	Gas
Gallup	6924	7185	Gas
Greenhorn	7619	7880	
Graneros	7674	7935	Gas
Dakota	7794	8055	Gas
Paguate	7806	8067	
Cubero	7841	8102	
Oak Canyon	7894	8155	
Encinal Canyon	7910	8171	

Lower Encinal Canyon	7956	8217	
Burro Canyon	7988	8249	
Morrison	8014	8275	
<b>TD</b>	8014	8275	

\*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, which shows the size, 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:

<b>TVD</b>	<b>TMD</b>	<b>Hole Size</b>	<b>Size</b>	<b>Grade</b>	<b>Weight</b>	<b>Thread</b>	<b>Condition</b>
0-285	0-285	12-1/4"	9-5/8"	H-40	32#	STC	New
0-3515	0-3776	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% CaCl<sub>2</sub>, .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/ N<sub>2</sub> 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<sup>3</sup>/sx foamed to 9 ppg, 2.18 ft<sup>3</sup>/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:**

<b>TVD Interval</b>	<b>TMD Interval</b>	<b>Type</b>	<b>Weight (ppg)</b>	<b>Viscosity</b>	<b>pH</b>	<b>Water Loss</b>	<b>Remarks</b>
0-285	0-285	Spud-foam	8.4-9.0	29-70	8.0	NC	FW gel, LSND or stiff foam
285-3515	285-3776	Air				NC	
3515 - TD	3776 - 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.

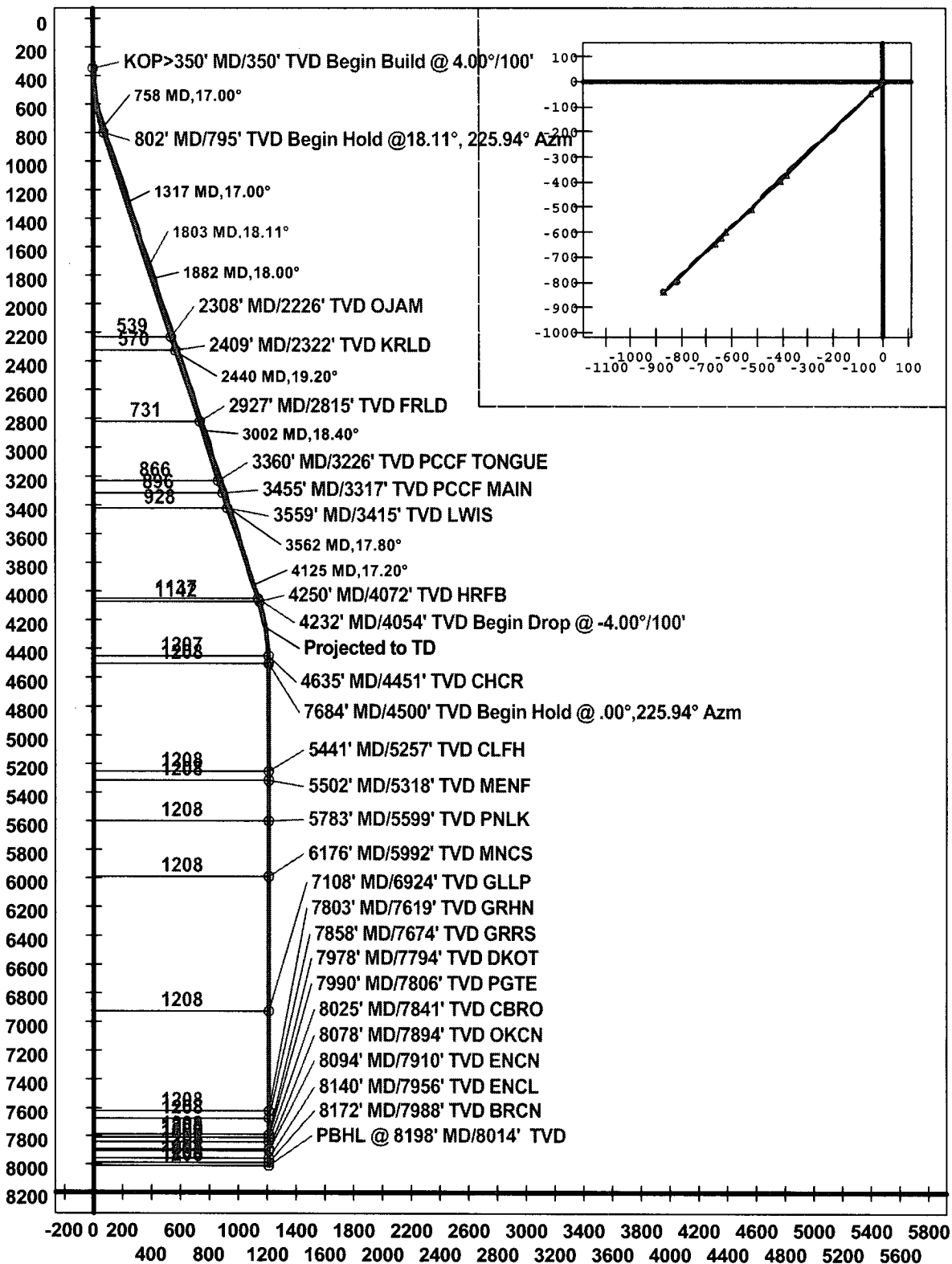
**Cores:** None anticipated.

**DST's:** None anticipated.

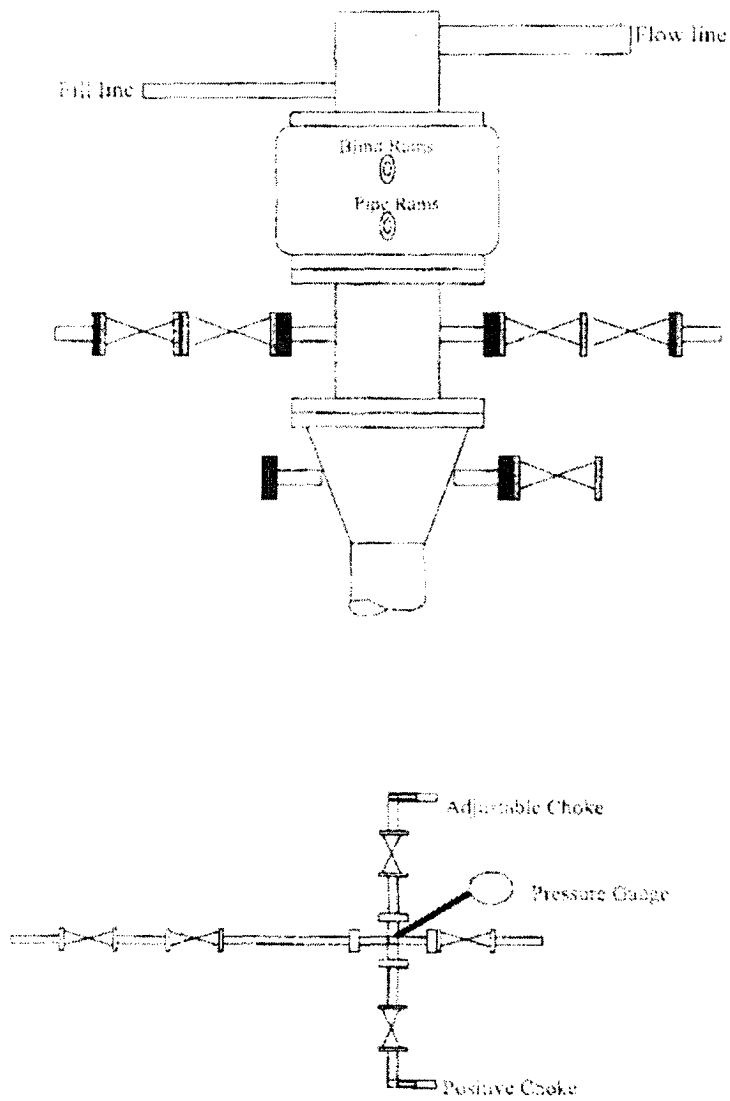
#### **6. ABNORMAL CONDITIONS:**

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

Company: Devon Energy  
 Lease/Well: NEBU 49M  
 Location: San Juan County  
 State/Country: New Mexico



## 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 3150 requirements for 2M systems.