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Form 3160-3  
(April 2004)Bureau of Land Management  
Farmington Field OfficeFORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF 079042	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Devon Energy Production Company, L.P.		7. If Unit or CA Agreement, Name and No. Northeast Blanco Unit	
3a. Address 20 N. Broadway Oklahoma City, OK 73102		8. Lease Name and Well No. NEBU 423A	
3b. Phone No. (include area code) 405-552-7917		9. API Well No. 30-039-30510	
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 1,610' FSL & 905' FEL, Unit I, NE SE At proposed prod. zone 1,940' FSL & 1,130' FEL, Unit I, NE SE		10. Field and Pool, or Exploratory Basin Fruitland Coal	
11. Sec., T. R. M. or Blk. and Survey or Area I Sec. 8, T30N, R7W		12. County or Parish Rio Arriba	
13. State NM		14. Distance in miles and direction from nearest town or post office* Approximately 37.4 miles	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 905'	16. No. of acres in lease 1779.91 Acres	17. Spacing Unit dedicated to this well 320 Acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 689'	19. Proposed Depth 3,198'	20. BLM/BIA Bond No. on file CO 1104	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GR 6,285'	22. Approximate date work will start* 04/27/2008	23. Estimated duration Unknown	
24. Attachments This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4			

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

1. Well plat certified by a registered surveyor.	4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
2. A Drilling Plan.	5. Operator certification
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).	6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) Melisa Castro	Date 3-27-08
Title Senior Staff Operations Technician		
Approved by (Signature) 	Name (Printed/Typed) AEM	Date 7/21/08
Title FFO		

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.

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 page 2)

Hold C104

for Directional Survey  
and "As Drilled" plat

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

H<sub>2</sub>S POTENTIAL EXISTRCVD JUL 22 '08  
OIL CONS. DIV.NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

JUL 24 2008

NMOCD

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

APR 02 2008

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT  
Bureau of Land Management  
Huntington Field Office

1 API Number <b>30.039.30510</b>	2 Pool Code <b>71629</b>	3 Pool Name <b>Barr Fruitland Coal</b>
4 Property Code <b>19641</b>	5 Property Name <b>NEBU</b>	6 Well Number <b>#423A</b>
7 OGRID No <b>6137</b>	8 Operator Name <b>Devon Energy Production Company, L.P.</b>	9 Elevation <b>6285</b>

10 Surface Location

UL or Lot No <b>I</b>	Section <b>8</b>	Township <b>30 N</b>	Range <b>7 W</b>	Lot Idn	Feet from the <b>1610</b>	North/South line <b>SOUTH</b>	Feet from the <b>905</b>	East/West line <b>EAST</b>	County <b>Rio Arriba</b>
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11 Bottom Hole Location If Different From Surface

7 UL or lot no <b>I</b>	Section <b>8</b>	Township <b>30 N</b>	Range <b>7 W</b>	Lot Idn	Feet from the <b>1940</b>	North/South line <b>SOUTH</b>	Feet from the <b>1130</b>	East/West line <b>EAST</b>	County <b>Rio Arriba</b>
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12 Dedicated Acres <b>320</b>	13 Joint or Infill	14 Consolidation Code	15 Order No
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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	5279(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>[Signature]</i> Printed Name <b>Melisa Castro</b> Title <b>SR. Staff Operations Technician</b> Date <b>March 27, 2008</b>
5280(R)	8	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  Date of Survey <b>June 5, 2007</b> Signature and Seal of Professional Surveyor  7016 Certificate Number
	Bottom Hole Location 1940' F/SL 1130' F/EL Azimuth - 325°43' 399' 905' 1610'	
	5280(R)	

## **NEBU 423A**

The referenced well is located inside the High Productivity Area of the Basin Fruitland Coal Pool. The subject well is in the participating area of the Northeast Blanco Unit. No notification is required per R-8768-F.

## NEBU 423A

From the town of Aztec, NM, take State HWY 173 for 18 miles to State HWY 511. Turn left on State HWY 511 and travel 5.7 miles to Dam Road. Take Dam Road for 1.8 miles to De Lasso Loos. Turn onto De Lasso Loos and travel 5.1 miles to Smith Pass. Take a left onto Smith Pass and travel 1.5 miles to State Road 527. Turn left onto State Road 527 and travel 3.2 miles, travel south west on State Road 527 for another 1.9 miles to location turn off. Turn right onto location road and well site will be 0.2 miles on north side of road.

**NEBU 423A**  
**SL: 1,610' FSL & 905' FEL, Unit I 8-30N-7W**  
**BHL: 1,940' FSL & 1,130' FEL, Unit I 8-30N-7W**  
**Rio Arriba 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	2134	2101	Aquifer
Kirtland	2308	2272	
Fruitland	2787	2749	Gas
Fruitland 1 <sup>st</sup> Coal	2976	2938	Gas
Pictured Cliffs Main	3236	3198	Gas
<b>PTD</b>	3236	3198	

All shows of fresh water and minerals will be adequately protected and reported. A 100' sump will be drilled into the Picture cliffs. A mud logger will be on location collecting samples and measuring gas levels. Should the Picture Cliffs interval appear to be productive the sump will be filled with cuttings and abandoned

**2. PRESSURE CONTROL EQUIPMENT:**

All well control equipment shall be in accordance with Onshore Order #<sup>2</sup>~~1~~ 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.
- *Safety valve assembly to fit all drill string connections in use*

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 1000 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
0-2995	0-2957	8-3/4"	7"	J-55	23#	LTC	New
0- TD	0- TD	6-1/4"	5-1/2"*	J-55	15.5 #	LTC	New

Casing Size	Collapse Resistance	Internal Yield	Body Yield
9 5/8"	1400 psi	2270 psi	254K psi
7"	3270 psi	4360 psi	366K psi
5 1/2"	4040 psi	4810 psi	248K psi

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)

**7" Casing:** 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).

B. The proposed cementing program will be as follows:

**Surface String:** 9-5/8" Surface cemented in a 12-1/4" hole at 285'.  
32.3# H-40 ST&C 8 Rnd  
Saw tooth guide shoe  
Cemented with 200 sacks Class B mixed at 15.6 ppg w/.25 pps  
Celloflake, 2% calcium chloride. Yield 1.19 ft<sup>3</sup>/sx. \*  
Cement designed to circulate to surface.

**\* Minor variations possible due to existing hole conditions**

**Production String:** 7" Production casing cemented in an 8-3/4" hole  
 23# J-55 LT&C 8 Rnd  
 Float collar  
 Joint  
 Float Shoe  
 Cement with  
**Lead:** 500 sacks Class B 50/50 POZ, 3% gel, 5# gilsonite, 1/4"# Flocele, .1% CFR 3, .2% Halad 344, yield 1.47 ft3/sx.  
**Tail:** 25 sx Class 'B'. 1.18 ft3/sx. \*  
 Cement designed to circulate to surface.  
 Pending hole conditions, cement baskets may be installed above TD

**\* Minor variations possible due to existing hole conditions.**

**Liner:** 5-1/2" liner\*  
 15.5# J-55 LT&C 8 Rnd  
 Shoe  
 Not Cemented

\* May not be run pending hole conditions.  
 If well does not respond to proposed to completion, the 5 1/2 " liner will be cemented using 300 sacks class B 50/50 POZ, 3% gel, 5# gilsonite, 1/4"# Flocele, .1% CFR 3, .2% Halad 344, yield 1.47 ft3/sx. \*\*

**\*\* Minor variations possible due to existing hole conditions**

#### 4. DRILLING FLUIDS PROGRAM:

TMD	TVD	Type	Weight (ppg)	Viscosity	pH	Water Loss	Remarks
0-285	0-285	Spud	8.4-9.0	29-70	8.0	NC	FW gel,
285-2995	285-2957	LSND	8.4-9.0	29-70	8.0	10-12	LCM as needed
2995 - TD	2957 - TD	Air					Foam as needed

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:

**Wireline Logs:** None

**Mud Logs:** mud logging in Fruitland Coal.

**Survey:** Deviation surveys will be taken every 500' from 0-TD of 8 3/4" hole or first succeeding bit change.

**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:**

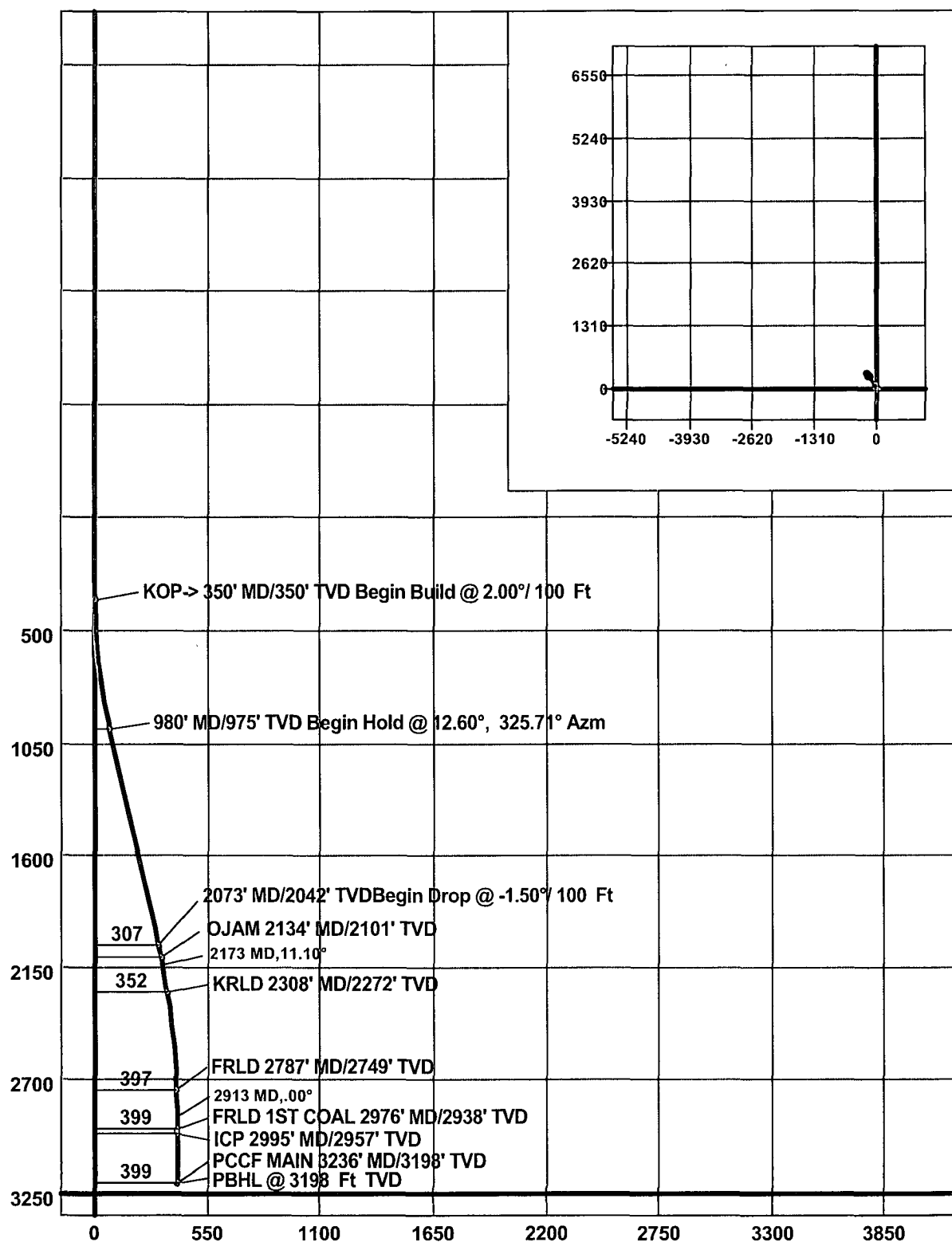
The anticipated starting date and duration of the operation will be as follows:

Starting Date:	Upon Approval
Duration:	20 days

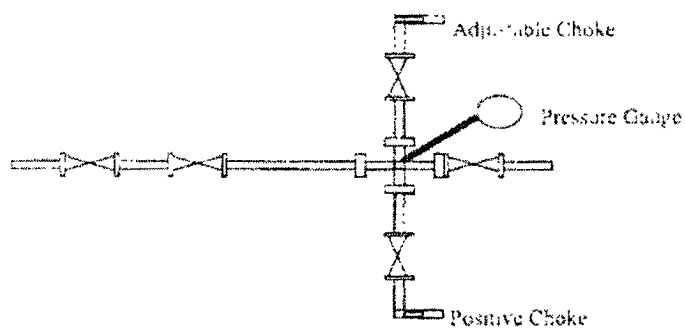
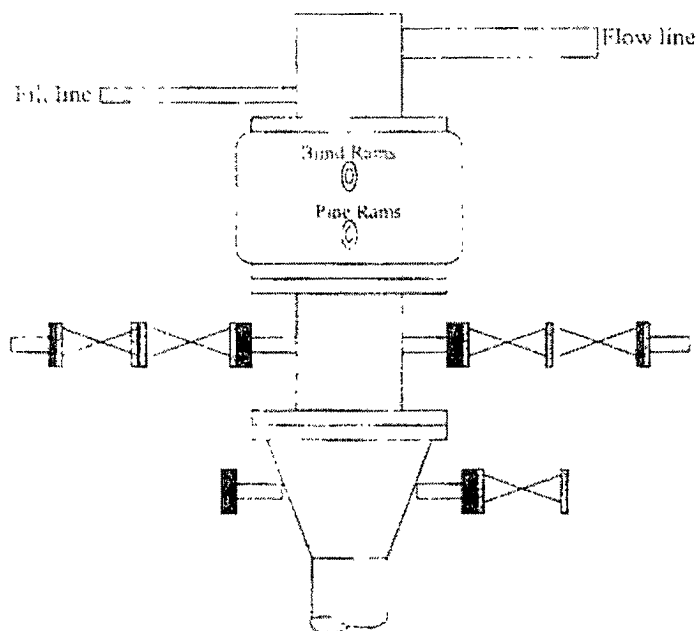
If the well is completed as a dry hole or as a producer, Well Completion or Recompletion Report and Log (Form 3160-4) will be submitted within 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3160. Copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample descriptions, daily drilling reports, daily completion reports, and all other surveys or data obtained and compiled during the drilling, completion, and/or workover operations, will be submitted directly to the Authorized Officer or filed with Form 3160-4.



Company: DEVON ENERGY  
 Lease/Well: NEBU #423A  
 Location: RIO ARRIBA CO.  
 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.