

DIST. 3

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007
2007 AUG 9 22

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF 079060	
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 NEBU 345	
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 345	
3b. Phone No. (include area code) 405-552-7917		9. API Well No. 30-039-30315	
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 1,575' FNL & 1,105' FEL, Unit H, SE NE At proposed prod. zone 900' FNL & 900' FEL, Unit A, NE NE		10. Field and Pool, or Exploratory La Jara- Basin Dakota / S. and P. PC	
11. Sec, T R M or Blk. and Survey or Area H Sec. 29, 30N, 7W		12. County or Parish Rio Arriba	
13. State NM		14. Distance in miles and direction from nearest town or post office* Approximately 29.4 miles	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg unit line, if any) 1,105'	16. No. of acres in lease 2236.44 Acres	17. Spacing Unit dedicated to this well NA/320 Acres - DK / 160 Acres - PC NE/4	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 51'	19. Proposed Depth 7,849'	20. BLM/BIA Bond No. on file CO 1104	
21. Elevations (Show whether DF, KDB, RT, GL, etc) GR 6,340'	22. Approximate date work will start* 10/20/2007	23. Estimated duration Unknown	

24. Attachments

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

- | | |
|---|--|
| 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 8-2-07
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Title
Senior Staff Operations Technician

Approved by (Signature) 	Name (Printed/Typed) AFM	Date 8/31/07
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Title AFM	Office PFO
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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 USC Section 1001 and Title 43 USC 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)

**NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT**

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

Obtain a pit permit from NMOCD
prior to constructing location

NMOCD HOLD C101 FOR directional survey
9-16-07
aw

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

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

2007 AUG -6 AM 9:22
RECEIVED
210-1-114

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30315	² Pool Code 71599/96199	³ Pool Name Basin Dakota / La Jara / Pictured Cliffs
⁴ Property Code 19641	⁵ Property Name NEBU	⁶ Well Number # 345
⁷ OGRID No 6137	⁸ Operator Name Devon Energy Production Company, L.P.	⁹ Elevation 6340

¹⁰ Surface Location

UL or Lot No. H	Section 29	Township 30 N	Range 7 W	Lot Idn	Feet from the 1575	North/South line NORTH	Feet from the 1105	East/West line EAST	County Rio Arriba
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¹¹ Bottom Hole Location If Different From Surface

⁷ UL or lot no A	Section 29	Township 30 N	Range 7 W	Lot Idn	Feet from the 900	North/South line NORTH	Feet from the 900	East/West line EAST	County Rio Arriba
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¹² Dedicated Acres 320 - 1/2 DK 160 - 1/4 PC	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No
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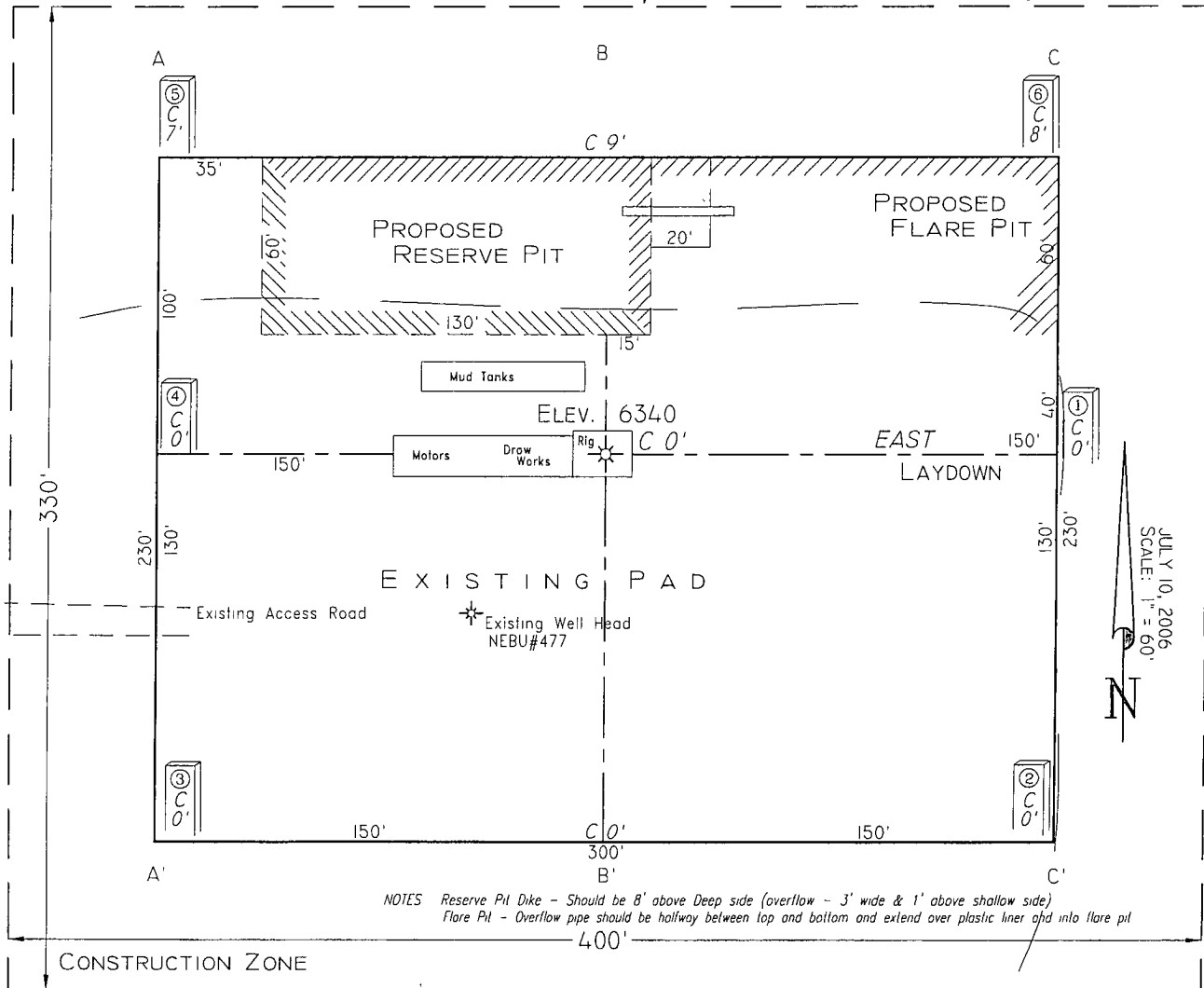
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>¹⁶</p> <p>5281'(R)</p> <p>Bottom Hole Location 900' F/NL 900' F/EL</p> <p>Azimuth - 16°51' 705'</p> <p>1575'</p> <p>1105'</p> <p>DK</p> <p>PC</p> <p>29</p> <p>5279'(R)</p>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature Melisa S. Castro</p> <p>Printed Name Sr. Staff Operations Technician</p> <p>Title August 2, 2007</p> <p>Date</p> <p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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.</p> <p>July 10, 2006</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>GARY D. VANN NEW MEXICO REGISTERED PROFESSIONAL LAND SURVEYOR 7016</p> <p>7016 Certificate Number</p>
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PAD LAYOUT PLAN & PROFILE
DEVON ENERGY PRODUCTION COMPANY, L.P.

Nebu # 345
 1575' F/NL 1105' F/EL
 SEC. 29, T30N, R7W, N.M.P.M.
 RIO ARriba COUNTY, NEW MEXICO

Lat: 36.78655° (83)
 Long: 107.58914°



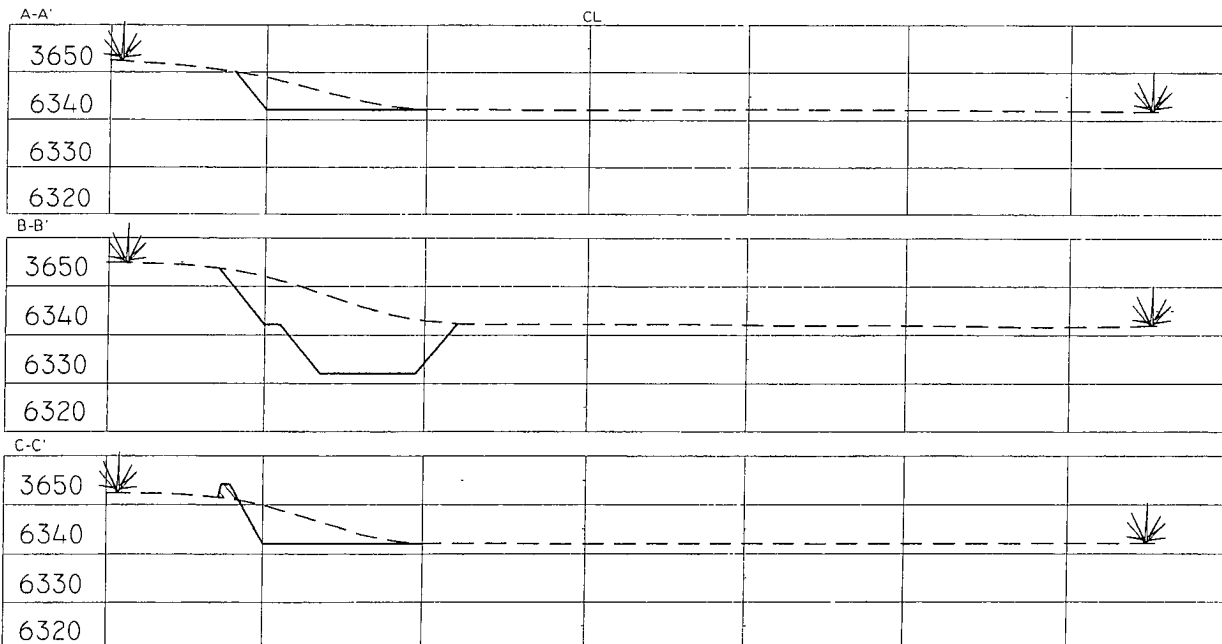
NOTES Reserve Pit Dike - Should be 8' above Deep side (overflow - 3' wide & 1' above shallow side)
 Flare Pit - Overflow pipe should be halfway between top and bottom and extend over plastic liner and into flare pit

JULY 10, 2006
 SCALE: 1" = 60'



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 345
Unit H 29-30N-7W
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	2314	2218	Aquifer
Kirtland	2438	2338	
Fruitland	2884	2776	Gas
Fruitland 1 st Coal	3122	3013	Gas
Pictured Cliffs Tongue	3365	3255	Gas
Pictured Cliffs Main	3370	3260	Gas
Lewis	3478	3368	Gas
Intermediate TD	3578	3468	
Huefanito Bentonite	4055	3945	Gas
Chacra / Otera	4363	4253	Gas
Cliff House	4943	4833	Gas
Menefee	5220	5110	Gas
Point Lookout	5583	5473	Gas
Mancos	5934	5824	Gas
Gallup	6869	6759	Gas
Greenhorn	7558	7448	
Graneros	7610	7500	Gas
Paguate	7745	7635	
Cubero	7771	7661	
Oak Canyon	7837	7727	
TD	7849	7739	

*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.

• *Safety valves & subs to fit all drill strings 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 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
0-3578	0-3468'	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 ft³/sx foamed to 9 ppg, 2.18 ft³/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'-3,578'	285'-3,468'	Water/Mud	8.4-9.0	29-70	8.0	NC	
3,578' - TD	3,468' - TD	Air/N ₂ 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:

Company: Devon Energy
Lease/Well: NEBU #345
Location: Rio Arriba County
State/Country: New Mexico

