

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SUNDRY NOTICES AND REPORTS ON WELLS

OCD-ARTESIA

FORM APPROVED
OMB NO. 1004-0135
EXPIRES: March 31, 2007

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals

S

SUBMIT IN TRIPLICATE

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other _____

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY, LP

APR 18 2008

OCD-ARTESIA

3. Address and Telephone No.
20 N. Broadway, Oklahoma City, Ok 73102-8260 405-235-3611

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
660 FSL 430 FEL Unit D SEC 1 T24S R30E

BHL: 330 FNL & 660 FEL SEC 1 T24S R30E PP: 660 FSL & 430 FEL

5. Lease Serial No.

NM-97133

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

8. Well Name and No.

Black Jack 1 Federal 3H

9. API Well No.

30-015-35797

10. Field and Pool, or Exploratory

Sand Dunes South; Delaware

11. County or Parish State

Eddy

NM

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Change APD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work and approximate duration thereof. If the proposal deepens directionally or recompletes horizontally, give subsurface location and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirement, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

Devon Energy Production Company L.P. respectfully requests to change the approved APD dated 9/7/07 from a vertical well to a horizontal well. Attached is the casing and cementing programs along with a revised C-102 reflecting the Bottom Hole Location and penetration point.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

(Attached C-102)

14. I hereby certify that the foregoing is true and correct

Signed

Name Judy A. Barnett X8699
Title Regulatory Analyst

Date

APPROVED
4/9/2008

(This space for Federal or State Office use)

Approved by

Title

Date

APR 15 2008

Conditions of approval, if any:

[Signature]

This to U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statement or report relating to any matter within its jurisdiction

PETROLEUM ENGINEER

*See Instruction on Reverse Side

Accepted for record - NMOCD

(REVISED 4/9/08)

DRILLING PROGRAM

Devon Energy Production Company, LP

Black Jack 1 Federal 3H

Surface Location: 660' FSL & 430' FEL, Lot P, Sec 1 T24S R30E, Eddy, NM

Bottom Hole Location: 330' FNL & 660' FEL, Lot A, Sec 1 T24S R30E, Eddy, NM

1. Geologic Name of Surface Formation

a. Delaware

2. Estimated tops of geological markers:

a. Rustler	477'
b. Salado	935'
c. Base of Salt	3902'
d. Delaware/Lamar	4125'
e. Bell Canyon	4171'
f. Cherry Canyon	5057'
g. Brushy-Canyon	6369'
h. Total Depth	11,980'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas

a. Rustler	490'	Fresh Water
b. Delaware	4120'-TD	Oil

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 570' and circulating cement back to surface. Fresh water sands will be protected by setting 9 5/8" casing at 4000' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 9 5/8" casing.

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17 1/2"	0' -570'	13 3/8"	48#	ST&C	H-40
12 1/4"	0' - 4000'	9 5/8"	36# 40	LT&C	K-55 or J-55
8 1/2"	0'-7500'	5 1/2"	17#	LT&C	N-80
7 7/8"	0'-11,980'	5 1/2"	17#	BT&C	N-80

5. Cement Program:

13 3/8" Surface

Lead w/ 330 sx 35:65 Poz (Fly Ash):Premium Plus C Cement + 0.125
lbs/sx Cello Flake + 4% bwoc Bentonite + 5% bwow Sodium

Chloride + 0.8% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 101.1% FW. 12.80 ppg, 1.96 cf/sx, 10.55 gps. TOC @ surface.

Tail w/ 250 sacks Premium Plus C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sx Cello Flake + 56.3% FW. 14.80 ppg, 1.35 cf/sx, 6.35 gps

9 5/8" Intermediate

Lead: w/1125 sx 35:65 Poz (Fly Ash) Premium Plus C Cmnt + 5% bwow Sodium Chloride + 0.125 lb/sx Cello Flake + 6% bwoc Bentonite + 107.8% FW. 12.50 ppg, 2.04 cf/sx, 11.24 gps. TOC @ surface.

Tail: 300 sx 60:40 Poz (Fly Ash) Premium Plus C Cmnt + 5% bwow Sodium Chloride + 0.125 lbs/sx Cello Flake + 4% bwoc Sodium Metasilicate + 4% MPA-5 + 64.7% FW. 13.80 ppg, 1.37 cf/sx, 6.36 gps

5 1/2" Production

Spacer 10 bbls FW @ 8.34 ppg

1500 gals Mud Clean II @ 8.45 ppg

10 bbls FW @ 8.34 ppg

Tail 850 sx 35:65 Class H Cmnt + 0.2% bwoc Sodium Metasilicate + 1.4% bwoc FL-62 + 0.4% bwoc CD-32 + 0.1% bwoc ASA-301 + 20 lbs/sx ASCA-1 + 0.35% bwoc R-3 + 52.9% FW. 15.60 ppg, 1.42 cf/sx, 5.97 gps

Stage 2 DV Tool @ 7400'.

Lead w/ 630 sx 35:65 Poz (Fly Ash) Premium Plus C Cmnt + 1% bwow Sodium Chloride + 0.125 lbs/sx Cello Flake + 6% bwoc Bentonite + 0.4% bwoc FL-52A + 0.4% bwoc R-3 + 103.1% FW. 12.50 ppg, 1.96 cf/sx, 10.75 gps

Tail w/ 340 sx 60:40 Poz (Fly Ash) Premium Plus C Cmnt + 1% bwow Sodium Chloride + 0.125 lb/sx Cello Flake + 4% bwoc MPA-5 + 0.75% bwoc BA-10A + 63.1% FW. 13.80 ppg, 1.34 cf/sx, 6.21 gps

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 500' above the 9 5/8" casing shoe.

6. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (5M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (5000 psi WP) and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. The drilling head will be installed on the 13 3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to **1200 psi with the rig pump before drilling out the 13 3/8" casing shoe**

(70% of 48#, H-40 casing). Prior to drilling out the 9 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi WP rating.

7. Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0'-570'	8.4-9.4	32-44	NC	WBM
570'-4000'	10	28	NC	Brine
4000'-7500'	8.8	28-30	NC-40cc	FW/WBM
7500'-11,980'	8.8	34.40	12-8cc	FW/WBM

The necessary mud products for weight addition and fluid loss control will be on location at all times.

8. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

9. Logging, Coring, and Testing Program:

- Drill stem tests will be based on geological sample shows.
- The open hole electrical logging program will be:
 - Total Depth to Intermediate Casing
Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
 - Total Depth to Surface
Compensated Neutron with Gamma Ray
 - No coring program is planned
 - Additional testing will be initiated subsequent to setting the 5 1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

10. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2900 psi and Estimated BHT 130°.

11. Anticipated Starting Date and Duration of Operations:

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, 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 Department

Form C-102
Revised October 12, 2005

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

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <u>30-015-35797</u>	Pool Code	Pool Name <u>SAND DUNES SOUTH; DELAWARE</u>
Property Code	Property Name <u>BLACK JACK "1" FEDERAL</u>	Well Number <u>3H</u>
OGRID No. <u>6137</u>	Operator Name <u>DEVON ENERGY PRODUCTION COMPANY LP</u>	Elevation <u>3438'</u>

Surface Location

UL or lot No. <u>P</u>	Section <u>1</u>	Township <u>24 S</u>	Range <u>30 E</u>	Lot Idn	Feet from the <u>660</u>	North/South line <u>SOUTH</u>	Feet from the <u>430</u>	East/West line <u>EAST</u>	County <u>EDDY</u>
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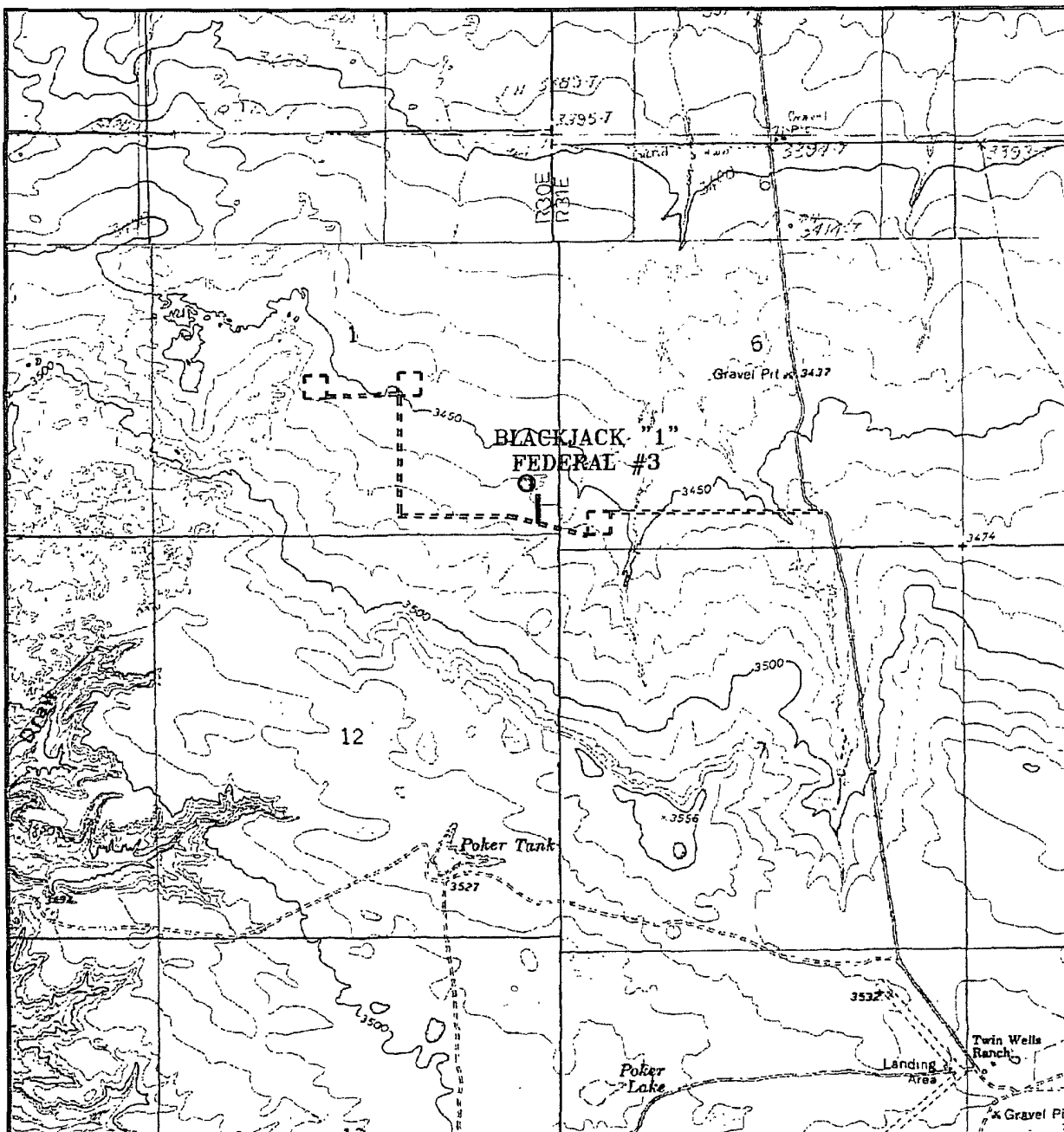
Bottom Hole Location If Different From Surface

UL or lot No. <u>A</u>	Section <u>1</u>	Township <u>24 S</u>	Range <u>30 E</u>	Lot Idn	Feet from the <u>330</u>	North/South line <u>NORTH</u>	Feet from the <u>660</u>	East/West line <u>EAST</u>	County <u>EDDY</u>
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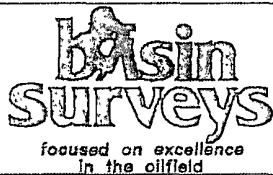
Dedicated Acres <u>160</u>	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	BOTTOM HOLE LOCATION Lat - N32°15'11.84" Long - W103°49'40.06" SPC- N.: 456247.646 E.: 697616.786 (NAD-83)	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date <u>4/09/08</u> Judy A. Barnett Printed Name _____ Regulatory Analyst
	SURFACE LOCATION Lat - N32°14'29.38" Long - W103°49'37.43" SPC- N.: 451958.200 E.: 697863.300 (NAD-83)	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. JUNE 17, 2008 Date Surveyed _____ Signature of Surveyor _____ Professional Surveyor W.O. _____ Certificate No. Gary L. Jones 7977 BASIN SURVEYS



BLACKJACK "1" FEDERAL #3
 Located at 660' FSL AND 430' FEL
 Section 1, Township 24 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7315 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: JMS 18213T

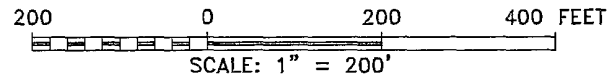
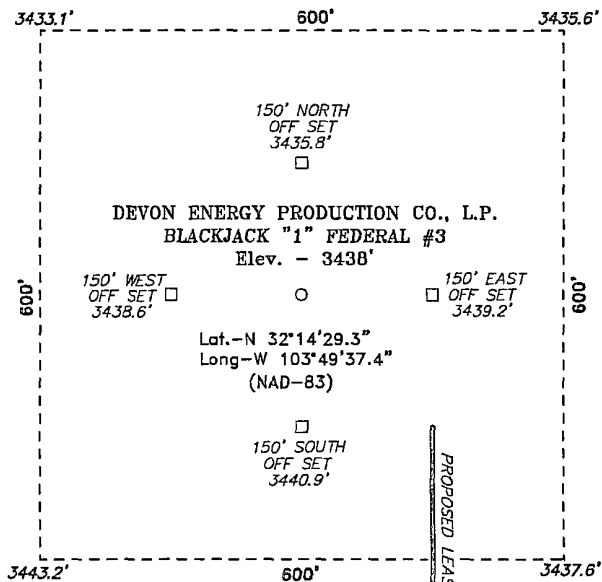
Survey Date: 06-07-2007

Scale: 1" = 2000'

Date: 06-08-2007

**DEVON ENERGY
 PROD. CO., L.P.**

SECTION 1, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM MILE MARKER 12 OF STATE HWY 128,
PROCEED EAST 0.5 MILES TO CO. RD. 787 (TWIN
WELLS), GO SOUTH ON CO. RD. 787 FOR 4.1 MILES
TO LEASE ROAD, ON LEASE ROAD GO WEST 0.5
MILES TO YATES WELL AND LEASE ROAD, PROCEED
WEST ON LEASE ROAD 0.1 MILES TO PROPOSED
LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 18213

Drawn By: J. M. SMALL

Date: 06-08-2007

Disk: 18213W JMS

DEVON ENERGY PROD. CO., L.P.

REF: BLACKJACK "1" FEDERAL #3 / WELL PAD TOPO

THE BLACKJACK "1" FEDERAL No. 3 LOCATED 660'

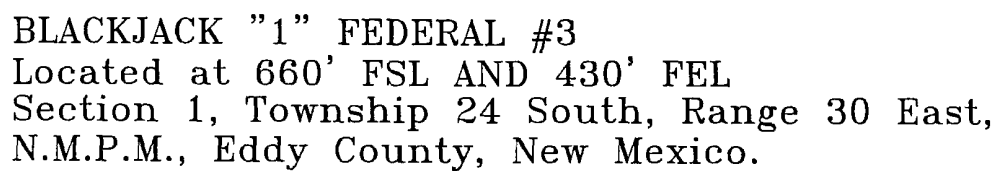
FROM THE SOUTH LINE AND 430' FROM THE EAST LINE OF

SECTION 1, TOWNSHIP 24 SOUTH, RANGE 30 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 06-07-2007

Sheet 1 of 1 Sheets





DEVON ENERGY CORPORATION

Field: Eddy Co, NM
Site: Black Jack 1 Fed 3H
Well: Black Jack 1 Fed 3H
Wellpath: 3H
Plan: Plan #1



Azimuths to Grid North
True North -0.27°
Magnetic North 7.81°
Magnetic Field
Strength 48972nT
Dip Angle 60.25°
Date 3/17/2008
Model igr2005

SITE DETAILS

Black Jack 1 Fed 3H
Section 1, T24S, R30E
Site Centre Latitude 32°14'29.300N
Longitude 103°49'37.400W
Ground Level 3438.00
Positional Uncertainty 0.00
Convergence 0.27

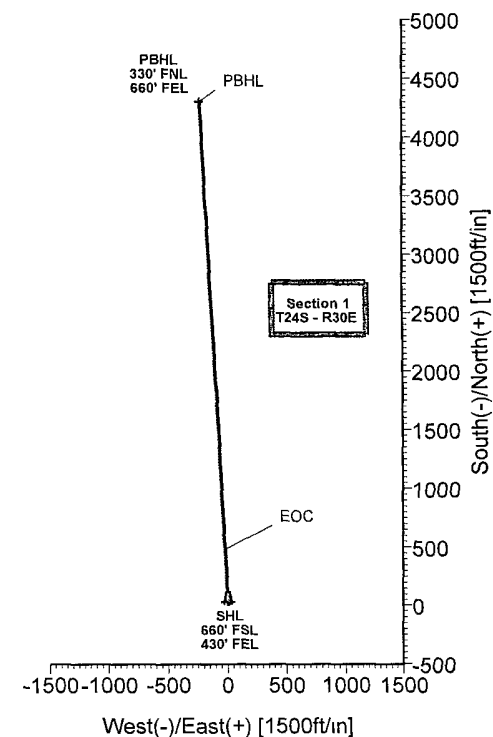
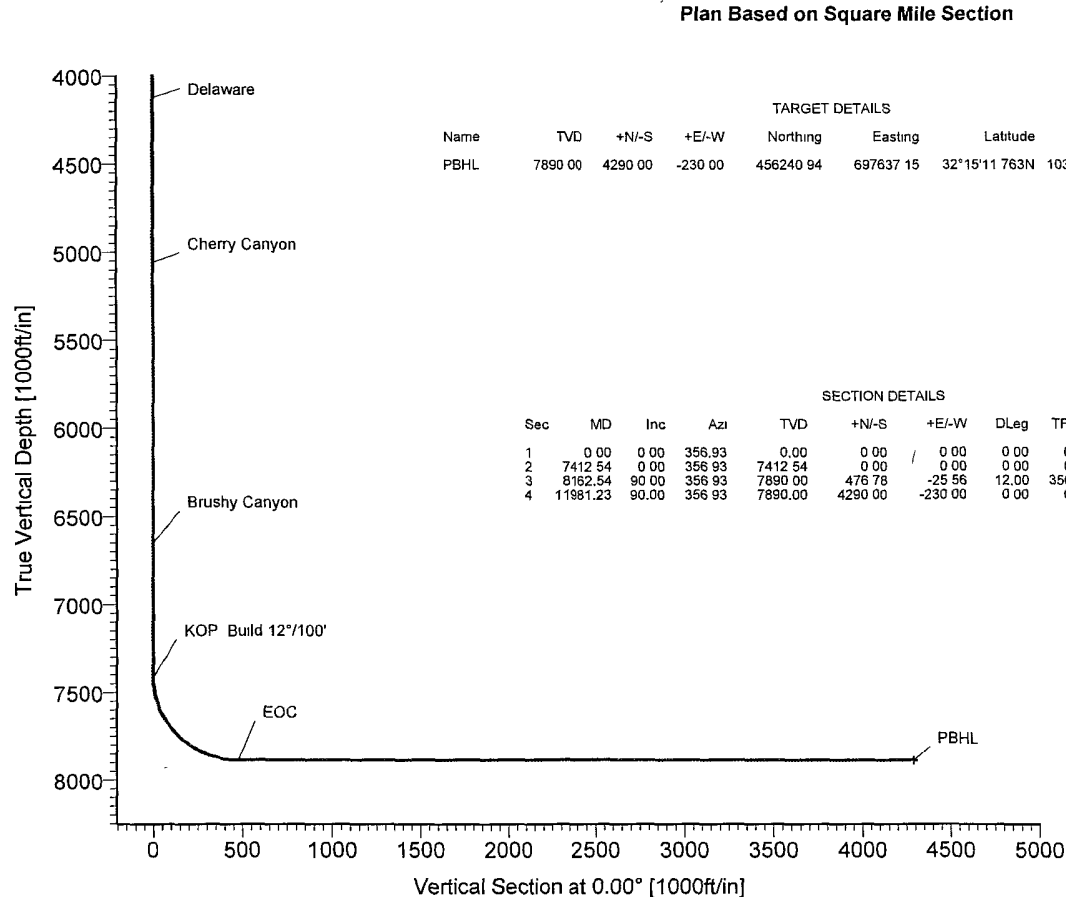
FIELD DETAILS

Eddy Co, NM
USA
Geodetic System US State Plane Coordinate System 1983
Ellipsoid GRS 1980
Zone New Mexico, Eastern Zone
Magnetic Model igr2005
System Datum Mean Sea Level
Local North Grid North

WELLPATH DETAILS

3H
Rig
Ref Datum SITE 0.00ft
V Section Angle Origin +N/-S Origin +E/-W Starting From TVD
0.00° 0.00 0.00 0.00

Plan Based on Square Mile Section



Ryan Energy Technologies
19510 Oil Center Blvd
Houston, TX 77073
Ph 281-443-1414
Fx 281-443-1676



Plan: Plan #1 (Black Jack 1 Fed 3H) (3H)
Created By: Kevin Day Date: 3/17/2008
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

Company: DEVON ENERGY CORPORATION	Date: 3/17/2008	Time: 15:30.45	Page: 1
Field: Eddy Co, NM	Co-ordinate(NE) Reference: Site: Black Jack 1 Fed 3H, Grid North		
Site: Black Jack 1 Fed 3H	Vertical (TVD) Reference: SITE 0.0		
Well: Black Jack 1 Fed 3H	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 3H	Plan: Plan #1		

Field: Eddy Co, NM

USA

Map System: US State Plane Coordinate System 1983

Geo Datum: GRS 1980

Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone

Coordinate System: Site Centre

Geomagnetic Model: igrf2005

Site: Black Jack 1 Fed 3H
Section 1, T24S, R30E

Site Position:	Northing: 451950.94 ft	Latitude: 32 14 29.300 N
From: Geographic	Easting: 697867.15 ft	Longitude: 103 49 37.400 W
Position Uncertainty: 0.00 ft		North Reference: Gnd
Ground Level: 3438.00 ft		Grid Convergence: 0.27 deg

Well: Black Jack 1 Fed 3H

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 451950.94 ft	Latitude: 32 14 29.300 N
+E/-W 0.00 ft	Easting: 697867.15 ft	Longitude: 103 49 37.400 W
Position Uncertainty: 0.00 ft		

Wellpath: 3H

Current Datum: SITE	Height 0.00 ft	Drilled From: Surface
Magnetic Data: 3/17/2008		Tie-on Depth: 0.00 ft
Field Strength: 48972 nT		Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S	Declination: 8.08 deg
ft	ft	Mag Dip Angle: 60.25 deg
		+E/-W Direction
		deg
0.00	0.00	0.00

Plan: Plan #1

Date Composed: 3/17/2008

Principal: Yes

Version: 1

Tied-to: From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	356.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7412.54	0.00	356.93	7412.54	0.00	0.00	0.00	0.00	0.00	0.00	
8162.54	90.00	356.93	7890.00	476.78	-25.56	12.00	12.00	0.00	356.93	
11981.23	90.00	356.93	7890.00	4290.00	-230.00	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
7425.00	1.50	356.93	7425.00	0.16	-0.01	0.16	12.00	12.00	0.00	
7450.00	4.50	356.93	7449.96	1.47	-0.08	1.47	12.00	12.00	0.00	
7475.00	7.50	356.93	7474.82	4.07	-0.22	4.07	12.00	12.00	0.00	
7500.00	10.50	356.93	7499.51	7.98	-0.43	7.98	12.00	12.00	0.00	
7525.00	13.50	356.93	7523.96	13.17	-0.71	13.17	12.00	12.00	0.00	
7550.00	16.50	356.93	7548.11	19.62	-1.05	19.62	12.00	12.00	0.00	
7575.00	19.50	356.93	7571.88	27.34	-1.47	27.34	12.00	12.00	0.00	
7600.00	22.50	356.93	7595.22	36.28	-1.95	36.28	12.00	12.00	0.00	
7625.00	25.50	356.93	7618.06	46.43	-2.49	46.43	12.00	12.00	0.00	
7650.00	28.50	356.93	7640.33	57.76	-3.10	57.76	12.00	12.00	0.00	
7675.00	31.50	356.93	7661.98	70.24	-3.77	70.24	12.00	12.00	0.00	
7700.00	34.50	356.93	7682.95	83.83	-4.49	83.83	12.00	12.00	0.00	
7725.00	37.50	356.93	7703.17	98.50	-5.28	98.50	12.00	12.00	0.00	
7750.00	40.50	356.93	7722.60	114.21	-6.12	114.21	12.00	12.00	0.00	
7775.00	43.50	356.93	7741.17	130.91	-7.02	130.91	12.00	12.00	0.00	
7800.00	46.50	356.93	7758.85	148.56	-7.96	148.56	12.00	12.00	0.00	
7825.00	49.50	356.93	7775.58	167.11	-8.96	167.11	12.00	12.00	0.00	



Ryan Energy Technologies Planning Report



Company: DEVON ENERGY CORPORATION
Field: Eddy Co, NM
Site: Black Jack 1 Fed 3H
Well: Black Jack 1 Fed 3H
Wellpath: 3H

Date: 3/17/2008 Time: 15:30:45 Page: 2
Co-ordinate(NE) Reference Site: Black Jack 1 Fed 3H, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
Plan: Plan #1

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
7850.00	52.50	356.93	7791.31	186.51	-10.00	186.51	12.00	12.00	0.00	
7875.00	55.50	356.93	7806.01	206.70	-11.08	206.70	12.00	12.00	0.00	
7900.00	58.50	356.93	7819.62	227.63	-12.20	227.63	12.00	12.00	0.00	
7925.00	61.50	356.93	7832.12	249.25	-13.36	249.25	12.00	12.00	0.00	
7950.00	64.50	356.93	7843.47	271.49	-14.56	271.49	12.00	12.00	0.00	
7975.00	67.50	356.93	7853.64	294.29	-15.78	294.29	12.00	12.00	0.00	
8000.00	70.50	356.93	7862.60	317.59	-17.03	317.59	12.00	12.00	0.00	
8025.00	73.50	356.93	7870.33	341.33	-18.30	341.33	12.00	12.00	0.00	
8050.00	76.50	356.93	7876.80	365.44	-19.59	365.44	12.00	12.00	0.00	
8075.00	79.50	356.93	7882.00	389.86	-20.90	389.86	12.00	12.00	0.00	
8100.00	82.50	356.93	7885.91	414.51	-22.22	414.51	12.00	12.00	0.00	
8125.00	85.50	356.93	7888.53	439.34	-23.55	439.34	12.00	12.00	0.00	
8150.00	88.50	356.93	7889.84	464.26	-24.89	464.26	12.00	12.00	0.00	
8162.54	90.00	356.93	7890.00	476.78	-25.56	476.78	12.00	12.00	0.00	EOC
8200.00	90.00	356.93	7890.00	514.19	-27.57	514.19	0.00	0.00	0.00	
8300.00	90.00	356.93	7890.00	614.05	-32.92	614.05	0.00	0.00	0.00	
8400.00	90.00	356.93	7890.00	713.90	-38.27	713.90	0.00	0.00	0.00	
8500.00	90.00	356.93	7890.00	813.76	-43.63	813.76	0.00	0.00	0.00	
8600.00	90.00	356.93	7890.00	913.62	-48.98	913.62	0.00	0.00	0.00	
8700.00	90.00	356.93	7890.00	1013.47	-54.34	1013.47	0.00	0.00	0.00	
8800.00	90.00	356.93	7890.00	1113.33	-59.69	1113.33	0.00	0.00	0.00	
8900.00	90.00	356.93	7890.00	1213.19	-65.04	1213.19	0.00	0.00	0.00	
9000.00	90.00	356.93	7890.00	1313.04	-70.40	1313.04	0.00	0.00	0.00	
9100.00	90.00	356.93	7890.00	1412.90	-75.75	1412.90	0.00	0.00	0.00	
9200.00	90.00	356.93	7890.00	1512.76	-81.10	1512.76	0.00	0.00	0.00	
9300.00	90.00	356.93	7890.00	1612.61	-86.46	1612.61	0.00	0.00	0.00	
9400.00	90.00	356.93	7890.00	1712.47	-91.81	1712.47	0.00	0.00	0.00	
9500.00	90.00	356.93	7890.00	1812.33	-97.16	1812.33	0.00	0.00	0.00	
9600.00	90.00	356.93	7890.00	1912.18	-102.52	1912.18	0.00	0.00	0.00	
9700.00	90.00	356.93	7890.00	2012.04	-107.87	2012.04	0.00	0.00	0.00	
9800.00	90.00	356.93	7890.00	2111.90	-113.23	2111.90	0.00	0.00	0.00	
9900.00	90.00	356.93	7890.00	2211.75	-118.58	2211.75	0.00	0.00	0.00	
10000.00	90.00	356.93	7890.00	2311.61	-123.93	2311.61	0.00	0.00	0.00	
10100.00	90.00	356.93	7890.00	2411.47	-129.29	2411.47	0.00	0.00	0.00	
10200.00	90.00	356.93	7890.00	2511.32	-134.64	2511.32	0.00	0.00	0.00	
10300.00	90.00	356.93	7890.00	2611.18	-139.99	2611.18	0.00	0.00	0.00	
10400.00	90.00	356.93	7890.00	2711.04	-145.35	2711.04	0.00	0.00	0.00	
10500.00	90.00	356.93	7890.00	2810.89	-150.70	2810.89	0.00	0.00	0.00	
10600.00	90.00	356.93	7890.00	2910.75	-156.05	2910.75	0.00	0.00	0.00	
10700.00	90.00	356.93	7890.00	3010.61	-161.41	3010.61	0.00	0.00	0.00	
10800.00	90.00	356.93	7890.00	3110.46	-166.76	3110.46	0.00	0.00	0.00	
10900.00	90.00	356.93	7890.00	3210.32	-172.12	3210.32	0.00	0.00	0.00	
11000.00	90.00	356.93	7890.00	3310.18	-177.47	3310.18	0.00	0.00	0.00	
11100.00	90.00	356.93	7890.00	3410.03	-182.82	3410.03	0.00	0.00	0.00	
11200.00	90.00	356.93	7890.00	3509.89	-188.18	3509.89	0.00	0.00	0.00	
11300.00	90.00	356.93	7890.00	3609.75	-193.53	3609.75	0.00	0.00	0.00	
11400.00	90.00	356.93	7890.00	3709.60	-198.88	3709.60	0.00	0.00	0.00	
11500.00	90.00	356.93	7890.00	3809.46	-204.24	3809.46	0.00	0.00	0.00	
11600.00	90.00	356.93	7890.00	3909.32	-209.59	3909.32	0.00	0.00	0.00	
11700.00	90.00	356.93	7890.00	4009.17	-214.94	4009.17	0.00	0.00	0.00	
11800.00	90.00	356.93	7890.00	4109.03	-220.30	4109.03	0.00	0.00	0.00	
11900.00	90.00	356.93	7890.00	4208.89	-225.65	4208.89	0.00	0.00	0.00	
11981.23	90.00	356.93	7890.00	4290.00	-230.00	4290.00	0.00	0.00	0.00	PBHL

Company: DEVON ENERGY CORPORATION
Field: Eddy Co, NM
Site: Black Jack 1 Fed 3H
Well: Black Jack 1 Fed 3H
Wellpath: 3H

Date: 3/17/2008 Time: 15:30:45 Page: 3
Co-ordinate(NE) Reference: Black Jack 1 Fed 3H, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
Plan: Plan #1

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
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Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
PBHL		7890.00	4290.00	-230.00	456240.94	697637.15	32	15	11.763 N	103	49	39.843 W

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
490.00	490.00	Rustler		0.00	0.00
810.00	810.00	Salado		0.00	0.00
945.00	945.00	Salt		0.00	0.00
3895.00	3895.00	Base of Salt		0.00	0.00
4120.00	4120.00	Delaware		0.00	0.00
5055.00	5055.00	Cherry Canyon		0.00	0.00
6650.00	6650.00	Brushy Canyon		0.00	0.00
	0.00	Bone Springs		0.00	0.00

Annotation

MD ft	TVD ft	
7412.54	7412.54	KOP: Build 12°/100'
8162.54	7890.00	EOC



Ryan Energy Technologies Planning Report



Company: DEVON ENERGY CORPORATION
Field: Eddy Co, NM
Site: Black Jack 1 Fed 3H
Well: Black Jack 1 Fed 3H
Wellpath: 3H

Date: 3/17/2008 Time: 15:30:45 Page: 3
Co-ordinate(NE) Reference: Black Jack 1 Fed 3H, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
Plan: Plan #1

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
PBHL		7890.00	4290.00	-230.00	456240.94	697637.15	32	15	11.763 N	103	49	39.843 W

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
490.00	490.00	Rustler		0.00	0.00
810.00	810.00	Salado		0.00	0.00
945.00	945.00	Salt		0.00	0.00
3895.00	3895.00	Base of Salt		0.00	0.00
4120.00	4120.00	Delaware		0.00	0.00
5055.00	5055.00	Cherry Canyon		0.00	0.00
6650.00	6650.00	Brushy Canyon		0.00	0.00
	0.00	Bone Springs		0.00	0.00

Annotation

MD ft	TVD ft	
7412.54	7412.54	KOP Build 12°/100'
8162.54	7890.00	EOC

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company, LP
LEASE NO.:	NMNM-97133
WELL NAME & NO.:	Black Jack 1 Federal 3H
SURFACE HOLE FOOTAGE:	0660' FSL & 0430' FEL
BOTTOM HOLE FOOTAGE:	0330' FNL & 0660' FEL
LOCATION:	Section 1, T. 24 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**
2. 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.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING – New Casing Required

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Centralizers required on horizontal leg, minimum of one every other joint.

High cave/karst.

Possible lost circulation in the Delaware and Bone Spring formations.

1. The 13-3/8 inch surface casing shall be set at approximately 570 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing.

- a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial action will be done prior to drilling out that string.

9-5/8" casing to be 40# J-55 or K-55.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a-d above.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

a. **First stage to DV tool, cement shall:**

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.

b. **Second stage above DV tool, cement shall:**

☒ Cement should tie-back at least 500 feet into previous casing string. **Operator shall provide method of verification.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. The tests shall be done by an independent service company.

b. The results of the test shall be reported to the appropriate BLM office.

c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

e. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1200** psi with the rig pumps is approved.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 041108