OCD Artesia

R-111-POTASH

AT5-10-1016
EA 10-159

RECEIVED
FEB 22 2010
NMOCD ARTESIA

Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.	NMNM-97133
6 If Indian, Allotee or Tribe Name	
7 If Unit or CA Agreement, Name and No.	
8 Lease Name and Well No.	Black Jack 1 Federal 5H
9. API Well No.	30-015-37650
10 Field and Pool, or Exploratory	Delaware
11 Sec., T R. M or Blk and Survey or Area	D-SEC 1 T24S R30E
12 County or Parish	Eddy County
13 State	NM

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

2. Name of Operator: Devon Energy Production Company, LP

3a Address: 20 North Broadway, Oklahoma City, Oklahoma City 73102-8260

3b Phone No. (include area code): 405-228-8699

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface: NW/4 NW/4 330' FNL & 500' FWL
At proposed prod zone: 330' FSL & 500' FWL

14 Distance in miles and direction from nearest town or post office*: 15 Miles east of Loving, NM.

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)	330'	16 No. of acres in lease: 640 Acres	17. Spacing Unit dedicated to this well: 160 Acres
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	4120'	19 Proposed Depth: 7780' TVD 12,126' MD	20 BLM/BIA Bond No on file: CO-1104
21 Elevations (Show whether DF, KDB, RT, GL, etc.): 3427' GL		22 Approximate date work will start*	23. Estimated duration: 45 days

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
2. A Drilling Plan.
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)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer

25. Signature: Judy A. Barnett	Name (Printed Typed): Judy A. Barnett	Date: 11/13/2009
Title: Regulatory Analyst		
Approved by (Signature): /s/ Jesse J. Juen	Name (Printed/Typed)	Date: FEB 15 2010
Title: STATE DIRECTOR	Office: NM STATE OFFICE	

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.

APPROVAL FOR TWO YEARS

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)

Carlsbad Controlled Water Basin

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

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

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-37650	53818	Sand Dunes; DELAWARE South

Property Code	Property Name	Well Number
36734	BLACK JACK "1" FEDERAL	5H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3427'

Surface Location

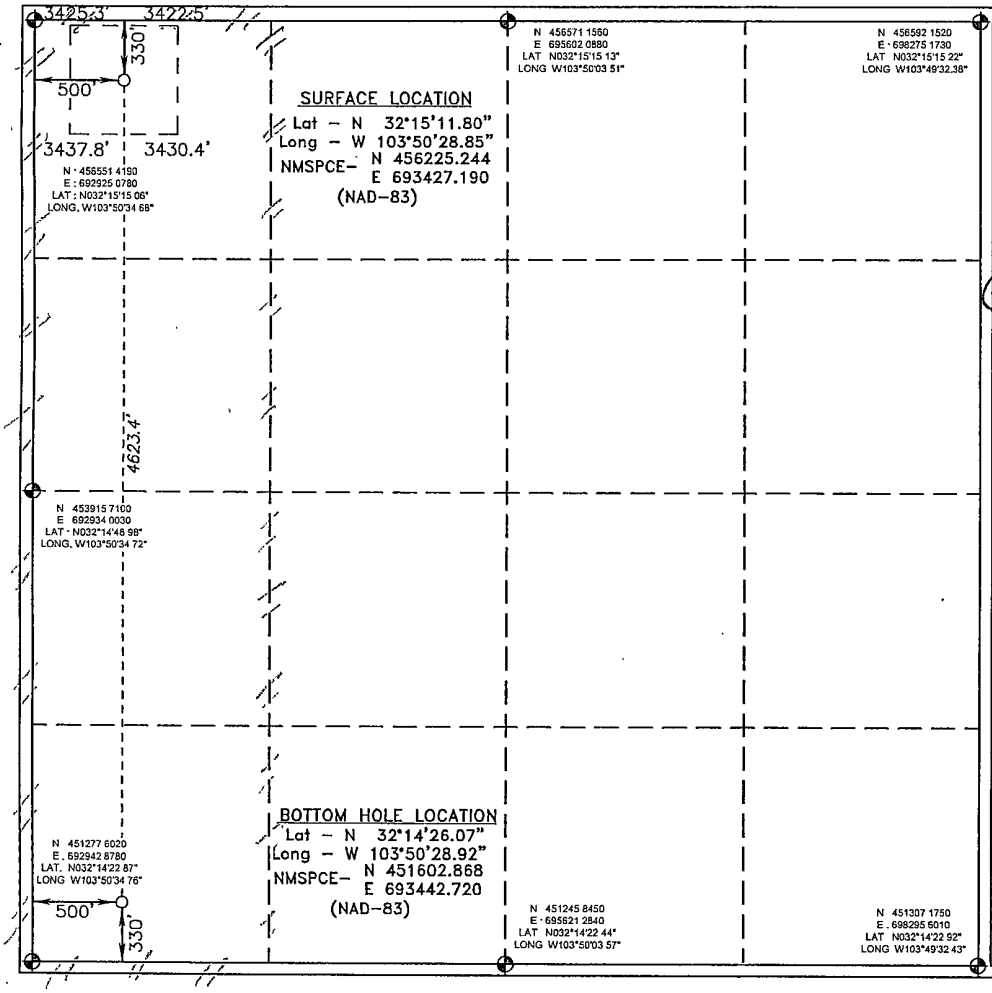
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	1	24 S	30 E		330	NORTH	500	WEST	EDDY

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
M	1	24 S	30 E		330	SOUTH	500	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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



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.

Judy A. Barnett 8/18/09
Signature Date

Judy A. Barnett
Printed Name Regulatory Analyst

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 supervison, and that the same is true and correct to the best of my belief.

AUGUST 7, 2009
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

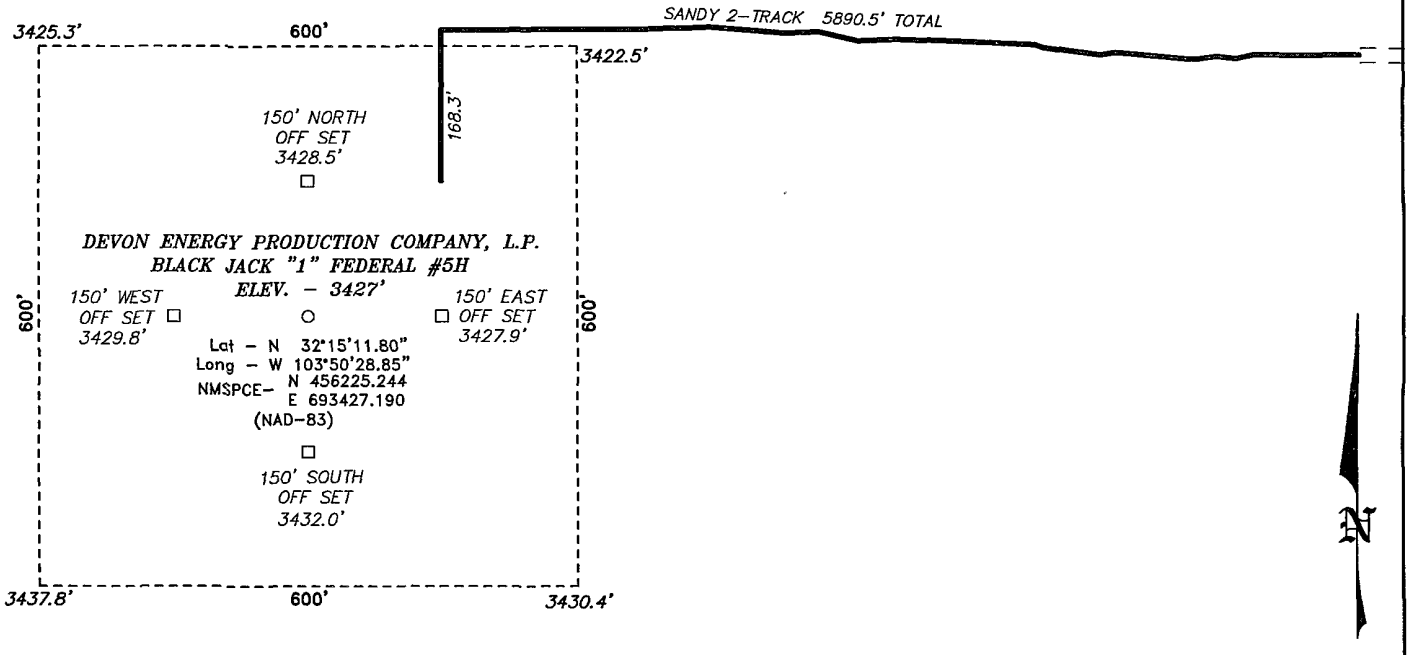
W.O. 24116

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 1, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF HWY 128 AND CO. RD. TWIN WELLS, GO SOUTH 4.5 MILES ON TWIN WELLS TO LEASE ROAD, ON LEASE ROAD GO WESTERLY TO SANDY 2-TRACK AND PROPOSED LEASE ROAD.

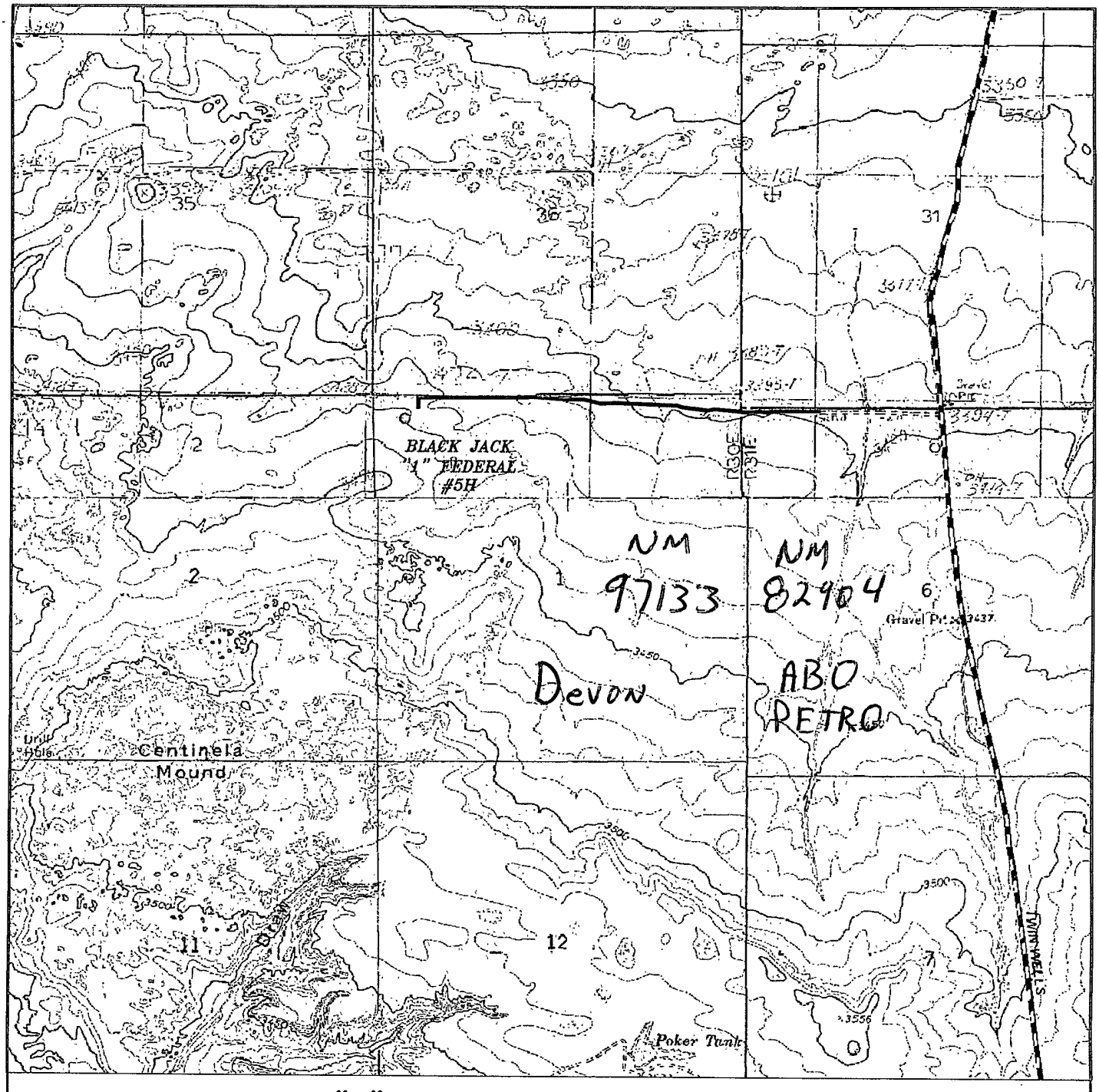
DEVON ENERGY PRODUCTION COMPANY, L.P.

REF: BLACK JACK "1" FEDERAL #5H / WELL PAD TOPO

THE BLACK JACK "1" FEDERAL #5H LOCATED 330' FROM THE NORTH LINE AND 500' FROM THE WEST LINE OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 21604	Drawn By: J. SMALL		
Date: 08-11-2009	Disk: JMS 21604	Survey Date: 08-07-2009	Sheet 1 of 1 Sheets



BLACK JACK "1" FEDERAL #5H
Located 330' FNL and 500' FWL
Section 1, Township 24 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

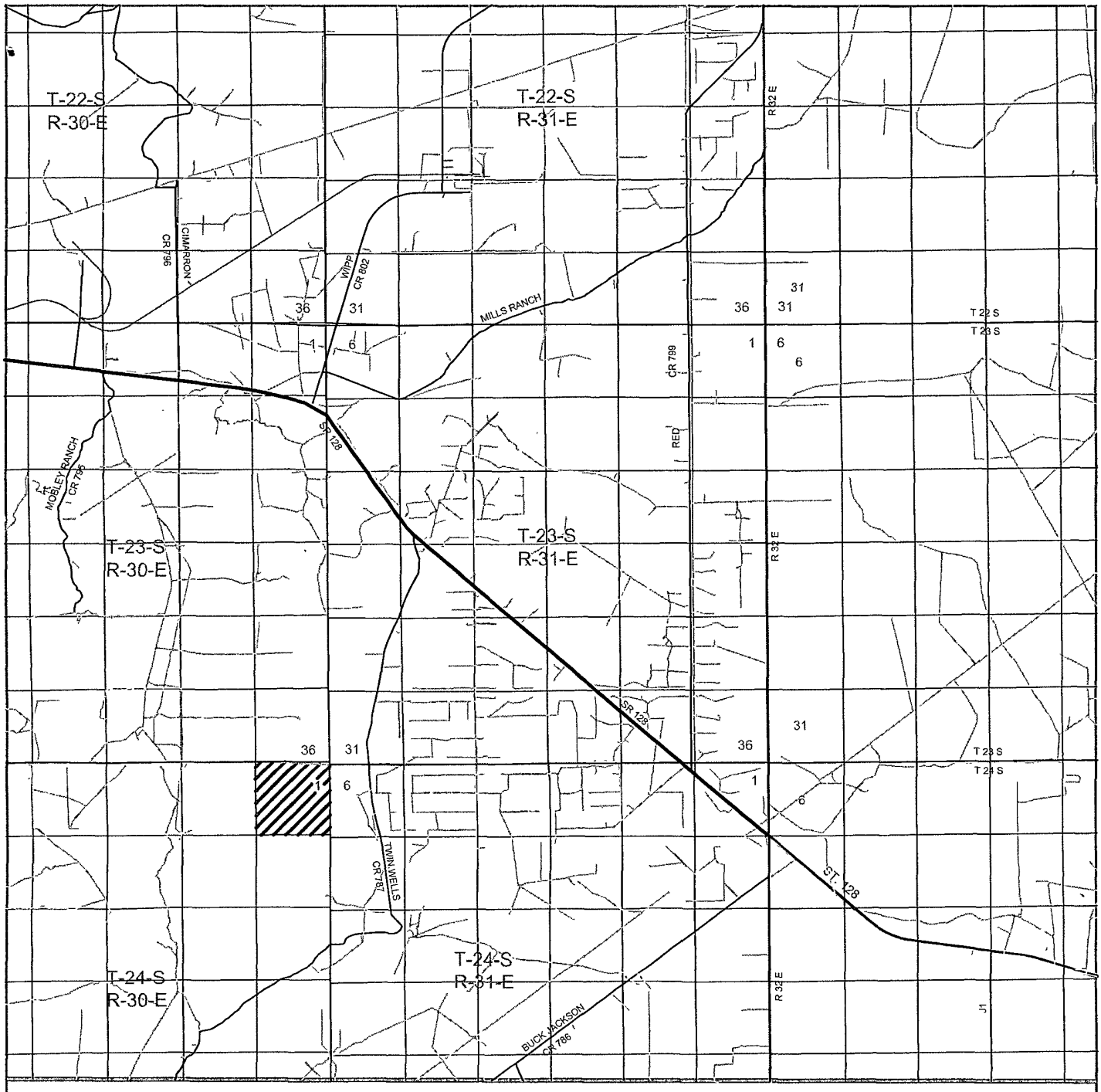
Basin Surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 21604
Survey Date:	08-07-2009
Scale:	1" = 2000'
Date:	08-11-2009

N

DEVON ENERGY PRODUCTION COMPANY, L.P.



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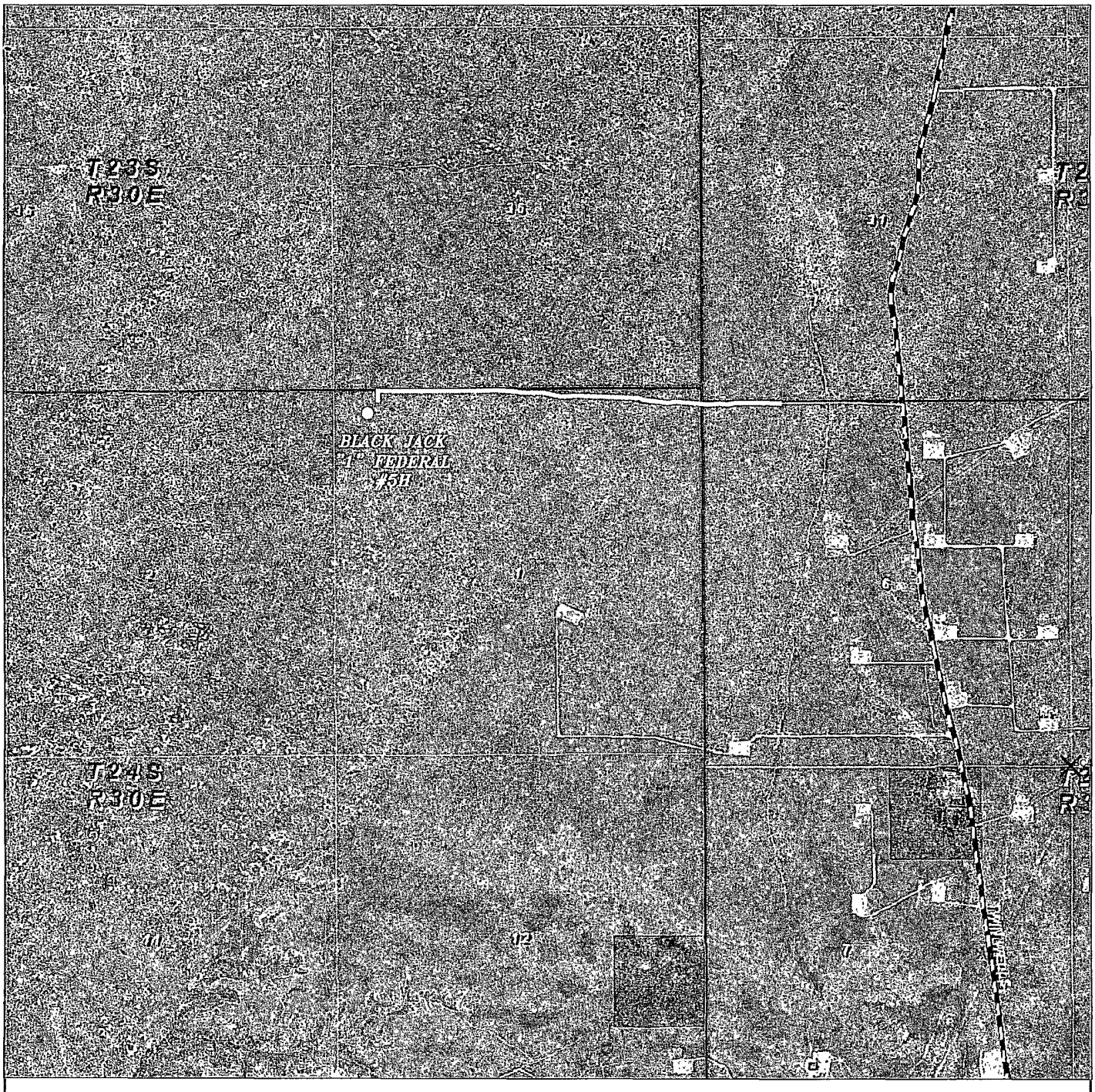
basinsurveys.com

W.O. Number:	JMS 21604
Survey Date:	08-07-2009
Scale:	1" = 2 Miles
Date:	08-11-2009

N

DEVON ENERGY PRODUCTION COMPANY, L.P.



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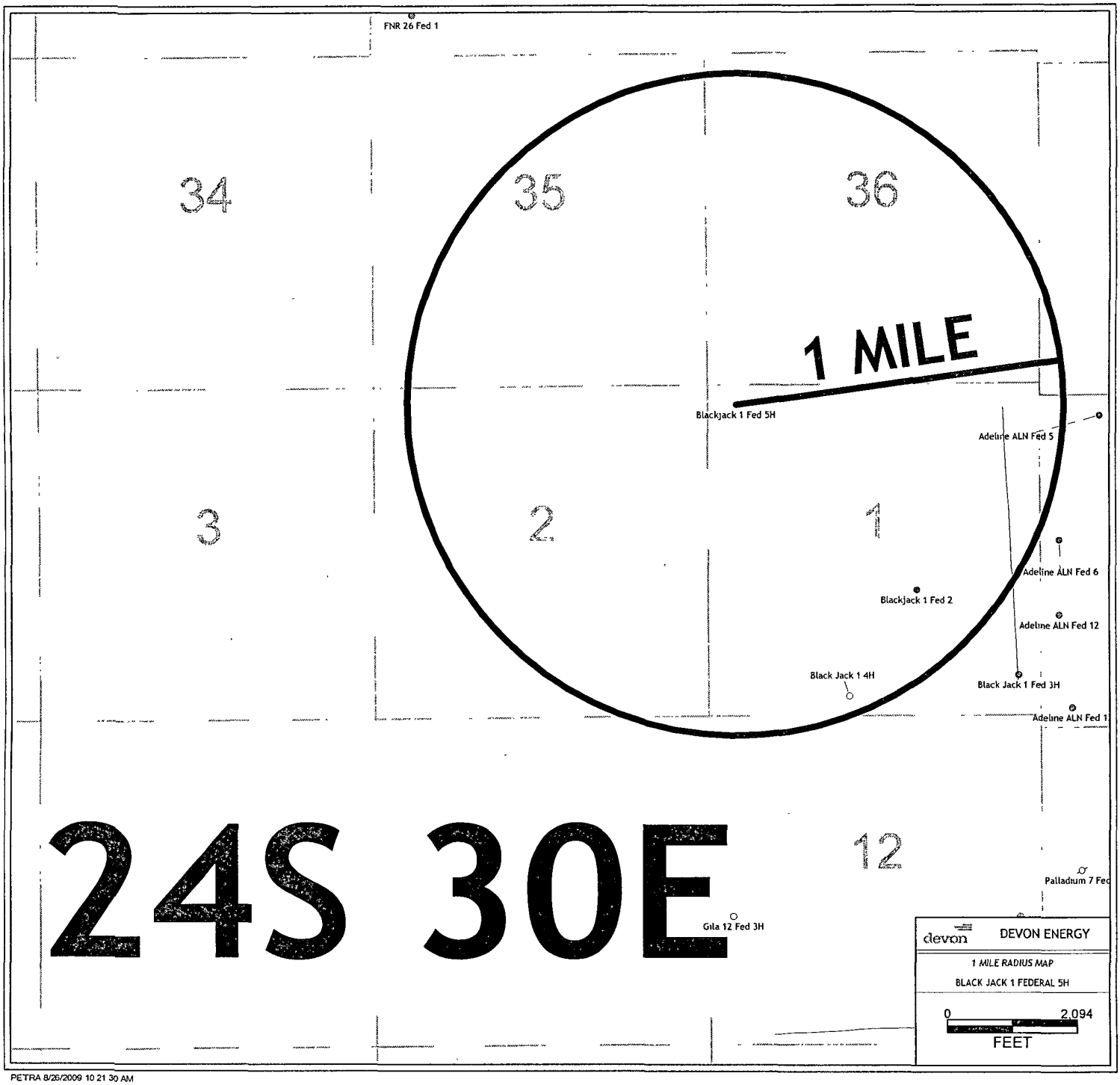
W.O. Number: JMS 21604

Scale: 1" = 2000'

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

DEVON ENERGY PRODUCTION COMPANY, L.P.



PETRA 8/26/2009 10 21 30 AM

DRILLING PROGRAM

Devon Energy Production Company, LP

Black Jack 1 Federal 5H

Surface Location: 330' FNL & 500' FWL, Unit D, Sec 1 T24S R30E, Eddy, NM
Bottom hole Location: 330' FSL & 500' FWL, Unit M, Sec 1 T24S R30E, Eddy, NM

1. Geologic Name of Surface Formation:

a. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

a.	Rustler	422'	
b.	Salado	785'	
c.	Salt	868'	
d.	Base Salt	3794'	
e.	Lamar	4019'	
f.	Bell Canyon	4054'	Oil
g.	Cherry Canyon	4957'	Oil
h.	Brushy Canyon	6259'	Oil
i.	Total Depth	12,126'	

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 ~~475~~ 527' and circulating cement back to surface. The fresh water sands will be protected by setting 9 5/8" casing at 3950' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 9 5/8" casing. ← See COA

3. Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 ½"	See COA 0' – ~~475~~ 527'	13 3/8"	0' – 475'	48#	STC	H-40
12 ¼"	475' – 3950'	9 5/8"	0' – 3000'	36#	LTC	J-55
12 ¼"	3000'-3950'	9 5/8"	3000'-3950'	40#	LTC	J-55
8 ½"	3950' – 7100'	5 ½"	0' – 7100	17#	LTC	N-80
8 ½"	7100' – 12126'	5 ½"	7100' – 12126'	17#	BTC	N-80

4. Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	3.46	7.78	14.12
9 5/8"36# J-55 LTC	1.29	2.26	3.10
9 5/8" 40# J-55 LTC	1.25	1.92	13.68
5 ½" 17# N-80 LTC	1.89	2.33	1.69
5 ½" 17# N-80 BTC	1.66	2.05	5.22

5. **Cement Program:**

a.	13 3/8"	Surface	**Lead** w/ 165sx 35:65 POZ (Fly Ash): Premium C +5% bwow Sodium Chloride + 0.125#/sx CF + 4% bwoc Bentonite + 0.8% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 101.1% FW. Yield 1.96 cf/sx. TOC @ surface. **Tail** w/ 250sx Premium Plus C + 2% bwoc Calcium Chloride + 0.125#/sx CF + 56.3% FW. **Yield** 1.35 cf/sx.
b.	9 5/8"	Intermediate	**Lead** w/ 940 sx 35:65 POZ (Fly Ash): Class C + 5% bwow Sodium Chloride +0.125#/sx CF + 6% bwoc Bentonite + 107.8% FW. Yield 2.04 cf/sx. TOC @ surface. **Tail** w/ 300sx 60:40 POZ + 5% bwow Sodium Chloride + 0.125#/sx CF + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% FW. **Yield** 1.37 cf/sx.
c.	5 1/2"	Production	**Stage 1**: **Lead** w/ 550sx (Fly Ash)Class H + 0.125#/sx CF + 3#/sx LCM-1 + 6% bwoc Bentonite 0.5% bwoc FL-52A + 99.3% FW. 12.5 PPG **Yield** 1.95 cf/sx. Tail w/ 1200 sx (50:50) POZ (Fly Ash) Class H + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 58.3% FW, 14.2 ppg. Yield 1.31 cf/sx. **Stage 2**: **Lead** w/ 405 sx 35:65 Poz (Fly Ash) Class C +1% bwow Sodium Chloride + 0.125#/sx CF + 6% bwoc Bentonite + 0.4% bwoc FL-52-A + 103.2% FW. 12.5 ppg. Yield 1.96 cf/sx. TOC @ surface. **Tail** w/ 300 sx 60:40 POZ Fly Ash Class C + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125#/sx CF + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% FW. 13.8 ppg. Yield 1.37 cf/sx. **DV Tool @ 4500'**

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. All casing is new and API approved. See COA

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 pipe rams on bottom. An annular and rotating head will be installed on the 13⅜ surface casing and utilized to setting depth of the 9⅝" intermediate casing. The annular and associated equipment will be tested ~~to 1000 psi with the rig pump~~ before drilling out the 13-3/8" casing shoe. The BOPE will be installed on the 9⅝" intermediate casing and utilized continuously

See COA

until total depth is reached. 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.
The ram system will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and hydril, other BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5000 psi WP. Devon Energy Production Company L. P.requests a variance if H & P Rig #214 is used to drill this well, a co-flex hose may be used between the BOP and the choke manifold. The hose will be kept as straight as possible with minimal turns. (Atttachments)

CO-Flex Hose Manufacturer: Phoenix Beattie;
~33' (11.43 meters) of co-flex line;
3" coupling w/ 4 1/16" flange on each end – 10,000 psi;
Quality Control Inspection & Test Certificate attached;
See configuration schematic.
Safety clamps are not required since the ends are flanged.

7. **Proposed Mud Program:** See COA

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 475'	8.4 – 9.0	30 – 34	N/C	FW
475' – 3950'	9.8 – 10.0	28 – 32	N/C	FW/Brine
3950' – 12126'	8.6 – 9.0	28-32	NC -12	FW

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. A Kelly cock will be in the drill string at all times.
   b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
   c. 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:** See COA
   a. Drill stem tests will be based on geological sample shows.
   b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
   c. The open hole electrical logging program will be:
      i. Total Depth to Intermediate Casing — Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
      ii. Total Depth to Surface — Compensated Neutron with Gamma Ray
      iii. No coring program is planned
      iv. Additional testing will be initiated subsequent to setting the 5 ½" 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 3600 psi and Estimated BHT 130°. No H2S is anticipated to be encountered.

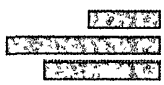
11. Anticipated Starting Date and Duration of Operations:

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.

Weatherford

Drilling Services

Proposal



devon

BLACK JACK 1 FEDERAL #5H

EDDY COUNTY, NEW MEXICO

WELL FILE: **PLAN 1**

NOVEMBER 06, 2009

Weatherford International, Ltd.
P.O. Box 61028
Midland, TX 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com

devon

Black Jack 1 Federal #5H
Eddy County, New Mexico

SECTION DETAILS

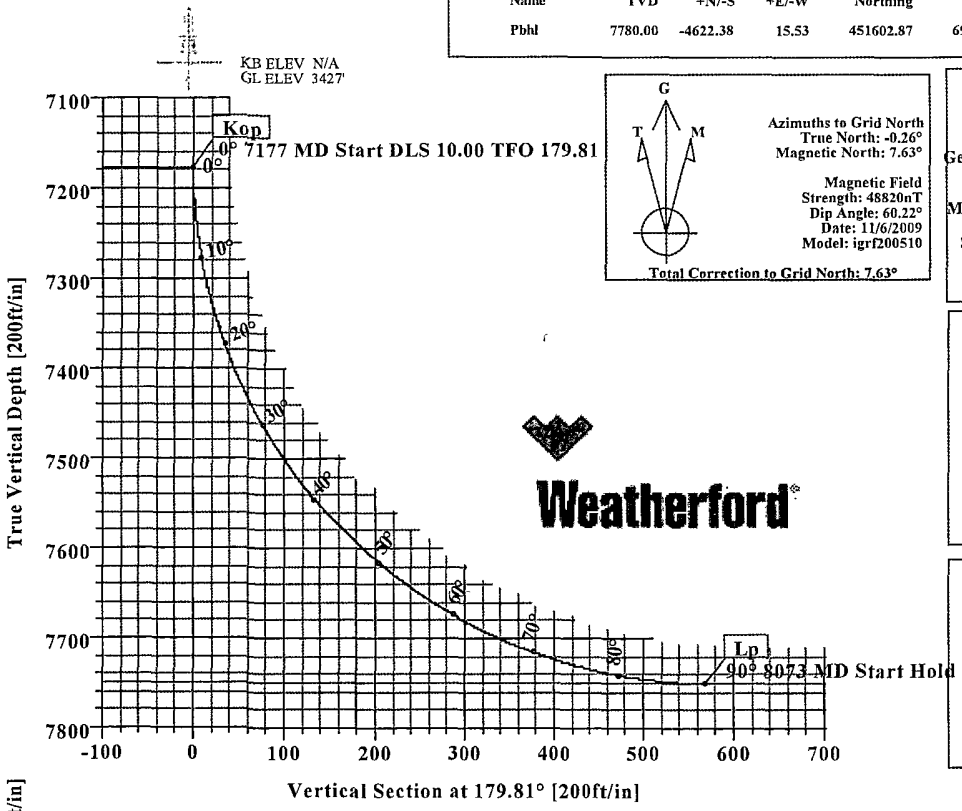
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	7177.06	0.00	0.00	7177.06	0.00	0.00	0.00	0.00	0.00	
3	8072.82	89.58	179.81	7750.00	-568.71	1.91	10.00	179.81	568.72	
4	12126.62	89.58	179.81	7780.00	-4622.38	15.53	0.00	0.00	4622.40	Pbhl

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#5H	0.00	0.00	456225.24	693427.19	32°15'11.801N	103°50'28.869W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Pbhl	7780.00	-4622.38	15.53	451602.87	693442.72	32°14'26.059N	103°50'28.934W	Point



FIELD DETAILS

Eddy Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: igrf200510

System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

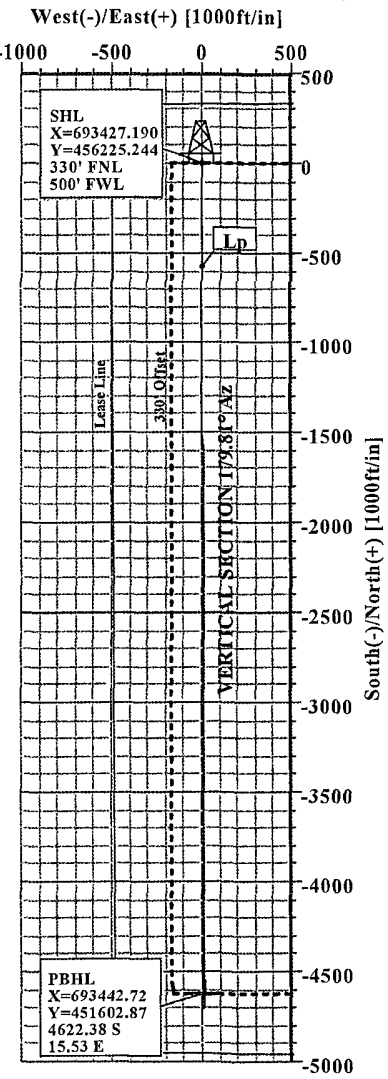
Black Jack 1 Federal #5H
330' FNL 500' FWL of Sec 1, T24S, R30E

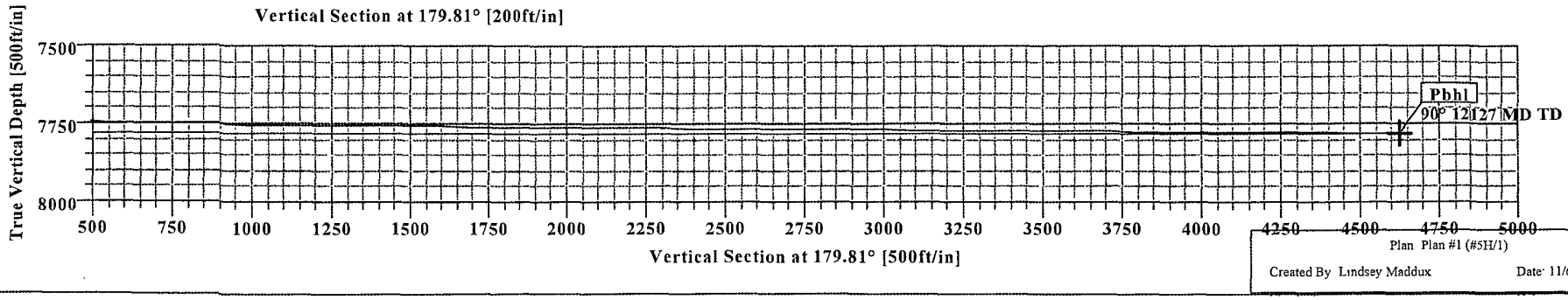
Site Centre Northing: 456225.24
Easting: 693427.19

Ground Level: 3427.00
Positional Uncertainty: 0.00
Convergence: 0.26

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	422.00	422.00	Rustler
2	785.00	785.00	Salado
3	868.00	868.00	Salt
4	3794.00	3794.00	Base Salt
5	4019.00	4019.00	Delaware/Lamar
6	4054.00	4054.00	Bell Canyon
7	4957.00	4957.00	Cherry Canyon
8	6259.00	6259.00	Brushy Canyon





Plan Plan #1 (#5H/1)

Created By Lindsey Maddux Date: 11/6/2009

Weatherford International, Inc.
Proposal Plan Report

Company:	Devon Energy	**Date:** 11/6/2009	**Time:** 13:36:38	**Page:**	1
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well: #5H, Grid North		
Site:	Black Jack 1 Federal #5H	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	#5H	**Section (VS) Reference:**	Well (0.00N,0.00E,179.81Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Plan:	Plan #1	**Date Composed:**	11/6/2009
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Field: Eddy Co., NM (NAD 83)

Map System:	US State Plane Coordinate System 1983	**Map Zone:**	New Mexico, Eastern Zone
Geo Datum:	GRS 1980	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf200510

Site: Black Jack 1 Federal #5H

330' FNL 500' FWL of Sec 1, T24S, R30E

Site Position:		**Northing:**	456225.24 ft	**Latitude:**	32	15	11.801 N
From:	Map	**Easting:**	693427.19 ft	**Longitude:**	103	50	28.869 W
Position Uncertainty:	0.00 ft			**North Reference:**			Grid
Ground Level:	3427.00 ft			**Grid Convergence:**			0.26 deg

Well: #5H **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	456225.24 ft	**Latitude:**	32	15	11.801 N
	+E/-W	0.00 ft	**Easting:**	693427.19 ft	**Longitude:**	103	50	28.869 W
Position Uncertainty:		0.00 ft						

Wellpath: 1

Current Datum:	SITE	**Height**	0.00 ft	**Drilled From:**	Surface
Magnetic Data:	11/6/2009			**Tie-on Depth:**	0.00 ft
Field Strength:	48820 nT			**Above System Datum:**	Mean Sea Level
Vertical Section:	**Depth From (TVD)**	**+N/-S**	**+E/-W**	**Declination:**	7.89 deg
	ft	ft	ft	**Mag Dip Angle:**	60.22 deg
				Direction	deg
	0.00	0.00	0.00		179.81

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7177.06	0.00	0.00	7177.06	0.00	0.00	0.00	0.00	0.00	0.00	
8072.82	89.58	179.81	7750.00	-568.71	1.91	10.00	10.00	20.07	179.81	
12126.62	89.58	179.81	7780.00	-4622.38	15.53	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	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
7100.00	0.00	0.00	7100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7177.06	0.00	0.00	7177.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Kop
7200.00	2.29	179.81	7199.99	-0.46	0.00	0.46	10.00	0.00	10.00	0.00	
7250.00	7.29	179.81	7249.80	-4.64	0.02	4.64	10.00	0.00	10.00	0.00	
7300.00	12.29	179.81	7299.06	-13.14	0.04	13.14	10.00	0.00	10.00	0.00	
7350.00	17.29	179.81	7347.39	-25.90	0.09	25.90	10.00	0.00	10.00	0.00	
7400.00	22.29	179.81	7394.42	-42.83	0.14	42.83	10.00	0.00	10.00	0.00	
7450.00	27.29	179.81	7439.79	-63.79	0.21	63.79	10.00	0.00	10.00	0.00	
7500.00	32.29	179.81	7483.17	-88.63	0.30	88.63	10.00	0.00	10.00	0.00	
7550.00	37.29	179.81	7524.22	-117.15	0.39	117.15	10.00	0.00	10.00	0.00	
7600.00	42.29	179.81	7562.62	-149.14	0.50	149.14	10.00	0.00	10.00	0.00	
7650.00	47.29	179.81	7598.09	-184.36	0.62	184.36	10.00	0.00	10.00	0.00	
7700.00	52.29	179.81	7630.36	-222.53	0.75	222.53	10.00	0.00	10.00	0.00	
7750.00	57.29	179.81	7659.18	-263.37	0.88	263.37	10.00	0.00	10.00	0.00	
7800.00	62.29	179.81	7684.33	-306.57	1.03	306.57	10.00	0.00	10.00	0.00	
7850.00	67.29	179.81	7705.61	-351.79	1.18	351.79	10.00	0.00	10.00	0.00	
7900.00	72.29	179.81	7722.88	-398.70	1.34	398.70	10.00	0.00	10.00	0.00	

Weatherford International, Inc.
Proposal Plan Report

Company:	Devon Energy	**Date:** 11/6/2009	**Time:** 13:36:38	**Page:**	2
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well: #5H, Grid North		
Site:	Black Jack 1 Federal #5H	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	#5H	**Section (VS) Reference:**	Well (0.00N,0.00E,179.81Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
7950.00	77.29	179.81	7735.99	-446.93	1.50	446.94	10.00	0.00	10.00	0.00	
8000.00	82.29	179.81	7744.84	-496.13	1.67	496.13	10.00	0.00	10.00	0.00	
8050.00	87.29	179.81	7749.38	-545.90	1.83	545.91	10.00	0.00	10.00	0.00	
8072.82	89.58	179.81	7750.00	-568.71	1.91	568.72	10.00	0.00	10.00	0.00	Lp
8100.00	89.58	179.81	7750.20	-595.89	2.00	595.90	0.00	0.00	0.00	0.00	
8200.00	89.58	179.81	7750.94	-695.89	2.34	695.89	0.00	0.00	0.00	0.00	
8300.00	89.58	179.81	7751.68	-795.89	2.67	795.89	0.00	0.00	0.00	0.00	
8400.00	89.58	179.81	7752.42	-895.88	3.01	895.89	0.00	0.00	0.00	0.00	
8500.00	89.58	179.81	7753.16	-995.88	3.35	995.89	0.00	0.00	0.00	0.00	
8600.00	89.58	179.81	7753.90	-1095.88	3.68	1095.88	0.00	0.00	0.00	0.00	
8700.00	89.58	179.81	7754.64	-1195.87	4.02	1195.88	0.00	0.00	0.00	0.00	
8800.00	89.58	179.81	7755.38	-1295.87	4.35	1295.88	0.00	0.00	0.00	0.00	
8900.00	89.58	179.81	7756.12	-1395.87	4.69	1395.88	0.00	0.00	0.00	0.00	
9000.00	89.58	179.81	7756.86	-1495.86	5.03	1495.87	0.00	0.00	0.00	0.00	
9100.00	89.58	179.81	7757.60	-1595.86	5.36	1595.87	0.00	0.00	0.00	0.00	
9200.00	89.58	179.81	7758.34	-1695.86	5.70	1695.87	0.00	0.00	0.00	0.00	
9300.00	89.58	179.81	7759.08	-1795.85	6.03	1795.86	0.00	0.00	0.00	0.00	
9400.00	89.58	179.81	7759.82	-1895.85	6.37	1895.86	0.00	0.00	0.00	0.00	
9500.00	89.58	179.81	7760.56	-1995.85	6.71	1995.86	0.00	0.00	0.00	0.00	
9600.00	89.58	179.81	7761.30	-2095.84	7.04	2095.86	0.00	0.00	0.00	0.00	
9700.00	89.58	179.81	7762.04	-2195.84	7.38	2195.85	0.00	0.00	0.00	0.00	
9800.00	89.58	179.81	7762.78	-2295.84	7.71	2295.85	0.00	0.00	0.00	0.00	
9900.00	89.58	179.81	7763.52	-2395.83	8.05	2395.85	0.00	0.00	0.00	0.00	
10000.00	89.58	179.81	7764.26	-2495.83	8.39	2495.85	0.00	0.00	0.00	0.00	
10100.00	89.58	179.81	7765.00	-2595.83	8.72	2595.84	0.00	0.00	0.00	0.00	
10200.00	89.58	179.81	7765.74	-2695.82	9.06	2695.84	0.00	0.00	0.00	0.00	
10300.00	89.58	179.81	7766.48	-2795.82	9.39	2795.84	0.00	0.00	0.00	0.00	
10400.00	89.58	179.81	7767.22	-2895.82	9.73	2895.83	0.00	0.00	0.00	0.00	
10500.00	89.58	179.81	7767.96	-2995.81	10.07	2995.83	0.00	0.00	0.00	0.00	
10600.00	89.58	179.81	7768.70	-3095.81	10.40	3095.83	0.00	0.00	0.00	0.00	
10700.00	89.58	179.81	7769.44	-3195.81	10.74	3195.83	0.00	0.00	0.00	0.00	
10800.00	89.58	179.81	7770.18	-3295.80	11.07	3295.82	0.00	0.00	0.00	0.00	
10900.00	89.58	179.81	7770.92	-3395.80	11.41	3395.82	0.00	0.00	0.00	0.00	
11000.00	89.58	179.81	7771.66	-3495.80	11.74	3495.82	0.00	0.00	0.00	0.00	
11100.00	89.58	179.81	7772.40	-3595.79	12.08	3595.81	0.00	0.00	0.00	0.00	
11200.00	89.58	179.81	7773.14	-3695.79	12.42	3695.81	0.00	0.00	0.00	0.00	
11300.00	89.58	179.81	7773.88	-3795.79	12.75	3795.81	0.00	0.00	0.00	0.00	
11400.00	89.58	179.81	7774.62	-3895.78	13.09	3895.81	0.00	0.00	0.00	0.00	
11500.00	89.58	179.81	7775.36	-3995.78	13.42	3995.80	0.00	0.00	0.00	0.00	
11600.00	89.58	179.81	7776.10	-4095.78	13.76	4095.80	0.00	0.00	0.00	0.00	
11700.00	89.58	179.81	7776.84	-4195.77	14.10	4195.80	0.00	0.00	0.00	0.00	
11800.00	89.58	179.81	7777.58	-4295.77	14.43	4295.80	0.00	0.00	0.00	0.00	
11900.00	89.58	179.81	7778.32	-4395.77	14.77	4395.79	0.00	0.00	0.00	0.00	
12000.00	89.58	179.81	7779.06	-4495.76	15.10	4495.79	0.00	0.00	0.00	0.00	
12100.00	89.58	179.81	7779.80	-4595.76	15.44	4595.79	0.00	0.00	0.00	0.00	
12126.62	89.58	179.81	7780.00	-4622.38	15.53	4622.40	0.00	0.00	0.00	0.00	Pbhl

Weatherford International, Inc.
Proposal Plan Report

Company:	Devon Energy	**Date:** 11/6/2009	**Time:** 13:36:38	**Page:**	3
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well: #5H, Grid North		
Site:	Black Jack 1 Federal #5H	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	#5H	**Section (VS) Reference:**	Well (0.00N,0.00E,179.81Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

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			7780.00	-4622.38	15.53	451602.87	693442.72	32	14	26.059 N	103	50	28.934 W

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
422.00	422.00	Rustler		0.00	0.00
785.00	785.00	Salado		0.00	0.00
868.00	868.00	Salt		0.00	0.00
3794.00	3794.00	Base Salt		0.00	0.00
4019.00	4019.00	Delaware/Lamar		0.00	0.00
4054.00	4054.00	Bell Canyon		0.00	0.00
4957.00	4957.00	Cherry Canyon		0.00	0.00
6259.00	6259.00	Brushy Canyon		0.00	0.00

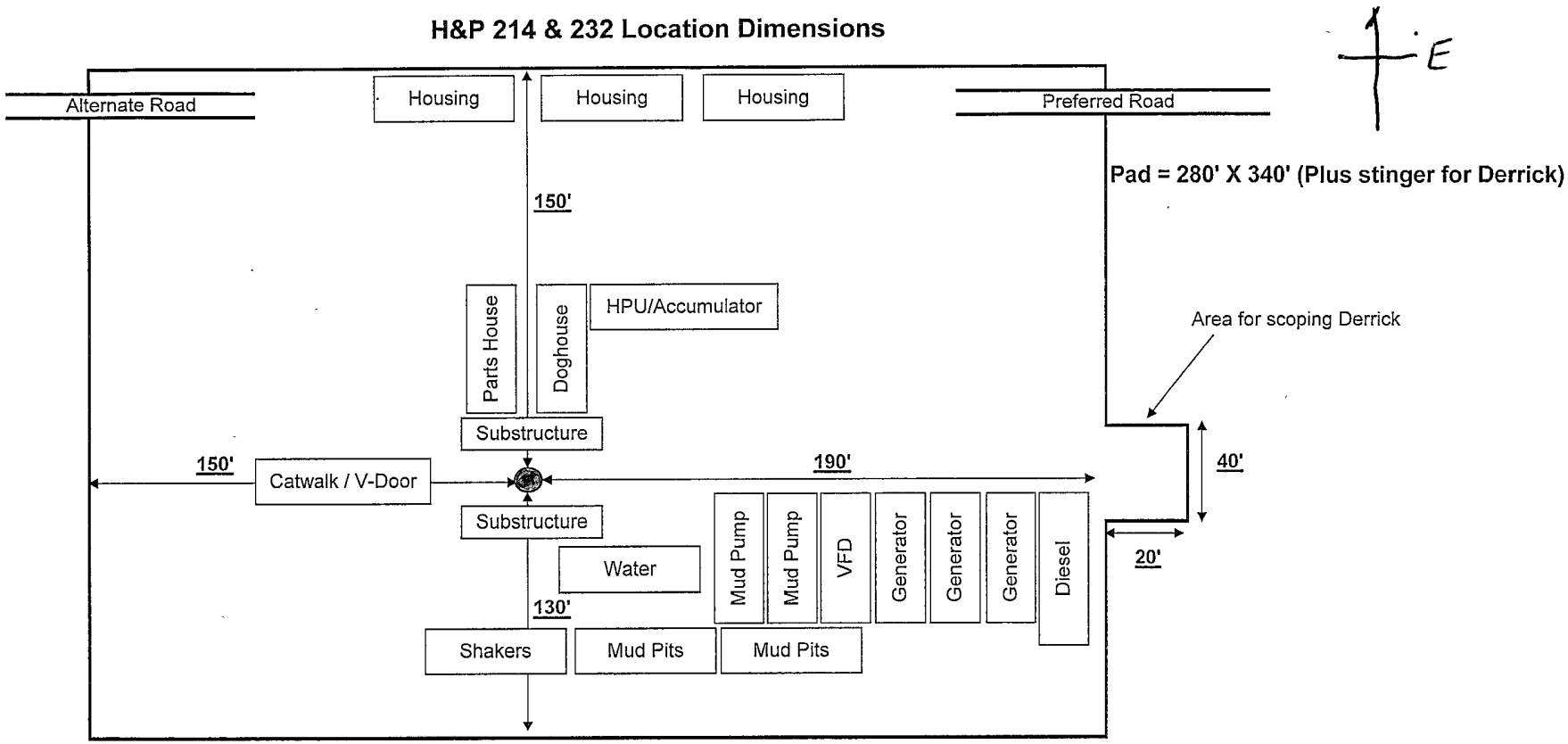
Annotation

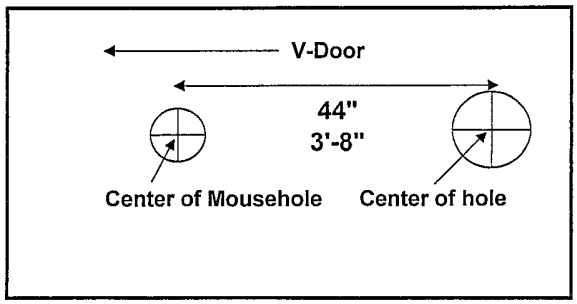
MD ft	TVD ft	
7177.06	7177.06	Kop
8072.82	7750.00	Lp
12126.61	7780.00	Pbhl

Casing Points

MD	TVD	Diameter	Hole Size	Name

H&P 214 & 232 Location Dimensions





Notes for Rotating Mouse hole for a FlexRig3 & 25' Substructure:

1) 70' of mouse hole below ground level
2) If conductor pipe is less than 85' below ground level, recommend cement mouse hole in place in order to prevent break thru & circulation / washout thru mouse hole.
3) Use 12" (mini. Nominal size) pipe. This can be spiral weld or low pressure pipe, 10 3/4" is used in some applications but due to inaccuracies in location of mouse hole & potential out of alignment or centered in hole, 12" pipe recommended.
4) Cement mouse hole in 13 1/2" or 14 3/4" hole.
5) Cellar will need to be oblong in order to accommadate mouse hole (I.e. 5' x 10', 6' x 10', ...) .... Operator decision

PHOENIX

QUALITY DOCUMENT

PHOENIX RUBBER INDUSTRIAL LTD.

H-6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 25
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurus-marga.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 555	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871	
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID		Choke and Kill Hose	
HOSE SERIAL N°: 34137		NOMINAL / ACTUAL LENGTH:		11,43 m	
W.P. 68,96 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration: 60	min.

Pressure test with water at ambient temperature

See attachment (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 16 MPa

COUPLINGS

Type	Serial N°	Quality	Heat N°
3" coupling with 4 1/16" Flange end	714 715	AISI 4130 AISI 4130	C7626 47357

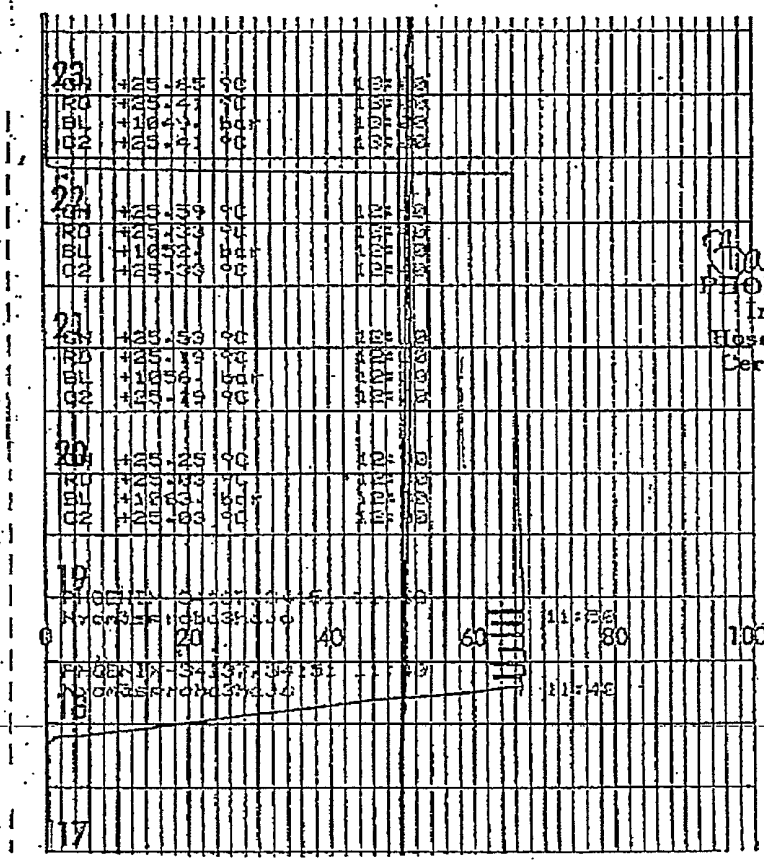
API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

Date:	Inspector	Quality Control
30. April. 2002.		PHOENIX RUBBER Industrial Ltd. Hose Inspection and Testing Department

Page: 1/1

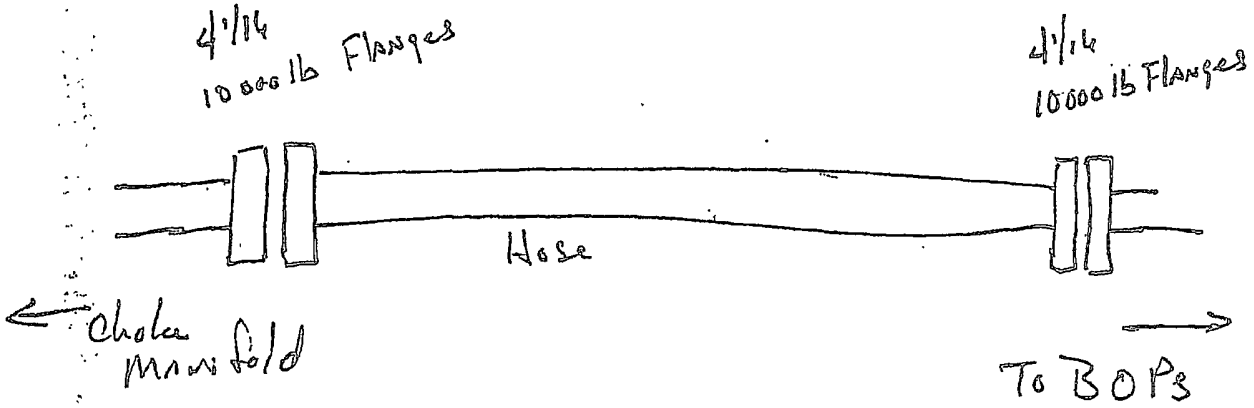


PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER C.S.

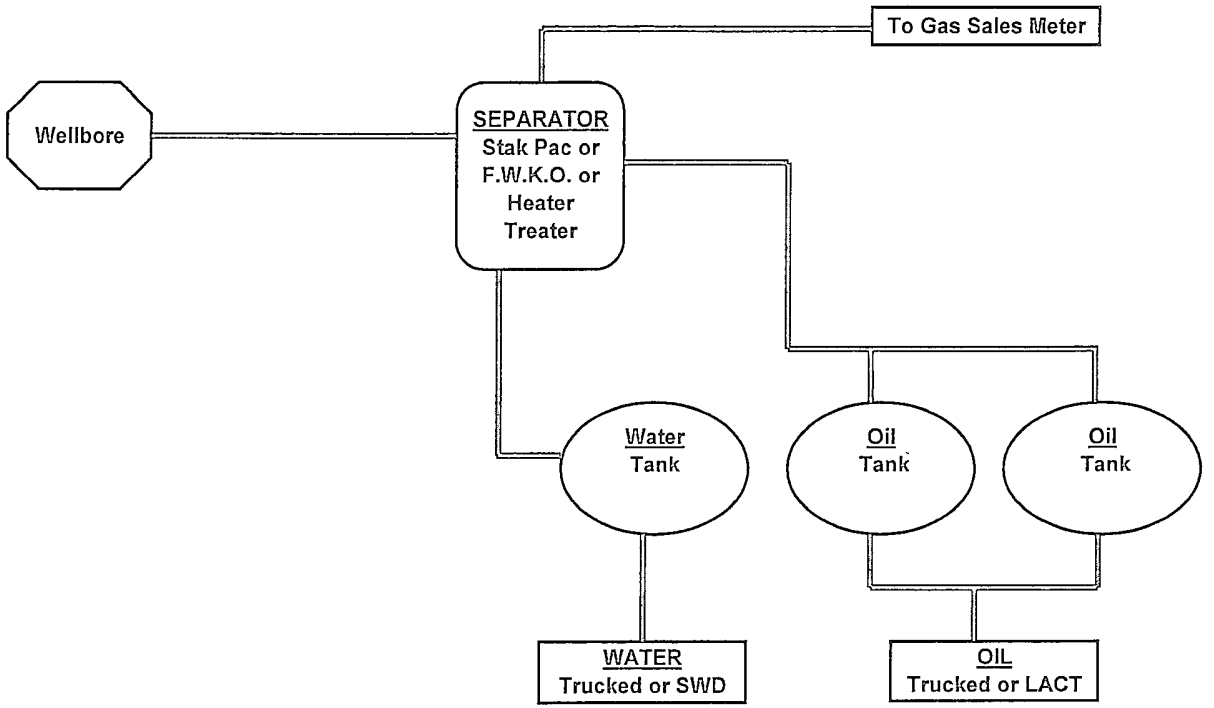
H&P 214

Choke hose



DEVON ENERGY PRODUCTION COMPANY LP

General Production Facilities Diagram



NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Black Jack 1 Federal 5H

Surface Location: 330' FNL & 500' FWL, Unit D, Sec 1 T24S R30E, Eddy, NM
Bottom hole Location: 330' FSL & 500' FWL, Unit M, Sec 1 T24S R30E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.

2. Wear ring will be properly installed in head.

3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 5000 psi working pressure.

4. All fittings will be flanged.

5. A full bore safety valve tested to a minimum 5000 psi WP with proper thread connections will be available on the rotary rig floor at all times.

6. All choke lines will be anchored to prevent movement.

7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.

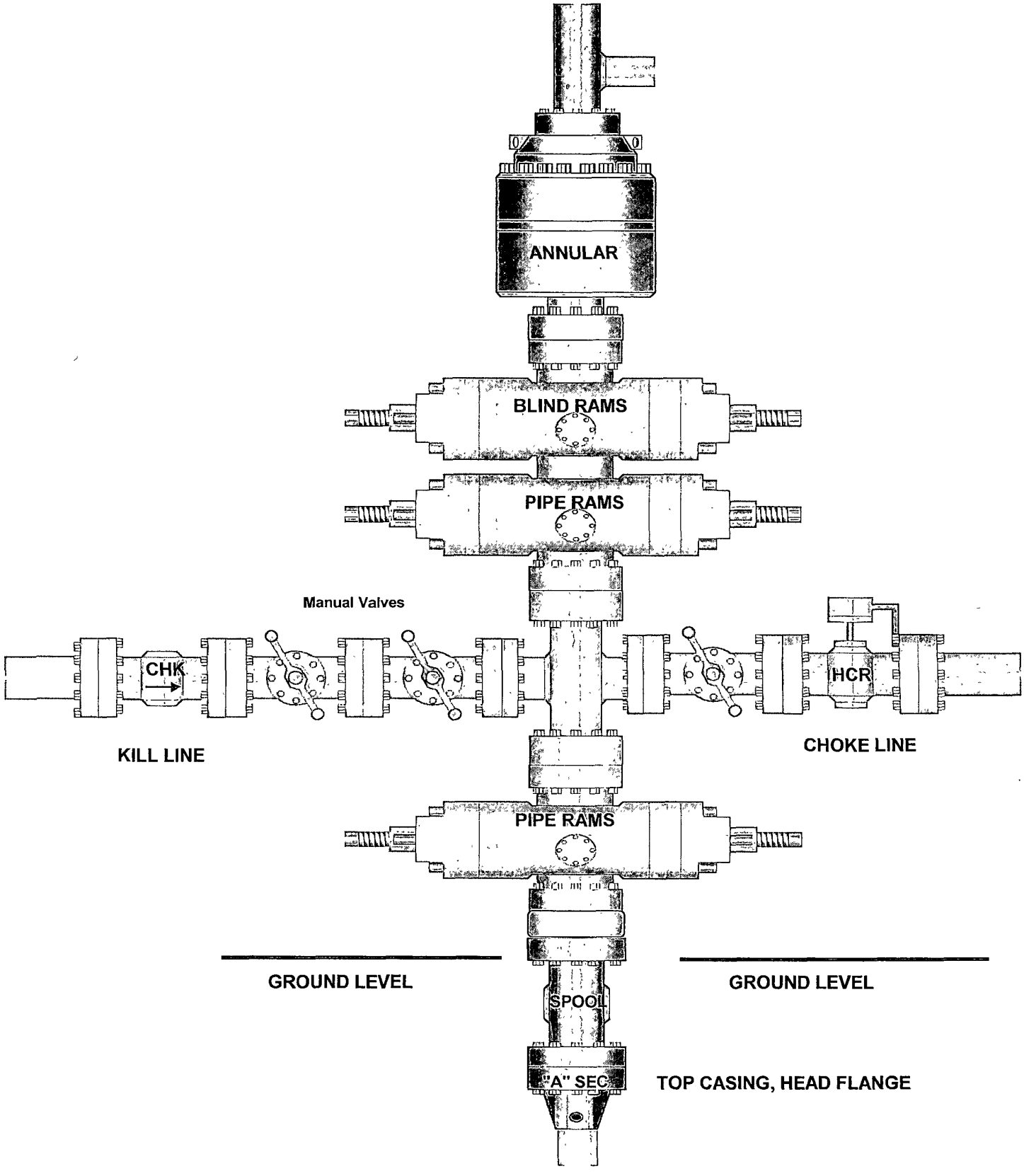
8. Will maintain a kelly cock attached to the kelly.

9. Hand wheels and wrenches will be properly installed and tested for safe operation.

10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.

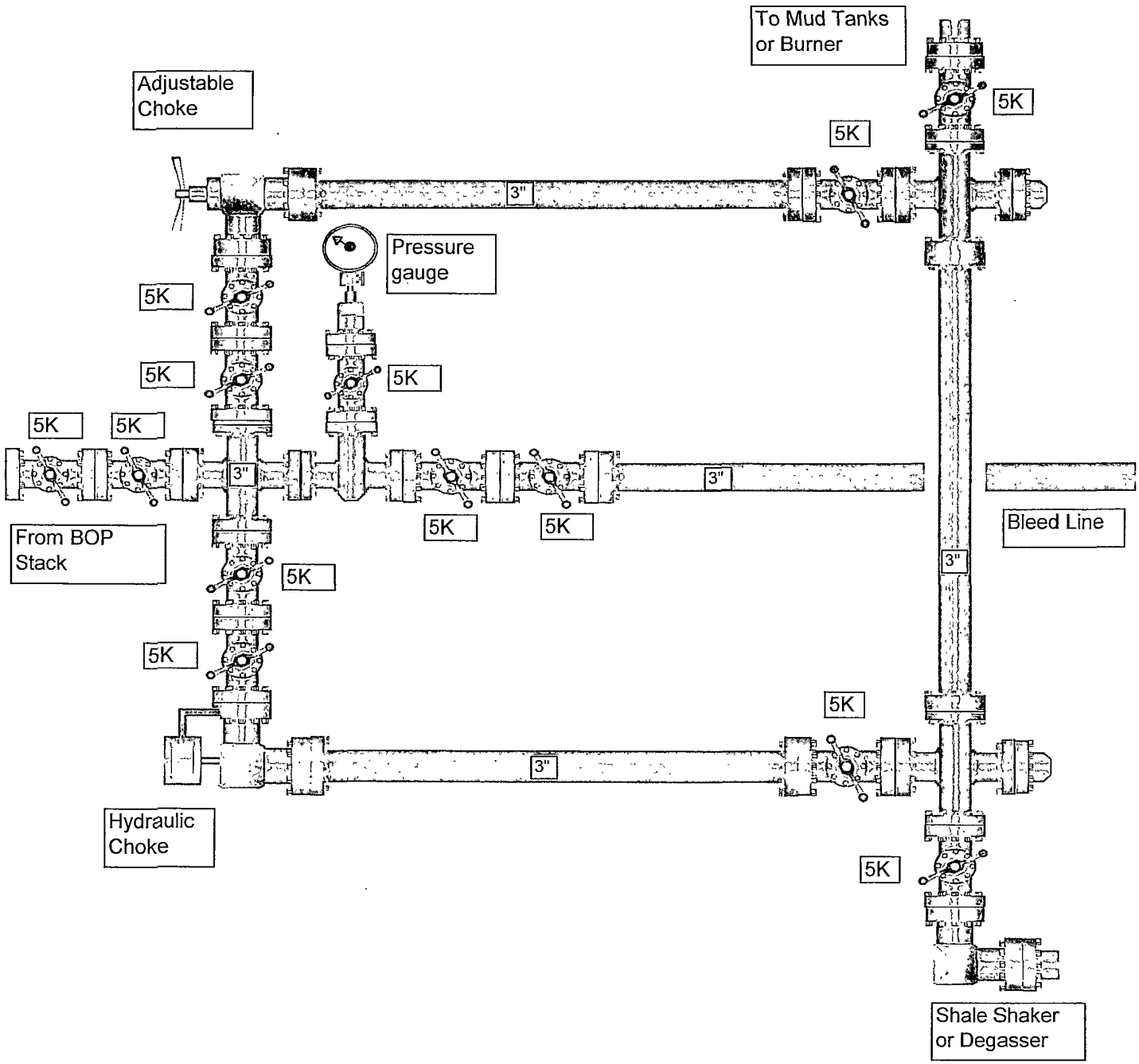
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

13-5/8" x 5,000 psi BOP Stack



L:\Western\Drilling\Wes Handley\Drawings\5K 2_3 ram BOP 11_13 625 w choke.xls

5,000 PSI CHOKE MANIFOLD



SURFACE USE PLAN
Devon Energy Production Company, LP
Black Jack 1 Federal 5H

Surface Location: 330' FNL & 500' FWL, Unit D, Sec 1 T24S R30E, Eddy, NM
Bottom hole Location: 330' FSL & 500' FWL, Unit M, Sec 1 T24S R30E, Eddy, NM

1. **Existing Roads:**
   a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by Basin Surveys.
   b. All roads into the location are depicted on Exhibit 3.
   c. Directions to Location: From the junction of Hwy 128 and Co. Rd Twin Wells, go south 4.5 mles on Twin Wells to lease road, on lease road go westerly to sandy 2-track and proposed lease road.

2. **New or Reconstructed Access Roads:**
   a. The well site layout, Form C-102 shows the existing County Road. Approximately 6038.8' of new access road will be constructed as follows. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
   b. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
   c. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

3. **Location of Existing Wells:**
   One Mile Radius Plat shows all existing and proposed wells within a one-mile radius of the proposed location. See attached plat.

4. **Location of Existing and/or Proposed Production Facilities:**
   a. In the event the well is found productive, the Blackjack 1 Federal 2 tank battery would be utilized and the necessary production equipment will be installed at the well site. See Production Facilities Layout diagram.
   b. If necessary, the well will be operated by means of an electric prime mover. Electric power poles will be set along side of the access road.
   c. All flow lines will adhere to API standards.
   d. If the well is productive, rehabilitation plans are as follows:
      i. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

5. **Location and Types of Water Supply:**
   This location will be drilled using a combination of water mud systems (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in the C-102. On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drill rig. In these cases where a poly pipeline is used to transport water for drilling purposes, proper

authorizations will be secured. If a poly pipeline is used, the size, distance, and map showing route will be provided to the BLM via sundry notice.

6. **Construction Materials:**
All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

7. **Methods of Handling Waste Material:**
   a. Drill cuttings will be disposed.
   b. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary landfill.
   c. The supplier, including broken sacks, will pick up salts remaining after completion of well.
   d. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
   e. Disposal of fluids to be transported by the following companies:
      i. American Production Service Inc, Odessa TX
      ii. Gandy Corporation, Lovington NM
      iii. I & W Inc, Loco Hill NM
      iv. Jims Water Service of Co Inc, Denver CO

8. **Ancillary Facilities:** No campsite or other facilities will be constructed as a result of this well.

9. **Well Site Layout:**
   a. Exhibit D shows the proposed well site layout with dimensions of the pad layout.
   b. This exhibit indicated proposed location of sump pits and living facilities.
   c. Mud pits in the active circulating system will be steel pits.
   d. A closed loop system will be utilized.
   e. If a pit or closed loop system is utilized, Devon will comply with the NMOCD requirements 19.15.17 and submit form C-144 to the appropriate NMOCD District Office.

10. **Plans for Surface Reclamation:**
   a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography.
   b. The location and road will be rehabilitated as recommended by the BLM.
   c. If the well is a producer, location not essential to production facilities will be reclaimed and seeded per BLM requirements.

d. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

11. Surface Ownership:

a. The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.
b. The proposed road routes and the surface location will be restored as directed by the BLM.

12. Other Information:

a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sage bush, yucca and miscellaneous weeds. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
b. There is no permanent or live water in the general proximity of the location.
c. There are no dwellings within 2 miles of location.
d. A Cultural Resources Examination will be completed by the Permian Basin Cultural Resource Fund in lieu of being required to conduct a Class III Survey for cultural resources associated with their project within the BLM office in Carlsbad, New Mexico.

13. Bond Coverage:

Bond Coverage is Nationwide; Bond # is CO-1104

Operators Representative:

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below.

Jim Cromer - Operations Engineer Advisor
Devon Energy Production Company, L.P.
20 North Broadway, Suite 1500
Oklahoma City, OK 73102-8260
(405) 228-8965 (office)
(405) 464-9769 (Cellular)

Don Mayberry - Superintendent
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250
(575) 748-3371 (office)
(575) 746-4945 (home)

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this _13th___ day of __November 2009.
Printed Name: Judy A. Barnett
Signed Name: Judy A. Barnett
Position Title: Regulatory Analyst
Address: 20 North Broadway, OKC OK 73102
Telephone: (405)-228-8699
Field Representative (if not above signatory):
Address (if different from above):
Telephone (if different from above):

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION COMPANY, LP
LEASE NO.:	NM97133
WELL NAME & NO.:	Black Jack 1 Federal 5H
SURFACE HOLE FOOTAGE:	330' FNL & 500' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 500' FWL
LOCATION:	Section 1, T. 24 S., R. 30 E, NMPM
COUNTY:	Eddy County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

1. **Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:** Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

2. **Ground-level Abandoned Well Marker to avoid raptor perching:** Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Closed Loop System: v-door east

Tanks are required for drilling operations. No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future

field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1: cross section and plans for typical road construction.

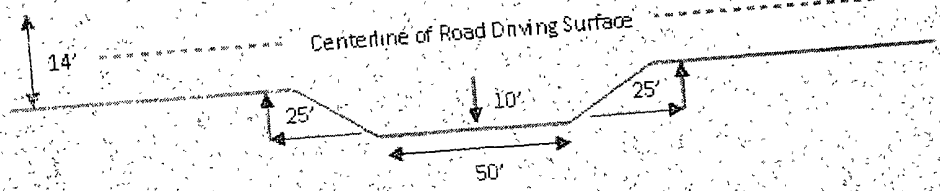
Ditching

Ditching shall be required on both sides of the road.

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

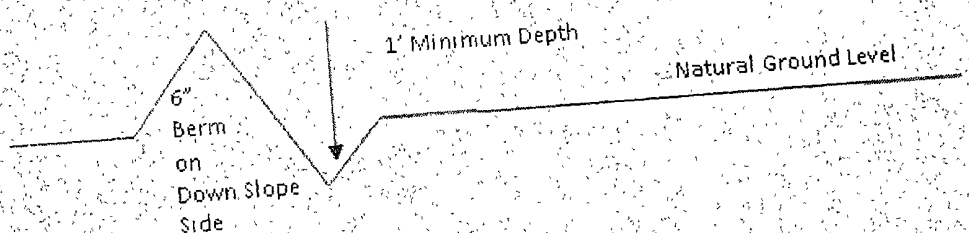


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section Of Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be

determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 400'/4% + 100' = 200' lead-off ditch interval

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

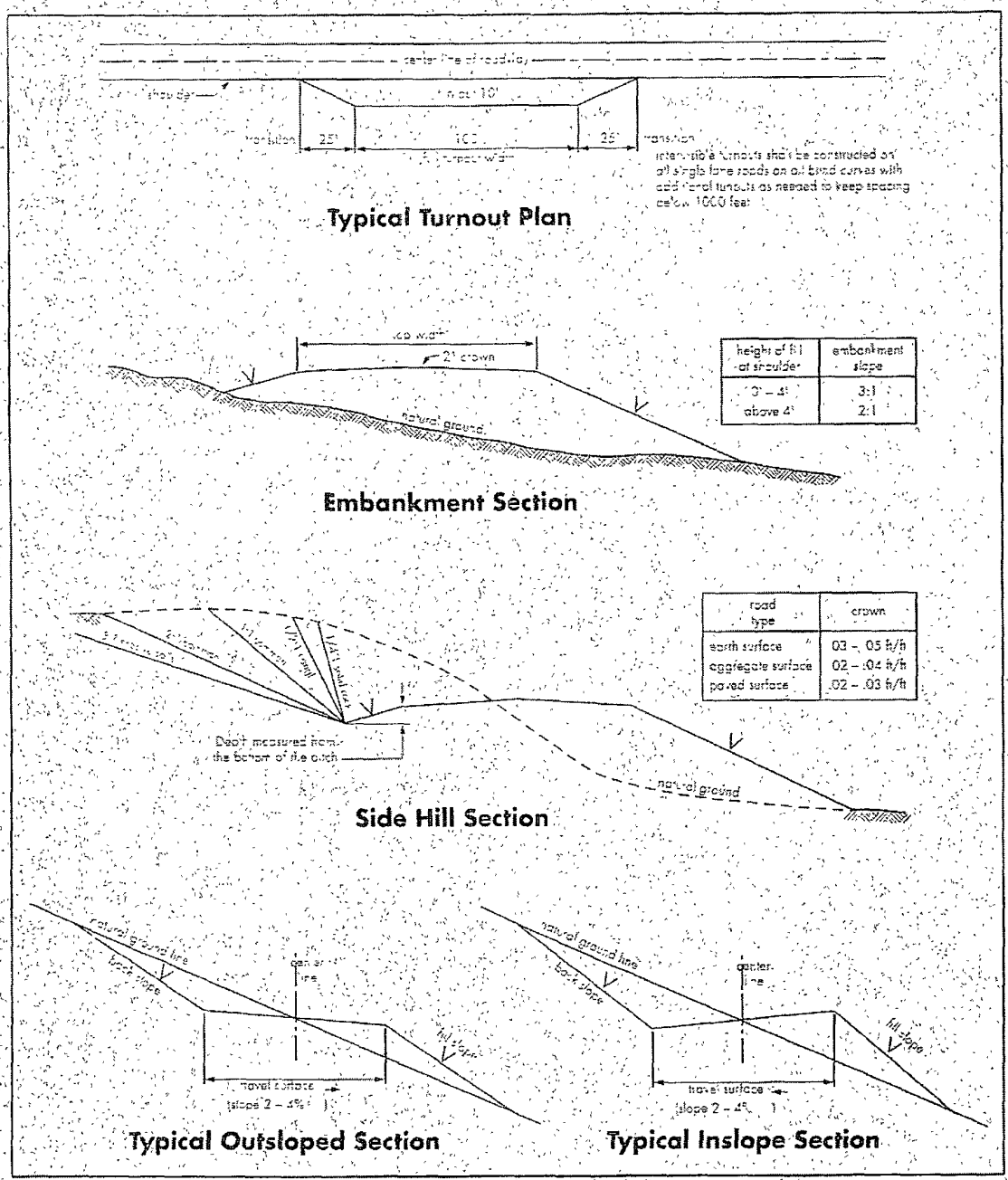
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. 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 this section, 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.

4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

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

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 for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

R-111-P potash area.
Medium potential for Karst and cave type structures.
Possible lost circulation in the Delaware and Bone Spring (if penetrated) formations.

1. The **13-3/8** inch surface casing shall be set at **approximately 527 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to be used to setting depth.**

   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 is to include the lead cement slurry.

   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 cementing will be done prior to drilling out that string.

Brine water mud to setting depth of intermediate casing.

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, c-d above.
   R-111-P requirement for this casing is to be set a minimum of 100' below the salt and not more than 600' below the salt. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to R-111-P potash.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

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 to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement will be required as excess cement calculates to 2%.**

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.

5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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. **Variance approved to use flex line from BOP to choke manifold. Check condition of 3" flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends.**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5m)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

5. 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. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

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

CRW 120909

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES – Not Requested in APD

C. ELECTRIC LINES – Not Requested in APD

IX. INTERIM RECLAMATION & RESEEDING PROCEDURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESEEDING PROCEDURE

Once the well is drilled, all completion procedures accomplished, and all trash removed, reseed the location and all surrounding disturbed areas as follows:

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed.

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.