ATS-09-342

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Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **NMNM-68084**

6. If Indian, Allotee or Tribe Name

7. If Unit or CA Agreement, Name and No.

1a. Type of work: ☑ DRILL ☐ REENTER

8. Lease Name and Well No. **Mesa Verde 7 Federal 3H** (30873)

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

9. API Well No. **30-025-39444**

2. Name of Operator **Devon Energy Production Company, LP** (6137)

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

3b. Phone No. *(include area code)* **405-552-8198**

10. Field and Pool, or Exploratory **Mesa Verde Delaware** (96191)

4 Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface **330 FSL & 1980 FWL, Unit N**

At proposed prod. zone **1650 FNL & 1980 FEL, Unit F**

11 Sec., T. R. M. or Blk. and Survey or Area **Sec 7, T24S R32E**

14. Distance in miles and direction from nearest town or post office* **Approximately 22 miles east of Lovington, NM** per Norvella 3-24-09

12. County or Parish **Eddy County** (EDDY)

13. State **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 **421.56**	17. Spacing Unit dedicated to this well **120 acres**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **1024'**	19. Proposed Depth **11384' MD 8310' TVD**	20. BLM/BIA Bond No. on file **CO-1104**
21 Elevations (Show whether DF, KDB, RT, GL, etc.) **3584' GL**	22. Approximate date work will start* **04/15/2009**	23. Estimated duration **30 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	Name *(Printed/Typed)*	Date
	Norvella Adams	**03/11/2009**

Title **Sr. Staff Eng. Tech**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
		MAY 20 2009
Title **FIELD MANAGER**	Office **CARLSBAD FIELD 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)*

Approval Subject to General Requirements & Special Stipulations Attached

Carlsbad Controlled Water Basin

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

RECEIVED
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
MAY 27 2009 Santa Fe, New Mexico 87505
HOBBSOCD

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
30-025-39444	96191	Mesa Verde Delaware

Property Code	Property Name	Well Number
30873	MESA VERDE "7" FEDERAL	3H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY LP	3584'

Surface Location

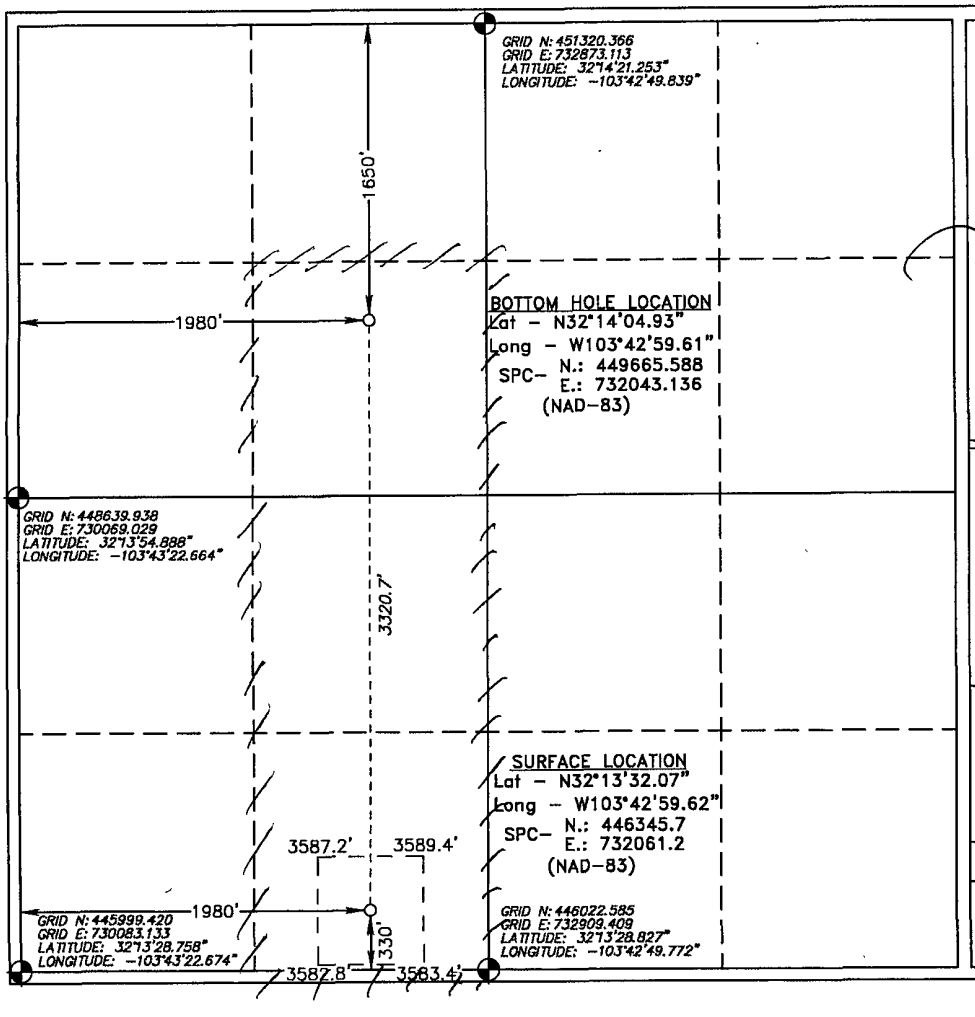
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	24 S	32 E		330	SOUTH	1980	WEST	LEA

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
F	7	24 S	32 E		1650	NORTH	1980	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
120			

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.

Signature 2/26/09 Date

Norvella Adams
Printed Name

SURVEYOR CERTIFICATION

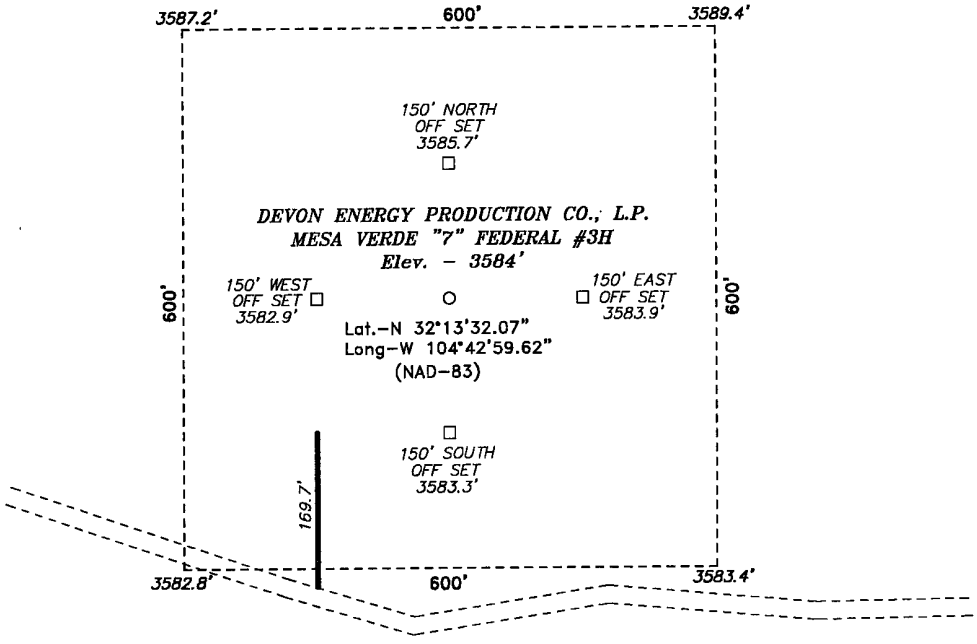
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

SEPTEMBER 24, 2008
Date Surveyed
Signature & Seal of Professional Surveyor
GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR
W.O. 20[illegible]

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 7, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF HWY 128 AND BUCK JACKSON, GO SOUTHWESTERLY 0.4 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTH 0.4 MILES TO 2-TRACK, ON 2-TRACK GO EASTERLY 0.35 MILES TO PROPOSED LEASE ROAD.

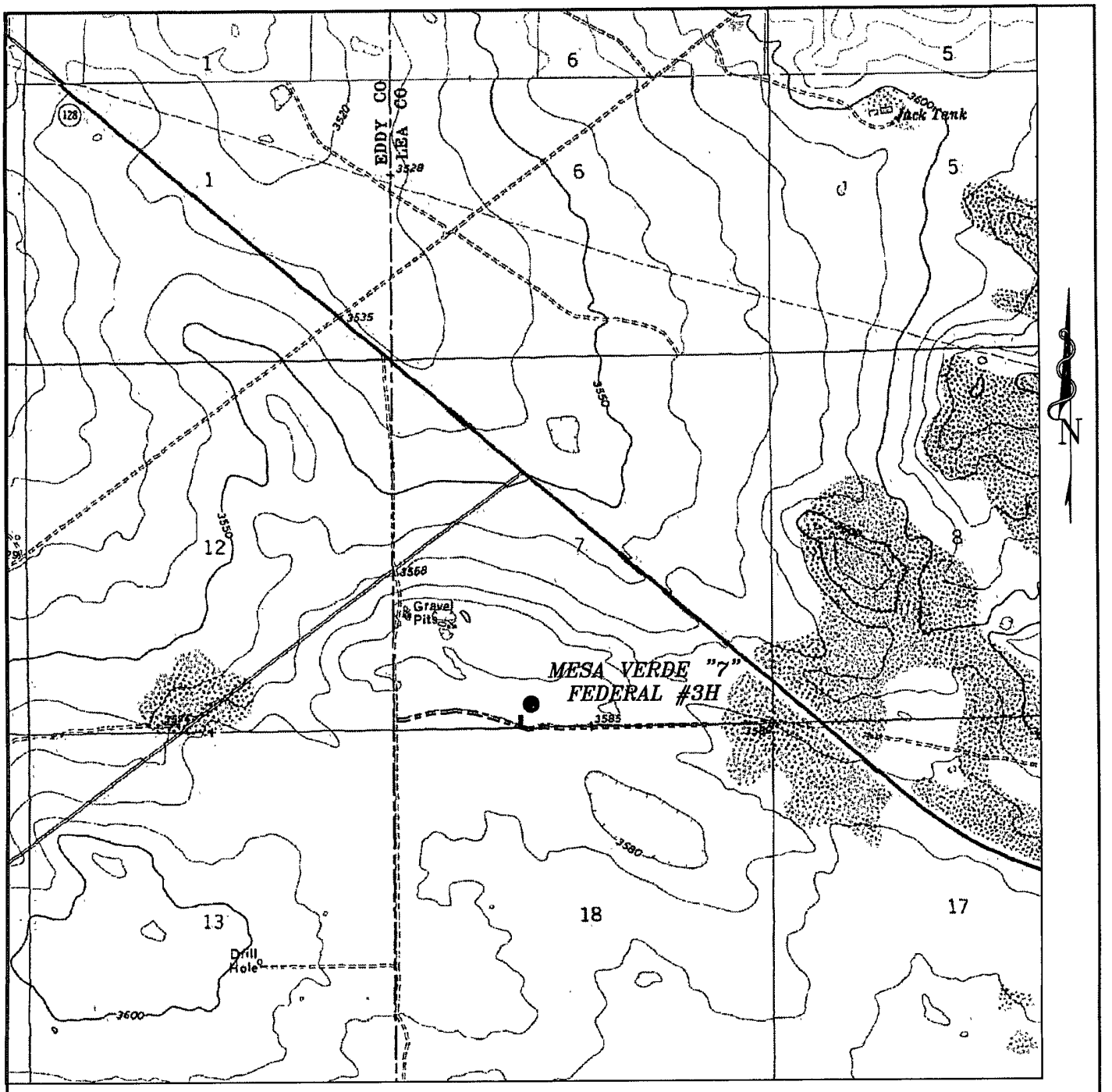
DEVON ENERGY PROD. CO., L.P.

REF: MESA VERDE "7" FEDERAL #3H / WELL PAD TOPO

THE MESA VERDE "7" FEDERAL #3H LOCATED 330' FROM THE SOUTH LINE AND 1980' FROM THE WEST LINE OF SECTION 7, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 20493	Drawn By: J. M. SMALL		
Date: 09-25-2008	Disk: 20493 JMS	Survey Date: 09-24-2008	Sheet 1 of 1 Sheets

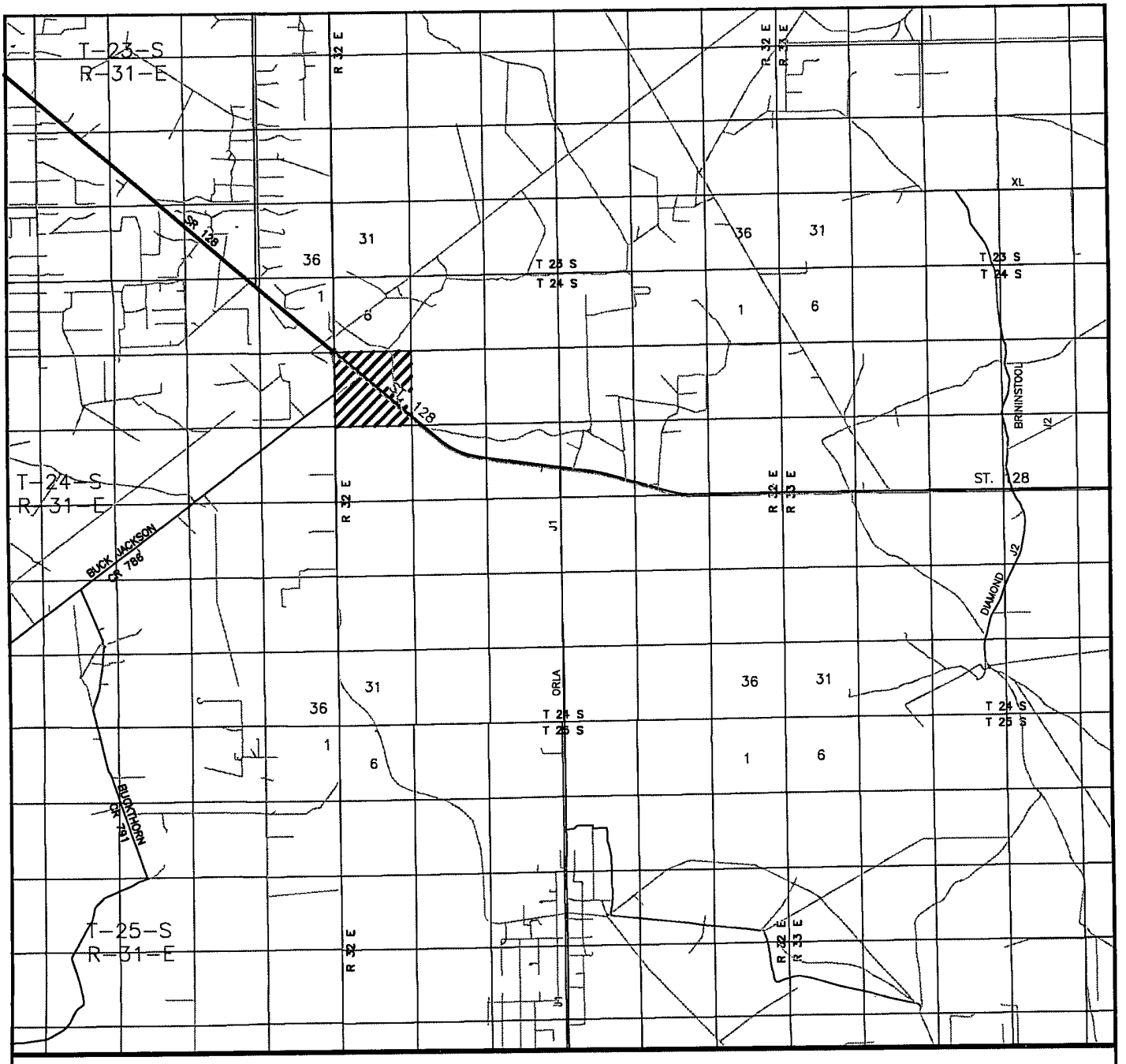


MESA VERDE "7" FEDERAL #3H
Located at 330' FSL AND 1980' FWL
Section 7, Township 24 South, Range 32 East,
N.M.P.M., Lea County, New Mexico.

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 20493
Survey Date:	09-24-2008
Scale:	1" = 2000'
Date:	09-25-2008

DEVON ENERGY PROD. CO., L.P.



MESA VERDE "7" FEDERAL #3H
Located at 330' FSL AND 1980' FWL
Section 7, Township 24 South, Range 32 East,
N.M.P.M., Lea County, New Mexico.

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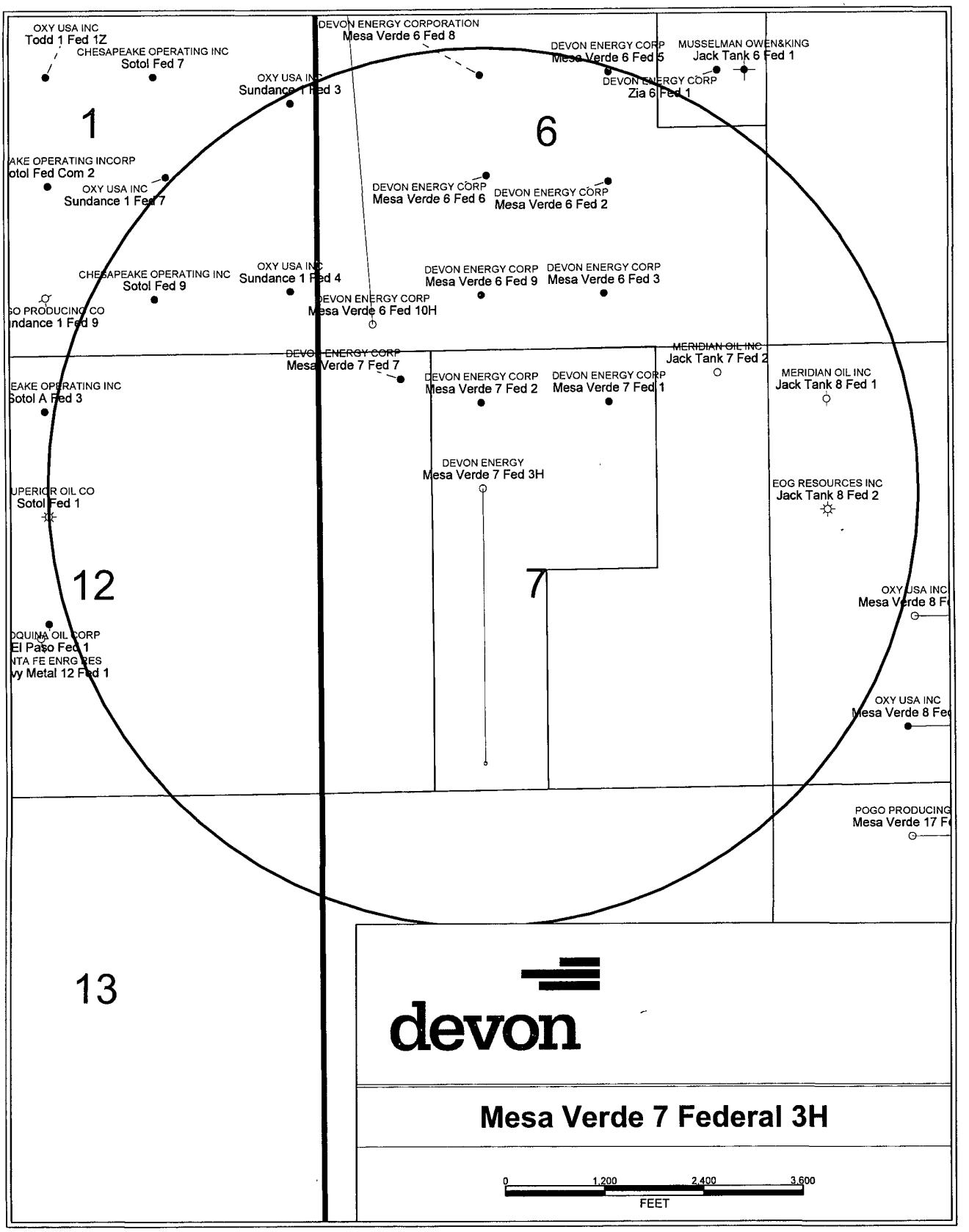
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 20493
Survey Date:	09-24-2008
Scale:	1" = 2 MILES
Date:	09-25-2008

DEVON ENERGY PROD. CO., L.P.

Devon Energy Production Company LP
Mesa Verde 7 Federal #3H



DRILLING PROGRAM

Devon Energy Production Company, LP
Mesa Verde 7 Federal 3H
Surface Location: 330' FSL & 1980' FWL, Unit N, Sec 7 T24S R32E, Lea, NM
Bottom Hole Location: 1650' FNL & 1980' FWL, Unit F, Sec 7 T24S R32E, Lea, NM

1. Geologic Name of Surface Formation

a. Permian

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

a.	Quaternary	surface	
b.	Rustler	851'	
c.	Salado	2464'	
d.	Base Salt	4401'	
e.	Delaware/Lamar	4624'	Oil & Gas
f.	Bell Canyon	4661'	Oil & Gas
g.	Cherry Canyon	5544'	Oil & Gas
h.	Brushy Canyon	6817'	Oil & Gas

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 9 5/8" casing at 4500' and circulating cement back to surface. The Delaware intervals will be isolated by setting 5 1/2" casing to total depth.

3. Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 1/2"	0'- 900'	13 3/8"	0'- 900'	48#	ST&C	H-40
12 1/4"	900-4500'	9 5/8"	0-4500'	40#	LT&C	K-55
8 1/2"	4500 -11490'	5 1/2"	0'-7700'	17#	LT&C	N-80
8 1/2"	4500-11490'	5 1/2"	7700'-11,490'	17#	BT&C	N-80

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	1.86	4.2	2.42
9 5/8"	1.24	1.67	2.38
5 ½"	1.52	1.88	1.60

4. Cement Program: (Note yields; and dv tool depths if multiple stages)

a. 13 3/8" Surface	Lead: 575 sx (35:65)Premium Plus C + 5% NaCl + ¼ lbs/sx Celloflake + 4% Bentonite + 1% Sodium Metasilicate + 5% MPA-5, 12.8 ppg, 1.97 cf/sx, 10.56 gps. Tail: 300 sx Premium Plus C cement + 2% $CaCl_2$ + ¼ #/sx Celloflake, 14.8 ppg, 1.35 cf/sx, 6.35 gps. TOC = 0.
b. 9 5/8" Intermediate	Lead: 1245 sx (35:65) Premium Plus C + 5% NaCl + ¼ lbs/sx Cello Flake + 6% Bentonite + 0.25% FL-52A; 12.5 ppg, 2.04 cf/sx, 11.24 gps. Tail: 300 sx (60:40) Premium Plus C + 5% NaCl + ¼ lbs/sx Cello Flake + 0.1% Sodium Metasilicate + 4% MPA-5; 13.8 ppg, 1.37 cf/sx, 6.43 gps. TOC = 0.
c. 5 1/2" Liner	2 stage job with DV tool at 7500'. Stage 1: 1060 sacks (50:50) Poz Class H cement + 5% NaCl + 0.4% CD-32 + 0.5% FL-25+ 2% Bentonite + 0.5% Sodium Metasilicate + 0.5% FL-52A. 14.20 ppg, 1.31 cf/sx, 5.87 gps. Stage 2: Lead with 535 sacks (35:65) Premium Plus C + 1% NaCl + ¼ #/sx Celloflake + 6% Bentonite + 0.4% FL-52A, 12.5 ppg, 1.96 cf/sx, 10.76 gps. Tail with 350 sacks (60:40) Poz Premium Plus C + 1% NaCl + 0.2% R-3 + ¼ #/sx Celloflake + 0.5% BA-10A + 4% MPA-5, 13.8 ppg, 1.34 cf/sx, 6.21 gps. TOC = 4000'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach the surface. All casing is new and API approved.

5. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (5 K 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 ½" drill pipe rams on bottom. **The hydrill will be tested to 1000 psi (high) and 250 psi (low).** Prior to drilling out 9 5/8" casing shoe, the BOP will be tested per the 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 driller's 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.

6. **Proposed Mud Circulation System**

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 900'	8.4 – 9.0	32-34	NC	Fresh Water/Gel
900'– 4500'	8.6 – 9.0	28 -30	NC	Brine
4500'– 8160'	8.3 – 8.6	28	NC - 40	Fresh
8160'- 11,490'	8.6 – 9.2	32 - 40	12 - 8 cc	Fresh

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

7. **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 9 5/8" casing shoe until the 5 1/2" casing is set. Breathing equipment will be on location upon drilling the 9 5/8" shoe until total depth is reached.

8. **Logging, Coring, and Testing Program:**
   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.

9. **Potential Hazards:**
   a. No abnormal pressures or temperatures are expected. A H2S contingency plan will be provided. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 800 psi and Estimated BHT 90°.

10. **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 30 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.

devon

Project. Eddy Co , New Mexico (Nad 83)
Site. Mesa Verde 7 Fed #3H
Well Mesa Verde 7 Fed #3H
Wellbore Lateral #1
Design Design #1

CUDD DRILLING & MEASUREMENT SERVICES

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	7737 04	0 00	0 00	7737 04	0 00	0 00	0 00	0 00	0 00	
3	8637 04	90 00	359 69	8310 00	572 95	-3 12	10 00	359 69	572 96	
4	11384 03	90 00	359 69	8310 00	3319 89	-18 06	0 00	0 00	3319 94	PBHL - TD (MV7F#3H) 12-11-08

ANNOTATIONS		
TVD	MD	Annotation
7737.04	7737 04	KOP - Build 10°/100'
8310 00	8637 04	EOC

WELL DETAILS Mesa Verde 7 Fed #3H						
Ground Level 3584 00						
WELL @ 3601 00ft (Original Well Elev)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0 00	446345 70	732061 20	32° 13' 32 073 N	103° 42' 59 624 W	

WELLBORE TARGET DETAILS				
Name	TVD	+N/-S	+E/-W	Shape
PBHL - TD (MV7F#3H) 12-11-08	8310.00	3319 89	-18 06	Point

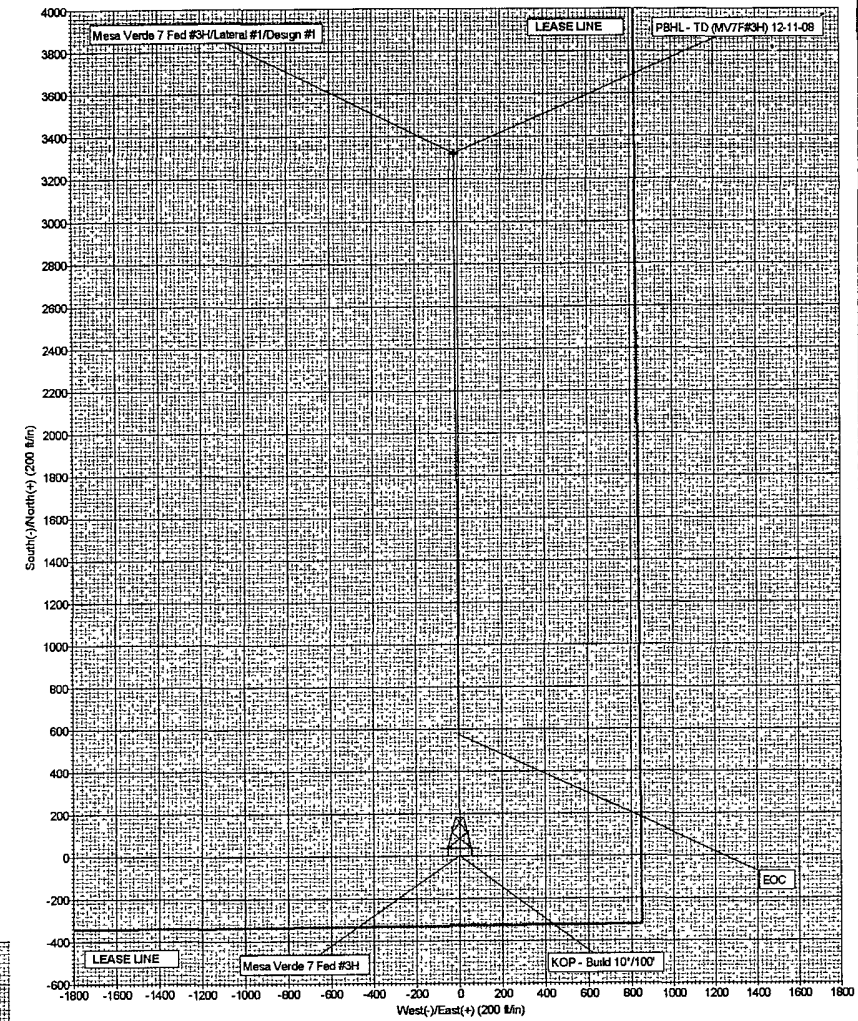
PROJECT DETAILS Eddy Co , New Mexico (Nad 83)	
Geodetic System	US State Plane 1983
Datum	North American Datum 1983
Ellipsoid	GRS 1980
Zone	New Mexico Eastern Zone
System Datum.	Mean Sea Level

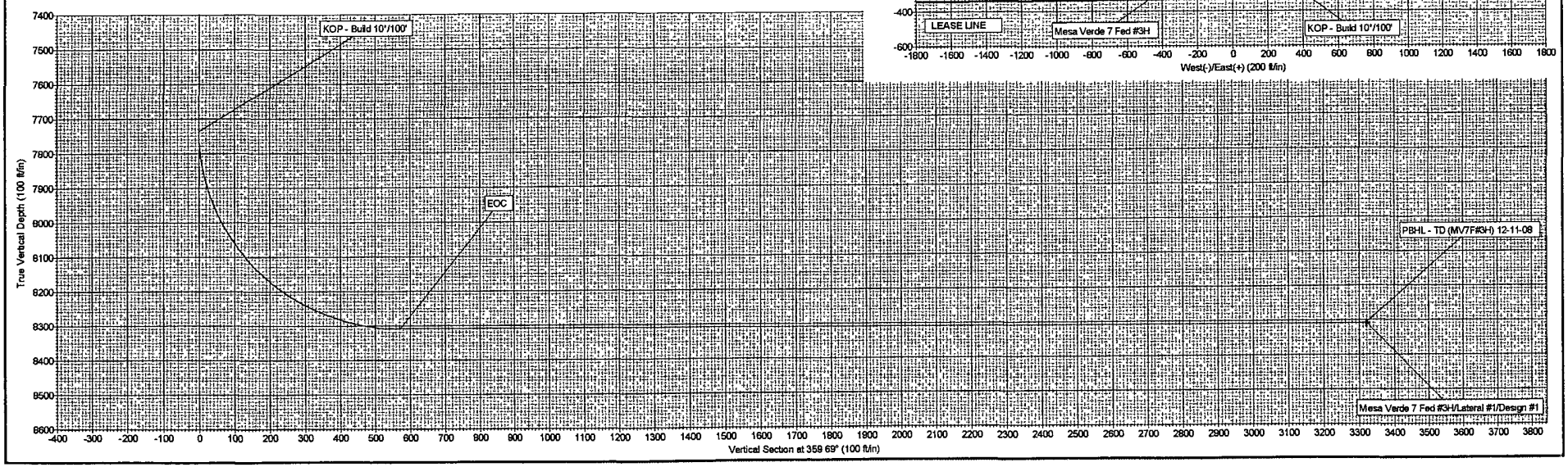
Plan: Design #1 (Mesa Verde 7 Fed #3H/Lateral #1)	
Created By: Mike Starkey	Date. 11 37, December 11 2008
Checked. _____	Date _____
Reviewed _____	Date _____
Approved _____	Date. _____

G
T M

Azimuths to Grid North
True North -0 33°
Magnetic North 7 61°

Magnetic Field
Strength 48877 9snT
Dip Angle 60 24°
Date 12/11/2008
Model IGRF200510





devon

Devon Energy

Eddy Co., New Mexico (Nad 83)
Mesa Verde 7 Fed #3H
Mesa Verde 7 Fed #3H

Lateral #1

Plan: Design #1

Standard Planning Report

11 December, 2008

CUDD
DRILLING & MEASUREMENT
SERVICES

Database:	EDM 2003.21 Midland Server Db	Local Co-ordinate Reference:	Well Mesa Verde 7 Fed #3H
Company:	Devon Energy	TVD Reference:	WELL @ 3601.00ft (Original Well Elev)
Project:	Eddy Co., New Mexico (Nad 83)	MD Reference:	WELL @ 3601.00ft (Original Well Elev)
Site:	Mesa Verde 7 Fed #3H	North Reference:	Grid
Well:	Mesa Verde 7 Fed #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Project Eddy Co., New Mexico (Nad 83)

Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Mesa Verde 7 Fed #3H, Sec 7, T-24S, R-32E

Site Position:		Northing:	446,345.70 ft	Latitude:	32° 13' 32.073 N
From:	Map	Easting:	732,061.20 ft	Longitude:	103° 42' 59.624 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.33 °

Well Mesa Verde 7 Fed #3H

Well Position	+N/-S	0.00 ft	Northing:	446,345.70 ft	Latitude:	32° 13' 32.073 N
	+E/-W	0.00 ft	Easting:	732,061.20 ft	Longitude:	103° 42' 59.624 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	3,601.00 ft	Ground Level:	3,584.00 ft

Wellbore Lateral #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/11/2008	7.94	60.24	48,878

Design Design #1

Audit Notes:

Version:		Phase:	PLAN	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	8,310.00	0.00	0.00	359.69

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,737.04	0.00	0.00	7,737.04	0.00	0.00	0.00	0.00	0.00	0.00	
8,637.04	90.00	359.69	8,310.00	572.95	-3.12	10.00	10.00	0.00	359.69	
11,384.03	90.00	359.69	8,310.00	3,319.89	-18.06	0.00	0.00	0.00	0.00	PBHL - TD (MV7F#3H

Database:	EDM 2003.21 Midland Server Db	Local Co-ordinate Reference:	Well Mesa Verde 7 Fed #3H
Company:	Devon Energy	TVD Reference:	WELL @ 3601.00ft (Original Well Elev)
Project:	Eddy Co., New Mexico (Nad 83)	MD Reference:	WELL @ 3601.00ft (Original Well Elev)
Site:	Mesa Verde 7 Fed #3H	North Reference:	Grid
Well:	Mesa Verde 7 Fed #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
851.00	0.00	0.00	851.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
2,464.00	0.00	0.00	2,464.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
4,401.00	0.00	0.00	4,401.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
4,624.00	0.00	0.00	4,624.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware / Lamar									
4,661.00	0.00	0.00	4,661.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
5,544.00	0.00	0.00	5,544.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
6,816.00	0.00	0.00	6,816.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
7,737.04	0.00	0.00	7,737.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 10°/100'									
8,637.04	90.00	359.69	8,310.00	572.95	-3.12	572.96	10.00	10.00	0.00
EOC									
11,384.03	90.00	359.69	8,310.01	3,319.89	-18.06	3,319.94	0.00	0.00	0.00
PBHL - TD (MV7F#3H) 12-11-08									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
851.00	851.00	Rustler		0.00	
2,464.00	2,464.00	Salado		0.00	
4,401.00	4,401.00	Base Salt		0.00	
4,624.00	4,624.00	Delaware / Lamar		0.00	
4,661.00	4,661.00	Bell Canyon		0.00	
5,544.00	5,544.00	Cherry Canyon		0.00	
6,816.00	6,816.00	Brushy Canyon		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
7,737.04	7,737.04	0.00	0.00	KOP - Build 10°/100'
8,637.04	8,310.00	572.95	-3.12	EOC

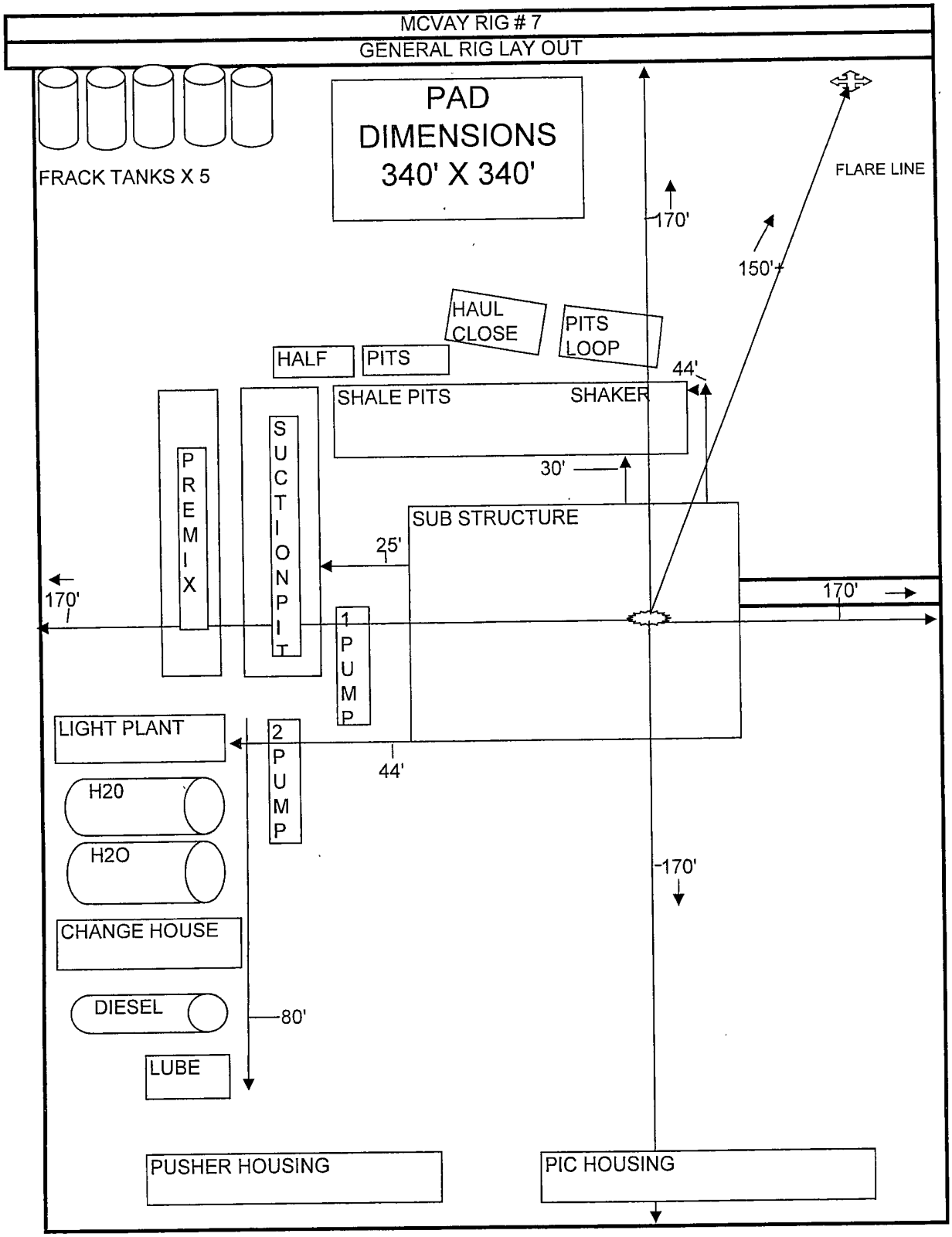
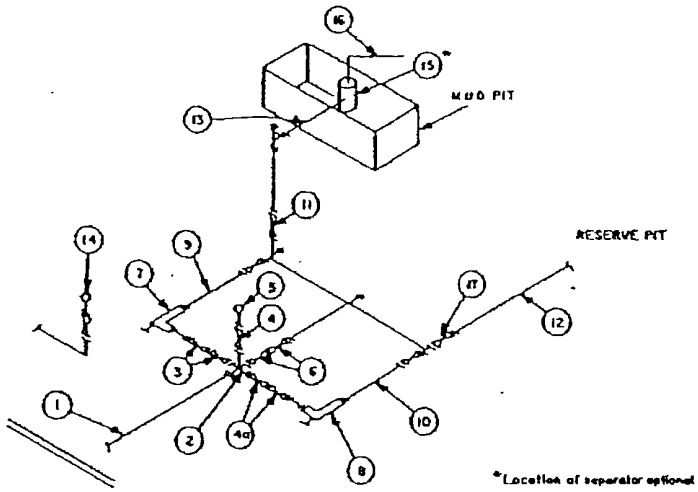

MCVAY RIG # 7
GENERAL RIG LAY OUT
PAD DIMENSIONS 340' X 340'
FRACK TANKS X 5
FLARE LINE
170'
150'+
HAUL CLOSE
PITS LOOP
HALF PITS
44'
SHALE PITS
SHAKER
30'
PREMIX
SUCTION PIT
SUB STRUCTURE
25'
170'
170'
1 PUMP
LIGHT PLANT
2 PUMP
44'
H20
H2O
170'
CHANGE HOUSE
DIESEL
80'
LUBE
PUSHER HOUSING
PIC HOUSING

Exhibit E

MINIMUM CHOKE MANIFOLD
3,000, 5,000 and 10,000 PSI Working Pressure

3 MWP - 5 MWP - 10 MWP



No.		3,000 MWP I.D.	3,000 MWP NOMINAL	3,000 MWP RATING	5,000 MWP I.D.	5,000 MWP NOMINAL	5,000 MWP RATING	10,000 MWP I.D.	10,000 MWP NOMINAL	10,000 MWP RATING
	MINIMUM REQUIREMENTS									
1	Line from drilling spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3"x3"x3"x2"			3,000			5,000			
	Cross 3"x3"x3"x3"									10,000
3	Valves(1) Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate ☐ Plug ☐(2)	1-13/16"		3,000	1-13/16"		5,000	1-13/16"		10,000
4a	Valves(1)	2-1/16"		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		3"	10,000
11	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
12	Lines		3"	1,000		3"	1,000		3"	2,000
13	Lines		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			3,000			5,000			10,000
15	Gas Separator		2"x5"			2"x5"			2"x5"	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

(1) Only one required in Class 3M.

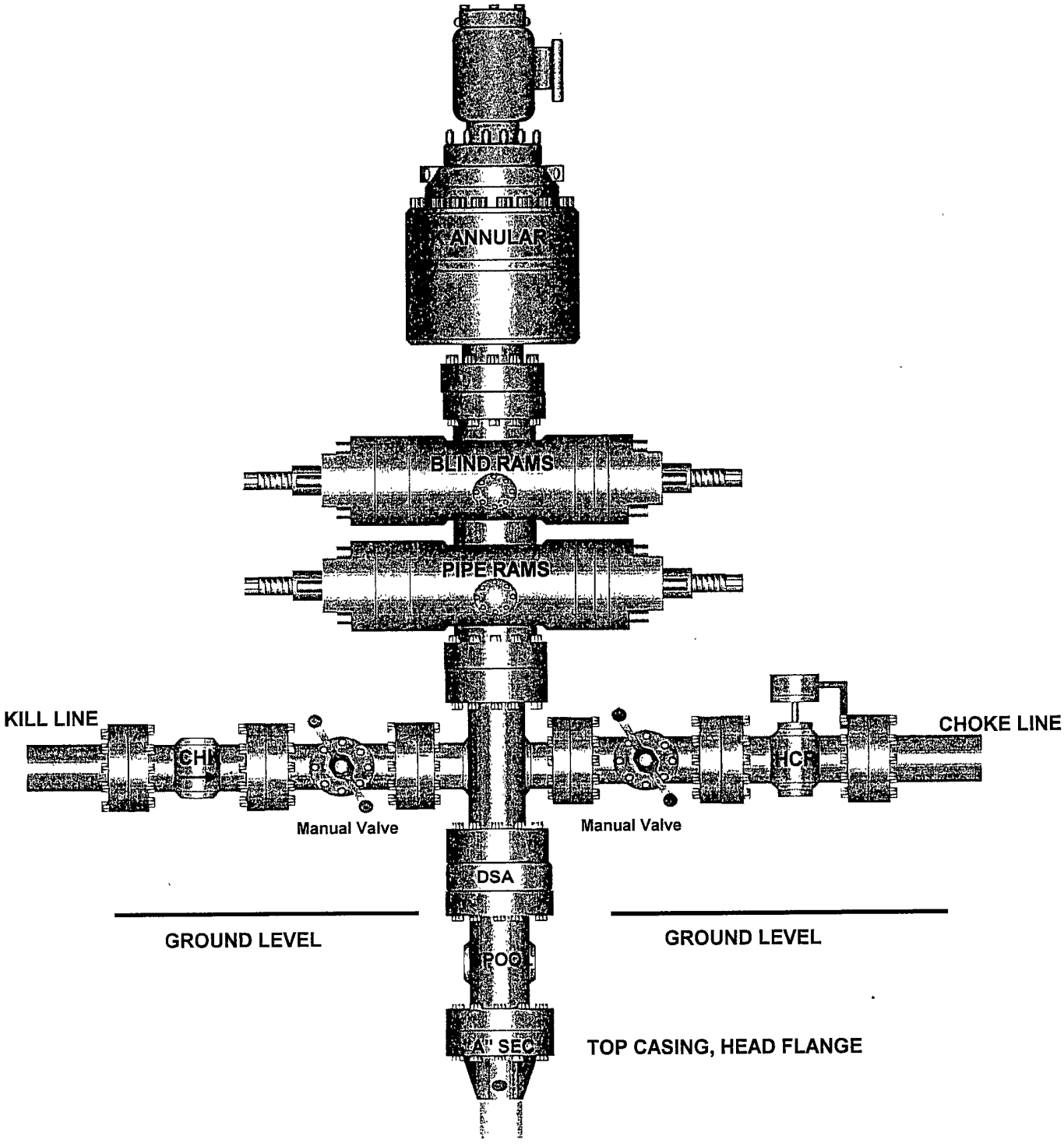
(2) Gate valves only shall be used for Class 10M.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

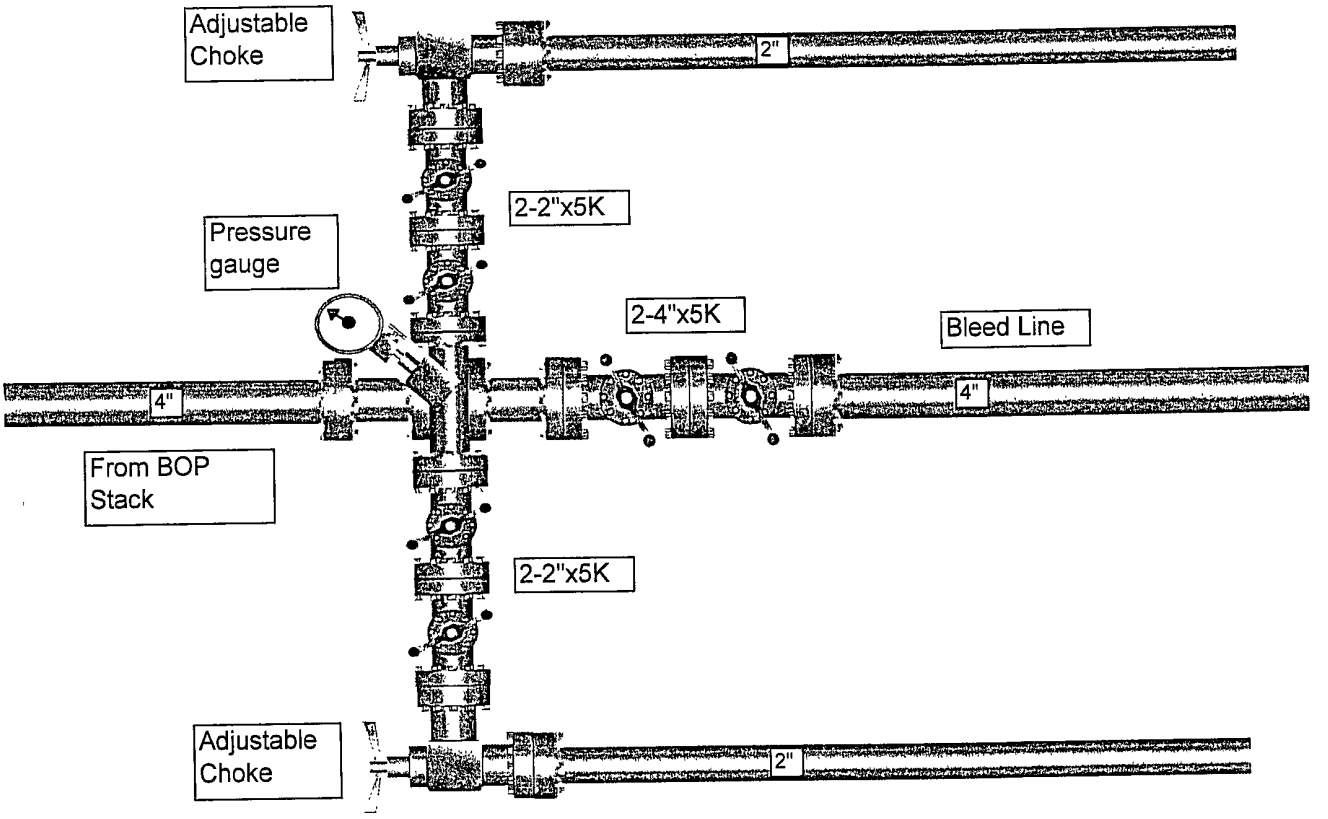
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
3. All lines shall be securely anchored.
4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
5. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
6. Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.
7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.

11" x 5,000 psi BOP Stack



5,000 PSI CHOKE MANIFOLD



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

Hydrogen Sulfide (H_2S) Contingency Plan

For

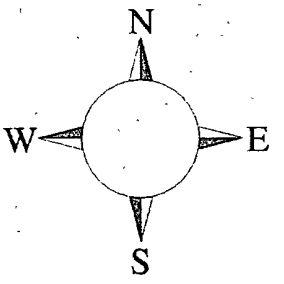
Mesa Verde "7" Federal Well # 3H

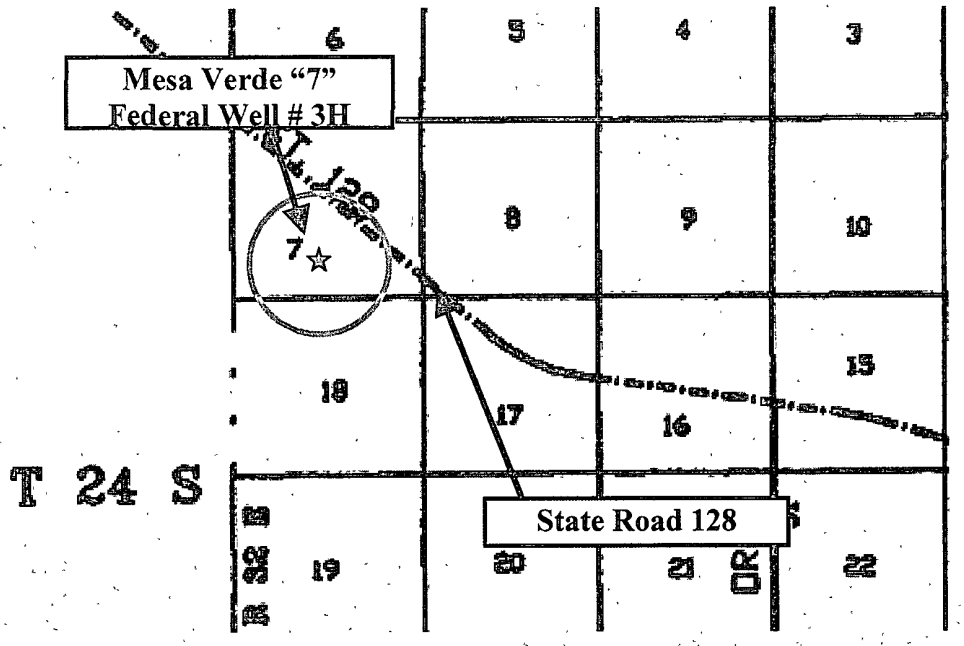
330' FSL & 1980' FWL,
Sec-7, T-24S R-32E

Eddy County NM

Mesa Verde "7" Federal Well # 3H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.





Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of discharging gas in the event of an emergency release. Escape can be facilitated West then North on lease road to SR 128. Crews should then move to block access to the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings within or near the ROE. **Immediate response** should include the evacuation of any person(s) potentially affected by toxic or flammable gasses. Evacuation of the downwind areas should occur first. Perimeter monitoring should then be established to ensure safe areas.

Emergency Procedures

In the case of a release of gas containing H_2S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H_2S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H_2S monitors and air packs in order to control the release. Use the "buddy system' to ensure no injuries during the response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentr-ation
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Devon Energy Corp. Company Call List

Artesia (505)	Cellular	Office	Home
Foreman – Robert Bell	748-7448	748-0178	746-2991
Asst. Foreman –Tommy Polly	748-5290	748-0165	748-2846
Don Mayberry	748-5235	748-0164	746-4945
Montral Walker	390-5182	748-0193	936-414-6246
Engineer – Marcos Ortiz	(405) 317-0666	(405) 552-8152	(405) 381-4350

Agency Call List

Eddy County (505)

Artesia

State Police	746-2703
City Police	746-2703
Sheriff's Office	746-9888
Ambulance	911
Fire Department	746-2701
LEPC (Local Emergency Planning Committee)	746-2122
NMOCD	748-1283

Carlsbad

State Police	885-3137
City Police	885-2111
Sheriff's Office	887-7551
Ambulance	911
Fire Department	885-2111
LEPC (Local Emergency Planning Committee)	887-3798
US Bureau of Land Management	887-6544
New Mexico Emergency Response Commission (Santa Fe)	(505)476-9600
24 HR	(505) 827-9126
National Emergency Response Center (Washington, DC)	(800) 424-8802

Emergency Services

Boots & Coots IWC	1-800-256-9688 or (281) 931-8884
Cudd Pressure Control	(915) 699-0139 or (915) 563-3356
Halliburton	(505) 746-2757
B. J. Services	(505) 746-3569

Give GPS position:

Flight For Life - Lubbock, TX	(806) 743-9911
Aerocare - Lubbock, TX	(806) 747-8923
Med Flight Air Amb - Albuquerque, NM	(505) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM	(505) 272-3115

Prepared in conjunction with
Wade Rohloff of;

Compliance Services
PO Box 2734 Hobbs NM 88240 (505) 631-9561

SURFACE USE PLAN
Devon Energy Production Company, LP
Mesa Verde 7 Federal 3H
Surface Location: 330' FSL & 1980' FWL, Unit N, Sec 7 T24S R32E, Lea, NM
Bottom Hole Location: 1650' FNL & 1980' FWL, Unit F, Sec 7 T24S R32E, Lea, 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 Buck Jackson, go southwesterly 0.4 miles to lease road, on lease road go south 0.4 miles to 2-track, on 2-track go easterly 0.35 miles to proposed lease road.
2. **New or Reconstructed Access Roads:**
   a. The well site layout, Form C-102 shows the existing trail road.
   b. 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.
   c. 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%.
   d. 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 Mesa Verde 7 Federal 1tank 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. We intend to lay flowlines from the Mesa Verde 7 Federal 3H to the Mesa Verde 7 Federal 1 tank battery. All flow lines will adhere to API standards.
   d. If the well is productive, rehabilitation plans are as follows:
      i. We will be using a closed loop system.
      ii. 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 of in the closed loop system.
   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. Remaining drilling fluids will be sent to a closed loop system. Water produced during completion will be put into a closed loop system. Oil and condensate produced will be put in a storage tank and sold.
   f. 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 a closed loop system and living facilities.
   c. Mud pits in the active circulating system will be steel pits & the pit will be a closed loop system.

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, those areas of the 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:

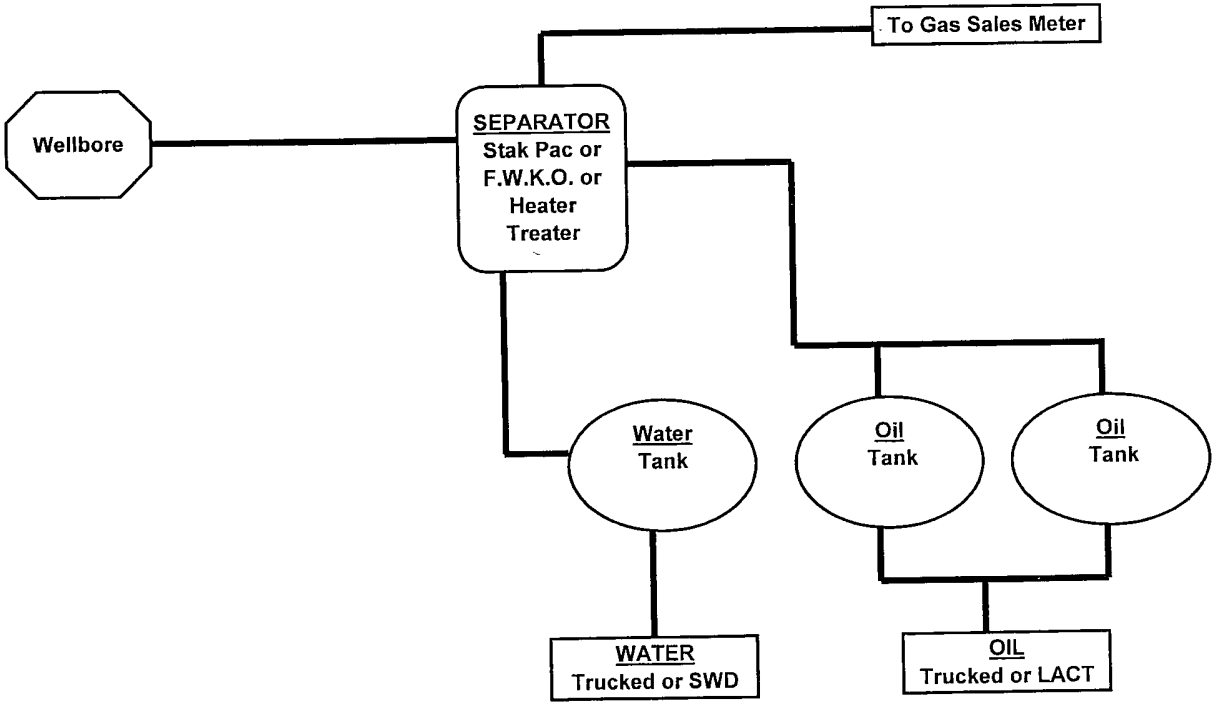
a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sagebrush, yucca and miscellaneous weeds. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
b. There 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 Southern New Mexico Archaeological Services, Inc. and forwarded to the BLM office in Carlsbad, New Mexico.

13. Bond Coverage:

Bond Coverage is Nationwide; Bond # is CO-1104

DEVON ENERGY PRODUCTION COMPANY LP

General Production Facilities Diagram



Operators Representative:

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

James Cromer
Operations Engineer

Devon Energy Production Company, L.P.
20 North Broadway, Suite 1500
Oklahoma City, OK 73102-8260

(405) 228-4464 (office)
(405) 694-7718 (Cellular)

Don Mayberry
Superintendent

Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250

(505) 748-3371 (office)
(505) 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 _10th___ day of __March _, 2009.
Printed Name: Norvella Adams
Signed Name: _____
Position Title: Sr. Staff Engineering Technician
Address: 20 North Broadway, OKC OK 73102
Telephone: (405) 552-8198
Field Representative (if not above signatory): Roger Hernandez
Address (if different from above): 6478 Seven Rivers Hwy, Artesia, NM
Telephone (if different from above): 575-748-0169
E-mail (optional): norvella.adams@dvn.com

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company, LP
LEASE NO.:	NM-68084
WELL NAME & NO.:	Mesa Verde 7 Federal #3H
SURFACE HOLE FOOTAGE:	330' FSL & 1980' FWL
BOTTOM HOLE FOOTAGE	1650' FSL & 1980' FWL
LOCATION:	Section 7, T. 24 S., R 32 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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 Hobbs Field Station at (575) 393-3612 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

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The operator has applied for a closed-loop system. 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.

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

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Hydrogen Sulfide has been reported as a hazard, but no measurements have been recorded. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, please report measurements 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

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.

Possible water flows in the Salado, Castile, Delaware and Bone Springs.
Possible lost circulation in the Delaware and Bone Springs.

1. The **13 3/8** inch surface casing shall be set at approximately **900** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
   Casing to be set in the Fletcher Anhydrite of the Salado Group.

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

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 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. 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.

3. 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 5 5000 (5M) psi.

4. 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.

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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

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

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.

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.

Seed Mixture 2, for Sandy 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 see 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
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*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.

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.