ATS-10-322

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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

1a. Type of work: ☑ DRILL ☐ REENTER	5 Lease Serial No. **NM-77064**
	6. If Indian, Allotee or Tribe Name
	7 If Unit or CA Agreement, Name and No.
1b. Type of Well. ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8 Lease Name and Well No. <30872> **Mesa Verde 6 Federal 4**
2. Name of Operator **Devon Energy Production Company, LP** <6137>	9. API Well No. 30-025-39854
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 Bone Spring** <96229>
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface **1980 FSL & 660 FEL, Unit I** At proposed prod. zone **1980 FSL & 660 FEL, Unit I**	11 Sec , T. R. M. or Blk and Survey or Area **Sec 6, T24S R32E**
14 Distance in miles and direction from nearest town or post office* **Approximately 22 miles east of Loving, NM**	12. County or Parish **Lea County** / 13 State **NM**

15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) **660'**	16 No. of acres in lease **1023.31**	17 Spacing Unit dedicated to this well **40**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **1245'**	19 Proposed Depth **9,850'**	20. BLM/BIA Bond No. on file **CO-1104**
21 Elevations (Show whether DF, KDB, RT, GL, etc) **3570' GL**	22. Approximate date work will start* **04/01/2010**	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) **Norvella Adams**	Date **02/22/2010**
Title **Sr. Staff Eng. Tech**		
Approved by (Signature) **/s/ Don Peterson**	Name (Printed/Typed) **/s/ Don Peterson**	Date **MAY 06 2010**
Title FOR **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)

Carlsbad Controlled Water Basin

KZ

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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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 15, 2009

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-39854	96229	Mesa Verde Bone Spring

Property Code	Property Name	Well Number
30872	MESA VERDE "6" FEDERAL	4

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3570'

Surface Location

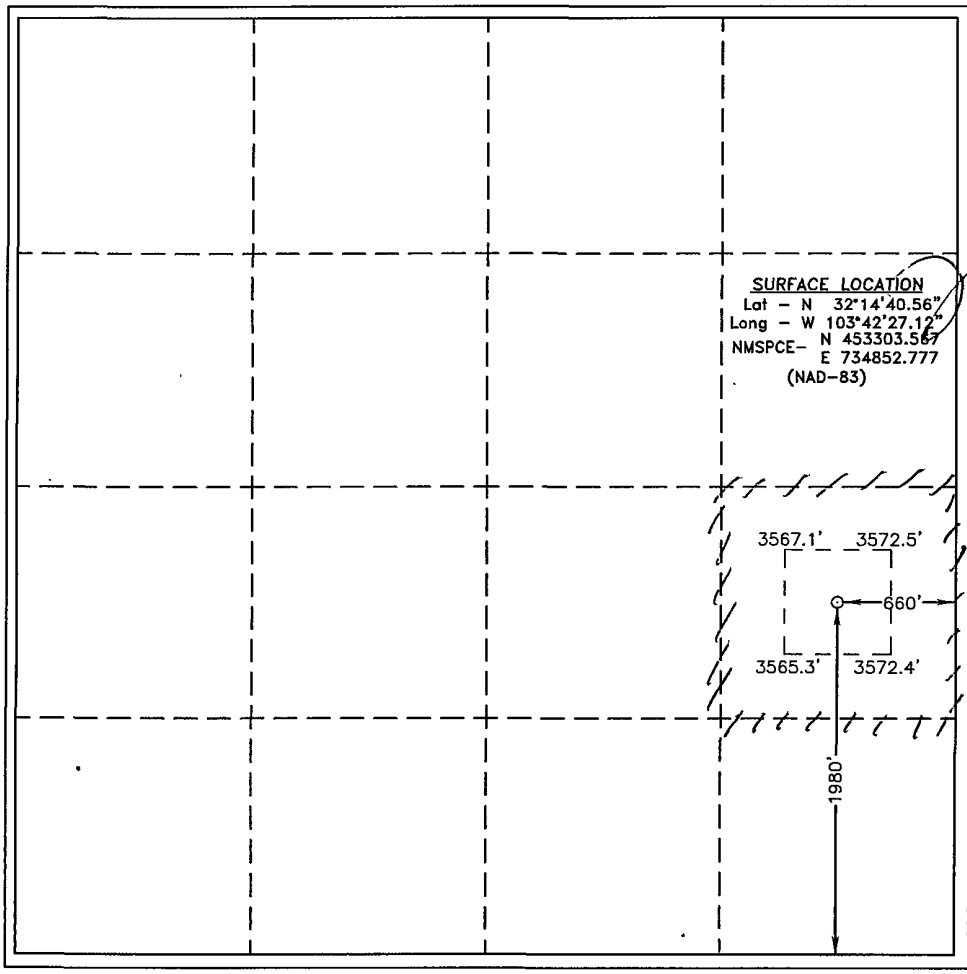
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	6	24 S	32 E		1980	SOUTH	660	EAST	LEA

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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 or has a right to drill this well at this 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.

2/22/10
Signature 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.

FEBRUARY 9, 2010
Date Surveyed

Signature & Seal of Professional Surveyor
7977

W.O. No. 2233

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

DRILLING PROGRAM

Devon Energy Production Company, LP
Mesa Verde 6 Federal 4
Surface Location: 1980' FSL & 660' FEL, Unit I, Sec 6 T24S R32E, Lea, NM
Bottom Hole Location: 1980' FSL & 660' FEL, Unit I, Sec 6 T24S R32E, Lea, NM

1. Geologic Name of Surface Formation

a. Quaternary Alluvium

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

a.	Rustler	908'	Fresh Water
b.	Salado	1249'	
c.	Base Salt	4404'	
d.	Delaware/Lamar	4627'	
e.	Bell Canyon	4686'	Oil
f.	Cherry Canyon	5542'	Oil
g.	Brushy Canyon	6807'	Oil
h.	Bone Spring	8513'	Oil
i.	1st Bone Spring Ss	9499'	Oil

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 8 5/8" casing at 4600' and circulating cement back to surface. The Bone Spring intervals will be isolated by setting 5 ½" casing to total depth and circulating cement 4100'.

3. Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
14 ¾"	0' – 950'	11 ¾"	0'- 950'	42#	ST&C	H-40
11"	950'- 2000'	8 5/8"	0'- 2000'	24#	ST&C	J-55
11"	2000'– 4600'	8 5/8"	2000'–4600'	32#	LT&C	J-55
7 7/8"	4600'-9,850'	5 1/2"	0-9,850'	17#	LT&C	N-80

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
11 ¾"	2.41	4.45	7.69
8 5/8" , 24#, J-55 ST&C	1.32	2.84	1.86
8 5/8", 32# J-55 LT&C	1.18	1.64	5.01
5 ½"	1.36	1.68	2.08

Note Regarding Collapse Design Factor for Intermediate Casing:
The maximum possible collapse load that the intermediate casing will experience will result from evacuated casing with the pore pressure exerting a collapse load at TD. The pore pressure is estimated to be 9.0 ppg for this calculation. This results in a collapse design factor of 1.18 for the 8 5/8", 32# J-55 LT&C casing at a depth of 4600'. While running the intermediate casing, the casing string will never be completely evacuated. There is no potential for the intermediate casing to be used as a production string.

4. Cement Program:

a. 11 3/4" Surface	Lead with 390 sx Class C + 2% $CaCl_2$ + ¼ lbs/sx Celloflake, and 4% Bentonite; 13.5 ppg, 1.75 cf/sx, 9.17 gps. Tail with 250 sx Class C + 2% $CaCl_2$ + ¼ lbs/sx Celloflake; 14.8 ppg, 1.35 cf/sx, 6.35 gps. TOC = 0.
b. 8 5/8" Intermediate	Lead with 975 sx (35:65) Poz Class 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 with 300 sx (60:40) Poz Class 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" Production	Stage 1: 425 sx (15:61:11) Poz Class C + 1% KCl + 0.75% EC-1 + 0.4% CD-32 + 3 #/sx LCM-1 + 0.6% FL-25 + 0.6% FL-52A; 13.30 ppg, 1.56 cf/sx, 7.55 gps.. Stage 2: Lead with 365 sx (35:65) Poz Class C + ¼ #/sx Cello Flake + 6% Bentonite; 12.50 ppg, 1.94 cf/sx, 10.65 pgs. Tail with 150 sx (60:40) Poz Class C + 2% NaCl + 0.4% Sodium Metasilicate + 4% MPA-5; 13.8 ppg, 1.35 cf/sx, 6.29 gps. TOC = 4,100. DV tool set at 6,950'.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. All casing is new and API approved.

5. Pressure Control Equipment:
The BOP system used to drill the intermediate hole will consist of an 11" 5M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the surface casing shoe.

See COA

The BOP system used to drill the production hole will consist of an 11" 5M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 5M system prior to drilling out the intermediate casing shoe.

The pipe rams 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 annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines and choke manifold rated at 5000 psi WP.

6. **Proposed Mud Circulation System**

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 950'	8.4 - 9.0	30-34	NC	Fresh Water
950'– 4600'	9.8–10.0	28-32	NC	Brine
4600'– 9,850'	8.6 - 9.0	28-32	NC-12 cc	Fresh Water

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

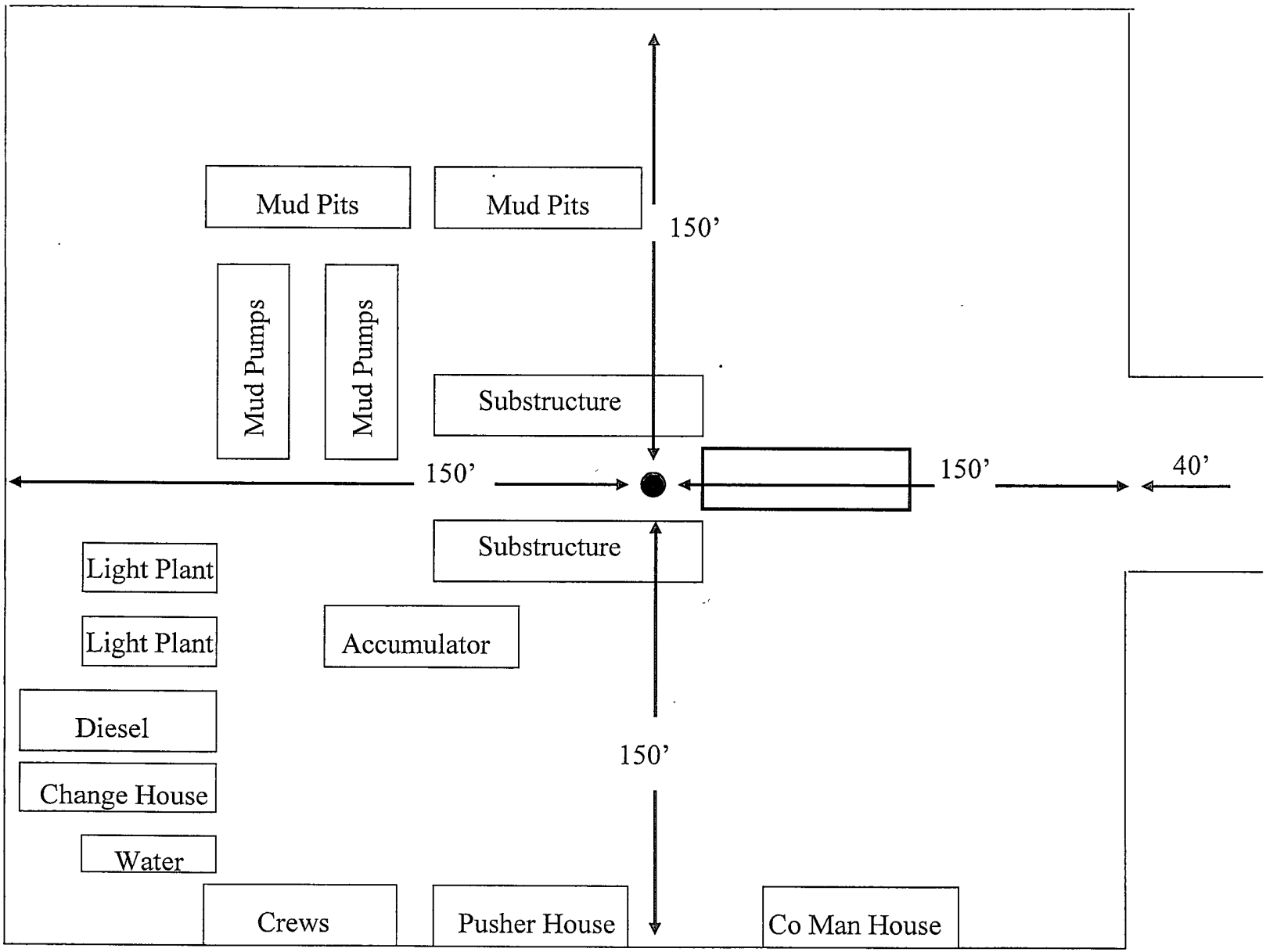
7. **Auxiliary Well Control and Monitoring Equipment:**
   a. A Kelly cock will be in the drill string at all times.
   b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
   c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 8 5/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 8 5/8" shoe until total depth is reached.

8. **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.

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 130°.

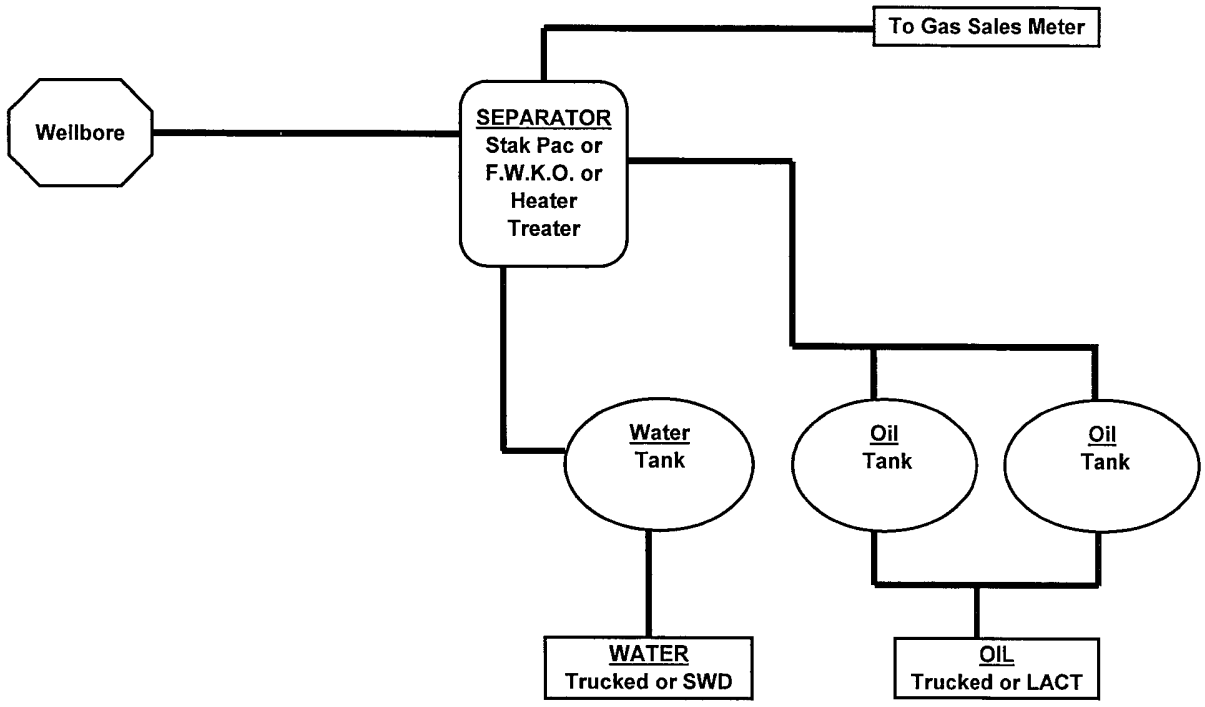
10. **Anticipated Starting Date and Duration of Operations:**
    a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days. 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.

PATTERSON RIG 41

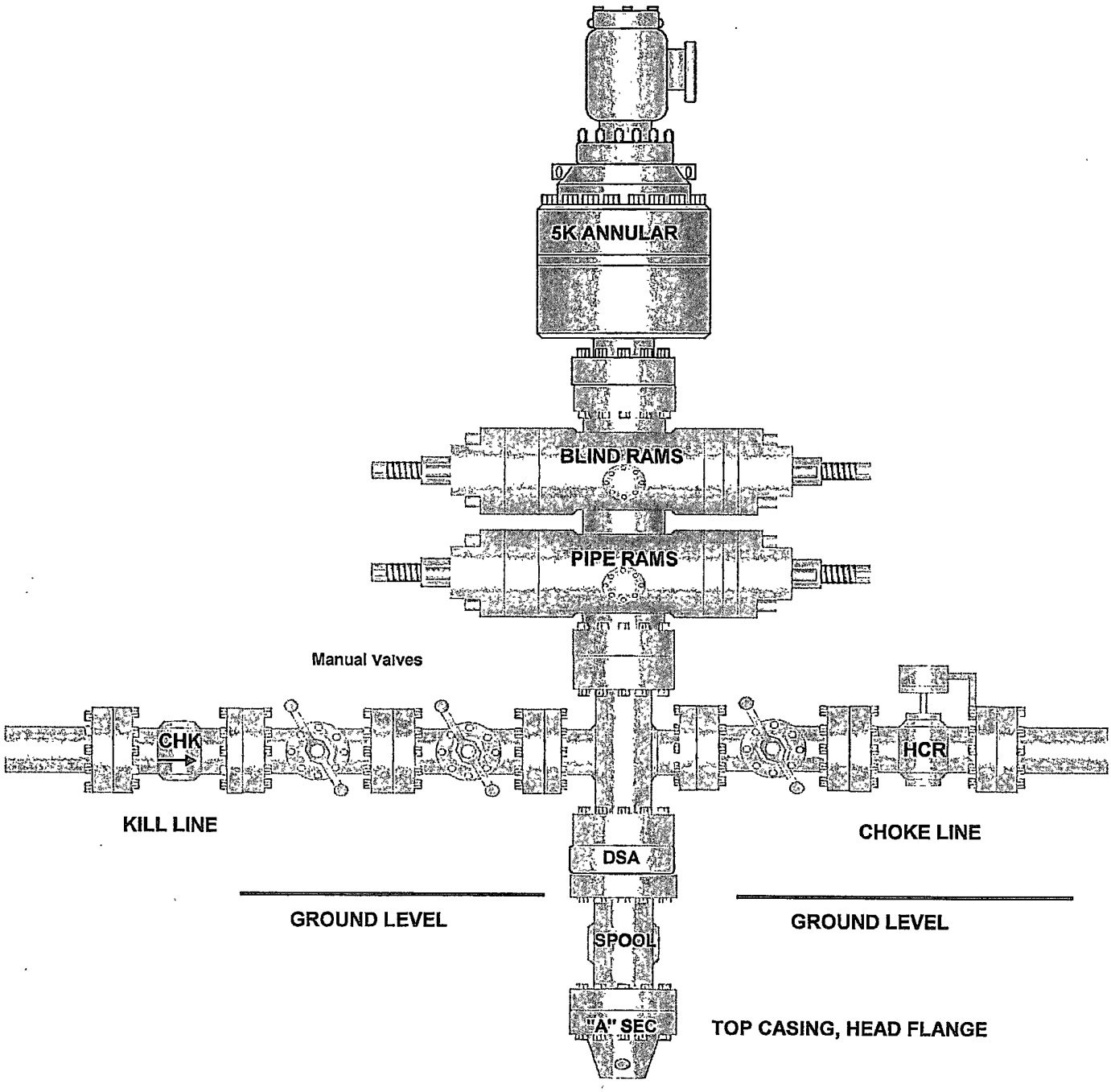


DEVON ENERGY PRODUCTION COMPANY LP

General Production Facilities Diagram



11" x 5,000 psi BOP Stack



5,000 PSI CHOKE MANIFOLD