

OPER. OGRID NO. 6137

PROPERTY NO. 33130

POOL CODE 39380

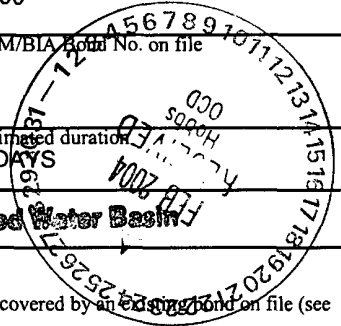
EFF. DATE 2/26/04

API NO. 30-025-36599



Lease Serial No.  
NMNM63994  
If Indian, Allottee or Tribe Name

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. HORNET 6 FEDERAL 3	
2. Name of Operator DEVON ENERGY CORPORATION Contact: KAREN COTTOM E-Mail: karen.cottom@dvn.com <i>W.L.P. per phone call to Karen Cottom</i>		9. API Well No. <u>30-025-36599</u>	
3a. Address 1500 MID-AMERICA TOWER 20 N. BROADWAY OKLAHOMA CITY, OK 73102		10. Field and Pool, or Exploratory LIVINGSTON RIDGE <u>Delaware SE</u>	
3b. Phone No. (include area code) Ph: 405.228.7512 Fx: 405.552.4621		11. Sec., T., R., M., or Blk. and Survey or Area Sec 6 T23S R32E Mer NMP SME: BLM	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SENE 1980FNL 660FEL At proposed prod. zone SENE 1980FNL 660FEL <u>Unit H</u>		12. County or Parish LEA	
14. Distance in miles and direction from nearest town or post office* 35 MILES W OF EUNICE NM		13. State NM	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in Lease 980.63	17. Spacing Unit dedicated to this well 40.00	
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 8600 MD	20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3520 GL	22. Approximate date work will start 02/09/2004	23. Estimated duration 45 DAYS	



24. Attachments **Carlsbad Controlled Water Basin**

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) KAREN COTTOM	Date 01/08/2004
Title ENGINEERING TECHNICIAN		
Approved by (Signature) <u>/s/ LESLIE A. THEISS</u>	Name (Printed/Typed) <u>/s/ LESLIE A. THEISS</u>	Date FEB 23 2004
Title FIELD MANAGER Office CARLSBAD FIELD OFFICE		

Application approval does not warrant or certify 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 1 YEAR**

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.

Additional Operator Remarks (see next page)

Electronic Submission #26665 verified by the BLM Well Information System  
For DEVON ENERGY CORPORATION, sent to the Hobbs  
Committed to AFMSS for processing by ARMANDO LOPEZ on 01/08/2004 (04AL0009AE)

**DECLARED WATER BASIN**  
**CEMENT BEHIND THE 13 3/8"**  
**CASING MUST BE CIRCULATED**

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED**

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

**Additional Operator Remarks:**

NO REMARK PROVIDED

DISTRICT I  
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II  
811 South First, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised March 17, 1999

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

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, New Mexico 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-36599</b>	Pool Code 39380	Pool Name Livingston Ridge; Delaware SE
Property Code <b>33130</b>	Property Name HORNET "6" FEDERAL	Well Number 3
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION CO., L.P.	Elevation 3520'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	6	23 S	32 E		1980	NORTH	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 40	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

LOT 4 - 45.31 AC.	LOT 3 - 39.81 AC.	LOT 2 - 39.71 AC.	LOT 1 - 39.59 AC.		<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Linda B Guthrie</i> Signature</p> <p>Linda B Guthrie Printed Name</p> <p>Operations Associate Title</p> <p>01/07/04 Date</p>
LOT 5 - 45.56 AC.					<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>DECEMBER 22, 2003 Date Surveyed</p> <p><i>Gary L Jones</i> Signature</p> <p>GARY L JONES Professional Surveyor NEW MEXICO 1977 W.S. No. 3855 Certification No. Gary L Jones 7977</p>
LOT 6 - 45.72 AC.				<p>Lot - N32°20'07.1" Long - W103°42'26.8"</p>	
LOT 7 - 45.88 AC.					

## DRILLING PROGRAM

Devon Energy Production Company, LP  
**Hornet 6 Federal #3**

Surface Location: 1980' FNL & 660' FEL, Unit Letter H, Sec 6 T23S R32E, Lea, NM  
Bottom hole Location: 1980' FNL & 660' FEL, Unit Letter H, Sec 6 T23S R32E, Lea, NM

**1. Geologic Name of Surface Formation**

a. Permian

**2. Estimated tops of geological markers:**

a. Rustler	460'
b. Salt	830'
c. Base of Salt	4300'
d. Delaware	4560'
e. Cherry Canyon	5550'
f. Brushy Canyon	7180'
g. Bone Spring LS	8450'

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

a. Cherry Canyon	5550'	Oil
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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 850' and circulating cement back to surface. Potash and salt will be protected by setting 8 5/8" casing at 4350' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 8 5/8" casing.

**4. Casing Program:**

<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
25"	0' - 40'	20"	Na	Na	Conductor
17 1/2"	0' - 850'	13 3/8"	48#	ST&C	H-40
11"	0' - 4350'	8 5/8"	32#	LT&C	J55
7 7/8"	0' - 8600'	5 1/2"	15.5# & 17#	LT&C	J55

**5. Cement & Setting Depth:**

a. 20"	Conductor	Cement with ready-mix to surface.
b. 13 3/8"	Surface	Cement to surface with 610 sx Poz C (35:65) + 2% Cacl2 followed by 250 sx Class C + 2% Cacl2
c. 8 5/8"	Intermediate	Cement to surface with 1280 sx Poz C (35:65) + 5% Nacl2 followed by 300 sx 60:40 Class C + 5% Nacl2

- d. 5 1/2" Production Cement with 430 sx 35:65:6 + 3% NaCl2 + 0.25% retarder + 0.3% FL + LCM followed by 490 sx 60:40 + 1% NaCl2 + 0.5% Bonding agent + LCM

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach above the 8 5/8" casing seat @ 4350'

**6. Pressure Control Equipment:**

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (3000 psi WP) preventor and a bag-type (Hydril) preventor (3000 psi WP). Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both BOP's will be installed on the 13 3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to 1200 psi before drilling out the 13 3/8" casing shoe (70% of 48#, H-40 casing). Prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 3000 psi WP rating.

**7. Proposed Mud Circulation System**

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' – 850'	8.5-9.0	27-32	NC	Native spud mud
850' – 4350'	9.7-10.2	28-30	NC	Brine water
4350' – 8600'	8.4-8.9	28-34	25	Fresh water w/gel

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 operations after drilling out the 13 3/8" casing shoe until the 8 5/8" 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:**

- a. Drill stem tests will be based on geological sample shows.
- b. 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. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2900 psi and Estimated BHT 125°.

**11. Anticipated Starting Date and Duration of Operations:**

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

**SURFACE USE PLAN**  
Devon Energy Production Company, LP  
**Hornet 6 Federal #3**

Surface Location: 1980' FNL & 660' FEL, Unit Letter H, Sec 6 T23S R32E, Lea, NM  
Bottom hole Location: 1980' FNL & 660' FEL, Unit Letter H, Sec 6 T23S R32E, Lea, NM

1. **Existing Roads:**
  - a. The well site and elevation plat for the proposed are reflected on Exhibit 2. 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 US Hwy 62/180 and Co. Rd H-29, go south on H-29 for 15.8 miles to a lease road; thence east on lease road for 1.2 mile to a "Y", go left at "Y" and continue east for 0.9 mile to a water line and lease road; thence northerly on lease road for approximately 0.5 mile to a proposed lease road.
2. **Access Road**
  - a. Exhibit #3 shows the existing lease road. Approximately 238' of new access road will be constructed. It will be constructed as follows:
  - 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. **Proposed Facilities**
  - a. In the event the well is found productive, a tank battery would be constructed and the necessary production equipment will be installed at the well site.
  - 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. The tank battery, all connections and all lines will adhere to API standards.
  - d. The well will be operated by means of a gas driven prime mover. No power will be required.
  - e. If the well is productive, rehabilitation plans are as follows:
    - i. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after completion, weather permitting).
    - 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.
4. **Methods of Handling Waste Material:**
  - a. Drill cuttings will be disposed of in the reserve pits.
  - 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. Wastewater from living quarters will be drained into hole with a minimum of 10'. These holes will be covered during drilling and will be back filled when the well is completed. 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 allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for further drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approved disposal site. Later pits will be broken out to speed dry. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in a storage tank and sold.

**5. Well Site Layout**

- a. Exhibit D Shows the proposed well site layout.
- b. This exhibit indicated proposed location of reserve and sump pits and living facilities.
- c. Mud pits in the active circulating system will be steel pits & the reserve pits is proposed to be unlined unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- d. If needed, the reserve pit is to be lined with polyethylene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2' over the reserve pits dikes where the liner will be anchored down.
- e. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

**6. 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.
- b. The surface and minerals are owned by the US Government and is administered by the Bureau of Land Management. The surface is of limited use except for the grazing of livestock and the production of oil and gas.
- c. An archaeological survey will be submitted to the Bureau of Land Management
- d. There are no dwellings within 2 miles of location.

**Operators Representative:**

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

James Blount  
Operations Engineer Advisor

Don Mayberry  
Superintendent

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

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

(405) 228-4301 (office)  
(405) 834-9207 (Cellular)

(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; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the



best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Devon Energy Production Company, L.P. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Signed: Linda Guthrie Date: January 7, 2004  
Linda Guthrie  
Operations Associate

Attachment to Exhibit #1  
NOTES REGARDING BLOWOUT PREVENTERS  
Devon Energy Production Company, LP

**Hornet 6 Federal #3**

Surface Location: 1980' FNL & 660' FEL, Unit Letter H, Sec 6 T23S R32E, Lea, NM

Bottom hole Location: 1980' FNL & 660' FEL, Unit Letter H, Sec 6 T23S R32E, Lea, 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 3000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000 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.

UNITED STATES DEPARTMENT OF THE INTERIOR

Bureau of Land Management

Roswell Field Office

2909 West Second Street

Roswell, New Mexico 88201-1287

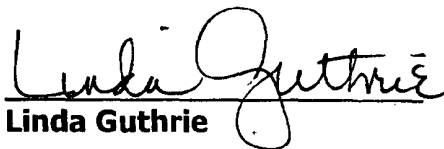
Statement Accepting Responsibility for Operations

Operator Name: **Devon Energy Production Company, LP**  
Street or Box: **20 North Broadway, Suite 1500**  
City, State: **Oklahoma City, Oklahoma**  
Zip Code: **73102-8260**

The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

Lease No.: **NMNM63994**  
Legal Description of Land: **40 acres 6-T23S-R32E**  
Formation(s): **Delaware/Bone Spring**  
Bond Coverage: **Nationwide**  
BLM Bond File No.: **CO-1104**

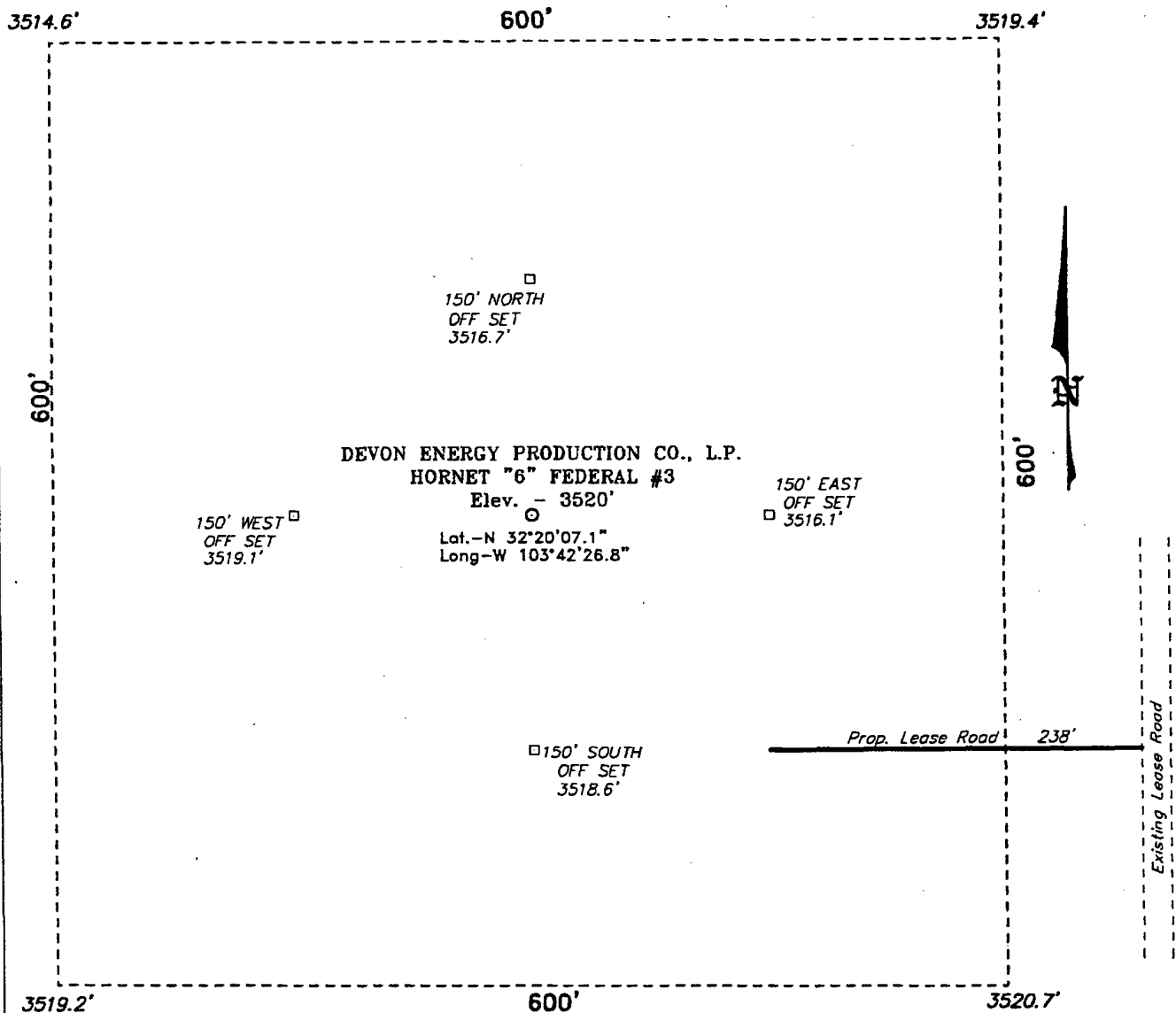
Authorized Signature:

  
**Linda Guthrie**

Title: **Operations Associate**

Date: **January 7, 2004**

SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF US HWY 62/180 AND CO. RD. H-29, GO SOUTH ON H-29 FOR 15.8 MILES TO A LEASE ROAD; THENCE EAST ON LEASE ROAD FOR 1.2 MILE TO A "Y", GO LEFT AT "Y" AND CONTINUE EAST FOR 0.9 MILE TO A WATER LINE AND LEASE ROAD; THENCE NORTHERLY ON LEASE ROAD FOR APPROX. 0.5 TO A PROPOSED LEASE ROAD.

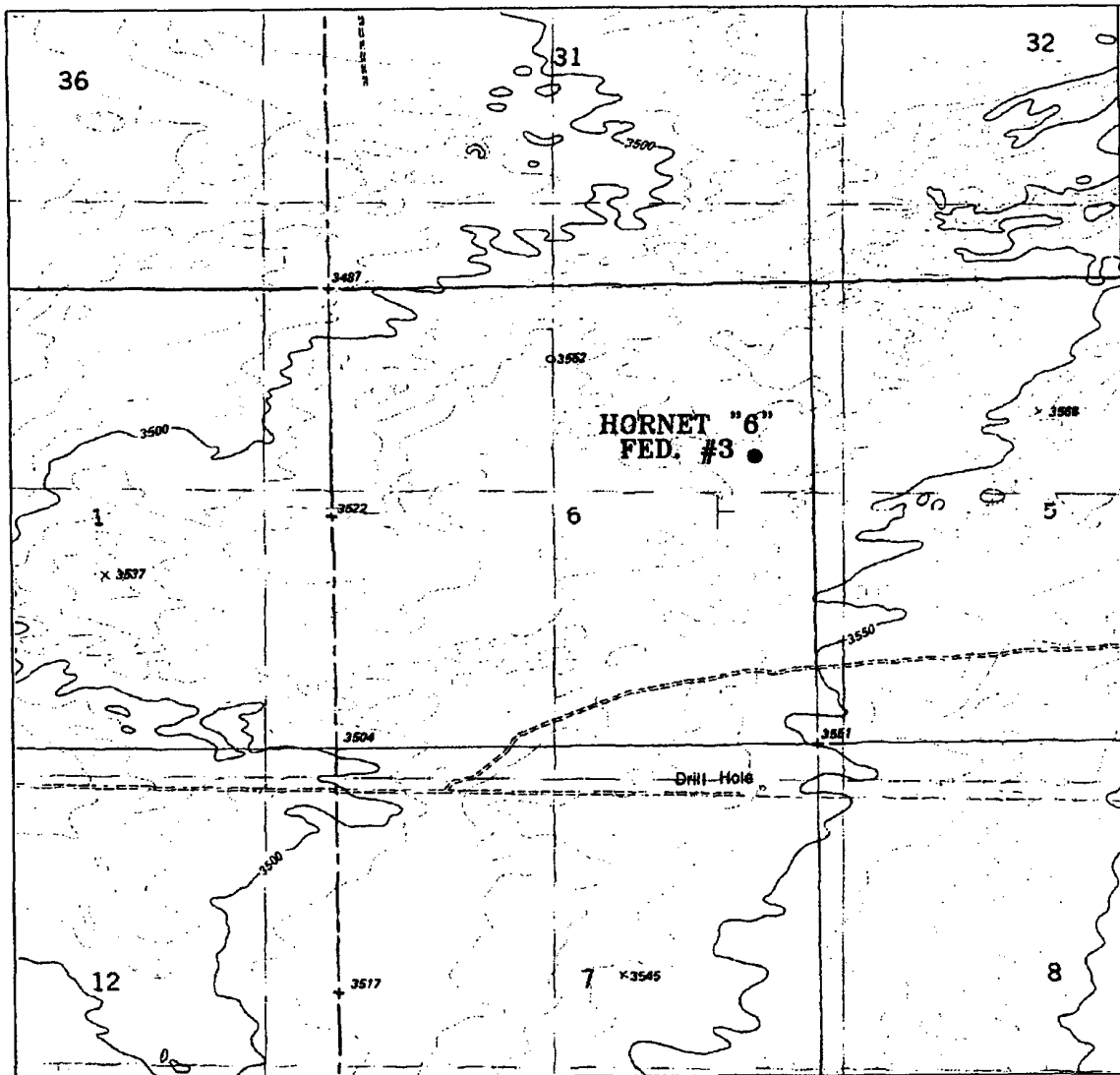
<b>DEVON ENERGY PROD. CO., L.P.</b>	
REF: HORNET "6" FED. No. 3 / Well Pad Topo	
THE HORNET "6" FED. No. 3 LOCATED 1980' FROM THE NORTH LINE AND 660' FROM THE EAST LINE OF SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.	

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

W.O. Number: 3885      Drawn By: **K. GOAD**

Date: 12-23-2003      Disk: KJG CD#4 - 3885A.DWG

Survey Date: 12-22-2003      Sheet 1 of 1 Sheets



**HORNET "6" FEDERAL #3**  
 1980' FNL AND 660' FEL  
 Section 6, Township 23 South, Range 32 East,  
 N.M.P.M., Lea County, New Mexico.



focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

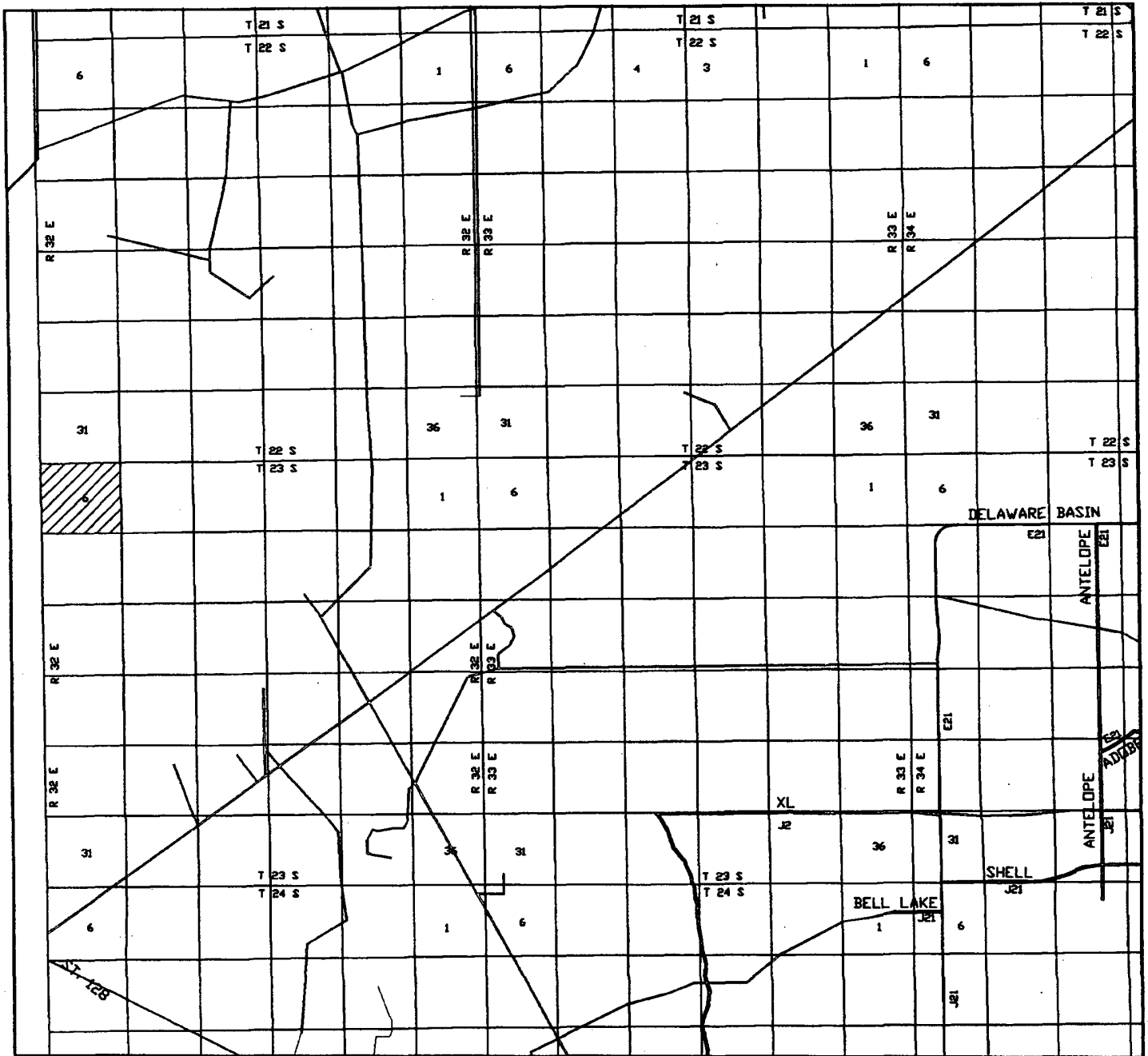
W.O. Number: 3885AA -- KJG CO#4

Survey Date: 12-22-2003

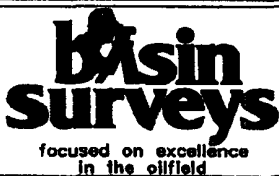
Scale: 1" = 2000'

Date: 12-23-2003

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



HORNET "6" FEDERAL #3  
 1980' FNL AND 660' FEL  
 Section 6, Township 23 South, Range 32 East,  
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

W.O. Number: 3885AA - KJG CD#4

Survey Date: 12-22-2003

Scale: 1" = 2 MILES

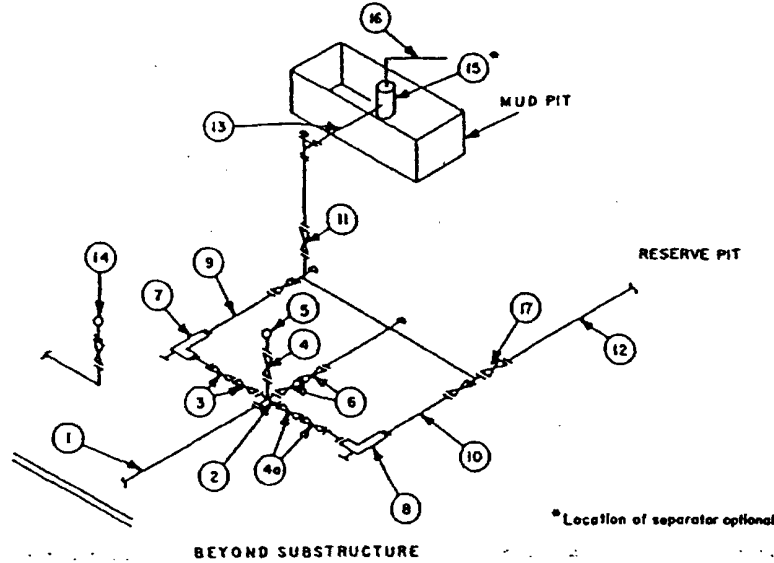
Date: 12-23-2003

DEVON ENERGY  
 PROD. CO., L.P.

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

3 MWP - 5 MWP - 10 MWP

EXHIBIT 1-A



MINIMUM REQUIREMENTS										
No.		3,000 MWP			5,000 MWP			10,000 MWP		
		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING
1	Line from drilling spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3"x3"x3"x2" Cross 3"x3"x3"x3"			3,000			5,000			10,000
3	Valves(1) Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (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**

- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- 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.
- 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.
- Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

1,000 psi Working Pressure

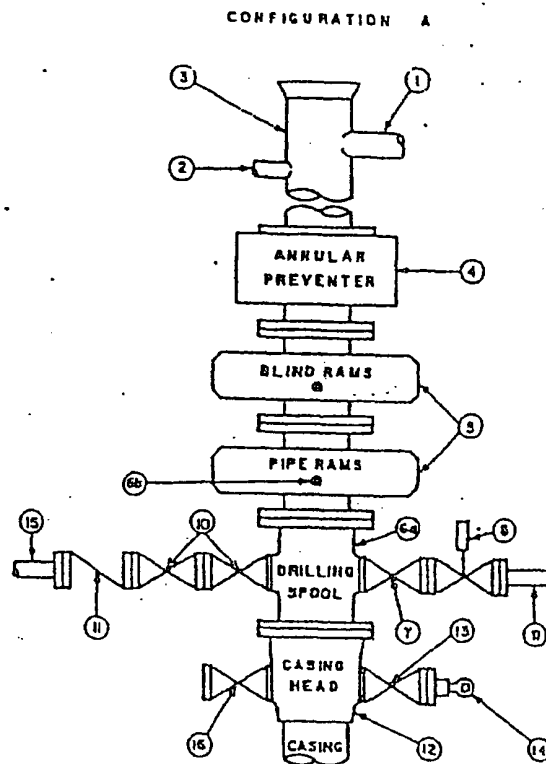
3 MWP

EXHIBIT # 1

STACK REQUIREMENTS

No.	Item	Min. I.D.	Min. Nominal
1	Flowline		
2	Fill up line		2"
3	Drilling nipple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min choke line outlets		
6b	2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above.)		
7	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	3-1/8"	
8	Gate valve—power operated	3-1/8"	
9	Line to choke manifold		3"
10	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/>	2-1/16"	
11	Check valve	2-1/16"	
12	Casing head		
13	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	1-13/16"	
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"

OPTIONAL			
16	Flanged valve	1-13/16"	



CONTRACTOR'S OPTION TO FURNISH:

- All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 3,000 psi, minimum.
- Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
- BOP controls, to be located near drillers position.
- Kelly equipped with Kelly cock.
- Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
- Kelly saver-sub equipped with rubber casing protector at all times.
- Plug type blowout preventer tester.
- Extra sat pipe rams to fit drill pipe in use on location at all times.
- Type RX ring gaskets in place of Type R.

MEC TO FURNISH:

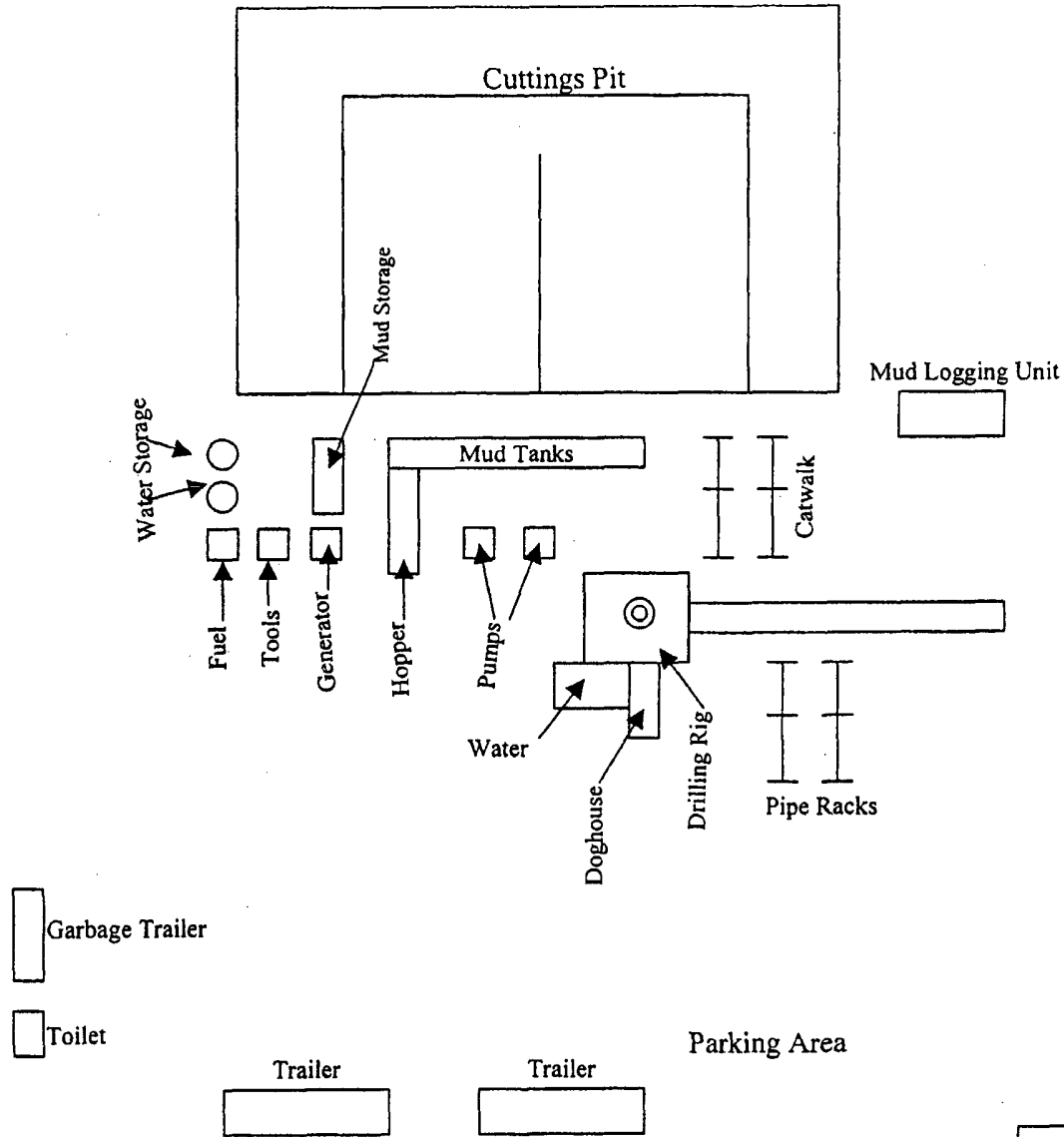
- Bradenhead or casinghead and side valves.
- Wear bushing, if required.

GENERAL NOTES:

- Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
- All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through chokes. Valves must be full opening and suitable for high pressure mud service.
- Controls to be of standard design and each marked, showing opening and closing position.
- Chokes will be positioned so as not to hamper or delay changing of choke beans. Replaceable parts for adjustable choke, other bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
- All valves to be equipped with handwheels or handles ready for immediate use.
- Choke lines must be suitably anchored.

- Handwheels and extensions to be connected and ready for use.
- Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
- All seamless steel control piping (3000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
- Casinghead connections shall not be used except in case of emergency.
- Do not use kill line for routine fill-up operations.

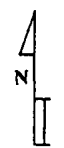




Garbage Trailer  
Toilet

Trailer  
Trailer

Parking Area



Devon Energy Production Company, LP Hornet 6 Federal 3
<b>Drilling Pad Exhibit #</b>

Well name:	<b>Hornet 6 Fed 3</b>
Operator:	<b>Devon Energy</b>
String type:	Surface
Location:	New Mexico

<b>Design parameters:</b>	<b>Minimum design factors:</b>	<b>Environment:</b>
<u>Collapse</u>	<u>Collapse:</u>	H2S considered? No
Mud weight: 9.000 ppg	Design factor 1.125	Surface temperature: 75 °F
Design is based on evacuated pipe.		Bottom hole temperature: 82 °F
		Temperature gradient: 1.40 °F/100ft
		Minimum section length: 500 ft
	<u>Burst:</u>	
	Design factor 1.00	
<u>Burst</u>		
Max anticipated surface pressure: 440 psi		
Internal gradient: 0.120 psi/ft	<u>Tension:</u>	Non-directional string.
Calculated BHP 500 psi	8 Round STC: 1.80 (J)	
	8 Round LTC: 1.80 (J)	
No backup mud specified.	Buttress: 1.60 (J)	
	Premium: 1.50 (J)	
	Body yield: 1.60 (B)	
		<b>Re subsequent strings:</b>
	Tension is based on air weight.	Next setting depth: 2,200 ft
	Neutral point: 434 ft	Next mud weight: 9.000 ppg
		Next setting BHP: 1,029 psi
		Fracture mud wt: 19.250 ppg
		Fracture depth: 500 ft
		Injection pressure 500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	500	13.375	48.00	H-40	ST&C	500	500	12.59	6201

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	234	740	3.17	500	1730	3.46	24	322	13.42 J

Devon Energy

Date: October 2, 2003  
Oklahoma City, Oklahoma

Remarks:  
Collapse is based on a vertical depth of 500 ft, a mud weight of 9 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.  
Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>Hornet 6 Fed 3</b>
Operator:	<b>Devon Energy</b>
String type:	<b>Intermediate</b>
Location:	<b>New Mexico</b>

**Design parameters:**

**Collapse**  
Mud weight: 10,000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**  
Design factor 1.125

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 135 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 500 ft

**Burst:**  
Design factor 1.00

**Burst**

Max anticipated surface pressure: 2,919 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 3,435 psi  
  
No backup mud specified.

**Tension:**  
8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Non-directional string.

Tension is based on air weight.  
Neutral point: 3,661 ft

**Re subsequent strings:**

Next setting depth: 8,400 ft  
Next mud weight: 9,000 ppg  
Next setting BHP: 3,927 psi  
Fracture mud wt: 19,250 ppg  
Fracture depth: 4,300 ft  
Injection pressure 4,300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	4300	8.625	32.00	J-55	LT&C	4350'	4350	7.875	34652

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2234	2530	1.13	3435	3930	1.14	137.6	417	3.03 J

Devon Energy

Date: October 2,2003  
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 4300 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>Hornet 6 Fed 3</b>
Operator:	<b>Devon Energy</b>
String type:	<b>Production</b>
Location:	<b>New Mexico</b>

**Design parameters:**

**Collapse**  
Mud weight: 9.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**  
Design factor 1.125

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 193 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 500 ft

**Burst:**  
Design factor 1.00

**Burst**

Max anticipated surface pressure: 2,919 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 3,927 psi

**Tension:**  
8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Non-directional string.

No backup mud specified.

Tension is based on air weight.  
Neutral point: 7,235 ft

Estimated cost: 30,210 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
3	600	5.5	17.00	J-55	LT&C	600	600	4.767	2325
2	6800	5.5	15.50	J-55	LT&C	7400	7400	4.825	24011
1	1000	5.5	17.00	J-55	LT&C	8600	8600	4.767	3874

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
3	281	3893	13.88	2991	5320	1.78	132.6	247	1.86 J
2	3460	3968	1.15	3807	4810	1.26	122.4	217	1.77 J
1	3927	4910	1.25	3927	5320	1.35	17	247	14.53 J

Devon Energy

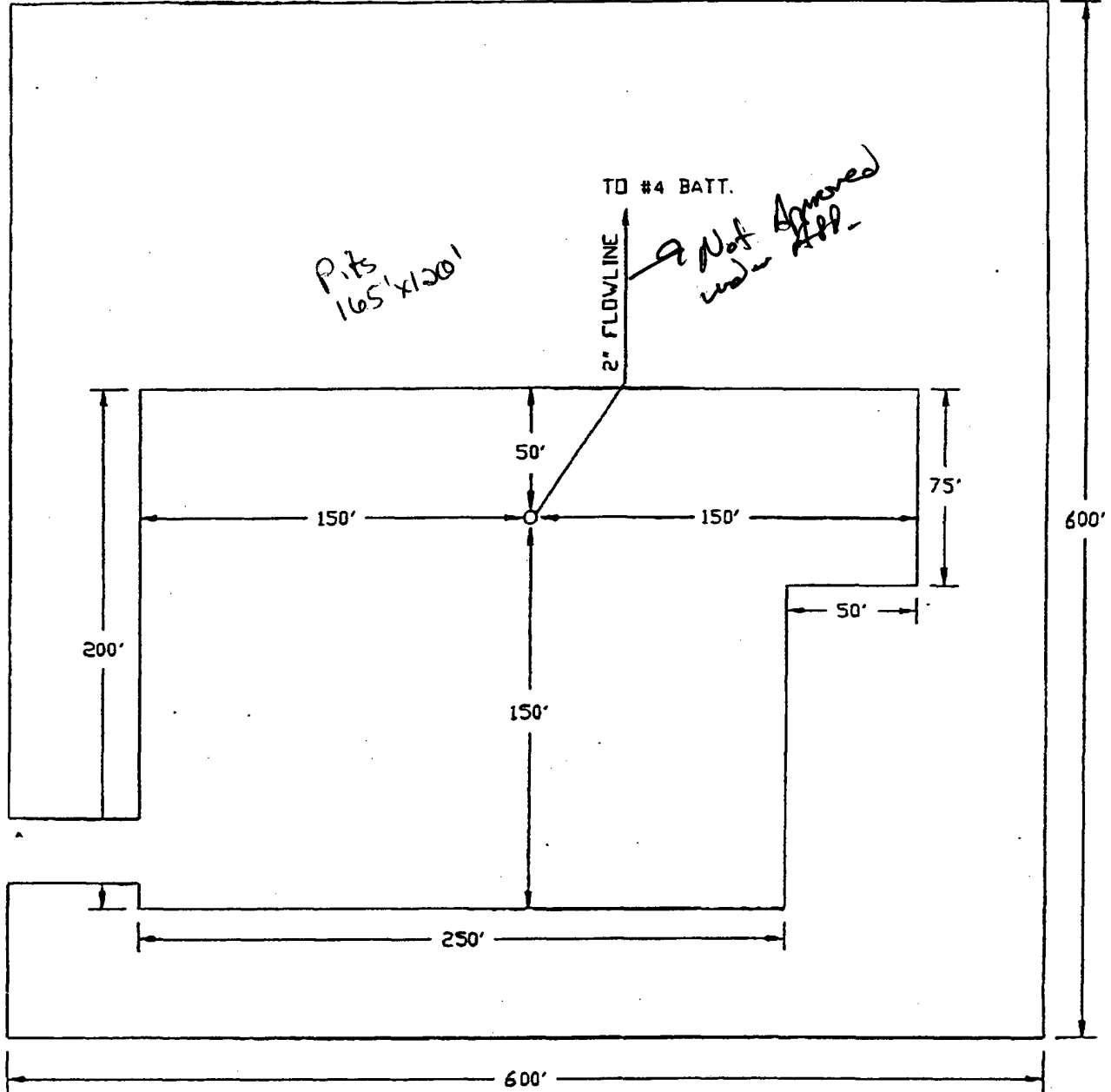
Date: October 2, 2003  
Oklahoma City, Oklahoma


Remarks:

Collapse is based on a vertical depth of 8400 ft, a mud weight of 9 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.



  
**PRODUCTION FACILITIES LAYOUT FOR**  
 HORNET 6 FEDERAL 3  
 SCALE: 1"=60'  
 EXHIBIT 5