

New Mexico Oil Conservation Division, District I
1925 N. French Drive
Hobbs, NM 88240

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
NMNM-86153

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER

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

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

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

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

7. If Unit or CA Agreement, Name and No.
8. Lease Name and Well No.
Tomcat 20 Federal 7 28700

9. API Well No.
30-025-37296

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

At surface 660 FSL & 660 FEL

At proposed prod. zone

10. Field and Pool, or Exploratory
Diamondtail, Delaware, SW 96916

11. Sec., T. R. M. or Blk. and Survey or Area

Sec 20, T23S R32E

14. Distance in miles and direction from nearest town or post office*
Approximately 35 miles WNW from Jal, 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)

16. No. of acres in lease
1000 acres

17. Spacing Unit dedicated to this well
40 acres

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.

19. Proposed Depth
8700'

20. BLM/BIA Bond on file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3696' GL

22. Approximate date work will start*
07/01/2005

23. Estimated duration
30 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:

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

04/28/2005

Title

Sr. Staff Eng. Tech

Approved by (Signature)

/s/ Joe G. Lara

Name (Printed/Typed)

/s/ Joe G. Lara

Date JUN 14 2005

Title

ACTING 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 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.

*(Instructions on page 2)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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

WITNESS

DECLARED WATER BASIN
CEMENT BEHIND THE 8 5/8"
CASING MUST BE CIRCULATED

WITNESS

Additional Operator Remarks:

Devon Energy Production Company, LP proposes to drill a Delaware well to 8700' for commercial quantities of oil and gas. If the well is deemed noncommercial, the wellbore will be plugged and abandoned per Federal regulations. Programs to adhere to onshore oil and gas regulations are outlined in the following exhibits and attachments.

Approximately 1037' of new access road will need to be constructed.

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

Form C-102
Revised March 17, 1989

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

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-37296		Pool Code 96916	Delaware Diamondtail; Delaware, SW	Pool Name
Property Code 28700	Property Name TOMCAT "20" FEDERAL			Well Number 7
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION CO., L.P.			Elevation 3696'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	23 S	32 E		660	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 40	Joint or Infill	Consolidation Code	Order No.						

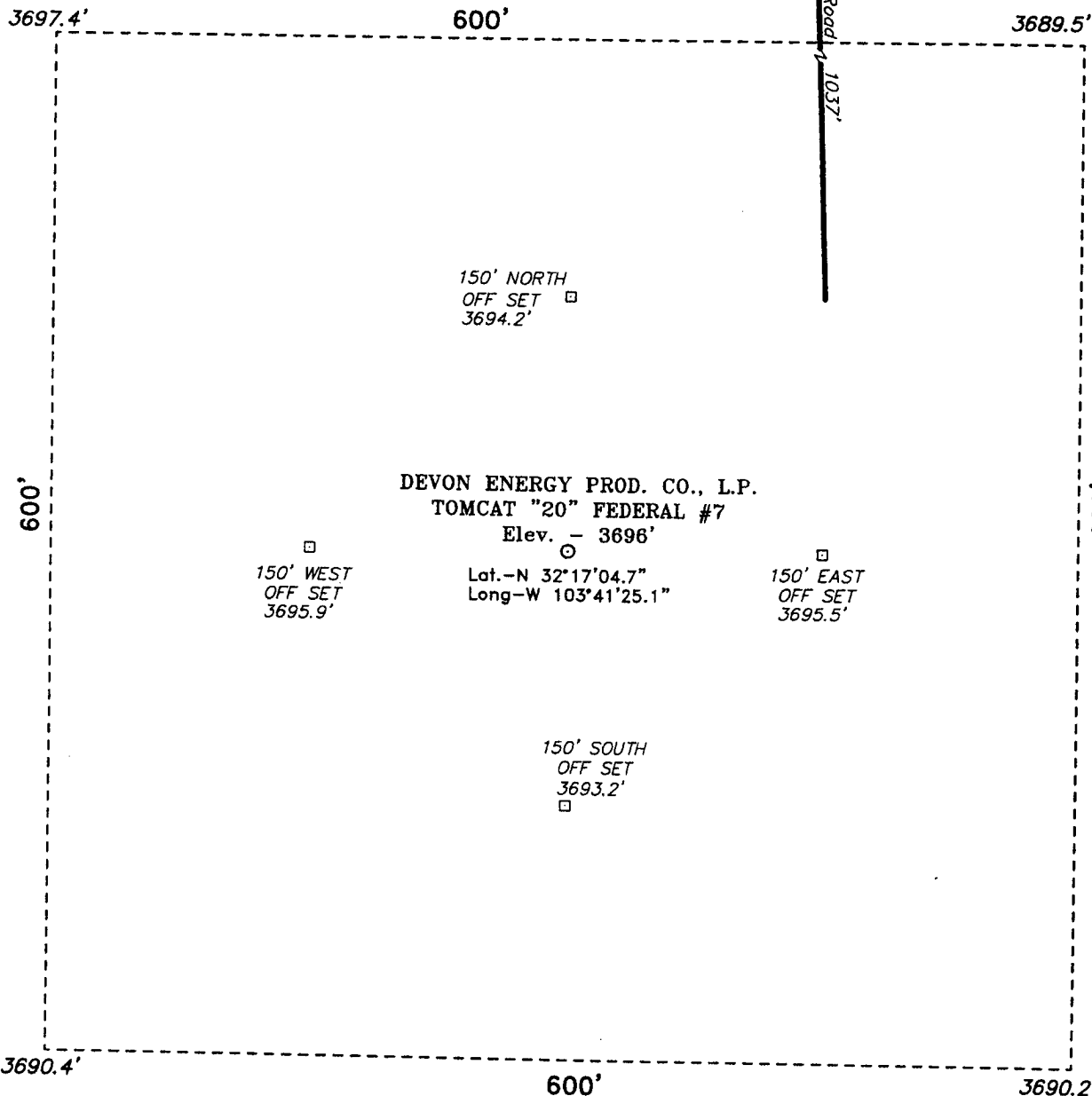
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<h3 style="text-align: center;">OPERATOR CERTIFICATION</h3> <p><i>I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <hr/> <p style="font-size: 1.2em;"><i>Norvella Adams</i></p> <p>Signature Norvella Adams</p> <hr/> <p>Printed Name Sr. Staff Eng. Tech.</p> <hr/> <p>Title April 27, 2005</p> <hr/> <p>Date</p>
<p>Lat - N32°17'04.7" Long - W103°41'25.1"</p>	<h3 style="text-align: center;">SURVEYOR CERTIFICATION</h3> <p><i>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.</i></p> <hr/> <p style="text-align: center;">APRIL 5, 2005</p> <hr/> <p>Date Surveyed</p> <p>Signature & Seal of Professional Surveyor</p> <div style="text-align: center;"> </div> <p>Certificate No. Gary Jones 7977</p> <p style="text-align: right;">BASIS SURVEYS</p>

SECTION 20, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

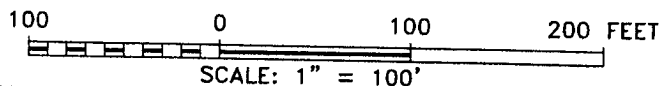
TOMCAT "20"
FED. #5

Prop. Lease Road, 1037'



Directions to Location:

FROM THE JUNCTION OF US HWY 62/180 AND CO.
RD. C-29, GO SOUTH ON C-29 FOR 17.1 MILES TO
LEASE ROAD; THENCE EAST ON LEASE ROAD FOR 2.2
MILES; THENCE SOUTH FOR 0.2 MILE; THENCE EAST
FOR 1.2 MILE; THENCE SOUTH 0.2 MILE; THENCE
WEST FOR 0.4 MILE TO WELL #5 AND PROPOSED
LEASE ROAD.



DEVON ENERGY PROD. CO., L.P.

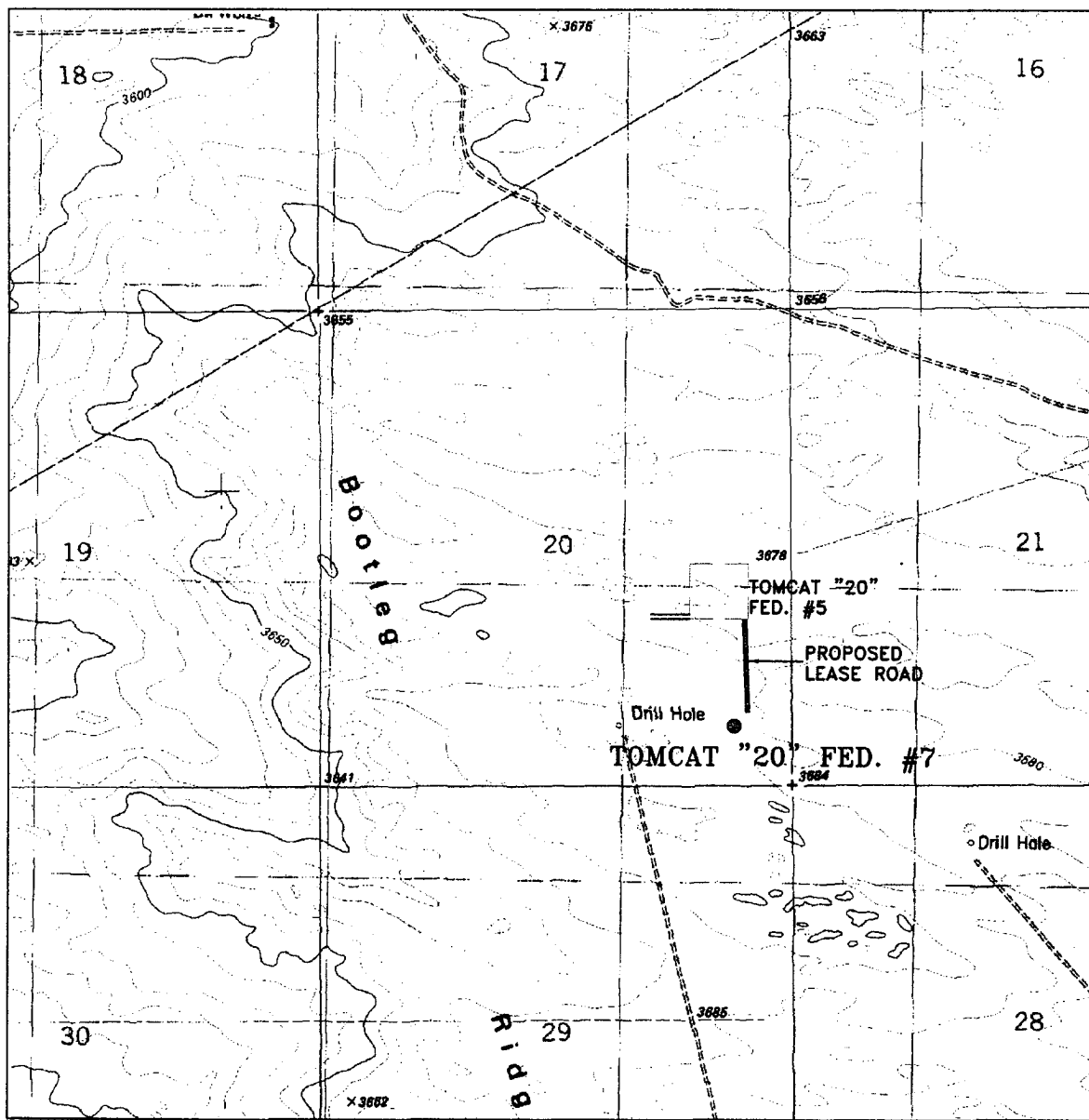
REF: TOMCAT "20" FED. No. 7 / Well Pad Topo

THE TOMCAT "20" FED. No. 7 LOCATED 660' FROM
THE SOUTH LINE AND 660' FROM THE EAST LINE OF
SECTION 20, 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: 5282 Drawn By: K. GOAD
Date: 04-07-2005 Disk: KJG CD#4 - 5282A.DWG

Survey Date: 04-05-2005 Sheet 1 of 1 Sheets



TOMCAT "20" FEDERAL #7

Located at 660' FSL and 660' FEL
 Section 20, 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

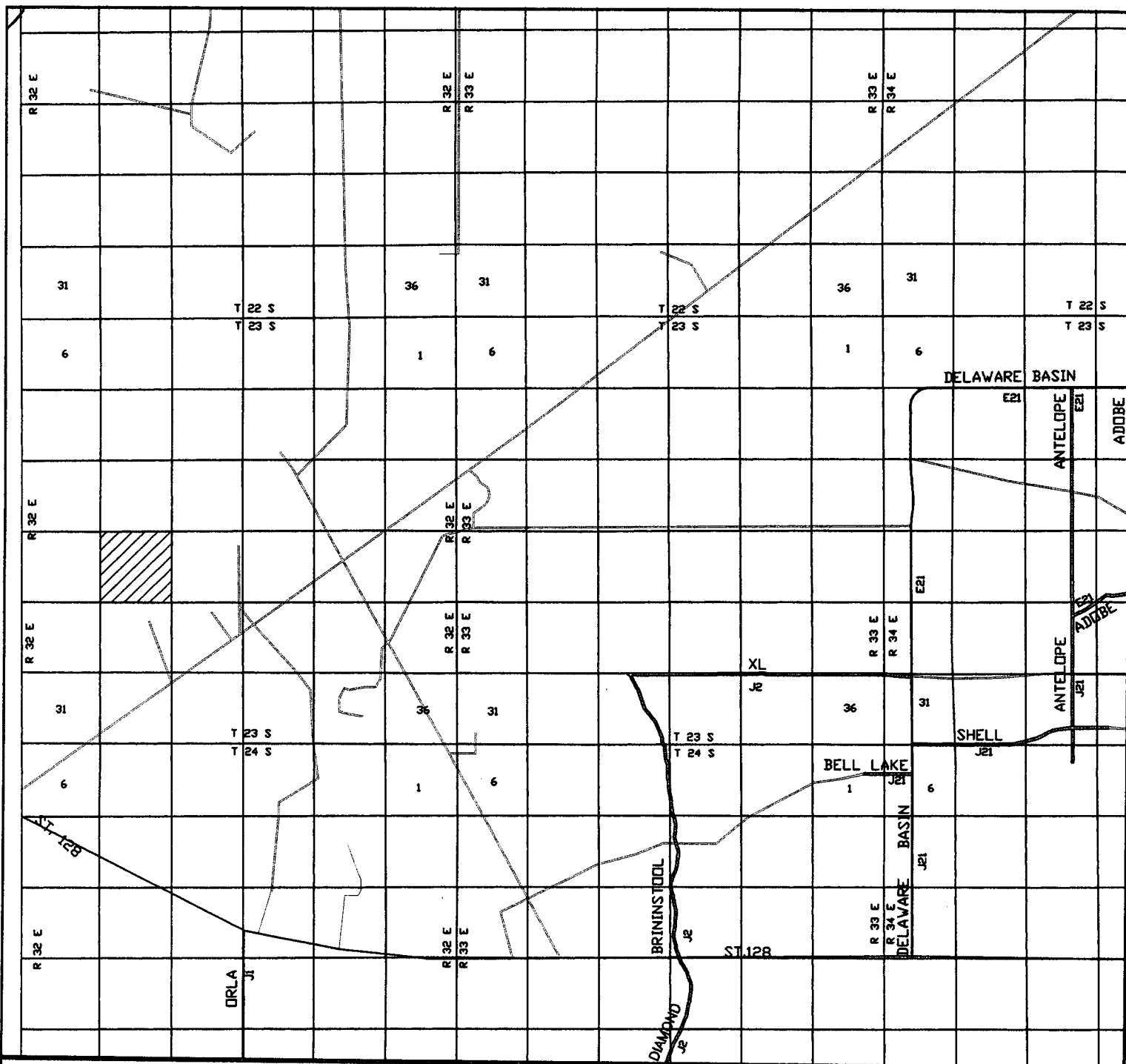
W.O. Number: 5282AA - KJC #1

Survey Date: 04-05-2005

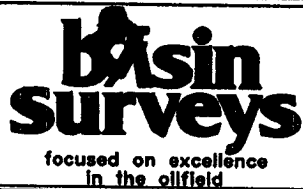
Scale: 1" = 2000'

Date: 04-07-2005

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



TOMCAT "20" FEDERAL #7
 Located at 660' FSL and 660' FEL
 Section 20, 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: 5282AA - KJG #1

Survey Date: 04-05-2005

Scale: 1" = 2 miles

Date: 04-07-2005

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

DRILLING PROGRAM

Devon Energy Production Company, LP

Tomcat 20 Federal #7

Surface Location: 660 FSL & 660 FEL, Unit P, Sec 20- T23S R32E, Lea, NM

Bottom hole Location: 660 FSL & 660 FEL, Unit P, Sec 20- T23S R32E, Lea, NM

1. Geologic Name of Surface Formation

- a. Alluvium

2. Estimated tops of geological markers:

- a. Rustler 1200'
- b. Top of Salt 1525'
- c. Base of Salt 4700'
- d. Delaware 4790'
- e. Total Depth 8700'

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

- a. Upper Permian Sands 0-600' Fresh Water
- b. Delaware 4790'-TD 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 13 3/8" casing at 850' and circulating cement back to surface. Salt will be protected by setting 8 5/8" casing at 4755' 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>Grade</u>	<u>Type</u>
30"	0' -40'	20"		Conductor	
17 1/2"	0' - 650'	13 3/8"	48#	H40	ST&C
11"	0' - 4755'	8 5/8"	32#	J55	LT&C
7 7/8"	0' - TD'	5 1/2"	15.5# & 17#	J55	LT&C

5. Cement & Setting Depth:

- a. 20" Conductor Cement with ready-mix to surface.
- b. 13 3/8" Surface Cement to surface with 550 sx Poz C (35:65) + 6% Gel + 1/4# sx Cellophane flakes followed by 250 sx Class C + 2% CaCl2
- c. 8 5/8" Intermediate Cement to surface with 1574 sx Poz C (35:65) + 6% Gel + 5% salt + 1/4# sx Cellophane flakes followed by 250 sx Poz C + 5% Salt + 0.25 lb/sx Cellophane flakes.

- d. 5 ½" Production Cement with 346 sx Poz C + 3% Salt + ¼# sx Cellophane flakes. Followed by 575 sx Poz C (60:40) + 1% Salt + ¼# sx Cellophane flakes.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach 500' above the 8 5/8" casing seat @ 4255'.

6. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (2000 psi WP) preventor and a bag-type (Hydril) preventor (2000 psi WP). 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. 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 with the rig pump 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 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 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' - 650' 1215'	8.8	34 - 36	NC	Fresh Water
1215' - 4755'	10.0	28	NC	Brine Water
4755' - TD	8.8	32 - 36	10-20	Fresh water Polymer

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

8. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in 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:

- Drill stem tests will be based on geological sample shows.
- The open hole electrical logging program will be:
 - Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron - Z Density log with Gamma Ray and Caliper.
 - Total Depth to Surface Compensated Neutron with Gamma Ray

- iii. No coring program is planned
- iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

10. Potential Hazards:

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

11. Anticipated Starting Date and Duration of Operations:

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

SURFACE USE PLAN

Devon Energy Production Company, LP

Tomcat 20 Federal #7

Surface Location: 660 FSL & 660 FEL, Unit P, Sec 20- T23S R32E, Lea, NM

Bottom hole Location: 660 FSL & 660 FEL, Unit P, Sec 20- 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 Topographic Land Surveyors of Midland, Texas.
- 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. C-29, go south on C-29 for 17.1 miles to lease road; then east on lease road for 2.2 miles; then south for 0.2 miles; then east for 1.2 mile; then south 0.2 mile; then west for 0.4 mile to well # 5 and proposed lease road.

2. Access Road

- a. Exhibit #3 shows the existing lease road. Approximately 1037' of new access road will be required. 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.
 - i. The well will be operated by means of an electric prime mover. Electric power poles will be set along the side of the access road.
- b. The tank battery, all connections and all lines will adhere to API standards.
- c. If the well is productive, rehabilitation plans are as follows:
 - i. The reserve pit will be closed pursuant to NM OCD rules and guidelines.
 - 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 will pick up salts, including broken sacks, remaining after completion of well.
- d. Wastewater from living quarters will be drained into a hole with a minimum depth of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A portable chemical toilet 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 closed. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approved disposal site. The reserve pit will be closed pursuant to NM OCD rules and guidelines. 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 indicates proposed location of reserve and sump pits and living facilities.
- c. Mud pits in the active circulating system will be steel pits & the reserve pit will be lined with a 12 mil synthetic woven liner
- d. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. After the rig is removed, the reserve pit will be fenced on the fourth side to preclude endangering wildlife. The fencing will be in place until the pit is reclaimed. If the well is a producer, 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 forwarded 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

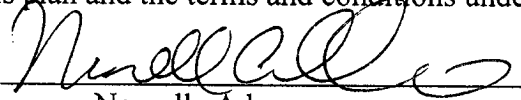
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250

(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: 
Norvella Adams
Sr. Staff Engineering Technician

Date: April 28, 2005

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

Tomcat 20 Federal #7

Surface Location: 660 FSL & 660 FEL, Unit P, Sec 20- T23S R32E, Lea, NM

Bottom hole Location: 660 FSL & 660 FEL, Unit P, Sec 20- 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.: **NMNM-86153**

Legal Description of Land: **40 acres 20-T23S-R32E**

Formation(s): **Delaware**

Bond Coverage: **Nationwide**

BLM Bond File No.: **CO-1104**

Authorized Signature:


Norvella Adams

Title: **Sr. Staff Engineering Technician**

Date: **4/28/05**

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. If H₂S is present in this area the following will apply.
2. All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - a. Characteristics of H₂S
 - b. Physical effects and hazards
 - c. Proper use of safety equipment and life support systems.
 - d. Principle and operation of H₂S detectors, warning system and briefing areas
 - e. Evacuation procedures, routes and first aid.
 - f. Proper use of 30-minute pressure demand air pack.
3. H₂S Detection and Alarm System
 - a. H₂S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
4. Windsock and/or wind streamers
 - a. Windsock at mud pit area should be high enough to be visible
 - b. Windsock at briefing area should be high enough to be visible
 - c. There should be a windsock at entrance to location
5. Condition Flags and Signs
 - a. Warning Sign on access road to location
 - b. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H₂S present in dangerous concentration. Only emergency personnel admitted to location.
6. Well Control Equipment
 - a. See Exhibit "E" & "E-1"
7. Communication
 - a. While working under masks chalkboards will be used for communication.
 - b. Hand signals will be used where chalk board is inappropriate
 - c. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
8. Drill stem Testing
 - a. Exhausts will be watered
 - b. Flare line will be equipped with an electric igniter or a propane pilot light in case gas reaches the surface.
 - c. If the location is near to a dwelling a closed DST will be performed.
9. Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.

If H₂S is encountered, mud system will be altered if necessary to maintain control or formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

3,000 psi Working Pressure

EXHIBIT # 1

3 MWP

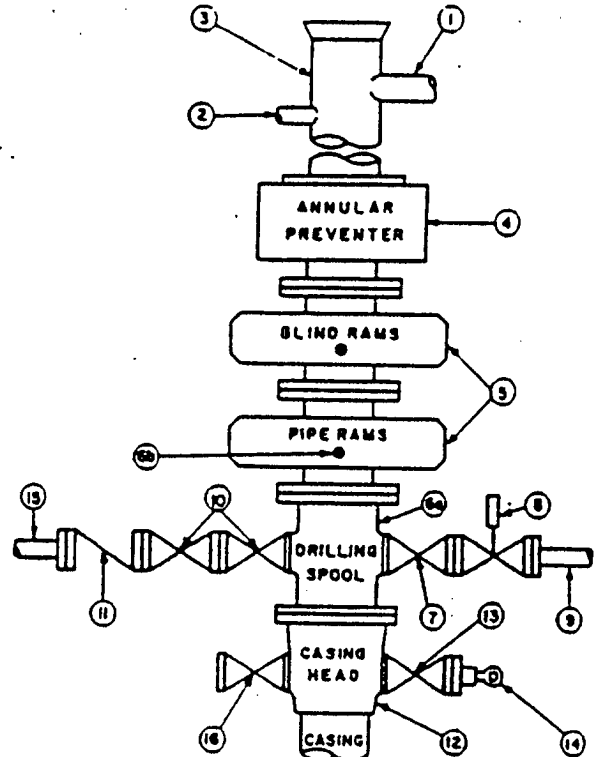
STACK REQUIREMENTS

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"	
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CONFIGURATION A



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 set 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:

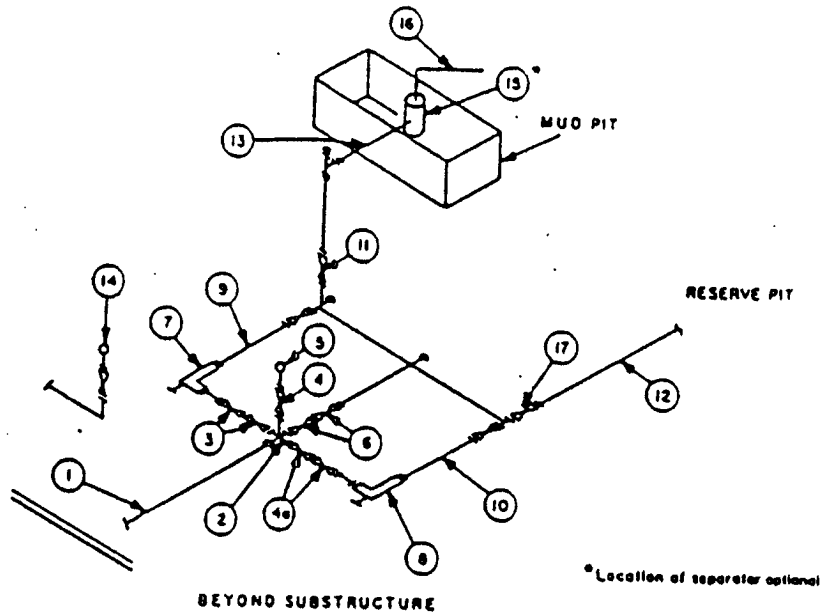
- Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
- All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke. 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.

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

3 MWP - 5 MWP - 10 MWP

EXHIBIT # 1



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"			3,000			5,000			
	Cross 3"x3"x3"x3"									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

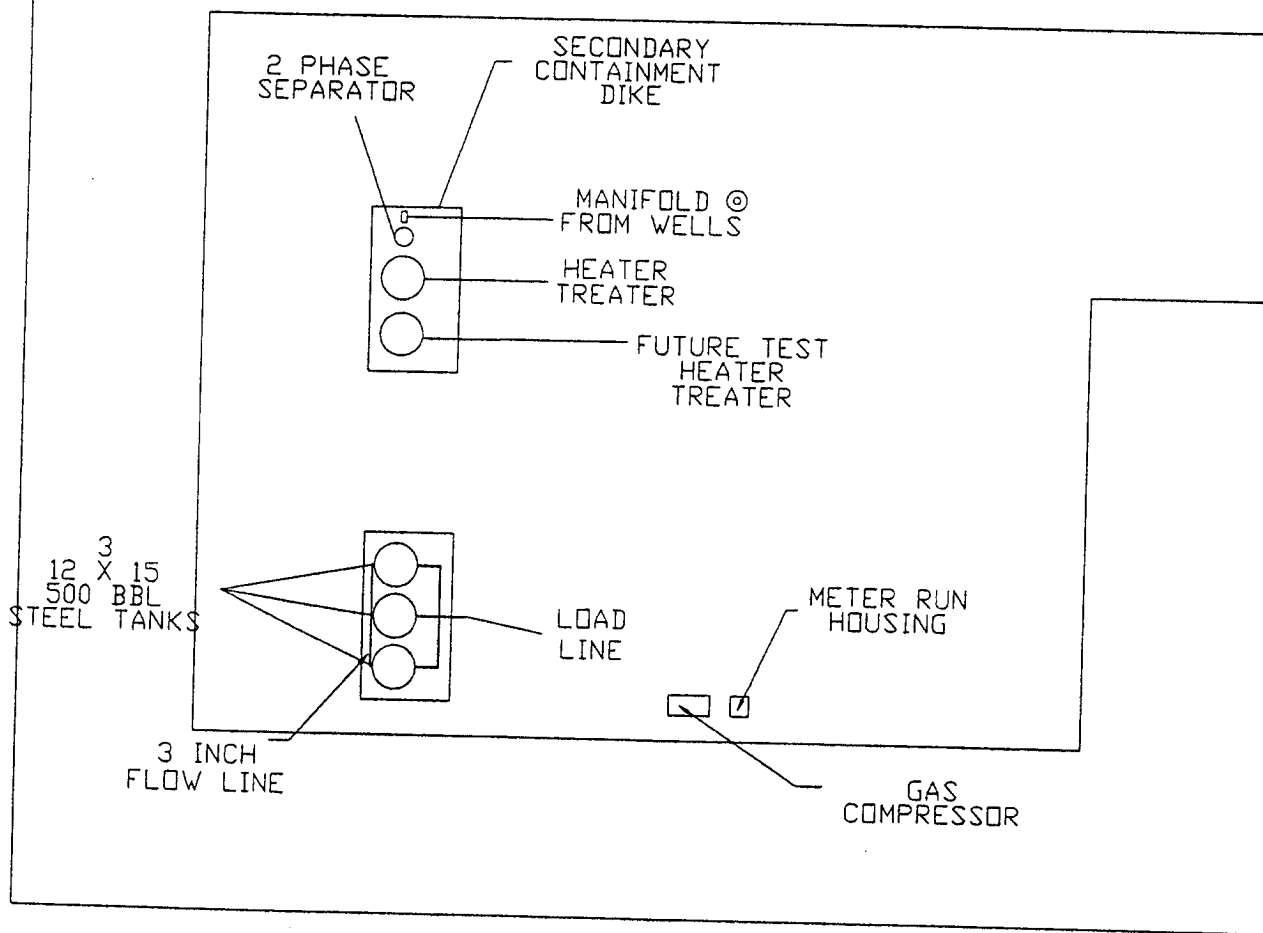
(1) Only one required in Class 3M.

(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.

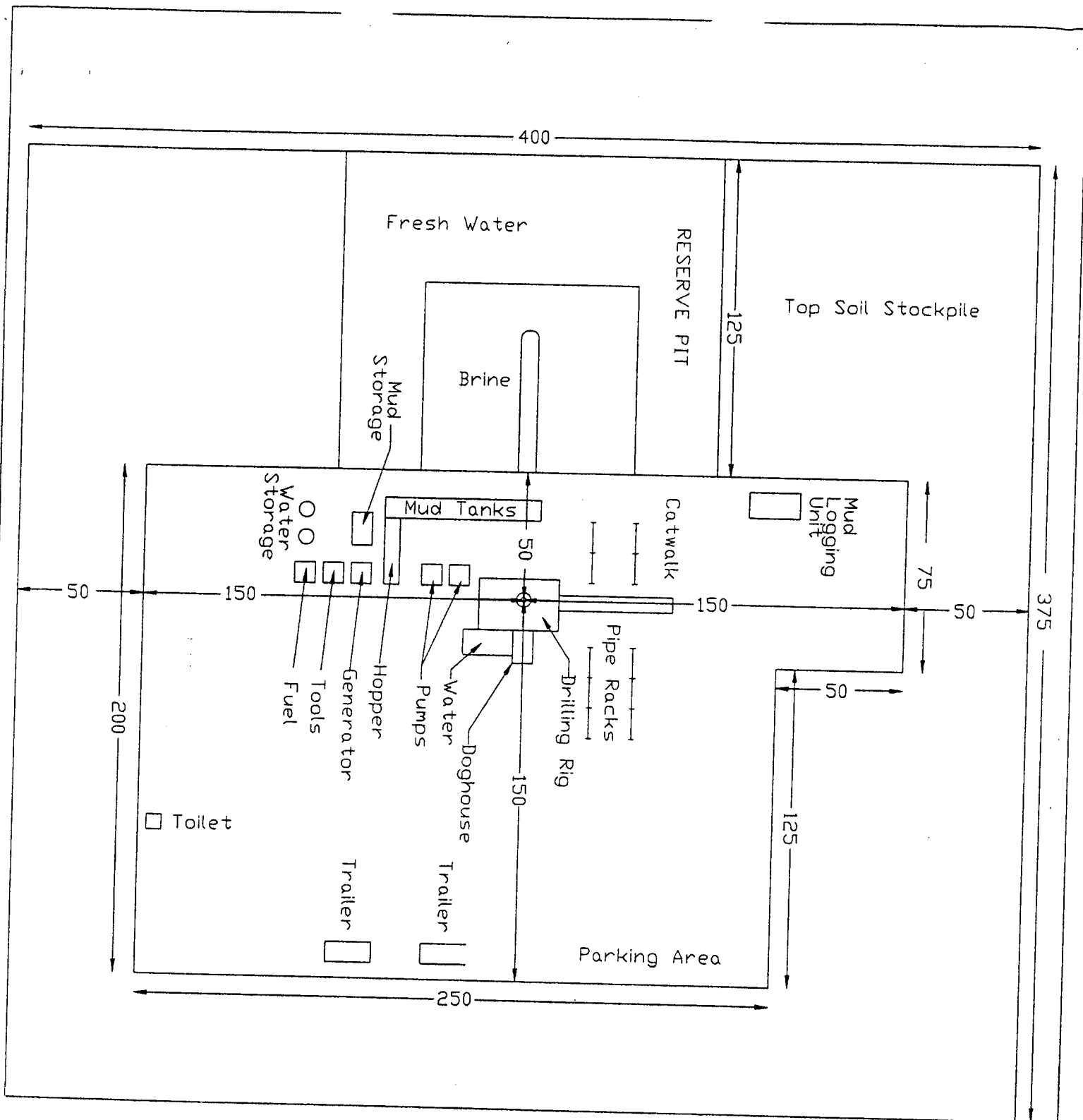
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

- 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.

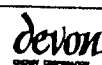


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INGLE WELLS FIELD EDDY COUNTY, NEW MEXICO	
PRODUCTION FACILITIES LAYOUT AT TODD-231 FED-4 FOR TODD-23E FED-20	
EXHIBIT 5	
Scale in Feet 25 0 25 50 75 100 6/98	



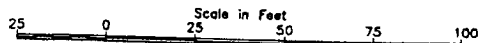
File: 23E-20



INGLES WELLS FIELD EDDY COUNTY, NEW MEXICO

DRILLING RIG LAYOUT AND ELEVATIONS
TODD-23E FED-20

EXHIBIT 6



6/98

Well name:	TOMCAT	
Operator:	DEVON ENERGY	
String type:	Surface	

Design parameters:
Collapse

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

Minimum design factors:
Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 83 °F
Temperature gradient: 0.90 °F/100ft
Minimum section length: 650 ft

Burst

Max anticipated surface pressure: 1,322 psi
Internal gradient: 0.268 psi/ft
Calculated BHP 1,549 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)

Tension is based on air weight.
Neutral point: 738 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 4,755 ft
Next mud weight: 10.500 ppg
Next setting BHP: 2,594 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 4,755 ft
Injection pressure 4,755 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	850 650	13.375	48.00	H-40	ST&C	850 650	850 650	12.59	23957
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	397	740	1.86	1549	1730	1.12	40.8	322	7.89 J

Prepared WES HANDLEY
by: Devon Energy

Date: April 21, 2005
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 850 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: **TOMCAT**
 Operator: **DEVON ENERGY**
 String type: **Intermediate**

Design parameters:

Collapse

Mud weight: 10.200 ppg
 Internal fluid density: 1.100 ppg

Minimum design factors:

Collapse:

Design factor 1.125

Environment:

H2S considered? No
 Surface temperature: 75 °F
 Bottom hole temperature: 118 °F
 Temperature gradient: 0.90 °F/100ft
 Minimum section length: 650 ft

Burst:

Design factor 1.00

Burst

Max anticipated surface pressure: 1,200 psi
 Internal gradient: 0.330 psi/ft
 Calculated BHP 2,767 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: 4,035 ft

Re subsequent strings:

Next setting depth: 8,700 ft
 Next mud weight: 9.000 ppg
 Next setting BHP: 4,068 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 8,700 ft
 Injection pressure 8,700 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	4755	8.625	32.00	J-55	LT&C	4755	4755	7.875	87088
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	2248	2530	1.13	2767	3930	1.42	152.2	417	2.74 J

Prepared **WES HANDLEY**
 by: **Devon Energy**

Date: April 21, 2005
 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 4755 ft, a mud weight of 10.2 ppg. An internal gradient of .057 psi/ft was used for collapse from TD.
 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:

TOMCAT

Operator: DEVON ENERGY

String type: Production

Design parameters:**Collapse**

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

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 153 °F
Temperature gradient: 0.90 °F/100ft
Minimum section length: 650 ft

Burst

Max anticipated surface pressure: 1,200 psi
Internal gradient: 0.330 psi/ft
Calculated BHP 4,067 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: 7,596 ft

Estimated cost: 71,295 (\$)

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	500	5.5	17.00	J-55	LT&C	500	500	4.767	4403
2	6800	5.5	15.50	J-55	LT&C	7300	7300	4.825	54570
1	1400	5.5	17.00	J-55	LT&C	8700	8700	4.767	12323

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	234	3763	16.10	1365	5320	3.90	137.7	247	1.79 J
2	3413	3923	1.15	3606	4810	1.33	129.2	217	1.68 J
1	4067	4910	1.21	4067	5320	1.31	23.8	247	10.38 J

Prepared WES HANDLEY
by: Devon Energy

Date: April 21, 2005
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 8700 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.

Energy Minerals and Natural Resources

Form C-144
June 1, 2004Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505For drilling and production facilities, submit to
appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe
office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Devon Energy Production Company, LP Telephone: 405-552-8198 e-mail address: norvella.adams@dev.com

Address: PO Box 250 Artesia NM 88211

Facility or well name: Tamcat 20 Fed 7 API #: 30-025-37296 U/L or Qtr/Qtr S/S/E Sec 20 T 23S R 32E

County: Lea Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐

Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐Workover ☐ Emergency ☐Lined ☒ Unlined ☐Liner type: Synthetic ☒ Thickness 12 mil Clay ☐

Pit Volume _____ bbl

Below-grade tank

Volume: _____ bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ If not, explain why not.Depth to ground water (vertical distance from bottom of pit to seasonal
high water elevation of ground water.)

Less than 50 feet

(20 points)

50 feet or more, but less than 100 feet

(10 points)

100 feet or more

(0 points)

Wellhead protection area: (Less than 200 feet from a private domestic
water source, or less than 1000 feet from all other water sources.)

Yes

(20 points)

No

(0 points)

Distance to surface water: (horizontal distance to all wetlands, playas,
irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

(20 points)

200 feet or more, but less than 1000 feet

(10 points)

1000 feet or more

(0 points)

Ranking Score (Total Points)

0

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if
you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including
remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results.

(5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank
has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☒, or an (attached) alternative OCD-approved plan ☐.

Date: 6/17/05

Printed Name/Title Norvella Adams / Sr. Staff Eng. Tech

Signature Norvella Adams

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or
otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or
regulations.

PETROLEUM ENGINEER

Approval:

Printed Name/Title

PAUL F. KAUTZ

Signature Paul F. KautzDate: JUN 17 2005