

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM0533177A	
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		6. If Indian, Allottee or Tribe Name	
2. Name of Operator DEVON SFS OPERATING INC		7. If Unit or CA Agreement, Name and No.	
Contact: KAREN COTTOM E-Mail: karen.cottom@dmv.com		8. Lease Name and Well No. TODD 14A FEDERAL 2	
3a. Address 20 NORTH BROADWAY SUITE 500 OKLAHOMA CITY, OK 73102		9. API Well No. 30-015-32866	
3b. Phone No. (include area code) Ph: 405.228.7512 Fx: 405.552.4667		10. Field and Pool, or Exploratory UNKNOWN	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface NENE 660FNL 660FEL <i>810 940 R/R SN EAH dated 6/10/03</i> At proposed prod. zone NENE 660FNL 660FEL		11. Sec., T., R., M., or Blk. and Survey or Area Sec 14 T23S R31E Mer NMP	
14. Distance in miles and direction from nearest town or post office* 35 MILES WEST-NORTHWEST OF JAL, NM		12. County or Parish EDDY	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660		13. State NM	
16. No. of Acres in Lease 800.00		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. 3500		20. BLM/BIA Bond No. on file	
19. Proposed Depth 8350 MD		21. Estimated duration 45	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3514 GL		22. Approximate date work will start 03/01/2003	
24. Attachments R-111-POTASH 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 11/12/2002
Title ENGINEERING TECHNICIAN			
Approved by (Signature) /s/ Richard A. Whitley		Name (Printed/Typed) /s/ Richard A. Whitley	Date 20 JUN 2003
Title ACTING STATE DIRECTOR		Office NM STATE 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.

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 #15954 verified by the BLM Well Information System
For DEVON SFS OPERATING INC, sent to the Carlsbad
Committed to AFMSS for processing by Linda Askwig on 11/14/2002 (03LA0094AE)

APPROVAL FOR 1 YEAR

** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED **

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Additional Operator Remarks:

Devon Energy proposes to drill to approximately 8350' to test the Delaware for commercial quantities of oil. If the Delaware is deemed non-commercial, the wellbore will be plugged and abandoned as per Federal regulations. Programs to adhere to onshore oil and gas regulations are outlined in the following exhibits and attachments.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

5. Lease Serial No.
NMNM0533177A
6. If Indian, Allottee or Tribe Name
7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

8. Well Name and No.
TODD 14A FEDERAL 2

9. API Well No.

10. Field and Pool, or Exploratory
UNKNOWN

11. County or Parish, and State
EDDY COUNTY, NM

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
DEVON SFS OPERATING INC

Contact: KAREN COTTOM
E-Mail: karen.cottom@dvn.com

3a. Address
20 NORTH BROADWAY SUITE 500
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)
Ph: 405.228.7512
Fx: 405.552.4621

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 14 T23S R31E NENE 660FNL 660FEL

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Per the BLM we request approval to move the referenced well to the following location. See attached
C102. Corrected attachments
CURRENT
860 FNL & 940 FEL
NEW LOCATION
810 FNL & 940 FEL

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #23031 verified by the BLM Well Information System
For DEVON SFS OPERATING INC, sent to the Carlsbad
Committed to AFMSS for processing by Armando Lopez on 06/10/2003 (03AL0295SE)**

Name (Printed/Typed) KAREN COTTOM

Title ENGINEERING TECHNICIAN

Signature (Electronic Submission)

Date 06/10/2003

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____
Conditions of approval, if any, are attached. Approval of this notice 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.

Title _____ Date _____

Office _____

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

DISTRICT I
1826 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, 1990

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	Pool Code 33745	Pool Name INGLE WELLS DELAWARE
Property Code	Property Name TODD "14" A	Well Number 2
GRID No. 6137	Operator Name DEVON ENERGY PRODUCTION CO., L.P.	Elevation 3506'

Surface Location

UL or lot No. A	Section 14	Township 23 S	Range 31 E	Lot Idn	Feet from the 810	North/South line NORTH	Feet from the 940	East/West line EAST	County EDDY
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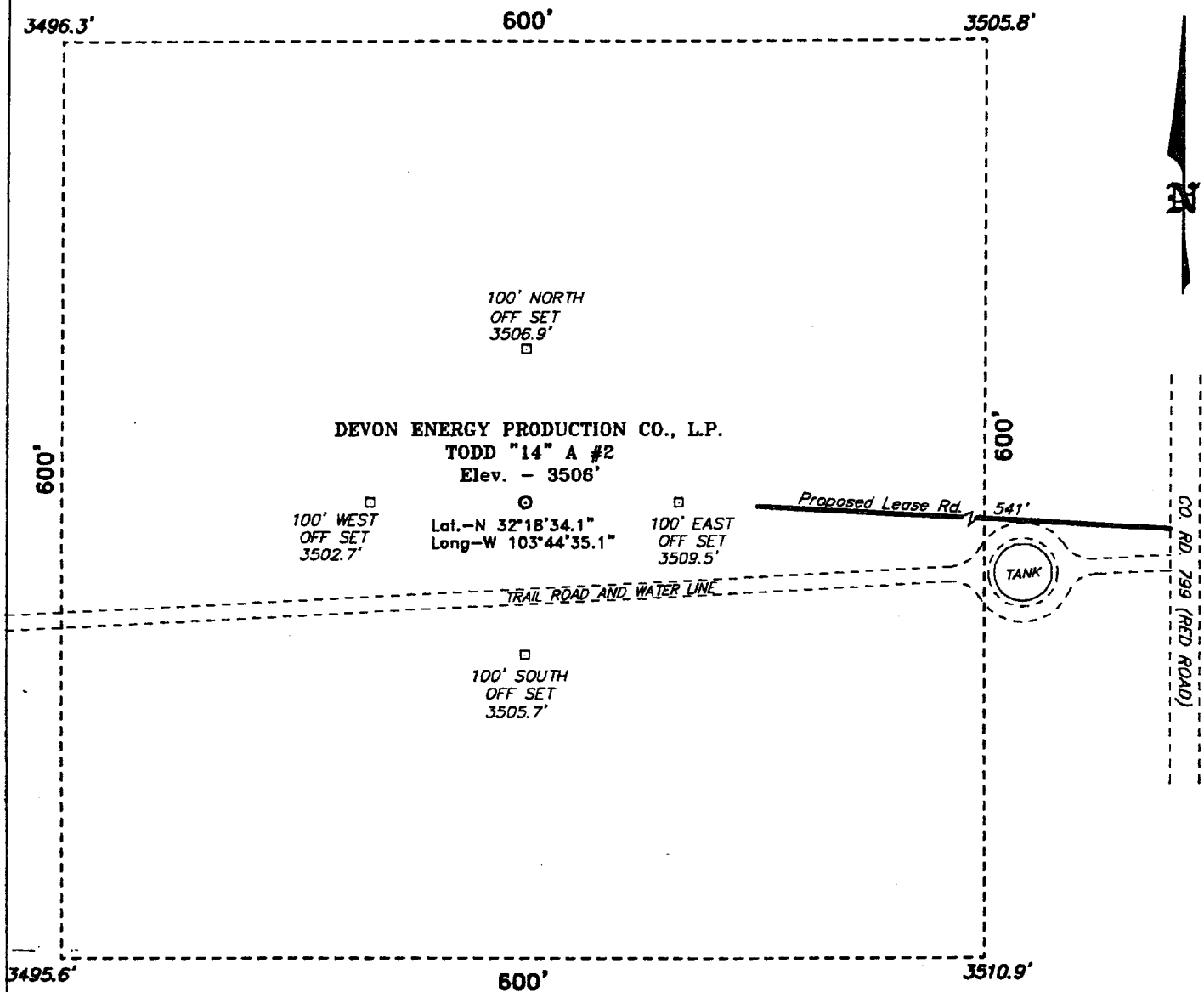
Bottom Hole Location If Different From Surface

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

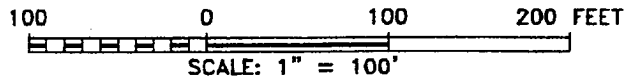
	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature: <u>James Blount</u> Printed Name: <u>JAMES BLOUNT</u> Title: <u>OPERATIONS ENGINEER ADVISOR</u> Date: <u>4-29-03</u>
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. APRIL 15, 2003 Date Surveyed: <u>APR 15 2003</u> Signature: <u>[Signature]</u> Professional Surveyor NEW MEXICO W.O. No. <u>3257</u> Certificate No. <u>7977</u>

SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF CO. RD. 799 (RED ROAD)
AND STATE HWY 128, GO NORTH ON HWY 799 FOR
APPROX. 3.9 MILES TO A PROPOSED LEASE ROAD.



DEVON ENERGY PROD. CO., L.P.

REF: TODD "14" A No. 2 / Well Pad Topo

THE TODD "14" A No. 2 LOCATED 810' FROM
THE NORTH LINE AND 940' FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 23 SOUTH, RANGE 31 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 3217

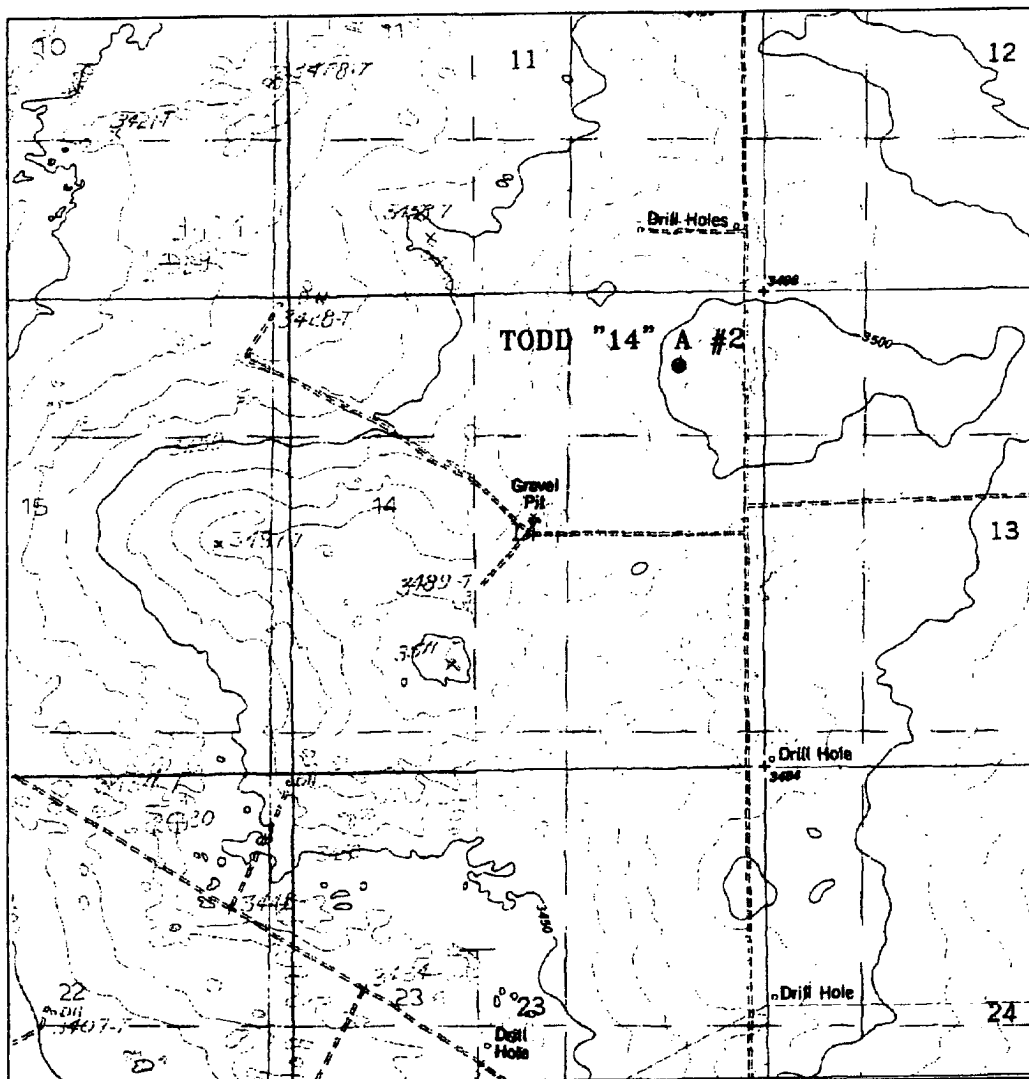
Drawn By: K. GOAD

Date: 04-16-2003

Disk: KJG CD#4 - 3217A.DWG

Survey Date: 04-15-2003

Sheet 1 of 1 Sheets



TODD "14" A #2
 Located at 810' FNL and 940' FEL
 Section 14, Township 23 South, Range 31 East,
 N.M.P.M., Eddy County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

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

W.O. Number: 3217AA - KJG CD#4

Survey Date: 04-15-2003

Scale: 1" = 2000'

Date: 04-16-2003

DEVON ENERGY
PROD. CO., L.P.

DRILLING PROGRAM

Attached to Form 3160-3
Devon Energy Production Company, LP
TODD 14 A FEDERAL #2
(A) 660' FNL & 660' FEL, Section 14 T23S, R31E
Eddy, County, New Mexico

1. Geologic Name of Surface Formation

Permian

2. Estimated Tops of Important Geologic Markers

Rustler	800'
Top of Salt	1100'
Base of Salt	3900'
Bell Canyon	4435'
Cherry Canyon	5610'
Brushy Canyon	6970'
Bone Spring Lime	8265'
Total Depth	8350'

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

Upper Permian Sands	Fresh Water
Delaware	4435' Oil
Delaware(Cherry Canyon)	6010' Oil
Delaware (Brushy Canyon)	8025' 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 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 4400' 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.

Todd 14A Federal #2
DRILLING PLAN
PAGE 2

4. Casing Program

Hole Size	Interval	OD Csg	Weight	Collar	Grade
30"	0-40'	20"	Conductor	0.30" wall	
17 1/2"	0-850' WITNESS	13 3/8"	48#	ST&C	H-40
11"	0-4400' WITNESS	8 5/8"	32#	ST&C	J-55
7 7/8"	0'- TD	5 1/2"	15.5 & 17#	LT&C	R-3

5. CASING CEMENTING & SETTING DEPTH:

20"	Conductor Casing:	Cemented with ready-mix to surface.
13 3/8"	Surface	Cemented to surface using 450 sx POZ "C" (35:65) + 6% Gel + 1/4# sk cellophane flakes followed by 200 sx Class "C" + 2% CC.
8 5/8"	Intermediate	Cement to surface with 1600 sx Poz Class "C" (35:65) + 6% Gel + 15% Salt + 1/4 lb/sk cellophane flakes followed by 200 sx Class "C" + 2% CC + 1/4 lb/sk cellophane flakes.
5 1/2"	Production	Cemented with 400 sx Poz C (35:65) + 3% Salt + 0.6% fluid loss additive + 1/4 lb/sk cellophane flakes followed by 500 sx 60:40 Class "C" + 4% gel.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach 450' (±) above the 8 5/8" casing seat at 4400'.

6. Minimum Specifications for Pressure Control:

The blow-out 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"

Todd 14A Federal #2
DRILLING PLAN
PAGE 3

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 function 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. Types and Characteristics of the Proposed Mud System:

The well will be drilled to total depth using brine, cut brine and polymer mud systems. Depths of systems are as follows:

DEPTH	MUD. WT.	MUD VISC.	FLUID LOSS	TYPE MUD
0' - 850'	8.8	34-36	NC	Fresh water
850' - 4400'	10	28	NC	Brine water
4400' - 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. 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, Testing and Coring Program:

- A. Drill stem tests will be based on geological sample shows.
- B. The open hole electrical logging program will be:
 - a. TD to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma ray. Compensated Neutron - Z-Density Log with Gamma Ray and Caliper.
 - b. TD to Surface Compensated Neutron with Gamma Ray.
 - c. No coring program is planned.

Todd 14A Federal #2
DRILLING PLAN
PAGE 4

- d. 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 Abnormal Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is 125 degrees and maximum bottom hole pressure is 2900 psi. No Hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation intervals have been encountered in adjacent wells.

11. Anticipated Starting Date and Duration of Operations

Road and location preparation will not be undertaken until approval has been received from the BLM. The anticipated spud date for the project is in March 2003. The drilling operation should require approximately 45 days. If the well is deemed productive, completion operations will require, at minimum, an additional 30 days of testing to ascertain whether permanent production facilities will be constructed.

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon SFS Operating, Inc.
Todd 14A Federal #2
(A) 660' FNL & 660' FEL, Section 14, T-23-S, R-31-E
Eddy, County, New Mexico

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.
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MINIMUM BLOWOUT PREVENTER REQUIREMENTS

3,000 psi Working Pressure

3 MWP

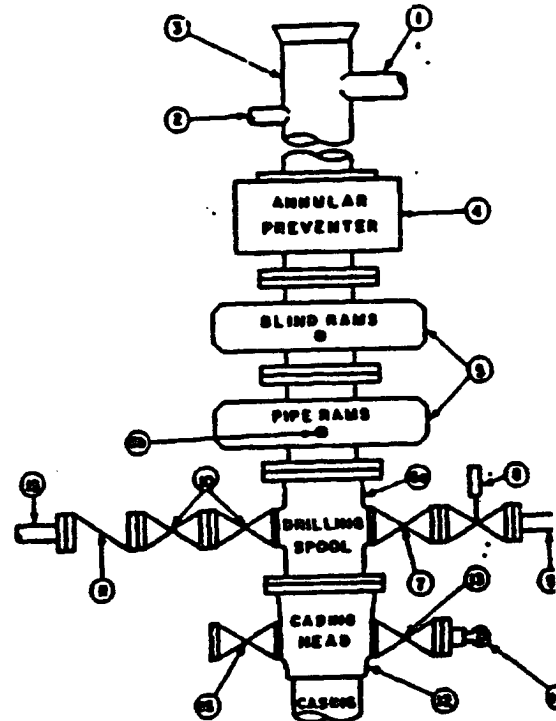
STACK REQUIREMENTS

No.	Item	Min. LD.	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:

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

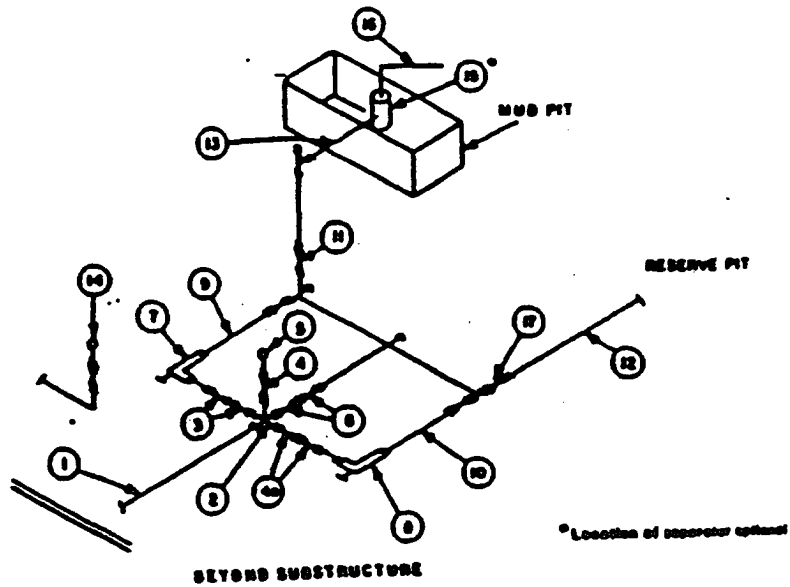
MEC TO FURNISH:

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

GENERAL NOTES:

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
2. 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.
3. Controls to be of standard design and each marked, showing opening and closing position.
4. Chokes will be positioned so as not to hamper or delay changing of choke beans. Replaceable parts for adjustable chokes, other bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
5. All valves to be equipped with handwheels or handles ready for immediate use.
6. Choke lines must be suitably anchored.

7. Handwheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open. Use outside valves except in emergency.
9. All seamless steel control piping (3,000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
10. Casinghead connections shall not be used except in case of emergency.
11. Do not use kill line for routine fill-up operations.

EXHIBIT #1-A**MINIMUM CHOKE MANIFOLD
3,000, 5,000 and 10,000 PSI Working Pressure****3 MWP - 5 MWP - 10 MWP**

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"x3" Cross 3"x3"x3"x3"			3,000			5,000			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	2-1/16"		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"x3"			2"x3"			2"x3"	
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.

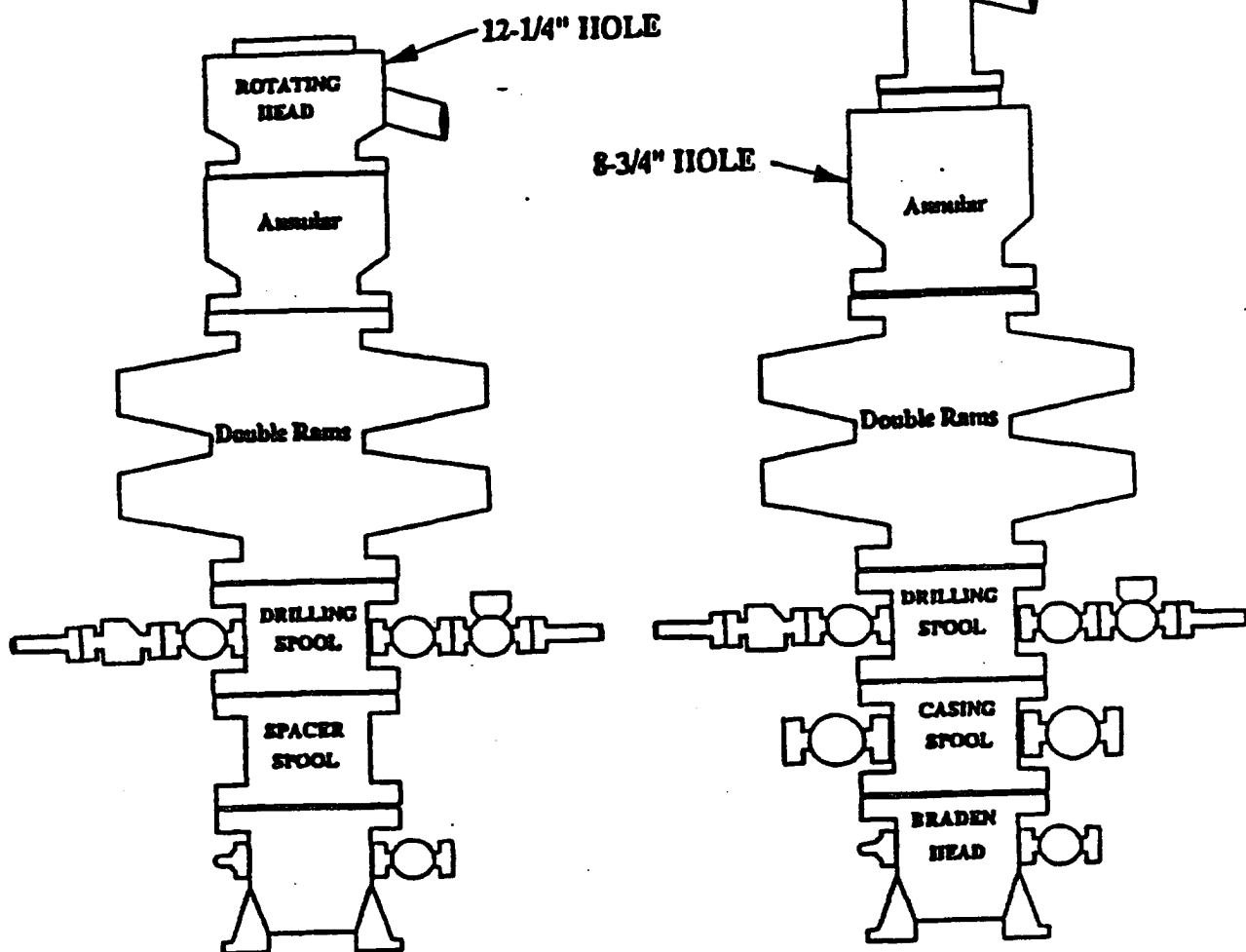
(3) Remote operated hydraulic chokes required on 5,000 psi and 10,000 psi for drilling.

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

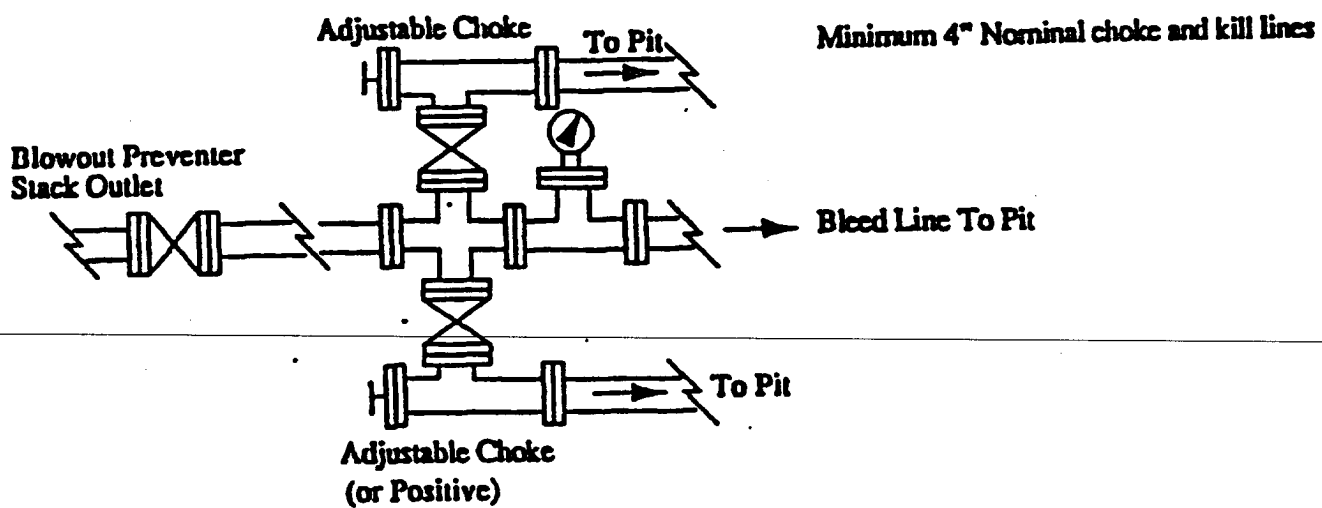
- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats 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.

BOPE SCHEMATIC

EXHIBIT #1-A



Choke Manifold Requirement (3000 psi WP)



R 31 E

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23
S

22

23

24

15D-4

15E-5

15L-12

15M-13

22D-4

22E-5

22L-12

22M-13

11B-2 11A-1

11F-6 11G-7 11H-8

1

14A-2

14K-1

14P-16

13M-13

13N-14

13O-15

23B-10

23A-9

24B-2

23F-13

23G-7

23H-6

24G-7

24H-8

23K-12

23J-3

23J-14

23I-4

24J-10

24I-9

23J-2

23P-8

24D-15

24P-16

23N-11

23D-5

23O-1

7

1

6

2

8

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11

10

1 MILE RADIUS

devon

SAND DUNES FIELD

EBBY COUNTY, NEW MEXICO

WELLS WITHIN 1 MILE RADIUS

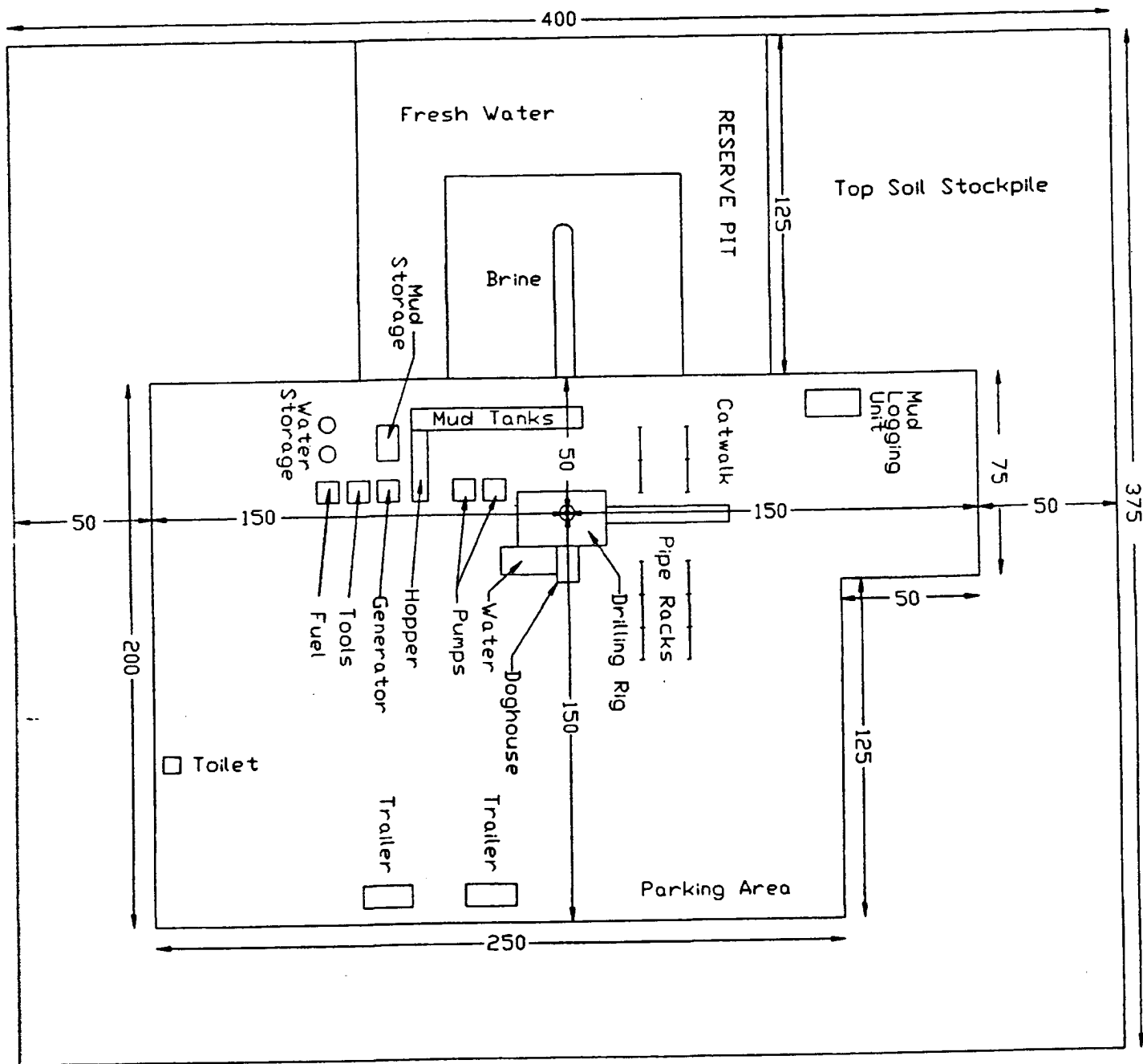
TODD-14A FED-2

EXHIBIT 4

N

Scale in Feet
2000 0 2000

File: 14A-1 8/93



ELEV 3514.1



Fig. 14A-1

devon

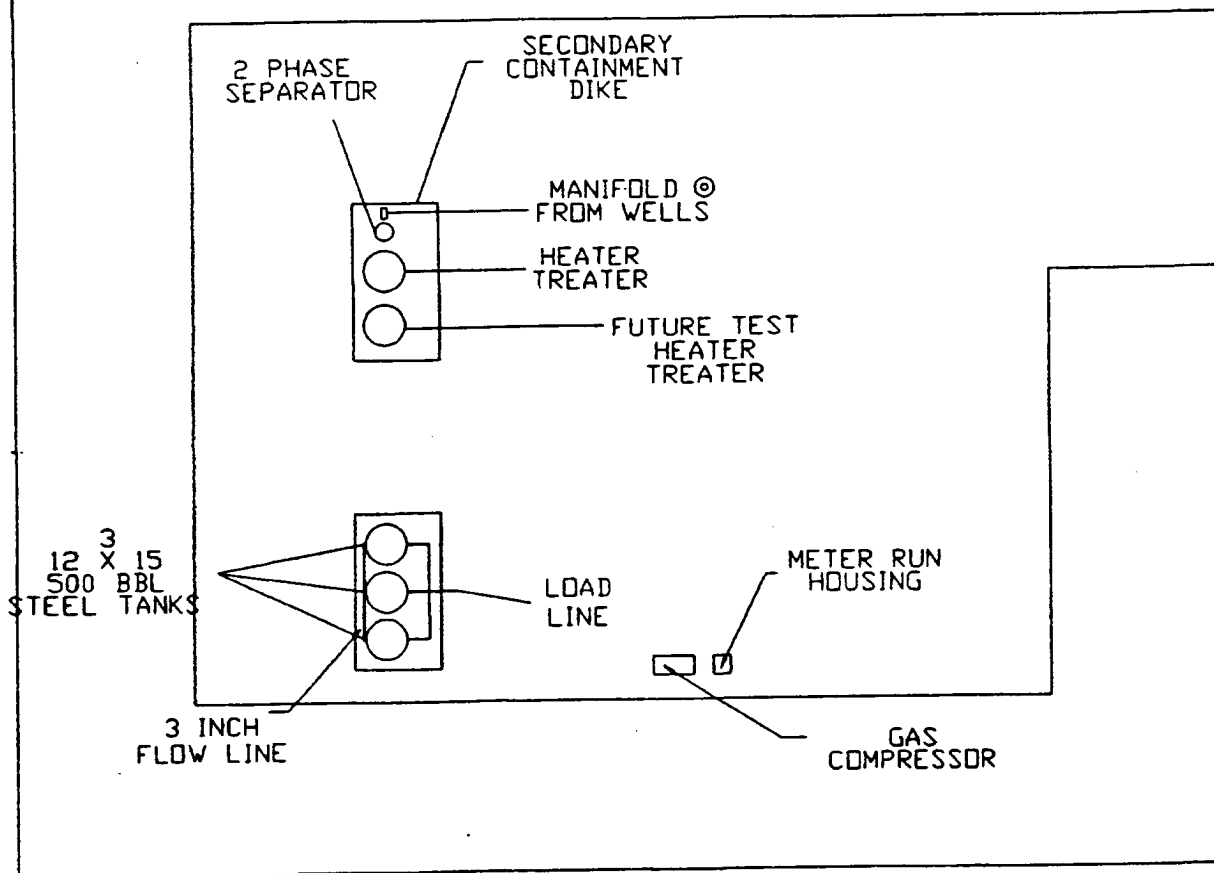
SAND DUNES FIELD
EDDY COUNTY, NEW MEXICO

DRILLING RIG LAYOUT AND ELEVATIONS
TODD-14A FED-2


EXHIBIT 5

Scale in Feet
25 0 25 50 75 100

8/93



File: 14A-1

	
SAND DUNES FIELD EDDY COUNTY, NEW MEXICO	
PRODUCTION FACILITIES LAYOUT AT DRILLING PAD FOR 1000-14A FED-2 EXHIBIT 6	
Scale in Feet 25 0 25 50 75 100 8/93	

DEVON ENERGY

Operator: DEVON ENERGY CORP	Well Name: TODD FEDERAL AREA
Project ID:	Location: T23S-R31E

Design Parameters:

Mud weight (9.00 ppg) : 0.468 psi/ft
 Shut in surface pressure : 765 psi
 Internal gradient (burst) : 0.100 psi/ft
 Annular gradient (burst) : 0.000 psi/ft
 Tensile load is determined using air weight
 Service rating is "Sweet"

Design Factors:

Collapse : 1.125
 Burst : 1.00
 8 Round : 1.80 (J)
 Buttress : 1.60 (J)
 Body Yield : 1.50 (B)
 Overpull : 0 lbs.

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost		
1	850	13-3/8	48.00	H-40	ST&C	850	12.559		
	Collapse Load Strgth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.	Tension Load Strgth (kips)	S.F.		
1	397	740	1.864	850	1730	2.04	40.80	322	7.89 J

Prepared by : CHUCK HORSMAN, Oklahoma City, OK
 Date : 06-04-1993
 Remarks :

Minimum segment length for the 850 foot well is 800 feet.

Surface string:

Next string will set at 4,400 ft. with 10.00 ppg mud (pore pressure of 2,286 psi.) The frac gradient of 1.000 at the casing seat results in an injection pressure of 850 psi. Effective BHP (for burst) is 850 psi.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1990 pricing model. (Version 1.0G)

DEVON ENERGY

Operator: DEVON ENERGY CORP	Well Name: TODD FEDERAL AREA
Project ID:	Location: T23S-R31E

Design Parameters:

Mud weight (9.80 ppg) : 0.509 psi/ft
 Shut in surface pressure : 3487 psi
 Internal gradient (burst) : 0.100 psi/ft
 Annular gradient (burst) : 0.000 psi/ft
 Tensile load is determined using air weight
 Service rating is "Sweet"

Design Factors:

Collapse : 1.125
 Burst : 1.00
 8 Round : 1.80 (J)
 Buttress : 9.89 (J)
 Body Yield : 1.50 (B)
 Overpull : 0 lbs.

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost		
1	4,400	8-5/8"	32.00	J-55	ST&C	4,400	7.875		
	Load (psi)	Collapse Strgth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.	Tension Load (kips)	Strgth (kips)	S.F.
1	2240	2530	1.129	3527	3930	1.11	140.80	372	2.64 J

Prepared by : CHUCK HORSMAN, Oklahoma City, OK
 Date : 06-04-1993
 Remarks :

Minimum segment length for the 4,400 foot well is 800 feet.

Surface/Intermediate string:

Next string will set at 8,400 ft. with 9.00 ppg mud (pore pressure of 3,927 psi.) The frac gradient of 1.000 at the casing seat results in an injection pressure of 4,400 psi. Effective BHP (for burst) is 3,527 psi.

NOTE: The design factors used in this casing string design are as shown above. As a general guide-line, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1990 pricing model. (Version 1.0G)

DEVON ENERGY

Operator: DEVON ENERGY CORP	Well Name: TODD FEDERAL AREA
Project ID:	Location: T23S-R31E

Design Parameters:

Mud weight (9.00 ppg) : 0.468 psi/ft
 Shut in surface pressure : 3087 psi
 Internal gradient (burst) : 0.100 psi/ft
 Annular gradient (burst) : 0.000 psi/ft
 Tensile load is determined using air weight
 Service rating is "Sweet"

Design Factors:

Collapse : 1.125
 Burst : 1.00
 S Round : 1.80 (J)
 Buttress : 9.90 (J)
 Body Yield : 1.50 (B)
 Overpull : 0 lbs.

	Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	800	5-1/2"	17.00	J-55	LT&C	800	4.767	
2	6,700	5-1/2"	15.50	J-55	LT&C	7,500	4.825	
3	900	5-1/2"	17.00	J-55	LT&C	8,400	4.767	

	Load (psi)	Collapse Strgth (psi)	S.F.	Load (psi)	Burst Strgth (psi)	Min Int Yield S.F.	Load (kips)	Tension Strgth (kips)	S.F.
1	374	3896	9.999	3167	5320	1.68	132.75	247	1.86 J
2	3506	3968	1.132	3837	4810	1.25	119.15	217	1.82 J
3	3927	4910	1.250	3927	5320	1.35	15.30	247	16.14 J

Prepared by : CHUCK HORSMAN, Oklahoma City, OK

Date : 06-04-1993

Remarks :

Minimum segment length for the 8,400 foot well is 800 feet.

The mud gradient and bottom hole pressures (for burst) are 0.468 psi/ft and 3,927 psi, respectively.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - S Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1990 pricing model. (Version 1.06)