

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N. M. Oil Cons. Division
811 ST ST. Form approved
ARTESIA, NM 88210-0014 OMB No. 1004-0136
Expires November 30, 2000

dsf

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. TYPE OF WORK: ☒ DRILL ☐ REENTER

b. TYPE OF WELL: ☒ OIL WELL ☐ GAS WELL ☐ Other ☐ SINGLE ZONE ☐ MULTIPLE ZONE

2. NAME OF OPERATOR

DEVON ENERGY PRODUCTION COMPANY, L.P.

3a. ADDRESS AND TELEPHONE NO.

20 NORTH BROADWAY, SUITE 1500, OKC, OK 73102

3b. TELEPHONE (Include area code).

(405) 235-3611

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface (I) 1650' FSL & 990' FEL

At top proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 5 miles southeast of Artesia, NM

15. DISTANCE FROM PROPOSED
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.

990'

16. NO. OF ACRES IN LEASE

160.69

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

4000'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3594' GR

22. APPROX. DATE WORK WILL START*

May 15, 2001

5. LEASE DESIGNATION AND SERIAL NO.

LC-064050-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME, WELL NO.

Eagle 34 Federal #32

9. API WELL NO.

30-015-31747

10. FIELD AND POOL, OR WILDCAT

Red Lake; Glorieta-Yeso

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec 34, T-17-S, R-27-E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

17. Spacing Unit dedicated to this well

40

20. BLM/BIA Bond No. on file

CO-1104

23. Estimated duration

24. Attachments

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.

Devon Energy proposes to drill a San andres, Glorieta-Yeso well to TD 4,000' for commercial quantities of oil and gas. If the well is deemed noncommercial, the well bore will be plugged and abandoned per Federal regulations. Program attachments.

NOTIFY OCD SPUD & TIME TO WITNESS
WATER PROTECTION STRING

Drilling Program

Surface Use and Operating Plan

Exhibit #1 = Blowout Prevention Equipment

Exhibit #2 = Location and Elevation Plat

Exhibit #3 = Road Map and Topo Map

Exhibit #4 = Wells Within 1 Mile Radius

Exhibit #5 = Rotary Rig Layout

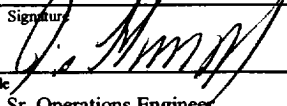
Exhibit #6 = H₂S Operating Plan

Exhibit #7 = Archeological clearance report

Exhibit #8 = Casing Program

conditions, stipulations
on the leased land or:

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

25. Signature 	Name (Printed/Typed) Jim Linville, Jr.	Date 3/12/01
Title Sr. Operations Engineer		
Approved by (signature) 	Name (Printed/Typed) Joe G. Laran	Date APR 26 2001
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.

Title 18 U.S.C. Section 1001, makes 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

RECEIVED
2001/12/20 AM 8:43
BUREAU OF LAND MGMT
FOSWELL OFFICE

DRILLING PROGRAM

Attached to Form 3160-3
Devon Energy Corporation
Eagle 34 Federal #32
(I)1650'FSL & 990' FEL
Section 34-T17S-R27E
Eddy County, New Mexico

1. Geologic Name of Surface Formation:

Permian

2. Estimated Tops of Important Geologic Markers:

Queen	879'
Grayburg	1330'
San Andres	1610'
Glorieta-Yeso	2960'

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

Water

Possible small amounts of fresh water from surface to 1130'.

Oil

Grayburg:	1330'
San Andres:	1610'
Glorieta-Yeso	2960'

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 8 5/8" casing at approximately 1150' and circulating cement back to surface. A shallower setting depth may be required to prevent the surface casing from being set through the Premier Sand. The Grayburg and San Andres intervals will be isolated by setting 5-1/2" casing to total depth (4000'±) and circulating cement to surface.

EAGLE 34 FEDERAL #32
DRILLING PROGRAM
PAGE 2

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>Csg OD</u>	<u>Weight, Grade, Type</u>
17 1/2"	0- 40'	14"	Conductor, 0.30" wall
12-1/4"	0-1150'	8-5/8"	24#, J-55 ERW or seamless ST&C R-3
7-7/8"	0-TD	5-1/2"	15.5# J-55,ERW, FBN or seamless LT&C , R-3

Casing Program:

13 3/8" Conductor Casing: Cemented with redimix to surface.

8 5/8" Surface Casing: Cemented to surface with 350 sks Lite + 5% salt + 1/4 lb/sk cellophane flakes and 200 sks Class C + 2% CaCl₂ + 1/4 lb/sk cellophane flakes.

5-1/2" Production: Cemented to surface with 380 sks Lite + 5#/sx salt + 1/4 lb/sk cellophane flakes and 370 sks 50:50 Pos 'C' w/3% salt, Fluid loss, 1/4#/sx flake.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach surface.

5. Minimum Specifications for Pressure Control:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of either a single annular preventor or a double ram type preventor (2000 psi WP). The unit will be hydraulically operated and will be equipped with either a single annular preventor or a set of double rams (blind rams and 4-1/2" drill pipe rams). The BOP will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. Prior to drilling out the 8 5/8" casing shoe, the BOP's will be tested with the rig pump to 1000 psi.

The BOP system will be function tested 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 BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold.

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to total depth using a fresh water mud system. Depths of systems are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (1/sec)</u>	<u>Water Loss (cc)</u>
0 -1150'	Fresh Water	8.4-8.8	34-38	No Control
1150' - TD	Fresh Water/Cut Brine	8.4-8.6	28-32	No Control

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

7. Auxiliary Well Control and Monitoring Equipment:

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

8. Logging, Testing and Coring Program:

- A. No drill stem tests are planned.
- B. The open hole electrical logging program will be:
 - T. D. to 1150': Dual Induction-Micro SFL with Gamma Ray, and Caliper
 - T. D. to 1150': Compensated Neutron-Litho Density with Gamma Ray and Caliper
 - T. D. to surface: Gamma Ray/Neutron
- C. No cores are planned.

9. Abnormal Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is 90 degrees and maximum bottom hole pressure is 800 psi. No major loss circulation intervals have been encountered in adjacent wells. An H₂S Drilling Operations Plan is included as Exhibit #6.

10. 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 is approximately May 15, 2001. The drilling operation should require approximately 7 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.

SURFACE USE AND OPERATING PLAN

Attachment to Form 3160-3
Devon Energy Corporation
Eagle 34 Federal #32
(I) 1650' FSL & 990' FEL
Section 34-T17S-R27E
Eddy County, New Mexico

1. Existing Roads:

- A. The well site and elevation plat for the proposed Eagle 34 Federal #32 is reflected on Exhibit #2. It was staked by Basin Surveys, Hobbs, New Mexico.
- B. All roads into the location are depicted in Exhibit #3. Approximately 200' of new road will be constructed to access the location from the existing county road. No upgrades to roads other than the access into location from existing road will be necessary.
- C. Directions to location: From the intersection of U.S. Hwy. 82 and county rd #225 go South on 225 1.5 miles to lease road go West on lease road 0.7 miles to then south 660 feet end of proposed road.

2. Proposed Access Road

Exhibit #3 shows the new access road to be constructed from the existing lease road. It will be constructed as follows:

- A. The maximum width of the road will be fifteen (15) feet.
- B. It will be crowned and made of 6 inches 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.
- D. The average grade will be approximately 1%.

EAGLE 34 FEDERAL #32
SURFACE USE AND OPERATING PLAN
PAGE 2

E. No cattle guards, grates or fence cuts will be required.

F. No turnouts are planned.

3. Location of Existing Wells:

Exhibit #4 shows all existing wells within a one-mile radius of the proposed Eagle 34 Federal #32 .

4. Location of Existing and/or Proposed Facilities:

A. In the event the well is found productive, the necessary production equipment will be installed at the well site.

B. If the well is productive, rehabilitation plans are as follows:

- a. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after completion, weather permitting).
- b. Caliche from unused portions of the drill pad will be removed. The original topsoil from the well site will be returned to the location. The drill site will then be contoured to the original natural state.

EAGLE 34 FEDERAL #32
SURFACE USE AND OPERATING PLAN
PAGE 3

5. Location and Type of Water Supply:

The Eagle 34 Federal #32 will be drilled using a fresh water mud system (outlined in Drilling Program). The water will be trucked or pumped to the location. No water well will be drilled on the location.

6. Source of Construction Materials:

All caliche utilized for the drilling pad and proposed access road will be obtained from a existing BLM approved pit. All roads will be constructed of 6" rolled and compacted caliche.

7. Methods of Handling Water Disposal:

- A. Drill cuttings will be disposed into the reserve pit.
- B. Drilling fluids will be contained in steel mud tanks or lined earthen pits and the reserve pit. The reserve pit will contain excess drilling fluid or fluid from the well during drilling, cementing, and completion operations. The reserve pit will be an earthen pit roughly 70' x 70' x 5', or smaller, in size.
- C. The reserve pit will be fenced on three sides throughout drilling operations and will be totally isolated upon removal of the rotary rig. The pit will be lined using a 5-7 mil plastic to minimize loss of drilling fluids.
- D. Water produced from the well during completion operations will be disposed into a steel tank or reserve pit, if volumes prove excessive. After placing the well on production through the production facilities, all water will be collected in tanks and injected into the water injection system. Produced oil will be separated into steel stock tanks until sold.
- E. A portable chemical toilet will be available on the location for human waste during the drilling operations.

- F. Garbage, trash and waste paper produced during drilling operations will be collected in a contained trailer and disposed at a approved landfill. All waste material will be contained to prevent scattering by the wind. All water, fluids, salt or other chemicals will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be generated by this operation.
- G. All waste material will be removed within 30 days after the well is either completed or abandoned. The reserve pit will be completely fenced until it has dried. At the point the reserve pit is found sufficiently dry, it will be backfilled and reclaimed. The portion of the drilling pad used by the production equipment (pumping unit) will remain in use. If the well is deemed non-commercial, only a dry hole marker will remain.

8. Ancillary Facilities:

No campsite or other facilities will be constructed as a result of this well.

9. Well Site Layout:

- A. The drill pad is shown on Exhibit #5. Approximate dimensions of the pad, pits and general location of the rig equipment is displayed. Top soil, if any is found, will be stored adjacent to the pad until reclamation efforts are undertaken. Only modest cuts will be necessary to build the pad which will be covered with 6" of compacted caliche.
- B. No permanent living facilities are planned, but temporary trailers for the tool pusher, drilling foreman and mud logger may be on location throughout drilling operations.
- C. The reserve pit and earthen pits will be lined using plastic sheeting of 5-7 mil thickness.

10. Plans for Restoration of Surface:

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The reserve pit area will be broken out and leveled after drying to a condition where these efforts are feasible. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography.
- B. The pit lining will be buried or hauled away in order to return the location and road to their pristine nature. All pits will be filled and location leveled, weather permitting, within 120 days after abandonment.
- C. The location and road will be rehabilitated as recommended by the BLM.
- D. The reserve pit will be fenced on three sides throughout drilling operations. After the rotary 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.
- E. If the well is deemed commercially productive, the reserve pit will be restored as described in 10 (A) within 120 days subsequent to the completion date. Caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

11. Surface Ownership:

The well site is owned by the Bureau of Land Management.

EAGLE 34 FEDERAL #32
SURFACE USE AND OPERATING PLAN
PAGE 6

12. Other Information:

- A. The project is located on the northwest side of a low rise in gypsum soils and then veneers of silty sands, with vegetations consisting of creosote, gyp coldenia and grasses with a 1-2 degree slope.
- B. There is permanent water (Pecos River) 0.8 miles W/SW of the location.
- C. A Cultural Resources Examination has been completed by Southern New Mexico Archeological Services, Inc. and forwarded to the Carlsbad, New Mexico BLM office.

13. Lessee's and Operator's Representative:

The Devon Energy Corporation representatives responsible for assuring compliance of the surface use plan are:

Jim Linville, Jr.
Sr. Operations Engineer

Don Mayberry
Superintendent

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

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

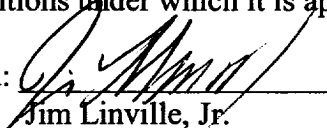
(405) 228-4261 (office)
(405) 936-9231 (home)

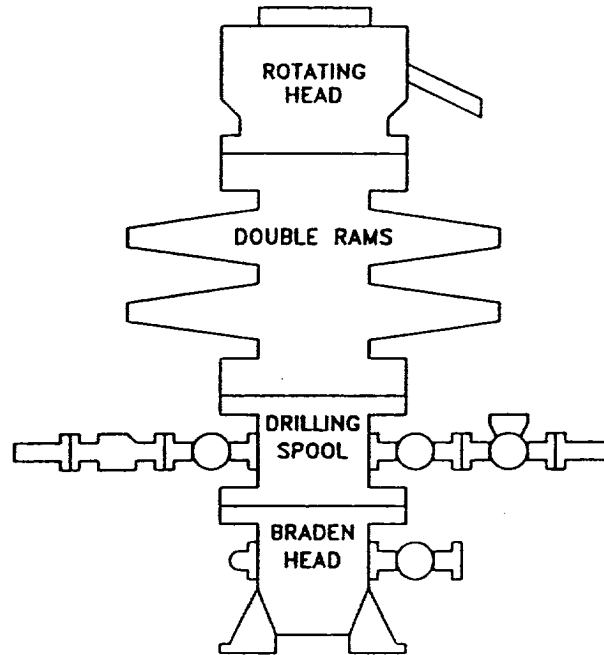
(505) 748-3371 (office)
(505) 746-4945 (home)

Certification:

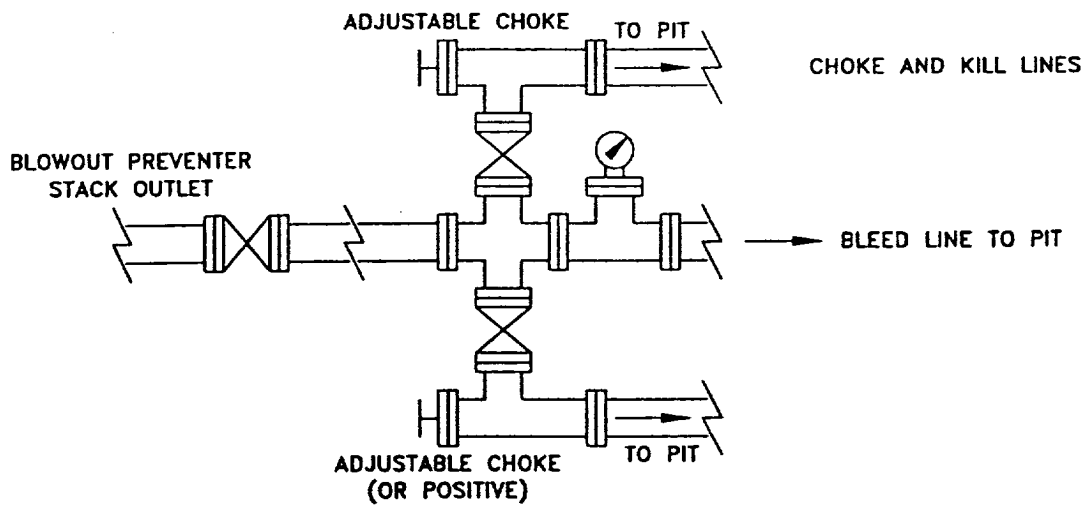
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Devon Energy Corporation (Nevada) and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Date: 3/10/01

Signed: 
Jim Linville, Jr.
Sr. Operations Engineer



CHOKE MANIFOLD REQUIREMENT (2000 psi WP)



devon

WEST RED LAKE AREA
EDDY COUNTY, NEW MEXICO

SCHEMATIC
BLOWOUT PREVENTOR
(2000 PSI WORKING WP)

Q:\...PROJECTS\EXPANDED

WRLBOP

EB

8/98

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTORS
Eagle 34 Federal #32
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 preventor and all associated fittings will be in operable condition and tested to 1000 psi with the rig pump.
4. All fittings will be flanged.
5. A full bore safety valve 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. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.
11. **BOP will consist of either a single annular preventor or a set of double rams as shown in Exhibit #1.**

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Instruction on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
Property Code	Property Name		Well Number
	EAGLE "34" FEDERAL		32
OGRED No. 6137	Operator Name		Elevation
	DEVON ENERGY PRODUCTION CO., L.P.		3594

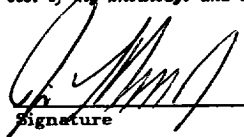
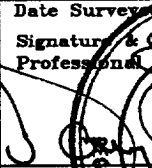
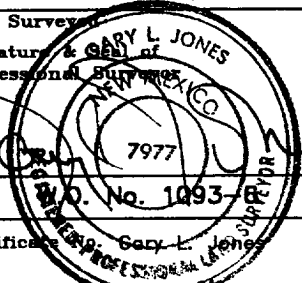
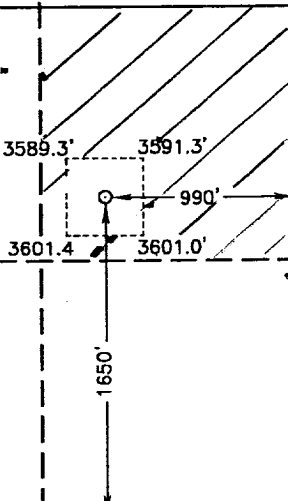
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	34	17 S	27 E		1650	SOUTH	990	EAST	EDDY

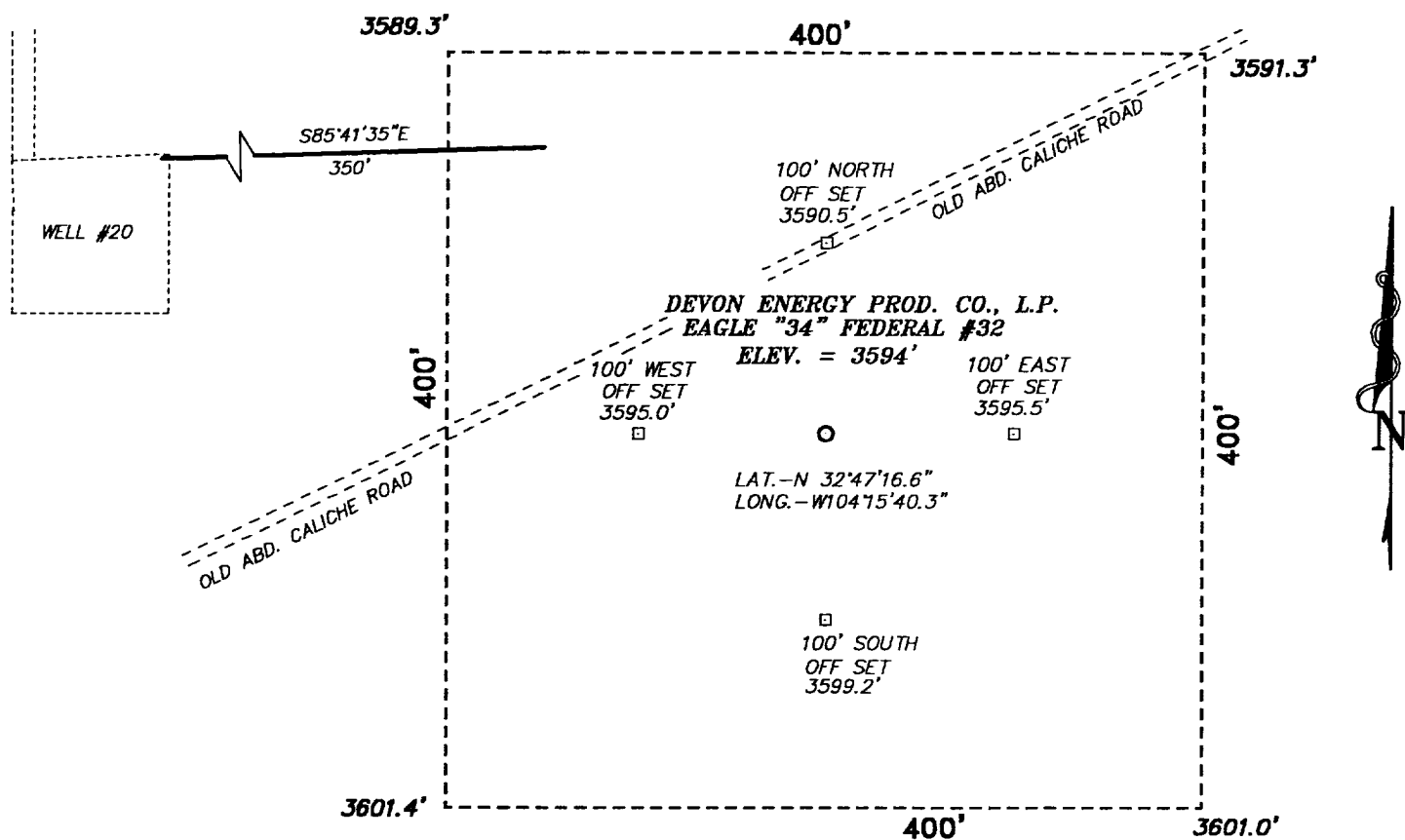
Bottom Hole Location If Different From Surface

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.					

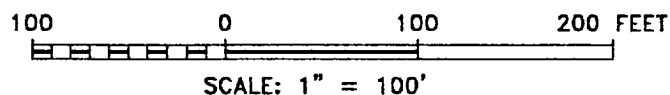
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

				OPERATOR CERTIFICATION <i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i>  Signature Jim Linville, Jr. Printed Name Sr. Operations Engineer Title March 12, 2001 Date
				SURVEYOR CERTIFICATION <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> FEBRUARY 13, 2001 Date Surveyed  Signature & Seal of Professional Surveyor  Certification No. 1093-B Gary L. Jones 7977 JLP BASIN SURVEYS
		LAT: N32°47'16.6" LONG: W104°15'40.3" 		

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



FROM THE INTERSECTION OF U.S. HWY. 82
AND COUNTY RD #225 GO SOUTH ON 225
1.5 MILES TO LEASE ROAD GO WEST ON
LEASE ROAD 0.7 MILES TO THEN SOUTH 660
FEET END OF PROPOSED ROAD.



DEVON ENERGY PROD. CO., L.P.

REF: EAGLE "34" FEDERAL #32 / Well Pad Topo

EAGLE "34" FEDERAL # 32 LOCATED 1650' FROM THE
SOUTH LINE AND 990' FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

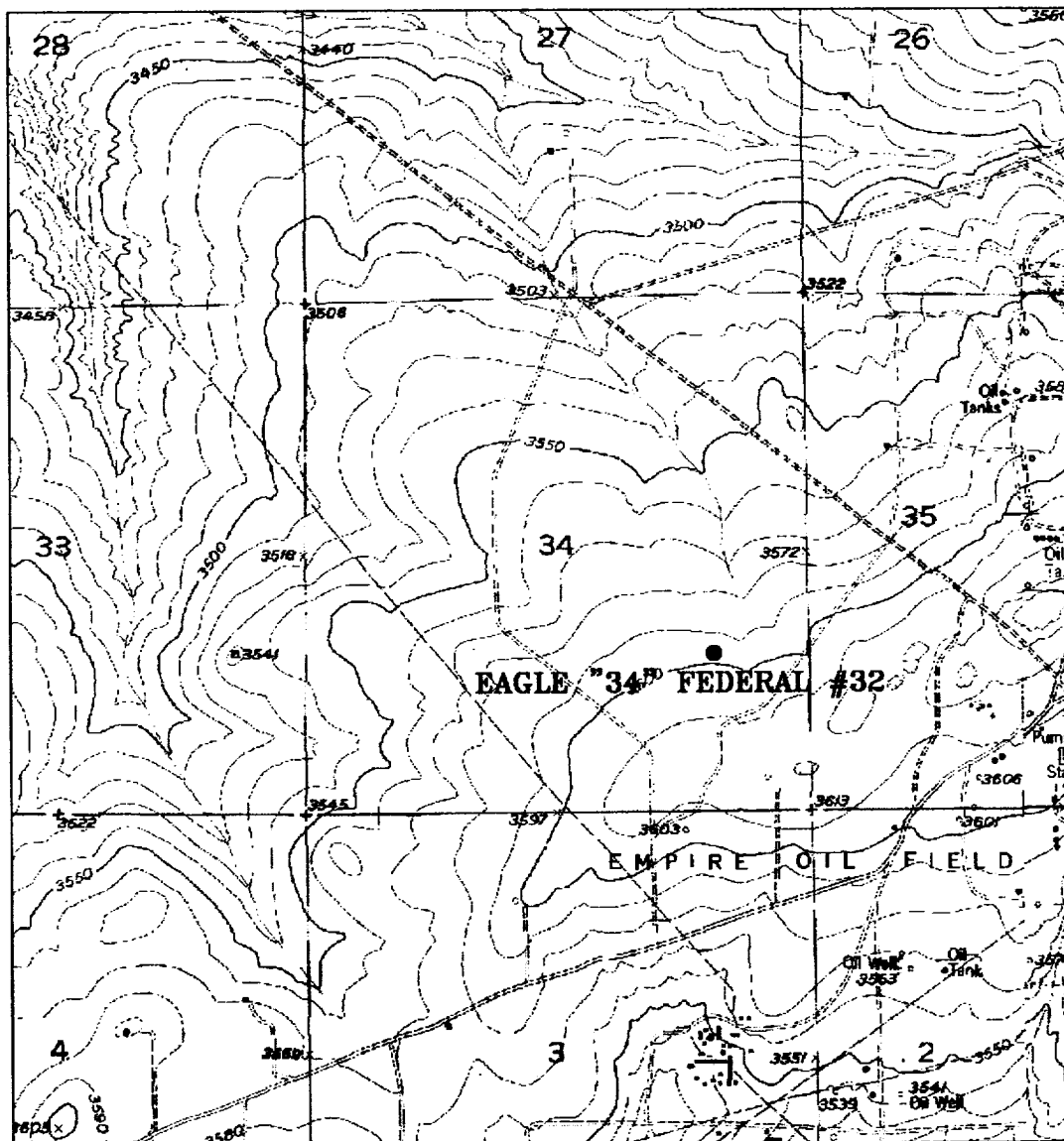
BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 1093-6	Drawn By: JAMES PRESLEY
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Date: 02/17/01	Disk: JLP #1 - DEV1093A-6
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Survey Date: 02/13/01

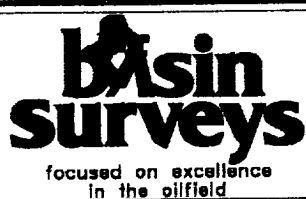
Sheet 1 of 1 Sheets



EAGLE "34" FEDERAL #32

Located at 1650' FSL and 990' FEL

Section 34, Township 17 South, Range 27 East,
N.M.P.M., Eddy 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

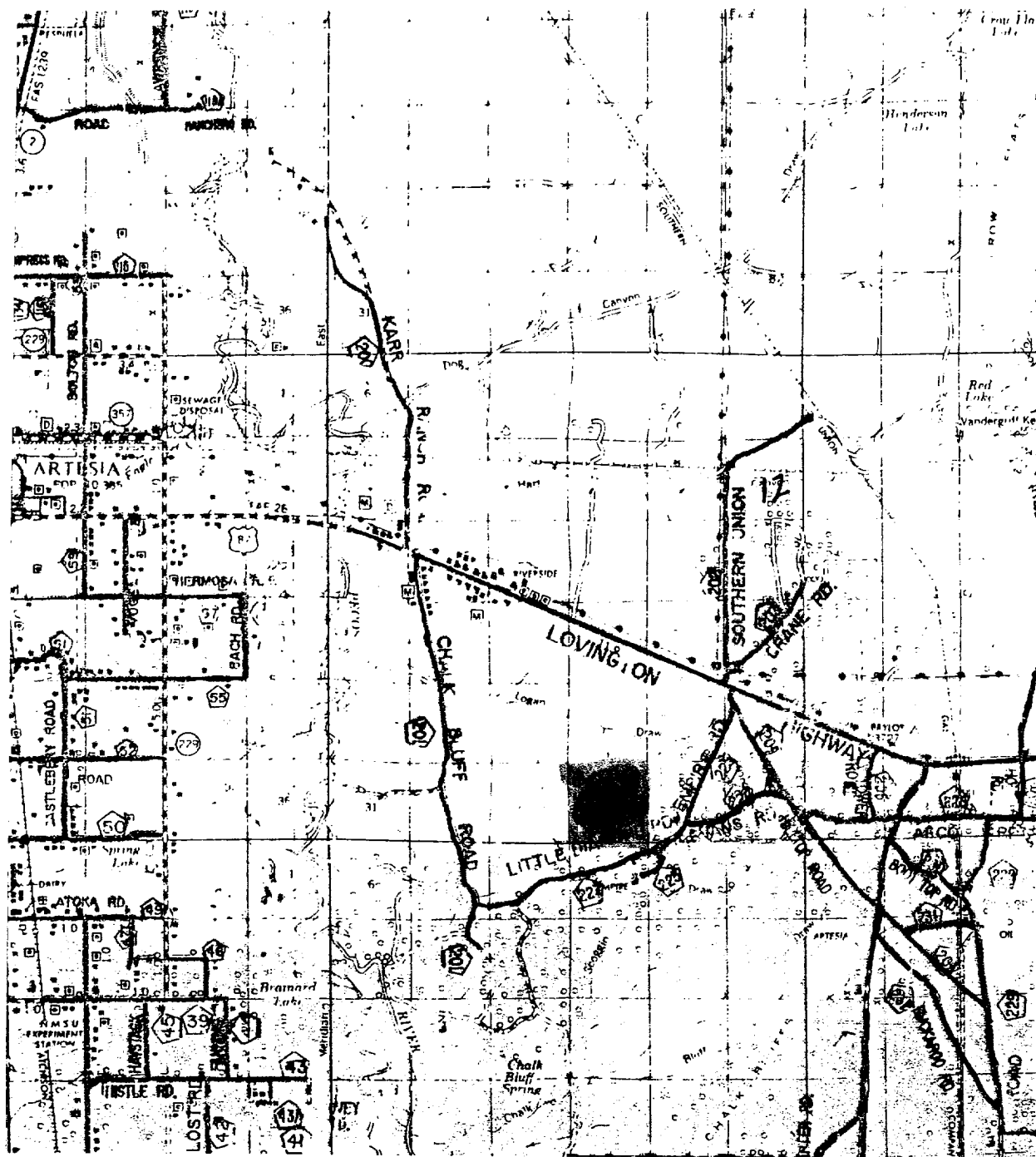
W.O. Number: 1093AA-6 - JLP #1

Survey Date: 02/13/01

Scale: 1" = 2000'

Date: 02/17/01

DEVON ENERGY
PROD. CO., L.P.



EAGLE "34" FEDERAL #32

Located at 1650' FSL and 990' FEL

Section 34, Township 17 South, Range 27 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
basinsurveys.com

W.O. Number: 1093AA-6 - JLP #1

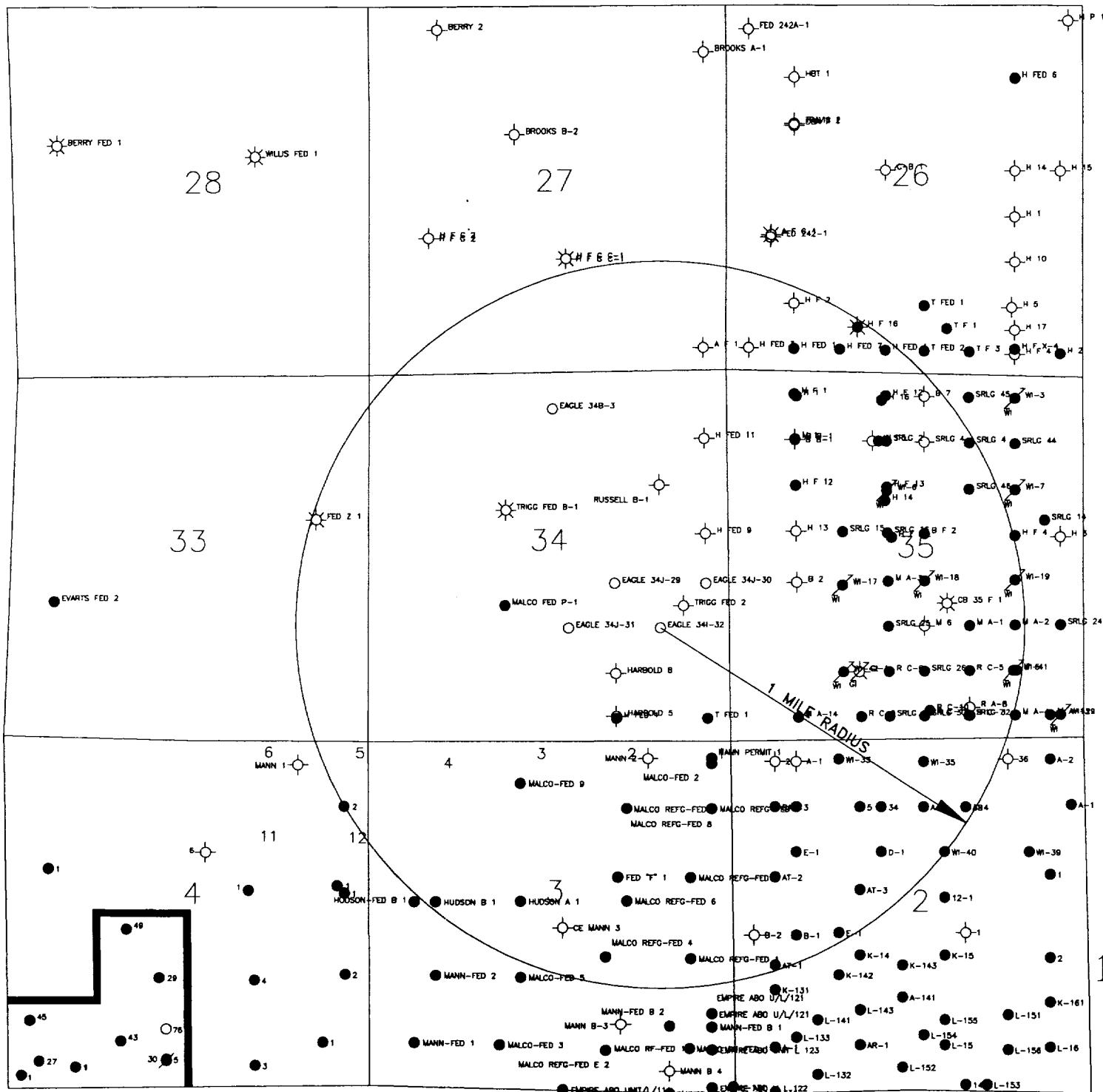
Survey Date: 02/13/01

Scale: 1" = 2000'

Date: 02/17/01

DEVON ENERGY
PROD. CO., L.P.

R 27 E



T
18
S



WEST RED LAKE AREA EDDY COUNTY, NEW MEXICO

EAGLE 34 FEDERAL "I" 32
WELLS WITHIN 1 MILE RADIUS

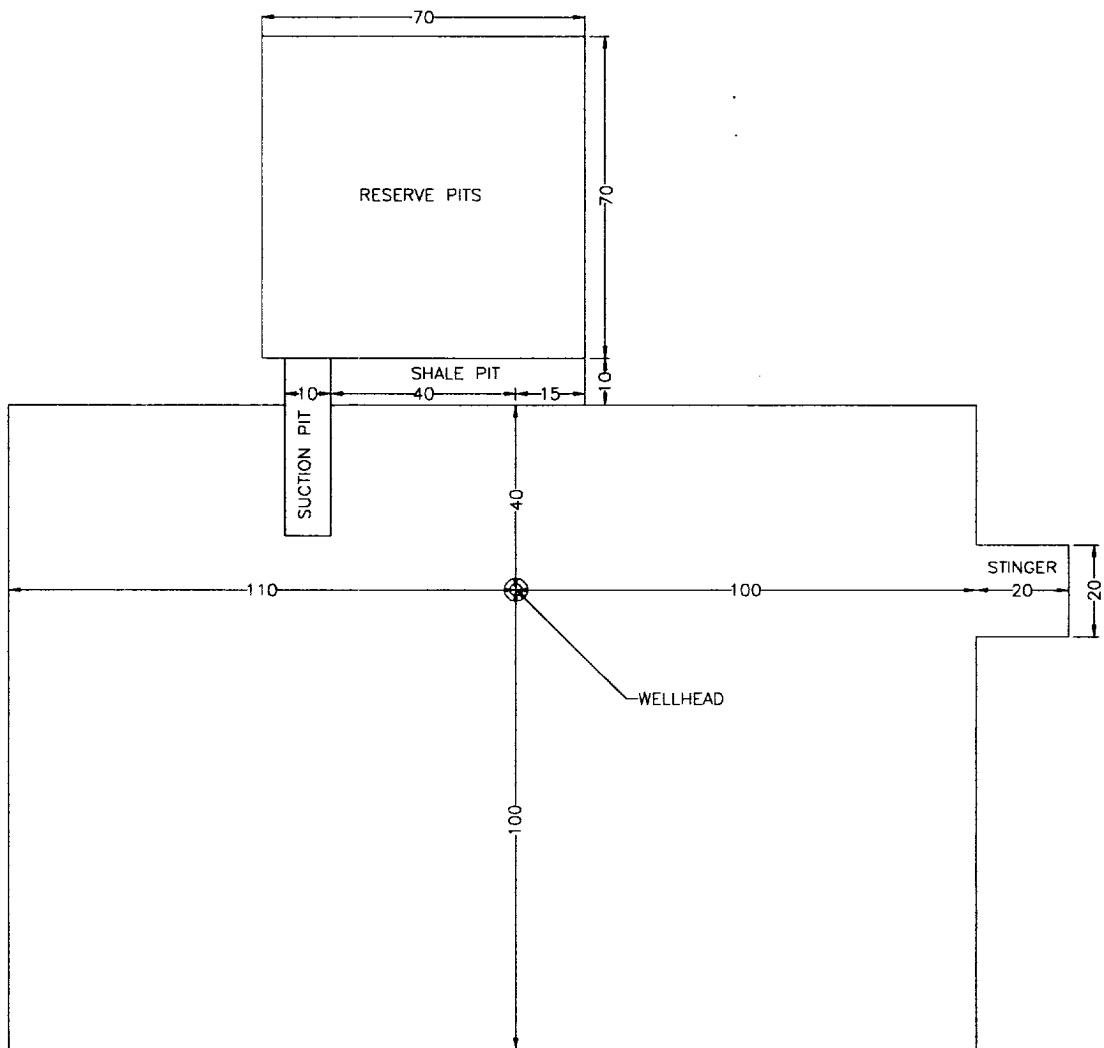
EXHIBIT 4

Scale in Feet
1000 0 1000 2000 3000 4000

EB

3/01

EAGLE 34:32



ELEVATION 3587



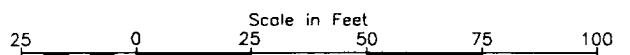
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WEST RED LAKE AREA

EDDY COUNTY, NEW MEXICO

DRILLING PAD FOR
EAGLE 34 FEDERAL "1"32
EXHIBIT 5



EB

3/01

DEVON ENERGY CORPORATION

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

A. Hydrogen Sulfide Training

All rig crews and company personnel will receive training from a qualified instructor in the following areas prior to penetrating any hydrogen sulfide bearing formations during drilling operations:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of the H₂S safety equipment and of personal protective equipment to be utilized at the location such as H₂S detection monitors, alarms and warning systems, and breathing equipment. Briefing areas and evacuation procedures will also be discussed and established.
3. Proper rescue techniques and procedures will be discussed and established.

In addition to the above, supervisory personnel will be trained in the prevention of oil and gas well blowouts in accordance with Minerals Management Service Standards Subpart - 0 - 250 - 212.

Prior to penetrating any known H₂S bearing formation, H₂S training will be required at the rig sight for all rig crews and company personnel that have not previously received such training. This instruction will be provided by a qualified instructor with each individual being required to pass a 20 question test regarding H₂S safety procedures. All contract personnel employed on an unscheduled basis will be required to have received appropriate H₂S training.

This Hydrogen Sulfide Drilling And Operations Plan shall be available at the wellsite during drilling operations.

B. H₂S Safety Equipment And Systems

All H₂S safety equipment and systems will be installed, tested, and operational when drilling operations reach a depth approximately 500' above any known or probable H₂S bearing formation. The safety systems to be utilized during drilling operations are as follows:

1. Well Control Equipment

- (a) Double ram BOP with a properly sized closing unit and pipe rams to accommodate all pipe sizes in use.
- (b) A choke manifold with a minimum of one remote choke.

2. H2S Detection And Monitoring Equipment

- (a) Three (3) H2S detection monitors will be placed in service at the location. One monitor will be placed near the bell nipple on the rig floor; one will be placed at the rig substructure; and, one will be at the working mud pits or shale shaker. This monitoring system will have warning lights and audible alarms that will alert personnel when H2S levels reach 10 ppm.
- (b) One (1) Sensidyne Pump with the appropriate detection tubes will also be available to perform spot checks for H2S concentrations in any remote or isolated areas.

3. Protective Equipment For Essential Personnel

Protective equipment will consist of the following:

- (a) Four (4) - five minute escape packs located at strategic points around the rig.
- (b) Two (2) - thirty minute rescue packs to be located at the designated briefing areas.

4. Visual Warning System

Visual warning system will consist of the following:

- (a) Two wind direction indicators.
- (b) One condition / warning sign which will be posted on the road - providing direct access to the location. The sign will contain lettering of sufficient size to be readable at a reasonable distance from the immediate location. The sign will inform the public that a hydrogen sulfide gas environment could be encountered at the location.

5. Mud Program

- (a) The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight and safe drilling practices (for example, keeping the hole filled during trips) will minimize hazards when drilling in H₂S bearing formations.

6. Metallurgy

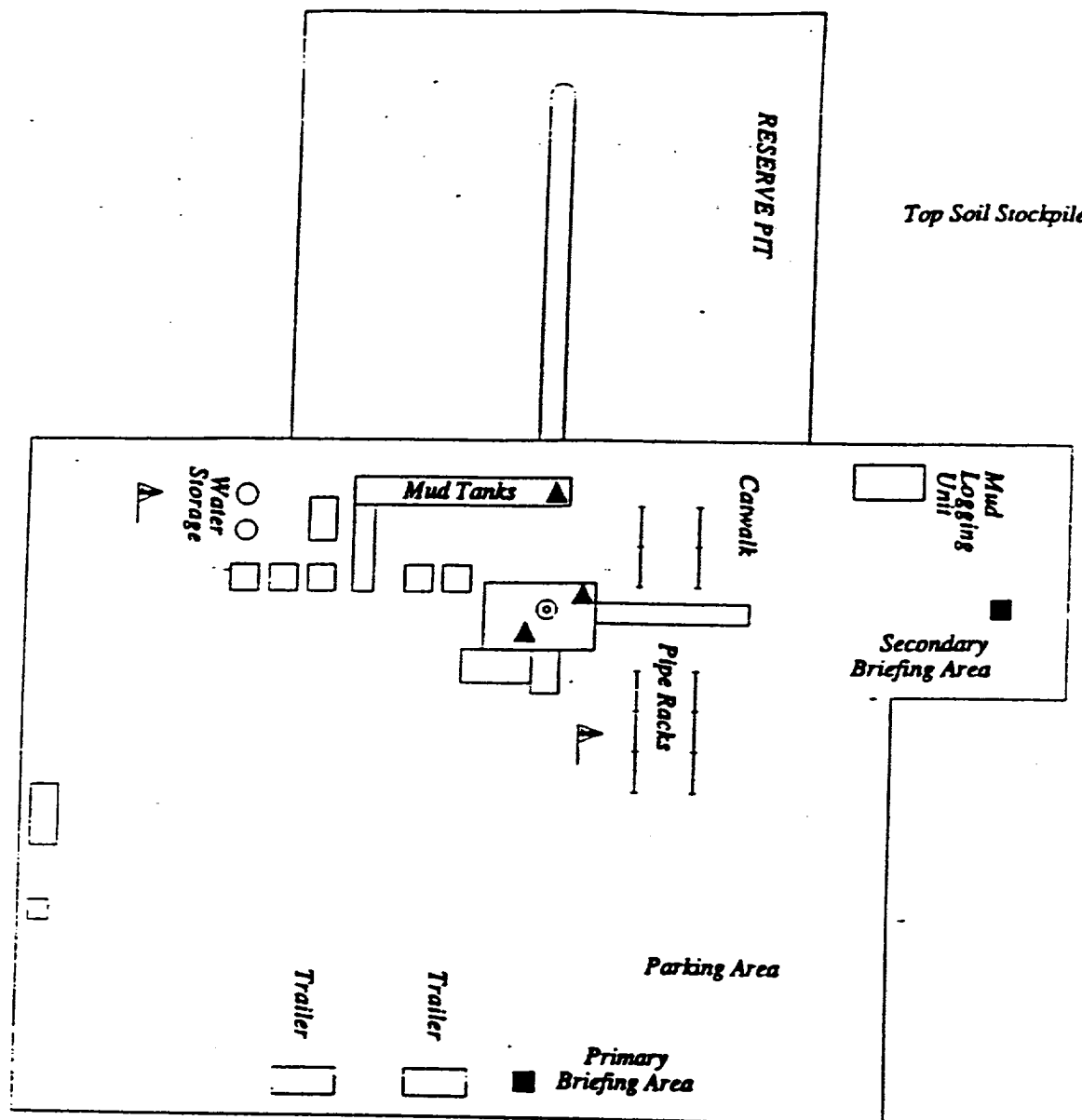
- (a) All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.

7. Communication

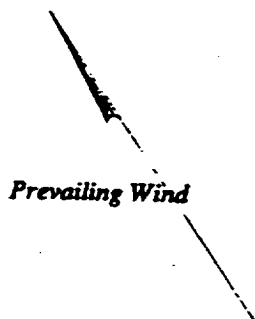
- (a) Two way radio and cellular telephone communication will be available in company vehicles.

C. Diagram of Drilling Location

- 1. Attached is a diagram representing a typical location layout as well as the location of H₂S monitors, briefing areas, and wind direction indicators.



- ▲ H2S MONITORS WITH ALARMS AT THE BELL NIPPLE, SUBSTRUCTURE, AND SHALE SHAKER
- WIND DIRECTION INDICATORS
- SAFE BRIEFING AREAS WITH CAUTION SIGNS AND PROTECTIVE BREATHING EQUIPMENT



devon

WEST RED LAKE AREA

DEBIDY COUNTY, NEW MEXICO

H2S PLAN

Scale in Feet

25 0 25 50 75 100

SNMAS

SOUTHERN NEW MEXICO ARCHAEOLOGICAL SERVICES, INC.
Post Office Box 1 Bent, New Mexico 88314
Office (505) 671-4797 Fax (505) 671-4760

March 1, 2001

Devon SFS Operating, Inc.
Ms. Karen Cottom
20 North Broadway, Suite 1500
Oklahoma City, Oklahoma 73102-8260

Dear Ms. Cottom;

Enclosed are our cultural resource reports for the following Devon SFS Operating, Inc. projects:

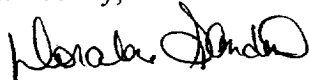
The Eagle "34" Federal Numbers 29, 30, 31, 32, 33, 34, 35 and 36
The Eagle "35" Federal Number 3 and 4
Proposed Well Locations and Access Roads
Sections 34 and 35 T.17S., R. 27E
Eddy County, New Mexico

A records check was completed at the Bureau of Land Management, Roswell District, Carlsbad Field Office, and the State of New Mexico Archaeological Records Management Section. The record check of T. 17S., R.27E., Sections 34 and 35 and within one mile revealed two previously recorded sites. During the current survey's, four isolated occurrences were encountered, recorded and all research potential exhausted in the field.

Archaeological clearance is recommended for the proposed Eagle "34" Federal Number 29, 30, 31, 32, 33, 34, 35, 36 and Eagle "35" Federal Number 3 and 4 well locations and access roads, located in Sections 34 and 35 T. 17S., R.27E, with no stipulations.

If you have any questions regarding the reports, please do not hesitate to contact me.
Thank you.

Sincerely,



Doralene Sanders
President and Office Manager

CC: Devon SFS Operating, Inc. (2)
CC: BLM Carlsbad Field Office (2)

CULTURAL RESOURCE MANAGEMENT REPORT

**Devon SFS Operating, Inc.
The Eagle "34" Federal Number 32
Proposed Well Location and Access Road
Section 34, T.17S., R. 27E
Eddy County, New Mexico**

Written By:
Doralene Sanders
And
Joe Ben Sanders
Project Archaeologist
Principal Investigator

Prepared For:
**Devon SFS Operating, Inc.
20 North Broadway, Suite 1500
Oklahoma City, Oklahoma 73102-8260**

Prepared By:

**SOUTHERN NEW MEXICO
ARCHAEOLOGICAL SERVICES, Inc.**

Post Office Box 1
Bent, New Mexico 88314-0001

Date:
March 1, 2001

**Project # SNMAS-01NM-525
NMCRIS # 73764**

TITLE PAGE/ABSTRACT
NEGATIVE SITE REPORT
ROSWELL DISTRICT

BLM/ RDO 1/95

Page 1

1. BLM Report No.

2. (Accepted)
(Rejected)

3. NMCRIS No. 73764

4. Title of Report (Project Title):

The Eagle "34" Federal Number 32
Proposed Well Location and Access Road
Section 34, T. 17S., R. 27E
Eddy County, New Mexico
A Cultural Resource Inventory

5. Project Date(s)

February 23, 2001

6. Report Date

March 1, 2001

7. Consultant Name & Address:

Direct Charge: Joe Ben Sanders
Name: Southern New Mexico Archaeological Services, Inc.
Address: PO Box 1 Bent, New Mexico 88314
Author's Name: Doralene Sanders
Field Personnel Names: Joe Ben Sanders
Phone No. (505) 671-4797

8. Permit No.

145-2920-00-G

Consultant Report #

SNMAS-01NM-525

10. SPONSOR NAME AND ADDRESS:

Individual Responsible: Karen Cottom

Name: Devon SFS Operating, Inc.
Address: 20 North Broadway, Suite 1500
Oklahoma City, Oklahoma 73102-8260
Phone No.(405) 235-3611

11. FOR BLM USE

12. ACREAGE:

Total No. of acres

Surveyed 4.4

Per Surface

Ownership:

Federal 4.4

State

Private

13. Location and Area: (Maps Attached if negative survey)

a. State: New Mexico **b. County:** Eddy **c. BLM District:** Roswell, **Field Office:** Carlsbad.

d. Nearest City or Town: Carlsbad, New Mexico

e. Location: T 17S R.27E Sec 34 Well Pad Footage's **1650' FSL and 990' FEL**

Well Location $\frac{1}{4}$'s: **SW1/4NE1/4SE1/4**

Access Road $\frac{1}{4}$'s: **NW1/4SW1/4NE1/4SE1/4**

f. 7.5' Map Name(s) and Code Number(s):

USGS Spring Lake (1955) 32104-G3

g. Area: Block:

Impact: 200' X 200'

Surveyed: 400' X 400'

Linear: 50' X 300'

Surveyed: 100' X 300'

14. a. Records Search:

Location: ARMS HPD.
BLM Carlsbad

Date: February 20, 2001

Date: February 20, 2001

List by LA # All sites within .25 miles of the project: None

b. Description of Undertaking:

The proposed Eagle "34" Federal Number 32 well location, is staked 1650 ft FSL and 990 ft FEL in Section 34, T.17S., R.27E. The impact area for the proposed well location is an area 200 ft by 200 ft. The proposed access road is 300 ft long with an impact area of 50 ft by 300 ft. The proposed access road begins on an existing well location and trends 300 ft east ending on the northwest corner of the well pad.

c. Environmental Setting NRCS soil designation: vegetative community: etc.:

The project is located on the northwest side of a low rise in gypsum soils and then veneers of silty sands, with vegetation consisting of creosote, gyp coldenia and grasses with a 1-2 degree slope. Elevation is 3594 ft.

d. Field Methods: Transect Intervals: 8 zig zag transects across well pad, 50-ft zig zag intervals across the staked corridor.

Crew Size: 1

Time in Field: 1 hour

Collections: NONE

15. Cultural Resource Findings:

a. Identification and description: (Location shown on project map)

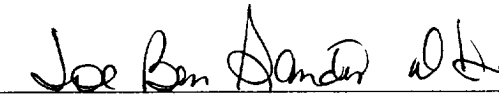
During the current survey, no cultural resources were encountered.

16. Management Summary (Recommendations):

During the survey, no cultural resources were encountered. **Therefore, archaeological clearance is recommended for the Devon SFS Operating, Inc. proposed Eagle "34" Federal Number 32 well location and access road, with no stipulations.**

I certify the information provided above is correct and accurate and meets all appreciable BLM standards.

Responsible Archaeologist: Signature

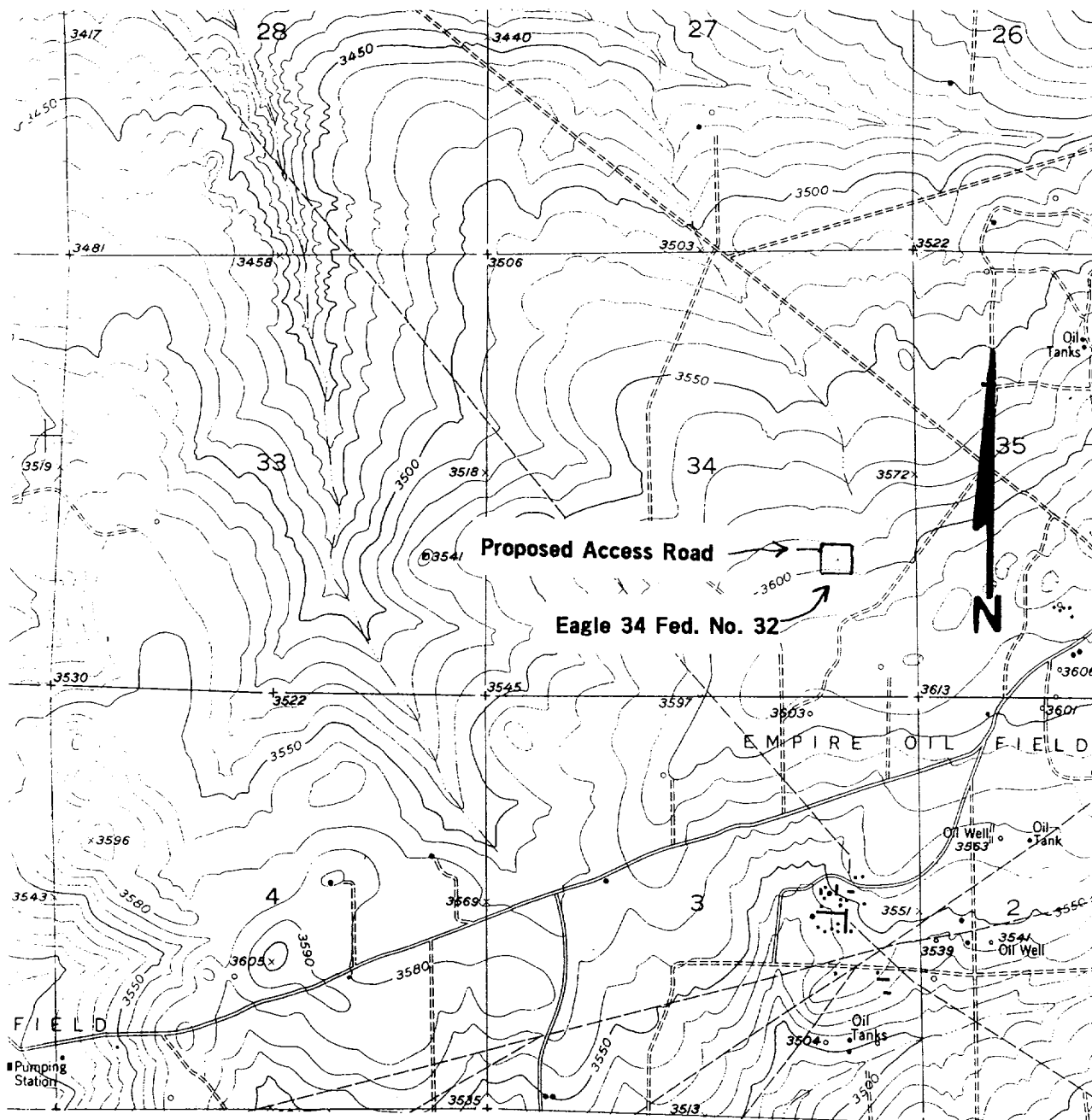


Joe Ben Sanders

Date: March 1, 2001

Principal Investigator

The above completes a negative report. If eligible of potentially eligible properties are involved, then the above will be the title page and abstract for a complete report



**Figure 1. Survey Devon SFS Operating, Inc.
 The Eagle "34" Federal Number 32 Proposed Well Location and Access Road
 Section 34, T.17S., R. 27E
 USGS Spring Lake 1955 7.5' topo map
 Eddy County, New Mexico
 Scale 1:24,000**

Southern New Mexico Archaeological Services, Inc.

EXHIBIT # 8

Well name:	West Red Lake Area
Operator:	Devon Energy Corporation
String type:	Surface
Location:	Eddy County, NM

Design parameters:

Collapse

Mud weight: 9.630 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: 77 °F
Temperature gradient: 0.20 °F/100ft
Minimum section length: 1,150 ft

Burst

Max anticipated surface pressure: 717 psi
Internal gradient: 0.000 psi/ft
Calculated BHP 717 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: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 984 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 4,000 ft
Next mud weight: 9.630 ppg
Next setting BHP: 2,001 psi
Fracture mud wt: 12.000 ppg
Fracture depth: 1,150 ft
Injection pressure 717 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)	Internal Capacity (ft³)
1	1150	8.625	24.00	J-55	ST&C	1150	1150	7.972	55.4
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	575	1370	2.38	717	2950	4.12	24	244	10.33 J

Prepared by: Jim Linville
Devon Energy

Phone: (405) 228-4621
FAX: (405) 552-4621

Date: March 12, 2001
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 1150 ft, a mud weight of 9.63 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:

West Red Lake Area

Operator: **Devon Energy Corporation**

String type: **Production**

Location: **Eddy County, NM**

Design parameters:

Collapse

Mud weight: 9.630 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: 95 °F
Temperature gradient: 0.50 °F/100ft
Minimum section length: 1,500 ft

Burst

Max anticipated surface pressure: 2,001 psi
Internal gradient: 0.000 psi/ft
Calculated BHP 2,001 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: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.

Neutral point: 3,417 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	4000	5.5	15.50	J-55	LT&C	4000	4000	4.825	125.4
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	2001	4040	2.02	2001	4810	2.40	53	217	4.10 J

Prepared by: **Jim Linville**
by: **Devon Energy**

Phone: (405) 228-4621
FAX: (405) 552-4621

Date: **March 12, 2001**
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 4000 ft, a mud weight of 9.63 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.

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, L.P.**
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.: **LC-064050-A**
Legal Description of Land: **Sec. 34-T176S-R27E**
Formation(s): **Red Lake; Glorieta-Yeso**
Bond Coverage: **Nationwide**
BLM Bond File No.: **UT-CO1104**

Authorized Signature:


Jim Linville, Jr.

Title: **Sr. Operations Engineer**

Date: **3/12/01**