

1625 N. French Drive  
Hobbs, NM 88240

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.  
NM-02127B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No. 34342  
Lea Federal Unit, Well No. 23

9. API Well No.  
30-025-37457

10. Field and Pool, or Exploratory  
Lea, Penn (Gas) 80040

11. Sec., T., R., M., or Blk. and Survey or Area  
Sec. 12-T20S-R34E

12. County or Parish  
Lea

13. State  
NM

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2. Name of Operator

Samson Resources

20165

3a. Address

Samson Plaza—Two W. 2nd St. Tulsa, OK 74103

3b. Phone No. (include area code)

(918) 591-1822

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

At surface 1980' FNL & 990' FEL

At proposed prod. zone same

"H"

14. Distance in miles and direction from nearest town or post office\*

50 miles northeast of Carlsbad, NM

15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any) 660'

16. No. of Acres in lease

480

17. Spacing Unit dedicated to this well

160 (320)

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft. 3,863'

19. Proposed Depth

13,325'

20. BLM/BIA Bond No. on file

NM-2037

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

3674 GL

22. Approximate date work will start\*

Sept. 15, 2005

23. Estimated duration

5 weeks

24. Attachments

CAPITAN 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

George R. Smith

Name (Printed/Typed)

George R. Smith

Date

7/6/05

Title

Agent for Samson Resources

Approved by (Signature)

/s/ Joe G. Lara

Name (Printed/Typed)

/s/ Joe G. Lara

Date

SEP 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 reverse)

Lease Responsibility Statement: Samson Resources Co. accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof.

George R. Smith  
George R. Smith, agent

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

**DISTRICT II**  
1301 W. GRAND AVENUE, ARTESIA, NM 88210

**DISTRICT III**  
1000 Rio Braxos Rd., Aztec, NM 87410

**DISTRICT IV**  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

**Form C-102**  
**Revised JUNE 10, 2003**  
**Submit to Appropriate District Office**  
**State Lease - 4 Copies**  
**Fee Lease - 3 Copies**

# WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 20-025-37457	Pool Code 80040	Pool Name Lea Penn
Property Code 34342	Property Name LEA FEDERAL UNIT	Well Number 23
OGRID No. 20165	Operator Name SAMSON RESOURCES	Elevation 3674'

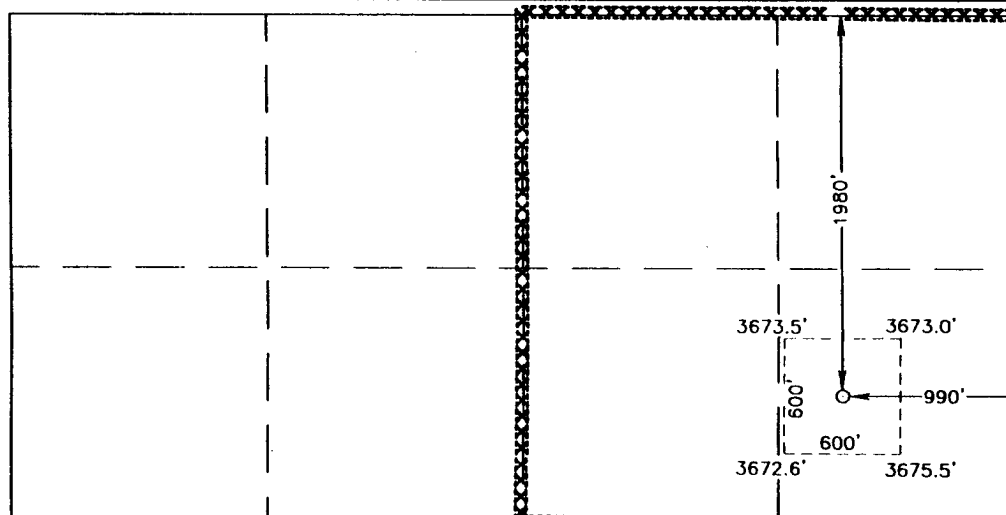
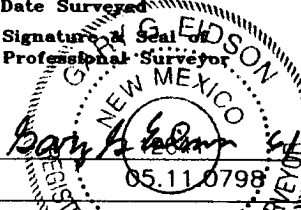
### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	12	20-S	34-E		1980	NORTH	990	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 160 (320)	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**

 <p style="text-align: center; margin-top: 20px;"> <b>GEODETIC COORDINATES</b>  <b>NAD 27 NME</b>   <b>Y=579088.6 N</b>  <b>X=754237.7 E</b>   <b>LAT.=32°35'21.51" N</b>  <b>LONG.=103°30'28.39" W</b> </p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; margin: 0;"><b>OPERATOR CERTIFICATION</b></p> <p style="font-size: small; margin: 5px 0;">I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p style="margin: 5px 0;"><i>George R. Smith</i> Signature</p> <p style="margin: 5px 0;">George R. Smith Printed Name</p> <p style="margin: 5px 0;">Agent Title</p> <p style="margin: 5px 0;">July 6, 2005 Date</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;"><b>SURVEYOR CERTIFICATION</b></p> <p style="font-size: small; margin: 5px 0;">I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p style="text-align: center; margin: 10px 0;">MAY 24, 2005</p> <p style="margin: 5px 0;">Date Surveyed</p> <p style="margin: 5px 0;">Signature and Seal of Professional Surveyor</p> <p style="text-align: center; margin: 10px 0;">  </p> <p style="margin: 5px 0;">Certificate No. GARY, Edson</p> </div>
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## APPLICATION FOR DRILLING

### SAMSON RESOURCES

Lea Federal Unit, Well No. 23  
1980' FNL & 990' FEL, Sec. 12-T20S-R34E  
Lea County, New Mexico  
Lease No.: NM-02127B  
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Samson Resources Co. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Rustler	1,710'	Bone Spring	8,203'
Top of Salt	1,810'	2 <sup>nd</sup> Bone Spring	10,070'
Base of salt	3,130'	3 <sup>rd</sup> Bone Spring	10,810'
Yates	3,530'	Wolfcamp	11,070'
Capitan Reef	3,830'	Strawn	12,085'
Queen	4,860'	Atoka	12,330'
Delaware	5,820'	Morrow	12,870'
		Barnett Shale	13,225'
		T.D.	13,325'

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 300'.

Oil: Possible in the Delaware 5800' - 6200', Bone Spring 8203' - 10,900'

Gas: Possible in the Morrow 12,870' - 13,225'

#### 4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.5#	J-55	BT&C	0" - 1,735'	Circ. 1700 sx. "C" to surface
12 1/4"	9 5/8"	40.0#	N-80	BT&C	0' - 5,820'	Circ. 1500 sx "C" & "H"
						2 stage w/ DV tool @ 3800'
8 3/4"	5 1/2"	20.0#	P110	LT&C	0' - 13,325'	1330 sx Zoneseal & 430 sx super H TOC @ 5,600'

#### 5. Minimum Specifications for Pressure Control Equipment:

A NU 13 5/8" 10,000 psi WP Shaffer, LWS Double Gate BOP over single 13 5/8" 5M Hydrill annular preventer will be installed on the 13 3/8" before drilling 12 1/4" and 8 3/4" holes and operated as a 5000 psi system. Will perform 3M test before drilling 12 1/4" hole and 5M test before drilling the 8 3/4" hole.

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL	
0' - 1,695':	Fresh water mud:	8.4 - 9.2 ppg	28 - 29	No W/L control
1,695' - 5,600':	Brine mud:	10.0 - 10.4 ppg	26 - 29	No W/L control
	Fresh water if lost circulation encountered.			
5,000' - 10,900':	Cut brine:	9.8 - 10.0 ppg	26 - 29	No W/L control
10,900' - 12,100':	Cut brine:	8.8 - 9.6 ppg	26 - 29	No W/L control
12,100' - 13,325':	Cut brine/XCD polymer:	10.5 - 11.5 ppg	29 - 42	W/L control <10 cc +/-

7. Auxiliary Equipment: Blowout Preventer, flow sensors and stabbing valve.

**SAMSON RESOURCES**

Lea Federal Unit, Well No. 23

Page 2

**8. Testing, Logging, and Coring Program:**

Drill Stem Tests: None unless conditions warrant.

Logging: 5,820' to T.D.: CNL-DNL w/GR-Cal.

5,820' to Surface: CNL-GR

Coring: Rotary sidewall if dictated by logs.

9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated evacuated BHP = 5863 psi and surface pressure of 2932 psi with a temperature of 193°.

10.  $H_2S$ : None expected. None in existing wells in close vicinity, but a the Mud Log Unit will cautioned to use a gas trap to detect  $H_2S$  and if any is detected the mud weight will be increased along with  $H_2S$  inhibitors sufficient to control the gas

11. Anticipated starting date: September 15, 2005.

Anticipated completion of drilling operations: Approximately 6 weeks.

## **MULTI POINT SURFACE USE AND OPERATIONS PLAN**

### **SAMSON RESOURCES**

Lea Federal Unit, Well No. 23  
1980' FNL & 990' FEL, Sec. 12-R20S-R34E  
Lea County, New Mexico  
Lease No.: NM-012127B  
(Development Well)

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, to be followed in rehabilitating the surface environmental effects associated with the operations.

#### **1. EXISTING ROADS:**

- A. Exhibit "A" is a portion of a USGS/BLM Topo map showing the location of the proposed well as staked. The well site location is approximately 50 road miles northeast of Carlsbad, New Mexico. Traveling east from Carlsbad there will be approximately 48.7 miles of paved highway and .6 miles of gravel ranch/oilfield roads.
- B. Directions: Travel east from Carlsbad, NM on U.S. Highway 62/180 for approximately 46 miles to Marathon Road. Turn south on Marathon Road for 3.5 miles. Turn east at a locked cattle guard and continue east for .3 mile to the Lea Federal Unit, Well No. 5 well site. The proposed access road will start on the northeast corner of the pad and will run northeast for 1628 feet to the southwest corner of the proposed well site.

#### **2. PLANNED ACCESS ROAD:**

- A. Length and Width: The proposed access road is approximately 1628 feet in length and 12 foot in width. The access road is color coded in red on Exhibit "A".
- B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche and will be properly drained.
- C. Turnouts: There will be one turnout increasing the road width to 20 feet for passing.
- D. Culverts: None required.
- E. Cuts and Fills: Some cuts on sand dunes and filling deflation basins.
- F. Gates, Cattle guards: None required.
- G. Off Lease R/W: None required.

#### **3. LOCATION OF EXISTING WELLS:**

- A. Existing wells within a two-mile radius are shown on Exhibit "C".

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES;**

- A. Samson Resources has no production facilities on the lease at this time, but production will be part of a unit.
- B. If the well proves to be commercial, the necessary production facilities and gas production-process equipment will be installed on the drilling pad. A 3" steel gas pipeline will be buried parallel to the access road back to a new gas-gathering pipeline Samson is installing. See Exhibit "A" map.

**5. LOCATION AND TYPE OF WATER SUPPLY:**

- A. It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing and proposed access roads.

**6. SOURCE OF CONSTRUCTION MATERIALS:**

- A. Caliche for the access road and well site pad will be obtained on location, if available, or from a Fee surface pit in the NE4SE4 of Sec. 35-T20S-R34E. No surface materials will be disturbed except those necessary for actual grading and construction of the drill site and access road.

**7. METHODS OF HANDLING WASTE DISPOSAL:**

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. All pits will be fenced with normal fencing materials to prevent livestock and wildlife from entering the area.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the BLM for approval.
- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering and will be removed for deposit in an approved sanitary landfill within 30 days after finishing drilling and/or completion operations.

**8. ANCILLARY FACILITIES:**

- A. None required.

**9. WELL SITE LAYOUT:**

- A. Exhibit "D" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked and flagged, 500' X 500'.
- B. Mat Size: 400' X 250', plus 175' X 175' mud pits. The pits will be on the north.
- B. Cut & Fill: There will be a 1.5 -foot cut on the southeast with fill to the north and west.
- D. The surface will be topped with compacted caliche and the mud pits will be plastic lined.

**10. PLANS FOR RESTORATION OF THE SURFACE:**

- A. After completion of drilling and/or completion operations, all equipment and other material not required for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing a condition as possible
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled as soon as they are dry enough to work after abandonment.

**11. OTHER INFORMATION:**

- A. Topography: The proposed well site and access road is located in an area of gently undulating sand dunes and deflation basins which is part of the Querecho Plains. The location has a slope of .4% to the southwest from an elevation of 3674'.
- B. Soil: The topsoil on the well site and access road is reddish brown colored fine sand. The soil is of the Kermit Soils and Dune Lands series.
- C. Flora and Fauna: The vegetation at the well site is a sparse grass cover of three-awn, dropseed, bluestem, muhly and other miscellaneous native grasses along with plants of mesquite, yucca, sage, shinnery oak brush, broomweed, cacti, and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: None.
- E. Residences and Other Structures: None, but existing oil field facilities.
- F. Land Use: Cattle grazing.
- G. Surface Ownership: The proposed well site and part of the access road are on Federal surface. Part of the proposed access road is on Fee surface of Ken Smith, Inc. 267 Smith Ranch Road, Hobbs, NM 88240 and phone No. (505) 887-8936. A landowner agreement has been made to compensate surface owner for surface damages.
- H. There is no evidence of archaeological, historical or cultural sites in the staked area. Archaeological Survey Consultants, P.O. Box 2285, Roswell, NM 88202 is conducting an archaeological survey and their report will be submitted to the appropriate government agencies.

**12. OPERATOR'S REPRESENTATIVE:**


- A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

Todd Wiley  
Samson Resources  
Samson Plaza-Two West Second St.  
Tulsa, OK 74103-3103  
Office Phone: (918) 591-1531

**13. CERTIFICATION:**

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the 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 Samson Resources and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

July 6, 2005

  
\_\_\_\_\_  
George R. Smith  
Agent for: Samson Resources



# Patterson-UTI Drilling Company

Rig # 480

20,000'

## DRAWWORKS

Gardner & Denver 1100 E (1500HP) 1 3/8" drill line (2) GE 752 elec. motors

## ENGINES

3 - Caterpillars 3508, 900HP w/720KW generators

## DERRICK

Ideal 143", 1,000,000# hook load w/12 lines

## SUBSTRUCTURE

24' height 21' vertical clear height under rotary beams

## MUD PUMPS

(2) - Gardner-Denver PZ-10, 1350HP powered by (2) GE 752, 1000HP D.C. Motor

## DRILL STRING

5900' 1950 E 5"  
3400' 1950 5" X95  
1550' 2560 5" X95  
1900' 1950 S 5"

## BLOWOUT PREVENTERS

(1) Shaffer 13 5/8" 10,000 psi SL double ram w/H2S trim w/ (4) 4" outlets; (1) Shaffer 13 5/8" 10,000 psi single ram w/H2S trim w/(2) 4" outlets  
(1) 13 5/8" 5000 psi Shaffer annular

## MUD SYSTEM

3 pits, 1600 bbl capacity w/high and low pressure mixing capability, Harrisburg 10 cone desilter, Harrisburg 2 cone desander, 2 FSI linear motion shale shakers.

## COMMUNICATIONS

24 hour direct cellular telephone

## OTHER EQUIPMENT

Blocks. Gardner-Denver 550 ton 6 sheaves 1 3/8" line

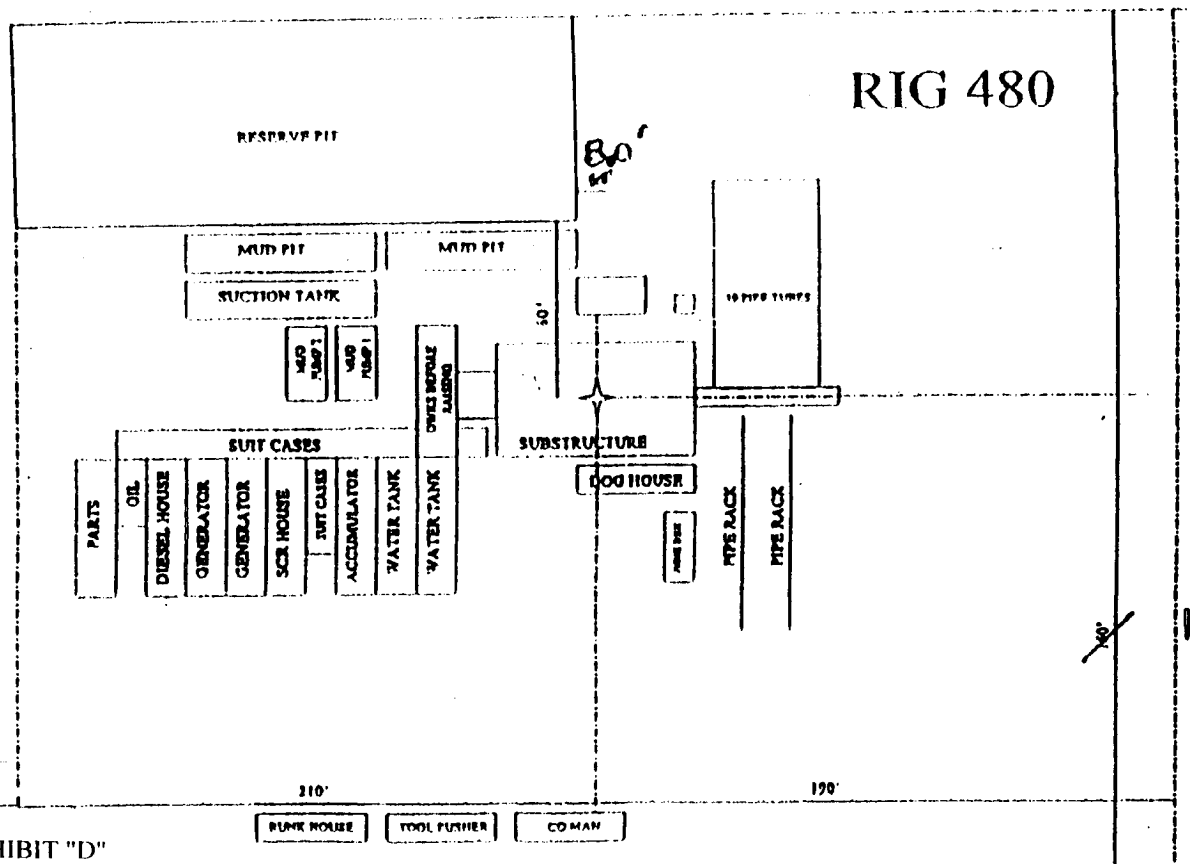
Hook. Joy 500 ton hook

Swivel. Gardner-Denver SW400, 400 tons

Rotary Table. Gardner-Denver 27 1/2", 250 tons @ 100 rpm 500 tons static

Electrical Power.

Fresh Water Storage. Housing. (2) 500 bbl



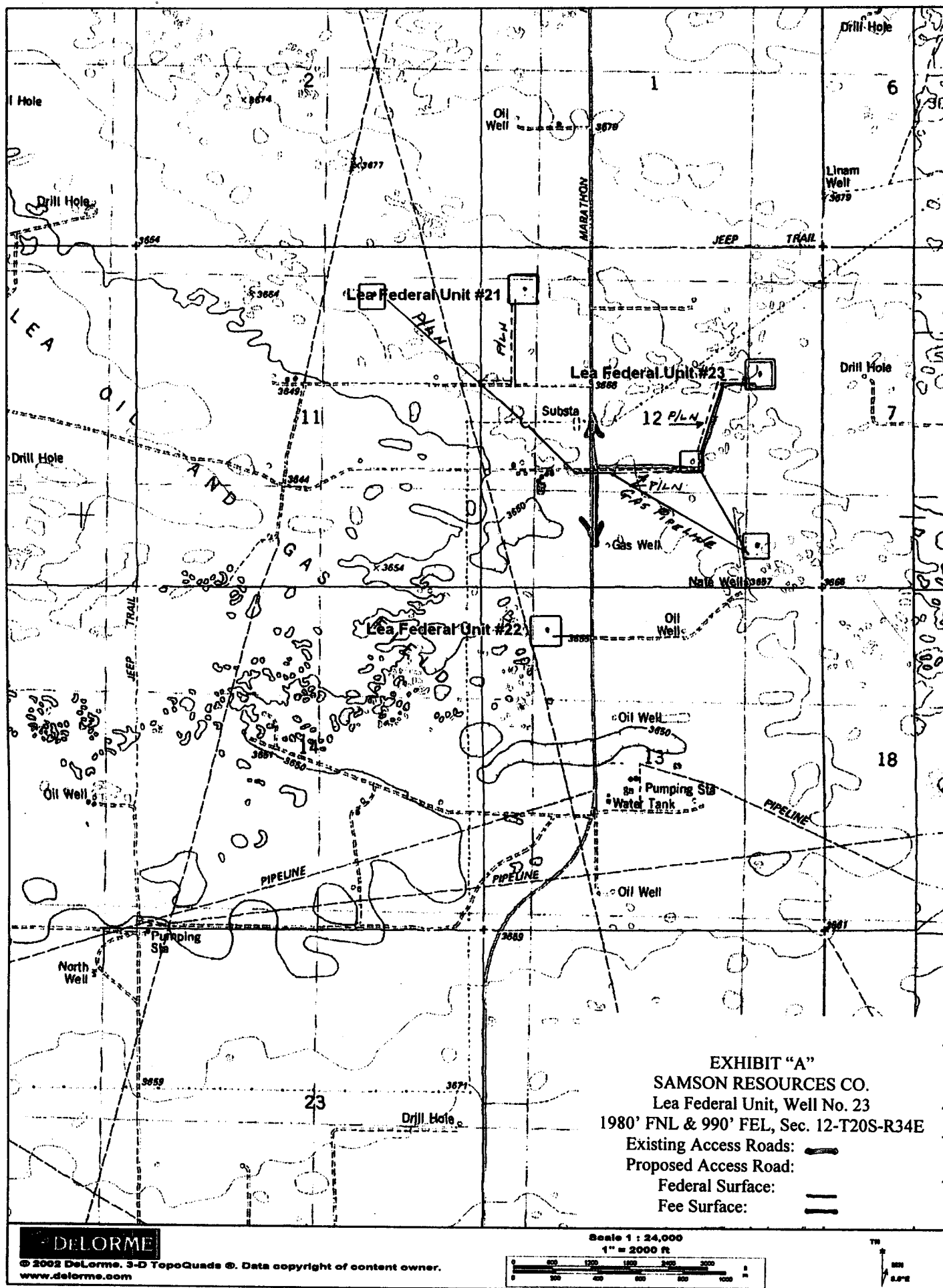
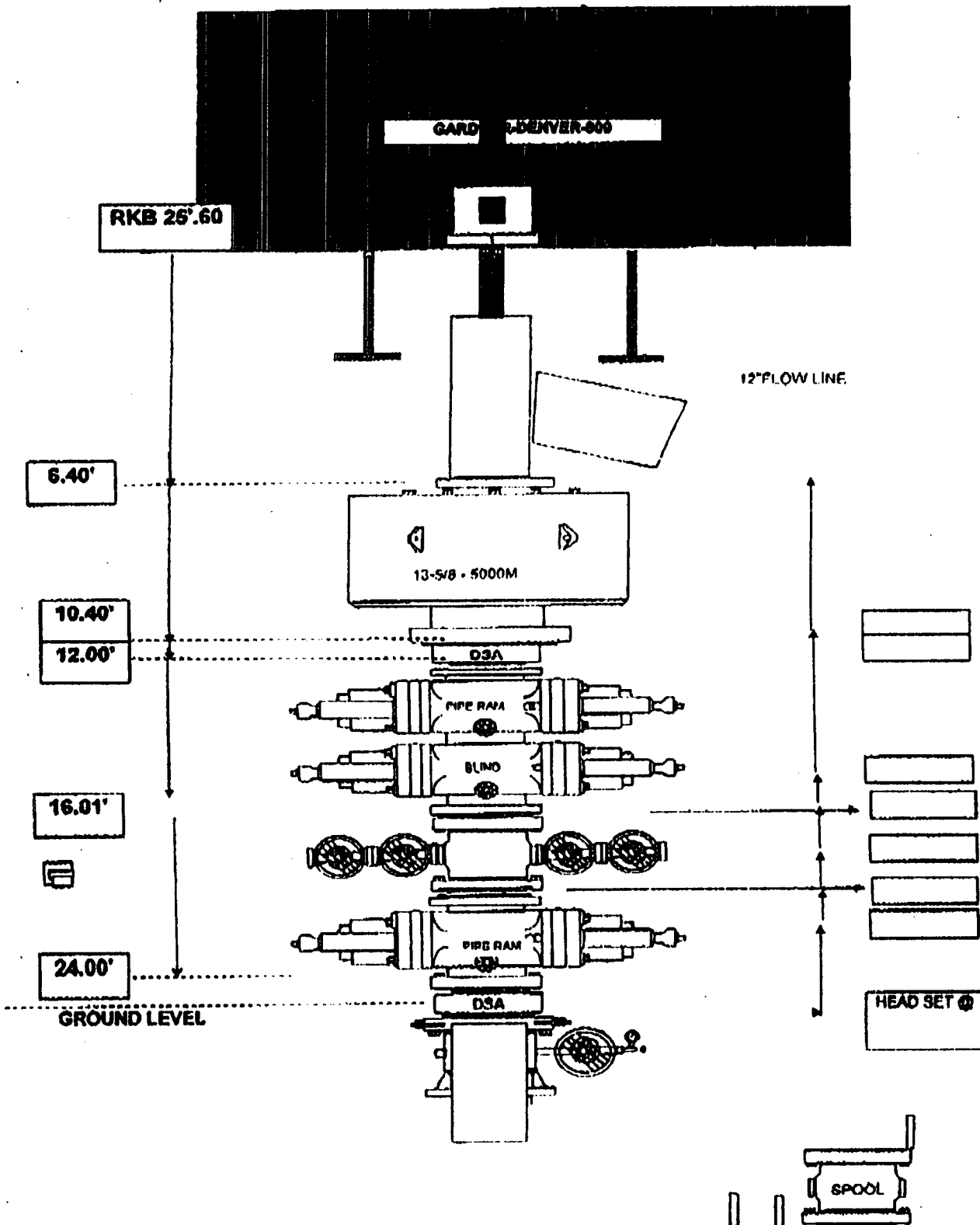


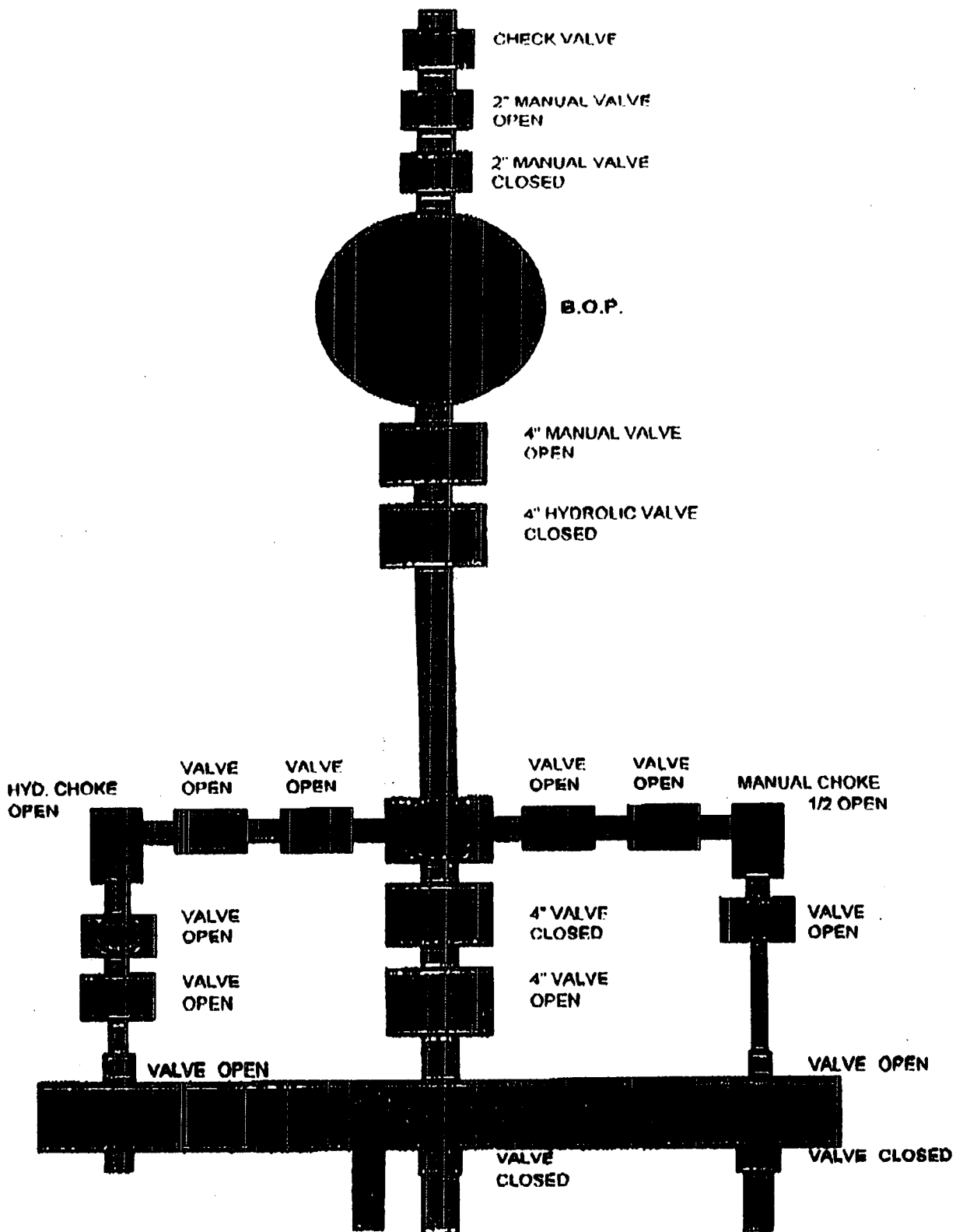
EXHIBIT "C"  
SAMSON RESOURCES CO.  
Lea Federal Unit, Well No. 23  
FNL & 990' FEL, Sec. 12-R20S-R34E  
Existing Wells



ANNULAR	= 13 5/8 - 5M HYDRIL GK ANN
DOUBLE	= 13 5/8 - 10M SHAFFER SL (DBL) BOP
SINGLE	= 13 5/8 - 10M SHAFFER SL POSLOK BOP
WELL HEAD	= 11" 5M
KILL LINE VALVES	= 2 1/16 10M
CHOKE LINE VALVE	= 4 1/16 10M

EXHIBIT "E"  
 SAMSON RESOURCES CO.  
 Lea Federal Unit, Well No. 23  
 BOP Specifications

## MANIFOLD SETUP



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
March 12, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For 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: Samson Resources (Brad Hargrove) Telephone: (918) 591-1939 e-mail address:

Address: Samson Plaza Two W. Second St. Tulsa, OK 74103

Facility or well name: Lea Federal Unit, Well #23 U/I. or Qtr/Qtr SE4NE4 Sec 12 T 20S R34E 30-025-37457

County: ~~Eddy~~ Lea Latitude 32°35'21.51" N Longitude 103°30'28.39" W NAD: 1927 X 1983 ☐ Surface Owner Federal X State Private ☐  
Indian ☐

**Pit**

Type: Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Volume 10,000 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:

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.

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 X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: July 6, 2005

Printed Name/Title: George R. Smith, agent

Signature: *George R. Smith*

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.

Approval:

Date:

Printed Name/Title:

Signature:

*[Signature]*

SEP 19 2005

PETROLEUM ENGINEER

# SPECIAL DRILLING STIPULATIONS

## THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name Samson Resources Well Name & No. Lea Federal Unit #23  
 Location 1980 F N L & 990 F E L Sec. 12, T. 20 S, R. 34 E.  
 Lease No. NM-02127-B County Lea State New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

### I. SPECIAL ENVIRONMENT REQUIREMENTS

- ( X ) Lesser Prairie Chicken (stips attached) ( ) Flood plain (stips attached)  
 ( ) San Simon Swale (stips attached) ( ) Other

### II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

( X ) The BLM will monitor construction of this drill site. Notify the ( X ) Carlsbad Field Office at (505) 234-5972 ( ) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

( X ) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche upon completion of well and it is determined to be a producer.

( ) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately \_\_\_\_\_ inches in depth. Approximately \_\_\_\_\_ cubic yards of topsoil material will be stockpiled for reclamation.

( ) Other.

### III. WELL COMPLETION REQUIREMENTS

( ) A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

( x ) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

- |   |   |
|---|---|
| ( ) A. Seed Mixture 1 (Loamy Sites)                   | ( X ) B. Seed Mixture 2 (Sandy Sites)                   |
| Side Oats Grama ( <i>Bouteloua curtipendula</i> ) 5.0 | Sand Dropseed ( <i>Sporobolus cryptandrus</i> ) 1.0     |
| Sand Dropseed ( <i>Sporobolus cryptandrus</i> ) 1.0   | Sand Lovegrass ( <i>Eragrostis trichodes</i> ) 1.0      |
|   | Plains Bristlegrass ( <i>Setaria magrostachya</i> ) 2.0 |
| ( ) C. Seed Mixture 3 (Shallow Sites)                 | ( ) D. Seed Mixture 4 (Gypsum Sites)                    |
| Side oats Grama ( <i>Boute curtipendula</i> ) 1.0     | Alkali Sacaton ( <i>Sporobolus airoides</i> ) 1.0       |
|   | Four-Wing Saltbush ( <i>Atriplex canescens</i> ) 5.0    |

( ) OTHER SEE ATTACHED SEED MIXTURE

Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture.

( ) Other.

## RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6 mil plastic. Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

## OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- (1) Lined as specified above and
- (2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be recontoured, all trash removed, and reseeded as specified in this permit.

## CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to processed by BLM.

## TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.



PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the following lands: All of Section 12 T. 20 S., R. 34 E.

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Bureau of Land Management  
Carlsbad Field Office

SENM-S-22  
December 1997

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Samson Resources

Well Name & No: Lea Unit Federal No. 23

Location: Surface: 1980' FNL & 990' FEL, Sec.12, T. 20 S. R. 34 E.

Lease: NMNM 02127-B

Lea County, New Mexico

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### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 3/8 inch; 9 5/8 inch; 5 1/2 inch.

C. BOP Tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan is not required for this wellbore, however the operator shall confirm that rig personnel has been trained in H<sub>2</sub>S safety awareness and knowledgeable to the uses of the mud loggers gas trap, mud weight additives and H<sub>2</sub>S scavengers stated in the APD as a H<sub>2</sub>S gas combatant plan.

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

### II. CASING:

1. The 13 3/8 inch shall be set at 1735 Feet with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 9 5/8 inch Intermediate casing is to circulate to surface.

3. The minimum required fill of cement behind the 5 1/2 inch Production casing is to Tie back into the 9 5/8 inch casing shoe by at lest 200 feet.

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 5M psi. A variance to test the 5M BOPE to 3 M BOPE standards ( i.e. for surface requirements) prior to drilling below the 13 ¾ inch casing is approved. The 5 M BOPE shall be in operations prior to drilling below the 9 ¾ casing shoe and used to TD depth.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.

- The test shall be done by an independent service company
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
- Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in safe workman-like manner. Hard line connections shall be required.
- Both low pressure and high pressure testing of BOPE is required.

#### **IV. DRILLING FLUID**

1. Brine water is planned as the main medium of drilling fluid below the 13 ¾ casing shoe to a casing depth of 5820 ft. However, if lost circulation occurs in this 12 ¼ inch hole section, the operator or driller is required to call the Hobbs BLM Office (505) 393-3612 to witness conversion to fresh water fluid going in the hole. The fresh water medium must be maintained throughout the 12 ¼ inch hole to a setting depth of approximately 5820 feet.

BLM Serial Number: NM-02127-B  
Company Reference: Samson Resources  
Well No. & Name: Lea Federal Unit #23

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS  
CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting there from, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar.

Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

☐ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

☒ Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

☐ Flat-blading is authorized on segment(s) delineated on the attached map.

### 3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, outsloping, insloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

#### SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

☒ 400 foot intervals.

☐ \_\_\_\_\_ foot intervals.

☐ locations staked in the field as per spacing intervals above.

☐ locations delineated on the attached map.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

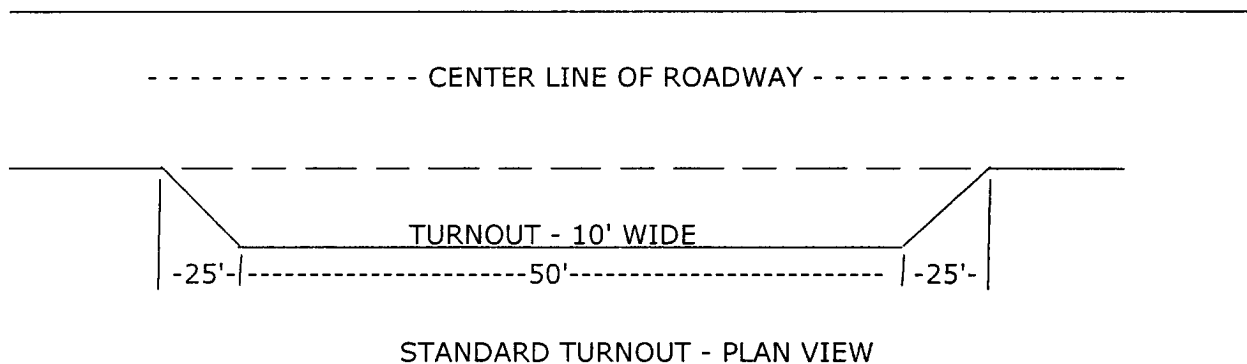
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

$$\text{spacing interval} = \frac{400'}{\text{road slope in \%}} + 100'$$

Example: 4% slope: spacing interval =  $\frac{400}{4} + 100 = 200$  feet

#### 4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



#### 5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

#### 6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

7. MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS:



BLM LEASE NUMBER: NM-02127-B  
COMPANY NAME: Samson Resources  
WELL NO. & NAME: Lea Federal Unit #23

### BURIED PIPELINE STIPULATIONS

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting there from, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.
6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.
7. Blading of all vegetation will be allowed. Blading is defined as the complete removal of brush and ground vegetation. Clearing of brush species will be allowed. Clearing defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface. In areas where blading and/or clearing is allowed, maximum width of these operations will not exceed **20** feet.
8. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
9. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in row, piles, or berms, unless otherwise approved by the Authorized Officer. A berm will be left over the ditch line to allow for settling back to grade.
10. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
11. The holder will reseed. Seeding will be done according to the attached seeding requirements, using the following seed mix.
- |  |   |
|--|---|
| <input type="checkbox"/> seed mixture 1            | <input type="checkbox"/> seed mixture 3 |
| <input checked="" type="checkbox"/> seed mixture 2 | <input type="checkbox"/> seed mixture 4 |
12. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.
13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

16. Special Stipulations: