

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

328

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-0631	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Samson Resources		7. If Unit or CA Agreement, Name and No.	
3a. Address Samson Plaza—Two W. 2nd St. Tulsa, OK 74103		8. Lease Name and Well No. Federal 11-20-34, Well # 8	
3b. Phone No. (include area code) (918) 591-1822		9. API Well No. 30-025-36616	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1100' FSL & 1100' FWL At proposed prod. zone same		10. Field and Pool, or Exploratory Lea Penn	
14. Distance in miles and direction from nearest town or post office* 50 miles northeast of Carlsbad, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 11-T20S-R34E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1100'		12. County or Parish Lea	
16. No. of Acres in lease 320		13. State NM	
17. Spacing Unit dedicated to this well 320			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 900'		20. BLM/BIA Bond No. on file NM-2037	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3639' GL		22. Approximate date work will start* January 26, 2004	
		23. Estimated duration 5 weeks	

24. Attachments

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 <i>George R. Smith</i>		Name (Printed/Typed) George R. Smith		Date 2/26/03	
Title Agent for Samson Resources					
Approved by (Signature) /s/ LESLIE A. THEISS		Name (Printed/Typed) /s/ LESLIE A. THEISS		Date FEB 23 2004	
Title 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.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

OCD approves intent to drill, but cannot produce until the #3-L is recompleted to another zone or Shut-in.

George R. Smith, agent  
OPER. OGRID NO. 20165  
PROPERTY NO. 9908  
POOL CODE 80040  
EFF. DATE 3/21/04  
API NO. 30-025-36616

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-36616</b>	Pool Code <b>80040</b>	Pool Name <b>Lea Penn Gas</b>
Property Code <b>9908</b>	Property Name <b>FEDERAL 11-20-34</b>	Well Number <b>8</b>
OGRID No. <b>20165</b>	Operator Name <b>SAMSON RESOURCES</b>	Elevation <b>3639'</b>

Surface Location

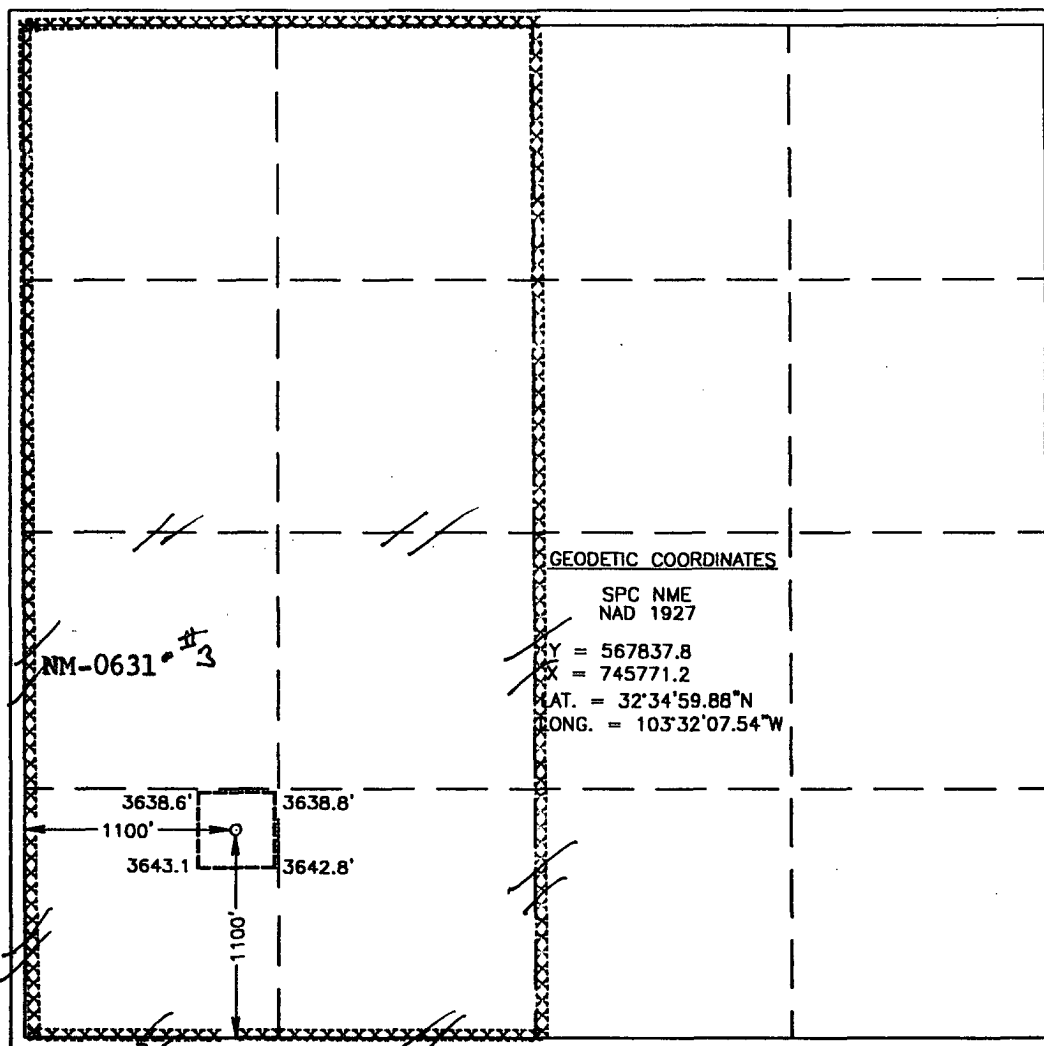
UL or lot No. <b>M</b>	Section <b>11</b>	Township <b>20-S</b>	Range <b>34-E</b>	Lot Idn	Feet from the <b>1100'</b>	North/South line <b>SOUTH</b>	Feet from the <b>1100'</b>	East/West line <b>WEST</b>	County <b>LEA</b>
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Dedicated Acres <b>320 1/2</b>	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  <u>George R. Smith</u> Signature George R. Smith, agent Printed Name Samson Resources Title December 26, 2003 Date
	<b>SURVEYOR CERTIFICATION</b>  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.  May 21, 2003 Date Surveyed AWB Signature & Seal of Professional Surveyor <u>Ronald J. Edson</u> 5/27/03 03.11.0543
	CERTIFICATE NO. 12841
	CERTIFICATE NO. 12841

## APPLICATION FOR DRILLING

### SAMSON RESOURCES

Federal 11-20-34, Well No. 8  
1100' FSL & 1100' FWL, Sec. 11-T20S-R34E  
Lea County, New Mexico  
Lease No.: NM-0631  
(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	1,595'	Bone Spring	8,220'
Top of Salt	1,710'	Wolfcamp	11,020'
Base of salt	3,160'	Strawn	12,000'
Yates	3,530'	Atoka	12,360'
Capitan Reef	3,860'	Morrow	12,740'
Queen	4,860'	T.D.	13,200'
Delaware	5,400'		

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 5600' - 6000', Bone Spring 9650' - 10,300'

Gas: Possible in the Morrow 12,900' - 13,200'

#### 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	LT&C	0' - 1,600'	Circ. 1275 sx. Hall. Prem Plus
11"	8 5/8"	32.0#	K-55	LT&C	0' - 5,000'	Circ. 1155 sx Interfill C & Prem 2 stage w/ DV tool @ 3800'
7 7/8"	5 1/2"	20.0#	P110	LT&C	0' - 13,200'	950 sx Interfill H & super H TOC 4,800'

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

A 11" 10,000 psi WP Shaffer, LWS Double Gate BOP will be installed on the 13 3/8" and operated as a 5000 psi system. The casing and BOP will be tested as per Onshore Oil & Gas Order #2 to the maximum of 1500 psi. (IIIBh) Casing and BOP will be tested before drilling out with the 11" and 7 7/8".

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL	
0' - 1,600':	Fresh water mud:	8.6 - 9.0 ppg	32 - 36	No W/L control
1,600' - 5,000':	Brine mud:	10.0 - 10.1 ppg	28 - 29	No W/L control
	Fresh water if lost circulation encountered.			
5,000' - 10,900':	Fresh water w/cut brine:	8.4 - 9.2 ppg	28 - 29	No W/L control
10,900' - 12,100':	Cut brine:	8.8 - 9.6 ppg	28 - 29	No W/L control
12,100' - 13,200':	Cut brine/XCD polymer:	9.4 - 11.5 ppg	38 - 42	W/L control 15 - 8 cc +/-

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

**SAMSON RESOURCES**

Federal 11-20-34, Well No. 8

Page 2

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

Drill Stem Tests: None unless conditions warrant.

Logging: 5,000' to T.D.: CNL-DNL w/GR-Cal.

5,000' 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 = 5808 psi and surface pressure of 2904 psi with a temperature of 192°.

10. H<sub>2</sub>S: None expected. None expected. None in existing wells in close vicinity, but a Drilling Operations Plan, Exhibit "F" is being submitted to cover this contingency.

11. Anticipated starting date: January 26, 2004.

Anticipated completion of drilling operations: Approximately 5 weeks.

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

### **SAMSON RESOURCES**

Federal 11-20-34, Well No. 8

1100' FSL & 1100' FWL, Sec. 11-R20S-R34E

Lea County, New Mexico

Lease No.: NM-0631

(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 48.5 miles of paved highway and 1.8 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 3.3 miles. Turn west at a Read & Stevens sign, crossing a cattle guard, and continue west for 1.3 mile to the Federal 11-20-34, Well No. 2 pump jack. Turn south for .3 mile; then turn west for .2 mile. The proposed access road will start on the south side of the road and will run south for 900 feet to the southeast corner of the proposed well site.

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

- A. Length and Width: The proposed access road is approximately 900 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 no turnouts.
- D. Culverts: None required.
- E. Cuts and Fills: Some minor cuts on small dunes as approaching location.
- 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 production facilities on the lease at this time.
- B. If the well proves to be commercial, the necessary production facilities, gas production-process equipment, will be installed on the drilling pad.

**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 an approved Federal pit located in the SW4 of Sec. 26-T19S-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, 600' X 600'.
- B. Mat Size: 300' X 210', plus 150' X 150' mud pits. The pits will be on the north.
- B. Cut & Fill: There will be a 1-foot cut on the south with fill to the north.
- 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 northerly slope of .8% from an elevation of 3639'.
- B. Soil: The topsoil on the well site and access road is reddish brown colored fine sand. The soil is of the Wink fine sands 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 access road are 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. See Exhibit "G".
- H. There is evidence of an archaeological site southwest of the well site and should not be impacted. Archaeological Survey Consultants, P.O. Box 2285, Roswell, NM 88202 have conducted an archaeological survey and their report will be submitted to the appropriate government agencies.

**12. OPERATOR'S REPRESENTATIVE:**

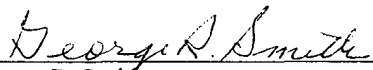
- A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

Billy Goodwin  
Samson Resources  
Samson Plaza-Two West Second St.  
Tulsa, OK 74103-3103  
Office Phone: (918) 591-1822

**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.

December 26, 2003

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

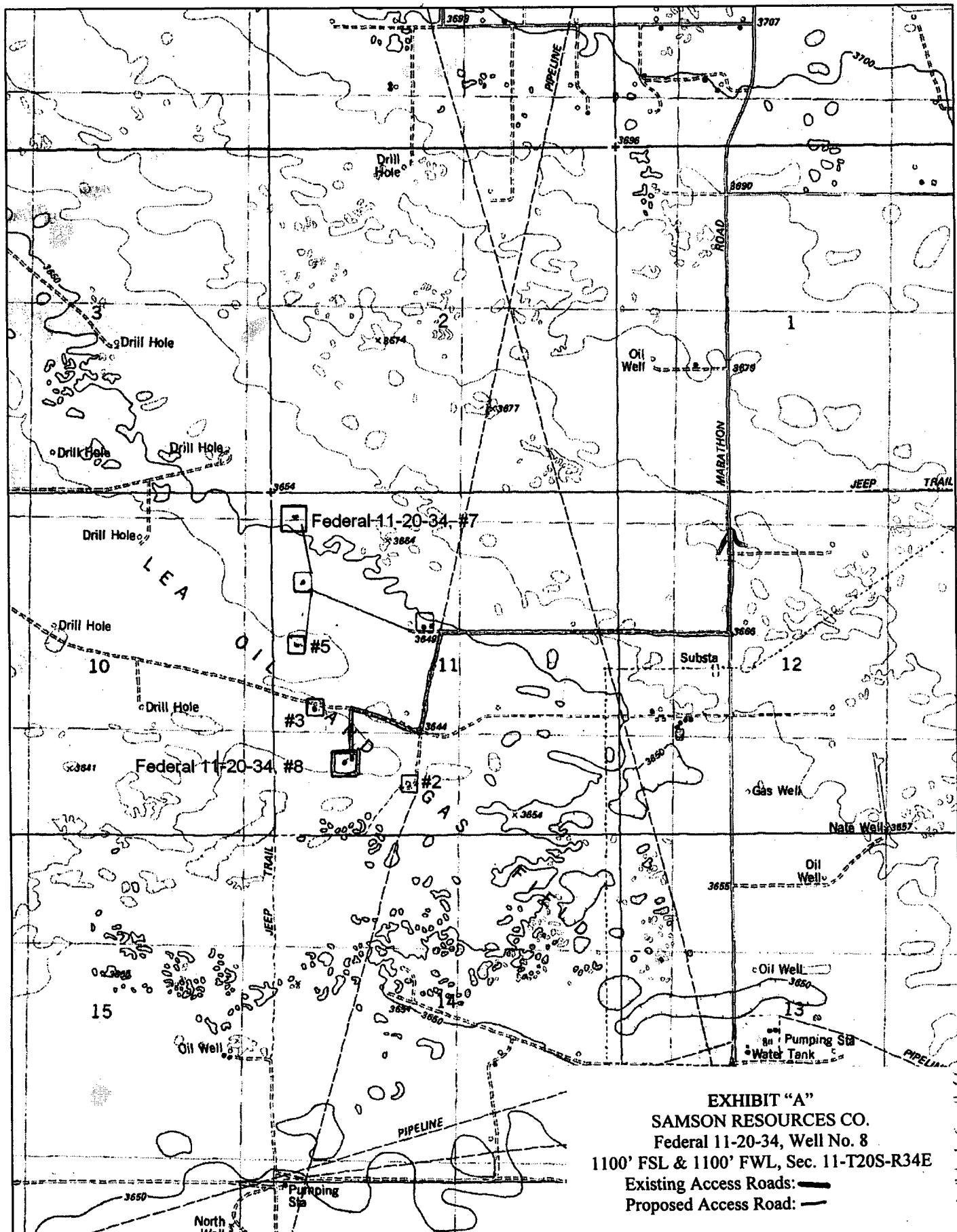
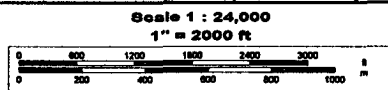


EXHIBIT "A"  
 SAMSON RESOURCES CO.  
 Federal 11-20-34, Well No. 8  
 1100' FSL & 1100' FWL, Sec. 11-T20S-R34E  
 Existing Access Roads: —  
 Proposed Access Road: —

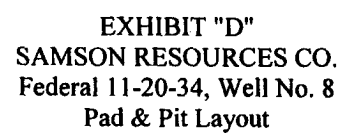
DELOME

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 www.delorme.com



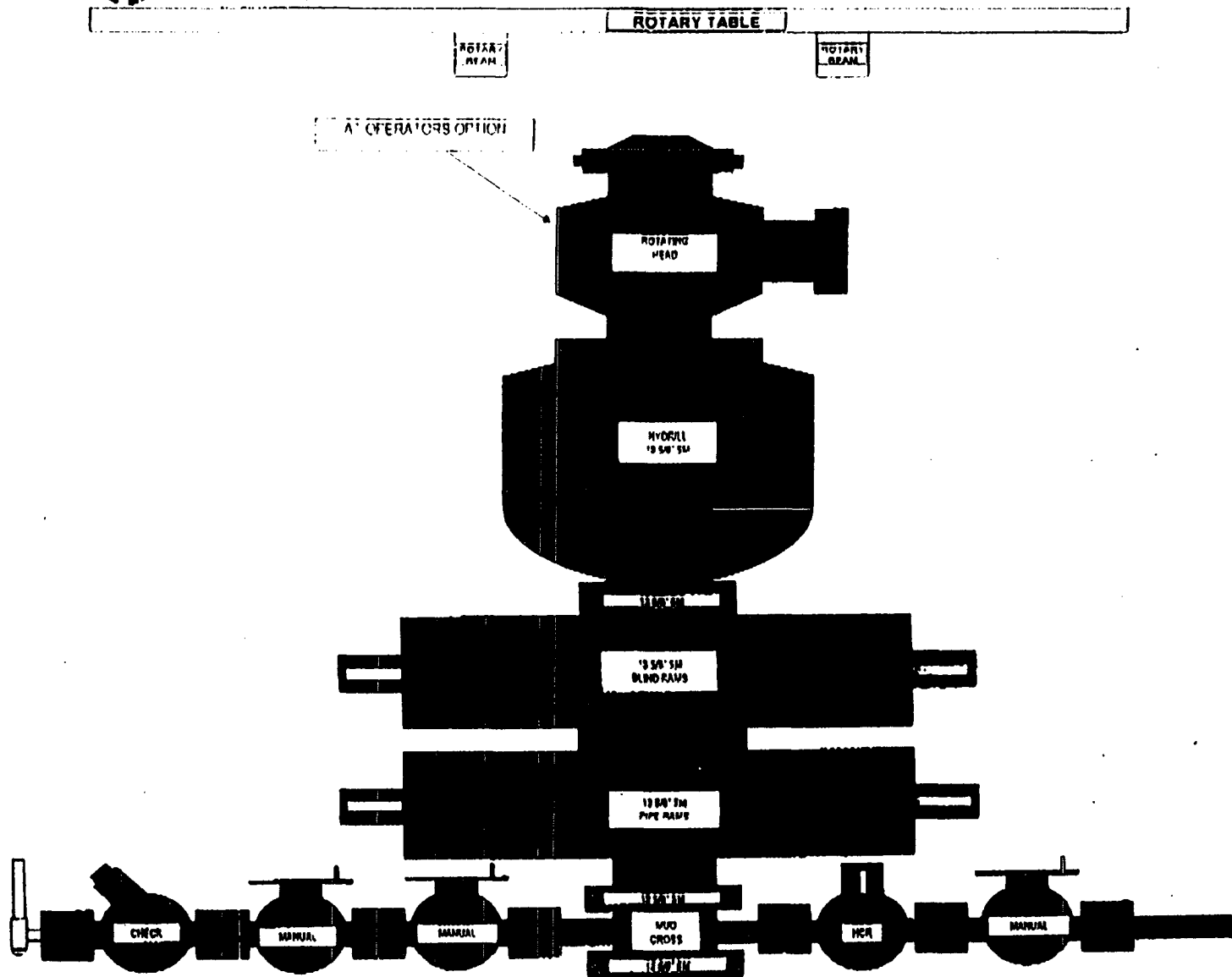
TH  
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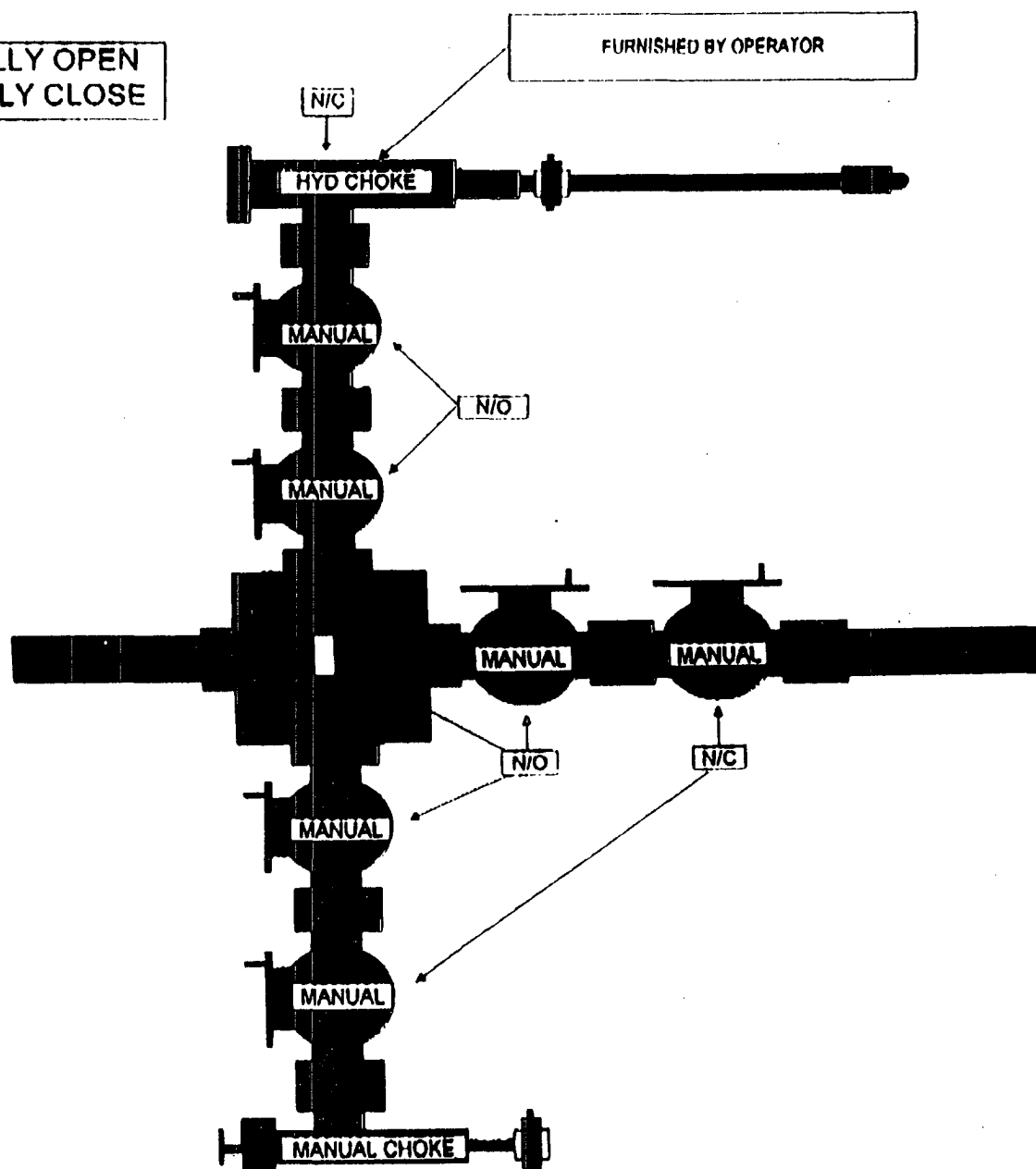


# RIG 715 BOP LAYOUT





N/O = NORMALLY OPEN  
N/C = NORMALLY CLOSE



## **EXHIBIT "F"**

### **SAMSON RESOURCES**

#### **H<sub>2</sub>S DRILLING OPERATIONS PLAN**

For:

Federal 11-20-34, Well No. 8  
1100' FSL & 1100' FWL, Sec. 11-T20S-R34E

#### **I. HYDROGEN SULFIDE TRAINING**

All key personnel whether regularly assigned, contracted or employed on an unscheduled basis will receive or represent that they have received training in accordance with the general training requirements outlined in the API RP49 for safe drilling of wells containing hydrogen sulfide, Section 2.

In addition, supervisory personnel will be trained in the following areas:

1. The corrective action and shut-in procedures when drilling or reworking a well, and blowout prevention in well control procedures.
2. The contents and requirements of the H<sub>2</sub>S drilling operations plan.

#### **II. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested and operational when drilling reaches a depth of 500 feet above the first zone containing or reasonably expected to contain 100 ppm or more hydrogen sulfide.

##### **1. Well Control Equipment:**

- a. Flare line with a continuous pilot.
- b. Choke manifold with a minimum of one choke.
- c. Blind rams and pipe rams and pipe rams to accommodate all drill pipe sizes with a properly sized closing unit.
- d. Auxiliary equipment to include an annular preventer and a rotating head.

##### **2. Protective Equipment:**

- a. Proper protective breathing apparatus shall be readily accessible to all essential personnel on the drill site.

##### **3. H<sub>2</sub>S and Monitoring Equipment:**

- a. Three portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens.

##### **4. Visual Warning Systems:**

- a. Wind direction indicators as shown on well site diagram.
- b. Caution/Danger signs shall be posted on roads providing direct access to location.

**5. Mud Program:**

- a. The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface. Proper mud weight and safe drilling practices will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

**6. Communications:**

- a. Cell phone communication available in all vehicles and at the drilling site.

**7. Well Testing:**

- a. Drillstem testing, if required, will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. When drillstem testing intervals known to or reasonably expected to contain 100 ppm or more H<sub>2</sub>S, the drillstem test will be conducted during daylight hours and formation fluids will not be flowed to the surface.

FROM : CLAY JOHNSON OIL AND GAS PROPE PHONE NO. :

Nov. 04 2003 05:29PM P2

# SELF-CERTIFICATION STATEMENT FROM LESSEE/OPERATOR

## SURFACE OWNER IDENTIFICATION

Federal or Indian Lease No. NM-0631

I hereby certify to the Authorized Officer of the Bureau of Land Management that I have reached one of the following agreements with the Surface Owner; or after failure of my good faith effort to come to an agreement of any kind with the Surface Owner, have provided a bond and will provide evidence of service of such bond to the Surface Owner:

- 1) \_\_\_\_\_ I have a signed access agreement to enter the leased lands;
- 2) \_\_\_\_\_ I have a signed waiver from the surface owner;
- 3) x I have entered into an agreement regarding compensation to the surface owner for damages for loss of crops and tangible improvements.
- 4) \_\_\_\_\_ because I have been unable to reach either 1), 2), or 3) with the surface owner, I have obtained a bond to cover loss of crops and damages to tangible improvements and served the surface owner with a copy of the bond.

Surface owner information: (if available after diligent effort)

Surface Owner Name: Kenneth Smith, Inc.Surface Owner Address: 267 Smith Ranch Road, Hobbs, New Mexico 88240

Surface Owner Phone Number: \_\_\_\_\_

Signed this 22<sup>nd</sup> -- day of October, 2003

Samson Resources Company  
(Name of lessee/operator)

I (Surface Owner) accept ✓ do not accept \_\_\_\_\_ the lessee or operator's Surface Owner Agreement under 1, 2, or 3 above.

Signed this 22 -- day of October, 2003

Kenneth Smith  
(Signature of Surface Owner if an agreement has been reached)

Attachment 1-1

EXHIBIT "G"  
SAMSON RESOURCES CO.  
Federal 11-20-34, Well No. 8  
1100' FSL & 1100' FWL, Sec. 11-T20S-R34E  
Landowner Agreement