

N.M. Oil Cons. Division
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
1625 N. French Dr.
Hobbs, NM 88240

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-14791
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	3b. Phone No. (include area code) (918) 591-1821	8. Lease Name and Well No. New Mexico C Federal, # 2
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 3500' FNL & 660' FEL At proposed prod. zone same		9. API Well No. 30-025-36218
14. Distance in miles and direction from nearest town or post office* 39 miles northeast of Carlsbad, NM		10. Field and Pool, or Exploratory So. Salt Lake Morrow
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 2,282.84	11. Sec., T., R., M., or Blk. and Survey or Area Sec. 4-T21S-R32E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1500'	19. Proposed Depth 14,200'	12. County or Parish Lea
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3695' GL	22. Approximate date work will start* February 10, 2003	13. State NM
17. Spacing Unit dedicated to this well 320		
20. BLM/BIA Bond No. on file NM-2037		
23. Estimated duration 6 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 1/10/03
Title Agent for Samson Resources		
Approved by (Signature) <i>151 TIMOTHY R. SPISAK</i>	Name (Printed/Typed) 151 TIMOTHY R. SPISAK	Date FEB 25 2003
Title Acting STATE DIRECTOR	Office NM STATE 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 SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, requiring the applicant to certify that the information provided is true and correct, 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)

OPER. OGRID NO. 20165
PROPERTY NO. 9914
POOL CODE 84480
EFF. DATE 3-06-03
API NO. 30-025-36218

George R. Smith, agent

Lease Responsibility Statement: Samson Resources accepts all applicable terms concerning operations conducted on the leased land or portion thereof.

DECLARED WATER BASIN
CEMENT BEHIND THE 16"
CASING MUST BE CIRCULATED

R-111-P Potash

CEMENT BEHIND THE 11 3/4"
CASING MUST BE CIRCULATED

CAPTAIN REED
CEMENT BEHIND THE 8 5/8"
CASING MUST BE TIED BACK

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STATE OFFICE

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

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-36218	Pool Code 84480	Pool Name South Salt Lake Morrow
Property Code 9914	Property Name NEW MEXICO C FEDERAL	Well Number 2
OGRID No. 20165	Operator Name SAMSON RESOURCES	Elevation 3695'

Surface Location

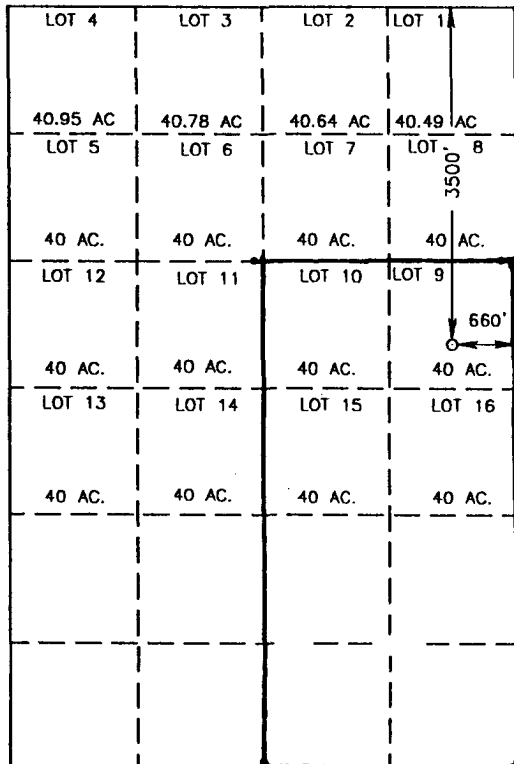
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
9	4	21-S	32-E		3500'	NORTH	660'	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320 (160)			

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



SCALE: 1" = 2000'

OPERATOR CERTIFICATION

I hereby certify the the information
contained hereto is true and complete to the
best of my knowledge and belief.

George R. Smith
Signature
George R. Smith agent for:
Printed Name
Samson Resources
Title
January 10, 2003
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown
on this plat was plotted from field notes of
actual surveys made by me or under my
supervision, and that the same is true and
correct to the best of my belief.

DECEMBER 18, 2002

Date Surveyed
Signature & Seal of
Professional Surveyor
Ronald J. Eidson
12/19/02
02.11.0968
Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

APPLICATION FOR DRILLING

SAMSON RESOURCES

New Mexico C Federal, Well No. 2
3500' FNL & 660' FEL, Sec. 4-T21S-R32E
Lea County, New Mexico
Lease No.: NM-14791
(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	1,385'	Penn Shale	12,100'
Yates	3,260'	Strawn	12,480'
Capitan	3,610'	Atoka	12,880'
Delaware	4,850'	Morrow	13,290'
1 st Bone Spring	8,400'	T.D.	14,200'
Wolfcamp	11,600'		

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 below 4850'.
Gas: Possible in Atoka below 12,880' and the Morrow below 13,290'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
18 1/2"	16"	75.0#	K-55	BT&C	0' - 1,450'	Circ 800 sx "C" cement
14 3/4"	11 3/4"	54.5#	K-55	BT&C	0' - 3,550'	Circ. 1860 sx. HLC Prem Plus
10 5/8"	8 5/8"	32.0#	N-80	LT&C	0' - 4,850'	Circ. 960 sx. Interfill C & Prem
7 7/8"	5 1/2"	20.0#	P110	LT&C	0' - 14,200'	840 sx Interfill H & Super H TOC 6,800'

5. Minimum Specifications for Pressure Control Equipment:

A 13 5/8" 10,000 psi WP Shaffer, LWS Double Gate BOP will be installed on the 11 3/4" casing and tested as per Onshore Oil & Gas Order #2 as a 5,000 psi system.. An annular preventer will be installed on the 16" casing to drill to the 3000" depth. The casing and BOP will be tested before drilling out with the 10 5/8" and 7 7/8". See Exhibit "E".

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL	
0' - 1,450':	Fresh water mud:	8.6 - 9.0 ppg	32 - 36	No W/L control
1,450' - 3,000':	Fresh/native brine	10.0 - 10.1 ppg	28 - 29	No W/L control
3,000' - 4,850':	Fresh water + addit.	8.4 - 8.5 ppg	28 - 29	No W/L control
4,850' - 11,500':	Fresh water/Cut brine	8.4 - 9.2 ppg	28 - 29	No W/L control
11,500' - 12,900':	Cut Brine	8.8 - 9.6 ppg	28 - 29	No W/L control
12,900' - 14,200':	Cut Brine/xcd Polymer	9.4 - 11.5 ppg	38 - 42	W/L control: 15cc to 8cc

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

SAMSON RESOURCES

New Mexico C Federal, Well No. 2

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 = 6336 psi and surface pressure of 3168 psi with a temperature of 204°.

10. H₂S: None expected. The Minis "2" Fed. #1, in Sec. 2 and producing in the Delaware, was tested and is totally sweet, no H₂S. There is no indication of H₂S in the New Mexico A Fed. Wells 2 – 6 Delaware.

11. Anticipated starting date: January 30, 2003.

Anticipated completion of drilling operations: Approximately 6 weeks.

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MULTI POINT SURFACE USE AND OPERATIONS PLAN

SAMSON RESOURCES

New Mexico C Federal, Well No. 2
3500' FNL & 660' FEL, Sec. 4-R21S-R32E
Lea County, New Mexico
Lease No.: NM-14791
(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 40 road miles northeast of Carlsbad, New Mexico. Traveling east from Carlsbad there will be approximately 37.0 miles of paved highway and 2.5 miles of gravel county roads.
- B. Directions: Travel east from Carlsbad, NM on U.S. Highway 62/180 for approximately 32 miles to NM Highway #176. Turn southeast on NM #176 for 4.6 miles. Turn south for 1.3 miles on Salt Lake Rd. and then west on Hat Mesa Rd. for 1.25 miles to the start of the proposed access road on the north (right). The proposed access road will run north for 1500 feet to the southeast corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed access road is approximately 1500 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 at the midpoint, increasing the road width to 20 feet for passing.
- D. Culverts: None required.
- E. Cuts and Fills: None required.
- F. Gates, Cattle guards: None required.
- G. Off Lease R/W: A right of way, if required, will be applied for..

3. LOCATION OF EXISTING WELLS:

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

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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 and tank battery, if required, 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 SENE of Sec. 11-T21S-R32E or will clear and reopen a closed pit in the NENW of Sec. 4-T21S-R32E. 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.

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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, 400' X 400'.
- B. Mat Size: 300' X 210', plus 150' X 150' mud pits. The pits will be on the north.
- C. Cut & Fill: There will be a 2 foot cut on the south 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 northwest of Hat Mesa. The location has a northwesterly slope of 1% from an elevation of 3695'.
- B. Soil: The topsoil on the well site and access road is a reddish brown colored fine sand. The soil is of the Pyote and Maljamar fine sands Soils Series.
- C. Flora and Fauna: The vegetation at the well site is a sparse to fair grass cover of three-awn, dropseed, burrograss, muhly and other miscellaneous native grasses along with plants of mesquite, yucca, sage, shinny oak brush, broomweed, cacti, buckwheat 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 Federal surface.
- H. There is no evidence of archaeological, historical or cultural sites in the area. Archaeological Survey Consultants, P.O. Box 2285, Roswell, NM 88202 are conducting an archaeological survey and their report will be submitted to the appropriate government agencies.

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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.

January 10, 2003


George R. Smith
Agent for: Samson Resources

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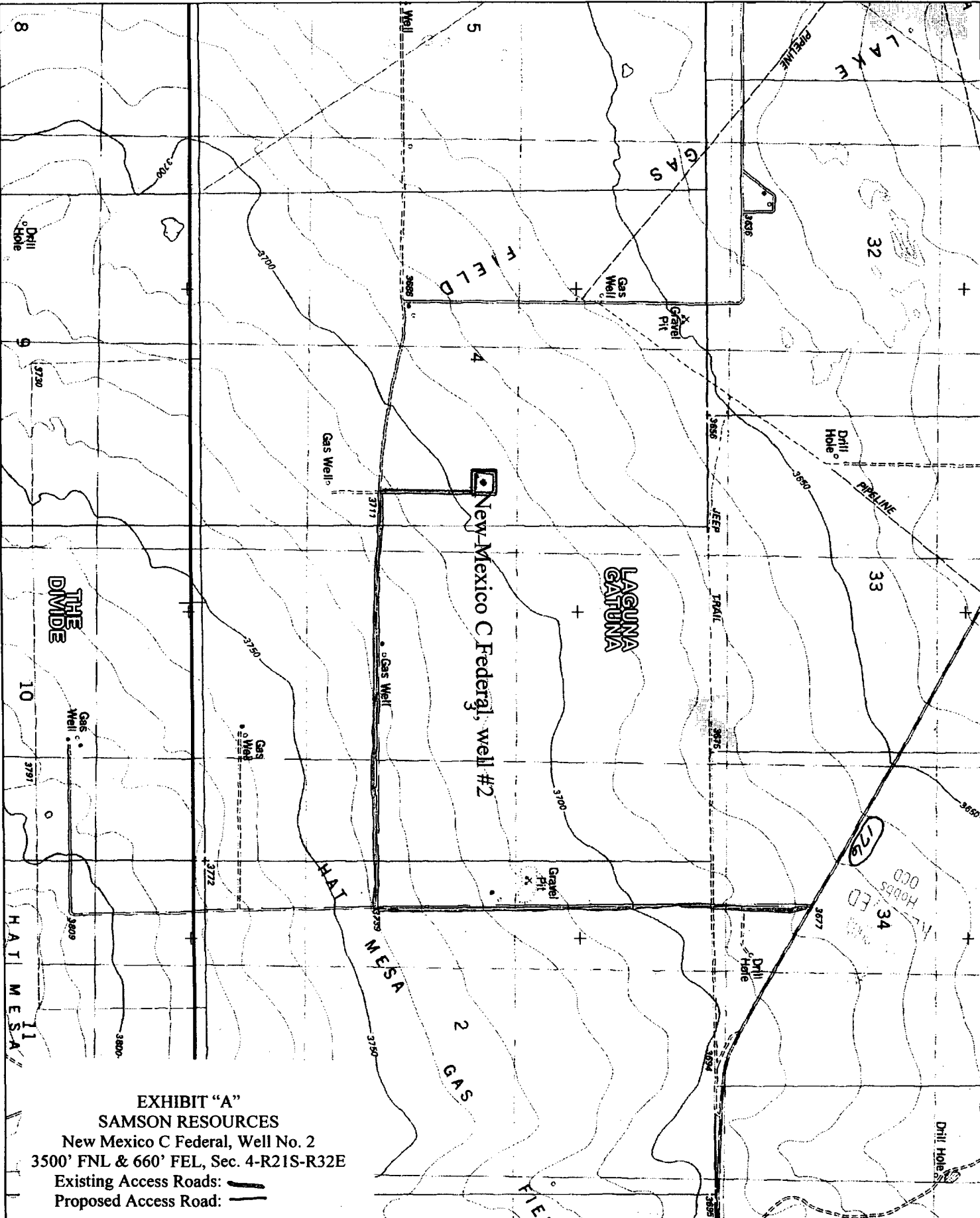




EXHIBIT "A"
SAMSON RESOURCES

New Mexico C Federal, Well No. 2
3500' FNL & 660' FEL, Sec. 4-R21S-R32E
Existing Access Roads: 
Proposed Access Road: 

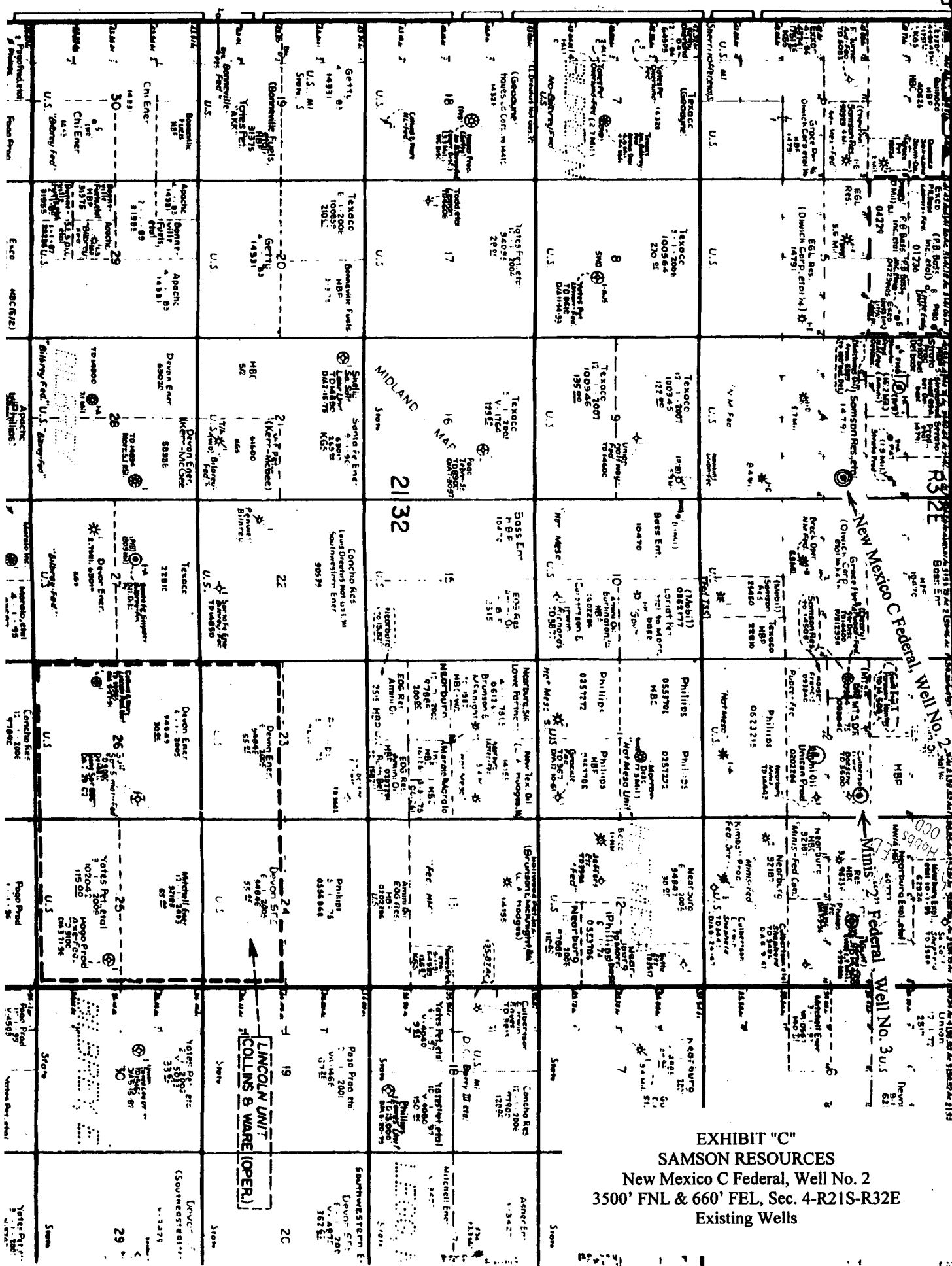
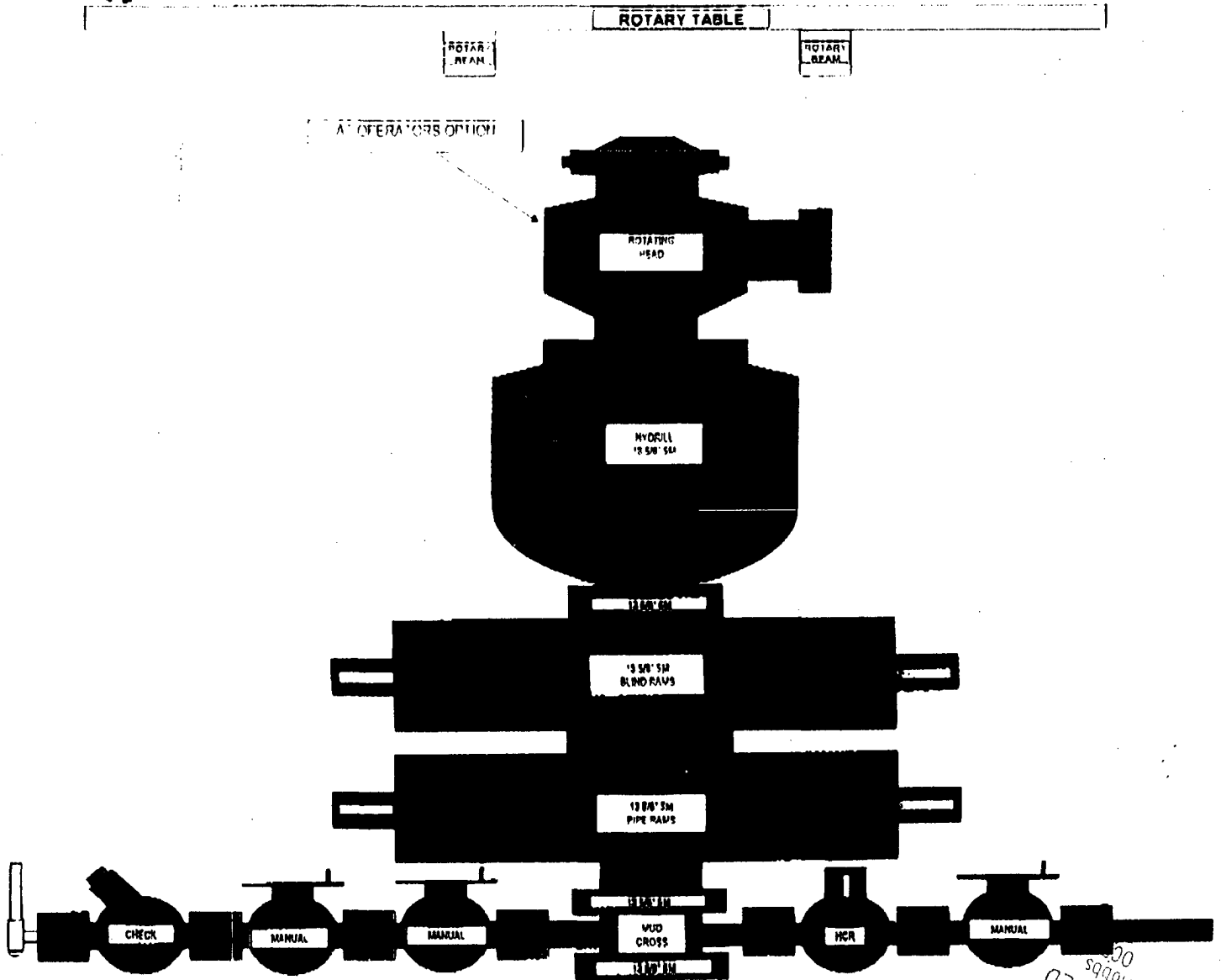


EXHIBIT "C"
SAMSON RESOURCES
New Mexico C Federal, Well No. 2
3500' FNL & 660' FEL, Sec. 4-R21S-R32E
Existing Wells



RIG 715 BOP LAYOUT



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EXHIBIT "E"
SAMSON RESOURCES
New Mexico C Federal, Well No. 2
BOP Specifications



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

