

New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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-2515		
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. Minis 2 Federal Com., # 4		
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1944' FNL & 660' FEL At proposed prod. zone same			9. API Well No. 30-025-36290		
14. Distance in miles and direction from nearest town or post office* 39 miles northeast of Carlsbad, NM			10. Field and Pool, or Exploratory Hat Mesa Morrow		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'			11. Sec., T., R., M., or Blk. and Survey or Area Sec. 2-T21S-R32E		
16. No. of Acres in lease 716.36			12. County or Parish Lea		
17. Spacing Unit dedicated to this well 320 (160)			13. State NM		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2600' (com)			19. Proposed Depth 14,200'		
20. BLM/BIA Bond No. on file NM-2037			21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3659' GL		
22. Approximate date work will start* June 15, 2003			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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>George R. Smith</i>		Name (Printed/Typed) George R. Smith		Date 3/19/03
Title Agent for Samson Resources		Name (Printed/Typed) SI RICHARD A. WHITLEY		Date MAY 16 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 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**

George R. Smith
George R. Smith, agent

OPER. OGRID NO. **20165**
PROPERTY NO. **30845**
POOL CODE **78240**
EFF. DATE **5-27-03**
API NO. **30-025-36290**

DISTRICT I
P.O. Box 1080, Hobbs, NM 88241-1080

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 30-025-36290	Pool Code 78240	Pool Name Hat Mesa Morrow
Property Code 30845	Property Name MINIS 2 FEDERAL COM.	Well Number 4
OGRID No. 20165	Operator Name SAMSON RESOURCES	Elevation 3715'

Surface Location

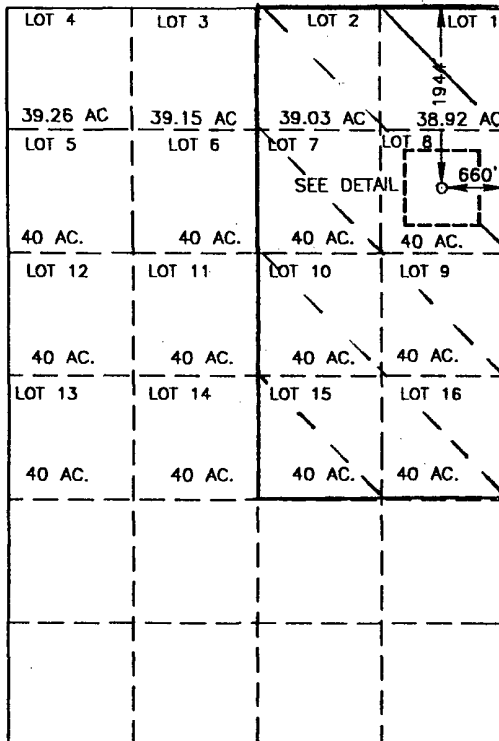
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
8	2	21-S	32-E		1944'	NORTH	660'	EAST	LEA

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



DETAIL

SCALE: 1" = 2000'

OPERATOR CERTIFICATION

I hereby certify the the information
contained herein 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
March 19, 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.

FEBRUARY 27, 2003

Date Surveyed
Signature & Seal of
Professional Surveyor

Gary R. Edson
03.11.0255
3/3/03

Certificate No. RONALD J. EDSON 3239
GARY EDSON 12841

APPLICATION FOR DRILLING

SAMSON RESOURCES CO.

Minis "2" Federal Com., Well No. 4
1944' FNL & 660' FEL, Sec. 2-T21S-R32E
Lea County, New Mexico
Lease No.: NM-2515
(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	1,530'	Penn Shale	12,200'
Yates	3,150'	Strawn	12,850'
Capitan	3,529'	Atoka	13,060'
Delaware	5,530'	Morrow	13,600'
1 st Bone Spring	9,535'	T.D.	14,400'
Wolfcamp	11,650'		

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 5530'.

Gas: Possible in Atoka below 13,060' and the Morrow below 13,600'.

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' - 1,590'	Circ 750 sx "C" cement
14 3/4"	11 3/4"	54.5#	K-55	BT&C	0' - 3,150'	Circ. 1330 sx. HLC Prem Plus
10 5/8"	8 5/8"	32.0#	N-80	LT&C	0' - 5,350'	Circ. 775 sx. Interfill C & Prem
7 7/8"	5 1/2"	20.0#	P110	LT&C	0' - 14,400'	800 sx Interfill H & Super H TOC 8000'

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 3150" 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' - 1,590': Fresh water mud:	8.6 - 9.0 ppg	32 - 36	No W/L control
1,590' - 3,150': Fresh/native brine	10.0 - 10.1 ppg	28 - 29	No W/L control
3,150' - 5,350': Fresh water + addit.	8.4 - 8.5 ppg	28 - 29	No W/L control
5,350' - 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' - 14,400': 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 CO.

Minis "2" Federal Com., Well No. 4

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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 producing in the Delaware was tested and is totally sweet, no H₂S.

11. Anticipated starting date: June 15, 2003.

Anticipated completion of drilling operations: Approximately 6 weeks.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

SAMSON RESOURCES

Minis "2" Federal, Well No. 4
1944' FNL & 660' FEL, Sec. 2-R21S-R32E
Lea County, New Mexico
Lease No.: NM-2515
(Exploratory 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 37.5 miles of paved highway and 2.0 miles of gravel ranch/oilfield 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 5.3 miles. Turn south on oil field road at a Phillips Petroleum and a Conoco sign onto a good gravel road. Continue south for 1.3 miles to the Minis 1 Fed. #2 well site 500 feet west (right) of the road. Turn north onto the well pad and take the road north and west from the northeast corner of the pad. This access road runs .4 mile to the Minis "2" Federal, Well No. 1 well pad. The start of the proposed access road is on the northeast corner of the pad. The road will run north for 2150 feet to the southeast corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed access road is approximately 2150 feet in length and is color coded 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 at least two turnouts, increasing the road width to 20 feet for passing.
- D. Culverts: None required.
- E. Cuts and Fills: None required except the leveling of small dunes.
- F. Gates, Cattle guards: None required.
- G. Off Lease R/W: R/W # NM-107207 was issued for the Minis 2 Federal, well No. 1.

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. A 3" steel 3200 psi gas flow line, with maximum of 1000 psi operating pressures, will be buried and will run parallel to the access road back to the Minis "2" Fed., Well No.1 well site and gas pipeline. A 3" 600 psi PVC surface water line may be required and will also run parallel to the access road back to the Minis #1 well 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 an approved Federal pit in the SENE Sec. 11-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.

9. WELL SITE LAYOUT:

- A. Exhibit "D" shows the relative location and dimensions of the well pad, reserve pits, and major rig components.
- B. Mat Size: 300' X 210', plus 150' x 150' mud pits on the north.
- C. Cut & Fill: There will be a 2.5 – 3 foot cut on the west with fill to the east and northeast.
- 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 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 on the north side of Hat Mesa. The location has a northeasterly slope of 1.5% from an elevation of 3715'.
- B. Soil: The topsoil on the well site and access road is a light brown colored fine sand. The soil is of the Pyote and Maljamar fine sands complex Soils Series.
- C. Flora and Fauna: The vegetation at the well site is a sparse to fair grass cover of threeawn, dropseed, burrograss, longspine sandbur and other miscellaneous native grasses along with plants of mesquite, yucca, sage, shinnery 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.

12. OPERATOR'S REPRESENTATIVE:


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

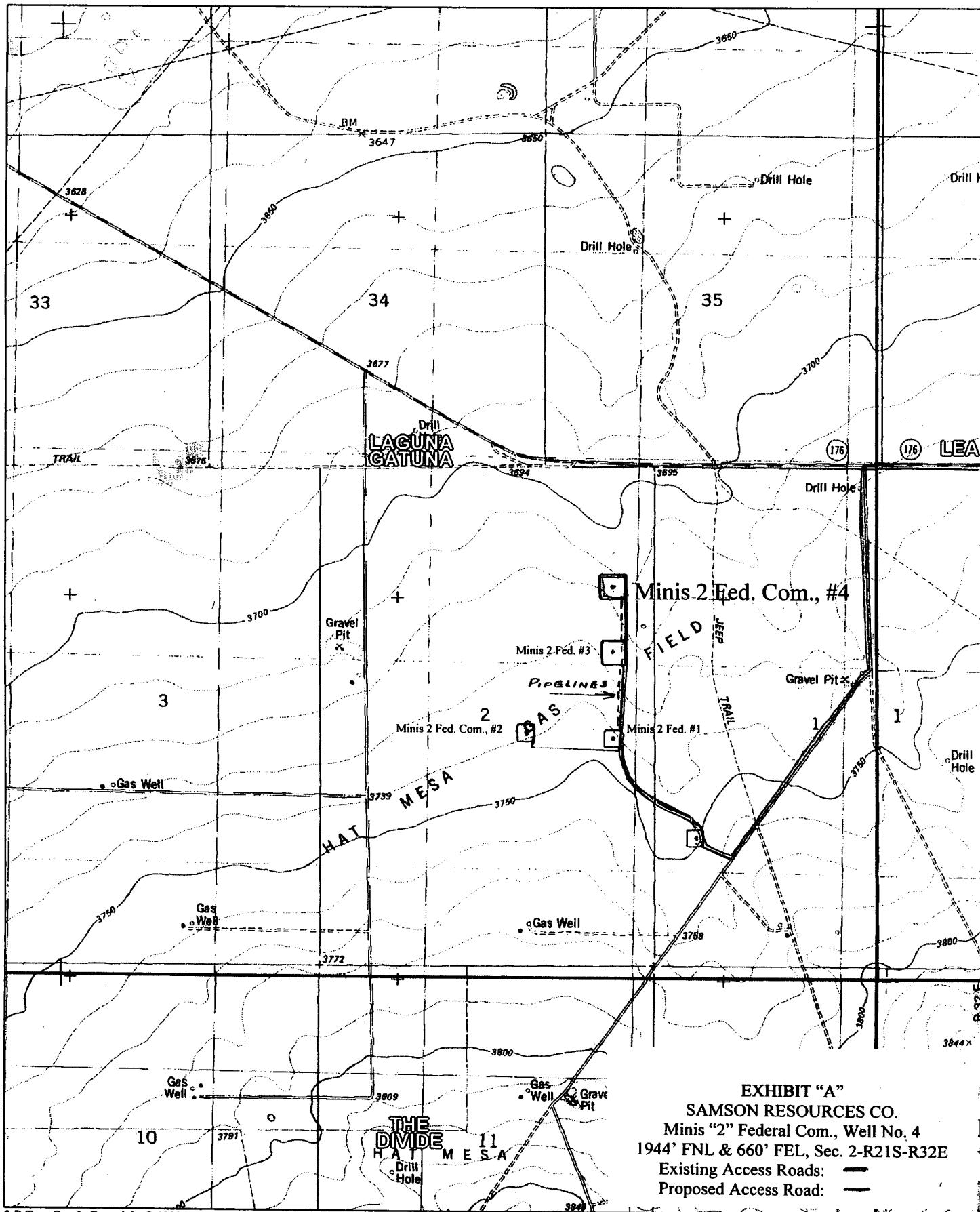
Kevin Olsen
Samson Resources
Samson Plaza-Two West Second St.
Tulsa, OK 74103-3103
Office Phone: (918) 591-1821

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.

March 19, 2003


George R. Smith
Agent for: Samson Resources



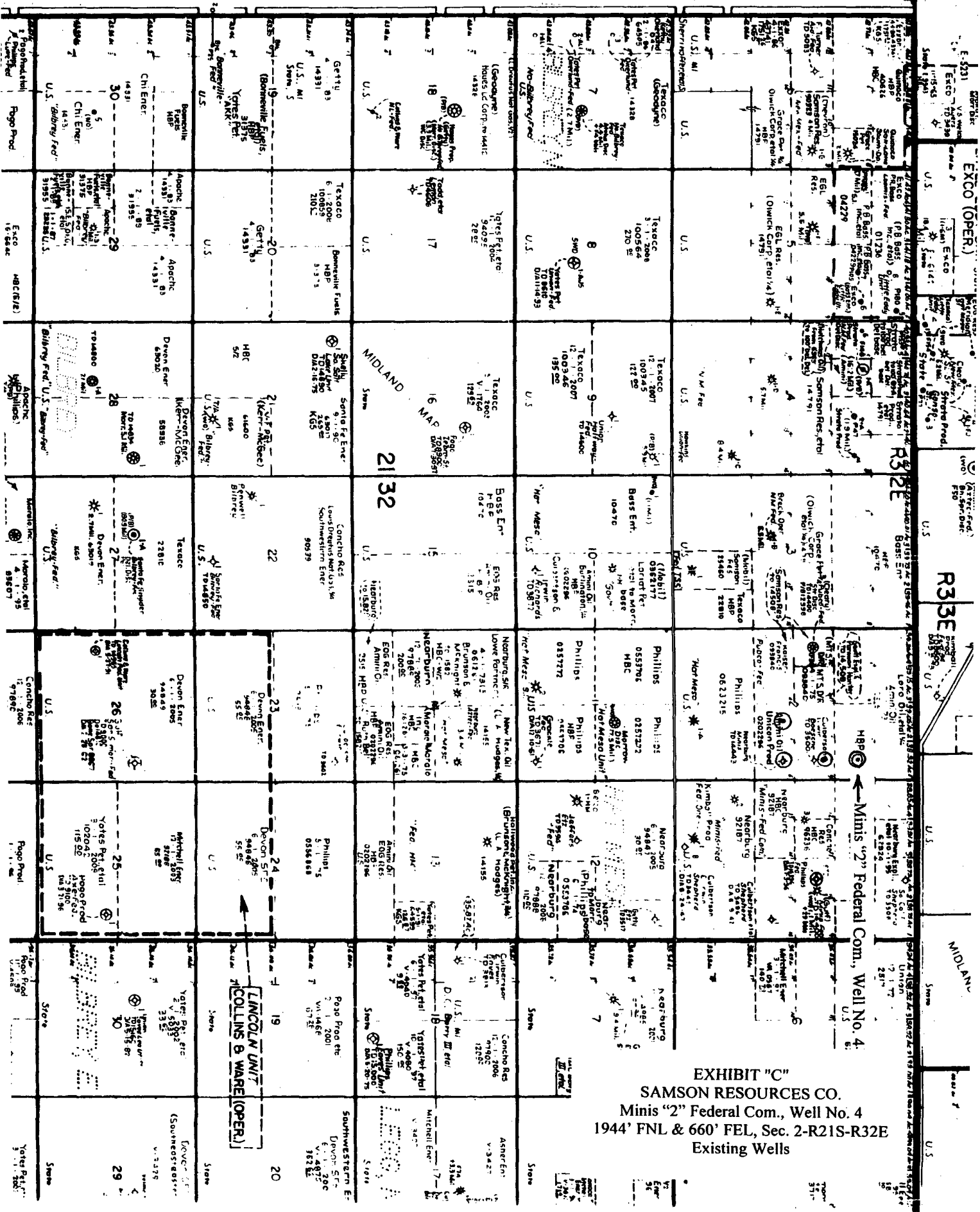


EXHIBIT "C"
SAMSON RESOURCES CO.
Minis "2" Federal Com., Well No. 4
1944' FNL & 660' FEL, Sec. 2-R21S-R32E
Existing Wells

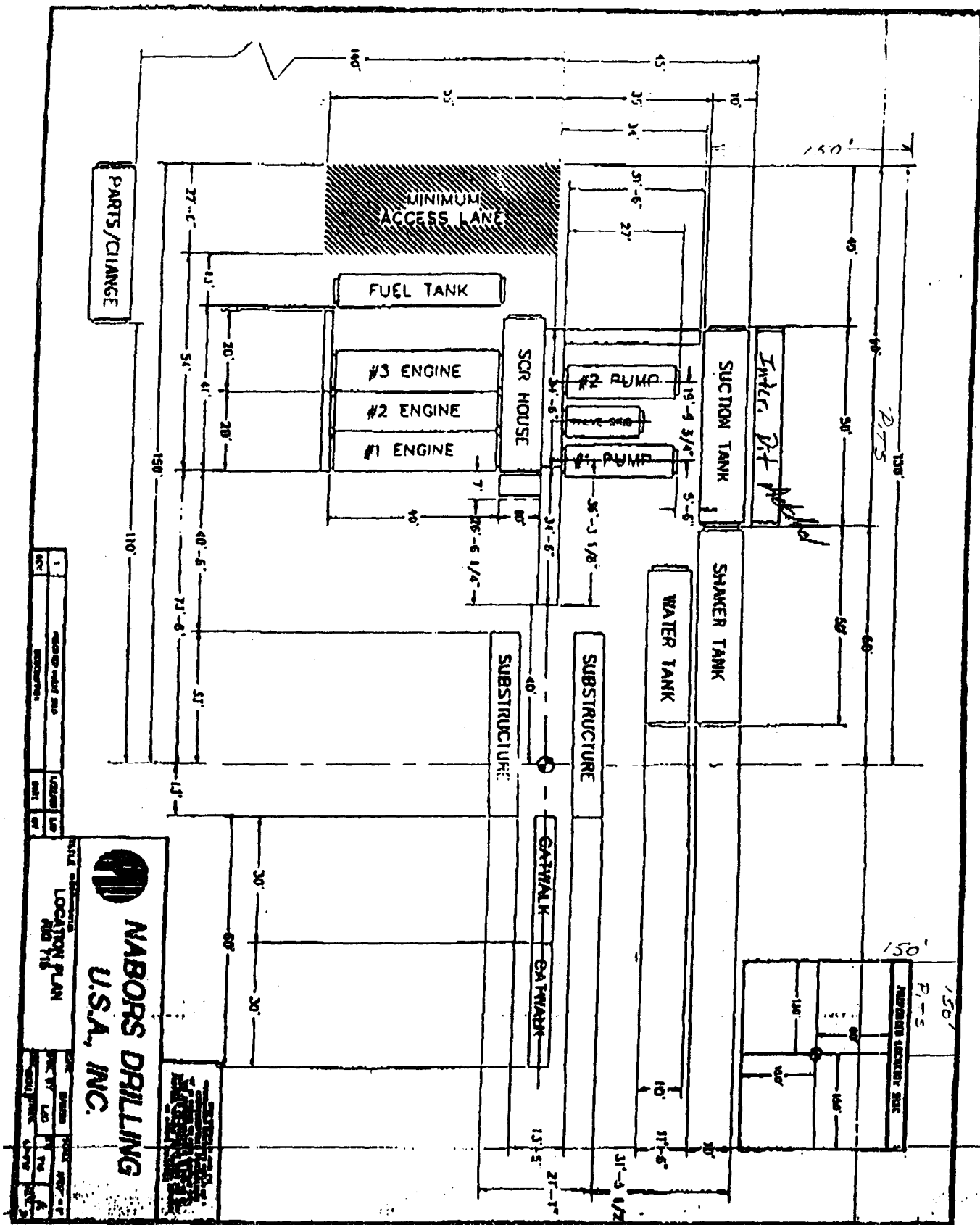


EXHIBIT "D"
SAMSON RESOURCES CO.
Minis "2" Federal Com., Well No. 4
Pad & Pit Layout



RIG 715 BOP LAYOUT

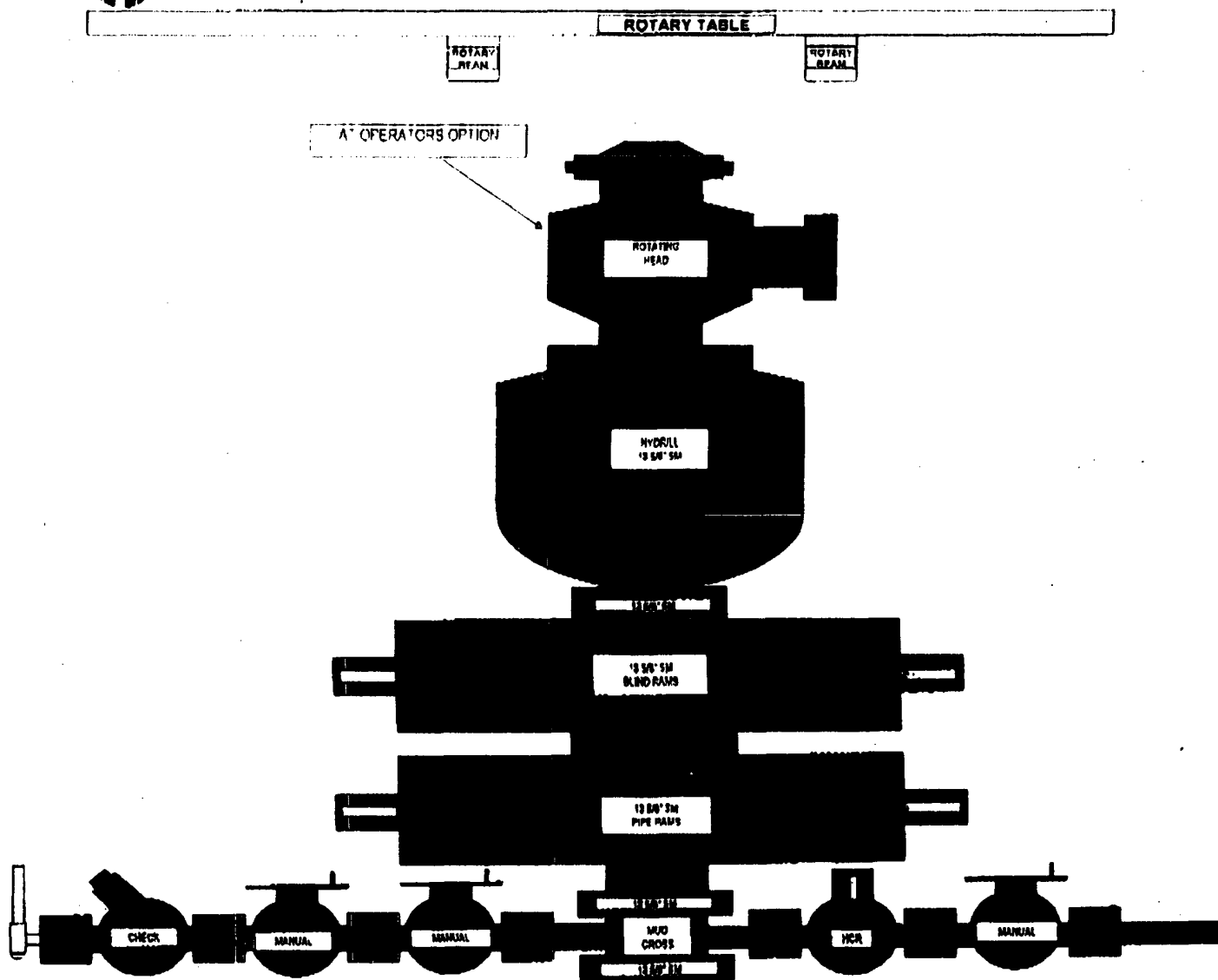


EXHIBIT "E"
 SAMSON RESOURCES CO.
 Minis "2" Federal Com., Well No. 4
 BOP Specifications



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

