

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

APPLICATION FOR PERMIT TO DRILL OR REENTER

R-111-POTASH

G-06-03

5. Lease Serial No.

NM-14791

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

Federal TSS Com., # 2

9. API Well No.

30-025-37868

10. Field and Pool, or Exploratory

Hat Mesa Morrow

11. Sec., T., R., M., or Blk. and Survey or Area

Sec. 3-T21S-R32E

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

3a. Address

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

3b. Phone No. (include area code)

(918) 591-1531

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

At surface 1650' FSL & 990' FWL

At proposed prod. zone same

Unit 2
Controlled Controlled Water Bank

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

39 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) 990'

16. No. of Acres in lease

2282.84

17. Spacing Unit dedicated to this well

320 (160)

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. 2000'

19. Proposed Depth

14,200'

20. BLM/BIA Bond No. on file

NM-2037

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

3731' GL

22. Approximate date work will start*

June 19, 2006

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

George R. Smith

Name (Printed/Typed)

George R. Smith

Date

03/30/06

Title

Agent for Samson Resources

Approved by (Signature)

1st DAVID B. SINCLAIR

Name (Printed/Typed)

1st DAVID B. SINCLAIR

Date

MAY 09 2006

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 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, agent

Witness Surface &
Intermediate Casing

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

DISTRICT II
P.O. Box 2088, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Artesia, 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 3D-025-37868	Pool Code 28800 78240	Pool Name Hat Mesa Morrow
Property Code 9927	Property Name FEDERAL TSS COM.	Well Number 2
OGRID No. 20165	Operator Name SAMSON RESOURCES	Elevation 3731'

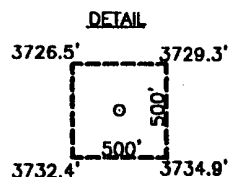
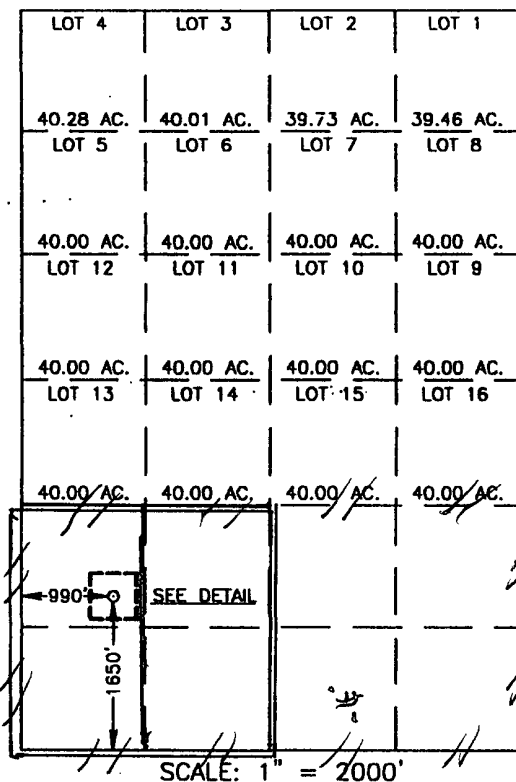
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
T	3	21-S	32-E		1650	SOUTH	990	WEST	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 320 (160)	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



GEODETIC COORDINATES
SPC NME
NAD 1927
Y = 548060.9 N
X = 705286.1 E
LAT. - 32°30'17.88"N
LONG. - 103°40'02.78"W

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
October 24, 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.

SEPTEMBER 29, 2003

Date Surveyed
Signature of Surveyor
Professional Surveyor
NEW MEXICO
GARY EIDSON
03.11.1073
Certified by Mr. GARY EIDSON
12841

APPLICATION FOR DRILLING

SAMSON RESOURCES
Federal TSS Com., Well No. 2
1650' FSL & 990' FWL, Sec. 3-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 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
1,450' - 3,000':	Fresh/native brine	10.0 - 10.1 ppg	28 - 29
3,000' - 4,850':	Fresh water + addit.	8.4 - 8.5 ppg	28 - 29
4,850' - 11,500':	Fresh water/Cut brine	8.4 - 9.2 ppg	28 - 29
11,500' - 12,900':	Cut Brine	8.8 - 9.6 ppg	28 - 29
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

Federal TSS Com., 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 = 6248 psi and surface pressure of 3124 psi with a temperature of 204°.

10. H_2S : None expected. The Minis "2" Fed. #1, in Sec. 2 and producing in the Delaware, was tested and is totally sweet, no H_2S . There is no indication of H_2S in the New Mexico A Fed. Wells 2 – 6 Delaware. The Mud Log Unit will be 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: June 19, 2006.

Anticipated completion of drilling operations: Approximately 6 weeks.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

SAMSON RESOURCES
TSS Federal Com., Well No. 2
1650' FSNL & 990' FWL, Sec. 3-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 2.2 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 .9 mile to a road stake on the left. The proposed access road is staked south for 1000 ft. to the NE corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed access road will be approximately 1000 feet in length and 12 feet wide (24' Max.). The proposed and existing roads are color coded on Exhibit "A".
- B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche. The surface will be properly drained.
- C. Turnouts: None required.
- D. Culverts: None required.
- E. Cuts and Fills: None required.
- 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 and tank battery, if required, 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 proposed access road and west on Hat Mesa Road to the Duke compressor station and then north to the New Mexico C Federal, Well No. 2 well site gas connection previously approved on a Sundry Notice.

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 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.

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 140' X 170' mud pits. The pits will be on the north.
- C. Cut & Fill: There will be a 1.5-2 foot cut on the southeast with fill to the northwest.
- 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 northwest of Hat Mesa. The location has a northwesterly slope of 1.6 % from an elevation of 3731'.
- B. Soil: The topsoil on the well site and access road is 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, sparse 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 has conducted an archaeological survey and their report was submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

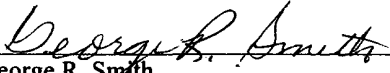
- A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

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.

March 29, 2006


George R. Smith
Agent for: Samson Resources

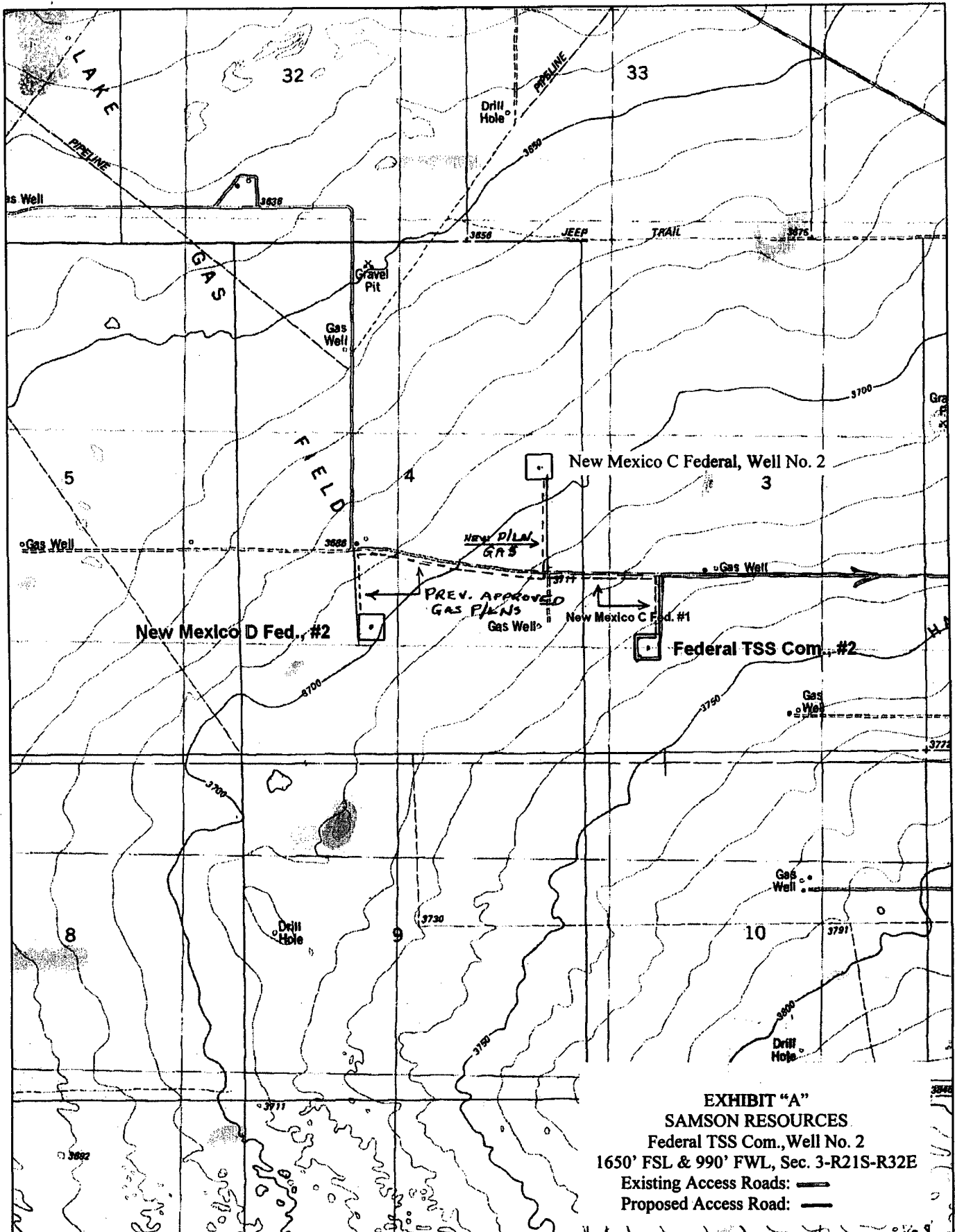


EXHIBIT "A"
SAMSON RESOURCES
 Federal TSS Com., Well No. 2
 1650' FSL & 990' FWL, Sec. 3-R21S-R32E
 Existing Access Roads: ———
 Proposed Access Road: ———



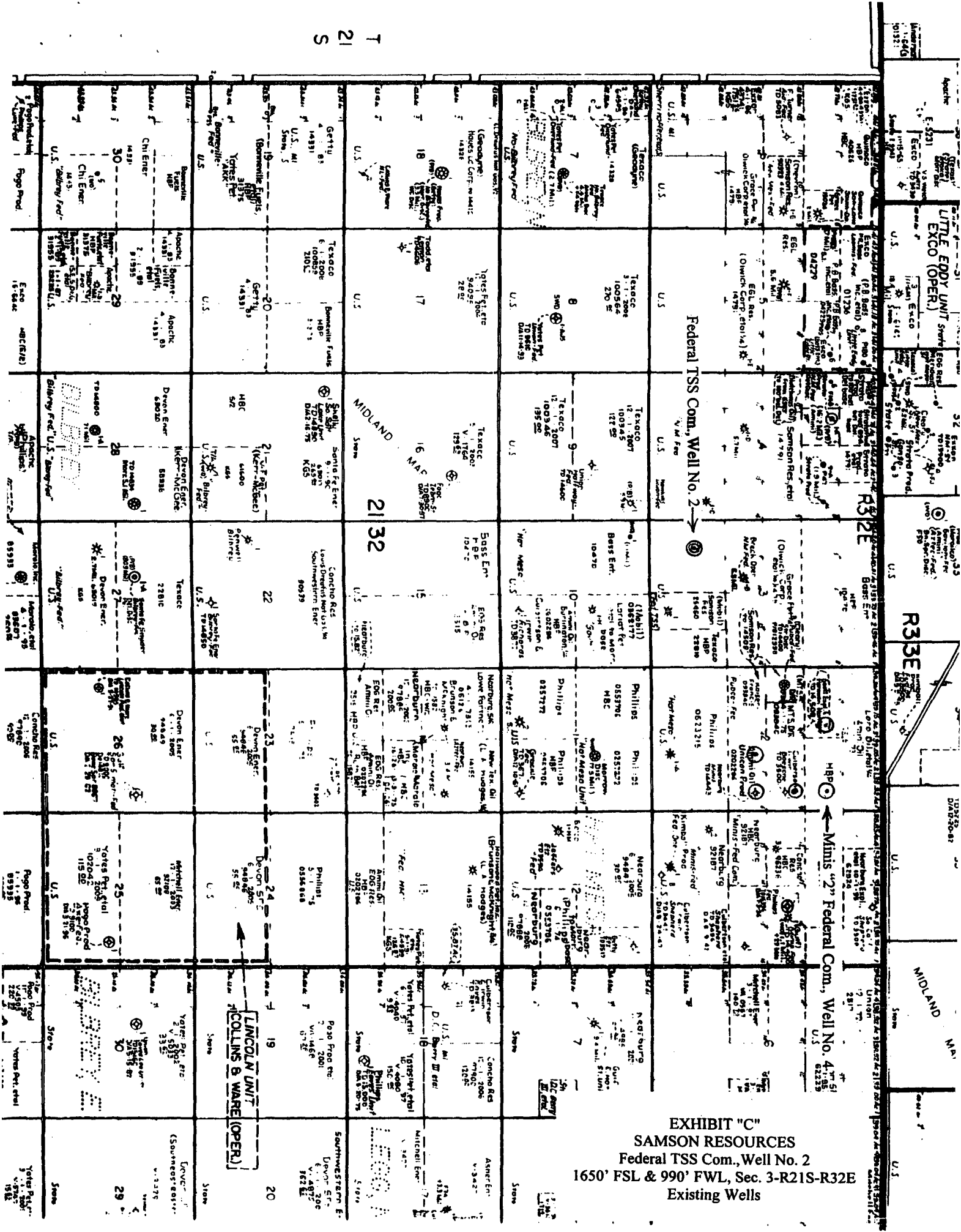


EXHIBIT "C"
SAMSON RESOURCES
Federal TSS Com., Well No. 2
1650' FSL & 990' FWL, Sec. 3-R21S-R32E
Existing Wells

20,000'

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

3 -- Calatpillars3500, 9001 IP w/720kW generators

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

24' height 21' vertical clear height under rotary beams

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

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

(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

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

24 hour direct cellular telephone

Blocks. Gardner-Denver 550 ton 6 sheaves 1 3/8" line
Hook. Joy 500 ton hook
Swivel. Garner-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

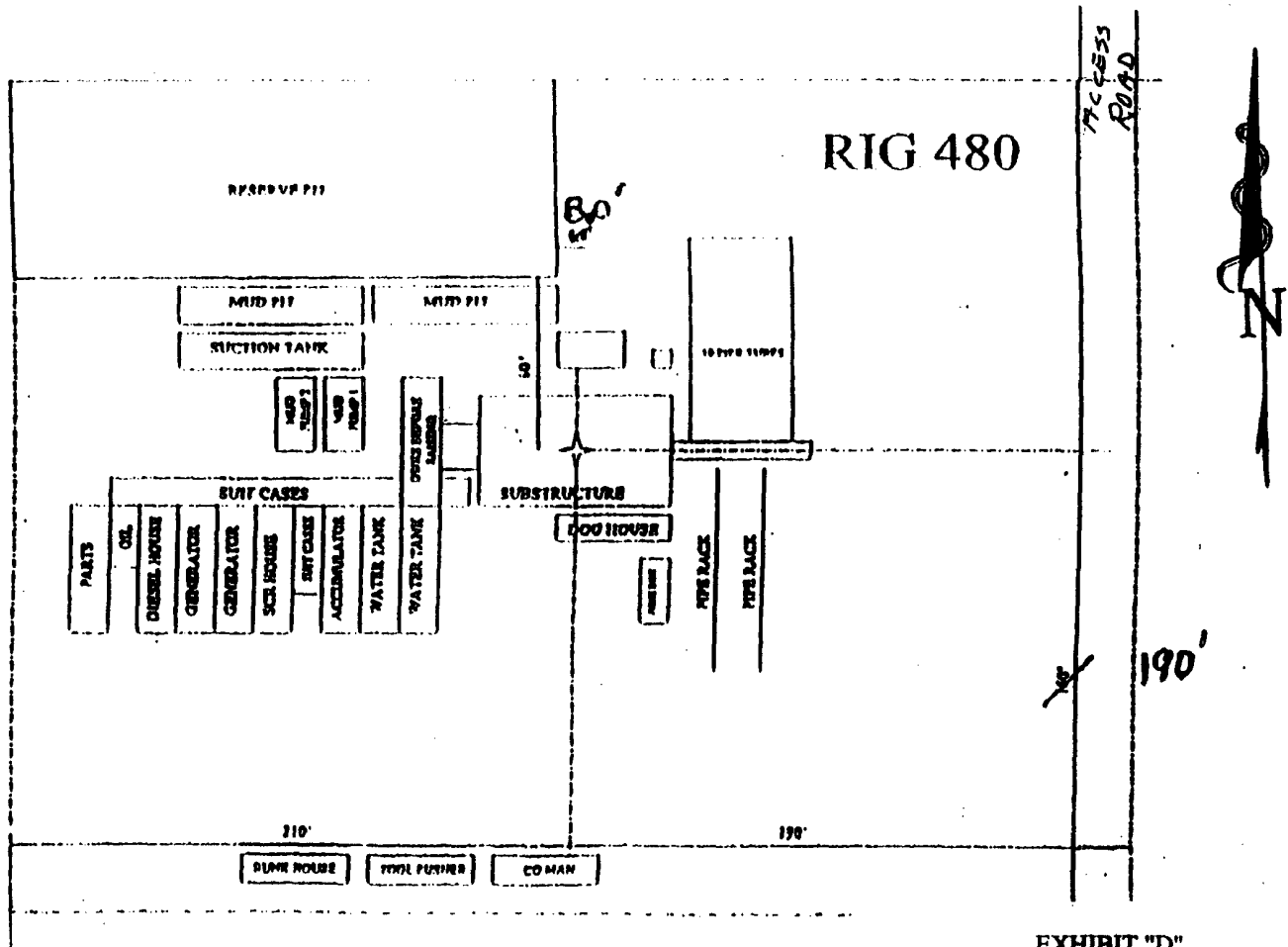


EXHIBIT "D"
SAMSON RESOURCES
Federal TSS Com., Well No. 2
Pad & Pit Layout

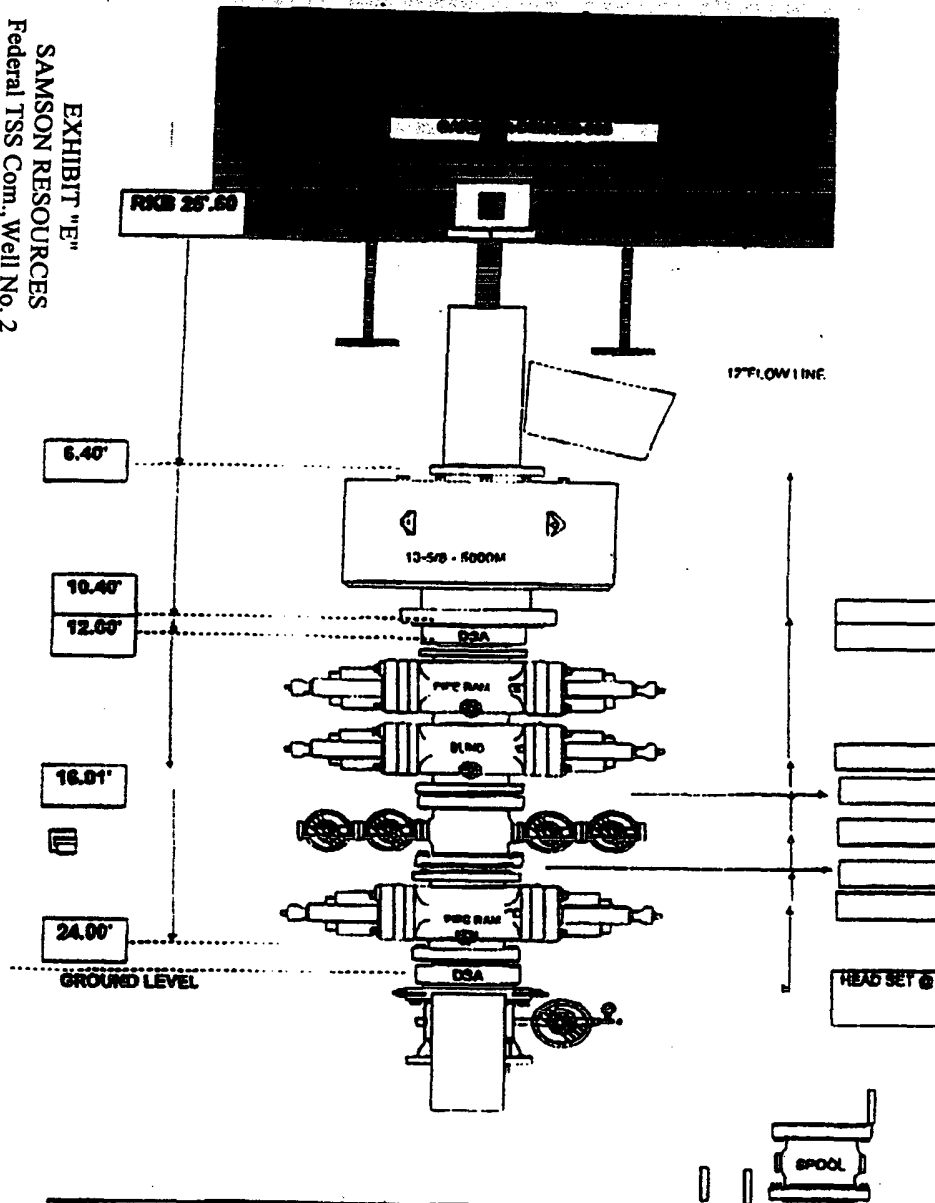
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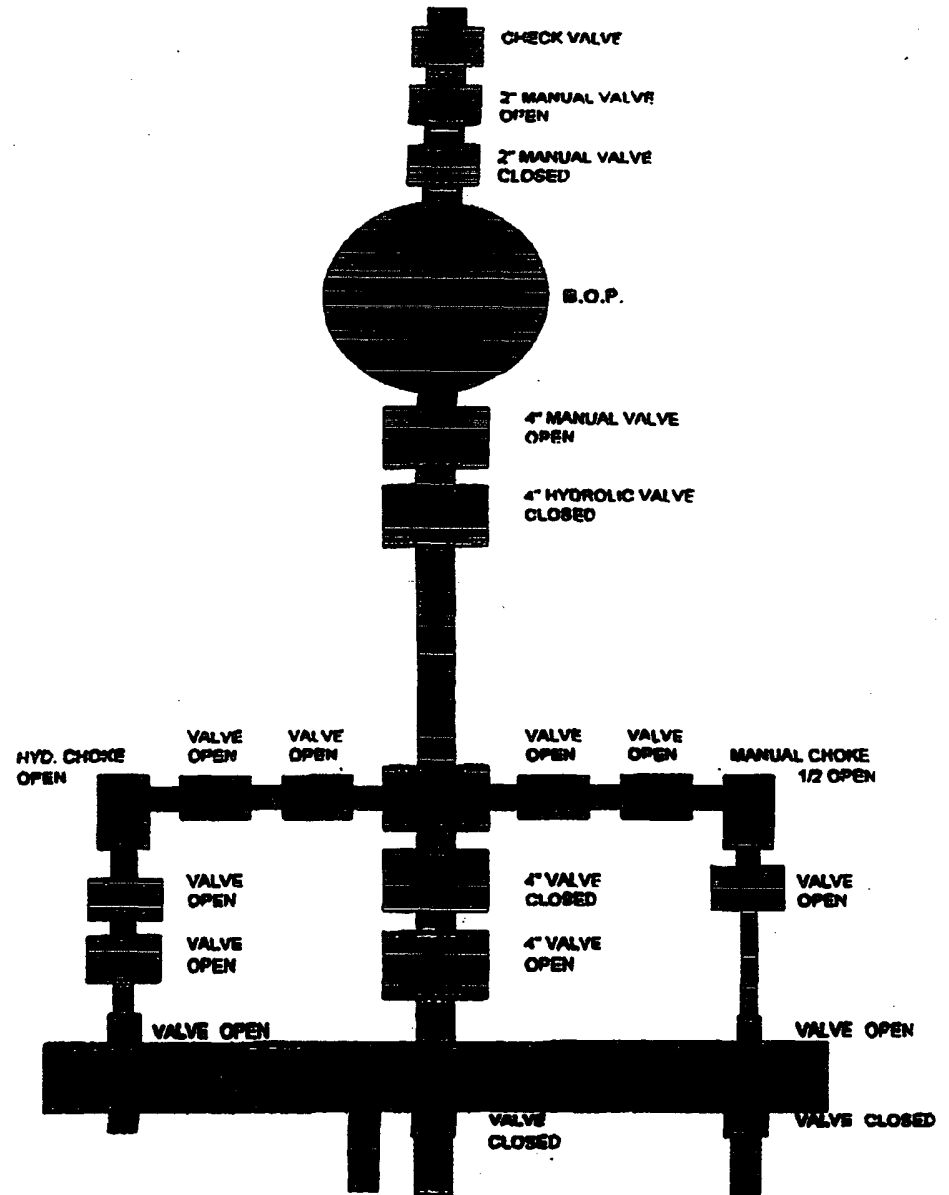
N.D.U.S.A.

MANIFOLD SETUP

EXHIBIT "E"
SAMSON RESOURCES
Federal TSS Com., Well No. 2
BOP Specifications



ANNULAR	= 13 5/8 - 68 HYDRA GK ANN
DOUBLE	= 13 5/8 - 100 SHAFER SL (DBL) BOP
SINGLE	= 13 5/8 - 100 SHAFER SL POSLOK BOP
WELL HEAD	= 11" 68
WELL LINE VALVE	= 2 1/8 100
CHOKE LINE VALVE	= 4 1/8 100



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

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

Form C-144
March 12, 2004

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

API # 30-025-37868

Facility or well name: Federal TSS Com., Well #2 U/L or Qtr/Qtr NW4SW4 Sec 3 T 21S R32E

County: Eddy Lea Latitude 32°30'17.88" N Longitude 103°40'02.78" W NAD: 1927 X 1983 ☐ Surface Owner Federal X State Private ☐
Indian ☐

Pit Type: Drilling X Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined X Unlined <input type="checkbox"/> Liner type: Synthetic X Thickness 12 mil Clay <input type="checkbox"/> Volume 10,000_bbl+	Below-grade tank Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> 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: March 31, 2006

Printed Name/Title: George R. Smith, agent

Signature: 

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: MAY 18 2006

Date: _____

Printed Name/Title: _____

PAUL F. KAUTZ
PETROLEUM ENGINEER

Signature: 

 The sender of this message has requested a read receipt. [Click here to send a receipt.](#)

Mull, Donna, EMNRD

From: Phillips, Dorothy, EMNRD
To: Mull, Donna, EMNRD
Cc:
Subject: RE: Financial Assurance Requirement
Attachments:

Sent: Thu 5/18/2006 12:31 PM

None of these appear on Jane's list and all have blankets.

From: Mull, Donna, EMNRD
Sent: Thursday, May 18, 2006 9:00 AM
To: Phillips, Dorothy, EMNRD
Cc: Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD
Subject: Financial Assurance Requirement

Dorothy,

Is the Financial Assurance Requirement for these Operators OK?

Citation Oil & Gas Corp (4537)
COG Operating LLC (229137)
David H Arrington Oil & Gas Inc (5898)
Arch Petroleum Inc (962)
Chesapeake Operating Inc (147179)
Samson Resources Co (20165)
Range Operating New Mexico Inc (227588)
Marathon Oil Co (14021)
Chevron USA inc (4323)
Yates Petroleum Corp (25575)

Inactive well list has been checked on all these Operators.

Please let me know. Thanks and have a nice day. Donna