



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

E-04-33

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 20165 | | 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) 591-1822 | 8. Lease Name and Well No. New Mexico B Federal, # 2 34243 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 3300' FNL & 1980' FEL At proposed prod. zone same Lot 10 R-111-P Potash | | 9. API Well No. 30-025-36834 |
| 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 (GAS) 78240 |
| 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 2282.84 | 11. Sec., T., R., M., or Blk. and Survey or Area Sec. 3-T21S-R32E |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2320' | 19. Proposed Depth 14,200' | 12. County or Parish Lea |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3708' GL | 22. Approximate date work will start* March 22, 2004 | 13. State NM |
| 23. Estimated duration 6 weeks | | |
| 24. Attachments Carlsbad 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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 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 2/13/04 |
| Title Agent for Samson Resources | | |
| Approved by (Signature) <i>/s/ Linda S. C. Rundell</i> | Name (Printed/Typed) <i>/s/ Linda S. C. Rundell</i> | Date 3 MAY 2004 |
| Title 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
George R. Smith, agent

KZ

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 30-025-36834 | Pool Code 78240 | Pool Name Hat Mesa Morrow |
| Property Code 34243 | Property Name NEW MEXICO B | Well Number 2 |
| OGRID No. 20165 | Operator Name SAMSON RESOURCES | Elevation 3708' |

Surface Location

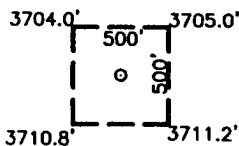
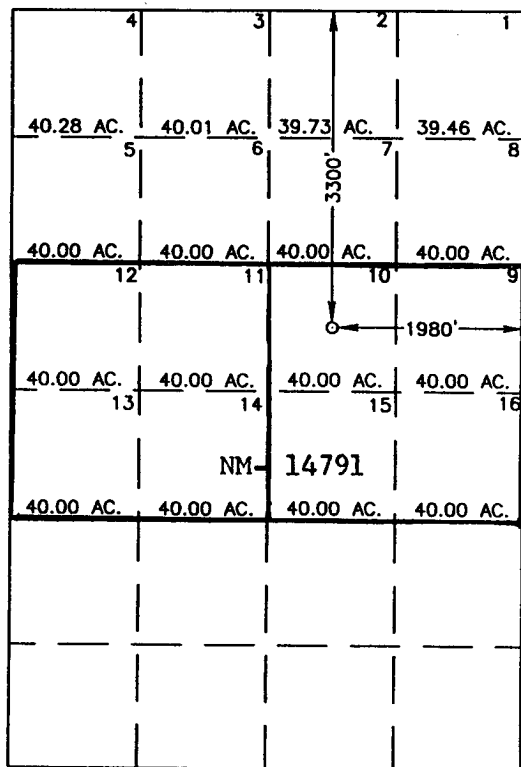
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|----------|-------------|-------------|---------|---------------|------------------|---------------|----------------|------------|
| 110 | 3 | 21-S | 32-E | | 3300 | NORTH | 1980 | 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



GEODETIC COORDINATES
NAD 27 NME
Y = 551052.7 N
X = 707559.3 E
LAT. 32°30'47.35"N
LONG. 103°39'36.02"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

Printed Name

for Samson Resources

Title

February 13, 2004

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 4, 2004

Date Surveyed L.A.

Signature & Seal of
Professional Surveyor

Gary E. Edson

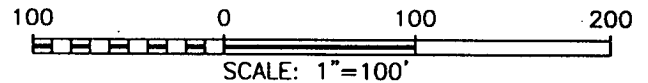
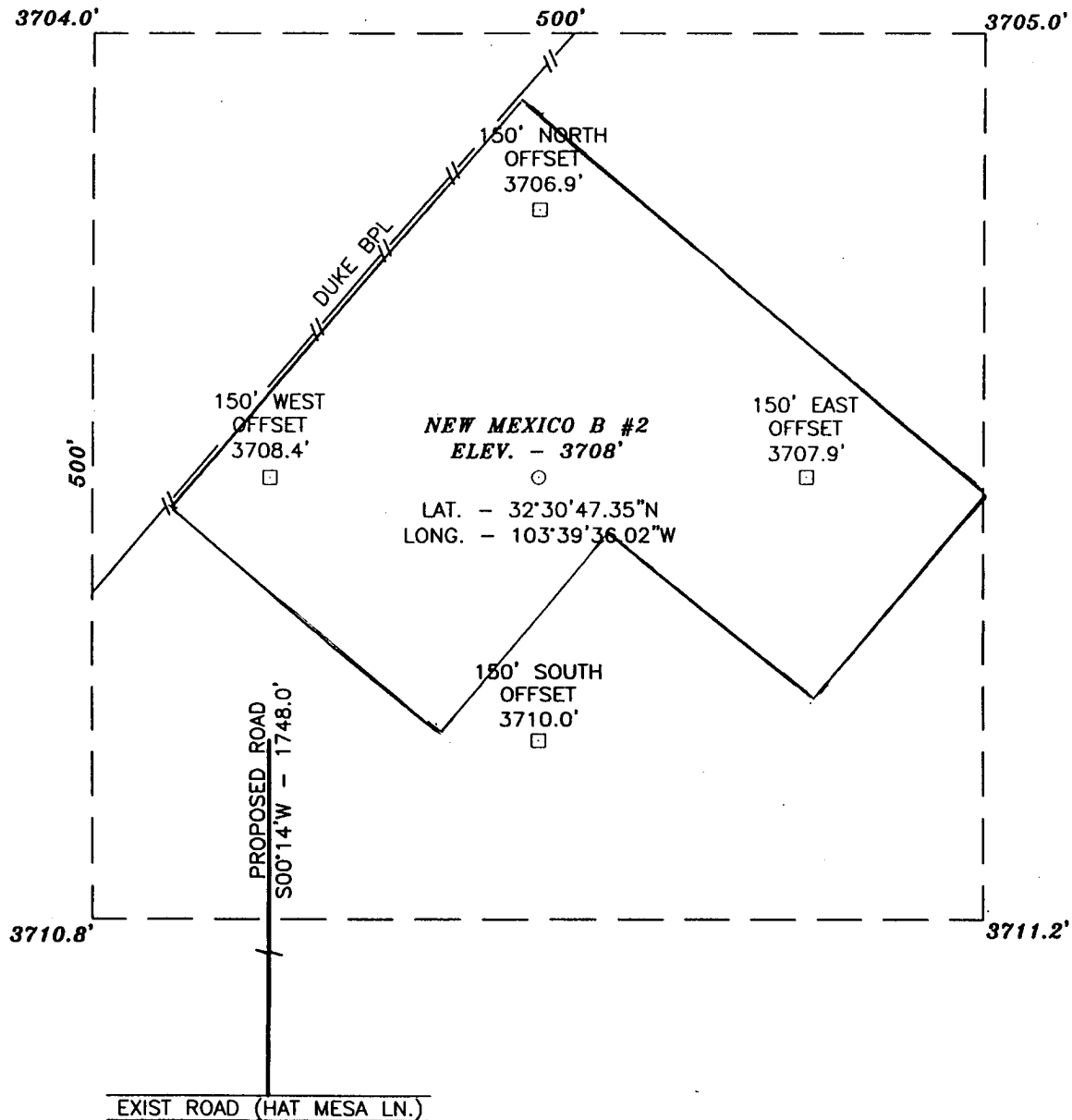
2/12/04

04.11.0129

Certificate No. GARY EDSON

12641

SECTION 3, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

TRAVELING SOUTHEAST ON STATE HWY #176 TURN RIGHT @ MILE MARKER #49. GO SOUTH ON SALT LAKE ROAD 1.2 MILES. TURN RIGHT ON HAT MESA LN. AND GO WEST 0.6 MILES. PROPOSED ACCESS ROAD STARTS AT THIS POINT AND GOES NORTH 1750' TO SW CORNER PROPOSED LOCATION.

SAMSON RESOURCES

THE NEW MEXICO B #2 LOCATED 3300 FROM THE NORTH LINE AND 1980 FROM THE EAST LINE SECTION 3, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

JOHN WEST SURVEYING COMPANY
412 N. DAL PASO - HOBBS, NEW MEXICO - 505-393-3117

| | |
|-------------------------|---------------------|
| Survey Date: 2/04/04 | Sheet 1 of 1 Sheets |
| W.O. Number: 04.11.0129 | Drawn By: L.A. |
| Date: 2/06/04 | DISK:CD#3 |
| 04110129 | |

APPLICATION FOR DRILLING

SAMSON RESOURCES

New Mexico B Federal, Well No. 2
3300' FNL & 1980' FEL, 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 | 12,400' |
| Capitan | 3,610' | Atoka | 12,800' |
| Delaware | 4,850' | Morrow | 13,300' |
| 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 12,800' and the Morrow below 13,300'.

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' / 480' | Circ 800 sx "C" cement |
| 14 3/4" | 11 3/4" | 54.5# | K-55 | BT&C | 0' - 3,550' / 3520' | Circ. 1860 sx. HLC Prem Plus |
| 10 5/8" | 8 5/8" | 32.0# | N-80 | LT&C | 0' - 4,850' / 4850' | 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 3550" 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

New Mexico B 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. H_2S : None expected. The Minis "2" Fed. #1 producing in the Delaware was tested and is totally sweet, no H_2S .

11. Anticipated starting date: March 22, 2004.

Anticipated completion of drilling operations: Approximately 6 weeks.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

SAMSON RESOURCES

New Mexico B Federal, Well No. 2
3300' FNL & 1980' FEL, 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 1.75 miles of gravel 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 4.6 miles. Turn south for 1.3 miles on Salt Lake Rd. and then west on Hat Mesa Rd. for .5 mile to a staked road on the right (north). This is the start of the proposed access road that will run north for approximately 1750' to the SW corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: None. The proposed access road is approximately 1750 feet in length and 12 foot in width 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: One will be required, increasing the 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: 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 run parallel to the access roads west to the Duke Energy compressor station in Sec. 4-T21S-R32E or their nearest line hookup on the south side of Hat Mesa Rd. TSO

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: 300' X 210', plus 150' X 150' mud pits. The pits will be on the southeast.
- C. Cut & Fill: There will be a 1 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 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 3708'.
- 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 are conducting an archaeological survey and their report will be submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

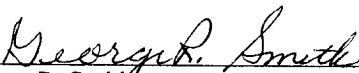
- A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

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

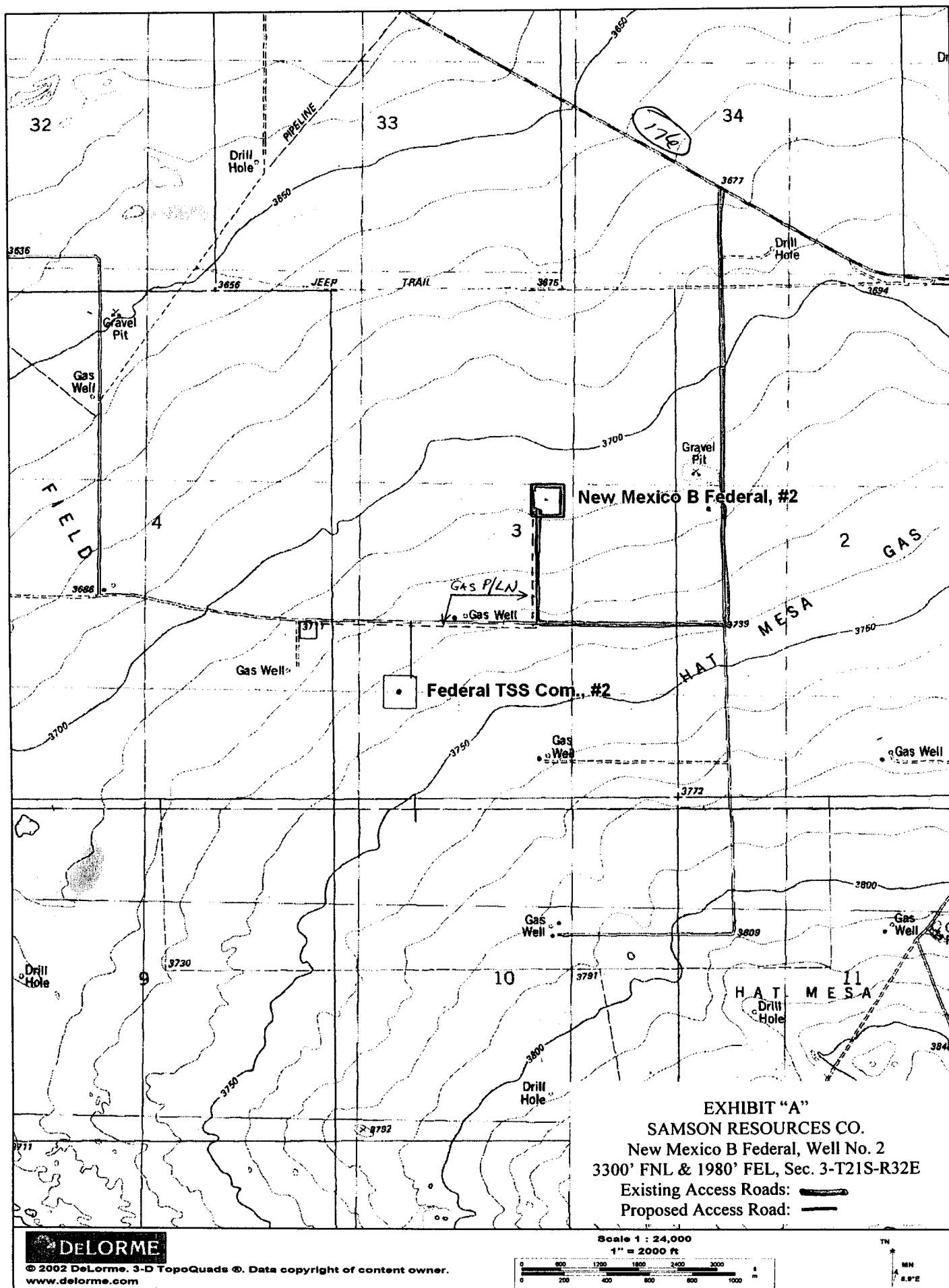
13. CERTIFICATION:

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.

February 13, 2004

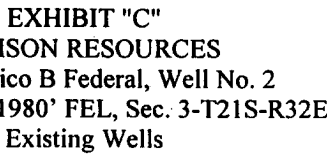


George R. Smith
Agent for: Samson Resources



DeLORME

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www.delorme.com





RIG 715 BOP LAYOUT

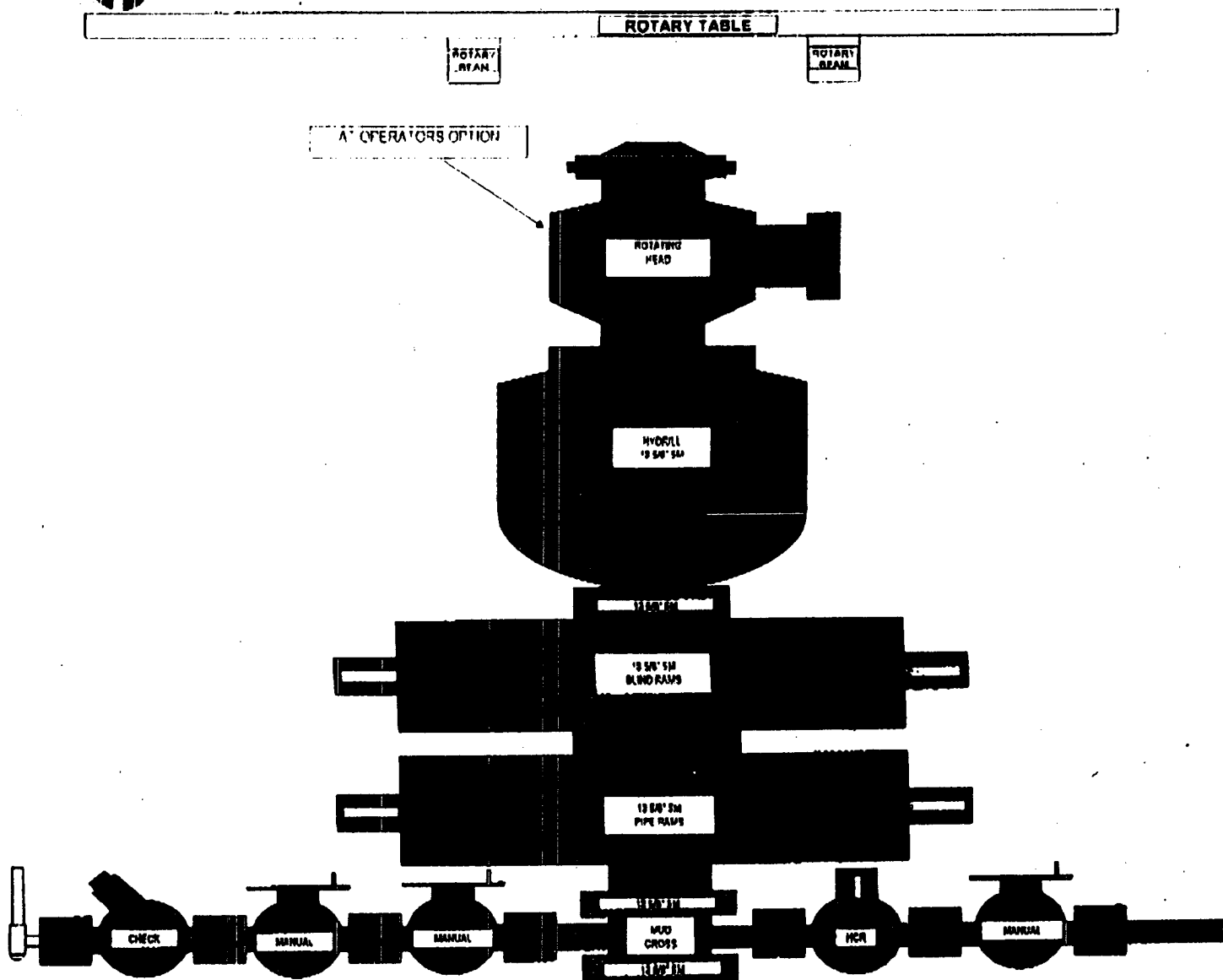


EXHIBIT "E"
 SAMSON RESOURCES CO.
 New Mexico B Federal, Well No. 2
 BOP Specifications



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

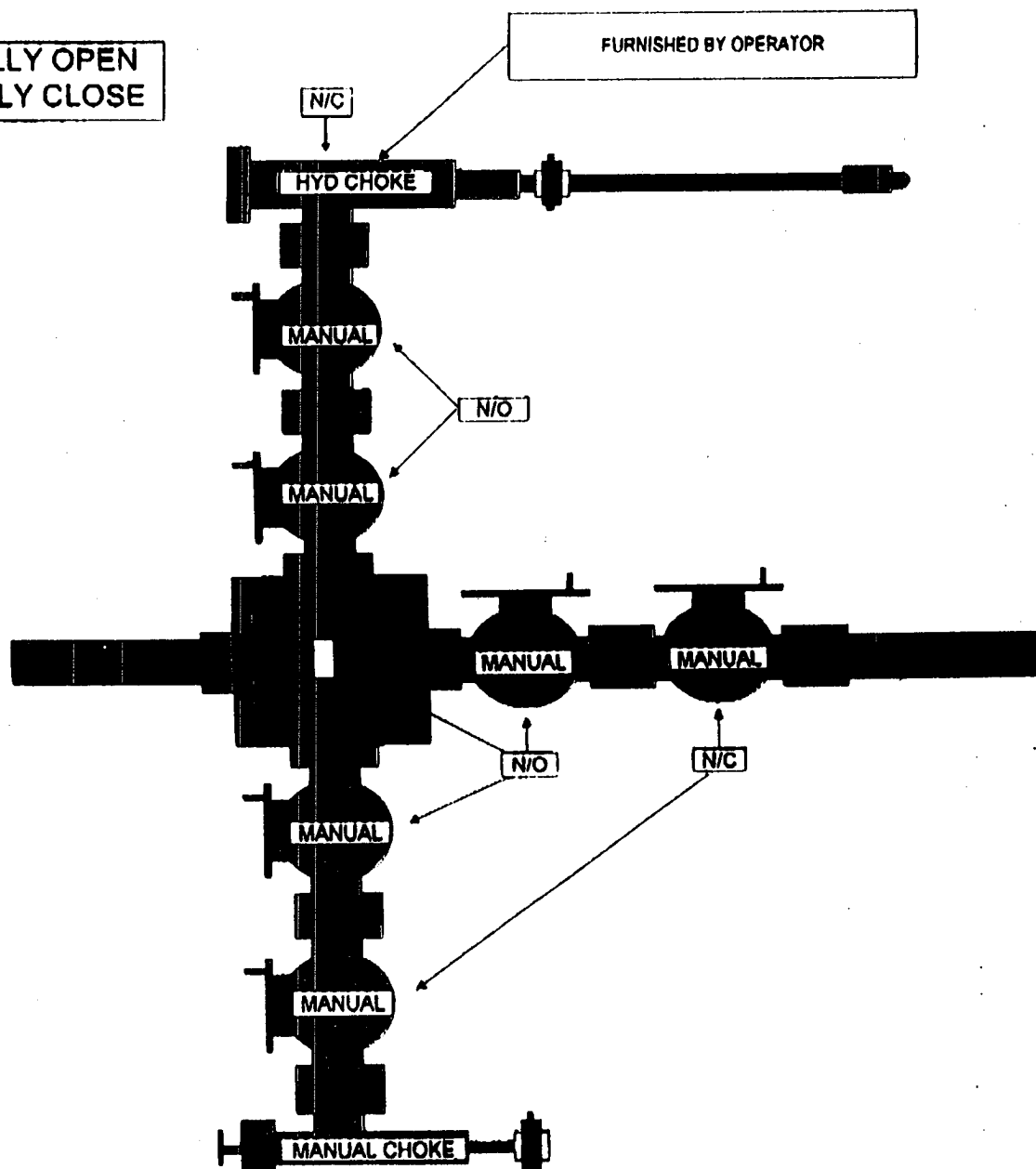


EXHIBIT "E"
SAMSON RESOURCES CO.
New Mexico B Federal, Well No. 2
BOP Specifications

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 CO | | Telephone: 918/591-1386 | | e-mail address: TKOSCELNY@SAMSON.COM | |
| Address: TWO WEST SECOND ST., TULSA, OK 74103-3103 | | | | | |
| Facility or well name: NEW MEXICO "B" FEDERAL #2 36834 U/L or Qtr/Qtr _____ Sec 3 T 21S 32E | | | | | |
| County: LEA Latitude 32 30 47.35 Longitude 103 39 36.02 NAD: 1927 <input checked="" type="checkbox"/> 1983 <input type="checkbox"/> Surface Owner Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/> | | | | | |
| Pit Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness 12 mil Clay <input type="checkbox"/> Volume 32,000 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) | | |
| | | | 10 | | |

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

Date: **8/25/04**

Printed Name/Title: **TOM KOSCELNY, ENVIRONMENTAL**

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:

Date: **8/29/04**

Printed Name/Title: _____

Signature: _____

| | | | |
|-------------------------|---------------------|----------|--|
| Survey Date: 2/04/04 | Sheet 1 of 1 Sheets | | |
| W.O. Number: 04.11.0129 | Drawn By: L.A. | | |
| Date: 2/06/04 | DISK:CD/3 | 04110129 | |

