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

Form 3160-3
(August 1999)

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

5. Lease Serial No.: LC-061863-A

6. If Indian, Allottee or Tribe Name:

1a. Type of Work: ☒ DRILL ☐ REENTER

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

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: Spencer Federal #1

2. Name of Operator: Sahara Operating Company

9. API Well No.: 30-025-35390

3a. Address: P.O. Box 4130, Midland, TX 79704

3b. Phone No. *(include area code)*: 915/697-0967

10. Field and Pool, or Exploratory: Paduca Delaware

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface: Unit Letter M, 478' FSL & 680' FWL
At proposed prod. zone: Same as above

11. Sec., T., R., M., or Blk. and Survey or Area: Sec. 5, T-25-S, R-32-E N.M.P.M.

14. Distance in miles and direction from nearest town or post office*: 32 Miles West of Jal, New Mexico

12. County or Parish: Lea

13. State: N.M.

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 478'

16. No. of Acres in lease: 2242.99 acres

17. Spacing Unit dedicated to this well: SW/4 of SW/4, Sec. 5, UL M, 40 Acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: None

19. Proposed Depth: 4900'

20. BLM/BIA Bond No. on file: NM 2352

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3454' G.L.

22. Approximate date work will start*: As soon as possible

23. Estimated duration: 12 days

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.
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: [signature] Name *(Printed/Typed)*: Robert McAlpine Date: 1/08/2001

Title: President

Approved by *(Signature)*: [illegible] Name *(Printed/Typed)*: [illegible] Date: JAN 29 2001

Title: Acting FIELD MANAGER Office: CARLSBAD FIELD OFFICE

Application approval does not warrant or certify the 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.

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)*

OPER. OGRID NO. 20077
PROPERTY NO. 27330
POOL CODE 49460
EFF. DATE 2-2-01
API NO. 30-025-35390

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-35390	49460	Paduca Delaware

Property Code	Property Name	Well Number
27330	SPENCER FEDERAL	1

OGRID No.	Operator Name	Elevation
020077	SAHARA OPERATING COMPANY	3454

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	5	25S	32E		478	SOUTH	680	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	Joint or Infill	Consolidation Code	Order No.
40	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

LOT 4	LOT 3	LOT 2	LOT 1
680' → ○ ↓ 478'	3450 3454 3452 3450		

OPERATOR CERTIFICATION

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

Signature

Robert McAlpine

Printed Name

President

Title

January 4, 2001

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 supervison, and that the same is true and correct to the best of my belief.

DECEMBER 4, 2000

Date Surveyed AWB

Signature & Seal of Professional Surveyor

Gary L. Eidson 12/18/00

00-11-1501

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Roswell field Office
2909 West Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name: Sahara Operating Company
Street or Box : P.O. Box 4130
City, State : Midland, Texas
Zip Code : 79704

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No. : LC-061863-A

Legal Description of Land: SW/4, Sec. 5, T-25-S, R-32-E, Lea County, New Mexico

Formation(s) (if applicable): Surface to the base of the Bell Canyon Formation

Bond Coverage (State if individually bonded or another's bond): Individual, Sahara Operating Company

BLM Bond file No. : NM 2352

Authorized Signature:

Robert McAlpine
Title: President

Date: January 8, 2001

TABLE OF CONTENTS

SAHARA OPERATING COMPANY
SPENCER FEDERAL 5 #1
478' FSL & 680' FWL
Sec. 5, T25S, R32E

LIST OF EXHIBITS

APPLICATION FOR PERMIT TO DRILL
SAHARA OPERATING COMPANY
SPENCER FEDERAL 5 #1
478' FSL & 680' FWL
Sec. 5, T25S, R32E

DRILLING PLAN

In conjunction with Form 3160-3, Application for Permit to Drill, Sahara Operating Company respectfully submits the following pertinent information in accordance with Onshore Oil & Gas Order Nos. 1&2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quarternary Alluvium.

2. Estimated tops of geologic markers are as follows:

Ogallala	100'	Base Salt	4275'
Dewey Lake	350'	Lamar Lime	4485'
Top Anhydrite	685'	Delaware Sand	4515'

3. The estimated depths at which water, oil, or gas bearing formation are expected to be encountered:

* - Water: 100' & 350' (Ogallala & Dewey Lake)
** - Oil and/or gas: 4535' (Delaware Sand)

* - Groundwater to be protected by 8-5/8" surface casing set into the Rustler Anhydrite with cement circulated to the surface of the ground.
** - Potentially productive horizons to be protected by 5-1/2" production casing with the top of cement brought to at least 3000'.

4. Proposed Casing Program: As Below, Also see Summary for running and cementing detail.

Hole Size	Casing Size	Weight/ft	Grade	Thread	Setting Depth	Cement	Est TOC
12-1/4"	8-5/8"	24.0	K-55	ST&C	±725'	400 sx	Surface
7-7/8"	5-1/2"	15.50 or	K-55	LT&C	4825'	530 sx	Surface
		17.0	K-55	LT&C			

Note: If acceptable to the BLM, it is proposed to utilize used, electronically inspected casing for the 5-1/2" string. Any used pipe so utilized will be either Yellow Band (0-15% wall loss) or White Band (0-12½% wall loss). As a point of reference, API spec for new pipe allows for 12½% reduction in wall thickness, meaning White Band is electronically indistinguishable from new pipe.

5. Pressure Control Equipment (Blowout Preventer): Please see Exhibit F
To be installed and tested after Surface Pipe is set at or below 750'

6. Mud Program: Please see Exhibit D.

7. This well will test the Delaware Sand. The testing, logging and coring program is as follows:

- DST's: Up to two (2) drill stem tests will be run in the Delaware Sand

- Logging: 1 man Mudlogging Unit from 4000' to TD.

- Electric Logs:
  Gamma Ray - TD to Surface
  Dual laterolog - TD to 4000'
  BHC Sonic - TD to surface casing depth
  FMI if productive
  Wireline sidewall cores if productive

- No rotary coring by drillstring is anticipated

8. Abnormal Pressures, temperatures, or other hazards:
- No abnormal pressures or temperatures are anticipated to be encountered in this well. Lost circulation is possible while drilling the surface hole.
The bottom hole pressure is expected to be less than 2000 psi.

9. The anticipated starting date for this well is June 20, 2001.

SURFACE USE PLAN

Sahara Operating Company
Spencer Federal 5 #1
478' FSL & 680' FWL, Sec 5, T25S, R32E
Lea County, NM

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to identify the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal may be made of the environmental effects associated with the operation.

The well has been staked by a registered New Mexico land surveyor and the work area staked and flagged.

1. EXISTING ROADS - Area Map. Exhibit "A" is a Location & Elevation Verification Map reproducting a portion of the USGS New Mexico 15 minute quadrangle for Paduca Breaks, NW, New Mexico. Existing and proposed roads are shown on the exhibit. All roads shall be maintained in a condition equal to that which existed prior to the start of construction.

   A. Exhibit "A" shows the proposed well site as staked.

   B. As shown on Exhibit B, Vicinity Map, from Jal, New Mexico, travel ±30 miles West on Hwy 128 to County Rd C-1. Travel south on C-1 for 6.3 miles and turn right (west) on an oilfield lease road. Travel west on this road 2 miles then north 0.8 mile, to the flagged 5411 feet of proposed road leading north to the proposed well site location for the Sahara Boyle Federal 8 #1. Continue through this location to the additional 1042' of road flagged for the Spencer Federal 5 #1.

2. PLANNED ACCESS ROADS - The planned access road is staked and flagged. Approximately ± 1042' of new access road will be constructed.

   A. The access road will be crowned and ditched to a 12' -00" wide travel surface with a 40' right-of-way.

   B. Gradient on all roads will be less than 5%.

   C. No turnouts will be necessary.

   D. If needed, the road will be surfaced with a minimum of 4" of comapcted caliche. This material will be obtained from a local source.

   E. Centerline for the new access road has been flagged. Earthwork will be as required by field conditions.

F. Culverts will not be needed.

G. Only minor leveling will be required. No significant cuts and fills will be necessary.

F. No new gates or cattleguards will be required.

3. Location of Existing Wells Within a One-Mile Radius (See Exhibit H)

A. Water Wells - None Known

B. Disposal Wells - None Known

C. Drilling Wells - None Known

D. Producing Wells - As shown on Exhibit H

E. Abandoned Wells - As shown on Exhibit H

4. Location of Poposed Facilities. - If, upon completion, the well is a producer, Sahara Operating Company will furnish maps or Plats showing On Well Pad facilities and Off Well Pad facilities (if needed) on a Sundry Notice before construction of these facilities starts.

5. Location and Type of Water Supply

A. Fresh Water - Fresh water for this well will be obtained from the Cotton Draw Unit water supply system shown on Exhibit D and trucked to the location.

B. Brine Water - Brine water will be purchased locally from a private source and trucked to the location.

6. SOURCE OF CONSTRUCTION MATERIALS

If needed, construction materials will be obtained from the drill site's excavations or from a local source. These materials will be transported over the access road as shown on Exhibit A.

7. METHODS FOR HANDLING WASTE DISPOSAL

A. 1. Drill cuttings will be disposed of in the drilling pits.

2. Trash, waste paper and garbage will be contained in a fenced trash trailer which will be hauled to disposal. Any trash, junk or debris left when the rig moves out will be contained to prevent scattering and will be buried at least 36" deep within a reasonable period of time.

3. Salts, chemicals, and unused mud materials remianing after completion of the well will be picked up by the supplier, including broken sacks.

4. Sewage from trailer houses will drain into holes at least 10`-00" deep. These holes will be covered during drilling and backfilled upon completion. A porta-john will be provided for rig crews. This will be properly maintained during drilling operations and removed upon completion of the well.

B. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for backfilling. In the event drilling fluids will not evaporate in a reasonable period of time, they will be transported in a tank truck to a state approved disposal site.

Water produced during testing of the well will be disposed of in the reserve pit. Oil produced during testing of the well will be stored in test tanks until sold and hauled from the site.

8. ANCILLARY FACILITIES

No camps or airstrips will be constructed.

9. WELL SITE LAYOUT

A. Exhibit G (Scale 1"=50`) shows the proposed well site layout.

B. This exhibit shows the proposed location of the working pits, reserve pits, and red bed pit. The pits will be to the north and the V-door to the east.

C. Mud pits in the active circulating system (working pits) are proposed to be earthen, dug and lined with polyethylene plastic film. If required by the BLM, steel pits will be used.

D. The reserve pits will be lined with polyethylene plastic film, sewn in place. The liner will extend a minimum of 2`-00" over the reserve pit dikes where the liner will be anchored down.

E. The red bed or slush pit will be lined with polyethylene plastic film.

F. The reserve and slush pits will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth (rig) side will be fenced after all drilling operations have ceased. The pits and those areas of the location not essential for production facilities will be reclaimed and seeded per BLM requirements.

10. PLANS FOR RESTORATION OF THE SURFACE

A. Rehabilitation of the surface will begin in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

B. After completion of the drilling and completion operations, all equipment not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk.

C. Any pits containing fluids will be fenced until they are filled.

D. The reserve pit will be allowed to dry properly and fluid removed and disposed of in accordance with Article 7.B as previously described. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. After the area has been reshaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will be in accordance with BLM standards.

E. If the well is a dry hole, the pad and access road area will be recontoured to match the existing terrain. Topsoil will be spread to the extent possible and the area revegetated to BLM standards.

F. If the well is a producer, the foregoing procedures will be applied to all areas which are not required for production facilities and for production and operation of the well.

11. OTHER INFORMATION

A. Topography: The land surface is very sandy and slopes gently gently to the Southwest. Surface elevation of the drillsite is 3445 feet.

B. Soil: Very sandy.

C. Flora and Fauna: The vegetative cover is sparse and consists of mesquite, shinnery oak, yucca, and perennial native grasses. Wildlife in the area, also sparse, is typical of a semi-arid desert and includes coyotes, rabbits, rodents and reptiles.

D. Ponds and Streams: There are no rivers, streams, lakes or ponds in this area.

E. Residences: The nearest ranch house is approximately 2 miles northeast of the location.

F. Land Use: The surface is used for grazing and to access producing wells in the area.

G. Surface Ownership: The wellsite and road are on Federal land.

12. CULTURAL RESOURCES

An Archaeological Survey of the wellsite and road is being conducted by Mesa Field Services of Carlsbad, N.M. The results of this survey will be transmitted directly to the BLM by Mesa.

13. OPERATOR'S REPRESENTATIVE

The field representatives responsible for assuring compliance with the approved Surface Use Plan are:

Rob McAlpine, President
P.O. Box 4130
Midland, TX 79704
915/697-0967 (office)
915/683-2907 (home)
915/556-2303 (mobile)

George McAlpine, Production Manager
P.O. Box 4130
Midland, TX 79704
915/697-0967 (office)
915/687-2925 (home)
915/556-2295 (mobile)

13. CERTIFICATION

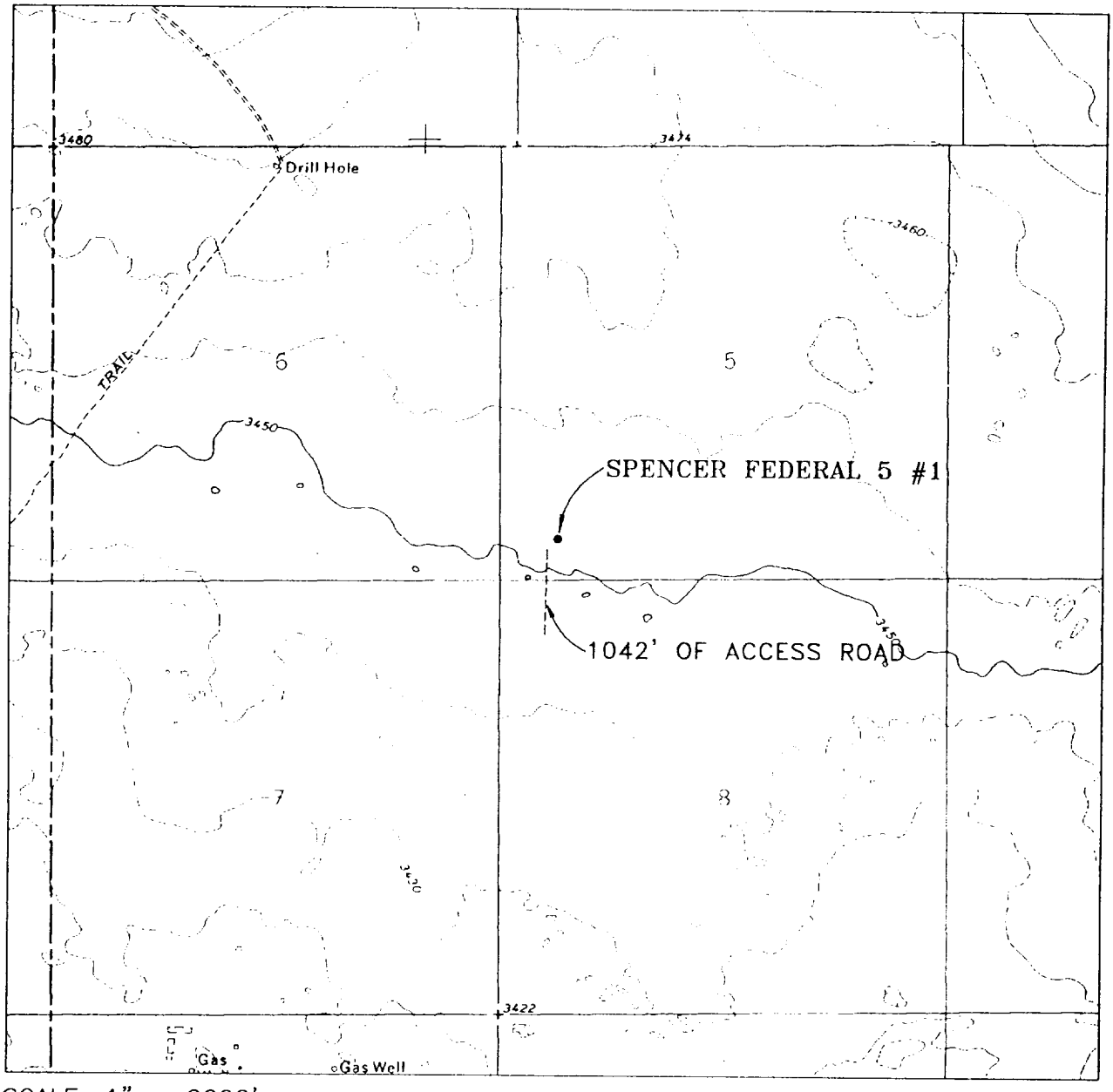
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Sahara Operating Company 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

1-08-2001
Date

Robert McAlpine
President, Sahara Operating Company

EXHIBIT A

LOCATION VERFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
PADUCA BREAKS NW, N.M.

SEC. 5 TWP. 25-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 478' FSL & 680' FWL

ELEVATION 3454

OPERATOR SAHARA OPERATING COMPANY

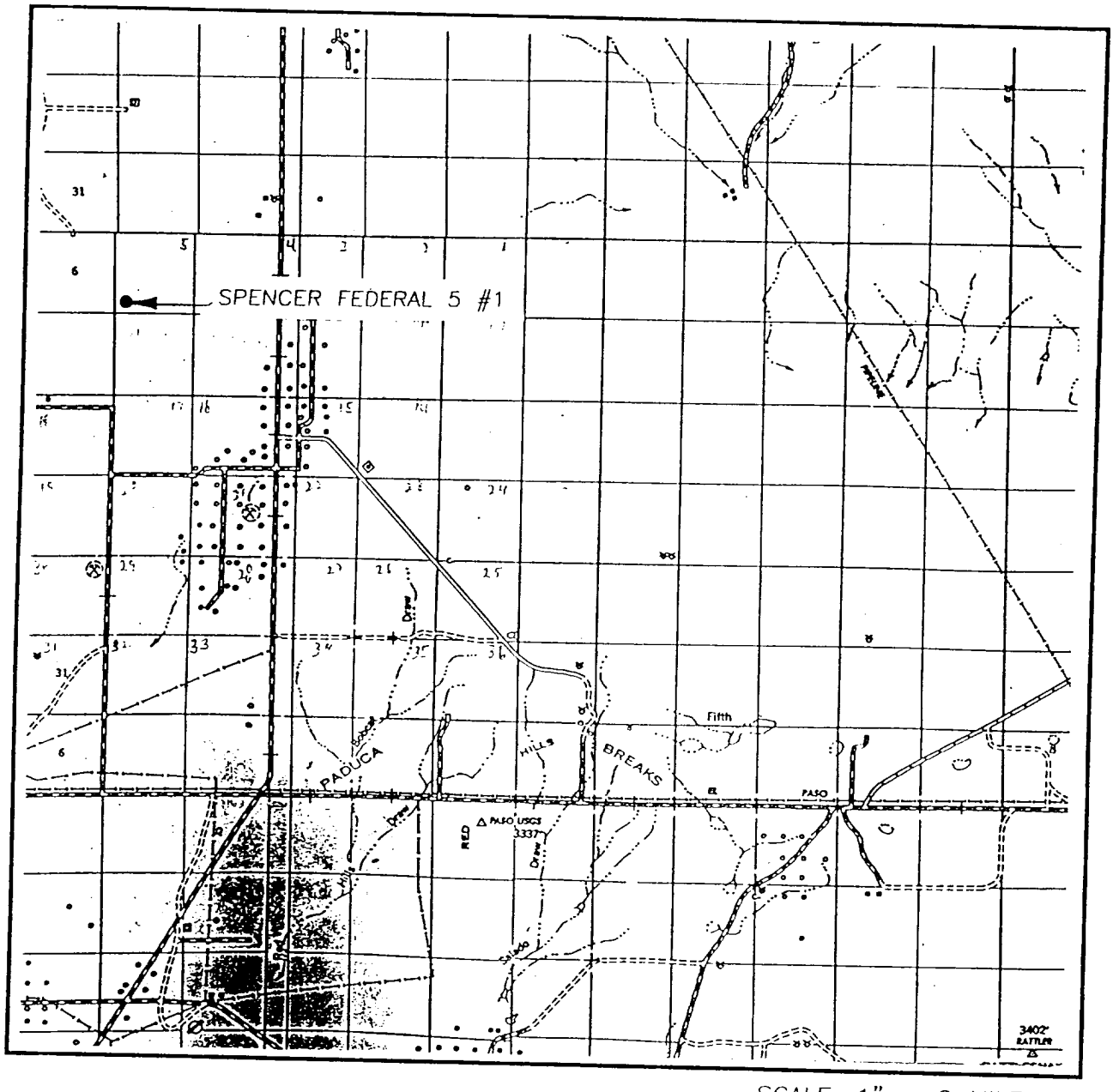
LEASE SPENCER FEDERAL 5

U.S.G.S. TOPOGRAPHIC MAP
PADUCA BREAKS NW, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

EXHIBIT B

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 5 TWP. 25-S RGE. 32E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 478'FSL & 680'FWL

ELEVATION 3454

OPERATOR SAHARA OPERATING COMPANY

LEASE SPENCER FEDERAL 5

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

Exhibit C

SUMMARY

Drilling, Drill Stem Tests, Casing and Cementing Program

1. Drill 12.25' hole to ~~± 725~~' or 20' into the anhydrite.

2. Run & set 8-5/8", 24#/ft, J-55 casing and cement with 200 sacks 35:65 poz:Class "C" cement with 6% gel, 2% calcium chloride and ¼ lb/sk celloflake, followed by 200 sacks Class "C" cement with 2% calcium chloride. Use a notched Texas Pattern guide shoe and an insert float or float collar on top of the shoe joint. Centralize the shoe joint and next two (2) joints. Thread lock the guide shoe and shoe joint. Displace the cement slurry with a wooden or rubber top plug.

3. Wait on cement. Cement must have minimum compressive strength of 500 psi at the casing shoe. Cut off and nipple up a Larkin Fig. 92 casing head. Nipple up BOP's and choke manifold. Test BOP's. Test casing to 600 psi, displace hole with brine water and drill out cement.

4. Drill 7-7/8" hole with brine water to ±4,000'. Rig up mud logger and mud up with starch to reduce the water loss to 10-15 cc for logs and tests. It is anticipated that, with a mud weight of 10.1+ lb/gal, the wellbore will be substantially overbalanced (mud column pressure of 2470 psi @ 4700' versus original reservoir pressures ~2000 psi). Evaluate sample shows and drilling times to choose drill stem test point and packer seat. Run DST on first Delaware sand porosity.

5. Log well with Sonic log from TD to 2500', pull gamma-ray log to surface. If well appears from tests and samples to be productive, run FMI log from TD to 4300'. If well appears productive selectively obtain sidewall cores.

6. Run 5.500", 15.5#/ft or 17.0 #/ft, K-55 casing, new or electronically inspected white or yellow band, and cement with 430 sacks of 50:50 Pozmix:Class C with 10% gel and 5% salt, tailed with 100 sacks class "C" with 3% KCL, 0.6% FL-62 fluid loss control and 0.2% cd-32 dispersant. Use a guide shoe and float collar, centralize the shoe joint and through the pay zone. Preflush before cement with 20-30 bbls of fresh water or mud cleaner, displace with a top rubber plug.

7. Cut off casing and weld on belled nipple and nipple up Larkin Model "R" tubing head. Release and move off drilling rig.

8. Perforations, acid job, and additional stimulation to be determined.

Exhibit D

DRILLING FLUID PROGRAM

Surface: Spud with fresh water with gel/lime. Add paper for seepage. Lost circulation is possible. In this event, "dry-drill" to surface casing point.

Production: After setting surface casing, displace hole jet all fresh water and redbed to the redbed pit. Drill out with 10# brine water, using lime to control pH, circulating the reserve pit. At 4300', switch circulation to the working pits and mud up with starch to reduce fluid loss to 10-15cc's and tag mud with ammonium nitrate. After mud up, maintain pH with caustic soda. Before running DST's or casing, clean the hole with a vicous sweep.

Exhibit E

SAHARA OPERATING COMPANY
Completed Well Schematic
Spencer Federal 5 #1
478' FSL & 680' FWL
Unit Letter M, Sec 5, T-25-S, R-32-E
Lea County, New Mexico

Larkin Fig. 92 Casing Head w/Model "R" Tubing Head

12-1/4" Surface Hole

8-5/8, 24# K-55, 8rd ST&C @approx 725' w/Cement Circulated (set into Rustler).

Casing dressed w/guide shoe, float collar, bottom 3 joints centralized

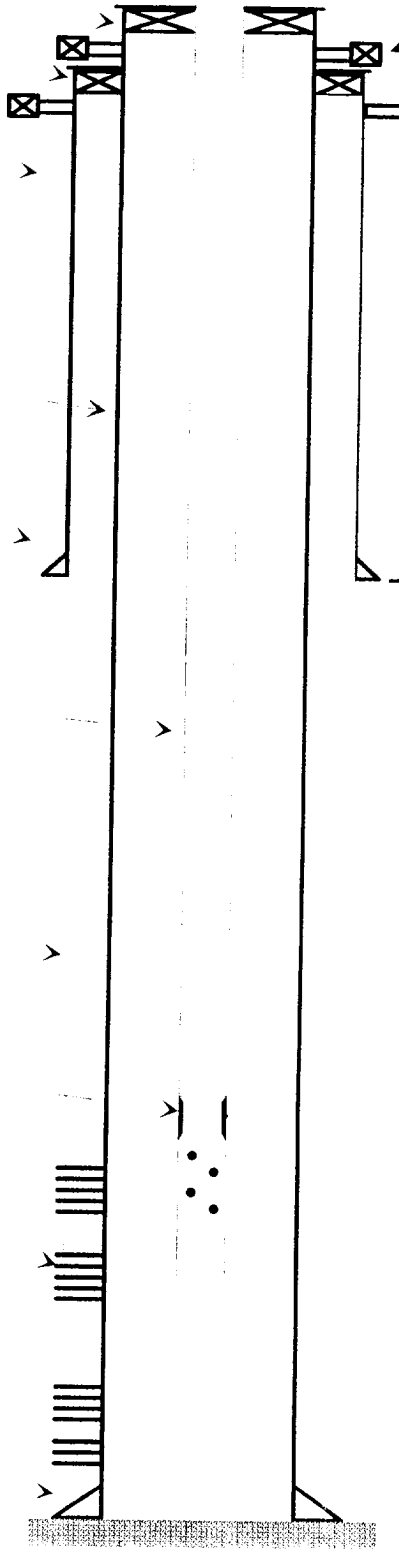
2-3/8" or 2-7/8", J-55, EUE 8rd tubing w/TAC

7.875" hole from surface casing to TD

Seating Nipple

Delaware Sand Perfs

5.5", 15.5#/ft or 17.0 #/ft casing set @ approx 4825', cement to surface



2" LPO w/valves

Fresh water mud, 8.4-9.3 #/gal. No pressure control equipment.

Top Rustler ~ 680'

Install 3M BOP

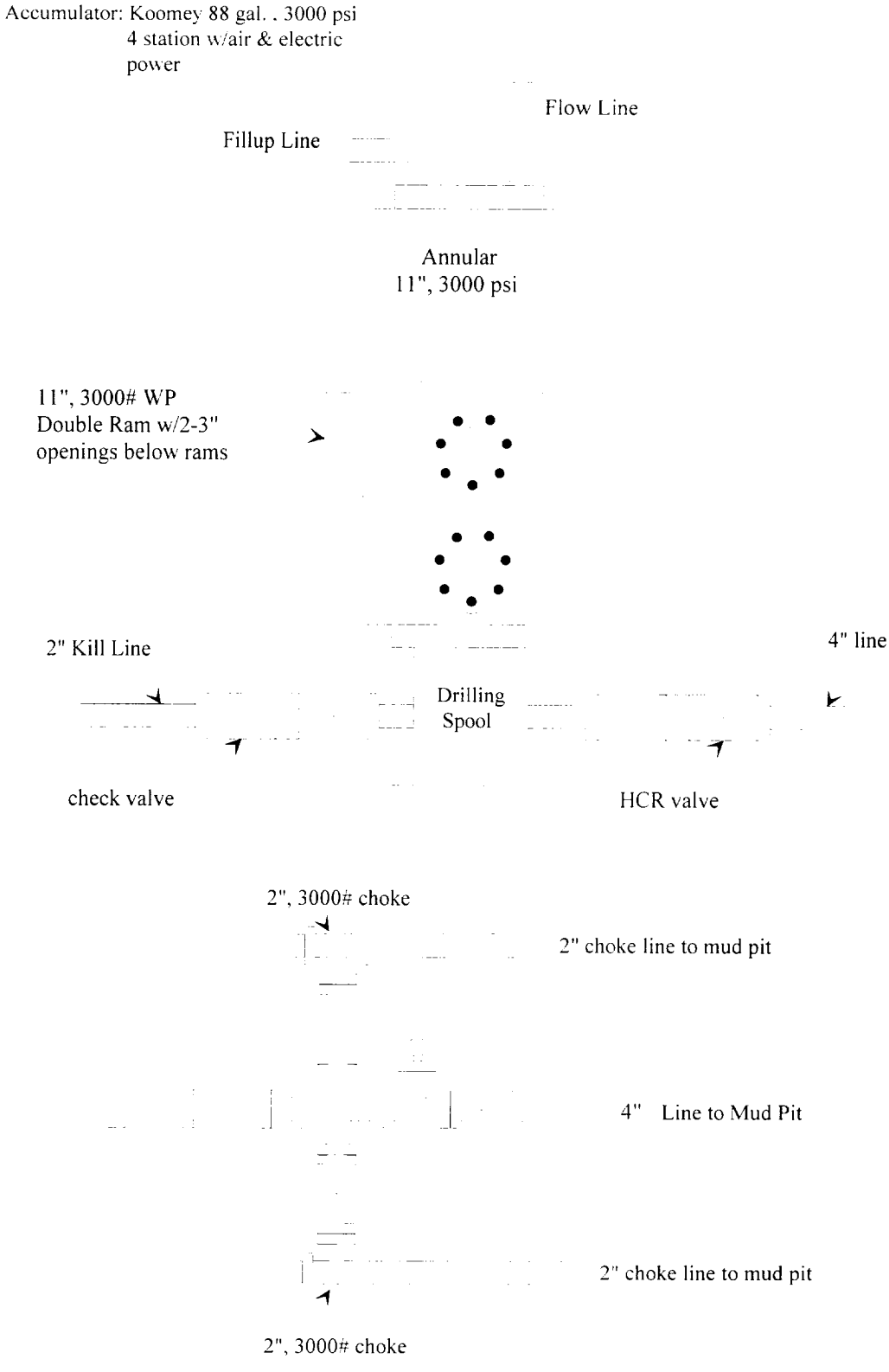
Saturated brine, MW 10.1-10.5. Lime for pH.

SAHARA OPERATING COMPANY
SPENCER FEDERAL 5 #1
478' FSL, 680' FWL
Sec. 5, T25S, R32E
LEA CO., N.M.

Exhibit F

Blow Out Preventer Schematic

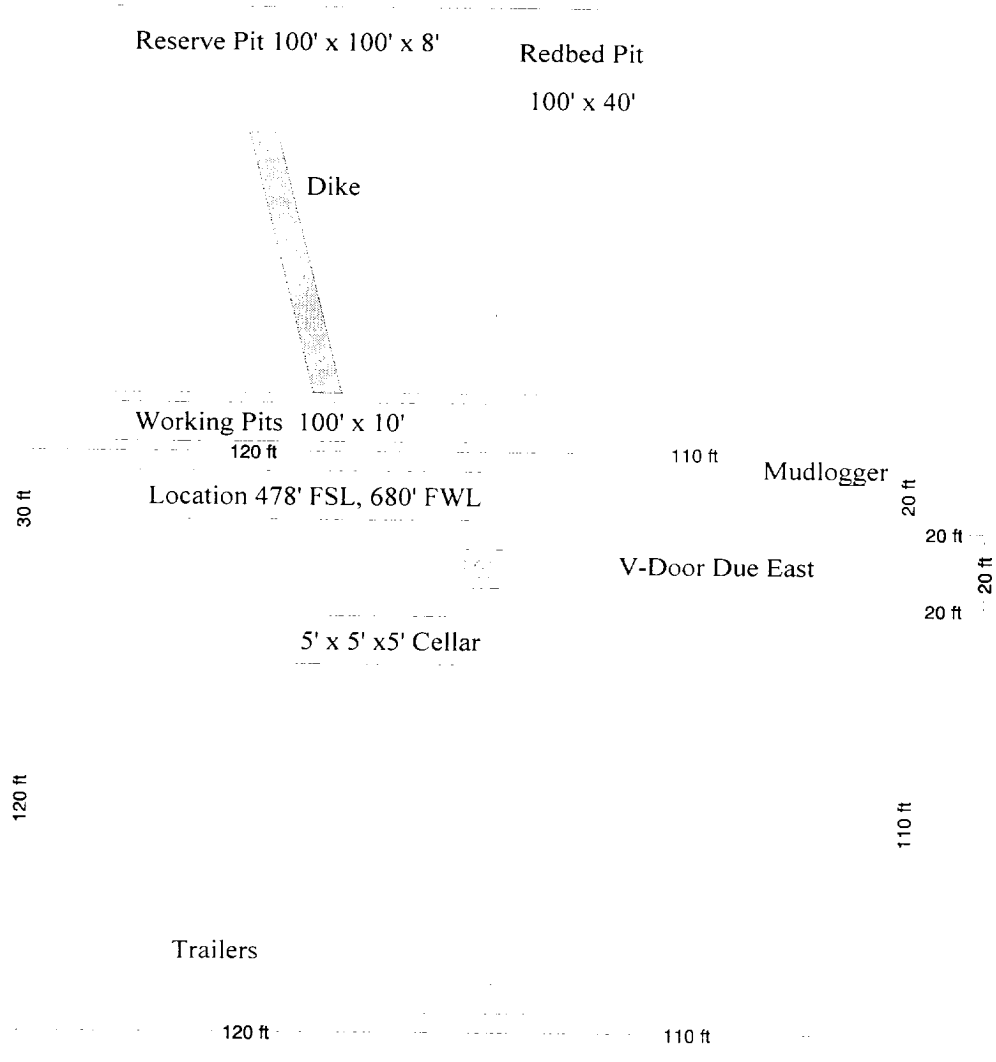
Rod Ric Rig #3 or #9



SAHARA OPERATING COMPANY
SPENCER FEDERAL 5 #1
M - 5 - 25S - 32E
Lea County, New Mexico

Exhibit G

WELL SITE LAYOUT



Road Access From South

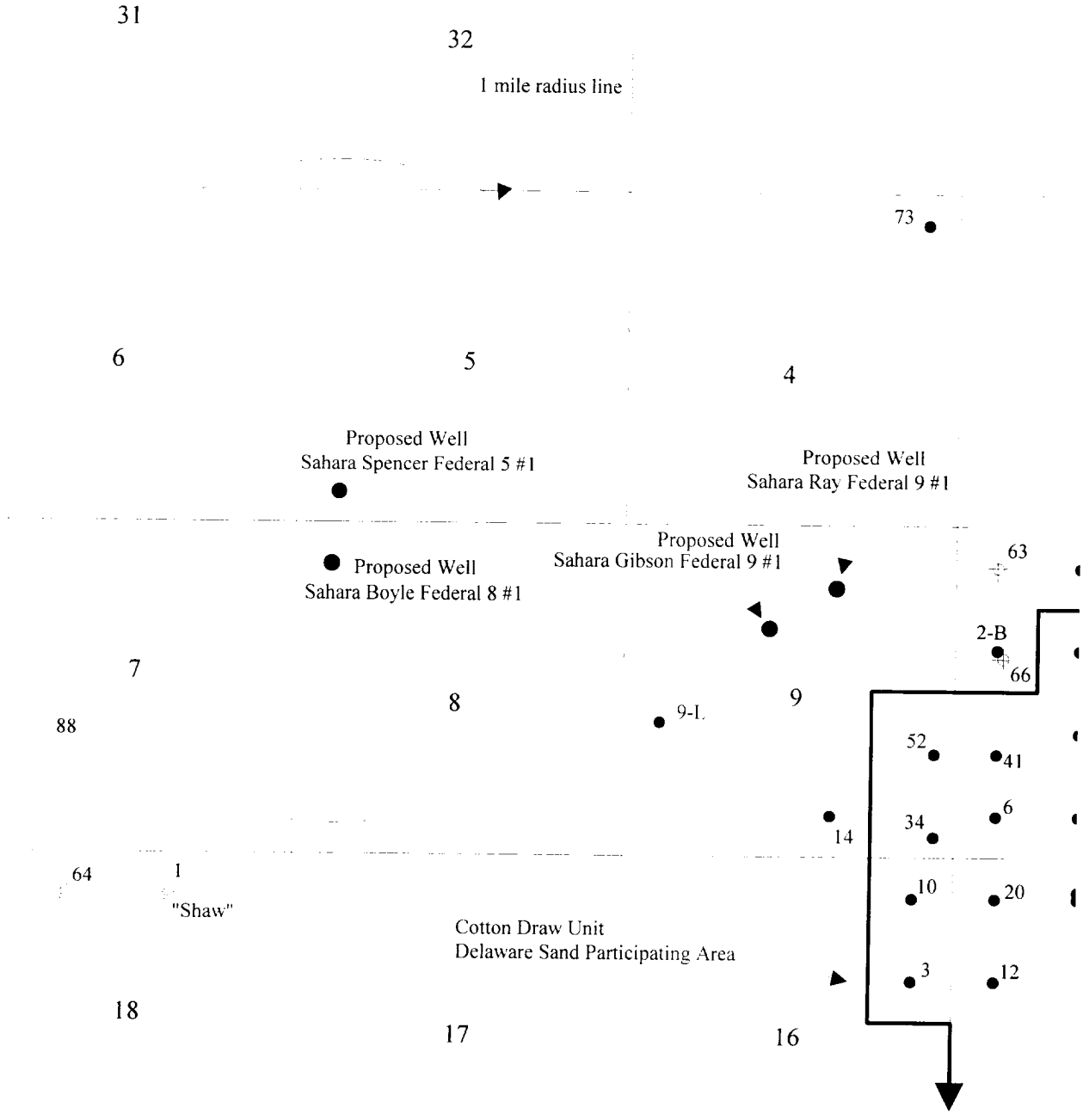
SAHARA OPERATING COMPANY

Exhibit H

SPENCER FEDERAL 5 #1

SW/4 of SW/4, Sec 5, T-25-S, R-32-E, Lea Cty, New Mexico

LOCATION OF EXISTING WELLS WITHIN A ONE-MILE RADIUS



Well Name	Operator	Location (Section)	Footage	Well Status
Boyle Federal 8 #1	Sahara	8	563' FNL & 651' FWL	Proposed
Cotton Draw Unit #88 (Well not actually within 1 mile radius)	Texaco	7	2210' FS & 1360' FEL	Unknown. Proposed TD was 13,200'. Well has been drilled. We do not have any information regarding completion.