

ATS-07-35

SECRETARY'S POTASH  
OCD-HOBBS

Form 3160-3  
(February 2005)

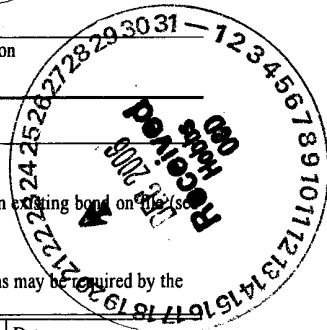
FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

0034

APPLICATION FOR PERMIT TO DRILL OR REENTER

5a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 85937
6. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator C.O.G. Operating, LLC		7. If Unit or CA Agreement, Name and No. N/A
3a. Address 550 W. Texas Midland, TX 79701		8. Lease Name and Well No. <i>(34806)</i> Prohibition "12" Federal #14
3b. Phone No. <i>(229137)</i> (432) 683-7443		9. API Well No. 30-025-38238
4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface 1980 FSL & 2100 FEL At proposed prod. zone 1980 FSL & 2100 FEL CARLSBAD CONTROLLED WATER BASIN <i>Unit 5</i>		10. Field and Pool, or Exploratory Red Tank; Bone Spring
11. Sec., T. R. M. or Blk. and Survey or Area Sec 12, T22S, R32E		12. County or Parish Lea
13. State NM		14. Distance in miles and direction from nearest town or post office* Approximately 28 miles West by Southwest from Eunice, NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1980'	16. No. of acres in lease 800	17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1320'	19. Proposed Depth 9000'	20. BLM/BIA Bond No. on file NMNM#000215
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3628' GL	22. Approximate date work will start* 01/01/2007	23. Estimated duration 30 days



The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must 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 must 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 BLM.

25. Signature <i>Denise Menoud</i>	Name (Printed/Typed) Denise Menoud - (432) 685-9158	Date 10/02/2006
Title Regulatory Specialist, Agent for C.O.G. Operating, LLC		
Approved by (Signature) <i>/s/ Linda S.C. Rundell</i>	Name (Printed/Typed) <i>/s/ Linda S.C. Rundell</i>	Date DEC 19 2006
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 page 2)

*See chgs on Cementing - Chris Williams*  
**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**

**STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS**

C.O.G. Operating, LLC  
550 W. Texas Avenue  
Midland, TX 79701

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

Lease No: NMNM #<sup>08</sup>85937

Well Name: Prohibition "12" Federal #14

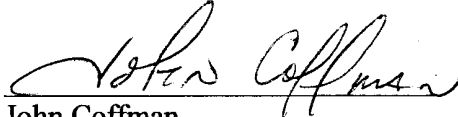
Legal Description of Land: Section 12, T22S, R32E  
1980 FSL & 2100 FEL  
Lea County, NM

Formation(s) (if applicable): Red Tank; Bone Spring

Bond Coverage: \$25,000 statewide bond of C.O.G. Operating, LLC

BLM Bond File No: NMB 000215

10/11/06  
Date

  
John Coffman  
C.O.G. Operating, LLC

**COG Operating LLC**  
**Prohibition "12" Federal #14**

1. Proposed drilling depth: TD:9000'

2. Estimated tops of geological markers:

Rustler Anhydrite	930'
Salt	1220'
Delaware	4850'
Bone Spring	8700'

3. Hole Size & Casing Program

<u>Hole size</u>	<u>Interval</u>	<u>OD of Casing</u>	<u>Weight</u>	<u>Thread</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0' - +/-950'	13-3/8"	48#	8rd	STC	H40
11"	+/-950' - +/-4700'	8-5/8"	32#	8rd	STC	HCK/J-55
7-7/8"	+/-4700' - 9000'	5-1/2"	17#	8rd	LTC	N-80

4. Proposed Mud Circulating System

<u>Interval</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>FL</u>	<u>Type Mud System</u>
0'- 950'	8.4-9.2	28-35	NC	Fresh water native mud w/ paper for seepage and sweeps. Lime for PH
950'- 4700'	10.0- 10.2	28-35	NC	Brine mud, lime for PH and paper for seepage and sweeps.
4700' - 8400'	8.4 - 8.5	NC	NC	Drill section with fresh water circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal.
8400' - 9000'	8.4-8.5	32-34	25cc	Increase vis w/ salt gel and drop fluid loss with starch. Paper for sweeps. Circulate steel pits

5. Pressure Control Equipment:

After setting 13 3/8" casing and installing 3000# casing spool, NU annular BOP. Test annular BOP, manifold and casing to 1250 psig w/ rig pump

After setting 8 5/8" casing and installing 3000# casing spool, NU 3000# double ram BOP and 3000# annular BOP. Test double ram BOP and manifold to 3000# and annular to 1500# using an independent tester.

6. Cementing

13 3/8"	surface	+/- 950'	Set +/- 950' of 13 3/8" 48# STC casing. Cement w/ 700 sx 35:65 Poz:C + additives followed by 200 sx + 2% CaCl2
8 5/8"	Intermediate	+/- 4700'	Set +/- 4700' of 8 5/8" 32# J-55/HCK-55 STC casing. Cement w/ 1000 sx Class "C" light cement + additives followed by 200 sx class "C" + 1% CaCl2
5 1/2"	Production	+/- 9000'	Set +/- 9000' of 5 1/2" 17# N-80/J-55 casing. Cement w/ <sup>750</sup> 500 sx Class "H" + additives. Est TOC @ +/- <del>6000'</del> <sup>4000'</sup>

**SURFACE USE AND OPERATIONS PLAN FOR  
DRILLING, COMPLETION, AND PRODUCING**

**C.O.G. Operating, LLC  
Prohibition "12" Federal #14  
Section 12, T-22-S, R-32-E  
Lea County, New Mexico**

**LOCATED**

Approximately 28 miles West by Southwest of Eunice, New Mexico

**OIL & GAS LEASE**

NMNM #085937

**OIL & GAS LESSEE**

C.O.G. Operating, LLC

**BOND COVERAGE**

\$25,000 statewide bond of C.O.G. Operating, LLC

**ACRES**

800

**SURFACE OWNER**

Bureau of Land Management

**MINERAL OWNER**

Bureau of Land Management

**POOL**

Red Tank; Bone Spring

**EXHIBITS**

- A. Well Location & Acreage Dedication Map
- B. Area Road Map
- C. Vicinity Oil & Gas Map
- D & D-1. Topographic & Location Verification Maps
- E. Drilling Rig Layout
- F. BOPE Schematic
- F-1. Choke Manifold Schematic
- G & G-1. Proposed Onlease Road Maps
- H & H-1. Proposed Onlease Pipeline Maps
- I & I-1. Proposed Onlease Electric Line Maps

This well will be drilled to a depth of approximately 9000'

**1. EXISTING ROADS**

- A. Exhibit B is a portion of a section map showing the location of the proposed well as staked.
- B. Exhibit C is a plat showing existing roads in the vicinity of the proposed well site.
- C. Directions to well location:  
From the junction of State Hwy 176 and Co. Rd. 30, proceed on Co. Rd. 30 Southwest approximately 0.2 miles to Delaware Basin Road. On Delaware Basin Road proceed Southwest approximately 14.2 miles to lease road. On lease road, proceed 1.5 miles to lease road, follow lease road to the Prohibition "12" Federal #10 and proposed lease road to Prohibition "12" Federal #14.

**2. ACCESS ROADS**

- A. Length and Width: 890' long and 30' wide  
  
The access road will be built and is shown on Exhibit B.
- B. Surface Material  
  
Existing
- C. Maximum Grad  
  
Less than five percent
- D. Turnouts  
  
None necessary
- E. Drainage Design  
  
Existing
- F. Culverts  
  
None necessary
- G. Gates and Cattle Guards  
  
None needed

**3. LOCATION OF EXISTING WELLS**

Existing wells in the immediate area are shown in Exhibit D-1.

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

Necessary production facilities for this well will be located on the well pad.

**5. LOCATION AND TYPE OF WATER SUPPLY**

It is not contemplated that a water well will be drilled. Water necessary for drilling will be purchased and hauled to the site over existing roads shown on Exhibit B, C, and D.

**6. METHODS OF HANDLING WASTE DISPOSAL**

- A. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.
- B. Water produced during tests will be disposed of in the drilling pits.
- C. Oil produced during tests will be stored in test tanks.
- D. Trash will be contained in a trash trailer and removed from well site.
- E. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

**7. ANCILLARY FACILITIES**

None required.

**8. WELL SITE LAYOUT**

Exhibit E shows the relative location and dimensions of the well pad, mud pits, reserve pit, and trash pit, and the location of major rig components.

**9. PLANS FOR RESTORATION OF THE SURFACE**

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. The well site will be cleaned of all trash and junk to leave the site in an as aesthetically pleasing condition as possible.
- B. After abandonment, all equipment, trash, and junk will be removed and the site will be clean.

**10. OTHER INFORMATION**

**A. Topography**

The land surface at the well site is rolling native grass with a regional slope being to the east.

**B. Soil**

Topsoil at the well site is sandy soil.

**C. Flora and Fauna**

The location is in an area sparsely covered with mesquite and range grasses.

**D. Ponds and Streams**

There are no rivers, lakes, ponds, or streams in the area.

**E. Residences and Other Structures**

There are no residences within a mile of the proposed well site.

**F. Archaeological, Historical, and Cultural sites**

None observed on this area.

**G. Land Use**

Grazing



**11. ONLEASE RIGHT OF WAY EXHIBITS**

**Requesting Right of Way for all onlease appurtenances, including proposed lease road, pipeline, and electrical lines.**

**A. Roads: Building of a proposed lease road 889.6' in length  
(See Exhibit G).**

**B. Pipeline: Building of a proposed pipeline 889.6' in length  
(See Exhibit H).**

**C. Electric: Building of a proposed electric line 1742.7' in length  
(See Exhibit I).**

**12. OPERATOR'S REPRESENTATIVE**

John Coffman  
C.O.G. Operating LLC  
550 West Texas Avenue  
Midland, Texas 79701  
Office: (432) 683-7443

**13. CERTIFICATION**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently 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 preformed by the C.O.G. Operating, LLC Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

10/11/06  
Date

John Coffman  
John Coffman  
C.O.G. Operating, LLC

DISTRICT I  
1825 N. French Dr., Hobbs, NM 88249

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-025-38238</b>		Pool Code 51683	Pool Name <b>Red Tank; Bone Spring</b>
Property Code 34806	Property Name <b>PROHIBITION "12" FEDERAL</b>		Well Number 14
OGRID No. 229137	Operator Name <b>C.O.G. OPERATING L.L.C.</b>		Elevation 3628'

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	12	22 S	32 E		1980	SOUTH	2100	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

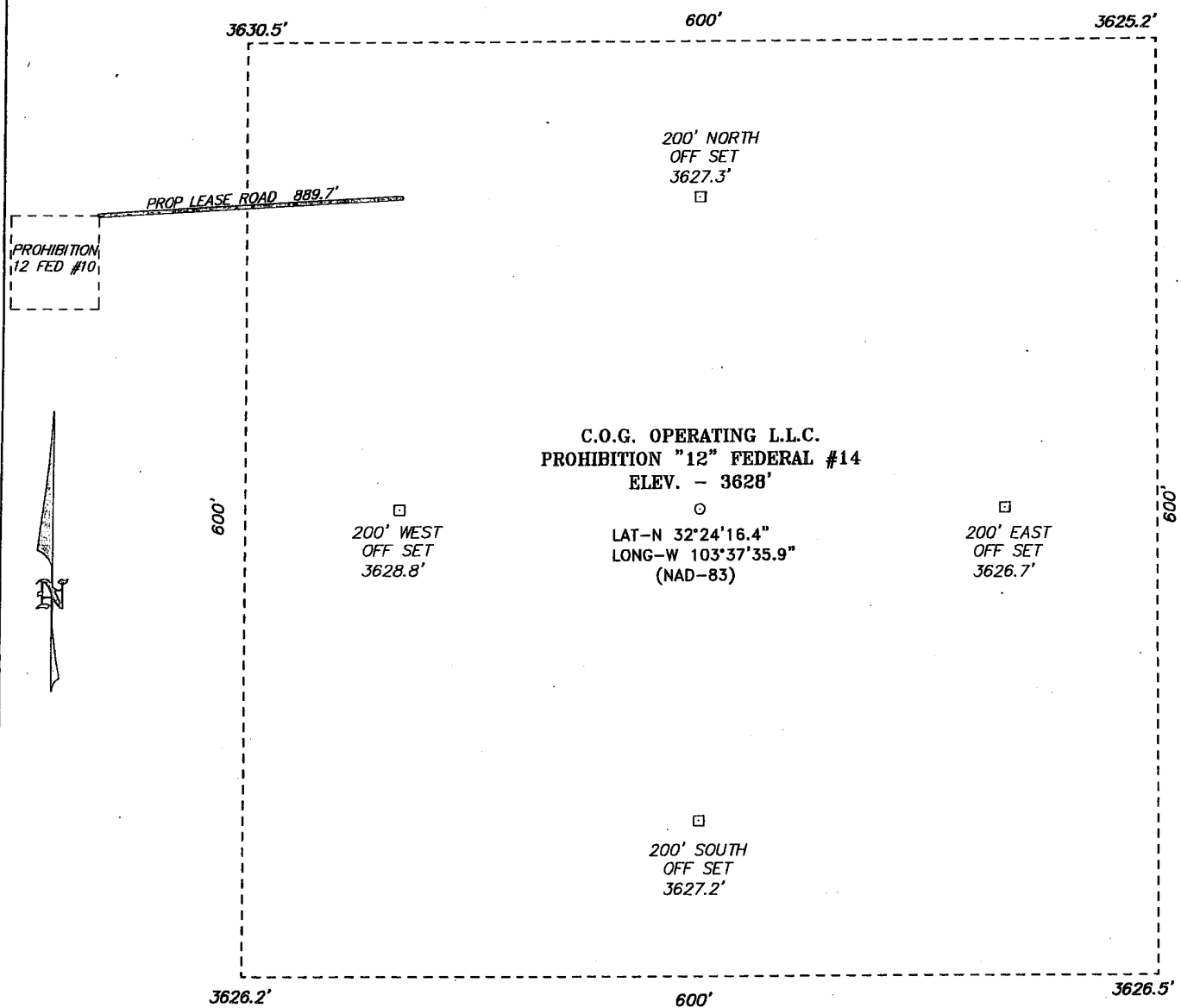
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

	<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p><i>Denise Menoud</i> 10/2/06 Signature Date Denise Menoud, Agent for C.O.G. Operating Printed Name</p>	
	<p><b>SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p>SEPTEMBER 22, 2006</p> <p>Date Surveyed Signature &amp; Seal Professional Surveyor</p> <p><i>Gary L. Jones</i> W. &amp; S. 15 Certificate No. Gary L. Jones 7977</p>	
	<p><b>BASIN SURVEYS</b></p>	

SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.

EXHIBIT "B"



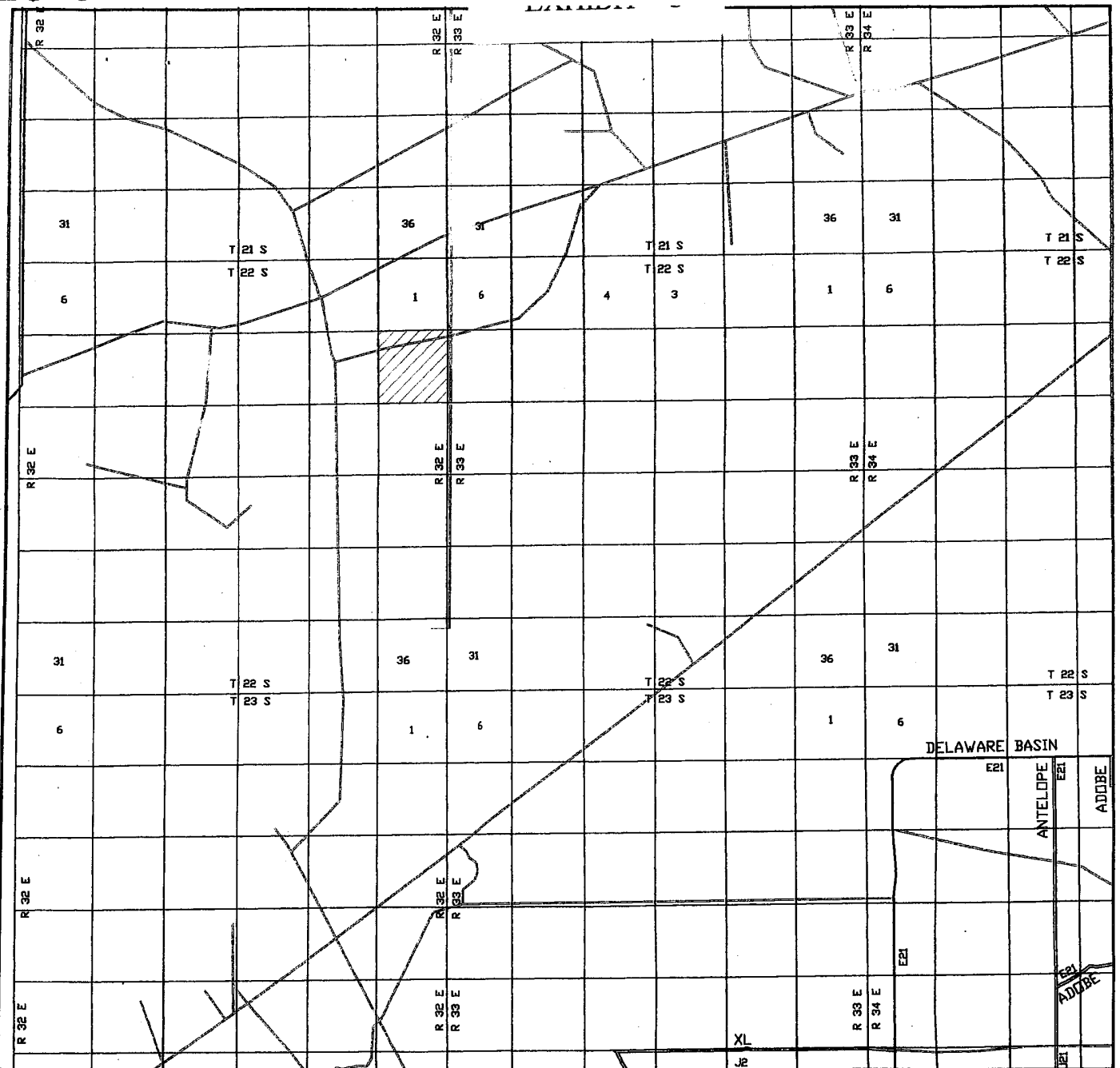
**DIRECTIONS TO LOCATION:**

FROM THE JUNCTION OF STATE HWY 176 AND CO. RD. 30, PROCEED ON CO. RD. 30 SOUTHWEST APPROX. 0.2 MILE TO DELAWARE BASIN ROAD, ON DELAWARE BASIN ROAD PROCEED SOUTHWEST APPROX. 14.2 MILE TO LEASE ROAD, ON LEASE ROAD PROCEED SOUTH 1.5 MILE TO LEASE ROAD, FOLLOW LEASE ROAD TO THE PROHIBITION "12" FEDERAL #10 AND PROPOSED LEASE ROAD.

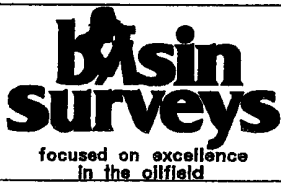
<b>C.O.G. OPERATING L.L.C.</b>	
REF: PROHIBITION "12" FEDERAL #14 / Well Pad Topo	
THE PROHIBITION "12" FEDERAL No. 14 LOCATED 1980' FROM	
THE SOUTH LINE AND 2100' FROM THE EAST LINE OF	
SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST,	
N.M.P.M., LEA COUNTY, NEW MEXICO.	

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 17215	Drawn By: J. M. SMALL	N.M.P.M., LEA COUNTY, NEW MEXICO.	
Date: 09-25-2006	Disk: JMS 17215W	Survey Date: 09-22-2006	Sheet 1 of 1 Sheets



THE PROHIBITION "12" FED #14  
 Located at 1980' FSL and 2100' FEL  
 Section 12, Township 22 South, Range 32 East,  
 N.M.P.M., LEA County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

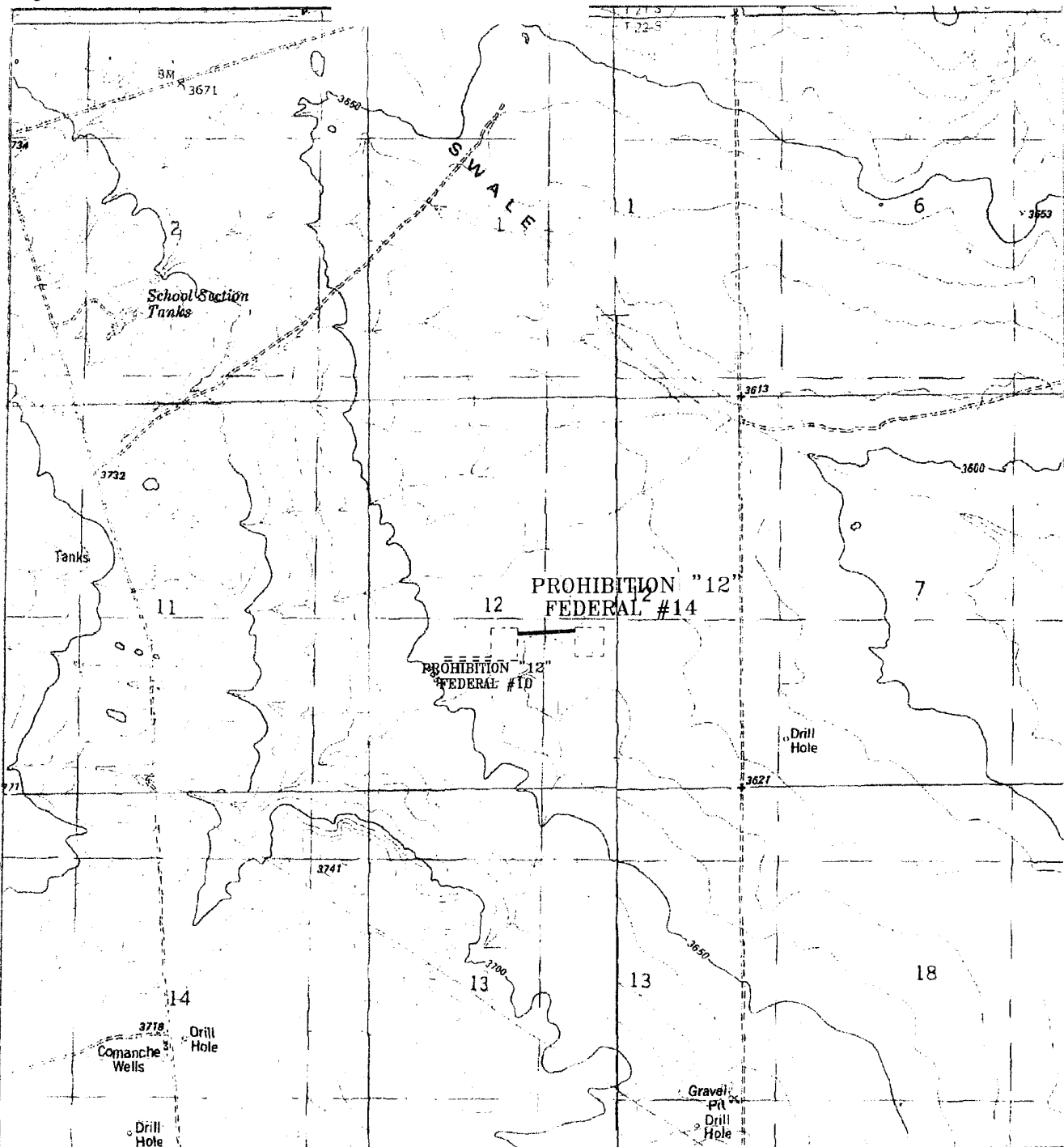
W.O. Number: JMS 17215T

Survey Date: 09-22-2006

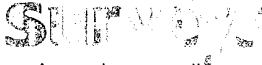
Scale: 1" = 2 MILES

Date: 09-25-2006

C.O.G.  
 OPERATING  
 L.L.C.



**THE PROHIBITION "12" FED #14**  
 Located at 1980' FSL and 2100' FEL  
 Section 12, Township 22 South, Range 32 East,  
 N.M.P.M., LEA County, New Mexico.

  
 focused on excellence  
 in the oilfield

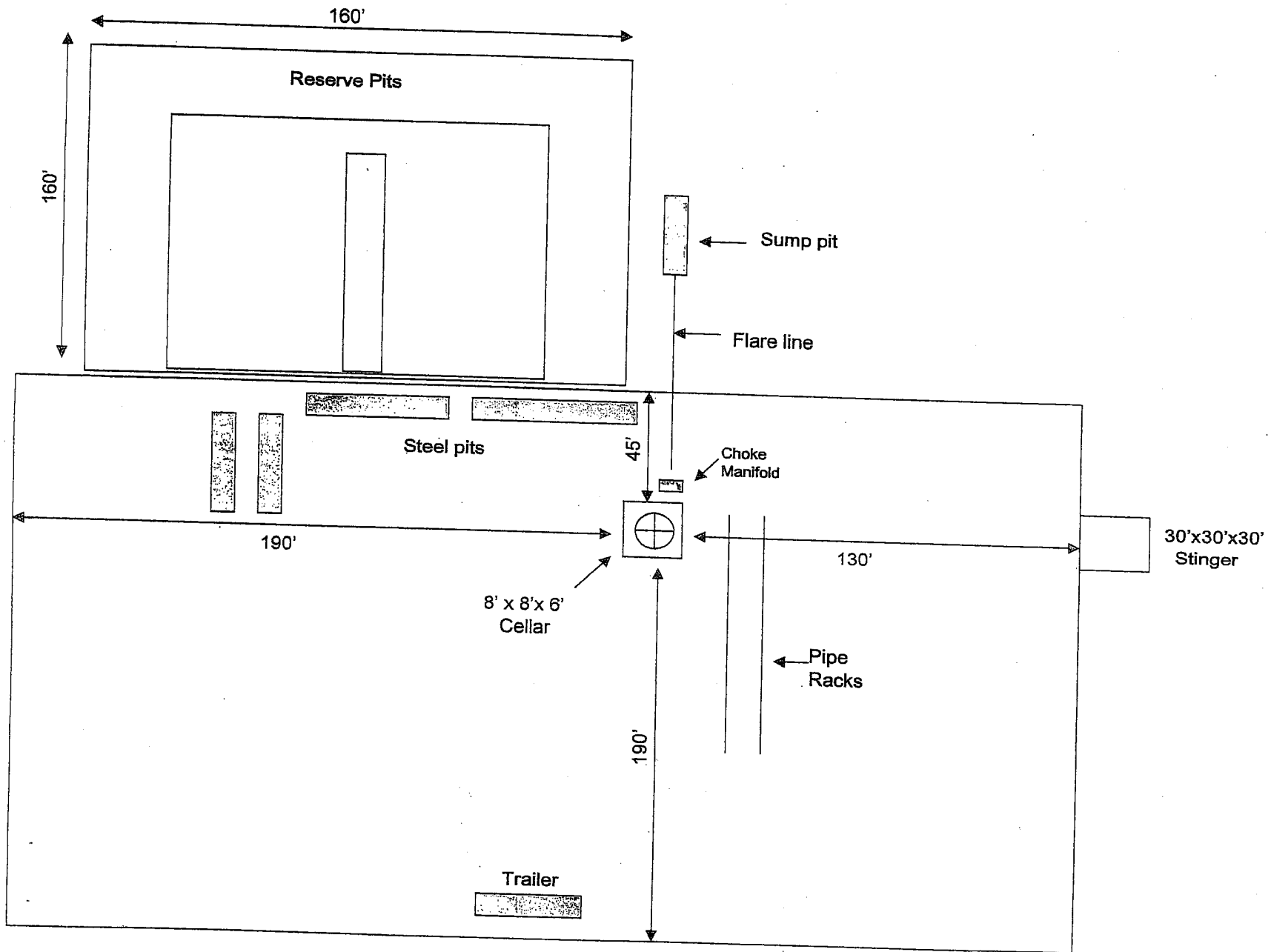
P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

W.O. Number:	JMS 17215T
Survey Date:	09-22-2006
Scale:	1" = 2000'
Date:	09-25-2006

**C.O.G.  
 OPERATING  
 L.L.C.**

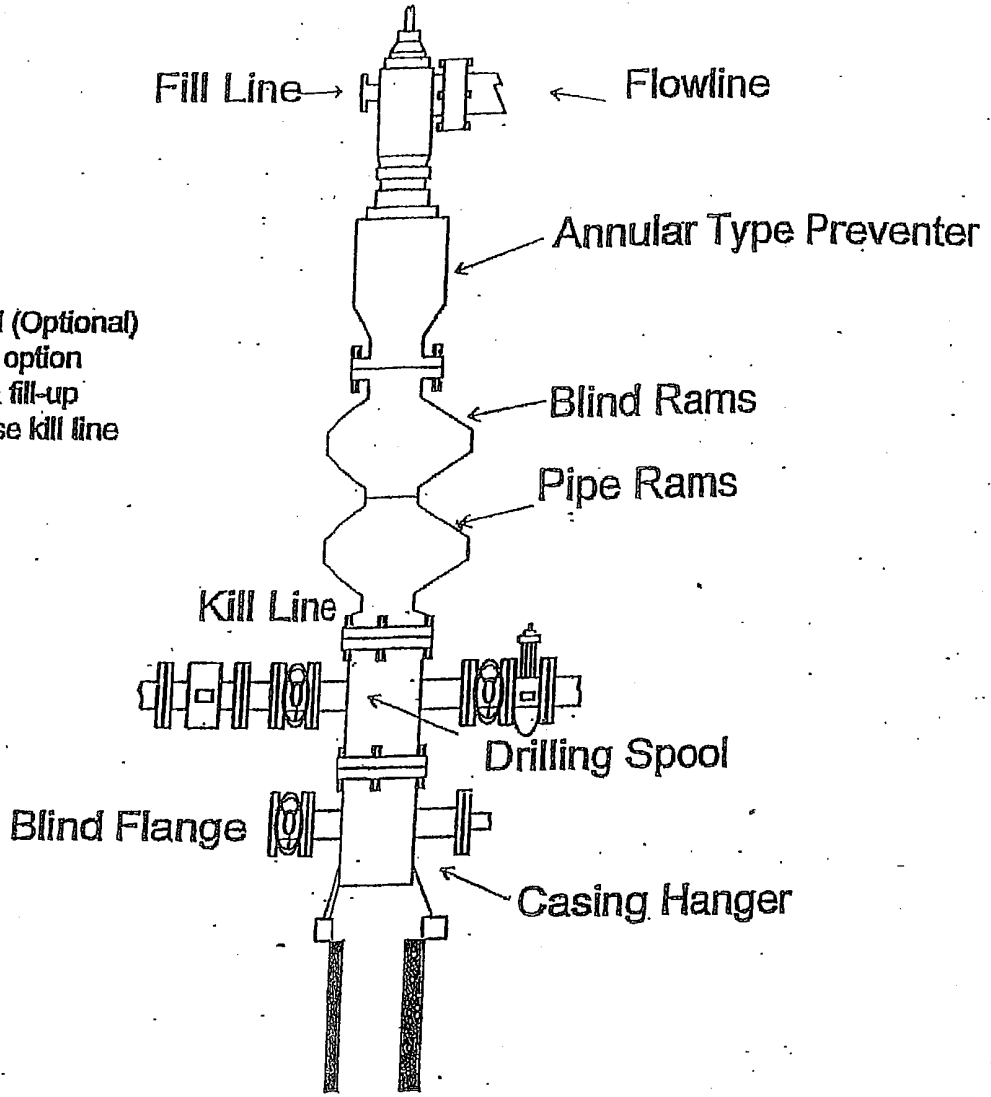


L/AM/D/1 L



BOPE SCHEMATIC

Rotating Head (Optional)  
Drilling Nipple option  
must include a fill-up  
line. Do not use kill line  
for fill up.

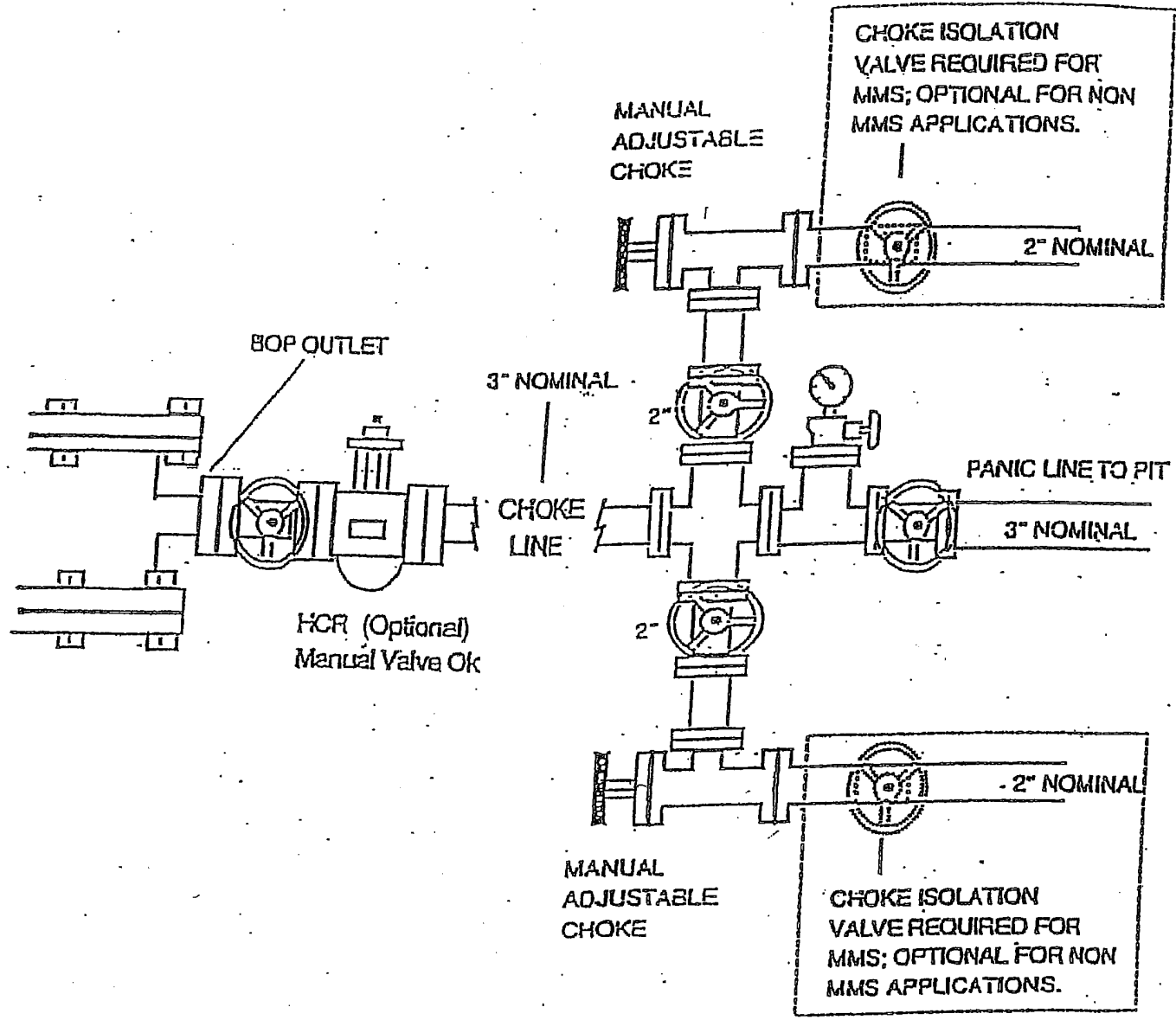


900 SERIES

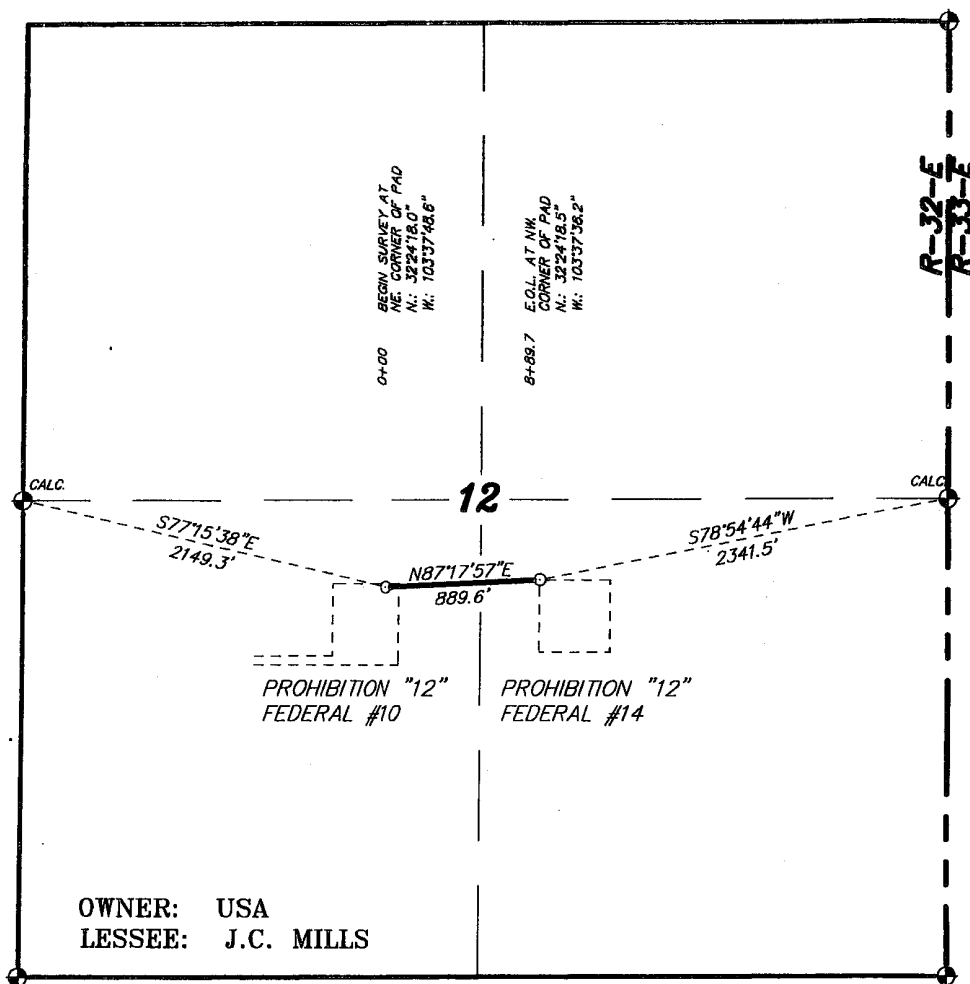


### CHOKE MANIFOLD

### 3M SERVICE



SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M.,  
 LEA COUNTY, EXHIBIT "G" NEW MEXICO.

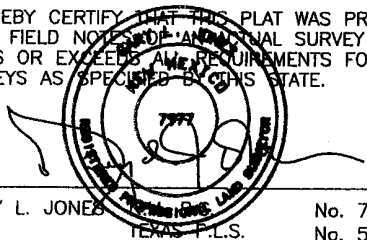


LEGAL DESCRIPTION

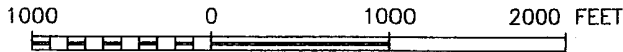
A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.

SECTION 12 = 889.7 FEET = 0.17 MILES = 59.92 RODS = 0.61 ACRES

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ORIGINAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.



GARY L. JONES No. 7977  
 SURVEYOR, STATE OF NEW MEXICO No. 5074



**C.O.G. OPERATING L.L.C.**

REF: PROP. ROAD TO THE PROHIBITION "12" FEDERAL #14

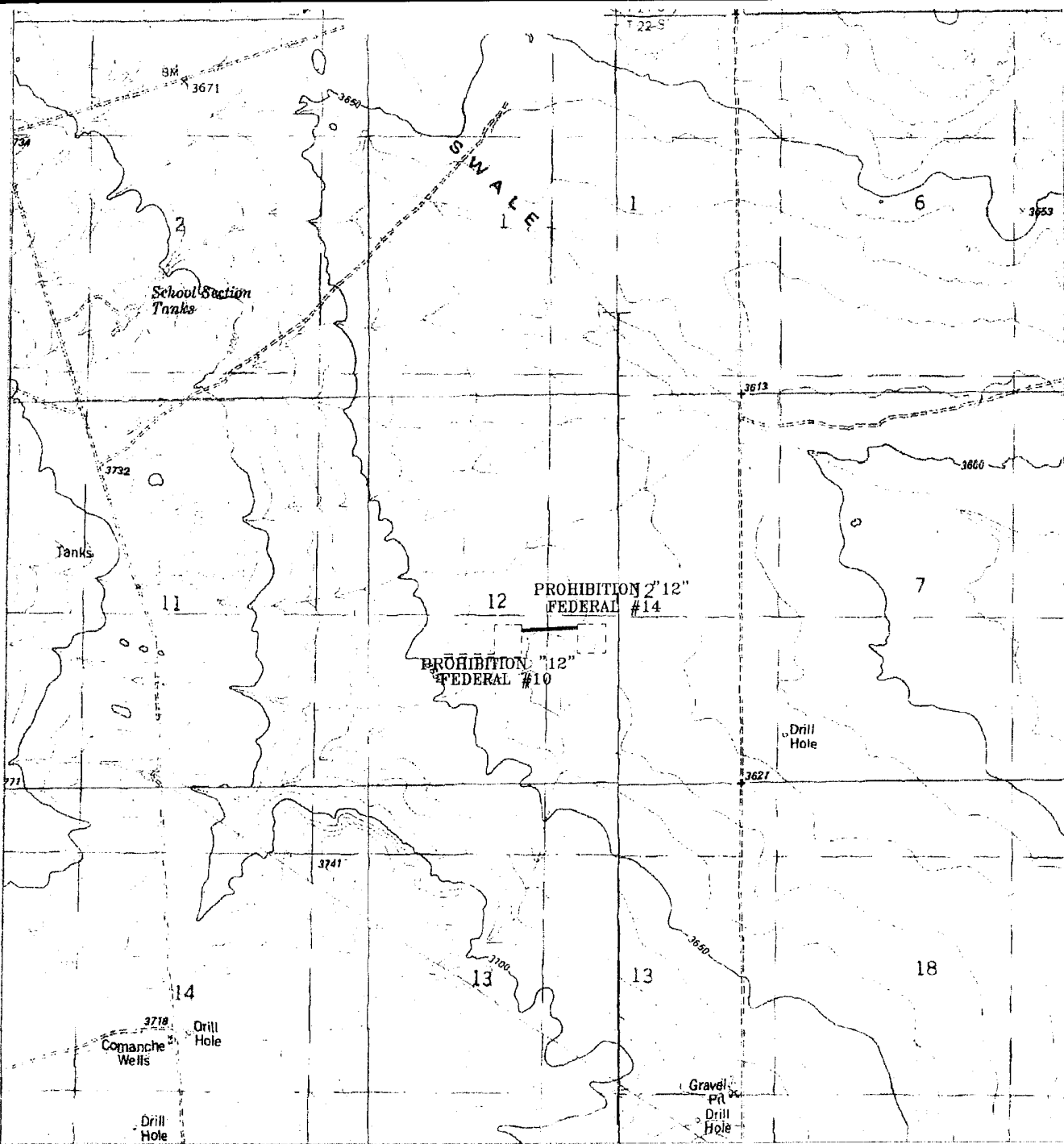
A ROAD CROSSING USA LAND IN  
 SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST,  
 N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 17214R.E.P. Drawn By: J. M. SMALL

Date: 09-25-2006 Disk: JMS 17214R.E.P.

Survey Date: 09-22-2006 Sheet 1 of 1 Sheets



PROPOSED LEASE ROAD TO THE PROHIBITION "12" FED #14  
 Section 12, Township 22 South, Range 32 East,  
 N.M.P.M., LEA County, New Mexico.

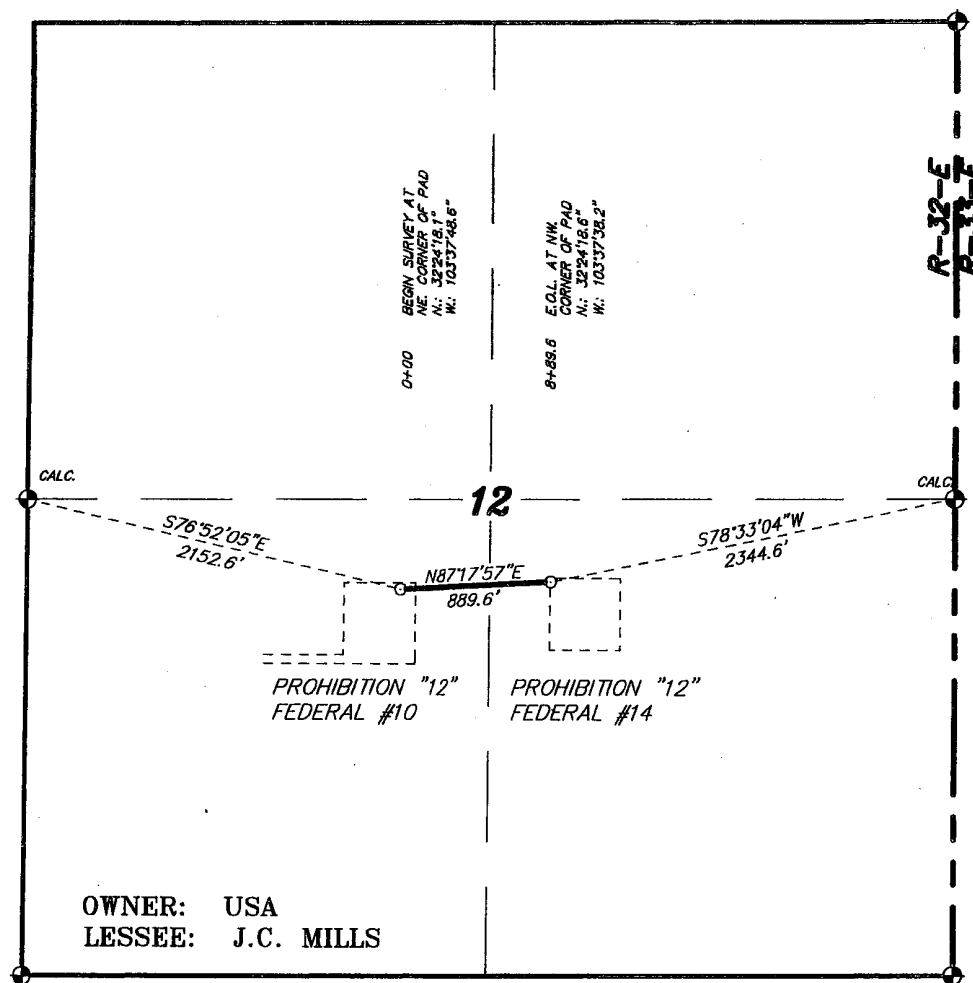
**SURVEYS**  
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 in the oilfield

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 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

W.O. Number:	17214TT
Survey Date:	09-22-2006
Scale:	1" = 2000'
Date:	09-25-2006

**C.O.G.  
 OPERATING  
 L.L.C.**

EXHIBIT H

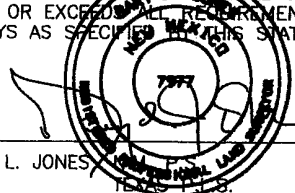


LEGAL DESCRIPTION

A STRIP OF LAND 50.0 FEET WIDE, LOCATED IN SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING 25.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.

SECTION 12 = 889.6 FEET = 0.17 MILES = 53.92 RODS = 0.61 ACRES

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ORIGINAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED IN THIS STATE.



GARY L. JONES

No. 7977  
No. 5074

1000 0 1000 2000 FEET

**C.O.G. OPERATING L.L.C.**

REF: PROP. PIPELINE TO THE PROHIBITION "12" FEDERAL #14

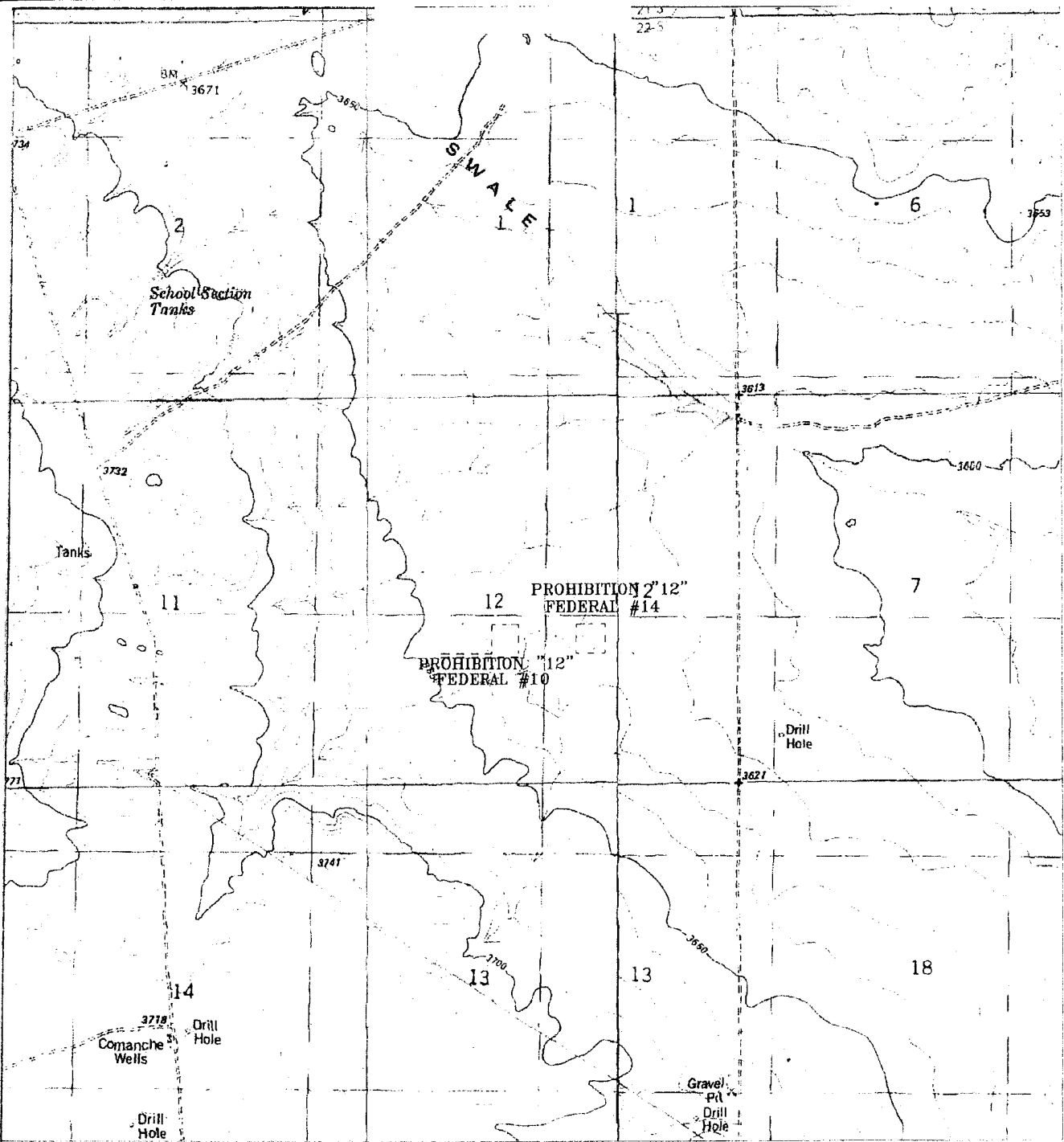
A PIPELINE CROSSING USA LAND IN  
SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 17214R.E.P. Drawn By: J. M. SMALL

Date: 09-25-2006 Disk: JMS 17214R.E.P.

Survey Date: 09-22-2006 Sheet 1 of 1 Sheets



PROPOSED PIPELINE TO THE PROHIBITION "12" FED #14  
 Section 12, Township 22 South, Range 32 East,  
 N.M.P.M., LEA County, New Mexico.

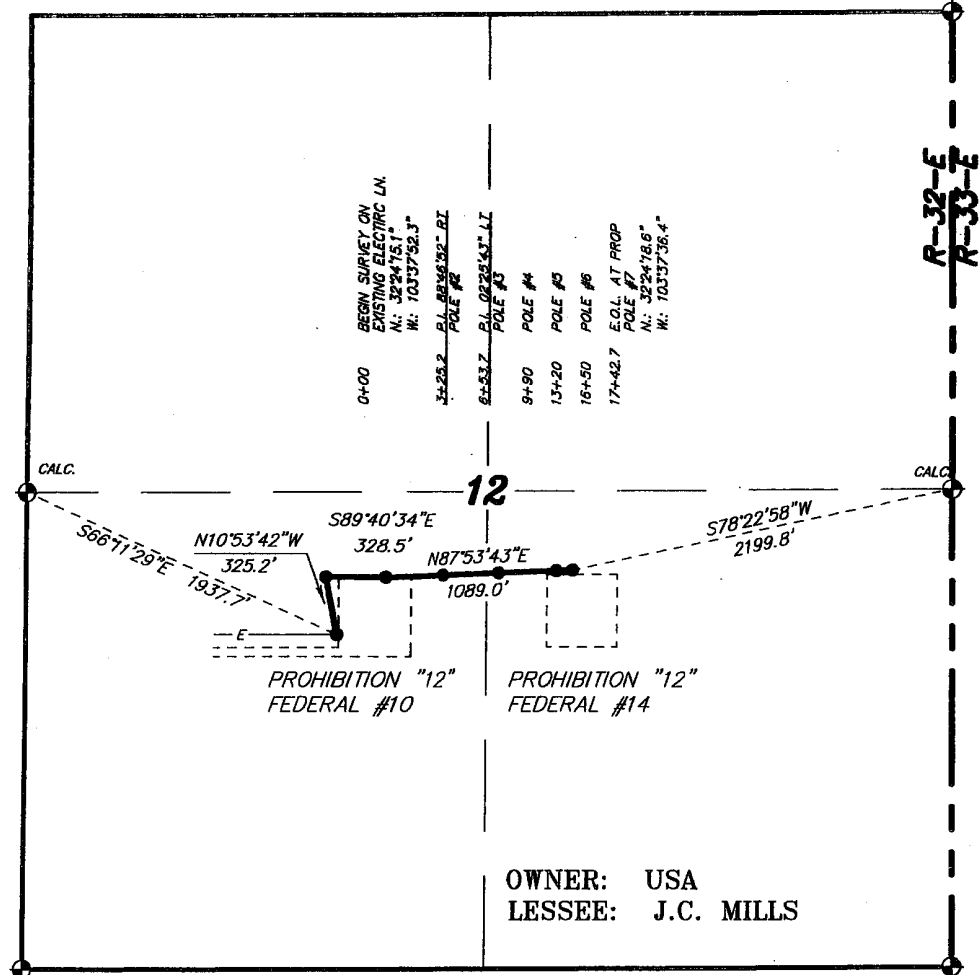
**basinsurveys**  
 focused on excellence  
 in the oilfield

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 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

W.O. Number:	17214TT
Survey Date:	09-22-2006
Scale:	1" = 2000'
Date:	09-25-2006

**C.O.G.  
 OPERATING  
 L.L.C.**

EXHIBIT I



OWNER: USA  
LESSEE: J.C. MILLS

LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.

SECTION 12 = 1742.7 FEET = 0.33 MILES = 105.62 RODS = 1.20 ACRES

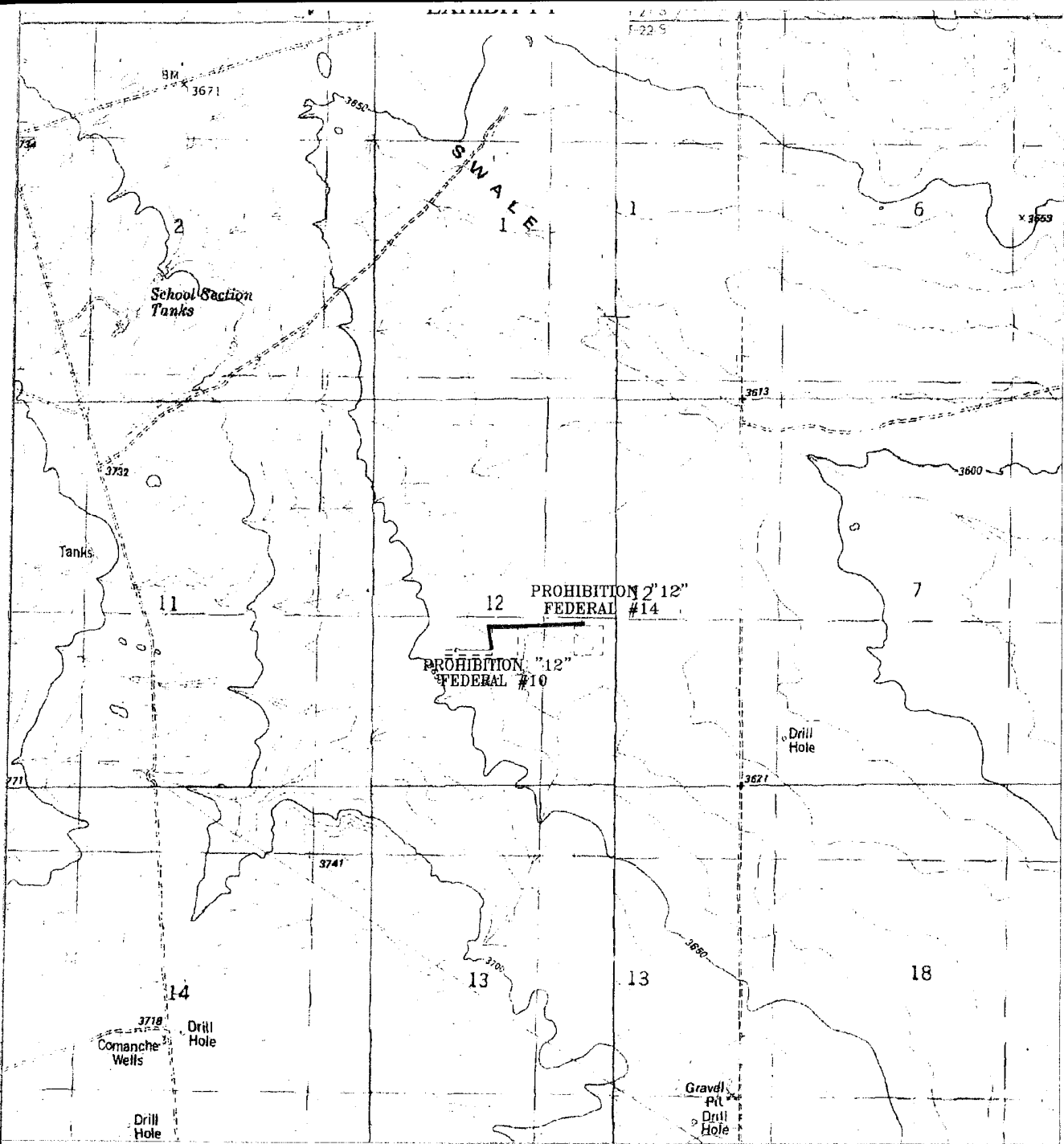
I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, N.M. P.S. No. 7977  
L.S. No. 5074



<b>C.O.G. OPERATING L.L.C.</b>	
REF: PROP. ELECTRIC LINE TO THE PROHIBITION "12" FEDERAL #14	
AN ELECTRIC LINE CROSSING USA LAND IN	
SECTION 12, TOWNSHIP 22 SOUTH, RANGE 32 EAST,	
N.M.P.M., LEA COUNTY, NEW MEXICO.	
W.O. Number: 17214R.E.P.	Drawn By: J. M. SMALL
Date: 09-25-2006	Disk: JMS 17214R.E.P.
Survey Date: 09-22-2006	Sheet 1 of 1 Sheets

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO



PROPOSED ELECTRIC LINE TO THE PROHIBITION "12" FED #14  
 Section 12, Township 22 South, Range 32 East,  
 N.M.P.M., LEA County, New Mexico.

**basin SURVEYS**  
 focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basin-surveys.com

W.O. Number: 17214TT
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**C.O.G.  
 OPERATING  
 L.L.C.**

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
  - A. Characteristics of H2S.
  - B. Physical effects and hazards.
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H2S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
  
2. **H2S Detection and Alarm Systems**
  - A. H2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
  
3. **Windsock and / or wind streamers**
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
  
4. **Condition Flags and Signs**
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.
  
5. **Well control equipment**
  - A. See Exhibits "F" and "F-1".
  
6. **Communication**
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
  
7. **Drillstem Testing**
  - A. Exhausts will be watered.
  - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - C. If location is near any dwelling a closed D.S.T. will be performed.
  
8. **Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.**
  
9. **If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.**



## CONDITIONS OF APPROVAL - DRILLING

Well Name & No.      Prohibition 12 Federal # 14  
Operator's Name:      COG Operating LLC  
Location:              1980 FSL, 2100 FEL, SEC 12, T22S, R32E, Lea County, NM  
Lease:                  NM-85937

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 3/8 inch 8 5/8 inch 5 1/2 inch

C. BOP tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated prior to drilling into the N/A Formation. A copy of the plan shall be posted at the drilling site.

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing ( size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

### II. CASING:

1. The 13 3/8 inch surface casing shall be set **ABOVE THE SALT, AT LEAST 25 feet INTO THE RUSTLER ANHYDRITE @ APPROXIMATELY 950 FEET**, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 8 5/8 inch intermediate casing is cement shall circulate to the surface.

4. The minimum required fill of cement behind the 5-1/2 inch production casing is **cement shall be raised to at least 200 feet above the base of the shoe of the 8 5/8 intermediate casing.**

5. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

### **III. PRESSURE CONTROL:**

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) is 3000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- A variance to test the 13 3/8 inch casing, BOP and BOPE to the reduced pressure of 700 psi with the rig pumps is approved.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

**Engineers can be reached at 505-706-2779 for any variances that might be necessary.**

F Wright 10/25/06

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

Form C-144  
June 1, 2004

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

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: COG Operating LLC      Telephones: Agent: (432) 685-9158; COG: (432) 683-7443      e-mail address: denise@graysurfacespecialties.com  
Address: 550 W. Texas, Suite 1300, Midland, TX 79701  
Facility or well name: Prohibition 12 Federal #14      API #: 30-025-38238      U/L or Qtr/Qtr: J      Sec 12      T 22S      R 32E  
County: Lea      Latitude: N32 deg, 24', 16.4"      Longitude W103 deg, 35', 35.9"      NAD: 1927  1983 X  
Surface Owner: Federal  State  Private  Indian

<b>Pit</b>	<b>Below-grade tank</b>	
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 _____ mil Clay <input type="checkbox"/> Pit Volume 20M bbl	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.)      89'	Less than 50 feet	(20 points)
	50 feet or more, but less than 100 feet      10	(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	( 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	( 0 points)
<b>Ranking Score (Total Points)</b>		<b>10</b>

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: (check the onsite box if you are burying in place) 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.

Additional Comments:

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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: 10/02/2006

Printed Name/Title: Denise Menoud / Regulatory Specialist, Agent for COG Operating      Signature Denise Menoud

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:

Printed Name/Title CHRIS WILLIAMS / DIST. SUPER.      Signature Chris Williams      Date: 1/2/07