Form 9-331 C
(May 1963)

NMOCC COPY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-015-22304

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM 25351

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Rock Tank Federal

2. NAME OF OPERATOR: Rial Oil Company

9. WELL NO.: No. 1

3. ADDRESS OF OPERATOR: P.O. Drawer 3068, Midland, Texas 79702

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SEP 23 1977
O. C. C.
ARTESIA, OFFICE

10. FIELD AND POOL, OR WILDCAT: Rock Tank

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface

At proposed prod. zone: 1315 FSL, 2080 FWL

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 31, T-22-S, R-25-E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 10 miles West Carlsbad, New Mexico

12. COUNTY OR PARISH: Eddy

13. STATE: New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 1315

16. NO. OF ACRES IN LEASE: 640.96

17. NO. OF ACRES ASSIGNED TO THIS WELL: 640.96

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.:

19. PROPOSED DEPTH: 10,600'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3991 GR

22. APPROX. DATE WORK WILL START*: 9/15/77

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 ¼	8-5/8	24#	2650	1050 (Circulate)
7-7/8	4 ½	11.60#	10600	450

See attached sheets for casing and cementing program.

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Gas sales not dedicated

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Ray Arnim TITLE Vice-President DATE 8/10/77

(This space for Federal or State office use)

PERMIT NO.

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

APPROVAL DATE

THIS APPROVAL IS RESCINDED IF OPERATIONS ARE NOT COMMENCED WITHIN 3 MONTHS.
EXPIRES DEC 21 1977

DECLARED WATER BASIN

CEMENT BEHIND THE CASING MUST BE CIRCULATED

NOTIFY USGS IN SUFFICIENT TIME TO CASING

*See Instructions On Reverse Side

Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

☆ GPO 782-931

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Rial Oil Co.	Rock Tank Fed.	1

Unit Letter	Section	Township	Range	County
N	31	22 South	25 East	Eddy

Actual Footage Location of Well:				
1315 feet from the South line and 2080 feet from the West line				
Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:	
3991.0	Morrow	Rock Tank	640.96	Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling etc?

Yes No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

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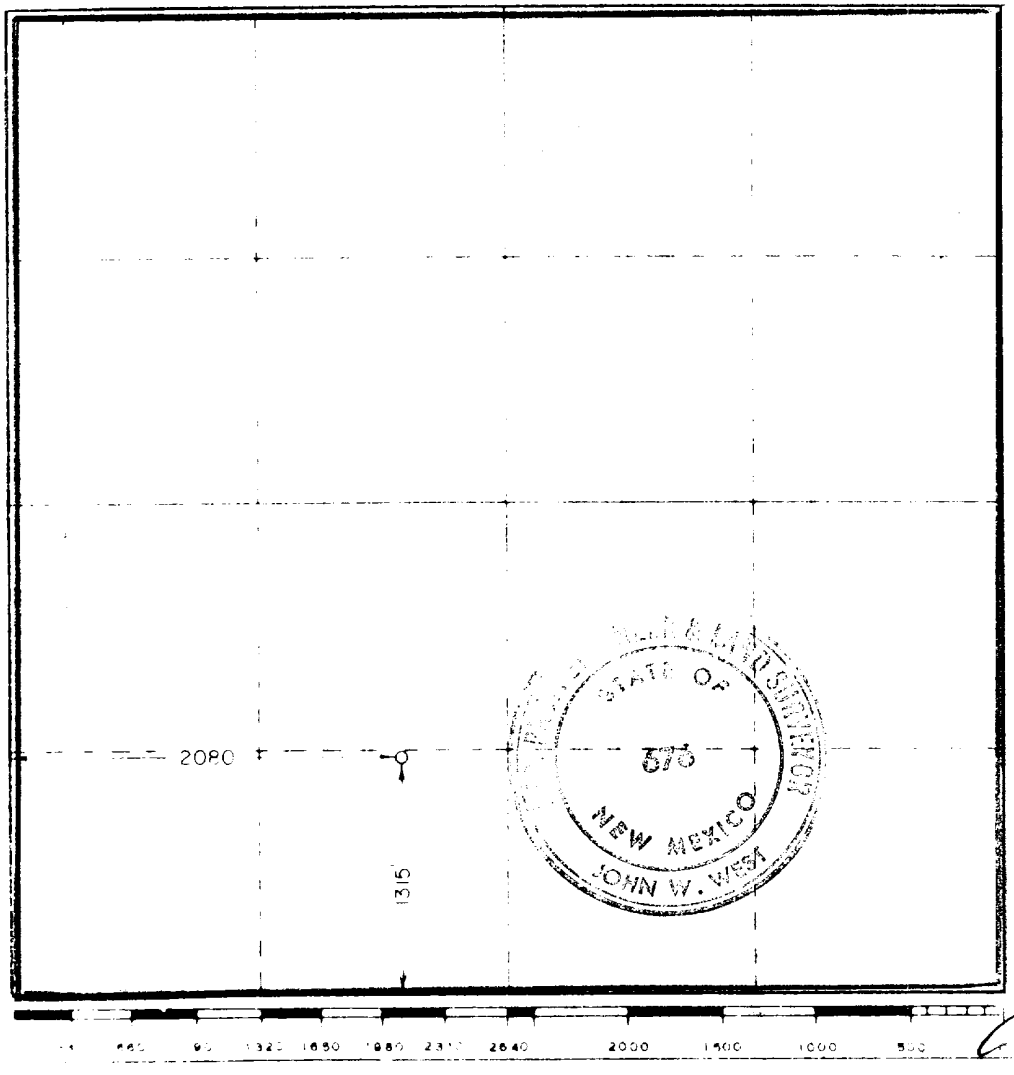
ARTESIA, NEW MEXICO



CERTIFICATION

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

Rod Amen

Vice-President

Rial Oil Company

8/10/77

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 knowledge and belief.

July 30, 1977

Registered Professional Engineer and/or Land Surveyor

John W West

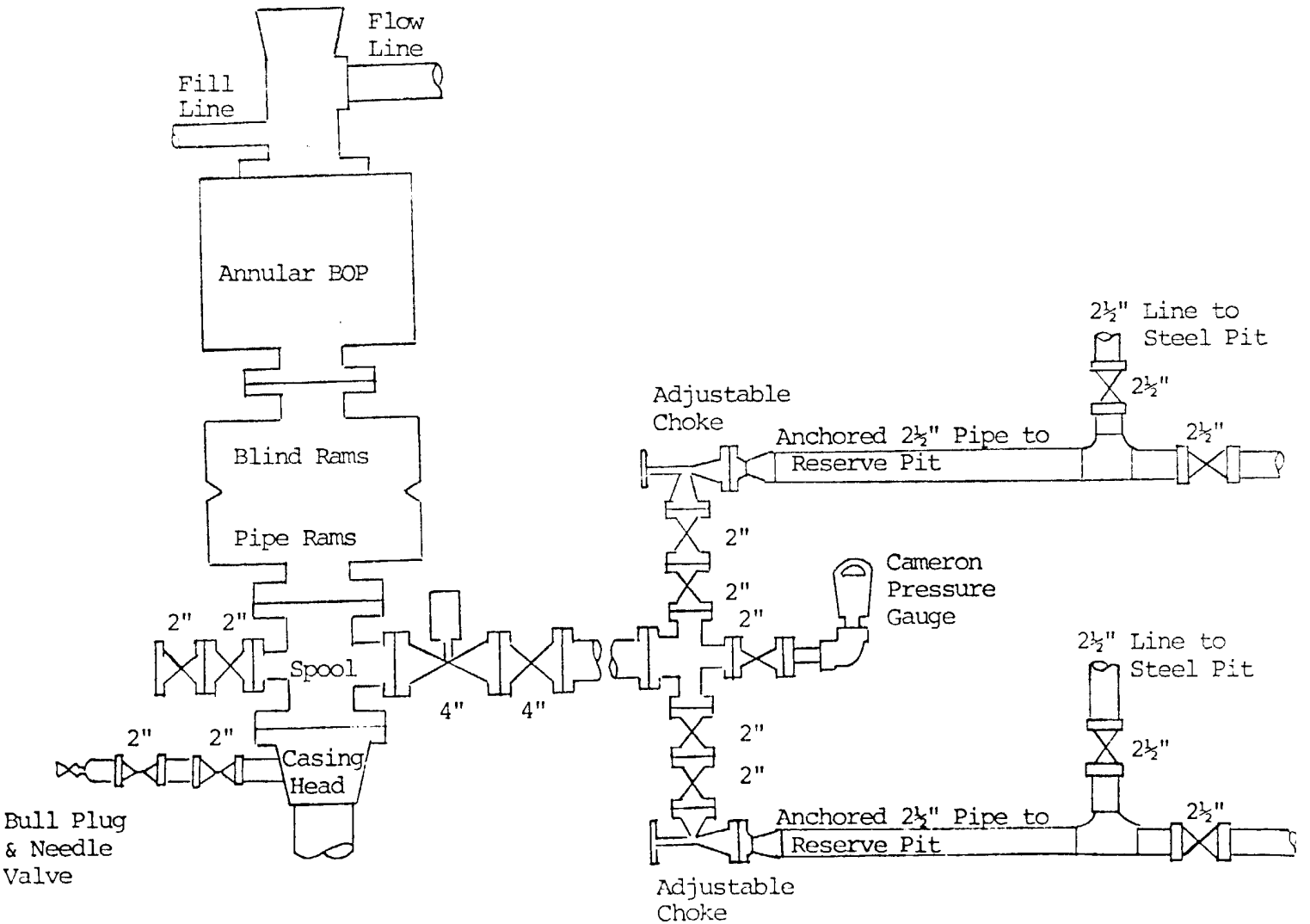
676

RIAL OIL COMPANY

Blowout Preventer Specifications

Rock Tank Federal No. 1 - 1315 FSL, 2080 FWL, Section 31, T-22-S, T-25-E, Eddy County, New Mexico.

EXHIBIT F



APPLICATION FOR DRILLING

Rial Oil Company
Rock Tank Federal Well No. 1
1315' FSL and 2080' FWL
Section 31-T22S-R25E
Eddy County, New Mexico

In conjunction with Form 9-331C, Application for Permit to Drill subject well, Rial Oil Company submits the following ten items of pertinent information in accordance with USGS requirements:

1. The geologic surface formation is the Yates formation of the Permian age.

2. The estimated tops of geologic markers are as follows:

Bone Springs	4328'
Wolfcamp	7877'
Cisco	8263'
Cisco Canyon Reef	8340'
Strawn	8633'
Atoka	9042'
Morrow	9435'
Chester	10,665'
Barnett	10,735'
Mississippian Lime	10,865'

3. The depths at which anticipated water, oil or gas formations are expected to be encountered:

   Water: Approximately 700' (water level approximately 400')

Oil or Gas:	Cisco Canyon	approximately	8263'-8633'
	Strawn	approximately	8633'-9042'
	Atoka	approximately	9042'-9435'
	Morrow	approximately	9435'- TD

4. Proposed Casing Program: See Form 9-331C and attached "Casing and Cementing Program".

5. Pressure Control Equipment: 10" Series 1500 Shaffer Type B, 10" Series 1500 GK Hydril, BOP Manifold and Spool, and Hydril Type K-80 Accumulator. See attached "Rig Inventory" and Exhibit F.

6. Mud Program: See attached "Mud Program".

7. Auxiliary Equipment: See attached "Rig Inventory".

8. Testing, Logging and Coring Programs:

   Will possibly DST the Atoka formation of the Pennsylvanian Period.
   Gamma ray sidewall neutron log.
   No coring.

9. No abnormal pressures or temperatures are anticipated.

10. Anticipated starting date: As soon as possible after approval.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Rial Oil Company
Rock Tank Federal Well No. 1
1315' FSL and 2080' FEL
Section 31-T22S-R25E
Eddy County, New Mexico
(Development Well)

This plan is submitted with Form 9-331C, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe 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 operations, so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS.

A. Exhibit A is a portion of a road map on a scale of ½" to a mile, showing the proposed location and surrounding area. Exhibit B is a portion of USGS topographic map on a scale of 1" to a mile. This map shows the area and the roads in the immediate vicinity of the proposed location. The proposed wellsite is located approximately 25 miles south and west of Carlsbad, New Mexico. Exhibits A and B indicate, in red and green, the access route to the location.

(1) Proceed south from Carlsbad on U.S. Highway 62/180. Turn right onto Hidalgo Road, which is directly west of the Carlsbad Civic Center.

(2) Proceed on Hidalgo Road for 9.4 miles at which point the paved road ends at a stop sign.

(3) Turn right at the stop sign and continue. The W.G. Smith ranch will be off to the right approximately 9.3 miles from the end of the paved road.

(4) Continue on this road in a now due north direction to a small house with windmill, approximately 1.7 miles beyond the Smith Ranch. The small house is on the west side of the road.

(5) 0.9 miles beyond the house, on the east side of the road is a caliche pit.

(6) Continue beyond the caliche pit approximately 2.3 miles to Monsanto Well #2. A gas pipeline will be crossed several times in this distance.

B. The existing access road from Monsanto Well #2 to the start of the new road (approximately 1 mile) will be bladed and covered with six inches of compacted caliche wherever needed. Turnouts will be constructed on this road as required.

2. PLANNED ACCESS ROAD.

   A. The proposed new access road will be approximately ½ mile in length and 12 feet driving surface width, excluding turnouts (if any). It will be covered with the necessary depth of compacted caliche. The road will be crowned, with drainage on both sides. No culverts or turnouts will be necessary. The new road will meet the drilling pad at the southwest corner of the pad.

   B. The center line of the proposed new access road has been staked and flagged, and is clearly visible.

3. LOCATION OF EXISTING WELLS.

   A. Other drilling activity in the area of the proposed location is shown on Exhibit C. The nearest producing well is Monsanto Co. Rock Tank Unit Well #2 located at 1980' FSL and 1650' FWL of Sec. 6-T23S-R25E.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

   A. At the present time, there are no production facilities on this lease.

   B. In the event this well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive of oil, a gas or diesel self contained unit will be used to provide the required power. No power will be necessary if the well is a gas producer.

5. LOCATION AND TYPE OF WATER SUPPLY.

   A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from a privately owned and/or commercial source. The water will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS.

   A. Caliche for construction of the drilling pad, new access road, and repairs to existing access road, will be obtained from either of two existing pits,one located in SW of NE of Section 12-T23S-R24E and the other, in SE of SE of Section 6-T23S-R25E.

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. 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 U.S. Geological Survey for appropriate approval.

D. Oil produced during operations will be stored in tanks until sold.

E. Current laws and regulations pertaining to the disposal of human waste will be complied with during the drilling operation.

F. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by wind.

G. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES.

A. None required.

9. WELLSITE LAYOUT.

A. Exhibit D shows the relative location and dimensions of the well pad, reserve pits, and major rig components.

B. The ground surface at the drilling site is on the upper side of a gentle slope. There is a gentle rise in a northwest direction. Cut and fill of as much as 8-10 feet will be required to level the pad area. It will also be covered with at least 6 inches of compacted caliche.

C. The reserve pits will be plastic lined.

D. The pad and pit area has been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE.

A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.

B. Unguarded pits, if any, containing fluids will be fenced until they have been filled.

C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the United States Geological Survey will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled within 90 days after abandonment.

11. OTHER INFORMATION.

A. Topography: The wellsite is almost to the top of a gently rising slope in a northerly direction. It reaches a height of approximately 10 feet over a lateral distance of several hundred feet.

B. Topsoil: The topsoil is rocky on moderately hard sand.

C. Vegetation: The cover at the wellsite is moderately sparse, consisting of clump grass, lechuguilla, prickly pear, cactus, greasewood, mesquite and bear grass.

D. Wildlife: No observations were made but it is likely that typical semi-arid desert wildlife such as deer, rabbits, coyotes, gophers, rodents and snakes traverse or inhabit the area. The area is used for sheep and cattle grazing.

E. Water: There are no ponds, lakes, streams or rivers within several miles of the wellsite.

F. Dwellings: The nearest dwelling is approximately 4.7 miles south of the wellsite, a small wooden house with windmill. There is also a rock water tank with windmill about .7 miles south of the wellsite.

G. Landownership: The wellsite is located on federally-owned surface. A portion of the existing access road (1/8 mi.) and of new access road (1/8 mi.) is on privately-owned surface. The operator has come to an agreement with the owner of the surface at the location of this portion of the road. See attached letter of agreement between operator and rancher.

H. Archeology: There is no evidence of any archeological, historical, or cultural sites in the area.

12. OPERATOR'S REPRESENTATIVE.

A. The field representative responsible for assuring compliance with approved surface use plan is:

Joel Lawhorn, Production Supt.
P.O. Drawer 3068
Midland, Texas 79702
Telephones: 915-683-5271 (office)
915-694-5979 (home)

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 presently exist; that the statement 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 Rial Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

8/22/77
Date

Edward N. Fuchs
Vice-President, Oil & Gas Administrative Services Company
Agent for Rial Oil Company

RIAL OIL COMPANY
P. O. DRAWER 3068
MIDLAND, TEXAS 79702

915 - 683-5271

MUD PROGRAM

Rock Tank Federal No. 1 - 2080 FWL, 1315 FSL, Section 31, T-23-S, R-25-E, Eddy County, New Mexico.

Depth Feet	MUD PROPERTIES Weight LB GAL	Viscosity Sec	Filtrate ml	TREATMENT
0' - 2600'	----------Spud----------			AQUAGEL/lime using HY-SEAL for seepage, FIBERTEX and cottonseed hulls for more severe losses. Lime for 9-9.5 pH. Begin Corrosion Program below 500'.
2600' - 8000'	----------Fresh Water---------- 8.4-8.6	28-31	N.C.	Use AQUAGEL/lime slugs for additional hole cleaning. HY-SEAL for seepage losses. Lime for 9-9.5 pH. BEN-EX for additional solids control. Continue Corrosion Program.
8000' - 9700'	----------Cut Brine-KCl---------- 9.3-9.5	28-31	N.C.	Brine water additions to increase fluid density to 9.3 ppg. Add 3-5% KCl for additional hole stability. ZEOGEL slugs for additional hole cleaning. HY-SEAL for seepage. Lime for 9-9.5 pH. BEN-EX for additional solids control. CON-DET for solids control and improved samples.
9700' - 10,600'	Brine polymer-KCl---------- 9.3-9.5	34-38	5-8 cc	Limit circulation to steel pits, treat hardness with soda ash and add or maintain 3-5%. Mud-up with DEXTRID/DRISPAC brine polymer system using ZEOGEL/Sea-Mud for additional viscosity. Caustic for 9-9.5 pH. Continue Corrosion Program.

RIAL OIL COMPANY
P. O. DRAWER 3068
MIDLAND, TEXAS 79702

915 - 683-5271

CASING AND CEMENTING PROGRAM

Rock Tank Federal No. 1 - 2080 FWL, 1315 FSL, Section 31, T-23-S, R-25-E, Eddy County, New Mexico.

Conductor Pipe:

20" Hole Size. Set 30' of 16" Conductor Pipe and Cement with Ready Mix.

Surface Casing:

12¼" Hole Size. Set approximately 2650' 8-5/8" 24# J-55 ST&C Casing. Cement with 650 sacks Halliburton Light Cement, 5# Gilsonite and ¼ Flocele per sack. Tail in with 400 sacks Class "C" and 2% Calcium Chloride and ¼# Flocele per sack.

Production String:

7-7/8" Hole Size. Set 4½" 11.60# N-80 and K-55 LT&C Casing from 10,600' to surface. Cement with 450 sacks Class "H" 8# Salt and 3/4 of 1% CFR-2 per sack.

RIAL OIL COMPANY
P. O. DRAWER 3068
MIDLAND, TEXAS 79702

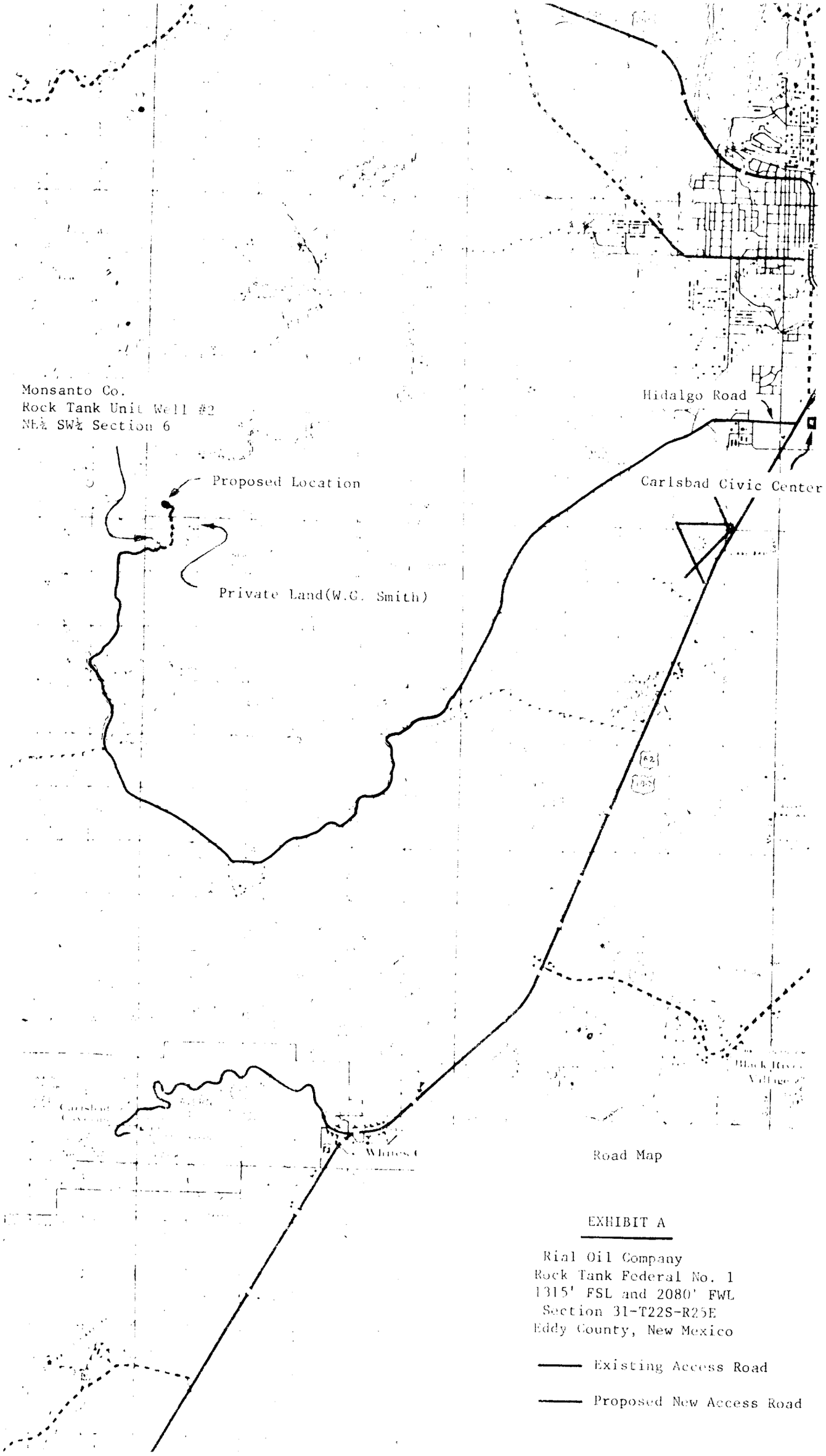
915 - 683-5271

RIG INVENTORY

Rial Drilling Company's Rig #6

Rock Tank Federal No. 1 - 1315 FSL, 2080 FWL, Section 31, T-22-S, R-25-E, Eddy County, New Mexico.

Drawworks:	National 50-A, 1 1/8" Grooved Drum, Kelco Catheads, Parmac 46" Hydromatic powered by two D-353 Caterpillar Diesel Engines. Rated to 11,600'.
Derrick:	131' Lee C. Moore - 480,000# Capacity.
Substructure:	14' Substructure - 600,000# Casing Capacity, 400,000# Set Back.
Pumps:	(1) Emsco D-500 Driven from Compound. (2) Oilwell 214-P Driven by GM 12103 Twin Engine.
Mud Pits:	Two 7½' x 40' x 5' Steel Mud Tanks with Mud Agitators and Shaleshaker.
Rotary:	Emsco JCS 20½".
Traveling Equipment:	Block: National D-12, 1 1/8" 4-Sheave. Hook: BJ 4200. Swivel: National Type D.
BOP Equipment:	10" Series 1500 Shaffer Type B, 10" Series 1500 GK Hydril, BOP Manifold and Spool and Hydril Type K-80 Accumulator.
Light Plants:	(1) 3304 Caterpillar 90 KW Generator. (2) 311 Caterpillar 21 KW Generator.
Drill String Pipe:	11,000' 4½" 16.60# Range 2, Grade E X-Hole Hard Banded and Plastic Coated.
Collars:	25 - 6½" OD x 30'.
Other:	Martin Decker Weight Indicator. 5¼" x 41' Hex Kelley. Satellite Automatic Driller. Air Hoist. Two 500 Barrel Water Tanks. Centrifugal Mud Mixing Pump.



Road Map

EXHIBIT A

Rial Oil Company
Rock Tank Federal No. 1
1315' FSL and 2080' FWL
Section 31-T22S-R25E
Eddy County, New Mexico

——— Existing Access Road

——— Proposed New Access Road