

(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Cons. Div-Dist. 2
1301 W. Grand Avenue
Alamosa, NM 88210

(Other instructions on
reverse side)

OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER

SINGLE ZONE ☒

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

GREAT WESTERN DRILLING COMPANY (ALAN ROBERTS 432-682-5241)

3. ADDRESS AND TELEPHONE NO.

P. O. BOX 1659 MIDLAND, TEXAS 79702 (432-682-5241)

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

At surface

1980' FSL & 1930' FWL SECTION 19 T17S-R31E EDDY CO. NM

At proposed prod. zone SAME

5. LEASE DESIGNATION AND SERIAL NO.

LC-031844

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.

JUNCTION FED. COM # 1

9. AP WELL NO.

30-015-33533

10. FIELD AND POOL, OR WILDCAT

CEDAR LAKE-MORROW (GAS)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

SECTION 19 T17S-R31E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 5 miles East of Loco Hills New Mexico

12. COUNTY OR PARISH

EDDY CO.

13. STATE

NEW MEXICO

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

660'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320±

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

NA

19. PROPOSED DEPTH

12,000'

20. ROTARY OR CABLE TOOLS

ROTARY

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

3609' GR.

22. APPROX. DATE WORK WILL START*
WHEN APPROVED

23. PROPOSED CASING AND CEMENTING PROGRAM

Koswell Controlled Water Basin

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	Conductor	NA	40'	Cement to surface with Redi-mix.
17½"	H-40 13 3/8"	48#	500'	500 Sx. circulate cement
12½"	J-55 8 5/8"	32#	4500'	1300 Sx. " "
7 7/8"	N-80 5½"	17#	12,000'	1400 Sx. Estimate TOC 8400'

1. Drill 25" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17½" hole to 500'. Run and set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 500 Sx. of Class "C" cement + ¼# Flocele/Sx. + 2% CaCl, circulate cement to surface.
3. Drill 12½" hole to 4500'. Run and set 4500' of 8 5/8" 32# J-55 ST&C casing. Cement with 800 Sx. of Class "C" Light weight cement + additives, tail in with 500 Sx. of Class "C" cement + ¼# Flocele/Sx. + 2% CaCl, circulate cement to surface.
4. Drill 7 7/8" hole to 12,000'. Run and set 12,000' of 5½" 17# N-80 LT&C casing. Cement with 700 Sx. of Class "H" Eight weight cement + additives, tail in with 600 Sx. of Class "H" Premium Plus cement + additives, estimate top of cement 8400' from surface.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS

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

24.

SIGNED

Just Janice

TITLE Agent

DATE 04/20/04

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

CEMENT TO COVER ALL OIL,
GAS AND WATER BEARING
ZONES

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the
CONDITIONS OF APPROVAL IF ANY:

APPROVED BY

/s/ LESLIE A. THEISS

TITLE FIELD MANAGER

DATE MAY 25 2004

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

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

RECEIVED
JUL 28 2004
OFF-ARTESIA

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: **Marbob Energy Corporation**

Telephone: **505-748-3303**

e-mail address: **marbob@marbob.com**

Address: **PO Box 227, Artesia, NM 88211-0227**

Facility or well name: **Junction Federal Com #1**

API #: _____ U/L or Qtr/Qtr **NESW** Sec **19** T **17S** R **31E**

County: **Eddy** Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness **12** mil Clay ☐ Volume _____ bbl

Below-grade tank

Volume: _____ bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ 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)

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)

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)

0 points

Ranking Score (Total Points)

0 points

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 OGD-approved plan ☐.

Date: **July 28, 2004**

Printed Name/Title: **Melanie J. Parker / Land Department**

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: **JUL 28 2004** _____
Printed Name/Title: _____ Signature: _____

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	Pool Code 74560	Pool Name CEDAR LAKE-MORROW (GAS)
Property Code	JUNCTION FEDERAL COM JUNCTION FEDERAL COM	Well Number 1
OGRID No. 9338	Operator Name GREAT WESTERN DRILLING COMPANY	Elevation 3609'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	19	17-S	31-E		1980	SOUTH	1930	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 320±	Joint or Infill	Consolidation Code	Order No.
-------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

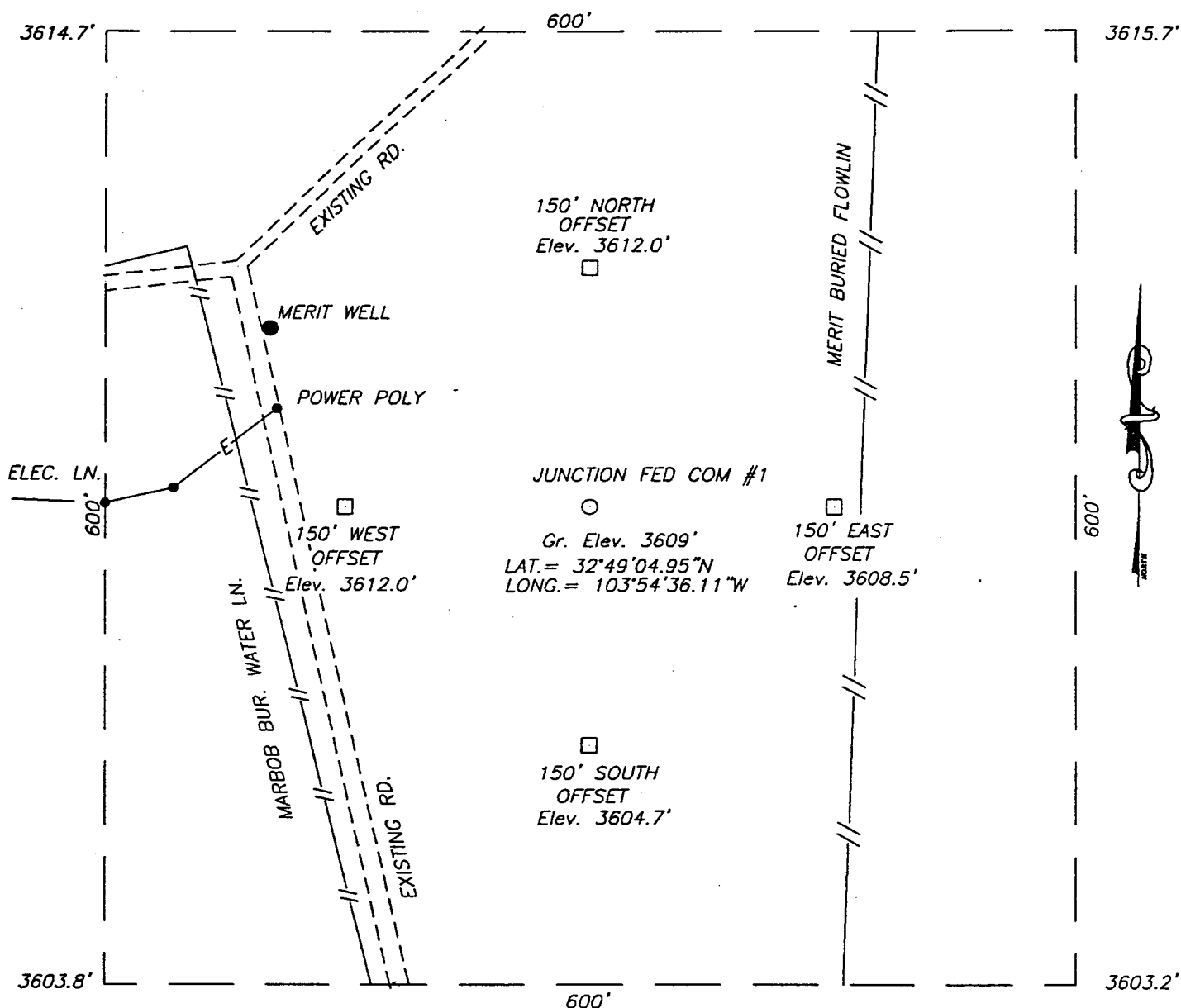
	<p><u>GEODETIC COORDINATES</u></p> <p>NAD 27 NMEZ</p> <p>Y = 661574.8 N</p> <p>X = 630043.5 E</p> <p>LAT. = 32°49'04.95"N</p> <p>LONG. = 103°54'36.11"W</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Joe T. Janica</i></p> <p>Signature Joe T. Janica</p> <p>Printed Name Agent</p> <p>Title 04/20/04</p> <p>Date</p>
		<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>April 15, 2004</p> <p>Date Surveyed AWB</p> <p>Signature & Seal of Professional Surveyor GARY E. EDSON 4/16/04</p> <p>04.11.0435</p> <p>Certificate No. GARY E. EDSON 12641</p>

EXHIBIT "A"

SECTION 19, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.,

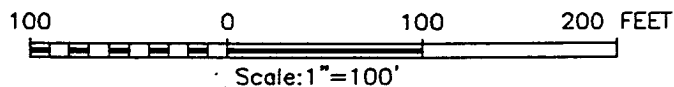
EDDY COUNTY,

NEW MEXICO.



DIRECTIONS TO LOCATION:

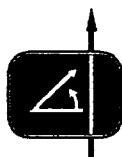
GOING EAST ON U.S. HWY. #83. TURN RIGHT AT MILE MARKER #136.5. GO SOUTH TO A CATTLE GUARD GO THROUGH CATTLE GUARD 100' ON A CALICHE RD. TURN RIGHT ON CALICHE RD. AND GO WEST 800'. PROPOSED LOCATION IS 250' SOUTH.



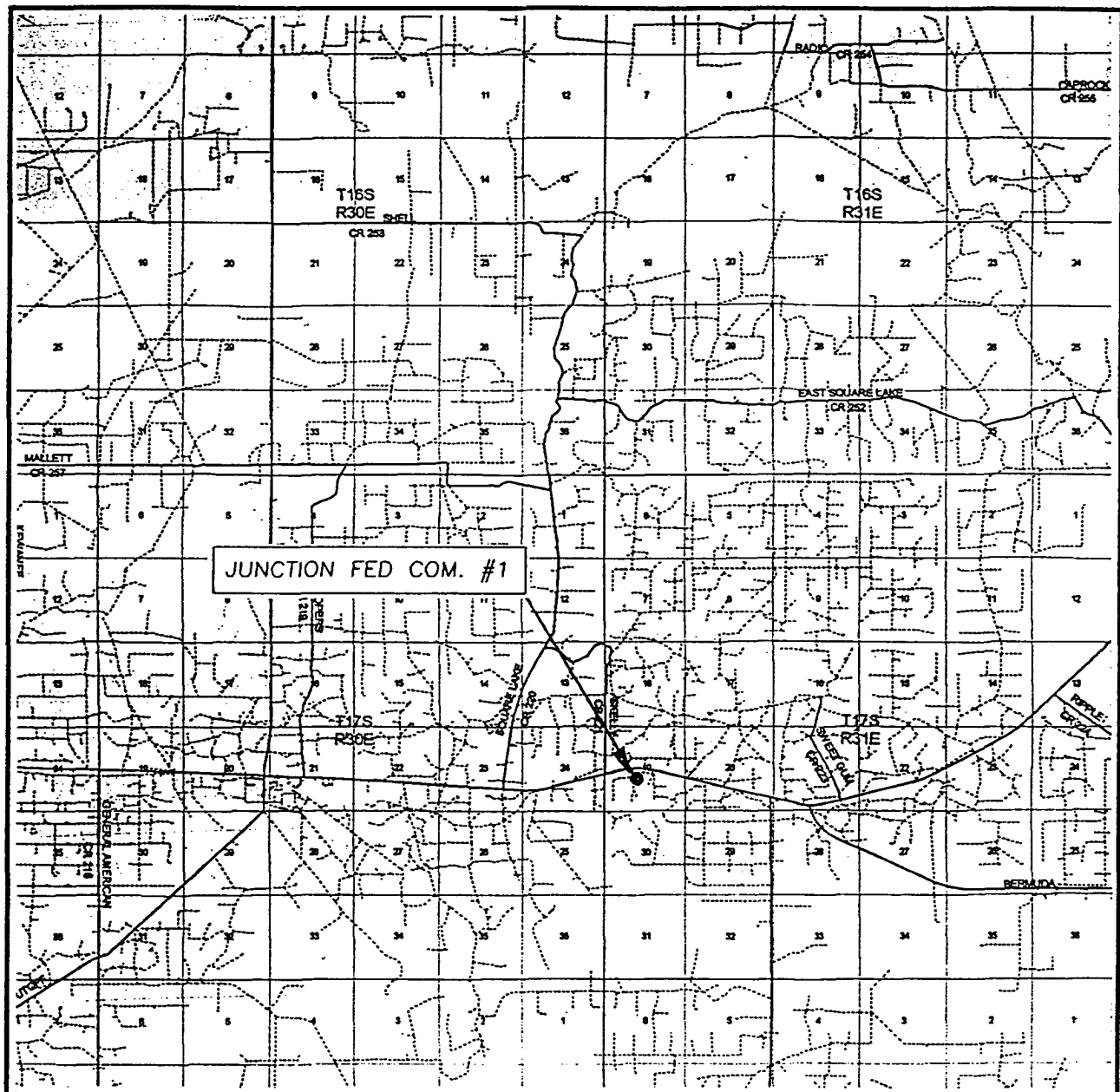
GREAT WESTERN DRILLING CO.

THE JUNCTION FEDERAL COM #1 LOCATED 1980' FROM THE SOUTH LINE AND 1930' FROM THE EAST LINE OF SECTION 19, TOWNSHIP 17 SOUTH, RANGE 31 WEST, EDDY COUNTY, NEW MEXICO

Survey Date: 04/15/04	Sheet 1 of 1 Sheets
W.O. Number: 04.11.0435	DRAWN BY: A.W.B
Date: 04/16/04	DISK: CD#10
04.11.0435	Scale: 1\"=100'



PROVIDING SURVEYING SERVICES
SINCE 1948
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 383-3117



SEC. 19 TWP. 17-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1980' FSL & 1930' FWL

ELEVATION 3609'

OPERATOR GREAT WESTERN DRILLING COMPANY

LEASE JUNCTION FEDERAL COM

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



APPLICATION TO DRILL

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

1. Location: 1980' FSL & 1930' FWL SECTION 19 T17S-R31E EDDY CO. NM
2. Elevation above Sea Level: 3609' GR.
3. Geologic name of surface formation: Quaternary Aeolian Deposits.
4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
5. Proposed drilling depth: 12,000'
6. Estimated tops of geological markers:

Yates	1500'	Penn	9,300'
San Andres	3100'	Strawn	10,500'
Abo Shale	6800'	Atoka	10,800'
Wolfcamp	8400'	Morrow	11,400'
7. Possible mineral bearing formations:

Penn	Oil	Atoka	Gas
Strawn	Gas	Morrow	Gas
8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40'	20"	NA	NA	NA	Conductor
17½"	0-500'	13 3/8"	48#	8-R	ST&C	H-40
12½"	0-4500'	8 5/8"	32#	8-R	ST&C	J-55
7 7/8"	0-12,000'	5½"	17#	8-R	LT&C	N-80

APPLICATION TO DRILL

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

9. CASING CEMENTING & SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor and cement to surface with Redi-mix.
13 3/8"	Surface	Set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 500 Sx. of Class "C" cement + additives, circulate cement.
8 5/8"	Intermediate	Set 4500' of 8 5/8" 32# J-55 ST&C casing. Cement with 1300 Sx. of Class "C" cement + additives, circulate cement to surface.
5 1/2"	Production	Set 12,000' of 5 1/2" 17# N-80 LT&C casing. Cement with 1400 Sx. of Class "H" cement estimate top of cement to be 8400' from surface. Or at least 500' above the upper most pay interval.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 Series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. This B.O.P. will be nipped up on the 13 3/8" casing. Exhibit "F-1" shows a 1500 Series 11" 5000 PSI B.O.P. and a choke manifold. This B.O.P. will be nipped up on the 8 5/8" casing. B.O.P.'s will be operated at least once in each 24 hour period, and blind rams will be operated when drill pipe is out of hole. Full opening stabbing valve and upper kelly cock will be available on the derrick floor in case of need. Exhibit "E-1" shows a 3000 PSI choke manifold with adjustable chokes. No abnormal pressures are expected, and abnormal temperatures are expected.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-500'	8.4-8.7	29-34	NC	Fresh water Spud mud use paper to control seepage.
500-4500'	10.0-10.2	29-38	NC	Brine water use paper to control seepage & high viscosity sweeps to clean hole.
4500-6600'	8.4-8.8	29-38	NC	Fresh water going to native
6600-9200'	9.5-9.7	29-38	NC	Cut brine use Gel for viscosity and paper seepage.
9200-12,000'	9.5-9.9	30-40	NC*	Cut brine Polymer system

* Water loss 10cc or less to log, run DST's and casing.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, viscosity, and water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Laterolog, CNL, LDT, Gamma Ray, Caliper from TD back to 8 5/8" casing shoe. Cased hole Gamma Ray, Neutron from the 8 5/8" casing shoe back to surface.
- B. Samples: 30' samples from surface to 4500'
10' samples from 4500' to 12,000'
- C. No cores are planned at this time. DST's will be run over the Wolfcamp and Strawn, and any other intervals at the discretion of well site Geologist.
- D. Mud logger may be put on the hole at the discretion of the operator.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H²S in this area. If H²S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 6500 PSI, and Estimated BHT 185°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 30 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Morrow formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as a gas well.

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 blowie line (mud pit) and on derrick floor or doghouse.
3. Windsack and/or wind streamers
 - A. Windsack at mudpit area should be high enough to be visible.
 - B. Windsack at briefing area should be high enough to be visible.
 - C. There should be a windsack 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 exhibit "E" & "E-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 of 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 the location is near to a dwelling a closed DST will be performed.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.
9. If H_2S 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 H_2S scavengers if necessary.

SURFACE USE PLAN

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

1. EXISTING ROADS & PROPOSED ROADS: Area maps; Exhibit "B" is a reproduction of a County General Hi-way Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
 - A. Exhibit "A" shows the proposed well site as staked.
 - B. From Loco Hills New Mexico take US Hi-way 82 East for 4.5 miles turn Right follow lease road 100' South turn Right go approximately 1000' to location on the East side of road.
 - C. Right Of Way for flowlines and powerlines will be requested on a Sundry report when well is completed.
2. PLANNED ACCESS ROADS: No additional roads will be required.
 - A. The access roads will be crowned and ditched to a 12' wide travel surface with a 40' Right-of-Way.
 - B. Gradient of all roads will be less than 5.00%.
 - C. If turn-outs are necessary they will be constructed.
 - D. If needed roads will be surfaced with a minimum of 4" of caliche. This material will be obtained from a local source.
 - E. Center-line for new roads will be flagged. Earth-work will be will be done as field conditions require.
 - F. Culverts will be placed in the access road if they are necessary. The roads will be constructed to utilize low water crossings for drainage as required by topography.
3. LOCATIONS OF EXISTING WELLS IN A ONE MILE RADIUS. EXHIBIT "A-1"
 - A. Water wells - None known
 - B. Disposal wells - None known
 - C. Drilling wells - None known
 - D. Producing wells - As shown on Exhibit "A-1"
 - E. Abandoned wells - As shown on Exhibit "A-1"

SURFACE USE PLAN

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's. If this well is completed as a producer a Sundry Report will be for the flowline and/or powerling.

5. LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped to location in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of drill site, if additional material is needed it will be obtained from a local source and transported over the access roads as shown on Exhibit "C".

7. METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by the supplier, including broken sacks.
- D. Waste water from living quarters will be drained into holes with a minium of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-John will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for furthed drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approve disposal site. Later pips will be broken out to speed drying. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in storage tanks and sold.

8. ANCILLARY FACILITIES:

- A. No camps or air strips will be constructed on location.

SURFACE USE PLAN

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

9. WELL SITE LAYOUT

- A. Exhibit "D" shows the proposed well site layout.
- B. This exhibit indicated proposed location of reserve and sump pits and living facilities.
- C. Mud pits in the active circulating system will be steel pits & the reserve pit is proposed to be unlined unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with polyathelene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start 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.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. 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. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be contoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

SURFACE USE PLAN

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

11. OTHER INFORMATION:

- A. Topography consists of sand dunes with a slight dip to the West. Deep sandy soil supports shinnery oak, native grasses, and an occasional mesquite tree.
- B. Surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is used for grazing livestock and the production of oil and gas.
- C. An archaeological survey will be conducted on the location and access roads. This report will be filed with The Bureau of Land Management in the Carlsbad field office.
- D. There are no dwellings in the near vicinity of this location.

12. OPERATORS REPRESENTATIVES:

Before construction:

TIERRA EXPLORATION, INC
P.O. BOX 2188
HOBBS, NEW MEXICO 88241
OFFICE Ph. 505-391-8503
JOE T. JANICA .

During and after construction:

GREAT WESTERN DRILLING COMPANY
P. O. BOX 1659
MIDLAND, TEXAS 79702
OFFICE PH. 432-682-5241
MR. ALAN ROBERTS

13. CERTIFICATION: I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access roads, and that I am familiar with the conditions which currently exist, and 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 Great Western Drilling Co. it's contractors/subcontractors is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false report

NAME: Joe T. Janica

DATE: 04/20/04

TITLE: Agent

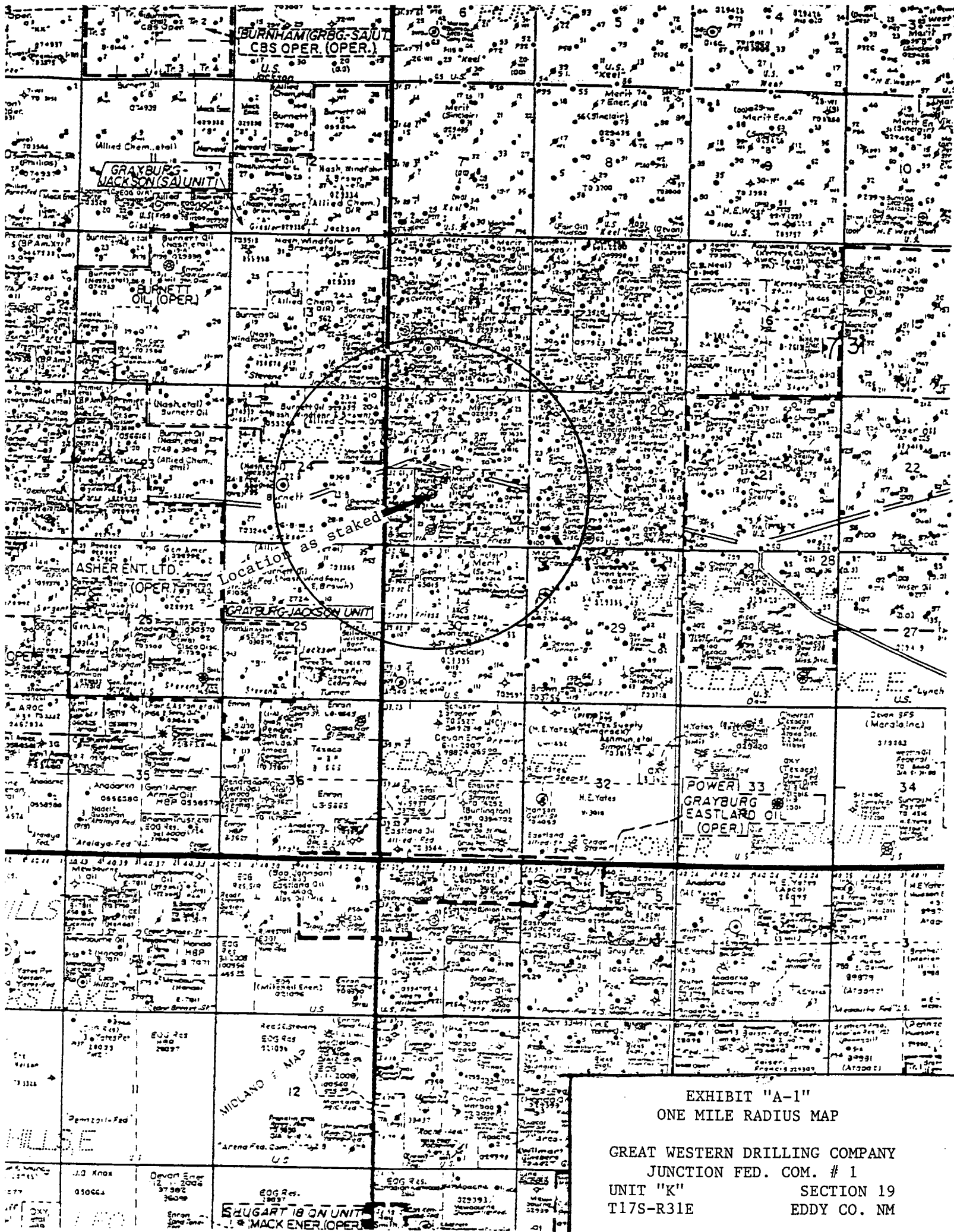
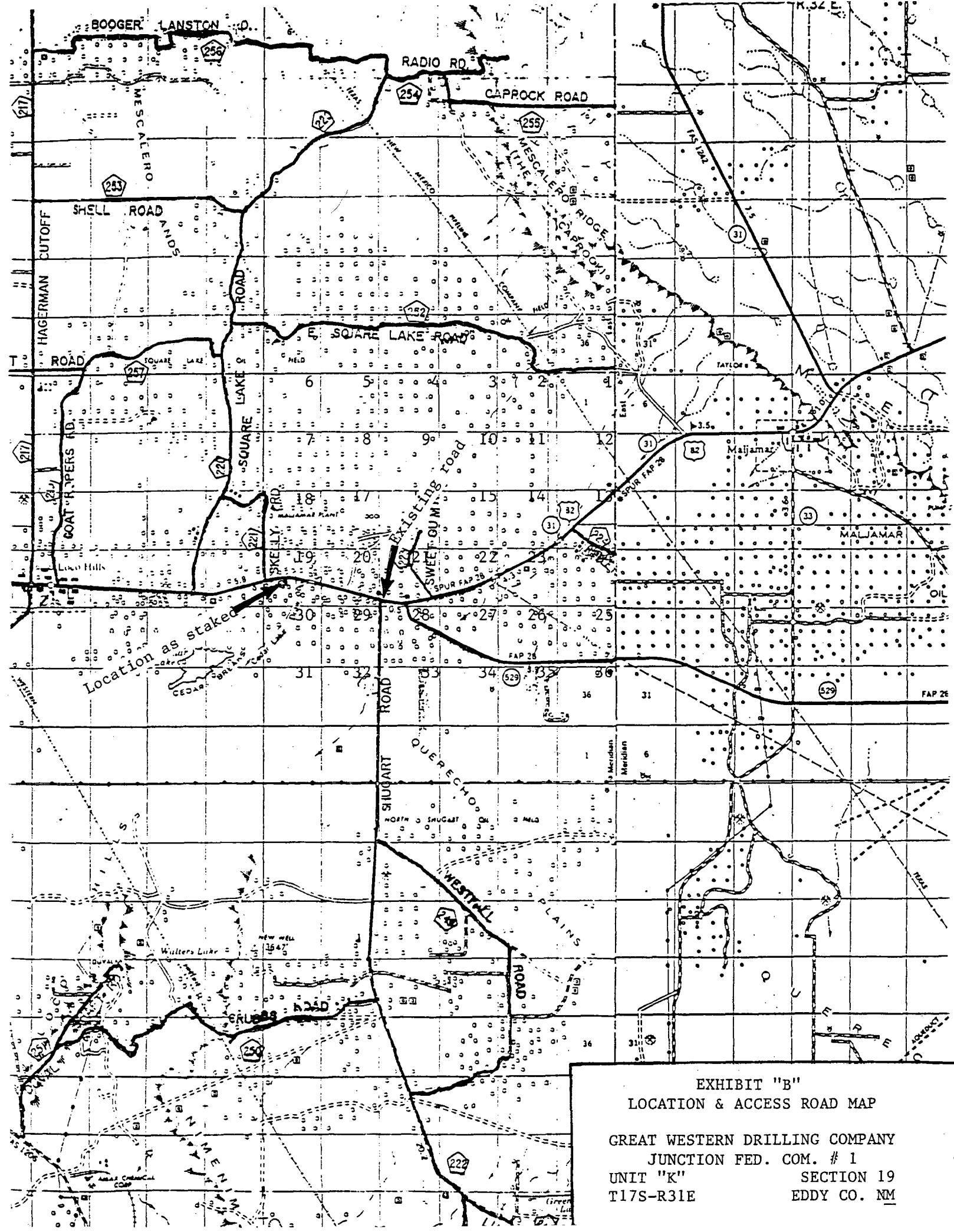
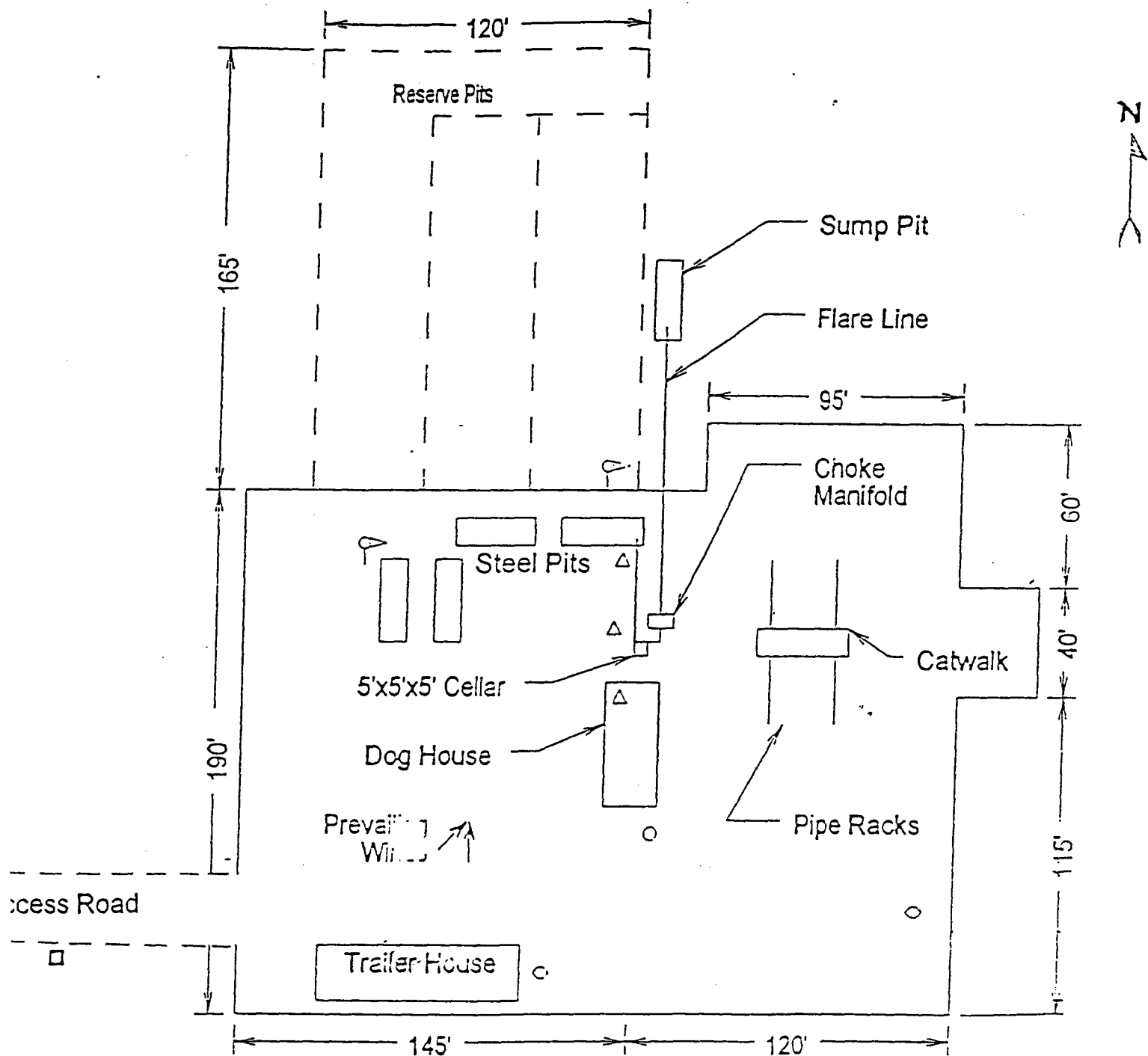


EXHIBIT "A-1"
ONE MILE RADIUS MAP

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K"
T17S-R31E
SECTION 19
EDDY CO. NM

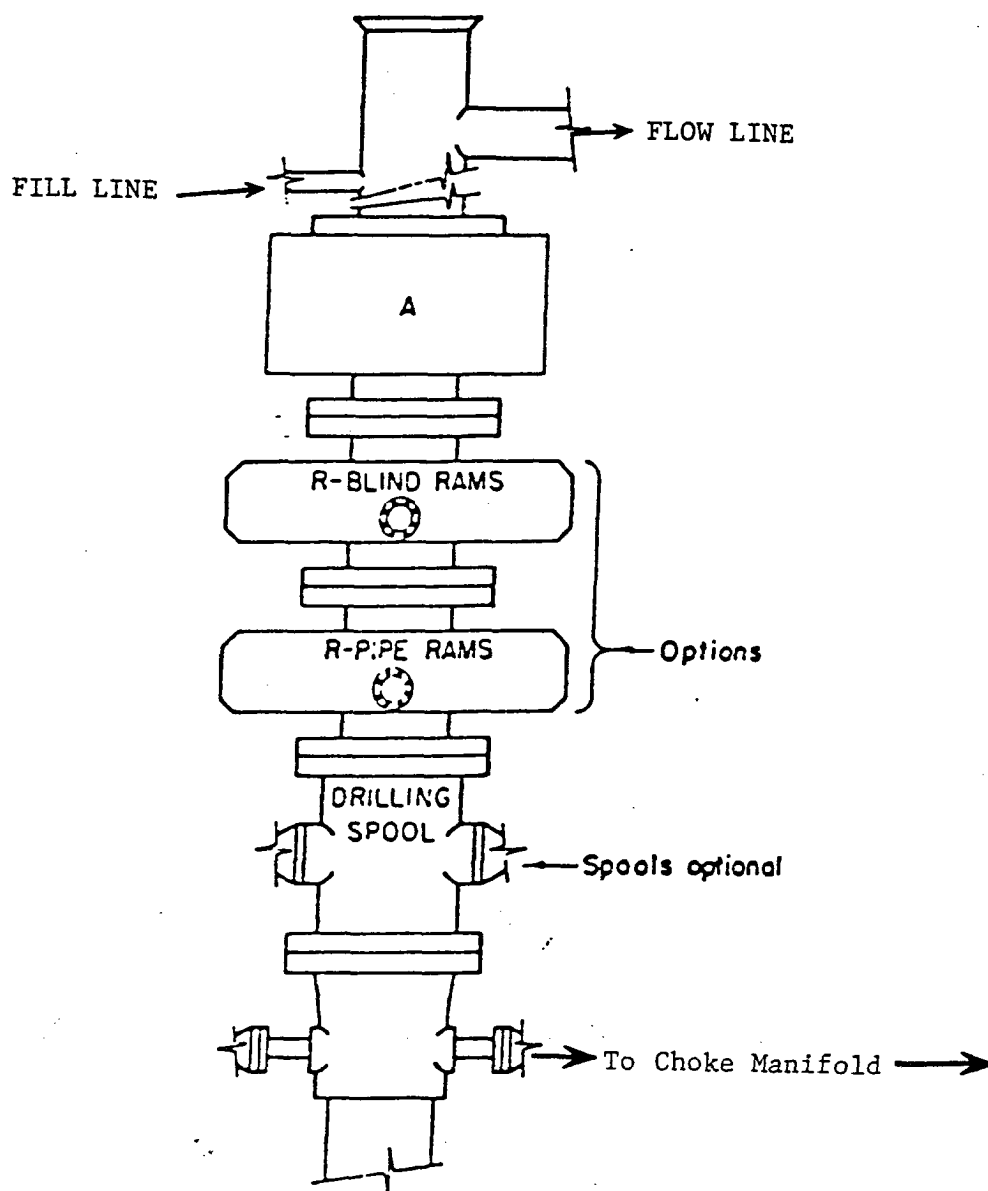




- Wind Direction Indicators (wind sock or streamers)
- △ H2S Monitors (alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

EXHIBIT "D"
RIG LAY OUT PLAT

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

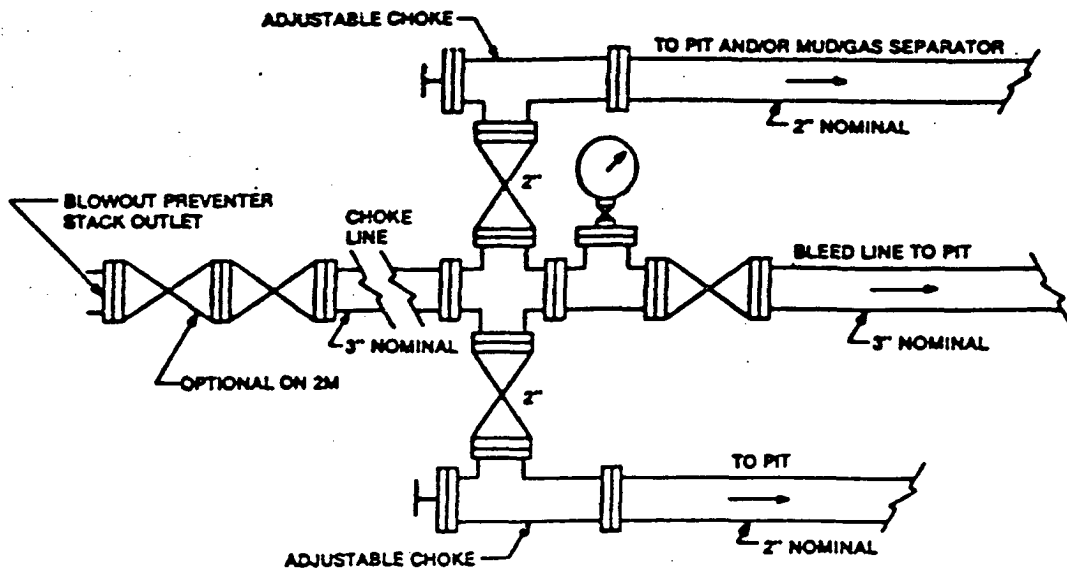


ARRANGEMENT SRRA

900 Series
3000 PSI WP

EXHIBIT "E"
SKETCH OF B.O.P. TO BE USED ON
3000 PSI

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM



Typical choke manifold assembly for 3M WP system

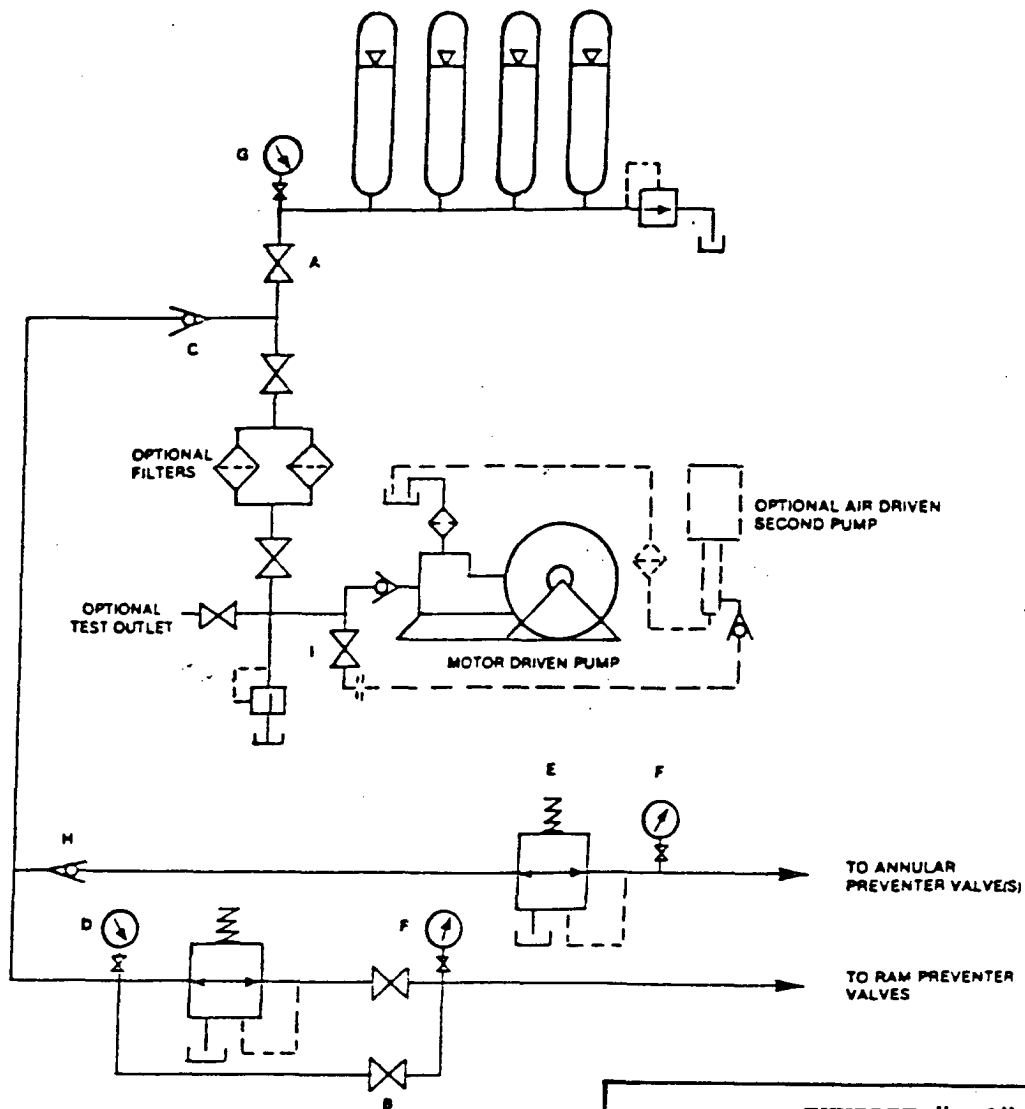
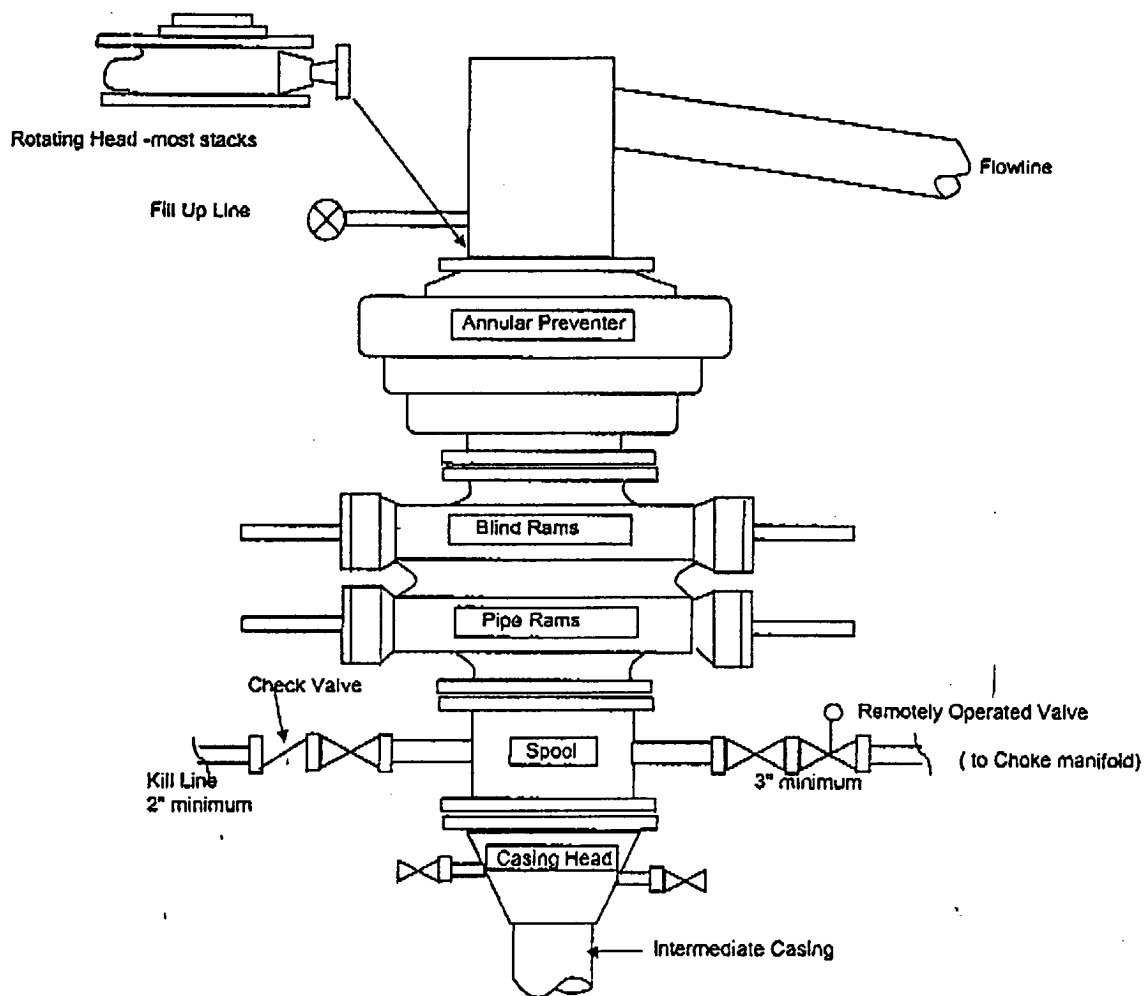
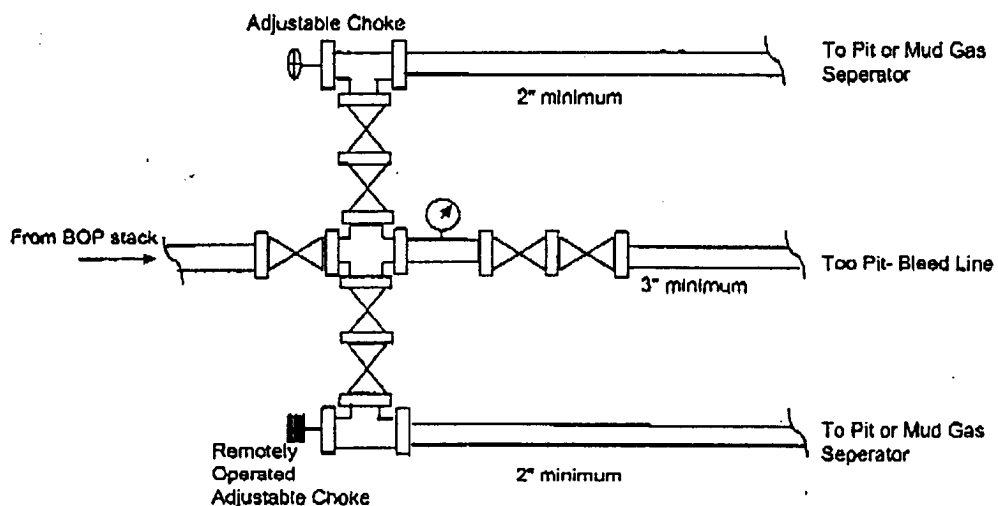


EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM



Typical 5,000 psi WP Choke Manifold with minimum features



Great Western Drilling Company

5,000 psi WP
BOP Stack &
Choke Manifold

by: Alan Roberts

12/17/02

EXHIBIT "F-1"
5000 PSI BOP &
CHOKE MANIFOLD

GREAT WESTERN DRILLING COMPANY
JUNCTION FED. COM. # 1
UNIT "K" SECTION 19
T17S-R31E EDDY CO. NM

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

OPERATOR NAME: Great Western Drilling Company

ADDRESS: P. O. Box 1659

CITY, STATE, & ZIP: Midland, Texas 79702

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

Lease No: LC-031844

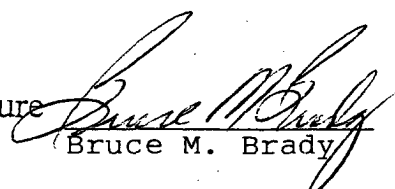
Well name: Junction^{FEP} Com No. 1

Legal Description of land: LC-031844 - E/2 SW/4 Section 19,
T-17-S, R-31-E, NMPM, Eddy County, NM

Bond coverage: \$150,000.00

B.L.M. Bond File No. 103122335

Authorized Signature


Bruce M. Brady

Title: President

Date: April 23, 2004