

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL  
WELL ☐

GAR  
WELL ☒

OTHER

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

Collins & Ware, Inc.

3. ADDRESS OF OPERATOR

303 W. Wall, Suite 2200, Midland, TX 79701

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

At surface

1433' FSL & 1459' FEL of Sec. 26

At proposed prod. zone

Same

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

6 air miles southwest of Carlsbad, NM airport

10. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

1433' FS

18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

16. NO. OF ACRES IN LEASE

1440

10. PROPOSED DEPTH

12200'

17. NO. OF ACRES ASSIGNED

TO THIS WELL

320

20. ROTARY OR CABLE TOOL

Rotary

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

3519.9 GR

[WITHIN THE CITY OF CARLSBAD WATER WELL FIELD]  
Carlsbad Controlled Water Basin

22. APPROX. DATE WORK WILL START\*

Soon after approval

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17.5"	13.375"	48-61#	350'	450 sx CIRCULATE WITNESS
12.25"	9.625"	40-43#	1800'	625 sx
8.5/8.75"	5.5"	15.5-20#	12200'	sufficient to fill to 600' above the uppermost productive zone

The Operator proposes to drill to a depth sufficient to test the Morrow and/or the Strawn for gas. If productive, 5.5" casing will be set and cemented to TD. If non-productive, the well will be plugged and abandoned in a manner consistent with Federal and State regulations and according to prudent engineering practice. Specific programs according to Onshore Oil & Gas Order #1 are outlined in the following attachments:

- Well Location and Acreage Dedication Plat
- Drilling Program  
Exhibits #1 & 1A - Blowout Preventers
- Surface Use and Operating Plan  
Exhibit #2 - Existing Roads  
Exhibit #2A - Planned Access Roads  
Exhibit #3 - One-Mile Radius Map and Lease Boundary  
Exhibit #3A - Well Status  
Exhibit #4 - Drilling Rig Layout  
Exhibit #5 - Production Facilities Layout

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

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

E. Thane Akers, P.E.

TITLE

Agent

DATE 2/20/92

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

3-26-92

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1900, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Artesia, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Collins & Ware			Lease Muley Fed. Unit		Well No. 1
Unit Letter J	Section 26	Township 23 South	Range 25 East	County Eddy	NMPM
Actual Footage Location of Well: 1459 feet from the East line and 1433 feet from the South line					
Ground Level Elev. 3519.9	Producing Formation Strawn - Morrow	Pool Undes. Horseshoe Bend		Dedicated Acreage: 320 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 interest 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 of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary.)

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

OPERATOR CERTIFICATION

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

Signature

*G. Thane Akins*

Printed Name

G. Thane Akins

Position

Agent

Company

Collins & Ware, Inc.

Date

February 13, 1992

SURVEYOR CERTIFICATION

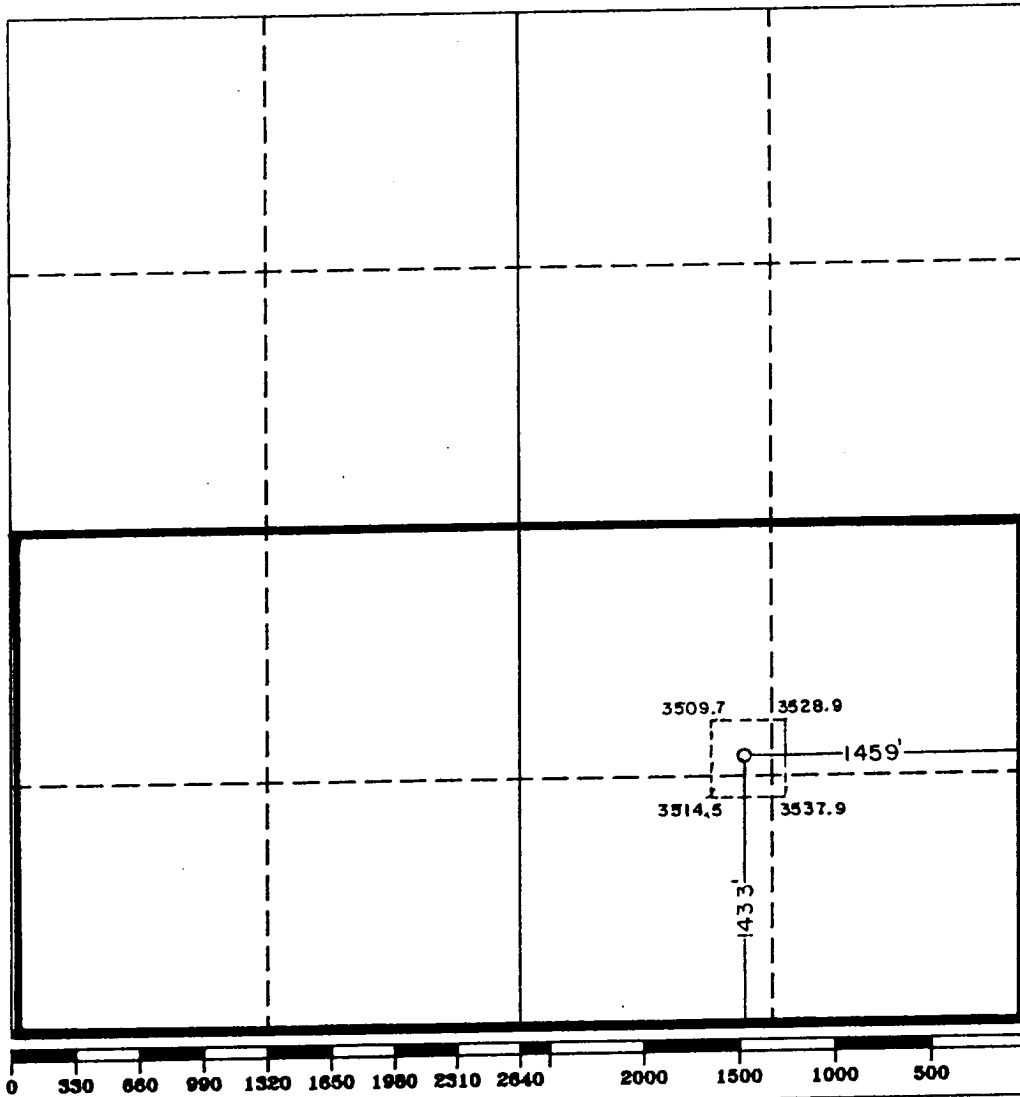
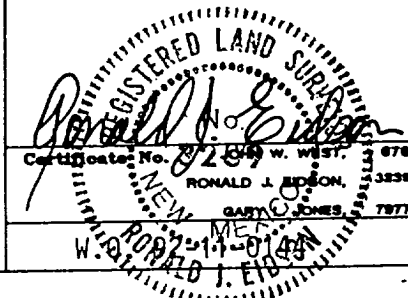
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

February 7, 1992

Signature & Seal of

Professional Surveyor



## DRILLING PROGRAM

COLLINS & WARE, INC.

MULEY FEDERAL WELL NO. 1

1433' FSL & 1459' FEL Sec. 26, T23S, R25E, Eddy County, NM

The following information is filed in accordance with "Onshore Oil and Gas Order" Nos. 1 & 2:

1. SURFACE FORMATION: Seven Rivers

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Delaware	2550'
Bone Springs	5200'
Wolfcamp	8200'
Strawn	9850'
Atoka	10200'
Morrow Clastics	10900'

3. ESTIMATED DEPTH TO FRESH WATER:

Possible fresh water at 100-300'

### ANTICIPATED POSSIBLE HYDROCARBON BEARING ZONES:

Strawn	Gas/Cond.
Morrow	Gas

No other formations are anticipated to give up commercial quantities of hydrocarbons.

The fresh water sands will be protected by setting 13 3/8" casing at 350' and circulating cement back to surface. Intermediate 9 5/8" casing will be set at 1800' and cement circulated back to surface. Any shallower zones above TD that contain commercial quantities of oil and/or gas will have cement circulated across them by single/double stage cementing techniques.

4. PROPOSED CASING AND CEMENTING PROGRAM:

#### Casing:

Hole Size	Interval	Casing OD	Weight, Grade, Joint, Condition
17.5"	0-350'	13 3/8"	48-61#, K-55, ST&C, New
12.25"	0-1800'	9 5/8" 40-43	24-32# J-55&S-80, ST&C, New
8.5/8.75"	0-12200'	5 1/2"	15.5-20#, K-55&N-80, LT&C, New

#### Cement:

13 3/8" Surface Csg: Cemented with 450 sacks of Class "C" with 2% CaCl. Circulate cement.

9 5/8" Intermediate: Cemented with 425 sacks of light cement tailed in with 200 sacks of Class "C" with 1% CaCl. Cement to circulate.

5 1/2" Prod. Casing: Cemented with sufficient sacks of Class "H" with additives to fill to 600' above the uppermost productive zone.

5. PRESSURE CONTROL EQUIPMENT:

Blowout prevention equipment, while drilling the 12 1/4" hole, will be either a 1500 psi working pressure double ram type preventer or a 1500 psi working pressure annular type preventer.

Blowout prevention equipment, while drilling below the 9 5/8" casing seat, will be a 3000 psi working pressure BOP stack.

BOP sketches are shown on Exhibits 1 & 1A.

6. CIRCULATING MEDIUM:

Surface to 350' : Fresh water spud mud - Viscosity 28 to 36 as required for hole cleaning, 8.5-8.8#/gal.

350' to 1800' : Fresh water with pH control, weight 8.4-9.2#/gal LCM sweeps as required to clean hole.

1800' to 10,300' : Brine water conditioned as necessary for control of hole, 28-50 viscosity, wt 10.5#/gal, pH 9-10.

10,300' to T.D. : Water-based drilling fluid conditioned as necessary for control of weight, viscosity, pH and water loss. Wt 9-10.5#, Viscosity 30-50, pH 9-10 (control with lime), filtrate while drilling Strawn/Morrow sections will be 10 cc or less.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

A. A kelly cock will be used.

B. A full-opening stabbing valve with proper drill pipe connections will be on the rig floor at all times.

C. The drilling fluids system will be visually monitored at all times.

D. A mud-logging unit will monitor drilling penetration rate and hydrocarbon shows from somewhere below the intermediate casing.

8. TESTING, LOGGING, AND CORING PROGRAMS:

A. Four drill stem tests are planned.

B. Compensated Neutron Log - Litho-density GR and Dual Laterolog with MSFL Log/GR from total depth back to intermediate casing. Gamma Ray log will be continued back to surface.

C. A mud-logging unit will be used below 2300'.

D. No cores anticipated.

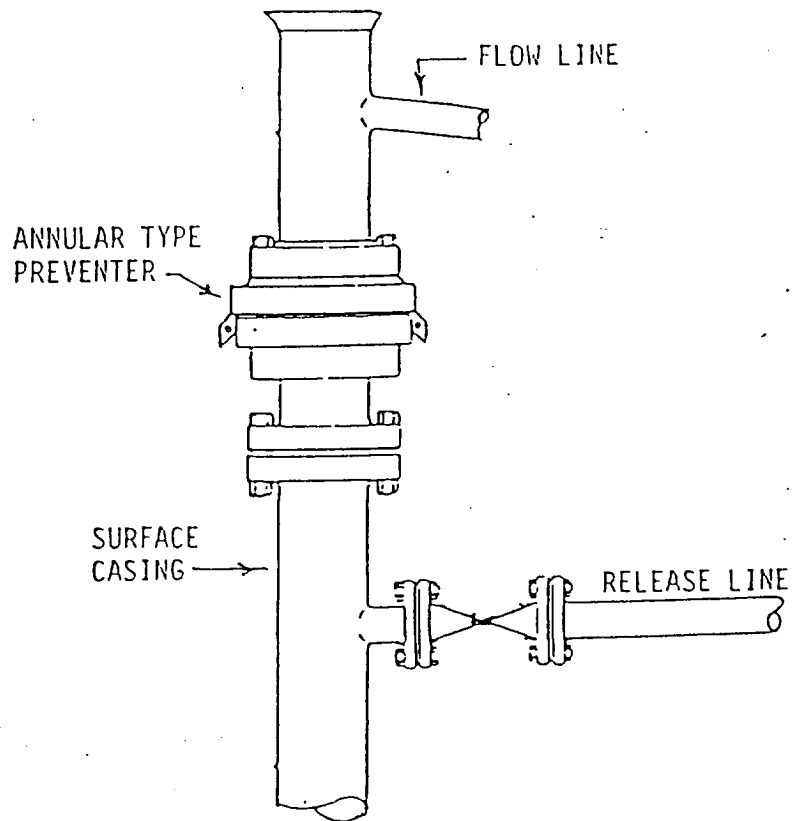
E. Other testing procedures may be used after the production casing has been set depending on shows and other testing indicators.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES, & POTENTIAL HAZARDS:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 148 F and the estimated maximum bottom hole pressure (BHP) is about 6000 psi. No hydrogen sulphide (H<sub>2</sub>S) or other hazardous fluids are known to exist at this depth in this area. No major lost circulation zones have been reported in wells in this area below the base of the Capitan Reef.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

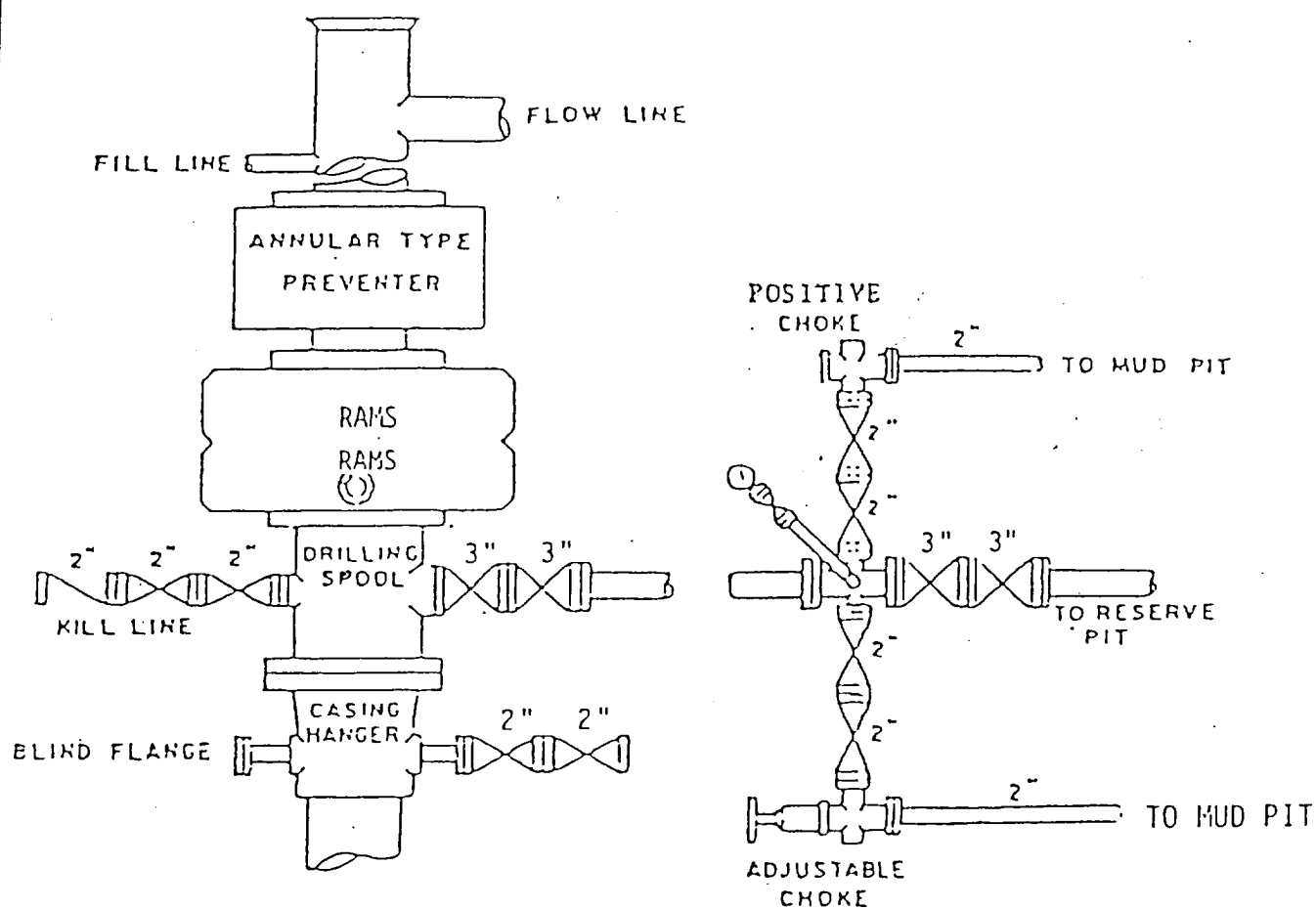
It is planned that operations will commence shortly after approval of this application, with drilling and completion operations lasting about 60-90 days. A decision as to design and installation of permanent facilities will be made after adequate testing of the well.



1500 PSI WORKING PRESSURE

IN USE WHILE DRILLING BELOW  
SURFACE CASING

Exhibit No. 1  
BOP ARRANGEMENT



# BOP STACK

3000 PSI WORKING PRESSURE

IN USE WHILE DRILLING BELOW  
9-5/8" CASING SEAT

Exhibit No. 1A  
BOP ARRANGEMENT

SURFACE USE AND OPERATIONS PLAN  
FOR

COLLINS & WARE, INC.  
MULEY FEDERAL WELL NO. 1  
1433' FSL & 1459' FEL SEC. 26, T.23 S., R.25 E.  
EDDY COUNTY, NEW MEXICO

LOCATED: 6 air miles southwest of Carlsbad, NM Airport

FEDERAL LEASE NUMBER: NM-51073

LEASE ISSUED: June 1, 1982 HBP

ACRES IN LEASE: 1440

TERM: Ten Years

LESSEE: Collins & Ware, Inc.

SURFACE OWNERSHIP: Roland Fech (505) 885-1250  
353 Dark Canyon Rd.  
Carlsbad, NM 88220

GRAZING PERMITTEE: Roland Fech (505) 885-1250  
353 Dark Canyon Rd.  
Carlsbad, NM 88220

POOL: Undesignated Horseshoe Bend - Strawn/Morrow

POOL RULES: Statewide Rules - 320-acre spacing for gas

EXHIBITS: 2. Existing roads  
2A. Planned access roads  
3. One-Mile Radius Map showing lease boundary and wells  
3A. Well Status  
4. Drilling Rig Layout  
5. Production Facilities Layout



1. EXISTING ROADS:

- A. Exhibit No. 2 is a portion of a road map showing the location of the proposed well as staked. Point "A" on the plat is on US 62-180 approximately 2.5 miles southwest of Carlsbad, NM city limits and about 8.2 miles south of the intersection of US 285 and one mile south of the Port of Entry. At Point "A", turn west on County Road 408. Travel generally west and south for about 6.5 miles to location just off the road to the east.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The new road will be 12' wide and is less than 100' long to service the Muley Federal Well No. 1 and is too short to be shown on Exhibit No. 2A.
- B. Surfacing Material: Caliche, watered, compacted and graded.
- C. Maximum Grade: Less than one per cent (1%).
- D. Turnouts: None necessary.
- E. Drainage Design: N/A
- F. Culverts: None needed.
- G. Cuts and Fills: None necessary.
- H. Gates and Cattleguards: None necessary.
- I. Existing access roads to the proposed wellsite will be used in their present state. Off-lease access approval, if necessary, will be executed under the Muley Federal No. 1 location.

3. LOCATION OF EXISTING WELLS:

- A. Existing wells within a one-mile radius are shown on Exhibit No. 3. There is only one well and its status is shown on Exhibit No. 3A. There are no disposal, injection, or observation wells within the one-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. Necessary production facilities for this proposed well will be located on the well pad. A layout of the production facilities is shown in Exhibit No. 5.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is not planned that a water supply well will be drilled. Water necessary for drilling operations will be purchased and trucked from commercial water stations to the well site, or will be moved to the well site by temporary pipeline laid on the ground alongside existing and proposed roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. Caliche needed for construction work will be taken, if present, from a pit opened on-site within the 400' X 450' work area. Otherwise, caliche will be taken from an existing pit on Federal land in the NW/4 of NE/4 of Sec. 26, T.23S., R.25E., Eddy County. Caliche will be trucked to well site over existing and proposed roads. Location of the nearest caliche pit is shown on Exhibit No. 2A.

7. METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be contained in steel tanks during drilling operations. The reserve pit will contain any excess drilling fluid or flow from the well during drilling and completion operations. The reserve pit will be an earthen pit about 150' X 150' X 6' deep and fenced on three sides prior to drilling. The pit will be plastic-lined (5-7 mil thickness) to minimize loss of drilling fluids and saturation of the ground with brine water. The drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.
- C. Water produced during tests will be disposed of in the drilling pits. After the well is permanently placed on production, produced water will be collected in fiberglass or steel tanks until hauled by transport to an approved disposal system.
- D. Oil produced during tests will be stored in test tanks until sold.
- E. Trash, waste paper, garbage and junk will be stored in a covered, above-ground container. All waste material will be contained to prevent scattering by the wind. Location of the trash container is shown on Exhibit No. 5. No toxic waste or hazardous chemicals will be produced by this operation. The container will be emptied when full and taken to an authorized disposal facility.
- F. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations. No adverse materials will be left on location. The reserve pit will be completely fenced and kept closed until it is dried. When the reserve pit is dry enough to break out and fill in, as weather permits, the unused portion of the well site will be leveled and restored to BLM specifications. Only that part of the pad required for production facilities will be kept in use. In the event of a dry hole, only a dry hole marker will remain.
- G. If required, a portable, chemical toilet will be provided on the location for human waste during the drilling and completion operations.

8. ANCILLARY FACILITIES:

- A. No airstrip, campsite, or other facilities will be built as a result of the operations of this well.

9. WELL SITE LAYOUT:

- A. Exhibit No. 4 shows the relative location and dimensions of the well pad, mud pits, reserve pit, and the location and orientation of major drilling rig components. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling and completion operations.
- B. Clearing and levelling of the well site will be required. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection. No major cuts will be required.
- C. The pad and pit area are staked and flagged.

10. 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 from the well site. Pits, after allowing to dry, will be broken out and levelled. The location will also be levelled and cleaned of all trash and junk to leave the well site in an as aesthetically pleasing condition as possible. Any part of the pad not needed for production facilities will have the top soil replaced and reseeded. Any tank battery constructed will be low profile and surface facilities will be painted either Desert Tan or Juniper green. This should be accomplished within 120 days.
- B. Any unguarded pits containing fluids will be fenced.
- C. After abandonment, all equipment, trash, and junk will be removed and the well site will be cleaned. Any special rehabilitation requirements of the surface management agency will be complied with and accomplished as rapidly as possible.

11. OTHER INFORMATION:

- A. Topography - The land surface in the area is a bottom area between steep hills. In the immediate area of the well site, land slope is gentle to the northwest.
- B. Soil - Top soil at the well site is a dark clay and quite rocky.
- C. Flora and Fauna - The vegetation cover is heavy and includes brambles, sand sage, yucca, weeds, and range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove and quail.
- D. Ponds and Streams - There is a dry stream bed a few hundred feet to the west of the location. No other lakes, ponds, or streams in the area.
- E. Residences and other Structures - There are no occupied dwellings or other structures, other than oil field related equipment, within a mile of the proposed well site.
- F. Archaeological, Historical, and Cultural Sites - None observed. However, an archaeological reconnaissance is to be accomplished and a report furnished.
- G. Land Use - Oil and gas production, grazing and wildlife habitat.
- H. Surface Ownership - Federal.

12. OPERATOR'S REPRESENTATIVE:

James F. O'Briant  
O'Briant Engineering  
P.O. Box 10487  
Midland, TX 79702  
Telephone: (915) 683-5511

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 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 Collins & Ware, Inc. 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.

Date: 2/20/92

G. Thane Akins  
G. Thane Akins, P.E.  
Agent for Collins & Ware, Inc.





## ONE-MILE RADIUS AND LEASE BOUNDARY MAP

COLLINS & WARE, INC.  
MULEY FEDERAL WELL NO. 1

Eddy County, NM

Scale: 1"=2000'

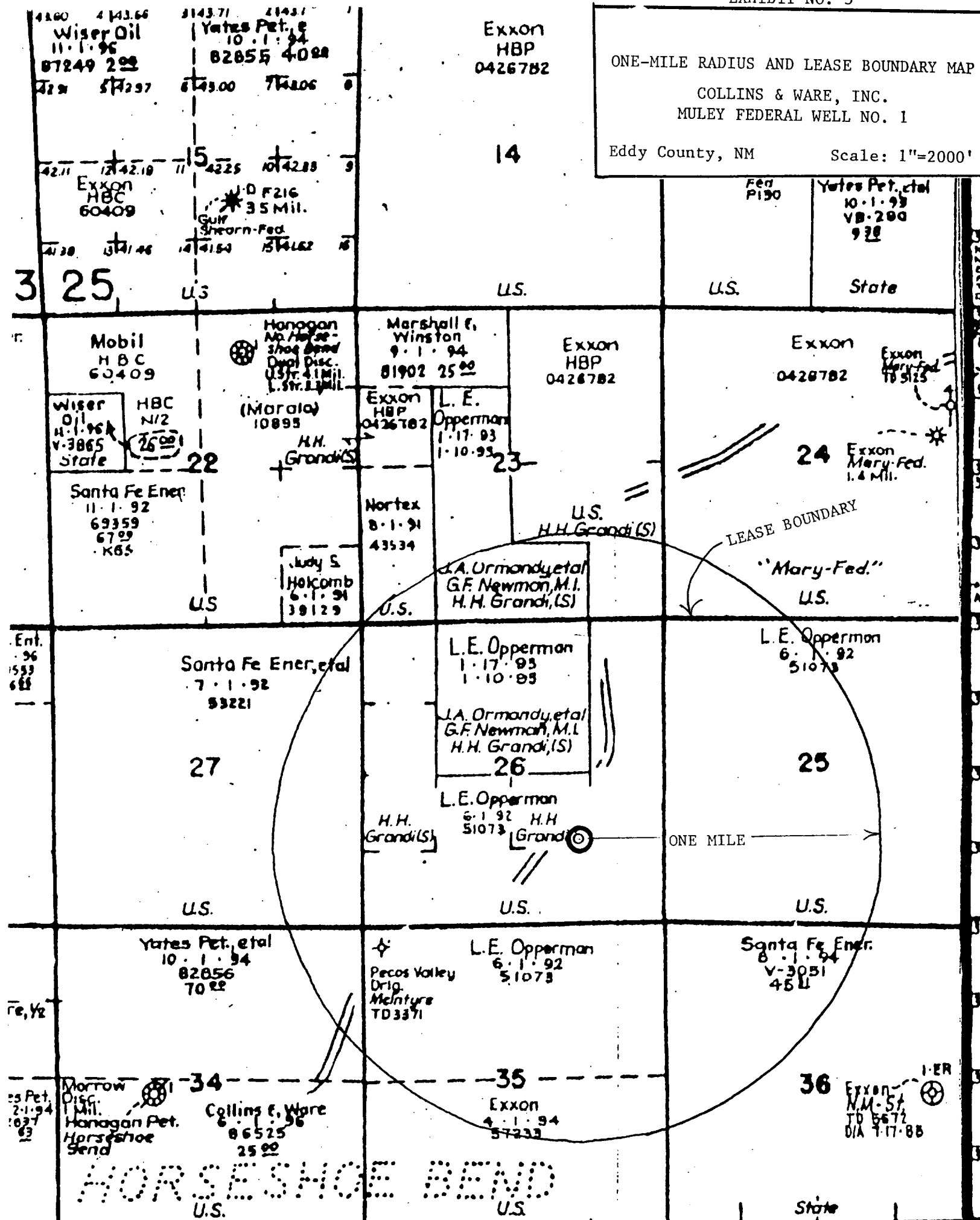


EXHIBIT NO. 3A

STATUS OF WELLS WITHIN ONE-MILE RADIUS  
Collins & Ware Muley Federal No. 1 Well  
Sec. 26, T23S, R25E, Eddy County, NM

Sec. 35, T23S, R25E

Pecos Valley Drlg McIntyre No. 1, 330'FW & 330'FNL, Dry Hole(TD 3371')



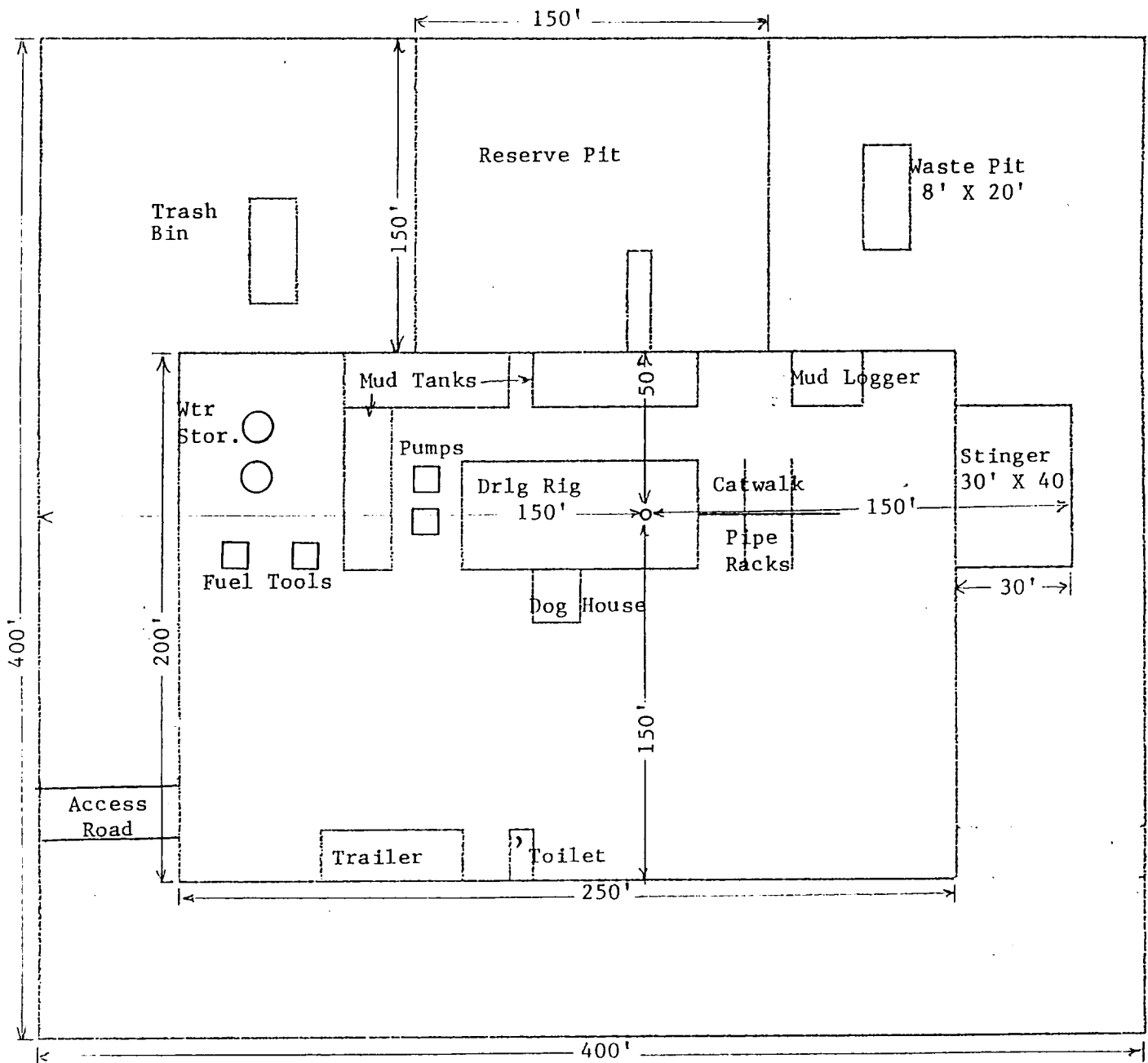


EXHIBIT NO. 4

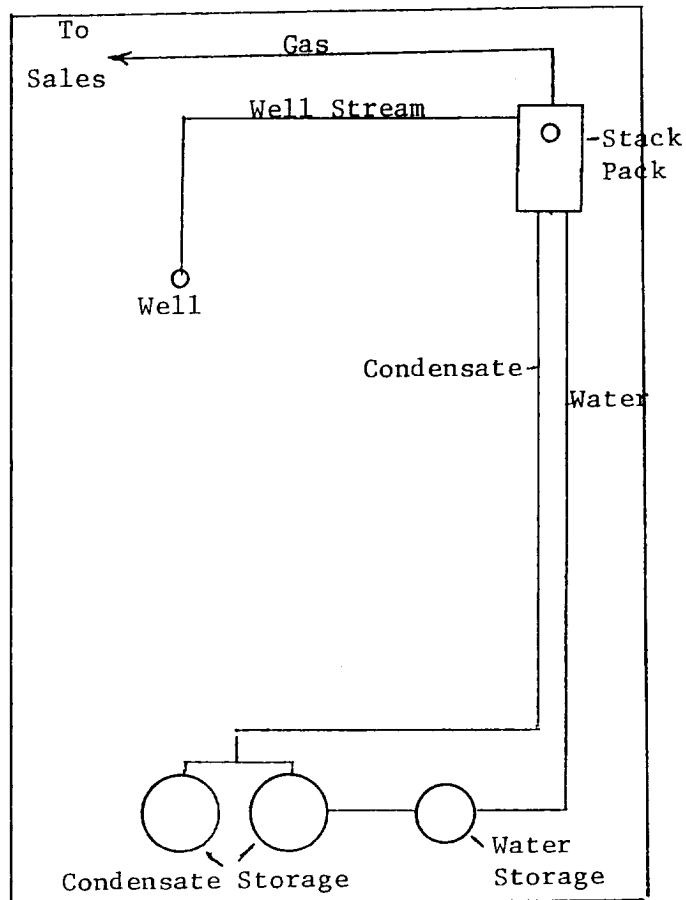
# DRILLING RIG LAYOUT

COLLINS & WARE, INC. MULEY FEDERAL NO. 1

Eddy County, New Mexico

Scale: None





Tank Battery is low profile with special paint.

EXHIBIT NO. 5  
 PRODUCTION FACILITIES LAYOUT  
 COLLINS & WARE, INC. MULEY FEDERAL NO. 1  
 Eddy County, New Mexico      Scale: None