

APPLICATION FOR DRILLING
 READ & STEVENS, INC.
 Crystal Federal, Well No. 2
 2375' FNL & 660' FEL, Sec. 4-T24S-R26E
 Eddy County, New Mexico
 Lease No.: NM-81910
 (Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Read & Stevens, Inc. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	1,600'	Atoka	10,626'
Bone Spring	8,200'	Morrow	11,180'
Strawn	10,446'	T.D.	12,000'

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

Water: Surface water in the Triassic between 80' - 230'.
 Oil: No commercial amounts expected.
 Gas: In the morrow below 11,180.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	61.0#	J-55	ST&C	500'	Circ. 780 sx "C" to surface.
12 1/4"	9 5/8"	40.0#	J-55	ST&C	3,800'	Circ. 1250 sx light + 200 sx "C" to surf.
8 3/4"	5 1/2"	17.0#	S-95	LT&C	700'	2100 sx light cmt + 200 sx "H"
8 3/4"	5 1/2"	17.0#	N-80	LT&C	10,300'	Incl above.
8 3/4"	5 1/2"	17.0#	S-95	LT&C	12,000'	" "

5. Proposed Control Equipment: A 12" 5000 psi wp Shaffer Type LWS Double Gate BOP will be installed on the 13 3/8" casing. Casing and BOP will be tested before drilling out with 7 7/8" and will be tested daily. See Exhibit "E".

MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
0' - 500': Fresh water mud:	8.5 - 9.0 ppg	28	No W/L control
500' - 3,800': Fresh water mud	10.0 - 10.2 ppg	28	No W/L control
3800' - 10,000': Cut Brine mud:	9.0 - 9.2 ppg	28	No W/L control
10,000' - 12,000': Brine mud:	10.0 - 10.2 ppg	32 - 37	W/L control 10 cc +/-

WITNESS

7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.

8. Testing, Logging, and Coring Program:

Drill Stem Tests: None planned.
 Logging: T.D -Int. Casing: GR, DLL, MSFL, LDT
 T.D. to surface: G/R, CNL
 Coring: None planned.

9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated BHP = 5000 psi (evac. hole) with temperature of 180°.

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10. H2S: None expected. None in previously drilled wells.

11. Anticipated starting date: April 15, 2001.

Anticipated completion of drilling operations: Approx. 4 weeks.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

READ & STEVENS, INC.
Crystal Federal, Well No. 2
2310' FNL & 660' FWL, Sec. 4-T24S-R26E
Eddy County, New Mexico
Lease No.: NM-81910
(Exploratory Well)

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, to be followed in rehabilitating the surface environmental effects associated with the operations.

1. EXISTING ROADS:

- A. Exhibit "A" is a portion of a USGS/BLM Topo map showing the location of the proposed well as staked. The well site location is approximately 12 road miles southwest of Carlsbad, New Mexico. Traveling southwest from Carlsbad there will be approximately 12 miles of paved highway and .6 mile of gravel oilfield road.
- B. Directions: Travel southwest from Carlsbad, NM on U.S. Highway 62/180 for approximately 12 miles past the junction of U.S. Highway 285. After passing Elbow Canyon, turn east at a cattle guard with a Read & Stevens, Inc. sign. Continue east for .6 mile to the northwest corner of the proposed location.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed of access road will be constructed to a width of 12 feet and will be approximately 25 feet in length. The proposed access road is color coded red on Exhibit "A".
- B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche and will be properly drained.
- C. Turnouts: None required.
- D. Culverts: None required.
- E. Cuts and Fills: None required.
- F. Gates, Cattle guards: None required.
- G. Off Lease R/W: None required.

3. LOCATION OF EXISTING WELLS:

- A. Existing wells within a two-mile radius are shown on Exhibit "C".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES;

- A. There are gas production facilities on the lease at this time.
- B. If the well proves to be commercial, the necessary production facilities, gas production-process equipment will be installed on the drilling pad. A gas flow line will be installed to the existing Read & Stevens, Inc flow line on the north edge of the pad.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing access roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. Caliche for surfacing the proposed access road and well site pad will be obtained on location, if available, or from an approved Federal pit in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 4-T24S-R26E. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site and access road.

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. All pits will be fenced with normal fencing materials to prevent livestock and wildlife from entering the area.
- D. 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 BLM for approval.
- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering and will be removed for deposit in an approved sanitary landfill within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

- A. None required.

9. **WELL SITE LAYOUT:**

- A. Exhibit "D" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked and flagged, 400' X 400'.
- B. Mat Size: 290' X 175', plus 110' X 120' reserve pits. The pits will be on the south.
- C. Cut & Fill: There will be a 1 - 1.5 foot cut on the west with fill to the east.
- D. The surface will be topped with compacted caliche and the reserve pits will be plastic lined.

10. **PLANS FOR RESTORATION OF THE SURFACE:**

- A. After completion of drilling and/or completion operations, all equipment and other materials not required for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled as soon as they are dry enough to be worked.

11. **OTHER INFORMATION:**

- A. Topography: The proposed well site and access road is located in an area of fairly flat surface which is part of the Frontier Hills, just south of Elbow Canyon. The location has an easterly slope of 1.8% from an elevation of 3375'.
- B. Soil: The topsoil at the well site is a tan to brown shallow loam with a surface scatter of gravel over a caliche subsurface. The topsoil is of the Reagan - Upton Assn. soils series.
- C. Flora and Fauna: The vegetation cover is a fair to poor grass cover of three-awn, dropseed, grama, tobosa, fluff grass and other miscellaneous native grasses along with plants of mesquite, yucca, tarbush, creosote bush, broomweed, cacti and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, deer, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: None in area.
- E. Residences and Other Structures: None except oil field sites and equipment.
- F. Land Use: Cattle grazing.

11. OTHER INFORMATION: cont.....

- G. Surface Ownership: The proposed well site and access road are on Federal surface.
- H. There is no evidence of archaeological, historical or cultural sites on the proposed 400' X 400 site and access road. Archaeological Survey Consultants, P. O. Box D, Roswell, NM 88202, are conducting an archaeological survey, and their report will be submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

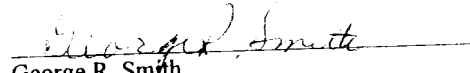
- A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

John Maxey
Read & Stevens, Inc.
P.O. Box 1518
Roswell, NM 88202
Roswell Office Phone: (505) 622-3770

13. CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the 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 Read & Stevens, 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.

March 8, 2001


George R. Smith
Agent for: Read & Stevens, Inc.

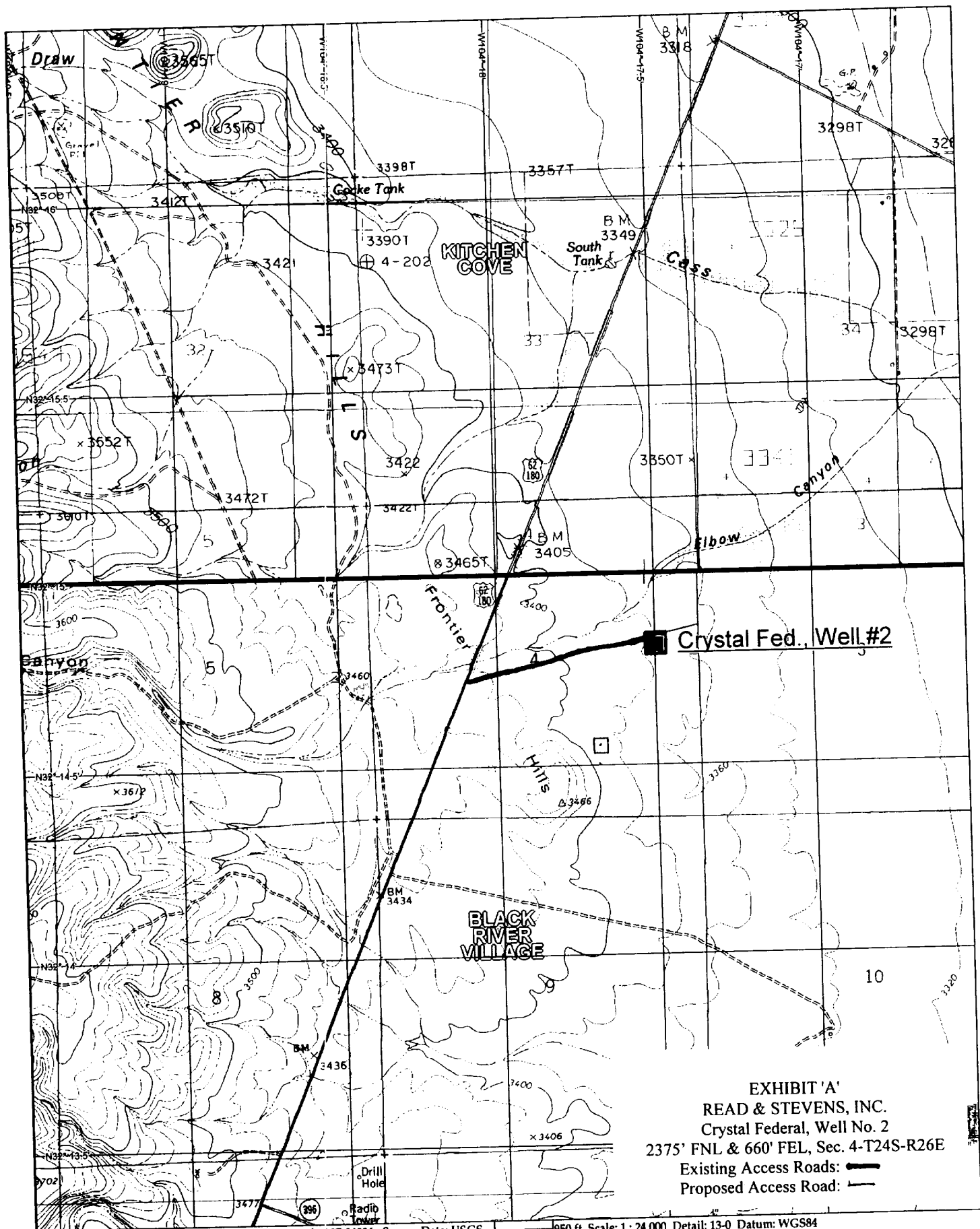


EXHIBIT 'A'
 READ & STEVENS, INC.
 Crystal Federal, Well No. 2
 2375' FNL & 660' FEL, Sec. 4-T24S-R26E
 Existing Access Roads: —
 Proposed Access Road: —

TMBR/Sharp Rig #22

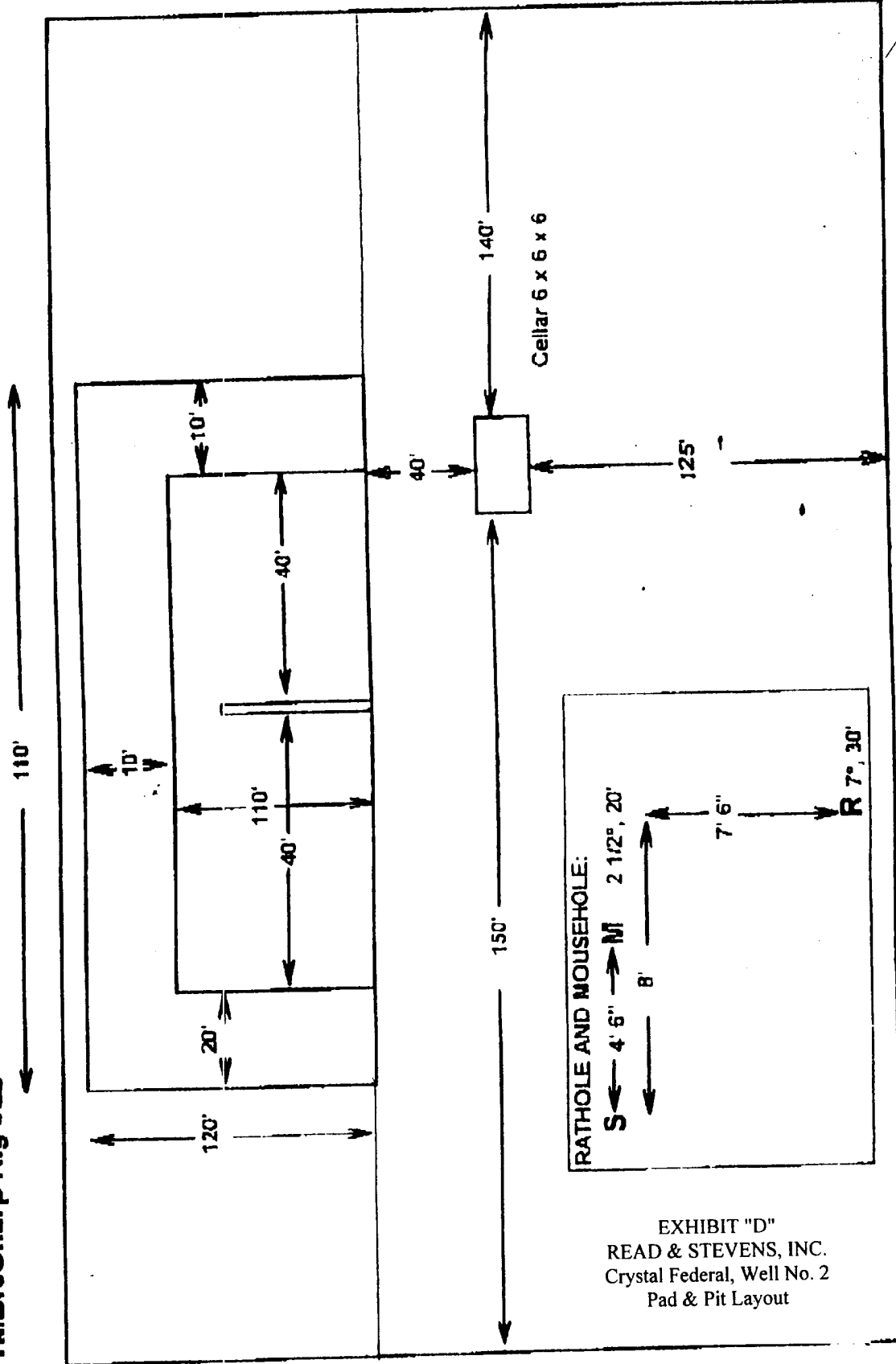


EXHIBIT "D"
 READ & STEVENS, INC.
 Crystal Federal, Well No. 2
 Pad & Pit Layout

EXISTING ACCESS ROAD
 READ & STEVENS
 EXISTING 6" GAS LINE
 REV 2/1/86

TIMEB // SHARP DRILLING

B.O.P. Equipment Intended for use on Rig # 24
Well To Be drilled for Time/Sharp

- * All B.O.P. equipment is H2S Trim *
- * All Accumulators are Kookey Type-610 : Dual Power Electric/Air *
- * Choke Manifold: * See sheet 2
- 4" Valves : Cameron F/FC, Shaffer DB Hydraulic
- 2" Check Valve: Cameron Type R
- 2" Valves : Cameron or Shaffer

Annular Shaffer Type: Spherical
Annular PSI: 3000

(If Shaffer: Spherical , If Hydril: Type GK)

BOP Type Shaffer LWS

(If Shaffer: LWS or SL, If Cameron: Type U)

BOP Size: 13 5/8" - 5000 PSI

Rotating Head Type Smith

Rot-Head Furnished By Time

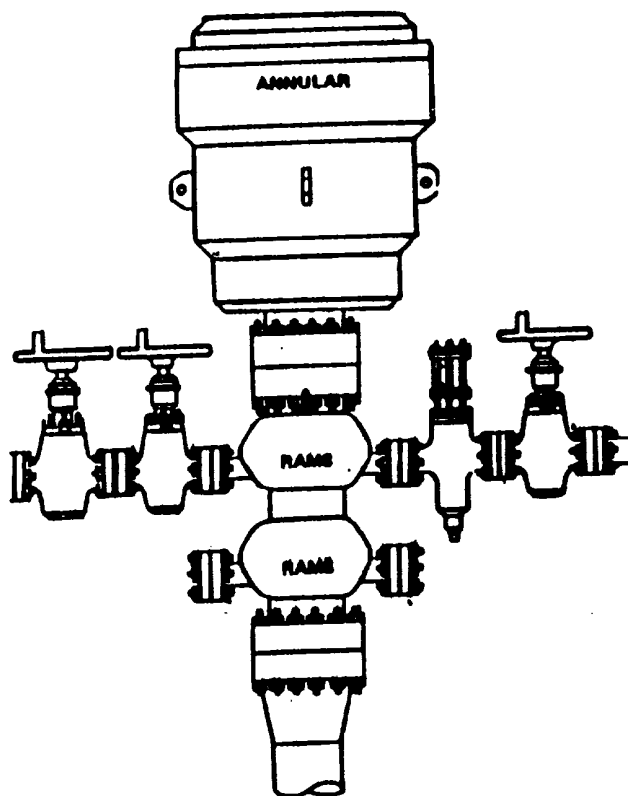
Rams in top gate: 4 1/2" pipe

Rams in bottom: Blinds

Side Outlets used:

Bottom X Top

4" Valves on Tee



B.O.P. Equipment Intended for use on Rig # 24
Well To Be drilled for Time/Sharp

* All Valves (H2S) *

Choke Manifold:

Pressure Rating 3,000 or 5,000 (as Req.)

1 - 4" Valves

2 - 2" Valves

2 - 2" Adjustable Chokes

Valve Types Used:

Cameron - F or FC

Shaffer - B Floseal

WKM - type 2

Chokes - Cameron H2 or TC unbolt

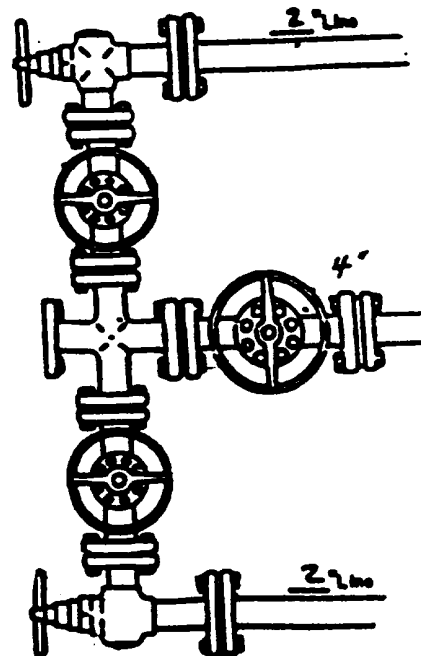


EXHIBIT "E"
READ & STEVENS, INC.
Crystal Federal, Well No. 2
BOP Specifications