

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-045-23983

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐

GAS
WELL ☒

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Hixon Development Company

3. ADDRESS OF OPERATOR

P.O. Box 2810, Farmington, New Mexico 87401

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

1000' FEL, 790' FNL, Section 18, T25N, R12W
At proposed prod. zone

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

24 miles south of Farmington

15. DISTANCE FROM PROPOSED*

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

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160 acres

18. DISTANCE FROM PROPOSED LOCATION*

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

19. PROPOSED DEPTH

2100'

20. ROTARY OR CABLE TOOLS

Rotary

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

GLE - 6531'

22. APPROX. DATE WORK WILL START*

12-31-79

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-3/4"	7"	23#	90'	100 sacks
5"	2-7/8"	6.5#	2100'	200 sacks

It is planned to drill a slimhole shallow gas Chacra test per the
attached. Gas from this well has not been 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

[Signature]

Petroleum Engineer

DATE

11-21-79

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

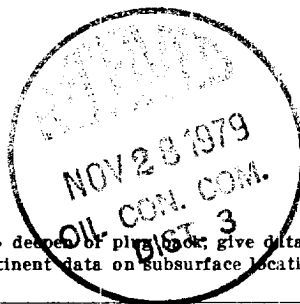
TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

*See Instructions On Reverse Side



NMOCC

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128
Effective 1-4-65

All distances must be from the outer boundaries of the Section.

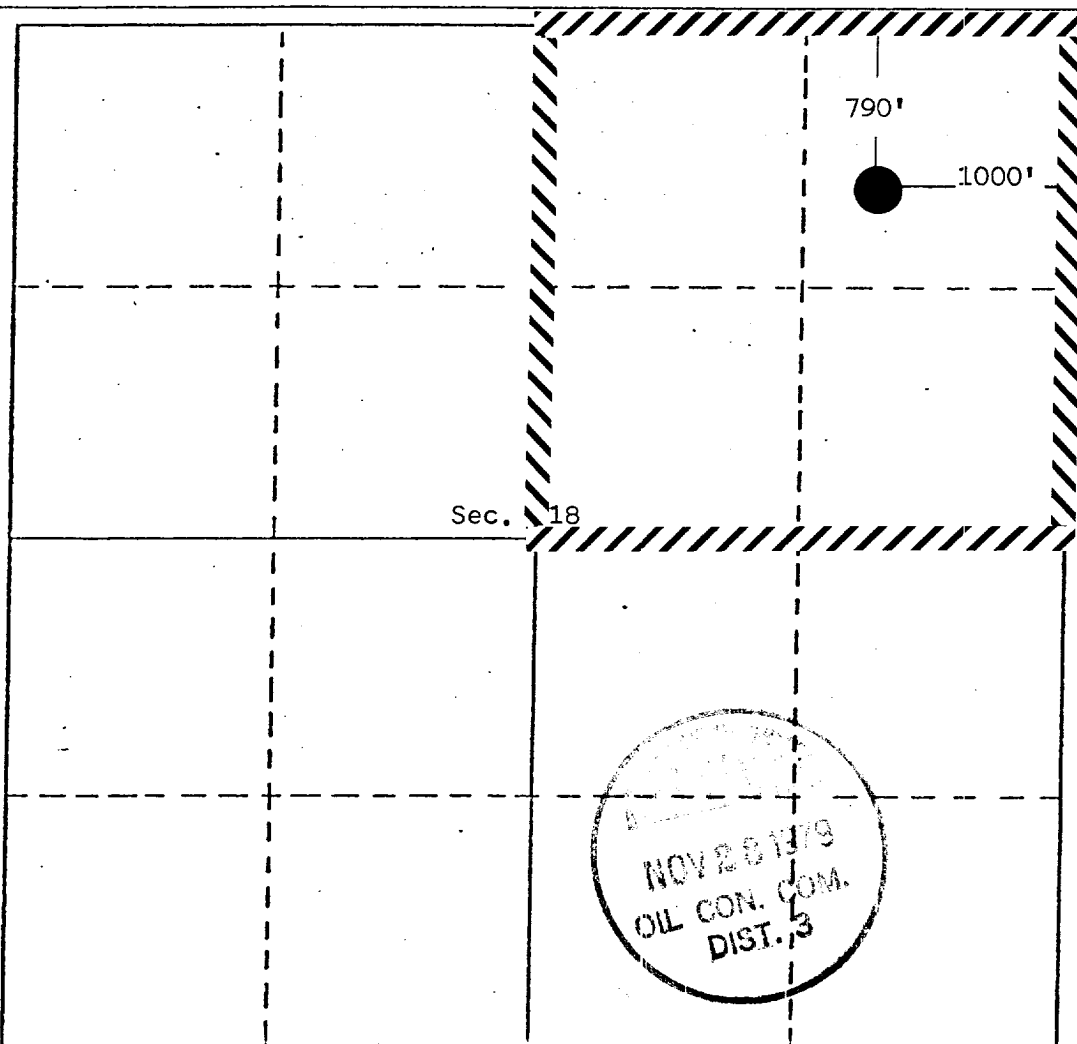
Operator Hixon Development Company			Lease Federal 18		Well No. 1-18
Unit Letter A	Section 18	Township 25 North	Range 12 West	County San Juan	
Actual Footage Location of Well:					
790 feet from the North line and		1000 feet from the East line			
Ground Level Elev. 6531	Producing Formation Chacra	Pool Wildcat	Dedicated Acreage: 160 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 one ownership lease

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.



CERTIFICATION

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

Aldrich L. Kuchera
Name

Aldrich L. Kuchera

Petroleum Engineer

Hixon Development Co.

Date
11-21-79

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

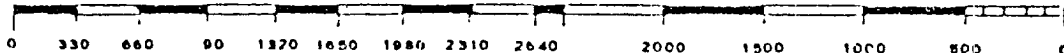


Date Surveyed
July 21, 1979

Registered Professional Engineer
and/or Land Surveyor

Edgar L. Risenhoover

Certificate No. 5979
Edgar L. Risenhoover, L.S.



APPLICATION FOR PERMIT TO DRILL
Hixon Development Company
Federal Well No. 1-18
790' FNL, 1000' FEL, Section 18, T25N, R12W
San Juan County, New Mexico

NTL-6 13 Point Requirement Outline is as follows:

1. Existing Roads - Refer to the attached topographic map.
The well will be located along side an existing dirt road.
The location is adjacent to the Hixon Development Company operated Central Bisti Unit oil field. Existing well location roads in the vicinity of the Federal 1-18 location are maintained by company construction vehicles.
2. Planned Access Roads - Refer to the attached maps.
3. Location of Existing Wells - A 1-mile radius map showing offset wells is attached.
4. Location of Existing and/or Proposed Facilities - The proposed well location is situated inside a developed oil and gas field containing an extensive system of oil and gas gathering lines, water injection lines, disposal lines, powerlines, fuel gas lines etc.

Proposed facilities for the Federal 1-18 well will consist of a well head assembly, meter house and an EPNG pipeline riser, i. e. a standard shallow gas well hookup. All lines will be buried 5' deep. The pipeline riser, well head, meter run and meter building will all be located on the proposed well pad schematic. The facility will not pose any problems for any livestock.

Restoration of any disturbed areas no longer needed for operations after drilling will be graded, contoured and raked.

5. Location and Type of Water Supply - Water for drilling will be obtained from the NIIP.
6. Source of Construction Materials - Materials for the drilling pad will be obtained from the proposed well location, i. e. none will be hauled in.

7. Methods for Handling Waste Disposal - Any waste material incurred while drilling will be buried in the mud pits, i. e. 5' deep. Cuttings, drilling fluid, well circulation and stimulation fluids (if any) will be contained in the mud pits. The mud pits will be allowed to dehydrate and will be filled and contoured per regulations. Well site will be properly cleaned up after rigging down rotary tools.
8. Ancillary Facilities - Central Bisti Lower Gallup Unit existing facilities will be used.
9. Well Site Layout - Refer to attached plat.
10. Plans for Restoration of Surface - The mud pits will be back filled, area leveled and contoured, raked and waste materials disposed of by burying 5' deep. Revegetation will not be carried out because seeding efforts in this area have been unsuccessful and a waste of money due to lack of moisture and blow sand conditions.
11. Other Information - Refer to Archeological Report to be submitted.
12. Operator's Representative -

Aldrich L. Kuchera
Hixon Development Company
Petroleum Center Building
Suite 101
501 Airport Drive
Farmington, New Mexico 87401

Office (505) 325 - 6984
Home (505) 325 - 3448
Car (505) 325 - 1873 - Unit 675
13. Certification - See Attached.

HIXON DEVELOPMENT COMPANY

P. O. BOX 2810

FARMINGTON, NEW MEXICO 87401

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 performed by Hixon Development Company and its contractors and subcontractors in conformity with this plan and the terms and conditions which it is approved.

November 26, 1979

Date

Aldrich L. Kuchera

Aldrich L. Kuchera
Vice President

Subscribed, Sworn to and Acknowledged before me this 26th
day of November, 19 79.

My commission expires: 7-25-83

Cindy Duncan



Notary Public

OFFICIAL SEAL

CINDY DUNCAN

NOTARY PUBLIC - NEW MEXICO

Notary Seal Filed with Secretary of State

My Commission Expires: 7-25-83

APPLICATION FOR PERMIT TO DRILL
Hixon Development Company
Federal Well No. 1-18
790' FNL, 1000' FEL, Section 18, T25N, R12W
San Juan County, New Mexico

Other NTL-6 Pertinent Data is as follows:

1. Estimated Log Tops -

Ojo Alamo -	318'
Farmington Sand -	648'
Fruitland -	783'
Fruitland Coal -	1413'
Pictured Cliffs -	1438'
Lewis -	1613'
Chacra Sand -	1768'

2. Estimated Depths of Water, Oil and Gas -

Fresh Water - Water well drilling in this area show the Ojo Alamo to be dry.

Gas Sands - 648' - TD. Gas sands and 16800 ppm NaCl water are dispersed from about 648' to TD.

3. Weight and Type of Mud to be Used -

Surface - 0-90'; drill with air. Should water be encountered an Aquagel/lime slurry will be mixed to a 40-50 sec/gt viscosity.

Production Hole - A Dextrid/Cellex low solids mud or equivalent will be used. Any hardness will be treated with soda ash. Mud weight and drilled solids will be controlled. Mud properties will be as follows:

Mud Weight - 8.4 - 8.8 #/gal
Viscosity - 34 - 45 sec/quart
Plastic Viscosity - 4 - 8 cps
Yield Value - 3 - 6 #/100 sq. ft.
Fluid Loss - 8 - 12 cc's/API
pH - 8.3 - 8.5
Solids Content - 5-1/2% maximum
Annular Velocity - 120 FPM

Note: Bottom hole pressure gradient is 3.40 #/gallon.
Fracture gradient is 19.2 #/gallon. We do not anticipate any drilling problems.

4. Open Hole Logs - Induction Electric Survey and Compensated Caliper Gamma Ray Neutron - Density.
5. Cased Hole Logs - Gamma Ray - CCL and Cement Bond Log.
6. Casing Program - Surface casing will be 90' 7" 23# J-55, 8rd, ST&C, Range 3, ST&C, Smls, New Casing.

Production Casing will be 2100' 2-7/8" 6.5# J-55, 8rd, EUE, Range 1, Smls, New Casing.

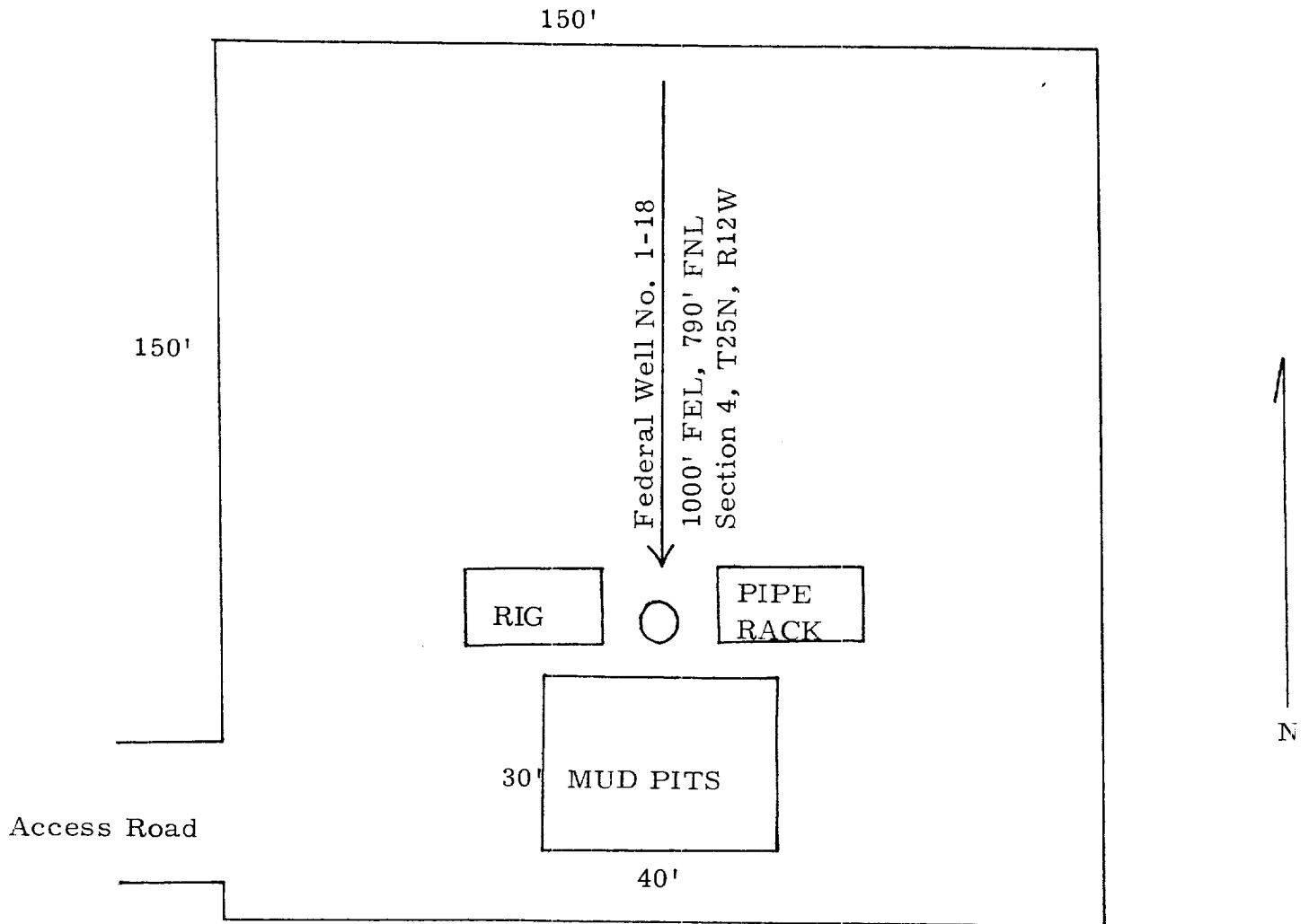
7. Cementing Program - Surface casing will be cemented to surface as follows: (1) break circulation with water (2) pump 100 sacks (500% excess Class B cement slurry with 2% CaCl) (3) Drop wooden cement wiper plug and displace to casing shoe (4) WOC 12 hours.

Production casing will be cemented to surface as follows: (1) Break circulation with mud (2) pump 20 bbl C-100 chemical wash (3) mix and pump 154 cubic feet (125 sacks) Litepoz 3 cement slurry weighing 13.5 #/gal and containing 2% gel, 2% CaCl, 1/4 #/sack D-29 cellophane, 10 #/sack Gilsonite (4) follow with 75 sacks Class B cement slurry with 2% CaCl (5) flush lines, drop Omega plug and displace plug with acetic acid and 2% KCl water (6) latch in plug with 2000 psi and WOC 48 hours or to a compressive strength of 1000 psi.
8. Drilling Hazards - are minimal in this area. High pressure zones, high temperatures, sour gas or other abnormal deviations are not expected.
9. Duration of Drilling Activity - will be about 15 days from spud date to completion.
10. Pressure Control Equipment - Will be either of the two attached BOP schematics.
11. Casing Pressure Testing - Surface casing will be tested for 30 minutes to 500 psi before drilling out shoe. Production casing will be tested to 2000 psi after Omega plug latches in

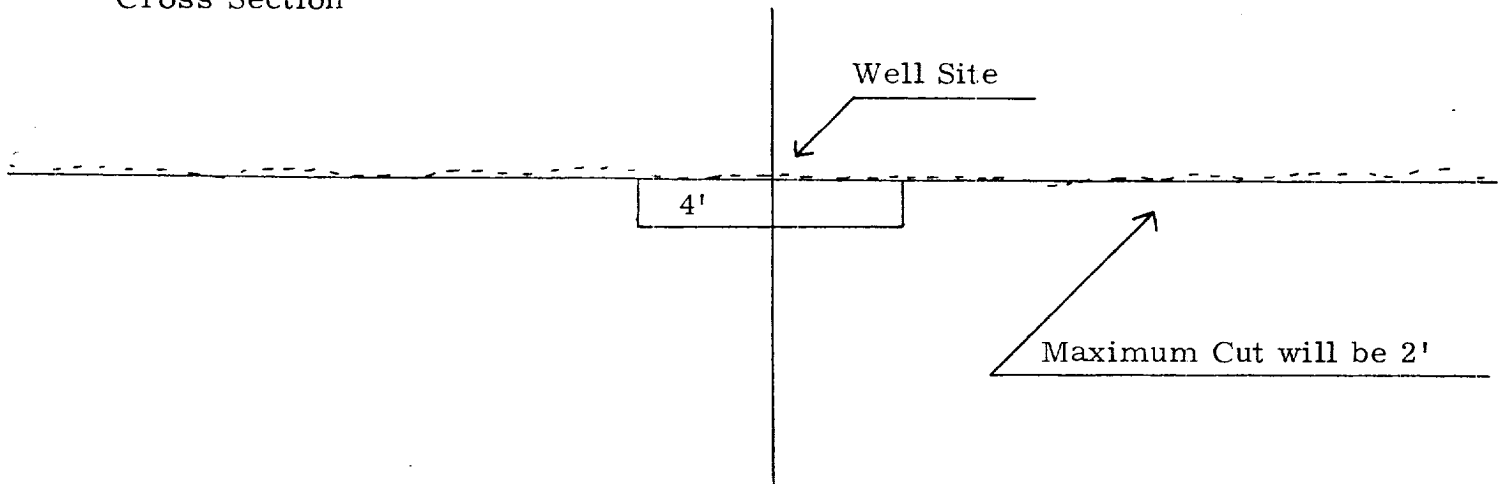
both surface and production casing will be factory tested to API specifications and will be new.

12. In the event the well is a dryhole, it will be plugged with prior USGS approval and the drill site restored in accordance with pertinent regulations.

HIKON DEVELOPMENT COMPANY
DRILLING LOCATION PLAT
FEDERAL WELL NO. 1-18



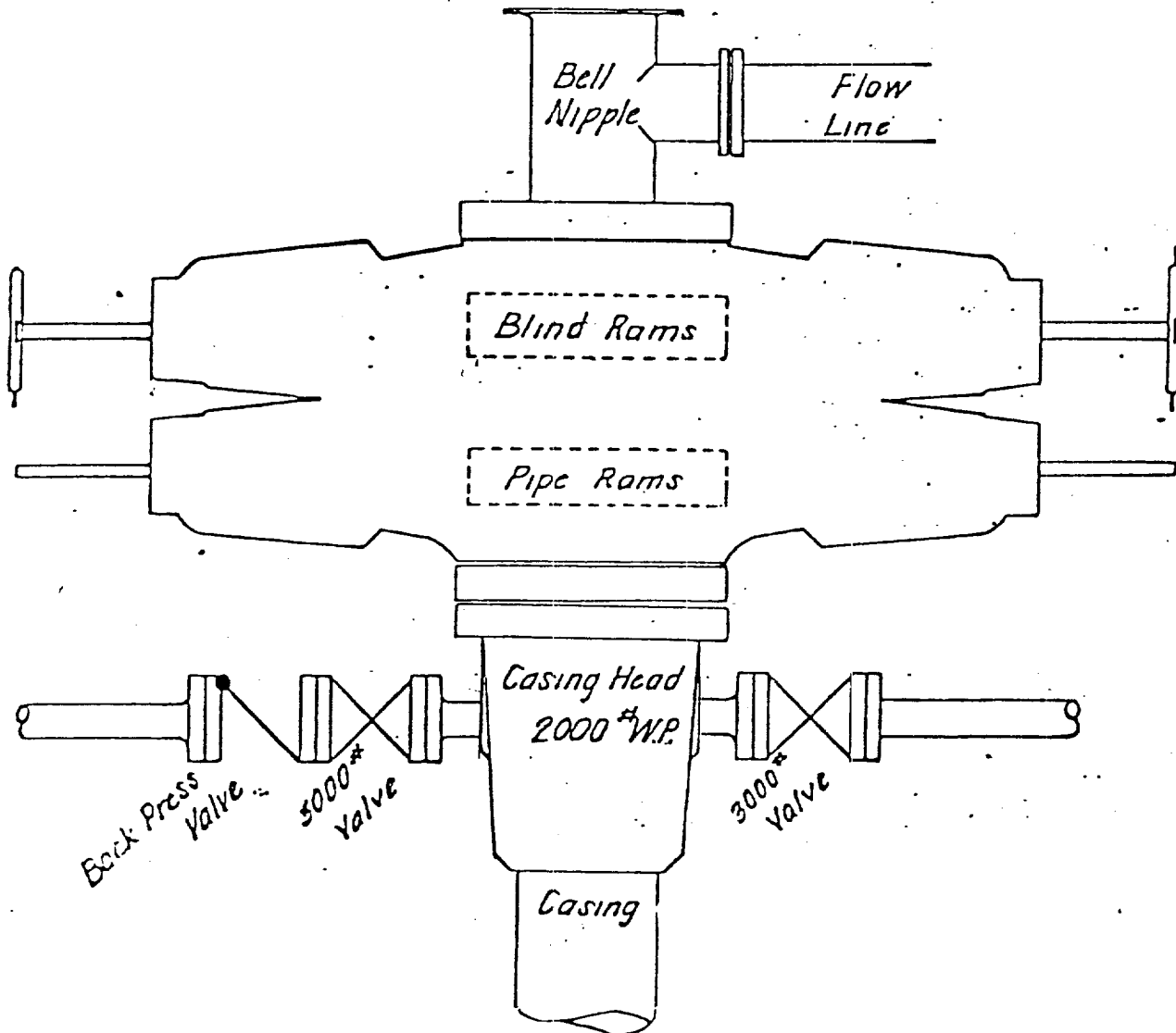
Cross Section



SCHEMATIC DIAGRAM

TESTING PROCEDURES

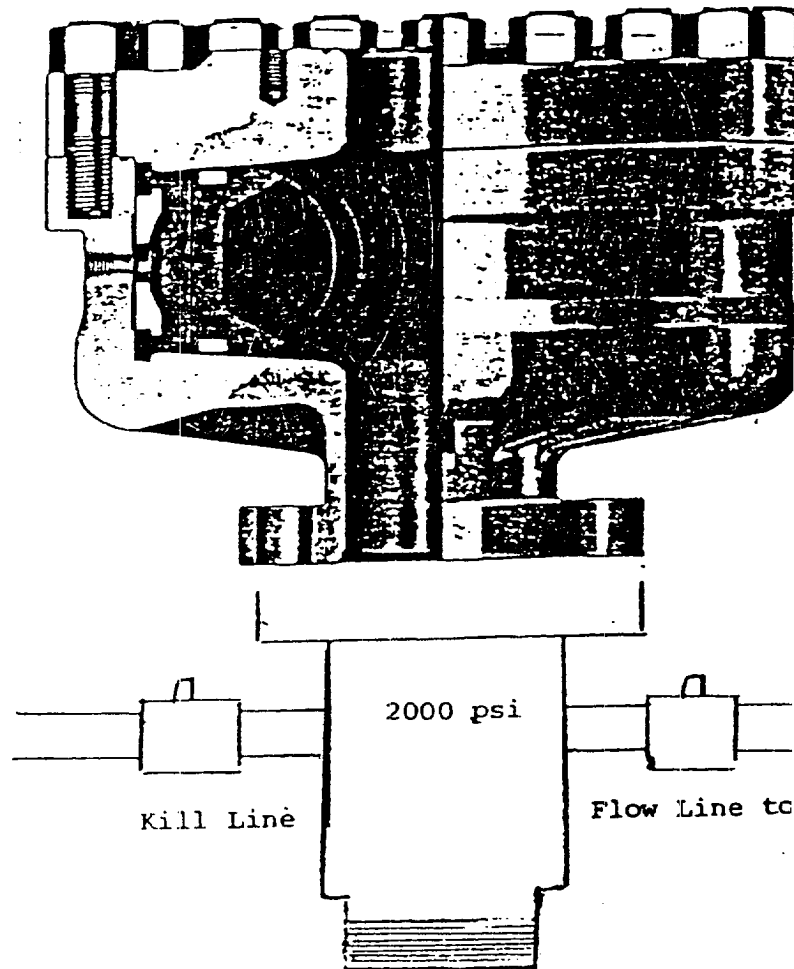
Install BOP after setting surface pipe and pressure test to 1000 psi after drilling out from under surface pipe.



*Shaffer Double Gate Blow Out Preventer
3000# W.P., 6000# Test, Type E*

TESTING PROCEDURES

Install BOP after setting surface pipe and pressure test to 1000 psi after drilling out from under surface pipe.

REGAN BLOWOUT PREVENTERS

The Regan Torus Blowout Preventer is used primarily on production and workover rigs for well control up to 3000 PSI working pressure

DESIGN FEATURES

- The Torus Preventer is designed for minimum height to facilitate its use with production and workover rigs.
- The rubber packer will conform to any object in the well bore. Sealing ability is not affected by minor damage to the inner bore.
- The packer will seal on open hole at full working pressure.
- The dual packer design increases the reliability of the preventer since the outer rubber is never exposed to the well bore. Under ordinary service, the outer packer is rarely replaced.

TORUS BLOWOUT PREVENTER
PATENTED

SPECIFICATIONS

Nominal Size	Test Pressure (psi)	DIMENSIONS (in.)			Weight (lb.)	End Flanges (I)	R/RX Ring Grooves	Side Outlet
		Outside Diameter	Thru Bore	Overall Height				
6	3000	27	7 1/4	19 1/4	1360	Nom. 6	45	None
	6000	28 1/2	7 1/4	21 1/4	1950	Nom. 6	45	2" L.P.