

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

N 790' FSL, 1650' FWL
At proposed prod. zone

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

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

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

6195' GLE

16. NO. OF ACRES IN LEASE

320

19. PROPOSED DEPTH

1300'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160

20. ROTARY OR CABLE TOOLS

Rotary

22. APPROX. DATE WORK WILL START*

9-1-79

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-1423

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Ka Da Pah

9. WELL NO.

1-R

10. FIELD AND POOL, OR WILDCAT

WAW-Fruitland-PC

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

NMPM

Section 3-25N-12W

12. COUNTY OR PARISH

San Juan

13. STATE

NM

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-3/4"	7"	20#	84' min at 90'	50 sacks
5"	2-7/8"	6.5#	1300'	150 sacks

It is proposed to drill a slimhole Pictured Cliffs development well per the attached. The Ka Da Pah No. 1 well, 790' FSL, 1000' FWL will be plugged back to the Farmington Sand.

gas is delineated

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]

TITLE Petroleum Engineer

DATE 7-26-79

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*ah 3rd**nymoc*

*See Instructions On Reverse Side

**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.

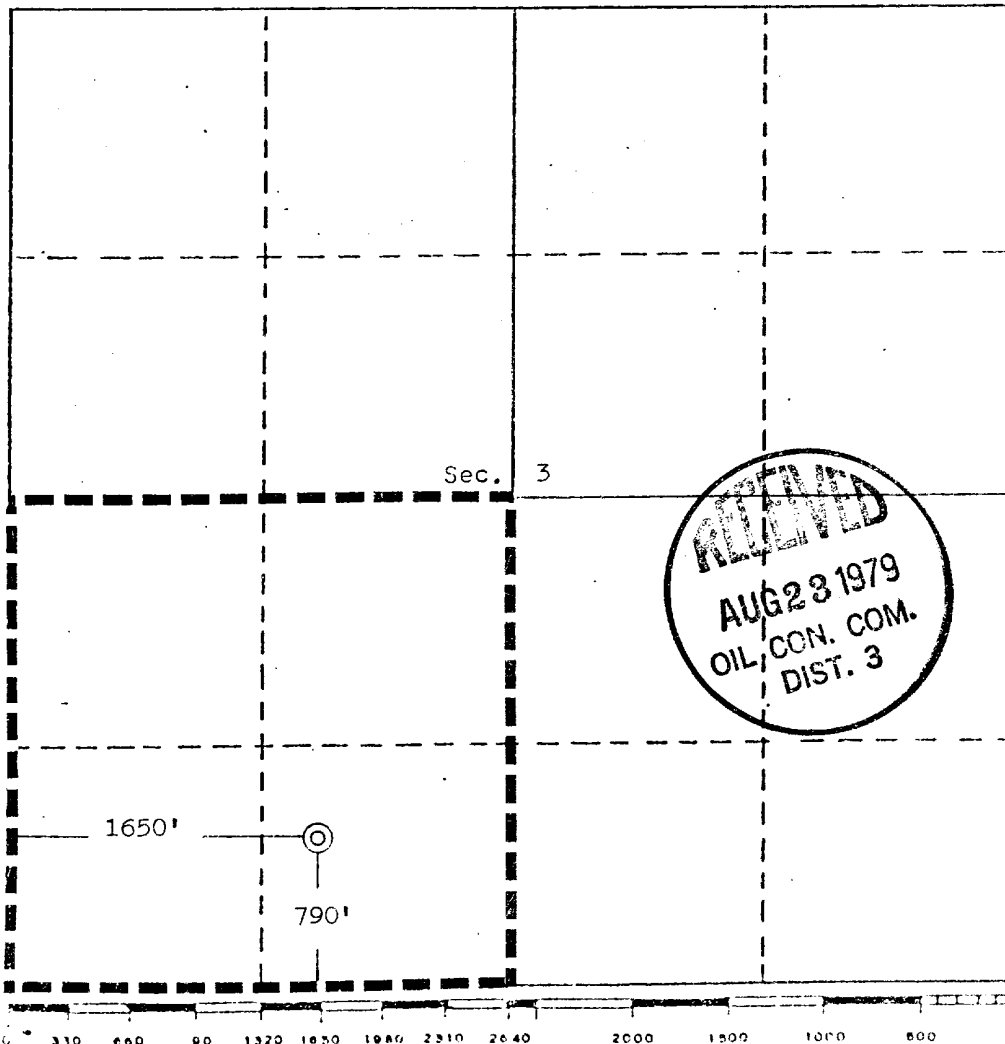
Operator Hixon Development Company			Lease Ka Da Pah		Well No. Ka Da Pah Well No. 1-R
Unit Letter N	Section 3	Township 25 North	Range 12 West	County San Juan	
Actual Footage Location of Well: <div style="display: flex; justify-content: space-between;"> 790 feet from the South line and 1650 feet from the West line </div>					
Ground Level Elev. 6195	Producing Formation Pictured Cliffs	Pool WAW-Fruitland - PC		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 Assignment

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.

Name Aldrich L. Kuchera
 Position Petroleum Engineer
 Company Hixon Development Co.
 Date 7-27-79

I hereby certify that the location shown on this plat is correct to the best of my knowledge and belief, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed July 22, 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
Ka Da Pah Well No. 1-R
790' FSL, 1650' FWL, Section 3-T25N-R12W
San Juan County, New Mexico

NTL-6 13 Point Requirement Outline is as follows:

1. Existing Roads - Refer to the attached NIIP layout map and topographic map. The well will be located 200' due south of a proposed NIIP paved road. The location falls within the Hixon Development Company operated Central Bisti Unit oil field and also within the NIIP. Existing well location roads in the vicinity of the Ka Da Pah location are maintained by company construction vehicles. The primary paved access road to this well will be maintained by the San Juan County.
2. Planned Access Roads - Access to this well will be provided by the NIIP. 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. A map is attached showing relevant lines and facilities in the vicinity of the proposed well location.

Proposed facilities for the Ka Da Pah 1-R well will consist of a well head assembly, meter house and an EPNG pipeline riser, i.e. a standard WAW-Fruitland-PC well hookup. Risers, well head assemblies will conform to NIIP field requirements. 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 (1) this might interfere with NAPI plans for the area and (2) 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.

7-30-79



Aldrich L. Kuchera
Vice President

Subscribed, Sworn to and Acknowledged before me this 27th day of July 1979.

My commission expires: 7-25-83



Cindy Duncan - Notary Public

NOTARY SEAL
CINDY DUNCAN
STATE OF NEW MEXICO
Notary Public and Secretary of State
Commission Expires: 7-25-83

APPLICATION FOR PERMIT TO DRILL
Hixon Development Company
Ka Da Pah Well No. 1-R
790' FSL, 1650' FWL, Section 3-T25N-R12W
San Juan County, New Mexico

Other NTL-6 Pertinent Data is as follows:

1. Estimated Log Tops -

Surface - Ojo Alamo
Kirtland - 120'
Fruitland - 660'
Pictured Cliffs - 1155'
Lewis - 1340'

2. Estimated Depths of Water Oil and Gas -

Fresh Water - 0-60' (may not be present because the Ojo Alamo outcrops at this location). Surface casing hole drilling in this area using air will dust indicating limited if any fresh water.

Gas Sands - 180' - TD. Gas sands and 16,800 ppm NaCl water are dispersed from about 180' to TD.

3. Weight and Type of Mud to be Used -

Surface - 0-84'; 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 84' 7" 20# J-55, 8rd, ST&C, Range 3, ST&C, Smls, New Casing.

Production Casing will be 1300' 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 50 sacks (400% excess Class B cement slurry w/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 30 cubic feet 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 - The majority of all past WAW-Fruitland - PC Field Shallow gas wells have been drilled with only a stripper head in lieu of a ram-type BOP. This is because the bottom hole pressure gradient is only 0.177 psi/foot. Typical gel-chem hydrostatic pressure is, in contrast, at least 0.440 psi/foot. Chance of a blowout are minimal. A stripper head is good for about 600 psi versus anticipated 230 psi bottom hole pressure.

If the USGS deems it necessary, we will however use a Shaffer type 45 6" 600 # Series 300 psi mechanical ram type BOP. The BOP would be tested to 1000 psi on a daily basis while drilling.

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.

PROJECT Ka Da Pah No. 1-R

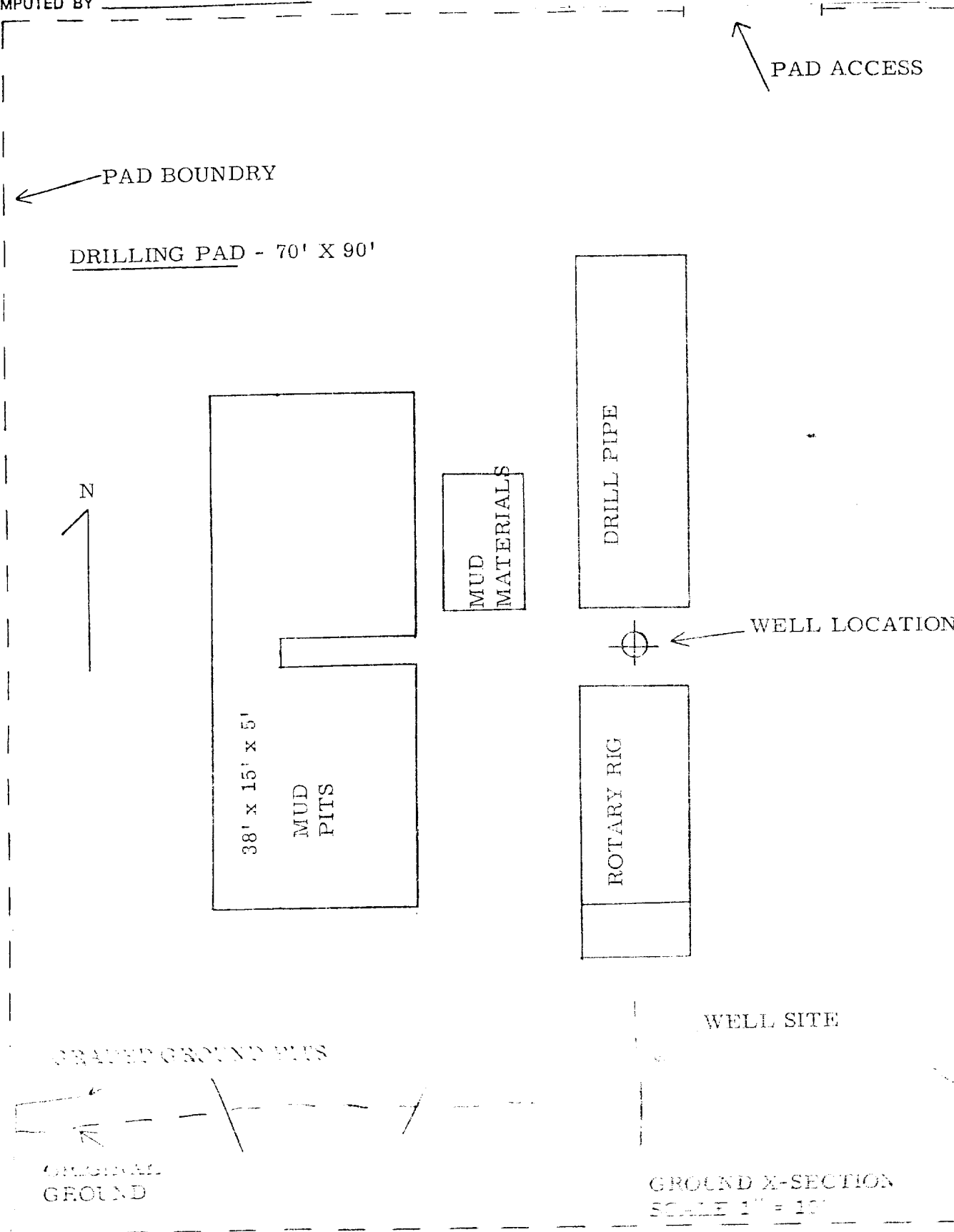
JOB NO. _____

PURPOSE Drilling Pad Plat

SHEET _____ OF _____

COMPUTED BY _____

CHECKED BY ALK



HIXON DEVELOPMENT COMPANY

SUPPLEMENTAL NTL-6 DATA

KA DA PAH WELL NO. 1-R

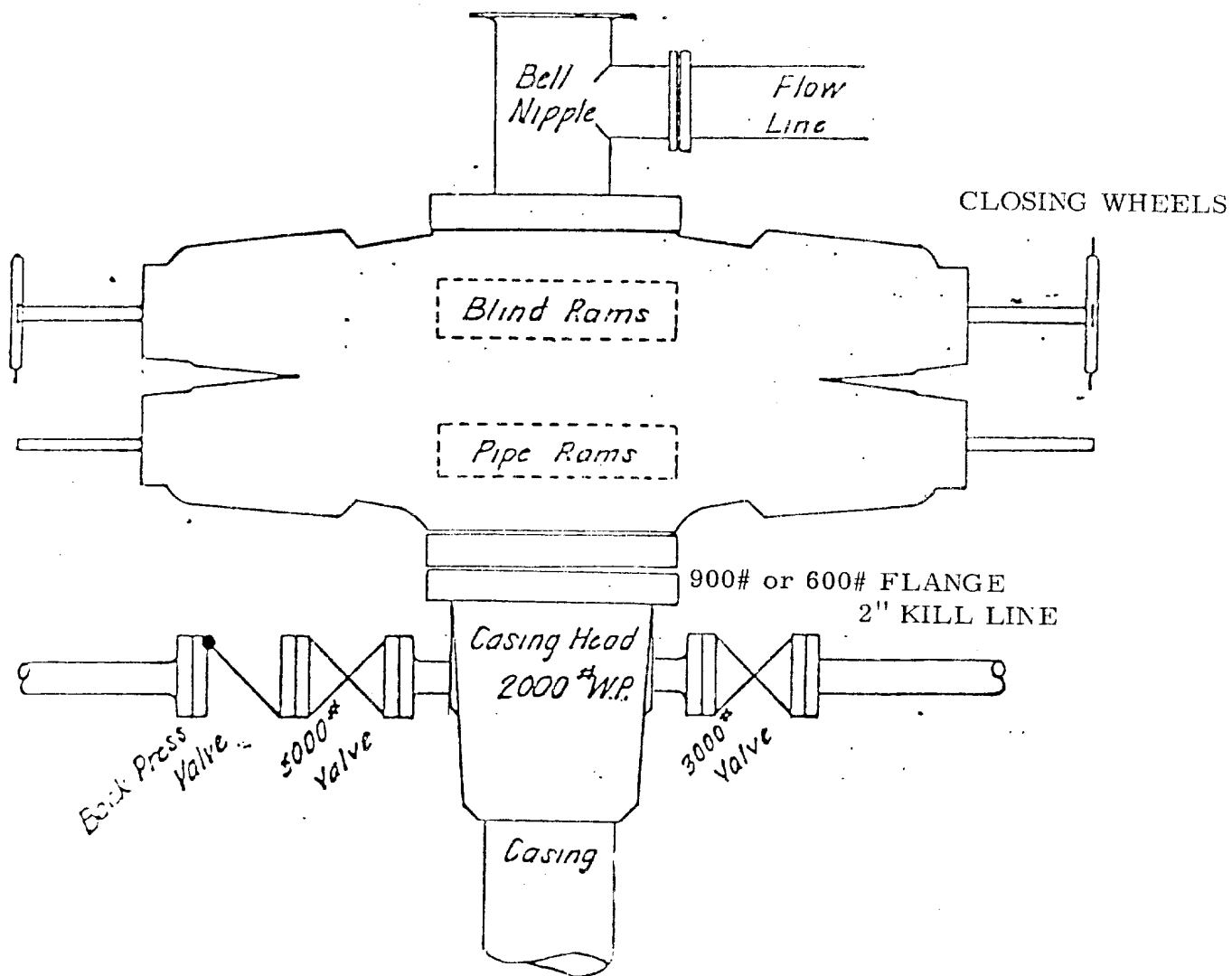
- I. BLOWOUT PREVENTER - Refer to attached mechanical double ram BOP schematic. This configuration will be used in lieu of our initially proposed Shaffer Type 45 single BOP.

Also attached for clarification purposes is a typical derrick, wellhead, BOP, mud line schematic of a typical rotary drilling rig. This basically will describe our planned drilling operation.

During completion of the well a hydraulic pack off (per the attached) type pressure control system will be used.

- II. SURFACE CASING DESIGN. We will increase our 84' design by 6' to 90' of 7" 20# 8rd J-55 ST&C casing. The casing will accomodate the above BOP with a 10" 900# flange. It will be cemented to surface with 50 sacks cement per the attached cementing diagram.

HIXON DEVELOPMENT COMPANY
BLOWOUT PREVENTER SCHEMATIC
(SHALLOW GAS WELLS)



*Shaffer Double Gate Blow Out Preventer
10", 3000# W.P., 6000# Test, Type E*

R 13 W R 12 W

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WEST BISTI

UNIT BOUNDARY

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CARSON UNIT

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HIKON DEVELOPMENT COMPANY
CENTRAL BISTI UNIT

SAN JUAN COUNTY, NEW MEXICO

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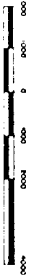
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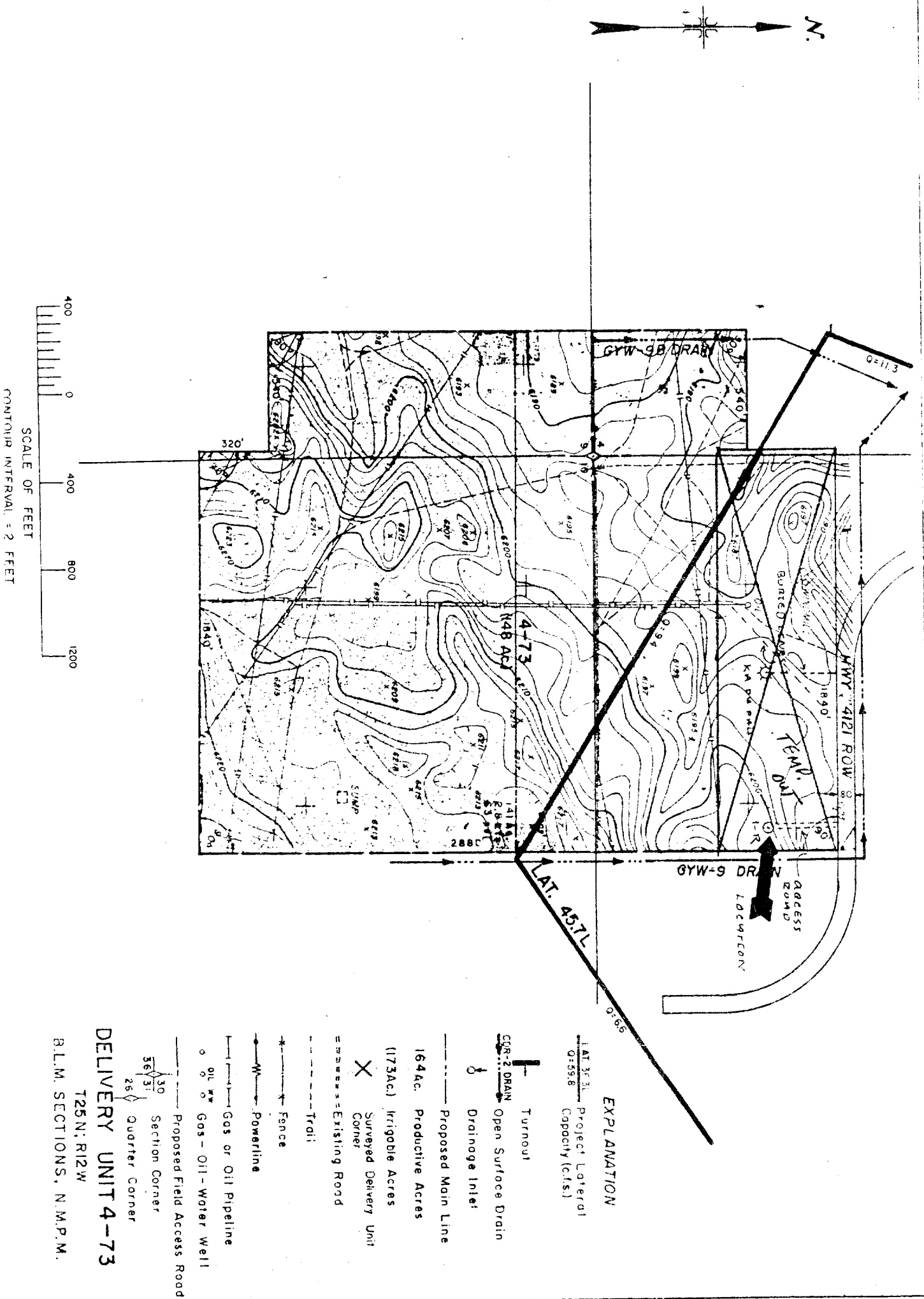
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UNIT BOUNDARY



DATE MAY 1, 1977



DELIVERY UNIT 4-73

T25N; R12W

8.L.M. SECTIONS, N.M.P.M.