

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-045-24045

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

2040' FNL, 2040' FEL, Section 4, 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)18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

16. NO. OF ACRES IN LEASE

19. PROPOSED DEPTH

1275'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160

20. ROTARY OR CABLE TOOLS

Rotary

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

6158' GLE

22. APPROX. DATE WORK WILL START*

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'	* 75 sacks
5"	2-7/8"	6.5#	1275'	150 sacks

The subject well is to be drilled as a replacement for the Pictured Cliffs Hixon Federal No. 1 which is uneconomical to operate. It will be drilled with a portable rotary rig using mud. The well will be evaluated with open hole resistivity and porosity logs prior setting casing. Well equipment will conform with NIIP requirements.

The existing Hixon Federal No. 1 well will be plugged back to the Farmington Sand and if commercial recompleted. This well has an existing gas sales contract.

* Surface casing will be cemented to surface.

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

TITLE

Petroleum Engineer

DATE

11-29-79

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

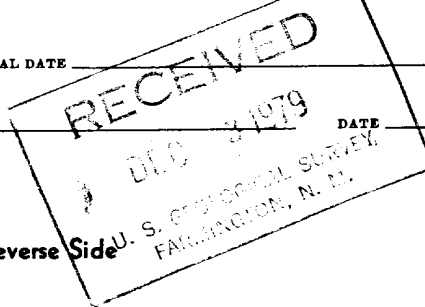
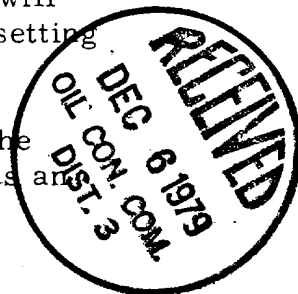
TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NMOC



WELL LOCATION AND ACREAGE DEDICATION PLAT

Form No. 1-77

All distances must be from the outer boundaries of the Section

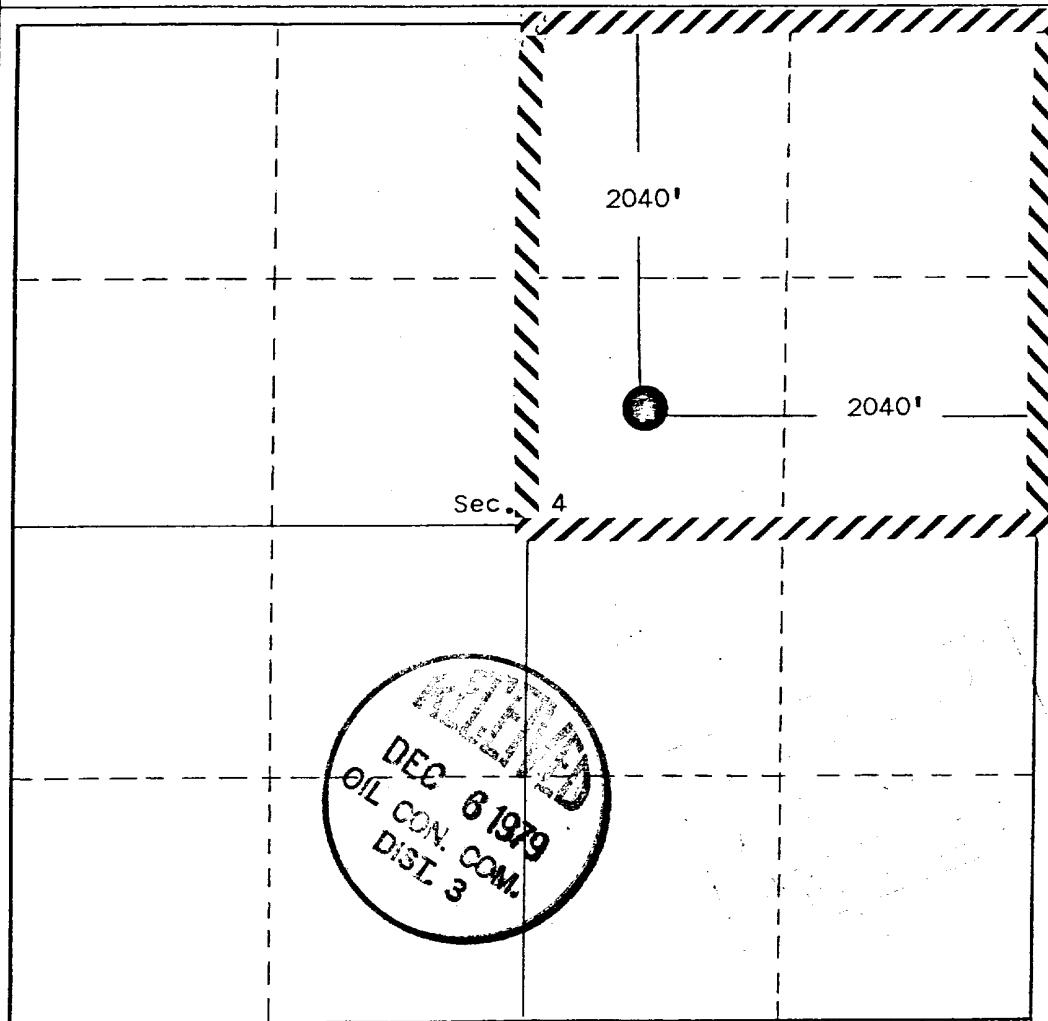
Hixon Development Company			Hixon Federal		#1R
Unit Letter G	Section 4	Township 25 North	Range 12 West	County San Juan	
Actual Footage Location of Well: 2040 feet from the North line and 2040 feet from the East line					
Ground Level Elev. 6158	Producing Formation Pictured Cliffs	Pool WAW-Fruitland-PC	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 _____

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
Position
Petroleum Engineer

Company
Hixon Development Company

Date
11-29-79

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
November 23, 1979

Registered Professional Engineer
and/or Land Surveyor

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

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

APPLICATION FOR PERMIT TO DRILL
Hixon Development Company
Hixon Federal Well No. 1-R
2040' FNL, 2040' FEL, Section 4, 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 400' southwest of an existing county road. The location is adjacent to the Hixon Development Company operated Central Bisti Unit oil field and also within the NIIP. Existing well location roads in the vicinity of the Hixon Federal 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 to the south of the proposed well location.

Proposed facilities for the Hixon Federal 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. Additional facilities will not be required.
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.

APPLICATION FOR PERMIT TO DRILL
Hixon Development Company
Hixon Federal Well No. 1-R
2040' FNL, 2040' FEL, Section 4, T25N, R12W
San Juan County, New Mexico

Other NTL-6 Pertinent Data is as follows:

1. Estimated Log Tops -

Ojo Alamo - Surface
Kirtland - 101'
Fruitland - 848'
Fruitland Coal - 1063'
Pictured Cliffs - 1092'

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

Production Hole - A Destrid/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" 20# J-55, 8rd, ST&C, Range 3, ST&C, Smls, New Casing.

Production Casing will be 1275' 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 75 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 - 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.

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.

11-29-79

Date

Aldrich L. Kuchera

Aldrich L. Kuchera
Vice President

Subscribed, Sworn and Acknowledged before me this 29th day of
November, 19 79.

My commission expires: 7-25-83

Cindy Duncan

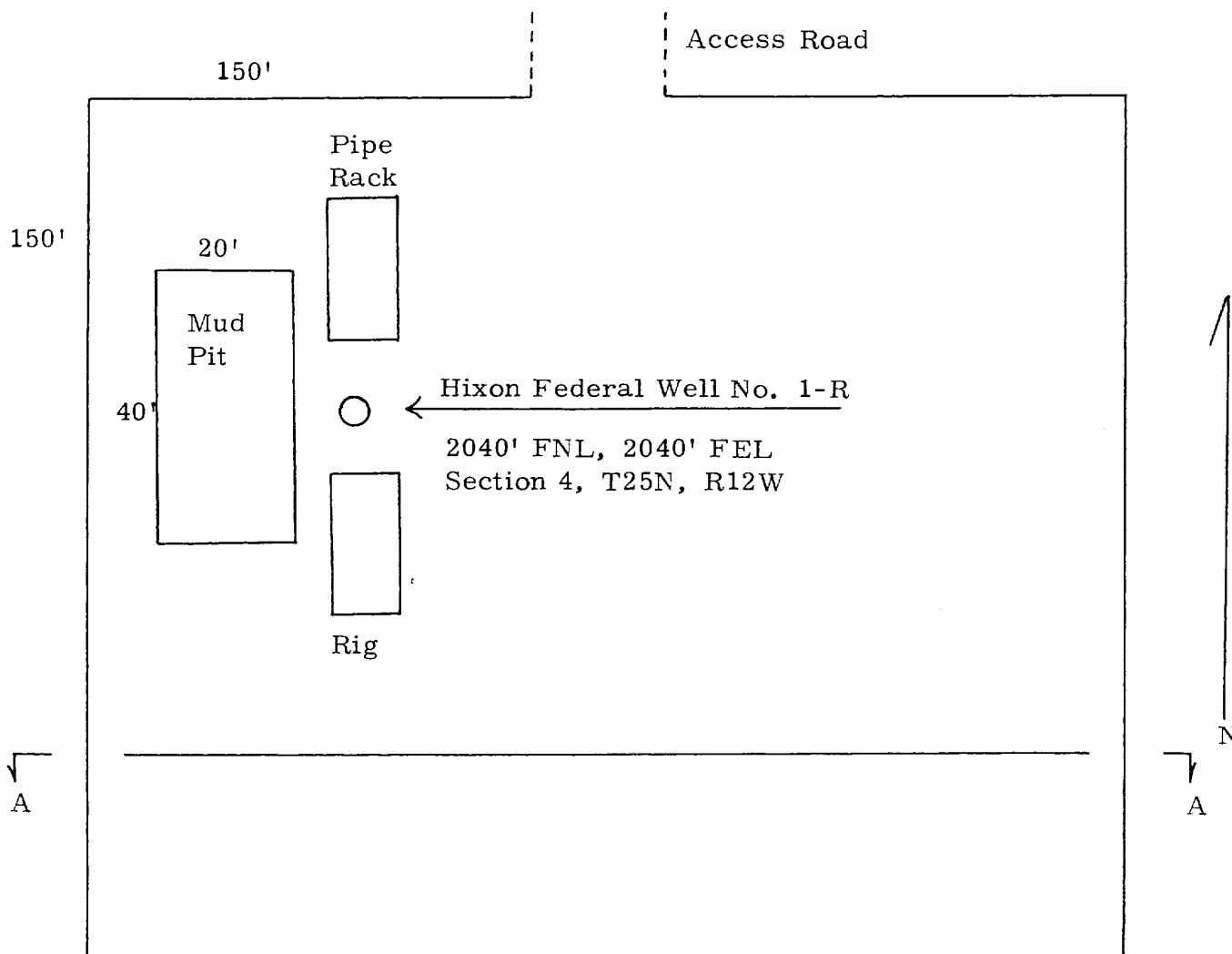
Notary Public



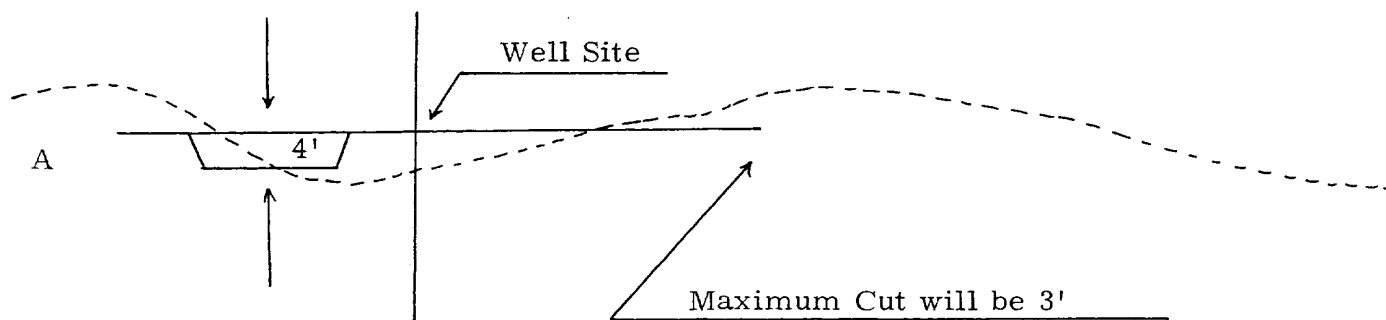
OFFICIAL SEAL
CINDY DUNCAN

NOTARY PUBLIC - NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires: 7-25-83

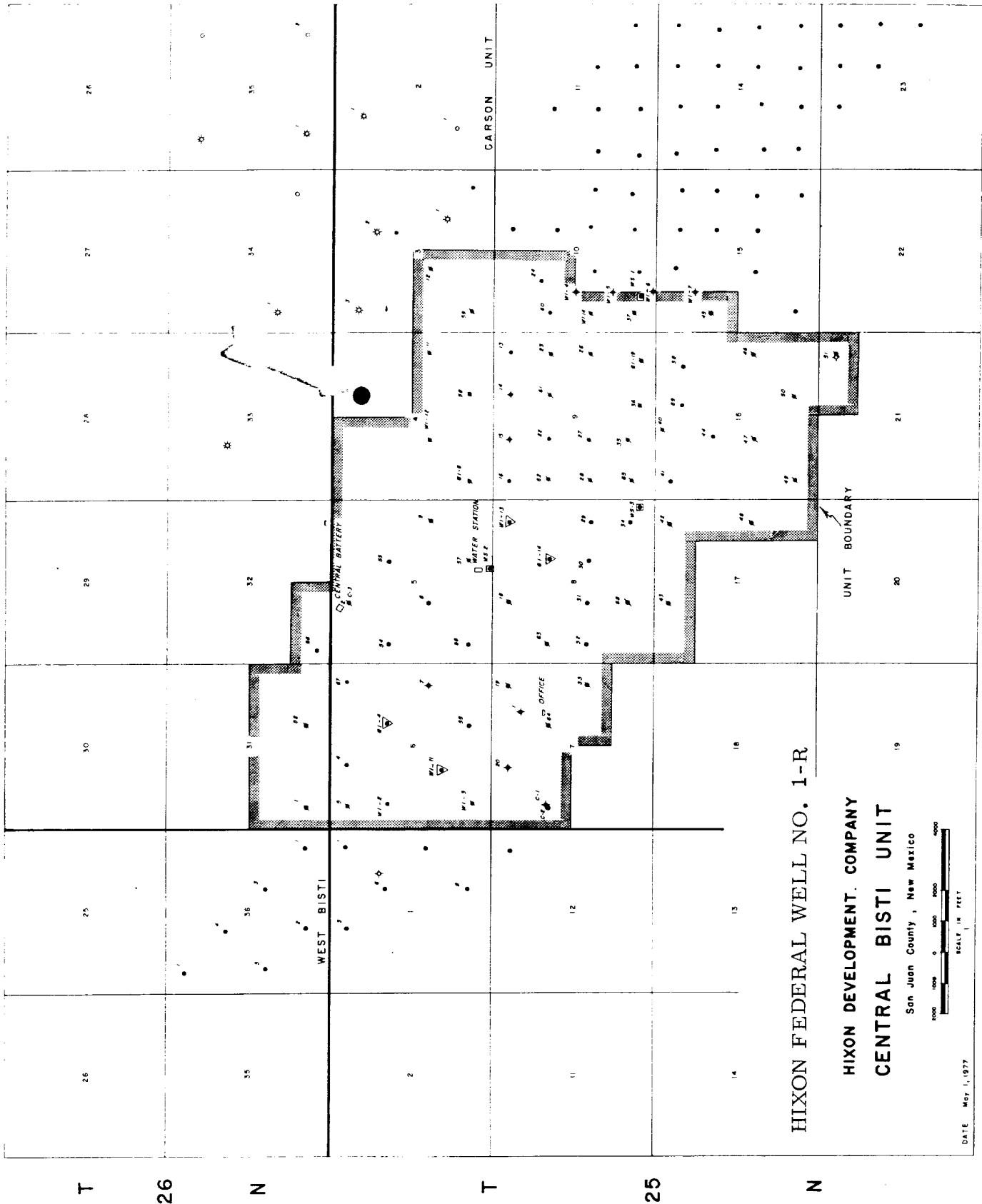
HIXON DEVELOPMENT COMPANY
DRILLING LOCATION PLAT
FEDERAL WELL NO. 1-R



Cross Section



R 13 W R 12 W



HIXON FEDERAL WELL NO. 1-R

HIXON DEVELOPMENT COMPANY

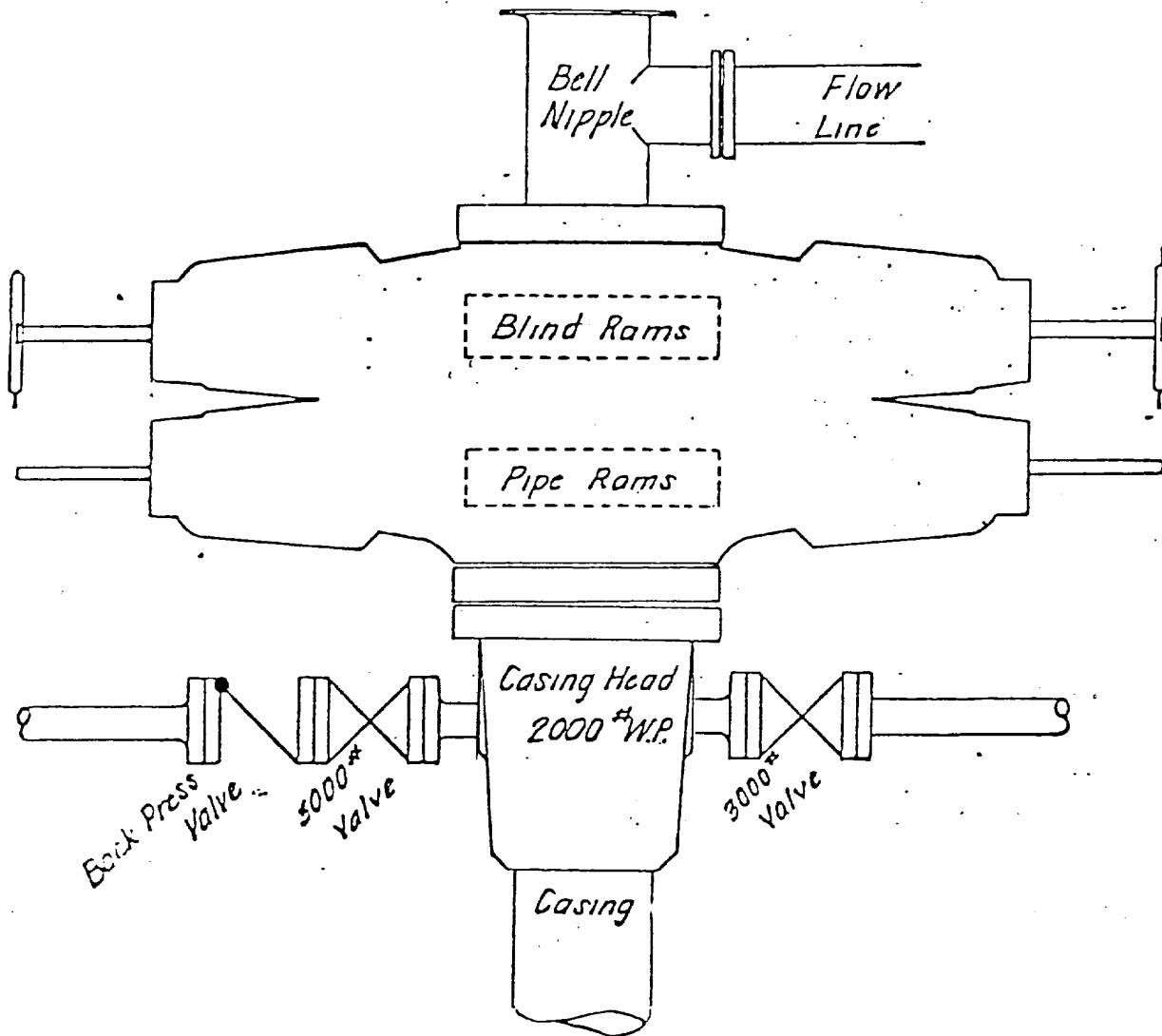
CENTRAL BISTI UNIT

San Juan County, New Mexico

SCHEMATIC DIAGRAM

TESTING PROCEDURES

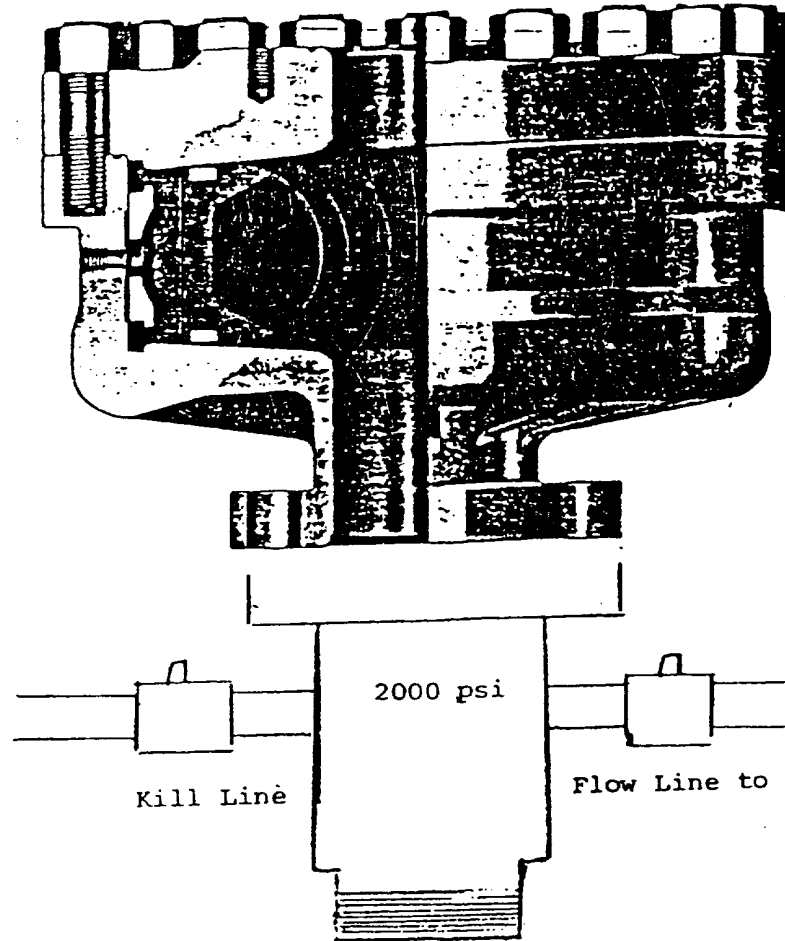
Install BOP after setting surface pipe and pressure test to 1000 psi after drilling out from under surface pipe.



*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 $\frac{1}{4}$	19 $\frac{1}{2}$	1360	Nom. 6	45	None 2" L.P.
	6000	28 $\frac{1}{2}$	7 $\frac{1}{4}$	21 $\frac{1}{2}$	1950	Nom. 6	45	

HIXON DEVELOPMENT COMPANY

P. O. BOX 2810

FARMINGTON, NEW MEXICO 87401

November 29, 1979

Joe D. Ramey, Director
State of New Mexico
Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

Subject: Request for Exception to Standard Location
Hixon Federal Well No. 1-R
NE/4 of Section 4, T25N, R12W
San Juan County, New Mexico

Dear Mr. Ramey:

Hixon Development Company requests administrative approval of an exception to standard WAW-Fruitland-Pictured Cliffs location for the subject gas well on the basis of topographic condition. Per the attached plat, we desire to drill the Hixon Federal No. 1-R at 2040' FNL, 2040' FEL, Section 4, T25N, R12W in order to be outside the NAPI irrigated land. A standard 1850' FNL, 1850' FEL location would put the proposed well in the path of a proposed/ existing irrigation sprinkling system.

Attached is a copy of a Bureau of Indian Affairs letter from Mr. Albert L. Keller supporting this request. Also attached is a Bureau of Reclamation plat showing the NAPI project boundary along with the proposed well location.

We have also notified offset lease holders of the proposed non-standard well location by certified mail with a copy of this letter.

Please give this request your earliest consideration.

Very truly yours,

Hixon Development Company

by Aldrich L. Kuchera

Aldrich L. Kuchera

November 29, 1979

Page 2

ALK:cd

Attachments

cc: Hixon Development Company
341 Milam Building
San Antonio, Texas 78205

United States Department of the Interior
Geological Survey
P.O. Box 959
Farmington, New Mexico 87401

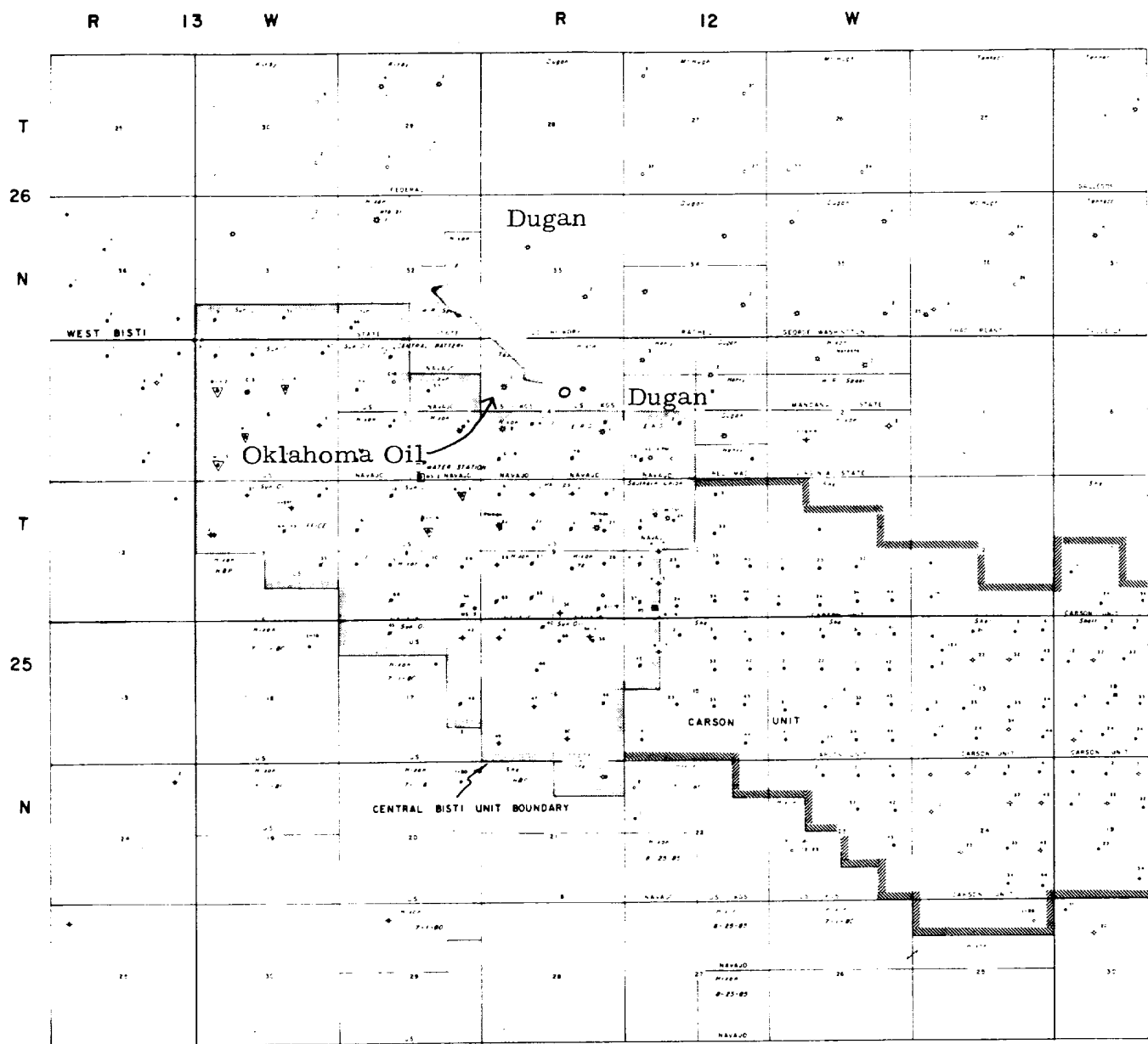
Dugan Production Company
P.O. Box 208
Farmington, New Mexico 87401

Energy Reserves Group, Inc.
P.O. Box 1407
Denver, Colorado 80202

Tesoro Petroleum Corporation
8520 Crownhill Blvd.
San Antonio, Texas 78209

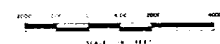
Oklahoma Oil Company
1120 One Energy Square
4925 Greenville Avenue
Dallas, Texas 75206

OFFSET OWNERSHIP PLAT



HIXON DEVELOPMENT COMPANY
CENTRAL BISTI UNIT

San Juan County , New Mexico



NAME _____ DATE _____

$$R_{\text{eq}} = 500 \quad A_{\text{avg}} = 0.79$$



UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF INDIAN AFFAIRS
Navajo Indian Irrigation Project
3539 East 30th Street
Northwest Energy Bldg., Room 103
Farmington, New Mexico 87401

November 8, 1979

Mr. A.L. Kuchera, Petroleum Engineer
Hixon Development Company
P. O. Box 2810
Farmington, New Mexico 87401

Dear Mr. Kuchera:

You have contacted our office regarding the location of the Hixon Federal #1R well in Section 4, T.25N., R.12W., which is within the Navajo Indian Irrigation Project.

The proposed location of this well was 1850' FNL, 1850' FEL. This location falls within a field to be irrigated with a mechanical move sprinkler irrigation system and would cause serious problems with the operation of this system.

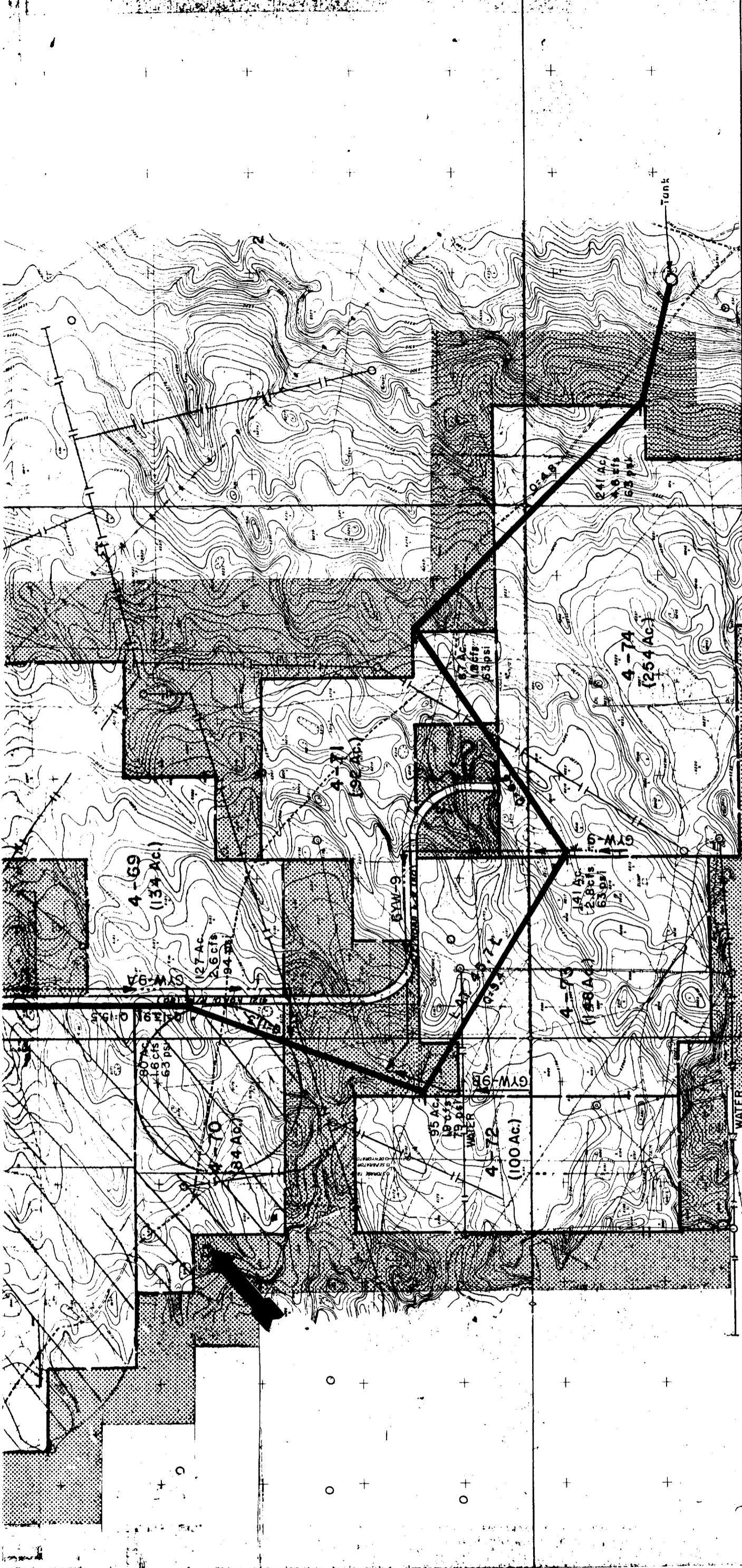
We request that, if possible, you change the location of this proposed well to 2040' FNL, 2040' FEL and that any necessary production equipment be located south of the well. This will put the well and equipment south of the area to be irrigated and be of mutual benefit.

Your cooperation in this is appreciated.

Sincerely,

A handwritten signature in cursive script, reading "Albert H. Keller", is written over the typed name.

Project Manager



UNITED STATES	
DEPARTMENT OF THE INTERIOR	
BUREAU OF RECLAMATION	
NAVAJO INDIAN IRRIGATION PROJECT - NEW MEXICO	
EAST CHACO DIVISION	
DELIVERY UNIT LAYOUT	
T.24 N., T.25 N., R.12 W., N.M.P.M.	
DRAWN _____	SUBMITTED _____
TRACED C. EASTIN _____	RECOMMENDED _____
CHECKED <i>D. Jackson</i> _____	APPROVED _____
FARMINGTON, NEW MEXICO	NOVEMBER 4, 1976
SHEET 12 OF 17	
809-529-2062	