Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instruction reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM-13646

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Luzon Federal

2. NAME OF OPERATOR: Union Oil Company of California

9. WELL NO.: 1

3. ADDRESS OF OPERATOR: P. O. Box 671 - Midland, Texas 79702

RECEIVED
AUG 22 1977

10. FIELD AND POOL, OR WILDCAT: UNDESIGNATED

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FNL and 1980' FEL

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 13, T-24-S, R-35-E

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 8 Miles Northwest of Jal, New Mexico

12. COUNTY OR PARISH: Lea

13. STATE: N. Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 660' to lease line; 660' to drlg. unit line

16. NO. OF ACRES IN LEASE: 320

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.:

19. PROPOSED DEPTH: 14,900'

20. ROTARY OR CABLE TOOLS: Rotary

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

22. APPROX. DATE WORK WILL START*: Upon Approval

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8" OD	48#	500'	500 sx Circul. to Surface
12-1/4"	9-5/8" OD	40# & 36#	5,300'	1800 sx Circul. to Surface
8-1/2"	7" OD	26# & 23#	11,200'	700 sx
6-1/8"	4-1/2" OD Liner Hung @ 10,900'	13.5#	14,900'	325 sx

3,000# W.P. Manual/Hydraulic B.O.P. from 500' to 5,300'
5,000# W.P. Manual/Hydraulic B.O.P. from 5,300' to Total Depth

Unless Drilling Operations have Commenced, this drilling approval Ex...

SEE ATTACHED FOR CONDITIONS OF APPROVAL

NOTE: This acreage is not dedicated to a gas purchaser.

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 J. R. Hughes TITLE District Drilling Supt. DATE August 19 1977

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED AS AMENDED
SEP 6 1977
ARTHUR R. BROWN
DISTRICT ENGINEER

*See Instructions On Reverse Side

Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

☆ U.S. GOVERNMENT PRINTING OFFICE : 1963—O-711-396

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	Lease	Well No.
UNION OIL COMPANY OF CALIFORNIA	Luzon Federal	1

Unit Letter	Section	Township	Range	County
B	13	24-S	35-E	Lea

Actual Footage Location of Well:
660 feet from the North line and 1980 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3432'	Morrow	~~WILDCAT~~ UNDESIGNATED	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

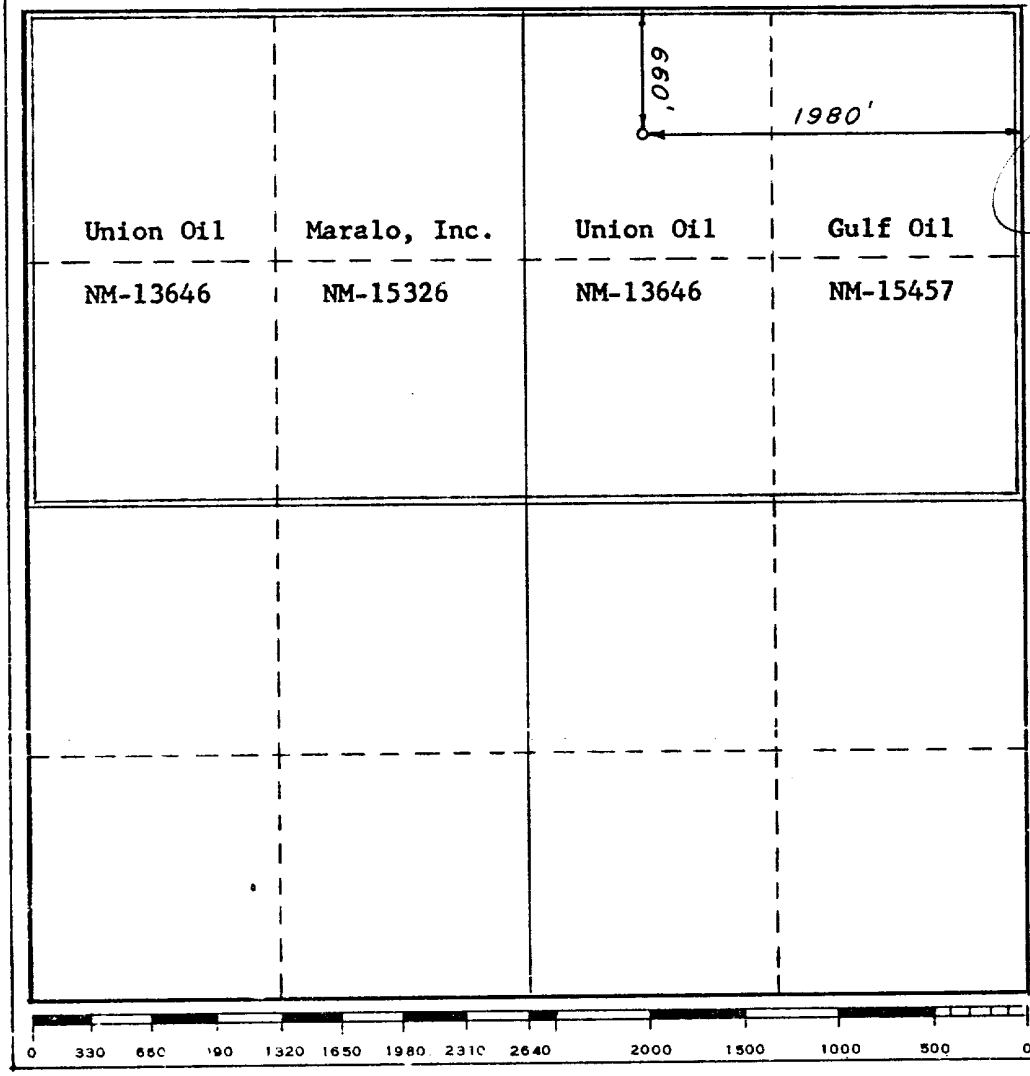
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

[X] Yes [ ] No If answer is "yes," type of consolidation Communitization

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
J. R. Hughes

Position
District Drilling Supt.

Company
Union Oil Co. of California

Date
August 19, 1977

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.

July 12, 1977

Date Surveyed

Richard B. Duniven

Registered Professional Engineer and/or Land Surveyor

Certificate No. 4004

UNION COMPANY OF CALIFORNIA

DISTRICT OFFICE - MIDLAND, TEXAS

DRILLING PROGRAM

Field: Luzon Prospect

Location: 660' FNL & 1980' FEL of Section 13, T-24-S, R-35-E, Lea County, New Mexico

Well Name: LUZON FEDERAL WELL NO. 1

Estimated Total Depth: 14,900'

Drilling Data: Geolograph & 10' drilling time surface to TD

Samples: 10' from 500' to TD

Estimated Formation Tops:

Rustler	1730	Strawn	11230*
Yates	4130	Atoka	12730*
Bone Spring	8150	Middle Morrow	14230*
Wolfcamp	10480*	Lower Morrow	14650*

* Abnormal pressure zones

Logs: GR-Sonic 5300'-surface;DIL & GR-Sonic 10,800-5300'; GR-CNL-Density, GR-Sonic, DLL CDM (contingent) TD-10,800'

DSTs: (8) Delaware, 2 Bone Spring, @ Wolfcamp, Strawn, 2 Middle Morrow

Cores: None

Deviation: 5° maximum with rate of change not to exceed 1° per 100' of interval

Casing & Mud Program:

Depth	Size Hole	Casing	Cement	W.O.C.	Mud Wt.	Mud Vis.	Mud W.L.
0'-500'	17-1/2"	13-3/8"	*500 sx	18	Spud Mud		
500'-5300'	12-1/4"	9-5/8"	**1800 sx	18	10 ppg brine		
5300'-10800'	8-1/2"	7"	***700 sx	24	Fresh Water		
10800'-TD	6-1/8"	4-1/2" L	****325 sx	24	10-12	35	<15

Rig to be released after nippling up 4-1/2" **casing.**

* 500 sx Class "C" w/2% $CaCl_2$, 1/4 lb flocele. Calculated to circulate.

** 1600 sx HOWCO light or equivalent w/10 lb salt, 1/4 lb flocele, 5 lb gilsonite followed by 200 sx Class "C" neat. Calculated to circulate.

*** 1st Stage 300 sx HOWCO light or equivalent w/.6% Halad 22A 15 lb salt 1/4 lb flocele followed by 200 sx Class "H" w/.6% Halad 22A 6 lb salt. 2nd Stage thru DV @ 7100 200 sx HOWCO light w/.4% Halad 22 15 lb salt 1/4# flocele.

**** 325 sx Class "H" w/.8% Halad 22A 6 lb KCl. Calculated to circulate above liner top.

NOTE: Changes in the above program will be at the direction of a qualified Union Oil Company of California representative and should be clearly indicated on the program posted at the rig.

J. R. Hughes
District Drilling Superintendent

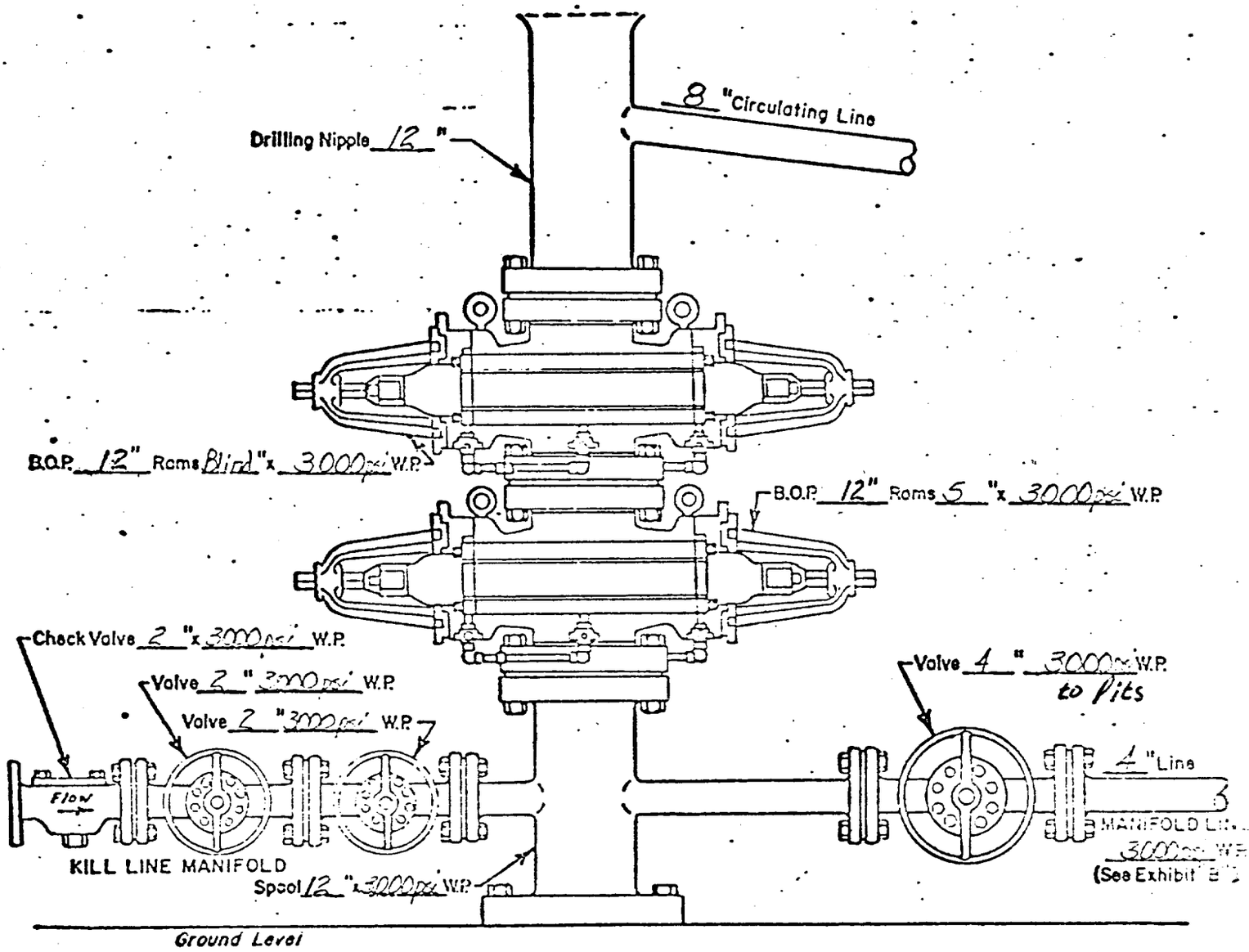
JLW:MTD:lb
6-22-77

UNION OIL COMPANY OF CALIFORN...

EXHIBIT A-1

WELL NAME: Luzon Federal No. 1

LOCATION: Lea County New Mexico



WELL HEAD B.O.P.

3000 #'s W.P.

☒ Manuel

☒ Hydraulic

Used on 12¼" hole 500'-5300'

Test to 3000 psi When Installed

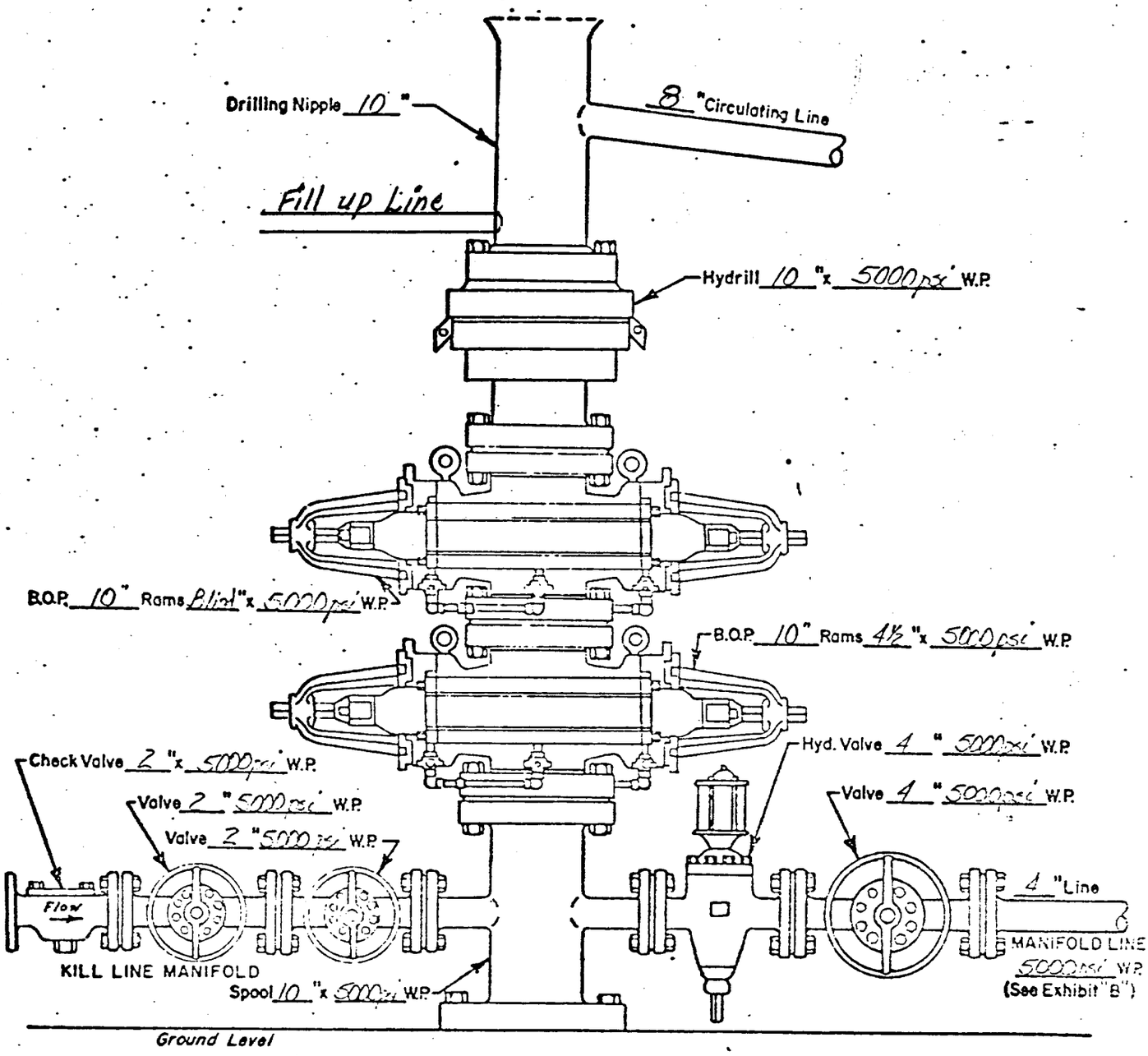
5112

UNION OIL COMPANY OF CALIFORNIA

EXHIBIT A-2

WELL NAME: Federal Luzon No 1

LOCATION: Lea County, New Mexico



WELL HEAD B.O.P.

5000 #W.P.

☒ Manuel

☒ Hydraulic

Used on 8½" & 6⅛" holes 5300'-TD. 3½" pipe rams required on 6⅛" hole. Rotating head to be furnished by Union when required.

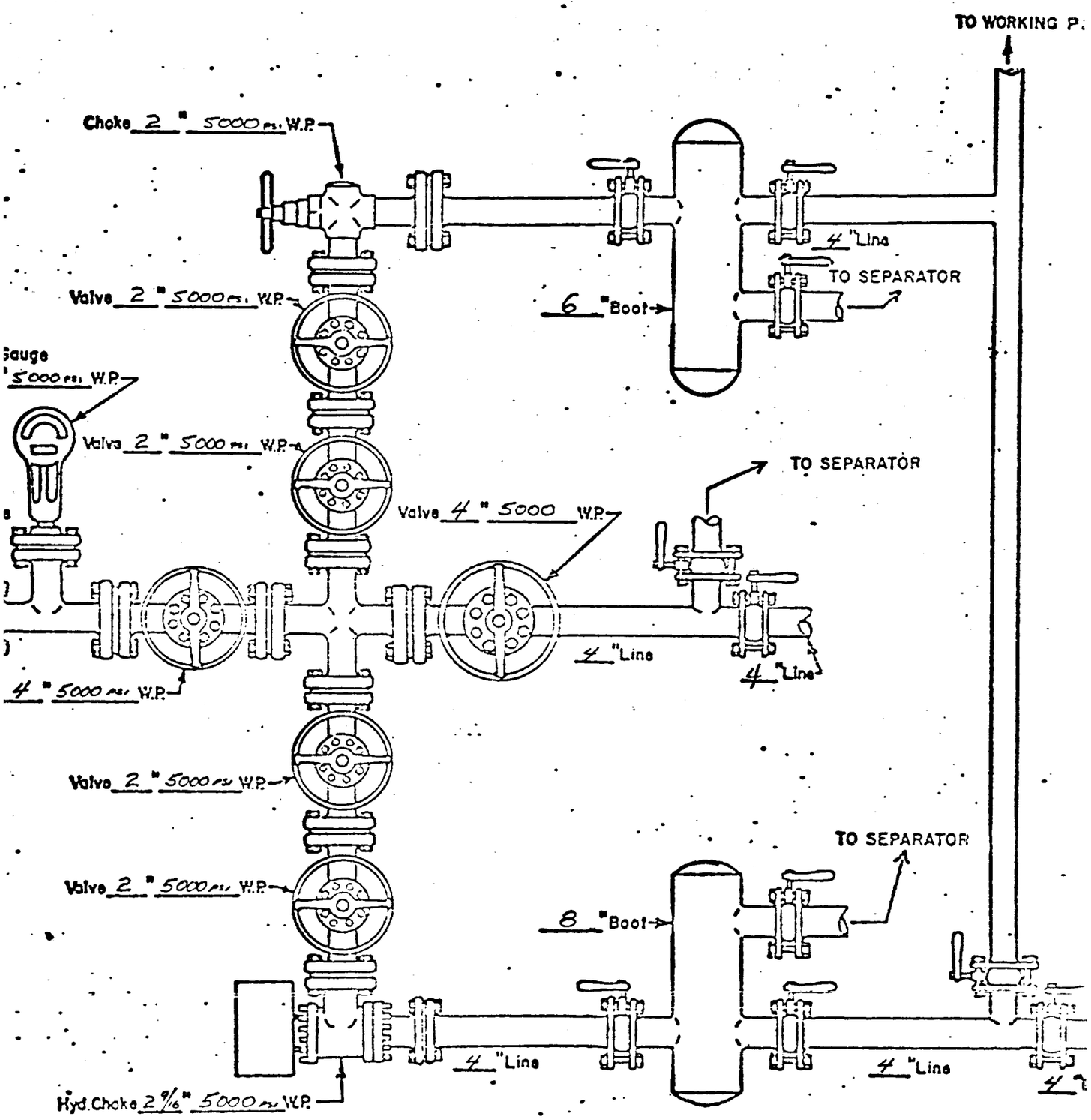
BOP is To be Tested to 5000 Psi when installed, Worked every trip, & tested to 5000 Psi every 30 days.

UNION OIL COMPANY OF CALIFORNIA

EXHIBIT B-2

ELL NAME: Luzom Federal No. 1

OCATION: Lea County, New Mexico



MANIFOLD
5000 #W.P

☒ Manuel
☐ Hydraulic

Valve 4"
2000 psi

USED ON 8 1/2" & 6 1/8" HOLES 5300' — TD.

Test to 5000psi when installed + every 30 days

FORM CR-13
1/72

CASING AND TUBING DESIGN

LL Luzon No. 1 FIELD Wildcat

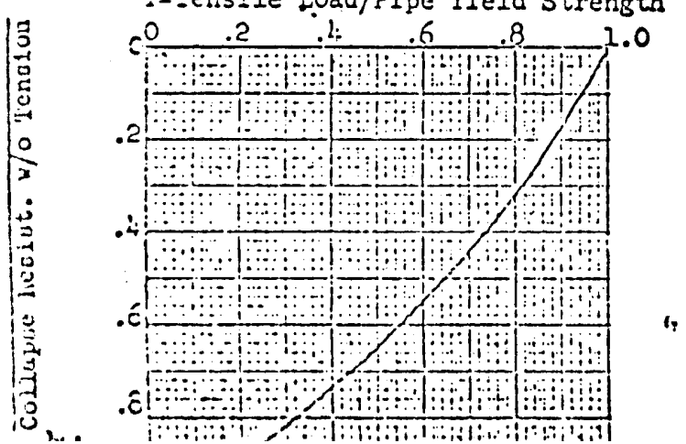
SING STRING Production (Liner) COUNTY Lea STATE New Mexico DATE 5-11-76 DESIGN BY MTP

SING SIZE 4½" HOLE SIZE 6⅛" MUD WT. I 13.0 #/g. HYD GR. I .676 psi/ft. MUD WT. II 10.0 #/g. HYD. GR. II .52 psi/ft. M.S.P. 10000 psi.

INTERVAL ttom	Top	LENGTH	Wt.	DESCRIPTION Grade	Thread	WEIGHT W/ BF W/O BF X lbs	TENSION -top of section lbs	MINIMUM STRENGTH TENSION 1000 lbs	TDF	COLLAPSE PRESS. @ bottom psi	COLLAPSE RESIST. tension psi	CDF	BURST PRESSURE psi	INTERNAL MINIMUM YIELD psi	BDF	PRICE PER FT.	COST
4½"	10900	3900	13.5#	S00-95	SFJ-P	52700	52700	232	4.40	10000	10980	1.1	10000	10710	1.07	7.50	[illegible]

All Csg to be new

Y=Tensile Load/Pipe Yield Strength



Formulae:

Collapse resistance in tension =
X (Collapse pressure rating)

Burst Pressure =
MSP + Depth (Hyd. Gr. II —.5)

BF (Bouyancy Factor) =
1.00 — (0.0153 X Mud Wt. I)

Calculations:

Total Cost ____

TO PURCHASING DEPT.

DATE ____

FORM CR-15
1/72

CASING AND TUBING DESIGN

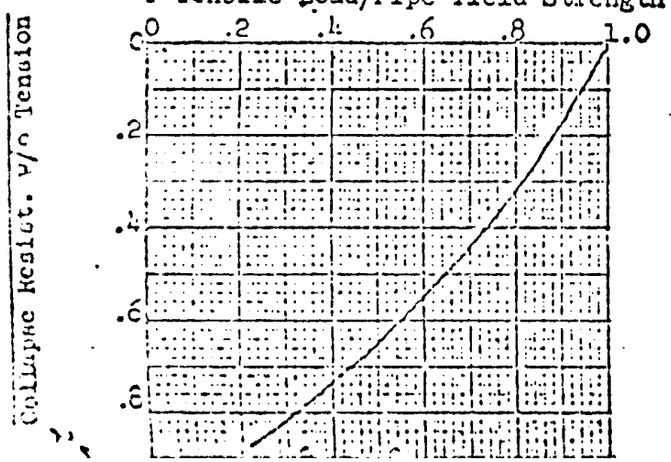
LL Luzon No 1 FIELD Wildcat

SING STRING 2nd Intermediate COUNTY Lea STATE New Mexico DATE 5-11-76 DESIGN BY MTD

SING SIZE 7" HOLE SIZE 8½" MUD WT. I 9.0 #/g. HYD GR. I .468 psi/ft. MUD WT. II 13.0 #/g. HYD. GR. II .676 psi/ft. M.S.P. 4500 psi.

INTERVAL Bottom	Top	LENGTH	DESCRIPTION Wt.	Grade	Thread	WEIGHT W/ BF W/O BF lbs	TENSION -top of section lbs	MINIMUM STRENGTH TENSION 1000 lbs	TDF	COLLAPSE PRESS. @ bottom psi	COLLAPSE RESIST. tension psi	CDF	BURST PRESSURE psi	INTERNAL MINIMUM YIELD psi	BDF	PRICE PER FT.	COST
12	5900	5400	26#	N-80	LT&C	140400	140400	519	3.7	5240	5410	1.03	6470	7240	1.12	9.80	52[illegible]
											x=.244 y=.898 3830						
3002	1500	4300	23#	N-80	LT&C	98900	239300	442	1.85	2720	3440	1.26	5520	6340	1.15	8.80	379[illegible]
											x=.396 y=.821 5410						
5002	0	1500	26#	N-80	LT&C	39000	278300	519	1.96	700	4440	6.3	4760	7240	1.52	9.80	1470
							All Csg to be New										

Y=Tensile Load/Pipe Yield Strength



Formulae:

Collapse resistance in tension = X (Collapse pressure rating)

Burst Pressure = MSP + Depth (Hyd. Gr. II .176 —.5)

BF (Bouyancy Factor) = 1.00 — (0.0153 X Mud Wt. I)

Calculations:

Total Cost $ 16552

TO PURCHASING DEPT.

DATE _____

FORM CR-13
1/72

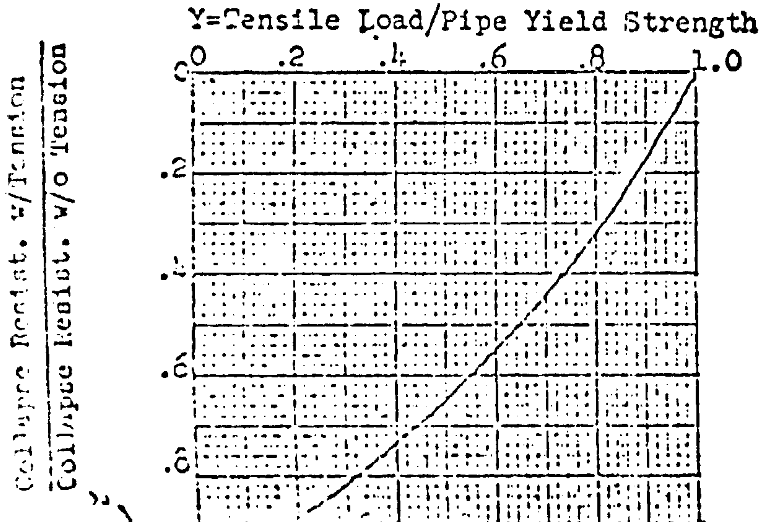
CASING AND TUBING DESIGN

WELL Luzon No. 1 FIELD Wildcat

CASING STRING 1st Intermediate COUNTY Lea STATE New Mexico DATE 5-11-76 DESIGN BY MTD

CASING SIZE 9 5/8" HOLE SIZE 12¼" MUD WT. I 10.0 #/g. HYD GR. I .52 psi/ft. MUD WT. II 9.0 #/g. HYD. GR. II .468 psi/ft. M.S.P. 3000 psi.

INTERVAL Bottom	Top	LENGTH	DESCRIPTION Wt.	Grade	Thread	WEIGHT W/ BF W/O BF ✓ lbs	TENSION -top of section lbs	MINIMUM STRENGTH TENSION 1000 lbs	TDF	COLLAPSE PRESS. @ bottom psi	COLLAPSE RESIST. tension psi	CDF	BURST PRESSURE psi	INTERNAL MINIMUM YIELD psi	BDF	PRICE PER FT.	COS[T]
[illegible]	4500	800	40#	N-80	LT&C	32000	32000	737	23	2760	3000	1.12	3000	5750	1.92	15.10	[illegible]
4500	3500	1000	40#	K-55	ST&C	40000	72000	486	6.75	2340	X=.05 Y=.986 2570 2530	1.08	3000	3950	1.32	11.90	11[illegible]
3500	0	3500	36#	K-55	ST&C	126000	198000	423	2.14	1820	X=.128 Y=.959 2020 1940	1.07	3000	3520	1.17	10.70	37[illegible]
								All	Csg	to be	new						



Formulae:

Collapse resistance in tension = X (Collapse pressure rating)

Burst Pressure = MSP + Depth (Hyd. Gr. II — .5)

BF (Bouyancy Factor) = 1.00 — (0.0153 X Mud Wt. I)

Calculations:

TO PURCHASING DEPT.

DATE ____

Total Cost 6.1[illegible]

FORM CR-13
1/72

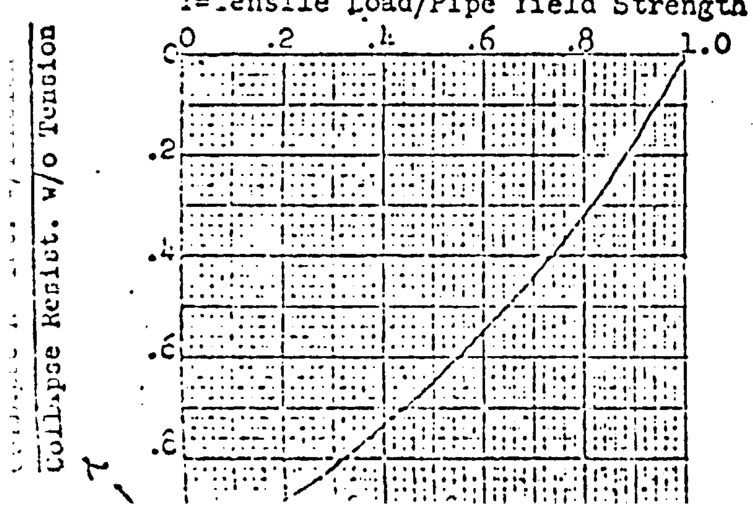
CASING AND TUBING DESIGN

WELL Luzon No 1 FIELD Wildcat

CASING STRING Surface COUNTY Lea STATE New Mexico DATE 5-11-76 DESIGN BY MTD

CASING SIZE 13 3/8" HOLE SIZE 17½" MUD WT. I 9.5 #/g. HYD GR. I .495 psi/ft. MUD WT. II 10.0 #/g. HYD. GR. II .52 psi/ft. M.S.P. 500 psi.

INTERVAL Bottom	INTERVAL Top	LENGTH	DESCRIPTION Wt.	DESCRIPTION Grade	DESCRIPTION Thread	WEIGHT W/ BF ___ W/O BF ✓ lbs	TENSION -top of section lbs	MINIMUM STRENGTH TENSION 1000 lbs	TDF	COLLAPSE PRESS. @ bottom psi	COLLAPSE RESIST. tension psi	CDF	BURST PRESSURE psi	INTERNAL MINIMUM YIELD psi	BDF	PRICE PER FT.	COST
5[illegible]	0	500	48#	H-40	ST&C	24000	24000	322	13.4	250	770	3.1	510	1730	3.4	[illegible] 14.9[illegible]	[illegible]
								All New Csg									



Formulae:

Collapse resistance in tension =
X (Collapse pressure rating)

Burst Pressure =
MSP + Depth (Hyd. Gr. II — .5)   .02 x 500 = 10

BF (Bouyancy Factor) =
1.00 — (0.0153 X Mud Wt. I)

Calculations:

Total Cost 74[illegible]

TO PURCHASING DEPT.

DATE ________

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

UNION OIL COMPANY OF CALIFORNIA

LUZON FEDERAL WELL NO. 1

660' FNL & 1980' FEL, Sec. 13, T-24-S, R-33-E

Lea County, New Mexico

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, the magnitude of necessary surface distrubance involved and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS:

   A. Exhibit "A" is a topographic map of southeastern Lea County, New Mexico, showing the location of proposed well as staked 4 miles north of Jal, New Mexico on highway No. 18, west 2 miles on paved road, 1 mile on county maintained caliche road, 2¼ miles west on existing oil field road, 2 miles west and 1 mile north on private ranch road, ½ mile west on existing oil field road, then 660 feet south on new road to proposed well site.

   B. Exhibit "B" is a map showing all existing roads within a 3 mile radius of the well site and the planned access road. The well will be drilled within 660 feet of an existing road.

   C. All existing oil field caliche roads and private ranch roads will be repaired as necessary. Repairs will consist of replacing the eroded caliche surface with a new caliche surface 6 inches deep and 12 feet wide, watered and compacted.

2. PLANNED ACCESS ROADS:

   A. Length and Width: The new road required will be 12 feet wide and approximately 660 feet long.

   B. Surfacing Material: Six inches of caliche, watered, compacted and graded.

   C. Maximum Grade: 3 Percent.

   D. Turnouts: None required.

   E. Drainage Design: New road will have a drop of 3-4 inches from center line on each side.

2. PLANNED ACCESS ROADS - Cont'd

F. Culverts: None required.

G. Cuts and Fills: None required.

H. Cattleguards: One cattleguard will be installed in fence approximately one mile south of well site.

3. LOCATION OF EXISTING WELLS:

A. There are no wells within a two mile radius of proposed well site.

B. There is an abandoned drill hole ½ mile southeast and an abandoned drill hole 1 mile northwest of drill site.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. Location of the proposed tank battery and flow line from well No. 1 are shown on Exhibit "D". There are no water disposal lines or injection lines.

B. If the well is productive, the tank battery and flow line will be located on the well pad and no additional surface disturbance will occur.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. Water for drilling will be purchased from Jal Public Library Fund Trustees and transported by pipeline to well site. The pipeline will be layed along a road as shown on Exhibit "B" together with water well location. The water line will not cause additional surface disturbance and will be removed after drilling is completed.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche for surfacing the road and the well pad will be obtained from an existing pit located in NE/4 of Section 14; 3/4 miles west of the proposed location as shown on Exhibit "B".

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be disposed of in the drilling pits.

B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.

C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

7. METHODS OF HANDLING WASTE DISPOSAL - Cont'd

D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

E. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of trash pit is shown on Exhibit "C".

F. All trash and debris will be buried or removed from the well site within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required.

9. WELLSITE LAYOUT:

A. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, reserve pit, trash pit and location of major rig components.

B. Only minor leveling of the well site will be required. No significant cuts and fills will be necessary.

C. Part of the reserve pit will be plastic lined.

D. The pad and pit area has been 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. Pits will be filled and 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. After abandonment, any special rehabilitation and/or revegetation requirements of the surface management agency will be complied with and accomplished as expeditiously as possible. All pits should be filled and leveled within 90 days after abandonment.

Note: See attached letter.

11. OTHER INFORMATION:

A. Topography: Land surface is level to gently rolling.

B. Soil: Soil is a sandy soil underlain by caliche.

11. OTHER INFORMATION - Cont'd

C. Flora and Fauna: The vegetative cover consists of mesquite, sandsage, and perenial native range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove, quail, and an occasional antelope.

D. Ponds and Streams: There are no rivers, streams, lakes or ponds in the area.

E. Residence and Other Structures: The nearest occupied dwelling is a ranch house 3½ miles northeast of the well site. No water in area.

F. Archeological, Historical and Cultural Sites: None observed in the area.

G. Land Use: Grazing and hunting in season.

H. Surface Ownership: Well site and all roads on surface are owned by Jal Public Library Fund Trustees. All roads and drill site easements have been obtained.

Note: See attached letter.

12. OPERATOR'S REPRESENTATIVE:

The field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

Bobby Bryan
317 S.W. 4th St.
Andrews, Texas 79714
Home Phone: 915-523-5383

J. R. Hughes
P. O. Box 671
Midland, Texas 79702
Home Phone: 915-697-1739
Office Phone: 915-682-9731

13. CERTIFICATION:

I hereby certify that I, or persons under by direct supervision, have inspected the proposed drillsite 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 Union Oil Company of California and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

8-18-77
Date

Jimmie Hughes
Name and Title

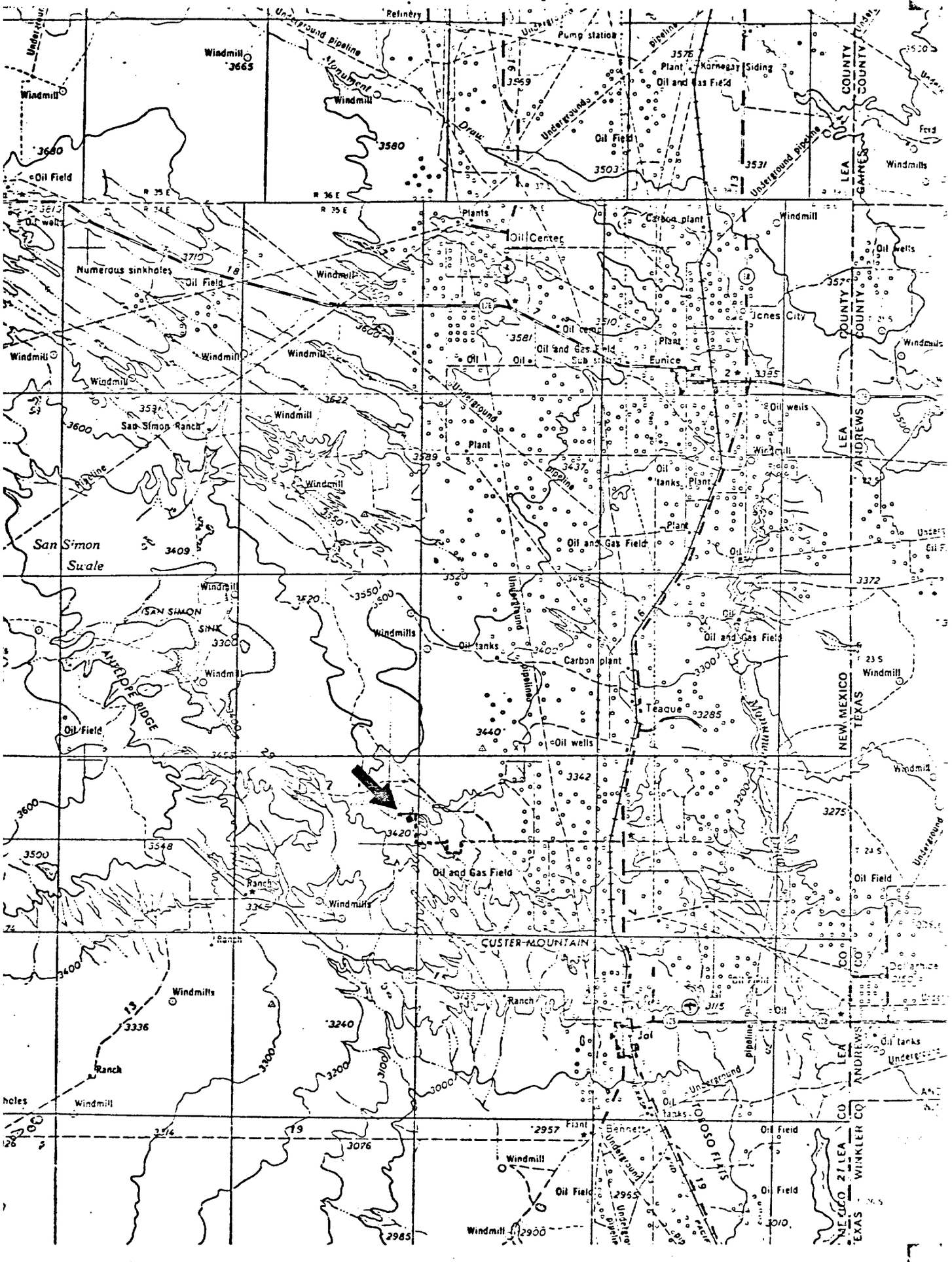
EXHIBIT A

UNION OIL COMPANY OF CALIFORNIA

LUZON FEDERAL WELL NO #1

660' FNL & 1980' FEL, SEC. 13, T-24-S, R-33-E

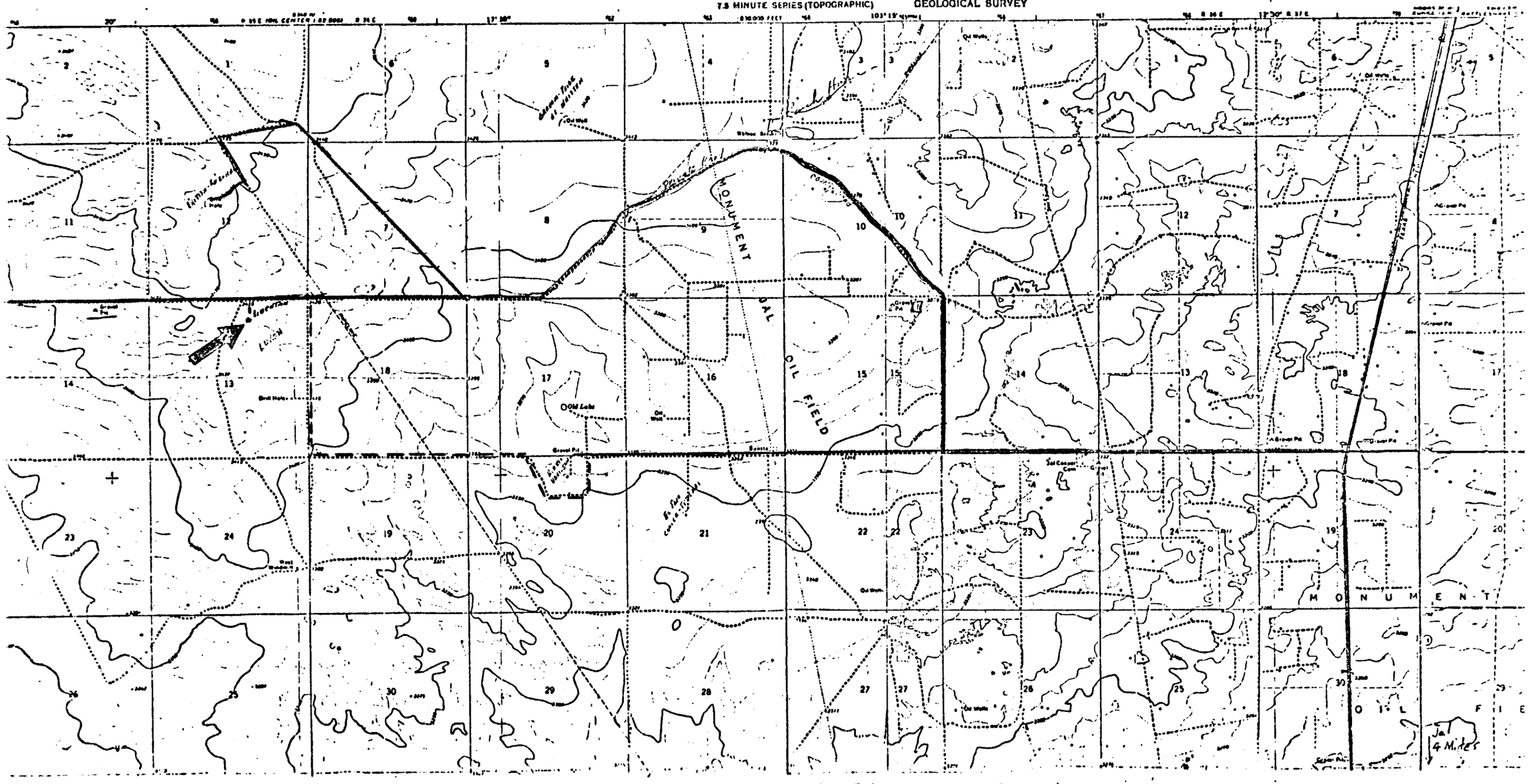
LEA COUNTY, NEW MEXICO



PUBLIC ROADS

EXISTING OIL FIELD ROADS

PRIVATE RANCH ROAD



State Highway 18, Jal-Eunice, Cemetery.

Caliche Road, County Maintained.

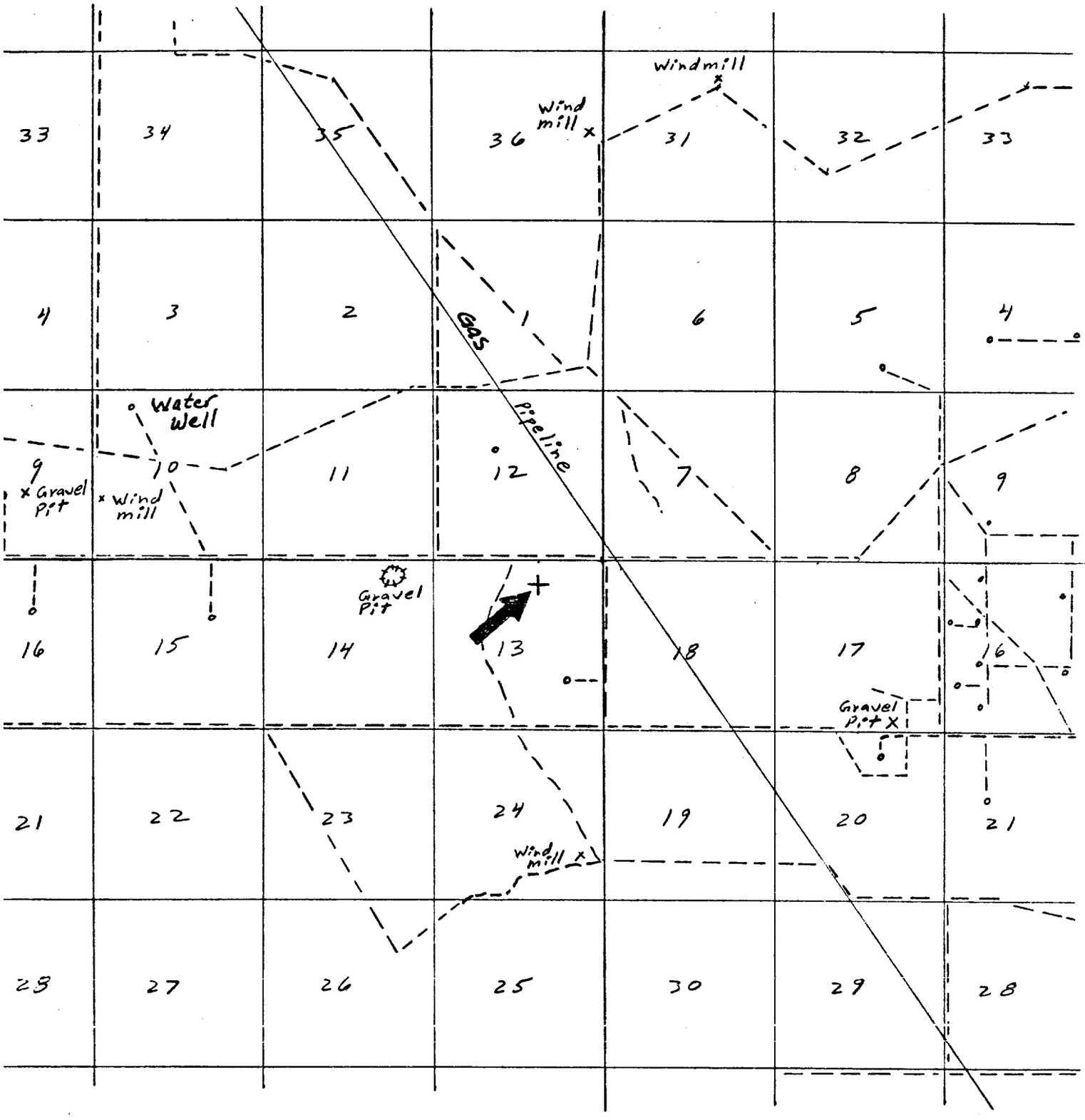
" Private Ranch Road.

Existing Oilfield Road

EXHIBIT "B"

LUZON FEDERAL WELL NO. 1

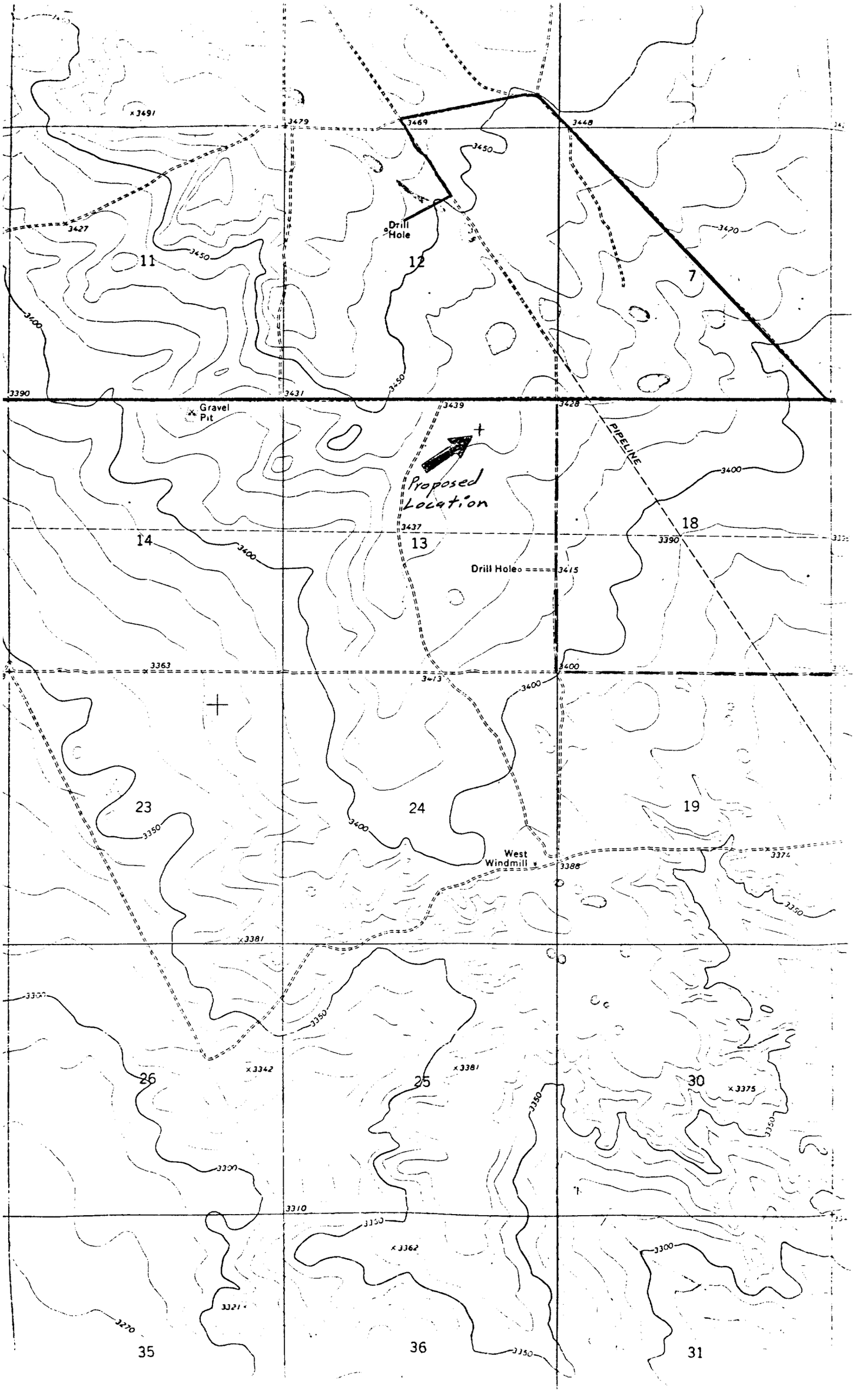
Location: 660' FNL + 1980' FEL of Sec. 13, T-24S R-35E, Lea County, New Mexico.



Scale: 1" = 406'

Water Well Located in NW/4 of Sec 10

all roads are caliche.


Drill Hole
Gravel Pit
Proposed Location
PIPELINE
Drill Hole
West Windmill
11
12
7
14
13
18
23
24
19
26
25
30
35
36
31

Union Oil Company of California

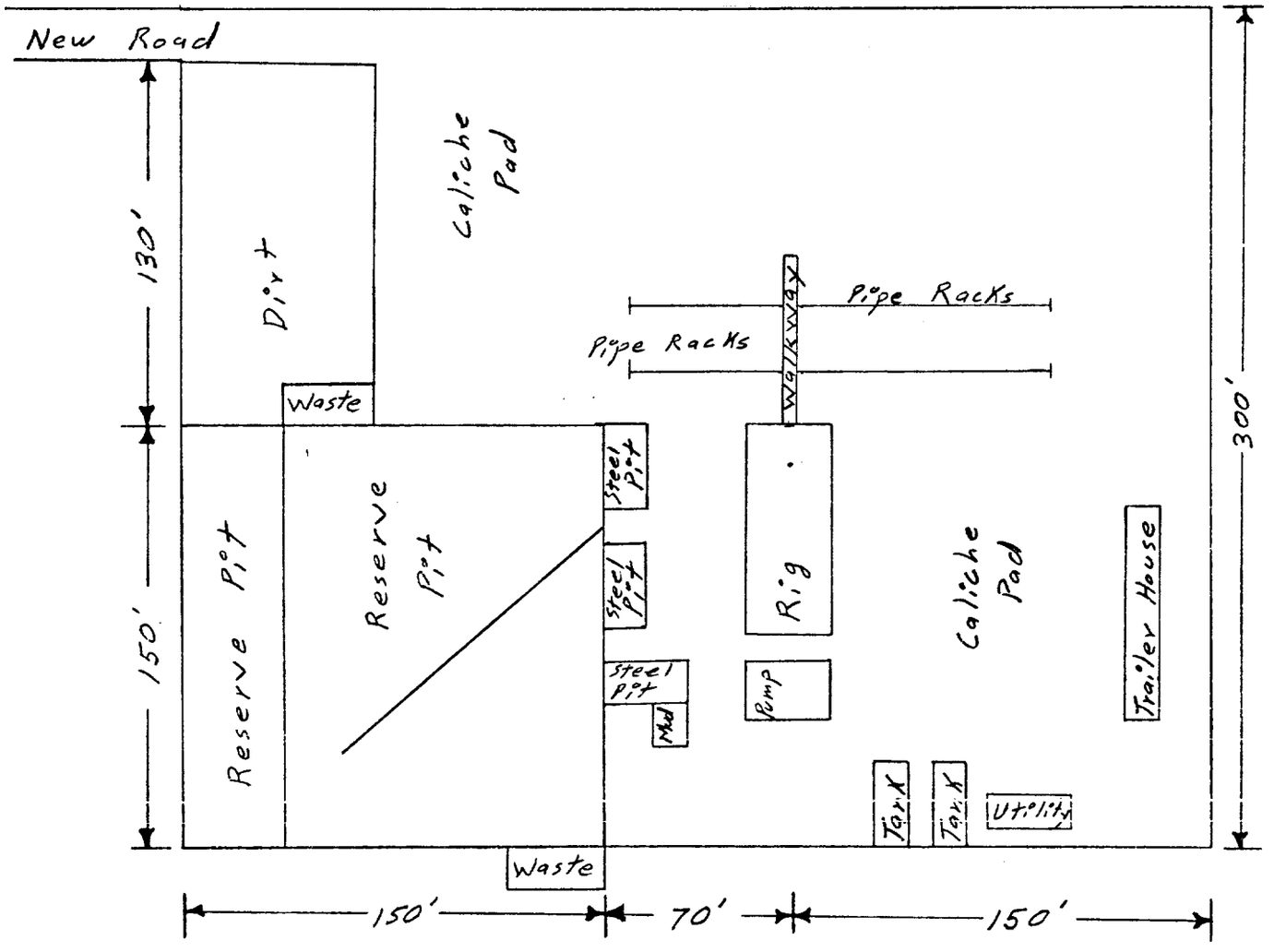
LUZON FEDERAL WELL NO. 1.

Location: 660' FNL & 1980' FEL of Section 13, T-24S, R-35E, Lea County, New Mexico.

EXHIBIT C

Scale: 1" = 60'

Low, rolling sand hills, covered with Shinnery Oak and native grass.



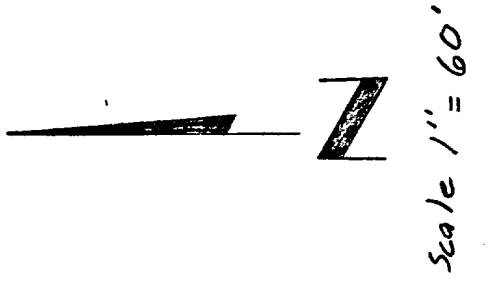
Low, rolling sand hills, covered with shinnery oak and native grass.

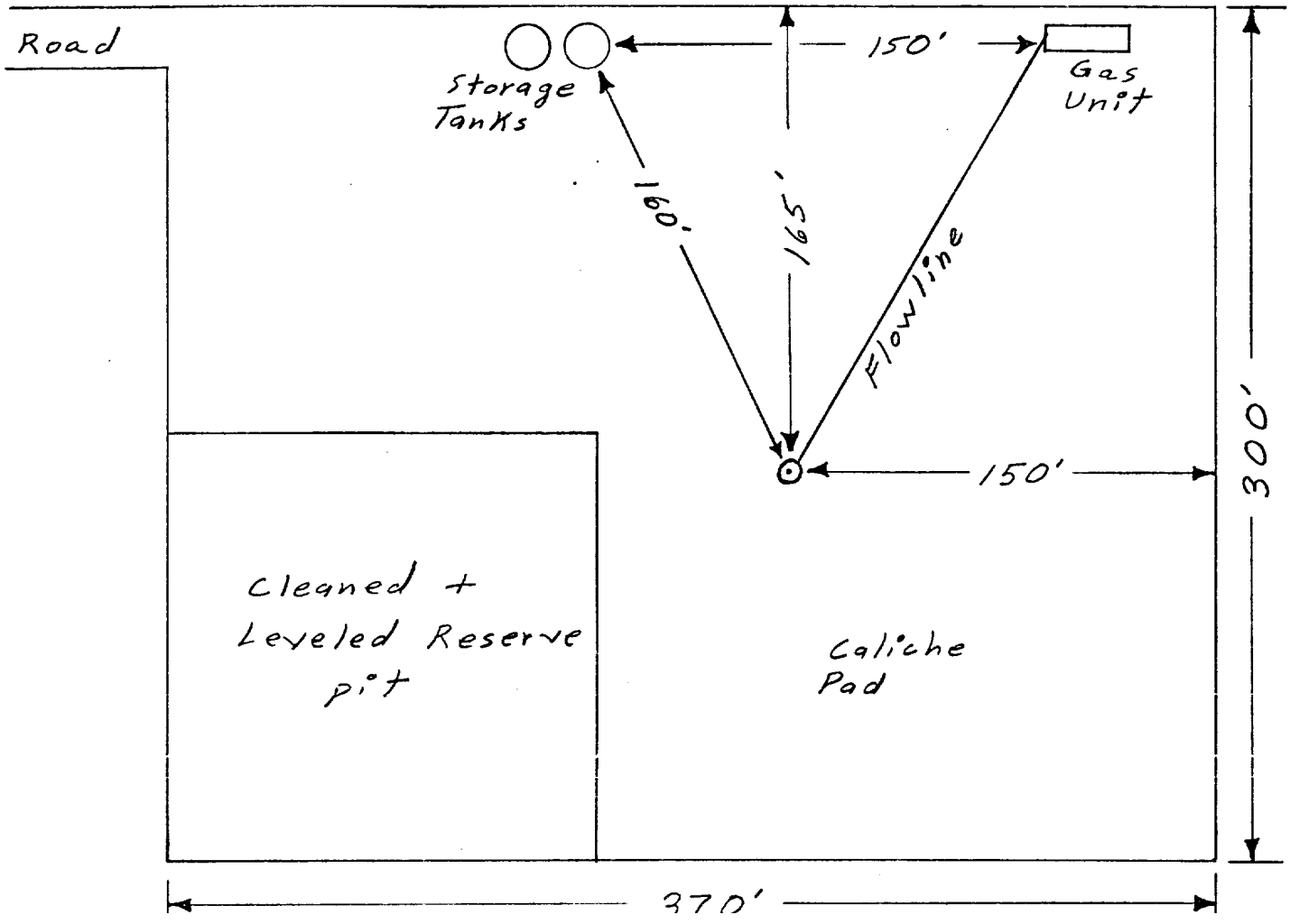
Union Oil Company of California

LUZON FEDERAL WELL NO. 1.

Location: 660' FNL + 1980' FEL of Section 13, T-24S, R-35E, Lea County, New Mexico.

EXHIBIT D





AUXILIARY EQUIPMENT:

A sub with full opening valve on the rig floor at all times.

Mud pit level controls hooked up at 10,800 ft.

No hydrogen sulfide gas is expected.

This well is expected to spud approximately October 10, 1977 and last 110 days.

U. S. Geological Survey

HOBBS DISTRICT

Union Oil Co. of California
No. 1 Luzon Federal
NW¼NE¼ sec. 13-24S-35E
Lea County, N. M.

Above Data Required on Well Sign

CONDITIONS OF APPROVAL

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Drilling Operations on Federal Oil and Gas Leases, dated January 1, 1977.

2. Notify this office (telephone (505) 393-3612) when the well is to be spudded and in sufficient time for a representative to witness all cementing operations. Attached are names and telephone numbers of Geological Survey and Bureau of Land Management personnel who are available for consultation during construction, drilling, completion, and rehabilitation activities.

3. Immediate notice is required of all blowouts, fires, spills, and accidents involving life-threatening injuries or loss of life.

4. Secure prior approval of the District Engineer for variance from the approved drilling program and before commencing plugging operations, plug-back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely.

5. Blowout prevention equipment is to be installed, tested, and in working order before drilling below the surface casing and shall be maintained ready for use until drilling operations are completed.

6. Operations must be in complaince with the provisions of the landowner agreement concerning surface disturbance and surface restoration.

7. Casing protectors will be run on drill pipe while drilling through the 9-5/8" casing. Protectors will be of sufficient number and of sufficient outside diameter to protect the casing.

8. After setting the 7" casing string and before drilling into the Pennsylvanian formation, the blowout preventers and related control equipment shall be pressure tested to rated working pressures by an indepencent service company. Any equipment failing to test satisfactorily shall be repaired or replaced. This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.

   Mud system monitoring equipment, with derrick floow indicators and visual and audio alarms, shall be installed and operating before drilling into the Pennsylvanian formation and used until production casing is run and cemented. Monitoring equipment shall consist of the following:

   (1) A recording pit level indicator to determine pit volume gains and losses.

   (2) A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.

   (3) A flow sensor on the flow-line to warn of any abnormal mud returns from the well.