

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM 38458		
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME		
2. NAME OF OPERATOR H. L. BROWN, JR.			7. UNIT AGREEMENT NAME		
3. ADDRESS OF OPERATOR P. O. BOX 2237, MIDLAND, TEXAS 79702			8. FARM OR LEASE NAME FEDERAL 8		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 2159' FNL AND 680' FWL OF SECTION 8 At proposed prod. zone			9. WELL NO. 2		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 5 MILES NORTH OF CARLSBAD, NEW MEXICO			10. FIELD AND POOL, OR WILDCAT WILDCAT		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any) 481'			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SEC. 8, T.21 S., R.27 E.		
16. NO. OF ACRES IN LEASE 160			12. COUNTY OR PARISH EDDY		
17. NO. OF ACRES ASSIGNED TO THIS WELL 40			13. STATE NEW MEXICO		
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 180'			20. ROTARY OR CABLE TOOLS ROTARY		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3220.6 GR			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"	48# H-40	1000	900 sacks - CIRCULATE
12-1/4"	**8-5/8"	24#J-55 28#H-40	2800	350 sacks
7-7/8"	4-1/2"	9.5# H-40	3900	300 sacks

** Above 8-5/8" casing string is a contingency string and will not be run unless there is a severe lost circulation problem in the Capitan Reef section.

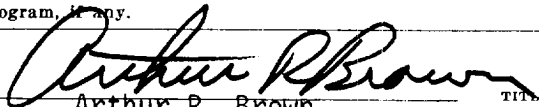
AFTER SETTING 4-1/2" CASING, PAY ZONE WILL BE PERFORATED AND STIMULATED AS REQUIRED.

SEE ATTACHED FOR: SUPPLEMENTAL DRILLING DATA
BOP SKETCH
SURFACE USE AND OPERATIONS PLAN

RECEIVED

JUL 18 1980

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 depth. If blowout preventer program, if any.

24.  Agent for
SIGNED: Arthur R. Brown TITLE: H. L. BROWN, JR. DATE: July 16, 1980

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

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

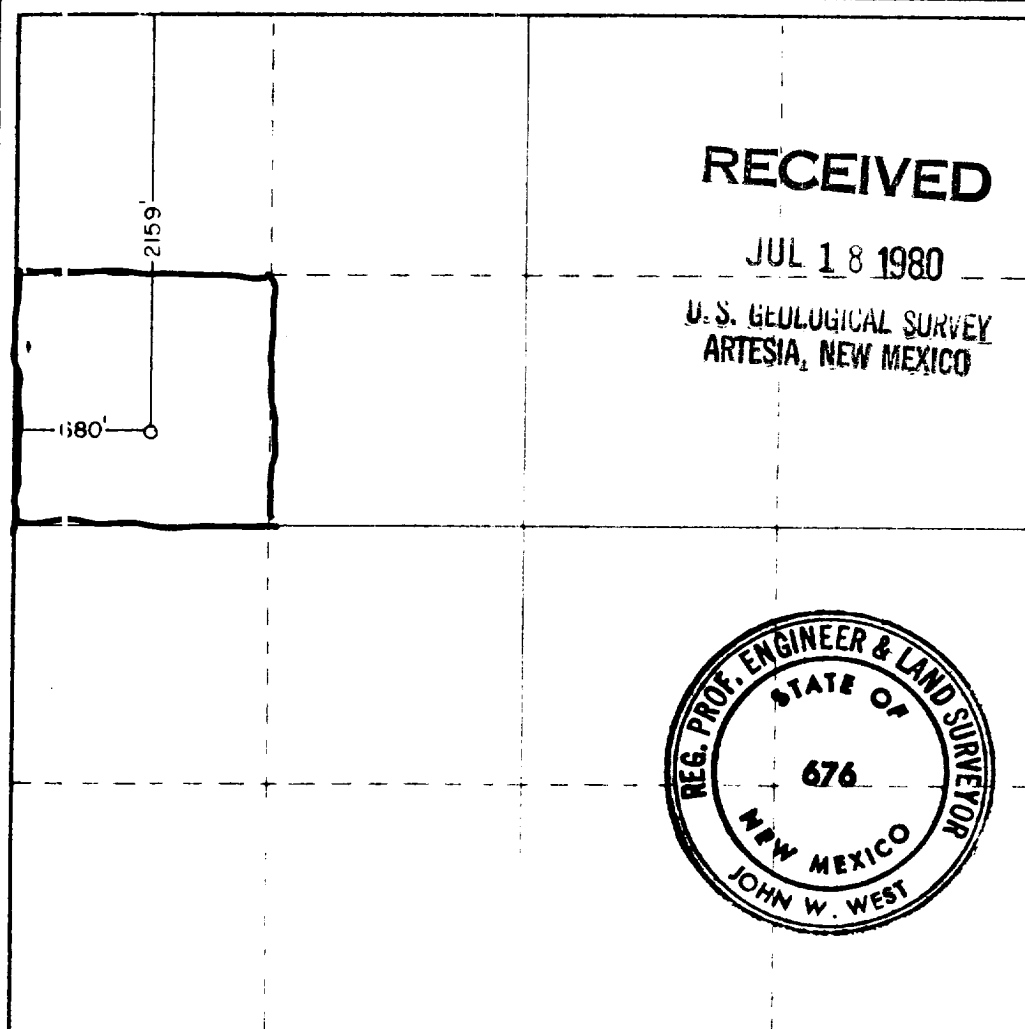
Operator H. L. Brown, Jr.		Lease Federal 8		Well No. 2
Grid Letter E	Section 8	Township 21 South	Range 27 East	County Eddy
Well Footage Location of Wells: 2159 feet from the North line and 680 feet from the West line				
Ground Level Elev. 3220.6	Producing Formation DELAWARE	Pool WILDCAT	Dedicated Acreage 40	

- 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.

Arthur R. Brown
Arthur R. Brown

Position

Agent for

Company

H. L. BROWN, JR.

Date

JULY 16, 1980

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

April 24, 1980

Registered Professional Land Surveyor
No. 676

John W. West
John W. West

676



UNITED STATES COPY
United States Department of the Interior

RECEIVED

GEOLOGICAL SURVEY
P. O. Drawer U
Artesia, New Mexico 88210

JUL 28 1980

O. C. D.
ARTESIA, OFFICE
July 25, 1980

H. L. Brown, Jr.
P. O. Box 2237
Midland, Texas 79702

H. L. BROWN, JR.
Fed "8" No. 2
2159 FNL 680 FWL Sec. 8 T.21S R.27E
Eddy County Lease No. NM-38458

Gentlemen:

Above Data Required on Well Sign

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 3,900 feet to test the Delaware formation is hereby approved subject to compliance with the OIL AND GAS OPERATING REGULATIONS (30 CFR 221) and the following conditions:

1. Drilling operations authorized are subject to compliance with the GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL LEASES, dated July 1, 1978.
2. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the SURFACE USE PLAN and this approval including the GENERAL REQUIREMENTS.
3. All access roads will be limited to a 12 foot wide driving surface, excluding turnarounds. Surface disturbance associated with road construction will be limited to 20 feet in width.
4. Submit a Daily Report of Operations from spud date until the Well Completion Report (form 9-330) is filed. The progress report should be not less than 8" x 5" in size and each page should identify the well.
5. All permanent above-ground structures and equipment shall be painted in accordance with the attached Painting Requirements. The color used should simulate Sandstone Brown (Federal Standard No. 595A, color 20318 or 30318).
6. Notify the Survey by telephone 24 hours prior to spudding well.
7. Cement behind the 13-3/8" and 8-5/8" casing must be circulated. Note: 8-5/8" casing will be used.
8. Notify Survey in sufficient time to witness the cementing of the 8-5/8" casing.

9. Please have anyone contacting the Survey in regard to this well to identify the well with all of the information required above for the well sign.

Sincerely yours,


GEORGE H. STEWART

George H. Stewart
Acting District Engineer

SUPPLEMENTAL DRILLING DATA

H. L. BROWN, JR.
WELL NO. 2 FEDERAL 8

1. SURFACE FORMATION: Rustler.
2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Yates	680
Reef	970
Delaware	2750

3. ANTICIPATED POSSIBLE WATER AND HYDROCARBON BEARING ZONES:

Fresh Water	Capitan Reef
Oil	Delaware

4. PROPOSED CASING AND CEMENTING PROGRAM:

CASING SIZE	SETTING DEPTH		WEIGHT	GRADE	JOINT
	FROM	TO			
13-3/8"	0	1000	48#	H-40	STC
**8-5/8"	0	2500	24#	J-55	STC
"	2500	2800	28#	H-40	STC
4-1/2"	0	3900	9.5#	H-40	STC

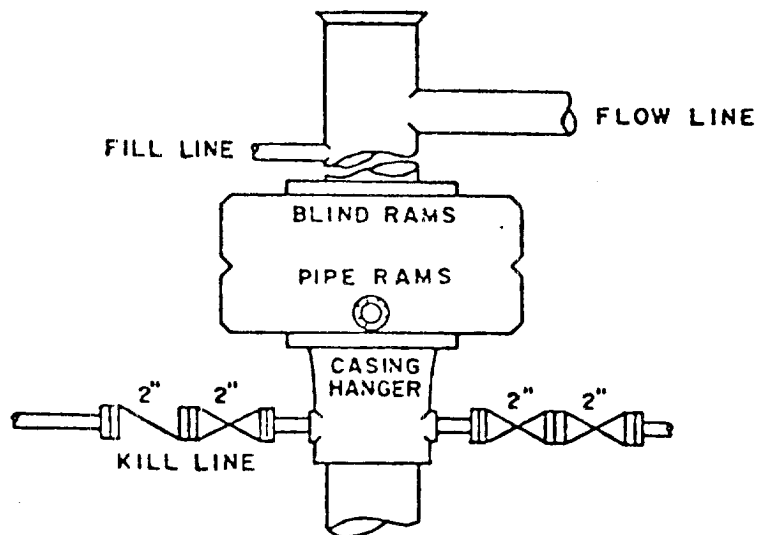
**The above 8-5/8" casing string is a contingency string and it is planned that this casing string will not be run unless there is a severe lost circulation problem in the Capitan Reef section.

Cement for 13-3/8" surface casing will be 450 sacks of "Light" cement plus 450 sacks of Class "C" with 2 percent CaCl. Cement to circulate.

If 8-5/8" contingency string is run, it will be cemented with 200 sacks of "Light" plus 150 sacks of Class "C" cement.

4-1/2" production casing will be cemented with 100 sacks of "Light" plus 200 sacks of Class "H" cement. Cement to fill to base of reef.

Cement quantities and additives may be varied to best suit hole



BOP STACK

3000 PSI WORKING PRESSURE

SURFACE USE AND OPERATIONS PLAN

FOR

RECEIVED

JUL 18 1980

H. L. BROWN, JR.
WELL NO. 2 FEDERAL 8
2159' FNL & 680' FWL SEC. 8, T. 21 S., R. 10 E.,
EDDY COUNTY, NEW MEXICO

**U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO**

LOCATED: 5 air miles north of Carlsbad, New Mexico.

FEDERAL LEASE NUMBER: NM 38458

RECORD LESSEE: Harvard and LeMay Exploration Company.

LEASE ISSUED: December 1, 1979. Lease is in producing status.

ACRES IN LEASE: 160.

SURFACE OWNERSHIP: Federal.

GRAZING PERMITTEE: J. D. Spears
P. O. Box 1017
Carlsbad, New Mexico 88220

POOL: Wildcat.

POOL RULES: Statewide. 40 acre spacing for oil.

ATTACHMENTS:

- A. General Road Map
- B. Plat Showing Existing Wells and Existing Roads
- C. Drilling Rig Layout
- D. Topo Plat

1. EXISTING ROADS:

- A. Attachment "A" is a portion of a road map showing the location of the proposed well as staked. To go to the well, starting at the intersection of Highways US-285 and US-62-180 in the city of Carlsbad, go north on Canal Street. Cross the river bridge at 1.4 miles and the railroad at 4.4 miles. Continue north past the railroad crossing 1.2 miles to a point where a caliche road goes east. Turn east off the pavement onto the caliche road and go 0.5 mile to arrive at well No. 1 Federal 8. Well No. 2 Federal 8 is 180 feet south of well No. 1.
- B. Attachment "B" is a plat showing existing roads in the vicinity of the proposed well site. Existing roads are color coded.
- C. Any repairs to existing roads do not appear necessary at the present time.

2. PLANNED ACCESS ROAD:

- A. No new road will be required. The proposed well location is on the existing well pad constructed for well No. 1, as shown on Attachment "C", and the existing road will be used for access.

3. LOCATION OF EXISTING WELLS:

- A. Existing wells in the immediate area are shown on Attachment "B".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. Existing production facilities, serving well No. 1 Federal 8 are located on the well pad and are shown on Attachment "C".
- B. If this proposed well is productive, necessary production facilities for it will also be located on the well pad, and no additional surface disturbance will be necessary.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is not contemplated that a water well will be drilled. Water necessary for drilling operations will be purchased and trucked to the well site over existing roads, or will be moved to the site by temporary pipeline layed on the ground alongside existing roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. There is a caliche pit in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T. 21 S., R. 27 E., Eddy County, New Mexico, on State minerals and Federal surface. Caliche for extending the existing pad sufficiently to accommodate the proposed well will be trucked from this pit to the well site over existing roads.

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 the 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.
- 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 the 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. WELL SITE LAYOUT:

- A. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, reserve pits, trash pit and the location of major rig components.
- B. Only minor levelling of the well site will be required. No significant cut and fill will be necessary.
- C. The pad and pit area has been staked and flagged.

12. OPERATOR'S REPRESENTATIVE:


Representative responsible for assuring compliance with the approved Surface Use Plan is:

J. L. McGill
P.O. Box 2237
Midland, Texas 79702
Office Phone: 915-683-5216
Home Phone: 915-697-5910

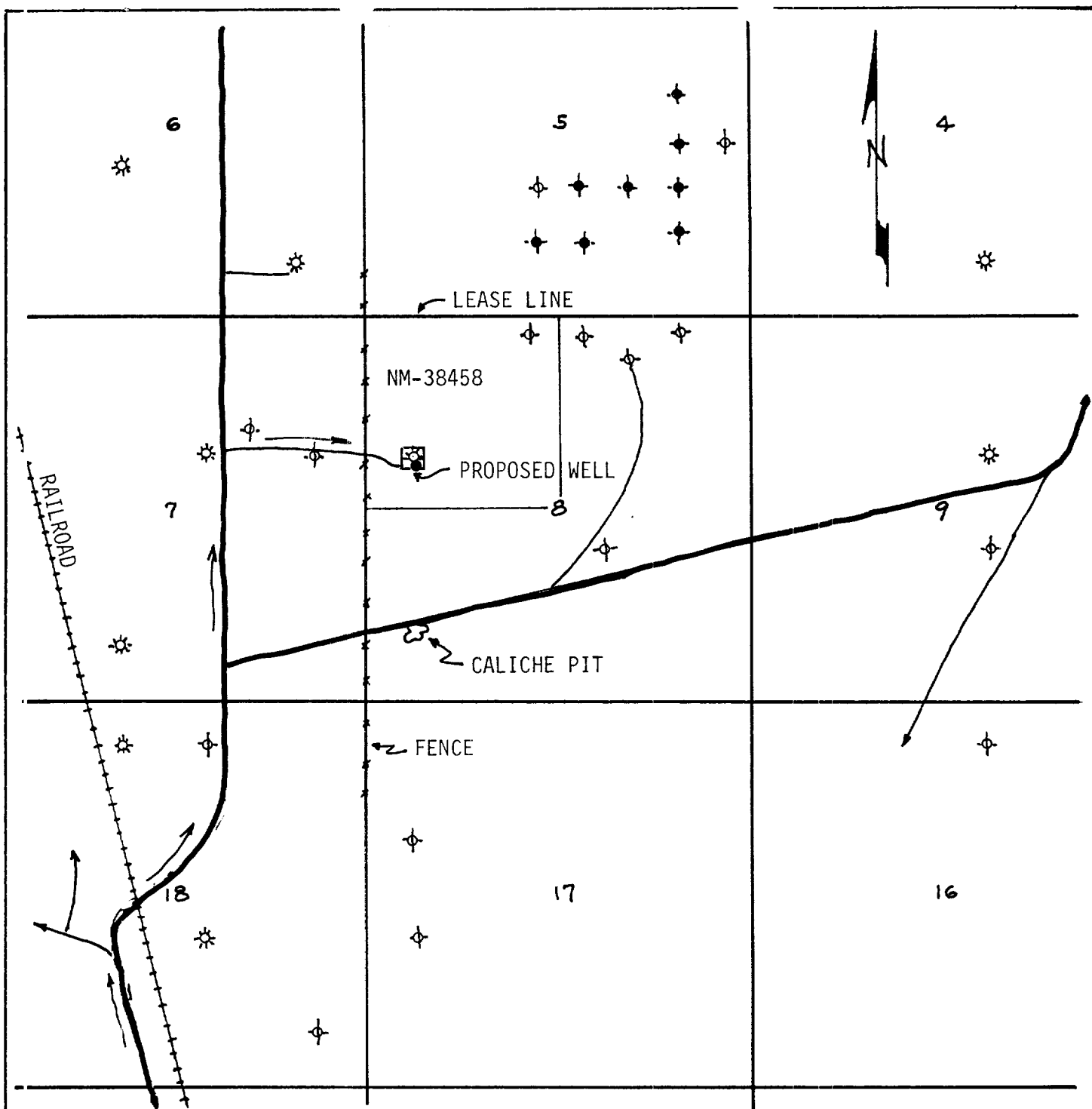
13. CERTIFICATION:

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; that the work associated with the operations proposed herein will be performed by H. L. Brown, Jr. and his contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

July 15, 1980
Date:



Arthur R. Brown, Agent for
H. L. BROWN, JR.

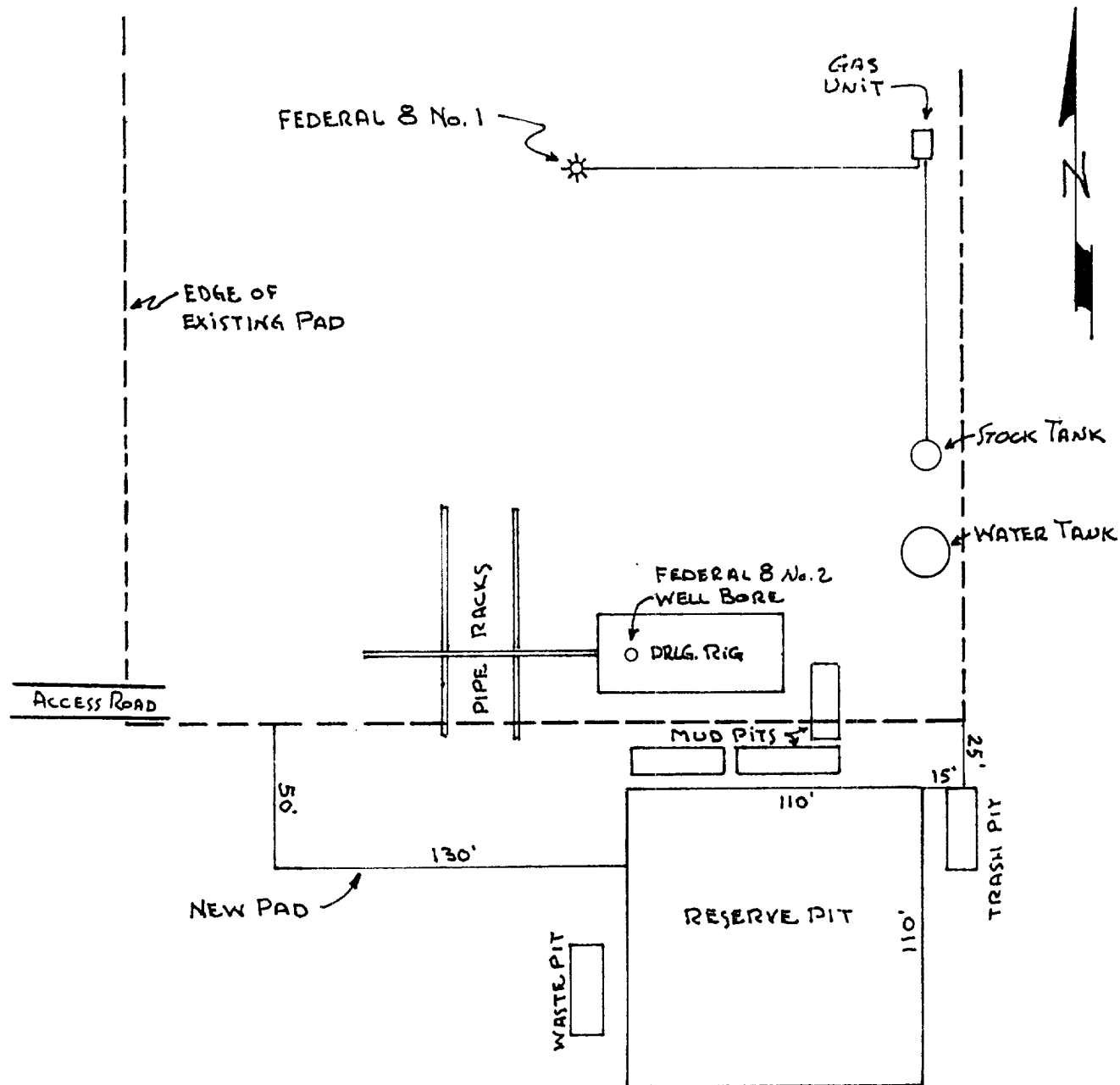


LEGEND

- ☼ Gas Well
- ⊕ Plugged Well
- Proposed Well
- Existing Paved Road
- Existing Caliche Road

ATTACHMENT "B"

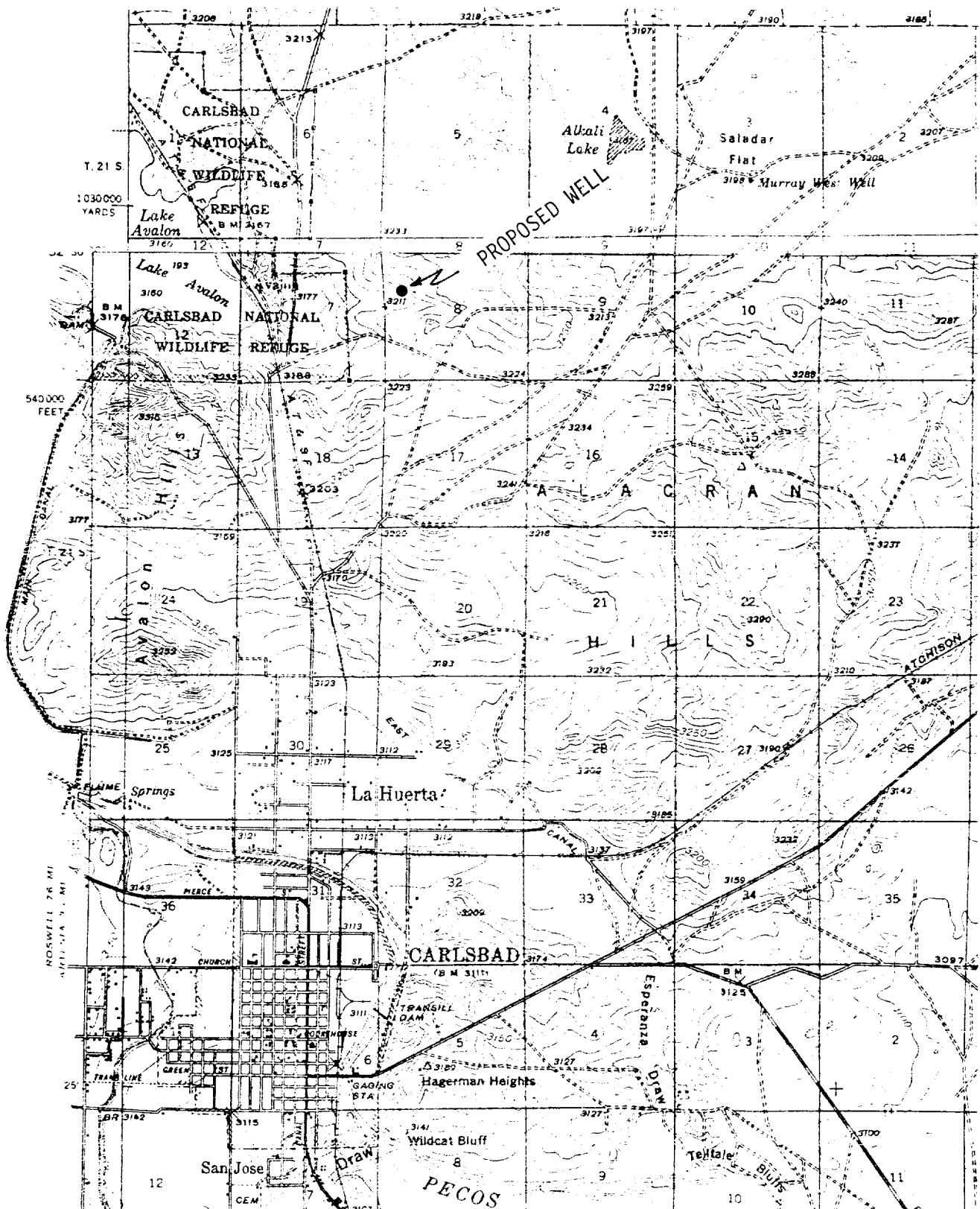
H. L. BROWN, JR.
 WELL NO. 2 FEDERAL 8
 2159' FNL & 680' FWL SEC. 8, T. 21 S., R. 27 E.
 EDDY COUNTY, N.M. SCALE: 1" = 2000'



ATTACHMENT "C"

DRILLING RIG LAYOUT

SCALE: 1" = 60'



ATTACHMENT "D"

SHOWING TOPOGRAPHY IN AREA
OF PROPOSED WELL
CONTOUR INTERVAL: 10' SCALE: 1" = 1 MI.
Roads shown may not be accurate.