

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

Engineering & Production Service, Inc.

3. ADDRESS OF OPERATOR

P. O. Box 190
Farmington, New Mexico

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

At surface

2310' FNL, 2310' FEL

At proposed prod. zone

same

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

15. DISTANCE FROM PROPOSED*

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

2310'

16. NO. OF ACRES IN LEASE

2560

18. DISTANCE FROM PROPOSED LOCATION*

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

6930'

19. PROPOSED DEPTH

2750' Point Lookout

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

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

6675 Gr.

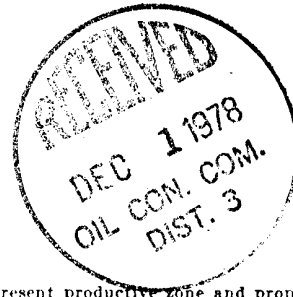
22. APPROX. DATE WORK WILL START*

12-20-1978

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 3/4	8 5/8	20	100	100 SX
7 7/8	4 1/2	9.5	2750	325

(See attachments)



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

Agent

DATE

11-22-1978

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

NOV 30 1978

*See Instructions On Reverse Side

U. S. GEOLOGICAL SURVEY
DENVER, COLO.

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.

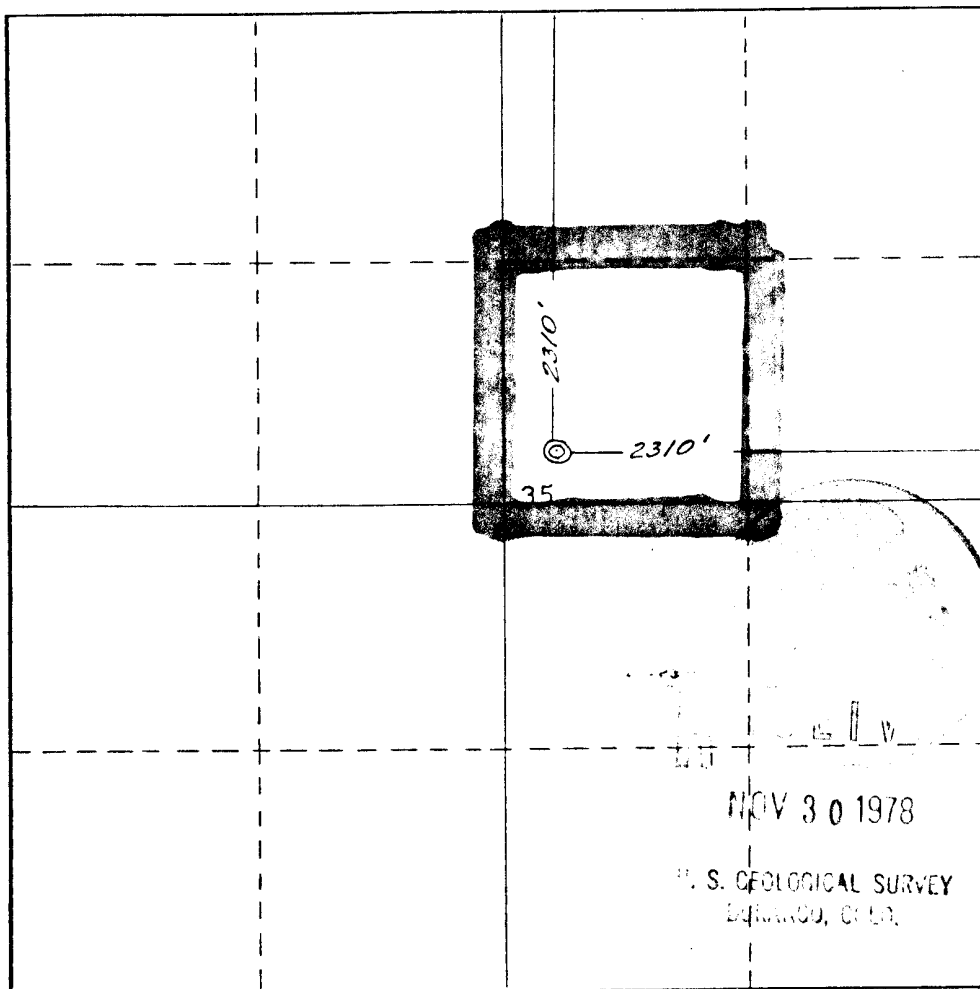
Operator ENGINEERING AND PRODUCTION SERVICES, INC.			Lease STAR LAKE		Well No. 2
Unit Letter H	Section 35	Township 20 NORTH	Range 6 WEST	County McKINLEY	
Actual Footage Location of Well: 2310 feet from the NORTH line and 2310 feet from the EAST line					
Ground Level Elev. 6664.9	Producing Formation Point Lookout		Pool Wildcat	Dedicated Acreage: 40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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.

Original Signed by:
Claude C. Kennedy

Name **Claude C. Kennedy**

Position **Agent**

Company
Engineering & Production Ser.

Date **11-28-1978**

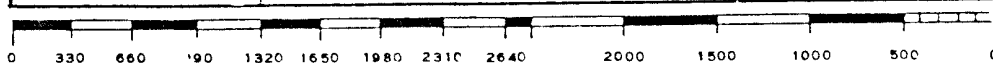
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

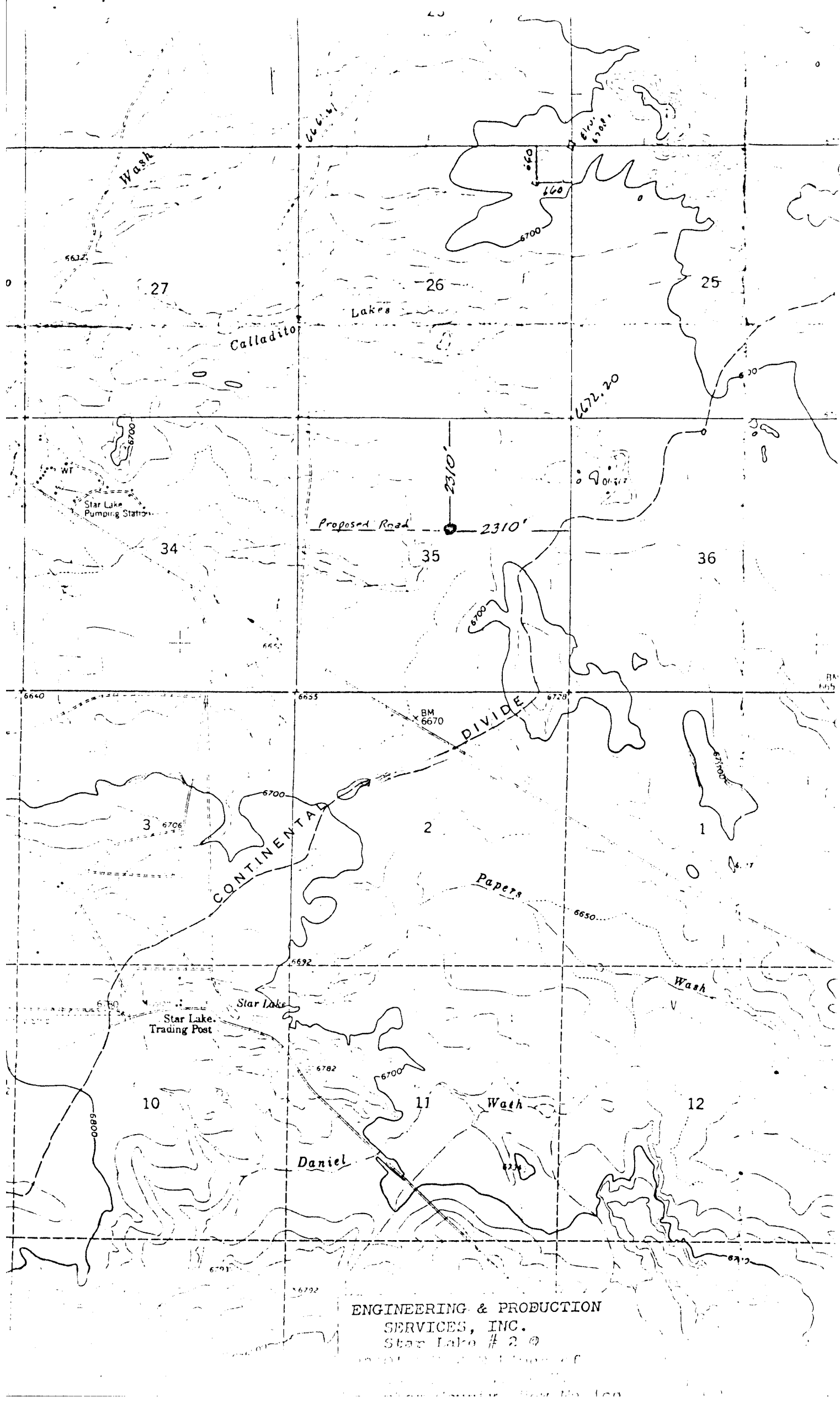
Date Surveyed
22 November 1978

Registered Professional Engineer
and Land Surveyor

James P. Lease
James P. Lease

Certificate No.
1463





ENGINEERING & PRODUCTION
SERVICES, INC.
Star Lake # 2

Engineering & Production Service, Inc.

Formation Information and Drilling Practices

WELL:
STAR LAKE #2

LOCATION
2310' FNL, 2310' FEL
Sec. 35, T20N, R6W
McKinley Co., New Mexico

LEASE NUMBER:

NM-5981

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U. S. GEOLOGICAL SURVEY
DENVER, COLO.

1) Geologic name of surface formation.

Kirtland

2) Estimated tops of important geologic markers.

La Ventata	852
Chacra	1210
Cliff House	1756
Menefee	1818
Point Lookout	2652

3) Estimated depths at which anticipated water, oil gas or other mineral-bearing formations are expected.

2652' - oil & gas

4) Proposed casing program.

Surface: 8 5/8", 20#, K-55, new casing to be set at 100'. Cement will be with 100 sk. Class "B" + 2% gelt 0.5% CaCl₂.

Production: 4½", 10.5#, K-55, New casing to be set at 2750'. Cement will be 325 sk. Class "B" + 2% gel +0.5% CFR-2.

5) Specifications for pressure control equipment.

The attached schematic shows the type of blow out preventer to be used while drilling. The unit will be tested to 800 psi with the rig pump prior to drilling from under surface. Both blind and pipe rams will be tested. Operation of the hydraulic system will be checked daily.

6) Drilling fluids.

Depth	Type	Vixcosity	Weight	Fluid Loss(cc)
0-100	gel-lime	35-45	8.6-9.0	N/C
100-2600	low-solids	29-33	8.4-8.8	15
2600-2750	gel-chem	35-40	8.8-9.4	8

7) Auxiliary equipment.

a. bit float

b. full opening stabbing valve to be used when kelly is not in the string

8) Logging-Coring-Testing.

Logging:

Induction Electric log
Formation Compensated Density
Gamma Ray
Caliper

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DURANGO, COLO.

8) Coring:

None

Drill Stem Testing:

None

9) Abnormal temperatures, pressures, or hazardous conditions.

None Expected.

10) Starting date.

12-20

Anticipated starting date is ~~12-20~~, 1978. Approximately 6 days will be needed to build roads and location and drill the well to total depth. If commercial, completion will commence immediately and require 10 days.

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BUREAU OF GEOLOGY



SHAFFER HYDRAULIC BLOWOUT PREVENTERS

(Patented)

TYPE LWS PREVENTERS—8", 3000 lb. & 5000 lb.—10", 5000 lb.
12", 3000 lb.—13 7/8", 5000 lb.—16", 3000 lb.

PARTS AND DIMENSIONAL ILLUSTRATIONS

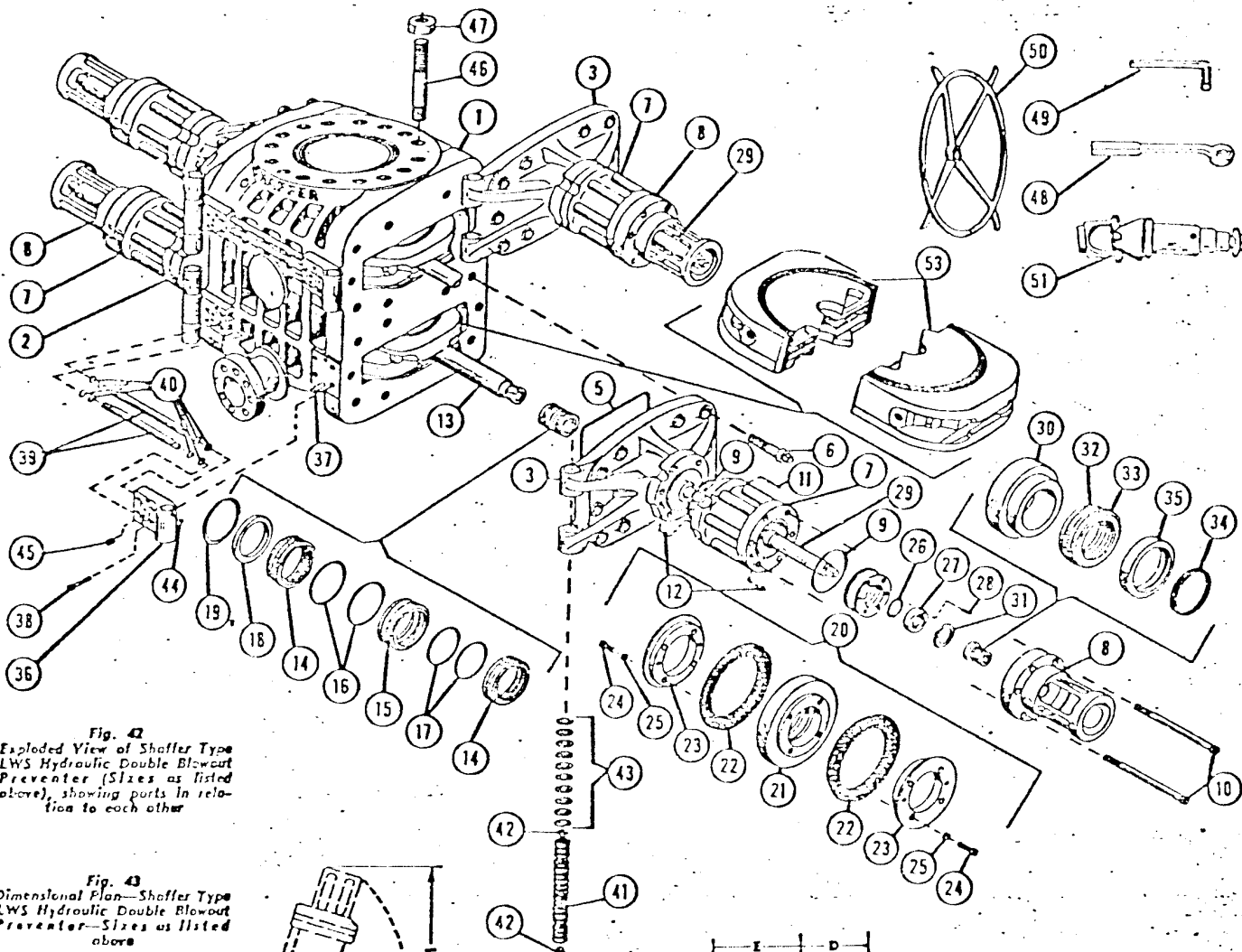


Fig. 42
Exploded View of Shaffer Type
LWS Hydraulic Double Blowout
Preventer (Sizes as listed
above), showing parts in rela-
tion to each other

Fig. 43
Dimensional Plan—Shaffer Type
LWS Hydraulic Double Blowout
Preventer—Sizes as listed
above

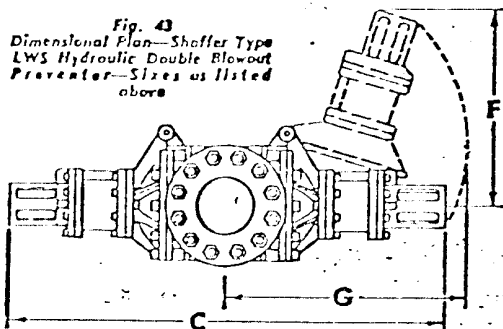
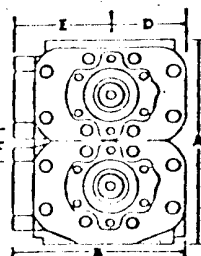


Fig. 44
Dimensional End Elevation—
Shaffer Type LWS Hydraulic
Double Blowout Preventer—
Sizes as listed above



STANDARD ACCESSORIES

- (50) 4 Hand Wheels
- (48) 1 Door Wrench
- (49) 1 Cylinder & Cylinder Head Wrench
- (51) 4 Universal Joints

DIMENSIONAL AND ENGINEERING DATA ON ABOVE SIZES OF TYPE LWS PREVENTERS

Refer to Figs. 43 and 44

S. GEOLOGICAL SURVEY																						
Size	Max. Service Pressure Rating, psi	Test Pressure, psi	Vertical Core	Max. Ram Size	Approx. Weight Lbs.	A				B	C	D	E	F	G	Closing Ratio	Opening Ratio	U.S. Gale Field To Close Rams	U.S. Gale Field To Open Rams			
						Studded Flange		Height														
						Single	Double	Single												Double		
								Studded Flange	Polished Flange											Studded Flange	Polished Flange	
8"	2,000	8,000	9"	7"	2,500	.....	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	11 1/2"	14 1/2"	22"	48"	5.8 to 1	1.85 to 1	2.75	1.2
10"	2,000	8,000	10"	7"	2,500	.....	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	25 1/2"	11 1/2"	14 1/2"	22"	48"	5.8 to 1	1.85 to 1	2.75	1.2
12"	2,000	10,000	11"	8 1/2"	5,000	.....	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	12 1/2"	16 1/2"	22"	48"	5.8 to 1	1.5 to 1	2.25	2.7
13 7/8"	2,000	8,000	12 1/2"	10 1/2"	6,500	.....	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	24 1/2"	13 1/2"	18 1/2"	27"	52"	5.8 to 1	1.85 to 1	2.55	2.9
16"	2,000	10,000	13 1/2"	10 1/2"	9,500	.....	26 1/2"	26 1/2"	26 1/2"	26 1/2"	26 1/2"	26 1/2"	26 1/2"	26 1/2"	14 1/2"	18 1/2"	41"	64"	5.8 to 1	1.5 to 1	1.55	2.9
16"	2,000	8,000	13 1/2"	12 1/2"	7,500	26"	26"	26"	26"	26"	26"	26"	26"	14 1/2"	18 1/2"	32"	60"	5.8 to 1	1.5 to 1	2.8	1.2

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Engineering and Production Service, Inc.

Surface Development Plan

WELL:
STAR LAKE #2

LOCATION
2310' FNL, 2310' FEL
Sec. 35, T20N, R6W
McKinley Co., New Mexico

LEASE NUMBER:

NM-5981

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U. S. GEOLOGICAL SURVEY
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1) Existing roads. (Shown in green)

The attached topographic map shows all existing roads within three (3) miles of the proposed location. All roads are in fair condition and will require a minimal amount of work to upgrade them to handle normal drilling activity traffic.

2) Planned access road. (Shown in red)

The new access road will be approximately 20' wide and 1 mile long. No cut, fill, turnouts, or culverts will be needed. No fences, gates or cattle guards will be crossed. Maximum grade will be 5%. Water bars will be used where needed to aid drainage and help prevent erosion.

3) Location of existing wells.

All wells (water, abandoned, disposal, and drilling) are shown and so labeled on the attached topographic map.

4) Location of existing production facilities.

All production facilities are to be contained within the proposed location.

Engineering & Production Service, Inc. does not own or control any tank batteries, production facilities or production, gathering and service lines within three miles of the proposed location.

5) Location and type of water supply.

Water for drilling will be trucked from Chapman's water hole, approximately 35 miles northwest of the location. This water is privately owned.

6) Source of construction material.

Any construction material required for road or location will be excess material accumulated during building of such sites.

7) Methods of handling waste material.

(Refer to attached well site layout.)

All material that can be safely burned will be so disposed when weather conditions permit.

All nonburnable waste (drilling fluids, cuttings, chemicals, etc.) will be held in the reserve pit until dry, and then buried. Any oil that accumulates on the pit will be removed prior to leaving the pit to dry. Pits will be fenced during dry out, then completely back-filled with dirt prior to preparing the location for production or abandonment.

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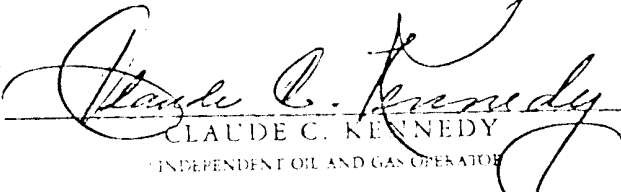
U. S. GEOLOGICAL SURVEY
DALLAS, TEXAS

12.

Claude C. Kennedy
Consultant
4949 San Pedro, N. E.
Suite 47
Albuquerque, New Mexico 87109
Phone: 883-9624

13. 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 the 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 George E. Coleman, and his contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

November ~~7~~, 1978



CLAUDE C. KENNEDY
INDEPENDENT OIL AND GAS OPERATOR

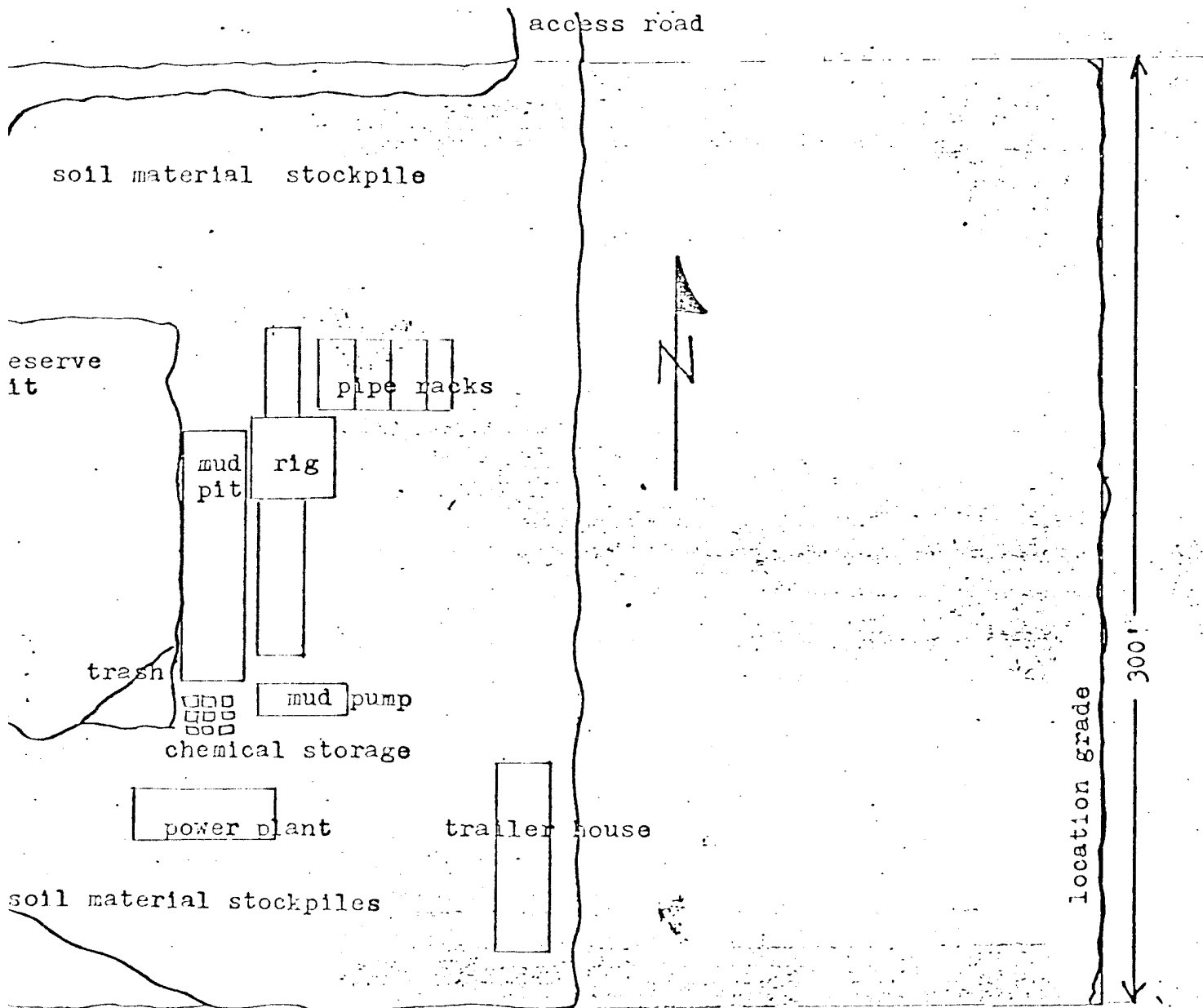
Date _____

4949 SAN PEDRO, N. E.
SUITE 47
ALBUQUERQUE, N. M. 87109

PHONE (505) 883-9624

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DALLAS, TEXAS



horizontal scale 1"=50'

vertical scale: 1"=10'

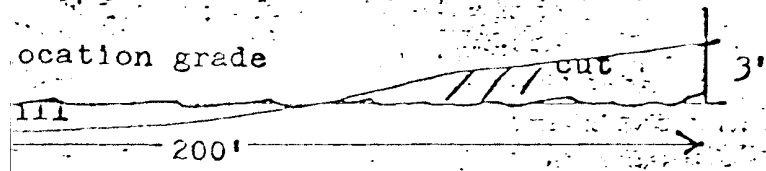
WELL SITE LAYOUT

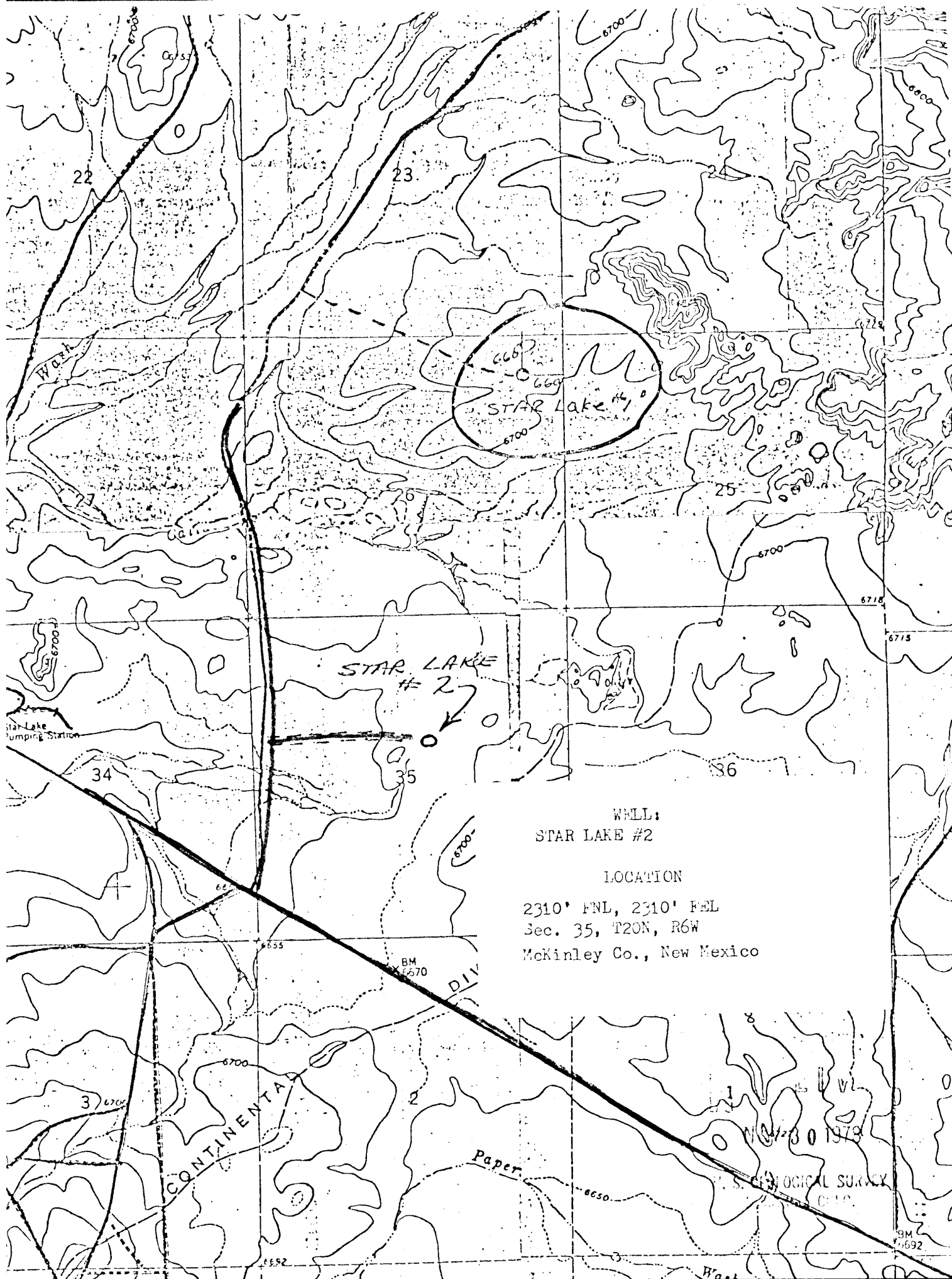
WELL:
STAR LAKE #2

LOCATION

2310' FNL, 2310' FNL NOV 30 1978
Sec. 35, T20N, R6W

McKinley Co., New Mexico
GEOLOGICAL SURVEY
DENVER, COLO.





WELL:
STAR LAKE #2

LOCATION
2310' FNL, 2310' FEL
Sec. 35, T20N, R6W
McKinley Co., New Mexico

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U.S. GEOLOGICAL SURVEY

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