

Drawer DD
Artesia, NM 88210
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*

(Other instr. as on
reverse)Form approved SF/field
Budget Bureau No. 42/R1425.

30-005-24008

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

DEPCO, Inc. ✓

RECEIVED

3. ADDRESS OF OPERATOR

800 Central, Odessa, Texas 79761

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

At surface

L-2160' FNL & 660' FWL, Sec. 3, T-16S, R-28E

At proposed prod. zone

DEC 1 1981
O. C. D.
ARTESIA, OFFICE

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

24 Miles NE of Artesia, New Mexico

15. DISTANCE FROM PROPOSED*

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

16. NO. OF ACRES IN LEASE

269.83

17. NO. OF ACRES ASSIGNED
TO THIS WELL

269.83

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

19. PROPOSED DEPTH

9450'

20. ROTARY OR CABLE TOOLS

Rotary

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

3596 GR

22. APPROX. DATE WORK WILL START*

On approval

23.

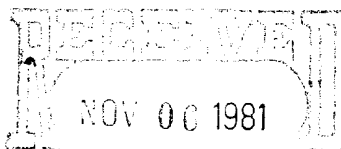
PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#	575'	425 Sx. CIRCULATE
11"	8 5/8"	24#	1950'	500 Sx. CIRCULATE
7 7/8"	4 1/2"	11.6#	9450'	625 Sx.

Mud Program: Letter from Marrs Mud Co.

BOP Program: See Exhibit "D"

Gas production not dedicated

GIL 1113
U.S. GEOLOGICAL SURVEY
LOS WELLS, NEW MEXICO

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

R.L. Denney

TITLE Chief Production Clerk

DATE 11-5-81

(This space for Federal or State office use)

APPROVED

PERMIT NO.

APPROVAL DATE

AS AMENDED

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL

NOV 25 1981

JAMES A. GILLHAM
DISTRICT SUPERVISOR

See Instructions On Reverse Side

PIT

All distances must be from the outer boundaries of the Section.

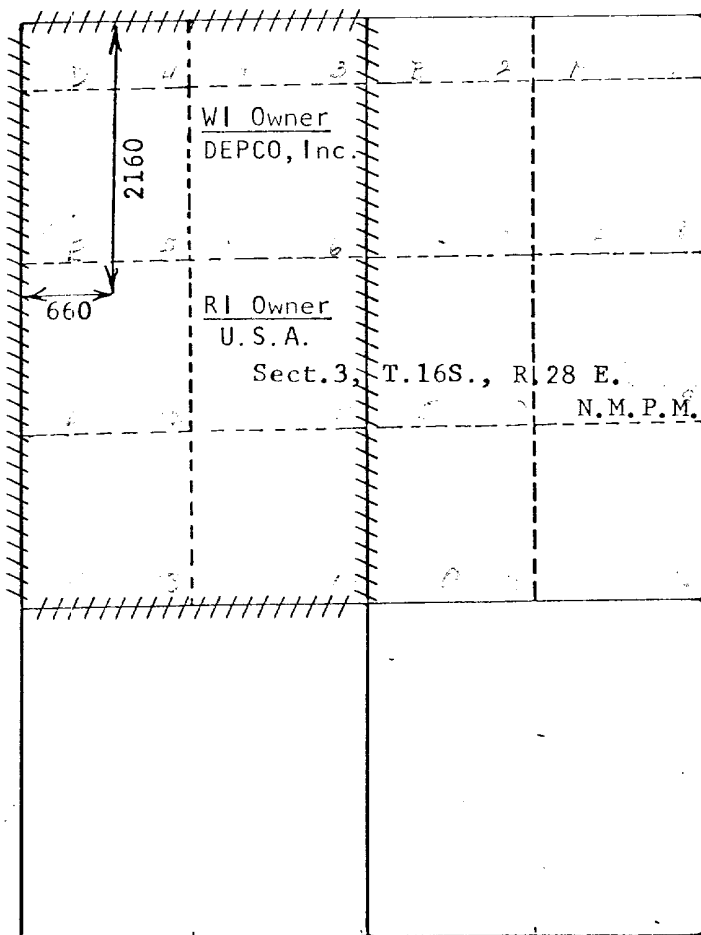
Depco, Inc.		Cave Lake Federal		Well No. #1	
Section 3	Township 16 South	Range 28 East	County Eddy		
Well Postage Location of Well:					
2160 feet from the North		line and 660 feet from the West		line	
Sound Level Elev. 3596	Producing Formation Morrow	Pool Diamond Mound Morrow		Dedicated Acreage: 269.83 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 Division.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

R. L. Denney
Name

R. L. Denney

Position

Chief Production Clerk

Company

DEPCO, Inc.

Date

11-5-81

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.

JOHN D. JAQUESS
NEW MEXICO
October 26, 1981
Registered Professional Engineer
and/or Land Surveyor
6290
John D. Jaquess, P.E., L.S.
Certificate No. 6290

DEPCO, Inc.
800 Central
Odessa, Texas 79761

Application for Drilling

DEPCO, Inc.
No. 1 Cave Lake Federal - Section 3, T-16s, R-28e
Eddy County, New Mexico

In conjunction with Form 9-331C, Application for permit to drill, DEPCO, Inc. submits the following items of pertinent information in accordance with USGS requirements.

1. The estimated tops of geologic markers are as follows:

Yates	360
Queen	1075
San Andres	1845
Glorieta	3345
Tubb	4565
Abo	5355
Wolfcamp	6585
Cisco	7510
Canyon	7840
Strawn	8350
Atoka	8885
Morrow	9025
Miss	9200
TD	9450

2. The depths at which anticipated water, oil or gas formations are expected to be encountered:

Water:	Approximately 100 feet or less
Oil Or Gas	Atoka 8885-9025
	Morrow 9025-9450'

3. Proposed casing Program: See Form 9-331C
4. Pressure Control Equipment: See Form 9331C and Exhibit D.
5. Mud Program: See Form 9-331C and attached letter from Marrs Mud Company.
6. Auxiliary Equipment: Blowout Preventer, Inside Blowout Preventer, Kelley Cock.
7. Testing, Logging and Coring Program:

Drill Stem Test:

Atoka-Morrow-2
10-foot samples from intermediate casing to TD
Logging: Dual Laterolog and Compensated Neutron/ Density
With Gamma Ray and Caliper.

8. No abnormal pressures or temperatures are anticipated.
9. Anticipated starting date: As soon as possible.

AC 505
623-6862

MARRS MUD

a division of
Corral, Inc.

1717 West Second St.
Roswell, New Mexico 88201

Sales Office

1118 West Aspen

Lovington, New Mexico 88260

AC 505
396-4876

COMPANY Depco, Inc.

WELL Cave Lake Federal # 1

FIELD

LOCATION Section 3, T-16-S, R-28-E

COUNTY Eddy STATE New Mexico

PROPOSED DEPTH 9450'

PROPOSED MUD PROGRAM

CASING PROGRAM:

13 3/8"	Surface	@	575'
8 5/8"	Intermediate	@	1,950'
4 1/2"	Production	@	9,400'

SUGGESTED MUD PROPERTIES

DEPTH (FEET)	MUD WEIGHT (PPG)	VISCOSITY (SEC)	FLUID LOSS (ML)
100	8.8 - 9.0	32 - 34	No Control
300	9.2 - 9.4	32 - 34	No Control
575	9.2 - 9.4	32 - 34	No Control

Set 13 3/8" Surface Casing @ 575'. Drill out with brine water.

600	10.0	28	No Control
800	10.0	28	No Control
1,000	10.0	28	No Control
1,200	10.0	28	No Control
1,400	10.0	28	No Control
1,600	10.0	28	No Control
1,950	10.0	28	No Control

Set 8 5/8" Intermediate Casing @ 1,950'. Drill out with fresh water.

2,000	8.4	28	No Control
3,000	8.4	28	No Control
4,000	8.4	28	No Control
5,000	8.4	28	No Control
5,400	8.8 - 9.0	38 - 40	No Control
6,000	8.8 - 9.0	38 - 40	No Control
7,000	8.8 - 9.0	38 - 40	No Control
7,500	9.1 - 9.3	43 - 45	15 - 20
8,000	9.1 - 9.3	43 - 45	15 - 20
8,500	9.1 - 9.3	43 - 45	15 - 20
9,000	9.3 - 9.5	43 - 45	10
9,400	9.3 - 9.5	48 - 50	10

Set 4 1/2" Production @ 9450'

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623-6862

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AC 505
396-4876

COMPANY Depco, Inc.

WELL Cave Lake Federal # 1

FIELD _____

LOCATION Section 3, T-16-S, R-28-E

COUNTY Eddy STATE New Mexico

PROPOSED DEPTH 9450'

PROPOSED MUD PROGRAM BY CASING INTERVAL

SURFACE: 0 - 575'

We suggest water to which fresh water gel and lime are added to be used to spud and drill surface.

We do not anticipate trouble in the interval.

INTERMEDIATE: 575 - 1,950'

Drill out from below surface casing with brine water circulating the working pits. This fluid should be adequate to safely drill to casing point. If drilling with water at casing point, we suggest sweeping the hole with a Flosal sweep before running casing.

For any unanticipated hole trouble, fishing, coring, testing, etc., we suggest taking a water loss control of the drilling fluid system. We recommend the following characteristics:

Weight - 10 to 10.2 PPG
Viscosity - 34 to 36 Sec./1000^{cc}
Fluid Loss - 10ML or less

Comment:

There is a chance of drilling into a salt water flow between 1,075' - 1,150'. We suggest that the drilling contractor be rigged up with a blow-out prevention system that will let them release pressure thru two 4" outlets. We suggest running a float in the drill collars to stop the flow while making connections.

PRODUCTION: 1,950 - 9450'

We suggest drilling out below the intermediate casing with fresh water circulating the reserve pits.

This type drilling fluid should be sufficient to drill, core or test down to 5,400' (approximately 150' above Abo).

At 5,400', we recommend mudding up with a low solids chemical oil type drilling fluid having the following characteristics:

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1717 West Second St.
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AC 505
396-4876



COMPANY Depco, Inc.
WELL Cave Lake Federal #1
FIELD
LOCATION Section 3, T-16-S, R-28-E
COUNTY Eddy STATE New Mexico
PROPOSED DEPTH 9450'

Weight - 8.8 to 9.0 PPG
Viscosity - 38 to 40 Sec./1000^{cc}
Fluid Loss - No Control
Oil Content - 2 to 3%

This type drilling fluid should be sufficient to drill to 7,500' with exception of viscosity which may need altering as hole conditions dictate.

At 7,500', we recommend taking a water loss control of the drilling fluid and we suggest the following drilling fluid characteristics:

Weight - 9.1 to 9.3 PPG
Viscosity - 43 to 45 Sec./1000^{cc}
Fluid Loss - 15 to 20 ML
Preservative - 1/4 to 1/2 PPB

Prior to logging, we suggest raising viscosity to 48 to 50 Sec./1000^{cc}. This type of drilling fluid should be sufficient to drill, test and log, with the exception of weight and viscosity, which may need altering as hole conditions dictate.

ESTIMATED MUD COST: \$23,000 to \$25,000

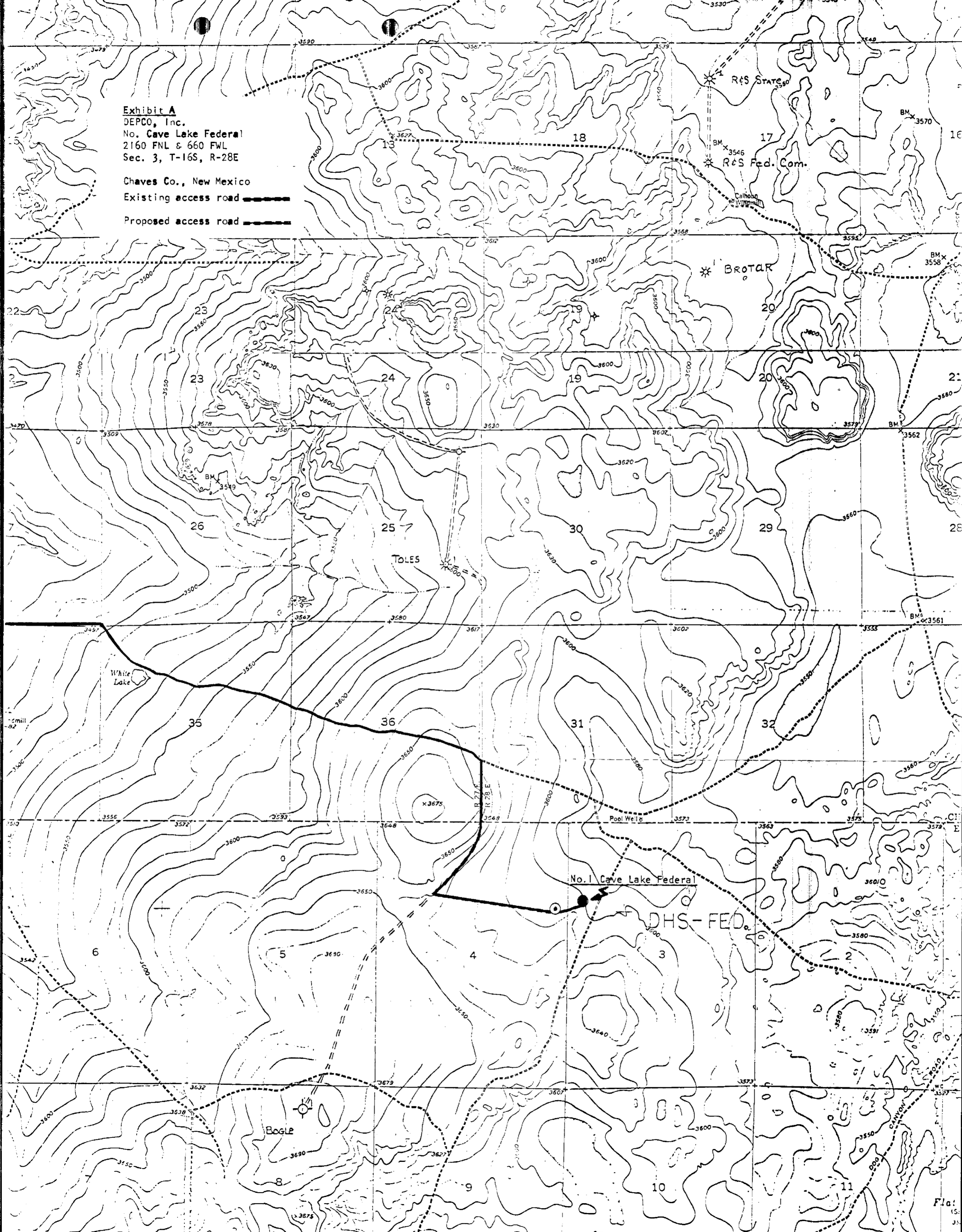
The estimated mud cost is under normal conditions and does not include any extensive loss of circulation, fishing, etc. This cost is also based on a normal drilling rate per day, therefore, any excessive time spent on drilling due to crooked hole, testing, breakdowns, etc., would increase mud cost.

Exhibit A
DEPCO, Inc.
No. Cave Lake Federal
2160 FNL & 660 FWL
Sec. 3, T-16S, R-28E

Chaves Co., New Mexico

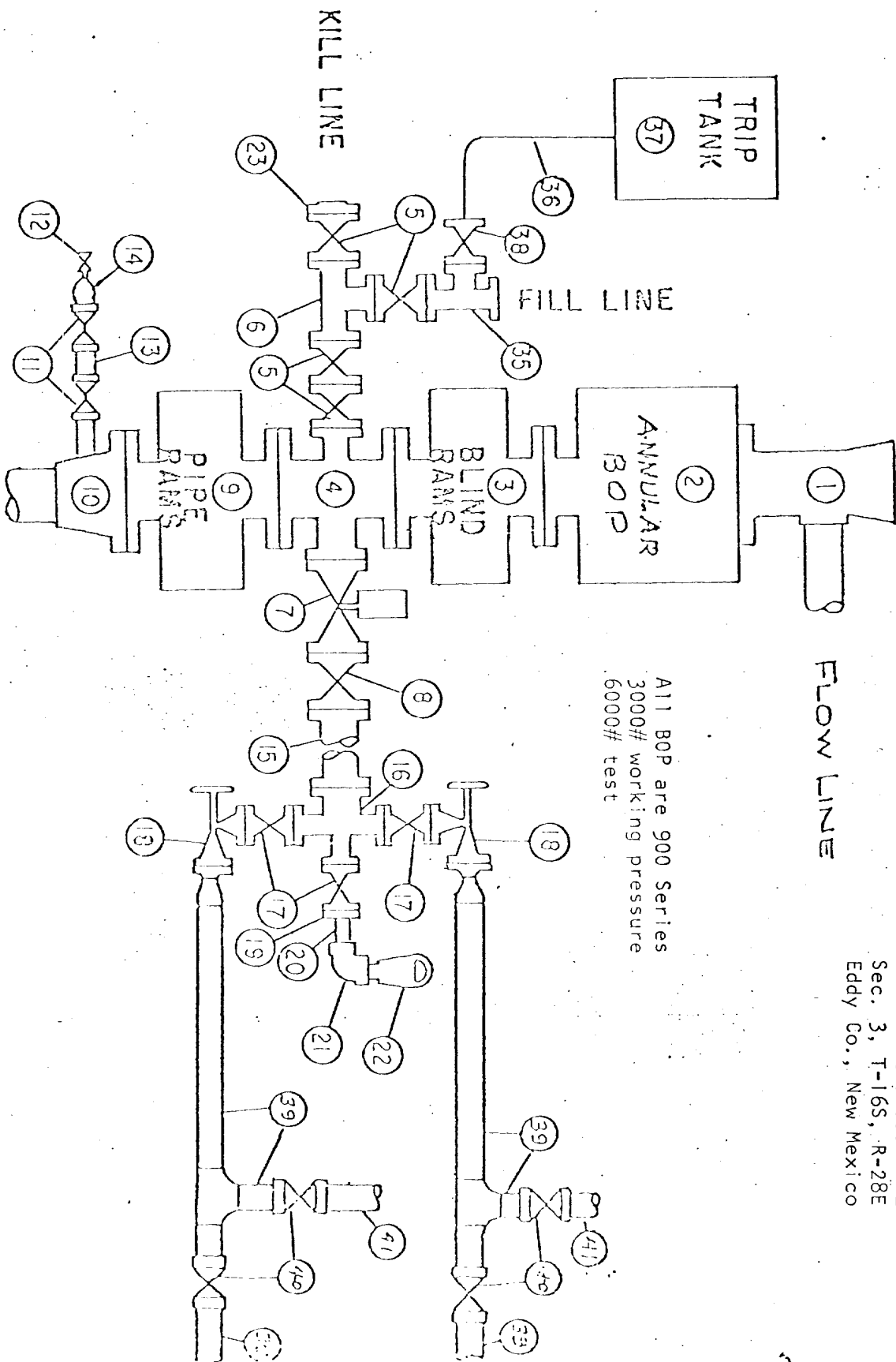
Existing access road ————

Proposed access road ————



WEK DRILLING CO., INC. BLOWOUT PREVENTER SPECIFICATION

Exhibit D
DEPCO, Inc.
No. 1 Cave Lake Federal
2160' FNL & 660' FWL
Sec. 3, T-16S, R-28E
Eddy Co., New Mexico



All BOP are 900 Series
3000# working pressure
6000# test



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
ARTESIA DISTRICT OFFICE

BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

December 7, 1981

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88210
(505) 746-4861

Depco Inc.
800 Central
Odessa, Texas 79761

Re: Cave Lake Federal
#1-L-3-16-28
Eddy County, New Mexico

Gentlemen:

We hereby acknowledge receipt of Federal Form 9-331C application for permit to drill the subject well approved on 11-25-81.

However to date this office has no record of approval of the 269.83 non-standard proration unit dedicated to the well.

Said NSP must be approved prior to producing the well.

If you have any questions concerning this matter, please feel free to call upon me.

Sincerely,

A handwritten signature in cursive script, reading "W.A. Gressett".

W.A. Gressett
Supervisor, District II

WAG:mm