

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NW OIL CONS. COM. 88010
Drawer DD
Artesia, NM
SUBMIT IN TRIPlicate
(Other instructions on reverse side)

30-015-25931
Form approved.
Budget Bureau No. 1004-0130
Expires August 31, 1985

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

ARCO Oil and Gas Co.

RECEIVED

3. ADDRESS OF OPERATOR

Box 1610, Midland, Texas 79702

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

At surface

660' FNL & 1980' FEL (Unit Letter B; NW NE)

JUN 15 '88

At proposed prod. zone

Same as above

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

ARTESIA, OFFICE

5.5 Miles Southeast of Loco Hills, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 660' North and West (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

200.04

17. NO. OF ACRES ASSIGNED TO THIS WELL

40.01

18. DISTANCE FROM PROPOSED LOCATION*

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

None

19. PROPOSED DEPTH

9000'

20. ROTARY OR CABLE TOOLS

Rotary

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

GR 3716.7 (upgraded)

22. APPROX. DATE WORK WILL START*

June 15, 1988

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"	54.5# K-55	400'	450 sx circ
11"	8 5/8"	24# K-55	2400'	1000 sx circ
7 7/8"	5 1/2"	17# K-55 & N-80	9000'	1150 sx TOC @ ± 2200'

Propose to drill Bone Springs wildcat well and test for commercial production.

Operational and surface use plan attached.

Post 1D-1
NL & API
6-24-88

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

Ken W. Gosnell

TITLE

Engr. Tech.

DATE

5-9-88

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

David A. Adams

TITLE

DATE

6-13-88

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form
Supplement No. 1
1-7-80

All distances are from the outer boundaries of the Section

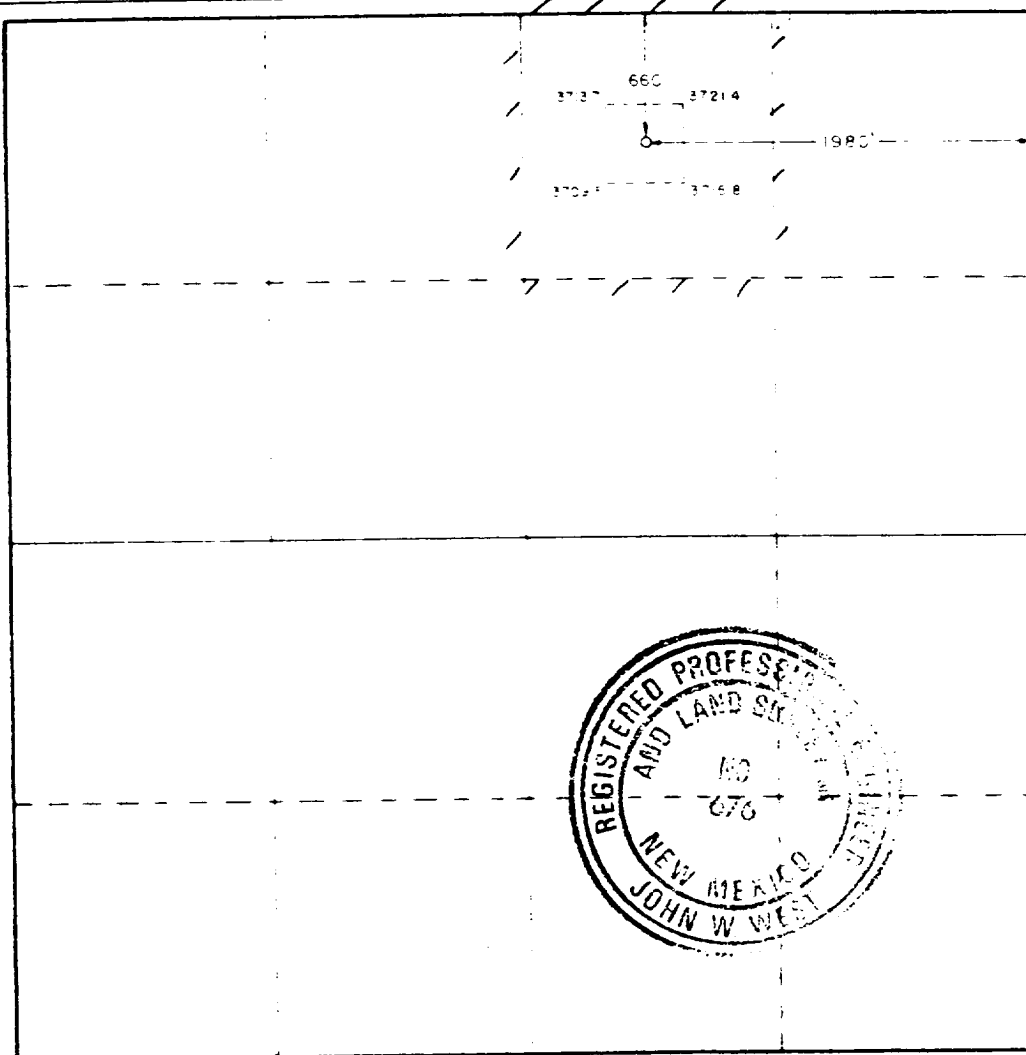
ARCO Oil Co. Atlantic Fed. 5 1
B 5 18 31 Eddy
660 N 1980 E
3716.7' GN Bone Springs North Shugart 40.01

- Outline the acreage dedicated to the subject well by colored pencil or highlight 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.

Ken W. Gosnell

Ken W. Gosnell

Engr. Tech.

ARCO Oil & Gas Co.

4-28-88

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:

Surveyed by:

Registered Professional Engineer

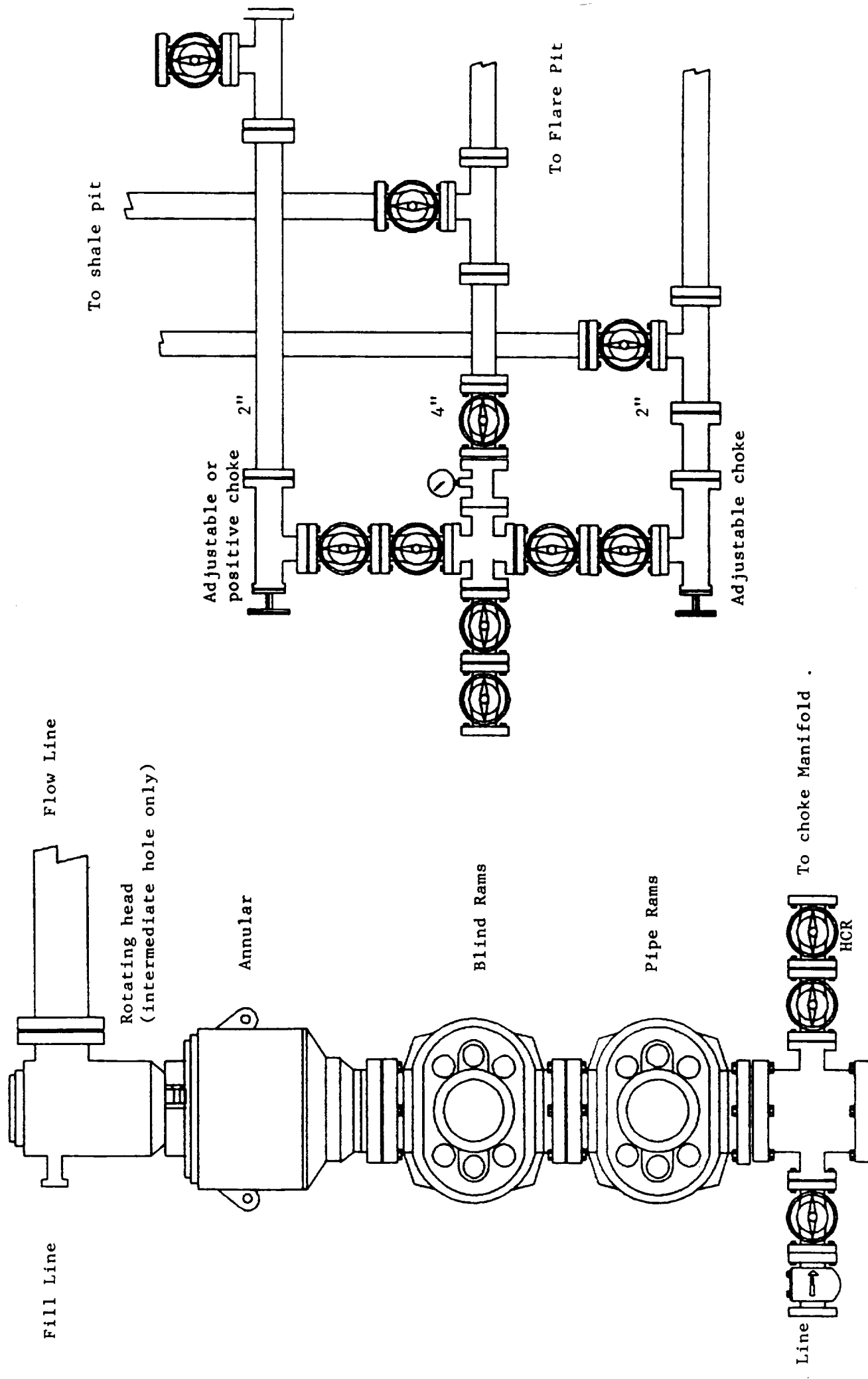
and Land Surveyor

John W. West

Certificate No. JOHN W. WEST

576

ARCO OIL AND GAS CO.
ATLANTIC FEDERAL "5" #1



" or 13 5/8" 3000 psi W. P.

To supplement USGS Form 3160-3, "Application for Permit to Drill, Deepen or Plugback", the following additional information is submitted to comply with USGS Order NTL-6.

Operator: ARCO Oil and Gas Company

Lease & Well No.: Atlantic Federal "5" #1

Location: Unit Letter B
Section 5, T18S, R31E
Eddy County, New Mexico
Lease, New Mexico NM-68038
Development well _____ Exploratory well X

1. See Well location and Acreage Dedication Plat Form C-102.
2. See Form 3160-3 for elevation above sea level of unprepared location.
3. The geologic name of the surface formation is as follows: Querecho Plains
Aeolian material with loose sandy loams and commonly harbor calcareous gravels.
4. The type of drilling tools and associated equipment to be utilized will be rotary.
5. The proposed drilling depth will be 9000'.
6. The estimated tops of important geologic markers are as follows:

TOS	600'	Queen	2850'
BOS	1800'	Grayburg	3200'
Yates	1900'	San Andres	3650'
		Bone Springs	5225'
1st Bone Springs Sand	7050'		
2nd Bone Springs Carbonate	7275'		
2nd Bone Springs Sand	7575'		
3rd Bone Springs Carbonate	8300'		
3rd Bone Springs Sand	8670'		
Wolfcamp	8900'		
7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to encounter are as follows:

Grayburg - 3200'; Oil
San Andres - 3650'; Oil
Bone Springs - 5225'; Oil
8. The proposed casing program including the size, grade and weight-per-foot of each string has been indicated on Form 3160-3. All strings of casing will be new.
9. See Form 3160-3 for amount of cement.

10. The pressure control diagram is attached to Form 3160-3. The following additional information about the pressure control equipment is as follows:

13-3/8" Casing:

Size: 13-5/8" or 11" 3000 psi WP double ram hydraulic w/annular
Pressure Ratings: 3000 psi WP, 6000 psi Test
Testing Procedure: Pressure up to 1000 psi before drilling out casing.
Testing Frequency: Pressure Test upon installation and operational checks daily and on all trips. The kill lines will be flushed after cementing.

8-5/8" Casing:

Size: 13-5/8" or 11" 3000 psi WP double ram hydraulic w/annular
Pressure Ratings: 3000 psi WP, 6000 psi Test
Testing Procedure: Pressure all BOPE to rated working pressure using independent testing company. Annular will be tested to 1500 psi.
Testing Frequency: (Same as above)

11. The type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling, and the quantities and types of mud and weighting material to be maintained will be as follows:

0-400'	Fresh water Spud Mud, 8.6 ppg
400'-2400'	Saturated Brine Water, 10 ppg
2400'-7200'	Fresh water Clear Fluid, 8.5 ppg
7200'-9000'	Fresh water Polymer Mud, 8.6-9.3 ppg

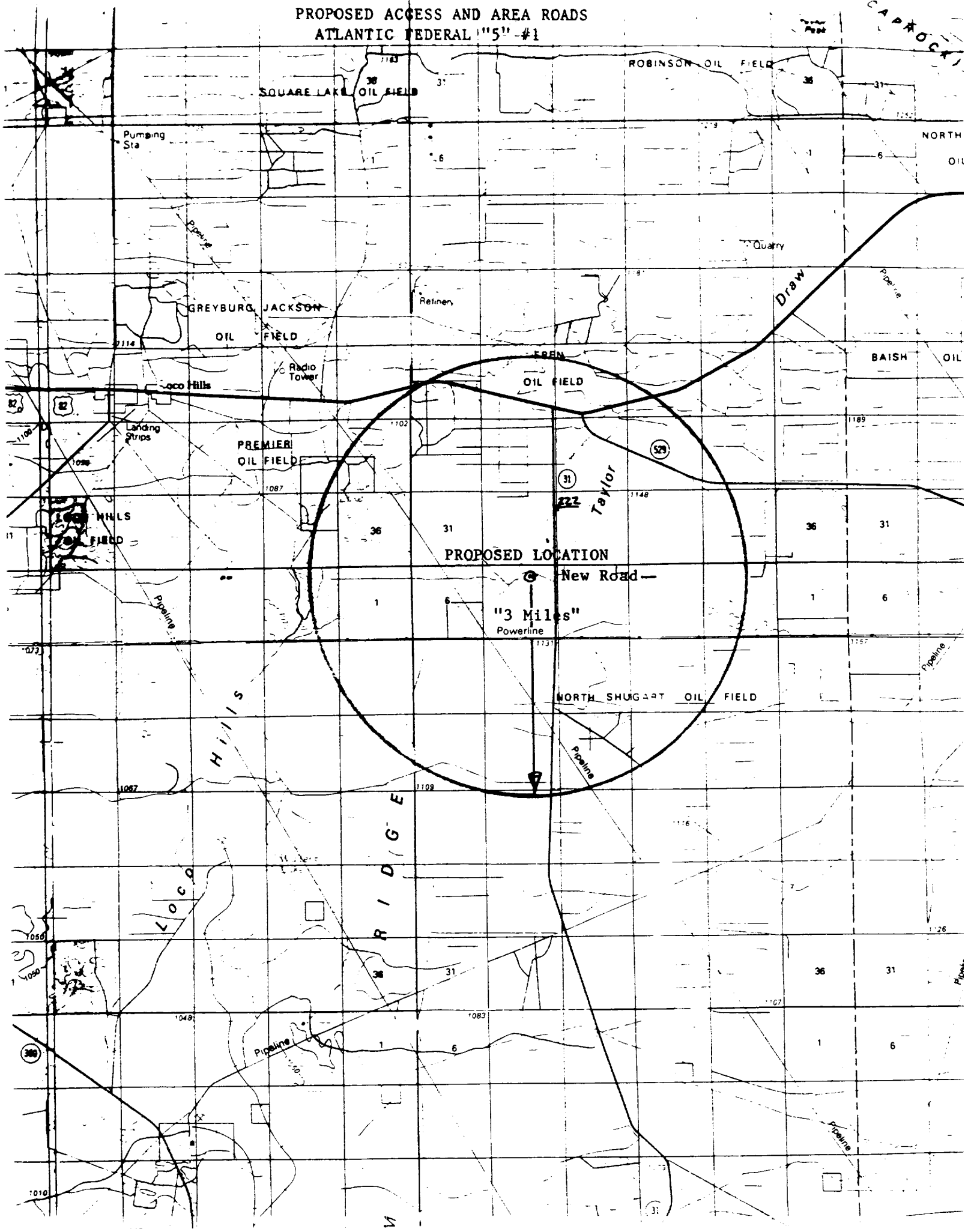
12. The testing, logging and coring program will be as follows:

<u>Drill Stem Test</u>	<u>Logs</u>	<u>Coring</u>
One Open Hole	OPEN HOLE:	1-60' Cores
Drill Stem Test in	GR/DIL/MSFL	cut in the
the Bone Springs	GR/CNL/FDC/Cal	Bone Springs Sand
below \pm 7275'	GR/BHCS/Cal	below 7575'

13. There are no abnormal pressure or temperatures anticipated.
14. The anticipated starting date (constructed) will be June 15, 1988 and completing date approximately August 15, 1988.
15. The auxiliary equipment to be used will consist of the following: Kelly cocks and sub on floor with full opening valve, to be used when needed. A mud logging unit will be used in the interval from 2500' - 9000'.

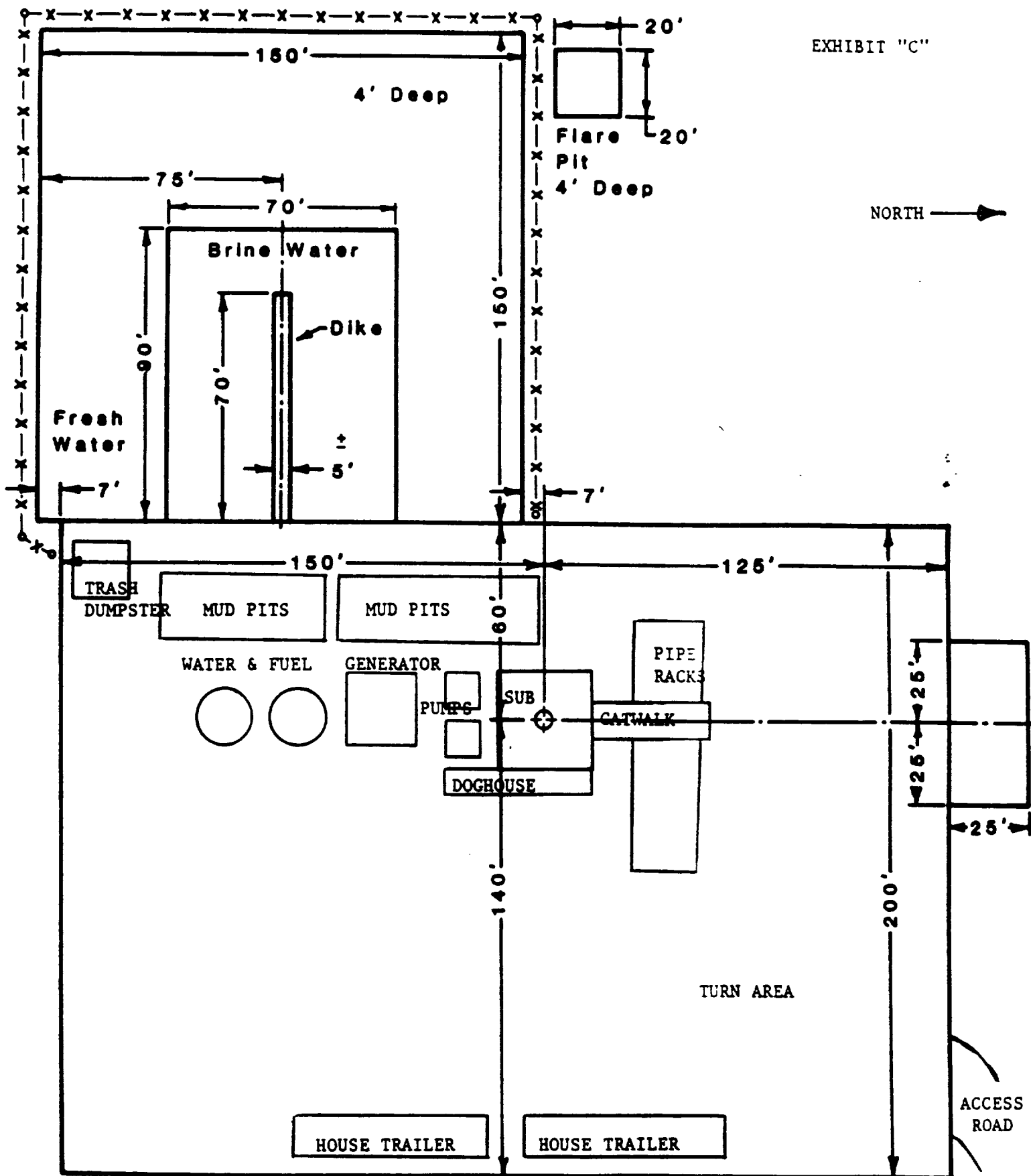

K. D. Krawietz
Area Drilling Engineer

САНКТ-ПЕТЕРБУРГ



TYP. 1/4 LOCATION LAYOUT FOR WELL 6000' OR GREATER IN DEPTH

Eddy and Lea County, New Mexico



NOTE: LOCATION MAY BE EXTENDED TO ACCOMMODATE PRODUCTION FACILITIES.