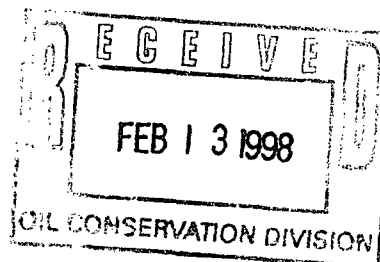




ARCO Permian
600 North Marienfeld
Midland TX 79701-4373
Post Office Box 1610
Midland TX 79702-1610
Telephone 915 688 5570

Elizabeth A. Casbeer
Regulatory/Compliance Analyst



February 4, 1998

NMOCD
2040 S. Pacheco
Santa Fe, New Mexico 87504

Ladies and Gentlemen:

ARCO Permian hereby requests administrative approval for an unorthodox location for Lago Rosa "4" Federal #5 under Rule 104.F. (3), due to topographical conditions and irregular section measurements. Because of foreshortened Lots 17 through 20 (tracts M through P) of Section 4, this location is approximately 177' from the south line of the lease and 205' from the east line of the lease. Barry Hunt with the BLM made an onsite inspection and determined that the hill slopes and two west trending draws (as shown on topo map) demanded the location be shifted as shown. As prescribed, we are submitting all supporting documentation with this APD.

On February 9th, we sent copies of this APD and a copy of the surveyor's plat and topo map to Devon Energy by certified mail. We advised them that if they have an objection, it must be filed in writing within 20 days from the date notice was sent.

A list of the offset operators directly adjacent to this location is attached. Thank you for your assistance in this matter.

Sincerely,

Elizabeth A. Casbeer
Regulatory/Compliance Analyst

EAC:lc

cc: Bureau of Land Management, Roswell, New Mexico
NMOCD, Artesia, New Mexico

Enclosures



ARCO Permian
600 North Marientfeld
Midland TX 79701-4373
Post Office Box 1610
Midland TX 79702-1610
Telephone 915 688 5570

Elizabeth A. Casbeer
Regulatory/Compliance Analyst

February 10, 1998

CERTIFIED RETURN RECEIPT MAIL

Devon Energy
20 N. Broadway, Suite 1500
Oklahoma City, Oklahoma 73102

Ladies and Gentlemen:

This letter will serve as notice that ARCO Permian has requested administrative approval from the NMOCD for an unorthodox location for Lago Rosa "4" Federal #5 under Rule 104.F. (3), due to topographical conditions and irregular section measurements. Because of foreshortened Lots 17 through 20 (tracts M through P) of Section 4, this location is approximately 177' from the south line of the lease and 205' from the east line of the lease. Barry Hunt with the BLM made an onsite inspection and determined that the hill slopes and two west trending draws (as shown on topo map) demanded the location be shifted as shown. As required by the NMOCD, we are also sending a copy of all supporting documentation with this letter for your perusal.

Should your company have any objection, it must be filed in writing within twenty (20) days from the date of this notice. The Division Director may approve the unorthodox location if no objection to the unorthodox location has been made within 20 days after the application has been received.

Sincerely,

Elizabeth A. Casbeer
Regulatory/Compliance Analyst

EAC:lc

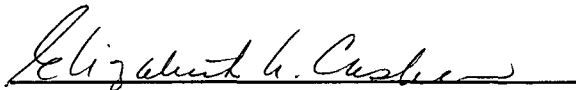
Enclosures

STATE OF TEXAS

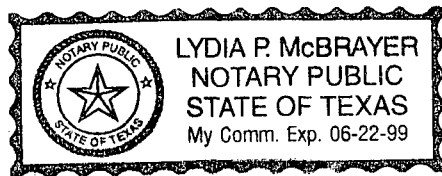
COUNTY OF MIDLAND

BEFORE ME, the undersigned authority on this day personally appeared Elizabeth A. Casbeer, a Regulatory Compliance Analyst with **ARCO Permian**, who being by me duly sworn, deposes and states that the persons listed on the foregoing attached list has been sent a copy on February 10, 1997, of the Bureau of Land Management form 3160-3 (and supporting documentation) entitled, "Application For Permit to Drill or Deepen" for the Lago Rosa "4" Federal #5.

ARCO Permian


Elizabeth A. Casbeer

SUBSCRIBED AND SWORN TO before me on February 10, 1998, to certify which witness my hand and seal of office.




NOTARY PUBLIC, STATE OF TEXAS

**OFFSET OPERATOR
LAGO ROSA "4" FEDERAL #5**

Devon Energy
20 N. Broadway, Suite 1500
Oklahoma City, Oklahoma 73102

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO.	
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 ARCO Permian		7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. P.O. Box 1610, Midland, TX 79702 915-688-5570		8. FARM OR LEASE NAME, WELL NO. LAGO ROSA "4" 5 FEDERAL	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) At surface 1550' FSL, 1115' FWL At proposed prod. zone SAME		9. API WELL NO.	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 10 MILES SE OF ARTESIA, NM		10. FIELD AND POOL, OR WILDCAT RED LAKE (Q-GB-SA)	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any) 177'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 4-T18S-R27E	
16. NO. OF ACRES IN LEASE 40		12. COUNTY OR PARISH EDDY	
17. NO. OF ACRES ASSIGNED TO THIS WELL 40		13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1000'		19. PROPOSED DEPTH 3800	
20. ROTARY OR CABLE TOOLS ROTARY		21. APPROX. DATE WORK WILL START* 3/98	

23. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11'	8-5/8" J-55	24	1100'	700 Ft ³
7-7/8"	5-1/2" K-55	15.5#	3800	1300 Ft ³

SUBJECT WELL IS PLANNED AS A 3800' STRAIGHT HOLE.
3,000 PSI BOPE WILL BE USED FROM 1100' TO TD.

ATTACHMENTS ARE AS FOLLOWS:

1. CERTIFIED LOCATION PLAT
2. DRILLING PLAN WITH ATTACHMENTS
3. SURFACE USE PLAN WITH ATTACHMENTS

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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 Elizabeth H. Cusack TITLE REGULATORY COMPLIANCE DATE 2/9/98

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994
Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT II

P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III

1000 Rio Brazos Rd., Axtel, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT IV

P.O. Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name <u>RED LAKE (A-GB-SA)</u>
Property Code	Property Name <u>LAGO ROSA "4" FEDERAL</u>	Well Number <u>5</u>
OGRID No. <u>000990</u>	Operator Name <u>ARCO PERMIAN</u>	Elevation <u>3540</u>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
16	4	18 S	27 E		1550	SOUTH	1115	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres <u>40</u>	Joint or Infill	Consolidation Code	Order No.
------------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

LOT 8 39.92 AC.	LOT 7 39.37 AC.	LOT 6 37.70 AC.	LOT 5 37.73 AC.
LOT 9 38.93 AC.	LOT 10 38.43 AC.	LOT 11 37.23 AC.	LOT 12 37.28 AC.
LOT 16 38.85 AC. #4	LOT 15 38.64 AC.	LOT 14 37.82 AC.	LOT 13 37.61 AC.
LOT 17 38.64 AC.	LOT 18 38.43 AC.	LOT 19 38.01 AC.	LOT 20 37.80 AC.

3525.4'

1115'

3539.6'

3542.1'

3553.8'

1550'

NAD27
SPC
NME
X=513965=E
Y=645178=N

OPERATOR CERTIFICATION

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

Elizabeth A. Casbeer
Signature

ELIZABETH A. CASBEER
Printed Name

REG. / COMP. ANALYST
Title

2-13-98
Date

SURVEYOR CERTIFICATION

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 belief.

NOVEMBER 14, 1997

Date Surveyed

Signature & Seal of Professional Surveyor

Ronald J. Eidson
Professional Surveyor

W.O. Num. 97-11893

Certification No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239
GARY G. EIDSON, 12641

8
Carter Collier

4
Devon
Carter Collier

WDW

290.
245.
Dev.
6
Hon.
IP:

1
29087
2500'
Devon Energy
1
Kite Fed
IP:109

23542
9.805MC
AMOCO PRCO

1
*FEDERAL*BA*GAS COM
MUD

SA
6L2B20 +781

2
29024
2400'
Devon Energy
2
Kite Fed
IP:187

3
29066
2400'
Devon Energy
3
Kite Fed
IP:106

4
29030
2400'
Devon Energy
4
Kite Fed
IP:91

2
Devon
Carter Collier
2800'

(Devon)

(Devon)

2
29067
2350'
Devon Energy
Kite Fed
IP:127

49
28286
2329'
Devon Energy
49
W. Red Lake Ut.
IP:44

00770
5.620MC
HONDC OIL
11
*FEDERAL
4538ADR

65
(2871-2900)

00783
1.938MC
COMPTON RD
4
BRAINARD

00784
1.938MC
COMPTON RD
6

W. Red Lake - FEDERAL A

28445
2225'
Devon Energy
45
W. Red Lake Ut.
IP:95

00766
2.185MC
ATLANTIC R

*MANN - FEDERAL A

10058
5.524MC
PAN AMER. C
2.296MC
COMPTON
4
ABC
MANN

120
(1359-2276)

28564
2.300MC
SANTA FE R

28925+
2400'
Devon Energy
76
W. Red lake Ut.
IP:145

Lago Rosa 4#5
Unorthodox loc
plot

43
28564
2300'
Devon
43
W. R.
IP:6

00777
002MC
EXISSON.

00785
1.263MC
COMPTON RD
7
BRAINARD

00780
1.260MC
COMPTON RD
3
BRAINARD

00786
1.258MC
COMPTON RD
8
BRAINARD

DRILLING PLAN

Attachment to BLM Form 3160-3

ARCO Permian

Well: Lago Rosa "4" Federal #5

1115'FWL, 1550'FSL

Section 4-T18S-R27E

Eddy County, New Mexico

1. Surface Geological Formation

Yates Formation (Sand and Anhydrite)

2. Estimated Tops of Geological Markers

<u>Formation</u>	<u>TVD</u>
Bowers	600'
Queen	800'
Grayburg	1100'
Premier	1420'
San Andres	1500'

3. Estimated Tops of Possible Water, Oil, Gas or Minerals:

Sands above 1000'

Water

4. Pressure Control Equipment

<u>Interval, TVD</u>	<u>Pressure Control Equipment</u>
0'-1100'	No pressure control required
1100'-TD	11", 2M psi double ram preventer, or; 11" 2M psi annular preventer

Exhibits 1, 2 and 3 show a double ram BOP stack arrangement, the choke manifold arrangements and the BOP specifications, respectively. The BOPE will be hydraulically tested per BLM requirements outlined by Onshore Oil and Gas Order No. 2. Pipe rams and blind rams, if a double ram preventer is used, will be functioned on each trip out of the hole. All BOPE checks and tests will be witnessed by ARCO's representative and will be noted on the IADC daily drilling report. Accessories to BOPE will include an upper kelly cock, lower kelly cock, and floor safety valve; all with pressure rating equivalent to the BOP stack.

5. Proposed Casing and Cementing Program

	<u>Hole</u>	<u>Interval</u>	<u>Casing</u>	<u>Weight &</u>
	<u>Size</u>	<u>M.D.</u>	<u>Size</u>	<u>Grade</u>
Surface	11"	0'-1100'	8-5/8"	24# J-55
Production	7-7/8"	1100'-3800'	5-1/2"	15.5# K-55

Cement Program: (Actual volumes will be based on caliper log when available)

Surface - Cement to surface with total of +/- 600 cu ft as follows;

Lead Slurry - 250 sks Class "C" + 4% Gel + 2% CaCl₂

Tail Slurry - 100 sks Class "C" + 2% CaCl₂

Production - Cement to surface with a total of +/- 800 cu ft as follows::

Lead Slurry - 300 sks 35 Poz: 65 Class "C" + 6% Gel + 5% salt

Tail Slurry - 200 sks 50 Poz: 50 Class "C" + 32% Gel + 5% salt + 0.4 % FL-62

6. **Mud Program**

<u>Depth</u>	<u>Mud Type</u>	<u>Weight</u> ppg	<u>Funnel</u> <u>Viscosity</u>	<u>Water</u> <u>Loss</u>
0'-1100'	Spud Mud	8.4-8.9	29-34	NC
1100'-2900'	Brine	10.0-10.2	28-30	NC
2900'-3800'	SWG	10.0-10.4	30-35	≤15 cc

7. **Auxiliary Equipment**

Upper Kelly Cock, Lower Kelly Cock, and Full Opening Stabbing Valve

8. **Testing, Coring, and Logging Program**

- A. Drill Stem Tests - None planned.
- B. Coring - None planned.
- C. Mud Logging -1100'-TD
- D. Electric Logs
 - Open Hole: DLL/MLL, CNL/LDT, GR: Shoe of 8-5/8" csg to TD
 - Cased Hole: GR/CNL Surf. to shoe of 8-5/8" csg
 - GR/CCL TD to 1500'.

9. **Anticipated Abnormal Temperature, Pressure, or Hazards**

Potential seepage and lost circulation starting in the Queen formation and continuing through the San Andres (800'-TD).

10. **Anticipated Starting Date and Duration of Operations**

Pending favorable weather and permit approval, construction work on this location is planned to begin in January, 1998. Construction work will require 2 days, move-in and rig up rotary tools, 1 day, drill and complete, 18 days. It is planned to spud the well in January, 1998.

SURFACE USE PLAN

Attachment to BLM Form 3160-3

ARCO Permian

Well: Lago Rosa "4" Federal #5

1550'FSL, 1115'FWL

Section 4-T18S, R27E

Eddy County, New Mexico

1. Directions to Location/Existing Roads

From Artesia, New Mexico go East 9 miles on Highway 82, then turn right on CR 204. Go SE 0.2 miles on CR 204 and turn right on CR 225. Go S 2.1 miles on CR 225 and turn right on CR 227. Go WSW 2 miles on CR 227 and turn right on CR 201. The Lago Rosa "4" Federal #5 location is approximately 700' North of CR 227 at this point. Exhibits "4" and "5" are the Vicinity Map and the Location Verification Map, respectively.

- A. The proposed development wellsite is staked as shown on the certified location plat attached.
- B. Most of the existing roads will not require any improvement or repair. Any existing sections of road that need improvement or repair will be fixed to a condition equal to that of the good sections of the existing road. All roads will be maintained in a condition equal to that which existed prior to the start of the construction.

2. Planned Access Roads

- A. Approximately 730' of new access road will be required.
- B. New access roads will have a 12' wide travel lane and be surfaced with 6" compacted caliche.
- C. Turnouts: None
- D. Culverts: None
- E. Cuts and fills: No major road cuts or fills will be necessary.

3. Location of Existing Wells

- A. The existing wells within a one mile radius of this location are shown on Exhibit "6".

4. Location of Existing or Proposed Facilities

- A. Existing Facilities - No facilities are currently existing for this well.
- B. New Facilities Proposed - If a successful Paddock producer is completed, surface facilities will consist of treater and storage tanks for oil and water.

5. Location and Type of Water Supply

Fresh and brine water used in drilling and completion operations will be purchased from independent trucking companies located in Artesia or Loco Hills, New Mexico. The water will be hauled over existing and new roads to the location.

6. Source of Construction Materials

Caliche for the road and well pad construction will be purchased from the Turkey Track Ranch (Bogle LTD) managed by Louis Derrick (505) 734-5442. The caliche will be hauled over existing and new roads to the location.

7. Methods of Handling Waste Disposal

- A. Drill cuttings will be handled in the reserve pit and buried during reclamation operations.
- B. Trash, waste paper, garbage and junk will be contained in a fenced trash trailer to prevent scattering by the wind and hauled to a municipal sanitary landfill. All sacked drilling mud will be picked up by the supplier. The drilling contractor will haul away any chemicals that they use while drilling.
- C. Toilet facilities will be provided for human waste. Sewage disposal facilities will be in accordance with State and Local Regulations.
- D. Drilling fluids will be handled as follows: The free water will be either hauled to the reserve pit of the next drilling well for re-use or hauled to a permitted SWD. If any mud is hauled away it will be disposed of at an approved mud disposal site. Remaining drilling fluids will be allowed to evaporate in the reserve pit until dry enough for reclamation.
- E. Any fluids produced during swab testing the well while the pulling unit is on location will be collected in a test tank. Produced water will be hauled to a permitted SWD. Oil produced will remain in the test tank until sold and hauled from the site.

8. Auxiliary Facilities

No new facilities will be built during drilling of this well. A trailer will be used as an office and temporary living quarters for wellsite supervision.

9. Wellsite Layout

- A. Exhibit "7" shows the proposed wellsite layout and dimensions. Major rig components and reserve pits are shown.
- B. No significant cuts or fills will be required.
- C. The reserve pits will be plastic lined with minimum 6 mil double x-laminated plastic. The liner will overlap the pit dikes and be anchored down. The reserve pit will be fenced on three sides during drilling operations. After drilling operations have ceased the fourth side of the pit will be fenced.

10. Plans for Reclamation of the Surface

- A. In a timely manner, after finishing the drilling and/or completion operations all equipment and other material not needed for production operations will be removed.

The location will be cleared of all trash and debris then any ruts, etc. will be filled. The cellar will be filled around the wellhead.

- B. Any pits containing fluids will be fenced until they are filled. The NMOCD pit netting rules will be followed. The reserve pits will be reclaimed by deep burying the drill cuttings. The pit area will be leveled and contoured to conform to the surrounding area. A stockpile of topsoil from the location construction will be evenly distributed over the disturbed area. Re-vegetation procedures will comply with BLM standards.
- C. Upon abandonment of the well, surface restoration will be in accordance with the surface owner requirements and will be accomplished as expediently as possible.

11. Surface Ownership

The surface for the wellsite location is owned by the U.S. Government and is administered by the BLM.

12. Additional Information

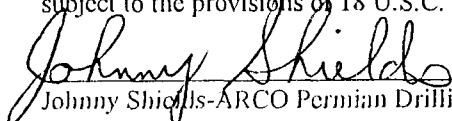
- A. Topography: Gently rolling grassland.
- B. Vegetation includes mesquite, catclaw, creosote, broom snakeweed, various cacti, shin oak, sand sage, narrowleaf yucca and mixed grasses.
- C. The soil is a sandy loam.
- D. Primary use of the land is livestock grazing and accessing producing wells.
- E. There are no nearby dwellings.
- F. An archeological block survey has been scheduled and a copy of the report will be forwarded to the BLM from the archeologist.
- G. The selected dirt contractor will be furnished with an approved copy of the Surface Use Plan and any additional stipulations prior to beginning any work.

13. Operator's Representatives

J.E. Shields
ARCO Permian
P. O. Box 1610
Midland, Texas 79702
(915)688-5574

Certification

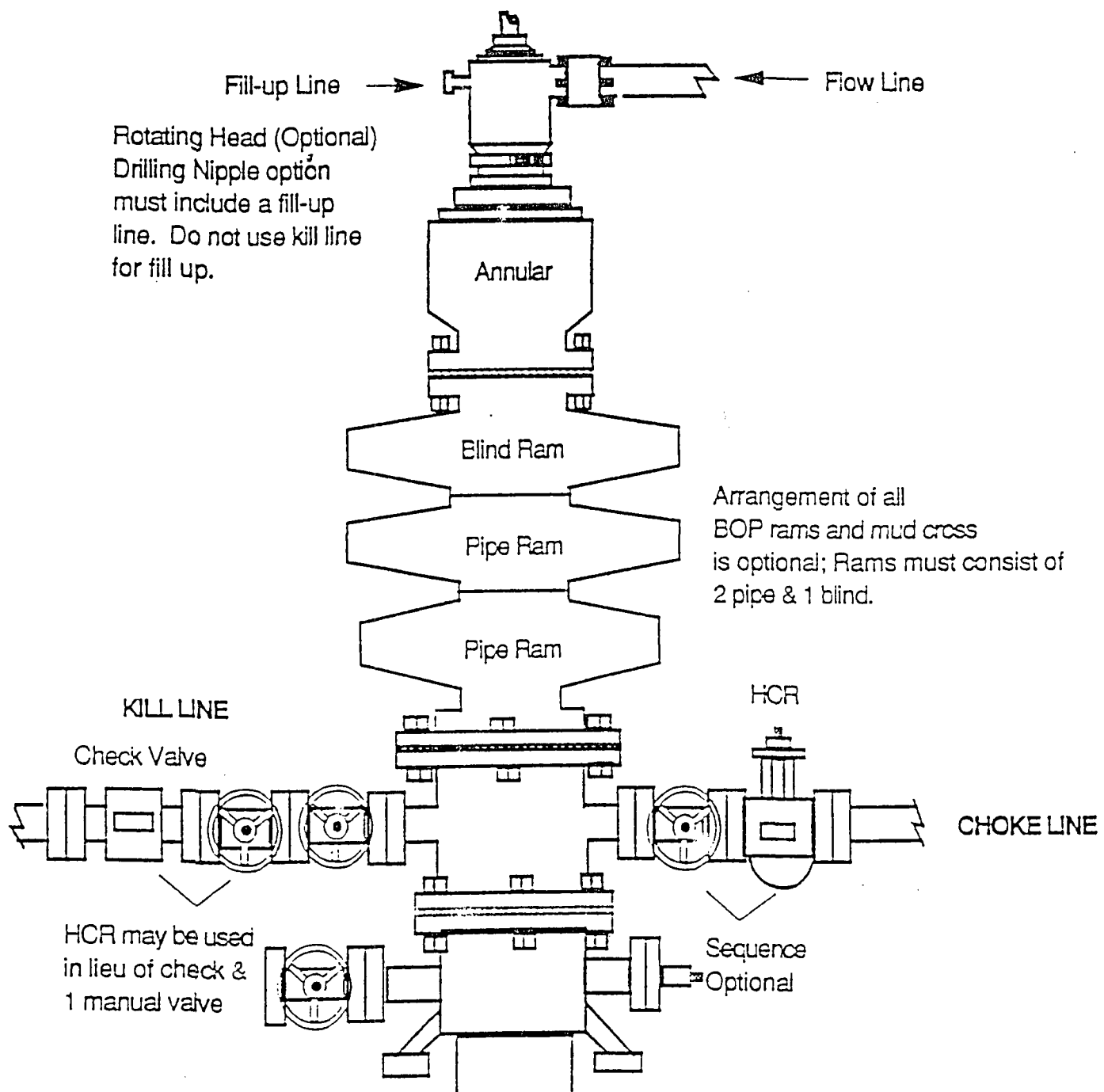
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by ARCO Permian and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.


Johnny Shields-ARCO Permian Drilling Manager

12/12/97
Date

EXHIBIT 1

DRILLING OPERATIONS
CLASS -1: NORMAL PRESSURE < 10PPG
OPTION - 2: MMS STANDARD; SINGLE SIZE DRILL STRING



DRILLING OPERATIONS
CHOKE MANIFOLD
2M AND 3M SERVICE

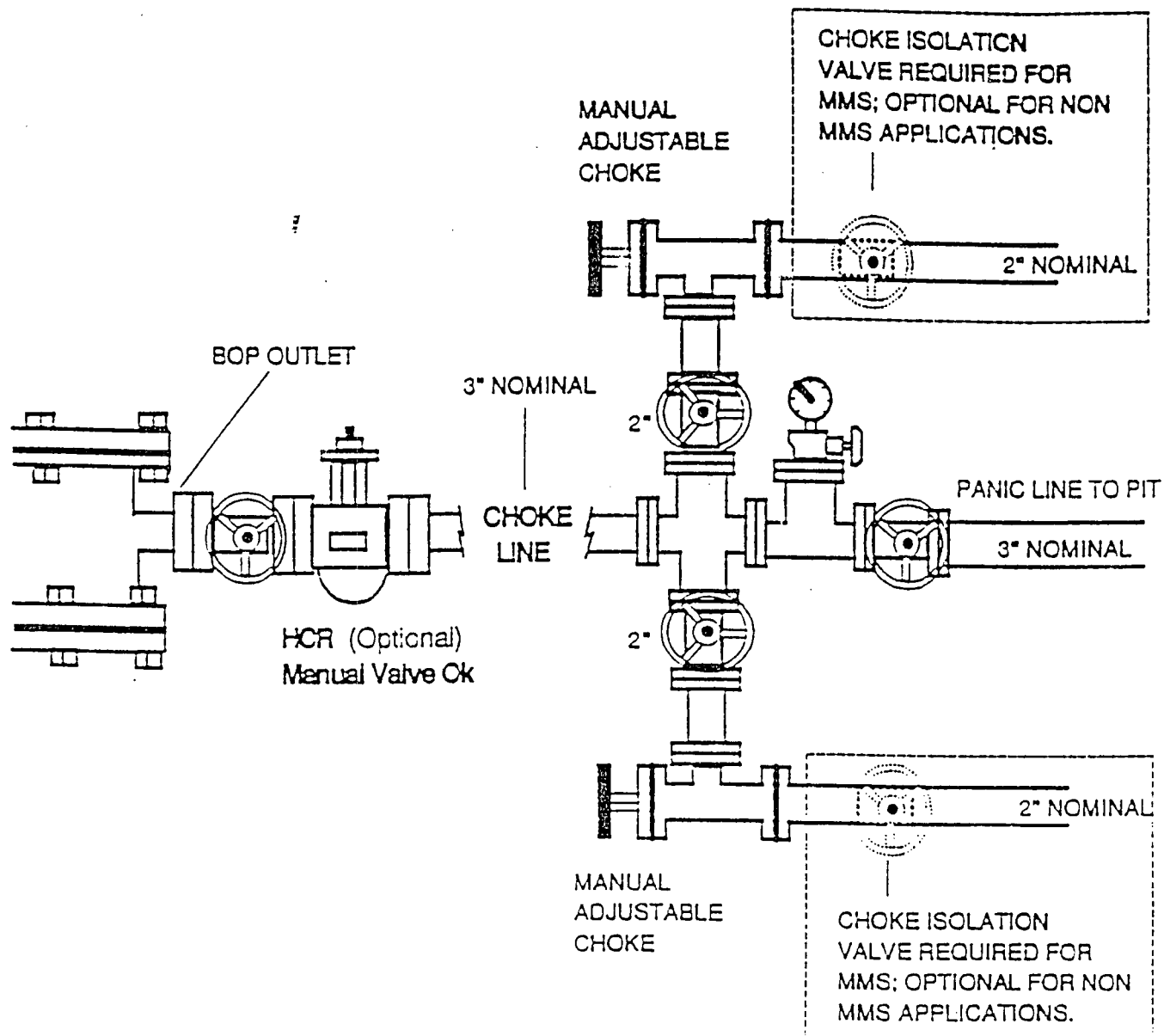
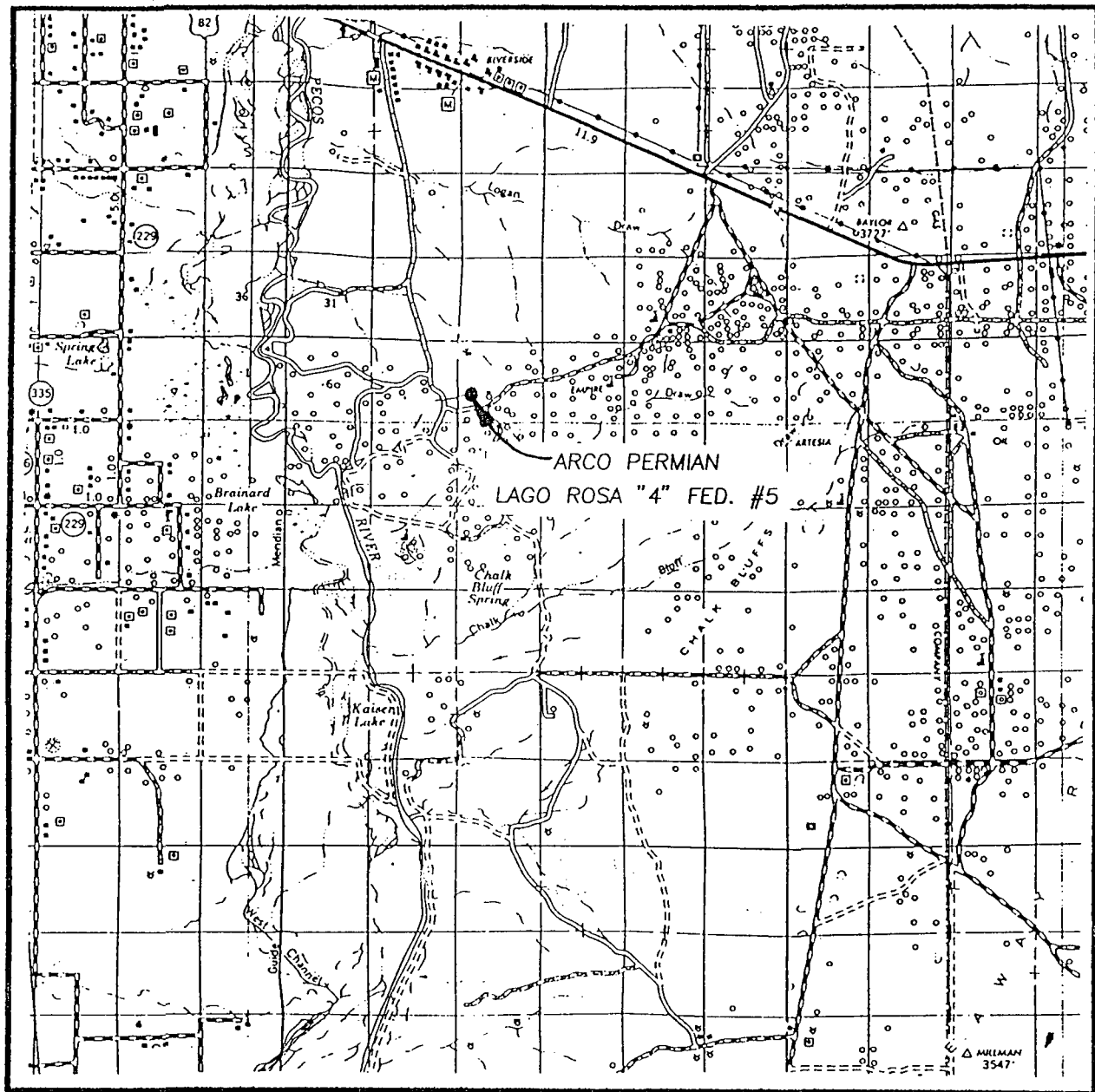


EXHIBIT 3

BLOWOUT PREVENTION EQUIPMENT SPECIFICATIONS

1. All BOP equipment shall be fluid and/or mechanically operated.
2. BOP's and all fittings will be in good working condition.
3. Equipment through which the bit must pass shall be at least as large as the casing size being drilled.
4. The nipple above the BOP shall be at least the same size as the last casing set.
5. The upper kelly cock with handle and lower kelly cock shall be rated at the BOP working pressure.
6. A floor safety valve (full opening) or drill string BOP with appropriate pressure ratings shall be available on the rig floor with connections or subs to fit any tool joint in the string.
7. The minimum size choke line shall be 3 inches nominal diameter, with a minimum size for vent lines downstream of chokes of 2 inches nominal, and vent lines which by-pass shall be a minimum of 3 inches nominal and as straight as possible.
8. All valves, fittings and lines between the closing unit and the blowout preventer stack should be of steel construction with rated working pressure at least equal to working pressure rating of the stack. Lines shall be bundled and protected from damage.
9. Minimum size for kill line is 2 inches nominal.
10. Ram type preventers shall be equipped with extension hand wheels or hydraulic locks.

VICINITY MAP

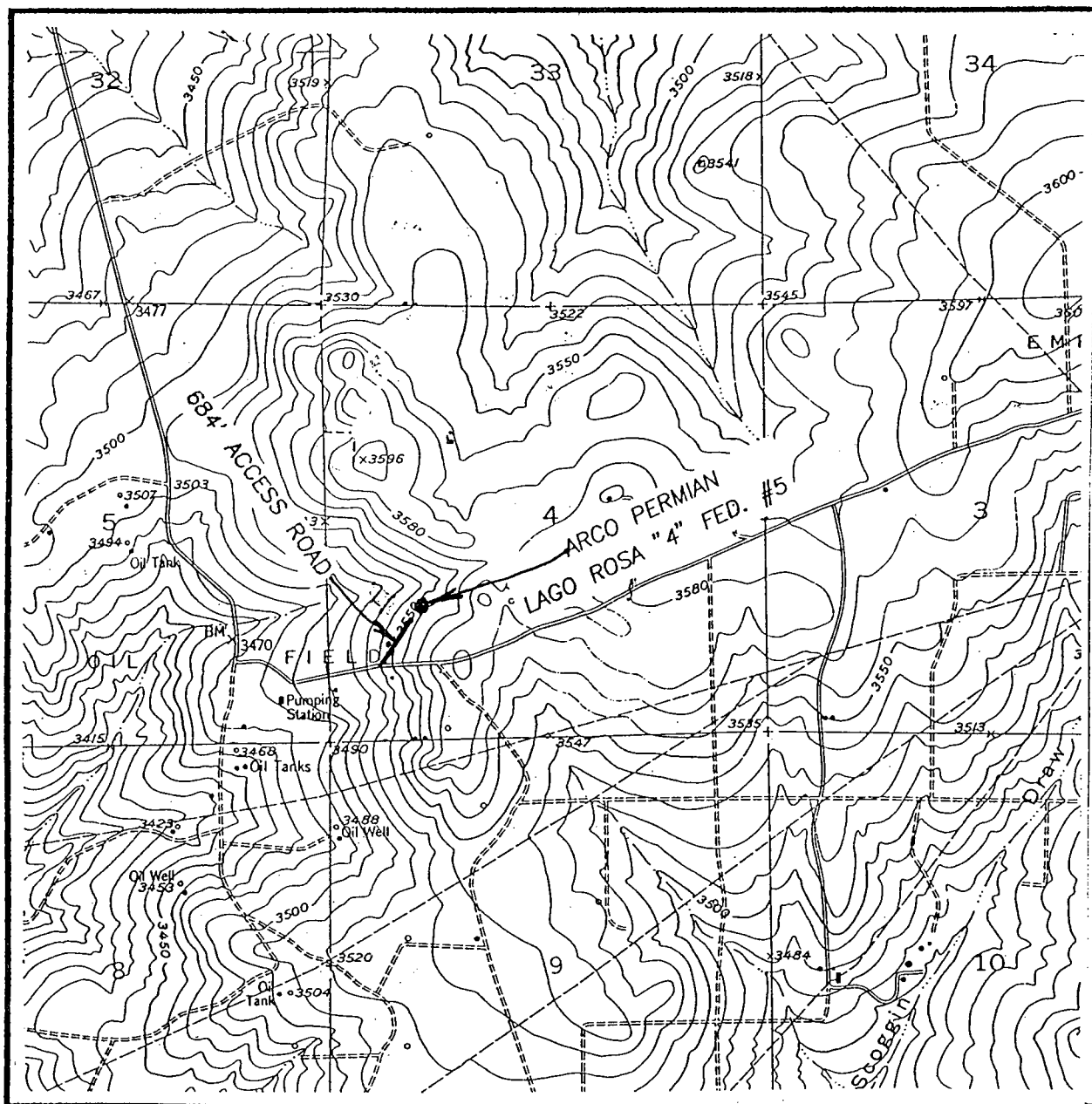


SCALE: 1" = 2 MILES

SEC. 4 TWP. 18-S RGE. 27-ESURVEY N.M.P.M.COUNTY EDDYDESCRIPTION 1550' FSL & 1115' FWLELEVATION 3540'OPERATOR ARCO PERMIANLEASE LAGO ROSA "4" FED.

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL - 10'

SEC. 4 TWP. 18-S RGE. 27-ESURVEY N.M.P.M.COUNTY EDDYDESCRIPTION 1550' FSL & 1115' FWLELEVATION 3540'OPERATOR ARCO PERMIANLEASE LAGO ROSA "4" FED.

U.S.G.S. TOPOGRAPHIC MAP

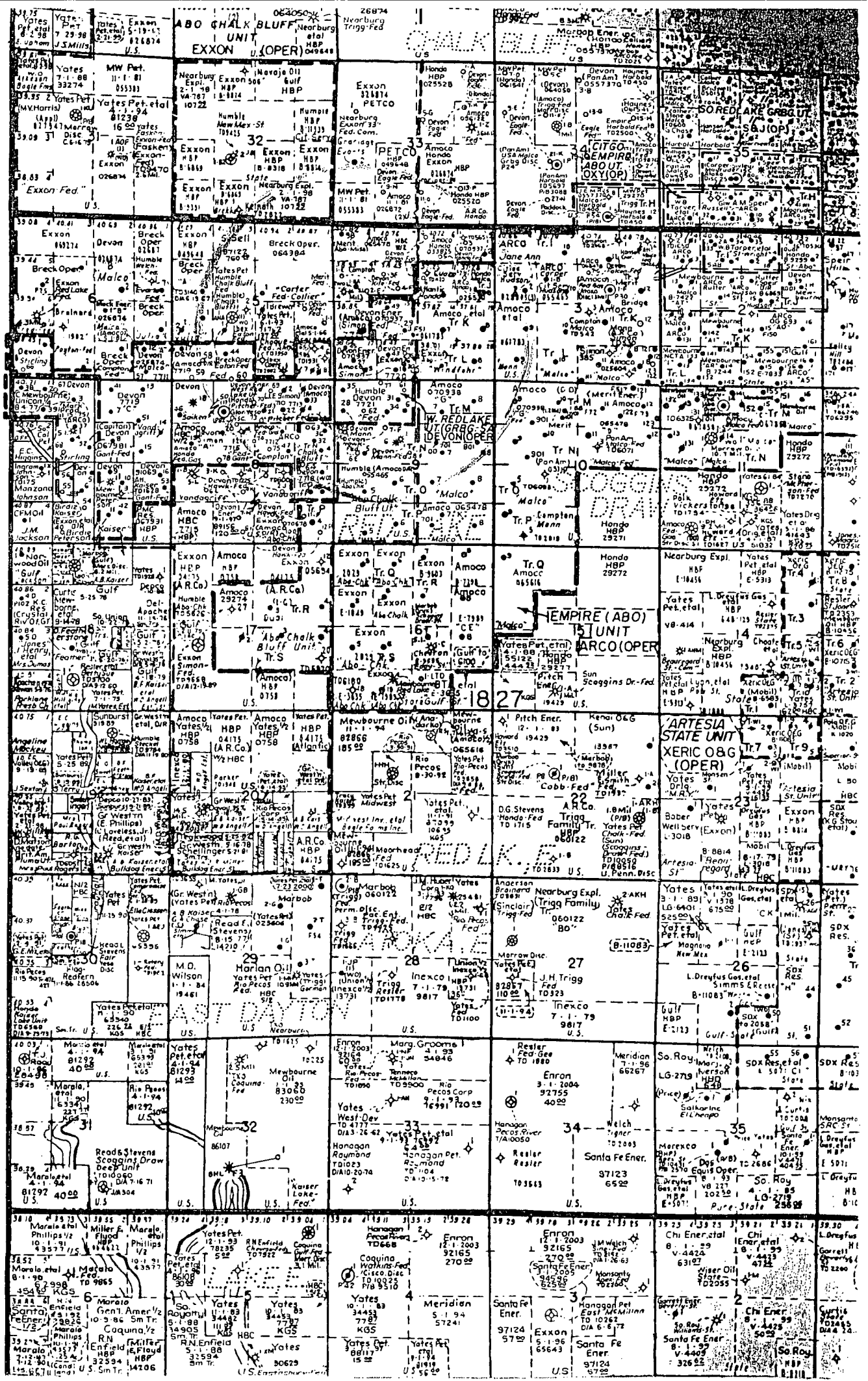
SPRING LAKE, N.M.

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO

(505) 393-3117

EXHIBIT 6

T
18
S

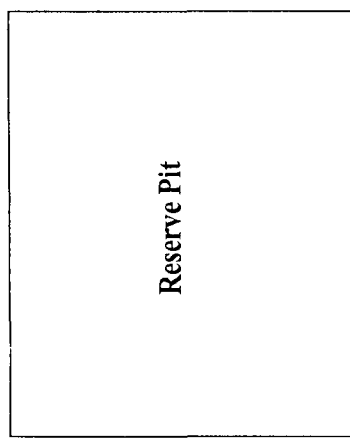




LAGO ROSA "4" FEDERAL #5

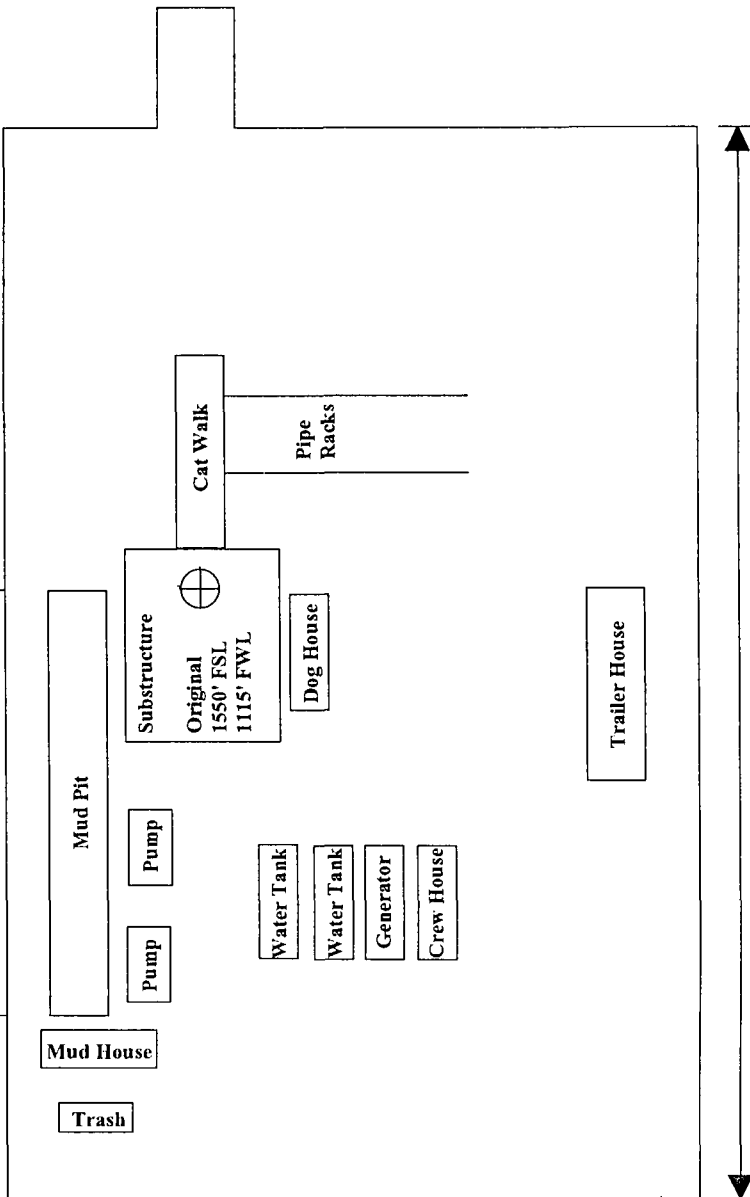
Pad & Rig Layout
Section 4 T18S-R27E
Eddy County, NM

80'



Reserve Pit

80'



250'

160'

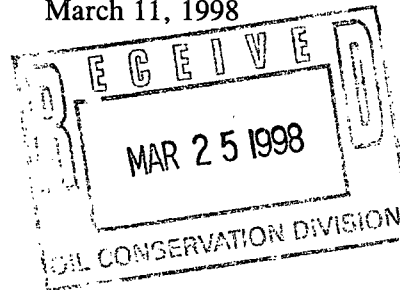
Access Road



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

March 11, 1998



RECEIVED

MAR 16 1998

REGULATORY

ARCO Permian
P. O. Box 1610
Midland, Texas 79702-1610

Attention: Elizabeth A. Casbeer

Re: *Application for administrative approval of an unorthodox oil well location for the Lago Rosa "4" Federal Well No. 5 to be drilled 1550 feet from the South line and 1115 feet from the West line (Lot 16/Unit L) of Section 4, Township 18 South, Range 27 East, NMPM, Red Lake Queen-Grayburg-San Andres Pool, Eddy County, New Mexico.*

Dear Ms. Casbeer:

The subject location is subject to the statewide rules and regulations for oil wells, as promulgated by **Rule 104.C(1)**, which provides for 40-acre oil spacing and proration units, or drilling units, and requires that wells be located no closer than 330 feet to the outer boundary of such 40-acre tract. The information provided is inadequate, it initially appears that locations within this standard window are acceptable and that the drilling of this well would serve only to encroach upon another lease not belonging to ARCO Permian, which could adversely affect correlative rights (see Section 70-2-11.A, NMSA 1978).

Should ARCO Permian wish to pursue this request further please submit the following:

- (1) detailed information to support the drilling of this unorthodox location;
- (2) a detail explanation with adequate supporting data explaining your claim that no standard locations within Lot 16 (Unit L) of said Section 4 are available to ARCO Permian;
- (3) how drainage from this well will or will not affect the offsetting lease or leases; and,
- (4) why directional drilling to a standard bottomhole location is not an option.

Thank you.

Sincerely,

Michael E. Stogner
Chief Hearing Officer/Engineer

cc: New Mexico Oil Conservation Division - Artesia
U. S. Bureau of Land Management - Carlsbad
Kathy Valdes, NMOCD - Santa Fe

- (i) Affected parties in this instance shall be defined as those parties who own interests in the applicable half quarter section (80-acre spacing), quarter section (160-acre spacing), half section (320-acre spacing), or section (640-acre spacing) in which the non-standard spacing unit is situated and which acreage is not included in said non-standard spacing unit;
- (ii) the designated operator of any adjoining or diagonal spacing unit producing from the same pool(s) as the proposed non-standard spacing unit;
- (iii) in the absence of an operator, all lessees of record of any diagonal or adjoining lease owning interests in the same pool(s) as the proposed non-standard spacing unit; and
- (iv) in the absence of an operator or lessee, then to all owners of record of unleased mineral interests. [5-25-64...2-1-96]
- (d) The applicant shall submit a statement attesting that applicant, on or before the same date the application was submitted to the Division, has sent notification to the affected parties by submitting a copy of the application, including a copy of the plat described in Subpart (c) above by certified or registered mail-return receipt in accordance with Rule 1207(6)(a) advising them that if they have an objection it must be filed in writing within twenty days from the date notice was sent. The Division Director may approve the non-standard spacing unit upon receipt of waivers from all said parties or if no said party has entered an objection to the non-standard spacing unit within 20 days after the Director has received the application. [5-25-64...2-1-96]
- (e) The Division Director may set any application for administrative approval for a non-standard spacing unit for public hearing. [5-25-64...2-1-96]

(3) Number of Wells Per Spacing Unit in Non-Protated Gas Pools:
Unless otherwise permitted by special pool rules or authorized after notice and hearing, only one (1) well per spacing unit is permitted in non-protated pools. [5-25-64...2-1-96]

104.E. Form C-102, "Well Location and Acreage Dedication Plat", for any well shall designate the exact legal subdivision allotted to the well and Form C-101, "Application for Permit to Drill, Deepen, or Plug Back", will not be approved by the Division without such proper designation of acreage. [12-29-52...2-1-96]

104.F. UNORTHODOX LOCATIONS

(1) Well locations for producing wells and/or injection wells which are unorthodox based on the well location requirements of Rule 104.C(1)(a) above and which are necessary to permit the completion of an efficient production and injection pattern within a secondary recovery, tertiary recovery, or pressure maintenance project are hereby authorized, provided that any such unorthodox location within such project is no closer than the required minimum orthodox distance to the outer boundary of the lease or the unitized area, nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary. Such locations shall only require such prior approval as is necessary for an orthodox location. [1-1-50...2-1-96]

(2) The Division Director shall have authority to grant an exception to the well location requirements of Sections 104.B and 104.C above or to the well location requirements of special pool rules without notice and hearing when the necessity for such unorthodox location is based upon geologic conditions, archaeological conditions, topographical conditions, or the recompletion of a well previously drilled to a deeper horizon provided said well was drilled at an orthodox or approved unorthodox location for such original horizon. [1-1-82...2-1-96]

(3) Applications for administrative approval of unorthodox locations pursuant to Rule 104.F(2), above, shall be accompanied by a plat showing the subject spacing unit, its proposed unorthodox well location, the diagonal and adjoining spacing units and/or leases (whichever is applicable) and wells, and a list of affected parties. If the proposed unorthodox location is based upon topography or archaeology, the plat shall also show and describe the existent topographical or archaeological conditions. If the proposed unorthodox location is based upon geology, the application shall include appropriate geologic exhibits and a discussion of the geologic conditions which result in the necessity for the unorthodox location. [2-9-66...2-1-96]

- (a) Adjoining and diagonal spacing units shall be defined as those immediately adjacent existing spacing units in the same pool(s) as the proposed unorthodox well and towards which the unorthodox well location encroaches. [2-9-66...2-1-96]
- (b) Affected parties shall be defined as those parties who own interests in leases or operate wells on adjoining or diagonal spacing units and include:
 - (i) the designated operator of any adjoining or diagonal spacing unit producing from the same pool(s) as the proposed well;
 - (ii) in the absence of an operator, all lessees of record of any diagonal or adjoining lease owning interests in the same pool(s) as the proposed well; and
 - (iii) in the absence of an operator or lessee, all owners of record of unleased mineral interests in the same pool(s) as the proposed well. [2-9-66...2-1-96]

(4) The applicant shall submit a statement attesting that applicant, on or before the same date the application was submitted to the Division, has sent notification to the affected parties by submitting a copy of the application, including a copy of the plat described in Rule 104.F(3) above by certified or registered mail-return receipt in accordance with Rule 1207(A)(5) advising them that if they have an objection it must be filed in writing within twenty days from the date notice was sent. The Division Director may approve the unorthodox location upon receipt of waivers from all said parties or if no said party has entered an objection to the unorthodox location within 20 days after the Director has received the application. [2-9-66...2-1-96]

(5) The Division Director may set any application for administrative approval of an unorthodox location for public hearing, and may require that a directional survey be run in the unorthodox well to establish the actual location of the producing interval(s). [1-1-82...2-1-96]

104.G. Whenever an exception is granted, the Division may take such action as will offset any advantage which the person securing the exception may obtain over other producers by reason of the unorthodox location. [1-1-50...2-1-96]

104.H.

If the drilling tract is within an allocated oil pool or is

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104.H. If the drilling tract is within an allocated oil pool or is

Facsimile Cover Sheet

Referred 3/20

To: Michael Stogner
Company: NMOCD, Santa Fe
Phone: 505-827-8185
Fax: 505-827-8177

From: Dave Pearcy
Company: ARCO Permian
Phone: 915-688-5355
Fax: 915-688-5246

Date: 3/19/98, 3:30pm

Pages including this ~~4~~ 5
cover page:

Re: OCD request on Red Lake Unorthodox locations (REVISED)
(Michael: Following text is corrected fm earlier today. Keep all prior
attachments, however, and add the 3 new ones here)

As shown in the attached ltr fm Barry Hunt, the BLM will now allow us an orthodox location for our West Red Lake 4 Fed #2. We will resubmit this as a sundry notice to BLM, and the unorthodox request will be dropped.

The Lago Rosa 4# Fed 5, according to BLM, cannot be moved to any orthodox spot in the SE quadrant of this 38.85-ac tract (Lot 16). We believe the staked location, which falls 277' FSL and 200' FEL of Lot 16 is the most feasible spot, and request your reconsideration for admin approval.

Has Devon objected? Devon told me they would not, and that they have similar unorthodox locations. As of July, Devon and predecessors had produced 347 MBO from Q-G-SA pays in the eight 40-acre tracts surrounding us, and was currently producing 222

BOPD from thirteen producers with two more wells now completing. We need two optimally-spaced wells on Lot 16 to protect us from any further competitive drainage in the Red Lake (Q-G-SA) pool. In spite of proximity to the lease line, drainage from the proposed well will only capture our remaining reserves, and not affect the offsetting leases.

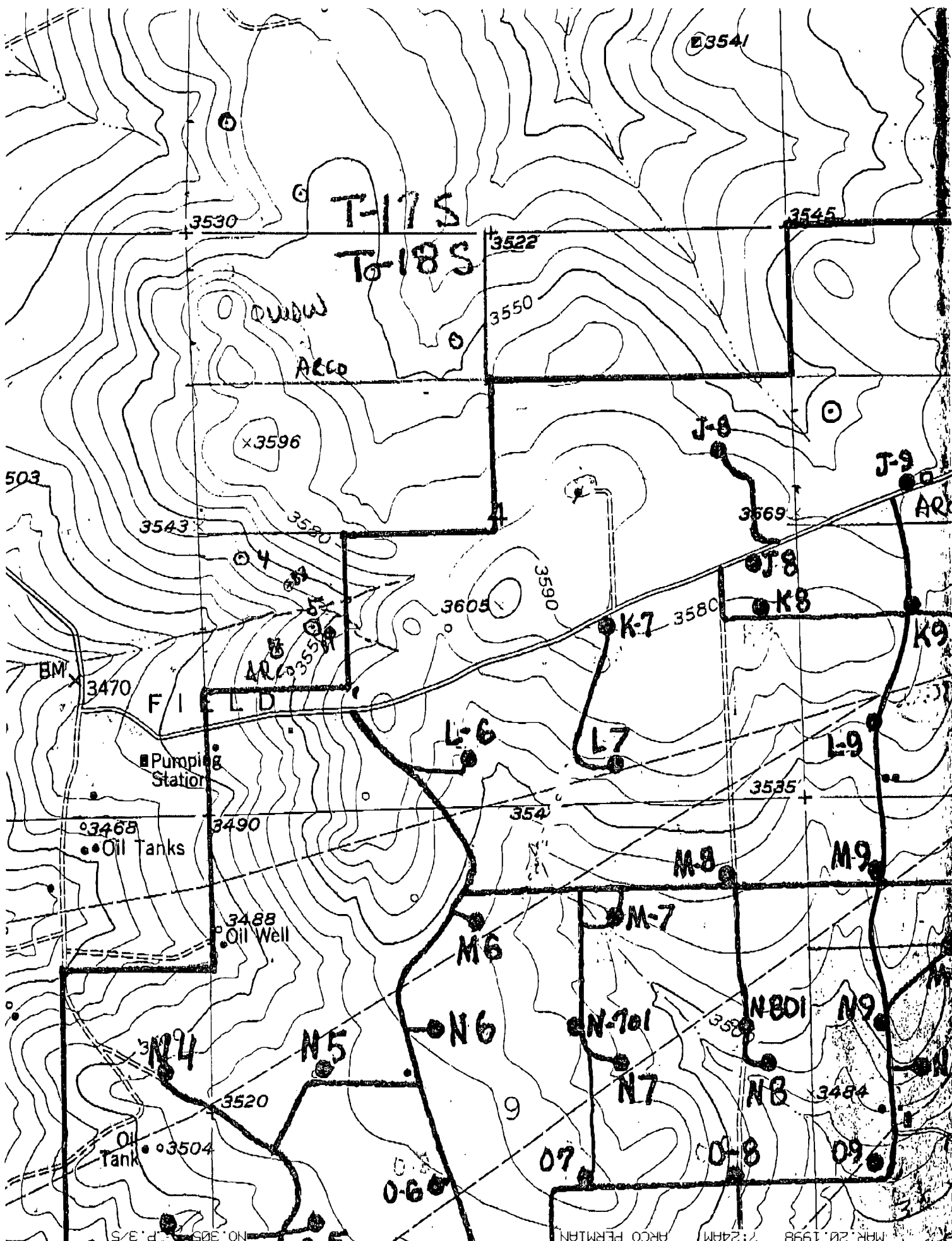
The topo map shows how an E-W gully severely limits available locations on Lot 17. BLM's 2d alternate is even more unorthodox. The BLM's 3d alternate (1980 FSL and 790 FWL) would be orthodox, but is only 514' away from our approved standard location for Fed #4 (2210 FSL and 330 FWL), and we believe that well spacing any closer than 700' is wasteful. Mr. Hunt told me today he does not think topography would allow his alt#3 to be shifted south or east to attain our 700' minimum.

(Directional drilling would add 100M\$ to our wellcost, and makes these wells uneconomic.)

3:30pm: added West Engineering's plat for Sec 4, and ARCO engineer's sketch. Darker topo map is annotated with our original #5 loc, B1=BLM's revision that is requested, and B2 and B3 as BLM alternates.

Will this be adequate for us to resubmit for admin approval?

Thank you. Dave



ARCO Permian

General Purpose Worksheet

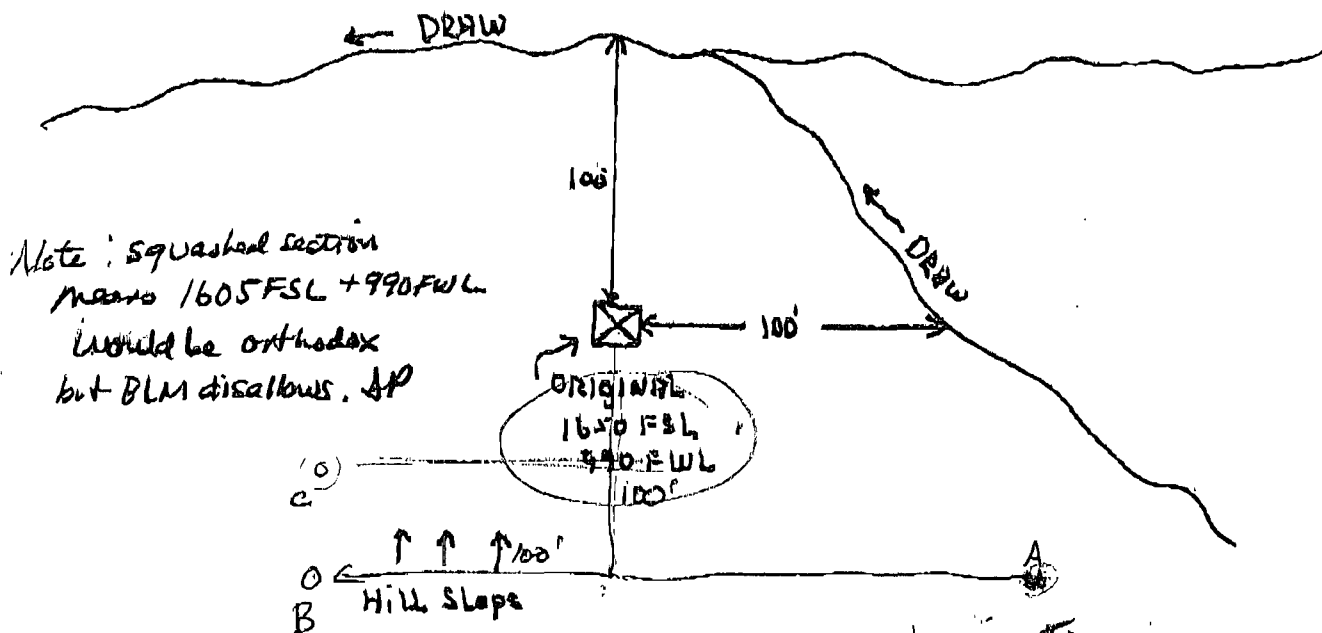
Subject	Page No.	of
File	By D. Walker	Date 10/97

N

Lago ROSA 4 Fed #5

V DOOR WEST

BRING ROAD IN FROM SOUTH 1/4 mile



Note: Squashed section
means 1605 FSL + 990 FWL
would be orthodox
but BLM disallows. AP

Problems

BLM requests
we move to
1550 FSL and 1115 FWL

CHALK BLUFF RD

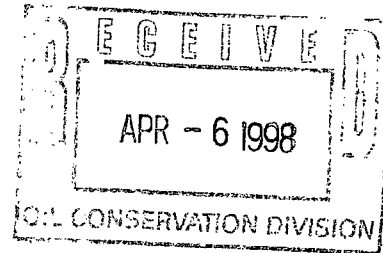


ARCO Permian
600 North Marienfeld
Midland TX 79701-4373
Post Office Box 1610
Midland TX 79702-1610
Telephone 915 688 5570

Elizabeth A. Casbeer
Regulatory/Compliance Analyst

March 27, 1998

Devon Energy Corporation
ATTN: Ken Gray, Landman
20 N. Broadway, Suite 1500
Oklahoma City, OK 73102



RE: Lago Rosa 4 Federal Well No. 5
1550' FSL & 1115' FWL
Sec 4, T-18-S, R-27-E
Eddy, Co., NM

Mr. Gray:

ARCO Permian respectfully requests your waiver to confirm the verbal non-objection we received on the Lago Rosa 4 Federal Well No. 5 location, located in the Red Lake (Q-G-SA) Field. The engineer's plat (attached) revised this location to 277' FSL of the lease and 200' FEL of the lease, both of which are lease lines with Devon. As cited in our previous letter, the BLM has directed this location shifted away from the orthodox location to the cited location.

Please submit with original signature, one copy of this letter, to the NMOCD, and one copy to ARCO in the enclosed self addressed envelopes. Your expeditious handling of this situation is appreciated.

If you have any questions, please contact me at 915/688-5570. Thank you for your assistance in this matter.

Yours very truly,

Elizabeth A. Casbeer
Regulatory Compliance Analyst

Attachments

xc: Dave Percy - 61123/MIO
Central Files - 041/MIO
R/C Files

=====

WAIVERS:

Devon Energy Corporation has no objection to the cited location.

Signed the 2ND day of APRIL, 1998

By:

Title: DISTRICT LANDMAN

Section 4 Township 18 South Range East
Eddy, County
 Scale: 1" = 1000'

