

1301 W. Grand Avenue  
Artesia, NM 88210

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <i>DM-101081</i>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Perenco LLC		7. If Unit or CA Agreement, Name and No.
3a. Address 6 Desta Drive, Suite 6800, Midland, TX 79705		8. Lease Name and Well No. 1625 Fed Com #271 34020
3b. Phone No. (include area code) (432) 682 8553		9. API Well No. 30-015-34195
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 660 FNL & 660 FWL unit letter D At proposed prod. zone Bottom Hole Location : 660 FSL & 660 FWL unit Letter M		10. Field and Pool, or Exploratory Wildcat Cottonwood Creek Abo E.
14. Distance in miles and direction from nearest town or post office* 3 miles NW of Artesia		11. Sec., T. R. M. or Blk. and Survey or Area Sec 27, T-16-S, R-25-E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660 ft		12. County or Parish Eddy
16. No. of acres in lease 600		13. State NM
17. Spacing Unit dedicated to this well 320 acres		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A		20. BLM/BIA Bond No. on file NMB000094
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3499 GL		22. Approximate date work will start* 08/01/2005
23. Estimated duration 1 month		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Lisa Hunt</i>	Name (Printed/Typed) lisa Hunt	Date 02/18/2005
Title Regulatory Technician		
Approved by (Signature) <i>/s/ Tony J. Herrell</i>	Name (Printed/Typed) <i>/s/ Tony J. Herrell</i>	Date MAY 03 2005
Title FIELD MANAGER CARLSBAD FIELD OFFICE		

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, are attached.

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

\*(Instructions on page 2)

432 687 1575 Larry Gillette

Reswell Controlled Water Basin

WITNESS 9 5/8" CEMENT JOB

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to  
appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe  
office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

RECEIVED

MAR 03 2005

CDP-ARTESIA

Operator: <u>Perenco LLC</u>		Telephone: <u>432 688-0951</u>		e-mail address: <u>lhunt@us.perenco.com</u>	
Address: <u>6 Desta Drive, Suite 6800, Midland, Texas 79705</u>					
Facility or well name: <u>1625 Fed Com #271</u>		API #: _____		U/L or Qtr/Qtr <u>D</u> Sec <u>27</u> T <u>16S</u> R <u>25E</u>	
County: <u>Eddy</u>		Latitude <u>325357.34 N</u>		Longitude <u>1042846.99 W</u> NAD: 1927 <input type="checkbox"/> 1983 <input checked="" type="checkbox"/>	
Surface Owner: Federal <input checked="" type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>					
<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>12,000</u> bbl		<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____			
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)		Less than 50 feet		(20 points)	
		50 feet or more, but less than 100 feet		(10 points)	
		<u>100 feet or more</u>		(0 points) <u>○</u>	
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)		Yes		(20 points)	
		<u>No</u>		(0 points) <u>○</u>	
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)		Less than 200 feet		(20 points)	
		200 feet or more, but less than 1000 feet		(10 points)	
		<u>1000 feet or more</u>		(0 points) <u>○</u>	
		<b>Ranking Score (Total Points)</b>		<u>○</u>	

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 3/1/05

Printed Name/Title Lisa Hunt - Regulatory Technician

Signature Lisa Hunt

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title Wild App

Signature Wild App

MAR 4 2005

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000

OCD-ARTESIA

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

PERENCO LLC. (FRANK NIX 432-682-8553)

3a. Address

6 DESTA DRIVE  
SUITE 6800 MIDLAND, TEXAS 79705

3b. Phone No. (include area code)

432-682-8553

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SURFACE LOCATION: 200' FNL & 700' FWL SEC. 27 T16S-R25E

BOTTOM HOLE LOCATION 660' FNL & 660' FWL SEC. 27 T16S-R25E

5. Lease Serial No.

NM-101081

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

FEDERAL-COM. 1625 # 271

9. API Well No.

30-015-34195

10. Field and Pool, or Exploratory Area

COTTON WOOD ABO EAST GAS

11. County or Parish, State

EDDY CO. NEW MEXICO

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Move
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Location
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BLA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-3 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

JUL 06 2005

OCD-ARTESIA

1. Perenco requests the approval to move their location from;

660' FNL & 660' FWL SECTION 27 T16S-R25E EDDY CO. NEW MEXICO

TO" 700' FWL & 200' FNL SECTION 27 T16S-R25E EDDY CO. NEW MEXICO

2. This is a horizational well and the hole will enter the pay zone at 660' FNL & 660'FWL OF SECTION 27 T16S-R25E.

3. The reason for this move is that water lines and pipelines are in the way of the original location.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Joe T. Janica

Title Agent

Signature

Date 05/18/05

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ Joe G. Lara

FIELD MANAGER

Date JUL 01 2005

Conditions of approval, if any, are attached. Approval of this notice 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.

Office CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

OIL CONSERVATION DIVISION  
2040 S Pacheco  
Santa Fe, NM 87505☐ AMENDED REPORT

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

2040 S Pacheco, Santa Fe, NM 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 75255	Pool Name COTTONWOOD CREEK EAST ABO GAS
Property Code	Property Name FED-COM 1625	Well Number 271
OGRID No. 218885	Operator Name PERENCO, LLC	Elevation 3499'

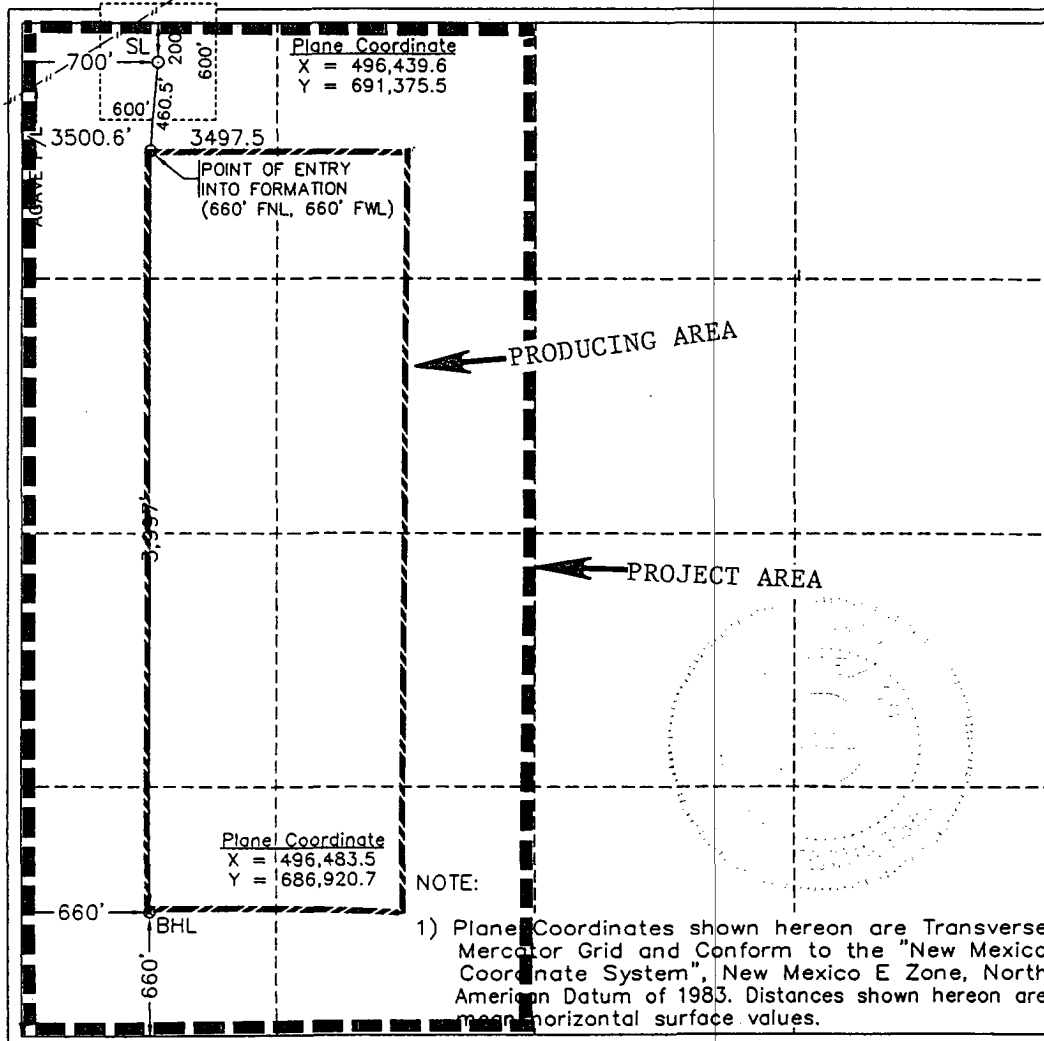
## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	16 S	25 E		200	NORTH	700	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
M	27	16 S	25 E		660	SOUTH	660	WEST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A  
3499.9' 3497.1' NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

## OPERATOR CERTIFICATION

I hereby certify the the information  
contained herein is true and complete to the  
best of my knowledge and belief.  
Signature  
Joe T. JanicaPrinted Name  
AgentTitle  
Date  
05/18/05

## 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  
upervision and that the same is true and  
correct to the best of my belief.

May 6, 2005

Date Surveyed  
Signature & Seal of  
Professional Surveyor  
JSR

W.O. Num. 2005-0350

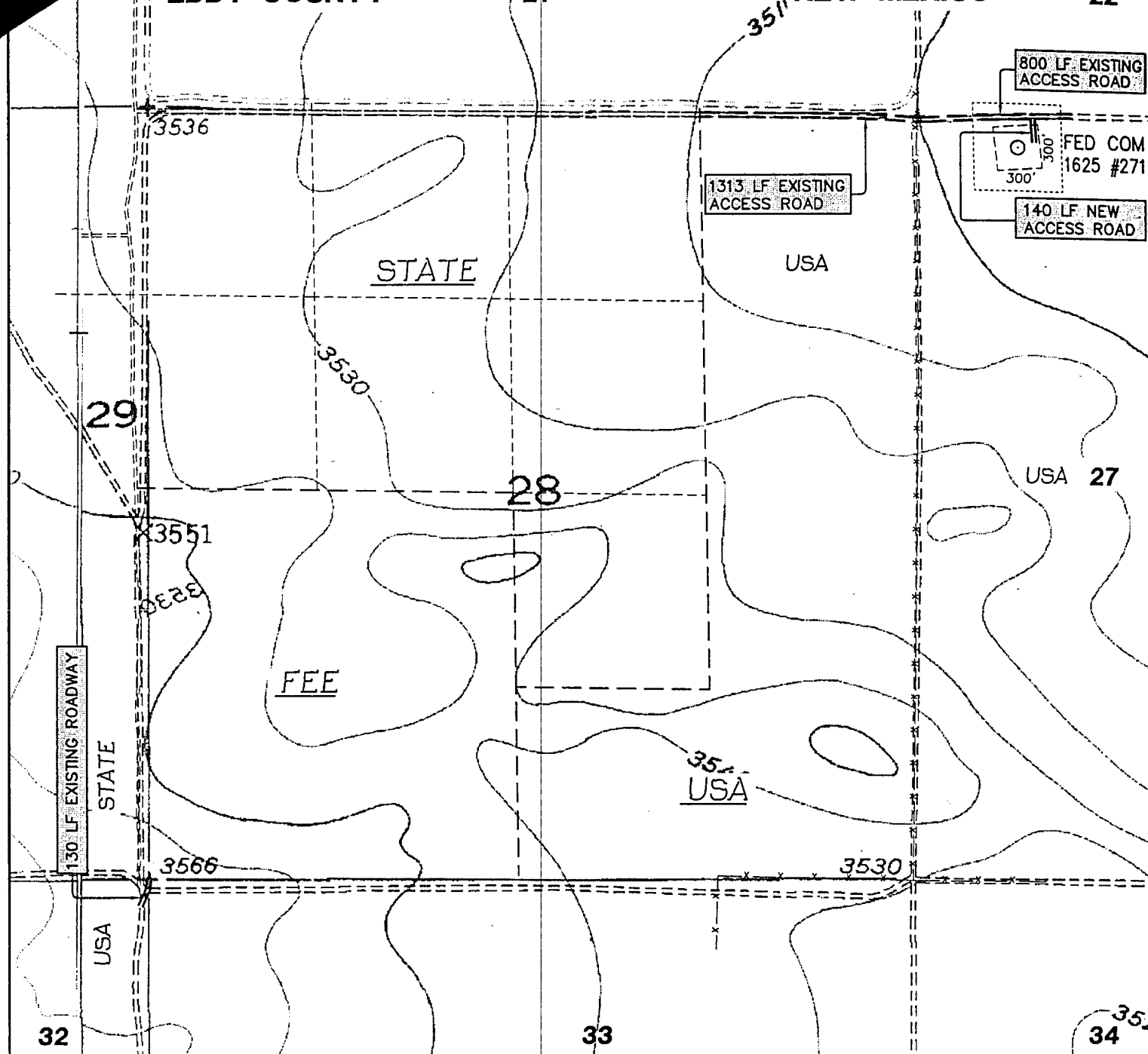
Certificate No. MACON McDONALD 12185

**TOWNSHIP 16 SOUTH, RANGE 25 EAST, N.M.P.M.  
EDDY COUNTY**

21

**NEW MEXICO**

22



1000 0 1000 2000 FEET



**PERENCO LLC**

30' WIDE ROADWAY EASEMENTS CROSSING USA LAND  
IN SECTIONS 22, 27, 28 & 32, TOWNSHIP 16 SOUTH,  
RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

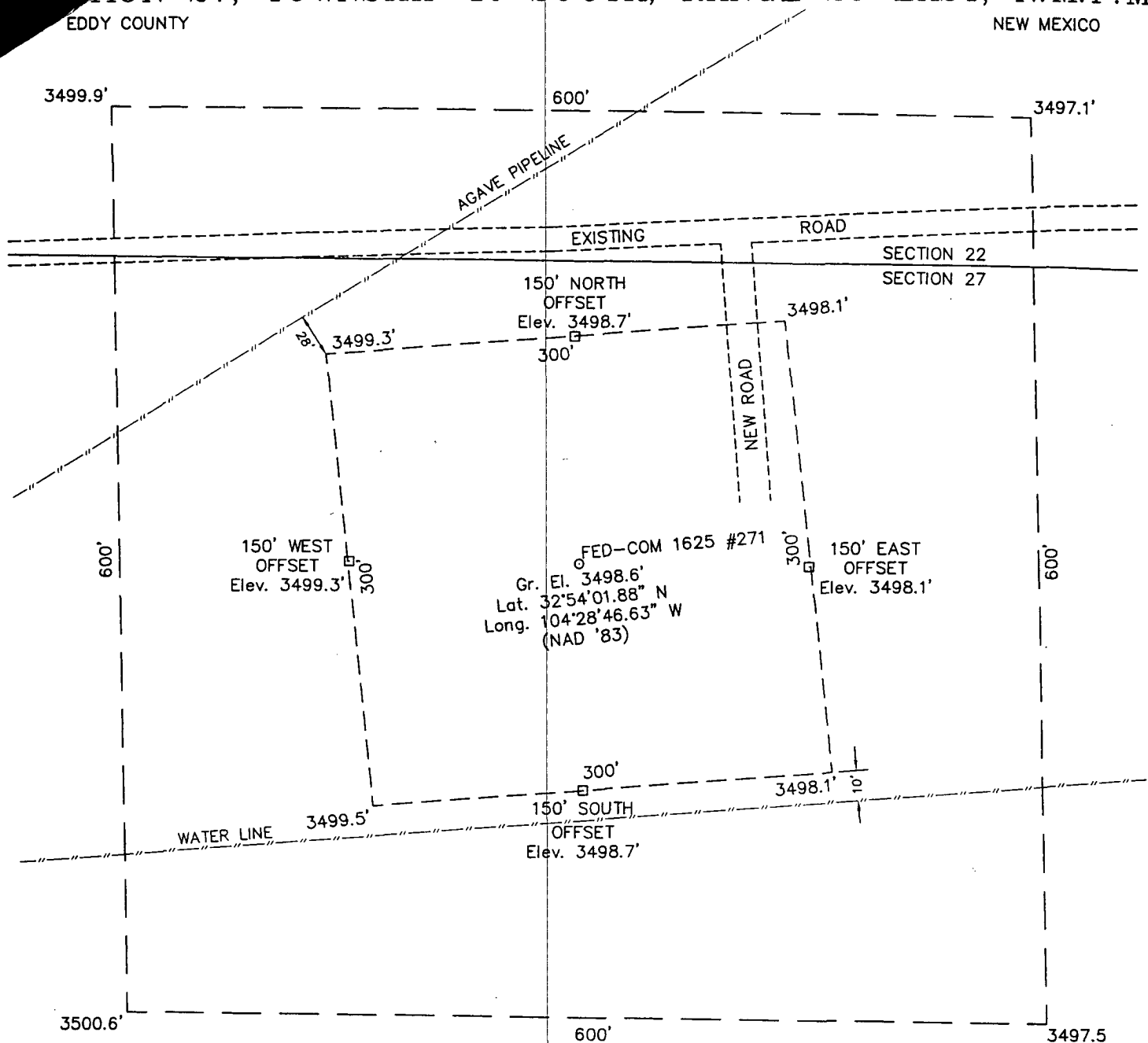
Survey Date: May 12, 2005	Sheet 1 of 1 Sheets
W.O. Number: 2005-0350	Drawn By: J.S.R.
Date: May 5, 2006	2005-0350.DWG
Scale: 1" = 1000'	

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED  
FROM NOTES TAKEN IN THE FIELD IN A BONA FIDE  
SURVEY MADE UNDER MY SUPERVISION

MACON McDONALD N.M. P.L.S. No. 12185

**WEST COMPANY OF MIDLAND, INC.**

110 W. LOUISIANA AVE., STE. 110  
MIDLAND TEXAS, 79701  
(915) 687-0865 - FAX: (915) 687-0868



#### DRIVING DIRECTIONS

FROM THE INTERSECTION OF US HIGHWAY 285 AND US HIGHWAY 82 IN ARTESIA, PROCEED WEST ALONG HIGHWAY 82, 5.85 MILES; THEN NORTH ALONG PERENCO LEASE ROAD (COUNTY ROAD "LONESOME TRAIL") 3 MILES; THEN NORTH ALONG EXISTING 2-TRACK ROAD ON EAST SIDE OF FENCE 1 MILE, THEN EAST ALONG EXISTING ROAD 1.1 MILE. LOCATION WILL BE SOUTH 250± FEET, IN PASTURE

## PERENCO, LLC

### FED-COM 1625 #271

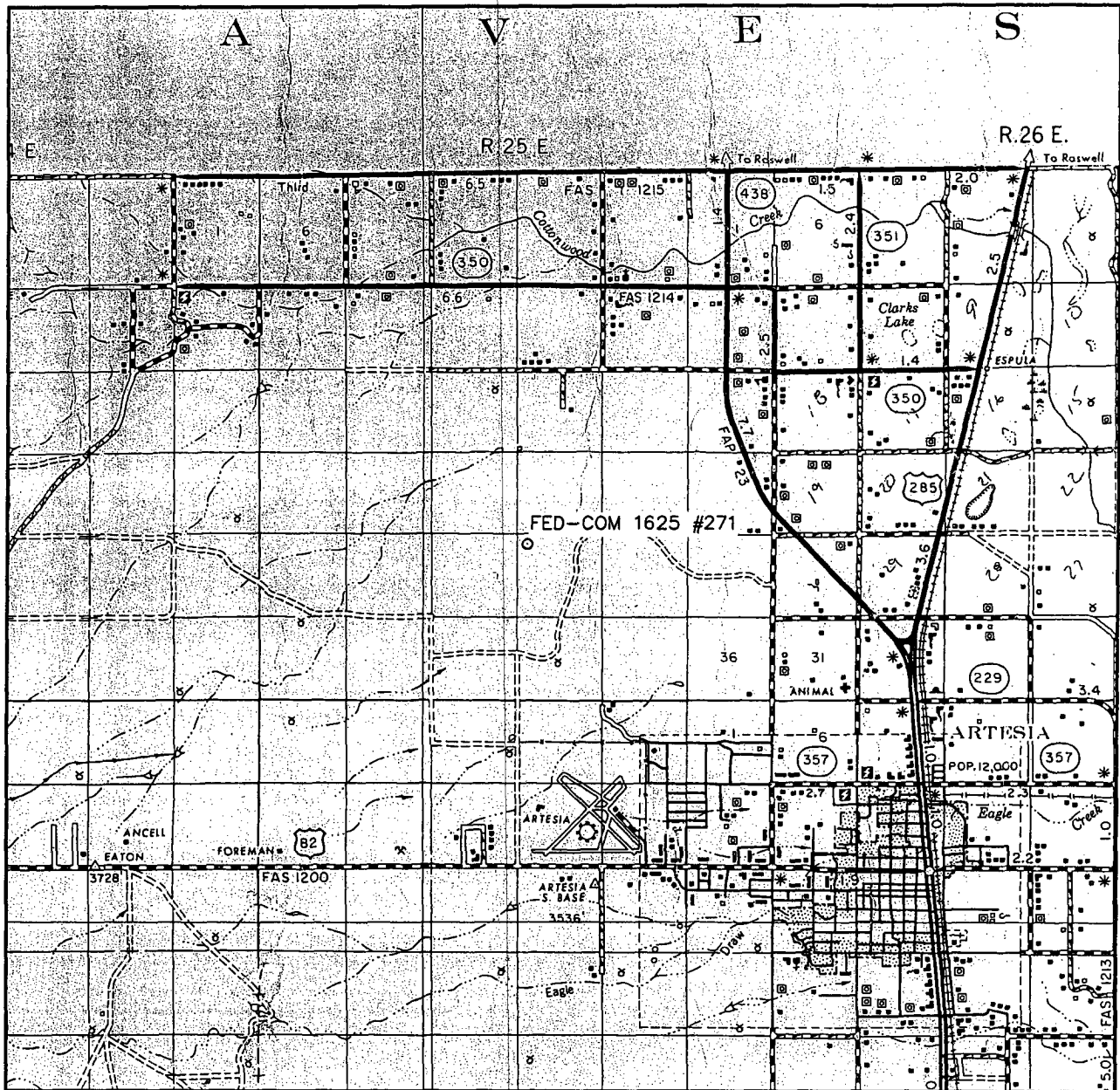
Located 200' FNL & 700' FWL, Section 27  
 Township 16 South, Range 25 E, N.M.P.M.  
 Eddy County, New Mexico

Drawn By: JSR	Date: May 12, 2005
Scale: 1"=100'	Field Book: 272 / 53-54
Revision Date:	Quadrangle: Espuela
W.O. No: 2005-0350	Dwg. No.: L-2005-0350

**WEST**  
**COMPANY**  
 of Midland, Inc.

110 W. LOUISIANA, STE. 110  
 MIDLAND TEXAS, 79701  
 (432) 687-0865 - (432) 687-0868 FAX

# VICINITY MAP



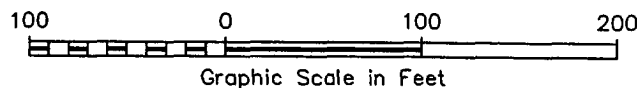
SCALE: 1" = 2 MILES

SEC. 27 TWP. 16-S RGE. 25-E  
 SURVEY N.M.P.M.  
 COUNTY EDDY  
 DESCRIPTION 660' FNL & 660' FWL  
 ELEVATION 3499'  
 OPERATOR PERENCO, LLC  
 LEASE FED-COM 1625



**WEST  
COMPANY**  
of Midland, Inc.

110 W. LOUISIANA, STE. 110  
 MIDLAND TEXAS, 79701  
 (432) 687-0865 - (432) 687-0868 FAX



Dwg. No.: L-2005-0133-A

110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX



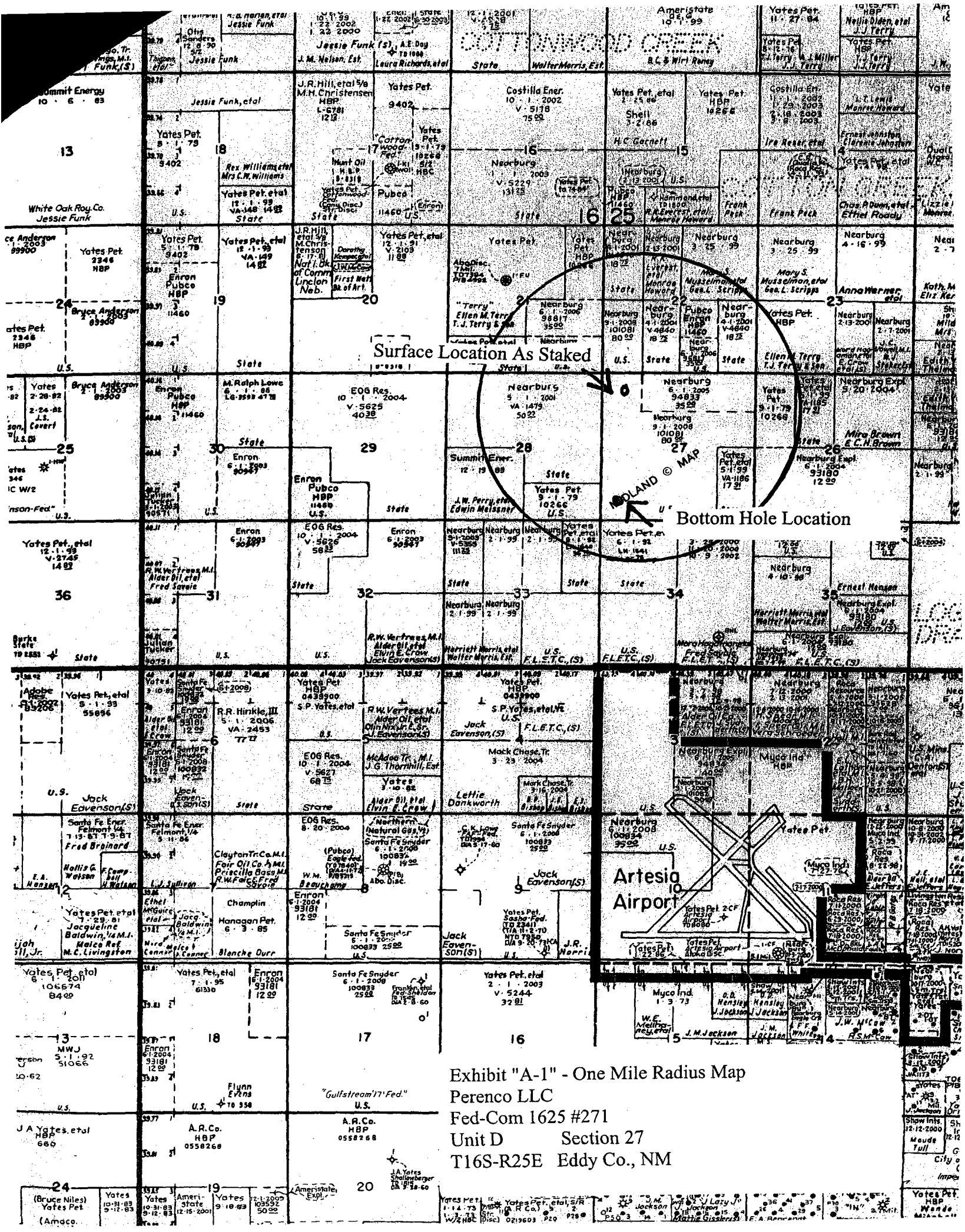


Exhibit "A-1" - One Mile Radius Map  
Perenco LLC  
Unit D Section 27  
T16S-R25E Eddy Co., NM



## Drilling Program: 1625 Fed Com #271

### Objectives

Drill vertically to ~5100' TD and then drill laterally to test the lower Abo formation for hydrocarbons.

### Location

#### Surface Location

Section: 27 Township: 16 Range: 25 FNL: 660 FWL: 660

#### Bottom Hole Location

Section: 27 Township: 16 Range: 25 FSL: 700 FWL: 660

#### Elevation

3499'

### Estimated Days to Completion

30 days drilling

30 days testing and completion

### Geology

#### *Estimated Tops of Important Geological Markers*

Chalk Bluff	0-200'
San Andres	525'
Glorieta	1713'
Tubb	3174'
Abo	3855'
Wolfcamp	5015'
TD	5100'

#### *Estimated Depths of Anticipated Fresh Water and Potential Hydrocarbon Producing Zones*

Quaternary Alluvium	0-200'	Fresh Water
San Andres	525'	Oil
Glorieta	1713'	Oil/Gas
Tubb	3174'	Oil/Gas
Abo Pay	4875'	Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13-3/8" casing at 350' and circulating cement back to surface, and 9-5/8" casing will be set at 1200' with cement circulated back to surface.

## **Drilling Information**

### **H2S**

No hydrogen sulfide or other hazardous gasses or fluids have been encountered, reported or are known to exist at this depth in this area.

### **Shallow Gas**

No shallow accumulations of have been encountered, reported or are known to exist at this depth in this area.

### **Lost Circulation**

No major lost circulation zones have been reported in offsetting wells. However in the wider area around the well site, minor lost circulation events have been experienced between 171- 730' and at 4670'.

### **Conditions at TD**

The estimated bottom hole temperature (BHT) at TD is 110 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 2500 psig.

## **Data Acquisition Program**

Electric logging program will consist of:

- GR-Dual Laterlog-MSFL 1100' to TD

- GR-Compensated Density-Neutron from 1100' to TD

- GR-Compensated Neutron run from Surface to 1100'

No cores are planned.

## **Well Control**

### **Minimum Specifications for Pressure Control (See exhibit 1)**

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (2000 psi WP) preventer and an annular preventer (2000-psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on top and drill pipe rams on bottom. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2. Before drilling out of 1<sup>st</sup> intermediate casing, the ram-type BOP and accessory equipment will be tested to 2000/1000 psi and the annular to 2000 psig pressure.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

### **Auxiliary Well Control and Monitoring Equipment**

A kelly cock will be kept in the drill string at all times.

A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

A mud-logging unit will be continuously monitoring drilling penetration rate and hydrocarbon shows from 1100' to TD of Horizontal Lateral.

### Mud Program - Summary

The well will be drilled to TD with a Fresh Water /gel mud system. The applicable depths and properties of this system are as follows:

Depth	Type	(PPG) Wt(sec)	Viscosity	Water loss(cc)
0-1200	Fresh Water (Spud Mud)	8.5	28	N.C.
1200-5100'	F. Water Gelled System	9.3	28-30	N.C.
KOP - TD	Fresh Water w/ Polymer Sweeps	8.4-8.6	28	N.C.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

### Casing & Cementing Program - Summary

#### Casing

Hole Size	Interval	OD Casing	Weight Grade Jt.
17-1/2"	0-350'	13-3/8"	48# H-40 ST&C
12-1/4"	0-1200'	9-5/8"	40# N-80 LT&C
8-3/4"	0-5500'	7"	26# J-55 LT&C
6-1/8"	4850-9000'	4-1/2"	11.35# N-80 HDL

#### Cement

17-1/2" Surface Casing	Cement to surface with 450 sx Class C w/ 2% CaCl
9-5/8" Intermediate	Cement to surface. Lead with 375 sx 65/35 Class C Poz + 5% NaCl + .25#/sk Celloflake + 6% Bentonite. Tail with 100 sx C + 2% CaCl
7" Production	Cement w/ Lead 500 sx 50/50 Class C Poz + 5% NaCl + 10% gel. Tail w/ 170 sx Class C
4-1/2" slotted liner	Will not be cemented

## Drilling Program

### 1. Surface-350'

1.1 MIRU

1.2 P/U 17.5" bit and surface BHA, drill to 350'

Surface BHA		Mud Characteristics	
1 x Drill Bit	17.5"	Mud Weight	8.4
1 x Bit Sub	8"	Viscosity	28
1 x Crossover	8"	pH	11
1 x Shock absorber	8"	Other	
8 x Collar	8"		

1.3 Circulate high-viscosity sweep

1.4 POOH and RIH 13-3/8 surface casing to 350'.

Size	13-38"	Cement	Class C + 2% CaCl
Specification	40# N-80 (LT&C)	# Sacks	450
# Joints	8	Estimated TOC	Surface

1.5 Cement and circulate to surface

1.6 Cut off casing and weld on 13-3/8" casing head

1.7 NU spacer spool, flowlines, and annular BOP

1.8 Per NM regs, wait until lower 20% of cement has reached a compressive strength of 500 psi, at least 8 hours.

### 2. 350'- 1100'

2.1 P/U 12-1/4 bit and intermediate BHA. RIH to TOC. Tag and note depth.

Intermediate BHA		Mud Characteristics	
1 x Drill Bit	12-1/2"	Mud Weight	8.4
1 x Shock absorber	8"	Viscosity	28
2 Drill Collar	8"	pH	11
1 x IB Stabilizer	12-1/4	Other	
1 x Collar	8"		
1 x IB Stabilizer	12-1/4"		
5 x Collar	8"		
1 x Cross Over	8"		
23 x Collar	6-1/4"		

2.2 Pressure test casing to at least 600 psi

2.3 Drill out plug and cement.

- 2.4 Drill ahead to 1200'
- 2.5 Circulate high-viscosity sweep
- 2.6 POOH and lay down 12-1/2 BHA
- 2.7 P/U and RIH 9-5/8 intermediate casing to 1200'

Size	9-5/8"	Cement	Class C + 5% CaCl + 5% NaCl + 6% Bentonite + 0.25 lb/sk celloflake
Specification	40# N-80 (LT&C)	# Sacks	375 + 100 tail
# Joints	27	Estimated TOC	Surface

- 2.8 Cement and circulate to surface
- 2.9 Install 9-5" casing head
- 2.10 NU spacer spool, flow lines, and annular BOP
- 2.11 Test BOP to 2000 psi, annular to 1500 psi

### 3. 1200 - 5500'

- 3.1 P/U 8-3/4" bit and production string BHA. RIH, tag and note TOC
- 3.2 Drill through cement and plug. Continue to 5100' (TD to be finalized by geologist)

BHA		Mud Characteristics	
1 x Drill Bit	8-3/4"	Mud Weight	9.3
1 x Tri Collar	8-3/4"	Viscosity	28
2 x Drill Collar	6-1/4"	pH	11
1 x IBS	8-3/4"	Other	
26 x Collar	6-1/4"		

- 3.3 At TD, circulate to clean hole
- 3.4 Spot high-viscosity mud on bottom. POOH
- 3.5 Run triple combo log (GR-Dual Laterlog-MSFL and GR-Compensated Density-Neutron)
- 3.6 P/U and RIH 7" Production Casing

Size	7"	Cement	Class C + 5% NaCl + 10% Bentonite + 0.25 lb/sk celloflake
Specification	26# L80 (LT&C)	# Sacks	500 + 170 tail
# Joints	120	Estimated TOC	900'

- 3.7 Cement, circulate TOC to 1000' (200' overlap with intermediate casing)
- 3.8 Install 7" casing head
- 3.9 NU spacer spool, flow lines, and annular BOP

### 3.10 Run Cement Bond Log

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#### 4. Lateral Section

- 4.1 Run cast iron bridge plug on wireline to 4535 ft
- 4.2 RIH with whipstock assembly
- 4.3 RIH with wireline to check orientation: 180° (south)
- 4.4 Set whipstock and shear off. POOH W/S setting string
- 4.5 RIH with window mill, cut window between 4507' and 4525' including 8 ft of formation to create rat hole
- 4.6 Circulate high viscosity sweep
- 4.7 P/U and RIH Lateral section BHA, drill and kickoff to west, building angle at 23°/100ft degrees until 90° is reached.

Lateral Section BHA		Mud Characteristics	
Bit	6-1/8	Mud Weight	8.4
Motor (2.5 Deg)	4-3/4	Viscosity	28
Float Sub	4-11/16	pH	11
UBHO	4-5/8	Other	
Monel Collar	4-3/4		
Monel Collar	4-11/16		

- 4.8 Drill and slide horizontal section to 9000' MD (4875' TVD)
- 4.9 At TD circulate to clean hole
- 4.10 Spot slider fluid
- 4.11 POOH

---

#### 5. Completion

- 5.1 RIH with 105 joints pre-perforated 11.6# L080 (ULTFS) 4.5" liner and packer hanger.
- 5.2 Set hanger at 4400 ft.
- 5.3 POOH
- 5.4 Nipple Down BOPs
- 5.5 R/D and release drilling rig

---

#### 6. Stimulation

- 6.1 RU Stinger's Casing Saver
- 6.2 RU Acid truck
- 6.3 Test lines to 7500 psi
- 6.4 Load well with 40 bbls water
- 6.5 Pump 65,000 bbls 15% NEFE HCL at 100 bbls/min
- 6.6 Flush with 245 bbls slick water



## **Surface Use and Operations Plan**

### **EXISTING ROADS**

To be proposed

### **PROPOSED ACCESS ROAD**

To be proposed

### **LOCATION OF EXISTING WELLS**

Exhibit #3 shows all existing wells within a one-mile radius of this well

### **LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

There are no existing production facilities. If production is encountered, a temporary facility will be established on the drill pad, and if warranted, a production facility would be built at a later date in the immediate area of the drill pad location. If the well is productive, the flowline would also be located on the drill-pad site and no additional disturbance will occur.

### **LOCATION AND TYPE OF WATER SUPPLY**

Fresh water for drilling will come from commercial sources and transported to the well site over the roads as described above.

### **PLANS FOR RESTORATION OF THE SURFACE**

After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Location will be cleaned of all trash and junk to leave the well in an aesthetically pleasing condition as possible.

Any unguarded pits containing fluid will be fenced until they are dry and back filled.

After abandonment of the well, surface restoration will be in accordance with current federal laws and regulations. Location will be cleaned, and the well pad removed to promote vegetation and disposal of human waste will be complied with. Trash, waste paper, garbage and junk will be hauled to an approved disposal site in an enclosed trash trailer.

All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

### **ANCILLARY FACILITIES**

No airstrip, campsite, or other facilities will be built.

**WELL SITE LAYOUT**

Exhibit #4 shows the relative location and dimensions of the well pad.

**OTHER INFORMATION**

The area around the well site is grassland and the topsoil is duned and sandy. The vegetation is native scrub grasses with abundant oakbrush, sagebrush, yucca, and prickly pear.

**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; and that the work associated with the operations proposed herein will be performed by Perenco LLC and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

A handwritten signature in cursive script, reading "Frank Nix", is written over a solid horizontal line.

Frank Nix  
Land Manager

# **HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

## **APPLICABILITY:**

The provisions of this plan are effective when drilling operations are conducted in areas where zones may be penetrated that are known to contain, or may be reasonably expected to contain, hydrogen sulfide gas in concentrations of 100 parts per million or more.

## **TRAINING REQUIREMENTS:**

A. When conducting drilling operations in an area where hydrogen sulfide gas might be encountered, all personnel at the well site will have had proper training in the following areas:

1. The hazards and characteristics of hydrogen sulfide gas (H<sub>2</sub>S).
2. Toxicity of hydrogen sulfide and sulfur dioxide.
3. Hydrogen sulfide gas detectors, warning systems, evacuation procedures, and proper use and maintenance of personal protective equipment.
4. Proper rescue procedures, first aid, and artificial respiration.

B. In addition, supervisory personnel will be trained in the following areas:

1. The effects of hydrogen sulfide on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well, and blowout prevention and well control procedures.
3. The contents and requirements of the Hydrogen Sulfide Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable hydrogen sulfide zone (within 3 days or 500 feet) and weekly hydrogen sulfide and well control drills for all personnel in each crew. The initial training session will include a review of the site specific Hydrogen Sulfide Drilling Operations Plan and the Public Protection Plan. This plan will be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

# **HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

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Perenco LLC  
 1625 Fed Com #271  
 Eddy Co, NM  
 Proposed Drill  
 Site Layout

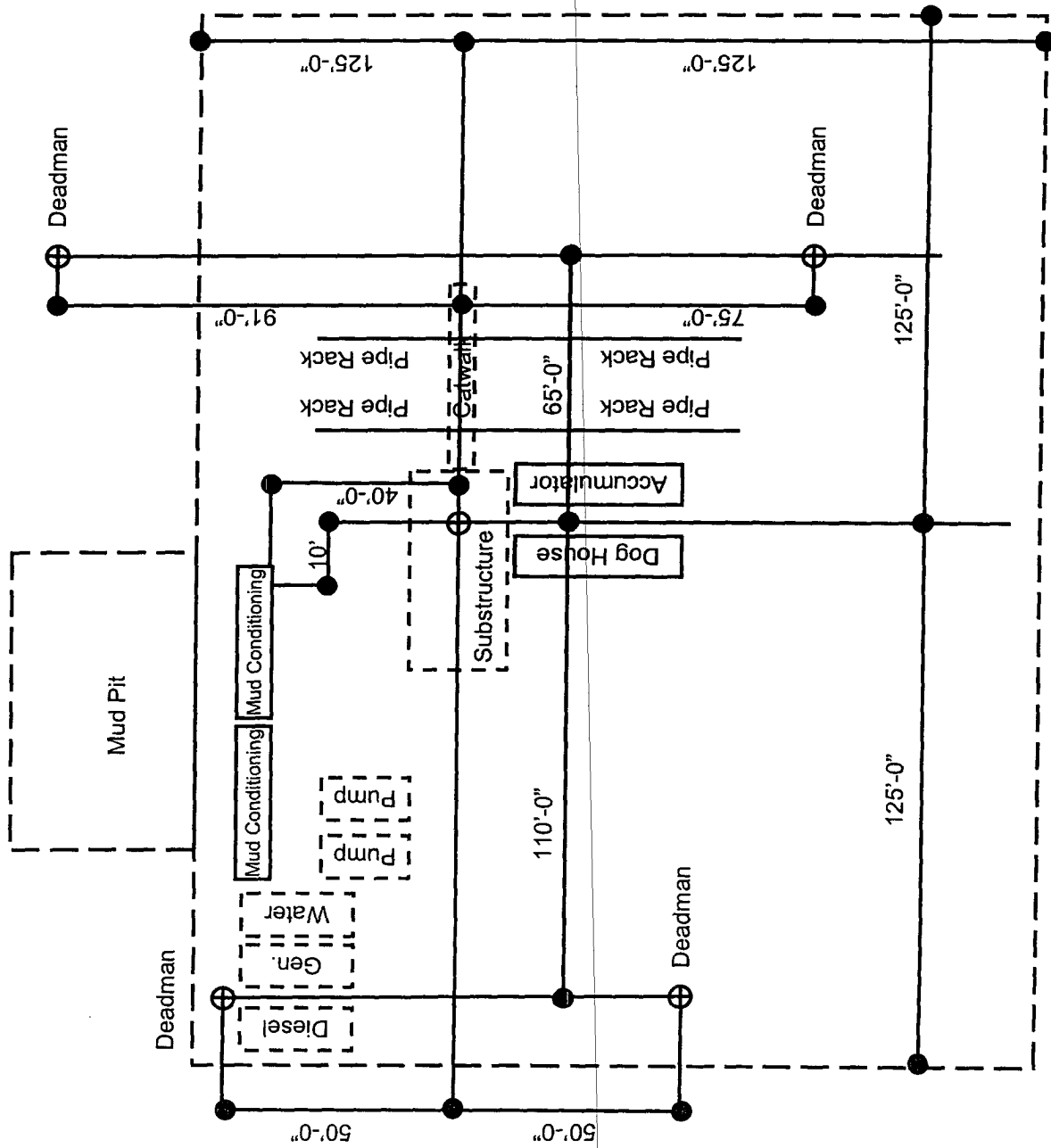
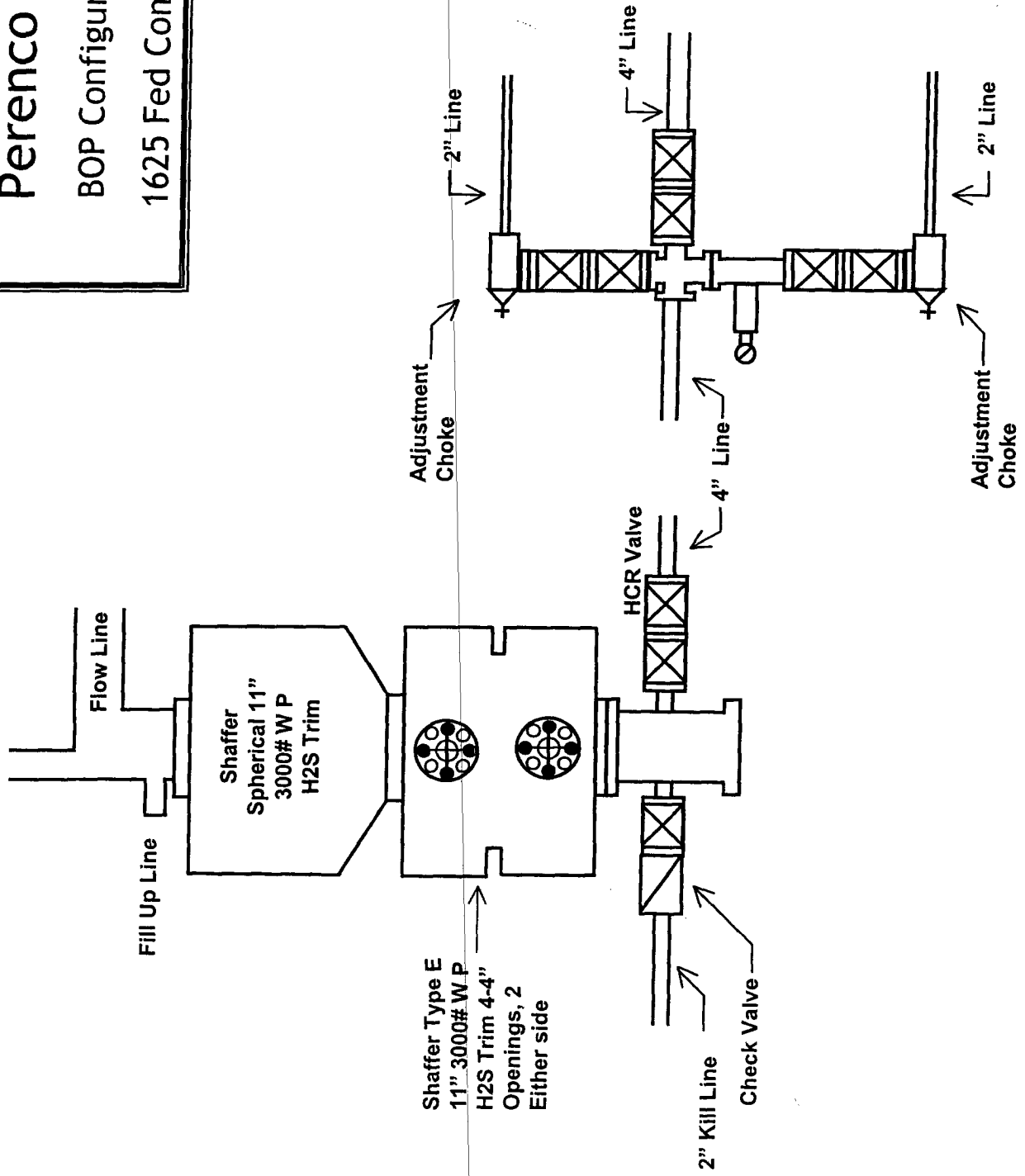


Exhibit 4

# Exhibit 1

Perenco LLC  
BOP Configuration  
1625 Fed Com #271



### ATTACHMENT TO EXHIBIT #1

- 1) Blow out preventer and all fittings must be in good condition, 2000 psi W.P. minimum.
- 2) Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 3000 psi W.P. minimum.
- 3) All choke and fill lines to be securely anchored especially ends of choke lines.
- 4) Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
- 5) Kelly cock on kelly.
- 6) Extension wrenches and hand wheels to be properly installed.
- 7) Blow out preventer control to be located as close to driller's position as feasible.
- 8) Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

Bryan Arrant (505) 748-1283; FAX 748-9720; emergency 746-4302  
State of New Mexico, Oil Conservation District (OCD), Artesia Office

Bryan,

This is to confirm that the FLETC has approved well drilling operations by LCX/Perenco, LLC in the north 828-feet of the northwest corner of Section 27, T16S, R25E, NMPM. This land is owned by the BLM and has been Withdrawn for use by the FLETC pursuant to existing mineral leases. Let me know if you have any questions.

Tom Heath

Chief, Master Plan Construction Branch  
(505) 748-8141

FLETC  
1300 W. Richey Ave.  
Artesia, NM 88210



**LCX ENERGY LLC**  
**110 N. Marlenfeld St., Suite 200**  
**Midland, TX 79701**  
**(432) 687-1575**  
July 6, 2005

Fed Com 1625 # 271 200' FNL & 700' FWL, D, Sec 27, T-16-S, R-25-E Eddy Co., NM

Attn: Brian Arrant

Brian,

There are no habitable dwellings within 1 mile of this well location at this time.

Please find the attached plat of the fence we built for FLETC to mark their North boundary. Also attached is Tom Heath's last e-mail to me approving the fence after it was completed.

You can e-mail the API # to me at [larryg@eeronline.com](mailto:larryg@eeronline.com) or fax at 432-687-2521.

Thanks,

  
Larry Gillette

---

**Larry Gillette**

---

**From:** Heath, Tom [Tom.Heath@dhs.gov]  
**Sent:** Wednesday, June 22, 2005 2:57 PM  
**To:** Larry Gillette  
**Cc:** Furman, Jonathan  
**Subject:** RE: New Mexico Fence

fence looks good... thanks, Tom

---

**From:** Larry Gillette [mailto:Larryg@eeronline.com]  
**Sent:** Wednesday, June 22, 2005 10:52 AM  
**To:** Heath, Tom  
**Subject:** New Mexico Fence

Tom,

The fence builders have finished the fence. Please let me know if it passes and is approved. Is there anything else we need to do?

I will be starting my location on July 1<sup>st</sup> or 5<sup>th</sup>. The suspension of lease has been approved but their clock starts at the first of each month. So if I started the location today the effective date would be June 1<sup>st</sup> which means I would have to be drilling by June 30<sup>th</sup>.

I will keep you updated on what we are doing.

Thanks,

Larry Gillette

---

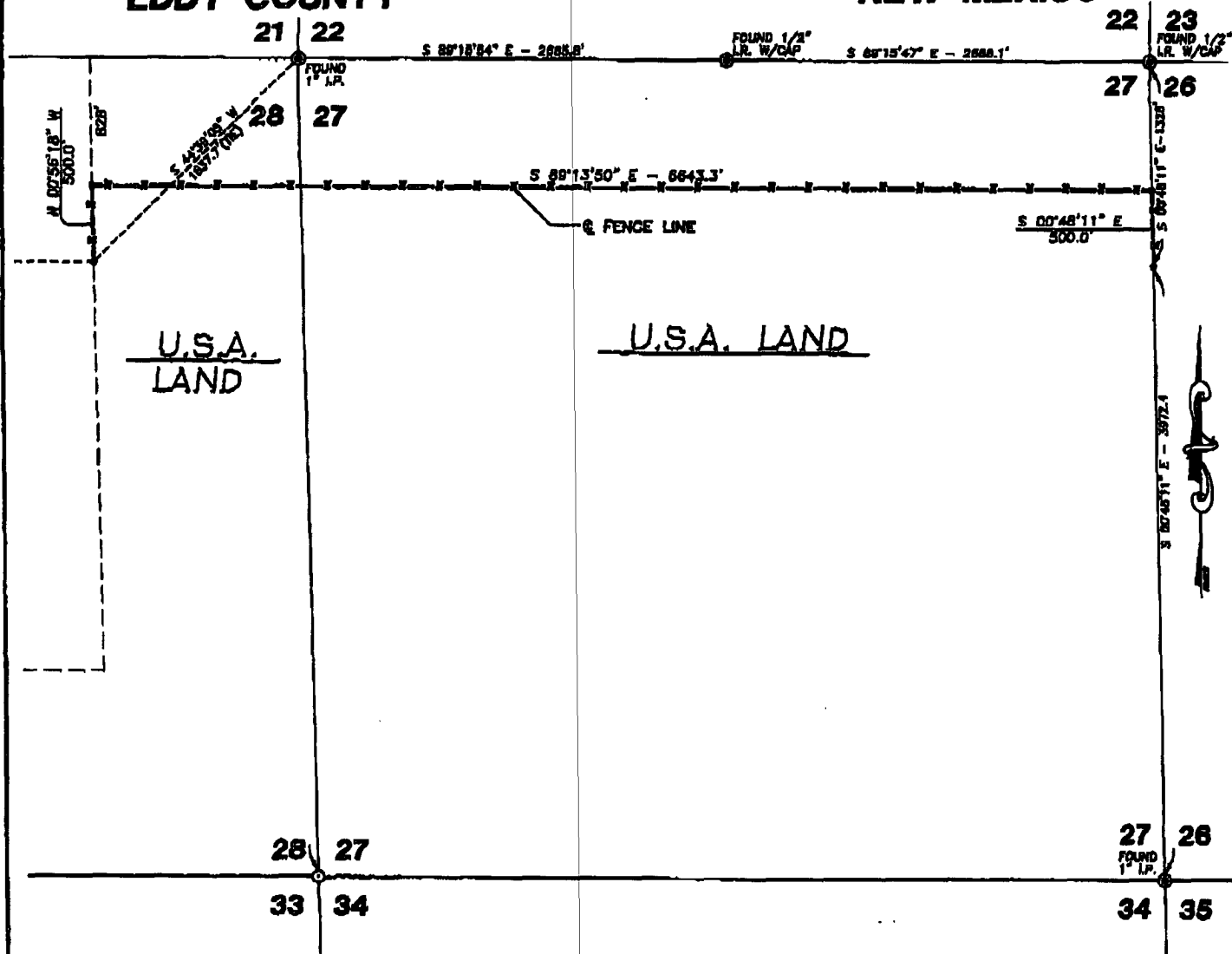
This email has been scanned by the MessageLabs Email Security System.  
For more information please visit <http://www.messagelabs.com/email>

Have a great day!

---

7/6/2005

# SECTIONS 27 & 28 , TOWNSHIP 16 SOUTH, RANGE 25 EAST, N.M.P.M. EDDY COUNTY NEW MEXICO



## LEGAL DESCRIPTION

A FENCE LINE BEING 7643.3 FEET OR 1.448 MILES IN LENGTH AS SHOWN BY THE THE ABOVE PLATTED CENTERLINE.

## LEGEND

- - DENOTES CALCULATED CORNER
- - DENOTES FOUND U.S.G.L.O. BRASS CAP

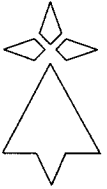
1000 0 1000 2000 FEET

## PERENCO LLC

A FENCE LINE CROSSING U.S.A. LAND IN SECTIONS  
27 & 28, TOWNSHIP 16 SOUTH, RANGE 25 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 5-20-2005	Sheet 1 of 1 Sheets
W.O. Number:	Drawn By:
Date: 5-20-2005	Scale: 1" = 1000'

# P E R E N C O



May 18, 2005

Oil Conservation Division  
1301 W. Grand Ave.  
Artesia, New Mexico 88210

Attn: Mr. Brian Arant

Re: Directional Drilling Plan  
1625 Fed Com #271  
T16S, R25E, Section 27: W/2  
Eddy County, New Mexico

RECEIVED  
MAY 19 2005  
OCD-ARTESIA

Dear Mr. Arant,

Reference is made to our recent telephone conversation in which you ask me to provide you a Directional Drilling Plan and a C-102 showing formation penetration, dedicated acreage and project area for our proposed 1625 Fed Com #271 well. Enclosed, please find the requested directional drilling plan. Also note, Joe Janica is forwarding a revised C-102 showing the items you requested.

Should you need anything further, feel free to call me at 432-688-0949.

Very truly yours,

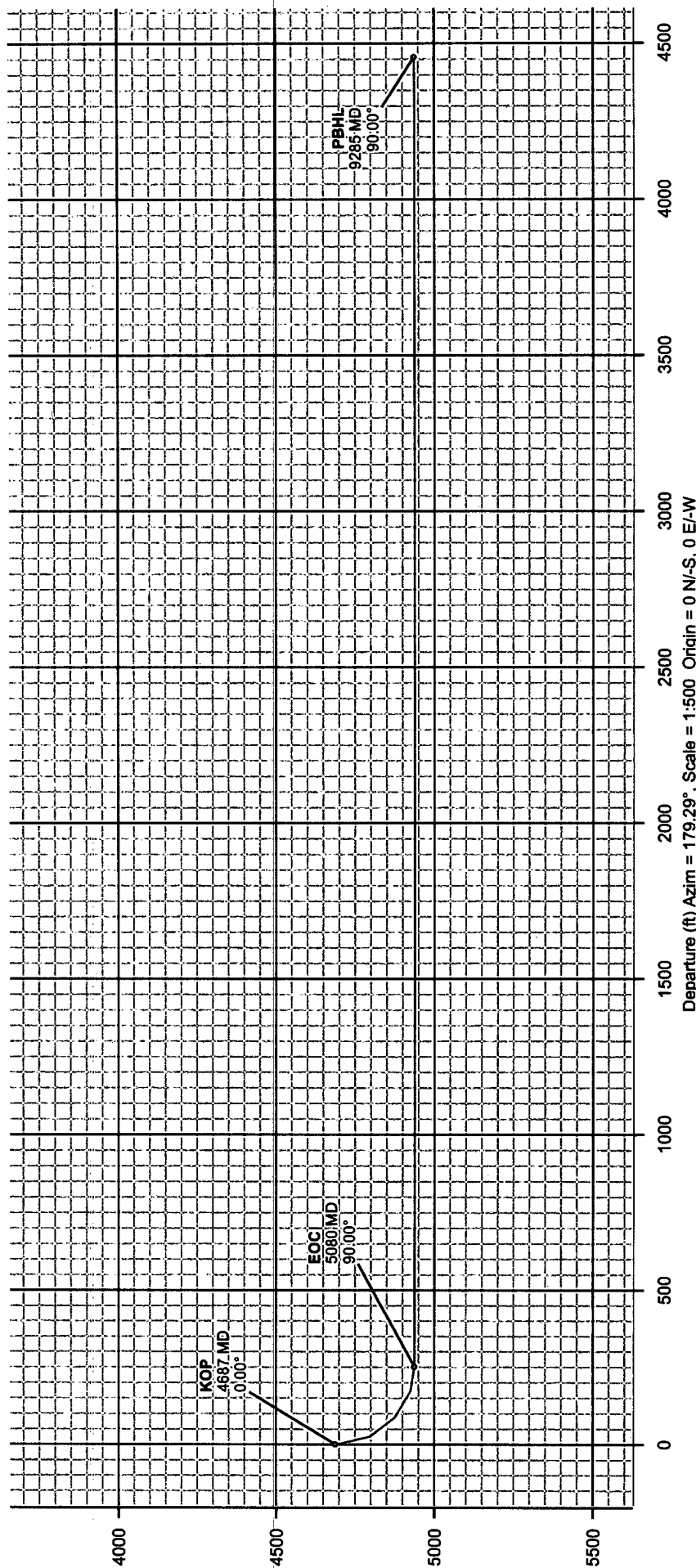
Perenco, LLC

Frank G. Nix  
Land Manager

Cc: Joe Janica

# Endeavor Energy

<b>Fed-Com 1625 #271</b>	<b>Eddy County, NM Nad 83</b>	<b>Fed-Com 1625 #271</b>
<b>WELL</b>	<b>FIELD</b>	<b>STRUCTURE</b>
<b>Magnetic Parameters</b>		
Model:	IGRF 2005	
Dip:	90.79°	
Mag Dec:	+8.765°	
Date:	May 17, 2005	
FS:	48565.6 mT	
<b>Surface Location</b>		
Lat:	N32 S4.1 E842	
Lon:	W104 D9 48 E27	
<b>NAD83 New Mexico State Planes, Eastern Zone, US Feet</b>		
Northing:	691373.50 ftUS	
Easting:	494350.00 ftUS	
Gd Conv:	-0.07945964'	
Scale Fact:	0.9999113095	
<b>Miscellaneous</b>		
Sect:	Fed-Com 1623 8Z71	TVD Ref:
Plan:	FC 1025-271.r1	Srvy Date:
		RKB (0.00 ft above)
		Tue 02:57 PM May 17, 2005



RECEIVED

MAY 19 70

06b-WH-1

# INTERPOL

## Dietitian Drilling Specialists

# Proposal



<b>Report Date:</b> May 17, 2005 <b>Client:</b> Endeavor Energy <b>Field:</b> Eddy County, NM Nad 83 <b>Structure / Slot:</b> Fed-Com 1625 #271 / Fed-Com 1625 #271 <b>Well:</b> Fed-Com 1625 #271 <b>Borehole:</b> Fed-Com 1625 #271 <b>UWI/API#:</b> <b>Survey Name / Date:</b> FC 1625-271_r1 / May 17, 2005 <b>Tort / AHD / DDI / ERD ratio:</b> 90.000° / 4455.54 ft / 5.877 / 0.902 <b>Grid Coordinate System:</b> NAD83 New Mexico State Planes, Eastern Zone, US Feet <b>Location Lat/Long:</b> N 32 54 1.882, W 104 28 46.627 <b>Location Grid N/E Y/X:</b> N 691375.500 ftUS, E 496439.600 ftUS <b>Grid Convergence Angle:</b> -0.07945964° <b>Grid Scale Factor:</b> 0.99991140	<b>Survey / DLS Computation Method:</b> Minimum Curvature / Lubinski <b>Vertical Section Azimuth:</b> 179.290° <b>Vertical Section Origin:</b> N 0.000 ft, E 0.000 ft <b>TVD Reference Datum:</b> RKB <b>TVD Reference Elevation:</b> 0.0 ft relative to <b>Sea Bed / Ground Level Elevation:</b> 0.000 ft relative to <b>Magnetic Declination:</b> 8.765° <b>Total Field Strength:</b> 49565.754 nT <b>Magnetic Dip:</b> 60.799° <b>Declination Date:</b> May 17, 2005 <b>Magnetic Declination Model:</b> IGRF 2005 <b>North Reference:</b> Grid North <b>Total Corr Mag North -&gt; Grid North:</b> +8.844° <b>Local Coordinates Referenced To:</b> Well Head
---	--

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
Tie-In	0.00	0.00	179.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	179.29M
KOP	4687.00	0.00	179.29	4687.00	0.00	0.00	0.00	0.00	0.00	0.00	179.29M
	4700.00	2.98	179.29	4699.99	0.34	-0.34	0.00	0.34	179.29	22.92	179.29M
	4800.00	25.90	179.29	4796.19	25.11	-25.10	0.31	25.11	179.29	22.92	0.00G
	4900.00	48.82	179.29	4875.15	85.38	-85.37	1.05	85.38	179.29	22.92	0.00G
	5000.00	71.73	179.29	4924.40	171.64	-171.63	2.12	171.64	179.29	22.92	0.00G
EOC	5079.70	90.00	179.29	4937.00	250.00	-249.98	3.09	250.00	179.29	22.92	0.00G
PBHL	9285.24	90.00	179.29	4937.00	4455.54	-4455.20	55.00	4455.54	179.29	0.00	0.00G

# Endeavor Energy

WELL Fed-Com 1625 #271 FIELD Eddy County, NM Nad 83 STRUCTURE Fed-Com 1625 #271

Magnetic Parameters  
Model: KRF 2005

Dip: 60.790°  
Mag Dec: +6.765°

Date: May 17, 2006  
FB: 49655.8 nT

Surface Location

Lat: N32 54 1.882  
Lon: W104 28 40.627

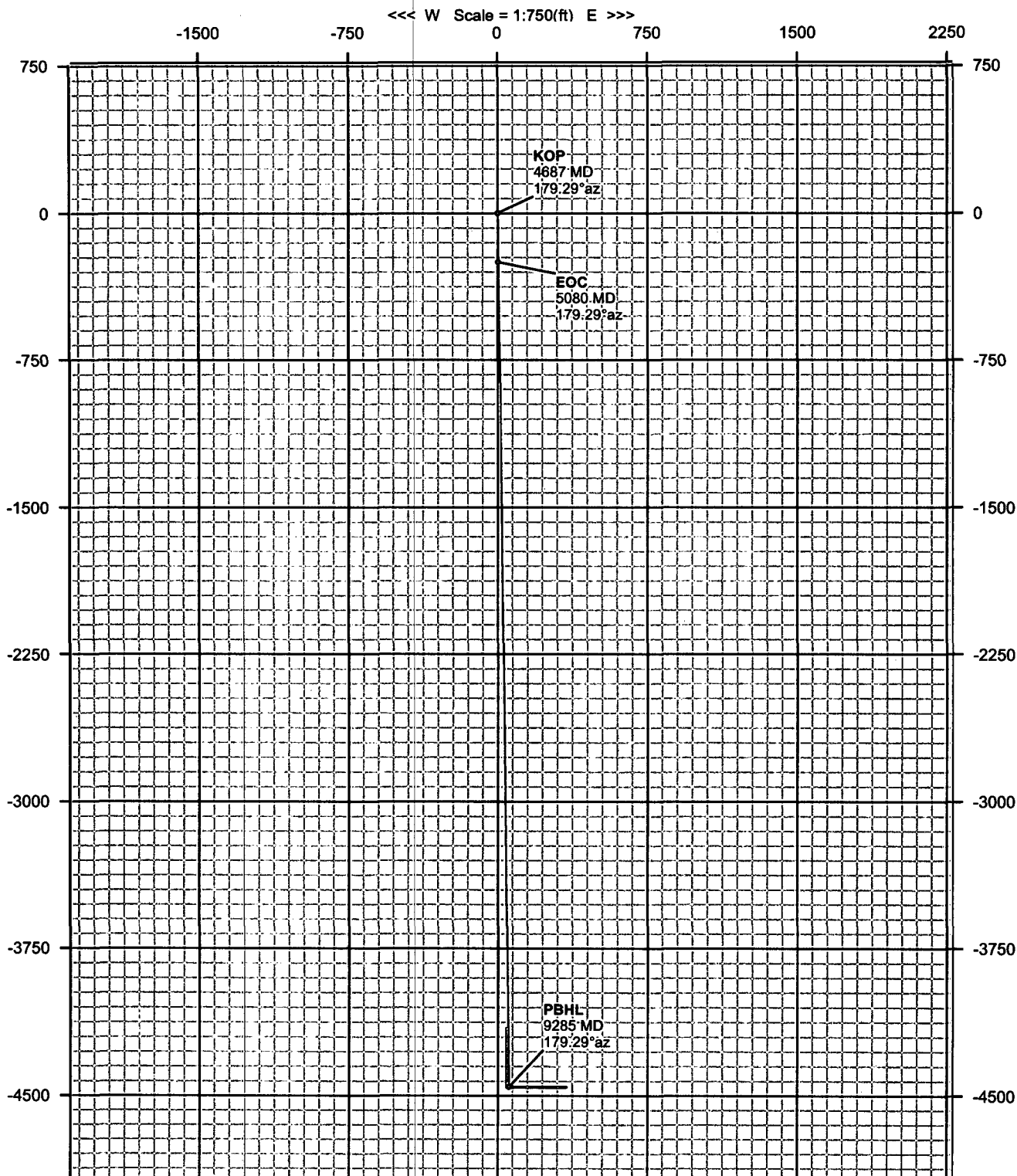
NAD83 New Mexico State Plane, Eastern Zone, US Feet

North: 601375.50 RLUS  
East: 496430.60 RLUS  
Grid Conv: -0.07945984°  
Scale Fact: 0.9999113593

Miscellaneous

Shot: Fed-Com 1625 #271  
Plan: FC 1625-271\_r1

TVD Ref: RKB (0.00 ft above)  
Srvy Date: Tue 02:57 PM May 17, 2006



**INTREPID**  
Directional Drilling Specialists

