NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

November 11, 2003

Lori Wrotenbery
Director
Oil Conservation Division

Amtex Energy, Inc.
P. O. Box 3418
Midland, Texas 79702

Case 13189

Attention: **William J. Savage**
President

Re: *Application submitted on November 6, 2003 (***administrative application reference No. pMES0-331140552***) for an exception to Division Rule 104.C (2) (b) in order to locate and complete two Morrow producing wells with the same quarter section of a standard 320-acre lay-down deep gas spacing unit comprising the S/2 of Section 16, Township 19 South, Range 34 East, NMPM, Quail Ridge-Morrow Gas Pool (**83280**), Lea County, New Mexico.*

Dear Mr. Savage,

I have reviewed your application and as we have discussed during our previous telephone conversations, this matter will require a hearing order for Division approval. Please note that I have amended your request somewhat to accurately reflect: (i) your application; and (ii) my recollection of our conversations and my advice to you in seeking such a rule exception. My review of the Division's records also indicates that the S/2 of Section 16 comprises a single state lease issued by the New Mexico State Land Office (State Lease No. E-07824-0002) in which Amtex Energy, Inc. is the leasehold operator. Since the S/2 of Section 16 is also a standard 320-acre lay-down deep gas spacing unit that is currently dedicated to Amtex Energy, Inc.'s existing Lea "ED" State (NCT-A) Well No. 2 (**API No. 30-025-25896**), located at a standard deep gas well location 1980 feet from the South and West lines (Unit K) of Section 16, your request to form a non-standard 160-acre deep gas spacing unit is deemed inappropriate.

My review of your application under the applicable Division rules [see Division Rules 104.C (2) and 1207.A] indicates your request to be in the best interest of conservation, exhibits sound engineering practices, prevents waste, and protects correlative rights. I recommend approval and have therefore prepared the following advertisement for the next available Division Hearing Examiner's docket scheduled for December 4, 2003.

> *"**CASE _____: Application of Amtex Energy, Inc. for an exception to Division Rule 104.C (2) (b), Lea County, New Mexico.** Applicant proposes to re-enter the plugged and abandoned Gulf Oil Corporation Lea "ED" State (NCT-A) Well No. 3 (**API No. 30-025-26098**), located at a standard deep gas well location 1980 feet from the South line and 660 feet from the West line (Unit L) of Section 16, Township 19 South, Range 34*

SD-
pMESO
33114055 2

RECEIVED

NOV 0 6 2003

OIL CONSERVATION DIVISION

AMTEX ENERGY, INC.
P.O. BOX 3418
MIDLAND, TEXAS 79702
(915) 686 0847

November 5, 2003

Case 13189

Mr. Mike Stogner
New Mexico Oil Conservation Division (OCD)
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RE: Application for Permit to Drill (APD) Request for Administrative Approval for the Reenter/Drill Deepening of the Lea ED State #3 Well on 160 acre Non-Standard Proration Unit Spacing by Splitting and Reducing the 320 acre Proration Unit currently assigned to the Lea ED State #2, so that each well is assigned 160 acres, S/2 of Section 16, T19S, R34E, Lea County, New Mexico

Dear Mr. Stogner:

Enclosed please find the following:

1. Form C-101,
2. Form C-102,
3. List of affected persons,
4. Request for Administrative Approval of Non-Standard Proration Units Written Explanation,
5. Exhibit A, Middle/Lower Morrow geologic mapping showing Morrow geology,
6. Exhibit B, Existing Well Bore Conditions for Lea ED State #2,
7. Reentry/Drilling Program for Lea ED State #3 Well.

Amtex Energy, Inc. hereby request Administrative Approval for this Application for Permit to Reenter/Drill Deepening of the Lea ED State #3 well on 160 acre Non-Standard Proration Unit spacing, by splitting and reducing the 320 acre Proration Unit currently assigned to the Lea ED State #2 well, in order for each well, Lea ED State #2 & #3, to be assigned 160 acre Non-Standard Proration Units in the S/2 of Section 16, T19S, R34E, Lea County, New Mexico.

Please review the enclosed exhibits which clearly show the reasons it is essential for granting this permit, for the Lea ED State #3, in order to produce the Middle/Lower Morrow Sands which are otherwise unaccessible!

Thank you for your prompt attention to this request. If you have any questions please call me at Office: 432/686-0847 or Cell: 432/770-0913.

Very truly yours,

William J Savage
President

WJS/pt
Enclosures

c:\myfiles\2003\LeaED#3Req

REQUEST FOR ADMINISTRATIVE APPROVAL OF NON-STANDARD PRORATION UNITS

REASONS FOR MIDDLE/LOWER MORROW REENTRY/DEEPENING, LEA ED STATE #3 WELL, ON 160 ACRE NON-STANDARD PRORATION UNIT SPACING. THIS REQUEST IS DUE TO JUNK OBSTRUCTING THE MIDDLE/LOWER MORROW IN THE OFFSET UPPER MORROW PRODUCER, LEA ED STATE #2 WELL. ADDITIONALLY, THIS IS WHILE CONTINUING PRODUCTION FROM THE OFFSET UPPER MORROW PRODUCING WELL, LEA ED STATE #2, ON THE ADJACENT 160 ACRE NON-STANDARD PRORATION UNIT.

Quail Ridge Morrow Gas Field
AMTEX ENERGY, INC. (Gulf Oil)
Lea ED State #3
1980 FSL, 660 FWL
Section 16, T19S, R34E
Lea County, New Mexico

Amtex Energy, Inc., requests administrative approval of their permit to reenter and deepen their Lea ED State #3 well, located 1980 FSL, 660 FWL, Section 16, T19S, R34E, Lea County, New Mexico, from 10200' fo 13,550' to more effectively develop the Morrow gas potential in Quail Ridge Morrow Gas Field. Furthermore, this well is located in the optimum location for testing the Middle/Lower Morrow Sands since regional geologic mapping indicates the Middle/Lower Morrow Sand reservoirs to be pinched out and not present on the east side of Sec. 16, T19S, R34E, Lea County, New Mexico (See attached Exhibit A).

The Amtex Energy, Inc., (Gulf Oil) Lea ED State #2 well, located 1980 FS and WL, Section 16, T19S, R34E, Lea County, New Mexico, currently produces approximately 110 MCFGPD from the Upper Morrow clastics through perforations from 13,236-242 with possibly minor contributions from perforations at 13,260-266. Junk in the well bore (Vann Gun never retrieved) and fill have been tagged at 13275, making any attempt to reenter this well bore to evaluate middle and lower Morrow clastics nearly impossible (please see attached Existing Well Bore Conditions Exhibit B).

Chronology
Lea ED State #2 Well
1980 FS & WL, Section 16, T-19-S, R-34-E
Lea County, New Mexico

In 1978 Gulf Oil ddrilled the Lea ED State #2 well to a depth of 13528'. They drill stem tested the upper Morrow sands from 13236-259 and flowed Gas to surface in 23 minutes at a rate of 4 MMCFGPD through a ½ inch choke (see attached Exhibit B). Gulf Oil then drill stem tested a middle Morrow sand from 13312-340 that flowed gas at an estimated rate of 7.9 MMCFGPD through a 3/8 inch choke. Upon reaching a total depth of 13528, Gulf plugged back to runcasing (OD t' 18#). From notes in the well files obtained from Gulf, the intended original plug backi TD (PBTD) was to have been 13478. However, according to drilling reports, the actual PBTD was 13442. This difference of 36 feet is very significant.

Gulf used a Vann Gun system to perforate the Morrow from 13236-242, 13260-266 (the upper Morrow sands that were drill stem tested) and also from 13324-330 (the middle Morrow sand which was drill stem tested, see attached Exhibit). The overall length of the Vann gun left in the hole was approximately 134.41 feet. Had the PBTD actually been 13478, then the top of the Vann gun would have been below the lower perforations at 13330. However, with the PBTD at 13442, the top of the Vann gun was actually tagged by Gulf at 13330, 24 feet above the top perforation in the middle Morrow sand. The maximum OD of the Vann guns is 3.375' while the ID of the 5" casing is 4.276". This leaves approximately 1/2" space between the Vann guns and the casing, making it impossible for Gulf Oil to have effectively treated the middle Morrow sand during their initial completion attempt in 1978.

Absolute open flow for the Lea ED State #2 was 4.311 MMCFG + 19.5 BCPD. This was significantly less than Gulf Oil was anticipating based on the results of the drill stem test data. According to their own records, Gulf did not feel like the middle Morrow sand was contributing any gas because the Vann guns were blocking the lower set of perforation.

The Lea ED State #2 well has now been producing from the upper Morrow sands for some 25 years.

REENTER/DRILL DEEPENING PROGRAM
AMTEX ENERGY, INC.
Lea ED State #3
1980 FSL 660 FWL
Section 16, T-19-S, R-34-E
Lea County, New Mexico
API Number: 3002526098

DIRECTIONS:

From Hobbs, New Mexico, take US Highway 62 / 180 to mile marker #79. Go 7/10 mile past mile marker #79 and turn North. Go 3.2 miles to the pumping well Lea ED State #1. Continue North ¼ mile to the Lea ED State #3 location.

ORIGINAL WELL BORE:

Original Operator: Gulf Oil Corporation
Original Spud Date: 11 / 01 / 1978
Original hole: 12 1/4" hole was drilled to 1750'
8 5/8" 32# & 24# casing was run - cmtd with 900 sx - circulated to surface
7 7/8" hole was drilled to 10, 200'
Maximum deviation encountered - 3 ¾ from 8473-8688
No economic zones were identified - no additional casing was run
Plugging Data: P & A on 12 / 13 / 1978
Plugs set as follows:

1.	10190-050	50 sx class C
2.	8100-7960	50 sx class C
3.	5900-5775	50 sx class C
4.	3200-3090	100 sx class C
5.	1750-1650	50 sx class C
6.	0-50	10 sx class C

None of the 8 5/8 casing was reported pulled

PROPOSED NEW WORK:

1. Call the 1-800-dig phone number 3 working days prior to preparing existing location for moving in rotary tools. Have pits lined. Drilling fluids will be circulated through the reserve pit for solids control.
2. Move in and rig up rotary tools. Rig up mud / gas separator which may be needed to circulate out possible accumulated oil and gas between plugs as well as for the lower (Morrow) portion of the new hole, if necessary. Steel reserve pits will also be rigged up for drilling the Morrow formation with fresh / Kcl water (see notes later).
3. Conduct safety meeting with rig personnel. Post drilling permit and emergency response plan in the dog house. Notify OCD of intent to spud.
4. Move in and Rig up Mud logging unit. They will monitor drilling fluids while cleaning out original hole and be ready to log samples at 10,200'.
5. Nipple up BOP stack. Test BOPE to ....psi low for 5 minutes, 1000 psi high for 30 minutes. Test casing to 1000 psi for 30 minutes. Test choke manifold to 250 psi low for 10 minutes, 3000 psi high for 10 minutes.
6. Pick up 7 7/8" bit and tool string. Deviation in existing well bore is on file with the OCD. Deviation in the new well bore in not expected to exceed 3 degrees in the new well bore

7. As the salt section is exposed below the original 8 5/8" csg, brine / salt mud will be required to drill out the existing plugs. Drilling fluid will be circulated through the reserve pit for solids control. Possible accumulations of oil and gas may be encountered when the #2 plug is drilled out from 8100-7960. Maximum safety precautions will be taken drilling out all plugs.
8. Once all existing plugs have been drilled out, the hole will be circulated and conditioned in preparation to deepen the well to the Morrow.

NEW INTERMEDIATE HOLE:

1. 7 7/8" bit will be used to drill the new intermediate hole to approximately 13,100'. This portion of the hole will be drilled with 10# brine as the salt section is exposed beneath the existing 8 5/8" casing.
2. TOTCO surveys will be run every 350' or adjusted accordingly to keep deviation below 3 degrees. In this portion of the Delaware Basin, deviation can increase in the Bone Spring and Wolfcamp intervals to as much as 6 degrees due to the basin slope. Should deviation begin to increase, measures will be taken to bring it back below 3 degrees.
3. When TD of approximatly 13,100 feet, the hole will be circulated and conditioned for running electric logs. A caliper will be included in the logging suite to aid in determining cement volumes for running long string intermediate casing.
4. Run 5 ½ inch casing to 13,100' +/-. (This casing point will be determined by a tight limestone bench that should be encountered somewhere between 13,080' and 13120').
   INSPECTION: Drift, clean and visually inspect all casing on location prior to running.
5. 5 ½ " casing will be run as follows: ....
6. Cement back to surface as follows: ...

PRODUCTION HOLE:

1. Test casing to .....
2. Test BOP. Have safety meeting with rig personnel regarding potential problems that may be encountered in drilling the Morrow clastics.
3. Trip in hole with 4 ¾ " bit on 2 3/8" tubing string, BHA, and down hole motor. Tag cement. Circulate hole with fresh water or KCL fluid with low water loss (<15). Drill out cement. Drill new hole to 13,550'.
4. Circulate and condition well bore.
5. Run 4" flush joint casing from 13,030'-13550' as follows: ...
6. Cement 4" liner as follows: ...
7. Install well head. Test ....
8. Release rig. Rig down and move out rotary tools.

POTENTIAL PROBLEMS

Original Well Bore:

Possible key seats may exist at 3160, 3700, 5800-6390, and 6515. If encountered, these will be worked through and cleaned out with the bit and scrapers.

Gulf Oil did report drillings breaks from 9315-9419 (OA). Formation pressures from drill stem test were reportedly 3694 psi (FSIP). There is the possibility that pressure could have built up under the 2nd plug (set between 7960-8100). All personnel will be made aware of this. Safety precautions will be in place in case pressure is encountered.

New Well Bore:

Deviation will be closely monitored. In the Bone Spring and Wolfcamp intervals, deviation can sometimes reach 6 degrees. This will be monitored using TOTCO surveys.

Production Well Bore:

The upper Morrow sands have been producing in offset wells for some 25 years. These sands could very possibly be severely underpressured, which can lead to lost circulation and differential sticking of the drill string. Because of this potential, 5 ½ " casing is being set at 13,100' and the drilling fluid switched to as light a fluid as possible - fresh water or KCL fluid. This presents a second problem, though, in that the middle and lower Morrow sands should be at normal pressures (between 4500-5000 psi). All rig personnel will be made aware of these potential problems. BOP's will be tested prior to drilling the new well bore. A mud / gas seperator will be hooked up and ready if needed as well.

MUD PROGRAM

Interval	Type	Weight (ppg)	Vis (sec/qt)	Fluid Loss (cc)
Surf to 10200	Brine	10#	28-30	No Control
10200 to 13100	Brine	10#	32-36	10-20 cc
13100 to 13525	Fresh / KCL	8-8.6#	32-36	< 15 cc

EVALUATION PROGRAM

Mud Logging:

A one man unit will be rigged up while drilling out the plugs in the original well bore to monitor for the presence of hydrocarbons. A two man unit will be utilized from 10200 to TD.

Open Hole Logs:

Electric logs will be run from 13100 to 1750 to tie in the old well bore with the new hole drilled.
DLL w/ MSFL, CNL-FDC, Pe, GR, Cal.

Cased Hole Logs:

Cased hole GR, Neut, Collar Locator will be run for correlation.

5 ½ " CASING CEMENT PROGRAM

Place ... DV tool at ....
First stage
Second stage

4.0" CASING CEMENT PROGRAM

Cement

CASING SUMMARY

Original Casing:
1750', 8 5/8" 32# and 24#

Long String Intermediate Casing:
1900' of 5 ½ ", 17#, HCP 110, LT & C, R-3
8750' of 5 ½ ", 17#, N 80, LT & C, R-3
2450' of 5 ½ ", 17#, HCP 110, LT & C, R-3
13,100 feet total

Production String:
13,030'-13550': 520' of 4" OD, 12.93#, L-80 SJ2 flush joint

Tubing:
13550' 2 3/8"L-80, 4.7#, EUE Tubing R-2, Hyundri or equal

CASING PROPERTIES

Casing	BURST Rated (80%)	COLLAPSE Rated (80%)	Test Pressure
8 5/8", ...			
5 ½ "			
4" flush joint.....			

PARTNER INFORMATION

COMPANY PERSONNEL

VENDORS

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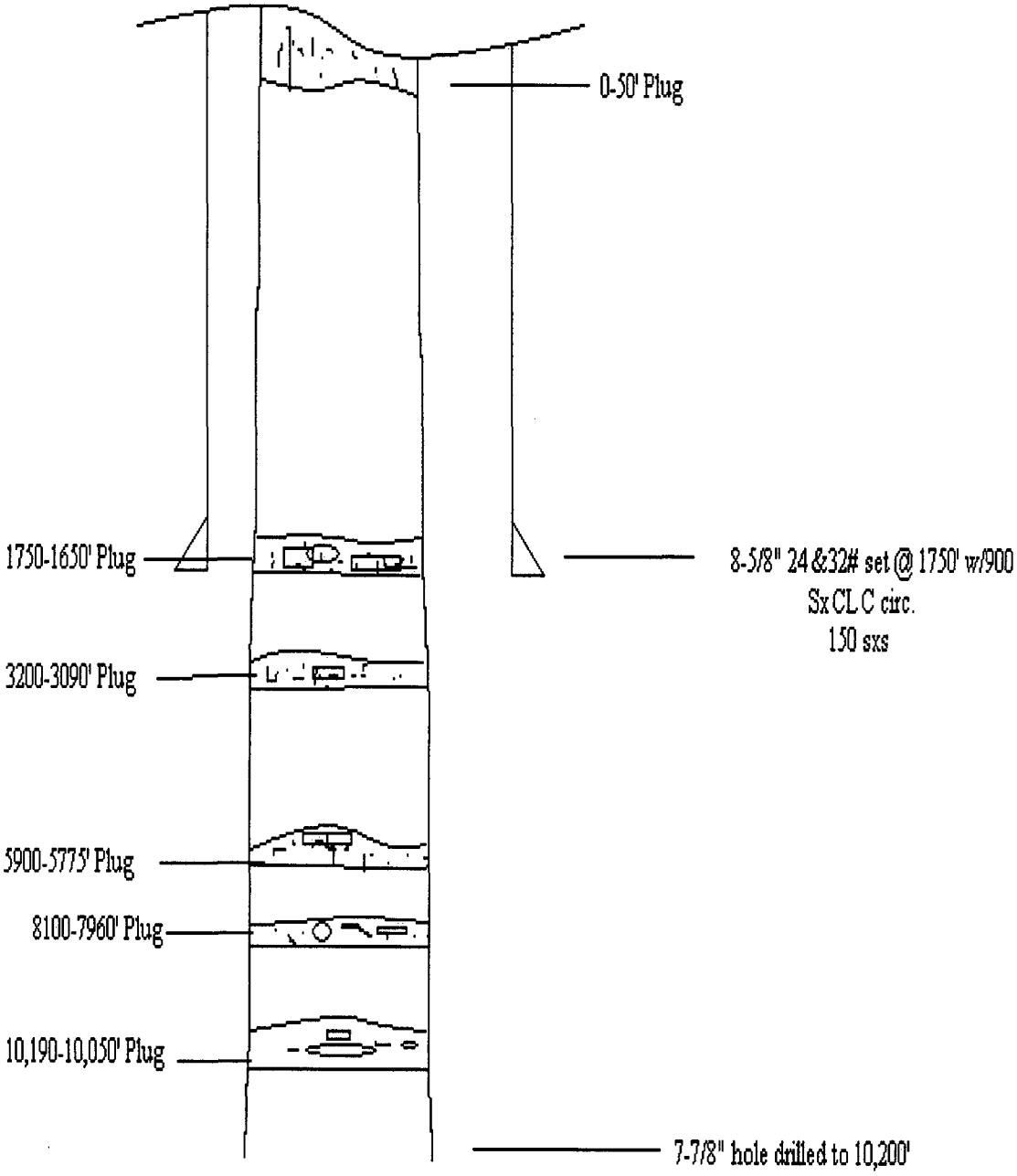
OPERATOR:	NAME OF LEASE:	WELL:
Amtex Energy Inc.	Lea ED State	No. 3
LOCATION: 1980 FSL, 660 FWL, Sec 16, T-29S, R34E, Lea County, New Mexico		



District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue. Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-101
Revised March 17, 1999

Submit to appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
Amtex Energy, Inc. P. O. Box 3418 Midland, TX 79702	000785
	[3] API Number 30-025-26098

[3] Property Code	[5] Property Name	[6] Well No.
17334	Lea "ED" State (NCT-A)	3

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	16	19S	34E		1980	S	660	W	Lea

[8] Proposed 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

[9] Proposed Pool 1	[10] Proposed Pool 2
Quail Ridge Morrow Gas	

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
E, D	G	R	S	3661
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
No	13525	Barnett Shale	TBA	12/03

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12 1/4"	8 5/8"	32#&24# K55	1750'	900sx Class 'C'	Circulated
7 7/8"	5 1/2"	17#	13,100'	To be determined by Survey	
4 3/4"	4"	Flush Jt	13,525'	150sx Class 'H'	13,100'

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone.

Describe the blowout prevention program, if any. Use additional sheets if necessary.

1. Original Operator - Gulf Oil Corp. drilled a 1 7/8" hole to 10,200 (DTD). No Commercial Production found. Well plugged 12/13/78.
2. Amtex Energy, Inc. will Reenter and Deepen this well by Drill Out Plugs, clean out original hole - 7 7/8", w/10# brine, to 10,200'.
3. Deepen by Drilling 7 7/8" hole from 10,200' to 13,100' w/10# brine.
4. Set 5 1/2" casing at 13,100'.
5. Drill out w/4 1/2" hole to 13,525' - KCL, fresh wtr, foam or combination thereof.
6. Set 4" Flush Joint Liner @ 13,525'. 7. Perforate and complete in Middle and Lower Morrow.

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: William J. Savage
Printed name: William J. Savage
Title: President
Date: 11/5/03
Phone: 432/686-0847

OIL CONSERVATION DIVISION

Approved by:
Title:
Approval Date: Expiration Date:
Conditions of Approval:
Attached ☐

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised June 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-26098	83280	Quail Ridge Morrow Gas

4 Property Code	5 Property Name	6 Well Number
17334	Lea "ED" State (NCT-A)	3

7 OGRID No.	8 Operator Name	9 Elevation
785	Amtex Energy, Inc.	GL 3661

10 Surface Location

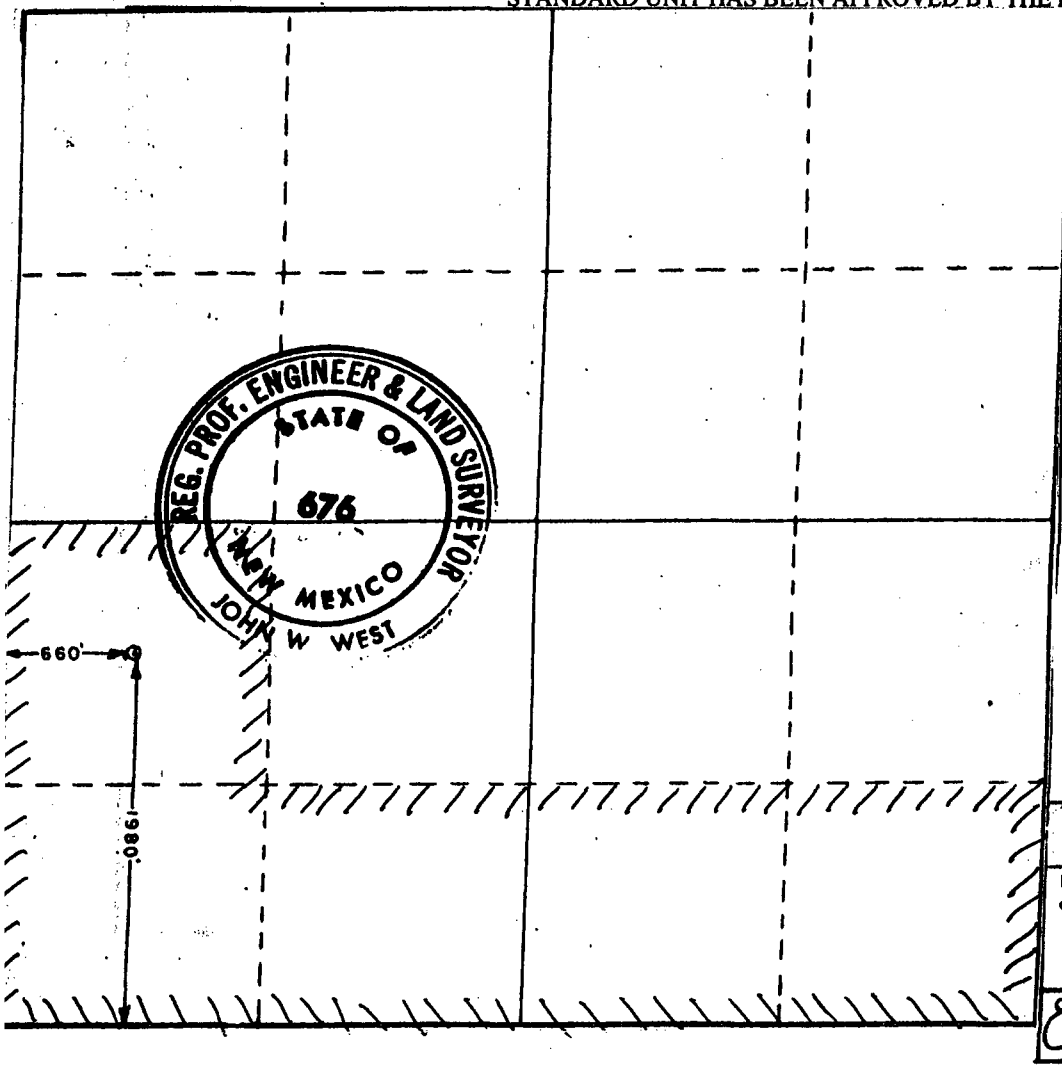
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	16	19S	34E		1980	S	660	W	Lea

11 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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
160			

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



REG. PROF. ENGINEER & LAND SURVEYOR
STATE OF
676
NEW MEXICO
JOHN W WEST

17 OPERATOR CERTIFICATION

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

William J. Savage
Signature

William J. Savage
Printed Name

President
Title and E-mail Address

amtex@geospectrum.com

11/5/03
Date

18 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 knowledge and belief.

Date Surveyed
September 27, 1978

Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. John W. West 676
Ronald J. Eidson 3239

LIST OF AFFECTED PERSONS

Tom Brown Inc.
555 17th Street
Denver, Colorado 80202

Merit Energy Company
106 South 4th Street
Loving, New Mexico 88256

Bureau of Land Management
P. O. Box 27115
Santa Fe, New Mexico 87502-0115

Chevron Texaco
15 Smith Road
Midland, Texas 79705