

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

**NOTIFY OCD OF SPUD & TIME  
TO WITNESS CEMENTING OF  
SURFACE CASING**

Form C-101  
May 27, 2004



1220 SOUTH ST. FRANCIS DR.  
Santa Fe, NM 87505

**OCD-ARTESIA**

Submit to appropriate District Office

☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address Parallel Petroleum Corp. 1004 N. Big Spring Street, Suite 400, Midland, TX. 79701		<sup>2</sup> OGRID Number 230387
<sup>3</sup> Property Code 36794	<sup>4</sup> Property Name Paris Draw State Unit 1624-16	<sup>5</sup> API Number 30-015-35860
<sup>9</sup> Proposed Pool 1 Wolfcamp, West		<sup>6</sup> Well No. 13

**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
H	17	16S	24E		1880'	N	195'	E	Eddy

**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
H	16	16S	24E		1880'	N	660'	E	Eddy

**Additional Well Information**

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code O & G	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code P	<sup>15</sup> Ground Level Elevation 3671'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 8900MD.4435TVD	<sup>18</sup> Formation Wolfcamp	<sup>19</sup> Contractor NA	<sup>20</sup> Spud Date NA
Depth to Groundwater 250'		Distance from nearest fresh water well 6200'		Distance from nearest surface water 4200'
<sup>21</sup> Proposed Casing and Cement Program				

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
11"	8-5/8"	24#	1500'	325	Surface
7-7/8"	5-1/2"	17#	TVD 4435'	NA	Tie back
			MD 8900'		To surface
					casing

<sup>22</sup> 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.

**Well to be Drilled as a Horizontal Wolfcamp test. The attached drilling plan will be utilized for this test and contains details on the cement and mud programs as well as the directional information. The following is a summary of this plan.**

1. Prepare surface location. Move in and rig up drilling rig, spud well and drill and set conductor. Install and test BOP's.
2. Drill 11" surface hole to a minimum depth of 1500'. Set 8 5/8" casing and cement.
3. Drill 7 7/8" production hole 5000' TD and evaluate running mud logs as well as DLL/CNL/LDT/CAL/GR to TD.
4. Set Kickoff point at 3580' and drill and advance hole to a Wolfcamp penetration point at approximately 1800' FNL and 660' FWL of section 16 and continue drilling to BHL. (8900' MD & 4435' TVD)
5. Set 5 1/2" to TD and tie cement back to surface casing. Perforate porosity and stimulate as necessary (specific procedure to be determined).
6. Place well on test. No H2S is anticipated during the drilling of this well.
7. Well will share a pad and common reserve pit with the Paris Draw State Unit 1624-17 #14.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed name: Deane Durham

Title: Drilling Engineer

E-mail Address: ddurham@plll.com

Date: 10-8-07

Phone: 432-684-3727

**OIL CONSERVATION DIVISION**

Approved by:

**BRYAN G. ARRANT**

Title:

**DISTRICT II GEOLOGIST**

Approval Date: OCT 15 2007

Expiration Date:

OCT 15 2008

Conditions of Approval Attached ☐

DISTRICT I  
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
1220 South St. Frances Dr.  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 75260	Pool Name UNDES. Cottonwood Creek, Wolfcamp, West
Property Code	Property Name PARIS DRAW STATE UNIT 1624-16	Well Number 13
OGRID No.	Operator Name PARALLEL PETROLEUM CORPORATION	Elevation 3671'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	17	16 S	24 E		1880	NORTH	195	EAST	EDDY

Bottom Hole Location If Different From Surface

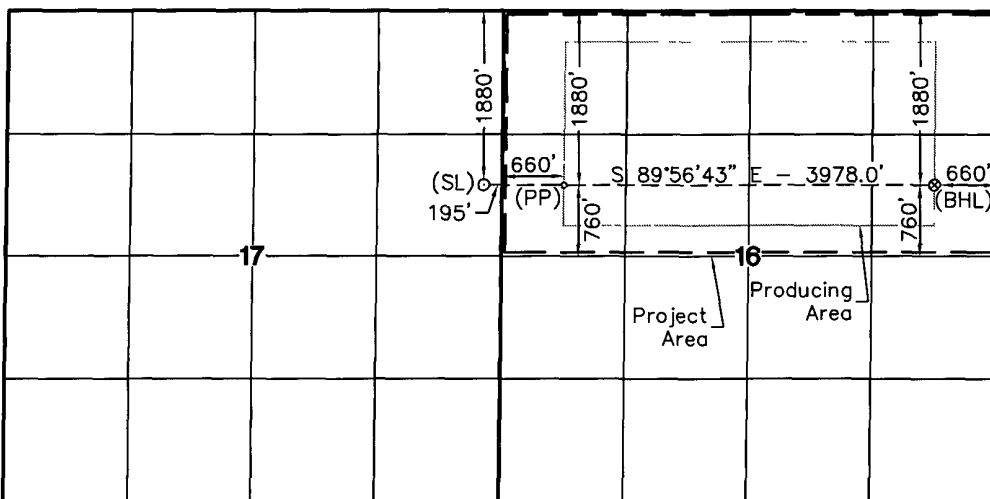
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	16	16 S	24 E		1880	NORTH	660	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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

NOTE:

- 1) Plane Coordinates and Bearings shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1983. Distances shown hereon are mean horizontal surface values.



Surface Location  
Plane Coordinate  
X = 458,526.6  
Y = 700,263.8  
Geodetic Coordinate  
Lat. 32°55'28.70" N  
Long. 104°36'09.70" W  
(NAD '27)

Penetration Point  
Plane Coordinate  
X = 459,381.4  
Y = 700,263.0  
Geodetic Coordinate  
Lat. 32°55'28.71" N  
Long. 104°35'59.68" W  
(NAD '27)

Bottom Hole Location  
Plane Coordinate  
X = 463,358.4  
Y = 700,259.2  
Geodetic Coordinate  
Lat. 32°55'28.77" N  
Long. 104°35'13.02" W  
(NAD '27)

OPERATOR CERTIFICATION

I hereby certify the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Deane Durham* Date: 10-8-07  
Printed Name: Deane Durham

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

September 17, 2007

Date of Survey  
Signature & Seal of Professional Surveyor

Signature: *MACON McDONALD*  
W.O. Num: 2007-0928  
Certificate No. MACON McDONALD 12185

# **PARALLEL** SURVEY CALCULATION PROGRAM PETROLEUM CORPORATION

OPERATOR:	Parallel Petroleum Corporation	Supervisors:	
WELL:	Paris Draw State Unit 1624-16 #13		
LOCATION:	N/2 Sec. 16 T-16-S R-24-E		
COMMENTS:			
		MAG DEC.(-/+)	
		GRID CORR.(-/+)	
		TOTAL CORR.(-/+)	0.0
DATE: 10/02/07		TIME: 1:47 PM	TRUE TO GRID <input type="checkbox"/>

MINIMUM CURVATURE CALCULATIONS(SPE-3362)									PROPOSED DIRECTION 90.0		TARGET TRACKING TO CENTER	
SVY NUM	MD	INC	GRID AZM	TVD	VERT SECT	N-S	E-W	DLS/ 100	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)		
TIE	0	0.0	0.0	0.0	0.0	0.0	0.0					
1	3580	0.0	0.0	3580.0	0.0	0.0	0.0	0.0	855.0	0.0		
2	3590	0.7	90.0	3590.0	0.1	0.0	0.1	7.0	845.0	0.0		
3	3600	1.4	90.0	3600.0	0.2	0.0	0.2	7.0	835.0	0.0		
4	4924	90.0	90.0	4435.0	855.9	0.0	855.9	6.7	0.0	0.0		
5	8900	90.0	90.0	4435.0	4832.3	0.0	4832.3	0.0	0.0	0.0		

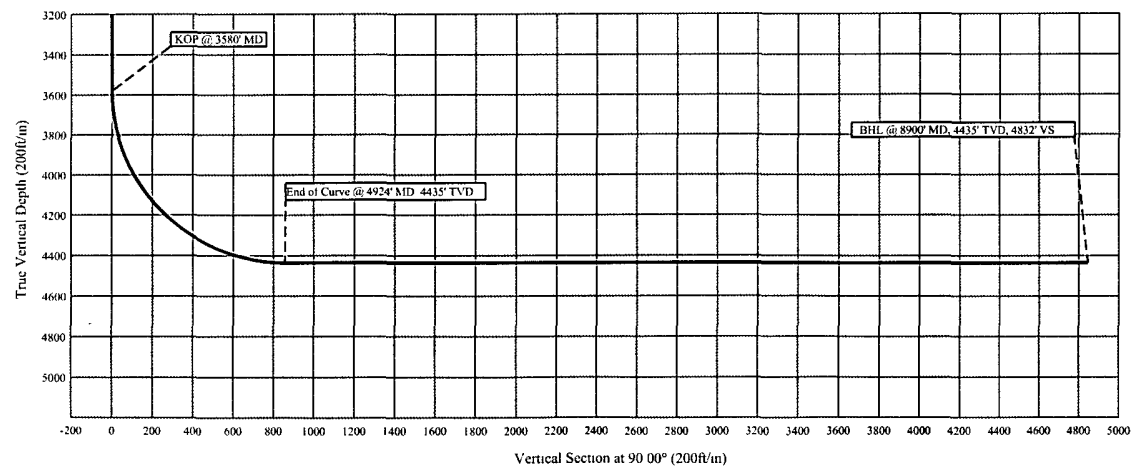
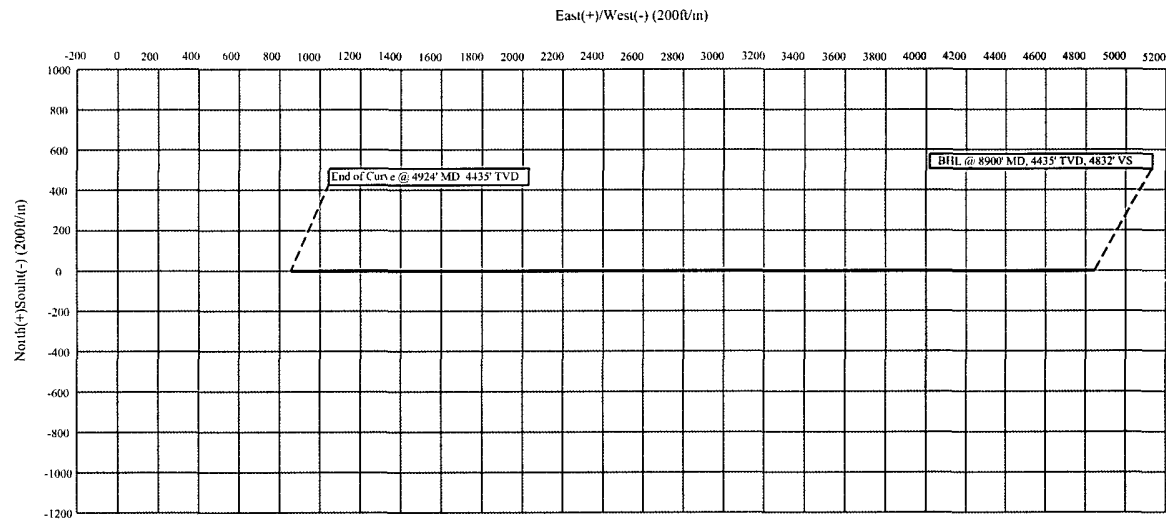
KOP @ 3580' MD  
 BUR = 6.7 DEG per 100 FT  
 End Curve @ 4924' MD, 4435' TVD  
 BHL @ 8900' MD, 4435' TVD, 4832' VS

# Parallel Petroleum Corp.

## COMPANY DETAILS

Parallel Petroleum Corp.  
1004 N. Big Spring, Ste 400  
Midland, Texas 79701

Paris Draw State Unit 1624-16 #13  
N/2 Sec. 16, T-16-S, R-24-E  
Eddy County, New Mexico



**PARALLEL PETROLEUM CORPORATION**  
**PARIS DRAW STATE UNIT 1624-16 #13**  
**SL: 1880' FNL AND 195' FEL, BHL: 1880' FNL AND 660' FEL**  
**SL: SEC 17, T16S, R24E, BHL: SEC 16, T16S, R24E**  
**EDDY COUNTY, NEW MEXICO**

**Objective**

Drill a horizontal in the Wolfcamp.

**Expected Geologic Tops**

GL: 3671', KB 3687'.  
 Glorieta 1365'  
 Tubb 2375'  
 Abo Shale 3020'  
 Wolfcamp 4435'  
 Wolfcamp Shale 4545'

**Well Geometry**

- 8 5/8" casing at 1000' ~~1500'~~
- kick-off at 3580' for horizontal zone of interest
- 5 1/2" casing through the horizontal Wolfcamp; Acid soluble cement per completion.

**Casing Program**

<u>Hole</u>	<u>MD</u> <u>(ft)</u>	<u>Casing</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>	<u>COMMENT</u>
11"	0 - <del>1500</del> 1000'	8-5/8"	24	J55	ST&C	
7-7/8"	0 - 8900'	5-1/2"	17	N80	LT&C	Run through the horizontal lateral.

### **Casing Cementing Program**

8-5/8" slurry: Lead: 125 sacks (50:50) Poz (Fly Ash): Class C + 5% bwow Sodium Chloride + 10% bwoc Bentonite + 151.7% fresh water. Tail: 200 sacks Class C + 1% bwoc Calcium Chloride + 56.3% fresh water

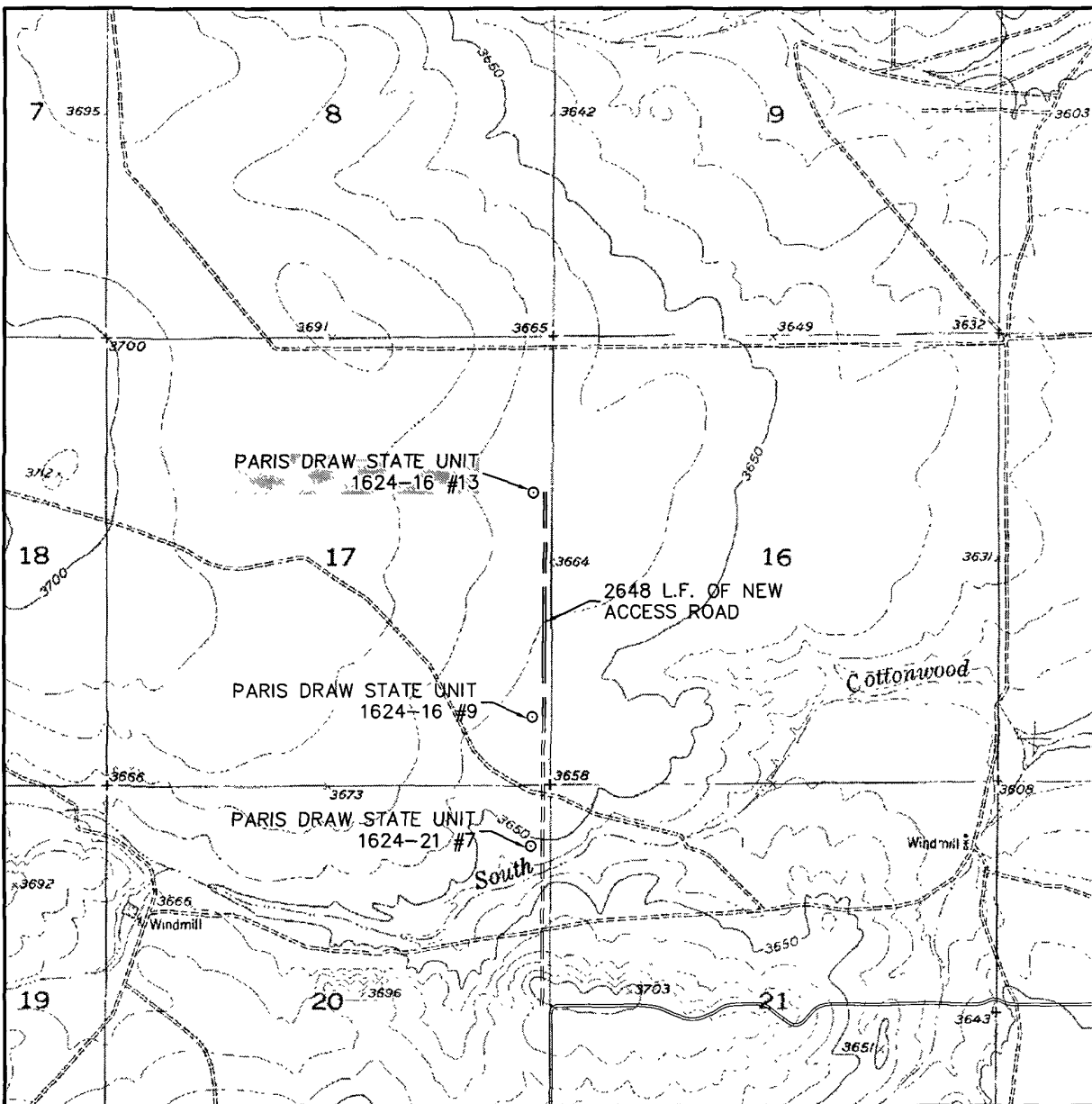
Note: If cement does not circulate to surface, notify OCD. A temperature survey will be required. Top out to surface with 1" pipe in the annulus.

Note: 5-1/2" Cement with acid-soluble CMT per completion procedure. Top of cement should be a tied-back to surface casing.

### **Mud Program**

<u>Depth</u>	<u>Hole</u>	<u>MW</u>	<u>Visc.</u>	<u>WL</u>	<u>Synopsis</u>
0 - 1500 <i>1000'</i>	11"	8.4 – 8.6	28 - 29	No control	FRESH WATER mud only to 1500 ft. Severe loss potential. Circulate inner reserve. LCM: paper, fiber, cotton seed hulls.
1500 – 3000	7-7/8"	8.6 – 9.2	28 -29	No control	Cut brine. Start w/existing & add brine t/50K- 60K chlorides
3000 – KOP	7-7/8"	8.9 – 9.5	38 - 45	12-14	XCD/polymer as req'd for hole cleaning. Lubricants.
KOP – TD Horizontal	7-7/8"	8.9 – 9.5	38 - 45	12-14	XCD/polymer as req'd for hole cleaning. Lubricants.

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
HOPE NE - 10'

SEC. 17 TWP. 16-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY CHAVES

DESCRIPTION 1880' FNL & 195' FEL

ELEVATION 3671'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE PARIS DRAW STATE UNIT 1624-16

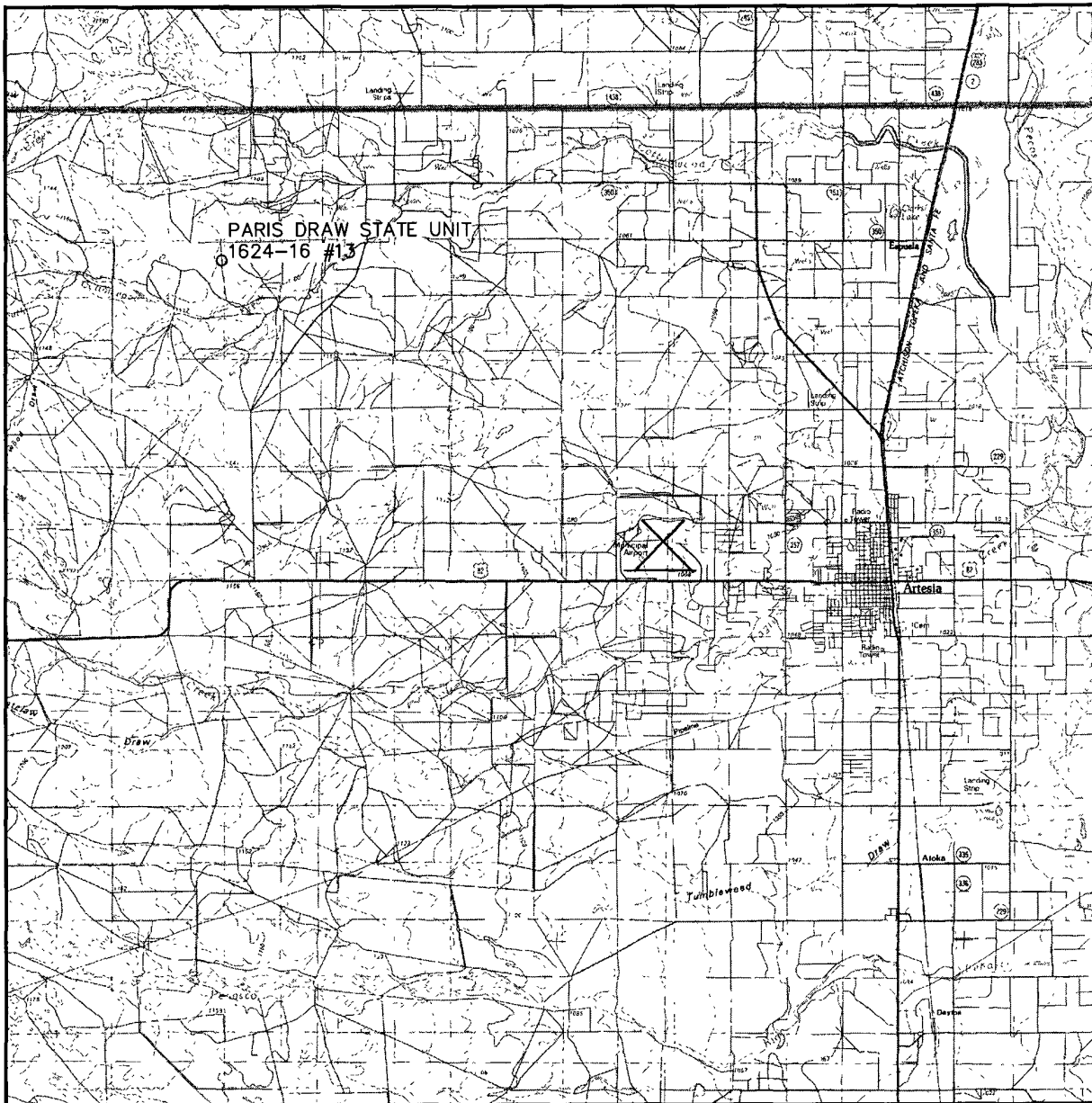
U.S.G.S. TOPOGRAPHIC MAP  
HOPE NE



**WEST  
COMPANY**  
of Midland, Inc.

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

# VICINITY MAP



SCALE: 1" = 3 MILES

SEC. 17 TWP. 16-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY CHAVES

DESCRIPTION 1880' FNL & 195' FEL

ELEVATION 3671'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE PARIS DRAW STATE UNIT 1624-16



**WEST  
COMPANY**  
of Midland, Inc.

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MIDLAND TEXAS, 79701  
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