

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**

25

Form C-101
May 27, 2004

Submit to appropriate District Office

1220 South St. Francis Dr.
Santa Fe, NM 87505

OCT 11 2007

☐ AMENDED REPORT

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

¹ Operator Name and Address Parallel Petroleum Corp. 1004 N. Big Spring Street, Suite 400, Midland, TX. 79701		² OGRID Number 230387
³ Property Code 36441	⁴ Property Name Paris Draw State Unit 1624-20	⁵ API Number 30-015-38857
⁹ Proposed Pool 1 Cottonwood Creek, Wolfcamp, West		¹⁰ Proposed Pool 2

Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	16S	24E		760'	N	213'	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
D	20	16S	24E		760'	N	660'	E	Eddy

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code O & G	¹³ Cable/Rotary R	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 3638'
¹⁶ Multiple No	¹⁷ Proposed Depth 8668MD, 4435TVD	¹⁸ Formation Wolfcamp	¹⁹ Contractor NA	²⁰ Spud Date NA
Depth to Groundwater 250'		Distance from nearest fresh water well 5000'		Distance from nearest surface water 600'
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 mils thick Clay <input type="checkbox"/> Pit Volume: 25,000 bbls Drilling Method: Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				
Closed-Loop System <input type="checkbox"/>				

²¹ 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' / 1100'	325	Surface
7-7/8"	5-1/2"	17#	TVD 4435'	NA	Tie back
			MD 8668'		To surface casing

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.

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 3986' and drill and advance hole to a Wolfcamp penetration point at approximately 760' FNL and 660' FEL of section 20 and continue drilling to BHL. (8668' 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 Com 1624-21 #7.

²³ 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
DISTRICT II GEOLOGIST**

Title:

Approval Date: OCT 15 2007

Expiration Date:

OCT 15 2008

Conditions of Approval Attached ☐

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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 1624-20	Well Number 8
OGRID No.	Operator Name PARALLEL PETROLEUM CORPORATION	Elevation 3638'

Surface Location

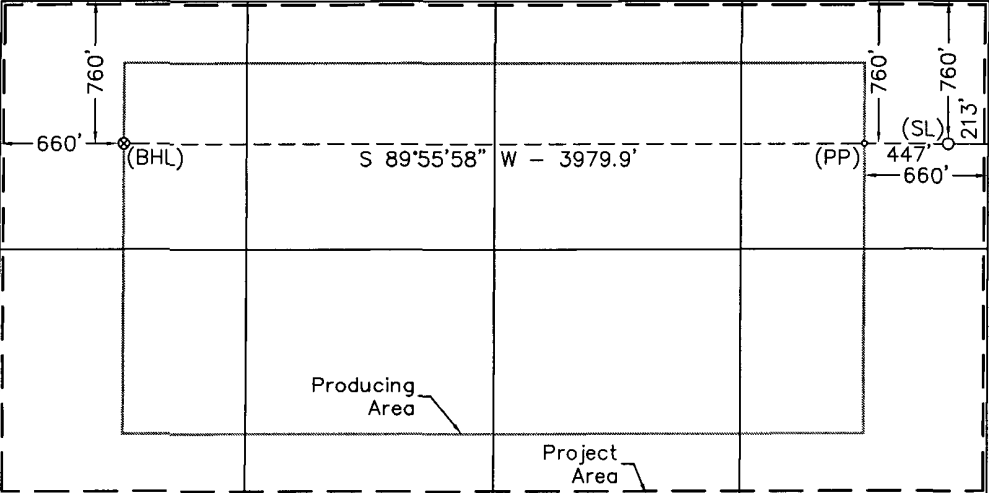
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	16 S	24 E		760	NORTH	213	EAST	EDDY

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
D	20	16 S	24 E		760	NORTH	660	WEST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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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

				<p>OPERATOR CERTIFICATION</p> <p>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 undivided 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.</p> <p><i>Deane Darham</i> 10-8-07 Signature Date Deane Darham Printed Name</p>
<p>Bottom Hole Location Plane Coordinate X = 454,052.9 Y = 696,092.6 Geodetic Coordinate Lat. 32°54'47.31" N Long. 104°37'02.06" W (NAD '27)</p>	<p>Penetration Point Plane Coordinate X = 458,031.8 Y = 696,097.3 Geodetic Coordinate Lat. 32°54'47.46" N Long. 104°36'15.38" W (NAD '27)</p>	<p>Surface Location Plane Coordinate X = 458,478.6 Y = 696,097.8 Geodetic Coordinate Lat. 32°54'47.48" N Long. 104°36'10.14" W (NAD '27)</p>	<p>SURVEYOR CERTIFICATION</p> <p>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</p> <p>September 17, 2007 Date of Survey Signature & Seal of Professional Surveyor <i>MACON McDONALD</i> NEW MEXICO 12185 W.O. Num 2007-0925 Certificate No. MACON McDONALD 12185</p>	
<p>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.</p>				

PARALLEL SURVEY CALCULATION PROGRAM PETROLEUM CORPORATION

OPERATOR:	Parallel Petroleum Corporation	Supervisors:	
WELL:	Paris Draw State Unit 1624-20 #8		
LOCATION:	N/2 Sec. 20 T-16-S R-24-E		
COMMENTS:			
		MAG DEC.(-/+)	
		GRID CORR.(-/+)	
		TOTAL CORR.(-/+)	0.0

DATE: 10/02/07 TIME: 1:33 PM TRUE TO GRID ☐

MINIMUM CURVATURE CALCULATIONS(SPE-3362)						PROPOSED DIRECTION		270.0	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	3986	0.0	0.0	3986.0	0.0	0.0	0.0	0.0	449.0	0.0
2	3996	1.3	270.0	3996.0	0.1	0.0	-0.1	12.8	439.0	0.0
3	4006	2.6	270.0	4006.0	0.4	0.0	-0.4	12.8	429.0	0.0
4	4691	90.0	270.0	4435.0	449.0	0.0	-449.0	12.8	0.0	0.0
5	8668	90.0	270.0	4435.0	4425.7	0.0	-4425.7	0.0	0.0	0.0

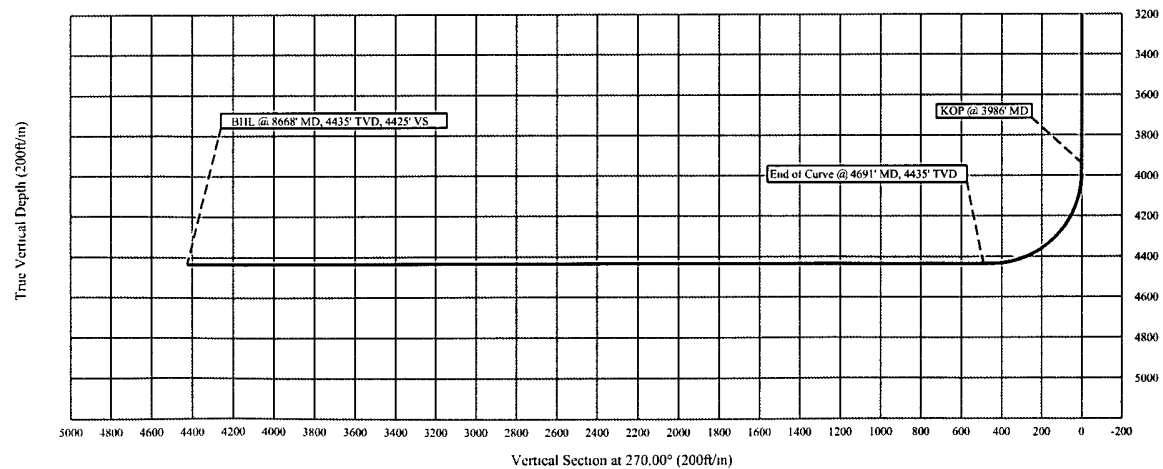
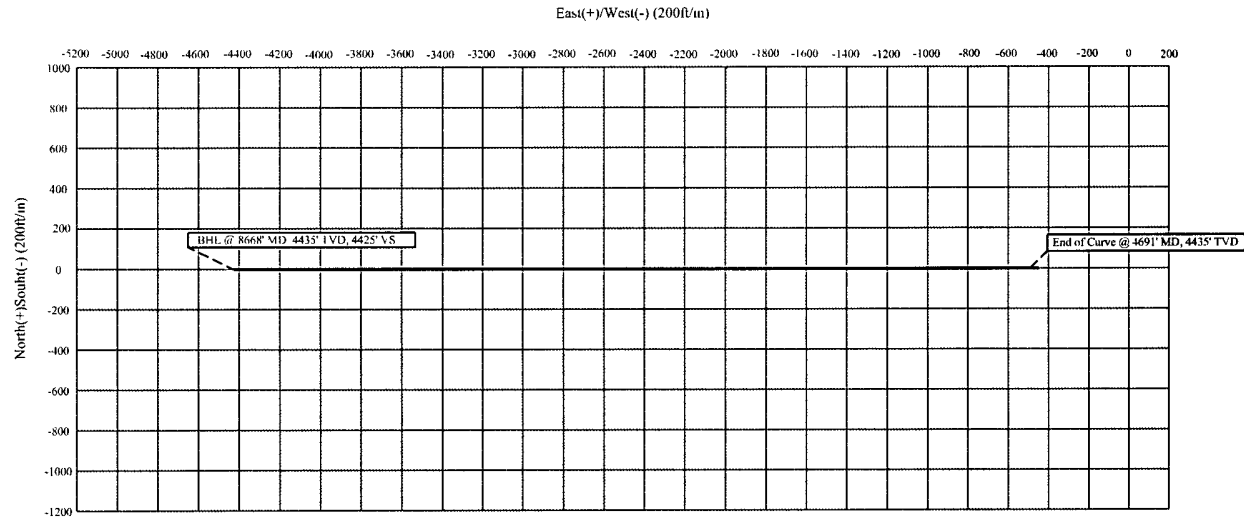
KOP @ 3986' MD
 BUR = 12.8 DEG per 100 FT
 End Curve @ 4691' MD, 4435' TVD
 BHL @ 8668' MD, 4435' TVD, 4425' VS

Parallel Petroleum Corp.

Paris Draw State Unit 1624-20 #8
N/2 Sec. 20, T-16-S, R-24-E
Eddy County, New Mexico

COMPANY DETAILS

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



PARALLEL PETROLEUM CORPORATION
PARIS DRAW STATE UNIT 1624-20 #8
SL: 760' FNL AND 213' FEL, BHL: 760' FNL AND 660' FWL
SL: SEC 20, T16S, R24E, BHL: SEC 20, T16S, R24E
EDDY COUNTY, NEW MEXICO

Objective

Drill a horizontal in the Wolfcamp.

Expected Geologic Tops

GL: 3638', KB 3654'.
 Glorieta 1365'
 Tubb 2375'
 Abo Shale 3020'
 Wolfcamp 4435'
 Wolfcamp Shale 4545'

Well Geometry

- 8 5/8" casing at 1500'
- kick-off at 3986' 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 - 1500'	8-5/8"	24	J55	ST&C	
7-7/8"	0 - 8668'	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

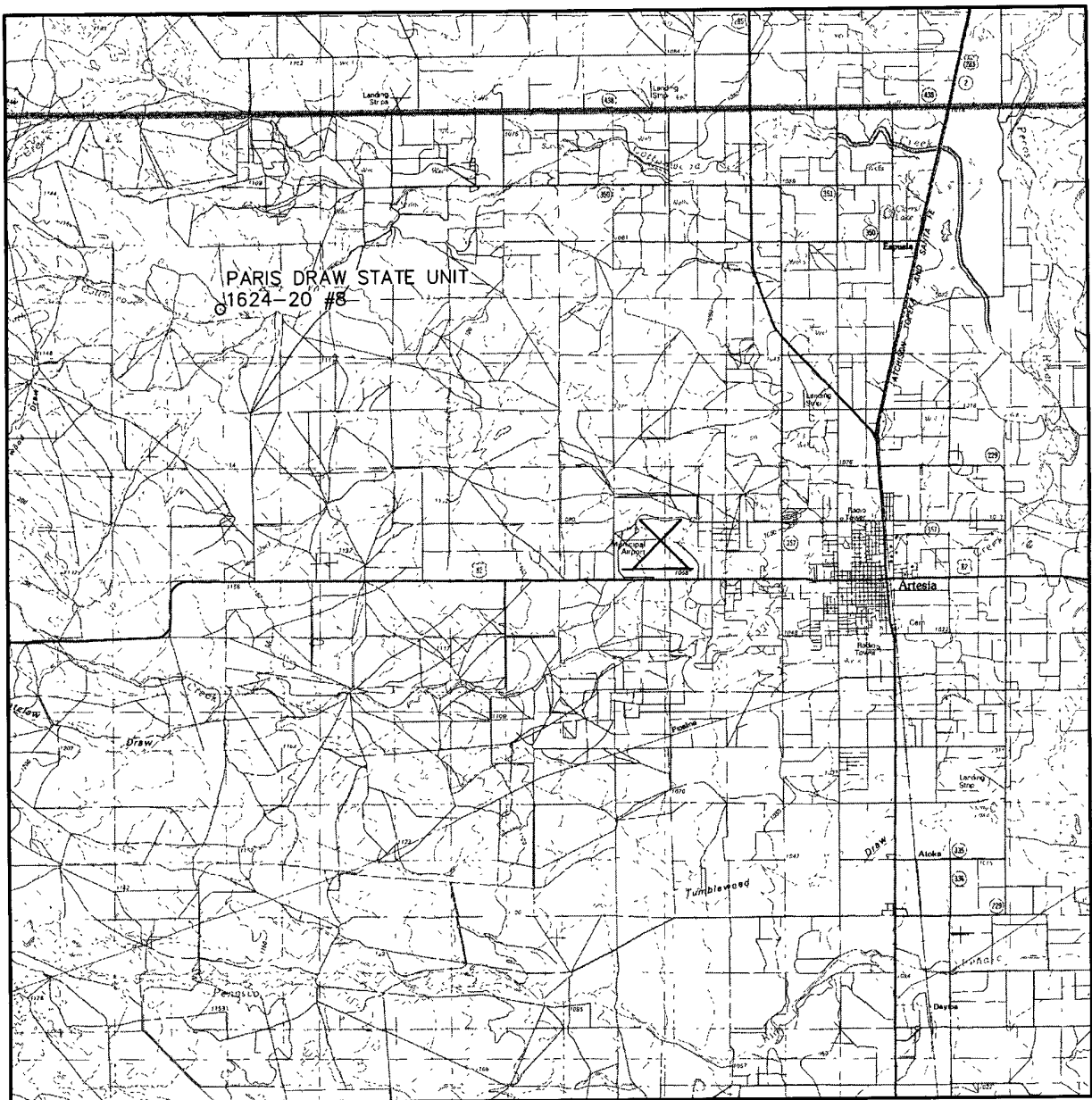
Note: If cement does not circulate to surface, notify OCD. A temperature survey will be required. Top out to surface with 1" pipe in the annulus.

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 11cc'	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.

VICINITY MAP



SCALE: 1" = 3 MILES

SEC. 20 TWP. 16-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY CHAVES

DESCRIPTION 760' FNL & 213' FEL

ELEVATION 3638'

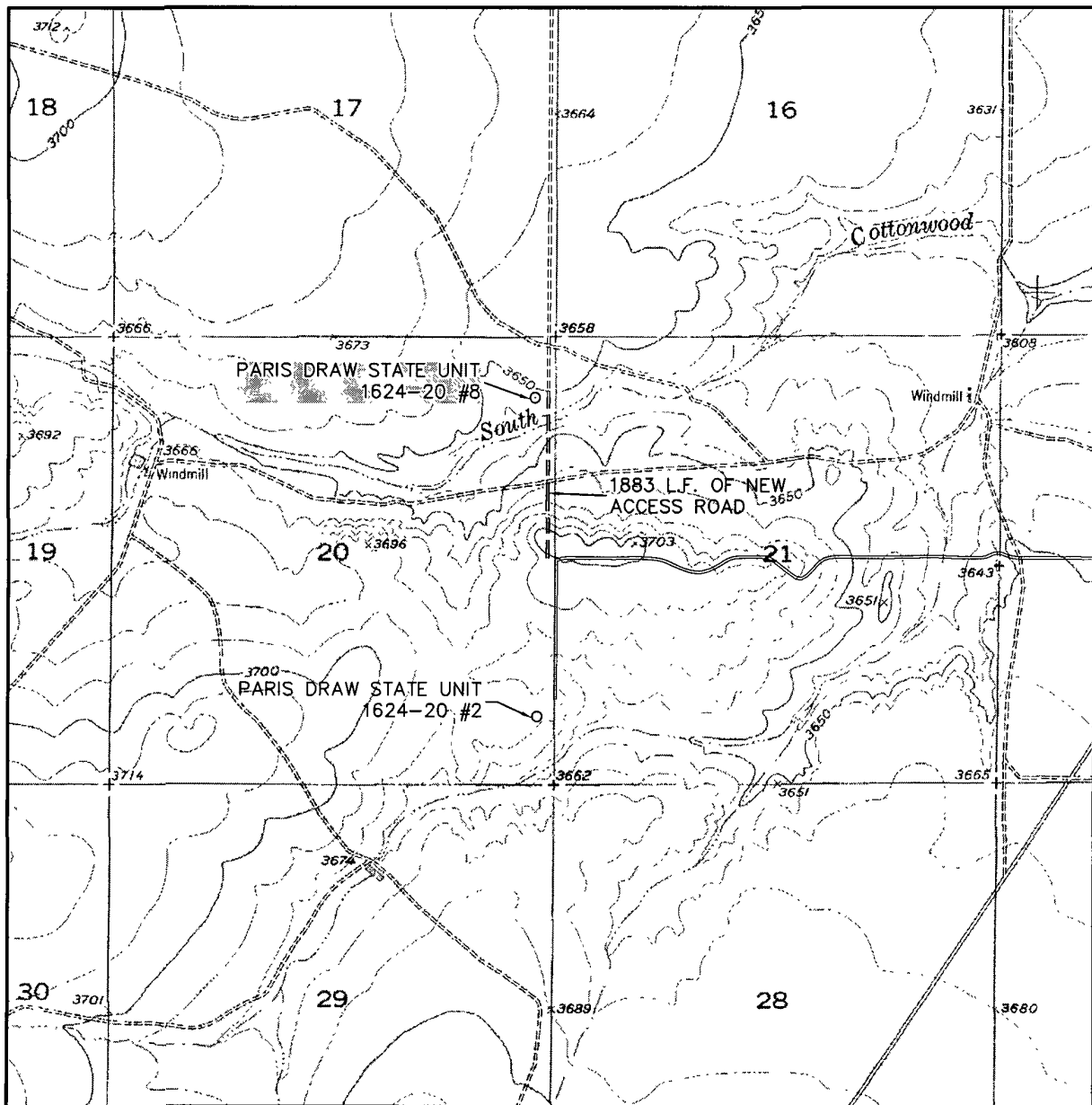
OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE PARIS DRAW STATE UNIT 1624-20



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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
HOPE NE - 10'

SEC. 20 TWP. 16-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY CHAVES

DESCRIPTION 760' FNL & 213' FEL

ELEVATION 3638'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE PARIS DRAW STATE UNIT 1624-20

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