Submit To Appropriate District Office
State Lease - 6 copies
Fee Lease - 5 copies
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 and Natural Resources

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

Form C-105
Revised March 25, 1999

WELL API NO. 30-015-33567

5. Indicate Type of Lease STATE ☑ FEE ☐

State Oil & Gas Lease No. 34222

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well: OIL WELL ☑ GAS WELL ☐ DRY ☐ OTHER

b. Type of Completion: NEW WELL ☑ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

7. Lease Name or Unit Agreement Name: State 1625

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DEC 3 . 2004
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2. Name of Operator: Perenco LLC

8. Well No. 291

3. Address of Operator: 6 Desta Drive, Suite 6800, Midland, TX, 79705

9. Pool name or Wildcat: Cottonwood Creek Abo East Gas

4. Well Location

Unit Letter A : 700 Feet From The North Line and 660 Feet From The East Line

Section 29 Township 16 Range 25 NMPM Eddy County

10. Date Spudded	11. Date T.D. Reached	12. Date Compl. (Ready to Prod.)	13. Elevations (DF& RKB, RT, GR, etc.)	14. Elev. Casinghead
09/09/04	10/03/04	10/28/04	3544 GL	

15. Total Depth	16. Plug Back T.D.	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By	Rotary Tools	Cable Tools
4907'				R	

19. Producing Interval(s), of this completion - Top, Bottom, Name: Abo: 4896' - 4945' MD

20. Was Directional Survey Made: Yes

21. Type Electric and Other Logs Run: Platform Express Litho-Den CN, GR, Micro-CFL

22. Was Well Cored: Yes

23. **CASING RECORD** (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	48#	375'	17-1/2"	returns to surf	105 scks
9-5/8"	36#	1123'	12-1/4"	temp survey	10 scks
7"	26#	5156'	8-3/4"	volume calcs	0

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
2-3/8"	4329' MD	6795' MD	uncement	

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-3/8"	4978'	4279'

26. Perforation record (interval, size, and number)

Pre-perforated

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
5100'-6795'	1555 bbls 15% HCl

28 **PRODUCTION**

Date First Production	Production Method (*Flowing, gas lift, pumping - Size and type pump*)	Well Status (*Prod. or Shut-in*)
10/20/04	Flowing	SI WO Pipeline Connection

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
11/01/04	4			0	66	4	na

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (*Corr.*)
1150	n/a			398	16	

29. Disposition of Gas (*Sold, used for fuel, vented, etc.*): vented

Test Witnessed By

30. List Attachments: Logs and Core report

31. *I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief*

Signature SJHowe Printed Name Stephen J Howe Title Petroleum Engineer Date 11/22/04

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka	T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	T. Menefee	T. Madison
T. Queen	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg	T. Montoya	T. Mancos	T. McCracken
T. San Andres 620'	T. Simpson	T. Gallup	T. Ignacio Otzte
T. Glorieta 1700'	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	T
T. Blinebry	T. Gr. Wash	T. Morrison	T.
T.Tubb 3210'	T. Delaware Sand	T.Todilto	T
T. Drinkard	T. Bone Springs	T. Entrada	T.
T. Abo 3880'	T.	T. Wingate	T.
T. Wolfcamp 5020'	T.	T. Chinle	T.
T. Penn	T.	T. Permian	T.
T. Cisco (Bough C)	T.	T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from 4900 to 4960 No. 3, from ..... to .....

No. 2, from ..... to ..... No. 4, from ..... to .....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ..... to ..... feet .....

No. 2, from ..... to ..... feet .....

No. 3, from ..... to ..... feet .....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
See attachment							

Clear

State 1625 #291 Lithology Record

From	To	Thkns	Lithology
1200	1470	270	Anhydrite/Dolomite
1470	1800	330	Dolomite/Limestone
1800	1840	40	Dolomite/Limestone/Sand
1840	2120	280	Anhydrite/Dolomite
2120	2140	20	Dolomite
2140	2210	70	Anhydrite/Dolomite
2120	2140	20	Dolomite
2140	2210	70	Anhydrite/Dolomite
2210	2280	70	Anhydrite/Dolomite/Limestone
2280	2420	160	Dolomite/Sand/Limestone
2420	2680	240	Dolomite/Anhydrite/Sand/Limestone
2680	2830	150	Dolomite/Sand/Shale/Silt
2380	2880	500	Anhydrite/Dolomite/Limestone
2880	3000	120	Anhydrite/Dolomite
3000	3160	160	Dolomite/Limestone/Shale
3160	3440	320	Anhydrite/Dolomite/Limestone/Sand/Shale
3440	3920	480	Anhydrite/Dolomite/Shale/Limestone
3920	4070	150	Dolomite/Shale
4070	4780	710	Anhydrite/Dolomite/Shale
4780	4800	20	Anhydrite/Dolomite/Limestone/Shale
4800	4930	130	Dolomite/Shale
4900	5145	245	Dolomite/Limestone/Shale

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

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

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RECEIVED
DEC 8 . 2004
OCD-ARTESIA

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name

Property Code	Property Name	Well Number
	STATE 1625	291

OGRID No.	Operator Name	Elevation
	PERENCO, LLC	3544'

Surface Location

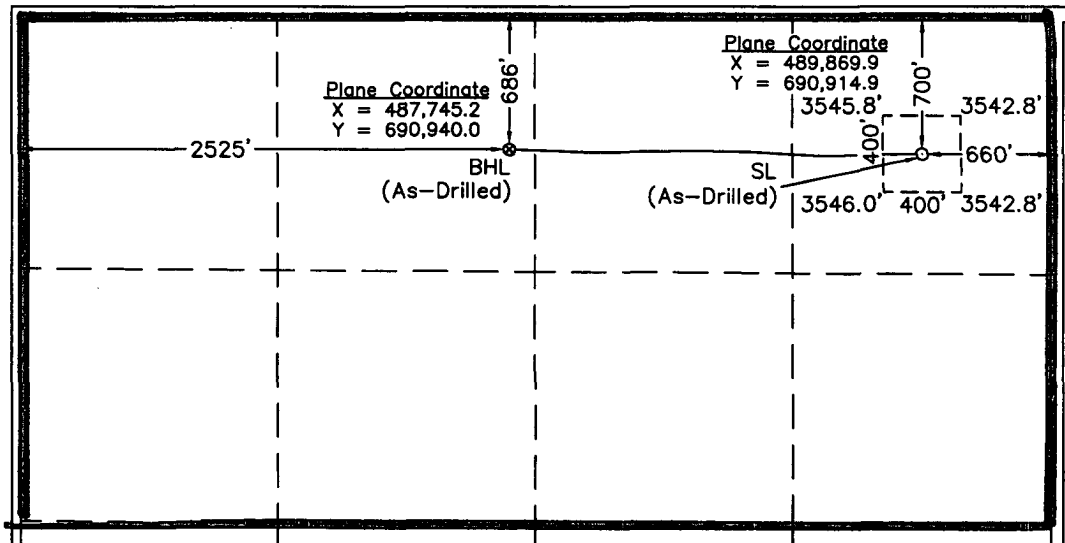
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	29	16 S	25 E		700	NORTH	660	EAST	EDDY

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
C	29	16 S	25 E		686	NORTH	2525	WEST	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 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.

OPERATOR CERTIFICATION

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

Signature

Printed Name

Title

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 upervison and that the same is true and orrect to the best of my belief.

November 20, 2004
Date Surveyed LVA

Signature & Seal of Professional Surveyor

W.O. Num. 2004-0862

Certificate No. MACON McDONALD 12185

A Gyrodata Directional Survey

for

PERENCO LLC

Lease: State Lease16-25 Well: No. 291, 3-1/2" Drillpipe
Location: Patterson #503, Eddy County, New Mexico

Job Number: MD0904GW222

Run Date: 23 Sep 2004

Surveyor: Perenco

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 32.899250 deg. N Longitude: 104.500580 deg. W

Azimuth Correction:
Gyro: 0.09000 deg East to Grid North

Proposed Well Direction: 270.310 deg

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

Perenco LLC
Lease: State Lease16-25 Well: No. 291, 3-1/2" Drillpipe
Location: Patterson #503, Eddy County, New Mexico
Job Number: MD0904GW222

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
0.00	0.00	0.00	0.0	0.00	0.00	0.0	0.0	0.00 N	0.00 E

0 TO 4531. FT. RATE GYROSCOPIC MULTISHOT RUN INSIDE 3-1/2" DRILLPIPE
ALL MEASURED DEPTHS AND COORDINATES ARE REFERENCED TO PATTERSON #503 R.K.B

200.00	0.28	171.46	-0.1	0.14	200.00	0.5	171.5	0.49 S	0.07 E
400.00	1.38	125.64	-2.1	0.60	399.98	3.2	138.5	2.38 S	2.11 E
600.00	1.27	118.21	-6.0	0.10	599.92	7.7	128.8	4.83 S	6.02 E
800.00	1.14	133.91	-9.4	0.18	799.88	11.9	127.7	7.25 S	9.39 E
1000.00	1.19	131.02	-12.4	0.04	999.84	15.9	128.9	9.99 S	12.39 E
1200.00	1.14	134.51	-15.4	0.04	1199.80	20.0	129.7	12.74 S	15.37 E
1400.00	1.09	130.66	-18.3	0.05	1399.76	23.8	130.1	15.37 S	18.22 E
1600.00	1.27	136.29	-21.3	0.11	1599.72	27.9	130.7	18.20 S	21.19 E
1800.00	1.21	144.24	-24.1	0.09	1799.67	32.2	131.9	21.51 S	23.95 E
2000.00	0.97	137.74	-26.4	0.13	1999.63	35.9	132.9	24.47 S	26.31 E
2200.00	0.90	136.60	-28.7	0.03	2199.61	39.2	133.3	26.87 S	28.54 E
2400.00	0.53	138.36	-30.4	0.19	2399.59	41.7	133.5	28.70 S	30.23 E
2600.00	0.42	142.48	-31.4	0.06	2599.59	43.3	133.8	29.96 S	31.28 E
2800.00	0.23	133.57	-32.2	0.10	2799.58	44.4	133.9	30.81 S	32.01 E
3000.00	0.12	161.82	-32.5	0.07	2999.58	45.0	134.0	31.29 S	32.37 E
3200.00	0.05	149.05	-32.6	0.03	3199.58	45.3	134.2	31.56 S	32.48 E
3400.00	0.25	236.38	-32.3	0.13	3399.58	45.3	134.8	31.88 S	32.16 E
3600.00	0.39	250.33	-31.3	0.08	3599.58	44.9	136.1	32.36 S	31.15 E
3800.00	0.37	242.50	-30.1	0.03	3799.57	44.5	137.7	32.88 S	29.94 E
4000.00	0.32	219.97	-29.2	0.07	3999.57	44.4	139.2	33.61 S	29.01 E

A Gyrodata Directional Survey

Perenco LLC
Lease: State Lease16-25 Well: No. 291, 3-1/2" Drillpipe
Location: Patterson #503, Eddy County, New Mexico
Job Number: MD0904GW222

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4200.00	0.28	193.72	-28.7	0.07	4199.57	44.8	140.4	34.51 S	28.54 E
4400.00	0.46	143.88	-29.1	0.18	4399.56	45.9	141.0	35.65 S	28.90 E
4531.00	0.50	118.33	-29.9	0.17	4530.56	46.9	140.7	36.35 S	29.71 E

Final Station Closure: Distance: 46.95 ft Az: 140.73 deg.

MEASUREMENT WHILE DRILLING SERVICES

October 27 2004

Perenco, LLC
6 Desta Drive, Suite 6800
Midland, Texas 79705

Attention: Regulatory Compliance Dept.

Re: Perenco, LLC
State Lease 1625 #291, S/T #1
Eddy County, New Mexico
Patterson Drilling 503

Dear Sir or Madam:

Please find attached (2) copies of MWD Survey Report for well referenced above for your records.

Regards,

Clyde J. Cormier
President

CJC:cb

Enclosure

MWD SERVICES, INC. • P.O. Box 750 / 219 Griffin Road • Youngsville, LA 70592
(337) 856-5965 • Fax: (337) 856-9091

MWD SURVEY REPORT
MWD Services, Inc.

MEASUREMENT WHILE DRILLING SERVICES

Report Date :	OCTOBER 06, 2004	Target +N / -S =	21.6'
Job Number :	04119B	Target +E / -W =	3988.2'
Operator :	PARENCO, LLC	Target TVD =	4932.0'
Lease / Well :	STATE LEASE 1625 #291 S/T 1	Magnetic Declination +E / -W =	8.99°
Location :	EDDY COUNTY, NEW MEXICO	Grid Convergence +E / -W =	-0.02°
Field :	ABO	Total Correction +E / -W =	9.01°
Contractor / Rig :	PATTERSON DRILLING 503	North Reference =	Grid
Directional Company :	THE DIRECTIONAL DRILLING COMPANY	RKB Height =	
MWD Field Rep. :	BRAD ROBERTS / RICHARD GODWIN	Ground Level Elevation =	
Tie In Survey Reference :	MWD SERVICES, INC. TRRC# 519015 FILE 04119	Vertical Section Azimuth =	270.31°
Calculation Method :	MINIMUM CURVATURE		

Comments :
SURVEY #0 = TIE IN SURVEY
SURVEY #59 = STRAIGHT LINE PROJECTED SURVEY TO BIT DEPTH

Srv. No.	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates +N / -S (ft)	Coordinates +E / -W (ft)	Closure Distance (ft)	Closure Azimuth (deg)	Dogleg Severity (deg/100 ')
0	4977.00'	73.70°	267.70°		4876.67'	195.45'	-1.70'	-195.46'	195.47'	269.50°	
1	5009.00'	76.30°	270.00°	32'	4884.95'	226.34'	-2.32'	-226.36'	226.37'	269.41°	10.69°
2	5041.00'	80.60°	269.60°	32'	4891.36'	257.69'	-2.43'	-257.70'	257.71'	269.46°	13.49°
3	5073.00'	84.60°	269.30°	32'	4895.48'	289.41'	-2.73'	-289.43'	289.44'	269.46°	12.53°
4	5105.00'	86.80°	268.50°	32'	4897.88'	321.31'	-3.34'	-321.33'	321.35'	269.40°	7.31°
5	5137.00'	89.20°	268.50°	32'	4898.99'	353.27'	-4.18'	-353.30'	353.32'	269.32°	7.50°
6	5169.00'	89.40°	268.50°	32'	4899.39'	385.25'	-5.02'	-385.28'	385.32'	269.25°	0.63°
7	5201.00'	89.90°	268.30°	32'	4899.58'	417.23'	-5.91'	-417.27'	417.31'	269.19°	1.68°
8	5233.00'	91.80°	268.90°	32'	4899.11'	449.21'	-6.69'	-449.26'	449.31'	269.15°	6.23°
9	5266.00'	92.50°	269.70°	33'	4897.87'	482.18'	-7.10'	-482.23'	482.28'	269.16°	3.22°
10	5297.00'	92.70°	270.70°	31'	4896.46'	513.15'	-6.99'	-513.20'	513.25'	269.22°	3.29°
11	5330.00'	92.10°	271.80°	33'	4895.08'	546.12'	-6.27'	-546.16'	546.20'	269.34°	3.79°
12	5362.00'	92.40°	272.50°	32'	4893.82'	578.08'	-5.07'	-578.11'	578.13'	269.50°	2.38°
13	5394.00'	91.40°	273.10°	32'	4892.76'	610.03'	-3.51'	-610.06'	610.07'	269.67°	3.64°
14	5425.00'	91.10°	273.20°	31'	4892.09'	640.98'	-1.81'	-641.00'	641.00'	269.84°	1.02°
15	5457.00'	87.40°	273.70°	32'	4892.51'	672.93'	0.12'	-672.94'	672.94'	270.01°	11.67°
16	5489.00'	86.30°	273.80°	32'	4894.26'	704.82'	2.21'	-704.82'	704.82'	270.18°	3.45°
17	5521.00'	86.40°	273.60°	32'	4896.30'	736.70'	4.27'	-736.69'	736.70'	270.33°	0.70°
18	5553.00'	86.20°	273.20°	32'	4898.37'	768.59'	6.16'	-768.56'	768.59'	270.46°	1.40°
19	5584.00'	85.90°	273.00°	31'	4900.50'	799.48'	7.84'	-799.44'	799.48'	270.56°	1.16°
20	5616.00'	85.60°	272.80°	32'	4902.87'	831.36'	9.45'	-831.32'	831.37'	270.65°	1.13°
21	5648.00'	85.40°	272.70°	32'	4905.38'	863.23'	10.98'	-863.18'	863.25'	270.73°	0.70°
22	5680.00'	85.10°	271.40°	32'	4908.03'	895.10'	12.12'	-895.05'	895.13'	270.78°	4.16°
23	5712.00'	85.20°	271.10°	32'	4910.74'	926.98'	12.82'	-926.93'	927.02'	270.79°	0.99°
24	5744.00'	87.60°	270.70°	32'	4912.75'	958.92'	13.32'	-958.86'	958.95'	270.80°	7.60°
25	5776.00'	88.40°	270.50°	32'	4913.87'	990.90'	13.65'	-990.84'	990.93'	270.79°	2.58°
26	5808.00'	87.50°	270.80°	32'	4915.01'	1022.87'	14.02'	-1022.81'	1022.91'	270.79°	2.96°
27	5841.00'	87.10°	270.80°	33'	4916.56'	1055.84'	14.48'	-1055.77'	1055.87'	270.79°	1.21°
28	5873.00'	87.00°	270.80°	32'	4918.21'	1087.79'	14.92'	-1087.73'	1087.83'	270.79°	0.31°

Srv. No.	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates +N / -S (ft)	Coordinates +E / -W (ft)	Closure Distance (ft)	Closure Azimuth (deg)	Dogleg Severity (deg/100 ')
29	5905.00'	86.90°	270.60°	32'	4919.91'	1119.75'	15.31'	-1119.68'	1119.79'	270.78°	0.70°
30	5937.00'	86.60°	270.10°	32'	4921.73'	1151.70'	15.51'	-1151.63'	1151.73'	270.77°	1.82°
31	5969.00'	86.50°	270.00°	32'	4923.65'	1183.64'	15.54'	-1183.57'	1183.67'	270.75°	0.44°
32	6000.00'	88.10°	269.80°	31'	4925.11'	1214.60'	15.48'	-1214.53'	1214.63'	270.73°	5.20°
33	6033.00'	88.60°	269.50°	33'	4926.06'	1247.58'	15.28'	-1247.52'	1247.61'	270.70°	1.77°
34	6065.00'	88.60°	269.20°	32'	4926.85'	1279.57'	14.92'	-1279.51'	1279.60'	270.67°	0.94°
35	6097.00'	88.80°	269.00°	32'	4927.57'	1311.56'	14.42'	-1311.50'	1311.58'	270.63°	0.88°
36	6128.00'	90.20°	269.40°	31'	4927.84'	1342.55'	13.98'	-1342.49'	1342.56'	270.60°	4.70°
37	6160.00'	89.90°	269.10°	32'	4927.81'	1374.54'	13.56'	-1374.49'	1374.56'	270.57°	1.33°
38	6192.00'	91.70°	269.50°	32'	4927.37'	1406.53'	13.17'	-1406.48'	1406.54'	270.54°	5.76°
39	6224.00'	92.00°	269.40°	32'	4926.33'	1438.51'	12.87'	-1438.46'	1438.52'	270.51°	0.99°
40	6256.00'	92.00°	269.00°	32'	4925.22'	1470.49'	12.42'	-1470.44'	1470.49'	270.48°	1.25°
41	6288.00'	92.30°	269.40°	32'	4924.02'	1502.46'	11.97'	-1502.41'	1502.46'	270.46°	1.56°
42	6320.00'	91.90°	269.10°	32'	4922.84'	1534.43'	11.56'	-1534.39'	1534.43'	270.43°	1.56°
43	6352.00'	91.10°	269.10°	32'	4922.01'	1566.41'	11.05'	-1566.38'	1566.41'	270.40°	2.50°
44	6384.00'	93.10°	269.50°	32'	4920.83'	1598.38'	10.66'	-1598.35'	1598.39'	270.38°	6.37°
45	6416.00'	93.40°	270.00°	32'	4919.02'	1630.33'	10.52'	-1630.30'	1630.33'	270.37°	1.82°
46	6448.00'	94.00°	270.60°	32'	4916.96'	1662.26'	10.69'	-1662.23'	1662.26'	270.37°	2.65°
47	6480.00'	93.30°	269.90°	32'	4914.92'	1694.20'	10.83'	-1694.16'	1694.20'	270.37°	3.09°
48	6512.00'	93.90°	271.30°	32'	4912.91'	1726.13'	11.16'	-1726.10'	1726.14'	270.37°	4.75°
49	6544.00'	94.20°	271.50°	32'	4910.65'	1758.05'	11.94'	-1758.01'	1758.05'	270.39°	1.13°
50	6576.00'	93.80°	271.60°	32'	4908.42'	1789.96'	12.81'	-1789.92'	1789.97'	270.41°	1.29°
51	6608.00'	94.20°	271.90°	32'	4906.18'	1821.87'	13.78'	-1821.83'	1821.88'	270.43°	1.56°
52	6640.00'	93.90°	272.10°	32'	4903.92'	1853.78'	14.90'	-1853.73'	1853.79'	270.46°	1.13°
53	6672.00'	94.20°	272.80°	32'	4901.66'	1885.68'	16.26'	-1885.62'	1885.69'	270.49°	2.37°
54	6704.00'	91.90°	272.10°	32'	4899.96'	1917.61'	17.63'	-1917.54'	1917.62'	270.53°	7.51°
55	6736.00'	90.50°	271.70°	32'	4899.29'	1949.59'	18.69'	-1949.52'	1949.61'	270.55°	4.55°
56	6768.00'	90.60°	272.00°	32'	4898.98'	1981.58'	19.72'	-1981.50'	1981.60'	270.57°	0.99°
57	6799.00'	92.50°	272.50°	31'	4898.15'	2012.54'	20.94'	-2012.46'	2012.57'	270.60°	6.34°
58	6831.00'	92.80°	272.10°	32'	4896.67'	2044.49'	22.22'	-2044.40'	2044.52'	270.62°	1.56°
59	6912.00'	93.00°	272.00°	81'	4892.57'	2125.35'	25.11'	-2125.25'	2125.39'	270.68°	0.28°

MEASUREMENT WHILE DRILLING SERVICES

MWD SURVEY REPORT
MWD Services, Inc.

Report Date :	OCTOBER 06, 2004	Target +N / -S =	21.6'
Job Number :	04119B	Target +E / -W =	3988.2'
Operator :	PARENCO, LLC	Target TVD =	4932.0'
Lease / Well :	STATE LEASE 1625 #291 S/T 1	Magnetic Declination +E / -W =	8.99°
Location :	EDDY COUNTY, NEW MEXICO	Grid Convergence +E / -W =	-0.02°
Field :	ABO	Total Correction +E / -W =	9.01°
Contractor / Rig :	PATTERSON DRILLING 503	North Reference =	Grid
Directional Company :	THE DIRECTIONAL DRILLING COMPANY	RKB Height =	
MWD Field Rep. :	BRAD ROBERTS / RICHARD GODWIN	Ground Level Elevation =	
Tie In Survey Reference :	MWD SERVICES, INC. TRRC# 519015 FILE 04119	Vertical Section Azimuth =	270.31°
Calculation Method :	MINIMUM CURVATURE		

Comments :
SURVEY #0 = TIE IN SURVEY
SURVEY #59 = STRAIGHT LINE PROJECTED SURVEY TO BIT DEPTH

Srv. No.	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates +N / -S (ft)	Coordinates +E / -W (ft)	Closure Distance (ft)	Closure Azimuth (deg)	Dogleg Severity (deg/100 ')
0	4977.00'	73.70°	267.70°		4876.67'	195.45'	-1.70'	-195.46'	195.47'	269.50°	
1	5009.00'	76.30°	270.00°	32'	4884.95'	226.34'	-2.32'	-226.36'	226.37'	269.41°	10.69°
2	5041.00'	80.60°	269.60°	32'	4891.36'	257.69'	-2.43'	-257.70'	257.71'	269.46°	13.49°
3	5073.00'	84.60°	269.30°	32'	4895.48'	289.41'	-2.73'	-289.43'	289.44'	269.46°	12.53°
4	5105.00'	86.80°	268.50°	32'	4897.88'	321.31'	-3.34'	-321.33'	321.35'	269.40°	7.31°
5	5137.00'	89.20°	268.50°	32'	4898.99'	353.27'	-4.18'	-353.30'	353.32'	269.32°	7.50°
6	5169.00'	89.40°	268.50°	32'	4899.39'	385.25'	-5.02'	-385.28'	385.32'	269.25°	0.63°
7	5201.00'	89.90°	268.30°	32'	4899.58'	417.23'	-5.91'	-417.27'	417.31'	269.19°	1.68°
8	5233.00'	91.80°	268.90°	32'	4899.11'	449.21'	-6.69'	-449.26'	449.31'	269.15°	6.23°
9	5266.00'	92.50°	269.70°	33'	4897.87'	482.18'	-7.10'	-482.23'	482.28'	269.16°	3.22°
10	5297.00'	92.70°	270.70°	31'	4896.46'	513.15'	-6.99'	-513.20'	513.25'	269.22°	3.29°
11	5330.00'	92.10°	271.80°	33'	4895.08'	546.12'	-6.27'	-546.16'	546.20'	269.34°	3.79°
12	5362.00'	92.40°	272.50°	32'	4893.82'	578.08'	-5.07'	-578.11'	578.13'	269.50°	2.38°
13	5394.00'	91.40°	273.10°	32'	4892.76'	610.03'	-3.51'	-610.06'	610.07'	269.67°	3.64°
14	5425.00'	91.10°	273.20°	31'	4892.09'	640.98'	-1.81'	-641.00'	641.00'	269.84°	1.02°
15	5457.00'	87.40°	273.70°	32'	4892.51'	672.93'	0.12'	-672.94'	672.94'	270.01°	11.67°
16	5489.00'	86.30°	273.80°	32'	4894.26'	704.82'	2.21'	-704.82'	704.82'	270.18°	3.45°
17	5521.00'	86.40°	273.60°	32'	4896.30'	736.70'	4.27'	-736.69'	736.70'	270.33°	0.70°
18	5553.00'	86.20°	273.20°	32'	4898.37'	768.59'	6.16'	-768.56'	768.59'	270.46°	1.40°
19	5584.00'	85.90°	273.00°	31'	4900.50'	799.48'	7.84'	-799.44'	799.48'	270.56°	1.16°
20	5616.00'	85.60°	272.80°	32'	4902.87'	831.36'	9.45'	-831.32'	831.37'	270.65°	1.13°
21	5648.00'	85.40°	272.70°	32'	4905.38'	863.23'	10.98'	-863.18'	863.25'	270.73°	0.70°
22	5680.00'	85.10°	271.40°	32'	4908.03'	895.10'	12.12'	-895.05'	895.13'	270.78°	4.16°
23	5712.00'	85.20°	271.10°	32'	4910.74'	926.98'	12.82'	-926.93'	927.02'	270.79°	0.99°
24	5744.00'	87.60°	270.70°	32'	4912.75'	958.92'	13.32'	-958.86'	958.95'	270.80°	7.60°
25	5776.00'	88.40°	270.50°	32'	4913.87'	990.90'	13.65'	-990.84'	990.93'	270.79°	2.58°
26	5808.00'	87.50°	270.80°	32'	4915.01'	1022.87'	14.02'	-1022.81'	1022.91'	270.79°	2.96°
27	5841.00'	87.10°	270.80°	33'	4916.56'	1055.84'	14.48'	-1055.77'	1055.87'	270.79°	1.21°
28	5873.00'	87.00°	270.80°	32'	4918.21'	1087.79'	14.92'	-1087.73'	1087.83'	270.79°	0.31°

Srv. No.	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates +N / -S (ft)	Coordinates +E / -W (ft)	Closure Distance (ft)	Closure Azimuth (deg)	Dogleg Severity (deg/100 ')
29	5905.00'	86.90°	270.60°	32'	4919.91'	1119.75'	15.31'	-1119.68'	1119.79'	270.78°	0.70°
30	5937.00'	86.60°	270.10°	32'	4921.73'	1151.70'	15.51'	-1151.63'	1151.73'	270.77°	1.82°
31	5969.00'	86.50°	270.00°	32'	4923.65'	1183.64'	15.54'	-1183.57'	1183.67'	270.75°	0.44°
32	6000.00'	88.10°	269.80°	31'	4925.11'	1214.60'	15.48'	-1214.53'	1214.63'	270.73°	5.20°
33	6033.00'	88.60°	269.50°	33'	4926.06'	1247.58'	15.28'	-1247.52'	1247.61'	270.70°	1.77°
34	6065.00'	88.60°	269.20°	32'	4926.85'	1279.57'	14.92'	-1279.51'	1279.60'	270.67°	0.94°
35	6097.00'	88.80°	269.00°	32'	4927.57'	1311.56'	14.42'	-1311.50'	1311.58'	270.63°	0.88°
36	6128.00'	90.20°	269.40°	31'	4927.84'	1342.55'	13.98'	-1342.49'	1342.56'	270.60°	4.70°
37	6160.00'	89.90°	269.10°	32'	4927.81'	1374.54'	13.56'	-1374.49'	1374.56'	270.57°	1.33°
38	6192.00'	91.70°	269.50°	32'	4927.37'	1406.53'	13.17'	-1406.48'	1406.54'	270.54°	5.76°
39	6224.00'	92.00°	269.40°	32'	4926.33'	1438.51'	12.87'	-1438.46'	1438.52'	270.51°	0.99°
40	6256.00'	92.00°	269.00°	32'	4925.22'	1470.49'	12.42'	-1470.44'	1470.49'	270.48°	1.25°
41	6288.00'	92.30°	269.40°	32'	4924.02'	1502.46'	11.97'	-1502.41'	1502.46'	270.46°	1.56°
42	6320.00'	91.90°	269.10°	32'	4922.84'	1534.43'	11.56'	-1534.39'	1534.43'	270.43°	1.56°
43	6352.00'	91.10°	269.10°	32'	4922.01'	1566.41'	11.05'	-1566.38'	1566.41'	270.40°	2.50°
44	6384.00'	93.10°	269.50°	32'	4920.83'	1598.38'	10.66'	-1598.35'	1598.39'	270.38°	6.37°
45	6416.00'	93.40°	270.00°	32'	4919.02'	1630.33'	10.52'	-1630.30'	1630.33'	270.37°	1.82°
46	6448.00'	94.00°	270.60°	32'	4916.96'	1662.26'	10.69'	-1662.23'	1662.26'	270.37°	2.65°
47	6480.00'	93.30°	269.90°	32'	4914.92'	1694.20'	10.83'	-1694.16'	1694.20'	270.37°	3.09°
48	6512.00'	93.90°	271.30°	32'	4912.91'	1726.13'	11.16'	-1726.10'	1726.14'	270.37°	4.75°
49	6544.00'	94.20°	271.50°	32'	4910.65'	1758.05'	11.94'	-1758.01'	1758.05'	270.39°	1.13°
50	6576.00'	93.80°	271.60°	32'	4908.42'	1789.96'	12.81'	-1789.92'	1789.97'	270.41°	1.29°
51	6608.00'	94.20°	271.90°	32'	4906.18'	1821.87'	13.78'	-1821.83'	1821.88'	270.43°	1.56°
52	6640.00'	93.90°	272.10°	32'	4903.92'	1853.78'	14.90'	-1853.73'	1853.79'	270.46°	1.13°
53	6672.00'	94.20°	272.80°	32'	4901.66'	1885.68'	16.26'	-1885.62'	1885.69'	270.49°	2.37°
54	6704.00'	91.90°	272.10°	32'	4899.96'	1917.61'	17.63'	-1917.54'	1917.62'	270.53°	7.51°
55	6736.00'	90.50°	271.70°	32'	4899.29'	1949.59'	18.69'	-1949.52'	1949.61'	270.55°	4.55°
56	6768.00'	90.60°	272.00°	32'	4898.98'	1981.58'	19.72'	-1981.50'	1981.60'	270.57°	0.99°
57	6799.00'	92.50°	272.50°	31'	4898.15'	2012.54'	20.94'	-2012.46'	2012.57'	270.60°	6.34°
58	6831.00'	92.80°	272.10°	32'	4896.67'	2044.49'	22.22'	-2044.40'	2044.52'	270.62°	1.56°
59	6912.00'	93.00°	272.00°	81'	4892.57'	2125.35'	25.11'	-2125.25'	2125.39'	270.68°	0.28°