

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

Form C-104
Revised August 1, 2011

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

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Colgate Operating, LLC 300 N Marienfeld Street, Suite 1000 Midland, Tx 79701		² OGRID Number 371449	
		³ Reason for Filing Code/ Effective Date RT	
⁴ API Number 30 – 015 – 46766	⁵ Pool Name WINCHESTER; BONE SPRING, WEST		⁶ Pool Code 97569
⁷ Property Code 371449 327171	⁸ Property Name BIG BURRO 27 STATE COM		⁷⁹ Well Number 133H

II. ¹⁰ Surface Location

UL or lot no. P	Section 27	Township 19S	Range 28E	Lot Idn	Feet from the 1139	North/South Line South	Feet from the 104	East/West line East	County Eddy
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¹¹ Bottom Hole Location

UL or lot no. L	Section 28	Township 19S	Range 28E	Lot Idn	Feet from the 1778	North/South line South	Feet from the 33	East/West line West	County Eddy
¹² Lse Code F	¹³ Producing Method Code		¹⁴ Gas Connection Date 05/01/2022		¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date	

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
329097	LM TOUCHDOWN, LLC	O
329097	LM TOUCHDOWN, LLC	G

IV. Well Completion Data

²¹ Spud Date 02/09/2022	²² Ready Date 06/01/2022	²³ TD 16,469 MD 8,460 TVD	²⁴ PBSD 18,690 MD 8,424 TVD	²⁵ Perforations 8,863-18,578	²⁶ DHC, MC
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set	
17.5		13.375		205	
12.25		9.625		2,995	
7.875		5.5		18,778	

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method
⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Mikah Thomas</i>			OIL CONSERVATION DIVISION		
Printed name: Mikah Thomas			Approved by: <i>John Garcia</i>		
Title: Sr. Regulatory Analyst			Title: <i>Petroleum Engineer</i>		
E-mail Address: mthomas@colgateenergy.com			Approval Date: <i>6/22/2022</i>		
Date: 05/15/2022		Phone: 432-695-4272	RT Expires 9-1-2022		

District I

1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III

1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 API Number 30-015-46766	2 Pool Code 97569	3 Pool Name WINCHESTER; BONE SPRING, WEST
4 Property Code 327171	5 Property Name BIG BURRO 27 STATE COM	6 Well Number 133H
7 OGRID No. 371449	8 Operator Name COLGATE ENERGY LLC	9 Elevation 3340.3'

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
p	27	19-S	28-E		1139'	SOUTH	104'	EAST	EDDY

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
L	28	19-S	28-E		1778'	SOUTH	33'	WEST	EDDY

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

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.

16 FTP TO LTP = 10,230.44' SURFACE HOLE LOCATION (SHL) 33' 98' 1778' 1778' BOTTOM HOLE LOCATION (BHL) 217' 104' 1139' CORNER DATA NEW MEXICO EAST - NAD 83 <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"> SURFACE HOLE LOCATION (SHL) NEW MEXICO EAST - NAD 83 X=595879.91 LAT.= 32.62766243° N Y=592119.90 LONG.= 104.15616588° W NEW MEXICO EAST - NAD 27 X=554699.96 LAT.= 32.62754520° N Y=592058.05 LONG.= 0.00000000° W MD = 18,725' </td> <td style="width: 50%;"> FIRST TAKE POINT (FTP) NEW MEXICO EAST - NAD 83 X=595767.08 LAT.= 32.62946998° N Y=592777.31 LONG.= 104.15652883° W NEW MEXICO EAST - NAD 27 X=554587.14 LAT.= 32.62935277° N Y=592715.44 LONG.= 0.00000000° W MD = 8,571' </td> </tr> <tr> <td> LAST TAKE POINT (LTP) NEW MEXICO EAST - NAD 83 X=585652.22 LAT.= 32.62925967° N Y=592685.53 LONG.= 104.18938540° W NEW MEXICO EAST - NAD 27 X=544472.30 LAT.= 32.62914280° N Y=592623.74 LONG.= 0.00000000° W MD = 18,725' </td> <td> BOTTOM HOLE LOCATION (BHL) NEW MEXICO EAST - NAD 83 X=585587.15 LAT.= 32.62925889° N Y=592685.16 LONG.= 104.18959676° W NEW MEXICO EAST - NAD 27 X=544407.23 LAT.= 32.62914203° N Y=592623.37 LONG.= 0.00000000° W MD = 18,790' </td> </tr> </table>	SURFACE HOLE LOCATION (SHL) NEW MEXICO EAST - NAD 83 X=595879.91 LAT.= 32.62766243° N Y=592119.90 LONG.= 104.15616588° W NEW MEXICO EAST - NAD 27 X=554699.96 LAT.= 32.62754520° N Y=592058.05 LONG.= 0.00000000° W MD = 18,725'	FIRST TAKE POINT (FTP) NEW MEXICO EAST - NAD 83 X=595767.08 LAT.= 32.62946998° N Y=592777.31 LONG.= 104.15652883° W NEW MEXICO EAST - NAD 27 X=554587.14 LAT.= 32.62935277° N Y=592715.44 LONG.= 0.00000000° W MD = 8,571'	LAST TAKE POINT (LTP) NEW MEXICO EAST - NAD 83 X=585652.22 LAT.= 32.62925967° N Y=592685.53 LONG.= 104.18938540° W NEW MEXICO EAST - NAD 27 X=544472.30 LAT.= 32.62914280° N Y=592623.74 LONG.= 0.00000000° W MD = 18,725'	BOTTOM HOLE LOCATION (BHL) NEW MEXICO EAST - NAD 83 X=585587.15 LAT.= 32.62925889° N Y=592685.16 LONG.= 104.18959676° W NEW MEXICO EAST - NAD 27 X=544407.23 LAT.= 32.62914203° N Y=592623.37 LONG.= 0.00000000° W MD = 18,790'	17 OPERATOR CERTIFICATION I hereby certify that 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. 03.23.2022 Signature: <i>Mikah Thomas</i> Date: _____ Printed Name: Mikah Thomas mthomas@colgateenergy.com E-mail Address 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 belief. 3/16/2022 Date of Survey: _____ Signature and Seal of Professional Surveyor: <i>Mark J. Murray</i> Certificate Number: _____
SURFACE HOLE LOCATION (SHL) NEW MEXICO EAST - NAD 83 X=595879.91 LAT.= 32.62766243° N Y=592119.90 LONG.= 104.15616588° W NEW MEXICO EAST - NAD 27 X=554699.96 LAT.= 32.62754520° N Y=592058.05 LONG.= 0.00000000° W MD = 18,725'	FIRST TAKE POINT (FTP) NEW MEXICO EAST - NAD 83 X=595767.08 LAT.= 32.62946998° N Y=592777.31 LONG.= 104.15652883° W NEW MEXICO EAST - NAD 27 X=554587.14 LAT.= 32.62935277° N Y=592715.44 LONG.= 0.00000000° W MD = 8,571'				
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Colgate Energy

**Eddy County, NM (N83-NME)
Big Burro 27 State Com
Big Burro 27 State Com 133H
30-015-46766
133H**

Design: DRL(OH)

Standard Survey Report

27 February, 2022



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Project	Eddy County, NM (N83-NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Big Burro 27 State Com		
Site Position:		Northing:	592,946.93 usft
From:	Map	Easting:	595,464.19 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.62993761
		Longitude:	-104.15751180

Well	Big Burro 27 State Com 133H		
Well Position	+N/-S	0.00 usft	Northing: 592,119.90 usft
	+E/-W	0.00 usft	Easting: 595,879.91 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
Grid Convergence:	0.10 °	Ground Level:	3,337.00 usft

Wellbore	133H		
Magnetics	Model Name	Sample Date	Declination (°)
	IFR	2/9/2022	7.11
			Dip Angle (°)
			60.35
			Field Strength (nT)
			47,710.70000000

Design	DRL(OH)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			269.59

Survey Program	Date	2/27/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
14.29	16,410.00	Survey #1_Gordon MWD(OH) (133H)	MWD+IFR1+SAG+FDIR (SQ OWSG MWD + IFR1 + Sag + FDIR Correction	
16,469.00	16,469.00	Survey #3_PTB(OH) (133H)	BLIND	BLIND

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14.29	0.06	328.79	14.29	0.01	0.00	0.00	0.42	0.42	0.00	
28.57	0.12	328.83	28.57	0.03	-0.02	0.02	0.42	0.42	0.28	
42.86	0.18	328.86	42.86	0.06	-0.03	0.03	0.42	0.42	0.21	
57.14	0.24	328.90	57.14	0.10	-0.06	0.06	0.42	0.42	0.28	
71.43	0.30	328.94	71.43	0.16	-0.10	0.10	0.42	0.42	0.28	
85.71	0.36	328.98	85.71	0.23	-0.14	0.14	0.42	0.42	0.28	
100.00	0.42	329.01	100.00	0.31	-0.19	0.19	0.42	0.42	0.21	
114.29	0.48	329.05	114.29	0.41	-0.25	0.24	0.42	0.42	0.28	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
128.57	0.55	329.09	128.57	0.52	-0.31	0.31	0.49	0.49	0.28	
142.86	0.61	329.12	142.86	0.64	-0.39	0.38	0.42	0.42	0.21	
157.14	0.67	329.16	157.14	0.78	-0.47	0.46	0.42	0.42	0.28	
171.43	0.73	329.20	171.43	0.93	-0.56	0.55	0.42	0.42	0.28	
185.71	0.79	329.23	185.70	1.09	-0.66	0.65	0.42	0.42	0.21	
200.00	0.86	329.27	199.99	1.27	-0.76	0.75	0.49	0.49	0.28	
214.50	0.88	329.53	214.49	1.46	-0.87	0.86	0.14	0.14	1.79	
229.00	0.91	329.79	228.99	1.66	-0.99	0.98	0.21	0.21	1.79	
243.50	0.94	330.03	243.49	1.86	-1.10	1.09	0.21	0.21	1.66	
258.00	0.97	330.26	257.99	2.07	-1.22	1.21	0.21	0.21	1.59	
272.50	0.99	330.49	272.48	2.28	-1.35	1.33	0.14	0.14	1.59	
287.00	1.02	330.70	286.98	2.51	-1.47	1.45	0.21	0.21	1.45	
301.50	1.05	330.91	301.48	2.73	-1.60	1.58	0.21	0.21	1.45	
316.00	1.08	331.11	315.98	2.97	-1.73	1.71	0.21	0.21	1.38	
330.50	1.11	331.30	330.47	3.21	-1.86	1.84	0.21	0.21	1.31	
345.00	1.14	331.49	344.97	3.46	-2.00	1.98	0.21	0.21	1.31	
359.50	1.17	331.67	359.47	3.72	-2.14	2.11	0.21	0.21	1.24	
374.00	1.20	331.84	373.96	3.98	-2.28	2.25	0.21	0.21	1.17	
388.38	1.16	333.17	388.34	4.25	-2.42	2.39	0.34	-0.28	9.25	
402.75	1.11	334.79	402.71	4.50	-2.54	2.51	0.41	-0.35	11.27	
417.13	1.07	336.65	417.09	4.75	-2.66	2.62	0.37	-0.28	12.93	
431.50	1.03	338.73	431.45	4.99	-2.76	2.72	0.38	-0.28	14.47	
445.88	0.98	340.98	445.83	5.23	-2.84	2.80	0.44	-0.35	15.65	
460.25	0.94	343.37	460.20	5.46	-2.92	2.88	0.39	-0.28	16.63	
474.63	0.91	345.79	474.58	5.68	-2.98	2.94	0.34	-0.21	16.83	
489.00	0.87	348.10	488.95	5.90	-3.03	2.99	0.37	-0.28	16.08	
503.31	0.86	349.92	503.25	6.11	-3.07	3.03	0.20	-0.07	12.72	
517.62	0.85	351.80	517.56	6.32	-3.10	3.06	0.21	-0.07	13.14	
531.92	0.84	353.72	531.86	6.53	-3.13	3.08	0.21	-0.07	13.43	
546.23	0.83	355.68	546.17	6.74	-3.15	3.10	0.21	-0.07	13.70	
560.54	0.82	357.69	560.48	6.95	-3.16	3.11	0.21	-0.07	14.05	
574.85	0.81	359.72	574.79	7.15	-3.17	3.11	0.21	-0.07	14.19	
589.15	0.81	1.79	589.09	7.35	-3.16	3.11	0.20	0.00	14.48	
603.46	0.80	3.87	603.39	7.55	-3.15	3.10	0.22	-0.07	14.54	
617.77	0.80	5.97	617.70	7.75	-3.14	3.08	0.20	0.00	14.68	
632.08	0.80	8.08	632.01	7.95	-3.11	3.06	0.21	0.00	14.74	
646.38	0.80	10.18	646.31	8.15	-3.08	3.02	0.21	0.00	14.69	
660.69	0.80	12.27	660.62	8.34	-3.04	2.98	0.20	0.00	14.61	
675.00	0.80	14.35	674.93	8.54	-3.00	2.93	0.20	0.00	14.54	
689.07	0.81	14.60	689.00	8.73	-2.95	2.88	0.08	0.07	1.78	
703.14	0.81	14.84	703.06	8.92	-2.90	2.83	0.02	0.00	1.71	
717.21	0.82	15.06	717.13	9.12	-2.84	2.78	0.07	0.07	1.56	
731.29	0.82	15.28	731.21	9.31	-2.79	2.72	0.02	0.00	1.56	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
745.36	0.83	15.48	745.28	9.50	-2.74	2.67	0.07	0.07	1.42	
759.43	0.84	15.67	759.35	9.70	-2.68	2.61	0.07	0.07	1.35	
773.50	0.84	15.85	773.42	9.90	-2.63	2.56	0.02	0.00	1.28	
787.57	0.85	16.01	787.49	10.10	-2.57	2.50	0.07	0.07	1.14	
801.64	0.86	16.17	801.55	10.30	-2.51	2.44	0.07	0.07	1.14	
815.71	0.86	16.31	815.62	10.50	-2.45	2.38	0.01	0.00	1.00	
829.79	0.87	16.45	829.70	10.71	-2.39	2.32	0.07	0.07	0.99	
843.86	0.88	16.57	843.77	10.91	-2.33	2.25	0.07	0.07	0.85	
857.93	0.89	16.68	857.84	11.12	-2.27	2.19	0.07	0.07	0.78	
872.00	0.89	16.78	871.91	11.33	-2.21	2.12	0.01	0.00	0.71	
886.31	0.90	16.21	886.21	11.55	-2.14	2.06	0.09	0.07	-3.98	
900.62	0.91	15.64	900.52	11.76	-2.08	2.00	0.09	0.07	-3.98	
914.92	0.92	15.08	914.82	11.98	-2.02	1.93	0.09	0.07	-3.92	
929.23	0.93	14.51	929.13	12.21	-1.96	1.87	0.09	0.07	-3.98	
943.54	0.93	13.95	943.44	12.43	-1.90	1.81	0.06	0.00	-3.91	
957.85	0.94	13.39	957.74	12.66	-1.85	1.76	0.09	0.07	-3.91	
972.15	0.95	12.83	972.04	12.89	-1.80	1.70	0.10	0.07	-3.92	
986.46	0.96	12.27	986.35	13.12	-1.74	1.65	0.10	0.07	-3.91	
1,000.77	0.97	11.72	1,000.66	13.36	-1.69	1.60	0.10	0.07	-3.84	
1,015.08	0.98	11.18	1,014.97	13.60	-1.65	1.55	0.09	0.07	-3.77	
1,029.38	0.99	10.64	1,029.26	13.84	-1.60	1.50	0.10	0.07	-3.78	
1,043.69	1.00	10.10	1,043.57	14.08	-1.55	1.45	0.10	0.07	-3.77	
1,058.00	1.01	9.57	1,057.88	14.33	-1.51	1.41	0.10	0.07	-3.70	
1,072.31	1.00	9.10	1,072.19	14.58	-1.47	1.37	0.09	-0.07	-3.28	
1,086.62	1.01	8.98	1,086.50	14.83	-1.43	1.32	0.07	0.07	-0.84	
1,100.92	1.04	8.92	1,100.79	15.08	-1.39	1.28	0.21	0.21	-0.42	
1,115.23	1.06	8.86	1,115.10	15.34	-1.35	1.24	0.14	0.14	-0.42	
1,129.54	1.08	8.80	1,129.41	15.60	-1.31	1.20	0.14	0.14	-0.42	
1,143.85	1.10	8.73	1,143.72	15.87	-1.27	1.15	0.14	0.14	-0.49	
1,158.15	1.13	8.66	1,158.01	16.15	-1.23	1.11	0.21	0.21	-0.49	
1,172.46	1.15	8.59	1,172.32	16.43	-1.18	1.07	0.14	0.14	-0.49	
1,186.77	1.17	8.52	1,186.63	16.71	-1.14	1.02	0.14	0.14	-0.49	
1,201.08	1.19	8.45	1,200.93	17.00	-1.10	0.97	0.14	0.14	-0.49	
1,215.38	1.22	8.37	1,215.23	17.30	-1.05	0.93	0.21	0.21	-0.56	
1,229.69	1.24	8.29	1,229.54	17.61	-1.01	0.88	0.14	0.14	-0.56	
1,244.00	1.27	8.21	1,243.84	17.92	-0.96	0.84	0.21	0.21	-0.56	
1,258.38	1.21	6.28	1,258.22	18.22	-0.92	0.79	0.51	-0.42	-13.42	
1,272.77	1.14	3.84	1,272.61	18.52	-0.90	0.77	0.60	-0.49	-16.96	
1,287.15	1.07	0.91	1,286.99	18.80	-0.89	0.75	0.63	-0.49	-20.38	
1,301.54	1.01	357.56	1,301.37	19.06	-0.89	0.75	0.59	-0.42	-23.28	
1,315.92	0.95	353.88	1,315.75	19.30	-0.91	0.77	0.60	-0.42	-25.59	
1,330.31	0.90	350.07	1,330.14	19.53	-0.94	0.80	0.55	-0.35	-26.48	
1,344.69	0.68	327.37	1,344.52	19.71	-1.01	0.86	2.63	-1.53	-157.86	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,359.08	0.65	288.23	1,358.91	19.81	-1.13	0.99	3.10	-0.21	-271.99
1,373.46	0.74	282.38	1,373.29	19.86	-1.30	1.15	0.80	0.63	-40.68
1,387.85	0.83	277.84	1,387.67	19.89	-1.49	1.35	0.76	0.63	-31.55
1,402.23	0.93	274.26	1,402.05	19.91	-1.71	1.57	0.79	0.70	-24.90
1,416.62	1.03	271.38	1,416.44	19.93	-1.96	1.81	0.77	0.69	-20.01
1,431.00	1.14	269.04	1,430.82	19.93	-2.23	2.09	0.82	0.76	-16.27
1,445.31	1.11	268.68	1,445.13	19.92	-2.51	2.37	0.22	-0.21	-2.52
1,459.62	1.08	268.41	1,459.43	19.91	-2.78	2.64	0.21	-0.21	-1.89
1,473.92	1.05	268.19	1,473.73	19.91	-3.05	2.91	0.21	-0.21	-1.54
1,488.23	1.02	268.01	1,488.04	19.90	-3.31	3.16	0.21	-0.21	-1.26
1,502.54	1.00	267.86	1,502.35	19.89	-3.56	3.42	0.14	-0.14	-1.05
1,516.85	0.97	267.70	1,516.65	19.88	-3.80	3.66	0.21	-0.21	-1.12
1,531.15	0.95	267.54	1,530.95	19.87	-4.04	3.90	0.14	-0.14	-1.12
1,545.46	0.93	267.78	1,545.26	19.86	-4.28	4.14	0.14	-0.14	1.68
1,559.77	0.93	268.15	1,559.57	19.85	-4.51	4.37	0.04	0.00	2.59
1,574.08	0.92	268.54	1,573.88	19.85	-4.74	4.60	0.08	-0.07	2.73
1,588.38	0.92	268.94	1,588.17	19.84	-4.97	4.83	0.04	0.00	2.80
1,602.69	0.91	269.37	1,602.48	19.84	-5.20	5.06	0.08	-0.07	3.00
1,617.00	0.91	269.81	1,616.79	19.84	-5.43	5.28	0.05	0.00	3.07
1,631.31	0.91	269.44	1,631.10	19.83	-5.65	5.51	0.04	0.00	-2.59
1,645.62	0.91	269.08	1,645.41	19.83	-5.88	5.74	0.04	0.00	-2.52
1,659.92	0.91	268.74	1,659.70	19.83	-6.11	5.97	0.04	0.00	-2.38
1,674.23	0.91	268.41	1,674.01	19.82	-6.34	6.19	0.04	0.00	-2.31
1,688.54	0.91	268.10	1,688.32	19.81	-6.56	6.42	0.03	0.00	-2.17
1,702.85	0.91	267.81	1,702.63	19.81	-6.79	6.65	0.03	0.00	-2.03
1,717.15	0.91	267.53	1,716.93	19.80	-7.02	6.87	0.03	0.00	-1.96
1,731.46	0.91	267.27	1,731.24	19.79	-7.24	7.10	0.03	0.00	-1.82
1,745.77	0.91	267.03	1,745.54	19.77	-7.47	7.33	0.03	0.00	-1.68
1,760.08	0.91	266.80	1,759.85	19.76	-7.70	7.56	0.03	0.00	-1.61
1,774.38	0.91	266.59	1,774.15	19.75	-7.92	7.78	0.02	0.00	-1.47
1,788.69	0.91	266.39	1,788.46	19.74	-8.15	8.01	0.02	0.00	-1.40
1,803.00	0.91	266.21	1,802.77	19.72	-8.38	8.24	0.02	0.00	-1.26
1,817.31	0.92	265.66	1,817.07	19.70	-8.61	8.46	0.09	0.07	-3.84
1,831.62	0.92	265.13	1,831.38	19.69	-8.84	8.69	0.06	0.00	-3.70
1,845.92	0.93	264.62	1,845.68	19.67	-9.06	8.92	0.09	0.07	-3.57
1,860.23	0.93	264.13	1,859.99	19.64	-9.30	9.16	0.06	0.00	-3.42
1,874.54	0.94	263.66	1,874.30	19.62	-9.53	9.39	0.09	0.07	-3.28
1,888.85	0.94	263.21	1,888.61	19.59	-9.76	9.62	0.05	0.00	-3.14
1,903.15	0.95	262.78	1,902.90	19.56	-10.00	9.86	0.09	0.07	-3.01
1,917.46	0.95	262.37	1,917.21	19.53	-10.23	10.09	0.05	0.00	-2.87
1,931.77	0.96	261.98	1,931.52	19.50	-10.47	10.33	0.08	0.07	-2.73
1,946.08	0.96	261.61	1,945.83	19.47	-10.70	10.56	0.04	0.00	-2.59
1,960.38	0.97	261.26	1,960.13	19.43	-10.94	10.80	0.08	0.07	-2.45
1,974.69	0.97	260.93	1,974.43	19.39	-11.18	11.04	0.04	0.00	-2.31



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,989.00	0.98	260.62	1,988.74	19.35	-11.42	11.28	0.08	0.07	-2.17
2,003.31	0.99	260.83	2,003.05	19.31	-11.67	11.53	0.07	0.07	1.47
2,017.62	0.99	261.06	2,017.36	19.27	-11.91	11.77	0.03	0.00	1.61
2,031.92	1.00	261.29	2,031.66	19.24	-12.15	12.02	0.08	0.07	1.61
2,046.23	1.01	261.54	2,045.96	19.20	-12.40	12.27	0.08	0.07	1.75
2,060.54	1.02	261.80	2,060.27	19.16	-12.65	12.52	0.08	0.07	1.82
2,074.85	1.03	262.06	2,074.58	19.13	-12.91	12.77	0.08	0.07	1.82
2,089.15	1.04	262.34	2,088.88	19.09	-13.16	13.03	0.08	0.07	1.96
2,103.46	1.05	262.62	2,103.18	19.06	-13.42	13.29	0.08	0.07	1.96
2,117.77	1.06	262.92	2,117.49	19.02	-13.68	13.55	0.08	0.07	2.10
2,132.08	1.07	263.22	2,131.80	18.99	-13.95	13.81	0.08	0.07	2.10
2,146.38	1.08	263.53	2,146.10	18.96	-14.21	14.08	0.08	0.07	2.17
2,160.69	1.08	263.85	2,160.40	18.93	-14.48	14.35	0.04	0.00	2.24
2,175.00	1.09	264.18	2,174.71	18.90	-14.75	14.62	0.08	0.07	2.31
2,189.38	1.11	264.81	2,189.09	18.88	-15.03	14.89	0.16	0.14	4.38
2,203.77	1.13	265.53	2,203.48	18.85	-15.31	15.17	0.17	0.14	5.00
2,218.15	1.14	266.30	2,217.85	18.83	-15.59	15.46	0.13	0.07	5.35
2,232.54	1.16	267.07	2,232.24	18.82	-15.88	15.74	0.18	0.14	5.35
2,246.92	1.19	267.83	2,246.62	18.80	-16.17	16.04	0.24	0.21	5.29
2,261.31	1.21	268.56	2,261.00	18.79	-16.47	16.34	0.17	0.14	5.07
2,275.69	1.23	269.24	2,275.38	18.79	-16.78	16.65	0.17	0.14	4.73
2,290.08	1.25	269.86	2,289.77	18.78	-17.09	16.96	0.17	0.14	4.31
2,304.46	1.28	270.40	2,304.14	18.79	-17.41	17.27	0.22	0.21	3.76
2,318.85	1.30	270.84	2,318.53	18.79	-17.73	17.60	0.16	0.14	3.06
2,333.23	1.32	271.14	2,332.91	18.79	-18.06	17.93	0.15	0.14	2.09
2,347.62	1.34	271.25	2,347.29	18.80	-18.40	18.26	0.14	0.14	0.76
2,362.00	1.36	271.09	2,361.67	18.81	-18.73	18.60	0.14	0.14	-1.11
2,376.38	1.38	270.62	2,376.04	18.81	-19.08	18.94	0.16	0.14	-3.27
2,390.77	1.39	269.91	2,390.43	18.82	-19.43	19.29	0.14	0.07	-4.93
2,405.15	1.41	269.04	2,404.81	18.81	-19.78	19.64	0.20	0.14	-6.05
2,419.54	1.42	268.10	2,419.19	18.80	-20.13	20.00	0.18	0.07	-6.53
2,433.92	1.43	267.12	2,433.57	18.79	-20.49	20.36	0.18	0.07	-6.82
2,448.31	1.45	266.14	2,447.95	18.77	-20.85	20.72	0.22	0.14	-6.81
2,462.69	1.46	265.18	2,462.33	18.74	-21.22	21.08	0.18	0.07	-6.68
2,477.08	1.47	264.24	2,476.71	18.71	-21.58	21.45	0.18	0.07	-6.53
2,491.46	1.49	263.36	2,491.09	18.67	-21.95	21.82	0.21	0.14	-6.12
2,505.85	1.50	262.53	2,505.47	18.62	-22.32	22.19	0.17	0.07	-5.77
2,520.23	1.51	261.78	2,519.85	18.57	-22.70	22.56	0.15	0.07	-5.22
2,534.62	1.53	261.12	2,534.23	18.51	-23.07	22.94	0.18	0.14	-4.59
2,549.00	1.54	260.58	2,548.61	18.45	-23.46	23.32	0.12	0.07	-3.76
2,563.38	1.54	260.15	2,562.98	18.38	-23.84	23.70	0.08	0.00	-2.99
2,577.77	1.54	259.85	2,577.37	18.32	-24.22	24.09	0.06	0.00	-2.08
2,592.15	1.55	259.64	2,591.74	18.25	-24.60	24.47	0.08	0.07	-1.46



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
2,606.54	1.55	259.52	2,606.13	18.18	-24.98	24.85	0.02	0.00	-0.83	
2,620.92	1.56	259.47	2,620.50	18.11	-25.37	25.23	0.07	0.07	-0.35	
2,635.31	1.56	259.48	2,634.89	18.04	-25.75	25.62	0.00	0.00	0.07	
2,649.69	1.57	259.55	2,649.26	17.96	-26.14	26.01	0.07	0.07	0.49	
2,664.08	1.57	259.67	2,663.65	17.89	-26.52	26.40	0.02	0.00	0.83	
2,678.46	1.58	259.83	2,678.02	17.82	-26.91	26.78	0.08	0.07	1.11	
2,692.85	1.59	260.04	2,692.40	17.75	-27.31	27.18	0.08	0.07	1.46	
2,707.23	1.60	260.29	2,706.78	17.68	-27.70	27.57	0.08	0.07	1.74	
2,721.62	1.62	260.57	2,721.16	17.62	-28.10	27.97	0.15	0.14	1.95	
2,736.00	1.63	260.86	2,735.54	17.55	-28.50	28.37	0.09	0.07	2.02	
2,750.31	1.66	261.20	2,749.84	17.49	-28.91	28.78	0.22	0.21	2.38	
2,764.62	1.69	261.56	2,764.15	17.43	-29.32	29.19	0.22	0.21	2.52	
2,778.92	1.72	261.94	2,778.44	17.36	-29.74	29.62	0.22	0.21	2.66	
2,793.23	1.75	262.36	2,792.74	17.30	-30.17	30.05	0.23	0.21	2.94	
2,807.54	1.78	262.80	2,807.05	17.25	-30.61	30.48	0.23	0.21	3.07	
2,821.85	1.82	263.26	2,821.35	17.19	-31.05	30.93	0.30	0.28	3.21	
2,836.15	1.85	263.75	2,835.64	17.14	-31.51	31.38	0.24	0.21	3.43	
2,850.46	1.89	264.26	2,849.94	17.09	-31.97	31.85	0.30	0.28	3.56	
2,864.77	1.93	264.77	2,864.25	17.05	-32.45	32.32	0.30	0.28	3.56	
2,879.08	1.96	265.28	2,878.55	17.01	-32.93	32.81	0.24	0.21	3.56	
2,893.38	1.99	265.77	2,892.84	16.97	-33.42	33.30	0.24	0.21	3.43	
2,907.69	2.03	266.20	2,907.14	16.93	-33.92	33.80	0.30	0.28	3.00	
2,922.00	2.06	266.54	2,921.44	16.90	-34.43	34.31	0.23	0.21	2.38	
2,935.56	2.09	266.76	2,934.99	16.87	-34.92	34.80	0.23	0.22	1.62	
2,949.11	2.11	266.92	2,948.53	16.84	-35.42	35.30	0.15	0.15	1.18	
2,962.67	2.13	267.11	2,962.08	16.82	-35.92	35.80	0.16	0.15	1.40	
2,976.22	2.14	267.39	2,975.62	16.79	-36.42	36.30	0.11	0.07	2.07	
2,989.78	2.15	267.84	2,989.18	16.77	-36.93	36.81	0.14	0.07	3.32	
3,003.33	2.15	268.55	3,002.72	16.76	-37.44	37.32	0.20	0.00	5.24	
3,016.89	2.13	269.65	3,016.27	16.75	-37.95	37.82	0.34	-0.15	8.11	
3,030.44	2.09	271.36	3,029.81	16.75	-38.44	38.32	0.55	-0.30	12.62	
3,044.00	2.03	274.07	3,043.36	16.78	-38.93	38.81	0.84	-0.44	19.99	
3,057.29	1.92	278.37	3,056.64	16.82	-39.39	39.26	1.39	-0.83	32.36	
3,070.57	1.80	284.20	3,069.91	16.91	-39.81	39.69	1.69	-0.90	43.90	
3,083.86	1.70	291.39	3,083.20	17.03	-40.19	40.07	1.81	-0.75	54.10	
3,097.14	1.65	299.47	3,096.47	17.20	-40.54	40.42	1.82	-0.38	60.84	
3,110.43	1.65	307.48	3,109.76	17.41	-40.86	40.74	1.73	0.00	60.27	
3,123.71	1.72	319.32	3,123.03	17.67	-41.14	41.02	2.67	0.53	89.16	
3,137.00	2.26	350.80	3,136.31	18.08	-41.32	41.19	9.01	4.06	236.87	
3,150.14	2.83	357.15	3,149.44	18.66	-41.37	41.24	4.83	4.34	48.33	
3,163.29	3.11	1.33	3,162.57	19.35	-41.38	41.24	2.69	2.13	31.79	
3,176.43	3.34	5.33	3,175.69	20.08	-41.34	41.19	2.45	1.75	30.44	
3,189.57	3.62	8.85	3,188.81	20.87	-41.24	41.09	2.68	2.13	26.79	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,202.71	3.90	11.72	3,201.92	21.72	-41.08	40.93	2.57	2.13	21.84	
3,215.86	4.20	13.81	3,215.04	22.63	-40.88	40.71	2.54	2.28	15.89	
3,229.00	5.03	12.74	3,228.13	23.66	-40.64	40.47	6.35	6.32	-8.14	
3,242.29	6.07	15.95	3,241.36	24.90	-40.31	40.14	8.16	7.83	24.15	
3,255.57	6.22	16.70	3,254.56	26.26	-39.91	39.73	1.28	1.13	5.65	
3,268.86	6.35	17.24	3,267.77	27.66	-39.49	39.29	1.07	0.98	4.06	
3,282.14	6.47	17.57	3,280.97	29.07	-39.05	38.84	0.95	0.90	2.48	
3,295.43	6.55	17.69	3,294.18	30.51	-38.59	38.37	0.61	0.60	0.90	
3,308.71	6.82	17.56	3,307.37	31.98	-38.12	37.89	2.04	2.03	-0.98	
3,322.00	7.92	17.89	3,320.55	33.60	-37.60	37.36	8.28	8.28	2.48	
3,335.43	8.71	20.11	3,333.83	35.44	-36.97	36.71	6.35	5.88	16.53	
3,348.86	8.55	18.97	3,347.11	37.34	-36.29	36.03	1.74	-1.19	-8.49	
3,362.29	8.35	17.54	3,360.40	39.21	-35.68	35.39	2.16	-1.49	-10.65	
3,375.71	8.14	15.91	3,373.68	41.05	-35.12	34.83	2.34	-1.56	-12.15	
3,389.14	7.94	14.19	3,386.98	42.87	-34.63	34.33	2.33	-1.49	-12.81	
3,402.57	7.78	12.52	3,400.28	44.65	-34.21	33.89	2.08	-1.19	-12.43	
3,416.00	7.67	11.09	3,413.59	46.42	-33.84	33.51	1.65	-0.82	-10.65	
3,429.43	7.62	10.25	3,426.90	48.18	-33.51	33.16	0.91	-0.37	-6.25	
3,442.86	7.64	9.67	3,440.21	49.93	-33.20	32.84	0.59	0.15	-4.32	
3,456.29	7.70	9.27	3,453.52	51.70	-32.91	32.54	0.60	0.45	-2.98	
3,469.71	7.78	8.98	3,466.82	53.49	-32.62	32.24	0.66	0.60	-2.16	
3,483.14	7.87	8.76	3,480.12	55.29	-32.34	31.94	0.71	0.67	-1.64	
3,496.57	7.95	8.59	3,493.42	57.12	-32.06	31.65	0.62	0.60	-1.27	
3,510.00	8.01	8.45	3,506.72	58.96	-31.78	31.36	0.47	0.45	-1.04	
3,523.29	8.73	10.25	3,519.87	60.87	-31.47	31.03	5.76	5.42	13.54	
3,536.57	9.61	11.87	3,532.98	62.95	-31.06	30.61	6.91	6.63	12.20	
3,549.86	9.58	11.83	3,546.09	65.12	-30.60	30.14	0.23	-0.23	-0.30	
3,563.14	9.54	11.80	3,559.18	67.28	-30.15	29.67	0.30	-0.30	-0.23	
3,576.43	9.49	11.78	3,572.29	69.43	-29.70	29.21	0.38	-0.38	-0.15	
3,589.71	9.44	11.76	3,585.39	71.56	-29.26	28.75	0.38	-0.38	-0.15	
3,603.00	9.40	11.75	3,598.50	73.69	-28.82	28.29	0.30	-0.30	-0.08	
3,616.43	9.37	11.72	3,611.75	75.84	-28.37	27.83	0.23	-0.22	-0.22	
3,629.86	9.35	11.69	3,625.00	77.98	-27.93	27.37	0.15	-0.15	-0.22	
3,643.29	9.33	11.66	3,638.25	80.11	-27.49	26.91	0.15	-0.15	-0.22	
3,656.71	9.33	11.63	3,651.50	82.24	-27.05	26.46	0.04	0.00	-0.22	
3,670.14	9.32	11.62	3,664.75	84.37	-26.61	26.00	0.08	-0.07	-0.07	
3,683.57	9.32	11.63	3,678.00	86.50	-26.17	25.55	0.01	0.00	0.07	
3,697.00	9.31	11.67	3,691.25	88.63	-25.73	25.10	0.09	-0.07	0.30	
3,710.29	9.31	11.77	3,704.37	90.74	-25.29	24.64	0.12	0.00	0.75	
3,723.57	9.30	11.91	3,717.47	92.84	-24.85	24.19	0.19	-0.08	1.05	
3,736.86	9.30	12.07	3,730.59	94.94	-24.41	23.73	0.19	0.00	1.20	
3,750.14	9.29	12.24	3,743.69	97.04	-23.96	23.26	0.22	-0.08	1.28	
3,763.43	9.29	12.42	3,756.81	99.13	-23.50	22.79	0.22	0.00	1.35	
3,776.71	9.30	12.61	3,769.92	101.23	-23.03	22.31	0.24	0.08	1.43	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,790.00	9.31	12.80	3,783.03	103.32	-22.56	21.82	0.24	0.08	1.43	
3,803.43	9.34	13.00	3,796.28	105.44	-22.07	21.32	0.33	0.22	1.49	
3,816.86	9.37	13.20	3,809.54	107.57	-21.58	20.81	0.33	0.22	1.49	
3,830.29	9.40	13.40	3,822.79	109.70	-21.08	20.29	0.33	0.22	1.49	
3,843.71	9.43	13.59	3,836.02	111.84	-20.56	19.76	0.32	0.22	1.42	
3,857.14	9.45	13.78	3,849.27	113.98	-20.04	19.23	0.28	0.15	1.41	
3,870.57	9.46	13.96	3,862.52	116.12	-19.51	18.68	0.23	0.07	1.34	
3,884.00	9.44	14.14	3,875.77	118.26	-18.98	18.13	0.27	-0.15	1.34	
3,897.29	9.39	14.30	3,888.88	120.37	-18.44	17.58	0.42	-0.38	1.20	
3,910.57	9.31	14.46	3,901.98	122.46	-17.91	17.03	0.63	-0.60	1.20	
3,923.86	9.22	14.59	3,915.10	124.53	-17.37	16.48	0.70	-0.68	0.98	
3,937.14	9.12	14.69	3,928.21	126.57	-16.84	15.93	0.76	-0.75	0.75	
3,950.43	9.02	14.74	3,941.33	128.60	-16.31	15.38	0.75	-0.75	0.38	
3,963.71	8.92	14.71	3,954.45	130.60	-15.78	14.84	0.75	-0.75	-0.23	
3,977.00	8.82	14.56	3,967.58	132.59	-15.26	14.31	0.77	-0.75	-1.13	
3,990.43	8.74	14.23	3,980.85	134.57	-14.75	13.79	0.70	-0.60	-2.46	
4,003.86	8.67	13.76	3,994.13	136.54	-14.26	13.28	0.74	-0.52	-3.50	
4,017.29	8.59	13.18	4,007.41	138.50	-13.79	12.80	0.88	-0.60	-4.32	
4,030.71	8.52	12.53	4,020.68	140.45	-13.35	12.34	0.89	-0.52	-4.84	
4,044.14	8.44	11.79	4,033.96	142.39	-12.93	11.91	1.01	-0.60	-5.51	
4,057.57	8.35	10.97	4,047.25	144.31	-12.54	11.51	1.12	-0.67	-6.11	
4,071.00	8.25	10.05	4,060.54	146.21	-12.19	11.14	1.24	-0.74	-6.85	
4,084.43	8.10	9.07	4,073.83	148.10	-11.87	10.81	1.52	-1.12	-7.30	
4,097.86	7.94	8.00	4,087.13	149.95	-11.59	10.52	1.63	-1.19	-7.97	
4,111.29	7.78	6.91	4,100.43	151.77	-11.35	10.27	1.63	-1.19	-8.12	
4,124.71	7.62	5.82	4,113.73	153.56	-11.15	10.06	1.61	-1.19	-8.12	
4,138.14	7.50	4.82	4,127.05	155.32	-10.99	9.88	1.33	-0.89	-7.45	
4,151.57	7.41	4.00	4,140.36	157.05	-10.86	9.73	1.04	-0.67	-6.11	
4,165.00	7.37	3.52	4,153.68	158.78	-10.74	9.61	0.55	-0.30	-3.57	
4,179.50	7.44	3.55	4,168.06	160.64	-10.63	9.48	0.48	0.48	0.21	
4,194.00	7.56	3.88	4,182.44	162.53	-10.51	9.34	0.88	0.83	2.28	
4,208.50	7.72	4.38	4,196.81	164.45	-10.37	9.19	1.19	1.10	3.45	
4,223.00	7.89	4.92	4,211.17	166.42	-10.21	9.02	1.28	1.17	3.72	
4,237.50	8.05	5.44	4,225.53	168.42	-10.03	8.82	1.21	1.10	3.59	
4,252.00	8.28	5.98	4,239.89	170.47	-9.82	8.60	1.67	1.59	3.72	
4,266.29	9.24	6.88	4,254.01	172.63	-9.58	8.34	6.79	6.72	6.30	
4,280.57	9.97	9.12	4,268.09	174.99	-9.24	7.99	5.74	5.11	15.69	
4,294.86	10.00	9.54	4,282.16	177.43	-8.84	7.57	0.55	0.21	2.94	
4,309.14	9.88	9.64	4,296.23	179.87	-8.43	7.14	0.85	-0.84	0.70	
4,323.43	9.74	9.70	4,310.31	182.27	-8.02	6.72	0.98	-0.98	0.42	
4,337.71	9.60	9.72	4,324.39	184.63	-7.62	6.30	0.98	-0.98	0.14	
4,352.00	9.46	9.65	4,338.48	186.96	-7.22	5.88	0.98	-0.98	-0.49	
4,365.29	9.34	9.48	4,351.59	189.10	-6.86	5.50	0.93	-0.90	-1.28	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,378.57	9.24	9.22	4,364.70	191.22	-6.51	5.14	0.82	-0.75	-1.96	
4,391.86	9.14	8.92	4,377.82	193.31	-6.17	4.79	0.83	-0.75	-2.26	
4,405.14	9.05	8.58	4,390.93	195.39	-5.86	4.46	0.79	-0.68	-2.56	
4,418.43	8.96	8.22	4,404.05	197.45	-5.55	4.14	0.80	-0.68	-2.71	
4,431.71	8.86	7.84	4,417.17	199.48	-5.26	3.84	0.87	-0.75	-2.86	
4,445.00	8.77	7.46	4,430.31	201.50	-4.99	3.55	0.81	-0.68	-2.86	
4,458.29	8.66	7.13	4,443.44	203.50	-4.74	3.28	0.91	-0.83	-2.48	
4,471.57	8.54	6.81	4,456.57	205.47	-4.50	3.03	0.97	-0.90	-2.41	
4,484.86	8.43	6.54	4,469.72	207.42	-4.27	2.78	0.88	-0.83	-2.03	
4,498.14	8.33	6.33	4,482.86	209.34	-4.05	2.55	0.79	-0.75	-1.58	
4,511.43	8.24	6.23	4,496.01	211.24	-3.84	2.33	0.69	-0.68	-0.75	
4,524.71	8.17	6.28	4,509.15	213.13	-3.64	2.11	0.53	-0.53	0.38	
4,538.00	8.13	6.58	4,522.31	215.00	-3.42	1.89	0.44	-0.30	2.26	
4,551.29	8.13	7.26	4,535.46	216.87	-3.20	1.65	0.72	0.00	5.12	
4,564.57	8.17	8.16	4,548.61	218.73	-2.95	1.38	1.01	0.30	6.78	
4,577.86	8.23	9.16	4,561.76	220.61	-2.66	1.08	1.16	0.45	7.52	
4,591.14	8.31	10.19	4,574.91	222.49	-2.34	0.75	1.27	0.60	7.76	
4,604.43	8.39	11.19	4,588.06	224.38	-1.98	0.38	1.25	0.60	7.52	
4,617.71	8.46	12.09	4,601.19	226.29	-1.59	-0.03	1.12	0.53	6.78	
4,631.00	8.78	13.25	4,614.33	228.23	-1.15	-0.48	2.74	2.41	8.73	
4,644.43	9.56	15.21	4,627.59	230.31	-0.62	-1.02	6.26	5.81	14.59	
4,657.86	10.27	17.85	4,640.82	232.52	0.04	-1.70	6.28	5.29	19.66	
4,671.29	10.55	18.28	4,654.03	234.83	0.79	-2.47	2.16	2.08	3.20	
4,684.71	10.56	18.52	4,667.22	237.16	1.56	-3.26	0.34	0.07	1.79	
4,698.14	10.57	18.73	4,680.42	239.50	2.35	-4.06	0.30	0.07	1.56	
4,711.57	10.58	18.90	4,693.63	241.83	3.15	-4.88	0.24	0.07	1.27	
4,725.00	10.57	19.03	4,706.83	244.16	3.95	-5.69	0.19	-0.07	0.97	
4,738.29	10.56	19.13	4,719.89	246.46	4.74	-6.51	0.16	-0.08	0.75	
4,751.57	10.53	19.19	4,732.95	248.76	5.54	-7.32	0.24	-0.23	0.45	
4,764.86	10.50	19.23	4,746.02	251.05	6.34	-8.14	0.23	-0.23	0.30	
4,778.14	10.47	19.24	4,759.07	253.33	7.14	-8.95	0.23	-0.23	0.08	
4,791.43	10.43	19.24	4,772.14	255.61	7.93	-9.76	0.30	-0.30	0.00	
4,804.71	10.39	19.20	4,785.20	257.87	8.72	-10.56	0.31	-0.30	-0.30	
4,818.00	10.35	19.14	4,798.28	260.13	9.51	-11.37	0.31	-0.30	-0.45	
4,831.43	10.29	19.04	4,811.49	262.41	10.29	-12.17	0.47	-0.45	-0.74	
4,844.86	10.24	18.92	4,824.71	264.67	11.07	-12.96	0.40	-0.37	-0.89	
4,858.29	10.18	18.78	4,837.92	266.92	11.84	-13.75	0.48	-0.45	-1.04	
4,871.71	10.13	18.66	4,851.13	269.16	12.60	-14.52	0.40	-0.37	-0.89	
4,885.14	10.07	18.56	4,864.35	271.39	13.35	-15.29	0.47	-0.45	-0.74	
4,898.57	10.02	18.50	4,877.58	273.62	14.10	-16.05	0.38	-0.37	-0.45	
4,912.00	9.98	18.53	4,890.80	275.83	14.84	-16.81	0.30	-0.30	0.22	
4,925.29	9.95	18.71	4,903.89	278.01	15.57	-17.56	0.33	-0.23	1.35	
4,938.57	9.92	18.96	4,916.97	280.18	16.31	-18.31	0.40	-0.23	1.88	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,951.86	9.91	19.23	4,930.07	282.34	17.06	-19.08	0.36	-0.08	2.03	
4,965.14	9.91	19.48	4,943.15	284.49	17.82	-19.85	0.32	0.00	1.88	
4,978.43	9.93	19.66	4,956.24	286.65	18.58	-20.63	0.28	0.15	1.35	
4,991.71	9.97	19.72	4,969.32	288.81	19.36	-21.42	0.31	0.30	0.45	
5,005.00	10.03	19.60	4,982.41	290.98	20.13	-22.21	0.48	0.45	-0.90	
5,018.43	10.15	19.19	4,995.63	293.20	20.91	-23.01	1.04	0.89	-3.05	
5,031.86	10.29	18.63	5,008.85	295.46	21.69	-23.80	1.28	1.04	-4.17	
5,045.29	10.46	17.99	5,022.06	297.75	22.45	-24.58	1.53	1.27	-4.77	
5,058.71	10.62	17.34	5,035.25	300.09	23.19	-25.34	1.49	1.19	-4.84	
5,072.14	10.78	16.75	5,048.45	302.48	23.92	-26.08	1.44	1.19	-4.39	
5,085.57	10.92	16.25	5,061.64	304.90	24.64	-26.82	1.26	1.04	-3.72	
5,099.00	11.14	15.10	5,074.82	307.38	25.33	-27.53	2.32	1.64	-8.56	
5,112.43	11.77	11.22	5,087.98	309.97	25.94	-28.15	7.41	4.69	-28.89	
5,125.86	12.53	8.84	5,101.11	312.75	26.43	-28.67	6.78	5.66	-17.72	
5,139.29	12.79	7.52	5,114.21	315.67	26.85	-29.10	2.90	1.94	-9.83	
5,152.71	12.78	7.99	5,127.30	318.61	27.25	-29.53	0.78	-0.07	3.50	
5,166.14	12.76	8.54	5,140.40	321.55	27.67	-29.97	0.92	-0.15	4.10	
5,179.57	12.72	9.11	5,153.50	324.47	28.13	-30.45	0.98	-0.30	4.24	
5,193.00	12.65	9.62	5,166.60	327.38	28.61	-30.95	0.98	-0.52	3.80	
5,206.29	12.54	9.96	5,179.57	330.24	29.10	-31.46	1.00	-0.83	2.56	
5,219.57	12.40	10.21	5,192.54	333.06	29.60	-31.99	1.13	-1.05	1.88	
5,232.86	12.25	10.39	5,205.52	335.85	30.11	-32.51	1.17	-1.13	1.35	
5,246.14	12.08	10.54	5,218.50	338.61	30.62	-33.04	1.30	-1.28	1.13	
5,259.43	11.91	10.67	5,231.50	341.32	31.13	-33.57	1.30	-1.28	0.98	
5,272.71	11.74	10.78	5,244.50	344.00	31.63	-34.09	1.29	-1.28	0.83	
5,286.00	11.58	10.89	5,257.52	346.63	32.14	-34.62	1.22	-1.20	0.83	
5,299.29	11.43	11.00	5,270.54	349.24	32.64	-35.14	1.14	-1.13	0.83	
5,312.57	11.29	11.11	5,283.56	351.80	33.14	-35.66	1.07	-1.05	0.83	
5,325.86	11.16	11.21	5,296.60	354.34	33.64	-36.18	0.99	-0.98	0.75	
5,339.14	11.03	11.30	5,309.63	356.85	34.14	-36.69	0.99	-0.98	0.68	
5,352.43	10.91	11.36	5,322.67	359.33	34.64	-37.21	0.91	-0.90	0.45	
5,365.71	10.80	11.39	5,335.72	361.78	35.13	-37.72	0.83	-0.83	0.23	
5,379.00	10.70	11.37	5,348.77	364.21	35.62	-38.23	0.75	-0.75	-0.15	
5,392.43	10.61	11.29	5,361.97	366.64	36.11	-38.73	0.68	-0.67	-0.60	
5,405.86	10.53	11.15	5,375.17	369.06	36.59	-39.23	0.63	-0.60	-1.04	
5,419.29	10.45	10.96	5,388.38	371.46	37.06	-39.71	0.65	-0.60	-1.41	
5,432.71	10.39	10.72	5,401.58	373.84	37.51	-40.19	0.55	-0.45	-1.79	
5,446.14	10.33	10.44	5,414.79	376.22	37.96	-40.65	0.58	-0.45	-2.08	
5,459.57	10.28	10.10	5,428.00	378.58	38.39	-41.09	0.59	-0.37	-2.53	
5,473.00	10.24	9.69	5,441.22	380.94	38.80	-41.52	0.62	-0.30	-3.05	
5,486.29	10.21	9.18	5,454.30	383.27	39.18	-41.92	0.72	-0.23	-3.84	
5,499.57	10.18	8.62	5,467.37	385.59	39.55	-42.31	0.78	-0.23	-4.22	
5,512.86	10.17	8.03	5,480.45	387.91	39.89	-42.66	0.79	-0.08	-4.44	
5,526.14	10.15	7.43	5,493.52	390.23	40.20	-42.99	0.81	-0.15	-4.52	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,539.43	10.14	6.86	5,506.60	392.56	40.49	-43.30	0.76	-0.08	-4.29	
5,552.71	10.12	6.34	5,519.68	394.88	40.76	-43.59	0.70	-0.15	-3.92	
5,566.00	10.10	5.91	5,532.76	397.20	41.01	-43.85	0.59	-0.15	-3.24	
5,579.43	10.07	5.64	5,545.98	399.53	41.25	-44.11	0.42	-0.22	-2.01	
5,592.86	10.04	5.48	5,559.21	401.87	41.47	-44.35	0.31	-0.22	-1.19	
5,606.29	10.00	5.39	5,572.43	404.19	41.70	-44.59	0.32	-0.30	-0.67	
5,619.71	9.97	5.37	5,585.65	406.51	41.91	-44.82	0.23	-0.22	-0.15	
5,633.14	9.95	5.40	5,598.87	408.82	42.13	-45.06	0.15	-0.15	0.22	
5,646.57	9.94	5.49	5,612.10	411.13	42.35	-45.29	0.14	-0.07	0.67	
5,660.00	9.95	5.63	5,625.33	413.44	42.58	-45.53	0.19	0.07	1.04	
5,673.29	9.99	5.86	5,638.42	415.73	42.81	-45.78	0.42	0.30	1.73	
5,686.57	10.05	6.14	5,651.50	418.03	43.05	-46.04	0.58	0.45	2.11	
5,699.86	10.12	6.45	5,664.58	420.34	43.30	-46.31	0.67	0.53	2.33	
5,713.14	10.19	6.77	5,677.65	422.67	43.57	-46.60	0.68	0.53	2.41	
5,726.43	10.24	7.11	5,690.73	425.01	43.86	-46.90	0.59	0.38	2.56	
5,739.71	10.28	7.45	5,703.80	427.35	44.16	-47.21	0.55	0.30	2.56	
5,753.00	10.73	7.02	5,716.87	429.76	44.46	-47.54	3.44	3.39	-3.24	
5,766.14	11.68	6.59	5,729.76	432.29	44.77	-47.86	7.26	7.23	-3.27	
5,779.29	11.68	7.01	5,742.64	434.94	45.08	-48.19	0.65	0.00	3.19	
5,792.43	11.58	7.43	5,755.51	437.56	45.41	-48.54	1.00	-0.76	3.20	
5,805.57	11.47	7.85	5,768.38	440.17	45.76	-48.91	1.05	-0.84	3.20	
5,818.71	11.33	8.24	5,781.26	442.74	46.13	-49.29	1.22	-1.07	2.97	
5,831.86	11.18	8.57	5,794.16	445.28	46.50	-49.69	1.24	-1.14	2.51	
5,845.00	11.01	8.78	5,807.05	447.78	46.88	-50.08	1.33	-1.29	1.60	
5,858.29	10.81	8.75	5,820.10	450.26	47.27	-50.49	1.51	-1.50	-0.23	
5,871.57	10.59	8.56	5,833.15	452.70	47.64	-50.87	1.68	-1.66	-1.43	
5,884.86	10.36	8.25	5,846.22	455.09	47.99	-51.24	1.78	-1.73	-2.33	
5,898.14	10.12	7.85	5,859.29	457.43	48.32	-51.59	1.88	-1.81	-3.01	
5,911.43	9.87	7.37	5,872.38	459.71	48.63	-51.91	1.98	-1.88	-3.61	
5,924.71	9.62	6.82	5,885.47	461.94	48.90	-52.21	2.01	-1.88	-4.14	
5,938.00	9.35	6.19	5,898.57	464.12	49.15	-52.47	2.18	-2.03	-4.74	
5,951.14	9.07	5.63	5,911.54	466.21	49.37	-52.70	2.24	-2.13	-4.26	
5,964.29	8.79	5.01	5,924.54	468.24	49.56	-52.91	2.25	-2.13	-4.71	
5,977.43	8.50	4.35	5,937.53	470.21	49.72	-53.08	2.33	-2.21	-5.02	
5,990.57	8.21	3.65	5,950.53	472.12	49.85	-53.23	2.34	-2.21	-5.33	
6,003.71	7.94	2.92	5,963.54	473.96	49.96	-53.35	2.20	-2.05	-5.56	
6,016.86	7.67	2.19	5,976.56	475.74	50.04	-53.44	2.19	-2.05	-5.55	
6,030.00	7.42	1.48	5,989.59	477.47	50.09	-53.51	2.03	-1.90	-5.40	
6,043.43	7.19	1.00	6,002.91	479.18	50.13	-53.56	1.77	-1.71	-3.57	
6,056.86	6.98	0.57	6,016.24	480.83	50.15	-53.59	1.61	-1.56	-3.20	
6,070.29	6.78	0.19	6,029.57	482.44	50.16	-53.62	1.53	-1.49	-2.83	
6,083.71	6.59	359.84	6,042.90	484.00	50.17	-53.63	1.45	-1.42	-2.61	
6,097.14	6.40	359.52	6,056.25	485.52	50.16	-53.63	1.44	-1.41	-2.38	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,110.57	6.21	359.24	6,069.59	487.00	50.14	-53.62	1.43	-1.41	-2.08
6,124.00	6.01	359.02	6,082.95	488.43	50.12	-53.61	1.50	-1.49	-1.64
6,137.29	5.81	358.92	6,096.17	489.79	50.09	-53.60	1.51	-1.50	-0.75
6,150.57	5.60	358.90	6,109.38	491.11	50.07	-53.58	1.58	-1.58	-0.15
6,163.86	5.39	358.95	6,122.61	492.39	50.05	-53.57	1.58	-1.58	0.38
6,177.14	5.18	359.05	6,135.83	493.61	50.02	-53.56	1.58	-1.58	0.75
6,190.43	4.97	359.21	6,149.07	494.79	50.01	-53.55	1.58	-1.58	1.20
6,203.71	4.77	359.43	6,162.30	495.91	49.99	-53.54	1.51	-1.51	1.66
6,217.00	4.58	359.75	6,175.55	497.00	49.99	-53.54	1.44	-1.43	2.41
6,230.29	4.40	0.11	6,188.80	498.04	49.98	-53.55	1.37	-1.35	2.71
6,243.57	4.23	0.62	6,202.04	499.04	49.99	-53.56	1.31	-1.28	3.84
6,256.86	4.08	1.32	6,215.30	500.00	50.01	-53.58	1.19	-1.13	5.27
6,270.14	3.94	2.30	6,228.54	500.93	50.04	-53.62	1.17	-1.05	7.38
6,283.43	3.84	3.68	6,241.80	501.83	50.08	-53.67	1.03	-0.75	10.38
6,296.71	3.77	5.61	6,255.05	502.71	50.15	-53.75	1.10	-0.53	14.53
6,310.00	3.77	8.28	6,268.31	503.57	50.26	-53.86	1.32	0.00	20.09
6,323.29	4.08	10.40	6,281.57	504.47	50.41	-54.02	2.58	2.33	15.95
6,336.57	5.39	3.98	6,294.81	505.56	50.54	-54.15	10.63	9.86	-48.34
6,349.86	6.89	4.99	6,308.02	506.97	50.65	-54.28	11.32	11.29	7.60
6,363.14	8.82	6.24	6,321.18	508.78	50.83	-54.47	14.59	14.53	9.41
6,376.43	10.77	8.67	6,334.27	511.02	51.13	-54.78	15.00	14.67	18.28
6,389.71	11.46	10.20	6,347.30	513.55	51.55	-55.22	5.65	5.20	11.52
6,403.00	11.53	11.70	6,360.33	516.15	52.05	-55.74	2.31	0.53	11.29
6,416.43	11.42	12.59	6,373.49	518.76	52.61	-56.32	1.55	-0.82	6.63
6,429.86	11.24	13.07	6,386.66	521.33	53.20	-56.93	1.51	-1.34	3.57
6,443.29	11.00	13.27	6,399.83	523.85	53.79	-57.54	1.81	-1.79	1.49
6,456.71	10.73	13.29	6,413.01	526.31	54.37	-58.13	2.01	-2.01	0.15
6,470.14	10.45	13.17	6,426.21	528.72	54.93	-58.72	2.09	-2.08	-0.89
6,483.57	10.18	12.97	6,439.43	531.06	55.48	-59.28	2.03	-2.01	-1.49
6,497.00	9.94	12.74	6,452.65	533.35	56.00	-59.82	1.81	-1.79	-1.71
6,510.43	9.76	12.63	6,465.88	535.59	56.50	-60.34	1.35	-1.34	-0.82
6,523.86	9.61	12.51	6,479.12	537.79	57.00	-60.84	1.13	-1.12	-0.89
6,537.29	9.48	12.37	6,492.37	539.97	57.48	-61.34	0.98	-0.97	-1.04
6,550.71	9.35	12.22	6,505.60	542.11	57.94	-61.82	0.99	-0.97	-1.12
6,564.14	9.23	12.04	6,518.86	544.23	58.40	-62.29	0.92	-0.89	-1.34
6,577.57	9.10	11.84	6,532.12	546.32	58.84	-62.75	1.00	-0.97	-1.49
6,591.00	8.95	11.62	6,545.38	548.39	59.27	-63.19	1.15	-1.12	-1.64
6,604.43	8.76	11.43	6,558.65	550.41	59.68	-63.62	1.43	-1.41	-1.41
6,617.86	8.56	11.23	6,571.93	552.40	60.08	-64.03	1.51	-1.49	-1.49
6,631.29	8.33	11.00	6,585.21	554.33	60.46	-64.43	1.73	-1.71	-1.71
6,644.71	8.09	10.76	6,598.49	556.21	60.82	-64.80	1.81	-1.79	-1.79
6,658.14	7.84	10.50	6,611.80	558.04	61.17	-65.16	1.88	-1.86	-1.94
6,671.57	7.57	10.23	6,625.10	559.81	61.49	-65.49	2.03	-2.01	-2.01



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,685.00	7.29	9.96	6,638.42	561.52	61.79	-65.81	2.10	-2.08	-2.01
6,698.43	6.98	9.85	6,651.75	563.17	62.08	-66.11	2.31	-2.31	-0.82
6,711.86	6.66	9.76	6,665.08	564.74	62.35	-66.39	2.38	-2.38	-0.67
6,725.29	6.33	9.67	6,678.43	566.23	62.61	-66.66	2.46	-2.46	-0.67
6,738.71	5.99	9.56	6,691.77	567.65	62.85	-66.91	2.54	-2.53	-0.82
6,752.14	5.66	9.42	6,705.13	569.00	63.07	-67.14	2.46	-2.46	-1.04
6,765.57	5.33	9.21	6,718.50	570.27	63.28	-67.36	2.46	-2.46	-1.56
6,779.00	5.01	8.91	6,731.87	571.46	63.47	-67.56	2.39	-2.38	-2.23
6,792.43	4.71	8.54	6,745.25	572.59	63.65	-67.74	2.25	-2.23	-2.76
6,805.86	4.43	8.06	6,758.64	573.65	63.80	-67.90	2.10	-2.08	-3.57
6,819.29	4.15	7.45	6,772.03	574.64	63.94	-68.05	2.11	-2.08	-4.54
6,832.71	3.88	6.72	6,785.42	575.57	64.05	-68.17	2.05	-2.01	-5.44
6,846.14	3.62	5.86	6,798.82	576.45	64.15	-68.27	1.98	-1.94	-6.40
6,859.57	3.38	4.91	6,812.23	577.26	64.23	-68.36	1.84	-1.79	-7.07
6,873.00	3.15	3.91	6,825.64	578.03	64.29	-68.42	1.76	-1.71	-7.45
6,886.29	2.94	3.39	6,838.91	578.73	64.33	-68.47	1.59	-1.58	-3.91
6,899.57	2.74	2.91	6,852.17	579.39	64.37	-68.51	1.52	-1.51	-3.61
6,912.86	2.55	2.45	6,865.45	580.00	64.40	-68.54	1.44	-1.43	-3.46
6,926.14	2.37	1.97	6,878.71	580.57	64.42	-68.57	1.36	-1.36	-3.61
6,939.43	2.19	1.44	6,891.99	581.10	64.43	-68.59	1.36	-1.35	-3.99
6,952.71	2.00	0.86	6,905.26	581.58	64.44	-68.60	1.44	-1.43	-4.37
6,966.00	1.81	0.24	6,918.55	582.03	64.45	-68.61	1.44	-1.43	-4.67
6,979.43	1.61	359.83	6,931.97	582.43	64.45	-68.61	1.49	-1.49	-3.05
6,992.86	1.40	359.41	6,945.40	582.78	64.45	-68.61	1.57	-1.56	-3.13
7,006.29	1.18	358.90	6,958.82	583.08	64.44	-68.61	1.64	-1.64	-3.80
7,019.71	0.97	358.21	6,972.24	583.33	64.44	-68.61	1.57	-1.56	-5.14
7,033.14	0.76	357.15	6,985.67	583.54	64.43	-68.60	1.57	-1.56	-7.89
7,046.57	0.56	355.37	6,999.10	583.69	64.42	-68.59	1.50	-1.49	-13.25
7,060.00	0.47	354.07	7,012.53	583.81	64.41	-68.58	0.68	-0.67	-9.68
7,073.43	0.32	13.06	7,025.96	583.90	64.41	-68.59	1.47	-1.12	141.40
7,086.86	0.25	49.98	7,039.39	583.96	64.44	-68.62	1.43	-0.52	274.91
7,100.29	0.31	87.85	7,052.82	583.98	64.50	-68.68	1.42	0.45	281.98
7,113.71	0.46	107.68	7,066.24	583.96	64.59	-68.76	1.48	1.12	147.76
7,127.14	0.63	117.48	7,079.67	583.91	64.70	-68.88	1.44	1.27	72.97
7,140.57	0.81	123.00	7,093.10	583.83	64.85	-69.02	1.43	1.34	41.10
7,154.00	0.99	126.48	7,106.52	583.71	65.02	-69.20	1.40	1.34	25.91
7,167.29	0.84	133.53	7,119.81	583.57	65.18	-69.36	1.41	-1.13	53.05
7,180.57	0.74	142.93	7,133.09	583.43	65.31	-69.48	1.23	-0.75	70.78
7,193.86	0.66	154.89	7,146.38	583.30	65.39	-69.56	1.25	-0.60	89.99
7,207.14	0.62	169.14	7,159.66	583.16	65.44	-69.61	1.23	-0.30	107.30
7,220.43	0.62	184.35	7,172.95	583.01	65.44	-69.62	1.23	0.00	114.45
7,233.71	0.66	198.55	7,186.23	582.87	65.42	-69.58	1.23	0.30	106.93
7,247.00	0.33	266.84	7,199.52	582.80	65.35	-69.52	4.66	-2.48	513.85
7,260.43	1.47	341.27	7,212.95	582.96	65.26	-69.43	10.55	8.49	554.21



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
7,273.86	1.54	344.33	7,226.37	583.29	65.15	-69.33	0.79	0.52	22.78	
7,287.29	1.26	342.75	7,239.80	583.61	65.06	-69.24	2.10	-2.08	-11.76	
7,300.71	0.97	340.17	7,253.21	583.86	64.98	-69.16	2.19	-2.16	-19.23	
7,314.14	0.69	335.41	7,266.64	584.04	64.91	-69.09	2.15	-2.08	-35.44	
7,327.57	0.43	324.74	7,280.07	584.15	64.84	-69.02	2.08	-1.94	-79.45	
7,341.00	0.23	293.56	7,293.50	584.20	64.79	-68.97	1.95	-1.49	-232.17	
7,354.29	0.19	349.33	7,306.79	584.24	64.76	-68.94	1.50	-0.30	419.64	
7,367.57	0.31	26.35	7,320.07	584.29	64.77	-68.95	1.47	0.90	278.77	
7,380.86	0.49	39.79	7,333.36	584.37	64.83	-69.01	1.52	1.35	101.13	
7,394.14	0.68	45.94	7,346.64	584.46	64.92	-69.10	1.50	1.43	46.31	
7,407.43	0.87	49.37	7,359.93	584.58	65.05	-69.23	1.47	1.43	25.81	
7,420.71	1.07	51.54	7,373.21	584.73	65.23	-69.41	1.53	1.51	16.34	
7,434.00	1.27	53.03	7,386.49	584.89	65.44	-69.62	1.52	1.50	11.21	
7,447.43	1.11	53.09	7,399.92	585.06	65.66	-69.85	1.19	-1.19	0.45	
7,460.86	0.97	53.24	7,413.35	585.21	65.86	-70.05	1.04	-1.04	1.12	
7,474.29	0.88	60.69	7,426.78	585.33	66.04	-70.23	1.12	-0.67	55.47	
7,487.71	0.83	69.11	7,440.20	585.41	66.22	-70.41	1.01	-0.37	62.74	
7,501.14	0.81	78.20	7,453.62	585.46	66.40	-70.59	0.98	-0.15	67.68	
7,514.57	0.81	87.56	7,467.05	585.49	66.59	-70.78	0.98	0.00	69.69	
7,528.00	0.83	96.71	7,480.48	585.48	66.78	-70.97	0.99	0.15	68.13	
7,541.29	0.86	91.70	7,493.77	585.47	66.98	-71.17	0.60	0.23	-37.70	
7,554.57	0.90	87.11	7,507.05	585.47	67.18	-71.37	0.61	0.30	-34.56	
7,567.86	0.95	82.94	7,520.34	585.49	67.40	-71.58	0.63	0.38	-31.38	
7,581.14	1.00	79.17	7,533.62	585.52	67.62	-71.81	0.61	0.38	-28.39	
7,594.43	1.06	75.76	7,546.90	585.57	67.85	-72.04	0.65	0.45	-25.66	
7,607.71	1.12	72.69	7,560.18	585.64	68.10	-72.28	0.63	0.45	-23.12	
7,621.00	1.18	69.92	7,573.47	585.73	68.35	-72.54	0.62	0.45	-20.84	
7,634.29	1.11	66.28	7,586.76	585.83	68.59	-72.78	0.76	-0.53	-27.39	
7,647.57	1.18	61.23	7,600.03	585.95	68.83	-73.02	0.92	0.53	-38.03	
7,660.86	1.31	60.40	7,613.32	586.09	69.08	-73.28	0.99	0.98	-6.25	
7,674.14	1.43	59.71	7,626.60	586.24	69.36	-73.55	0.91	0.90	-5.20	
7,687.43	1.55	59.11	7,639.88	586.42	69.66	-73.85	0.91	0.90	-4.51	
7,700.71	1.68	58.60	7,653.16	586.61	69.98	-74.17	0.98	0.98	-3.84	
7,714.00	1.80	58.15	7,666.44	586.83	70.32	-74.52	0.91	0.90	-3.39	
7,727.29	1.71	51.04	7,679.72	587.06	70.65	-74.85	1.77	-0.68	-53.50	
7,740.57	1.65	42.26	7,693.00	587.33	70.93	-75.14	1.99	-0.45	-66.11	
7,753.86	1.63	32.55	7,706.28	587.63	71.17	-75.37	2.09	-0.15	-73.06	
7,767.14	1.66	22.84	7,719.56	587.96	71.34	-75.55	2.11	0.23	-73.12	
7,780.43	1.71	13.90	7,732.84	588.33	71.46	-75.67	2.01	0.38	-67.27	
7,793.71	1.78	6.17	7,746.12	588.73	71.53	-75.74	1.85	0.53	-58.21	
7,807.00	1.85	356.88	7,759.40	589.15	71.54	-75.76	2.27	0.53	-69.90	
7,820.29	2.62	321.85	7,772.68	589.60	71.34	-75.56	11.53	5.79	-263.58	
7,833.57	3.96	317.80	7,785.94	590.18	70.85	-75.07	10.23	10.09	-30.50	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,846.86	3.75	319.31	7,799.20	590.85	70.26	-74.48	1.75	-1.58	11.36
7,860.14	3.55	321.79	7,812.45	591.50	69.72	-73.95	1.92	-1.51	18.67
7,873.43	3.36	324.87	7,825.72	592.15	69.24	-73.48	2.00	-1.43	23.18
7,886.71	3.19	328.07	7,838.97	592.78	68.82	-73.06	1.88	-1.28	24.10
7,900.00	3.04	330.72	7,852.24	593.40	68.45	-72.70	1.56	-1.13	19.94
7,913.43	2.92	330.68	7,865.66	594.01	68.11	-72.36	0.89	-0.89	-0.30
7,926.86	2.83	329.58	7,879.07	594.59	67.78	-72.03	0.79	-0.67	-8.19
7,940.29	2.78	327.74	7,892.48	595.15	67.44	-71.69	0.77	-0.37	-13.70
7,953.71	2.76	325.41	7,905.89	595.69	67.08	-71.34	0.85	-0.15	-17.36
7,967.14	2.75	322.81	7,919.30	596.22	66.70	-70.96	0.93	-0.07	-19.36
7,980.57	2.76	320.10	7,932.72	596.72	66.30	-70.57	0.97	0.07	-20.18
7,994.00	2.79	317.41	7,946.13	597.21	65.87	-70.14	1.00	0.22	-20.03
8,007.29	2.78	314.79	7,959.41	597.68	65.42	-69.70	0.96	-0.08	-19.71
8,020.57	2.78	312.21	7,972.67	598.12	64.95	-69.23	0.94	0.00	-19.43
8,033.86	2.79	309.67	7,985.94	598.54	64.47	-68.75	0.93	0.08	-19.11
8,047.14	2.81	307.16	7,999.21	598.95	63.96	-68.24	0.94	0.15	-18.90
8,060.43	2.84	304.69	8,012.48	599.33	63.43	-67.72	0.94	0.23	-18.59
8,073.71	2.87	302.26	8,025.75	599.69	62.88	-67.17	0.94	0.23	-18.30
8,087.00	2.92	299.83	8,039.02	600.04	62.30	-66.59	1.00	0.38	-18.28
8,100.00	2.97	297.24	8,052.00	600.36	61.72	-66.01	1.09	0.38	-19.92
8,113.00	3.02	294.92	8,064.98	600.66	61.11	-65.40	1.01	0.38	-17.85
8,127.00	3.10	293.09	8,078.96	600.96	60.42	-64.72	0.90	0.57	-13.07
8,141.00	3.20	291.87	8,092.94	601.26	59.71	-64.01	0.86	0.71	-8.71
8,155.00	3.32	291.20	8,106.92	601.55	58.97	-63.27	0.90	0.86	-4.79
8,169.00	3.48	291.10	8,120.90	601.85	58.20	-62.50	1.14	1.14	-0.71
8,183.00	3.67	291.64	8,134.87	602.17	57.38	-61.69	1.38	1.36	3.86
8,196.29	4.60	295.08	8,148.12	602.55	56.51	-60.82	7.24	7.00	25.88
8,209.57	6.51	298.58	8,161.34	603.13	55.36	-59.68	14.60	14.38	26.36
8,222.86	8.69	300.52	8,174.51	604.00	53.84	-58.16	16.51	16.40	14.60
8,236.14	10.94	299.81	8,187.60	605.14	51.88	-56.21	16.97	16.94	-5.35
8,237.00	11.08	299.72	8,188.44	605.22	51.73	-56.06	16.13	16.01	-10.36
KOP: 8237.00' MD, -56.06' VS, 8188.44' TVD									
8,249.43	13.07	298.64	8,200.60	606.49	49.46	-53.80	16.13	16.03	-8.70
8,262.71	14.77	297.88	8,213.49	608.00	46.65	-51.00	12.87	12.80	-5.72
8,276.00	16.38	297.34	8,226.29	609.65	43.49	-47.85	12.16	12.11	-4.06
8,289.29	18.32	296.38	8,238.97	611.44	39.95	-44.33	14.76	14.60	-7.22
8,302.57	20.41	295.81	8,251.50	613.38	36.00	-40.38	15.80	15.74	-4.29
8,315.86	22.44	295.32	8,263.87	615.47	31.62	-36.02	15.33	15.27	-3.69
8,329.14	24.00	293.39	8,276.07	617.63	26.85	-31.27	13.07	11.75	-14.53
8,342.43	24.27	293.60	8,288.20	619.79	21.86	-26.30	2.13	2.03	1.58
8,355.71	25.81	291.49	8,300.23	621.95	16.67	-21.12	13.40	11.60	-15.89
8,369.00	27.61	291.68	8,312.11	624.14	11.12	-15.58	13.56	13.54	1.43
8,382.29	29.22	290.62	8,323.79	626.42	5.22	-9.70	12.69	12.11	-7.98
8,384.99	29.57	290.41	8,326.15	626.89	3.98	-8.46	13.61	13.08	-7.69



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
100FEL: 8384.99' MD, -8.46' VS, 8326.15' TVD									
8,395.57	30.96	289.64	8,335.28	628.71	-1.03	-3.47	13.61	13.11	-7.30
8,408.86	32.84	289.33	8,346.57	631.06	-7.65	3.14	14.20	14.15	-2.33
8,422.14	34.65	288.76	8,357.61	633.46	-14.63	10.09	13.84	13.63	-4.29
8,435.43	36.38	287.50	8,368.43	635.86	-21.96	17.41	14.13	13.02	-9.48
8,448.71	38.17	286.07	8,378.99	638.18	-29.66	25.10	14.97	13.48	-10.77
8,462.00	40.00	284.58	8,389.31	640.39	-37.74	33.16	15.48	13.77	-11.21
8,475.14	41.56	283.25	8,399.26	642.46	-46.07	41.48	13.59	11.87	-10.12
8,488.29	43.38	283.82	8,408.96	644.54	-54.71	50.09	14.15	13.84	4.33
8,501.43	44.97	283.06	8,418.38	646.66	-63.61	58.98	12.75	12.10	-5.78
8,514.57	46.01	283.10	8,427.59	648.78	-72.74	68.09	7.92	7.91	0.30
8,527.71	45.93	283.46	8,436.73	650.95	-81.93	77.27	2.06	-0.61	2.74
8,540.86	45.98	282.86	8,445.87	653.11	-91.14	86.46	3.30	0.38	-4.56
8,554.00	46.64	281.39	8,454.95	655.10	-100.43	95.74	9.52	5.02	-11.19
8,567.43	48.47	280.10	8,464.01	656.95	-110.16	105.46	15.36	13.63	-9.61
8,571.04	48.79	279.52	8,466.40	657.41	-112.83	108.13	14.95	8.98	-15.92
01-FTP(BB-133H)									
8,580.86	49.69	277.99	8,472.81	658.54	-120.18	115.47	14.95	9.12	-15.63
8,594.29	51.66	278.48	8,481.32	660.03	-130.46	125.74	14.94	14.67	3.65
8,607.71	53.64	278.10	8,489.46	661.57	-141.02	136.28	14.92	14.75	-2.83
8,621.14	55.52	277.52	8,497.24	663.05	-151.86	147.11	14.43	14.00	-4.32
8,634.57	57.35	276.83	8,504.67	664.45	-162.97	158.21	14.28	13.63	-5.14
8,648.00	59.17	275.76	8,511.73	665.70	-174.32	169.55	15.15	13.55	-7.97
8,661.29	61.03	275.03	8,518.36	666.78	-185.79	181.01	14.78	14.00	-5.49
8,674.57	62.90	275.91	8,524.60	667.90	-197.45	192.67	15.25	14.08	6.63
8,687.86	64.84	276.56	8,530.45	669.20	-209.32	204.52	15.24	14.60	4.89
8,701.14	66.99	277.47	8,535.87	670.68	-221.35	216.54	17.36	16.19	6.85
8,714.43	67.95	278.91	8,540.96	672.43	-233.50	228.68	12.34	7.22	10.84
8,727.71	69.80	279.19	8,545.75	674.38	-245.73	240.90	14.07	13.93	2.11
8,741.00	72.00	279.41	8,550.10	676.41	-258.12	253.28	16.63	16.55	1.66
8,754.29	74.01	279.23	8,553.98	678.46	-270.66	265.80	15.18	15.12	-1.35
8,767.57	75.92	278.15	8,557.43	680.40	-283.34	278.46	16.39	14.38	-8.13
8,780.86	77.84	276.60	8,560.44	682.06	-296.18	291.29	18.38	14.45	-11.66
8,794.14	79.72	274.90	8,563.03	683.37	-309.14	304.24	18.92	14.16	-12.80
8,807.43	81.03	272.92	8,565.25	684.26	-322.21	317.30	17.69	9.86	-14.90
8,820.71	82.80	271.19	8,567.12	684.73	-335.35	330.44	18.55	13.33	-13.03
8,834.00	84.20	269.30	8,568.62	684.79	-348.55	343.64	17.62	10.53	-14.22
8,849.00	86.02	267.51	8,569.90	684.37	-363.49	358.58	16.99	12.13	-11.93
8,864.00	87.55	265.82	8,570.74	683.50	-378.44	373.54	15.18	10.20	-11.27
8,879.00	89.54	264.91	8,571.12	682.29	-393.38	388.49	14.59	13.27	-6.07
8,891.25	90.27	264.70	8,571.14	681.18	-405.58	400.70	6.20	5.96	-1.71
8,903.50	90.38	264.68	8,571.07	680.04	-417.78	412.90	0.91	0.90	-0.16
8,915.75	90.47	264.66	8,570.98	678.91	-429.98	425.11	0.75	0.73	-0.16



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,928.00	90.51	264.64	8,570.88	677.76	-442.17	437.31	0.37	0.33	-0.16	
8,941.29	90.51	264.62	8,570.76	676.52	-455.40	450.55	0.15	0.00	-0.15	
8,954.57	90.47	264.61	8,570.65	675.27	-468.62	463.78	0.31	-0.30	-0.08	
8,967.86	90.42	264.60	8,570.54	674.03	-481.86	477.02	0.38	-0.38	-0.08	
8,981.14	90.36	264.60	8,570.45	672.78	-495.08	490.25	0.45	-0.45	0.00	
8,994.43	90.27	264.60	8,570.38	671.52	-508.31	503.49	0.68	-0.68	0.00	
9,007.71	90.17	264.61	8,570.33	670.28	-521.53	516.72	0.76	-0.75	0.08	
9,021.00	90.07	264.64	8,570.30	669.03	-534.76	529.96	0.79	-0.75	0.23	
9,034.43	89.97	264.69	8,570.30	667.78	-548.13	543.34	0.83	-0.74	0.37	
9,047.86	89.90	264.75	8,570.31	666.55	-561.50	556.72	0.69	-0.52	0.45	
9,061.29	89.85	264.81	8,570.34	665.32	-574.88	570.10	0.58	-0.37	0.45	
9,074.71	89.81	264.88	8,570.38	664.12	-588.24	583.48	0.60	-0.30	0.52	
9,088.14	89.77	264.95	8,570.43	662.93	-601.62	596.86	0.60	-0.30	0.52	
9,101.57	89.73	265.02	8,570.49	661.75	-615.00	610.25	0.60	-0.30	0.52	
9,115.00	89.69	265.07	8,570.56	660.59	-628.38	623.64	0.48	-0.30	0.37	
9,128.29	89.66	265.11	8,570.63	659.46	-641.62	636.88	0.38	-0.23	0.30	
9,141.57	89.65	265.15	8,570.71	658.33	-654.85	650.12	0.31	-0.08	0.30	
9,154.86	89.65	265.19	8,570.79	657.21	-668.09	663.37	0.30	0.00	0.30	
9,168.14	89.65	265.24	8,570.87	656.10	-681.33	676.62	0.38	0.00	0.38	
9,181.43	89.62	265.32	8,570.96	655.01	-694.57	689.87	0.64	-0.23	0.60	
9,194.71	89.56	265.44	8,571.05	653.94	-707.81	703.11	1.01	-0.45	0.90	
9,208.00	89.52	265.62	8,571.16	652.90	-721.06	716.37	1.39	-0.30	1.35	
9,221.43	89.54	265.91	8,571.27	651.91	-734.45	729.77	2.16	0.15	2.16	
9,234.86	89.63	266.25	8,571.37	650.99	-747.85	743.17	2.62	0.67	2.53	
9,248.29	89.80	266.60	8,571.43	650.16	-761.25	756.58	2.90	1.27	2.61	
9,261.71	90.00	266.92	8,571.46	649.40	-774.65	769.98	2.81	1.49	2.38	
9,275.14	91.51	267.59	8,571.28	648.76	-788.06	783.40	12.30	11.24	4.99	
9,280.00	91.96	267.58	8,571.13	648.55	-792.92	788.26	9.31	9.31	-0.15	
EOC: 9280.00' MD, 788.26' VS, 8571.13' TVD										
9,288.57	92.76	267.57	8,570.78	648.19	-801.47	796.81	9.31	9.31	-0.15	
9,302.00	93.01	267.73	8,570.10	647.64	-814.87	810.22	2.21	1.86	1.19	
9,315.00	93.18	267.77	8,569.40	647.13	-827.85	823.19	1.34	1.31	0.31	
9,328.00	93.25	267.73	8,568.67	646.62	-840.82	836.17	0.62	0.54	-0.31	
9,341.00	93.27	267.66	8,567.93	646.10	-853.78	849.14	0.56	0.15	-0.54	
9,354.00	93.23	267.55	8,567.20	645.55	-866.75	862.11	0.90	-0.31	-0.85	
9,367.00	93.15	267.44	8,566.47	644.99	-879.72	875.08	1.05	-0.62	-0.85	
9,380.00	93.07	267.34	8,565.77	644.40	-892.69	888.05	0.98	-0.62	-0.77	
9,393.00	93.02	267.27	8,565.08	643.79	-905.65	901.02	0.66	-0.38	-0.54	
9,406.43	93.02	267.25	8,564.37	643.15	-919.05	914.42	0.15	0.00	-0.15	
9,419.86	93.02	267.26	8,563.66	642.50	-932.45	927.82	0.07	0.00	0.07	
9,433.29	93.03	267.29	8,562.95	641.87	-945.84	941.22	0.24	0.07	0.22	
9,446.71	93.05	267.32	8,562.24	641.24	-959.23	954.61	0.27	0.15	0.22	
9,460.14	93.06	267.34	8,561.53	640.61	-972.62	968.02	0.17	0.07	0.15	
9,473.57	93.06	267.34	8,560.81	639.99	-986.02	981.42	0.00	0.00	0.00	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,487.00	93.04	267.30	8,560.09	639.36	-999.42	994.82	0.33	-0.15	-0.30
9,500.43	92.99	267.20	8,559.39	638.72	-1,012.81	1,008.22	0.83	-0.37	-0.74
9,513.86	92.92	267.05	8,558.70	638.04	-1,026.21	1,021.62	1.23	-0.52	-1.12
9,527.29	92.83	266.89	8,558.02	637.34	-1,039.60	1,035.02	1.37	-0.67	-1.19
9,540.71	92.74	266.71	8,557.37	636.59	-1,052.99	1,048.40	1.50	-0.67	-1.34
9,554.14	92.64	266.54	8,556.74	635.80	-1,066.38	1,061.80	1.47	-0.74	-1.27
9,567.57	92.53	266.37	8,556.13	634.97	-1,079.77	1,075.20	1.51	-0.82	-1.27
9,581.00	92.43	266.23	8,555.55	634.10	-1,093.16	1,088.59	1.28	-0.74	-1.04
9,594.43	92.32	266.14	8,555.00	633.21	-1,106.55	1,101.99	1.06	-0.82	-0.67
9,607.86	92.21	266.07	8,554.47	632.30	-1,119.94	1,115.38	0.97	-0.82	-0.52
9,621.29	92.11	266.02	8,553.96	631.37	-1,133.32	1,128.78	0.83	-0.74	-0.37
9,634.71	92.01	265.99	8,553.48	630.44	-1,146.70	1,142.16	0.78	-0.75	-0.22
9,648.14	91.93	265.98	8,553.02	629.50	-1,160.09	1,155.56	0.60	-0.60	-0.07
9,661.57	91.86	265.98	8,552.57	628.56	-1,173.48	1,168.95	0.52	-0.52	0.00
9,675.00	91.78	266.00	8,552.14	627.62	-1,186.87	1,182.35	0.61	-0.60	0.15
9,688.29	91.72	266.04	8,551.74	626.70	-1,200.12	1,195.61	0.54	-0.45	0.30
9,701.57	91.64	266.11	8,551.35	625.79	-1,213.37	1,208.86	0.80	-0.60	0.53
9,714.86	91.56	266.17	8,550.98	624.89	-1,226.62	1,222.12	0.75	-0.60	0.45
9,728.14	91.47	266.24	8,550.63	624.01	-1,239.87	1,235.37	0.86	-0.68	0.53
9,741.43	91.39	266.30	8,550.30	623.15	-1,253.13	1,248.63	0.75	-0.60	0.45
9,754.71	91.32	266.35	8,549.98	622.30	-1,266.37	1,261.89	0.65	-0.53	0.38
9,768.00	91.26	266.36	8,549.68	621.45	-1,279.63	1,275.15	0.46	-0.45	0.08
9,781.43	91.21	266.33	8,549.39	620.60	-1,293.03	1,288.56	0.43	-0.37	-0.22
9,794.86	91.17	266.28	8,549.11	619.73	-1,306.43	1,301.96	0.48	-0.30	-0.37
9,808.29	91.13	266.21	8,548.84	618.85	-1,319.83	1,315.37	0.60	-0.30	-0.52
9,821.71	91.08	266.15	8,548.59	617.96	-1,333.22	1,328.76	0.58	-0.37	-0.45
9,835.14	91.03	266.10	8,548.34	617.05	-1,346.62	1,342.17	0.53	-0.37	-0.37
9,848.57	90.97	266.07	8,548.10	616.14	-1,360.01	1,355.57	0.50	-0.45	-0.22
9,862.00	90.88	266.10	8,547.89	615.22	-1,373.41	1,368.97	0.71	-0.67	0.22
9,875.29	90.74	266.19	8,547.70	614.33	-1,386.67	1,382.24	1.25	-1.05	0.68
9,888.57	90.56	266.33	8,547.55	613.46	-1,399.92	1,395.49	1.72	-1.36	1.05
9,901.86	90.35	266.49	8,547.44	612.63	-1,413.18	1,408.76	1.99	-1.58	1.20
9,915.14	90.09	266.68	8,547.39	611.84	-1,426.44	1,422.02	2.42	-1.96	1.43
9,928.43	89.77	267.07	8,547.41	611.11	-1,439.71	1,435.30	3.80	-2.41	2.93
9,941.71	89.55	268.70	8,547.49	610.62	-1,452.98	1,448.57	12.39	-1.66	12.27
9,955.00	89.26	269.48	8,547.63	610.41	-1,466.27	1,461.86	6.26	-2.18	5.87
9,968.43	89.18	269.72	8,547.81	610.32	-1,479.69	1,475.29	1.88	-0.60	1.79
9,981.86	89.22	269.97	8,548.00	610.28	-1,493.12	1,488.72	1.89	0.30	1.86
9,995.29	89.33	270.23	8,548.17	610.30	-1,506.55	1,502.15	2.10	0.82	1.94
10,008.71	89.50	270.48	8,548.30	610.39	-1,519.97	1,515.56	2.25	1.27	1.86
10,022.14	89.73	270.71	8,548.39	610.53	-1,533.40	1,528.99	2.42	1.71	1.71
10,035.57	90.52	271.02	8,548.36	610.73	-1,546.83	1,542.42	6.32	5.88	2.31
10,049.00	92.20	271.46	8,548.04	611.02	-1,560.25	1,555.84	12.93	12.51	3.28



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,062.43	92.75	271.64	8,547.46	611.38	-1,573.66	1,569.25	4.31	4.10	1.34
10,075.86	92.78	271.74	8,546.82	611.78	-1,587.07	1,582.65	0.78	0.22	0.74
10,089.29	92.77	271.82	8,546.17	612.20	-1,600.48	1,596.06	0.60	-0.07	0.60
10,102.71	92.72	271.88	8,545.52	612.63	-1,613.88	1,609.45	0.58	-0.37	0.45
10,116.14	92.66	271.93	8,544.89	613.07	-1,627.29	1,622.86	0.58	-0.45	0.37
10,129.57	92.58	271.96	8,544.28	613.53	-1,640.69	1,636.26	0.64	-0.60	0.22
10,143.00	92.52	271.96	8,543.68	613.99	-1,654.10	1,649.67	0.45	-0.45	0.00
10,156.29	92.49	271.92	8,543.10	614.44	-1,667.37	1,662.93	0.38	-0.23	-0.30
10,169.57	92.46	271.87	8,542.53	614.88	-1,680.63	1,676.19	0.44	-0.23	-0.38
10,182.86	92.41	271.80	8,541.96	615.30	-1,693.90	1,689.46	0.65	-0.38	-0.53
10,196.14	92.35	271.74	8,541.41	615.71	-1,707.17	1,702.72	0.64	-0.45	-0.45
10,209.43	92.26	271.69	8,540.88	616.11	-1,720.44	1,715.99	0.77	-0.68	-0.38
10,222.71	92.16	271.66	8,540.37	616.50	-1,733.70	1,729.25	0.79	-0.75	-0.23
10,236.00	92.07	271.68	8,539.87	616.88	-1,746.98	1,742.52	0.69	-0.68	0.15
10,249.43	91.97	271.78	8,539.40	617.29	-1,760.39	1,755.93	1.05	-0.74	0.74
10,262.86	91.91	271.91	8,538.95	617.72	-1,773.81	1,769.34	1.07	-0.45	0.97
10,276.29	91.90	272.07	8,538.50	618.19	-1,787.22	1,782.76	1.19	-0.07	1.19
10,289.71	91.93	272.23	8,538.05	618.69	-1,800.63	1,796.15	1.21	0.22	1.19
10,303.14	92.04	272.37	8,537.59	619.23	-1,814.04	1,809.56	1.33	0.82	1.04
10,316.57	92.95	271.31	8,537.00	619.66	-1,827.45	1,822.97	10.40	6.78	-7.89
10,330.00	93.36	270.97	8,536.26	619.93	-1,840.86	1,836.37	3.96	3.05	-2.53
10,343.14	93.50	270.99	8,535.48	620.15	-1,853.97	1,849.49	1.08	1.07	0.15
10,356.29	93.57	270.99	8,534.67	620.38	-1,867.09	1,862.61	0.53	0.53	0.00
10,369.43	93.59	270.96	8,533.85	620.60	-1,880.21	1,875.72	0.27	0.15	-0.23
10,382.57	93.58	270.92	8,533.02	620.82	-1,893.32	1,888.83	0.31	-0.08	-0.30
10,395.71	93.56	270.88	8,532.21	621.02	-1,906.43	1,901.94	0.34	-0.15	-0.30
10,408.86	93.54	270.85	8,531.39	621.22	-1,919.55	1,915.06	0.27	-0.15	-0.23
10,422.00	93.53	270.83	8,530.58	621.41	-1,932.67	1,928.17	0.17	-0.08	-0.15
10,435.29	93.55	270.84	8,529.76	621.61	-1,945.93	1,941.43	0.17	0.15	0.08
10,448.57	93.61	270.86	8,528.93	621.80	-1,959.18	1,954.68	0.48	0.45	0.15
10,461.86	93.64	270.89	8,528.09	622.00	-1,972.45	1,967.94	0.32	0.23	0.23
10,475.14	93.65	270.92	8,527.25	622.21	-1,985.70	1,981.19	0.24	0.08	0.23
10,488.43	93.65	270.96	8,526.40	622.43	-1,998.96	1,994.45	0.30	0.00	0.30
10,501.71	93.64	270.98	8,525.56	622.66	-2,012.21	2,007.70	0.17	-0.08	0.15
10,515.00	93.63	271.00	8,524.71	622.89	-2,025.47	2,020.96	0.17	-0.08	0.15
10,528.30	93.59	270.99	8,523.88	623.12	-2,038.74	2,034.23	0.31	-0.30	-0.08
10,541.60	93.55	270.98	8,523.05	623.34	-2,052.01	2,047.50	0.31	-0.30	-0.08
10,554.90	93.51	270.95	8,522.23	623.57	-2,065.29	2,060.77	0.38	-0.30	-0.23
10,568.20	93.46	270.92	8,521.42	623.78	-2,078.56	2,074.04	0.44	-0.38	-0.23
10,581.50	93.41	270.89	8,520.62	623.99	-2,091.84	2,087.32	0.44	-0.38	-0.23
10,594.80	93.37	270.86	8,519.84	624.20	-2,105.11	2,100.59	0.38	-0.30	-0.23
10,608.10	93.33	270.83	8,519.06	624.39	-2,118.39	2,113.86	0.38	-0.30	-0.23
10,621.51	93.31	270.81	8,518.28	624.58	-2,131.77	2,127.25	0.21	-0.15	-0.15



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,634.93	93.32	270.79	8,517.51	624.77	-2,145.17	2,140.64	0.17	0.07	-0.15	
10,648.34	93.33	270.78	8,516.73	624.95	-2,158.56	2,154.03	0.11	0.07	-0.07	
10,661.76	93.35	270.76	8,515.95	625.13	-2,171.95	2,167.42	0.21	0.15	-0.15	
10,675.17	93.38	270.75	8,515.16	625.31	-2,185.34	2,180.81	0.24	0.22	-0.07	
10,688.59	93.40	270.74	8,514.37	625.49	-2,198.73	2,194.20	0.17	0.15	-0.07	
10,702.00	93.43	270.73	8,513.57	625.66	-2,212.12	2,207.58	0.24	0.22	-0.07	
10,715.43	93.45	270.71	8,512.76	625.83	-2,225.52	2,220.99	0.21	0.15	-0.15	
10,728.86	93.48	270.70	8,511.95	625.99	-2,238.93	2,234.39	0.24	0.22	-0.07	
10,742.29	93.50	270.69	8,511.13	626.15	-2,252.33	2,247.79	0.17	0.15	-0.07	
10,755.71	93.53	270.67	8,510.31	626.31	-2,265.72	2,261.18	0.27	0.22	-0.15	
10,769.14	93.64	270.08	8,509.47	626.40	-2,279.13	2,274.59	4.46	0.82	-4.39	
10,782.57	93.77	268.85	8,508.60	626.27	-2,292.53	2,287.99	9.19	0.97	-9.16	
10,796.00	93.78	268.42	8,507.72	625.96	-2,305.93	2,301.39	3.20	0.07	-3.20	
10,809.43	93.83	268.38	8,506.83	625.58	-2,319.32	2,314.79	0.48	0.37	-0.30	
10,822.86	93.90	268.33	8,505.92	625.20	-2,332.72	2,328.18	0.64	0.52	-0.37	
10,836.29	93.96	268.27	8,505.00	624.80	-2,346.11	2,341.58	0.63	0.45	-0.45	
10,849.71	94.03	268.22	8,504.07	624.39	-2,359.49	2,354.96	0.64	0.52	-0.37	
10,863.14	94.11	268.16	8,503.11	623.97	-2,372.88	2,368.35	0.74	0.60	-0.45	
10,876.57	94.18	268.11	8,502.14	623.53	-2,386.27	2,381.74	0.64	0.52	-0.37	
10,890.00	94.25	268.06	8,501.16	623.08	-2,399.65	2,395.13	0.64	0.52	-0.37	
10,903.43	94.33	268.03	8,500.15	622.63	-2,413.04	2,408.52	0.64	0.60	-0.22	
10,916.86	94.40	268.00	8,499.13	622.16	-2,426.42	2,421.91	0.57	0.52	-0.22	
10,930.29	94.47	267.98	8,498.09	621.69	-2,439.80	2,435.29	0.54	0.52	-0.15	
10,943.71	94.52	267.95	8,497.04	621.22	-2,453.17	2,448.66	0.43	0.37	-0.22	
10,957.14	94.56	267.93	8,495.98	620.74	-2,466.55	2,462.05	0.33	0.30	-0.15	
10,970.57	94.58	267.90	8,494.91	620.25	-2,479.93	2,475.43	0.27	0.15	-0.22	
10,984.00	94.57	267.86	8,493.83	619.75	-2,493.31	2,488.81	0.31	-0.07	-0.30	
10,994.62	94.51	267.81	8,492.99	619.35	-2,503.89	2,499.39	0.69	-0.53	-0.45	
02-v2500(BB-133H)										
10,997.29	94.50	267.80	8,492.78	619.25	-2,506.55	2,502.05	0.69	-0.53	-0.45	
11,010.57	94.39	267.74	8,491.75	618.74	-2,519.78	2,515.28	0.94	-0.83	-0.45	
11,023.86	94.28	267.68	8,490.75	618.21	-2,533.02	2,528.53	0.94	-0.83	-0.45	
11,037.14	94.17	267.62	8,489.77	617.66	-2,546.25	2,541.77	0.94	-0.83	-0.45	
11,050.43	94.07	267.56	8,488.82	617.11	-2,559.49	2,555.01	0.88	-0.75	-0.45	
11,063.71	93.30	267.92	8,487.96	616.58	-2,572.74	2,568.26	6.40	-5.80	2.71	
11,077.00	92.12	268.25	8,487.33	616.14	-2,586.00	2,581.53	9.22	-8.88	2.48	
11,090.43	91.43	268.28	8,486.92	615.73	-2,599.42	2,594.95	5.14	-5.14	0.22	
11,103.86	91.45	268.26	8,486.58	615.33	-2,612.84	2,608.37	0.21	0.15	-0.15	
11,117.29	91.48	268.25	8,486.24	614.92	-2,626.26	2,621.79	0.24	0.22	-0.07	
11,130.71	91.53	268.24	8,485.89	614.51	-2,639.67	2,635.20	0.38	0.37	-0.07	
11,144.14	91.59	268.24	8,485.52	614.10	-2,653.09	2,648.63	0.45	0.45	0.00	
11,157.57	91.65	268.23	8,485.14	613.68	-2,666.51	2,662.05	0.45	0.45	-0.07	
11,171.00	91.73	268.23	8,484.74	613.27	-2,679.92	2,675.47	0.60	0.60	0.00	
11,184.43	91.82	268.21	8,484.33	612.85	-2,693.34	2,688.89	0.69	0.67	-0.15	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,197.86	91.91	268.20	8,483.89	612.43	-2,706.76	2,702.31	0.67	0.67	-0.07
11,211.29	92.01	268.18	8,483.43	612.01	-2,720.17	2,715.72	0.76	0.74	-0.15
11,224.71	92.11	268.16	8,482.95	611.58	-2,733.58	2,729.13	0.76	0.75	-0.15
11,238.14	92.21	268.13	8,482.44	611.14	-2,746.99	2,742.55	0.78	0.74	-0.22
11,251.57	92.30	268.10	8,481.91	610.70	-2,760.40	2,755.96	0.71	0.67	-0.22
11,265.00	92.39	268.06	8,481.37	610.25	-2,773.81	2,769.38	0.73	0.67	-0.30
11,278.43	92.46	268.00	8,480.80	609.79	-2,787.22	2,782.79	0.69	0.52	-0.45
11,291.86	92.53	267.93	8,480.21	609.32	-2,800.63	2,796.20	0.74	0.52	-0.52
11,305.29	92.61	267.87	8,479.61	608.82	-2,814.04	2,809.61	0.74	0.60	-0.45
11,318.71	92.69	267.80	8,478.99	608.32	-2,827.44	2,823.01	0.79	0.60	-0.52
11,332.14	92.76	267.75	8,478.35	607.80	-2,840.84	2,836.42	0.64	0.52	-0.37
11,345.57	92.81	267.71	8,477.70	607.27	-2,854.24	2,849.83	0.48	0.37	-0.30
11,359.00	92.83	267.69	8,477.04	606.73	-2,867.65	2,863.23	0.21	0.15	-0.15
11,372.29	92.79	267.71	8,476.39	606.19	-2,880.91	2,876.50	0.34	-0.30	0.15
11,385.57	92.74	267.75	8,475.75	605.67	-2,894.17	2,889.76	0.48	-0.38	0.30
11,398.86	92.66	267.81	8,475.12	605.15	-2,907.43	2,903.03	0.75	-0.60	0.45
11,412.14	92.56	267.86	8,474.52	604.65	-2,920.69	2,916.29	0.84	-0.75	0.38
11,425.43	92.45	267.91	8,473.93	604.16	-2,933.96	2,929.56	0.91	-0.83	0.38
11,438.71	92.30	267.95	8,473.38	603.68	-2,947.22	2,942.82	1.17	-1.13	0.30
11,452.00	91.68	268.63	8,472.92	603.29	-2,960.49	2,956.10	6.92	-4.67	5.12
11,465.29	90.94	269.37	8,472.62	603.06	-2,973.78	2,969.38	7.87	-5.57	5.57
11,478.57	90.85	269.32	8,472.41	602.90	-2,987.05	2,982.66	0.78	-0.68	-0.38
11,491.86	90.77	269.26	8,472.22	602.74	-3,000.34	2,995.95	0.75	-0.60	-0.45
11,505.14	90.63	269.20	8,472.06	602.56	-3,013.62	3,009.23	1.15	-1.05	-0.45
11,518.43	90.38	269.13	8,471.94	602.37	-3,026.91	3,022.52	1.95	-1.88	-0.53
11,531.71	89.44	269.49	8,471.96	602.21	-3,040.19	3,035.80	7.58	-7.08	2.71
11,545.00	88.96	269.74	8,472.15	602.12	-3,053.47	3,049.09	4.07	-3.61	1.88
11,558.43	88.86	269.71	8,472.41	602.05	-3,066.90	3,062.51	0.78	-0.74	-0.22
11,571.86	88.84	269.68	8,472.68	601.98	-3,080.33	3,075.94	0.27	-0.15	-0.22
11,585.29	88.87	269.65	8,472.94	601.90	-3,093.76	3,089.37	0.32	0.22	-0.22
11,598.71	88.91	269.63	8,473.20	601.82	-3,107.17	3,102.79	0.33	0.30	-0.15
11,612.14	88.95	269.60	8,473.45	601.73	-3,120.60	3,116.21	0.37	0.30	-0.22
11,625.57	88.97	269.56	8,473.70	601.63	-3,134.03	3,129.64	0.33	0.15	-0.30
11,639.00	88.94	269.51	8,473.94	601.52	-3,147.45	3,143.07	0.43	-0.22	-0.37
11,652.14	88.86	269.45	8,474.20	601.40	-3,160.59	3,156.21	0.76	-0.61	-0.46
11,665.29	88.77	269.36	8,474.47	601.27	-3,173.74	3,169.35	0.97	-0.68	-0.68
11,678.43	88.67	269.27	8,474.76	601.11	-3,186.87	3,182.49	1.02	-0.76	-0.68
11,691.57	88.54	269.18	8,475.08	600.93	-3,200.01	3,195.63	1.20	-0.99	-0.68
11,704.71	88.41	269.09	8,475.43	600.73	-3,213.14	3,208.76	1.20	-0.99	-0.68
11,717.86	88.30	268.99	8,475.81	600.51	-3,226.29	3,221.91	1.13	-0.84	-0.76
11,731.00	88.22	268.90	8,476.21	600.27	-3,239.42	3,235.04	0.92	-0.61	-0.68
11,744.29	88.16	268.82	8,476.63	600.01	-3,252.70	3,248.32	0.75	-0.45	-0.60
11,757.57	88.11	268.75	8,477.06	599.73	-3,265.97	3,261.59	0.65	-0.38	-0.53



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,770.86	88.09	268.69	8,477.50	599.43	-3,279.25	3,274.87	0.48	-0.15	-0.45
11,784.14	88.06	268.63	8,477.95	599.12	-3,292.52	3,288.14	0.50	-0.23	-0.45
11,797.43	88.03	268.59	8,478.40	598.80	-3,305.79	3,301.43	0.38	-0.23	-0.30
11,810.71	87.97	268.56	8,478.86	598.47	-3,319.06	3,314.70	0.51	-0.45	-0.23
11,824.00	87.90	268.57	8,479.34	598.13	-3,332.34	3,327.97	0.53	-0.53	0.08
11,837.43	87.83	268.61	8,479.84	597.80	-3,345.76	3,341.39	0.60	-0.52	0.30
11,850.86	87.79	268.67	8,480.35	597.48	-3,359.17	3,354.81	0.54	-0.30	0.45
11,864.29	87.74	268.74	8,480.88	597.18	-3,372.59	3,368.23	0.64	-0.37	0.52
11,877.71	87.68	268.80	8,481.41	596.89	-3,386.00	3,381.64	0.63	-0.45	0.45
11,891.14	87.95	269.35	8,481.93	596.68	-3,399.41	3,395.06	4.56	2.01	4.10
11,904.57	88.48	270.11	8,482.35	596.61	-3,412.84	3,408.48	6.90	3.95	5.66
11,918.00	88.41	270.11	8,482.71	596.64	-3,426.26	3,421.90	0.52	-0.52	0.00
11,931.29	88.36	270.06	8,483.08	596.66	-3,439.55	3,435.19	0.53	-0.38	-0.38
11,944.57	88.31	269.99	8,483.47	596.67	-3,452.82	3,448.46	0.65	-0.38	-0.53
11,957.86	88.25	269.90	8,483.87	596.65	-3,466.11	3,461.75	0.81	-0.45	-0.68
11,971.14	88.20	269.82	8,484.28	596.62	-3,479.38	3,475.02	0.71	-0.38	-0.60
11,984.43	88.15	269.76	8,484.70	596.57	-3,492.66	3,488.30	0.59	-0.38	-0.45
11,997.71	88.10	269.74	8,485.14	596.51	-3,505.93	3,501.58	0.41	-0.38	-0.15
12,011.00	88.08	269.78	8,485.58	596.46	-3,519.22	3,514.86	0.34	-0.15	0.30
12,024.43	88.08	269.91	8,486.03	596.42	-3,532.64	3,528.28	0.97	0.00	0.97
12,037.86	88.11	270.10	8,486.48	596.42	-3,546.06	3,541.70	1.43	0.22	1.41
12,051.29	88.15	270.31	8,486.92	596.47	-3,559.48	3,555.13	1.59	0.30	1.56
12,064.71	88.21	270.52	8,487.34	596.57	-3,572.90	3,568.54	1.63	0.45	1.56
12,078.14	88.91	270.78	8,487.68	596.72	-3,586.32	3,581.96	5.56	5.21	1.94
12,091.57	90.01	271.19	8,487.81	596.95	-3,599.75	3,595.39	8.74	8.19	3.05
12,105.00	90.19	271.37	8,487.78	597.25	-3,613.18	3,608.81	1.90	1.34	1.34
12,118.29	90.30	271.42	8,487.73	597.57	-3,626.46	3,622.09	0.91	0.83	0.38
12,131.57	90.39	271.43	8,487.65	597.90	-3,639.74	3,635.37	0.68	0.68	0.08
12,144.86	90.47	271.42	8,487.55	598.24	-3,653.02	3,648.65	0.61	0.60	-0.08
12,158.14	90.55	271.38	8,487.43	598.56	-3,666.30	3,661.92	0.67	0.60	-0.30
12,171.43	90.63	271.33	8,487.29	598.87	-3,679.58	3,675.20	0.71	0.60	-0.38
12,184.71	90.74	271.26	8,487.13	599.17	-3,692.86	3,688.48	0.98	0.83	-0.53
12,198.00	90.88	271.17	8,486.94	599.46	-3,706.15	3,701.76	1.25	1.05	-0.68
12,211.29	91.03	271.05	8,486.72	599.71	-3,719.43	3,715.04	1.45	1.13	-0.90
12,224.57	91.14	270.92	8,486.47	599.94	-3,732.71	3,728.32	1.28	0.83	-0.98
12,237.86	91.17	270.78	8,486.20	600.14	-3,745.99	3,741.60	1.08	0.23	-1.05
12,251.14	91.14	270.64	8,485.94	600.30	-3,759.27	3,754.88	1.08	-0.23	-1.05
12,264.43	91.03	270.51	8,485.68	600.44	-3,772.56	3,768.16	1.28	-0.83	-0.98
12,277.71	90.88	270.39	8,485.46	600.54	-3,785.83	3,781.44	1.45	-1.13	-0.90
12,291.00	90.77	270.30	8,485.27	600.62	-3,799.12	3,794.73	1.07	-0.83	-0.68
12,304.43	90.75	270.25	8,485.09	600.69	-3,812.55	3,808.16	0.40	-0.15	-0.37
12,317.86	90.79	270.22	8,484.91	600.74	-3,825.98	3,821.58	0.37	0.30	-0.22
12,331.29	90.89	270.21	8,484.72	600.79	-3,839.41	3,835.01	0.75	0.74	-0.07
12,344.71	91.06	270.22	8,484.49	600.84	-3,852.83	3,848.43	1.27	1.27	0.07



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,358.14	91.29	270.23	8,484.21	600.89	-3,866.25	3,861.85	1.71	1.71	0.07
12,371.57	91.55	270.24	8,483.88	600.95	-3,879.68	3,875.28	1.94	1.94	0.07
12,385.00	91.75	270.26	8,483.49	601.01	-3,893.10	3,888.70	1.50	1.49	0.15
12,398.29	91.83	270.27	8,483.08	601.07	-3,906.39	3,901.99	0.61	0.60	0.08
12,411.57	91.87	270.29	8,482.65	601.13	-3,919.66	3,915.26	0.34	0.30	0.15
12,424.86	91.93	270.30	8,482.21	601.20	-3,932.94	3,928.54	0.46	0.45	0.08
12,438.14	92.02	270.31	8,481.75	601.27	-3,946.21	3,941.81	0.68	0.68	0.08
12,451.43	92.17	270.31	8,481.26	601.34	-3,959.49	3,955.09	1.13	1.13	0.00
12,464.71	92.42	270.30	8,480.73	601.42	-3,972.76	3,968.36	1.88	1.88	-0.08
12,478.00	92.64	270.27	8,480.15	601.48	-3,986.04	3,981.63	1.67	1.66	-0.23
12,491.29	92.76	270.22	8,479.52	601.54	-3,999.32	3,994.91	0.98	0.90	-0.38
12,504.57	92.80	270.15	8,478.88	601.58	-4,012.58	4,008.17	0.61	0.30	-0.53
12,517.86	92.79	270.08	8,478.23	601.61	-4,025.85	4,021.45	0.53	-0.08	-0.53
12,531.14	92.74	270.00	8,477.59	601.62	-4,039.12	4,034.71	0.71	-0.38	-0.60
12,544.43	92.67	269.92	8,476.96	601.61	-4,052.39	4,047.99	0.80	-0.53	-0.60
12,557.71	92.58	269.86	8,476.35	601.58	-4,065.66	4,061.25	0.81	-0.68	-0.45
12,571.00	91.84	269.80	8,475.84	601.54	-4,078.94	4,074.53	5.59	-5.57	-0.45
12,584.29	91.38	269.90	8,475.47	601.51	-4,092.22	4,087.82	3.54	-3.46	0.75
12,597.57	91.40	269.87	8,475.14	601.48	-4,105.50	4,101.09	0.27	0.15	-0.23
12,610.86	91.43	269.85	8,474.82	601.45	-4,118.79	4,114.38	0.27	0.23	-0.15
12,624.14	91.47	269.83	8,474.48	601.41	-4,132.06	4,127.65	0.34	0.30	-0.15
12,637.43	91.53	269.82	8,474.13	601.37	-4,145.35	4,140.94	0.46	0.45	-0.08
12,650.71	91.62	269.79	8,473.77	601.33	-4,158.62	4,154.21	0.71	0.68	-0.23
12,664.00	91.70	269.77	8,473.38	601.27	-4,171.91	4,167.50	0.62	0.60	-0.15
12,677.43	91.30	269.88	8,473.03	601.23	-4,185.33	4,180.92	3.09	-2.98	0.82
12,690.86	90.54	270.11	8,472.81	601.23	-4,198.76	4,194.35	5.91	-5.66	1.71
12,704.29	90.66	270.06	8,472.67	601.25	-4,212.19	4,207.78	0.97	0.89	-0.37
12,717.71	90.80	270.01	8,472.50	601.26	-4,225.61	4,221.20	1.11	1.04	-0.37
12,731.14	90.96	269.97	8,472.30	601.26	-4,239.04	4,234.63	1.23	1.19	-0.30
12,744.57	91.13	269.93	8,472.05	601.25	-4,252.46	4,248.05	1.30	1.27	-0.30
12,758.00	91.33	269.91	8,471.76	601.23	-4,265.89	4,261.48	1.50	1.49	-0.15
12,771.29	91.57	269.93	8,471.43	601.21	-4,279.18	4,274.77	1.81	1.81	0.15
12,784.57	91.82	269.95	8,471.03	601.20	-4,292.45	4,288.04	1.89	1.88	0.15
12,797.86	92.08	269.98	8,470.58	601.19	-4,305.73	4,301.32	1.97	1.96	0.23
12,811.14	92.32	270.00	8,470.07	601.19	-4,319.00	4,314.59	1.81	1.81	0.15
12,824.43	92.55	270.00	8,469.51	601.19	-4,332.28	4,327.87	1.73	1.73	0.00
12,837.71	92.73	269.97	8,468.90	601.18	-4,345.55	4,341.13	1.37	1.36	-0.23
12,851.00	92.86	269.90	8,468.25	601.17	-4,358.82	4,354.41	1.11	0.98	-0.53
12,864.29	92.88	269.74	8,467.58	601.12	-4,372.10	4,367.68	1.21	0.15	-1.20
12,877.57	92.85	269.53	8,466.92	601.04	-4,385.36	4,380.95	1.60	-0.23	-1.58
12,890.86	92.78	269.30	8,466.27	600.90	-4,398.63	4,394.22	1.81	-0.53	-1.73
12,904.14	92.70	269.07	8,465.63	600.72	-4,411.90	4,407.48	1.83	-0.60	-1.73
12,917.43	92.64	268.86	8,465.01	600.48	-4,425.17	4,420.76	1.64	-0.45	-1.58



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,930.71	92.03	268.80	8,464.47	600.21	-4,438.43	4,434.03	4.62	-4.59	-0.45
12,944.00	90.89	268.78	8,464.13	599.92	-4,451.72	4,447.31	8.58	-8.58	-0.15
12,957.43	89.86	268.48	8,464.04	599.60	-4,465.14	4,460.74	7.99	-7.67	-2.23
12,970.86	89.75	268.24	8,464.09	599.22	-4,478.57	4,474.16	1.97	-0.82	-1.79
12,984.29	89.85	268.16	8,464.14	598.80	-4,491.99	4,487.59	0.95	0.74	-0.60
12,997.71	89.88	268.10	8,464.17	598.36	-4,505.40	4,501.01	0.50	0.22	-0.45
13,011.14	89.92	268.05	8,464.19	597.91	-4,518.83	4,514.43	0.48	0.30	-0.37
13,024.57	89.96	268.02	8,464.21	597.45	-4,532.25	4,527.86	0.37	0.30	-0.22
13,038.00	89.99	268.01	8,464.21	596.98	-4,545.67	4,541.28	0.24	0.22	-0.07
13,051.29	90.00	268.02	8,464.21	596.52	-4,558.95	4,554.57	0.11	0.08	0.08
13,064.57	90.00	268.05	8,464.21	596.07	-4,572.22	4,567.84	0.23	0.00	0.23
13,077.86	89.99	268.09	8,464.21	595.62	-4,585.51	4,581.13	0.31	-0.08	0.30
13,091.14	89.98	268.14	8,464.22	595.18	-4,598.78	4,594.40	0.38	-0.08	0.38
13,104.43	89.97	268.18	8,464.22	594.76	-4,612.06	4,607.69	0.31	-0.08	0.30
13,117.71	89.96	268.23	8,464.23	594.34	-4,625.34	4,620.96	0.38	-0.08	0.38
13,131.00	89.95	268.26	8,464.24	593.93	-4,638.62	4,634.25	0.24	-0.08	0.23
13,144.29	89.95	268.27	8,464.25	593.53	-4,651.90	4,647.54	0.08	0.00	0.08
13,157.57	89.96	268.27	8,464.26	593.13	-4,665.18	4,660.81	0.08	0.08	0.00
13,170.86	89.97	268.26	8,464.27	592.73	-4,678.46	4,674.10	0.11	0.08	-0.08
13,184.14	89.98	268.25	8,464.28	592.32	-4,691.74	4,687.38	0.11	0.08	-0.08
13,197.43	90.00	268.25	8,464.28	591.92	-4,705.02	4,700.66	0.15	0.15	0.00
13,210.71	90.03	268.25	8,464.28	591.51	-4,718.29	4,713.94	0.23	0.23	0.00
13,224.00	90.06	268.27	8,464.27	591.11	-4,731.58	4,727.23	0.27	0.23	0.15
13,237.29	90.09	268.31	8,464.25	590.71	-4,744.86	4,740.51	0.38	0.23	0.30
13,250.57	90.14	268.37	8,464.22	590.33	-4,758.14	4,753.79	0.59	0.38	0.45
13,263.86	90.21	268.44	8,464.18	589.96	-4,771.42	4,767.08	0.74	0.53	0.53
13,277.14	90.31	268.51	8,464.12	589.60	-4,784.70	4,780.35	0.92	0.75	0.53
13,290.43	90.42	268.58	8,464.04	589.27	-4,797.98	4,793.64	0.98	0.83	0.53
13,303.71	90.56	268.66	8,463.92	588.95	-4,811.26	4,806.92	1.21	1.05	0.60
13,317.00	90.72	268.73	8,463.78	588.64	-4,824.54	4,820.21	1.31	1.20	0.53
13,330.29	90.93	268.79	8,463.58	588.36	-4,837.83	4,833.49	1.64	1.58	0.45
13,343.57	91.16	268.85	8,463.34	588.08	-4,851.10	4,846.77	1.79	1.73	0.45
13,356.86	91.38	268.90	8,463.05	587.82	-4,864.39	4,860.06	1.70	1.66	0.38
13,370.14	91.59	268.93	8,462.70	587.57	-4,877.66	4,873.33	1.60	1.58	0.23
13,383.43	91.76	268.95	8,462.31	587.32	-4,890.94	4,886.61	1.29	1.28	0.15
13,396.71	91.87	268.93	8,461.89	587.08	-4,904.21	4,899.89	0.84	0.83	-0.15
13,410.00	91.87	268.88	8,461.46	586.83	-4,917.49	4,913.17	0.38	0.00	-0.38
13,423.43	91.71	268.77	8,461.04	586.55	-4,930.91	4,926.59	1.45	-1.19	-0.82
13,436.86	91.46	268.62	8,460.67	586.24	-4,944.34	4,940.01	2.17	-1.86	-1.12
13,450.29	91.16	268.46	8,460.36	585.90	-4,957.76	4,953.44	2.53	-2.23	-1.19
13,463.71	90.87	268.30	8,460.12	585.52	-4,971.17	4,966.85	2.47	-2.16	-1.19
13,477.14	90.61	268.16	8,459.95	585.11	-4,984.59	4,980.28	2.20	-1.94	-1.04
13,490.57	89.57	268.04	8,459.93	584.66	-4,998.02	4,993.70	7.80	-7.74	-0.89



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,497.50	89.07	268.23	8,460.01	584.44	-5,004.95	5,000.63	7.63	-7.15	2.68	
03-v5000(BB-133H)										
13,504.00	88.61	268.40	8,460.14	584.25	-5,011.44	5,007.13	7.63	-7.15	2.68	
13,517.14	88.44	268.43	8,460.48	583.88	-5,024.57	5,020.26	1.31	-1.29	0.23	
13,530.29	88.43	268.40	8,460.84	583.52	-5,037.71	5,033.40	0.24	-0.08	-0.23	
13,543.43	88.45	268.38	8,461.20	583.15	-5,050.84	5,046.54	0.22	0.15	-0.15	
13,556.57	88.48	268.37	8,461.55	582.78	-5,063.97	5,059.67	0.24	0.23	-0.08	
13,569.71	88.51	268.36	8,461.90	582.40	-5,077.10	5,072.80	0.24	0.23	-0.08	
13,582.86	88.55	268.35	8,462.23	582.02	-5,090.24	5,085.94	0.31	0.30	-0.08	
13,596.00	88.60	268.33	8,462.56	581.64	-5,103.37	5,099.08	0.41	0.38	-0.15	
13,609.43	88.64	268.31	8,462.88	581.25	-5,116.79	5,112.50	0.33	0.30	-0.15	
13,622.86	88.68	268.29	8,463.20	580.85	-5,130.21	5,125.92	0.33	0.30	-0.15	
13,636.29	88.75	268.27	8,463.50	580.45	-5,143.63	5,139.34	0.54	0.52	-0.15	
13,649.71	88.86	268.24	8,463.78	580.04	-5,157.04	5,152.76	0.85	0.82	-0.22	
13,663.14	89.04	268.22	8,464.02	579.63	-5,170.46	5,166.18	1.35	1.34	-0.15	
13,676.57	89.23	268.20	8,464.23	579.21	-5,183.88	5,179.61	1.42	1.41	-0.15	
13,690.00	89.41	268.18	8,464.39	578.78	-5,197.31	5,193.03	1.35	1.34	-0.15	
13,703.29	89.58	268.16	8,464.50	578.36	-5,210.59	5,206.32	1.29	1.28	-0.15	
13,716.57	89.73	268.15	8,464.58	577.93	-5,223.86	5,219.59	1.13	1.13	-0.08	
13,729.86	89.87	268.14	8,464.63	577.50	-5,237.14	5,232.88	1.06	1.05	-0.08	
13,743.14	89.99	268.13	8,464.65	577.07	-5,250.42	5,246.15	0.91	0.90	-0.08	
13,756.43	90.09	268.12	8,464.64	576.63	-5,263.70	5,259.44	0.76	0.75	-0.08	
13,769.71	90.16	268.10	8,464.61	576.20	-5,276.97	5,272.71	0.55	0.53	-0.15	
13,783.00	90.19	268.08	8,464.57	575.75	-5,290.26	5,286.00	0.27	0.23	-0.15	
13,796.29	90.16	268.04	8,464.53	575.30	-5,303.54	5,299.29	0.38	-0.23	-0.30	
13,809.57	90.08	267.99	8,464.50	574.84	-5,316.81	5,312.56	0.71	-0.60	-0.38	
13,822.86	89.95	267.95	8,464.50	574.37	-5,330.09	5,325.85	1.02	-0.98	-0.30	
13,836.14	89.79	267.90	8,464.53	573.89	-5,343.36	5,339.12	1.26	-1.20	-0.38	
13,849.43	89.58	267.85	8,464.60	573.40	-5,356.64	5,352.40	1.62	-1.58	-0.38	
13,862.71	89.30	267.80	8,464.73	572.89	-5,369.91	5,365.68	2.14	-2.11	-0.38	
13,876.00	88.93	267.76	8,464.93	572.38	-5,383.19	5,378.96	2.80	-2.78	-0.30	
13,889.43	88.60	267.73	8,465.22	571.85	-5,396.61	5,392.38	2.47	-2.46	-0.22	
13,902.86	88.42	267.71	8,465.57	571.32	-5,410.02	5,405.80	1.35	-1.34	-0.15	
13,916.29	88.35	267.70	8,465.95	570.78	-5,423.44	5,419.21	0.53	-0.52	-0.07	
13,929.71	88.38	267.70	8,466.33	570.24	-5,436.84	5,432.62	0.22	0.22	0.00	
13,943.14	88.47	267.72	8,466.70	569.70	-5,450.25	5,446.04	0.69	0.67	0.15	
13,956.57	88.60	267.75	8,467.05	569.17	-5,463.67	5,459.46	0.99	0.97	0.22	
13,970.00	88.68	267.82	8,467.36	568.66	-5,477.09	5,472.88	0.79	0.60	0.52	
13,983.43	88.66	267.95	8,467.68	568.16	-5,490.50	5,486.30	0.98	-0.15	0.97	
13,996.86	88.69	268.09	8,467.99	567.70	-5,503.92	5,499.72	1.07	0.22	1.04	
14,010.29	88.79	268.25	8,468.28	567.27	-5,517.34	5,513.14	1.40	0.74	1.19	
14,023.71	88.89	268.39	8,468.55	566.87	-5,530.75	5,526.56	1.28	0.75	1.04	
14,037.14	89.19	268.75	8,468.78	566.54	-5,544.18	5,539.98	3.49	2.23	2.68	
14,050.57	89.78	269.44	8,468.90	566.33	-5,557.60	5,553.41	6.76	4.39	5.14	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,064.00	90.30	270.08	8,468.89	566.27	-5,571.03	5,566.84	6.14	3.87	4.77	
14,077.43	90.36	270.10	8,468.81	566.29	-5,584.46	5,580.27	0.47	0.45	0.15	
14,090.86	90.38	270.10	8,468.73	566.31	-5,597.89	5,593.70	0.15	0.15	0.00	
14,104.29	90.37	270.09	8,468.64	566.34	-5,611.32	5,607.13	0.11	-0.07	-0.07	
14,117.71	90.36	270.07	8,468.55	566.36	-5,624.74	5,620.55	0.17	-0.07	-0.15	
14,131.14	90.33	270.05	8,468.47	566.37	-5,638.17	5,633.98	0.27	-0.22	-0.15	
14,144.57	90.31	270.03	8,468.40	566.38	-5,651.60	5,647.41	0.21	-0.15	-0.15	
14,158.00	90.28	270.01	8,468.33	566.38	-5,665.03	5,660.83	0.27	-0.22	-0.15	
14,171.29	90.28	269.99	8,468.26	566.38	-5,678.32	5,674.12	0.15	0.00	-0.15	
14,184.57	90.28	269.97	8,468.20	566.38	-5,691.60	5,687.40	0.15	0.00	-0.15	
14,197.86	90.30	269.96	8,468.13	566.37	-5,704.89	5,700.69	0.17	0.15	-0.08	
14,211.14	90.32	269.95	8,468.06	566.36	-5,718.17	5,713.97	0.17	0.15	-0.08	
14,224.43	90.44	269.94	8,467.97	566.35	-5,731.46	5,727.26	0.91	0.90	-0.08	
14,237.71	90.61	269.93	8,467.85	566.33	-5,744.74	5,740.54	1.28	1.28	-0.08	
14,251.00	90.81	269.94	8,467.68	566.32	-5,758.03	5,753.83	1.51	1.50	0.08	
14,264.29	90.99	269.95	8,467.48	566.30	-5,771.32	5,767.12	1.36	1.35	0.08	
14,277.57	91.13	269.97	8,467.23	566.30	-5,784.60	5,780.40	1.06	1.05	0.15	
14,290.86	91.24	270.00	8,466.96	566.29	-5,797.88	5,793.68	0.86	0.83	0.23	
14,304.14	91.34	270.02	8,466.66	566.29	-5,811.16	5,806.96	0.77	0.75	0.15	
14,317.43	91.42	270.05	8,466.34	566.30	-5,824.45	5,820.24	0.64	0.60	0.23	
14,330.71	91.45	270.07	8,466.00	566.32	-5,837.72	5,833.52	0.27	0.23	0.15	
14,344.00	91.46	270.09	8,465.67	566.34	-5,851.01	5,846.81	0.17	0.08	0.15	
14,357.43	91.47	270.10	8,465.32	566.36	-5,864.43	5,860.23	0.11	0.07	0.07	
14,370.86	91.52	270.10	8,464.97	566.38	-5,877.86	5,873.66	0.37	0.37	0.00	
14,384.29	91.58	270.10	8,464.61	566.40	-5,891.28	5,887.08	0.45	0.45	0.00	
14,397.71	91.63	270.10	8,464.23	566.43	-5,904.70	5,900.49	0.37	0.37	0.00	
14,411.14	91.65	270.08	8,463.85	566.45	-5,918.12	5,913.92	0.21	0.15	-0.15	
14,424.57	91.58	270.06	8,463.47	566.47	-5,931.55	5,927.34	0.54	-0.52	-0.15	
14,438.00	91.44	270.03	8,463.12	566.48	-5,944.97	5,940.77	1.07	-1.04	-0.22	
14,451.43	91.20	269.99	8,462.81	566.48	-5,958.40	5,954.19	1.81	-1.79	-0.30	
14,464.86	90.96	269.93	8,462.55	566.47	-5,971.83	5,967.62	1.84	-1.79	-0.45	
14,478.29	90.76	269.88	8,462.35	566.45	-5,985.26	5,981.05	1.54	-1.49	-0.37	
14,491.71	90.60	269.83	8,462.19	566.41	-5,998.67	5,994.47	1.25	-1.19	-0.37	
14,505.14	90.42	269.80	8,462.07	566.37	-6,012.10	6,007.90	1.36	-1.34	-0.22	
14,518.57	90.29	269.79	8,461.99	566.32	-6,025.53	6,021.33	0.97	-0.97	-0.07	
14,532.00	90.20	269.82	8,461.93	566.28	-6,038.96	6,034.76	0.71	-0.67	0.22	
14,545.43	90.12	269.91	8,461.90	566.24	-6,052.39	6,048.19	0.90	-0.60	0.67	
14,558.86	90.05	270.03	8,461.88	566.24	-6,065.82	6,061.62	1.03	-0.52	0.89	
14,572.29	90.00	270.16	8,461.87	566.26	-6,079.25	6,075.05	1.04	-0.37	0.97	
14,585.71	89.96	270.29	8,461.87	566.31	-6,092.67	6,088.46	1.01	-0.30	0.97	
14,599.14	89.86	270.39	8,461.90	566.39	-6,106.10	6,101.89	1.05	-0.74	0.74	
14,612.57	90.15	270.73	8,461.89	566.52	-6,119.53	6,115.32	3.33	2.16	2.53	
14,626.00	90.30	270.83	8,461.84	566.71	-6,132.96	6,128.75	1.34	1.12	0.74	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,639.29	89.81	270.79	8,461.83	566.89	-6,146.25	6,142.04	3.70	-3.69	-0.30
14,652.57	89.36	270.72	8,461.92	567.07	-6,159.53	6,155.31	3.43	-3.39	-0.53
14,665.86	88.97	270.63	8,462.12	567.22	-6,172.82	6,168.60	3.01	-2.93	-0.68
14,679.14	88.65	270.54	8,462.39	567.36	-6,186.09	6,181.87	2.50	-2.41	-0.68
14,692.43	88.47	270.46	8,462.73	567.48	-6,199.38	6,195.16	1.48	-1.35	-0.60
14,705.71	88.72	270.06	8,463.05	567.54	-6,212.65	6,208.43	3.55	1.88	-3.01
14,719.00	88.67	270.02	8,463.36	567.55	-6,225.94	6,221.72	0.48	-0.38	-0.30
14,732.43	88.72	270.02	8,463.66	567.55	-6,239.37	6,235.14	0.37	0.37	0.00
14,745.86	88.82	270.03	8,463.95	567.56	-6,252.79	6,248.57	0.75	0.74	0.07
14,759.29	88.99	270.07	8,464.21	567.57	-6,266.22	6,262.00	1.30	1.27	0.30
14,772.71	89.17	270.10	8,464.42	567.59	-6,279.64	6,275.42	1.36	1.34	0.22
14,786.14	89.44	270.14	8,464.59	567.62	-6,293.07	6,288.84	2.03	2.01	0.30
14,799.57	89.75	270.17	8,464.68	567.65	-6,306.50	6,302.27	2.32	2.31	0.22
14,813.00	89.93	270.18	8,464.72	567.69	-6,319.93	6,315.70	1.34	1.34	0.07
14,826.57	89.88	270.16	8,464.74	567.73	-6,333.50	6,329.27	0.40	-0.37	-0.15
14,840.14	89.76	270.12	8,464.78	567.77	-6,347.07	6,342.84	0.93	-0.88	-0.29
14,853.71	89.70	270.07	8,464.85	567.79	-6,360.64	6,356.41	0.58	-0.44	-0.37
14,867.29	89.70	270.02	8,464.92	567.80	-6,374.22	6,369.99	0.37	0.00	-0.37
14,880.86	89.70	269.96	8,464.99	567.80	-6,387.79	6,383.56	0.44	0.00	-0.44
14,894.43	89.70	269.91	8,465.06	567.78	-6,401.36	6,397.13	0.37	0.00	-0.37
14,908.00	89.69	269.87	8,465.13	567.76	-6,414.93	6,410.70	0.30	-0.07	-0.29
14,921.57	89.75	269.85	8,465.20	567.72	-6,428.50	6,424.27	0.47	0.44	-0.15
14,935.14	89.87	269.84	8,465.24	567.69	-6,442.07	6,437.84	0.89	0.88	-0.07
14,948.71	90.01	269.84	8,465.26	567.65	-6,455.64	6,451.41	1.03	1.03	0.00
14,962.29	90.12	269.85	8,465.24	567.61	-6,469.22	6,464.99	0.81	0.81	0.07
14,975.86	90.19	269.85	8,465.21	567.58	-6,482.79	6,478.56	0.52	0.52	0.00
14,989.43	90.26	269.86	8,465.15	567.54	-6,496.36	6,492.13	0.52	0.52	0.07
15,003.00	90.34	269.87	8,465.08	567.51	-6,509.93	6,505.70	0.59	0.59	0.07
15,016.43	90.48	269.87	8,464.99	567.48	-6,523.35	6,519.13	1.04	1.04	0.00
15,029.86	90.67	269.88	8,464.85	567.45	-6,536.78	6,532.56	1.42	1.41	0.07
15,043.29	90.88	269.88	8,464.67	567.42	-6,550.21	6,545.98	1.56	1.56	0.00
15,056.71	91.10	269.87	8,464.44	567.39	-6,563.63	6,559.40	1.64	1.64	-0.07
15,070.14	91.30	269.86	8,464.16	567.36	-6,577.06	6,572.83	1.49	1.49	-0.07
15,083.57	91.50	269.85	8,463.83	567.33	-6,590.48	6,586.26	1.49	1.49	-0.07
15,097.00	91.70	269.82	8,463.45	567.29	-6,603.91	6,599.68	1.51	1.49	-0.22
15,110.43	91.89	269.77	8,463.03	567.24	-6,617.33	6,613.10	1.46	1.41	-0.37
15,123.86	92.02	269.71	8,462.57	567.18	-6,630.75	6,626.53	1.07	0.97	-0.45
15,137.29	92.00	269.65	8,462.10	567.10	-6,644.18	6,639.95	0.47	-0.15	-0.45
15,150.71	91.72	269.60	8,461.67	567.02	-6,657.59	6,653.36	2.12	-2.09	-0.37
15,164.14	90.97	269.73	8,461.35	566.94	-6,671.01	6,666.79	5.67	-5.58	0.97
15,177.57	90.04	269.98	8,461.23	566.90	-6,684.44	6,680.22	7.17	-6.92	1.86
15,191.00	89.54	270.09	8,461.28	566.91	-6,697.87	6,693.64	3.81	-3.72	0.82
15,204.43	89.55	270.08	8,461.39	566.93	-6,711.30	6,707.07	0.11	0.07	-0.07



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,217.86	89.57	270.09	8,461.49	566.95	-6,724.73	6,720.50	0.17	0.15	0.07	
15,231.29	89.60	270.10	8,461.59	566.97	-6,738.16	6,733.93	0.24	0.22	0.07	
15,244.71	89.56	270.11	8,461.69	567.00	-6,751.58	6,747.35	0.31	-0.30	0.07	
15,258.14	89.51	270.13	8,461.80	567.03	-6,765.01	6,760.78	0.40	-0.37	0.15	
15,271.57	89.48	270.15	8,461.92	567.06	-6,778.44	6,774.21	0.27	-0.22	0.15	
15,285.00	89.47	270.18	8,462.04	567.10	-6,791.87	6,787.64	0.24	-0.07	0.22	
15,298.43	89.51	270.22	8,462.16	567.15	-6,805.30	6,801.07	0.42	0.30	0.30	
15,311.86	89.57	270.26	8,462.27	567.20	-6,818.73	6,814.50	0.54	0.45	0.30	
15,325.29	89.69	270.30	8,462.35	567.27	-6,832.16	6,827.92	0.94	0.89	0.30	
15,338.71	89.83	270.34	8,462.41	567.34	-6,845.58	6,841.34	1.08	1.04	0.30	
15,352.14	89.97	270.39	8,462.43	567.43	-6,859.01	6,854.77	1.11	1.04	0.37	
15,365.57	90.06	270.45	8,462.43	567.53	-6,872.44	6,868.20	0.81	0.67	0.45	
15,379.00	90.15	270.51	8,462.40	567.64	-6,885.87	6,881.63	0.81	0.67	0.45	
15,392.43	90.22	270.57	8,462.36	567.77	-6,899.30	6,895.06	0.69	0.52	0.45	
15,405.86	90.30	270.64	8,462.30	567.91	-6,912.73	6,908.48	0.79	0.60	0.52	
15,419.29	90.36	270.71	8,462.22	568.07	-6,926.15	6,921.91	0.69	0.45	0.52	
15,432.71	90.44	270.78	8,462.13	568.24	-6,939.57	6,935.33	0.79	0.60	0.52	
15,446.14	90.57	270.84	8,462.01	568.43	-6,953.00	6,948.75	1.07	0.97	0.45	
15,459.57	90.73	270.88	8,461.86	568.63	-6,966.43	6,962.18	1.23	1.19	0.30	
15,473.00	90.89	270.91	8,461.67	568.84	-6,979.86	6,975.61	1.21	1.19	0.22	
15,486.43	91.05	270.90	8,461.44	569.05	-6,993.28	6,989.03	1.19	1.19	-0.07	
15,499.86	91.19	270.88	8,461.18	569.26	-7,006.71	7,002.45	1.05	1.04	-0.15	
15,513.29	91.28	270.84	8,460.89	569.46	-7,020.13	7,015.88	0.73	0.67	-0.30	
15,526.71	91.19	270.80	8,460.60	569.66	-7,033.55	7,029.29	0.73	-0.67	-0.30	
15,540.14	90.86	270.75	8,460.36	569.84	-7,046.97	7,042.72	2.49	-2.46	-0.37	
15,553.57	90.14	270.58	8,460.24	569.99	-7,060.40	7,056.14	5.51	-5.36	-1.27	
15,567.00	89.82	270.37	8,460.25	570.10	-7,073.83	7,069.57	2.85	-2.38	-1.56	
15,580.43	89.89	270.36	8,460.28	570.19	-7,087.26	7,083.00	0.53	0.52	-0.07	
15,593.86	89.96	270.37	8,460.30	570.28	-7,100.69	7,096.43	0.53	0.52	0.07	
15,607.29	90.06	270.37	8,460.30	570.36	-7,114.12	7,109.86	0.74	0.74	0.00	
15,620.71	90.17	270.38	8,460.27	570.45	-7,127.54	7,123.28	0.82	0.82	0.07	
15,634.14	90.28	270.39	8,460.22	570.54	-7,140.97	7,136.71	0.82	0.82	0.07	
15,647.57	90.36	270.39	8,460.14	570.63	-7,154.40	7,150.13	0.60	0.60	0.00	
15,661.00	90.44	270.39	8,460.05	570.72	-7,167.83	7,163.56	0.60	0.60	0.00	
15,674.43	90.52	270.37	8,459.94	570.81	-7,181.26	7,176.99	0.61	0.60	-0.15	
15,687.86	90.60	270.34	8,459.80	570.90	-7,194.69	7,190.42	0.64	0.60	-0.22	
15,701.29	90.69	270.31	8,459.65	570.97	-7,208.12	7,203.85	0.71	0.67	-0.22	
15,714.71	90.79	270.27	8,459.48	571.04	-7,221.54	7,217.26	0.80	0.75	-0.30	
15,728.14	90.91	270.23	8,459.28	571.10	-7,234.96	7,230.69	0.94	0.89	-0.30	
15,741.57	91.04	270.18	8,459.05	571.15	-7,248.39	7,244.12	1.04	0.97	-0.37	
15,755.00	91.15	270.12	8,458.80	571.18	-7,261.82	7,257.55	0.93	0.82	-0.45	
15,768.29	91.25	270.05	8,458.52	571.20	-7,275.11	7,270.83	0.92	0.75	-0.53	
15,781.57	91.37	269.97	8,458.21	571.20	-7,288.38	7,284.11	1.09	0.90	-0.60	
15,794.86	91.48	269.89	8,457.88	571.19	-7,301.67	7,297.40	1.02	0.83	-0.60	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,808.14	91.55	269.80	8,457.53	571.15	-7,314.94	7,310.67	0.86	0.53	-0.68	
15,821.43	91.57	269.72	8,457.17	571.10	-7,328.23	7,323.96	0.62	0.15	-0.60	
15,834.71	91.49	269.64	8,456.82	571.02	-7,341.50	7,337.23	0.85	-0.60	-0.60	
15,848.00	91.08	269.59	8,456.52	570.93	-7,354.79	7,350.52	3.11	-3.09	-0.38	
15,861.43	90.30	269.56	8,456.36	570.83	-7,368.22	7,363.95	5.81	-5.81	-0.22	
15,874.86	89.72	269.50	8,456.35	570.72	-7,381.65	7,377.38	4.34	-4.32	-0.45	
15,888.29	89.77	269.43	8,456.41	570.60	-7,395.08	7,390.81	0.64	0.37	-0.52	
15,901.71	89.84	269.36	8,456.46	570.46	-7,408.50	7,404.23	0.74	0.52	-0.52	
15,915.14	89.91	269.30	8,456.49	570.30	-7,421.93	7,417.66	0.69	0.52	-0.45	
15,928.57	90.00	269.24	8,456.50	570.13	-7,435.36	7,431.09	0.81	0.67	-0.45	
15,942.00	90.15	269.20	8,456.48	569.94	-7,448.78	7,444.52	1.16	1.12	-0.30	
15,955.29	90.38	269.18	8,456.42	569.76	-7,462.07	7,457.80	1.74	1.73	-0.15	
15,968.57	90.47	269.17	8,456.32	569.57	-7,475.35	7,471.08	0.68	0.68	-0.08	
15,981.86	90.56	269.18	8,456.20	569.37	-7,488.64	7,484.37	0.68	0.68	0.08	
15,995.14	90.60	269.20	8,456.07	569.19	-7,501.92	7,497.65	0.34	0.30	0.15	
15,997.46	90.60	269.21	8,456.04	569.15	-7,504.24	7,499.97	0.24	0.08	0.23	
04-v7500(BB-133H)										
16,008.43	90.61	269.23	8,455.93	569.00	-7,515.21	7,510.94	0.24	0.08	0.23	
16,021.71	90.61	269.28	8,455.79	568.83	-7,528.48	7,524.22	0.38	0.00	0.38	
16,035.00	90.64	269.34	8,455.64	568.67	-7,541.77	7,537.51	0.50	0.23	0.45	
16,048.43	90.72	269.43	8,455.48	568.53	-7,555.20	7,550.94	0.90	0.60	0.67	
16,061.86	90.82	269.53	8,455.30	568.41	-7,568.63	7,564.37	1.05	0.74	0.74	
16,075.29	90.91	269.64	8,455.10	568.31	-7,582.06	7,577.80	1.06	0.67	0.82	
16,088.71	91.01	269.74	8,454.87	568.24	-7,595.47	7,591.21	1.05	0.75	0.75	
16,102.14	91.13	269.83	8,454.62	568.18	-7,608.90	7,604.64	1.12	0.89	0.67	
16,115.57	91.27	269.91	8,454.34	568.15	-7,622.33	7,618.07	1.20	1.04	0.60	
16,129.00	91.40	269.95	8,454.03	568.14	-7,635.75	7,631.49	1.01	0.97	0.30	
16,142.43	91.47	269.93	8,453.69	568.12	-7,649.18	7,644.92	0.54	0.52	-0.15	
16,155.86	91.46	269.89	8,453.35	568.10	-7,662.61	7,658.34	0.31	-0.07	-0.30	
16,169.29	91.41	269.82	8,453.01	568.07	-7,676.03	7,671.77	0.64	-0.37	-0.52	
16,182.71	91.27	269.74	8,452.70	568.02	-7,689.45	7,685.19	1.20	-1.04	-0.60	
16,196.14	90.94	269.66	8,452.44	567.95	-7,702.88	7,698.61	2.53	-2.46	-0.60	
16,209.57	90.05	269.55	8,452.32	567.85	-7,716.30	7,712.04	6.68	-6.63	-0.82	
16,223.00	89.09	269.47	8,452.42	567.74	-7,729.73	7,725.47	7.17	-7.15	-0.60	
16,236.43	88.82	269.34	8,452.67	567.60	-7,743.16	7,738.90	2.23	-2.01	-0.97	
16,249.86	88.76	269.29	8,452.95	567.44	-7,756.59	7,752.33	0.58	-0.45	-0.37	
16,263.29	88.69	269.23	8,453.25	567.27	-7,770.01	7,765.75	0.69	-0.52	-0.45	
16,276.71	88.57	269.17	8,453.57	567.08	-7,783.43	7,779.17	1.00	-0.89	-0.45	
16,290.14	88.43	269.10	8,453.92	566.88	-7,796.85	7,792.59	1.17	-1.04	-0.52	
16,303.57	88.30	269.04	8,454.31	566.66	-7,810.27	7,806.02	1.07	-0.97	-0.45	
16,317.00	88.21	268.97	8,454.72	566.43	-7,823.70	7,819.44	0.85	-0.67	-0.52	
16,330.29	88.16	268.91	8,455.14	566.18	-7,836.98	7,832.72	0.59	-0.38	-0.45	
16,343.57	88.12	268.84	8,455.57	565.92	-7,850.25	7,846.00	0.61	-0.30	-0.53	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	133H	Survey Calculation Method:	Minimum Curvature
Design:	DRL(OH)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,356.86	88.04	268.78	8,456.01	565.64	-7,863.53	7,859.28	0.75	-0.60	-0.45	
16,370.14	87.98	268.71	8,456.47	565.35	-7,876.80	7,872.55	0.69	-0.45	-0.53	
16,383.43	88.00	268.65	8,456.94	565.05	-7,890.07	7,885.83	0.48	0.15	-0.45	
16,396.71	88.10	268.59	8,457.39	564.73	-7,903.34	7,899.10	0.88	0.75	-0.45	
16,410.00	88.17	268.54	8,457.83	564.39	-7,916.62	7,912.38	0.65	0.53	-0.38	
Final MWD Survey(OH): 16410.00' MD, 88.17°INC, 268.54°AZ										
16,469.00	88.17	268.54	8,459.71	562.89	-7,975.57	7,971.34	0.00	0.00	0.00	
PTB(OH): 16469.00' MD, 88.17°INC, 268.54°AZ - 05-v10000(BB-133H) - 07-PBHL(BB-133H) - 06-LTP(BB-133H)										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
8,237.00	8,188.44	605.22	51.73	KOP: 8237.00' MD, -56.06' VS,8188.44' TVD	
8,384.99	8,326.15	626.89	3.98	100FEL: 8384.99' MD, -8.46' VS,8326.15' TVD	
9,280.00	8,571.13	648.55	-792.92	EOC: 9280.00' MD, 788.26' VS,8571.13' TVD	
16,410.00	8,457.83	564.39	-7,916.62	Final MWD Survey(OH): 16410.00' MD, 88.17°INC, 268.54°AZ	
16,469.00	8,459.71	562.89	-7,975.57	PTB(OH): 16469.00' MD, 88.17°INC, 268.54°AZ	

Checked By: _____ Approved By: _____ Date: _____



Colgate Energy

**Eddy County, NM (N83-NME)
Big Burro 27 State Com
Big Burro 27 State Com 133H
30-015-46766
ST01 133H**

Design: 133H(ST01)

Standard Survey Report

27 February, 2022



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Project	Eddy County, NM (N83-NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Big Burro 27 State Com		
Site Position:		Northing:	592,946.93 usft
From:	Map	Easting:	595,464.19 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.62993761
		Longitude:	-104.15751180

Well	Big Burro 27 State Com 133H		
Well Position	+N/-S	0.00 usft	Northing: 592,119.90 usft
	+E/-W	0.00 usft	Easting: 595,879.91 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
Grid Convergence:	0.10 °	Ground Level:	3,337.00 usft

Wellbore	ST01 133H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2/23/2022	6.77	60.16	47,600.09905687

Design	133H(ST01)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	15,567.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00		269.59

Survey Program	Date	2/27/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
14.29	15,567.00	Survey #1_Gordon MWD(OH) (133H)	MWD+IFR1+SAG+FDIR (SQ OWSG MWD + IFR1 + Sag + FDIR Correction		
15,581.83	18,730.00	Survey #3_Gordon MWD(ST01) (ST01 133	MWD+IFR1+SAG+FDIR (SQ OWSG MWD + IFR1 + Sag + FDIR Correction		
18,790.00	18,790.00	Survey #4_PTB (ST01 133H)	BLIND	BLIND	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14.29	0.06	328.79	14.29	0.01	0.00	0.00	0.42	0.42	0.00	
28.57	0.12	328.83	28.57	0.03	-0.02	0.02	0.42	0.42	0.28	
42.86	0.18	328.86	42.86	0.06	-0.03	0.03	0.42	0.42	0.21	
57.14	0.24	328.90	57.14	0.10	-0.06	0.06	0.42	0.42	0.28	
71.43	0.30	328.94	71.43	0.16	-0.10	0.10	0.42	0.42	0.28	
85.71	0.36	328.98	85.71	0.23	-0.14	0.14	0.42	0.42	0.28	
100.00	0.42	329.01	100.00	0.31	-0.19	0.19	0.42	0.42	0.21	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
114.29	0.48	329.05	114.29	0.41	-0.25	0.24	0.42	0.42	0.28	
128.57	0.55	329.09	128.57	0.52	-0.31	0.31	0.49	0.49	0.28	
142.86	0.61	329.12	142.86	0.64	-0.39	0.38	0.42	0.42	0.21	
157.14	0.67	329.16	157.14	0.78	-0.47	0.46	0.42	0.42	0.28	
171.43	0.73	329.20	171.43	0.93	-0.56	0.55	0.42	0.42	0.28	
185.71	0.79	329.23	185.70	1.09	-0.66	0.65	0.42	0.42	0.21	
200.00	0.86	329.27	199.99	1.27	-0.76	0.75	0.49	0.49	0.28	
214.50	0.88	329.53	214.49	1.46	-0.87	0.86	0.14	0.14	1.79	
229.00	0.91	329.79	228.99	1.66	-0.99	0.98	0.21	0.21	1.79	
243.50	0.94	330.03	243.49	1.86	-1.10	1.09	0.21	0.21	1.66	
258.00	0.97	330.26	257.99	2.07	-1.22	1.21	0.21	0.21	1.59	
272.50	0.99	330.49	272.48	2.28	-1.35	1.33	0.14	0.14	1.59	
287.00	1.02	330.70	286.98	2.51	-1.47	1.45	0.21	0.21	1.45	
301.50	1.05	330.91	301.48	2.73	-1.60	1.58	0.21	0.21	1.45	
316.00	1.08	331.11	315.98	2.97	-1.73	1.71	0.21	0.21	1.38	
330.50	1.11	331.30	330.47	3.21	-1.86	1.84	0.21	0.21	1.31	
345.00	1.14	331.49	344.97	3.46	-2.00	1.98	0.21	0.21	1.31	
359.50	1.17	331.67	359.47	3.72	-2.14	2.11	0.21	0.21	1.24	
374.00	1.20	331.84	373.96	3.98	-2.28	2.25	0.21	0.21	1.17	
388.38	1.16	333.17	388.34	4.25	-2.42	2.39	0.34	-0.28	9.25	
402.75	1.11	334.79	402.71	4.50	-2.54	2.51	0.41	-0.35	11.27	
417.13	1.07	336.65	417.09	4.75	-2.66	2.62	0.37	-0.28	12.93	
431.50	1.03	338.73	431.45	4.99	-2.76	2.72	0.38	-0.28	14.47	
445.88	0.98	340.98	445.83	5.23	-2.84	2.80	0.44	-0.35	15.65	
460.25	0.94	343.37	460.20	5.46	-2.92	2.88	0.39	-0.28	16.63	
474.63	0.91	345.79	474.58	5.68	-2.98	2.94	0.34	-0.21	16.83	
489.00	0.87	348.10	488.95	5.90	-3.03	2.99	0.37	-0.28	16.08	
503.31	0.86	349.92	503.25	6.11	-3.07	3.03	0.20	-0.07	12.72	
517.62	0.85	351.80	517.56	6.32	-3.10	3.06	0.21	-0.07	13.14	
531.92	0.84	353.72	531.86	6.53	-3.13	3.08	0.21	-0.07	13.43	
546.23	0.83	355.68	546.17	6.74	-3.15	3.10	0.21	-0.07	13.70	
560.54	0.82	357.69	560.48	6.95	-3.16	3.11	0.21	-0.07	14.05	
574.85	0.81	359.72	574.79	7.15	-3.17	3.11	0.21	-0.07	14.19	
589.15	0.81	1.79	589.09	7.35	-3.16	3.11	0.20	0.00	14.48	
603.46	0.80	3.87	603.39	7.55	-3.15	3.10	0.22	-0.07	14.54	
617.77	0.80	5.97	617.70	7.75	-3.14	3.08	0.20	0.00	14.68	
632.08	0.80	8.08	632.01	7.95	-3.11	3.06	0.21	0.00	14.74	
646.38	0.80	10.18	646.31	8.15	-3.08	3.02	0.21	0.00	14.69	
660.69	0.80	12.27	660.62	8.34	-3.04	2.98	0.20	0.00	14.61	
675.00	0.80	14.35	674.93	8.54	-3.00	2.93	0.20	0.00	14.54	
689.07	0.81	14.60	689.00	8.73	-2.95	2.88	0.08	0.07	1.78	
703.14	0.81	14.84	703.06	8.92	-2.90	2.83	0.02	0.00	1.71	
717.21	0.82	15.06	717.13	9.12	-2.84	2.78	0.07	0.07	1.56	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
731.29	0.82	15.28	731.21	9.31	-2.79	2.72	0.02	0.00		1.56
745.36	0.83	15.48	745.28	9.50	-2.74	2.67	0.07	0.07		1.42
759.43	0.84	15.67	759.35	9.70	-2.68	2.61	0.07	0.07		1.35
773.50	0.84	15.85	773.42	9.90	-2.63	2.56	0.02	0.00		1.28
787.57	0.85	16.01	787.49	10.10	-2.57	2.50	0.07	0.07		1.14
801.64	0.86	16.17	801.55	10.30	-2.51	2.44	0.07	0.07		1.14
815.71	0.86	16.31	815.62	10.50	-2.45	2.38	0.01	0.00		1.00
829.79	0.87	16.45	829.70	10.71	-2.39	2.32	0.07	0.07		0.99
843.86	0.88	16.57	843.77	10.91	-2.33	2.25	0.07	0.07		0.85
857.93	0.89	16.68	857.84	11.12	-2.27	2.19	0.07	0.07		0.78
872.00	0.89	16.78	871.91	11.33	-2.21	2.12	0.01	0.00		0.71
886.31	0.90	16.21	886.21	11.55	-2.14	2.06	0.09	0.07		-3.98
900.62	0.91	15.64	900.52	11.76	-2.08	2.00	0.09	0.07		-3.98
914.92	0.92	15.08	914.82	11.98	-2.02	1.93	0.09	0.07		-3.92
929.23	0.93	14.51	929.13	12.21	-1.96	1.87	0.09	0.07		-3.98
943.54	0.93	13.95	943.44	12.43	-1.90	1.81	0.06	0.00		-3.91
957.85	0.94	13.39	957.74	12.66	-1.85	1.76	0.09	0.07		-3.91
972.15	0.95	12.83	972.04	12.89	-1.80	1.70	0.10	0.07		-3.92
986.46	0.96	12.27	986.35	13.12	-1.74	1.65	0.10	0.07		-3.91
1,000.77	0.97	11.72	1,000.66	13.36	-1.69	1.60	0.10	0.07		-3.84
1,015.08	0.98	11.18	1,014.97	13.60	-1.65	1.55	0.09	0.07		-3.77
1,029.38	0.99	10.64	1,029.26	13.84	-1.60	1.50	0.10	0.07		-3.78
1,043.69	1.00	10.10	1,043.57	14.08	-1.55	1.45	0.10	0.07		-3.77
1,058.00	1.01	9.57	1,057.88	14.33	-1.51	1.41	0.10	0.07		-3.70
1,072.31	1.00	9.10	1,072.19	14.58	-1.47	1.37	0.09	-0.07		-3.28
1,086.62	1.01	8.98	1,086.50	14.83	-1.43	1.32	0.07	0.07		-0.84
1,100.92	1.04	8.92	1,100.79	15.08	-1.39	1.28	0.21	0.21		-0.42
1,115.23	1.06	8.86	1,115.10	15.34	-1.35	1.24	0.14	0.14		-0.42
1,129.54	1.08	8.80	1,129.41	15.60	-1.31	1.20	0.14	0.14		-0.42
1,143.85	1.10	8.73	1,143.72	15.87	-1.27	1.15	0.14	0.14		-0.49
1,158.15	1.13	8.66	1,158.01	16.15	-1.23	1.11	0.21	0.21		-0.49
1,172.46	1.15	8.59	1,172.32	16.43	-1.18	1.07	0.14	0.14		-0.49
1,186.77	1.17	8.52	1,186.63	16.71	-1.14	1.02	0.14	0.14		-0.49
1,201.08	1.19	8.45	1,200.93	17.00	-1.10	0.97	0.14	0.14		-0.49
1,215.38	1.22	8.37	1,215.23	17.30	-1.05	0.93	0.21	0.21		-0.56
1,229.69	1.24	8.29	1,229.54	17.61	-1.01	0.88	0.14	0.14		-0.56
1,244.00	1.27	8.21	1,243.84	17.92	-0.96	0.84	0.21	0.21		-0.56
1,258.38	1.21	6.28	1,258.22	18.22	-0.92	0.79	0.51	-0.42		-13.42
1,272.77	1.14	3.84	1,272.61	18.52	-0.90	0.77	0.60	-0.49		-16.96
1,287.15	1.07	0.91	1,286.99	18.80	-0.89	0.75	0.63	-0.49		-20.38
1,301.54	1.01	357.56	1,301.37	19.06	-0.89	0.75	0.59	-0.42		-23.28
1,315.92	0.95	353.88	1,315.75	19.30	-0.91	0.77	0.60	-0.42		-25.59
1,330.31	0.90	350.07	1,330.14	19.53	-0.94	0.80	0.55	-0.35		-26.48
1,344.69	0.68	327.37	1,344.52	19.71	-1.01	0.86	2.63	-1.53		-157.86



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,359.08	0.65	288.23	1,358.91	19.81	-1.13	0.99	3.10	-0.21	-271.99
1,373.46	0.74	282.38	1,373.29	19.86	-1.30	1.15	0.80	0.63	-40.68
1,387.85	0.83	277.84	1,387.67	19.89	-1.49	1.35	0.76	0.63	-31.55
1,402.23	0.93	274.26	1,402.05	19.91	-1.71	1.57	0.79	0.70	-24.90
1,416.62	1.03	271.38	1,416.44	19.93	-1.96	1.81	0.77	0.69	-20.01
1,431.00	1.14	269.04	1,430.82	19.93	-2.23	2.09	0.82	0.76	-16.27
1,445.31	1.11	268.68	1,445.13	19.92	-2.51	2.37	0.22	-0.21	-2.52
1,459.62	1.08	268.41	1,459.43	19.91	-2.78	2.64	0.21	-0.21	-1.89
1,473.92	1.05	268.19	1,473.73	19.91	-3.05	2.91	0.21	-0.21	-1.54
1,488.23	1.02	268.01	1,488.04	19.90	-3.31	3.16	0.21	-0.21	-1.26
1,502.54	1.00	267.86	1,502.35	19.89	-3.56	3.42	0.14	-0.14	-1.05
1,516.85	0.97	267.70	1,516.65	19.88	-3.80	3.66	0.21	-0.21	-1.12
1,531.15	0.95	267.54	1,530.95	19.87	-4.04	3.90	0.14	-0.14	-1.12
1,545.46	0.93	267.78	1,545.26	19.86	-4.28	4.14	0.14	-0.14	1.68
1,559.77	0.93	268.15	1,559.57	19.85	-4.51	4.37	0.04	0.00	2.59
1,574.08	0.92	268.54	1,573.88	19.85	-4.74	4.60	0.08	-0.07	2.73
1,588.38	0.92	268.94	1,588.17	19.84	-4.97	4.83	0.04	0.00	2.80
1,602.69	0.91	269.37	1,602.48	19.84	-5.20	5.06	0.08	-0.07	3.00
1,617.00	0.91	269.81	1,616.79	19.84	-5.43	5.28	0.05	0.00	3.07
1,631.31	0.91	269.44	1,631.10	19.83	-5.65	5.51	0.04	0.00	-2.59
1,645.62	0.91	269.08	1,645.41	19.83	-5.88	5.74	0.04	0.00	-2.52
1,659.92	0.91	268.74	1,659.70	19.83	-6.11	5.97	0.04	0.00	-2.38
1,674.23	0.91	268.41	1,674.01	19.82	-6.34	6.19	0.04	0.00	-2.31
1,688.54	0.91	268.10	1,688.32	19.81	-6.56	6.42	0.03	0.00	-2.17
1,702.85	0.91	267.81	1,702.63	19.81	-6.79	6.65	0.03	0.00	-2.03
1,717.15	0.91	267.53	1,716.93	19.80	-7.02	6.87	0.03	0.00	-1.96
1,731.46	0.91	267.27	1,731.24	19.79	-7.24	7.10	0.03	0.00	-1.82
1,745.77	0.91	267.03	1,745.54	19.77	-7.47	7.33	0.03	0.00	-1.68
1,760.08	0.91	266.80	1,759.85	19.76	-7.70	7.56	0.03	0.00	-1.61
1,774.38	0.91	266.59	1,774.15	19.75	-7.92	7.78	0.02	0.00	-1.47
1,788.69	0.91	266.39	1,788.46	19.74	-8.15	8.01	0.02	0.00	-1.40
1,803.00	0.91	266.21	1,802.77	19.72	-8.38	8.24	0.02	0.00	-1.26
1,817.31	0.92	265.66	1,817.07	19.70	-8.61	8.46	0.09	0.07	-3.84
1,831.62	0.92	265.13	1,831.38	19.69	-8.84	8.69	0.06	0.00	-3.70
1,845.92	0.93	264.62	1,845.68	19.67	-9.06	8.92	0.09	0.07	-3.57
1,860.23	0.93	264.13	1,859.99	19.64	-9.30	9.16	0.06	0.00	-3.42
1,874.54	0.94	263.66	1,874.30	19.62	-9.53	9.39	0.09	0.07	-3.28
1,888.85	0.94	263.21	1,888.61	19.59	-9.76	9.62	0.05	0.00	-3.14
1,903.15	0.95	262.78	1,902.90	19.56	-10.00	9.86	0.09	0.07	-3.01
1,917.46	0.95	262.37	1,917.21	19.53	-10.23	10.09	0.05	0.00	-2.87
1,931.77	0.96	261.98	1,931.52	19.50	-10.47	10.33	0.08	0.07	-2.73
1,946.08	0.96	261.61	1,945.83	19.47	-10.70	10.56	0.04	0.00	-2.59
1,960.38	0.97	261.26	1,960.13	19.43	-10.94	10.80	0.08	0.07	-2.45



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,974.69	0.97	260.93	1,974.43	19.39	-11.18	11.04	0.04	0.00	-2.31	
1,989.00	0.98	260.62	1,988.74	19.35	-11.42	11.28	0.08	0.07	-2.17	
2,003.31	0.99	260.83	2,003.05	19.31	-11.67	11.53	0.07	0.07	1.47	
2,017.62	0.99	261.06	2,017.36	19.27	-11.91	11.77	0.03	0.00	1.61	
2,031.92	1.00	261.29	2,031.66	19.24	-12.15	12.02	0.08	0.07	1.61	
2,046.23	1.01	261.54	2,045.96	19.20	-12.40	12.27	0.08	0.07	1.75	
2,060.54	1.02	261.80	2,060.27	19.16	-12.65	12.52	0.08	0.07	1.82	
2,074.85	1.03	262.06	2,074.58	19.13	-12.91	12.77	0.08	0.07	1.82	
2,089.15	1.04	262.34	2,088.88	19.09	-13.16	13.03	0.08	0.07	1.96	
2,103.46	1.05	262.62	2,103.18	19.06	-13.42	13.29	0.08	0.07	1.96	
2,117.77	1.06	262.92	2,117.49	19.02	-13.68	13.55	0.08	0.07	2.10	
2,132.08	1.07	263.22	2,131.80	18.99	-13.95	13.81	0.08	0.07	2.10	
2,146.38	1.08	263.53	2,146.10	18.96	-14.21	14.08	0.08	0.07	2.17	
2,160.69	1.08	263.85	2,160.40	18.93	-14.48	14.35	0.04	0.00	2.24	
2,175.00	1.09	264.18	2,174.71	18.90	-14.75	14.62	0.08	0.07	2.31	
2,189.38	1.11	264.81	2,189.09	18.88	-15.03	14.89	0.16	0.14	4.38	
2,203.77	1.13	265.53	2,203.48	18.85	-15.31	15.17	0.17	0.14	5.00	
2,218.15	1.14	266.30	2,217.85	18.83	-15.59	15.46	0.13	0.07	5.35	
2,232.54	1.16	267.07	2,232.24	18.82	-15.88	15.74	0.18	0.14	5.35	
2,246.92	1.19	267.83	2,246.62	18.80	-16.17	16.04	0.24	0.21	5.29	
2,261.31	1.21	268.56	2,261.00	18.79	-16.47	16.34	0.17	0.14	5.07	
2,275.69	1.23	269.24	2,275.38	18.79	-16.78	16.65	0.17	0.14	4.73	
2,290.08	1.25	269.86	2,289.77	18.78	-17.09	16.96	0.17	0.14	4.31	
2,304.46	1.28	270.40	2,304.14	18.79	-17.41	17.27	0.22	0.21	3.76	
2,318.85	1.30	270.84	2,318.53	18.79	-17.73	17.60	0.16	0.14	3.06	
2,333.23	1.32	271.14	2,332.91	18.79	-18.06	17.93	0.15	0.14	2.09	
2,347.62	1.34	271.25	2,347.29	18.80	-18.40	18.26	0.14	0.14	0.76	
2,362.00	1.36	271.09	2,361.67	18.81	-18.73	18.60	0.14	0.14	-1.11	
2,376.38	1.38	270.62	2,376.04	18.81	-19.08	18.94	0.16	0.14	-3.27	
2,390.77	1.39	269.91	2,390.43	18.82	-19.43	19.29	0.14	0.07	-4.93	
2,405.15	1.41	269.04	2,404.81	18.81	-19.78	19.64	0.20	0.14	-6.05	
2,419.54	1.42	268.10	2,419.19	18.80	-20.13	20.00	0.18	0.07	-6.53	
2,433.92	1.43	267.12	2,433.57	18.79	-20.49	20.36	0.18	0.07	-6.82	
2,448.31	1.45	266.14	2,447.95	18.77	-20.85	20.72	0.22	0.14	-6.81	
2,462.69	1.46	265.18	2,462.33	18.74	-21.22	21.08	0.18	0.07	-6.68	
2,477.08	1.47	264.24	2,476.71	18.71	-21.58	21.45	0.18	0.07	-6.53	
2,491.46	1.49	263.36	2,491.09	18.67	-21.95	21.82	0.21	0.14	-6.12	
2,505.85	1.50	262.53	2,505.47	18.62	-22.32	22.19	0.17	0.07	-5.77	
2,520.23	1.51	261.78	2,519.85	18.57	-22.70	22.56	0.15	0.07	-5.22	
2,534.62	1.53	261.12	2,534.23	18.51	-23.07	22.94	0.18	0.14	-4.59	
2,549.00	1.54	260.58	2,548.61	18.45	-23.46	23.32	0.12	0.07	-3.76	
2,563.38	1.54	260.15	2,562.98	18.38	-23.84	23.70	0.08	0.00	-2.99	
2,577.77	1.54	259.85	2,577.37	18.32	-24.22	24.09	0.06	0.00	-2.08	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
2,592.15	1.55	259.64	2,591.74	18.25	-24.60	24.47	0.08	0.07	-1.46	
2,606.54	1.55	259.52	2,606.13	18.18	-24.98	24.85	0.02	0.00	-0.83	
2,620.92	1.56	259.47	2,620.50	18.11	-25.37	25.23	0.07	0.07	-0.35	
2,635.31	1.56	259.48	2,634.89	18.04	-25.75	25.62	0.00	0.00	0.07	
2,649.69	1.57	259.55	2,649.26	17.96	-26.14	26.01	0.07	0.07	0.49	
2,664.08	1.57	259.67	2,663.65	17.89	-26.52	26.40	0.02	0.00	0.83	
2,678.46	1.58	259.83	2,678.02	17.82	-26.91	26.78	0.08	0.07	1.11	
2,692.85	1.59	260.04	2,692.40	17.75	-27.31	27.18	0.08	0.07	1.46	
2,707.23	1.60	260.29	2,706.78	17.68	-27.70	27.57	0.08	0.07	1.74	
2,721.62	1.62	260.57	2,721.16	17.62	-28.10	27.97	0.15	0.14	1.95	
2,736.00	1.63	260.86	2,735.54	17.55	-28.50	28.37	0.09	0.07	2.02	
2,750.31	1.66	261.20	2,749.84	17.49	-28.91	28.78	0.22	0.21	2.38	
2,764.62	1.69	261.56	2,764.15	17.43	-29.32	29.19	0.22	0.21	2.52	
2,778.92	1.72	261.94	2,778.44	17.36	-29.74	29.62	0.22	0.21	2.66	
2,793.23	1.75	262.36	2,792.74	17.30	-30.17	30.05	0.23	0.21	2.94	
2,807.54	1.78	262.80	2,807.05	17.25	-30.61	30.48	0.23	0.21	3.07	
2,821.85	1.82	263.26	2,821.35	17.19	-31.05	30.93	0.30	0.28	3.21	
2,836.15	1.85	263.75	2,835.64	17.14	-31.51	31.38	0.24	0.21	3.43	
2,850.46	1.89	264.26	2,849.94	17.09	-31.97	31.85	0.30	0.28	3.56	
2,864.77	1.93	264.77	2,864.25	17.05	-32.45	32.32	0.30	0.28	3.56	
2,879.08	1.96	265.28	2,878.55	17.01	-32.93	32.81	0.24	0.21	3.56	
2,893.38	1.99	265.77	2,892.84	16.97	-33.42	33.30	0.24	0.21	3.43	
2,907.69	2.03	266.20	2,907.14	16.93	-33.92	33.80	0.30	0.28	3.00	
2,922.00	2.06	266.54	2,921.44	16.90	-34.43	34.31	0.23	0.21	2.38	
2,935.56	2.09	266.76	2,934.99	16.87	-34.92	34.80	0.23	0.22	1.62	
2,949.11	2.11	266.92	2,948.53	16.84	-35.42	35.30	0.15	0.15	1.18	
2,962.67	2.13	267.11	2,962.08	16.82	-35.92	35.80	0.16	0.15	1.40	
2,976.22	2.14	267.39	2,975.62	16.79	-36.42	36.30	0.11	0.07	2.07	
2,989.78	2.15	267.84	2,989.18	16.77	-36.93	36.81	0.14	0.07	3.32	
3,003.33	2.15	268.55	3,002.72	16.76	-37.44	37.32	0.20	0.00	5.24	
3,016.89	2.13	269.65	3,016.27	16.75	-37.95	37.82	0.34	-0.15	8.11	
3,030.44	2.09	271.36	3,029.81	16.75	-38.44	38.32	0.55	-0.30	12.62	
3,044.00	2.03	274.07	3,043.36	16.78	-38.93	38.81	0.84	-0.44	19.99	
3,057.29	1.92	278.37	3,056.64	16.82	-39.39	39.26	1.39	-0.83	32.36	
3,070.57	1.80	284.20	3,069.91	16.91	-39.81	39.69	1.69	-0.90	43.90	
3,083.86	1.70	291.39	3,083.20	17.03	-40.19	40.07	1.81	-0.75	54.10	
3,097.14	1.65	299.47	3,096.47	17.20	-40.54	40.42	1.82	-0.38	60.84	
3,110.43	1.65	307.48	3,109.76	17.41	-40.86	40.74	1.73	0.00	60.27	
3,123.71	1.72	319.32	3,123.03	17.67	-41.14	41.02	2.67	0.53	89.16	
3,137.00	2.26	350.80	3,136.31	18.08	-41.32	41.19	9.01	4.06	236.87	
3,150.14	2.83	357.15	3,149.44	18.66	-41.37	41.24	4.83	4.34	48.33	
3,163.29	3.11	1.33	3,162.57	19.35	-41.38	41.24	2.69	2.13	31.79	
3,176.43	3.34	5.33	3,175.69	20.08	-41.34	41.19	2.45	1.75	30.44	
3,189.57	3.62	8.85	3,188.81	20.87	-41.24	41.09	2.68	2.13	26.79	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,202.71	3.90	11.72	3,201.92	21.72	-41.08	40.93	2.57	2.13	21.84
3,215.86	4.20	13.81	3,215.04	22.63	-40.88	40.71	2.54	2.28	15.89
3,229.00	5.03	12.74	3,228.13	23.66	-40.64	40.47	6.35	6.32	-8.14
3,242.29	6.07	15.95	3,241.36	24.90	-40.31	40.14	8.16	7.83	24.15
3,255.57	6.22	16.70	3,254.56	26.26	-39.91	39.73	1.28	1.13	5.65
3,268.86	6.35	17.24	3,267.77	27.66	-39.49	39.29	1.07	0.98	4.06
3,282.14	6.47	17.57	3,280.97	29.07	-39.05	38.84	0.95	0.90	2.48
3,295.43	6.55	17.69	3,294.18	30.51	-38.59	38.37	0.61	0.60	0.90
3,308.71	6.82	17.56	3,307.37	31.98	-38.12	37.89	2.04	2.03	-0.98
3,322.00	7.92	17.89	3,320.55	33.60	-37.60	37.36	8.28	8.28	2.48
3,335.43	8.71	20.11	3,333.83	35.44	-36.97	36.71	6.35	5.88	16.53
3,348.86	8.55	18.97	3,347.11	37.34	-36.29	36.03	1.74	-1.19	-8.49
3,362.29	8.35	17.54	3,360.40	39.21	-35.68	35.39	2.16	-1.49	-10.65
3,375.71	8.14	15.91	3,373.68	41.05	-35.12	34.83	2.34	-1.56	-12.15
3,389.14	7.94	14.19	3,386.98	42.87	-34.63	34.33	2.33	-1.49	-12.81
3,402.57	7.78	12.52	3,400.28	44.65	-34.21	33.89	2.08	-1.19	-12.43
3,416.00	7.67	11.09	3,413.59	46.42	-33.84	33.51	1.65	-0.82	-10.65
3,429.43	7.62	10.25	3,426.90	48.18	-33.51	33.16	0.91	-0.37	-6.25
3,442.86	7.64	9.67	3,440.21	49.93	-33.20	32.84	0.59	0.15	-4.32
3,456.29	7.70	9.27	3,453.52	51.70	-32.91	32.54	0.60	0.45	-2.98
3,469.71	7.78	8.98	3,466.82	53.49	-32.62	32.24	0.66	0.60	-2.16
3,483.14	7.87	8.76	3,480.12	55.29	-32.34	31.94	0.71	0.67	-1.64
3,496.57	7.95	8.59	3,493.42	57.12	-32.06	31.65	0.62	0.60	-1.27
3,510.00	8.01	8.45	3,506.72	58.96	-31.78	31.36	0.47	0.45	-1.04
3,523.29	8.73	10.25	3,519.87	60.87	-31.47	31.03	5.76	5.42	13.54
3,536.57	9.61	11.87	3,532.98	62.95	-31.06	30.61	6.91	6.63	12.20
3,549.86	9.58	11.83	3,546.09	65.12	-30.60	30.14	0.23	-0.23	-0.30
3,563.14	9.54	11.80	3,559.18	67.28	-30.15	29.67	0.30	-0.30	-0.23
3,576.43	9.49	11.78	3,572.29	69.43	-29.70	29.21	0.38	-0.38	-0.15
3,589.71	9.44	11.76	3,585.39	71.56	-29.26	28.75	0.38	-0.38	-0.15
3,603.00	9.40	11.75	3,598.50	73.69	-28.82	28.29	0.30	-0.30	-0.08
3,616.43	9.37	11.72	3,611.75	75.84	-28.37	27.83	0.23	-0.22	-0.22
3,629.86	9.35	11.69	3,625.00	77.98	-27.93	27.37	0.15	-0.15	-0.22
3,643.29	9.33	11.66	3,638.25	80.11	-27.49	26.91	0.15	-0.15	-0.22
3,656.71	9.33	11.63	3,651.50	82.24	-27.05	26.46	0.04	0.00	-0.22
3,670.14	9.32	11.62	3,664.75	84.37	-26.61	26.00	0.08	-0.07	-0.07
3,683.57	9.32	11.63	3,678.00	86.50	-26.17	25.55	0.01	0.00	0.07
3,697.00	9.31	11.67	3,691.25	88.63	-25.73	25.10	0.09	-0.07	0.30
3,710.29	9.31	11.77	3,704.37	90.74	-25.29	24.64	0.12	0.00	0.75
3,723.57	9.30	11.91	3,717.47	92.84	-24.85	24.19	0.19	-0.08	1.05
3,736.86	9.30	12.07	3,730.59	94.94	-24.41	23.73	0.19	0.00	1.20
3,750.14	9.29	12.24	3,743.69	97.04	-23.96	23.26	0.22	-0.08	1.28
3,763.43	9.29	12.42	3,756.81	99.13	-23.50	22.79	0.22	0.00	1.35



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,776.71	9.30	12.61	3,769.92	101.23	-23.03	22.31	0.24	0.08	1.43	
3,790.00	9.31	12.80	3,783.03	103.32	-22.56	21.82	0.24	0.08	1.43	
3,803.43	9.34	13.00	3,796.28	105.44	-22.07	21.32	0.33	0.22	1.49	
3,816.86	9.37	13.20	3,809.54	107.57	-21.58	20.81	0.33	0.22	1.49	
3,830.29	9.40	13.40	3,822.79	109.70	-21.08	20.29	0.33	0.22	1.49	
3,843.71	9.43	13.59	3,836.02	111.84	-20.56	19.76	0.32	0.22	1.42	
3,857.14	9.45	13.78	3,849.27	113.98	-20.04	19.23	0.28	0.15	1.41	
3,870.57	9.46	13.96	3,862.52	116.12	-19.51	18.68	0.23	0.07	1.34	
3,884.00	9.44	14.14	3,875.77	118.26	-18.98	18.13	0.27	-0.15	1.34	
3,897.29	9.39	14.30	3,888.88	120.37	-18.44	17.58	0.42	-0.38	1.20	
3,910.57	9.31	14.46	3,901.98	122.46	-17.91	17.03	0.63	-0.60	1.20	
3,923.86	9.22	14.59	3,915.10	124.53	-17.37	16.48	0.70	-0.68	0.98	
3,937.14	9.12	14.69	3,928.21	126.57	-16.84	15.93	0.76	-0.75	0.75	
3,950.43	9.02	14.74	3,941.33	128.60	-16.31	15.38	0.75	-0.75	0.38	
3,963.71	8.92	14.71	3,954.45	130.60	-15.78	14.84	0.75	-0.75	-0.23	
3,977.00	8.82	14.56	3,967.58	132.59	-15.26	14.31	0.77	-0.75	-1.13	
3,990.43	8.74	14.23	3,980.85	134.57	-14.75	13.79	0.70	-0.60	-2.46	
4,003.86	8.67	13.76	3,994.13	136.54	-14.26	13.28	0.74	-0.52	-3.50	
4,017.29	8.59	13.18	4,007.41	138.50	-13.79	12.80	0.88	-0.60	-4.32	
4,030.71	8.52	12.53	4,020.68	140.45	-13.35	12.34	0.89	-0.52	-4.84	
4,044.14	8.44	11.79	4,033.96	142.39	-12.93	11.91	1.01	-0.60	-5.51	
4,057.57	8.35	10.97	4,047.25	144.31	-12.54	11.51	1.12	-0.67	-6.11	
4,071.00	8.25	10.05	4,060.54	146.21	-12.19	11.14	1.24	-0.74	-6.85	
4,084.43	8.10	9.07	4,073.83	148.10	-11.87	10.81	1.52	-1.12	-7.30	
4,097.86	7.94	8.00	4,087.13	149.95	-11.59	10.52	1.63	-1.19	-7.97	
4,111.29	7.78	6.91	4,100.43	151.77	-11.35	10.27	1.63	-1.19	-8.12	
4,124.71	7.62	5.82	4,113.73	153.56	-11.15	10.06	1.61	-1.19	-8.12	
4,138.14	7.50	4.82	4,127.05	155.32	-10.99	9.88	1.33	-0.89	-7.45	
4,151.57	7.41	4.00	4,140.36	157.05	-10.86	9.73	1.04	-0.67	-6.11	
4,165.00	7.37	3.52	4,153.68	158.78	-10.74	9.61	0.55	-0.30	-3.57	
4,179.50	7.44	3.55	4,168.06	160.64	-10.63	9.48	0.48	0.48	0.21	
4,194.00	7.56	3.88	4,182.44	162.53	-10.51	9.34	0.88	0.83	2.28	
4,208.50	7.72	4.38	4,196.81	164.45	-10.37	9.19	1.19	1.10	3.45	
4,223.00	7.89	4.92	4,211.17	166.42	-10.21	9.02	1.28	1.17	3.72	
4,237.50	8.05	5.44	4,225.53	168.42	-10.03	8.82	1.21	1.10	3.59	
4,252.00	8.28	5.98	4,239.89	170.47	-9.82	8.60	1.67	1.59	3.72	
4,266.29	9.24	6.88	4,254.01	172.63	-9.58	8.34	6.79	6.72	6.30	
4,280.57	9.97	9.12	4,268.09	174.99	-9.24	7.99	5.74	5.11	15.69	
4,294.86	10.00	9.54	4,282.16	177.43	-8.84	7.57	0.55	0.21	2.94	
4,309.14	9.88	9.64	4,296.23	179.87	-8.43	7.14	0.85	-0.84	0.70	
4,323.43	9.74	9.70	4,310.31	182.27	-8.02	6.72	0.98	-0.98	0.42	
4,337.71	9.60	9.72	4,324.39	184.63	-7.62	6.30	0.98	-0.98	0.14	
4,352.00	9.46	9.65	4,338.48	186.96	-7.22	5.88	0.98	-0.98	-0.49	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,365.29	9.34	9.48	4,351.59	189.10	-6.86	5.50	0.93	-0.90	-1.28	
4,378.57	9.24	9.22	4,364.70	191.22	-6.51	5.14	0.82	-0.75	-1.96	
4,391.86	9.14	8.92	4,377.82	193.31	-6.17	4.79	0.83	-0.75	-2.26	
4,405.14	9.05	8.58	4,390.93	195.39	-5.86	4.46	0.79	-0.68	-2.56	
4,418.43	8.96	8.22	4,404.05	197.45	-5.55	4.14	0.80	-0.68	-2.71	
4,431.71	8.86	7.84	4,417.17	199.48	-5.26	3.84	0.87	-0.75	-2.86	
4,445.00	8.77	7.46	4,430.31	201.50	-4.99	3.55	0.81	-0.68	-2.86	
4,458.29	8.66	7.13	4,443.44	203.50	-4.74	3.28	0.91	-0.83	-2.48	
4,471.57	8.54	6.81	4,456.57	205.47	-4.50	3.03	0.97	-0.90	-2.41	
4,484.86	8.43	6.54	4,469.72	207.42	-4.27	2.78	0.88	-0.83	-2.03	
4,498.14	8.33	6.33	4,482.86	209.34	-4.05	2.55	0.79	-0.75	-1.58	
4,511.43	8.24	6.23	4,496.01	211.24	-3.84	2.33	0.69	-0.68	-0.75	
4,524.71	8.17	6.28	4,509.15	213.13	-3.64	2.11	0.53	-0.53	0.38	
4,538.00	8.13	6.58	4,522.31	215.00	-3.42	1.89	0.44	-0.30	2.26	
4,551.29	8.13	7.26	4,535.46	216.87	-3.20	1.65	0.72	0.00	5.12	
4,564.57	8.17	8.16	4,548.61	218.73	-2.95	1.38	1.01	0.30	6.78	
4,577.86	8.23	9.16	4,561.76	220.61	-2.66	1.08	1.16	0.45	7.52	
4,591.14	8.31	10.19	4,574.91	222.49	-2.34	0.75	1.27	0.60	7.76	
4,604.43	8.39	11.19	4,588.06	224.38	-1.98	0.38	1.25	0.60	7.52	
4,617.71	8.46	12.09	4,601.19	226.29	-1.59	-0.03	1.12	0.53	6.78	
4,631.00	8.78	13.25	4,614.33	228.23	-1.15	-0.48	2.74	2.41	8.73	
4,644.43	9.56	15.21	4,627.59	230.31	-0.62	-1.02	6.26	5.81	14.59	
4,657.86	10.27	17.85	4,640.82	232.52	0.04	-1.70	6.28	5.29	19.66	
4,671.29	10.55	18.28	4,654.03	234.83	0.79	-2.47	2.16	2.08	3.20	
4,684.71	10.56	18.52	4,667.22	237.16	1.56	-3.26	0.34	0.07	1.79	
4,698.14	10.57	18.73	4,680.42	239.50	2.35	-4.06	0.30	0.07	1.56	
4,711.57	10.58	18.90	4,693.63	241.83	3.15	-4.88	0.24	0.07	1.27	
4,725.00	10.57	19.03	4,706.83	244.16	3.95	-5.69	0.19	-0.07	0.97	
4,738.29	10.56	19.13	4,719.89	246.46	4.74	-6.51	0.16	-0.08	0.75	
4,751.57	10.53	19.19	4,732.95	248.76	5.54	-7.32	0.24	-0.23	0.45	
4,764.86	10.50	19.23	4,746.02	251.05	6.34	-8.14	0.23	-0.23	0.30	
4,778.14	10.47	19.24	4,759.07	253.33	7.14	-8.95	0.23	-0.23	0.08	
4,791.43	10.43	19.24	4,772.14	255.61	7.93	-9.76	0.30	-0.30	0.00	
4,804.71	10.39	19.20	4,785.20	257.87	8.72	-10.56	0.31	-0.30	-0.30	
4,818.00	10.35	19.14	4,798.28	260.13	9.51	-11.37	0.31	-0.30	-0.45	
4,831.43	10.29	19.04	4,811.49	262.41	10.29	-12.17	0.47	-0.45	-0.74	
4,844.86	10.24	18.92	4,824.71	264.67	11.07	-12.96	0.40	-0.37	-0.89	
4,858.29	10.18	18.78	4,837.92	266.92	11.84	-13.75	0.48	-0.45	-1.04	
4,871.71	10.13	18.66	4,851.13	269.16	12.60	-14.52	0.40	-0.37	-0.89	
4,885.14	10.07	18.56	4,864.35	271.39	13.35	-15.29	0.47	-0.45	-0.74	
4,898.57	10.02	18.50	4,877.58	273.62	14.10	-16.05	0.38	-0.37	-0.45	
4,912.00	9.98	18.53	4,890.80	275.83	14.84	-16.81	0.30	-0.30	0.22	
4,925.29	9.95	18.71	4,903.89	278.01	15.57	-17.56	0.33	-0.23	1.35	
4,938.57	9.92	18.96	4,916.97	280.18	16.31	-18.31	0.40	-0.23	1.88	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,951.86	9.91	19.23	4,930.07	282.34	17.06	-19.08	0.36	-0.08	2.03
4,965.14	9.91	19.48	4,943.15	284.49	17.82	-19.85	0.32	0.00	1.88
4,978.43	9.93	19.66	4,956.24	286.65	18.58	-20.63	0.28	0.15	1.35
4,991.71	9.97	19.72	4,969.32	288.81	19.36	-21.42	0.31	0.30	0.45
5,005.00	10.03	19.60	4,982.41	290.98	20.13	-22.21	0.48	0.45	-0.90
5,018.43	10.15	19.19	4,995.63	293.20	20.91	-23.01	1.04	0.89	-3.05
5,031.86	10.29	18.63	5,008.85	295.46	21.69	-23.80	1.28	1.04	-4.17
5,045.29	10.46	17.99	5,022.06	297.75	22.45	-24.58	1.53	1.27	-4.77
5,058.71	10.62	17.34	5,035.25	300.09	23.19	-25.34	1.49	1.19	-4.84
5,072.14	10.78	16.75	5,048.45	302.48	23.92	-26.08	1.44	1.19	-4.39
5,085.57	10.92	16.25	5,061.64	304.90	24.64	-26.82	1.26	1.04	-3.72
5,099.00	11.14	15.10	5,074.82	307.38	25.33	-27.53	2.32	1.64	-8.56
5,112.43	11.77	11.22	5,087.98	309.97	25.94	-28.15	7.41	4.69	-28.89
5,125.86	12.53	8.84	5,101.11	312.75	26.43	-28.67	6.78	5.66	-17.72
5,139.29	12.79	7.52	5,114.21	315.67	26.85	-29.10	2.90	1.94	-9.83
5,152.71	12.78	7.99	5,127.30	318.61	27.25	-29.53	0.78	-0.07	3.50
5,166.14	12.76	8.54	5,140.40	321.55	27.67	-29.97	0.92	-0.15	4.10
5,179.57	12.72	9.11	5,153.50	324.47	28.13	-30.45	0.98	-0.30	4.24
5,193.00	12.65	9.62	5,166.60	327.38	28.61	-30.95	0.98	-0.52	3.80
5,206.29	12.54	9.96	5,179.57	330.24	29.10	-31.46	1.00	-0.83	2.56
5,219.57	12.40	10.21	5,192.54	333.06	29.60	-31.99	1.13	-1.05	1.88
5,232.86	12.25	10.39	5,205.52	335.85	30.11	-32.51	1.17	-1.13	1.35
5,246.14	12.08	10.54	5,218.50	338.61	30.62	-33.04	1.30	-1.28	1.13
5,259.43	11.91	10.67	5,231.50	341.32	31.13	-33.57	1.30	-1.28	0.98
5,272.71	11.74	10.78	5,244.50	344.00	31.63	-34.09	1.29	-1.28	0.83
5,286.00	11.58	10.89	5,257.52	346.63	32.14	-34.62	1.22	-1.20	0.83
5,299.29	11.43	11.00	5,270.54	349.24	32.64	-35.14	1.14	-1.13	0.83
5,312.57	11.29	11.11	5,283.56	351.80	33.14	-35.66	1.07	-1.05	0.83
5,325.86	11.16	11.21	5,296.60	354.34	33.64	-36.18	0.99	-0.98	0.75
5,339.14	11.03	11.30	5,309.63	356.85	34.14	-36.69	0.99	-0.98	0.68
5,352.43	10.91	11.36	5,322.67	359.33	34.64	-37.21	0.91	-0.90	0.45
5,365.71	10.80	11.39	5,335.72	361.78	35.13	-37.72	0.83	-0.83	0.23
5,379.00	10.70	11.37	5,348.77	364.21	35.62	-38.23	0.75	-0.75	-0.15
5,392.43	10.61	11.29	5,361.97	366.64	36.11	-38.73	0.68	-0.67	-0.60
5,405.86	10.53	11.15	5,375.17	369.06	36.59	-39.23	0.63	-0.60	-1.04
5,419.29	10.45	10.96	5,388.38	371.46	37.06	-39.71	0.65	-0.60	-1.41
5,432.71	10.39	10.72	5,401.58	373.84	37.51	-40.19	0.55	-0.45	-1.79
5,446.14	10.33	10.44	5,414.79	376.22	37.96	-40.65	0.58	-0.45	-2.08
5,459.57	10.28	10.10	5,428.00	378.58	38.39	-41.09	0.59	-0.37	-2.53
5,473.00	10.24	9.69	5,441.22	380.94	38.80	-41.52	0.62	-0.30	-3.05
5,486.29	10.21	9.18	5,454.30	383.27	39.18	-41.92	0.72	-0.23	-3.84
5,499.57	10.18	8.62	5,467.37	385.59	39.55	-42.31	0.78	-0.23	-4.22
5,512.86	10.17	8.03	5,480.45	387.91	39.89	-42.66	0.79	-0.08	-4.44



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,526.14	10.15	7.43	5,493.52	390.23	40.20	-42.99	0.81	-0.15	-4.52	
5,539.43	10.14	6.86	5,506.60	392.56	40.49	-43.30	0.76	-0.08	-4.29	
5,552.71	10.12	6.34	5,519.68	394.88	40.76	-43.59	0.70	-0.15	-3.92	
5,566.00	10.10	5.91	5,532.76	397.20	41.01	-43.85	0.59	-0.15	-3.24	
5,579.43	10.07	5.64	5,545.98	399.53	41.25	-44.11	0.42	-0.22	-2.01	
5,592.86	10.04	5.48	5,559.21	401.87	41.47	-44.35	0.31	-0.22	-1.19	
5,606.29	10.00	5.39	5,572.43	404.19	41.70	-44.59	0.32	-0.30	-0.67	
5,619.71	9.97	5.37	5,585.65	406.51	41.91	-44.82	0.23	-0.22	-0.15	
5,633.14	9.95	5.40	5,598.87	408.82	42.13	-45.06	0.15	-0.15	0.22	
5,646.57	9.94	5.49	5,612.10	411.13	42.35	-45.29	0.14	-0.07	0.67	
5,660.00	9.95	5.63	5,625.33	413.44	42.58	-45.53	0.19	0.07	1.04	
5,673.29	9.99	5.86	5,638.42	415.73	42.81	-45.78	0.42	0.30	1.73	
5,686.57	10.05	6.14	5,651.50	418.03	43.05	-46.04	0.58	0.45	2.11	
5,699.86	10.12	6.45	5,664.58	420.34	43.30	-46.31	0.67	0.53	2.33	
5,713.14	10.19	6.77	5,677.65	422.67	43.57	-46.60	0.68	0.53	2.41	
5,726.43	10.24	7.11	5,690.73	425.01	43.86	-46.90	0.59	0.38	2.56	
5,739.71	10.28	7.45	5,703.80	427.35	44.16	-47.21	0.55	0.30	2.56	
5,753.00	10.73	7.02	5,716.87	429.76	44.46	-47.54	3.44	3.39	-3.24	
5,766.14	11.68	6.59	5,729.76	432.29	44.77	-47.86	7.26	7.23	-3.27	
5,779.29	11.68	7.01	5,742.64	434.94	45.08	-48.19	0.65	0.00	3.19	
5,792.43	11.58	7.43	5,755.51	437.56	45.41	-48.54	1.00	-0.76	3.20	
5,805.57	11.47	7.85	5,768.38	440.17	45.76	-48.91	1.05	-0.84	3.20	
5,818.71	11.33	8.24	5,781.26	442.74	46.13	-49.29	1.22	-1.07	2.97	
5,831.86	11.18	8.57	5,794.16	445.28	46.50	-49.69	1.24	-1.14	2.51	
5,845.00	11.01	8.78	5,807.05	447.78	46.88	-50.08	1.33	-1.29	1.60	
5,858.29	10.81	8.75	5,820.10	450.26	47.27	-50.49	1.51	-1.50	-0.23	
5,871.57	10.59	8.56	5,833.15	452.70	47.64	-50.87	1.68	-1.66	-1.43	
5,884.86	10.36	8.25	5,846.22	455.09	47.99	-51.24	1.78	-1.73	-2.33	
5,898.14	10.12	7.85	5,859.29	457.43	48.32	-51.59	1.88	-1.81	-3.01	
5,911.43	9.87	7.37	5,872.38	459.71	48.63	-51.91	1.98	-1.88	-3.61	
5,924.71	9.62	6.82	5,885.47	461.94	48.90	-52.21	2.01	-1.88	-4.14	
5,938.00	9.35	6.19	5,898.57	464.12	49.15	-52.47	2.18	-2.03	-4.74	
5,951.14	9.07	5.63	5,911.54	466.21	49.37	-52.70	2.24	-2.13	-4.26	
5,964.29	8.79	5.01	5,924.54	468.24	49.56	-52.91	2.25	-2.13	-4.71	
5,977.43	8.50	4.35	5,937.53	470.21	49.72	-53.08	2.33	-2.21	-5.02	
5,990.57	8.21	3.65	5,950.53	472.12	49.85	-53.23	2.34	-2.21	-5.33	
6,003.71	7.94	2.92	5,963.54	473.96	49.96	-53.35	2.20	-2.05	-5.56	
6,016.86	7.67	2.19	5,976.56	475.74	50.04	-53.44	2.19	-2.05	-5.55	
6,030.00	7.42	1.48	5,989.59	477.47	50.09	-53.51	2.03	-1.90	-5.40	
6,043.43	7.19	1.00	6,002.91	479.18	50.13	-53.56	1.77	-1.71	-3.57	
6,056.86	6.98	0.57	6,016.24	480.83	50.15	-53.59	1.61	-1.56	-3.20	
6,070.29	6.78	0.19	6,029.57	482.44	50.16	-53.62	1.53	-1.49	-2.83	
6,083.71	6.59	359.84	6,042.90	484.00	50.17	-53.63	1.45	-1.42	-2.61	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,097.14	6.40	359.52	6,056.25	485.52	50.16	-53.63	1.44	-1.41	-2.38
6,110.57	6.21	359.24	6,069.59	487.00	50.14	-53.62	1.43	-1.41	-2.08
6,124.00	6.01	359.02	6,082.95	488.43	50.12	-53.61	1.50	-1.49	-1.64
6,137.29	5.81	358.92	6,096.17	489.79	50.09	-53.60	1.51	-1.50	-0.75
6,150.57	5.60	358.90	6,109.38	491.11	50.07	-53.58	1.58	-1.58	-0.15
6,163.86	5.39	358.95	6,122.61	492.39	50.05	-53.57	1.58	-1.58	0.38
6,177.14	5.18	359.05	6,135.83	493.61	50.02	-53.56	1.58	-1.58	0.75
6,190.43	4.97	359.21	6,149.07	494.79	50.01	-53.55	1.58	-1.58	1.20
6,203.71	4.77	359.43	6,162.30	495.91	49.99	-53.54	1.51	-1.51	1.66
6,217.00	4.58	359.75	6,175.55	497.00	49.99	-53.54	1.44	-1.43	2.41
6,230.29	4.40	0.11	6,188.80	498.04	49.98	-53.55	1.37	-1.35	2.71
6,243.57	4.23	0.62	6,202.04	499.04	49.99	-53.56	1.31	-1.28	3.84
6,256.86	4.08	1.32	6,215.30	500.00	50.01	-53.58	1.19	-1.13	5.27
6,270.14	3.94	2.30	6,228.54	500.93	50.04	-53.62	1.17	-1.05	7.38
6,283.43	3.84	3.68	6,241.80	501.83	50.08	-53.67	1.03	-0.75	10.38
6,296.71	3.77	5.61	6,255.05	502.71	50.15	-53.75	1.10	-0.53	14.53
6,310.00	3.77	8.28	6,268.31	503.57	50.26	-53.86	1.32	0.00	20.09
6,323.29	4.08	10.40	6,281.57	504.47	50.41	-54.02	2.58	2.33	15.95
6,336.57	5.39	3.98	6,294.81	505.56	50.54	-54.15	10.63	9.86	-48.34
6,349.86	6.89	4.99	6,308.02	506.97	50.65	-54.28	11.32	11.29	7.60
6,363.14	8.82	6.24	6,321.18	508.78	50.83	-54.47	14.59	14.53	9.41
6,376.43	10.77	8.67	6,334.27	511.02	51.13	-54.78	15.00	14.67	18.28
6,389.71	11.46	10.20	6,347.30	513.55	51.55	-55.22	5.65	5.20	11.52
6,403.00	11.53	11.70	6,360.33	516.15	52.05	-55.74	2.31	0.53	11.29
6,416.43	11.42	12.59	6,373.49	518.76	52.61	-56.32	1.55	-0.82	6.63
6,429.86	11.24	13.07	6,386.66	521.33	53.20	-56.93	1.51	-1.34	3.57
6,443.29	11.00	13.27	6,399.83	523.85	53.79	-57.54	1.81	-1.79	1.49
6,456.71	10.73	13.29	6,413.01	526.31	54.37	-58.13	2.01	-2.01	0.15
6,470.14	10.45	13.17	6,426.21	528.72	54.93	-58.72	2.09	-2.08	-0.89
6,483.57	10.18	12.97	6,439.43	531.06	55.48	-59.28	2.03	-2.01	-1.49
6,497.00	9.94	12.74	6,452.65	533.35	56.00	-59.82	1.81	-1.79	-1.71
6,510.43	9.76	12.63	6,465.88	535.59	56.50	-60.34	1.35	-1.34	-0.82
6,523.86	9.61	12.51	6,479.12	537.79	57.00	-60.84	1.13	-1.12	-0.89
6,537.29	9.48	12.37	6,492.37	539.97	57.48	-61.34	0.98	-0.97	-1.04
6,550.71	9.35	12.22	6,505.60	542.11	57.94	-61.82	0.99	-0.97	-1.12
6,564.14	9.23	12.04	6,518.86	544.23	58.40	-62.29	0.92	-0.89	-1.34
6,577.57	9.10	11.84	6,532.12	546.32	58.84	-62.75	1.00	-0.97	-1.49
6,591.00	8.95	11.62	6,545.38	548.39	59.27	-63.19	1.15	-1.12	-1.64
6,604.43	8.76	11.43	6,558.65	550.41	59.68	-63.62	1.43	-1.41	-1.41
6,617.86	8.56	11.23	6,571.93	552.40	60.08	-64.03	1.51	-1.49	-1.49
6,631.29	8.33	11.00	6,585.21	554.33	60.46	-64.43	1.73	-1.71	-1.71
6,644.71	8.09	10.76	6,598.49	556.21	60.82	-64.80	1.81	-1.79	-1.79
6,658.14	7.84	10.50	6,611.80	558.04	61.17	-65.16	1.88	-1.86	-1.94
6,671.57	7.57	10.23	6,625.10	559.81	61.49	-65.49	2.03	-2.01	-2.01



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,685.00	7.29	9.96	6,638.42	561.52	61.79	-65.81	2.10	-2.08	-2.01
6,698.43	6.98	9.85	6,651.75	563.17	62.08	-66.11	2.31	-2.31	-0.82
6,711.86	6.66	9.76	6,665.08	564.74	62.35	-66.39	2.38	-2.38	-0.67
6,725.29	6.33	9.67	6,678.43	566.23	62.61	-66.66	2.46	-2.46	-0.67
6,738.71	5.99	9.56	6,691.77	567.65	62.85	-66.91	2.54	-2.53	-0.82
6,752.14	5.66	9.42	6,705.13	569.00	63.07	-67.14	2.46	-2.46	-1.04
6,765.57	5.33	9.21	6,718.50	570.27	63.28	-67.36	2.46	-2.46	-1.56
6,779.00	5.01	8.91	6,731.87	571.46	63.47	-67.56	2.39	-2.38	-2.23
6,792.43	4.71	8.54	6,745.25	572.59	63.65	-67.74	2.25	-2.23	-2.76
6,805.86	4.43	8.06	6,758.64	573.65	63.80	-67.90	2.10	-2.08	-3.57
6,819.29	4.15	7.45	6,772.03	574.64	63.94	-68.05	2.11	-2.08	-4.54
6,832.71	3.88	6.72	6,785.42	575.57	64.05	-68.17	2.05	-2.01	-5.44
6,846.14	3.62	5.86	6,798.82	576.45	64.15	-68.27	1.98	-1.94	-6.40
6,859.57	3.38	4.91	6,812.23	577.26	64.23	-68.36	1.84	-1.79	-7.07
6,873.00	3.15	3.91	6,825.64	578.03	64.29	-68.42	1.76	-1.71	-7.45
6,886.29	2.94	3.39	6,838.91	578.73	64.33	-68.47	1.59	-1.58	-3.91
6,899.57	2.74	2.91	6,852.17	579.39	64.37	-68.51	1.52	-1.51	-3.61
6,912.86	2.55	2.45	6,865.45	580.00	64.40	-68.54	1.44	-1.43	-3.46
6,926.14	2.37	1.97	6,878.71	580.57	64.42	-68.57	1.36	-1.36	-3.61
6,939.43	2.19	1.44	6,891.99	581.10	64.43	-68.59	1.36	-1.35	-3.99
6,952.71	2.00	0.86	6,905.26	581.58	64.44	-68.60	1.44	-1.43	-4.37
6,966.00	1.81	0.24	6,918.55	582.03	64.45	-68.61	1.44	-1.43	-4.67
6,979.43	1.61	359.83	6,931.97	582.43	64.45	-68.61	1.49	-1.49	-3.05
6,992.86	1.40	359.41	6,945.40	582.78	64.45	-68.61	1.57	-1.56	-3.13
7,006.29	1.18	358.90	6,958.82	583.08	64.44	-68.61	1.64	-1.64	-3.80
7,019.71	0.97	358.21	6,972.24	583.33	64.44	-68.61	1.57	-1.56	-5.14
7,033.14	0.76	357.15	6,985.67	583.54	64.43	-68.60	1.57	-1.56	-7.89
7,046.57	0.56	355.37	6,999.10	583.69	64.42	-68.59	1.50	-1.49	-13.25
7,060.00	0.47	354.07	7,012.53	583.81	64.41	-68.58	0.68	-0.67	-9.68
7,073.43	0.32	13.06	7,025.96	583.90	64.41	-68.59	1.47	-1.12	141.40
7,086.86	0.25	49.98	7,039.39	583.96	64.44	-68.62	1.43	-0.52	274.91
7,100.29	0.31	87.85	7,052.82	583.98	64.50	-68.68	1.42	0.45	281.98
7,113.71	0.46	107.68	7,066.24	583.96	64.59	-68.76	1.48	1.12	147.76
7,127.14	0.63	117.48	7,079.67	583.91	64.70	-68.88	1.44	1.27	72.97
7,140.57	0.81	123.00	7,093.10	583.83	64.85	-69.02	1.43	1.34	41.10
7,154.00	0.99	126.48	7,106.52	583.71	65.02	-69.20	1.40	1.34	25.91
7,167.29	0.84	133.53	7,119.81	583.57	65.18	-69.36	1.41	-1.13	53.05
7,180.57	0.74	142.93	7,133.09	583.43	65.31	-69.48	1.23	-0.75	70.78
7,193.86	0.66	154.89	7,146.38	583.30	65.39	-69.56	1.25	-0.60	89.99
7,207.14	0.62	169.14	7,159.66	583.16	65.44	-69.61	1.23	-0.30	107.30
7,220.43	0.62	184.35	7,172.95	583.01	65.44	-69.62	1.23	0.00	114.45
7,233.71	0.66	198.55	7,186.23	582.87	65.42	-69.58	1.23	0.30	106.93
7,247.00	0.33	266.84	7,199.52	582.80	65.35	-69.52	4.66	-2.48	513.85



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,260.43	1.47	341.27	7,212.95	582.96	65.26	-69.43	10.55	8.49	554.21
7,273.86	1.54	344.33	7,226.37	583.29	65.15	-69.33	0.79	0.52	22.78
7,287.29	1.26	342.75	7,239.80	583.61	65.06	-69.24	2.10	-2.08	-11.76
7,300.71	0.97	340.17	7,253.21	583.86	64.98	-69.16	2.19	-2.16	-19.23
7,314.14	0.69	335.41	7,266.64	584.04	64.91	-69.09	2.15	-2.08	-35.44
7,327.57	0.43	324.74	7,280.07	584.15	64.84	-69.02	2.08	-1.94	-79.45
7,341.00	0.23	293.56	7,293.50	584.20	64.79	-68.97	1.95	-1.49	-232.17
7,354.29	0.19	349.33	7,306.79	584.24	64.76	-68.94	1.50	-0.30	419.64
7,367.57	0.31	26.35	7,320.07	584.29	64.77	-68.95	1.47	0.90	278.77
7,380.86	0.49	39.79	7,333.36	584.37	64.83	-69.01	1.52	1.35	101.13
7,394.14	0.68	45.94	7,346.64	584.46	64.92	-69.10	1.50	1.43	46.31
7,407.43	0.87	49.37	7,359.93	584.58	65.05	-69.23	1.47	1.43	25.81
7,420.71	1.07	51.54	7,373.21	584.73	65.23	-69.41	1.53	1.51	16.34
7,434.00	1.27	53.03	7,386.49	584.89	65.44	-69.62	1.52	1.50	11.21
7,447.43	1.11	53.09	7,399.92	585.06	65.66	-69.85	1.19	-1.19	0.45
7,460.86	0.97	53.24	7,413.35	585.21	65.86	-70.05	1.04	-1.04	1.12
7,474.29	0.88	60.69	7,426.78	585.33	66.04	-70.23	1.12	-0.67	55.47
7,487.71	0.83	69.11	7,440.20	585.41	66.22	-70.41	1.01	-0.37	62.74
7,501.14	0.81	78.20	7,453.62	585.46	66.40	-70.59	0.98	-0.15	67.68
7,514.57	0.81	87.56	7,467.05	585.49	66.59	-70.78	0.98	0.00	69.69
7,528.00	0.83	96.71	7,480.48	585.48	66.78	-70.97	0.99	0.15	68.13
7,541.29	0.86	91.70	7,493.77	585.47	66.98	-71.17	0.60	0.23	-37.70
7,554.57	0.90	87.11	7,507.05	585.47	67.18	-71.37	0.61	0.30	-34.56
7,567.86	0.95	82.94	7,520.34	585.49	67.40	-71.58	0.63	0.38	-31.38
7,581.14	1.00	79.17	7,533.62	585.52	67.62	-71.81	0.61	0.38	-28.39
7,594.43	1.06	75.76	7,546.90	585.57	67.85	-72.04	0.65	0.45	-25.66
7,607.71	1.12	72.69	7,560.18	585.64	68.10	-72.28	0.63	0.45	-23.12
7,621.00	1.18	69.92	7,573.47	585.73	68.35	-72.54	0.62	0.45	-20.84
7,634.29	1.11	66.28	7,586.76	585.83	68.59	-72.78	0.76	-0.53	-27.39
7,647.57	1.18	61.23	7,600.03	585.95	68.83	-73.02	0.92	0.53	-38.03
7,660.86	1.31	60.40	7,613.32	586.09	69.08	-73.28	0.99	0.98	-6.25
7,674.14	1.43	59.71	7,626.60	586.24	69.36	-73.55	0.91	0.90	-5.20
7,687.43	1.55	59.11	7,639.88	586.42	69.66	-73.85	0.91	0.90	-4.51
7,700.71	1.68	58.60	7,653.16	586.61	69.98	-74.17	0.98	0.98	-3.84
7,714.00	1.80	58.15	7,666.44	586.83	70.32	-74.52	0.91	0.90	-3.39
7,727.29	1.71	51.04	7,679.72	587.06	70.65	-74.85	1.77	-0.68	-53.50
7,740.57	1.65	42.26	7,693.00	587.33	70.93	-75.14	1.99	-0.45	-66.11
7,753.86	1.63	32.55	7,706.28	587.63	71.17	-75.37	2.09	-0.15	-73.06
7,767.14	1.66	22.84	7,719.56	587.96	71.34	-75.55	2.11	0.23	-73.12
7,780.43	1.71	13.90	7,732.84	588.33	71.46	-75.67	2.01	0.38	-67.27
7,793.71	1.78	6.17	7,746.12	588.73	71.53	-75.74	1.85	0.53	-58.21
7,807.00	1.85	356.88	7,759.40	589.15	71.54	-75.76	2.27	0.53	-69.90
7,820.29	2.62	321.85	7,772.68	589.60	71.34	-75.56	11.53	5.79	-263.58



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,833.57	3.96	317.80	7,785.94	590.18	70.85	-75.07	10.23	10.09	-30.50
7,846.86	3.75	319.31	7,799.20	590.85	70.26	-74.48	1.75	-1.58	11.36
7,860.14	3.55	321.79	7,812.45	591.50	69.72	-73.95	1.92	-1.51	18.67
7,873.43	3.36	324.87	7,825.72	592.15	69.24	-73.48	2.00	-1.43	23.18
7,886.71	3.19	328.07	7,838.97	592.78	68.82	-73.06	1.88	-1.28	24.10
7,900.00	3.04	330.72	7,852.24	593.40	68.45	-72.70	1.56	-1.13	19.94
7,913.43	2.92	330.68	7,865.66	594.01	68.11	-72.36	0.89	-0.89	-0.30
7,926.86	2.83	329.58	7,879.07	594.59	67.78	-72.03	0.79	-0.67	-8.19
7,940.29	2.78	327.74	7,892.48	595.15	67.44	-71.69	0.77	-0.37	-13.70
7,953.71	2.76	325.41	7,905.89	595.69	67.08	-71.34	0.85	-0.15	-17.36
7,967.14	2.75	322.81	7,919.30	596.22	66.70	-70.96	0.93	-0.07	-19.36
7,980.57	2.76	320.10	7,932.72	596.72	66.30	-70.57	0.97	0.07	-20.18
7,994.00	2.79	317.41	7,946.13	597.21	65.87	-70.14	1.00	0.22	-20.03
8,007.29	2.78	314.79	7,959.41	597.68	65.42	-69.70	0.96	-0.08	-19.71
8,020.57	2.78	312.21	7,972.67	598.12	64.95	-69.23	0.94	0.00	-19.43
8,033.86	2.79	309.67	7,985.94	598.54	64.47	-68.75	0.93	0.08	-19.11
8,047.14	2.81	307.16	7,999.21	598.95	63.96	-68.24	0.94	0.15	-18.90
8,060.43	2.84	304.69	8,012.48	599.33	63.43	-67.72	0.94	0.23	-18.59
8,073.71	2.87	302.26	8,025.75	599.69	62.88	-67.17	0.94	0.23	-18.30
8,087.00	2.92	299.83	8,039.02	600.04	62.30	-66.59	1.00	0.38	-18.28
8,100.00	2.97	297.24	8,052.00	600.36	61.72	-66.01	1.09	0.38	-19.92
8,113.00	3.02	294.92	8,064.98	600.66	61.11	-65.40	1.01	0.38	-17.85
8,127.00	3.10	293.09	8,078.96	600.96	60.42	-64.72	0.90	0.57	-13.07
8,141.00	3.20	291.87	8,092.94	601.26	59.71	-64.01	0.86	0.71	-8.71
8,155.00	3.32	291.20	8,106.92	601.55	58.97	-63.27	0.90	0.86	-4.79
8,169.00	3.48	291.10	8,120.90	601.85	58.20	-62.50	1.14	1.14	-0.71
8,183.00	3.67	291.64	8,134.87	602.17	57.38	-61.69	1.38	1.36	3.86
8,196.29	4.60	295.08	8,148.12	602.55	56.51	-60.82	7.24	7.00	25.88
8,209.57	6.51	298.58	8,161.34	603.13	55.36	-59.68	14.60	14.38	26.36
8,222.86	8.69	300.52	8,174.51	604.00	53.84	-58.16	16.51	16.40	14.60
8,236.14	10.94	299.81	8,187.60	605.14	51.88	-56.21	16.97	16.94	-5.35
8,249.43	13.07	298.64	8,200.60	606.49	49.46	-53.80	16.13	16.03	-8.80
8,262.71	14.77	297.88	8,213.49	608.00	46.65	-51.00	12.87	12.80	-5.72
8,276.00	16.38	297.34	8,226.29	609.65	43.49	-47.85	12.16	12.11	-4.06
8,289.29	18.32	296.38	8,238.97	611.44	39.95	-44.33	14.76	14.60	-7.22
8,302.57	20.41	295.81	8,251.50	613.38	36.00	-40.38	15.80	15.74	-4.29
8,315.86	22.44	295.32	8,263.87	615.47	31.62	-36.02	15.33	15.27	-3.69
8,329.14	24.00	293.39	8,276.07	617.63	26.85	-31.27	13.07	11.75	-14.53
8,342.43	24.27	293.60	8,288.20	619.79	21.86	-26.30	2.13	2.03	1.58
8,355.71	25.81	291.49	8,300.23	621.95	16.67	-21.12	13.40	11.60	-15.89
8,369.00	27.61	291.68	8,312.11	624.14	11.12	-15.58	13.56	13.54	1.43
8,382.29	29.22	290.62	8,323.79	626.42	5.22	-9.70	12.69	12.11	-7.98
8,395.57	30.96	289.64	8,335.28	628.71	-1.03	-3.47	13.61	13.10	-7.38
8,408.86	32.84	289.33	8,346.57	631.06	-7.65	3.14	14.20	14.15	-2.33



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,422.14	34.65	288.76	8,357.61	633.46	-14.63	10.09	13.84	13.63	-4.29
8,435.43	36.38	287.50	8,368.43	635.86	-21.96	17.41	14.13	13.02	-9.48
8,448.71	38.17	286.07	8,378.99	638.18	-29.66	25.10	14.97	13.48	-10.77
8,462.00	40.00	284.58	8,389.31	640.39	-37.74	33.16	15.48	13.77	-11.21
8,475.14	41.56	283.25	8,399.26	642.46	-46.07	41.48	13.59	11.87	-10.12
8,488.29	43.38	283.82	8,408.96	644.54	-54.71	50.09	14.15	13.84	4.33
8,501.43	44.97	283.06	8,418.38	646.66	-63.61	58.98	12.75	12.10	-5.78
8,514.57	46.01	283.10	8,427.59	648.78	-72.74	68.09	7.92	7.91	0.30
8,527.71	45.93	283.46	8,436.73	650.95	-81.93	77.27	2.06	-0.61	2.74
8,540.86	45.98	282.86	8,445.87	653.11	-91.14	86.46	3.30	0.38	-4.56
8,554.00	46.64	281.39	8,454.95	655.10	-100.43	95.74	9.52	5.02	-11.19
8,567.43	48.47	280.10	8,464.01	656.95	-110.16	105.46	15.36	13.63	-9.61
8,571.04	48.79	279.52	8,466.40	657.41	-112.83	108.13	14.95	8.98	-15.92
01-FTP(BB-133H)									
8,580.86	49.69	277.99	8,472.81	658.54	-120.18	115.47	14.95	9.12	-15.63
8,594.29	51.66	278.48	8,481.32	660.03	-130.46	125.74	14.94	14.67	3.65
8,607.71	53.64	278.10	8,489.46	661.57	-141.02	136.28	14.92	14.75	-2.83
8,621.14	55.52	277.52	8,497.24	663.05	-151.86	147.11	14.43	14.00	-4.32
8,634.57	57.35	276.83	8,504.67	664.45	-162.97	158.21	14.28	13.63	-5.14
8,648.00	59.17	275.76	8,511.73	665.70	-174.32	169.55	15.15	13.55	-7.97
8,661.29	61.03	275.03	8,518.36	666.78	-185.79	181.01	14.78	14.00	-5.49
8,674.57	62.90	275.91	8,524.60	667.90	-197.45	192.67	15.25	14.08	6.63
8,687.86	64.84	276.56	8,530.45	669.20	-209.32	204.52	15.24	14.60	4.89
8,701.14	66.99	277.47	8,535.87	670.68	-221.35	216.54	17.36	16.19	6.85
8,714.43	67.95	278.91	8,540.96	672.43	-233.50	228.68	12.34	7.22	10.84
8,727.71	69.80	279.19	8,545.75	674.38	-245.73	240.90	14.07	13.93	2.11
8,741.00	72.00	279.41	8,550.10	676.41	-258.12	253.28	16.63	16.55	1.66
8,754.29	74.01	279.23	8,553.98	678.46	-270.66	265.80	15.18	15.12	-1.35
8,767.57	75.92	278.15	8,557.43	680.40	-283.34	278.46	16.39	14.38	-8.13
8,780.86	77.84	276.60	8,560.44	682.06	-296.18	291.29	18.38	14.45	-11.66
8,794.14	79.72	274.90	8,563.03	683.37	-309.14	304.24	18.92	14.16	-12.80
8,807.43	81.03	272.92	8,565.25	684.26	-322.21	317.30	17.69	9.86	-14.90
8,820.71	82.80	271.19	8,567.12	684.73	-335.35	330.44	18.55	13.33	-13.03
8,834.00	84.20	269.30	8,568.62	684.79	-348.55	343.64	17.62	10.53	-14.22
8,849.00	86.02	267.51	8,569.90	684.37	-363.49	358.58	16.99	12.13	-11.93
8,864.00	87.55	265.82	8,570.74	683.50	-378.44	373.54	15.18	10.20	-11.27
8,879.00	89.54	264.91	8,571.12	682.29	-393.38	388.49	14.59	13.27	-6.07
8,891.25	90.27	264.70	8,571.14	681.18	-405.58	400.70	6.20	5.96	-1.71
8,903.50	90.38	264.68	8,571.07	680.04	-417.78	412.90	0.91	0.90	-0.16
8,915.75	90.47	264.66	8,570.98	678.91	-429.98	425.11	0.75	0.73	-0.16
8,928.00	90.51	264.64	8,570.88	677.76	-442.17	437.31	0.37	0.33	-0.16
8,941.29	90.51	264.62	8,570.76	676.52	-455.40	450.55	0.15	0.00	-0.15
8,954.57	90.47	264.61	8,570.65	675.27	-468.62	463.78	0.31	-0.30	-0.08



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,967.86	90.42	264.60	8,570.54	674.03	-481.86	477.02	0.38	-0.38	-0.08
8,981.14	90.36	264.60	8,570.45	672.78	-495.08	490.25	0.45	-0.45	0.00
8,994.43	90.27	264.60	8,570.38	671.52	-508.31	503.49	0.68	-0.68	0.00
9,007.71	90.17	264.61	8,570.33	670.28	-521.53	516.72	0.76	-0.75	0.08
9,021.00	90.07	264.64	8,570.30	669.03	-534.76	529.96	0.79	-0.75	0.23
9,034.43	89.97	264.69	8,570.30	667.78	-548.13	543.34	0.83	-0.74	0.37
9,047.86	89.90	264.75	8,570.31	666.55	-561.50	556.72	0.69	-0.52	0.45
9,061.29	89.85	264.81	8,570.34	665.32	-574.88	570.10	0.58	-0.37	0.45
9,074.71	89.81	264.88	8,570.38	664.12	-588.24	583.48	0.60	-0.30	0.52
9,088.14	89.77	264.95	8,570.43	662.93	-601.62	596.86	0.60	-0.30	0.52
9,101.57	89.73	265.02	8,570.49	661.75	-615.00	610.25	0.60	-0.30	0.52
9,115.00	89.69	265.07	8,570.56	660.59	-628.38	623.64	0.48	-0.30	0.37
9,128.29	89.66	265.11	8,570.63	659.46	-641.62	636.88	0.38	-0.23	0.30
9,141.57	89.65	265.15	8,570.71	658.33	-654.85	650.12	0.31	-0.08	0.30
9,154.86	89.65	265.19	8,570.79	657.21	-668.09	663.37	0.30	0.00	0.30
9,168.14	89.65	265.24	8,570.87	656.10	-681.33	676.62	0.38	0.00	0.38
9,181.43	89.62	265.32	8,570.96	655.01	-694.57	689.87	0.64	-0.23	0.60
9,194.71	89.56	265.44	8,571.05	653.94	-707.81	703.11	1.01	-0.45	0.90
9,208.00	89.52	265.62	8,571.16	652.90	-721.06	716.37	1.39	-0.30	1.35
9,221.43	89.54	265.91	8,571.27	651.91	-734.45	729.77	2.16	0.15	2.16
9,234.86	89.63	266.25	8,571.37	650.99	-747.85	743.17	2.62	0.67	2.53
9,248.29	89.80	266.60	8,571.43	650.16	-761.25	756.58	2.90	1.27	2.61
9,261.71	90.00	266.92	8,571.46	649.40	-774.65	769.98	2.81	1.49	2.38
9,275.14	91.51	267.59	8,571.28	648.76	-788.06	783.40	12.30	11.24	4.99
9,288.57	92.76	267.57	8,570.78	648.19	-801.47	796.81	9.31	9.31	-0.15
9,302.00	93.01	267.73	8,570.10	647.64	-814.87	810.22	2.21	1.86	1.19
9,315.00	93.18	267.77	8,569.40	647.13	-827.85	823.19	1.34	1.31	0.31
9,328.00	93.25	267.73	8,568.67	646.62	-840.82	836.17	0.62	0.54	-0.31
9,341.00	93.27	267.66	8,567.93	646.10	-853.78	849.14	0.56	0.15	-0.54
9,354.00	93.23	267.55	8,567.20	645.55	-866.75	862.11	0.90	-0.31	-0.85
9,367.00	93.15	267.44	8,566.47	644.99	-879.72	875.08	1.05	-0.62	-0.85
9,380.00	93.07	267.34	8,565.77	644.40	-892.69	888.05	0.98	-0.62	-0.77
9,393.00	93.02	267.27	8,565.08	643.79	-905.65	901.02	0.66	-0.38	-0.54
9,406.43	93.02	267.25	8,564.37	643.15	-919.05	914.42	0.15	0.00	-0.15
9,419.86	93.02	267.26	8,563.66	642.50	-932.45	927.82	0.07	0.00	0.07
9,433.29	93.03	267.29	8,562.95	641.87	-945.84	941.22	0.24	0.07	0.22
9,446.71	93.05	267.32	8,562.24	641.24	-959.23	954.61	0.27	0.15	0.22
9,460.14	93.06	267.34	8,561.53	640.61	-972.62	968.02	0.17	0.07	0.15
9,473.57	93.06	267.34	8,560.81	639.99	-986.02	981.42	0.00	0.00	0.00
9,487.00	93.04	267.30	8,560.09	639.36	-999.42	994.82	0.33	-0.15	-0.30
9,500.43	92.99	267.20	8,559.39	638.72	-1,012.81	1,008.22	0.83	-0.37	-0.74
9,513.86	92.92	267.05	8,558.70	638.04	-1,026.21	1,021.62	1.23	-0.52	-1.12
9,527.29	92.83	266.89	8,558.02	637.34	-1,039.60	1,035.02	1.37	-0.67	-1.19



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,540.71	92.74	266.71	8,557.37	636.59	-1,052.99	1,048.40	1.50	-0.67	-1.34	
9,554.14	92.64	266.54	8,556.74	635.80	-1,066.38	1,061.80	1.47	-0.74	-1.27	
9,567.57	92.53	266.37	8,556.13	634.97	-1,079.77	1,075.20	1.51	-0.82	-1.27	
9,581.00	92.43	266.23	8,555.55	634.10	-1,093.16	1,088.59	1.28	-0.74	-1.04	
9,594.43	92.32	266.14	8,555.00	633.21	-1,106.55	1,101.99	1.06	-0.82	-0.67	
9,607.86	92.21	266.07	8,554.47	632.30	-1,119.94	1,115.38	0.97	-0.82	-0.52	
9,621.29	92.11	266.02	8,553.96	631.37	-1,133.32	1,128.78	0.83	-0.74	-0.37	
9,634.71	92.01	265.99	8,553.48	630.44	-1,146.70	1,142.16	0.78	-0.75	-0.22	
9,648.14	91.93	265.98	8,553.02	629.50	-1,160.09	1,155.56	0.60	-0.60	-0.07	
9,661.57	91.86	265.98	8,552.57	628.56	-1,173.48	1,168.95	0.52	-0.52	0.00	
9,675.00	91.78	266.00	8,552.14	627.62	-1,186.87	1,182.35	0.61	-0.60	0.15	
9,688.29	91.72	266.04	8,551.74	626.70	-1,200.12	1,195.61	0.54	-0.45	0.30	
9,701.57	91.64	266.11	8,551.35	625.79	-1,213.37	1,208.86	0.80	-0.60	0.53	
9,714.86	91.56	266.17	8,550.98	624.89	-1,226.62	1,222.12	0.75	-0.60	0.45	
9,728.14	91.47	266.24	8,550.63	624.01	-1,239.87	1,235.37	0.86	-0.68	0.53	
9,741.43	91.39	266.30	8,550.30	623.15	-1,253.13	1,248.63	0.75	-0.60	0.45	
9,754.71	91.32	266.35	8,549.98	622.30	-1,266.37	1,261.89	0.65	-0.53	0.38	
9,768.00	91.26	266.36	8,549.68	621.45	-1,279.63	1,275.15	0.46	-0.45	0.08	
9,781.43	91.21	266.33	8,549.39	620.60	-1,293.03	1,288.56	0.43	-0.37	-0.22	
9,794.86	91.17	266.28	8,549.11	619.73	-1,306.43	1,301.96	0.48	-0.30	-0.37	
9,808.29	91.13	266.21	8,548.84	618.85	-1,319.83	1,315.37	0.60	-0.30	-0.52	
9,821.71	91.08	266.15	8,548.59	617.96	-1,333.22	1,328.76	0.58	-0.37	-0.45	
9,835.14	91.03	266.10	8,548.34	617.05	-1,346.62	1,342.17	0.53	-0.37	-0.37	
9,848.57	90.97	266.07	8,548.10	616.14	-1,360.01	1,355.57	0.50	-0.45	-0.22	
9,862.00	90.88	266.10	8,547.89	615.22	-1,373.41	1,368.97	0.71	-0.67	0.22	
9,875.29	90.74	266.19	8,547.70	614.33	-1,386.67	1,382.24	1.25	-1.05	0.68	
9,888.57	90.56	266.33	8,547.55	613.46	-1,399.92	1,395.49	1.72	-1.36	1.05	
9,901.86	90.35	266.49	8,547.44	612.63	-1,413.18	1,408.76	1.99	-1.58	1.20	
9,915.14	90.09	266.68	8,547.39	611.84	-1,426.44	1,422.02	2.42	-1.96	1.43	
9,928.43	89.77	267.07	8,547.41	611.11	-1,439.71	1,435.30	3.80	-2.41	2.93	
9,941.71	89.55	268.70	8,547.49	610.62	-1,452.98	1,448.57	12.39	-1.66	12.27	
9,955.00	89.26	269.48	8,547.63	610.41	-1,466.27	1,461.86	6.26	-2.18	5.87	
9,968.43	89.18	269.72	8,547.81	610.32	-1,479.69	1,475.29	1.88	-0.60	1.79	
9,981.86	89.22	269.97	8,548.00	610.28	-1,493.12	1,488.72	1.89	0.30	1.86	
9,995.29	89.33	270.23	8,548.17	610.30	-1,506.55	1,502.15	2.10	0.82	1.94	
10,008.71	89.50	270.48	8,548.30	610.39	-1,519.97	1,515.56	2.25	1.27	1.86	
10,022.14	89.73	270.71	8,548.39	610.53	-1,533.40	1,528.99	2.42	1.71	1.71	
10,035.57	90.52	271.02	8,548.36	610.73	-1,546.83	1,542.42	6.32	5.88	2.31	
10,049.00	92.20	271.46	8,548.04	611.02	-1,560.25	1,555.84	12.93	12.51	3.28	
10,062.43	92.75	271.64	8,547.46	611.38	-1,573.66	1,569.25	4.31	4.10	1.34	
10,075.86	92.78	271.74	8,546.82	611.78	-1,587.07	1,582.65	0.78	0.22	0.74	
10,089.29	92.77	271.82	8,546.17	612.20	-1,600.48	1,596.06	0.60	-0.07	0.60	
10,102.71	92.72	271.88	8,545.52	612.63	-1,613.88	1,609.45	0.58	-0.37	0.45	
10,116.14	92.66	271.93	8,544.89	613.07	-1,627.29	1,622.86	0.58	-0.45	0.37	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,129.57	92.58	271.96	8,544.28	613.53	-1,640.69	1,636.26	0.64	-0.60	0.22	
10,143.00	92.52	271.96	8,543.68	613.99	-1,654.10	1,649.67	0.45	-0.45	0.00	
10,156.29	92.49	271.92	8,543.10	614.44	-1,667.37	1,662.93	0.38	-0.23	-0.30	
10,169.57	92.46	271.87	8,542.53	614.88	-1,680.63	1,676.19	0.44	-0.23	-0.38	
10,182.86	92.41	271.80	8,541.96	615.30	-1,693.90	1,689.46	0.65	-0.38	-0.53	
10,196.14	92.35	271.74	8,541.41	615.71	-1,707.17	1,702.72	0.64	-0.45	-0.45	
10,209.43	92.26	271.69	8,540.88	616.11	-1,720.44	1,715.99	0.77	-0.68	-0.38	
10,222.71	92.16	271.66	8,540.37	616.50	-1,733.70	1,729.25	0.79	-0.75	-0.23	
10,236.00	92.07	271.68	8,539.87	616.88	-1,746.98	1,742.52	0.69	-0.68	0.15	
10,249.43	91.97	271.78	8,539.40	617.29	-1,760.39	1,755.93	1.05	-0.74	0.74	
10,262.86	91.91	271.91	8,538.95	617.72	-1,773.81	1,769.34	1.07	-0.45	0.97	
10,276.29	91.90	272.07	8,538.50	618.19	-1,787.22	1,782.76	1.19	-0.07	1.19	
10,289.71	91.93	272.23	8,538.05	618.69	-1,800.63	1,796.15	1.21	0.22	1.19	
10,303.14	92.04	272.37	8,537.59	619.23	-1,814.04	1,809.56	1.33	0.82	1.04	
10,316.57	92.95	271.31	8,537.00	619.66	-1,827.45	1,822.97	10.40	6.78	-7.89	
10,330.00	93.36	270.97	8,536.26	619.93	-1,840.86	1,836.37	3.96	3.05	-2.53	
10,343.14	93.50	270.99	8,535.48	620.15	-1,853.97	1,849.49	1.08	1.07	0.15	
10,356.29	93.57	270.99	8,534.67	620.38	-1,867.09	1,862.61	0.53	0.53	0.00	
10,369.43	93.59	270.96	8,533.85	620.60	-1,880.21	1,875.72	0.27	0.15	-0.23	
10,382.57	93.58	270.92	8,533.02	620.82	-1,893.32	1,888.83	0.31	-0.08	-0.30	
10,395.71	93.56	270.88	8,532.21	621.02	-1,906.43	1,901.94	0.34	-0.15	-0.30	
10,408.86	93.54	270.85	8,531.39	621.22	-1,919.55	1,915.06	0.27	-0.15	-0.23	
10,422.00	93.53	270.83	8,530.58	621.41	-1,932.67	1,928.17	0.17	-0.08	-0.15	
10,435.29	93.55	270.84	8,529.76	621.61	-1,945.93	1,941.43	0.17	0.15	0.08	
10,448.57	93.61	270.86	8,528.93	621.80	-1,959.18	1,954.68	0.48	0.45	0.15	
10,461.86	93.64	270.89	8,528.09	622.00	-1,972.45	1,967.94	0.32	0.23	0.23	
10,475.14	93.65	270.92	8,527.25	622.21	-1,985.70	1,981.19	0.24	0.08	0.23	
10,488.43	93.65	270.96	8,526.40	622.43	-1,998.96	1,994.45	0.30	0.00	0.30	
10,501.71	93.64	270.98	8,525.56	622.66	-2,012.21	2,007.70	0.17	-0.08	0.15	
10,515.00	93.63	271.00	8,524.71	622.89	-2,025.47	2,020.96	0.17	-0.08	0.15	
10,528.30	93.59	270.99	8,523.88	623.12	-2,038.74	2,034.23	0.31	-0.30	-0.08	
10,541.60	93.55	270.98	8,523.05	623.34	-2,052.01	2,047.50	0.31	-0.30	-0.08	
10,554.90	93.51	270.95	8,522.23	623.57	-2,065.29	2,060.77	0.38	-0.30	-0.23	
10,568.20	93.46	270.92	8,521.42	623.78	-2,078.56	2,074.04	0.44	-0.38	-0.23	
10,581.50	93.41	270.89	8,520.62	623.99	-2,091.84	2,087.32	0.44	-0.38	-0.23	
10,594.80	93.37	270.86	8,519.84	624.20	-2,105.11	2,100.59	0.38	-0.30	-0.23	
10,608.10	93.33	270.83	8,519.06	624.39	-2,118.39	2,113.86	0.38	-0.30	-0.23	
10,621.51	93.31	270.81	8,518.28	624.58	-2,131.77	2,127.25	0.21	-0.15	-0.15	
10,634.93	93.32	270.79	8,517.51	624.77	-2,145.17	2,140.64	0.17	0.07	-0.15	
10,648.34	93.33	270.78	8,516.73	624.95	-2,158.56	2,154.03	0.11	0.07	-0.07	
10,661.76	93.35	270.76	8,515.95	625.13	-2,171.95	2,167.42	0.21	0.15	-0.15	
10,675.17	93.38	270.75	8,515.16	625.31	-2,185.34	2,180.81	0.24	0.22	-0.07	
10,688.59	93.40	270.74	8,514.37	625.49	-2,198.73	2,194.20	0.17	0.15	-0.07	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,702.00	93.43	270.73	8,513.57	625.66	-2,212.12	2,207.58	0.24	0.22	-0.07	
10,715.43	93.45	270.71	8,512.76	625.83	-2,225.52	2,220.99	0.21	0.15	-0.15	
10,728.86	93.48	270.70	8,511.95	625.99	-2,238.93	2,234.39	0.24	0.22	-0.07	
10,742.29	93.50	270.69	8,511.13	626.15	-2,252.33	2,247.79	0.17	0.15	-0.07	
10,755.71	93.53	270.67	8,510.31	626.31	-2,265.72	2,261.18	0.27	0.22	-0.15	
10,769.14	93.64	270.08	8,509.47	626.40	-2,279.13	2,274.59	4.46	0.82	-4.39	
10,782.57	93.77	268.85	8,508.60	626.27	-2,292.53	2,287.99	9.19	0.97	-9.16	
10,796.00	93.78	268.42	8,507.72	625.96	-2,305.93	2,301.39	3.20	0.07	-3.20	
10,809.43	93.83	268.38	8,506.83	625.58	-2,319.32	2,314.79	0.48	0.37	-0.30	
10,822.86	93.90	268.33	8,505.92	625.20	-2,332.72	2,328.18	0.64	0.52	-0.37	
10,836.29	93.96	268.27	8,505.00	624.80	-2,346.11	2,341.58	0.63	0.45	-0.45	
10,849.71	94.03	268.22	8,504.07	624.39	-2,359.49	2,354.96	0.64	0.52	-0.37	
10,863.14	94.11	268.16	8,503.11	623.97	-2,372.88	2,368.35	0.74	0.60	-0.45	
10,876.57	94.18	268.11	8,502.14	623.53	-2,386.27	2,381.74	0.64	0.52	-0.37	
10,890.00	94.25	268.06	8,501.16	623.08	-2,399.65	2,395.13	0.64	0.52	-0.37	
10,903.43	94.33	268.03	8,500.15	622.63	-2,413.04	2,408.52	0.64	0.60	-0.22	
10,916.86	94.40	268.00	8,499.13	622.16	-2,426.42	2,421.91	0.57	0.52	-0.22	
10,930.29	94.47	267.98	8,498.09	621.69	-2,439.80	2,435.29	0.54	0.52	-0.15	
10,943.71	94.52	267.95	8,497.04	621.22	-2,453.17	2,448.66	0.43	0.37	-0.22	
10,957.14	94.56	267.93	8,495.98	620.74	-2,466.55	2,462.05	0.33	0.30	-0.15	
10,970.57	94.58	267.90	8,494.91	620.25	-2,479.93	2,475.43	0.27	0.15	-0.22	
10,984.00	94.57	267.86	8,493.83	619.75	-2,493.31	2,488.81	0.31	-0.07	-0.30	
10,994.62	94.51	267.81	8,492.99	619.35	-2,503.89	2,499.39	0.69	-0.53	-0.45	
02-v2500(BB-133H)										
10,997.29	94.50	267.80	8,492.78	619.25	-2,506.55	2,502.05	0.69	-0.53	-0.45	
11,010.57	94.39	267.74	8,491.75	618.74	-2,519.78	2,515.28	0.94	-0.83	-0.45	
11,023.86	94.28	267.68	8,490.75	618.21	-2,533.02	2,528.53	0.94	-0.83	-0.45	
11,037.14	94.17	267.62	8,489.77	617.66	-2,546.25	2,541.77	0.94	-0.83	-0.45	
11,050.43	94.07	267.56	8,488.82	617.11	-2,559.49	2,555.01	0.88	-0.75	-0.45	
11,063.71	93.30	267.92	8,487.96	616.58	-2,572.74	2,568.26	6.40	-5.80	2.71	
11,077.00	92.12	268.25	8,487.33	616.14	-2,586.00	2,581.53	9.22	-8.88	2.48	
11,090.43	91.43	268.28	8,486.92	615.73	-2,599.42	2,594.95	5.14	-5.14	0.22	
11,103.86	91.45	268.26	8,486.58	615.33	-2,612.84	2,608.37	0.21	0.15	-0.15	
11,117.29	91.48	268.25	8,486.24	614.92	-2,626.26	2,621.79	0.24	0.22	-0.07	
11,130.71	91.53	268.24	8,485.89	614.51	-2,639.67	2,635.20	0.38	0.37	-0.07	
11,144.14	91.59	268.24	8,485.52	614.10	-2,653.09	2,648.63	0.45	0.45	0.00	
11,157.57	91.65	268.23	8,485.14	613.68	-2,666.51	2,662.05	0.45	0.45	-0.07	
11,171.00	91.73	268.23	8,484.74	613.27	-2,679.92	2,675.47	0.60	0.60	0.00	
11,184.43	91.82	268.21	8,484.33	612.85	-2,693.34	2,688.89	0.69	0.67	-0.15	
11,197.86	91.91	268.20	8,483.89	612.43	-2,706.76	2,702.31	0.67	0.67	-0.07	
11,211.29	92.01	268.18	8,483.43	612.01	-2,720.17	2,715.72	0.76	0.74	-0.15	
11,224.71	92.11	268.16	8,482.95	611.58	-2,733.58	2,729.13	0.76	0.75	-0.15	
11,238.14	92.21	268.13	8,482.44	611.14	-2,746.99	2,742.55	0.78	0.74	-0.22	
11,251.57	92.30	268.10	8,481.91	610.70	-2,760.40	2,755.96	0.71	0.67	-0.22	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,265.00	92.39	268.06	8,481.37	610.25	-2,773.81	2,769.38	0.73	0.67	-0.30
11,278.43	92.46	268.00	8,480.80	609.79	-2,787.22	2,782.79	0.69	0.52	-0.45
11,291.86	92.53	267.93	8,480.21	609.32	-2,800.63	2,796.20	0.74	0.52	-0.52
11,305.29	92.61	267.87	8,479.61	608.82	-2,814.04	2,809.61	0.74	0.60	-0.45
11,318.71	92.69	267.80	8,478.99	608.32	-2,827.44	2,823.01	0.79	0.60	-0.52
11,332.14	92.76	267.75	8,478.35	607.80	-2,840.84	2,836.42	0.64	0.52	-0.37
11,345.57	92.81	267.71	8,477.70	607.27	-2,854.24	2,849.83	0.48	0.37	-0.30
11,359.00	92.83	267.69	8,477.04	606.73	-2,867.65	2,863.23	0.21	0.15	-0.15
11,372.29	92.79	267.71	8,476.39	606.19	-2,880.91	2,876.50	0.34	-0.30	0.15
11,385.57	92.74	267.75	8,475.75	605.67	-2,894.17	2,889.76	0.48	-0.38	0.30
11,398.86	92.66	267.81	8,475.12	605.15	-2,907.43	2,903.03	0.75	-0.60	0.45
11,412.14	92.56	267.86	8,474.52	604.65	-2,920.69	2,916.29	0.84	-0.75	0.38
11,425.43	92.45	267.91	8,473.93	604.16	-2,933.96	2,929.56	0.91	-0.83	0.38
11,438.71	92.30	267.95	8,473.38	603.68	-2,947.22	2,942.82	1.17	-1.13	0.30
11,452.00	91.68	268.63	8,472.92	603.29	-2,960.49	2,956.10	6.92	-4.67	5.12
11,465.29	90.94	269.37	8,472.62	603.06	-2,973.78	2,969.38	7.87	-5.57	5.57
11,478.57	90.85	269.32	8,472.41	602.90	-2,987.05	2,982.66	0.78	-0.68	-0.38
11,491.86	90.77	269.26	8,472.22	602.74	-3,000.34	2,995.95	0.75	-0.60	-0.45
11,505.14	90.63	269.20	8,472.06	602.56	-3,013.62	3,009.23	1.15	-1.05	-0.45
11,518.43	90.38	269.13	8,471.94	602.37	-3,026.91	3,022.52	1.95	-1.88	-0.53
11,531.71	89.44	269.49	8,471.96	602.21	-3,040.19	3,035.80	7.58	-7.08	2.71
11,545.00	88.96	269.74	8,472.15	602.12	-3,053.47	3,049.09	4.07	-3.61	1.88
11,558.43	88.86	269.71	8,472.41	602.05	-3,066.90	3,062.51	0.78	-0.74	-0.22
11,571.86	88.84	269.68	8,472.68	601.98	-3,080.33	3,075.94	0.27	-0.15	-0.22
11,585.29	88.87	269.65	8,472.94	601.90	-3,093.76	3,089.37	0.32	0.22	-0.22
11,598.71	88.91	269.63	8,473.20	601.82	-3,107.17	3,102.79	0.33	0.30	-0.15
11,612.14	88.95	269.60	8,473.45	601.73	-3,120.60	3,116.21	0.37	0.30	-0.22
11,625.57	88.97	269.56	8,473.70	601.63	-3,134.03	3,129.64	0.33	0.15	-0.30
11,639.00	88.94	269.51	8,473.94	601.52	-3,147.45	3,143.07	0.43	-0.22	-0.37
11,652.14	88.86	269.45	8,474.20	601.40	-3,160.59	3,156.21	0.76	-0.61	-0.46
11,665.29	88.77	269.36	8,474.47	601.27	-3,173.74	3,169.35	0.97	-0.68	-0.68
11,678.43	88.67	269.27	8,474.76	601.11	-3,186.87	3,182.49	1.02	-0.76	-0.68
11,691.57	88.54	269.18	8,475.08	600.93	-3,200.01	3,195.63	1.20	-0.99	-0.68
11,704.71	88.41	269.09	8,475.43	600.73	-3,213.14	3,208.76	1.20	-0.99	-0.68
11,717.86	88.30	268.99	8,475.81	600.51	-3,226.29	3,221.91	1.13	-0.84	-0.76
11,731.00	88.22	268.90	8,476.21	600.27	-3,239.42	3,235.04	0.92	-0.61	-0.68
11,744.29	88.16	268.82	8,476.63	600.01	-3,252.70	3,248.32	0.75	-0.45	-0.60
11,757.57	88.11	268.75	8,477.06	599.73	-3,265.97	3,261.59	0.65	-0.38	-0.53
11,770.86	88.09	268.69	8,477.50	599.43	-3,279.25	3,274.87	0.48	-0.15	-0.45
11,784.14	88.06	268.63	8,477.95	599.12	-3,292.52	3,288.14	0.50	-0.23	-0.45
11,797.43	88.03	268.59	8,478.40	598.80	-3,305.79	3,301.43	0.38	-0.23	-0.30
11,810.71	87.97	268.56	8,478.86	598.47	-3,319.06	3,314.70	0.51	-0.45	-0.23
11,824.00	87.90	268.57	8,479.34	598.13	-3,332.34	3,327.97	0.53	-0.53	0.08



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,837.43	87.83	268.61	8,479.84	597.80	-3,345.76	3,341.39	0.60	-0.52	0.30
11,850.86	87.79	268.67	8,480.35	597.48	-3,359.17	3,354.81	0.54	-0.30	0.45
11,864.29	87.74	268.74	8,480.88	597.18	-3,372.59	3,368.23	0.64	-0.37	0.52
11,877.71	87.68	268.80	8,481.41	596.89	-3,386.00	3,381.64	0.63	-0.45	0.45
11,891.14	87.95	269.35	8,481.93	596.68	-3,399.41	3,395.06	4.56	2.01	4.10
11,904.57	88.48	270.11	8,482.35	596.61	-3,412.84	3,408.48	6.90	3.95	5.66
11,918.00	88.41	270.11	8,482.71	596.64	-3,426.26	3,421.90	0.52	-0.52	0.00
11,931.29	88.36	270.06	8,483.08	596.66	-3,439.55	3,435.19	0.53	-0.38	-0.38
11,944.57	88.31	269.99	8,483.47	596.67	-3,452.82	3,448.46	0.65	-0.38	-0.53
11,957.86	88.25	269.90	8,483.87	596.65	-3,466.11	3,461.75	0.81	-0.45	-0.68
11,971.14	88.20	269.82	8,484.28	596.62	-3,479.38	3,475.02	0.71	-0.38	-0.60
11,984.43	88.15	269.76	8,484.70	596.57	-3,492.66	3,488.30	0.59	-0.38	-0.45
11,997.71	88.10	269.74	8,485.14	596.51	-3,505.93	3,501.58	0.41	-0.38	-0.15
12,011.00	88.08	269.78	8,485.58	596.46	-3,519.22	3,514.86	0.34	-0.15	0.30
12,024.43	88.08	269.91	8,486.03	596.42	-3,532.64	3,528.28	0.97	0.00	0.97
12,037.86	88.11	270.10	8,486.48	596.42	-3,546.06	3,541.70	1.43	0.22	1.41
12,051.29	88.15	270.31	8,486.92	596.47	-3,559.48	3,555.13	1.59	0.30	1.56
12,064.71	88.21	270.52	8,487.34	596.57	-3,572.90	3,568.54	1.63	0.45	1.56
12,078.14	88.91	270.78	8,487.68	596.72	-3,586.32	3,581.96	5.56	5.21	1.94
12,091.57	90.01	271.19	8,487.81	596.95	-3,599.75	3,595.39	8.74	8.19	3.05
12,105.00	90.19	271.37	8,487.78	597.25	-3,613.18	3,608.81	1.90	1.34	1.34
12,118.29	90.30	271.42	8,487.73	597.57	-3,626.46	3,622.09	0.91	0.83	0.38
12,131.57	90.39	271.43	8,487.65	597.90	-3,639.74	3,635.37	0.68	0.68	0.08
12,144.86	90.47	271.42	8,487.55	598.24	-3,653.02	3,648.65	0.61	0.60	-0.08
12,158.14	90.55	271.38	8,487.43	598.56	-3,666.30	3,661.92	0.67	0.60	-0.30
12,171.43	90.63	271.33	8,487.29	598.87	-3,679.58	3,675.20	0.71	0.60	-0.38
12,184.71	90.74	271.26	8,487.13	599.17	-3,692.86	3,688.48	0.98	0.83	-0.53
12,198.00	90.88	271.17	8,486.94	599.46	-3,706.15	3,701.76	1.25	1.05	-0.68
12,211.29	91.03	271.05	8,486.72	599.71	-3,719.43	3,715.04	1.45	1.13	-0.90
12,224.57	91.14	270.92	8,486.47	599.94	-3,732.71	3,728.32	1.28	0.83	-0.98
12,237.86	91.17	270.78	8,486.20	600.14	-3,745.99	3,741.60	1.08	0.23	-1.05
12,251.14	91.14	270.64	8,485.94	600.30	-3,759.27	3,754.88	1.08	-0.23	-1.05
12,264.43	91.03	270.51	8,485.68	600.44	-3,772.56	3,768.16	1.28	-0.83	-0.98
12,277.71	90.88	270.39	8,485.46	600.54	-3,785.83	3,781.44	1.45	-1.13	-0.90
12,291.00	90.77	270.30	8,485.27	600.62	-3,799.12	3,794.73	1.07	-0.83	-0.68
12,304.43	90.75	270.25	8,485.09	600.69	-3,812.55	3,808.16	0.40	-0.15	-0.37
12,317.86	90.79	270.22	8,484.91	600.74	-3,825.98	3,821.58	0.37	0.30	-0.22
12,331.29	90.89	270.21	8,484.72	600.79	-3,839.41	3,835.01	0.75	0.74	-0.07
12,344.71	91.06	270.22	8,484.49	600.84	-3,852.83	3,848.43	1.27	1.27	0.07
12,358.14	91.29	270.23	8,484.21	600.89	-3,866.25	3,861.85	1.71	1.71	0.07
12,371.57	91.55	270.24	8,483.88	600.95	-3,879.68	3,875.28	1.94	1.94	0.07
12,385.00	91.75	270.26	8,483.49	601.01	-3,893.10	3,888.70	1.50	1.49	0.15
12,398.29	91.83	270.27	8,483.08	601.07	-3,906.39	3,901.99	0.61	0.60	0.08



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,411.57	91.87	270.29	8,482.65	601.13	-3,919.66	3,915.26	0.34	0.30	0.15	
12,424.86	91.93	270.30	8,482.21	601.20	-3,932.94	3,928.54	0.46	0.45	0.08	
12,438.14	92.02	270.31	8,481.75	601.27	-3,946.21	3,941.81	0.68	0.68	0.08	
12,451.43	92.17	270.31	8,481.26	601.34	-3,959.49	3,955.09	1.13	1.13	0.00	
12,464.71	92.42	270.30	8,480.73	601.42	-3,972.76	3,968.36	1.88	1.88	-0.08	
12,478.00	92.64	270.27	8,480.15	601.48	-3,986.04	3,981.63	1.67	1.66	-0.23	
12,491.29	92.76	270.22	8,479.52	601.54	-3,999.32	3,994.91	0.98	0.90	-0.38	
12,504.57	92.80	270.15	8,478.88	601.58	-4,012.58	4,008.17	0.61	0.30	-0.53	
12,517.86	92.79	270.08	8,478.23	601.61	-4,025.85	4,021.45	0.53	-0.08	-0.53	
12,531.14	92.74	270.00	8,477.59	601.62	-4,039.12	4,034.71	0.71	-0.38	-0.60	
12,544.43	92.67	269.92	8,476.96	601.61	-4,052.39	4,047.99	0.80	-0.53	-0.60	
12,557.71	92.58	269.86	8,476.35	601.58	-4,065.66	4,061.25	0.81	-0.68	-0.45	
12,571.00	91.84	269.80	8,475.84	601.54	-4,078.94	4,074.53	5.59	-5.57	-0.45	
12,584.29	91.38	269.90	8,475.47	601.51	-4,092.22	4,087.82	3.54	-3.46	0.75	
12,597.57	91.40	269.87	8,475.14	601.48	-4,105.50	4,101.09	0.27	0.15	-0.23	
12,610.86	91.43	269.85	8,474.82	601.45	-4,118.79	4,114.38	0.27	0.23	-0.15	
12,624.14	91.47	269.83	8,474.48	601.41	-4,132.06	4,127.65	0.34	0.30	-0.15	
12,637.43	91.53	269.82	8,474.13	601.37	-4,145.35	4,140.94	0.46	0.45	-0.08	
12,650.71	91.62	269.79	8,473.77	601.33	-4,158.62	4,154.21	0.71	0.68	-0.23	
12,664.00	91.70	269.77	8,473.38	601.27	-4,171.91	4,167.50	0.62	0.60	-0.15	
12,677.43	91.30	269.88	8,473.03	601.23	-4,185.33	4,180.92	3.09	-2.98	0.82	
12,690.86	90.54	270.11	8,472.81	601.23	-4,198.76	4,194.35	5.91	-5.66	1.71	
12,704.29	90.66	270.06	8,472.67	601.25	-4,212.19	4,207.78	0.97	0.89	-0.37	
12,717.71	90.80	270.01	8,472.50	601.26	-4,225.61	4,221.20	1.11	1.04	-0.37	
12,731.14	90.96	269.97	8,472.30	601.26	-4,239.04	4,234.63	1.23	1.19	-0.30	
12,744.57	91.13	269.93	8,472.05	601.25	-4,252.46	4,248.05	1.30	1.27	-0.30	
12,758.00	91.33	269.91	8,471.76	601.23	-4,265.89	4,261.48	1.50	1.49	-0.15	
12,771.29	91.57	269.93	8,471.43	601.21	-4,279.18	4,274.77	1.81	1.81	0.15	
12,784.57	91.82	269.95	8,471.03	601.20	-4,292.45	4,288.04	1.89	1.88	0.15	
12,797.86	92.08	269.98	8,470.58	601.19	-4,305.73	4,301.32	1.97	1.96	0.23	
12,811.14	92.32	270.00	8,470.07	601.19	-4,319.00	4,314.59	1.81	1.81	0.15	
12,824.43	92.55	270.00	8,469.51	601.19	-4,332.28	4,327.87	1.73	1.73	0.00	
12,837.71	92.73	269.97	8,468.90	601.18	-4,345.55	4,341.13	1.37	1.36	-0.23	
12,851.00	92.86	269.90	8,468.25	601.17	-4,358.82	4,354.41	1.11	0.98	-0.53	
12,864.29	92.88	269.74	8,467.58	601.12	-4,372.10	4,367.68	1.21	0.15	-1.20	
12,877.57	92.85	269.53	8,466.92	601.04	-4,385.36	4,380.95	1.60	-0.23	-1.58	
12,890.86	92.78	269.30	8,466.27	600.90	-4,398.63	4,394.22	1.81	-0.53	-1.73	
12,904.14	92.70	269.07	8,465.63	600.72	-4,411.90	4,407.48	1.83	-0.60	-1.73	
12,917.43	92.64	268.86	8,465.01	600.48	-4,425.17	4,420.76	1.64	-0.45	-1.58	
12,930.71	92.03	268.80	8,464.47	600.21	-4,438.43	4,434.03	4.62	-4.59	-0.45	
12,944.00	90.89	268.78	8,464.13	599.92	-4,451.72	4,447.31	8.58	-8.58	-0.15	
12,957.43	89.86	268.48	8,464.04	599.60	-4,465.14	4,460.74	7.99	-7.67	-2.23	
12,970.86	89.75	268.24	8,464.09	599.22	-4,478.57	4,474.16	1.97	-0.82	-1.79	
12,984.29	89.85	268.16	8,464.14	598.80	-4,491.99	4,487.59	0.95	0.74	-0.60	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,997.71	89.88	268.10	8,464.17	598.36	-4,505.40	4,501.01	0.50	0.22	-0.45
13,011.14	89.92	268.05	8,464.19	597.91	-4,518.83	4,514.43	0.48	0.30	-0.37
13,024.57	89.96	268.02	8,464.21	597.45	-4,532.25	4,527.86	0.37	0.30	-0.22
13,038.00	89.99	268.01	8,464.21	596.98	-4,545.67	4,541.28	0.24	0.22	-0.07
13,051.29	90.00	268.02	8,464.21	596.52	-4,558.95	4,554.57	0.11	0.08	0.08
13,064.57	90.00	268.05	8,464.21	596.07	-4,572.22	4,567.84	0.23	0.00	0.23
13,077.86	89.99	268.09	8,464.21	595.62	-4,585.51	4,581.13	0.31	-0.08	0.30
13,091.14	89.98	268.14	8,464.22	595.18	-4,598.78	4,594.40	0.38	-0.08	0.38
13,104.43	89.97	268.18	8,464.22	594.76	-4,612.06	4,607.69	0.31	-0.08	0.30
13,117.71	89.96	268.23	8,464.23	594.34	-4,625.34	4,620.96	0.38	-0.08	0.38
13,131.00	89.95	268.26	8,464.24	593.93	-4,638.62	4,634.25	0.24	-0.08	0.23
13,144.29	89.95	268.27	8,464.25	593.53	-4,651.90	4,647.54	0.08	0.00	0.08
13,157.57	89.96	268.27	8,464.26	593.13	-4,665.18	4,660.81	0.08	0.08	0.00
13,170.86	89.97	268.26	8,464.27	592.73	-4,678.46	4,674.10	0.11	0.08	-0.08
13,184.14	89.98	268.25	8,464.28	592.32	-4,691.74	4,687.38	0.11	0.08	-0.08
13,197.43	90.00	268.25	8,464.28	591.92	-4,705.02	4,700.66	0.15	0.15	0.00
13,210.71	90.03	268.25	8,464.28	591.51	-4,718.29	4,713.94	0.23	0.23	0.00
13,224.00	90.06	268.27	8,464.27	591.11	-4,731.58	4,727.23	0.27	0.23	0.15
13,237.29	90.09	268.31	8,464.25	590.71	-4,744.86	4,740.51	0.38	0.23	0.30
13,250.57	90.14	268.37	8,464.22	590.33	-4,758.14	4,753.79	0.59	0.38	0.45
13,263.86	90.21	268.44	8,464.18	589.96	-4,771.42	4,767.08	0.74	0.53	0.53
13,277.14	90.31	268.51	8,464.12	589.60	-4,784.70	4,780.35	0.92	0.75	0.53
13,290.43	90.42	268.58	8,464.04	589.27	-4,797.98	4,793.64	0.98	0.83	0.53
13,303.71	90.56	268.66	8,463.92	588.95	-4,811.26	4,806.92	1.21	1.05	0.60
13,317.00	90.72	268.73	8,463.78	588.64	-4,824.54	4,820.21	1.31	1.20	0.53
13,330.29	90.93	268.79	8,463.58	588.36	-4,837.83	4,833.49	1.64	1.58	0.45
13,343.57	91.16	268.85	8,463.34	588.08	-4,851.10	4,846.77	1.79	1.73	0.45
13,356.86	91.38	268.90	8,463.05	587.82	-4,864.39	4,860.06	1.70	1.66	0.38
13,370.14	91.59	268.93	8,462.70	587.57	-4,877.66	4,873.33	1.60	1.58	0.23
13,383.43	91.76	268.95	8,462.31	587.32	-4,890.94	4,886.61	1.29	1.28	0.15
13,396.71	91.87	268.93	8,461.89	587.08	-4,904.21	4,899.89	0.84	0.83	-0.15
13,410.00	91.87	268.88	8,461.46	586.83	-4,917.49	4,913.17	0.38	0.00	-0.38
13,423.43	91.71	268.77	8,461.04	586.55	-4,930.91	4,926.59	1.45	-1.19	-0.82
13,436.86	91.46	268.62	8,460.67	586.24	-4,944.34	4,940.01	2.17	-1.86	-1.12
13,450.29	91.16	268.46	8,460.36	585.90	-4,957.76	4,953.44	2.53	-2.23	-1.19
13,463.71	90.87	268.30	8,460.12	585.52	-4,971.17	4,966.85	2.47	-2.16	-1.19
13,477.14	90.61	268.16	8,459.95	585.11	-4,984.59	4,980.28	2.20	-1.94	-1.04
13,490.57	89.57	268.04	8,459.93	584.66	-4,998.02	4,993.70	7.80	-7.74	-0.89
13,497.50	89.07	268.23	8,460.01	584.44	-5,004.95	5,000.63	7.63	-7.15	2.68
03-v5000(BB-133H)									
13,504.00	88.61	268.40	8,460.14	584.25	-5,011.44	5,007.13	7.63	-7.15	2.68
13,517.14	88.44	268.43	8,460.48	583.88	-5,024.57	5,020.26	1.31	-1.29	0.23
13,530.29	88.43	268.40	8,460.84	583.52	-5,037.71	5,033.40	0.24	-0.08	-0.23



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,543.43	88.45	268.38	8,461.20	583.15	-5,050.84	5,046.54	0.22	0.15	-0.15	
13,556.57	88.48	268.37	8,461.55	582.78	-5,063.97	5,059.67	0.24	0.23	-0.08	
13,569.71	88.51	268.36	8,461.90	582.40	-5,077.10	5,072.80	0.24	0.23	-0.08	
13,582.86	88.55	268.35	8,462.23	582.02	-5,090.24	5,085.94	0.31	0.30	-0.08	
13,596.00	88.60	268.33	8,462.56	581.64	-5,103.37	5,099.08	0.41	0.38	-0.15	
13,609.43	88.64	268.31	8,462.88	581.25	-5,116.79	5,112.50	0.33	0.30	-0.15	
13,622.86	88.68	268.29	8,463.20	580.85	-5,130.21	5,125.92	0.33	0.30	-0.15	
13,636.29	88.75	268.27	8,463.50	580.45	-5,143.63	5,139.34	0.54	0.52	-0.15	
13,649.71	88.86	268.24	8,463.78	580.04	-5,157.04	5,152.76	0.85	0.82	-0.22	
13,663.14	89.04	268.22	8,464.02	579.63	-5,170.46	5,166.18	1.35	1.34	-0.15	
13,676.57	89.23	268.20	8,464.23	579.21	-5,183.88	5,179.61	1.42	1.41	-0.15	
13,690.00	89.41	268.18	8,464.39	578.78	-5,197.31	5,193.03	1.35	1.34	-0.15	
13,703.29	89.58	268.16	8,464.50	578.36	-5,210.59	5,206.32	1.29	1.28	-0.15	
13,716.57	89.73	268.15	8,464.58	577.93	-5,223.86	5,219.59	1.13	1.13	-0.08	
13,729.86	89.87	268.14	8,464.63	577.50	-5,237.14	5,232.88	1.06	1.05	-0.08	
13,743.14	89.99	268.13	8,464.65	577.07	-5,250.42	5,246.15	0.91	0.90	-0.08	
13,756.43	90.09	268.12	8,464.64	576.63	-5,263.70	5,259.44	0.76	0.75	-0.08	
13,769.71	90.16	268.10	8,464.61	576.20	-5,276.97	5,272.71	0.55	0.53	-0.15	
13,783.00	90.19	268.08	8,464.57	575.75	-5,290.26	5,286.00	0.27	0.23	-0.15	
13,796.29	90.16	268.04	8,464.53	575.30	-5,303.54	5,299.29	0.38	-0.23	-0.30	
13,809.57	90.08	267.99	8,464.50	574.84	-5,316.81	5,312.56	0.71	-0.60	-0.38	
13,822.86	89.95	267.95	8,464.50	574.37	-5,330.09	5,325.85	1.02	-0.98	-0.30	
13,836.14	89.79	267.90	8,464.53	573.89	-5,343.36	5,339.12	1.26	-1.20	-0.38	
13,849.43	89.58	267.85	8,464.60	573.40	-5,356.64	5,352.40	1.62	-1.58	-0.38	
13,862.71	89.30	267.80	8,464.73	572.89	-5,369.91	5,365.68	2.14	-2.11	-0.38	
13,876.00	88.93	267.76	8,464.93	572.38	-5,383.19	5,378.96	2.80	-2.78	-0.30	
13,889.43	88.60	267.73	8,465.22	571.85	-5,396.61	5,392.38	2.47	-2.46	-0.22	
13,902.86	88.42	267.71	8,465.57	571.32	-5,410.02	5,405.80	1.35	-1.34	-0.15	
13,916.29	88.35	267.70	8,465.95	570.78	-5,423.44	5,419.21	0.53	-0.52	-0.07	
13,929.71	88.38	267.70	8,466.33	570.24	-5,436.84	5,432.62	0.22	0.22	0.00	
13,943.14	88.47	267.72	8,466.70	569.70	-5,450.25	5,446.04	0.69	0.67	0.15	
13,956.57	88.60	267.75	8,467.05	569.17	-5,463.67	5,459.46	0.99	0.97	0.22	
13,970.00	88.68	267.82	8,467.36	568.66	-5,477.09	5,472.88	0.79	0.60	0.52	
13,983.43	88.66	267.95	8,467.68	568.16	-5,490.50	5,486.30	0.98	-0.15	0.97	
13,996.86	88.69	268.09	8,467.99	567.70	-5,503.92	5,499.72	1.07	0.22	1.04	
14,010.29	88.79	268.25	8,468.28	567.27	-5,517.34	5,513.14	1.40	0.74	1.19	
14,023.71	88.89	268.39	8,468.55	566.87	-5,530.75	5,526.56	1.28	0.75	1.04	
14,037.14	89.19	268.75	8,468.78	566.54	-5,544.18	5,539.98	3.49	2.23	2.68	
14,050.57	89.78	269.44	8,468.90	566.33	-5,557.60	5,553.41	6.76	4.39	5.14	
14,064.00	90.30	270.08	8,468.89	566.27	-5,571.03	5,566.84	6.14	3.87	4.77	
14,077.43	90.36	270.10	8,468.81	566.29	-5,584.46	5,580.27	0.47	0.45	0.15	
14,090.86	90.38	270.10	8,468.73	566.31	-5,597.89	5,593.70	0.15	0.15	0.00	
14,104.29	90.37	270.09	8,468.64	566.34	-5,611.32	5,607.13	0.11	-0.07	-0.07	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,117.71	90.36	270.07	8,468.55	566.36	-5,624.74	5,620.55	0.17	-0.07	-0.15
14,131.14	90.33	270.05	8,468.47	566.37	-5,638.17	5,633.98	0.27	-0.22	-0.15
14,144.57	90.31	270.03	8,468.40	566.38	-5,651.60	5,647.41	0.21	-0.15	-0.15
14,158.00	90.28	270.01	8,468.33	566.38	-5,665.03	5,660.83	0.27	-0.22	-0.15
14,171.29	90.28	269.99	8,468.26	566.38	-5,678.32	5,674.12	0.15	0.00	-0.15
14,184.57	90.28	269.97	8,468.20	566.38	-5,691.60	5,687.40	0.15	0.00	-0.15
14,197.86	90.30	269.96	8,468.13	566.37	-5,704.89	5,700.69	0.17	0.15	-0.08
14,211.14	90.32	269.95	8,468.06	566.36	-5,718.17	5,713.97	0.17	0.15	-0.08
14,224.43	90.44	269.94	8,467.97	566.35	-5,731.46	5,727.26	0.91	0.90	-0.08
14,237.71	90.61	269.93	8,467.85	566.33	-5,744.74	5,740.54	1.28	1.28	-0.08
14,251.00	90.81	269.94	8,467.68	566.32	-5,758.03	5,753.83	1.51	1.50	0.08
14,264.29	90.99	269.95	8,467.48	566.30	-5,771.32	5,767.12	1.36	1.35	0.08
14,277.57	91.13	269.97	8,467.23	566.30	-5,784.60	5,780.40	1.06	1.05	0.15
14,290.86	91.24	270.00	8,466.96	566.29	-5,797.88	5,793.68	0.86	0.83	0.23
14,304.14	91.34	270.02	8,466.66	566.29	-5,811.16	5,806.96	0.77	0.75	0.15
14,317.43	91.42	270.05	8,466.34	566.30	-5,824.45	5,820.24	0.64	0.60	0.23
14,330.71	91.45	270.07	8,466.00	566.32	-5,837.72	5,833.52	0.27	0.23	0.15
14,344.00	91.46	270.09	8,465.67	566.34	-5,851.01	5,846.81	0.17	0.08	0.15
14,357.43	91.47	270.10	8,465.32	566.36	-5,864.43	5,860.23	0.11	0.07	0.07
14,370.86	91.52	270.10	8,464.97	566.38	-5,877.86	5,873.66	0.37	0.37	0.00
14,384.29	91.58	270.10	8,464.61	566.40	-5,891.28	5,887.08	0.45	0.45	0.00
14,397.71	91.63	270.10	8,464.23	566.43	-5,904.70	5,900.49	0.37	0.37	0.00
14,411.14	91.65	270.08	8,463.85	566.45	-5,918.12	5,913.92	0.21	0.15	-0.15
14,424.57	91.58	270.06	8,463.47	566.47	-5,931.55	5,927.34	0.54	-0.52	-0.15
14,438.00	91.44	270.03	8,463.12	566.48	-5,944.97	5,940.77	1.07	-1.04	-0.22
14,451.43	91.20	269.99	8,462.81	566.48	-5,958.40	5,954.19	1.81	-1.79	-0.30
14,464.86	90.96	269.93	8,462.55	566.47	-5,971.83	5,967.62	1.84	-1.79	-0.45
14,478.29	90.76	269.88	8,462.35	566.45	-5,985.26	5,981.05	1.54	-1.49	-0.37
14,491.71	90.60	269.83	8,462.19	566.41	-5,998.67	5,994.47	1.25	-1.19	-0.37
14,505.14	90.42	269.80	8,462.07	566.37	-6,012.10	6,007.90	1.36	-1.34	-0.22
14,518.57	90.29	269.79	8,461.99	566.32	-6,025.53	6,021.33	0.97	-0.97	-0.07
14,532.00	90.20	269.82	8,461.93	566.28	-6,038.96	6,034.76	0.71	-0.67	0.22
14,545.43	90.12	269.91	8,461.90	566.24	-6,052.39	6,048.19	0.90	-0.60	0.67
14,558.86	90.05	270.03	8,461.88	566.24	-6,065.82	6,061.62	1.03	-0.52	0.89
14,572.29	90.00	270.16	8,461.87	566.26	-6,079.25	6,075.05	1.04	-0.37	0.97
14,585.71	89.96	270.29	8,461.87	566.31	-6,092.67	6,088.46	1.01	-0.30	0.97
14,599.14	89.86	270.39	8,461.90	566.39	-6,106.10	6,101.89	1.05	-0.74	0.74
14,612.57	90.15	270.73	8,461.89	566.52	-6,119.53	6,115.32	3.33	2.16	2.53
14,626.00	90.30	270.83	8,461.84	566.71	-6,132.96	6,128.75	1.34	1.12	0.74
14,639.29	89.81	270.79	8,461.83	566.89	-6,146.25	6,142.04	3.70	-3.69	-0.30
14,652.57	89.36	270.72	8,461.92	567.07	-6,159.53	6,155.31	3.43	-3.39	-0.53
14,665.86	88.97	270.63	8,462.12	567.22	-6,172.82	6,168.60	3.01	-2.93	-0.68
14,679.14	88.65	270.54	8,462.39	567.36	-6,186.09	6,181.87	2.50	-2.41	-0.68
14,692.43	88.47	270.46	8,462.73	567.48	-6,199.38	6,195.16	1.48	-1.35	-0.60



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,705.71	88.72	270.06	8,463.05	567.54	-6,212.65	6,208.43	3.55	1.88	-3.01	
14,719.00	88.67	270.02	8,463.36	567.55	-6,225.94	6,221.72	0.48	-0.38	-0.30	
14,732.43	88.72	270.02	8,463.66	567.55	-6,239.37	6,235.14	0.37	0.37	0.00	
14,745.86	88.82	270.03	8,463.95	567.56	-6,252.79	6,248.57	0.75	0.74	0.07	
14,759.29	88.99	270.07	8,464.21	567.57	-6,266.22	6,262.00	1.30	1.27	0.30	
14,772.71	89.17	270.10	8,464.42	567.59	-6,279.64	6,275.42	1.36	1.34	0.22	
14,786.14	89.44	270.14	8,464.59	567.62	-6,293.07	6,288.84	2.03	2.01	0.30	
14,799.57	89.75	270.17	8,464.68	567.65	-6,306.50	6,302.27	2.32	2.31	0.22	
14,813.00	89.93	270.18	8,464.72	567.69	-6,319.93	6,315.70	1.34	1.34	0.07	
14,826.57	89.88	270.16	8,464.74	567.73	-6,333.50	6,329.27	0.40	-0.37	-0.15	
14,840.14	89.76	270.12	8,464.78	567.77	-6,347.07	6,342.84	0.93	-0.88	-0.29	
14,853.71	89.70	270.07	8,464.85	567.79	-6,360.64	6,356.41	0.58	-0.44	-0.37	
14,867.29	89.70	270.02	8,464.92	567.80	-6,374.22	6,369.99	0.37	0.00	-0.37	
14,880.86	89.70	269.96	8,464.99	567.80	-6,387.79	6,383.56	0.44	0.00	-0.44	
14,894.43	89.70	269.91	8,465.06	567.78	-6,401.36	6,397.13	0.37	0.00	-0.37	
14,908.00	89.69	269.87	8,465.13	567.76	-6,414.93	6,410.70	0.30	-0.07	-0.29	
14,921.57	89.75	269.85	8,465.20	567.72	-6,428.50	6,424.27	0.47	0.44	-0.15	
14,935.14	89.87	269.84	8,465.24	567.69	-6,442.07	6,437.84	0.89	0.88	-0.07	
14,948.71	90.01	269.84	8,465.26	567.65	-6,455.64	6,451.41	1.03	1.03	0.00	
14,962.29	90.12	269.85	8,465.24	567.61	-6,469.22	6,464.99	0.81	0.81	0.07	
14,975.86	90.19	269.85	8,465.21	567.58	-6,482.79	6,478.56	0.52	0.52	0.00	
14,989.43	90.26	269.86	8,465.15	567.54	-6,496.36	6,492.13	0.52	0.52	0.07	
15,003.00	90.34	269.87	8,465.08	567.51	-6,509.93	6,505.70	0.59	0.59	0.07	
15,016.43	90.48	269.87	8,464.99	567.48	-6,523.35	6,519.13	1.04	1.04	0.00	
15,029.86	90.67	269.88	8,464.85	567.45	-6,536.78	6,532.56	1.42	1.41	0.07	
15,043.29	90.88	269.88	8,464.67	567.42	-6,550.21	6,545.98	1.56	1.56	0.00	
15,056.71	91.10	269.87	8,464.44	567.39	-6,563.63	6,559.40	1.64	1.64	-0.07	
15,070.14	91.30	269.86	8,464.16	567.36	-6,577.06	6,572.83	1.49	1.49	-0.07	
15,083.57	91.50	269.85	8,463.83	567.33	-6,590.48	6,586.26	1.49	1.49	-0.07	
15,097.00	91.70	269.82	8,463.45	567.29	-6,603.91	6,599.68	1.51	1.49	-0.22	
15,110.43	91.89	269.77	8,463.03	567.24	-6,617.33	6,613.10	1.46	1.41	-0.37	
15,123.86	92.02	269.71	8,462.57	567.18	-6,630.75	6,626.53	1.07	0.97	-0.45	
15,137.29	92.00	269.65	8,462.10	567.10	-6,644.18	6,639.95	0.47	-0.15	-0.45	
15,150.71	91.72	269.60	8,461.67	567.02	-6,657.59	6,653.36	2.12	-2.09	-0.37	
15,164.14	90.97	269.73	8,461.35	566.94	-6,671.01	6,666.79	5.67	-5.58	0.97	
15,177.57	90.04	269.98	8,461.23	566.90	-6,684.44	6,680.22	7.17	-6.92	1.86	
15,191.00	89.54	270.09	8,461.28	566.91	-6,697.87	6,693.64	3.81	-3.72	0.82	
15,204.43	89.55	270.08	8,461.39	566.93	-6,711.30	6,707.07	0.11	0.07	-0.07	
15,217.86	89.57	270.09	8,461.49	566.95	-6,724.73	6,720.50	0.17	0.15	0.07	
15,231.29	89.60	270.10	8,461.59	566.97	-6,738.16	6,733.93	0.24	0.22	0.07	
15,244.71	89.56	270.11	8,461.69	567.00	-6,751.58	6,747.35	0.31	-0.30	0.07	
15,258.14	89.51	270.13	8,461.80	567.03	-6,765.01	6,760.78	0.40	-0.37	0.15	
15,271.57	89.48	270.15	8,461.92	567.06	-6,778.44	6,774.21	0.27	-0.22	0.15	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,285.00	89.47	270.18	8,462.04	567.10	-6,791.87	6,787.64	0.24	-0.07	0.22
15,298.43	89.51	270.22	8,462.16	567.15	-6,805.30	6,801.07	0.42	0.30	0.30
15,311.86	89.57	270.26	8,462.27	567.20	-6,818.73	6,814.50	0.54	0.45	0.30
15,325.29	89.69	270.30	8,462.35	567.27	-6,832.16	6,827.92	0.94	0.89	0.30
15,338.71	89.83	270.34	8,462.41	567.34	-6,845.58	6,841.34	1.08	1.04	0.30
15,352.14	89.97	270.39	8,462.43	567.43	-6,859.01	6,854.77	1.11	1.04	0.37
15,365.57	90.06	270.45	8,462.43	567.53	-6,872.44	6,868.20	0.81	0.67	0.45
15,379.00	90.15	270.51	8,462.40	567.64	-6,885.87	6,881.63	0.81	0.67	0.45
15,392.43	90.22	270.57	8,462.36	567.77	-6,899.30	6,895.06	0.69	0.52	0.45
15,405.86	90.30	270.64	8,462.30	567.91	-6,912.73	6,908.48	0.79	0.60	0.52
15,419.29	90.36	270.71	8,462.22	568.07	-6,926.15	6,921.91	0.69	0.45	0.52
15,432.71	90.44	270.78	8,462.13	568.24	-6,939.57	6,935.33	0.79	0.60	0.52
15,446.14	90.57	270.84	8,462.01	568.43	-6,953.00	6,948.75	1.07	0.97	0.45
15,459.57	90.73	270.88	8,461.86	568.63	-6,966.43	6,962.18	1.23	1.19	0.30
15,473.00	90.89	270.91	8,461.67	568.84	-6,979.86	6,975.61	1.21	1.19	0.22
15,486.43	91.05	270.90	8,461.44	569.05	-6,993.28	6,989.03	1.19	1.19	-0.07
15,499.86	91.19	270.88	8,461.18	569.26	-7,006.71	7,002.45	1.05	1.04	-0.15
15,513.29	91.28	270.84	8,460.89	569.46	-7,020.13	7,015.88	0.73	0.67	-0.30
15,526.71	91.19	270.80	8,460.60	569.66	-7,033.55	7,029.29	0.73	-0.67	-0.30
15,540.14	90.86	270.75	8,460.36	569.84	-7,046.97	7,042.72	2.49	-2.46	-0.37
15,553.57	90.14	270.58	8,460.24	569.99	-7,060.40	7,056.14	5.51	-5.36	-1.27
15,567.00	89.82	270.37	8,460.25	570.10	-7,073.83	7,069.57	2.85	-2.38	-1.56
15,581.83	89.80	270.51	8,460.30	570.22	-7,088.66	7,084.40	0.95	-0.13	0.94
15,596.67	89.81	270.68	8,460.35	570.37	-7,103.50	7,099.24	1.15	0.07	1.15
15,611.50	89.80	270.85	8,460.40	570.57	-7,118.33	7,114.06	1.15	-0.07	1.15
15,626.33	89.74	271.01	8,460.46	570.81	-7,133.16	7,128.89	1.15	-0.40	1.08
15,641.17	89.65	271.17	8,460.54	571.09	-7,148.00	7,143.73	1.24	-0.61	1.08
15,656.00	89.41	271.31	8,460.66	571.41	-7,162.82	7,158.55	1.87	-1.62	0.94
15,669.43	88.76	271.54	8,460.87	571.75	-7,176.25	7,171.97	5.13	-4.84	1.71
15,682.86	87.87	272.10	8,461.27	572.17	-7,189.66	7,185.38	7.83	-6.63	4.17
15,696.29	87.36	272.98	8,461.83	572.77	-7,203.07	7,198.78	7.57	-3.80	6.55
15,709.71	87.46	274.08	8,462.43	573.59	-7,216.45	7,212.16	8.22	0.75	8.20
15,723.14	87.53	274.58	8,463.02	574.61	-7,229.83	7,225.53	3.76	0.52	3.72
15,736.57	87.60	274.62	8,463.59	575.68	-7,243.20	7,238.90	0.60	0.52	0.30
15,750.00	87.66	274.66	8,464.15	576.77	-7,256.58	7,252.26	0.54	0.45	0.30
15,763.29	87.71	274.71	8,464.68	577.85	-7,269.81	7,265.49	0.53	0.38	0.38
15,776.57	87.77	274.76	8,465.21	578.95	-7,283.04	7,278.71	0.59	0.45	0.38
15,789.86	87.84	274.81	8,465.72	580.06	-7,296.27	7,291.93	0.65	0.53	0.38
15,803.14	87.96	274.86	8,466.20	581.18	-7,309.49	7,305.15	0.98	0.90	0.38
15,816.43	88.17	274.91	8,466.65	582.31	-7,322.73	7,318.37	1.62	1.58	0.38
15,829.71	88.62	274.90	8,467.02	583.44	-7,335.95	7,331.59	3.39	3.39	-0.08
15,843.00	89.52	274.75	8,467.24	584.56	-7,349.19	7,344.82	6.87	6.77	-1.13
15,856.43	89.64	274.76	8,467.34	585.67	-7,362.58	7,358.20	0.90	0.89	0.07



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,869.86	89.75	274.75	8,467.41	586.79	-7,375.96	7,371.57	0.82	0.82	-0.07
15,883.29	89.83	274.74	8,467.46	587.90	-7,389.35	7,384.95	0.60	0.60	-0.07
15,896.71	89.90	274.73	8,467.49	589.00	-7,402.72	7,398.32	0.53	0.52	-0.07
15,910.14	89.95	274.71	8,467.51	590.11	-7,416.10	7,411.69	0.40	0.37	-0.15
15,923.57	89.97	274.71	8,467.52	591.21	-7,429.49	7,425.07	0.15	0.15	0.00
15,937.00	90.02	274.72	8,467.52	592.32	-7,442.87	7,438.44	0.38	0.37	0.07
15,950.43	90.09	274.75	8,467.50	593.42	-7,456.26	7,451.82	0.57	0.52	0.22
15,963.86	90.17	274.80	8,467.47	594.54	-7,469.64	7,465.19	0.70	0.60	0.37
15,977.29	90.25	274.85	8,467.42	595.67	-7,483.02	7,478.57	0.70	0.60	0.37
15,990.71	90.33	274.90	8,467.36	596.81	-7,496.39	7,491.93	0.70	0.60	0.37
15,995.08	90.36	274.92	8,467.33	597.19	-7,500.75	7,496.29	0.70	0.60	0.37
04-v7500(BB-133H)									
16,004.14	90.41	274.95	8,467.27	597.97	-7,509.77	7,505.30	0.70	0.60	0.37
16,017.57	90.49	275.00	8,467.16	599.13	-7,523.15	7,518.67	0.70	0.60	0.37
16,031.00	90.59	275.04	8,467.04	600.31	-7,536.53	7,532.04	0.80	0.74	0.30
16,044.29	90.70	275.07	8,466.89	601.48	-7,549.77	7,545.27	0.86	0.83	0.23
16,057.57	90.81	275.08	8,466.71	602.65	-7,563.00	7,558.49	0.83	0.83	0.08
16,070.86	90.91	275.08	8,466.51	603.83	-7,576.23	7,571.72	0.75	0.75	0.00
16,084.14	90.99	275.07	8,466.29	605.00	-7,589.46	7,584.93	0.61	0.60	-0.08
16,097.43	91.06	275.03	8,466.06	606.17	-7,602.69	7,598.16	0.61	0.53	-0.30
16,110.71	91.12	274.96	8,465.80	607.33	-7,615.92	7,611.38	0.69	0.45	-0.53
16,124.00	91.17	274.85	8,465.54	608.46	-7,629.16	7,624.61	0.91	0.38	-0.83
16,137.57	91.25	274.66	8,465.25	609.59	-7,642.68	7,638.12	1.52	0.59	-1.40
16,151.14	91.35	274.44	8,464.94	610.67	-7,656.20	7,651.64	1.78	0.74	-1.62
16,164.71	91.47	274.21	8,464.61	611.69	-7,669.73	7,665.16	1.91	0.88	-1.69
16,178.29	91.64	273.99	8,464.24	612.66	-7,683.27	7,678.69	2.05	1.25	-1.62
16,191.86	91.58	273.31	8,463.86	613.52	-7,696.81	7,692.22	5.03	-0.44	-5.01
16,205.43	91.34	272.31	8,463.51	614.19	-7,710.36	7,705.77	7.58	-1.77	-7.37
16,219.00	91.47	272.20	8,463.18	614.72	-7,723.91	7,719.32	1.25	0.96	-0.81
16,232.29	91.56	272.16	8,462.83	615.23	-7,737.19	7,732.59	0.74	0.68	-0.30
16,245.57	91.66	272.17	8,462.46	615.73	-7,750.45	7,745.85	0.76	0.75	0.08
16,258.86	91.75	272.20	8,462.06	616.23	-7,763.73	7,759.12	0.71	0.68	0.23
16,272.14	91.85	272.23	8,461.64	616.75	-7,776.99	7,772.38	0.79	0.75	0.23
16,285.43	91.97	272.24	8,461.20	617.27	-7,790.26	7,785.65	0.91	0.90	0.08
16,298.71	92.08	272.22	8,460.73	617.78	-7,803.53	7,798.91	0.84	0.83	-0.15
16,312.00	92.20	272.13	8,460.24	618.29	-7,816.80	7,812.17	1.13	0.90	-0.68
16,325.29	92.33	271.94	8,459.71	618.76	-7,830.07	7,825.44	1.73	0.98	-1.43
16,338.57	92.43	271.70	8,459.16	619.18	-7,843.33	7,838.70	1.96	0.75	-1.81
16,351.86	92.50	271.43	8,458.59	619.54	-7,856.60	7,851.97	2.10	0.53	-2.03
16,365.14	92.53	271.16	8,458.00	619.84	-7,869.87	7,865.23	2.04	0.23	-2.03
16,378.43	92.32	270.68	8,457.44	620.05	-7,883.14	7,878.50	3.94	-1.58	-3.61
16,391.71	91.83	269.79	8,456.96	620.11	-7,896.41	7,891.77	7.65	-3.69	-6.70
16,405.00	91.91	269.51	8,456.53	620.03	-7,909.70	7,905.06	2.19	0.60	-2.11
16,418.29	92.00	269.43	8,456.07	619.90	-7,922.98	7,918.34	0.91	0.68	-0.60



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,431.57	92.04	269.39	8,455.61	619.77	-7,936.25	7,931.61	0.43	0.30	-0.30	
16,444.86	92.09	269.38	8,455.13	619.63	-7,949.53	7,944.89	0.38	0.38	-0.08	
16,458.14	92.15	269.38	8,454.64	619.48	-7,962.80	7,958.16	0.45	0.45	0.00	
16,471.43	92.21	269.40	8,454.13	619.34	-7,976.08	7,971.44	0.48	0.45	0.15	
16,484.71	92.27	269.43	8,453.61	619.21	-7,989.35	7,984.71	0.51	0.45	0.23	
16,498.00	92.34	269.46	8,453.08	619.08	-8,002.63	7,997.99	0.57	0.53	0.23	
16,511.29	92.44	269.49	8,452.52	618.95	-8,015.91	8,011.27	0.79	0.75	0.23	
16,524.57	92.62	269.52	8,451.94	618.84	-8,029.17	8,024.54	1.37	1.36	0.23	
16,537.86	92.81	269.54	8,451.31	618.73	-8,042.45	8,037.81	1.44	1.43	0.15	
16,551.14	92.98	269.57	8,450.64	618.63	-8,055.71	8,051.08	1.30	1.28	0.23	
16,564.43	93.12	269.58	8,449.93	618.53	-8,068.98	8,064.35	1.06	1.05	0.08	
16,577.71	93.26	269.59	8,449.19	618.43	-8,082.24	8,077.61	1.06	1.05	0.08	
16,591.00	93.38	269.58	8,448.42	618.34	-8,095.51	8,090.87	0.91	0.90	-0.08	
16,604.43	93.49	269.54	8,447.62	618.23	-8,108.91	8,104.28	0.87	0.82	-0.30	
16,617.86	93.58	269.50	8,446.79	618.12	-8,122.32	8,117.69	0.73	0.67	-0.30	
16,631.29	93.68	269.44	8,445.94	618.00	-8,135.72	8,131.09	0.87	0.74	-0.45	
16,644.71	93.77	269.38	8,445.07	617.86	-8,149.11	8,144.48	0.81	0.67	-0.45	
16,658.14	93.73	269.31	8,444.19	617.71	-8,162.51	8,157.88	0.60	-0.30	-0.52	
16,671.57	93.30	269.24	8,443.36	617.54	-8,175.91	8,171.29	3.24	-3.20	-0.52	
16,685.00	92.45	269.08	8,442.69	617.34	-8,189.33	8,184.70	6.44	-6.33	-1.19	
16,698.29	92.11	269.07	8,442.16	617.13	-8,202.60	8,197.98	2.56	-2.56	-0.08	
16,711.57	92.11	269.02	8,441.67	616.91	-8,215.87	8,211.25	0.38	0.00	-0.38	
16,724.86	92.17	268.97	8,441.18	616.67	-8,229.15	8,224.53	0.59	0.45	-0.38	
16,738.14	92.27	268.93	8,440.66	616.43	-8,242.42	8,237.80	0.81	0.75	-0.30	
16,751.43	92.37	268.89	8,440.12	616.18	-8,255.70	8,251.07	0.81	0.75	-0.30	
16,764.71	92.46	268.86	8,439.56	615.92	-8,268.96	8,264.34	0.71	0.68	-0.23	
16,778.00	92.54	268.84	8,438.98	615.65	-8,282.24	8,277.62	0.62	0.60	-0.15	
16,791.43	92.60	268.83	8,438.38	615.38	-8,295.65	8,291.03	0.45	0.45	-0.07	
16,804.86	92.63	268.84	8,437.77	615.10	-8,309.06	8,304.45	0.24	0.22	0.07	
16,818.29	92.69	268.85	8,437.15	614.83	-8,322.48	8,317.86	0.45	0.45	0.07	
16,831.71	92.71	268.87	8,436.51	614.57	-8,335.88	8,331.27	0.21	0.15	0.15	
16,845.14	92.55	268.89	8,435.90	614.31	-8,349.29	8,344.68	1.20	-1.19	0.15	
16,858.57	92.04	268.97	8,435.36	614.05	-8,362.71	8,358.10	3.84	-3.80	0.60	
16,872.00	91.08	269.22	8,434.99	613.84	-8,376.13	8,371.52	7.39	-7.15	1.86	
16,885.29	90.75	269.31	8,434.78	613.67	-8,389.42	8,384.81	2.57	-2.48	0.68	
16,898.57	90.86	269.38	8,434.60	613.52	-8,402.70	8,398.09	0.98	0.83	0.53	
16,911.86	90.98	269.45	8,434.38	613.38	-8,415.98	8,411.38	1.05	0.90	0.53	
16,925.14	91.11	269.52	8,434.14	613.27	-8,429.26	8,424.66	1.11	0.98	0.53	
16,938.43	91.28	269.59	8,433.86	613.16	-8,442.55	8,437.94	1.38	1.28	0.53	
16,951.71	91.47	269.63	8,433.54	613.07	-8,455.82	8,451.22	1.46	1.43	0.30	
16,965.00	91.71	269.63	8,433.18	612.99	-8,469.11	8,464.50	1.81	1.81	0.00	
16,978.29	91.97	269.59	8,432.75	612.90	-8,482.39	8,477.79	1.98	1.96	-0.30	
16,991.57	92.22	269.51	8,432.26	612.79	-8,495.66	8,491.06	1.98	1.88	-0.60	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
17,004.86	92.39	269.40	8,431.73	612.66	-8,508.94	8,504.34	1.52	1.28	-0.83	
17,018.14	92.47	269.29	8,431.17	612.51	-8,522.21	8,517.61	1.02	0.60	-0.83	
17,031.43	92.33	269.17	8,430.61	612.33	-8,535.48	8,530.88	1.39	-1.05	-0.90	
17,044.71	91.88	268.91	8,430.12	612.11	-8,548.75	8,544.15	3.91	-3.39	-1.96	
17,058.00	91.16	268.20	8,429.77	611.78	-8,562.03	8,557.44	7.61	-5.42	-5.34	
17,071.43	90.49	267.54	8,429.58	611.28	-8,575.45	8,570.86	7.00	-4.99	-4.91	
17,084.86	90.56	267.42	8,429.45	610.69	-8,588.87	8,584.28	1.03	0.52	-0.89	
17,098.29	90.59	267.29	8,429.32	610.07	-8,602.29	8,597.70	0.99	0.22	-0.97	
17,111.71	90.44	267.17	8,429.20	609.42	-8,615.69	8,611.11	1.43	-1.12	-0.89	
17,125.14	89.68	267.12	8,429.18	608.75	-8,629.10	8,624.53	5.67	-5.66	-0.37	
17,138.57	88.93	267.10	8,429.35	608.07	-8,642.51	8,637.94	5.59	-5.58	-0.15	
17,152.00	88.90	267.01	8,429.60	607.38	-8,655.92	8,651.36	0.71	-0.22	-0.67	
17,165.29	88.89	266.93	8,429.86	606.68	-8,669.19	8,664.63	0.61	-0.08	-0.60	
17,178.57	88.92	266.88	8,430.11	605.96	-8,682.45	8,677.89	0.44	0.23	-0.38	
17,191.86	88.98	266.83	8,430.35	605.24	-8,695.72	8,691.17	0.59	0.45	-0.38	
17,205.14	89.03	266.79	8,430.58	604.50	-8,708.98	8,704.43	0.48	0.38	-0.30	
17,218.43	89.08	266.76	8,430.80	603.75	-8,722.24	8,717.70	0.44	0.38	-0.23	
17,231.71	89.12	266.74	8,431.01	603.00	-8,735.50	8,730.96	0.34	0.30	-0.15	
17,245.00	89.15	266.73	8,431.21	602.24	-8,748.77	8,744.23	0.24	0.23	-0.08	
17,258.43	89.19	266.74	8,431.41	601.47	-8,762.17	8,757.65	0.31	0.30	0.07	
17,271.86	89.24	266.75	8,431.59	600.71	-8,775.58	8,771.06	0.38	0.37	0.07	
17,285.29	89.31	266.77	8,431.76	599.95	-8,788.99	8,784.47	0.54	0.52	0.15	
17,298.71	89.40	266.79	8,431.91	599.20	-8,802.39	8,797.87	0.69	0.67	0.15	
17,312.14	89.52	266.81	8,432.04	598.45	-8,815.80	8,811.29	0.91	0.89	0.15	
17,325.57	89.63	266.84	8,432.14	597.71	-8,829.20	8,824.70	0.85	0.82	0.22	
17,339.00	89.75	266.85	8,432.21	596.97	-8,842.61	8,838.12	0.90	0.89	0.07	
17,352.29	89.84	266.86	8,432.26	596.24	-8,855.88	8,851.39	0.68	0.68	0.08	
17,365.57	89.94	266.86	8,432.28	595.51	-8,869.14	8,864.66	0.75	0.75	0.00	
17,378.86	90.05	266.86	8,432.29	594.78	-8,882.41	8,877.93	0.83	0.83	0.00	
17,392.14	90.14	266.86	8,432.26	594.05	-8,895.67	8,891.19	0.68	0.68	0.00	
17,405.43	90.24	266.86	8,432.22	593.33	-8,908.94	8,904.47	0.75	0.75	0.00	
17,418.71	90.35	266.86	8,432.15	592.60	-8,922.20	8,917.73	0.83	0.83	0.00	
17,432.00	90.46	266.87	8,432.06	591.87	-8,935.47	8,931.01	0.83	0.83	0.08	
17,445.29	90.54	266.88	8,431.94	591.15	-8,948.74	8,944.28	0.61	0.60	0.08	
17,458.57	90.60	266.89	8,431.81	590.43	-8,962.00	8,957.55	0.46	0.45	0.08	
17,471.86	90.63	266.91	8,431.67	589.71	-8,975.27	8,970.82	0.27	0.23	0.15	
17,485.14	90.58	266.92	8,431.53	588.99	-8,988.53	8,984.09	0.38	-0.38	0.08	
17,498.43	90.40	266.93	8,431.41	588.28	-9,001.80	8,997.36	1.36	-1.35	0.08	
17,511.71	90.02	267.09	8,431.36	587.59	-9,015.06	9,010.63	3.10	-2.86	1.20	
17,525.00	89.36	267.83	8,431.44	587.00	-9,028.34	9,023.91	7.46	-4.97	5.57	
17,538.43	89.14	267.92	8,431.61	586.50	-9,041.76	9,037.33	1.77	-1.64	0.67	
17,551.86	89.10	267.92	8,431.82	586.01	-9,055.18	9,050.76	0.30	-0.30	0.00	
17,565.29	89.12	267.92	8,432.03	585.53	-9,068.60	9,064.18	0.15	0.15	0.00	
17,578.71	89.18	267.91	8,432.23	585.04	-9,082.01	9,077.59	0.45	0.45	-0.07	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,592.14	89.24	267.91	8,432.41	584.55	-9,095.43	9,091.01	0.45	0.45	0.00
17,605.57	89.33	267.90	8,432.58	584.06	-9,108.85	9,104.44	0.67	0.67	-0.07
17,619.00	89.41	267.89	8,432.73	583.56	-9,122.27	9,117.86	0.60	0.60	-0.07
17,632.43	89.49	267.87	8,432.85	583.07	-9,135.69	9,131.28	0.61	0.60	-0.15
17,645.86	89.56	267.85	8,432.97	582.57	-9,149.11	9,144.71	0.54	0.52	-0.15
17,659.29	89.64	267.83	8,433.06	582.06	-9,162.53	9,158.13	0.61	0.60	-0.15
17,672.71	89.71	267.81	8,433.14	581.55	-9,175.94	9,171.54	0.54	0.52	-0.15
17,686.14	89.78	267.78	8,433.20	581.03	-9,189.36	9,184.97	0.57	0.52	-0.22
17,699.57	89.91	267.76	8,433.23	580.51	-9,202.78	9,198.39	0.98	0.97	-0.15
17,713.00	90.08	267.74	8,433.23	579.98	-9,216.20	9,211.81	1.27	1.27	-0.15
17,726.29	90.26	267.71	8,433.19	579.45	-9,229.48	9,225.10	1.37	1.35	-0.23
17,739.57	90.45	267.69	8,433.11	578.92	-9,242.75	9,238.37	1.44	1.43	-0.15
17,752.86	90.65	267.67	8,432.98	578.38	-9,256.03	9,251.65	1.51	1.50	-0.15
17,766.14	90.84	267.66	8,432.81	577.84	-9,269.29	9,264.92	1.43	1.43	-0.08
17,779.43	91.01	267.65	8,432.60	577.30	-9,282.57	9,278.20	1.28	1.28	-0.08
17,792.71	91.18	267.66	8,432.34	576.76	-9,295.84	9,291.47	1.28	1.28	0.08
17,806.00	91.31	267.68	8,432.05	576.22	-9,309.11	9,304.75	0.99	0.98	0.15
17,819.29	91.43	267.73	8,431.74	575.68	-9,322.39	9,318.03	0.98	0.90	0.38
17,832.57	91.51	267.80	8,431.40	575.17	-9,335.65	9,331.30	0.80	0.60	0.53
17,845.86	91.56	267.87	8,431.04	574.66	-9,348.93	9,344.58	0.65	0.38	0.53
17,859.14	91.54	267.94	8,430.68	574.18	-9,362.20	9,357.85	0.55	-0.15	0.53
17,872.43	91.42	268.00	8,430.34	573.71	-9,375.47	9,371.13	1.01	-0.90	0.45
17,885.71	90.99	268.17	8,430.06	573.26	-9,388.74	9,384.40	3.48	-3.24	1.28
17,899.00	90.11	268.85	8,429.93	572.92	-9,402.03	9,397.69	8.37	-6.62	5.12
17,912.29	89.21	269.76	8,430.01	572.76	-9,415.32	9,410.98	9.63	-6.77	6.85
17,925.57	89.33	269.70	8,430.18	572.70	-9,428.60	9,424.26	1.01	0.90	-0.45
17,938.86	89.45	269.63	8,430.32	572.62	-9,441.88	9,437.55	1.05	0.90	-0.53
17,952.14	89.59	269.54	8,430.43	572.52	-9,455.16	9,450.82	1.25	1.05	-0.68
17,965.43	89.74	269.44	8,430.51	572.40	-9,468.45	9,464.11	1.36	1.13	-0.75
17,978.71	89.88	269.34	8,430.55	572.26	-9,481.73	9,477.39	1.30	1.05	-0.75
17,992.00	90.03	269.25	8,430.56	572.10	-9,495.02	9,490.68	1.32	1.13	-0.68
18,005.43	90.11	269.16	8,430.55	571.91	-9,508.45	9,504.11	0.90	0.60	-0.67
18,018.86	90.18	269.08	8,430.51	571.71	-9,521.88	9,517.54	0.79	0.52	-0.60
18,032.29	90.22	269.00	8,430.47	571.48	-9,535.31	9,530.97	0.67	0.30	-0.60
18,045.71	90.26	268.93	8,430.41	571.24	-9,548.72	9,544.39	0.60	0.30	-0.52
18,059.14	90.31	268.86	8,430.34	570.98	-9,562.15	9,557.82	0.64	0.37	-0.52
18,072.57	90.38	268.79	8,430.26	570.70	-9,575.58	9,571.25	0.74	0.52	-0.52
18,086.00	90.44	268.73	8,430.17	570.41	-9,589.00	9,584.68	0.63	0.45	-0.45
18,099.43	90.49	268.68	8,430.06	570.11	-9,602.43	9,598.11	0.53	0.37	-0.37
18,112.86	90.52	268.63	8,429.94	569.79	-9,615.86	9,611.53	0.43	0.22	-0.37
18,126.29	90.58	268.59	8,429.81	569.47	-9,629.28	9,624.96	0.54	0.45	-0.30
18,139.71	90.63	268.56	8,429.67	569.13	-9,642.70	9,638.38	0.43	0.37	-0.22
18,153.14	90.61	268.53	8,429.52	568.79	-9,656.12	9,651.80	0.27	-0.15	-0.22



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,166.57	90.25	268.91	8,429.42	568.49	-9,669.55	9,665.23	3.90	-2.68	2.83
18,180.00	89.53	269.79	8,429.45	568.34	-9,682.98	9,678.66	8.47	-5.36	6.55
18,193.29	89.46	269.78	8,429.56	568.29	-9,696.27	9,691.95	0.53	-0.53	-0.08
18,206.57	89.42	269.78	8,429.69	568.24	-9,709.55	9,705.23	0.30	-0.30	0.00
18,219.86	89.41	269.78	8,429.83	568.19	-9,722.84	9,718.52	0.08	-0.08	0.00
18,233.14	89.44	269.78	8,429.96	568.14	-9,736.11	9,731.80	0.23	0.23	0.00
18,246.43	89.50	269.78	8,430.09	568.09	-9,749.40	9,745.09	0.45	0.45	0.00
18,259.71	89.60	269.78	8,430.19	568.04	-9,762.68	9,758.37	0.75	0.75	0.00
18,273.00	89.73	269.77	8,430.27	567.98	-9,775.97	9,771.66	0.98	0.98	-0.08
18,286.29	89.89	269.74	8,430.31	567.93	-9,789.26	9,784.95	1.22	1.20	-0.23
18,299.57	90.09	269.72	8,430.32	567.87	-9,802.54	9,798.23	1.51	1.51	-0.15
18,312.86	90.37	269.69	8,430.26	567.80	-9,815.83	9,811.52	2.12	2.11	-0.23
18,326.14	90.69	269.65	8,430.14	567.72	-9,829.11	9,824.80	2.43	2.41	-0.30
18,339.43	90.95	269.62	8,429.95	567.64	-9,842.40	9,838.09	1.97	1.96	-0.23
18,352.71	91.16	269.59	8,429.70	567.54	-9,855.68	9,851.36	1.60	1.58	-0.23
18,366.00	91.33	269.55	8,429.42	567.44	-9,868.96	9,864.65	1.31	1.28	-0.30
18,379.43	91.46	269.52	8,429.09	567.34	-9,882.39	9,878.08	0.99	0.97	-0.22
18,392.86	91.59	269.49	8,428.73	567.22	-9,895.81	9,891.50	0.99	0.97	-0.22
18,406.29	91.67	269.46	8,428.35	567.10	-9,909.24	9,904.93	0.64	0.60	-0.22
18,419.71	91.70	269.44	8,427.95	566.97	-9,922.65	9,918.34	0.27	0.22	-0.15
18,433.14	91.64	269.41	8,427.56	566.83	-9,936.08	9,931.76	0.50	-0.45	-0.22
18,446.57	91.44	269.39	8,427.20	566.69	-9,949.50	9,945.19	1.50	-1.49	-0.15
18,460.00	90.82	269.40	8,426.94	566.55	-9,962.93	9,958.62	4.62	-4.62	0.07
18,473.29	89.66	269.64	8,426.88	566.44	-9,976.22	9,971.91	8.91	-8.73	1.81
18,486.57	89.43	269.98	8,426.99	566.40	-9,989.49	9,985.19	3.09	-1.73	2.56
18,499.86	89.56	269.97	8,427.10	566.39	-10,002.78	9,998.48	0.98	0.98	-0.08
18,501.05	89.58	269.97	8,427.11	566.39	-10,003.97	9,999.67	1.36	1.36	0.00
05-v10000(BB-133H)									
18,513.14	89.74	269.97	8,427.19	566.38	-10,016.06	10,011.75	1.36	1.36	0.00
18,526.43	89.92	269.96	8,427.22	566.37	-10,029.35	10,025.04	1.36	1.35	-0.08
18,539.71	90.12	269.96	8,427.22	566.37	-10,042.63	10,038.32	1.51	1.51	0.00
18,553.00	90.33	269.94	8,427.17	566.35	-10,055.92	10,051.61	1.59	1.58	-0.15
18,566.29	90.54	269.91	8,427.07	566.34	-10,069.21	10,064.90	1.60	1.58	-0.23
18,579.57	90.73	269.88	8,426.92	566.31	-10,082.49	10,078.18	1.45	1.43	-0.23
18,592.86	90.92	269.84	8,426.73	566.28	-10,095.78	10,091.47	1.46	1.43	-0.30
18,606.14	91.12	269.81	8,426.49	566.24	-10,109.06	10,104.75	1.52	1.51	-0.23
18,619.43	91.32	269.77	8,426.21	566.19	-10,122.35	10,118.04	1.53	1.50	-0.30
18,632.71	91.50	269.73	8,425.88	566.13	-10,135.62	10,131.31	1.39	1.36	-0.30
18,646.00	91.67	269.71	8,425.51	566.07	-10,148.91	10,144.60	1.29	1.28	-0.15
18,660.00	91.83	269.69	8,425.09	565.99	-10,162.90	10,158.59	1.15	1.14	-0.14
18,674.00	92.02	269.68	8,424.62	565.92	-10,176.89	10,172.58	1.36	1.36	-0.07
18,688.00	92.24	269.68	8,424.10	565.84	-10,190.88	10,186.57	1.57	1.57	0.00
18,702.00	92.46	269.68	8,423.52	565.76	-10,204.87	10,200.56	1.57	1.57	0.00



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Big Burro 27 State Com 133H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3340+22 @ 3366.00usft
Site:	Big Burro 27 State Com	MD Reference:	3340+22 @ 3366.00usft
Well:	Big Burro 27 State Com 133H	North Reference:	Grid
Wellbore:	ST01 133H	Survey Calculation Method:	Minimum Curvature
Design:	133H(ST01)	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,716.00	92.70	269.67	8,422.89	565.68	-10,218.86	10,214.55	1.72	1.71	-0.07
18,723.04	92.82	269.67	8,422.55	565.64	-10,225.89	10,221.58	1.64	1.64	0.00
100FWL: 18723.04' MD, 10221.58' VS, 8422.55' TVD									
18,724.84	92.85	269.67	8,422.46	565.63	-10,227.69	10,223.38	1.64	1.64	0.00
06-LTP(BB-133H)									
18,730.00	92.93	269.67	8,422.20	565.60	-10,232.84	10,228.53	1.64	1.64	0.00
Final MWD Survey: 18730.00' MD, 92.93°INC, 269.67°AZ									
18,790.00	92.93	269.67	8,419.14	565.26	-10,292.76	10,288.45	0.00	0.00	0.00
PTB: 18790.00' MD, 92.93°INC, 269.67°AZ - 07-PBHL(BB-133H)									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
18,723.04	8,422.55	565.64	-10,225.89	100FWL: 18723.04' MD, 10221.58' VS, 8422.55' TVD
18,730.00	8,422.20	565.60	-10,232.84	Final MWD Survey: 18730.00' MD, 92.93°INC, 269.67°AZ
18,790.00	8,419.14	565.26	-10,292.76	PTB: 18790.00' MD, 92.93°INC, 269.67°AZ

Checked By: _____	Approved By: _____	Date: _____
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District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

ACKNOWLEDGMENTS

Action 112396

ACKNOWLEDGMENTS

Operator: COLGATE OPERATING, LLC 300 North Marienfeld Street Midland, TX 79701	OGRID: 371449
	Action Number: 112396
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 112396

CONDITIONS

Operator: COLGATE OPERATING, LLC 300 North Marienfeld Street Midland, TX 79701	OGRID: 371449
	Action Number: 112396
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
jagarcia	See corrected property code on C-104	6/22/2022
jagarcia	RT expires on 9-1-2022	6/22/2022