

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 NW	
⁴ API Number 30 – 015 – 47823	⁵ Pool Name PARKWAY; BONE SPRING		⁶ Pool Code 49622
⁷ Property Code 329892	⁸ Property Name BLACK DIAMOND 34 FED		⁹ Well Number 132H

II. ¹⁰ Surface Location

UL or lot no. H	Section 34	Township 19S	Range 29E	Lot Idn	Feet from the 1395	North/South Line North	Feet from the 301	East/West line East	County Eddy
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¹¹ Bottom Hole Location

UL or lot no. G	Section 33	Township 19S	Range 29E	Lot Idn	Feet from the 2297	North/South line North	Feet from the 2623	East/West line East	County Eddy
¹² Lse Code F	¹³ Producing Method Code		¹⁴ Gas Connection Date 01/01/2021		¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date	

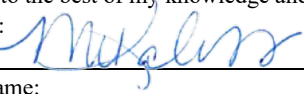
III. Oil and Gas Transporters

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 10/27/2021	²² Ready Date 03/04/2022	²³ TD 16,758 MD 9,073 TVD	²⁴ PBTD 16,654 MD 8,977 TVD	²⁵ Perforations 9,455-16,530	²⁶ DHC, MC
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set	³⁰ Sacks Cement
22.375		18.625		343	355
17.5		13.375		1,517	560 Lead 255 Tail
12.25		9.625		3,405	625 Lead 230 Tail
8.75		5.5		16,746	920 Lead 1,325 Tail

V. Well Test Data

³¹ Date New Oil 3/23/2022	³² Gas Delivery Date 1.56	³³ Test Date 4/3/2022	³⁴ Test Length 24	³⁵ Tbg. Pressure 1220	³⁶ Csg. Pressure 351
³⁷ Choke Size 88/88	³⁸ Oil 891	³⁹ Water 2608	⁴⁰ Gas 920		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: 			OIL CONSERVATION DIVISION		
Printed name: Mikah Thomas			Approved by: PATRICIA MARTINEZ		
Title: Sr. Regulatory Analyst			Title: PETROLEUM SPECIALIST		
E-mail Address: mthomas@colgateenergy.com			Approval Date: 6/13/2022		
Date: 05/15/2022		Phone: 432-695-4272			

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

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3480 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised August 1, 2011

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Submit one copy to appropriate
District Office

AS-DRILLED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-47823	² Pool Code 49622	³ Pool Name PARKWAY; BONE SPRING
⁴ Property Code 329892	⁵ Property Name Black Diamond 34 Fed	⁶ Well Number 132H
⁷ OGRID No. 371449	⁸ Operator Name Colgate Operating, LLC	⁹ Elevation 3317

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
H	34	19 S	29 E		1395	North	301	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
G	33	19 S	29 E		2297	North	2623	East	Eddy

¹² Dedicated Acres 240	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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Legend:
 ● = Surface Location
 ○ = Bottom Hole Location
 ◇ = Kick Off Point (KOP)
 △ = First Take Point (FTP)
 □ = Last Take Point (LTP)
 ⊕ = Found 1916 USGLO Brass Cap
 ⊙ = Found Monument

SURFACE LOCATION
 NAD 83 NMSPC ZONE 3001
 Y= 589610.72 N
 X= 626996.28 E
 LAT.= 32.6205822° N
 LONG.= 104.0551143° W

KICK OFF POINT
 NAD 83 NMSPC ZONE 3001
 Y= 588836.98 N
 X= 627227.70 E
 LAT.= 32.6184537° N
 LONG.= 104.0543692° W

FIRST TAKE POINT
 NAD 83 NMSPC ZONE 3001
 Y= 588725.21 N
 X= 626679.02 E
 LAT.= 32.6181505° N
 LONG.= 104.0561522° W

LAST TAKE POINT
 NAD 83 NMSPC ZONE 3001
 Y= 588730.02 N
 X= 619614.65 E
 LAT.= 32.6182122° N
 LONG.= 104.0790964° W

CORNER COORDINATES TABLE
 NAD 83 NME

A - Y= 591027.43 N, X= 616739.51 E	A - LAT.=32.6245457° N, LONG.=104.0884173° W
B - Y= 591013.94 N, X= 622006.62 E	B - LAT.=32.6244741° N, LONG.=104.0713093° W
C - Y= 591005.32 N, X= 627295.72 E	C - LAT.=32.6244134° N, LONG.=104.0541298° W
D - Y= 588388.25 N, X= 616742.30 E	D - LAT.=32.6172913° N, LONG.=104.0884280° W
E - Y= 588372.64 N, X= 622012.21 E	E - LAT.=32.6172139° N, LONG.=104.0713123° W
F - Y= 588365.48 N, X= 627298.21 E	F - LAT.=32.6171572° N, LONG.=104.0541443° W

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.

Mikah Thomas 05.22.2022
 Signature Date
 Mikah Thomas
 Printed Name
 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.

3/27/21
 Date of Survey
 Plat Revised: 5/9/22
 Signature and Seal of Professional Surveyor

MARSHALL W. LINDEEN
 NEW MEXICO
 17078
 5-18-22
 PROFESSIONAL SURVEYOR

17078
 Certificate Number

Diagram Details:
 Section 33 and Section 34.
 SURFACE LOCATION: 1395' FNL, 301' FEL, MD=0.00
 KOP: 2168' FNL, 70' FEL, MD=8,529.00
 FTP: 2281' FNL, 619' FEL, MD=9,455.00
 LTP: 2290' FNL, 2397' FEL, MD=16,530.00
 BHL: 2297' FNL, 2623' FEL, MD=16,758.00
 1/2" Rebar at corners A, B, C, D, E, F.
 Spike Near Rock & Fence at corner B.
 Stone Monument at corner F.
 NOTE: DOWNHOLE INFORMATION TAKEN FROM A REPORT FURNISHED BY COLGATE ENERGY, DATED 1-20-22
 T-19-S
 T-20-S



Colgate Energy

Eddy County, NM (N83-NME)

Black Diamond 34 Fed Com

Black Diamond 34 Fed 132H

30-015-47823

132H

Design: DRL

Standard Survey Report

20 January, 2022



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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	Black Diamond 34 Fed Com		
Site Position:		Northing:	589,010.96 usft
From:	Map	Easting:	627,173.41 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.61893234
		Longitude:	-104.05454408

Well	Black Diamond 34 Fed 132H		
Well Position	+N/-S	0.00 usft	Northing: 589,610.72 usft
	+E/-W	0.00 usft	Easting: 626,996.28 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
Grid Convergence:	0.15 °	Ground Level:	3,314.00 usft

Wellbore	132H		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IFR	11/1/2021	6.96
			Dip Angle (°)
			60.34
			Field Strength (nT)
			47,803.20000000

Design	DRL		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°)
			270.11

Survey Program	Date	1/20/2022		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
15.00	16,699.00	Survey #0_SQC (132H)	MWD+IFR1+SAG+FDIR (SQ OWSG MWD + IFR1 + Sag + FDIR Correction	
16,758.00	16,758.00	Survey #0_SQC_PTB (132H)	BLIND	BLIND

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15.00	0.14	161.38	15.00	-0.02	0.01	-0.01	0.93	0.93	0.00	
30.00	0.28	161.38	30.00	-0.07	0.02	-0.02	0.93	0.93	0.00	
45.00	0.41	161.37	45.00	-0.16	0.05	-0.05	0.87	0.87	-0.07	
60.00	0.55	161.37	60.00	-0.27	0.09	-0.09	0.93	0.93	0.00	
75.00	0.69	161.37	75.00	-0.43	0.14	-0.15	0.93	0.93	0.00	
90.00	0.82	161.36	90.00	-0.62	0.21	-0.21	0.87	0.87	-0.07	
105.00	0.96	161.36	105.00	-0.84	0.28	-0.28	0.93	0.93	0.00	
120.00	1.10	161.36	119.99	-1.09	0.37	-0.37	0.93	0.93	0.00	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
135.00	1.23	161.35	134.99	-1.38	0.47	-0.47	0.87	0.87	-0.07	
150.00	1.37	161.35	149.99	-1.70	0.57	-0.58	0.93	0.93	0.00	
165.00	1.51	161.34	164.98	-2.06	0.69	-0.70	0.93	0.93	-0.07	
180.00	1.65	161.34	179.98	-2.45	0.83	-0.83	0.93	0.93	0.00	
195.00	1.78	161.34	194.97	-2.88	0.97	-0.98	0.87	0.87	0.00	
209.29	1.81	161.34	209.25	-3.30	1.11	-1.12	0.21	0.21	0.00	
223.57	1.84	161.37	223.52	-3.73	1.26	-1.27	0.21	0.21	0.21	
237.86	1.88	161.41	237.81	-4.17	1.41	-1.42	0.28	0.28	0.28	
252.14	1.91	161.45	252.08	-4.62	1.56	-1.57	0.21	0.21	0.28	
266.43	1.95	161.49	266.36	-5.08	1.71	-1.72	0.28	0.28	0.28	
280.71	1.99	161.53	280.63	-5.54	1.87	-1.88	0.28	0.28	0.28	
295.00	2.02	161.56	294.91	-6.02	2.02	-2.04	0.21	0.21	0.21	
309.29	2.06	161.58	309.19	-6.50	2.19	-2.20	0.28	0.28	0.14	
323.57	2.09	161.60	323.47	-6.99	2.35	-2.36	0.21	0.21	0.14	
337.86	2.12	161.61	337.75	-7.49	2.51	-2.53	0.21	0.21	0.07	
352.14	2.15	161.62	352.02	-7.99	2.68	-2.70	0.21	0.21	0.07	
366.43	2.17	161.62	366.30	-8.50	2.85	-2.87	0.14	0.14	0.00	
380.71	2.17	161.63	380.57	-9.02	3.02	-3.04	0.00	0.00	0.07	
395.00	2.17	161.66	394.85	-9.53	3.19	-3.21	0.01	0.00	0.21	
408.00	2.15	161.73	407.84	-9.99	3.35	-3.37	0.16	-0.15	0.54	
421.00	2.11	161.79	420.83	-10.45	3.50	-3.52	0.31	-0.31	0.46	
434.00	2.06	161.85	433.82	-10.90	3.65	-3.67	0.38	-0.38	0.46	
447.00	2.01	161.88	446.81	-11.34	3.79	-3.81	0.38	-0.38	0.23	
460.00	1.94	161.85	459.80	-11.77	3.93	-3.95	0.54	-0.54	-0.23	
473.00	1.87	161.72	472.80	-12.18	4.06	-4.09	0.54	-0.54	-1.00	
488.00	1.76	161.36	487.79	-12.63	4.21	-4.24	0.74	-0.73	-2.40	
503.00	1.65	160.80	502.78	-13.05	4.36	-4.38	0.74	-0.73	-3.73	
518.00	1.54	160.05	517.78	-13.44	4.50	-4.52	0.75	-0.73	-5.00	
533.00	1.43	159.12	532.77	-13.81	4.63	-4.66	0.75	-0.73	-6.20	
548.00	1.34	158.00	547.77	-14.15	4.77	-4.79	0.63	-0.60	-7.47	
563.00	1.27	156.77	562.76	-14.46	4.90	-4.93	0.50	-0.47	-8.20	
577.83	1.24	155.74	577.59	-14.76	5.03	-5.06	0.25	-0.20	-6.95	
592.67	1.22	154.63	592.42	-15.05	5.16	-5.19	0.21	-0.13	-7.48	
607.50	1.22	153.42	607.25	-15.33	5.30	-5.33	0.17	0.00	-8.16	
622.33	1.22	152.03	622.08	-15.61	5.45	-5.48	0.20	0.00	-9.37	
637.17	1.29	151.29	636.91	-15.90	5.60	-5.63	0.48	0.47	-4.99	
652.00	1.36	151.85	651.74	-16.20	5.76	-5.79	0.48	0.47	3.78	
665.00	1.33	149.63	664.74	-16.47	5.91	-5.94	0.46	-0.23	-17.08	
678.00	1.30	146.98	677.73	-16.72	6.07	-6.10	0.52	-0.23	-20.38	
691.00	1.27	143.96	690.73	-16.96	6.23	-6.27	0.57	-0.23	-23.23	
704.00	1.24	140.61	703.73	-17.19	6.41	-6.44	0.61	-0.23	-25.77	
717.00	1.22	136.99	716.72	-17.40	6.59	-6.62	0.62	-0.15	-27.85	
730.00	1.21	133.17	729.72	-17.59	6.79	-6.82	0.63	-0.08	-29.38	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
743.00	1.21	129.27	742.72	-17.77	6.99	-7.03	0.63	0.00	-30.00
757.11	1.19	125.08	756.83	-17.95	7.23	-7.26	0.64	-0.14	-29.70
771.22	1.18	120.72	770.93	-18.11	7.47	-7.51	0.64	-0.07	-30.90
785.33	1.19	116.35	785.04	-18.25	7.73	-7.76	0.64	0.07	-30.97
799.44	1.20	112.11	799.15	-18.37	8.00	-8.03	0.63	0.07	-30.05
813.56	1.23	108.14	813.26	-18.47	8.28	-8.31	0.63	0.21	-28.12
827.67	1.27	104.58	827.37	-18.56	8.57	-8.61	0.62	0.28	-25.23
841.78	1.31	101.58	841.48	-18.63	8.88	-8.92	0.56	0.28	-21.26
855.89	1.37	99.27	855.58	-18.69	9.21	-9.24	0.57	0.43	-16.37
870.00	1.44	97.86	869.69	-18.74	9.55	-9.58	0.55	0.50	-9.99
883.43	1.52	96.63	883.11	-18.78	9.89	-9.93	0.64	0.60	-9.16
896.86	1.62	95.93	896.54	-18.82	10.26	-10.29	0.76	0.74	-5.21
910.29	1.72	95.55	909.96	-18.86	10.65	-10.68	0.75	0.74	-2.83
923.71	1.83	95.37	923.38	-18.90	11.06	-11.10	0.82	0.82	-1.34
937.14	1.95	95.31	936.80	-18.94	11.50	-11.54	0.89	0.89	-0.45
950.57	2.08	95.30	950.22	-18.99	11.97	-12.01	0.97	0.97	-0.07
964.00	2.22	95.31	963.64	-19.03	12.47	-12.51	1.04	1.04	0.07
977.57	2.37	95.88	977.20	-19.09	13.02	-13.05	1.12	1.11	4.20
991.14	2.52	96.45	990.76	-19.15	13.59	-13.63	1.12	1.11	4.20
1,004.71	2.68	96.98	1,004.31	-19.22	14.20	-14.24	1.19	1.18	3.91
1,018.29	2.84	97.46	1,017.88	-19.30	14.85	-14.89	1.19	1.18	3.53
1,031.86	2.99	97.90	1,031.43	-19.40	15.54	-15.57	1.12	1.11	3.24
1,045.43	3.12	98.29	1,044.98	-19.50	16.25	-16.29	0.97	0.96	2.87
1,059.00	3.25	98.64	1,058.53	-19.61	17.00	-17.03	0.97	0.96	2.58
1,072.43	3.34	99.11	1,071.94	-19.73	17.76	-17.80	0.70	0.67	3.50
1,085.86	3.41	99.50	1,085.34	-19.86	18.54	-18.58	0.55	0.52	2.90
1,099.29	3.40	99.78	1,098.75	-19.99	19.33	-19.36	0.14	-0.07	2.08
1,112.71	3.02	99.78	1,112.15	-20.12	20.07	-20.11	2.83	-2.83	0.00
1,126.14	2.77	95.45	1,125.56	-20.21	20.74	-20.78	2.47	-1.86	-32.24
1,139.57	2.76	95.65	1,138.98	-20.27	21.38	-21.42	0.10	-0.07	1.49
1,153.00	2.72	95.81	1,152.39	-20.33	22.02	-22.06	0.30	-0.30	1.19
1,166.57	2.64	95.49	1,165.95	-20.40	22.65	-22.69	0.60	-0.59	-2.36
1,180.14	2.54	94.87	1,179.50	-20.45	23.26	-23.30	0.77	-0.74	-4.57
1,193.71	2.41	93.92	1,193.06	-20.50	23.85	-23.89	1.00	-0.96	-7.00
1,207.29	2.27	92.58	1,206.63	-20.53	24.40	-24.44	1.11	-1.03	-9.87
1,220.86	2.12	90.68	1,220.19	-20.54	24.92	-24.96	1.23	-1.11	-14.00
1,234.43	1.96	87.98	1,233.75	-20.54	25.40	-25.44	1.38	-1.18	-19.90
1,248.00	1.79	83.99	1,247.31	-20.51	25.85	-25.89	1.58	-1.25	-29.40
1,261.43	1.58	79.32	1,260.74	-20.45	26.24	-26.28	1.87	-1.56	-34.77
1,274.86	1.38	79.52	1,274.16	-20.39	26.58	-26.62	1.49	-1.49	1.49
1,288.29	1.29	96.06	1,287.59	-20.38	26.89	-26.93	2.94	-0.67	123.16
1,301.71	1.35	112.63	1,301.01	-20.45	27.18	-27.22	2.87	0.45	123.47
1,315.14	1.34	121.69	1,314.43	-20.60	27.46	-27.50	1.58	-0.07	67.46



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
1,328.57	1.10	116.93	1,327.86	-20.74	27.71	-27.75	1.94	-1.79	-35.44
1,342.00	0.88	110.37	1,341.29	-20.83	27.92	-27.96	1.84	-1.64	-48.85
1,355.43	0.81	99.70	1,354.72	-20.88	28.11	-28.15	1.28	-0.52	-79.45
1,368.86	0.77	87.54	1,368.14	-20.89	28.30	-28.34	1.28	-0.30	-90.54
1,382.29	0.77	74.79	1,381.57	-20.87	28.47	-28.51	1.27	0.00	-94.94
1,395.71	0.81	62.63	1,394.99	-20.80	28.65	-28.69	1.28	0.30	-90.61
1,409.14	0.88	51.97	1,408.42	-20.69	28.81	-28.85	1.28	0.52	-79.37
1,422.57	0.98	43.13	1,421.85	-20.55	28.97	-29.01	1.30	0.74	-65.82
1,436.00	1.09	36.00	1,435.28	-20.36	29.12	-29.16	1.26	0.82	-53.09
1,450.89	1.04	34.42	1,450.16	-20.13	29.28	-29.32	0.39	-0.34	-10.61
1,465.78	1.14	32.11	1,465.05	-19.89	29.44	-29.48	0.73	0.67	-15.51
1,480.67	1.26	30.39	1,479.94	-19.63	29.60	-29.64	0.84	0.81	-11.55
1,495.56	1.37	28.96	1,494.82	-19.33	29.77	-29.81	0.77	0.74	-9.60
1,510.44	1.49	27.75	1,509.70	-19.00	29.95	-29.98	0.83	0.81	-8.13
1,525.33	1.61	26.72	1,524.58	-18.65	30.13	-30.17	0.83	0.81	-6.92
1,540.22	1.73	25.83	1,539.47	-18.26	30.32	-30.36	0.82	0.81	-5.98
1,555.11	1.85	25.05	1,554.35	-17.84	30.52	-30.56	0.82	0.81	-5.24
1,570.00	1.96	24.37	1,569.23	-17.39	30.73	-30.76	0.75	0.74	-4.57
1,584.00	2.01	24.47	1,583.22	-16.95	30.93	-30.96	0.36	0.36	0.71
1,598.00	2.06	24.70	1,597.22	-16.49	31.14	-31.17	0.36	0.36	1.64
1,612.00	2.09	25.07	1,611.21	-16.03	31.35	-31.38	0.23	0.21	2.64
1,626.00	2.09	25.63	1,625.20	-15.57	31.57	-31.60	0.15	0.00	4.00
1,639.43	2.02	26.34	1,638.62	-15.14	31.78	-31.81	0.55	-0.52	5.29
1,652.86	1.90	27.15	1,652.04	-14.73	31.99	-32.01	0.92	-0.89	6.03
1,666.29	1.60	35.57	1,665.46	-14.38	32.20	-32.22	2.94	-2.23	62.70
1,679.71	1.42	39.18	1,678.88	-14.10	32.41	-32.44	1.52	-1.34	26.90
1,693.14	1.26	41.02	1,692.31	-13.86	32.61	-32.64	1.23	-1.19	13.70
1,706.57	1.10	42.87	1,705.73	-13.65	32.80	-32.82	1.22	-1.19	13.78
1,720.00	0.82	54.98	1,719.16	-13.50	32.96	-32.99	2.56	-2.08	90.17
1,733.57	0.65	102.31	1,732.73	-13.46	33.12	-33.14	4.50	-1.25	348.78
1,747.14	0.96	141.66	1,746.30	-13.57	33.26	-33.29	4.54	2.28	289.98
1,760.71	1.49	158.02	1,759.87	-13.82	33.40	-33.43	4.64	3.91	120.56
1,774.29	1.34	151.87	1,773.44	-14.12	33.54	-33.57	1.57	-1.10	-45.29
1,787.86	1.21	143.24	1,787.01	-14.38	33.70	-33.73	1.71	-0.96	-63.60
1,801.43	1.11	132.95	1,800.58	-14.58	33.88	-33.91	1.70	-0.74	-75.83
1,815.00	1.06	122.79	1,814.14	-14.74	34.09	-34.11	1.46	-0.37	-74.87
1,828.43	1.24	129.53	1,827.57	-14.90	34.30	-34.33	1.67	1.34	50.19
1,841.86	1.49	135.37	1,841.00	-15.12	34.54	-34.57	2.13	1.86	43.48
1,855.29	1.75	144.54	1,854.42	-15.41	34.78	-34.81	2.73	1.94	68.28
1,868.71	2.36	156.47	1,867.83	-15.83	35.01	-35.04	5.53	4.55	88.90
1,882.14	3.04	163.28	1,881.25	-16.42	35.22	-35.25	5.59	5.06	50.71
1,895.57	3.76	167.63	1,894.65	-17.19	35.42	-35.45	5.69	5.36	32.39
1,909.00	4.15	169.48	1,908.05	-18.10	35.60	-35.64	3.06	2.90	13.78
1,922.57	4.65	170.15	1,921.58	-19.13	35.78	-35.82	3.70	3.68	4.94



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
1,936.14	5.36	170.77	1,935.10	-20.30	35.98	-36.02	5.25	5.23	4.57	
1,949.71	6.08	171.25	1,948.60	-21.63	36.19	-36.23	5.32	5.31	3.54	
1,963.29	6.55	171.75	1,962.10	-23.11	36.41	-36.46	3.48	3.46	3.68	
1,976.86	6.49	172.50	1,975.58	-24.63	36.62	-36.67	0.77	-0.44	5.53	
1,990.43	6.43	173.26	1,989.07	-26.15	36.81	-36.86	0.77	-0.44	5.60	
2,004.00	6.34	173.83	2,002.55	-27.65	36.98	-37.03	0.81	-0.66	4.20	
2,017.43	6.20	173.79	2,015.90	-29.11	37.14	-37.20	1.04	-1.04	-0.30	
2,030.86	6.04	173.41	2,029.25	-30.53	37.30	-37.36	1.23	-1.19	-2.83	
2,044.29	5.86	172.78	2,042.61	-31.91	37.47	-37.53	1.43	-1.34	-4.69	
2,057.71	5.69	171.97	2,055.96	-33.25	37.65	-37.71	1.40	-1.27	-6.04	
2,071.14	5.53	171.04	2,069.33	-34.55	37.84	-37.91	1.37	-1.19	-6.92	
2,084.57	5.38	170.06	2,082.70	-35.81	38.05	-38.12	1.31	-1.12	-7.30	
2,098.00	5.28	169.11	2,096.07	-37.04	38.27	-38.35	0.99	-0.74	-7.07	
2,111.43	5.22	168.38	2,109.44	-38.24	38.51	-38.59	0.67	-0.45	-5.44	
2,124.86	5.19	167.73	2,122.82	-39.43	38.77	-38.84	0.49	-0.22	-4.84	
2,138.29	5.19	167.15	2,136.19	-40.62	39.03	-39.11	0.39	0.00	-4.32	
2,151.71	5.20	166.67	2,149.56	-41.80	39.31	-39.39	0.33	0.07	-3.58	
2,165.14	5.23	166.30	2,162.93	-42.99	39.59	-39.67	0.34	0.22	-2.76	
2,178.57	5.25	166.08	2,176.31	-44.18	39.88	-39.97	0.21	0.15	-1.64	
2,192.00	5.27	166.05	2,189.68	-45.37	40.18	-40.27	0.15	0.15	-0.22	
2,205.43	5.28	166.33	2,203.05	-46.57	40.48	-40.56	0.21	0.07	2.08	
2,218.86	5.71	166.36	2,216.42	-47.82	40.78	-40.87	3.20	3.20	0.22	
2,232.29	6.39	166.47	2,229.78	-49.20	41.11	-41.21	5.06	5.06	0.82	
2,245.71	7.09	166.68	2,243.10	-50.73	41.48	-41.57	5.22	5.22	1.56	
2,259.14	7.41	166.88	2,256.43	-52.38	41.86	-41.96	2.39	2.38	1.49	
2,272.57	7.43	167.38	2,269.74	-54.07	42.25	-42.35	0.50	0.15	3.72	
2,286.00	7.47	167.85	2,283.06	-55.77	42.62	-42.73	0.54	0.30	3.50	
2,299.43	7.53	168.17	2,296.38	-57.49	42.99	-43.10	0.54	0.45	2.38	
2,312.86	7.62	168.39	2,309.69	-59.22	43.35	-43.46	0.70	0.67	1.64	
2,326.29	7.70	168.56	2,323.00	-60.98	43.71	-43.82	0.62	0.60	1.27	
2,339.71	7.80	168.68	2,336.30	-62.75	44.06	-44.18	0.75	0.75	0.89	
2,353.14	7.89	168.79	2,349.60	-64.55	44.42	-44.54	0.68	0.67	0.82	
2,366.57	7.97	168.90	2,362.90	-66.36	44.78	-44.91	0.61	0.60	0.82	
2,380.00	8.03	169.01	2,376.20	-68.20	45.14	-45.27	0.46	0.45	0.82	
2,394.54	8.07	169.16	2,390.60	-70.20	45.52	-45.66	0.31	0.28	1.03	
2,409.08	8.09	169.33	2,404.99	-72.21	45.90	-46.04	0.21	0.14	1.17	
2,423.62	8.10	169.52	2,419.39	-74.22	46.28	-46.42	0.20	0.07	1.31	
2,438.15	8.10	169.72	2,433.77	-76.23	46.65	-46.79	0.19	0.00	1.38	
2,452.69	8.09	169.92	2,448.17	-78.25	47.01	-47.16	0.21	-0.07	1.38	
2,467.23	8.08	170.13	2,462.57	-80.26	47.36	-47.52	0.21	-0.07	1.44	
2,481.77	8.06	170.35	2,476.96	-82.27	47.71	-47.87	0.25	-0.14	1.51	
2,496.31	8.05	170.57	2,491.36	-84.28	48.05	-48.21	0.22	-0.07	1.51	
2,510.85	8.03	170.80	2,505.75	-86.29	48.38	-48.54	0.26	-0.14	1.58	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
2,525.38	8.01	171.03	2,520.14	-88.29	48.70	-48.87	0.26	-0.14	1.58	
2,539.92	7.99	171.26	2,534.54	-90.29	49.01	-49.18	0.26	-0.14	1.58	
2,554.46	7.97	171.50	2,548.94	-92.29	49.31	-49.49	0.27	-0.14	1.65	
2,569.00	7.95	171.74	2,563.34	-94.28	49.61	-49.79	0.27	-0.14	1.65	
2,583.54	7.92	171.99	2,577.74	-96.27	49.89	-50.07	0.31	-0.21	1.72	
2,598.08	7.89	172.23	2,592.14	-98.25	50.16	-50.35	0.31	-0.21	1.65	
2,612.62	7.86	172.48	2,606.55	-100.22	50.43	-50.62	0.31	-0.21	1.72	
2,627.15	7.83	172.73	2,620.94	-102.19	50.68	-50.88	0.31	-0.21	1.72	
2,641.69	7.80	172.98	2,635.34	-104.15	50.93	-51.13	0.31	-0.21	1.72	
2,656.23	7.77	173.24	2,649.75	-106.10	51.17	-51.37	0.32	-0.21	1.79	
2,670.77	7.74	173.49	2,664.16	-108.05	51.39	-51.60	0.31	-0.21	1.72	
2,685.31	7.71	173.74	2,678.57	-110.00	51.61	-51.82	0.31	-0.21	1.72	
2,699.85	7.69	174.00	2,692.97	-111.93	51.82	-52.03	0.28	-0.14	1.79	
2,714.38	7.66	174.25	2,707.37	-113.86	52.02	-52.24	0.31	-0.21	1.72	
2,728.92	7.65	174.49	2,721.78	-115.79	52.21	-52.43	0.23	-0.07	1.65	
2,743.46	7.63	174.74	2,736.20	-117.72	52.39	-52.61	0.27	-0.14	1.72	
2,758.00	7.63	174.97	2,750.61	-119.64	52.56	-52.79	0.21	0.00	1.58	
2,772.54	7.65	175.19	2,765.02	-121.56	52.73	-52.96	0.24	0.14	1.51	
2,787.08	7.67	175.40	2,779.43	-123.50	52.89	-53.12	0.24	0.14	1.44	
2,801.62	7.70	175.61	2,793.84	-125.43	53.04	-53.28	0.28	0.21	1.44	
2,816.15	7.73	175.80	2,808.24	-127.38	53.18	-53.43	0.27	0.21	1.31	
2,830.69	7.77	175.99	2,822.64	-129.33	53.32	-53.57	0.33	0.28	1.31	
2,845.23	7.81	176.17	2,837.05	-131.30	53.46	-53.71	0.32	0.28	1.24	
2,859.77	7.85	176.34	2,851.45	-133.28	53.59	-53.84	0.32	0.28	1.17	
2,874.31	7.89	176.50	2,865.86	-135.26	53.71	-53.97	0.31	0.28	1.10	
2,888.85	7.93	176.65	2,880.26	-137.26	53.83	-54.10	0.31	0.28	1.03	
2,903.38	7.97	176.78	2,894.65	-139.27	53.95	-54.22	0.30	0.28	0.89	
2,917.92	8.00	176.90	2,909.05	-141.29	54.06	-54.33	0.24	0.21	0.83	
2,932.46	8.04	176.98	2,923.45	-143.31	54.17	-54.44	0.29	0.28	0.55	
2,947.00	8.07	177.03	2,937.84	-145.35	54.27	-54.55	0.21	0.21	0.34	
2,961.54	8.10	177.03	2,952.24	-147.39	54.38	-54.66	0.21	0.21	0.00	
2,976.08	8.12	176.99	2,966.63	-149.44	54.49	-54.77	0.14	0.14	-0.28	
2,990.62	8.14	176.92	2,981.03	-151.49	54.60	-54.89	0.15	0.14	-0.48	
3,005.15	8.15	176.84	2,995.41	-153.54	54.71	-55.00	0.10	0.07	-0.55	
3,019.69	8.17	176.75	3,009.80	-155.61	54.82	-55.12	0.16	0.14	-0.62	
3,034.23	8.18	176.66	3,024.19	-157.67	54.94	-55.25	0.11	0.07	-0.62	
3,048.77	8.20	176.56	3,038.59	-159.74	55.07	-55.37	0.17	0.14	-0.69	
3,063.31	8.21	176.46	3,052.98	-161.81	55.19	-55.50	0.12	0.07	-0.69	
3,077.85	8.22	176.37	3,067.37	-163.88	55.32	-55.64	0.11	0.07	-0.62	
3,092.38	8.23	176.29	3,081.75	-165.96	55.45	-55.77	0.10	0.07	-0.55	
3,106.92	8.23	176.23	3,096.14	-168.03	55.59	-55.91	0.06	0.00	-0.41	
3,121.46	8.24	176.19	3,110.53	-170.11	55.73	-56.05	0.08	0.07	-0.28	
3,136.00	8.24	176.19	3,124.92	-172.19	55.87	-56.20	0.00	0.00	0.00	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
3,150.00	8.23	176.26	3,138.77	-174.19	56.00	-56.33	0.10	-0.07	0.50	
3,164.00	8.23	176.37	3,152.63	-176.19	56.13	-56.47	0.11	-0.00	0.79	
3,178.00	8.22	176.50	3,166.49	-178.19	56.25	-56.59	0.15	-0.07	0.93	
3,192.00	8.21	176.66	3,180.34	-180.19	56.37	-56.72	0.18	-0.07	1.14	
3,206.00	8.20	176.82	3,194.20	-182.18	56.48	-56.83	0.18	-0.07	1.14	
3,220.00	8.19	176.99	3,208.06	-184.17	56.59	-56.95	0.19	-0.07	1.21	
3,234.00	8.17	177.17	3,221.91	-186.16	56.69	-57.05	0.23	-0.14	1.29	
3,248.00	8.16	177.34	3,235.77	-188.15	56.79	-57.15	0.19	-0.07	1.21	
3,262.00	8.15	177.52	3,249.63	-190.13	56.88	-57.24	0.20	-0.07	1.29	
3,276.00	8.14	177.69	3,263.49	-192.12	56.96	-57.33	0.19	-0.07	1.21	
3,290.00	8.13	177.85	3,277.35	-194.10	57.04	-57.41	0.18	-0.07	1.14	
3,304.00	8.12	178.01	3,291.21	-196.07	57.11	-57.49	0.18	-0.07	1.14	
3,318.00	8.11	178.14	3,305.07	-198.05	57.18	-57.56	0.15	-0.07	0.93	
3,332.00	8.11	178.24	3,318.93	-200.02	57.24	-57.62	0.10	0.00	0.71	
3,345.67	8.12	178.30	3,332.46	-201.95	57.30	-57.68	0.10	0.07	0.44	
3,359.33	8.13	178.33	3,345.98	-203.88	57.35	-57.74	0.08	0.07	0.22	
3,373.00	8.15	178.34	3,359.52	-205.82	57.41	-57.80	0.15	0.15	0.07	
3,386.67	8.17	178.34	3,373.05	-207.75	57.47	-57.86	0.15	0.15	0.00	
3,400.33	8.19	178.34	3,386.57	-209.70	57.52	-57.92	0.15	0.15	0.00	
3,414.00	8.21	178.35	3,400.10	-211.65	57.58	-57.98	0.15	0.15	0.07	
3,427.67	8.22	178.37	3,413.63	-213.60	57.63	-58.04	0.08	0.07	0.15	
3,441.33	8.24	178.41	3,427.15	-215.55	57.69	-58.10	0.15	0.15	0.29	
3,455.00	8.26	178.48	3,440.68	-217.51	57.74	-58.16	0.16	0.15	0.51	
3,468.57	8.28	178.61	3,454.11	-219.47	57.79	-58.21	0.20	0.15	0.96	
3,482.14	8.29	178.78	3,467.53	-221.42	57.84	-58.26	0.19	0.07	1.25	
3,495.71	8.31	178.96	3,480.96	-223.38	57.88	-58.30	0.24	0.15	1.33	
3,509.29	8.31	179.14	3,494.40	-225.34	57.91	-58.34	0.19	0.00	1.33	
3,522.86	8.32	179.32	3,507.83	-227.30	57.93	-58.37	0.21	0.07	1.33	
3,536.43	8.31	179.47	3,521.25	-229.27	57.95	-58.39	0.18	-0.07	1.11	
3,550.00	8.30	179.59	3,534.68	-231.23	57.97	-58.41	0.15	-0.07	0.88	
3,563.43	8.26	179.64	3,547.97	-233.16	57.98	-58.43	0.30	-0.30	0.37	
3,576.86	8.22	179.65	3,561.26	-235.08	58.00	-58.45	0.30	-0.30	0.07	
3,590.29	8.16	179.63	3,574.56	-237.00	58.01	-58.46	0.45	-0.45	-0.15	
3,603.71	8.11	179.58	3,587.84	-238.90	58.02	-58.48	0.38	-0.37	-0.37	
3,617.14	8.05	179.50	3,601.14	-240.78	58.04	-58.50	0.45	-0.45	-0.60	
3,630.57	7.99	179.38	3,614.44	-242.66	58.05	-58.52	0.46	-0.45	-0.89	
3,644.00	7.52	173.97	3,627.74	-244.47	58.16	-58.63	6.46	-3.50	-40.28	
3,657.57	7.41	172.94	3,641.20	-246.22	58.36	-58.83	1.28	-0.81	-7.59	
3,671.14	7.36	172.64	3,654.66	-247.95	58.58	-59.05	0.47	-0.37	-2.21	
3,684.71	7.31	172.33	3,668.11	-249.67	58.80	-59.28	0.47	-0.37	-2.28	
3,698.29	7.26	172.02	3,681.59	-251.37	59.04	-59.52	0.47	-0.37	-2.28	
3,711.86	7.22	171.76	3,695.05	-253.06	59.28	-59.76	0.38	-0.29	-1.92	
3,725.43	7.18	171.59	3,708.51	-254.75	59.53	-60.01	0.33	-0.29	-1.25	
3,739.00	7.16	171.57	3,721.97	-256.42	59.77	-60.27	0.15	-0.15	-0.15	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
3,752.43	7.16	171.81	3,735.30	-258.08	60.01	-60.51	0.22	0.00	1.79	
3,765.86	7.17	172.18	3,748.62	-259.74	60.25	-60.75	0.35	0.07	2.76	
3,779.29	7.18	172.62	3,761.95	-261.40	60.47	-60.97	0.42	0.07	3.28	
3,792.71	7.19	173.06	3,775.26	-263.07	60.68	-61.18	0.42	0.07	3.28	
3,806.14	7.17	173.47	3,788.59	-264.73	60.88	-61.38	0.41	-0.15	3.05	
3,819.57	7.12	173.78	3,801.91	-266.39	61.06	-61.57	0.47	-0.37	2.31	
3,833.00	7.03	173.92	3,815.24	-268.04	61.24	-61.75	0.68	-0.67	1.04	
3,846.57	6.85	173.67	3,828.71	-269.67	61.42	-61.93	1.35	-1.33	-1.84	
3,860.14	6.63	173.17	3,842.19	-271.25	61.60	-62.12	1.68	-1.62	-3.68	
3,873.71	6.38	172.50	3,855.67	-272.77	61.79	-62.31	1.93	-1.84	-4.94	
3,887.29	6.11	171.70	3,869.17	-274.24	61.99	-62.52	2.09	-1.99	-5.89	
3,900.86	5.85	170.84	3,882.67	-275.64	62.21	-62.74	2.03	-1.92	-6.34	
3,914.43	5.59	169.97	3,896.17	-276.97	62.43	-62.96	2.02	-1.92	-6.41	
3,928.00	5.27	167.40	3,909.68	-278.23	62.68	-63.22	2.96	-2.36	-18.94	
3,941.43	4.82	159.20	3,923.06	-279.36	63.02	-63.55	6.32	-3.35	-61.06	
3,954.86	4.63	157.96	3,936.44	-280.39	63.42	-63.96	1.61	-1.41	-9.23	
3,968.29	4.45	158.49	3,949.83	-281.37	63.82	-64.36	1.38	-1.34	3.95	
3,981.71	4.28	159.17	3,963.21	-282.33	64.19	-64.73	1.32	-1.27	5.07	
3,995.14	4.13	159.94	3,976.60	-283.25	64.53	-65.07	1.19	-1.12	5.73	
4,008.57	3.99	160.72	3,990.00	-284.14	64.85	-65.40	1.12	-1.04	5.81	
4,022.00	3.88	161.44	4,003.40	-285.02	65.15	-65.70	0.90	-0.82	5.36	
4,035.43	3.81	161.73	4,016.80	-285.87	65.43	-65.98	0.54	-0.52	2.16	
4,048.86	3.75	161.93	4,030.20	-286.71	65.71	-66.26	0.46	-0.45	1.49	
4,062.29	3.72	162.07	4,043.60	-287.54	65.98	-66.53	0.23	-0.22	1.04	
4,075.71	3.69	162.16	4,056.99	-288.37	66.25	-66.80	0.23	-0.22	0.67	
4,089.14	3.68	162.20	4,070.39	-289.19	66.51	-67.07	0.08	-0.07	0.30	
4,102.57	3.66	162.18	4,083.80	-290.01	66.77	-67.33	0.15	-0.15	-0.15	
4,116.00	3.65	162.11	4,097.20	-290.82	67.04	-67.59	0.08	-0.07	-0.52	
4,129.57	3.64	161.97	4,110.74	-291.65	67.30	-67.86	0.10	-0.07	-1.03	
4,143.14	3.62	161.77	4,124.28	-292.46	67.57	-68.13	0.17	-0.15	-1.47	
4,156.71	3.60	161.54	4,137.83	-293.27	67.84	-68.40	0.18	-0.15	-1.69	
4,170.29	3.58	161.29	4,151.38	-294.08	68.11	-68.67	0.19	-0.15	-1.84	
4,183.86	3.56	161.04	4,164.92	-294.88	68.38	-68.95	0.19	-0.15	-1.84	
4,197.43	3.54	160.80	4,178.47	-295.67	68.66	-69.22	0.18	-0.15	-1.77	
4,211.00	3.51	160.60	4,192.01	-296.46	68.93	-69.50	0.24	-0.22	-1.47	
4,224.43	3.49	160.50	4,205.42	-297.23	69.20	-69.78	0.16	-0.15	-0.74	
4,237.86	3.46	160.43	4,218.82	-298.00	69.48	-70.05	0.23	-0.22	-0.52	
4,251.29	3.44	160.37	4,232.23	-298.76	69.75	-70.32	0.15	-0.15	-0.45	
4,264.71	3.41	160.29	4,245.63	-299.52	70.02	-70.59	0.23	-0.22	-0.60	
4,278.14	3.39	160.15	4,259.03	-300.27	70.29	-70.86	0.16	-0.15	-1.04	
4,291.57	3.36	159.92	4,272.44	-301.01	70.56	-71.14	0.25	-0.22	-1.71	
4,305.00	3.34	159.55	4,285.85	-301.75	70.83	-71.41	0.22	-0.15	-2.76	
4,318.57	3.31	158.97	4,299.39	-302.48	71.11	-71.69	0.33	-0.22	-4.27	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
4,332.14	3.28	158.23	4,312.94	-303.21	71.39	-71.97	0.38	-0.22	-5.45	
4,345.71	3.26	157.36	4,326.49	-303.92	71.69	-72.27	0.39	-0.15	-6.41	
4,359.29	3.23	156.35	4,340.05	-304.63	71.99	-72.57	0.48	-0.22	-7.44	
4,372.86	3.20	155.21	4,353.59	-305.33	72.30	-72.89	0.52	-0.22	-8.40	
4,386.43	3.17	153.90	4,367.14	-306.01	72.62	-73.21	0.58	-0.22	-9.65	
4,400.00	3.13	152.38	4,380.69	-306.67	72.96	-73.55	0.68	-0.29	-11.20	
4,413.43	3.07	150.69	4,394.10	-307.31	73.31	-73.90	0.81	-0.45	-12.58	
4,426.86	3.00	148.77	4,407.51	-307.92	73.66	-74.26	0.92	-0.52	-14.30	
4,440.29	2.93	146.67	4,420.93	-308.51	74.04	-74.63	0.96	-0.52	-15.64	
4,453.71	2.88	144.42	4,434.33	-309.07	74.42	-75.01	0.93	-0.37	-16.77	
4,467.14	2.83	142.09	4,447.74	-309.61	74.82	-75.41	0.94	-0.37	-17.35	
4,480.57	3.07	140.40	4,461.16	-310.15	75.25	-75.85	1.90	1.79	-12.58	
4,494.00	3.81	141.18	4,474.56	-310.77	75.76	-76.36	5.52	5.51	5.81	
4,507.57	3.81	139.36	4,488.10	-311.46	76.34	-76.94	0.89	0.00	-13.41	
4,521.14	3.84	137.46	4,501.64	-312.14	76.94	-77.54	0.96	0.22	-14.00	
4,534.71	3.87	135.56	4,515.18	-312.80	77.57	-78.17	0.97	0.22	-14.00	
4,548.29	3.92	133.70	4,528.73	-313.45	78.22	-78.82	1.00	0.37	-13.70	
4,561.86	3.97	131.91	4,542.27	-314.09	78.91	-79.51	0.98	0.37	-13.19	
4,575.43	4.03	130.25	4,555.80	-314.71	79.62	-80.23	0.96	0.44	-12.23	
4,589.00	4.09	128.76	4,569.34	-315.32	80.36	-80.97	0.89	0.44	-10.98	
4,602.43	4.12	127.39	4,582.73	-315.91	81.12	-81.73	0.76	0.22	-10.20	
4,615.86	4.90	129.80	4,596.12	-316.57	81.94	-82.55	5.98	5.81	17.94	
4,629.29	5.57	133.84	4,609.50	-317.39	82.85	-83.46	5.69	4.99	30.08	
4,642.71	6.32	136.39	4,622.84	-318.38	83.83	-84.44	5.92	5.59	19.00	
4,656.14	6.41	135.83	4,636.19	-319.45	84.87	-85.48	0.81	0.67	-4.17	
4,669.57	6.46	135.09	4,649.54	-320.52	85.92	-86.54	0.72	0.37	-5.51	
4,683.00	6.51	134.32	4,662.88	-321.59	87.00	-87.62	0.75	0.37	-5.73	
4,696.57	6.56	133.47	4,676.36	-322.66	88.11	-88.73	0.80	0.37	-6.26	
4,710.14	6.62	132.61	4,689.84	-323.72	89.25	-89.87	0.85	0.44	-6.34	
4,723.71	6.67	131.76	4,703.32	-324.78	90.41	-91.04	0.81	0.37	-6.26	
4,737.29	6.72	130.93	4,716.81	-325.82	91.60	-92.23	0.80	0.37	-6.11	
4,750.86	6.77	130.13	4,730.29	-326.86	92.81	-93.44	0.78	0.37	-5.90	
4,764.43	6.82	129.37	4,743.76	-327.88	94.05	-94.68	0.76	0.37	-5.60	
4,778.00	6.86	128.66	4,757.23	-328.90	95.30	-95.94	0.69	0.29	-5.23	
4,791.43	6.89	128.01	4,770.57	-329.90	96.57	-97.20	0.62	0.22	-4.84	
4,804.86	6.90	127.43	4,783.90	-330.89	97.84	-98.48	0.52	0.07	-4.32	
4,818.29	6.92	126.91	4,797.23	-331.86	99.13	-99.77	0.49	0.15	-3.87	
4,831.71	6.93	126.47	4,810.56	-332.83	100.43	-101.06	0.40	0.07	-3.28	
4,845.14	6.93	126.12	4,823.89	-333.79	101.73	-102.37	0.31	0.00	-2.61	
4,858.57	6.94	125.91	4,837.22	-334.74	103.04	-103.69	0.20	0.07	-1.56	
4,872.00	6.95	125.87	4,850.55	-335.69	104.36	-105.00	0.08	0.07	-0.30	
4,885.43	6.96	126.10	4,863.88	-336.65	105.68	-106.32	0.22	0.07	1.71	
4,898.86	6.97	126.50	4,877.21	-337.61	106.99	-107.64	0.37	0.07	2.98	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
4,912.29	6.99	127.01	4,890.54	-338.59	108.30	-108.95	0.48	0.15	3.80	
4,925.71	7.00	127.58	4,903.86	-339.58	109.60	-110.25	0.52	0.07	4.25	
4,939.14	7.00	128.18	4,917.19	-340.58	110.89	-111.54	0.54	0.00	4.47	
4,952.57	6.99	128.77	4,930.52	-341.60	112.17	-112.82	0.54	-0.07	4.39	
4,966.00	6.98	129.32	4,943.85	-342.63	113.44	-114.09	0.50	-0.07	4.10	
4,979.43	6.95	130.12	4,957.18	-343.67	114.69	-115.35	0.76	-0.22	5.96	
4,992.86	7.31	135.22	4,970.51	-344.80	115.91	-116.57	5.42	2.68	37.97	
5,006.29	7.62	139.04	4,983.83	-346.08	117.10	-117.76	4.36	2.31	28.44	
5,019.71	7.53	139.36	4,997.13	-347.42	118.25	-118.92	0.74	-0.67	2.38	
5,033.14	7.45	139.71	5,010.44	-348.75	119.39	-120.06	0.69	-0.60	2.61	
5,046.57	7.37	140.10	5,023.76	-350.08	120.51	-121.18	0.70	-0.60	2.90	
5,060.00	7.31	140.56	5,037.08	-351.40	121.60	-122.27	0.63	-0.45	3.43	
5,073.57	7.29	141.11	5,050.54	-352.73	122.69	-123.37	0.54	-0.15	4.05	
5,087.14	7.30	141.71	5,064.00	-354.08	123.76	-124.44	0.57	0.07	4.42	
5,100.71	7.32	142.32	5,077.46	-355.44	124.83	-125.51	0.59	0.15	4.50	
5,114.29	7.34	142.94	5,090.93	-356.82	125.88	-126.56	0.60	0.15	4.57	
5,127.86	7.36	143.55	5,104.39	-358.21	126.92	-127.60	0.59	0.15	4.50	
5,141.43	7.37	144.13	5,117.85	-359.61	127.94	-128.63	0.55	0.07	4.27	
5,155.00	7.37	144.67	5,131.31	-361.03	128.96	-129.65	0.51	0.00	3.98	
5,168.43	7.49	146.01	5,144.62	-362.46	129.94	-130.64	1.57	0.89	9.98	
5,181.86	8.01	149.31	5,157.93	-363.99	130.91	-131.61	5.09	3.87	24.57	
5,195.29	8.39	153.47	5,171.22	-365.67	131.83	-132.53	5.24	2.83	30.98	
5,208.71	8.52	155.40	5,184.50	-367.45	132.68	-133.38	2.33	0.97	14.38	
5,222.14	8.42	155.69	5,197.78	-369.25	133.50	-134.21	0.81	-0.74	2.16	
5,235.57	8.32	155.98	5,211.07	-371.03	134.30	-135.01	0.81	-0.74	2.16	
5,249.00	8.22	156.25	5,224.36	-372.80	135.08	-135.79	0.80	-0.74	2.01	
5,262.57	8.15	156.50	5,237.79	-374.57	135.85	-136.57	0.58	-0.52	1.84	
5,276.14	8.09	156.73	5,251.22	-376.33	136.61	-137.34	0.50	-0.44	1.69	
5,289.71	8.03	156.94	5,264.66	-378.08	137.36	-138.09	0.49	-0.44	1.55	
5,303.29	7.96	157.15	5,278.11	-379.82	138.10	-138.83	0.56	-0.52	1.55	
5,316.86	7.88	157.35	5,291.55	-381.54	138.82	-139.55	0.62	-0.59	1.47	
5,330.43	7.77	157.55	5,304.99	-383.25	139.53	-140.27	0.84	-0.81	1.47	
5,344.00	7.64	157.78	5,318.44	-384.93	140.22	-140.96	0.98	-0.96	1.69	
5,357.43	7.44	158.00	5,331.75	-386.56	140.89	-141.63	1.50	-1.49	1.64	
5,370.86	7.21	158.24	5,345.07	-388.15	141.52	-142.27	1.73	-1.71	1.79	
5,384.29	6.96	158.49	5,358.40	-389.69	142.13	-142.88	1.88	-1.86	1.86	
5,397.71	6.70	158.75	5,371.73	-391.18	142.72	-143.47	1.95	-1.94	1.94	
5,411.14	6.45	159.02	5,385.07	-392.61	143.27	-144.02	1.88	-1.86	2.01	
5,424.57	6.21	159.28	5,398.42	-394.00	143.80	-144.55	1.80	-1.79	1.94	
5,438.00	5.99	159.51	5,411.77	-395.33	144.30	-145.06	1.65	-1.64	1.71	
5,451.57	5.81	159.66	5,425.27	-396.64	144.79	-145.55	1.33	-1.33	1.11	
5,465.14	5.67	159.77	5,438.77	-397.91	145.26	-146.02	1.03	-1.03	0.81	
5,478.71	5.54	159.87	5,452.28	-399.16	145.71	-146.48	0.96	-0.96	0.74	
5,492.29	5.44	159.97	5,465.79	-400.38	146.16	-146.93	0.74	-0.74	0.74	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
5,505.86	5.35	160.09	5,479.30	-401.58	146.60	-147.37	0.67	-0.66	0.88	
5,519.43	5.28	160.27	5,492.81	-402.76	147.02	-147.80	0.53	-0.52	1.33	
5,533.00	5.22	160.52	5,506.33	-403.93	147.44	-148.21	0.47	-0.44	1.84	
5,546.43	5.20	160.91	5,519.70	-405.08	147.84	-148.62	0.30	-0.15	2.90	
5,559.86	5.20	161.37	5,533.08	-406.23	148.24	-149.01	0.31	0.00	3.43	
5,573.29	5.21	161.86	5,546.45	-407.39	148.62	-149.40	0.34	0.07	3.65	
5,586.71	5.21	162.37	5,559.82	-408.55	148.99	-149.78	0.35	0.00	3.80	
5,600.14	5.21	162.87	5,573.19	-409.71	149.36	-150.14	0.34	0.00	3.72	
5,613.57	5.20	163.33	5,586.56	-410.88	149.71	-150.50	0.32	-0.07	3.43	
5,627.00	5.43	163.63	5,599.94	-412.07	150.07	-150.86	1.73	1.71	2.23	
5,640.43	5.97	164.27	5,613.30	-413.35	150.43	-151.23	4.05	4.02	4.77	
5,653.86	6.65	165.94	5,626.65	-414.78	150.81	-151.61	5.24	5.06	12.43	
5,667.29	6.50	166.00	5,639.99	-416.27	151.19	-151.98	1.12	-1.12	0.45	
5,680.71	6.33	166.01	5,653.33	-417.73	151.55	-152.35	1.27	-1.27	0.07	
5,694.14	6.17	165.99	5,666.68	-419.14	151.90	-152.71	1.19	-1.19	-0.15	
5,707.57	6.03	165.97	5,680.03	-420.53	152.25	-153.05	1.04	-1.04	-0.15	
5,721.00	5.93	166.00	5,693.39	-421.89	152.59	-153.40	0.74	-0.74	0.22	
5,734.57	5.92	166.09	5,706.89	-423.25	152.92	-153.74	0.10	-0.07	0.66	
5,748.14	5.96	166.24	5,720.38	-424.61	153.26	-154.07	0.32	0.29	1.11	
5,761.71	6.03	166.42	5,733.88	-425.99	153.59	-154.41	0.53	0.52	1.33	
5,775.29	6.10	166.63	5,747.38	-427.38	153.93	-154.75	0.54	0.52	1.55	
5,788.86	6.18	166.87	5,760.87	-428.79	154.26	-155.08	0.62	0.59	1.77	
5,802.43	6.24	167.17	5,774.36	-430.22	154.59	-155.42	0.50	0.44	2.21	
5,816.00	6.73	167.15	5,787.85	-431.72	154.93	-155.76	3.61	3.61	-0.15	
5,829.43	7.43	166.67	5,801.18	-433.33	155.31	-156.14	5.23	5.21	-3.57	
5,842.86	8.12	166.16	5,814.48	-435.10	155.73	-156.57	5.16	5.14	-3.80	
5,856.29	8.84	166.16	5,827.77	-437.02	156.21	-157.05	5.36	5.36	0.00	
5,869.71	8.95	166.75	5,841.02	-439.04	156.69	-157.54	1.06	0.82	4.40	
5,883.14	8.90	167.45	5,854.29	-441.07	157.16	-158.01	0.89	-0.37	5.21	
5,896.57	8.83	168.21	5,867.56	-443.09	157.60	-158.45	1.02	-0.52	5.66	
5,910.00	8.75	168.95	5,880.83	-445.10	158.00	-158.86	1.03	-0.60	5.51	
5,923.57	8.64	169.59	5,894.25	-447.12	158.38	-159.24	1.08	-0.81	4.72	
5,937.14	8.51	170.19	5,907.67	-449.11	158.74	-159.60	1.16	-0.96	4.42	
5,950.71	8.37	170.75	5,921.09	-451.07	159.07	-159.93	1.20	-1.03	4.13	
5,964.29	8.22	171.30	5,934.53	-453.01	159.37	-160.24	1.25	-1.10	4.05	
5,977.86	8.06	171.83	5,947.96	-454.91	159.66	-160.53	1.30	-1.18	3.91	
5,991.43	7.90	172.34	5,961.40	-456.78	159.92	-160.79	1.29	-1.18	3.76	
6,005.00	7.73	172.83	5,974.84	-458.61	160.15	-161.03	1.35	-1.25	3.61	
6,018.43	7.56	173.24	5,988.15	-460.38	160.37	-161.25	1.33	-1.27	3.05	
6,031.86	7.39	173.62	6,001.47	-462.11	160.57	-161.46	1.32	-1.27	2.83	
6,045.29	7.21	173.99	6,014.79	-463.81	160.76	-161.65	1.39	-1.34	2.76	
6,058.71	7.04	174.33	6,028.11	-465.47	160.92	-161.82	1.31	-1.27	2.53	
6,072.14	6.87	174.64	6,041.44	-467.09	161.08	-161.98	1.30	-1.27	2.31	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
6,085.57	6.70	174.93	6,054.77	-468.67	161.23	-162.12	1.29	-1.27	2.16	
6,099.00	6.53	175.17	6,068.11	-470.21	161.36	-162.26	1.28	-1.27	1.79	
6,112.43	6.37	175.31	6,081.46	-471.71	161.48	-162.39	1.20	-1.19	1.04	
6,125.86	6.22	175.40	6,094.81	-473.18	161.60	-162.51	1.12	-1.12	0.67	
6,139.29	6.07	175.45	6,108.16	-474.61	161.72	-162.63	1.12	-1.12	0.37	
6,152.71	5.92	175.48	6,121.51	-476.01	161.83	-162.74	1.12	-1.12	0.22	
6,166.14	5.77	175.49	6,134.87	-477.37	161.94	-162.85	1.12	-1.12	0.07	
6,179.57	5.61	175.51	6,148.23	-478.70	162.04	-162.96	1.19	-1.19	0.15	
6,193.00	5.45	175.53	6,161.60	-479.99	162.14	-163.06	1.19	-1.19	0.15	
6,206.57	5.45	174.77	6,175.11	-481.27	162.25	-163.17	0.53	0.00	-5.60	
6,220.14	5.93	172.38	6,188.61	-482.61	162.40	-163.33	3.94	3.54	-17.61	
6,233.71	6.55	170.77	6,202.10	-484.07	162.62	-163.55	4.75	4.57	-11.86	
6,247.29	7.15	168.94	6,215.58	-485.66	162.91	-163.84	4.70	4.42	-13.48	
6,260.86	7.78	167.43	6,229.04	-487.39	163.27	-164.20	4.86	4.64	-11.13	
6,274.43	7.74	167.38	6,242.48	-489.18	163.67	-164.61	0.30	-0.29	-0.37	
6,288.00	7.49	167.90	6,255.93	-490.93	164.05	-164.99	1.91	-1.84	3.83	
6,301.43	7.22	168.77	6,269.25	-492.62	164.40	-165.35	2.17	-2.01	6.48	
6,314.86	6.95	169.90	6,282.58	-494.24	164.71	-165.66	2.26	-2.01	8.41	
6,328.29	6.68	171.21	6,295.92	-495.82	164.97	-165.92	2.32	-2.01	9.75	
6,341.71	6.43	172.63	6,309.25	-497.33	165.18	-166.14	2.22	-1.86	10.58	
6,355.14	6.20	174.06	6,322.60	-498.80	165.36	-166.31	2.07	-1.71	10.65	
6,368.57	6.00	175.36	6,335.95	-500.22	165.49	-166.45	1.81	-1.49	9.68	
6,382.00	5.86	176.33	6,349.31	-501.61	165.59	-166.55	1.28	-1.04	7.22	
6,395.57	5.79	176.51	6,362.81	-502.98	165.67	-166.64	0.53	-0.52	1.33	
6,409.14	5.77	176.34	6,376.31	-504.34	165.76	-166.73	0.19	-0.15	-1.25	
6,422.71	5.77	175.97	6,389.81	-505.70	165.85	-166.82	0.27	0.00	-2.73	
6,436.29	5.79	175.50	6,403.32	-507.07	165.95	-166.93	0.38	0.15	-3.46	
6,449.86	5.79	175.04	6,416.82	-508.43	166.07	-167.04	0.34	0.00	-3.39	
6,463.43	5.94	174.34	6,430.32	-509.81	166.19	-167.17	1.22	1.11	-5.16	
6,477.00	6.48	172.99	6,443.81	-511.27	166.36	-167.34	4.12	3.98	-9.95	
6,490.43	7.04	170.99	6,457.15	-512.84	166.58	-167.56	4.52	4.17	-14.89	
6,503.86	7.53	169.66	6,470.47	-514.52	166.87	-167.85	3.86	3.65	-9.90	
6,517.29	8.16	168.57	6,483.77	-516.32	167.21	-168.20	4.82	4.69	-8.12	
6,530.71	8.77	166.74	6,497.05	-518.25	167.64	-168.63	4.97	4.55	-13.64	
6,544.14	9.38	164.80	6,510.31	-520.30	168.16	-169.16	5.08	4.54	-14.45	
6,557.57	9.90	164.48	6,523.55	-522.47	168.75	-169.76	3.89	3.87	-2.38	
6,571.00	9.49	164.64	6,536.79	-524.65	169.36	-170.36	3.06	-3.05	1.19	
6,584.43	8.98	164.93	6,550.04	-526.73	169.92	-170.93	3.81	-3.80	2.16	
6,597.86	8.42	165.33	6,563.32	-528.69	170.44	-171.46	4.19	-4.17	2.98	
6,611.29	7.85	165.85	6,576.61	-530.53	170.92	-171.93	4.28	-4.24	3.87	
6,624.71	7.28	166.49	6,589.92	-532.25	171.34	-172.36	4.29	-4.25	4.77	
6,638.14	6.76	167.26	6,603.25	-533.84	171.71	-172.74	3.93	-3.87	5.73	
6,651.57	6.30	168.15	6,616.59	-535.34	172.04	-173.06	3.51	-3.43	6.63	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
6,665.00	5.97	169.12	6,629.94	-536.74	172.32	-173.35	2.58	-2.46	7.22	
6,678.57	5.81	169.98	6,643.44	-538.11	172.57	-173.61	1.35	-1.18	6.34	
6,692.14	5.78	170.85	6,656.94	-539.46	172.80	-173.84	0.68	-0.22	6.41	
6,705.71	5.82	171.69	6,670.44	-540.82	173.01	-174.05	0.69	0.29	6.19	
6,719.29	5.90	172.50	6,683.95	-542.19	173.20	-174.24	0.85	0.59	5.96	
6,732.86	5.99	173.24	6,697.45	-543.59	173.37	-174.42	0.87	0.66	5.45	
6,746.43	6.06	173.94	6,710.94	-545.00	173.53	-174.58	0.75	0.52	5.16	
6,760.00	6.51	173.65	6,724.43	-546.48	173.69	-174.74	3.32	3.32	-2.14	
6,773.43	7.30	172.98	6,737.76	-548.08	173.88	-174.93	5.91	5.88	-4.99	
6,786.86	8.17	172.91	6,751.07	-549.88	174.10	-175.16	6.48	6.48	-0.52	
6,800.29	9.03	173.28	6,764.35	-551.87	174.35	-175.41	6.42	6.40	2.76	
6,813.71	9.83	174.29	6,777.59	-554.06	174.58	-175.65	6.09	5.96	7.53	
6,827.14	10.69	174.33	6,790.80	-556.44	174.82	-175.89	6.40	6.40	0.30	
6,840.57	11.58	173.94	6,803.98	-559.02	175.09	-176.16	6.65	6.63	-2.90	
6,854.00	11.58	174.14	6,817.14	-561.70	175.37	-176.44	0.30	0.00	1.49	
6,867.57	11.42	174.51	6,830.44	-564.39	175.63	-176.72	1.30	-1.18	2.73	
6,881.14	11.23	174.92	6,843.74	-567.04	175.88	-176.97	1.52	-1.40	3.02	
6,894.71	11.03	175.36	6,857.06	-569.65	176.10	-177.19	1.60	-1.47	3.24	
6,908.29	10.82	175.85	6,870.39	-572.22	176.30	-177.40	1.69	-1.55	3.61	
6,921.86	10.60	176.38	6,883.72	-574.74	176.47	-177.57	1.78	-1.62	3.91	
6,935.43	10.37	176.97	6,897.07	-577.20	176.61	-177.72	1.87	-1.69	4.35	
6,949.00	10.12	177.62	6,910.42	-579.61	176.73	-177.84	2.03	-1.84	4.79	
6,962.43	9.85	178.30	6,923.65	-581.94	176.81	-177.93	2.19	-2.01	5.06	
6,975.86	9.58	179.04	6,936.89	-584.20	176.86	-177.98	2.21	-2.01	5.51	
6,989.29	9.29	179.83	6,950.13	-586.41	176.88	-178.01	2.36	-2.16	5.88	
7,002.71	9.02	180.63	6,963.38	-588.54	176.88	-178.01	2.22	-2.01	5.96	
7,016.14	8.75	181.43	6,976.65	-590.61	176.84	-177.97	2.21	-2.01	5.96	
7,029.57	8.51	182.17	6,989.93	-592.63	176.78	-177.91	1.97	-1.79	5.51	
7,043.00	8.29	182.80	7,003.22	-594.59	176.69	-177.83	1.78	-1.64	4.69	
7,056.43	8.11	183.14	7,016.51	-596.50	176.59	-177.74	1.39	-1.34	2.53	
7,069.86	7.97	183.34	7,029.81	-598.38	176.49	-177.63	1.06	-1.04	1.49	
7,083.29	7.85	183.44	7,043.11	-600.22	176.38	-177.53	0.90	-0.89	0.74	
7,096.71	7.74	183.48	7,056.40	-602.04	176.27	-177.42	0.82	-0.82	0.30	
7,110.14	7.63	183.50	7,069.71	-603.83	176.16	-177.32	0.82	-0.82	0.15	
7,123.57	7.53	183.53	7,083.03	-605.60	176.05	-177.21	0.75	-0.74	0.22	
7,137.00	7.43	183.62	7,096.34	-607.34	175.94	-177.11	0.75	-0.74	0.67	
7,150.57	7.32	183.89	7,109.80	-609.08	175.83	-176.99	0.85	-0.81	1.99	
7,164.14	7.21	184.23	7,123.26	-610.79	175.70	-176.88	0.87	-0.81	2.51	
7,177.71	7.11	184.59	7,136.72	-612.48	175.57	-176.75	0.81	-0.74	2.65	
7,191.29	7.00	184.94	7,150.20	-614.14	175.44	-176.61	0.87	-0.81	2.58	
7,204.86	6.89	185.23	7,163.67	-615.78	175.29	-176.47	0.85	-0.81	2.14	
7,218.43	6.80	185.40	7,177.15	-617.39	175.14	-176.33	0.68	-0.66	1.25	
7,232.00	6.70	185.38	7,190.62	-618.98	174.99	-176.18	0.74	-0.74	-0.15	
7,245.43	6.63	185.03	7,203.96	-620.53	174.85	-176.04	0.60	-0.52	-2.61	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
7,258.86	6.56	184.47	7,217.30	-622.06	174.72	-175.92	0.71	-0.52	-4.17
7,272.29	6.50	183.79	7,230.64	-623.59	174.61	-175.81	0.73	-0.45	-5.06
7,285.71	6.43	183.03	7,243.98	-625.10	174.52	-175.72	0.82	-0.52	-5.66
7,299.14	6.35	182.24	7,257.33	-626.59	174.45	-175.66	0.89	-0.60	-5.88
7,312.57	6.26	181.47	7,270.67	-628.06	174.40	-175.61	0.92	-0.67	-5.73
7,326.00	6.52	176.24	7,284.02	-629.56	174.44	-175.64	4.74	1.94	-38.94
7,339.57	6.87	172.28	7,297.50	-631.13	174.60	-175.81	4.27	2.58	-29.18
7,353.14	7.26	168.92	7,310.97	-632.78	174.87	-176.08	4.19	2.87	-24.76
7,366.71	7.21	167.66	7,324.43	-634.45	175.22	-176.43	1.23	-0.37	-9.29
7,380.29	6.92	167.15	7,337.90	-636.08	175.58	-176.80	2.18	-2.14	-3.76
7,393.86	6.64	166.61	7,351.38	-637.64	175.94	-177.17	2.12	-2.06	-3.98
7,407.43	6.37	166.10	7,364.86	-639.13	176.31	-177.53	2.03	-1.99	-3.76
7,421.00	6.14	165.71	7,378.35	-640.57	176.67	-177.90	1.72	-1.69	-2.87
7,434.43	6.01	165.60	7,391.71	-641.94	177.02	-178.25	0.97	-0.97	-0.82
7,447.86	5.93	165.66	7,405.06	-643.30	177.36	-178.60	0.60	-0.60	0.45
7,461.29	5.88	165.81	7,418.42	-644.64	177.71	-178.94	0.39	-0.37	1.12
7,474.71	5.85	166.00	7,431.77	-645.97	178.04	-179.28	0.27	-0.22	1.42
7,488.14	5.83	166.18	7,445.13	-647.29	178.37	-179.61	0.20	-0.15	1.34
7,501.57	5.81	166.29	7,458.49	-648.62	178.69	-179.94	0.17	-0.15	0.82
7,515.00	5.82	164.90	7,471.85	-649.93	179.03	-180.28	1.05	0.07	-10.35
7,528.57	6.30	162.56	7,485.35	-651.31	179.43	-180.68	3.98	3.54	-17.24
7,542.14	6.98	161.22	7,498.83	-652.80	179.92	-181.17	5.14	5.01	-9.87
7,555.71	7.57	160.49	7,512.29	-654.42	180.49	-181.74	4.40	4.35	-5.38
7,569.29	7.73	160.25	7,525.75	-656.12	181.09	-182.35	1.20	1.18	-1.77
7,582.86	7.67	159.58	7,539.19	-657.83	181.72	-182.98	0.80	-0.44	-4.94
7,596.43	7.61	158.88	7,552.64	-659.52	182.36	-183.62	0.82	-0.44	-5.16
7,610.00	7.81	158.56	7,566.09	-661.22	183.02	-184.29	1.51	1.47	-2.36
7,623.43	8.40	158.66	7,579.39	-662.98	183.71	-184.98	4.39	4.39	0.74
7,636.86	9.03	158.40	7,592.66	-664.87	184.45	-185.73	4.70	4.69	-1.94
7,650.29	9.66	158.42	7,605.91	-666.90	185.26	-186.54	4.69	4.69	0.15
7,663.71	10.11	158.21	7,619.13	-669.04	186.11	-187.39	3.36	3.35	-1.56
7,677.14	9.95	157.98	7,632.36	-671.21	186.98	-188.27	1.23	-1.19	-1.71
7,690.57	9.63	157.72	7,645.59	-673.33	187.84	-189.13	2.41	-2.38	-1.94
7,704.00	9.27	157.37	7,658.84	-675.36	188.68	-189.98	2.71	-2.68	-2.61
7,717.57	8.85	156.89	7,672.24	-677.33	189.51	-190.81	3.14	-3.10	-3.54
7,731.14	8.40	156.27	7,685.66	-679.20	190.32	-191.62	3.39	-3.32	-4.57
7,744.71	7.95	155.53	7,699.09	-680.96	191.11	-192.42	3.41	-3.32	-5.45
7,758.29	7.51	154.67	7,712.55	-682.62	191.88	-193.19	3.35	-3.24	-6.33
7,771.86	7.10	153.69	7,726.01	-684.17	192.63	-193.94	3.16	-3.02	-7.22
7,785.43	6.76	152.61	7,739.48	-685.63	193.37	-194.68	2.68	-2.51	-7.96
7,799.00	6.51	151.47	7,752.96	-687.02	194.10	-195.42	2.08	-1.84	-8.40
7,812.43	6.41	150.45	7,766.30	-688.34	194.84	-196.16	1.13	-0.74	-7.59
7,825.86	6.40	149.43	7,779.65	-689.64	195.59	-196.91	0.85	-0.07	-7.59



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
7,839.29	6.45	148.46	7,792.99	-690.92	196.36	-197.69	0.89	0.37	-7.22
7,852.71	6.52	147.56	7,806.33	-692.21	197.16	-198.49	0.92	0.52	-6.71
7,866.14	6.61	146.76	7,819.67	-693.50	198.00	-199.33	0.96	0.67	-5.96
7,879.57	6.67	146.07	7,833.01	-694.79	198.86	-200.19	0.74	0.45	-5.14
7,893.00	6.97	145.99	7,846.34	-696.11	199.75	-201.08	2.23	2.23	-0.60
7,906.43	7.54	146.43	7,859.67	-697.52	200.69	-202.03	4.26	4.24	3.28
7,919.86	8.12	147.03	7,872.97	-699.05	201.69	-203.04	4.36	4.32	4.47
7,933.29	8.67	147.47	7,886.26	-700.70	202.75	-204.10	4.12	4.10	3.28
7,946.71	9.27	147.03	7,899.51	-702.46	203.89	-205.23	4.50	4.47	-3.28
7,960.14	9.83	147.15	7,912.76	-704.33	205.10	-206.45	4.17	4.17	0.89
7,973.57	9.64	146.63	7,925.99	-706.24	206.34	-207.69	1.56	-1.41	-3.87
7,987.00	9.41	146.26	7,939.24	-708.09	207.57	-208.92	1.77	-1.71	-2.76
8,000.57	9.14	146.63	7,952.63	-709.91	208.77	-210.14	2.04	-1.99	2.73
8,014.14	8.84	147.45	7,966.03	-711.69	209.93	-211.29	2.40	-2.21	6.04
8,027.71	8.55	148.60	7,979.45	-713.43	211.02	-212.38	2.49	-2.14	8.47
8,041.29	8.26	150.02	7,992.88	-715.14	212.03	-213.40	2.63	-2.14	10.46
8,054.86	7.98	151.63	8,006.32	-716.81	212.96	-214.34	2.66	-2.06	11.86
8,068.43	7.74	153.36	8,019.76	-718.45	213.82	-215.20	2.48	-1.77	12.75
8,082.00	7.53	155.11	8,033.21	-720.08	214.60	-215.99	2.31	-1.55	12.90
8,095.43	7.34	156.38	8,046.53	-721.66	215.32	-216.70	1.87	-1.41	9.46
8,108.86	7.18	157.60	8,059.85	-723.22	215.98	-217.37	1.65	-1.19	9.08
8,122.29	7.06	158.81	8,073.17	-724.77	216.60	-217.99	1.43	-0.89	9.01
8,135.71	6.95	160.01	8,086.49	-726.30	217.18	-218.57	1.36	-0.82	8.94
8,149.14	6.85	161.23	8,099.83	-727.82	217.71	-219.11	1.32	-0.74	9.08
8,162.57	6.76	162.49	8,113.16	-729.34	218.21	-219.61	1.30	-0.67	9.38
8,176.00	6.68	163.80	8,126.50	-730.84	218.66	-220.07	1.29	-0.60	9.75
8,189.57	6.58	165.15	8,139.98	-732.35	219.08	-220.49	1.36	-0.74	9.95
8,203.14	6.48	166.55	8,153.46	-733.85	219.46	-220.87	1.39	-0.74	10.32
8,216.71	6.38	167.96	8,166.95	-735.33	219.79	-221.21	1.38	-0.74	10.39
8,230.29	6.29	169.34	8,180.44	-736.80	220.09	-221.50	1.30	-0.66	10.16
8,243.86	6.19	170.64	8,193.93	-738.25	220.35	-221.76	1.28	-0.74	9.58
8,257.43	6.15	171.55	8,207.42	-739.69	220.57	-221.99	0.78	-0.29	6.71
8,271.00	6.70	169.03	8,220.91	-741.19	220.83	-222.25	4.55	4.05	-18.57
8,284.57	7.32	167.79	8,234.38	-742.81	221.16	-222.59	4.70	4.57	-9.14
8,298.14	7.87	165.06	8,247.83	-744.55	221.59	-223.01	4.85	4.05	-20.12
8,311.71	8.45	162.65	8,261.26	-746.40	222.12	-223.55	4.96	4.27	-17.76
8,325.29	8.57	161.82	8,274.69	-748.31	222.74	-224.17	1.26	0.88	-6.11
8,338.86	8.42	161.42	8,288.11	-750.22	223.37	-224.81	1.19	-1.11	-2.95
8,352.43	8.26	160.90	8,301.54	-752.08	224.00	-225.45	1.30	-1.18	-3.83
8,366.00	8.10	160.33	8,314.97	-753.90	224.64	-226.09	1.32	-1.18	-4.20
8,380.17	7.94	159.87	8,329.00	-755.76	225.32	-226.77	1.22	-1.13	-3.25
8,394.33	7.78	159.48	8,343.03	-757.57	225.99	-227.44	1.19	-1.13	-2.75
8,408.50	7.64	159.18	8,357.07	-759.35	226.66	-228.12	1.03	-0.99	-2.12



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
8,422.67	7.50	159.01	8,371.12	-761.10	227.33	-228.79	1.00	-0.99	-1.20
8,436.83	7.37	159.07	8,385.16	-762.81	227.98	-229.45	0.92	-0.92	0.42
8,451.00	7.26	159.47	8,399.21	-764.50	228.62	-230.09	0.86	-0.78	2.82
8,465.00	7.18	160.45	8,413.10	-766.15	229.22	-230.69	1.05	-0.57	7.00
8,479.00	7.12	161.76	8,426.99	-767.80	229.79	-231.26	1.24	-0.43	9.36
8,493.00	7.07	163.24	8,440.89	-769.45	230.31	-231.78	1.35	-0.36	10.57
8,507.00	7.04	164.77	8,454.78	-771.10	230.78	-232.26	1.36	-0.21	10.93
8,521.00	7.00	166.22	8,468.68	-772.76	231.21	-232.69	1.30	-0.29	10.36
8,529.00	7.41	169.58	8,476.61	-773.74	231.42	-232.90	7.34	5.11	42.06
KOP: 8529.00' MD, -232.90' VS, 8476.61' TVD									
8,535.00	7.73	171.87	8,482.56	-774.52	231.55	-233.03	7.34	5.36	38.09
8,549.00	9.42	178.99	8,496.40	-776.59	231.70	-233.19	14.23	12.07	50.86
8,563.00	11.24	183.91	8,510.18	-779.10	231.63	-233.12	14.44	13.00	35.14
8,576.43	12.88	188.23	8,523.31	-781.89	231.32	-232.82	13.93	12.21	32.17
8,589.86	14.64	191.32	8,536.35	-785.03	230.78	-232.28	14.20	13.10	23.01
8,603.29	16.30	194.09	8,549.30	-788.53	229.98	-231.50	13.53	12.36	20.63
8,616.71	17.89	196.10	8,562.12	-792.33	228.95	-230.47	12.64	11.85	14.98
8,630.14	19.42	198.19	8,574.85	-796.44	227.68	-229.21	12.43	11.39	15.56
8,643.57	20.97	200.37	8,587.45	-800.81	226.15	-227.69	12.83	11.54	16.23
8,657.00	22.48	202.37	8,599.93	-805.44	224.34	-225.88	12.52	11.24	14.89
8,670.43	23.77	203.88	8,612.28	-810.29	222.26	-223.82	10.57	9.61	11.24
8,683.86	25.31	204.42	8,624.50	-815.38	219.98	-221.55	11.59	11.47	4.02
8,697.29	26.90	204.85	8,636.56	-820.75	217.52	-219.09	11.92	11.84	3.20
8,710.48	28.46	205.56	8,648.24	-826.29	214.91	-216.49	12.11	11.85	5.37
00-EON(BD-132H)									
8,710.71	28.49	205.57	8,648.44	-826.39	214.86	-216.45	12.11	11.86	5.09
8,724.14	29.62	206.58	8,660.18	-832.25	211.99	-213.59	9.17	8.41	7.52
8,737.57	30.78	208.56	8,671.78	-838.24	208.86	-210.47	11.38	8.64	14.74
8,751.00	31.94	211.12	8,683.25	-844.30	205.39	-207.01	13.15	8.64	19.06
8,761.44	32.61	213.39	8,692.08	-849.01	202.41	-204.04	13.26	6.43	21.71
100FEL: 8761.44' MD, -204.04' VS,8692.08' TVD									
8,764.57	32.82	214.05	8,694.71	-850.42	201.47	-203.10	13.26	6.68	21.19
8,778.14	33.56	216.59	8,706.07	-856.47	197.18	-198.82	11.61	5.45	18.72
8,791.71	34.41	219.63	8,717.32	-862.44	192.49	-194.15	14.00	6.26	22.40
8,805.29	35.07	222.60	8,728.48	-868.27	187.41	-189.07	13.38	4.86	21.87
8,818.86	35.13	225.75	8,739.59	-873.86	181.97	-183.65	13.35	0.44	23.21
8,832.43	35.09	229.09	8,750.69	-879.14	176.22	-177.91	14.16	-0.29	24.61
8,846.00	35.35	232.45	8,761.78	-884.09	170.16	-171.86	14.41	1.92	24.76
8,859.43	35.74	235.70	8,772.70	-888.67	163.84	-165.55	14.36	2.90	24.20
8,872.86	36.30	238.76	8,783.57	-892.94	157.20	-158.92	14.03	4.17	22.78
8,886.29	36.75	241.69	8,794.36	-896.91	150.27	-151.99	13.41	3.35	21.82
8,899.71	37.61	244.34	8,805.05	-900.58	143.04	-144.77	13.54	6.41	19.75
8,913.14	38.26	247.05	8,815.65	-903.98	135.52	-137.25	13.31	4.84	20.18
8,926.57	38.93	249.77	8,826.14	-907.06	127.73	-129.47	13.58	4.99	20.25



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
8,940.00	39.51	252.57	8,836.55	-909.80	119.69	-121.44	13.87	4.32	20.85
8,953.57	39.95	255.37	8,846.99	-912.19	111.36	-113.11	13.58	3.24	20.63
8,966.84	40.38	257.86	8,857.13	-914.17	103.03	-104.79	12.55	3.24	18.80
Exit(01): 8966.84' MD, -104.79' VS, 8857.13' TVD									
8,967.14	40.39	257.92	8,857.36	-914.21	102.84	-104.60	12.55	3.44	18.62
8,980.71	41.16	260.49	8,867.63	-915.87	94.14	-95.90	13.61	5.67	18.94
8,994.29	41.56	263.36	8,877.83	-917.13	85.25	-87.02	14.27	2.95	21.13
9,007.86	41.90	265.74	8,887.95	-917.99	76.26	-78.03	11.94	2.51	17.54
9,021.43	42.73	267.78	8,897.99	-918.50	67.14	-68.91	11.82	6.12	15.03
9,035.00	43.89	269.82	8,907.86	-918.70	57.84	-59.60	13.39	8.55	15.03
9,048.43	45.00	271.48	8,917.45	-918.59	48.44	-50.20	11.97	8.27	12.36
9,061.86	46.26	272.29	8,926.84	-918.27	38.84	-40.61	10.33	9.38	6.03
9,066.30	46.88	272.40	8,929.90	-918.14	35.62	-37.38	13.97	13.85	2.58
01-FTP(BD-132H)									
9,075.29	48.12	272.63	8,935.97	-917.85	29.00	-30.76	13.97	13.85	2.51
9,088.71	50.03	273.49	8,944.76	-917.31	18.87	-20.64	15.03	14.23	6.41
9,102.14	51.58	274.96	8,953.25	-916.54	8.50	-10.26	14.32	11.54	10.95
9,115.57	53.29	276.18	8,961.43	-915.50	-2.10	0.34	14.63	12.73	9.08
9,129.00	55.05	277.36	8,969.30	-914.22	-12.91	11.15	14.92	13.10	8.79
9,130.77	55.27	277.47	8,970.31	-914.03	-14.35	12.60	13.42	12.49	5.99
Entry(01): 9130.77' MD, 12.60' VS, 8970.31' TVD									
9,142.43	56.73	278.15	8,976.83	-912.72	-23.93	22.17	13.42	12.51	5.87
9,155.86	58.37	278.31	8,984.03	-911.10	-35.14	33.39	12.25	12.21	1.19
9,169.29	60.21	278.06	8,990.89	-909.45	-46.57	44.83	13.79	13.70	-1.86
9,182.71	62.06	277.51	8,997.37	-907.86	-58.22	56.47	14.24	13.79	-4.10
9,196.14	63.86	276.90	9,003.47	-906.36	-70.08	68.34	14.00	13.40	-4.54
9,209.57	65.35	275.58	9,009.23	-905.04	-82.14	80.40	14.21	11.09	-9.83
9,223.00	67.17	274.72	9,014.64	-903.94	-94.39	92.65	14.76	13.55	-6.40
9,236.57	69.16	274.45	9,019.69	-902.93	-106.94	105.21	14.78	14.66	-1.99
9,250.14	70.67	274.44	9,024.35	-901.95	-119.65	117.92	11.13	11.13	-0.07
9,263.71	70.37	274.55	9,028.87	-900.94	-132.40	130.67	2.34	-2.21	0.81
9,277.29	70.06	274.67	9,033.47	-899.92	-145.14	143.41	2.43	-2.28	0.88
9,290.86	69.91	274.83	9,038.11	-898.86	-157.84	156.12	1.56	-1.11	1.18
9,304.43	71.61	275.53	9,042.59	-897.70	-170.60	168.88	13.44	12.53	5.16
9,318.00	73.06	276.08	9,046.70	-896.40	-183.47	181.75	11.36	10.69	4.05
9,331.43	74.63	275.89	9,050.44	-895.05	-196.30	194.58	11.77	11.69	-1.41
9,344.86	76.48	275.32	9,053.79	-893.78	-209.24	207.52	14.38	13.78	-4.24
9,358.29	76.83	275.19	9,056.89	-892.58	-222.25	220.54	2.77	2.61	-0.97
9,371.71	76.76	275.21	9,059.96	-891.40	-235.26	233.55	0.54	-0.52	0.15
9,385.14	77.22	274.92	9,062.98	-890.24	-248.30	246.59	4.02	3.43	-2.16
9,398.57	79.08	274.03	9,065.74	-889.22	-261.40	259.69	15.29	13.85	-6.63
9,412.00	81.21	273.95	9,068.04	-888.30	-274.60	272.89	15.87	15.86	-0.60
9,425.43	82.96	273.79	9,069.88	-887.40	-287.87	286.17	13.08	13.03	-1.19
9,438.86	84.75	273.82	9,071.32	-886.52	-301.19	299.49	13.33	13.33	0.22



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
9,452.29	87.01	273.34	9,072.29	-885.68	-314.56	312.86	17.20	16.83	-3.57	
9,465.71	89.32	273.76	9,072.72	-884.85	-327.95	326.25	17.49	17.21	3.13	
9,479.14	91.65	274.04	9,072.60	-883.94	-341.35	339.65	17.47	17.35	2.08	
9,489.26	93.42	273.99	9,072.16	-883.23	-351.43	349.73	17.50	17.50	-0.45	
01-LP(132H)										
9,492.57	94.00	273.98	9,071.94	-883.00	-354.72	353.03	17.50	17.50	-0.45	
9,493.00	94.01	273.99	9,071.91	-882.97	-355.15	353.46	3.03	2.76	1.27	
EOC: 9493.00' MD, 353.46' VS, 9071.91' TVD										
9,506.00	94.37	274.15	9,070.96	-882.05	-368.09	366.39	3.03	2.76	1.27	
9,519.57	94.09	274.26	9,069.96	-881.06	-381.58	379.89	2.22	-2.06	0.81	
9,533.14	93.77	274.30	9,069.03	-880.04	-395.08	393.39	2.38	-2.36	0.29	
9,546.71	93.44	274.31	9,068.18	-879.03	-408.59	406.90	2.43	-2.43	0.07	
9,560.29	93.13	274.31	9,067.40	-878.01	-422.11	420.42	2.28	-2.28	0.00	
9,573.86	91.94	274.04	9,066.80	-877.02	-435.63	433.94	8.99	-8.77	-1.99	
9,587.43	89.90	273.62	9,066.58	-876.12	-449.16	447.48	15.35	-15.03	-3.10	
9,601.00	89.30	273.54	9,066.68	-875.27	-462.71	461.03	4.46	-4.42	-0.59	
9,614.43	89.26	273.56	9,066.84	-874.44	-476.11	474.43	0.33	-0.30	0.15	
9,627.86	89.29	273.60	9,067.01	-873.60	-489.51	487.84	0.37	0.22	0.30	
9,641.29	89.35	273.63	9,067.17	-872.75	-502.92	501.24	0.50	0.45	0.22	
9,654.71	89.45	273.68	9,067.31	-871.90	-516.31	514.63	0.83	0.75	0.37	
9,668.14	89.57	273.73	9,067.43	-871.03	-529.71	528.04	0.97	0.89	0.37	
9,681.57	89.71	273.78	9,067.51	-870.15	-543.11	541.44	1.11	1.04	0.37	
9,695.00	89.88	273.84	9,067.56	-869.26	-556.51	554.84	1.34	1.27	0.45	
9,708.57	90.08	273.91	9,067.57	-868.34	-570.05	568.38	1.56	1.47	0.52	
9,722.14	90.29	273.98	9,067.52	-867.41	-583.59	581.92	1.63	1.55	0.52	
9,735.71	90.50	274.06	9,067.43	-866.46	-597.12	595.46	1.66	1.55	0.59	
9,749.29	90.71	274.13	9,067.29	-865.49	-610.67	609.01	1.63	1.55	0.52	
9,762.86	90.91	274.21	9,067.09	-864.50	-624.20	622.54	1.59	1.47	0.59	
9,776.43	91.07	274.28	9,066.86	-863.49	-637.73	636.07	1.29	1.18	0.52	
9,790.00	91.18	274.35	9,066.59	-862.47	-651.26	649.60	0.96	0.81	0.52	
9,803.43	92.86	274.56	9,066.12	-861.43	-664.64	662.99	12.61	12.51	1.56	
9,816.86	93.28	274.65	9,065.40	-860.35	-678.01	676.36	3.20	3.13	0.67	
9,830.29	93.20	274.69	9,064.64	-859.26	-691.37	689.72	0.67	-0.60	0.30	
9,843.71	93.09	274.74	9,063.90	-858.16	-704.73	703.08	0.90	-0.82	0.37	
9,857.14	92.98	274.79	9,063.19	-857.05	-718.09	716.44	0.90	-0.82	0.37	
9,870.57	92.86	274.84	9,062.51	-855.92	-731.46	729.81	0.97	-0.89	0.37	
9,884.00	92.76	274.91	9,061.85	-854.78	-744.82	743.18	0.91	-0.74	0.52	
9,897.57	92.69	275.00	9,061.21	-853.61	-758.33	756.69	0.84	-0.52	0.66	
9,911.14	92.65	275.10	9,060.57	-852.42	-771.83	770.19	0.79	-0.29	0.74	
9,924.71	92.62	275.20	9,059.95	-851.20	-785.33	783.69	0.77	-0.22	0.74	
9,938.29	92.60	275.30	9,059.33	-849.96	-798.84	797.21	0.75	-0.15	0.74	
9,951.86	92.58	275.39	9,058.72	-848.70	-812.34	810.70	0.68	-0.15	0.66	
9,965.43	92.57	275.46	9,058.11	-847.41	-825.83	824.20	0.52	-0.07	0.52	
9,979.00	92.56	275.49	9,057.50	-846.12	-839.33	837.70	0.23	-0.07	0.22	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
9,992.43	92.54	275.46	9,056.90	-844.84	-852.68	851.06	0.27	-0.15	-0.22	
10,005.86	92.54	275.40	9,056.31	-843.57	-866.04	864.42	0.45	0.00	-0.45	
10,019.29	92.53	275.31	9,055.71	-842.32	-879.40	877.78	0.67	-0.07	-0.67	
10,032.71	92.53	275.22	9,055.12	-841.09	-892.75	891.13	0.67	0.00	-0.67	
10,046.14	92.54	275.12	9,054.53	-839.88	-906.11	904.49	0.75	0.07	-0.74	
10,059.57	92.56	275.02	9,053.93	-838.69	-919.47	917.86	0.76	0.15	-0.74	
10,073.00	92.13	273.42	9,053.38	-837.71	-932.86	931.25	12.33	-3.20	-11.91	
10,086.43	92.21	273.34	9,052.87	-836.92	-946.25	944.64	0.84	0.60	-0.60	
10,099.86	92.30	273.26	9,052.34	-836.14	-959.65	958.04	0.90	0.67	-0.60	
10,113.29	92.40	273.19	9,051.79	-835.39	-973.05	971.44	0.91	0.74	-0.52	
10,126.71	92.47	273.13	9,051.22	-834.65	-986.43	984.83	0.69	0.52	-0.45	
10,140.14	92.50	273.09	9,050.64	-833.92	-999.83	998.23	0.37	0.22	-0.30	
10,153.57	93.16	272.01	9,049.98	-833.32	-1,013.23	1,011.63	9.42	4.91	-8.04	
10,167.00	93.92	269.98	9,049.15	-833.09	-1,026.63	1,025.03	16.11	5.66	-15.12	
10,180.57	94.06	267.74	9,048.20	-833.36	-1,040.17	1,038.57	16.50	1.03	-16.51	
10,194.14	93.74	267.81	9,047.28	-833.89	-1,053.70	1,052.09	2.41	-2.36	0.52	
10,207.71	93.35	267.91	9,046.44	-834.39	-1,067.23	1,065.63	2.97	-2.87	0.74	
10,221.29	92.94	268.02	9,045.70	-834.87	-1,080.78	1,079.18	3.13	-3.02	0.81	
10,234.86	92.53	268.16	9,045.05	-835.33	-1,094.33	1,092.72	3.19	-3.02	1.03	
10,248.43	92.16	268.30	9,044.49	-835.74	-1,107.88	1,106.27	2.91	-2.73	1.03	
10,262.00	91.87	268.48	9,044.02	-836.13	-1,121.44	1,119.83	2.51	-2.14	1.33	
10,275.43	91.73	268.68	9,043.60	-836.46	-1,134.86	1,133.25	1.82	-1.04	1.49	
10,288.86	91.67	268.90	9,043.20	-836.74	-1,148.28	1,146.67	1.70	-0.45	1.64	
10,302.29	91.67	269.12	9,042.81	-836.97	-1,161.70	1,160.09	1.64	0.00	1.64	
10,315.71	91.68	269.34	9,042.41	-837.15	-1,175.11	1,173.50	1.64	0.07	1.64	
10,329.14	91.71	269.54	9,042.02	-837.29	-1,188.54	1,186.93	1.51	0.22	1.49	
10,342.57	93.12	269.52	9,041.45	-837.40	-1,201.95	1,200.34	10.50	10.50	-0.15	
10,356.00	94.52	269.47	9,040.56	-837.51	-1,215.35	1,213.74	10.43	10.42	-0.37	
10,369.57	94.48	269.57	9,039.49	-837.63	-1,228.88	1,227.27	0.79	-0.29	0.74	
10,383.14	94.43	269.65	9,038.44	-837.72	-1,242.41	1,240.80	0.69	-0.37	0.59	
10,396.71	94.36	269.72	9,037.40	-837.79	-1,255.94	1,254.33	0.73	-0.52	0.52	
10,410.29	94.29	269.78	9,036.37	-837.85	-1,269.48	1,267.87	0.68	-0.52	0.44	
10,423.86	94.22	269.83	9,035.37	-837.90	-1,283.01	1,281.40	0.63	-0.52	0.37	
10,437.43	94.14	269.89	9,034.38	-837.93	-1,296.55	1,294.93	0.74	-0.59	0.44	
10,451.00	94.07	269.96	9,033.41	-837.95	-1,310.08	1,308.47	0.73	-0.52	0.52	
10,464.43	94.01	270.04	9,032.46	-837.95	-1,323.48	1,321.87	0.74	-0.45	0.60	
10,477.86	93.95	270.12	9,031.53	-837.93	-1,336.88	1,335.26	0.74	-0.45	0.60	
10,491.29	93.89	270.21	9,030.61	-837.89	-1,350.27	1,348.66	0.80	-0.45	0.67	
10,504.71	93.83	270.30	9,029.71	-837.83	-1,363.66	1,362.05	0.80	-0.45	0.67	
10,518.14	93.76	270.38	9,028.82	-837.75	-1,377.06	1,375.45	0.79	-0.52	0.60	
10,531.57	93.76	269.35	9,027.94	-837.78	-1,390.46	1,388.85	7.65	0.00	-7.67	
10,545.00	93.88	267.60	9,027.04	-838.14	-1,403.86	1,402.25	13.03	0.89	-13.03	
10,558.43	93.81	267.66	9,026.14	-838.70	-1,417.25	1,415.63	0.69	-0.52	0.45	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
10,571.86	93.73	267.72	9,025.26	-839.24	-1,430.64	1,429.02	0.74	-0.60	0.45
10,585.29	93.64	267.77	9,024.39	-839.76	-1,444.03	1,442.41	0.77	-0.67	0.37
10,598.71	93.54	267.81	9,023.55	-840.28	-1,457.41	1,455.80	0.80	-0.75	0.30
10,612.14	93.43	267.84	9,022.74	-840.79	-1,470.81	1,469.19	0.85	-0.82	0.22
10,625.57	93.29	267.86	9,021.95	-841.29	-1,484.21	1,482.59	1.05	-1.04	0.15
10,639.00	93.11	267.86	9,021.20	-841.79	-1,497.61	1,495.99	1.34	-1.34	0.00
10,652.57	92.87	267.83	9,020.49	-842.30	-1,511.15	1,509.53	1.78	-1.77	-0.22
10,666.14	92.59	267.78	9,019.85	-842.82	-1,524.69	1,523.07	2.10	-2.06	-0.37
10,679.71	92.29	267.73	9,019.27	-843.35	-1,538.24	1,536.62	2.24	-2.21	-0.37
10,693.29	91.98	267.67	9,018.76	-843.90	-1,551.80	1,550.18	2.33	-2.28	-0.44
10,706.86	91.67	267.62	9,018.33	-844.45	-1,565.35	1,563.73	2.31	-2.28	-0.37
10,720.43	91.37	267.59	9,017.97	-845.02	-1,578.90	1,577.28	2.22	-2.21	-0.22
10,734.00	91.08	267.59	9,017.68	-845.59	-1,592.46	1,590.83	2.14	-2.14	0.00
10,747.57	90.83	267.63	9,017.45	-846.16	-1,606.02	1,604.39	1.87	-1.84	0.29
10,761.14	90.60	267.71	9,017.29	-846.71	-1,619.57	1,617.94	1.79	-1.69	0.59
10,774.71	90.39	267.80	9,017.17	-847.24	-1,633.13	1,631.50	1.68	-1.55	0.66
10,788.29	90.19	267.89	9,017.10	-847.75	-1,646.70	1,645.07	1.61	-1.47	0.66
10,801.86	90.01	267.98	9,017.08	-848.24	-1,660.26	1,658.63	1.48	-1.33	0.66
10,815.43	91.24	268.36	9,016.93	-848.67	-1,673.83	1,672.19	9.49	9.06	2.80
10,829.00	93.29	268.73	9,016.39	-849.02	-1,687.38	1,685.75	15.35	15.11	2.73
10,842.43	93.62	268.82	9,015.58	-849.30	-1,700.78	1,699.15	2.55	2.46	0.67
10,855.86	93.50	268.89	9,014.75	-849.57	-1,714.18	1,712.55	1.03	-0.89	0.52
10,869.29	93.38	268.97	9,013.94	-849.82	-1,727.59	1,725.95	1.07	-0.89	0.60
10,882.71	93.26	269.03	9,013.17	-850.06	-1,740.98	1,739.35	1.00	-0.89	0.45
10,896.14	93.16	269.10	9,012.41	-850.27	-1,754.39	1,752.75	0.91	-0.74	0.52
10,909.57	94.29	269.03	9,011.54	-850.49	-1,767.79	1,766.15	8.43	8.41	-0.52
10,923.00	94.51	269.05	9,010.51	-850.72	-1,781.18	1,779.54	1.64	1.64	0.15
10,936.43	94.45	269.09	9,009.46	-850.93	-1,794.57	1,792.93	0.54	-0.45	0.30
10,949.86	94.40	269.11	9,008.43	-851.14	-1,807.95	1,806.32	0.40	-0.37	0.15
10,963.29	94.35	269.13	9,007.40	-851.35	-1,821.34	1,819.71	0.40	-0.37	0.15
10,976.71	94.32	269.15	9,006.39	-851.55	-1,834.72	1,833.08	0.27	-0.22	0.15
10,990.14	94.28	269.16	9,005.38	-851.75	-1,848.11	1,846.48	0.31	-0.30	0.07
11,003.57	94.26	269.18	9,004.38	-851.94	-1,861.51	1,859.87	0.21	-0.15	0.15
11,017.00	94.24	269.20	9,003.38	-852.13	-1,874.90	1,873.26	0.21	-0.15	0.15
11,030.57	94.22	269.22	9,002.38	-852.32	-1,888.43	1,886.79	0.21	-0.15	0.15
11,044.14	94.21	269.25	9,001.39	-852.50	-1,901.96	1,900.32	0.23	-0.07	0.22
11,057.71	94.21	269.28	9,000.39	-852.67	-1,915.49	1,913.85	0.22	0.00	0.22
11,071.29	94.20	269.31	8,999.39	-852.84	-1,929.04	1,927.39	0.23	-0.07	0.22
11,084.86	94.19	269.33	8,998.40	-853.00	-1,942.57	1,940.93	0.16	-0.07	0.15
11,098.43	94.17	269.33	8,997.41	-853.16	-1,956.10	1,954.46	0.15	-0.15	0.00
11,112.00	94.15	269.33	8,996.43	-853.32	-1,969.63	1,967.99	0.15	-0.15	0.00
11,125.43	94.10	269.30	8,995.46	-853.48	-1,983.03	1,981.39	0.43	-0.37	-0.22
11,138.86	94.05	269.25	8,994.51	-853.65	-1,996.42	1,994.78	0.53	-0.37	-0.37



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
11,152.29	94.00	269.19	8,993.56	-853.83	-2,009.82	2,008.18	0.58	-0.37	-0.45
11,165.71	93.95	269.12	8,992.63	-854.03	-2,023.21	2,021.56	0.64	-0.37	-0.52
11,179.14	93.90	269.04	8,991.72	-854.24	-2,036.60	2,034.96	0.70	-0.37	-0.60
11,192.57	93.87	268.94	8,990.81	-854.48	-2,050.00	2,048.36	0.78	-0.22	-0.74
11,206.00	92.29	268.85	8,990.08	-854.74	-2,063.41	2,061.76	11.78	-11.76	-0.67
11,219.43	91.72	268.71	8,989.61	-855.02	-2,076.83	2,075.18	4.37	-4.24	-1.04
11,232.86	91.75	268.55	8,989.21	-855.34	-2,090.25	2,088.60	1.21	0.22	-1.19
11,246.29	91.79	268.37	8,988.79	-855.70	-2,103.66	2,102.02	1.37	0.30	-1.34
11,259.71	91.83	268.20	8,988.37	-856.11	-2,117.07	2,115.42	1.30	0.30	-1.27
11,273.14	91.88	268.05	8,987.93	-856.54	-2,130.49	2,128.84	1.18	0.37	-1.12
11,286.57	90.05	268.03	8,987.71	-857.00	-2,143.91	2,142.26	13.63	-13.63	-0.15
11,300.00	90.11	267.94	8,987.69	-857.48	-2,157.33	2,155.68	0.81	0.45	-0.67
11,313.57	90.17	267.92	8,987.66	-857.97	-2,170.89	2,169.24	0.47	0.44	-0.15
11,327.14	90.24	267.93	8,987.61	-858.46	-2,184.45	2,182.80	0.52	0.52	0.07
11,340.71	90.31	267.98	8,987.54	-858.94	-2,198.01	2,196.36	0.63	0.52	0.37
11,354.29	90.37	268.04	8,987.46	-859.41	-2,211.58	2,209.93	0.62	0.44	0.44
11,367.86	90.41	268.12	8,987.37	-859.87	-2,225.15	2,223.49	0.66	0.29	0.59
11,381.43	90.44	268.22	8,987.27	-860.30	-2,238.71	2,237.05	0.77	0.22	0.74
11,395.00	90.43	268.33	8,987.17	-860.71	-2,252.27	2,250.62	0.81	-0.07	0.81
11,408.43	90.36	268.47	8,987.07	-861.08	-2,265.70	2,264.04	1.17	-0.52	1.04
11,421.86	90.26	268.62	8,987.00	-861.43	-2,279.12	2,277.46	1.34	-0.74	1.12
11,435.29	90.14	268.77	8,986.95	-861.73	-2,292.55	2,290.89	1.43	-0.89	1.12
11,448.71	90.00	268.91	8,986.94	-862.00	-2,305.97	2,304.31	1.48	-1.04	1.04
11,462.14	89.83	269.04	8,986.96	-862.24	-2,319.39	2,317.73	1.59	-1.27	0.97
11,475.57	89.66	269.14	8,987.02	-862.46	-2,332.82	2,331.16	1.47	-1.27	0.74
11,489.00	89.46	269.19	8,987.12	-862.65	-2,346.25	2,344.59	1.54	-1.49	0.37
11,502.57	89.23	269.17	8,987.27	-862.85	-2,359.82	2,358.16	1.70	-1.69	-0.15
11,516.14	89.00	269.10	8,987.48	-863.05	-2,373.38	2,371.72	1.77	-1.69	-0.52
11,529.71	88.75	269.01	8,987.75	-863.28	-2,386.95	2,385.29	1.96	-1.84	-0.66
11,543.29	88.51	268.90	8,988.08	-863.52	-2,400.52	2,398.86	1.94	-1.77	-0.81
11,556.86	88.29	268.80	8,988.45	-863.79	-2,414.09	2,412.42	1.78	-1.62	-0.74
11,570.43	88.18	268.67	8,988.87	-864.09	-2,427.65	2,425.98	1.25	-0.81	-0.96
11,584.00	88.45	268.47	8,989.27	-864.43	-2,441.21	2,439.54	2.48	1.99	-1.47
11,597.43	88.33	268.43	8,989.65	-864.80	-2,454.63	2,452.96	0.94	-0.89	-0.30
11,610.86	88.23	268.42	8,990.05	-865.16	-2,468.04	2,466.38	0.75	-0.74	-0.07
11,624.29	88.14	268.41	8,990.48	-865.54	-2,481.46	2,479.80	0.67	-0.67	-0.07
11,637.71	88.05	268.41	8,990.92	-865.91	-2,494.87	2,493.20	0.67	-0.67	0.00
11,643.65	88.01	268.41	8,991.13	-866.07	-2,500.80	2,499.14	0.74	-0.74	0.00
02-V2800(BD-132H)									
11,651.14	87.95	268.41	8,991.39	-866.28	-2,508.29	2,506.62	0.74	-0.74	0.00
11,664.57	88.04	268.47	8,991.86	-866.65	-2,521.70	2,520.03	0.81	0.67	0.45
11,678.00	88.49	268.71	8,992.27	-866.98	-2,535.12	2,533.45	3.80	3.35	1.79
11,691.57	88.89	269.04	8,992.58	-867.24	-2,548.69	2,547.02	3.82	2.95	2.43
11,705.14	88.81	269.08	8,992.85	-867.47	-2,562.25	2,560.58	0.66	-0.59	0.29



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
11,718.71	88.53	269.04	8,993.17	-867.69	-2,575.82	2,574.15	2.08	-2.06	-0.29
11,732.29	88.24	268.99	8,993.55	-867.92	-2,589.39	2,587.72	2.17	-2.14	-0.37
11,745.86	87.96	268.95	8,994.00	-868.17	-2,602.95	2,601.28	2.08	-2.06	-0.29
11,759.43	87.93	268.92	8,994.49	-868.42	-2,616.51	2,614.84	0.31	-0.22	-0.22
11,773.00	88.37	268.97	8,994.92	-868.67	-2,630.07	2,628.40	3.26	3.24	0.37
11,786.43	88.85	269.14	8,995.25	-868.89	-2,643.49	2,641.82	3.79	3.57	1.27
11,799.86	89.00	269.14	8,995.50	-869.09	-2,656.92	2,655.25	1.12	1.12	0.00
11,813.29	88.74	269.16	8,995.77	-869.29	-2,670.35	2,668.67	1.94	-1.94	0.15
11,826.71	88.48	269.18	8,996.09	-869.48	-2,683.76	2,682.09	1.94	-1.94	0.15
11,840.14	88.24	269.21	8,996.48	-869.67	-2,697.18	2,695.51	1.80	-1.79	0.22
11,853.57	88.38	269.18	8,996.87	-869.86	-2,710.61	2,708.93	1.07	1.04	-0.22
11,867.00	88.89	269.14	8,997.19	-870.06	-2,724.03	2,722.36	3.81	3.80	-0.30
11,880.57	89.45	269.14	8,997.39	-870.26	-2,737.60	2,735.92	4.13	4.13	0.00
11,894.14	90.04	269.02	8,997.45	-870.48	-2,751.17	2,749.49	4.44	4.35	-0.88
11,907.71	90.60	268.98	8,997.37	-870.72	-2,764.73	2,763.06	4.14	4.13	-0.29
11,921.29	90.58	269.13	8,997.23	-870.94	-2,778.31	2,776.63	1.11	-0.15	1.10
11,934.86	90.57	269.29	8,997.10	-871.13	-2,791.88	2,790.20	1.18	-0.07	1.18
11,948.43	90.60	269.43	8,996.96	-871.28	-2,805.45	2,803.77	1.06	0.22	1.03
11,962.00	91.12	269.25	8,996.75	-871.43	-2,819.01	2,817.34	4.06	3.83	-1.33
11,975.43	91.73	269.14	8,996.42	-871.62	-2,832.44	2,830.76	4.62	4.54	-0.82
11,988.86	92.38	269.10	8,995.94	-871.83	-2,845.86	2,844.18	4.85	4.84	-0.30
12,002.29	92.45	269.16	8,995.37	-872.03	-2,859.28	2,857.60	0.69	0.52	0.45
12,015.71	92.42	269.23	8,994.80	-872.22	-2,872.68	2,871.00	0.57	-0.22	0.52
12,029.14	92.40	269.28	8,994.24	-872.40	-2,886.10	2,884.42	0.40	-0.15	0.37
12,042.57	92.38	269.32	8,993.68	-872.56	-2,899.52	2,897.84	0.33	-0.15	0.30
12,056.00	92.35	269.32	8,993.12	-872.72	-2,912.93	2,911.25	0.22	-0.22	0.00
12,069.43	92.33	269.26	8,992.58	-872.89	-2,926.35	2,924.67	0.47	-0.15	-0.45
12,082.86	92.31	269.16	8,992.03	-873.07	-2,939.77	2,938.09	0.76	-0.15	-0.74
12,096.29	92.28	269.05	8,991.49	-873.28	-2,953.19	2,951.51	0.85	-0.22	-0.82
12,109.71	92.26	268.92	8,990.96	-873.52	-2,966.59	2,964.91	0.98	-0.15	-0.97
12,123.14	92.25	268.80	8,990.43	-873.78	-2,980.01	2,978.33	0.90	-0.07	-0.89
12,136.57	92.23	268.68	8,989.91	-874.08	-2,993.43	2,991.74	0.91	-0.15	-0.89
12,150.00	92.22	268.58	8,989.39	-874.40	-3,006.84	3,005.16	0.75	-0.07	-0.74
12,163.57	92.22	268.51	8,988.86	-874.74	-3,020.40	3,018.71	0.52	0.00	-0.52
12,177.14	92.23	268.46	8,988.34	-875.10	-3,033.95	3,032.27	0.38	0.07	-0.37
12,190.71	92.24	268.43	8,987.81	-875.47	-3,047.51	3,045.82	0.23	0.07	-0.22
12,204.29	92.26	268.40	8,987.27	-875.85	-3,061.07	3,059.39	0.27	0.15	-0.22
12,217.86	92.29	268.38	8,986.73	-876.23	-3,074.63	3,072.94	0.27	0.22	-0.15
12,231.43	92.34	268.36	8,986.19	-876.61	-3,088.18	3,086.49	0.40	0.37	-0.15
12,245.00	92.41	268.34	8,985.62	-877.00	-3,101.73	3,100.04	0.54	0.52	-0.15
12,258.57	92.50	268.32	8,985.04	-877.40	-3,115.29	3,113.60	0.68	0.66	-0.15
12,272.14	92.62	268.30	8,984.44	-877.80	-3,128.84	3,127.14	0.90	0.88	-0.15
12,285.71	92.73	268.27	8,983.80	-878.20	-3,142.39	3,140.69	0.84	0.81	-0.22



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
12,299.29	92.84	268.23	8,983.14	-878.62	-3,155.94	3,154.25	0.86	0.81	-0.29	
12,312.86	92.93	268.18	8,982.46	-879.04	-3,169.49	3,167.80	0.76	0.66	-0.37	
12,326.43	92.98	268.12	8,981.76	-879.48	-3,183.03	3,181.34	0.58	0.37	-0.44	
12,340.00	92.96	268.02	8,981.06	-879.94	-3,196.58	3,194.88	0.75	-0.15	-0.74	
12,353.43	92.85	267.89	8,980.38	-880.42	-3,209.98	3,208.29	1.27	-0.82	-0.97	
12,366.86	92.68	267.73	8,979.73	-880.93	-3,223.39	3,221.69	1.74	-1.27	-1.19	
12,380.29	92.50	267.56	8,979.12	-881.48	-3,236.79	3,235.09	1.84	-1.34	-1.27	
12,393.71	92.32	267.40	8,978.56	-882.07	-3,250.19	3,248.49	1.79	-1.34	-1.19	
12,407.14	92.18	267.23	8,978.03	-882.70	-3,263.59	3,261.89	1.64	-1.04	-1.27	
12,420.57	91.70	267.07	8,977.58	-883.37	-3,277.00	3,275.30	3.77	-3.57	-1.19	
12,434.00	91.13	266.82	8,977.24	-884.08	-3,290.40	3,288.70	4.63	-4.24	-1.86	
12,447.43	91.26	266.71	8,976.96	-884.84	-3,303.81	3,302.10	1.27	0.97	-0.82	
12,460.86	91.45	266.61	8,976.65	-885.62	-3,317.21	3,315.51	1.60	1.41	-0.74	
12,474.29	91.68	266.51	8,976.28	-886.43	-3,330.61	3,328.91	1.87	1.71	-0.74	
12,487.71	91.92	266.42	8,975.86	-887.25	-3,344.00	3,342.29	1.91	1.79	-0.67	
12,501.14	92.14	266.33	8,975.38	-888.10	-3,357.40	3,355.69	1.77	1.64	-0.67	
12,514.57	92.32	266.25	8,974.86	-888.97	-3,370.79	3,369.08	1.47	1.34	-0.60	
12,528.00	92.42	266.17	8,974.30	-889.86	-3,384.18	3,382.46	0.95	0.74	-0.60	
12,541.57	92.40	266.11	8,973.73	-890.77	-3,397.70	3,395.99	0.47	-0.15	-0.44	
12,555.14	92.30	266.05	8,973.18	-891.70	-3,411.23	3,409.51	0.86	-0.74	-0.44	
12,568.71	92.17	265.99	8,972.65	-892.64	-3,424.76	3,423.04	1.05	-0.96	-0.44	
12,582.29	92.03	265.95	8,972.15	-893.59	-3,438.30	3,436.57	1.07	-1.03	-0.29	
12,595.86	91.90	265.92	8,971.69	-894.55	-3,451.82	3,450.10	0.98	-0.96	-0.22	
12,609.43	91.46	266.02	8,971.29	-895.51	-3,465.35	3,463.63	3.33	-3.24	0.74	
12,623.00	90.65	266.25	8,971.04	-896.42	-3,478.89	3,477.16	6.20	-5.97	1.69	
12,636.43	90.58	266.33	8,970.89	-897.29	-3,492.29	3,490.56	0.79	-0.52	0.60	
12,649.86	90.68	266.39	8,970.75	-898.14	-3,505.69	3,503.96	0.87	0.74	0.45	
12,663.29	90.80	266.46	8,970.57	-898.98	-3,519.10	3,517.36	1.03	0.89	0.52	
12,676.71	90.94	266.53	8,970.37	-899.80	-3,532.49	3,530.76	1.17	1.04	0.52	
12,690.14	91.09	266.58	8,970.13	-900.61	-3,545.89	3,544.16	1.18	1.12	0.37	
12,703.57	90.99	266.15	8,969.89	-901.46	-3,559.29	3,557.56	3.29	-0.74	-3.20	
12,717.00	90.99	265.87	8,969.66	-902.39	-3,572.69	3,570.95	2.08	0.00	-2.08	
12,730.57	91.17	265.82	8,969.40	-903.38	-3,586.22	3,584.48	1.38	1.33	-0.37	
12,744.14	91.36	265.75	8,969.10	-904.37	-3,599.75	3,598.01	1.49	1.40	-0.52	
12,757.71	91.56	265.65	8,968.75	-905.39	-3,613.28	3,611.53	1.65	1.47	-0.74	
12,771.29	91.74	265.55	8,968.36	-906.43	-3,626.81	3,625.07	1.52	1.33	-0.74	
12,784.86	91.91	265.45	8,967.93	-907.50	-3,640.33	3,638.59	1.45	1.25	-0.74	
12,798.43	92.05	265.35	8,967.46	-908.58	-3,653.85	3,652.10	1.27	1.03	-0.74	
12,807.21	92.11	265.30	8,967.14	-909.30	-3,662.60	3,660.85	0.94	0.74	-0.59	
Exit(02): 12807.21' MD, 3660.85' VS, 8967.14' TVD										
12,812.00	92.15	265.27	8,966.96	-909.69	-3,667.37	3,665.62	0.94	0.74	-0.59	
12,825.43	92.19	265.22	8,966.46	-910.80	-3,680.74	3,678.99	0.48	0.30	-0.37	
12,838.86	92.18	265.18	8,965.94	-911.93	-3,694.12	3,692.36	0.31	-0.07	-0.30	
12,852.29	92.14	265.15	8,965.44	-913.06	-3,707.49	3,705.73	0.37	-0.30	-0.22	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
12,865.71	92.08	265.13	8,964.94	-914.19	-3,720.85	3,719.09	0.47	-0.45	-0.15	
12,879.14	92.02	265.11	8,964.46	-915.34	-3,734.22	3,732.46	0.47	-0.45	-0.15	
12,892.57	91.77	265.56	8,964.02	-916.43	-3,747.60	3,745.84	3.83	-1.86	3.35	
12,906.00	91.34	266.08	8,963.66	-917.41	-3,760.99	3,759.22	5.02	-3.20	3.87	
12,919.43	90.87	266.62	8,963.40	-918.26	-3,774.39	3,772.62	5.33	-3.50	4.02	
12,932.86	90.64	266.81	8,963.22	-919.03	-3,787.80	3,786.03	2.22	-1.71	1.41	
12,946.29	90.53	266.77	8,963.08	-919.78	-3,801.21	3,799.43	0.87	-0.82	-0.30	
12,959.71	90.41	266.74	8,962.97	-920.54	-3,814.60	3,812.83	0.92	-0.89	-0.22	
12,973.14	90.25	266.89	8,962.89	-921.29	-3,828.01	3,826.24	1.63	-1.19	1.12	
12,986.57	90.06	267.41	8,962.86	-921.96	-3,841.43	3,839.65	4.12	-1.41	3.87	
13,000.00	90.07	268.05	8,962.84	-922.49	-3,854.85	3,853.07	4.77	0.07	4.77	
13,013.57	90.03	268.78	8,962.83	-922.86	-3,868.41	3,866.63	5.39	-0.29	5.38	
13,027.14	89.95	269.17	8,962.83	-923.11	-3,881.98	3,880.20	2.93	-0.59	2.87	
13,040.71	89.78	269.24	8,962.87	-923.29	-3,895.55	3,893.77	1.35	-1.25	0.52	
13,054.29	89.60	269.31	8,962.94	-923.47	-3,909.13	3,907.35	1.42	-1.33	0.52	
13,067.86	89.42	269.37	8,963.06	-923.62	-3,922.69	3,920.91	1.40	-1.33	0.44	
13,081.43	89.29	269.59	8,963.21	-923.75	-3,936.26	3,934.48	1.88	-0.96	1.62	
13,095.00	89.23	270.25	8,963.38	-923.76	-3,949.83	3,948.05	4.88	-0.44	4.86	
13,108.57	89.08	270.86	8,963.58	-923.63	-3,963.40	3,961.62	4.63	-1.11	4.50	
13,122.14	89.33	271.43	8,963.77	-923.36	-3,976.97	3,975.19	4.59	1.84	4.20	
13,135.71	89.39	272.08	8,963.92	-922.95	-3,990.53	3,988.75	4.81	0.44	4.79	
13,149.29	89.30	272.03	8,964.08	-922.46	-4,004.10	4,002.32	0.76	-0.66	-0.37	
13,162.86	89.18	271.85	8,964.26	-922.00	-4,017.66	4,015.88	1.59	-0.88	-1.33	
13,176.43	89.06	271.67	8,964.47	-921.58	-4,031.22	4,029.45	1.59	-0.88	-1.33	
13,190.00	88.93	271.56	8,964.70	-921.20	-4,044.78	4,043.01	1.25	-0.96	-0.81	
13,203.43	88.79	271.55	8,964.97	-920.84	-4,058.21	4,056.43	1.05	-1.04	-0.07	
13,216.86	88.65	271.61	8,965.27	-920.47	-4,071.63	4,069.85	1.13	-1.04	0.45	
13,230.29	88.50	271.71	8,965.61	-920.08	-4,085.05	4,083.27	1.34	-1.12	0.74	
13,243.71	88.36	271.81	8,965.97	-919.67	-4,098.46	4,096.68	1.28	-1.04	0.75	
13,257.14	88.22	271.90	8,966.37	-919.23	-4,111.87	4,110.10	1.24	-1.04	0.67	
13,270.57	88.23	272.33	8,966.79	-918.74	-4,125.29	4,123.52	3.20	0.07	3.20	
13,284.00	88.24	272.98	8,967.20	-918.11	-4,138.70	4,136.93	4.84	0.07	4.84	
13,297.57	88.14	273.65	8,967.63	-917.33	-4,152.24	4,150.47	4.99	-0.74	4.94	
13,310.47	88.01	274.27	8,968.07	-916.44	-4,165.10	4,163.33	4.90	-1.03	4.79	
00 Corva(BD-132H)										
13,311.14	88.00	274.30	8,968.09	-916.39	-4,165.77	4,164.00	4.90	-1.03	4.79	
13,324.71	87.92	274.82	8,968.57	-915.31	-4,179.29	4,177.52	3.87	-0.59	3.83	
13,338.29	87.74	274.66	8,969.09	-914.19	-4,192.81	4,191.05	1.77	-1.33	-1.18	
13,351.86	87.56	274.48	8,969.64	-913.11	-4,206.33	4,204.56	1.88	-1.33	-1.33	
13,365.43	87.38	274.29	8,970.24	-912.07	-4,219.84	4,218.08	1.93	-1.33	-1.40	
13,379.00	87.24	274.11	8,970.88	-911.08	-4,233.36	4,231.60	1.68	-1.03	-1.33	
13,392.43	87.15	273.96	8,971.54	-910.14	-4,246.74	4,244.99	1.30	-0.67	-1.12	
13,405.86	87.11	273.84	8,972.21	-909.22	-4,260.12	4,258.37	0.94	-0.30	-0.89	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
13,416.61	87.09	273.74	8,972.75	-908.51	-4,270.84	4,269.08	0.92	-0.22	-0.89	
Entry(02): 13416.61' MD, 4269.08' VS, 8972.75' TVD										
13,419.29	87.08	273.72	8,972.89	-908.34	-4,273.51	4,271.76	0.92	-0.22	-0.89	
13,432.71	87.08	273.62	8,973.57	-907.48	-4,286.88	4,285.13	0.74	0.00	-0.75	
13,446.14	87.08	273.52	8,974.26	-906.65	-4,300.27	4,298.52	0.74	0.00	-0.74	
13,459.57	87.09	273.42	8,974.94	-905.84	-4,313.66	4,311.91	0.75	0.07	-0.74	
13,473.00	87.09	273.33	8,975.62	-905.05	-4,327.05	4,325.30	0.67	0.00	-0.67	
13,486.43	87.09	273.24	8,976.30	-904.28	-4,340.44	4,338.69	0.67	0.00	-0.67	
13,499.86	87.08	273.15	8,976.99	-903.53	-4,353.83	4,352.09	0.67	-0.07	-0.67	
13,513.29	87.07	273.07	8,977.67	-902.80	-4,367.22	4,365.48	0.60	-0.07	-0.60	
13,526.71	87.06	272.98	8,978.36	-902.09	-4,380.61	4,378.87	0.67	-0.07	-0.67	
13,540.14	87.05	272.90	8,979.05	-901.41	-4,394.00	4,392.26	0.60	-0.07	-0.60	
13,553.57	87.04	272.81	8,979.74	-900.74	-4,407.40	4,405.66	0.67	-0.07	-0.67	
13,567.00	87.03	272.73	8,980.44	-900.09	-4,420.79	4,419.06	0.60	-0.07	-0.60	
13,580.43	87.02	272.65	8,981.13	-899.46	-4,434.19	4,432.45	0.60	-0.07	-0.60	
13,593.86	87.01	272.57	8,981.83	-898.85	-4,447.59	4,445.85	0.60	-0.07	-0.60	
13,607.29	87.01	272.49	8,982.53	-898.26	-4,460.99	4,459.25	0.59	0.00	-0.60	
13,620.71	87.01	272.41	8,983.23	-897.69	-4,474.38	4,472.64	0.60	0.00	-0.60	
13,634.14	87.02	272.33	8,983.93	-897.13	-4,487.78	4,486.04	0.60	0.07	-0.60	
13,647.57	87.05	272.26	8,984.63	-896.59	-4,501.18	4,499.45	0.57	0.22	-0.52	
13,661.00	87.09	272.19	8,985.31	-896.07	-4,514.58	4,512.85	0.60	0.30	-0.52	
13,674.57	87.16	272.13	8,985.99	-895.56	-4,528.12	4,526.39	0.68	0.52	-0.44	
13,688.14	87.25	272.08	8,986.66	-895.06	-4,541.67	4,539.94	0.76	0.66	-0.37	
13,701.71	87.35	272.02	8,987.30	-894.58	-4,555.21	4,553.49	0.86	0.74	-0.44	
13,715.29	87.46	271.97	8,987.91	-894.11	-4,568.77	4,567.05	0.89	0.81	-0.37	
13,728.86	87.57	271.92	8,988.50	-893.65	-4,582.32	4,580.60	0.89	0.81	-0.37	
13,742.43	87.69	271.86	8,989.06	-893.20	-4,595.87	4,594.15	0.99	0.88	-0.44	
13,756.00	87.80	271.78	8,989.59	-892.77	-4,609.42	4,607.70	1.00	0.81	-0.59	
13,769.43	87.91	271.70	8,990.10	-892.36	-4,622.84	4,621.12	1.01	0.82	-0.60	
13,782.86	88.02	271.60	8,990.57	-891.98	-4,636.25	4,634.53	1.11	0.82	-0.74	
13,796.29	88.13	271.50	8,991.02	-891.61	-4,649.67	4,647.95	1.11	0.82	-0.74	
13,809.71	88.25	271.40	8,991.45	-891.27	-4,663.08	4,661.36	1.16	0.89	-0.75	
13,823.14	88.37	271.30	8,991.84	-890.96	-4,676.50	4,674.78	1.16	0.89	-0.74	
13,836.57	88.49	271.21	8,992.21	-890.66	-4,689.92	4,688.20	1.12	0.89	-0.67	
13,850.00	88.63	271.12	8,992.55	-890.39	-4,703.35	4,701.63	1.24	1.04	-0.67	
13,863.43	88.78	271.06	8,992.85	-890.13	-4,716.77	4,715.05	1.20	1.12	-0.45	
13,876.86	88.95	271.00	8,993.12	-889.89	-4,730.20	4,728.48	1.34	1.27	-0.45	
13,890.29	89.11	270.95	8,993.35	-889.66	-4,743.62	4,741.90	1.25	1.19	-0.37	
13,903.71	89.28	270.89	8,993.54	-889.45	-4,757.04	4,755.32	1.34	1.27	-0.45	
13,917.14	89.45	270.82	8,993.68	-889.25	-4,770.47	4,768.75	1.37	1.27	-0.52	
13,930.57	89.60	270.74	8,993.80	-889.07	-4,783.89	4,782.18	1.27	1.12	-0.60	
13,944.00	89.75	270.62	8,993.87	-888.91	-4,797.32	4,795.61	1.43	1.12	-0.89	
13,957.57	89.86	270.46	8,993.92	-888.78	-4,810.89	4,809.18	1.43	0.81	-1.18	
13,971.14	89.97	270.28	8,993.94	-888.69	-4,824.46	4,822.75	1.55	0.81	-1.33	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
13,984.71	90.06	270.08	8,993.93	-888.65	-4,838.03	4,836.32	1.62	0.66	-1.47	
13,998.29	90.14	269.87	8,993.91	-888.65	-4,851.61	4,849.90	1.65	0.59	-1.55	
14,011.86	90.21	269.67	8,993.87	-888.71	-4,865.18	4,863.47	1.56	0.52	-1.47	
14,025.43	90.28	269.48	8,993.81	-888.81	-4,878.75	4,877.04	1.49	0.52	-1.40	
14,039.00	90.33	269.32	8,993.74	-888.95	-4,892.32	4,890.61	1.24	0.37	-1.18	
14,052.43	90.38	269.21	8,993.66	-889.12	-4,905.75	4,904.03	0.90	0.37	-0.82	
14,065.86	90.42	269.12	8,993.56	-889.32	-4,919.18	4,917.46	0.73	0.30	-0.67	
14,079.29	90.46	269.06	8,993.46	-889.53	-4,932.61	4,930.89	0.54	0.30	-0.45	
14,092.71	90.49	269.00	8,993.35	-889.76	-4,946.02	4,944.31	0.50	0.22	-0.45	
14,106.14	90.54	268.95	8,993.23	-890.00	-4,959.45	4,957.73	0.53	0.37	-0.37	
14,119.57	90.60	268.91	8,993.09	-890.25	-4,972.88	4,971.16	0.54	0.45	-0.30	
14,133.00	90.70	269.60	8,992.94	-890.43	-4,986.31	4,984.59	5.19	0.74	5.14	
14,146.57	90.73	270.30	8,992.77	-890.44	-4,999.87	4,998.16	5.16	0.22	5.16	
14,148.72	90.75	270.30	8,992.74	-890.43	-5,002.02	5,000.30	0.98	0.96	-0.22	
03-V5000(BD-132H)										
14,160.14	90.86	270.27	8,992.58	-890.37	-5,013.44	5,011.72	0.98	0.96	-0.22	
14,173.71	91.00	270.25	8,992.36	-890.31	-5,027.01	5,025.29	1.04	1.03	-0.15	
14,187.29	91.15	270.23	8,992.11	-890.25	-5,040.59	5,038.87	1.11	1.10	-0.15	
14,200.86	91.29	270.19	8,991.82	-890.20	-5,054.16	5,052.44	1.07	1.03	-0.29	
14,214.43	91.41	270.14	8,991.50	-890.16	-5,067.72	5,066.00	0.96	0.88	-0.37	
14,228.00	91.52	270.84	8,991.15	-890.05	-5,081.29	5,079.57	5.22	0.81	5.16	
14,241.43	91.42	271.68	8,990.81	-889.75	-5,094.71	5,092.99	6.30	-0.74	6.25	
14,254.86	91.17	272.42	8,990.50	-889.27	-5,108.13	5,106.41	5.81	-1.86	5.51	
14,268.29	91.01	272.73	8,990.25	-888.67	-5,121.54	5,119.82	2.60	-1.19	2.31	
14,281.71	90.99	272.52	8,990.01	-888.05	-5,134.94	5,133.23	1.57	-0.15	-1.56	
14,295.14	90.97	272.29	8,989.79	-887.49	-5,148.36	5,146.65	1.72	-0.15	-1.71	
14,308.57	90.96	272.06	8,989.56	-886.98	-5,161.78	5,160.07	1.71	-0.07	-1.71	
14,322.00	90.99	271.85	8,989.33	-886.52	-5,175.20	5,173.49	1.58	0.22	-1.56	
14,335.43	91.08	271.67	8,989.09	-886.11	-5,188.62	5,186.91	1.50	0.67	-1.34	
14,348.86	91.21	271.51	8,988.82	-885.74	-5,202.04	5,200.33	1.53	0.97	-1.19	
14,362.29	91.36	271.37	8,988.52	-885.40	-5,215.47	5,213.76	1.53	1.12	-1.04	
14,375.71	91.52	271.24	8,988.18	-885.09	-5,228.88	5,227.17	1.54	1.19	-0.97	
14,389.14	91.67	271.13	8,987.81	-884.82	-5,242.30	5,240.59	1.38	1.12	-0.82	
14,402.57	91.80	271.03	8,987.40	-884.56	-5,255.72	5,254.01	1.22	0.97	-0.74	
14,416.00	91.90	270.94	8,986.97	-884.33	-5,269.14	5,267.43	1.00	0.74	-0.67	
14,429.43	91.94	270.87	8,986.52	-884.12	-5,282.56	5,280.86	0.60	0.30	-0.52	
14,442.86	91.94	270.82	8,986.06	-883.92	-5,295.98	5,294.28	0.37	0.00	-0.37	
14,456.29	91.92	270.77	8,985.61	-883.74	-5,309.40	5,307.70	0.40	-0.15	-0.37	
14,469.71	91.89	270.72	8,985.16	-883.56	-5,322.82	5,321.11	0.43	-0.22	-0.37	
14,483.14	91.86	270.66	8,984.72	-883.40	-5,336.24	5,334.53	0.50	-0.22	-0.45	
14,496.57	91.44	271.04	8,984.34	-883.20	-5,349.66	5,347.96	4.22	-3.13	2.83	
14,510.00	90.89	271.75	8,984.06	-882.87	-5,363.08	5,361.38	6.69	-4.10	5.29	
14,523.57	90.54	272.52	8,983.90	-882.37	-5,376.64	5,374.94	6.23	-2.58	5.67	



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
14,537.14	90.45	272.59	8,983.78	-881.76	-5,390.20	5,388.50	0.84	-0.66	0.52
14,550.71	90.37	272.41	8,983.68	-881.17	-5,403.76	5,402.05	1.45	-0.59	-1.33
14,564.29	90.30	272.23	8,983.60	-880.62	-5,417.32	5,415.62	1.42	-0.52	-1.33
14,577.86	90.23	272.05	8,983.54	-880.12	-5,430.88	5,429.19	1.42	-0.52	-1.33
14,591.43	90.19	271.91	8,983.49	-879.65	-5,444.45	5,442.75	1.07	-0.29	-1.03
14,605.00	89.61	271.94	8,983.51	-879.19	-5,458.01	5,456.31	4.28	-4.27	0.22
14,618.43	89.19	271.99	8,983.65	-878.73	-5,471.43	5,469.73	3.15	-3.13	0.37
14,631.86	89.28	272.00	8,983.83	-878.26	-5,484.85	5,483.15	0.67	0.67	0.07
14,645.29	89.40	272.04	8,983.99	-877.79	-5,498.27	5,496.58	0.94	0.89	0.30
14,658.71	89.53	272.09	8,984.11	-877.31	-5,511.68	5,509.99	1.04	0.97	0.37
14,672.14	89.68	272.13	8,984.21	-876.81	-5,525.10	5,523.41	1.16	1.12	0.30
14,685.57	89.83	272.15	8,984.26	-876.31	-5,538.52	5,536.83	1.13	1.12	0.15
14,699.00	89.45	272.39	8,984.35	-875.78	-5,551.94	5,550.25	3.35	-2.83	1.79
14,712.43	88.72	272.68	8,984.56	-875.18	-5,565.36	5,563.67	5.85	-5.44	2.16
14,725.86	88.18	272.75	8,984.93	-874.55	-5,578.77	5,577.08	4.05	-4.02	0.52
14,739.29	88.36	272.61	8,985.33	-873.92	-5,592.18	5,590.49	1.70	1.34	-1.04
14,752.71	88.55	272.45	8,985.69	-873.33	-5,605.58	5,603.89	1.85	1.42	-1.19
14,766.14	88.74	272.28	8,986.01	-872.77	-5,618.99	5,617.31	1.90	1.41	-1.27
14,779.57	88.92	272.11	8,986.28	-872.26	-5,632.41	5,630.73	1.84	1.34	-1.27
14,793.00	89.06	271.95	8,986.52	-871.78	-5,645.83	5,644.15	1.58	1.04	-1.19
14,806.57	89.17	271.81	8,986.73	-871.34	-5,659.39	5,657.71	1.31	0.81	-1.03
14,820.14	89.24	271.68	8,986.92	-870.93	-5,672.95	5,671.27	1.09	0.52	-0.96
14,833.71	89.30	271.55	8,987.09	-870.54	-5,686.52	5,684.84	1.06	0.44	-0.96
14,847.29	89.35	271.44	8,987.25	-870.19	-5,700.09	5,698.41	0.89	0.37	-0.81
14,860.86	89.41	271.32	8,987.40	-869.86	-5,713.66	5,711.98	0.99	0.44	-0.88
14,874.43	88.66	271.48	8,987.63	-869.53	-5,727.22	5,725.54	5.65	-5.53	1.18
14,888.00	87.81	271.90	8,988.04	-869.13	-5,740.78	5,739.10	6.99	-6.26	3.10
14,901.43	87.09	272.16	8,988.64	-868.66	-5,754.19	5,752.51	5.70	-5.36	1.94
14,914.86	87.18	272.01	8,989.31	-868.17	-5,767.59	5,765.91	1.30	0.67	-1.12
14,928.29	87.28	271.86	8,989.96	-867.72	-5,781.00	5,779.32	1.34	0.74	-1.12
14,941.71	87.39	271.70	8,990.59	-867.30	-5,794.40	5,792.72	1.45	0.82	-1.19
14,955.14	87.50	271.53	8,991.19	-866.92	-5,807.81	5,806.13	1.51	0.82	-1.27
14,968.57	87.62	271.37	8,991.76	-866.58	-5,821.22	5,819.55	1.49	0.89	-1.19
14,982.00	87.76	271.21	8,992.30	-866.28	-5,834.64	5,832.96	1.58	1.04	-1.19
14,995.43	87.90	271.05	8,992.81	-866.01	-5,848.06	5,846.38	1.58	1.04	-1.19
15,008.86	88.05	270.90	8,993.28	-865.79	-5,861.47	5,859.80	1.58	1.12	-1.12
15,022.29	88.21	270.76	8,993.72	-865.59	-5,874.90	5,873.22	1.58	1.19	-1.04
15,035.71	88.36	270.62	8,994.12	-865.43	-5,888.31	5,886.64	1.53	1.12	-1.04
15,049.14	88.51	270.50	8,994.49	-865.30	-5,901.73	5,900.06	1.43	1.12	-0.89
15,062.57	88.65	270.39	8,994.82	-865.19	-5,915.16	5,913.49	1.33	1.04	-0.82
15,076.00	88.77	270.31	8,995.12	-865.11	-5,928.59	5,926.91	1.07	0.89	-0.60
15,089.57	88.85	270.28	8,995.41	-865.04	-5,942.15	5,940.48	0.63	0.59	-0.22
15,103.14	88.92	270.26	8,995.67	-864.98	-5,955.72	5,954.05	0.54	0.52	-0.15
15,116.71	88.99	270.25	8,995.92	-864.92	-5,969.29	5,967.62	0.52	0.52	-0.07



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
15,130.29	89.05	270.25	8,996.15	-864.86	-5,982.86	5,981.19	0.44	0.44	0.00
15,143.86	89.13	270.22	8,996.36	-864.80	-5,996.43	5,994.76	0.63	0.59	-0.22
15,157.43	88.75	270.74	8,996.62	-864.69	-6,010.00	6,008.33	4.75	-2.80	3.83
15,171.00	88.31	271.56	8,996.96	-864.42	-6,023.56	6,021.89	6.86	-3.24	6.04
15,184.57	88.00	272.52	8,997.40	-863.93	-6,037.12	6,035.45	7.43	-2.28	7.07
15,198.14	88.14	272.55	8,997.86	-863.33	-6,050.67	6,049.00	1.06	1.03	0.22
15,211.71	88.38	272.40	8,998.27	-862.75	-6,064.22	6,062.55	2.09	1.77	-1.11
15,225.29	88.64	272.24	8,998.62	-862.20	-6,077.78	6,076.12	2.25	1.91	-1.18
15,238.86	88.90	272.08	8,998.91	-861.69	-6,091.34	6,089.67	2.25	1.92	-1.18
15,252.43	89.16	271.91	8,999.14	-861.22	-6,104.90	6,103.23	2.29	1.92	-1.25
15,266.00	89.42	271.76	8,999.31	-860.78	-6,118.46	6,116.80	2.21	1.92	-1.11
15,279.43	89.65	271.62	8,999.42	-860.39	-6,131.88	6,130.22	2.00	1.71	-1.04
15,292.86	89.86	271.49	8,999.48	-860.02	-6,145.31	6,143.65	1.84	1.56	-0.97
15,306.29	90.05	271.36	8,999.49	-859.69	-6,158.73	6,157.07	1.71	1.41	-0.97
15,319.71	90.22	271.24	8,999.46	-859.38	-6,172.15	6,170.49	1.55	1.27	-0.89
15,333.14	90.37	271.11	8,999.39	-859.11	-6,185.58	6,183.92	1.48	1.12	-0.97
15,346.57	90.48	270.97	8,999.29	-858.86	-6,199.01	6,197.35	1.33	0.82	-1.04
15,360.00	90.53	270.81	8,999.17	-858.65	-6,212.43	6,210.77	1.25	0.37	-1.19
15,373.43	90.49	270.63	8,999.05	-858.49	-6,225.86	6,224.20	1.37	-0.30	-1.34
15,386.86	90.41	270.44	8,998.95	-858.36	-6,239.29	6,237.63	1.53	-0.60	-1.41
15,400.29	90.32	270.24	8,998.86	-858.28	-6,252.72	6,251.06	1.63	-0.67	-1.49
15,413.71	90.22	270.04	8,998.80	-858.25	-6,266.14	6,264.48	1.67	-0.75	-1.49
15,427.14	90.15	269.84	8,998.75	-858.26	-6,279.57	6,277.91	1.58	-0.52	-1.49
15,440.57	89.54	269.96	8,998.79	-858.29	-6,293.00	6,291.34	4.63	-4.54	0.89
15,454.00	88.93	270.53	8,998.97	-858.23	-6,306.43	6,304.77	6.22	-4.54	4.24
15,467.57	88.55	271.31	8,999.27	-858.01	-6,319.99	6,318.33	6.39	-2.80	5.75
15,481.14	88.70	271.13	8,999.59	-857.72	-6,333.56	6,331.90	1.73	1.11	-1.33
15,494.71	88.87	270.94	8,999.88	-857.48	-6,347.12	6,345.46	1.88	1.25	-1.40
15,508.29	89.07	270.76	9,000.12	-857.27	-6,360.70	6,359.04	1.98	1.47	-1.33
15,521.86	89.29	270.58	9,000.32	-857.12	-6,374.27	6,372.61	2.09	1.62	-1.33
15,535.43	89.51	270.42	9,000.46	-857.00	-6,387.83	6,386.18	2.00	1.62	-1.18
15,549.00	89.75	270.28	9,000.55	-856.91	-6,401.40	6,399.75	2.05	1.77	-1.03
15,562.57	90.01	270.17	9,000.58	-856.86	-6,414.97	6,413.32	2.08	1.92	-0.81
15,576.14	90.26	270.07	9,000.54	-856.83	-6,428.54	6,426.89	1.98	1.84	-0.74
15,589.71	90.52	269.99	9,000.45	-856.83	-6,442.11	6,440.46	2.00	1.92	-0.59
15,603.29	90.76	269.91	9,000.30	-856.84	-6,455.69	6,454.04	1.86	1.77	-0.59
15,616.86	90.99	269.83	9,000.09	-856.87	-6,469.26	6,467.60	1.79	1.69	-0.59
15,630.43	91.18	269.73	8,999.84	-856.92	-6,482.83	6,481.17	1.58	1.40	-0.74
15,644.00	91.33	269.61	8,999.54	-857.00	-6,496.39	6,494.74	1.42	1.11	-0.88
15,657.43	91.41	269.45	8,999.22	-857.11	-6,509.82	6,508.16	1.33	0.60	-1.19
15,670.86	91.45	269.27	8,998.88	-857.26	-6,523.25	6,521.59	1.37	0.30	-1.34
15,684.29	91.46	269.08	8,998.54	-857.45	-6,536.67	6,535.01	1.42	0.07	-1.41
15,697.71	91.46	268.89	8,998.20	-857.69	-6,550.08	6,548.42	1.42	0.00	-1.42



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)
15,711.14	91.46	268.70	8,997.86	-857.97	-6,563.51	6,561.85	1.41	0.00	-1.41
15,724.57	91.03	269.18	8,997.57	-858.22	-6,576.93	6,575.27	4.80	-3.20	3.57
15,738.00	90.50	269.91	8,997.39	-858.33	-6,590.36	6,588.70	6.72	-3.95	5.44
15,751.43	90.28	270.23	8,997.30	-858.31	-6,603.79	6,602.13	2.89	-1.64	2.38
15,764.86	90.33	270.09	8,997.22	-858.27	-6,617.22	6,615.56	1.11	0.37	-1.04
15,778.29	90.39	269.96	8,997.14	-858.27	-6,630.65	6,628.99	1.07	0.45	-0.97
15,791.71	90.45	269.83	8,997.04	-858.29	-6,644.07	6,642.41	1.07	0.45	-0.97
15,805.14	90.52	269.70	8,996.93	-858.35	-6,657.50	6,655.84	1.10	0.52	-0.97
15,818.57	90.59	269.57	8,996.80	-858.43	-6,670.93	6,669.27	1.10	0.52	-0.97
15,832.00	90.68	269.44	8,996.65	-858.55	-6,684.35	6,682.69	1.18	0.67	-0.97
15,845.57	90.80	269.31	8,996.47	-858.70	-6,697.92	6,696.26	1.30	0.88	-0.96
15,859.14	90.92	269.19	8,996.27	-858.87	-6,711.49	6,709.83	1.25	0.88	-0.88
15,872.71	91.06	269.06	8,996.04	-859.08	-6,725.06	6,723.39	1.41	1.03	-0.96
15,886.29	91.20	268.94	8,995.77	-859.32	-6,738.63	6,736.97	1.36	1.03	-0.88
15,899.86	91.35	268.82	8,995.47	-859.58	-6,752.20	6,750.53	1.42	1.11	-0.88
15,913.43	91.49	268.70	8,995.13	-859.88	-6,765.76	6,764.09	1.36	1.03	-0.88
15,927.00	91.64	268.57	8,994.76	-860.20	-6,779.32	6,777.66	1.46	1.11	-0.96
15,940.43	91.80	268.45	8,994.36	-860.55	-6,792.74	6,791.07	1.49	1.19	-0.89
15,953.86	91.95	268.33	8,993.92	-860.93	-6,806.16	6,804.49	1.43	1.12	-0.89
15,967.29	92.09	268.21	8,993.44	-861.33	-6,819.57	6,817.91	1.37	1.04	-0.89
15,980.71	92.23	268.09	8,992.94	-861.76	-6,832.97	6,831.31	1.37	1.04	-0.89
15,994.14	92.35	267.97	8,992.40	-862.23	-6,846.39	6,844.72	1.26	0.89	-0.89
16,007.57	92.45	267.85	8,991.84	-862.72	-6,859.80	6,858.13	1.16	0.74	-0.89
16,021.00	92.52	267.73	8,991.26	-863.23	-6,873.20	6,871.53	1.03	0.52	-0.89
16,034.57	92.53	267.60	8,990.66	-863.79	-6,886.75	6,885.08	0.96	0.07	-0.96
16,048.14	92.52	267.47	8,990.06	-864.37	-6,900.29	6,898.62	0.96	-0.07	-0.96
16,061.71	92.50	267.35	8,989.47	-864.98	-6,913.84	6,912.16	0.90	-0.15	-0.88
16,075.29	92.48	267.22	8,988.88	-865.62	-6,927.39	6,925.71	0.97	-0.15	-0.96
16,088.86	92.19	267.44	8,988.32	-866.26	-6,940.93	6,939.26	2.68	-2.14	1.62
16,102.43	91.58	268.03	8,987.88	-866.79	-6,954.48	6,952.81	6.25	-4.50	4.35
16,116.00	90.97	268.66	8,987.57	-867.18	-6,968.04	6,966.37	6.46	-4.50	4.64
16,129.43	90.41	269.21	8,987.41	-867.43	-6,981.47	6,979.79	5.84	-4.17	4.10
16,142.86	90.55	269.09	8,987.30	-867.63	-6,994.90	6,993.22	1.37	1.04	-0.89
16,156.29	90.72	268.97	8,987.15	-867.86	-7,008.33	7,006.65	1.55	1.27	-0.89
16,169.71	90.89	268.85	8,986.96	-868.11	-7,021.74	7,020.06	1.55	1.27	-0.89
16,183.14	91.08	268.73	8,986.73	-868.40	-7,035.17	7,033.49	1.67	1.41	-0.89
16,196.57	91.27	268.62	8,986.46	-868.71	-7,048.59	7,046.91	1.63	1.41	-0.82
16,210.00	91.46	268.51	8,986.14	-869.04	-7,062.01	7,060.33	1.63	1.41	-0.82
16,223.43	91.64	268.42	8,985.77	-869.40	-7,075.43	7,073.75	1.50	1.34	-0.67
16,236.86	91.82	268.33	8,985.37	-869.79	-7,088.85	7,087.17	1.50	1.34	-0.67
16,250.29	91.98	268.25	8,984.92	-870.19	-7,102.27	7,100.58	1.33	1.19	-0.60
16,263.71	92.14	268.17	8,984.44	-870.60	-7,115.67	7,113.99	1.33	1.19	-0.60
16,277.14	92.29	268.08	8,983.92	-871.04	-7,129.09	7,127.40	1.30	1.12	-0.67



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	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)	
16,290.57	92.41	268.00	8,983.37	-871.50	-7,142.50	7,140.81	1.07	0.89	-0.60	
16,304.00	92.51	267.91	8,982.79	-871.98	-7,155.91	7,154.22	1.00	0.74	-0.67	
16,317.57	92.56	267.81	8,982.19	-872.49	-7,169.45	7,167.77	0.82	0.37	-0.74	
16,331.14	92.59	267.71	8,981.58	-873.02	-7,183.00	7,181.31	0.77	0.22	-0.74	
16,344.71	92.60	267.60	8,980.97	-873.57	-7,196.54	7,194.85	0.81	0.07	-0.81	
16,358.29	92.59	267.49	8,980.36	-874.15	-7,210.10	7,208.41	0.81	-0.07	-0.81	
16,371.86	92.59	267.38	8,979.74	-874.76	-7,223.64	7,221.95	0.81	0.00	-0.81	
16,385.43	92.14	267.47	8,979.18	-875.37	-7,237.18	7,235.49	3.38	-3.32	0.66	
16,399.00	91.51	267.71	8,978.75	-875.94	-7,250.74	7,249.04	4.97	-4.64	1.77	
16,412.43	90.91	267.89	8,978.47	-876.45	-7,264.15	7,262.46	4.66	-4.47	1.34	
16,425.86	90.88	267.80	8,978.26	-876.96	-7,277.57	7,275.87	0.71	-0.22	-0.67	
16,439.29	90.85	267.71	8,978.05	-877.49	-7,290.99	7,289.29	0.71	-0.22	-0.67	
16,452.71	90.82	267.62	8,977.86	-878.03	-7,304.40	7,302.70	0.71	-0.22	-0.67	
16,466.14	90.79	267.53	8,977.67	-878.60	-7,317.81	7,316.11	0.71	-0.22	-0.67	
16,479.57	90.76	267.43	8,977.49	-879.19	-7,331.23	7,329.53	0.78	-0.22	-0.74	
16,493.00	90.62	267.78	8,977.33	-879.75	-7,344.65	7,342.94	2.81	-1.04	2.61	
16,506.43	90.35	268.33	8,977.21	-880.21	-7,358.07	7,356.37	4.56	-2.01	4.10	
16,519.86	90.07	268.84	8,977.16	-880.54	-7,371.49	7,369.79	4.33	-2.08	3.80	
16,533.29	89.88	269.34	8,977.17	-880.75	-7,384.92	7,383.22	3.98	-1.41	3.72	
16,546.71	89.76	269.85	8,977.21	-880.85	-7,398.34	7,396.64	3.90	-0.89	3.80	
16,560.14	89.75	269.57	8,977.27	-880.92	-7,411.77	7,410.07	2.09	-0.07	-2.08	
16,573.57	89.74	269.27	8,977.33	-881.05	-7,425.20	7,423.50	2.24	-0.07	-2.23	
16,587.00	89.76	268.99	8,977.39	-881.26	-7,438.63	7,436.92	2.09	0.15	-2.08	
16,601.00	89.83	268.76	8,977.44	-881.53	-7,452.63	7,450.92	1.72	0.50	-1.64	
16,615.00	89.92	268.57	8,977.47	-881.86	-7,466.62	7,464.92	1.50	0.64	-1.36	
16,629.00	90.03	268.40	8,977.47	-882.23	-7,480.62	7,478.91	1.45	0.79	-1.21	
16,643.00	90.15	268.25	8,977.45	-882.64	-7,494.61	7,492.90	1.37	0.86	-1.07	
16,648.01	90.19	268.20	8,977.44	-882.79	-7,499.62	7,497.91	1.26	0.86	-0.93	
04-V7500(BD-132H)										
16,657.00	90.27	268.12	8,977.40	-883.08	-7,508.61	7,506.90	1.26	0.86	-0.93	
16,666.21	90.35	268.04	8,977.35	-883.39	-7,517.81	7,516.10	1.21	0.86	-0.86	
05-LTP(BD-132H)										
16,667.96	90.36	268.03	8,977.34	-883.45	-7,519.56	7,517.85	1.21	0.86	-0.86	
100FWL: 16667.96' MD, 7517.85' VS, 8977.34' TVD										
16,671.00	90.39	268.00	8,977.32	-883.55	-7,522.60	7,520.89	1.21	0.86	-0.86	
16,685.00	90.51	267.88	8,977.21	-884.06	-7,536.59	7,534.88	1.21	0.86	-0.86	
16,699.00	90.61	267.77	8,977.07	-884.59	-7,550.58	7,548.86	1.06	0.71	-0.79	
Final MWD Survey: 16699.00' MD, 90.61°INC, 267.77°AZ										
16,755.77	90.61	267.77	8,976.47	-886.80	-7,607.30	7,605.58	0.00	0.00	0.00	
06-PBHL(BD-132H) - 06-PBHL-30L(BD-132H)										
16,758.00	90.61	267.77	8,976.44	-886.88	-7,609.53	7,607.81	0.00	0.00	0.00	
PTB: 16758.00' MD, 90.61°INC, 267.77°AZ										



Survey Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well Black Diamond 34 Fed 132H
Project:	Eddy County, NM (N83-NME)	TVD Reference:	3314+30 @ 3344.00usft
Site:	Black Diamond 34 Fed Com	MD Reference:	3314+30 @ 3344.00usft
Well:	Black Diamond 34 Fed 132H	North Reference:	Grid
Wellbore:	132H	Survey Calculation Method:	Minimum Curvature
Design:	DRL	Database:	EDM 5000.14 Single User Db

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
00-EON(BD-132H) - actual wellpath misses target center by 468.44usft at 8710.48usft MD (8648.24 TVD, -826.29 N, 214.91 E) - Point	0.00	0.00	8,764.08	-795.61	667.76	588,815.11	627,664.04	32.61839045	-104.05295225
04-V7500(BD-132H) - actual wellpath misses target center by 62.58usft at 16648.01usft MD (8977.44 TVD, -882.79 N, -7499.62 E) - Point	0.00	0.00	8,975.00	-820.29	-7,501.59	588,790.43	619,494.69	32.61837906	-104.07948554
06-PBHL(BD-132H) - actual wellpath misses target center by 67.03usft at 16755.77usft MD (8976.47 TVD, -886.80 N, -7607.30 E) - Point	0.00	0.00	8,982.32	-820.08	-7,609.96	588,790.64	619,386.32	32.61838034	-104.07983751
05-LTP(BD-132H) - actual wellpath misses target center by 63.39usft at 16666.21usft MD (8977.35 TVD, -883.39 N, -7517.81 E) - Point	0.00	0.00	8,983.25	-820.31	-7,519.96	588,790.41	619,476.32	32.61837912	-104.07954520
03-V5000(BD-132H) - actual wellpath misses target center by 65.75usft at 14148.72usft MD (8992.74 TVD, -890.43 N, -5002.02 E) - Point	0.00	0.00	8,985.00	-825.14	-5,001.59	588,785.58	621,994.69	32.61834905	-104.07136587
00 Corva(BD-132H) - actual wellpath misses target center by 63.25usft at 13310.81usft MD (8968.08 TVD, -916.41 N, -4165.44 E) - Point	0.00	0.00	8,988.46	-856.76	-4,160.26	588,753.96	622,836.02	32.61825641	-104.06863358
02-V2800(BD-132H) - actual wellpath misses target center by 36.57usft at 11643.65usft MD (8991.13 TVD, -866.07 N, -2500.80 E) - Point	0.00	0.00	8,997.00	-829.99	-2,501.60	588,780.73	624,494.68	32.61831852	-104.06324623
01-LP(132H) - actual wellpath misses target center by 49.79usft at 9489.26usft MD (9072.16 TVD, -883.23 N, -351.43 E) - Point	0.00	0.00	9,080.09	-834.17	-348.38	588,776.55	626,647.90	32.61829180	-104.05625287
01-FTP(BD-132H) - actual wellpath misses target center by 255.08usft at 9066.30usft MD (8929.90 TVD, -918.14 N, 35.62 E) - Point	0.00	0.00	9,105.00	-835.24	201.54	588,775.48	627,197.82	32.61828490	-104.05446681

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
8,529.00	8,476.61	-773.74	231.42	KOP: 8529.00' MD, -232.90' VS, 8476.61' TVD	
8,761.44	8,692.08	-849.01	202.41	100FEL: 8761.44' MD, -204.04' VS, 8692.08' TVD	
8,966.84	8,857.13	-914.17	103.03	Exit(01): 8966.84' MD, -104.79' VS, 8857.13' TVD	
9,130.77	8,970.31	-914.03	-14.35	Entry(01): 9130.77' MD, 12.60' VS, 8970.31' TVD	
9,493.00	9,071.91	-882.97	-355.15	EOC: 9493.00' MD, 353.46' VS, 9071.91' TVD	
12,807.21	8,967.14	-909.30	-3,662.60	Exit(02): 12807.21' MD, 3660.85' VS, 8967.14' TVD	
13,416.61	8,972.75	-908.51	-4,270.84	Entry(02): 13416.61' MD, 4269.08' VS, 8972.75' TVD	
16,667.96	8,977.34	-883.45	-7,519.56	100FWL: 16667.96' MD, 7517.85' VS, 8977.34' TVD	
16,699.00	8,977.07	-884.59	-7,550.58	Final MWD Survey: 16699.00' MD, 90.61°INC, 267.77°AZ	
16,758.00	8,976.44	-886.88	-7,609.53	PTB: 16758.00' MD, 90.61°INC, 267.77°AZ	

Checked By: _____	Approved By: _____	Date: _____
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Office
 District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM
 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

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

WELL API NO. 30-015-47823
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Black Diamond 34 Fed
8. Well Number 132H
9. OGRID Number 371449
10. Pool name or Wildcat Parkway; Bone Spring

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator Colgate Operating, LLC	
3. Address of Operator 300 North Marienfeld, Suite 1,000 – Midland, Tx 79701	
4. Well Location	
Unit Letter: <u>H</u> <u>1395</u> feet from the <u>North</u> line and <u>301</u> feet from the <u>East</u> line	
Section: <u>34</u> Township: <u>19S</u> Range: <u>29E</u> NMPM County: <u>Eddy</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3317 GL	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐ TEMPORARILY ABANDON ☐ CHANGE PLANS ☐ PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐ DOWNHOLE COMMINGLE ☐ CLOSED-LOOP SYSTEM ☐ OTHER: ☐		SUBSEQUENT REPORT OF: REMEDIAL WORK ☐ ALTERING CASING ☐ COMMENCE DRILLING OPNS. ☐ P AND A ☐ CASING/CEMENT JOB ☐ OTHER: New Well Completion ☒	
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13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

1/24/2022- Pressured up casing to 7,000 psi with a 15 minute test and 8,000 psi with a 15 minute test
 2/27/2022- Perf and frac stages 1-41.
 Perfs 9,455 – 16,530
 Frac with 300,563 bbl liquid and 15,753,185 lbs of proppant
 3/03/2022- Drilled out plugs
 Turn over to production. Tubing 2.875 @ 8,978
 TD 16,758 - PBTD 16,654

Spud Date: 10/27/2021

Rig Release Date: 11/13/2021

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

SIGNATURE: Mikah Thomas

TITLE: Sr. Regulatory Analyst

DATE: 05/15/2022

Type or print name Mikah Thomas

E-mail address: mtomas@colgateenergy.com

PHONE: 432-695-4272

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any): _____

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505		State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505				Form C-105 Revised April 3, 2017				
WELL COMPLETION OR RECOMPLETION REPORT AND LOG										
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)								5. Lease Name or Unit Agreement Name Black Diamond 34 Fed		
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER								6. Well Number: 132H		
8. Name of Operator Colgate Operating, LLC						9. OGRID 371449				
10. Address of Operator 300 North Marcienfeld, Suite 1,000 Midland, Texas 79705						11. Pool name or Wildcat Parkway; Bone Spring				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	H	34	19S	29E		1395	North	301	East	Eddy
BH:	G	33	19S	29E		2297	North	2623	East	Eddy
13. Date Spudded 10/27/2021		14. Date T.D. Reached 11/11/2021		15. Date Rig Released 11/13/2021		16. Date Completed (Ready to Produce) 3/4/2022		17. Elevations (DF and RKB, RT, GR, etc.) 3314		
18. Total Measured Depth of Well 16,758			19. Plug Back Measured Depth 16,654			20. Was Directional Survey Made? Yes		21. Type Electric and Other Logs Run Gamma Ray		
22. Producing Interval(s), of this completion - Top, Bottom, Name 9,455-16,530 Parkway; Bone Spring										
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
18.625		87.5		343		22.375		Prem Plus 355 sx 1.34		
13.375		54.5		1,517		17.5		Prem Plus 560 sx 2.08, 255 sx 1.34		
9.625		36		3,405		12.25		Prem Plus 625 sx 2.07, 230 sx 1.34		
5.5		17		16,746		8.75		Prem 920 sx 2.41, 1,325 sx 1.73		
24. LINER RECORD										
SIZE	TOP	BOTTOM	SACKS CEMENT		SCREEN		25. TUBING RECORD			
							SIZE		DEPTH SET	PACKER SET
							2 7/8		8978	
26. Perforation record (interval, size, and number) 9,455-16,530 0.37 1,338 holes						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						9,455-16,530		Total Proppant 15,753,185 – Total Fluid 300,563		
28. PRODUCTION										
Date First Production 03/21/2022		Production Method (<i>Flowing, gas lift, pumping - Size and type pump</i>) Gas Lift				Well Status (<i>Prod. or Shut-in</i>) Producing				
Date of Test 04/3/2022	Hours Tested 24	Choke Size 88/88	Prod'n For Test Period	Oil – Bbl 891	Gas – MCF 920	Water – Bbl. 2608	Gas - Oil Ratio			
Flow Tubing Press. 1220	Casing Pressure 351	Calculated 24-Hour Rate	Oil - Bbl. 891	Gas - MCF 920	Water - Bbl. 2068	Oil Gravity - API - (<i>Corr.</i>) 42.8				
29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>) Sold							30. Test Witnessed By Colgate Operating, LLC			
31. List Attachments C-102, C-103, C-104, Directionnel Survey										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.							33. Rig Release Date:			
34. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude				Longitude				NAD83		

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

Signature

Printed

Name: Mikah Thomas

Title: Sr. Regulatory Analyst

Date: 05/15/2022

E-mail Address: mthomas@colgateenergy.com

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Rustler- 129	T. Canyon	T. Ojo Alamo	T. Penn A"
T. Salt- 364	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt- 1120	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates- 1369	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. DLWR Mnt. Group- 3486	T. Devonian	T. Cliff House	T. Leadville
T. L Brushy Canyon- 5373	T. Silurian	T. Menefee	T. Madison
T. BS Lime- 5700	T. Montoya	T. Point Lookout	T. Elbert
T. 1 st Bone Spring SD- 7089	T. Simpson	T. Mancos	T. McCracken
T. 2 nd Bone Spring LM- 7293	T. McKee	T. Gallup	T. Ignacio Otzte
T. 2 nd Bone Spring SD- 7927	T. Ellenburger	Base Greenhorn	T. Granite
T. 3 rd Bone Spring LM- 8272	T. Gr. Wash	T. Dakota	
T. 3 rd Bone Spring SD- 8904	T. Delaware Sand	T. Morrison	
T. Drinkard	T. Bone Springs	T. Todilto	
T. Abo	T. Capitan- 2743	T. Entrada	
T. Wolfcamp	T.	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

OIL OR GAS SANDS OR ZONES

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

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

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

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

IMPORTANT WATER SANDS

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

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

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

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

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
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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 116554

ACKNOWLEDGMENTS

Operator: COLGATE OPERATING, LLC 300 North Marienfeld Street Midland, TX 79701	OGRID: 371449
	Action Number: 116554
	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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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

CONDITIONS

Action 116554

CONDITIONS

Operator: COLGATE OPERATING, LLC 300 North Marienfeld Street Midland, TX 79701	OGRID: 371449
	Action Number: 116554
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 Completion Report and 3160-5 Completion Sundry within 10 days to NMOCD after BLM approval. Log (s) if applicable need to be submitted separately as a [UF-WL] EP Well Log Submission (Well Log) Permit.	6/13/2022