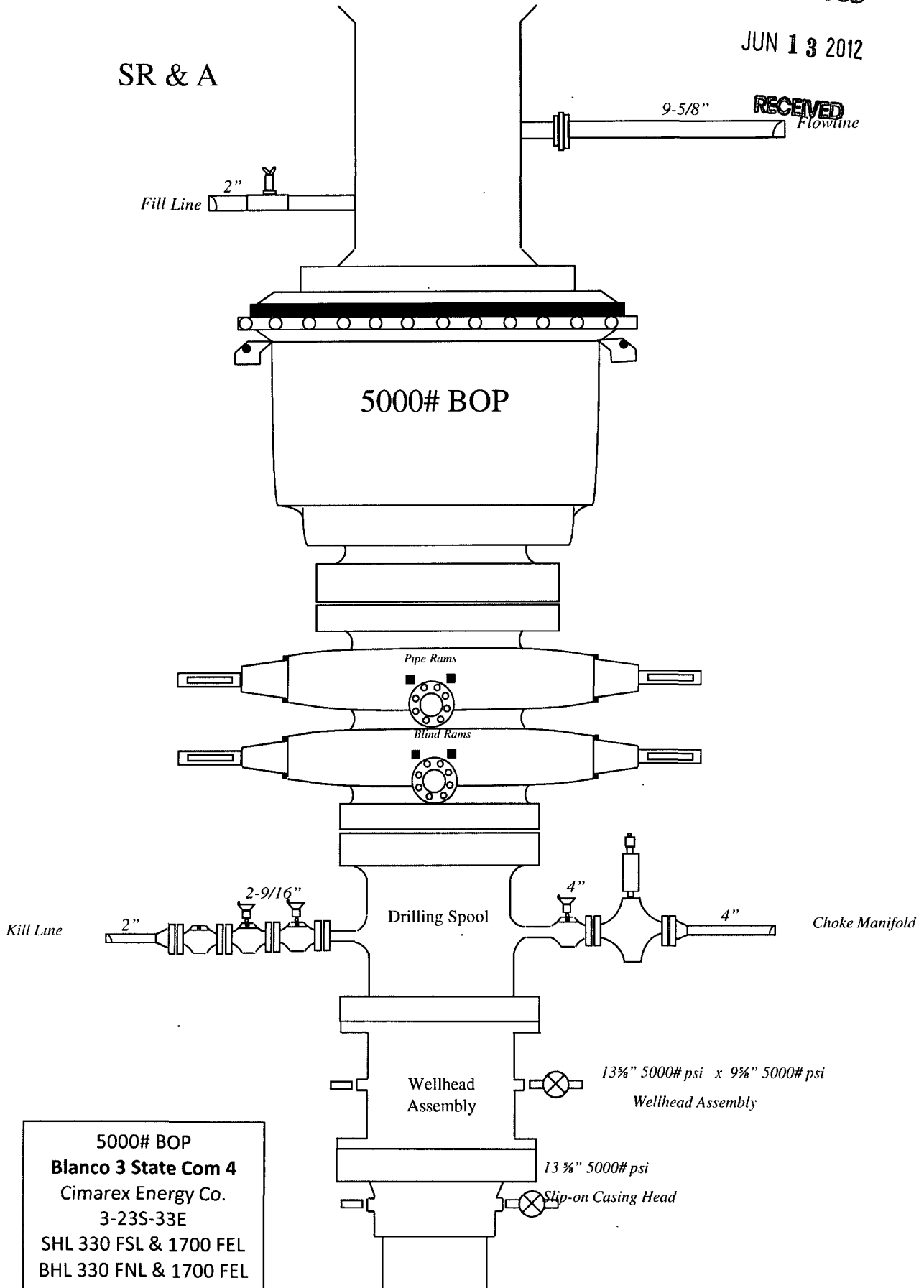


30-025-40623

HOBBS OCD

JUN 13 2012

SR & A

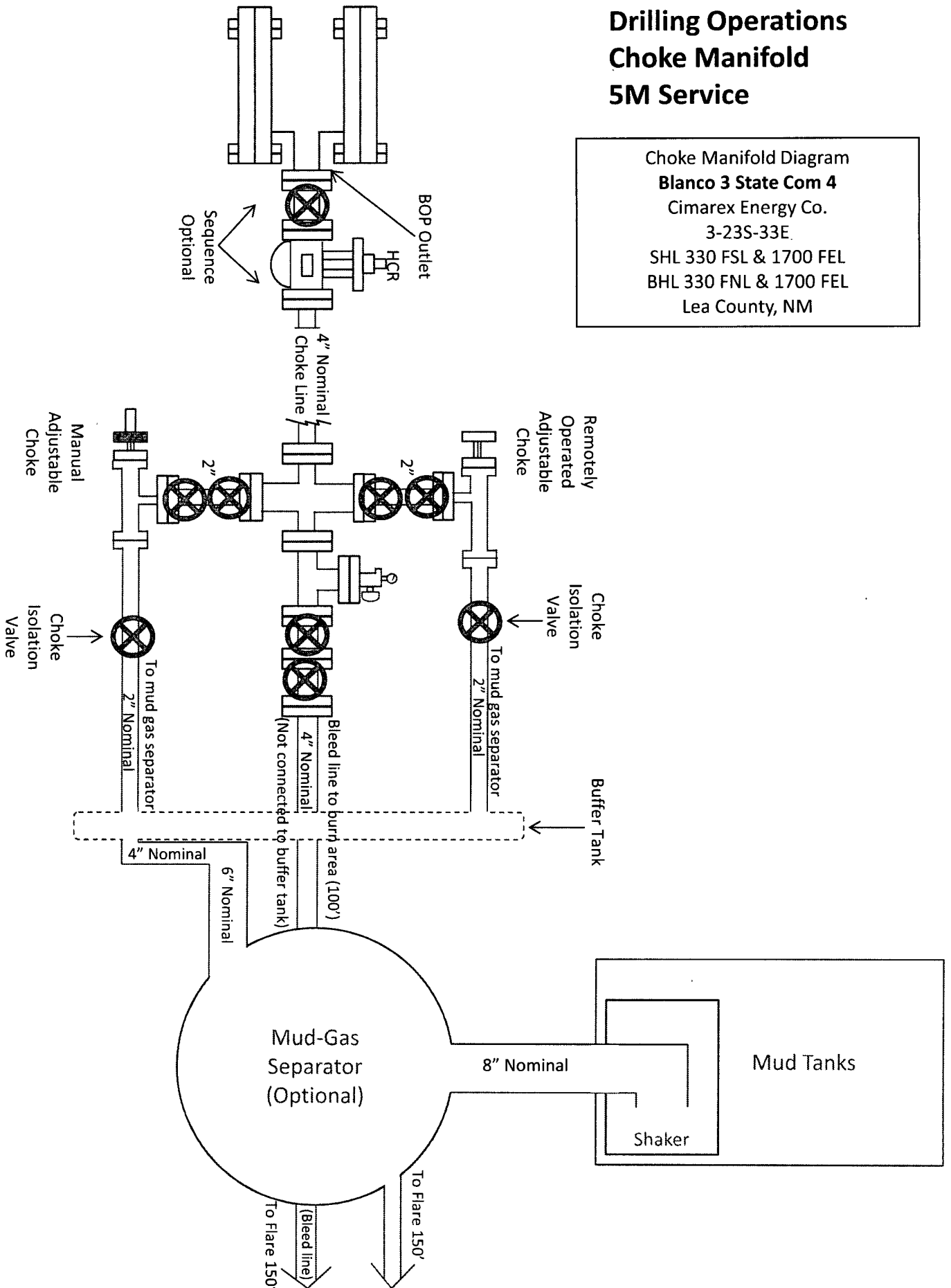


5000# BOP
Blanco 3 State Com 4
 Cimarex Energy Co.
 3-23S-33E
 SHL 330 FSL & 1700 FEL
 BHL 330 FNL & 1700 FEL
 Lea County, NM

JUN 18 2012

Drilling Operations Choke Manifold 5M Service

Choke Manifold Diagram
Blanco 3 State Com 4
Cimarex Energy Co.
3-23S-33E
SHL 330 FSL & 1700 FEL
BHL 330 FNL & 1700 FEL
Lea County, NM





Cimarex Energy Co.

Location: Lea County, NM
Field: (Blanco) Sec 3, T23S, R33E
Facility: Blanco 3 State Com No. 4

Slot: Slot #1
Well: No. 4
Wellbore: No. 4 (PWB)

RECEIVED

JUN 13 2012

HOBBS OGD



Well Profile Data

Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0 00	0.000	359 519	0.00	0 00	0.00	0 00	0.00
KOP	9350 00	0 000	359 519	9350 00	0 00	0.00	0 00	0.00
EOB/SOH	10056 86	90 000	359.519	9800.00	449 98	-3.78	12.73	450 00
TD/PBHL	14219 05	90 000	359 519	9800 00	4612 02	-38 70	0 00	4612 19

Location Information

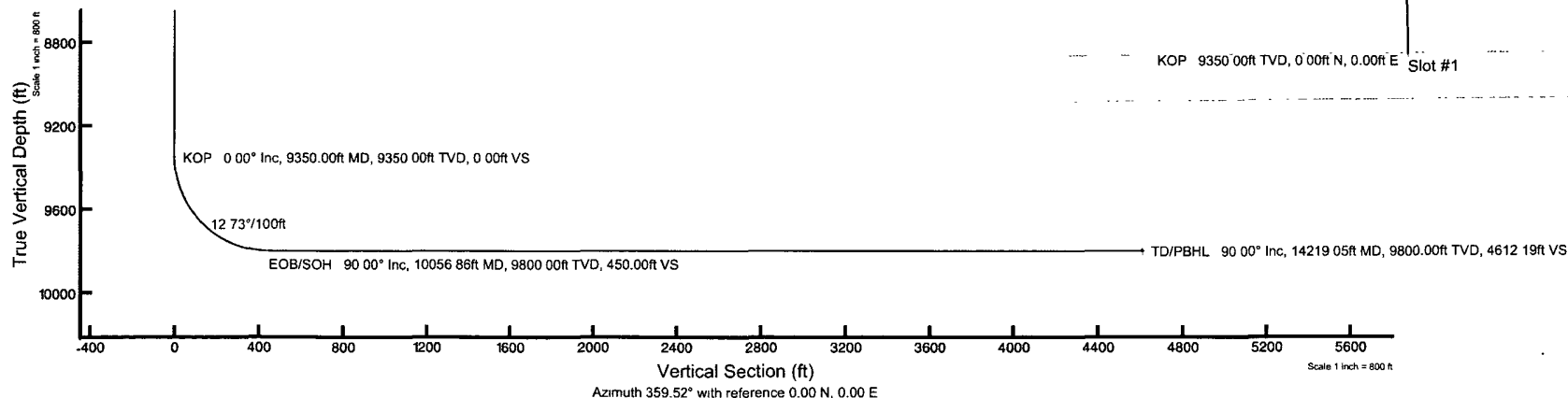
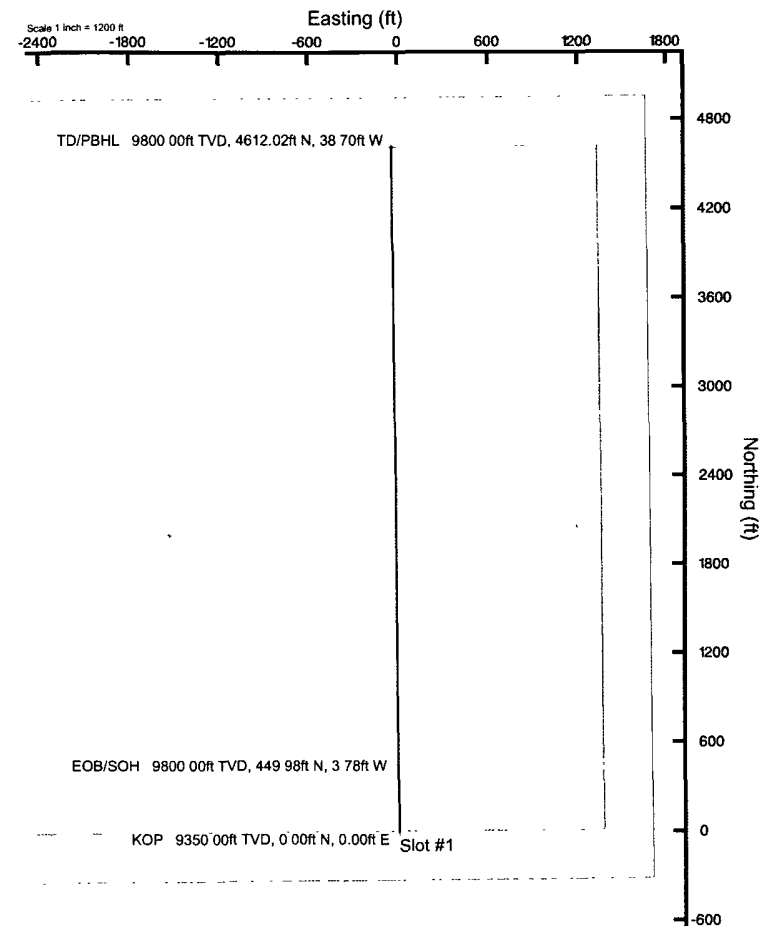
Facility Name		Gnd East (US ft)		Gnd North (US ft)		Latitude	Longitude
Blanco 3 State Com No 4		781079.000		483714.000		32°19'38.693"N	103°33'25.860"W
Slot	Local N (ft)	Local E (ft)	Gnd East (US ft)	Gnd North (US ft)	Latitude	Longitude	
Slot #1	0 00	0.00	781079.000	483714.000	32°19'38.693"N	103°33'25.860"W	
Rig on Slot #1 (RT) to Mud line (At Slot Slot #1)						0ft	
Mean Sea Level to Mud line (At Slot Slot #1)						-3575ft	
Rig on Slot #1 (RT) to Mean Sea Level						3575ft	

Bottom Hole Location

MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Gnd East (US ft)	Gnd North (US ft)	Latitude	Longitude
14219 05	90 000	359 519	9800 00	4612 02	-38 70	781040 30	488325 90	32°20'24.330"N	103°33'25.922"W

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Gnd East (US ft)	Gnd North (US ft)	Latitude	Longitude
Blanco 3 State Com No 4 (Rev-0)	14219 05	9800 00	4612 02	-38 70	781040 30	488325 90	32°20'24.330"N	103°33'25.922"W



Rev-A.0



Planned Wellpath Report

Rev-A.0

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	Slot #1
Area	Lea County, NM	Well	No. 4
Field	(Blanco) Sec 3, T23S, R33E	Wellbore	No. 4 (PWB)
Facility	Blanco 3 State Com No. 4		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Daviarcm
Scale	0.999975	Report Generated	6/6/2012 at 9:02:59 AM
Convergence at slot	n/a	Database/Source file	WA_Midland/No. 4_PWB_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W
Facility Reference Pt			781079.00	483714.00	32°19'38.693"N	103°33'25.860"W
Field Reference Pt			780799.10	483712.00	32°19'38.693"N	103°33'29.122"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on Slot #1 (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on Slot #1 (RT) to Mean Sea Level	3575.00ft
Vertical Reference Pt	Rig on Slot #1 (RT)	Rig on Slot #1 (RT) to Mud Line at Slot (Slot #1)	0.00ft
MD Reference Pt	Rig on Slot #1 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.52°



Planned Wellpath Report

Rev-A.0

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	Slot #1
Area	Lea County, NM	Well	No. 4
Field	(Blanco) Sec 3, T23S, R33E	Wellbore	No. 4 (PWB)
Facility	Blanco 3 State Com No. 4		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
0.00	0.000	359.519	0.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
100.00†	0.000	359.519	100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
200.00†	0.000	359.519	200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
300.00†	0.000	359.519	300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
400.00†	0.000	359.519	400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
500.00†	0.000	359.519	500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
600.00†	0.000	359.519	600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
700.00†	0.000	359.519	700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
800.00†	0.000	359.519	800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
900.00†	0.000	359.519	900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1000.00†	0.000	359.519	1000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1100.00†	0.000	359.519	1100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1200.00†	0.000	359.519	1200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1300.00†	0.000	359.519	1300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1400.00†	0.000	359.519	1400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1500.00†	0.000	359.519	1500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1600.00†	0.000	359.519	1600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1700.00†	0.000	359.519	1700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1800.00†	0.000	359.519	1800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
1900.00†	0.000	359.519	1900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2000.00†	0.000	359.519	2000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2100.00†	0.000	359.519	2100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2200.00†	0.000	359.519	2200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2300.00†	0.000	359.519	2300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2400.00†	0.000	359.519	2400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2500.00†	0.000	359.519	2500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2600.00†	0.000	359.519	2600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2700.00†	0.000	359.519	2700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2800.00†	0.000	359.519	2800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
2900.00†	0.000	359.519	2900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00



Planned Wellpath Report

Rev-A.0

Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	Slot #1
Area	Lea County, NM	Well	No. 4
Field	(Blanco) Sec 3, T23S, R33E	Wellbore	No. 4 (PWB)
Facility	Blanco 3 State Com No. 4		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
3000.00†	0.000	359.519	3000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3100.00†	0.000	359.519	3100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3200.00†	0.000	359.519	3200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3300.00†	0.000	359.519	3300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3400.00†	0.000	359.519	3400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3500.00†	0.000	359.519	3500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3600.00†	0.000	359.519	3600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3700.00†	0.000	359.519	3700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3800.00†	0.000	359.519	3800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
3900.00†	0.000	359.519	3900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4000.00†	0.000	359.519	4000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4100.00†	0.000	359.519	4100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4200.00†	0.000	359.519	4200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4300.00†	0.000	359.519	4300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4400.00†	0.000	359.519	4400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4500.00†	0.000	359.519	4500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4600.00†	0.000	359.519	4600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4700.00†	0.000	359.519	4700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4800.00†	0.000	359.519	4800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
4900.00†	0.000	359.519	4900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5000.00†	0.000	359.519	5000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5100.00†	0.000	359.519	5100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5200.00†	0.000	359.519	5200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5300.00†	0.000	359.519	5300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5400.00†	0.000	359.519	5400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5500.00†	0.000	359.519	5500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5600.00†	0.000	359.519	5600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5700.00†	0.000	359.519	5700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5800.00†	0.000	359.519	5800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
5900.00†	0.000	359.519	5900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00



Planned Wellpath Report

Rev-A.0

Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	Slot #1
Area	Lea County, NM	Well	No. 4
Field	(Blanco) Sec 3, T23S, R33E	Wellbore	No. 4 (PWB)
Facility	Blanco 3 State Com No. 4		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
6000.00†	0.000	359.519	6000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6100.00†	0.000	359.519	6100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6200.00†	0.000	359.519	6200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6300.00†	0.000	359.519	6300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6400.00†	0.000	359.519	6400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6500.00†	0.000	359.519	6500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6600.00†	0.000	359.519	6600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6700.00†	0.000	359.519	6700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6800.00†	0.000	359.519	6800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
6900.00†	0.000	359.519	6900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7000.00†	0.000	359.519	7000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7100.00†	0.000	359.519	7100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7200.00†	0.000	359.519	7200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7300.00†	0.000	359.519	7300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7400.00†	0.000	359.519	7400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7500.00†	0.000	359.519	7500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7600.00†	0.000	359.519	7600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7700.00†	0.000	359.519	7700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7800.00†	0.000	359.519	7800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
7900.00†	0.000	359.519	7900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8000.00†	0.000	359.519	8000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8100.00†	0.000	359.519	8100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8200.00†	0.000	359.519	8200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8300.00†	0.000	359.519	8300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8400.00†	0.000	359.519	8400.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8500.00†	0.000	359.519	8500.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8600.00†	0.000	359.519	8600.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8700.00†	0.000	359.519	8700.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8800.00†	0.000	359.519	8800.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
8900.00†	0.000	359.519	8900.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00



Planned Wellpath Report

Rev-A.0
Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	Slot #1
Area	Lea County, NM	Well	No. 4
Field	(Blanco) Sec 3, T23S, R33E	Wellbore	No. 4 (PWB)
Facility	Blanco 3 State Com No. 4		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
9000.00†	0.000	359.519	9000.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
9100.00†	0.000	359.519	9100.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
9200.00†	0.000	359.519	9200.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
9300.00†	0.000	359.519	9300.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
9350.00	0.000	359.519	9350.00	0.00	0.00	0.00	781079.00	483714.00	32°19'38.693"N	103°33'25.860"W	0.00	0.000	0.00
9400.00†	6.366	359.519	9399.90	2.77	2.77	-0.02	781078.98	483716.77	32°19'38.720"N	103°33'25.860"W	2.77	359.519	12.73
9500.00†	19.099	359.519	9497.24	24.77	24.77	-0.21	781078.79	483738.77	32°19'38.938"N	103°33'25.860"W	24.77	359.519	12.73
9600.00†	31.831	359.519	9587.34	67.68	67.67	-0.57	781078.43	483781.67	32°19'39.363"N	103°33'25.861"W	67.68	359.519	12.73
9700.00†	44.563	359.519	9665.76	129.39	129.38	-1.09	781077.91	483843.38	32°19'39.973"N	103°33'25.862"W	129.39	359.519	12.73
9800.00†	57.296	359.519	9728.66	206.86	206.86	-1.74	781077.26	483920.85	32°19'40.740"N	103°33'25.863"W	206.86	359.519	12.73
9900.00†	70.028	359.519	9772.94	296.30	296.29	-2.49	781076.51	484010.28	32°19'41.625"N	103°33'25.864"W	296.30	359.519	12.73
10000.00†	82.761	359.519	9796.41	393.29	393.28	-3.30	781075.70	484107.27	32°19'42.584"N	103°33'25.865"W	393.29	359.519	12.73
10056.86	90.000	359.519	9800.00	450.00	449.98	-3.78	781075.22	484163.97	32°19'43.146"N	103°33'25.866"W	450.00	359.519	12.73
10100.00†	90.000	359.519	9800.00	493.14	493.12	-4.14	781074.86	484207.11	32°19'43.572"N	103°33'25.867"W	493.14	359.519	0.00
10200.00†	90.000	359.519	9800.00	593.14	593.12	-4.98	781074.02	484307.10	32°19'44.562"N	103°33'25.868"W	593.14	359.519	0.00
10300.00†	90.000	359.519	9800.00	693.14	693.12	-5.82	781073.18	484407.10	32°19'45.551"N	103°33'25.869"W	693.14	359.519	0.00
10400.00†	90.000	359.519	9800.00	793.14	793.11	-6.66	781072.34	484507.09	32°19'46.541"N	103°33'25.871"W	793.14	359.519	0.00
10500.00†	90.000	359.519	9800.00	893.14	893.11	-7.49	781071.51	484607.09	32°19'47.530"N	103°33'25.872"W	893.14	359.519	0.00
10600.00†	90.000	359.519	9800.00	993.14	993.11	-8.33	781070.67	484707.08	32°19'48.520"N	103°33'25.873"W	993.14	359.519	0.00
10700.00†	90.000	359.519	9800.00	1093.14	1093.10	-9.17	781069.83	484807.07	32°19'49.509"N	103°33'25.875"W	1093.14	359.519	0.00
10800.00†	90.000	359.519	9800.00	1193.14	1193.10	-10.01	781068.99	484907.07	32°19'50.499"N	103°33'25.876"W	1193.14	359.519	0.00
10900.00†	90.000	359.519	9800.00	1293.14	1293.10	-10.85	781068.15	485007.06	32°19'51.488"N	103°33'25.877"W	1293.14	359.519	0.00
11000.00†	90.000	359.519	9800.00	1393.14	1393.09	-11.69	781067.31	485107.05	32°19'52.478"N	103°33'25.879"W	1393.14	359.519	0.00
11100.00†	90.000	359.519	9800.00	1493.14	1493.09	-12.53	781066.47	485207.05	32°19'53.467"N	103°33'25.880"W	1493.14	359.519	0.00
11200.00†	90.000	359.519	9800.00	1593.14	1593.09	-13.37	781065.63	485307.04	32°19'54.457"N	103°33'25.881"W	1593.14	359.519	0.00
11300.00†	90.000	359.519	9800.00	1693.14	1693.08	-14.21	781064.79	485407.04	32°19'55.446"N	103°33'25.883"W	1693.14	359.519	0.00
11400.00†	90.000	359.519	9800.00	1793.14	1793.08	-15.05	781063.95	485507.03	32°19'56.436"N	103°33'25.884"W	1793.14	359.519	0.00
11500.00†	90.000	359.519	9800.00	1893.14	1893.08	-15.89	781063.12	485607.02	32°19'57.425"N	103°33'25.885"W	1893.14	359.519	0.00
11600.00†	90.000	359.519	9800.00	1993.14	1993.07	-16.72	781062.28	485707.02	32°19'58.415"N	103°33'25.887"W	1993.14	359.519	0.00
11700.00†	90.000	359.519	9800.00	2093.14	2093.07	-17.56	781061.44	485807.01	32°19'59.404"N	103°33'25.888"W	2093.14	359.519	0.00



Planned Wellpath Report

Rev-A.0

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	Slot #1
Area	Lea County, NM	Well	No. 4
Field	(Blanco) Sec 3, T23S, R33E	Wellbore	No. 4 (PWB)
Facility	Blanco 3 State Com No. 4		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
11800.00†	90.000	359.519	9800.00	2193.14	2193.06	-18.40	781060.60	485907.01	32°20'00.394"N	103°33'25.889"W	2193.14	359.519	0.00
11900.00†	90.000	359.519	9800.00	2293.14	2293.06	-19.24	781059.76	486007.00	32°20'01.383"N	103°33'25.891"W	2293.14	359.519	0.00
12000.00†	90.000	359.519	9800.00	2393.14	2393.06	-20.08	781058.92	486106.99	32°20'02.373"N	103°33'25.892"W	2393.14	359.519	0.00
12100.00†	90.000	359.519	9800.00	2493.14	2493.05	-20.92	781058.08	486206.99	32°20'03.362"N	103°33'25.893"W	2493.14	359.519	0.00
12200.00†	90.000	359.519	9800.00	2593.14	2593.05	-21.76	781057.24	486306.98	32°20'04.352"N	103°33'25.895"W	2593.14	359.519	0.00
12300.00†	90.000	359.519	9800.00	2693.14	2693.05	-22.60	781056.40	486406.97	32°20'05.341"N	103°33'25.896"W	2693.14	359.519	0.00
12400.00†	90.000	359.519	9800.00	2793.14	2793.04	-23.44	781055.56	486506.97	32°20'06.331"N	103°33'25.897"W	2793.14	359.519	0.00
12500.00†	90.000	359.519	9800.00	2893.14	2893.04	-24.28	781054.72	486606.96	32°20'07.320"N	103°33'25.899"W	2893.14	359.519	0.00
12600.00†	90.000	359.519	9800.00	2993.14	2993.04	-25.12	781053.89	486706.96	32°20'08.310"N	103°33'25.900"W	2993.14	359.519	0.00
12700.00†	90.000	359.519	9800.00	3093.14	3093.03	-25.95	781053.05	486806.95	32°20'09.299"N	103°33'25.901"W	3093.14	359.519	0.00
12800.00†	90.000	359.519	9800.00	3193.14	3193.03	-26.79	781052.21	486906.94	32°20'10.289"N	103°33'25.903"W	3193.14	359.519	0.00
12900.00†	90.000	359.519	9800.00	3293.14	3293.03	-27.63	781051.37	487006.94	32°20'11.278"N	103°33'25.904"W	3293.14	359.519	0.00
13000.00†	90.000	359.519	9800.00	3393.14	3393.02	-28.47	781050.53	487106.93	32°20'12.268"N	103°33'25.905"W	3393.14	359.519	0.00
13100.00†	90.000	359.519	9800.00	3493.14	3493.02	-29.31	781049.69	487206.92	32°20'13.257"N	103°33'25.907"W	3493.14	359.519	0.00
13200.00†	90.000	359.519	9800.00	3593.14	3593.02	-30.15	781048.85	487306.92	32°20'14.247"N	103°33'25.908"W	3593.14	359.519	0.00
13300.00†	90.000	359.519	9800.00	3693.14	3693.01	-30.99	781048.01	487406.91	32°20'15.236"N	103°33'25.909"W	3693.14	359.519	0.00
13400.00†	90.000	359.519	9800.00	3793.14	3793.01	-31.83	781047.17	487506.91	32°20'16.226"N	103°33'25.911"W	3793.14	359.519	0.00
13500.00†	90.000	359.519	9800.00	3893.14	3893.00	-32.67	781046.33	487606.90	32°20'17.215"N	103°33'25.912"W	3893.14	359.519	0.00
13600.00†	90.000	359.519	9800.00	3993.14	3993.00	-33.51	781045.49	487706.89	32°20'18.205"N	103°33'25.913"W	3993.14	359.519	0.00
13700.00†	90.000	359.519	9800.00	4093.14	4093.00	-34.35	781044.66	487806.89	32°20'19.194"N	103°33'25.915"W	4093.14	359.519	0.00
13800.00†	90.000	359.519	9800.00	4193.14	4192.99	-35.18	781043.82	487906.88	32°20'20.184"N	103°33'25.916"W	4193.14	359.519	0.00
13900.00†	90.000	359.519	9800.00	4293.14	4292.99	-36.02	781042.98	488006.87	32°20'21.173"N	103°33'25.917"W	4293.14	359.519	0.00
14000.00†	90.000	359.519	9800.00	4393.14	4392.99	-36.86	781042.14	488106.87	32°20'22.163"N	103°33'25.919"W	4393.14	359.519	0.00
14100.00†	90.000	359.519	9800.00	4493.14	4492.98	-37.70	781041.30	488206.86	32°20'23.152"N	103°33'25.920"W	4493.14	359.519	0.00
14200.00†	90.000	359.519	9800.00	4593.14	4592.98	-38.54	781040.46	488306.86	32°20'24.142"N	103°33'25.921"W	4593.14	359.519	0.00
14219.05	90.000	359.519	9800.00 ¹	4612.19	4612.02	-38.70	781040.30	488325.90	32°20'24.330"N	103°33'25.922"W	4612.19	359.519	0.00



Planned Wellpath Report

Rev-A.0

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	Slot #1
Area	Lea County, NM	Well	No. 4
Field	(Blanco) Sec 3, T23S, R33E	Wellbore	No. 4 (PWB)
Facility	Blanco 3 State Com No. 4		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) Blanco 3 State Com No. 4 (Rev-0)	14219.05	9800.00	4612.02	-38.70	781040.30	488325.90	32°20'24.330"N	103°33'25.922"W	point