

HOBBS OCD

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PO Box 1370
Artesia, NM 88211-1370
(505) 748-1288

30-015-38655

July 8, 2011

Cimarex Energy Co.
Attn: Jim Evans
600 N. Marienfeld, Suite 600
Midland, TX 79701

RE: Bluetail 8 Federal #4
1850' FNL & 330' FWL
Sec. 8, T17S, R29E
Eddy County, New Mexico

Dear Sir,

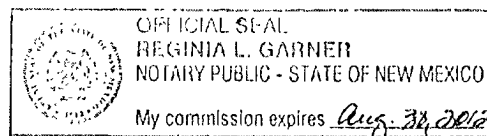
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 8th day of July, 2011.

Notary Public

Bluetail 8 Federal #4

#	Date	Depth	Dev/AZT	Direction
6/30/2011		229	0 50	0 00
7/1/2011		480	0 70	0.00
7/1/2011		725	1 00	0.00
7/2/2011		1053	0 60	90.10
7/2/2011		1116	2 10	28.40
7/2/2011		1212	2.10	41.00
7/2/2011		1306	4 70	39.10
7/1/2011		1400	5 20	28.30
7/2/2011		1494	353.70	4 80
7/2/2011		1587	343.80	5 10
7/2/2011		1682	350 80	4.30
7/2/2011		1776	356.10	4.20
7/3/2011		1871	3.70	356.10
7/3/2011		1966	355.80	4.10
7/3/2011		2111	3.90	350 60
7/3/2011		2155	4.20	350 00
7/3/2011		2250	4.20	344.90
7/3/2011		2345	4 40	354 40
7/3/2011		2439	4.40	351.00
7/3/2011		2533	4.70	353 10
7/4/2011		2629	4 50	4 10
7/4/2011		2724	4 40	346.80
7/4/2011		2819	4.40	359 30
7/4/2011		2914	4.30	353.50
7/4/2011		3008	4.30	12.40
7/4/2011		3103	3 90	5.70
7/4/2011		3197	4.40	6.20
7/4/2011		3275	4.70	2.30
7/5/2011		3293	4.50	3.40
7/5/2011		3387	4.60	359.00
7/5/2011		3483	4.60	1.00
7/5/2011		3578	4.40	358.40
7/5/2011		3671	4.60	354.30
7/5/2011		3755	4.80	347.10
7/6/2011		3860	3.70	358.80
7/6/2011		3954	3.20	348.60
7/6/2011		4048	4.40	20.20
7/6/2011		4079	4 30	20.80
7/6/2011		4142	4.50	17.00
7/6/2011		4236	4.10	20.70
7/6/2011		4331	4 30	12.30
7/6/2011		4426	4 40	7.70
7/6/2011		4522	4 10	93 00
7/6/2011		4616	4 40	0 90
7/7/2011		4652	4 60	356.00



Cimarex Energy Co. of Colorado
Bluetail 8 Fed 4
SHL 2160' FNL & 330' FWL
BHL 1650' FNL & 330' FWL
Sec 8 - T17S - R29E, Eddy Co NM
M Ketter 30-015- 8/3/2011

11-3/4" 42# H40 STC csg @ 299'
Cmt'd w/425 sxs; Circl'd cmt

Quantity	Description	Length	Setting Depth
	KB	18	18 00
111	2-7/8" 6.5# J55 8rd EUE Tbg	3617.91	3635.91
1	Collar	0.50	3636.41
1	Lift Sub	8.10	3644.51
1	Pump	28.83	3673.34
1	Tag Bar	1.25	3674.59
1	2-7/8" 6.5# J55 8rd EUE Tbg	32.53	3707.12
		2.85	3709.97

Quantity	Description	Length	Total Depth
1	PR	22.00	22.00
1	1" Drive Rod w/ 7/8" p.n	25.00	47.00
24	1" Drive Rod w/ 7/8" p.n (3 mcl 3e: g. des'nd)	600.00	647.00
95	1" Drive Rod w/ 7/8" p.n	2375.00	3022.00
22	1" Drive Rod w/ 7/8" p.n (3 mcl 3e: g. des'nd)	550.00	3572.00
1	1" Pony Rod	75.00	3597.00
1	Rotor	28.00	3625.00

Sliding @ 1100'

Paddock Perfs:
3796'-4116'

Blinebry Perfs:
4196', 4200', 21', 26', 30', 36', 38', 41', 52', 61', 75',
82', 92', 4305', 13', 36', 39', 47', 53', 75', 60', 81',
4403', 16', 20', 37', 53', 60', 70', 82', 4504', 4523', 28',
39', 44', 50', 66', 88'

5-1/2" 17# L80 BTC csg @ 4,703'
Cmt'd w/950 sxs, Circl'd cmt

TD 4703'
PBD 4654'

NOES OGD

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CIMAREX ENERGY

Empire

Eddy County, NM

Bluetail "8" Federal #4

VH - Job #32K0711628

Survey: Actual

SDI Standard Survey Report

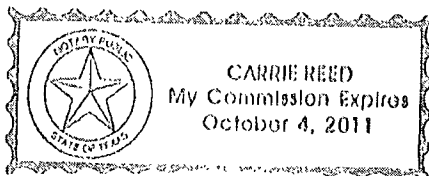
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 1st of August, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling
Directional Drilling Operations

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	CIMAREX ENERGY	Local Co-ordinate Reference:	Well Bluelail "8" Federal #4
Project:	Empire	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Bluelail "8" Federal #4	North Reference:	Grid
Wellbore:	VH - Job #32K0711628	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0711628	Database:	EDM-Regulatory

Project	Empire		
Map System:	US State Plane 1927 (Exact solution)	System Datum	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Eddy County, NM				
Site Position:		Northing:	673,477 15 usft	Latitude:	32° 51' 4 550 N
From	Lat/Long	Easting:	570,262 08 usft	Longitude:	104° 6' 16 340 W
Position Uncertainty:	0 0 usft	Slot Radius:	0"	Grid Convergence:	0 12 °

Well	Bluelail "8" Federal #4, Directional (Great White)					
Well Position	+N/-S	0 0 usft	Northings:	673,477 15 usft	Latitude:	32° 51' 4 550 N
	+E/-W	0 0 usft	Easting:	570,262 08 usft	Longitude:	104° 6' 16 340 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K0711628				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/1/2011	7 88	60 67	48,956

Design	VII - Job #32K0711628				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0 0	0 0	0 0	359 80	

Survey Program		Date	8/25/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
129 0	1,072 0	Actual (VH - Job #32K0711628)	Keeper	Keeper Gyro	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0 0	0 00	0 00	0 0	0 0	0 0	0 00	0 0
129 0	0 57	320 94	129 0	0 5	-0 4	320 94	0 6
220 6	0 66	333 55	220 6	1 3	-0 9	325 03	1 6
312 3	0 72	339 90	312 3	2 3	-1 4	329 82	2 7
399 9	0 53	338 67	399 9	3 3	-1 7	332 39	3 7
490 5	0 58	6 08	490 5	4 2	-1 8	336 24	4 6
583 1	0 57	46 88	583 1	4 9	-1 4	343 68	5 2
675 0	0 78	43 47	675 0	5 7	-0 7	353 17	5 8
766 8	0 77	50 91	766 8	6 6	0 2	1 96	6 6
858 6	0 64	50 10	858 5	7 3	1 1	8 57	7 4
950 4	0 56	71 40	950 3	7 7	1 9	13 89	8 0
1,042 3	0 50	86 47	1 042 2	7 9	2 7	19 11	8 4



Scientific Drilling
Directional Drilling Operations

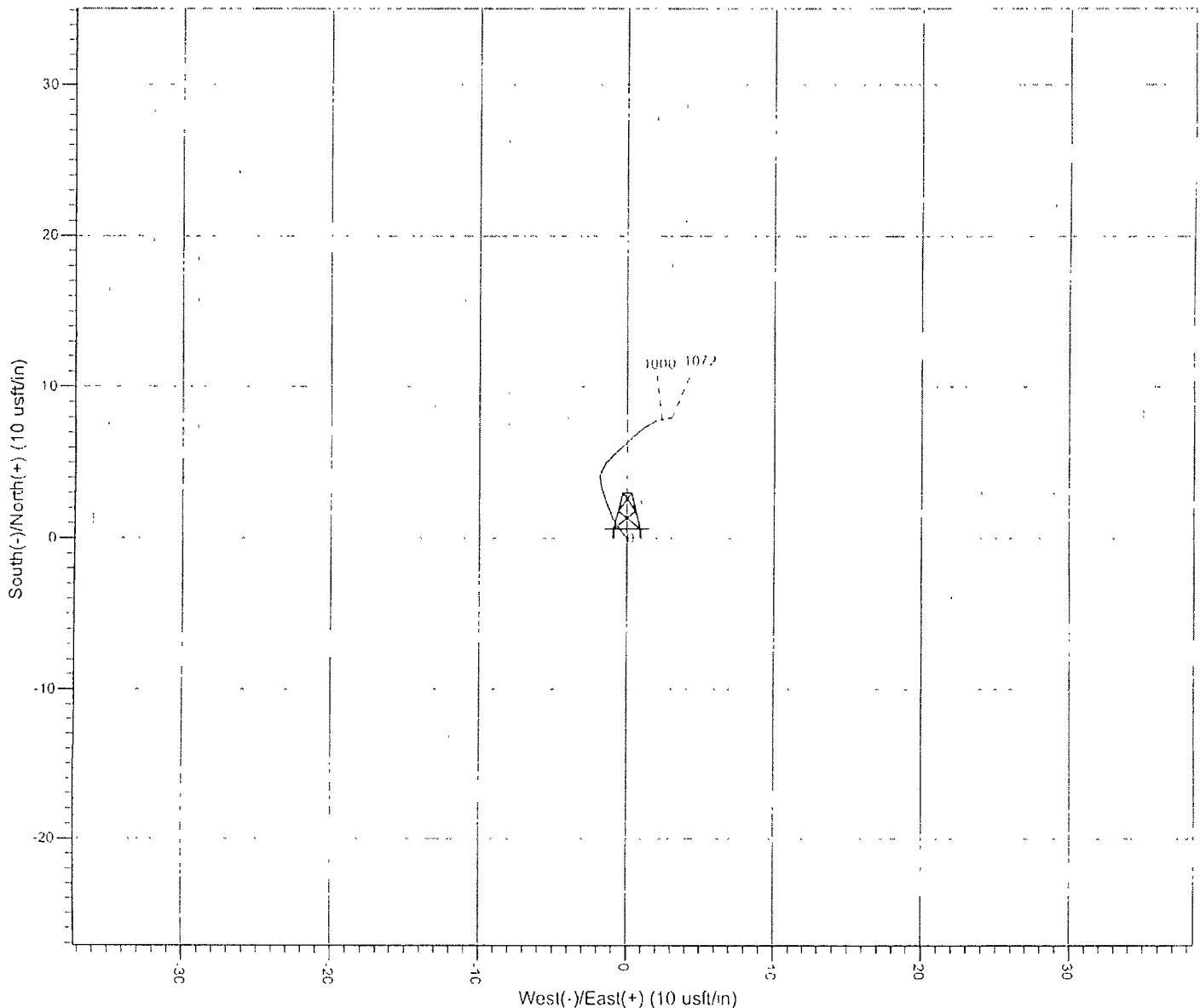
Project Empire
Eddy County, NM
Well Bluetail "8" Federal #4
Wellbore VH - Job #32K0711628
Design VH - Job #32K0711628



Azimuths to Grid North
True North 0.12°
Magnetic North 1.75°
Magnetic Field
Strength 48.450 Gauss
Dip Angle 0.00°
Date 7/1/2011
Model 103RF-2010

WELL DETAILS Bluetail "8" Federal #4
WELL @ 0.0usft (Original Well Elev)
Ground Level 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	673477.15	570262.08	32° 51' 4.550 N	104° 6' 16.340 W	



PROJECT DETAILS Empire
Geodetic System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone New Mexico East 3001
System Datum Mean Sea Level

SITE DETAILS Eddy County, NM
Site Centre Latitude 32° 51' 4.550 N
Longitude 104° 6' 16.340 W
Positional Uncertainty 0.0
Convergence 0.12
Local North Grid