

RECEIVED

AUG 25 2010
HOBBSOCD

SUR@ M-29-19s-32e, 375/S & 330/W
BHL @ P-29-19s-32e, 366/S & 4914/W
API # 30-025-39634

Cimarex Energy Co.

Lea County (NAD 83)

Sec 29 - T19S - R32E

Southern California 29 Fed #15H

Wellbore #1

Survey: MWD Survey

Standard Survey Report

15 March, 2010

Cimarex Energy Co.

Project: Lea County (NAD 83)
 Site: Sec 29 - T19S - R32E
 Well: Southern California 29 Fed #15H
 Wellbore: Wellbore #1
 Design: Plan #2

WELL DETAILS: Southern California 29 Fed #15H



+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	591606.30	706799.20	32° 37' 30.812 N	103° 47' 45.203 W
SHL: 375' FSL / 330' FWL					
BHL: 330' FSL / 330' FEL					



Azimuths to Grid North

Total Correction: 7.59°

Magnetic Field
 Strength: 49031.9nT
 Dip Angle: 60.57°
 Date: 2010/01/15
 Model: IGRF200510

WELLBORE TARGET DETAILS

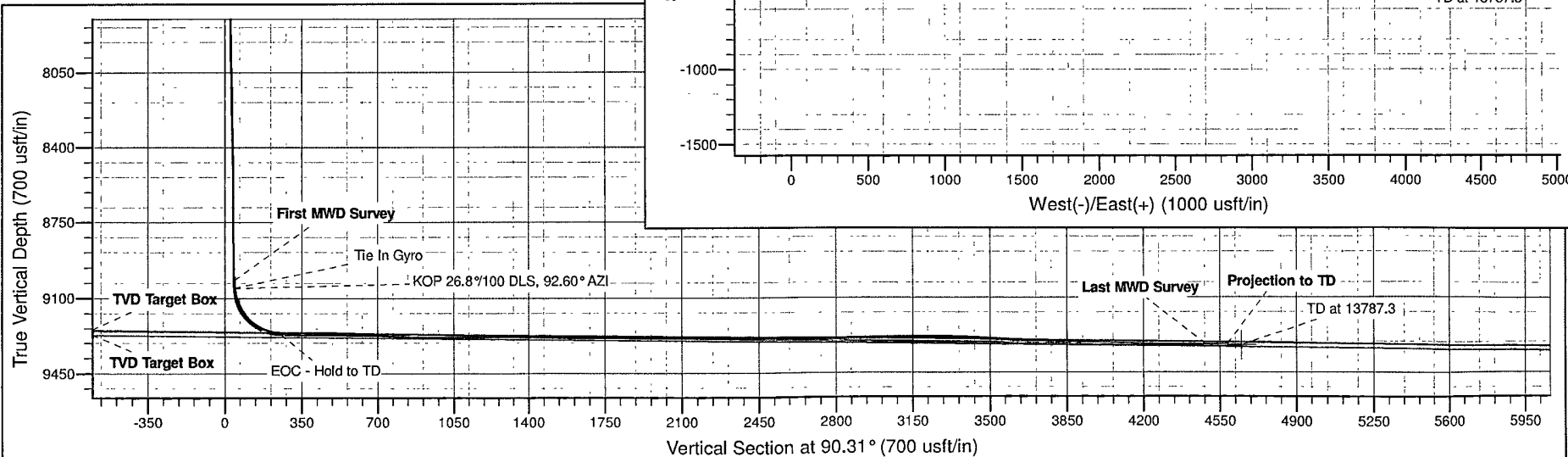
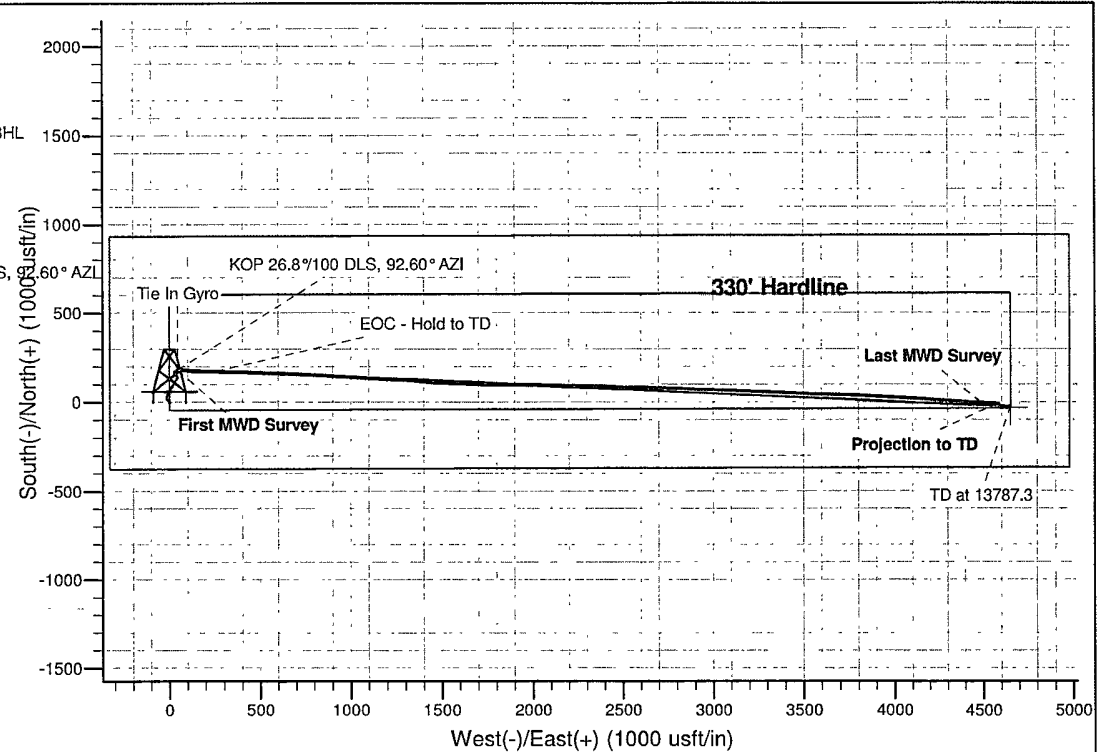
Name	TVD	+N/-S	+E/-W	Northing	Easting
SC #15H PBHL	9324.3	-33.5	4648.4	591572.82	711447.56

PLAN DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
9059.0	0.85	79.55	9054.4	182.9	45.1	0.00	0.00	44.1	
9060.0	0.85	79.55	9055.4	182.9	45.1	0.00	0.00	44.1	
9389.9	89.24	92.60	9266.0	174.0	255.8	26.80	13.06	254.9	
13787.4	89.24	92.60	9324.3	-25.4	4648.4	0.00	0.00	4648.5	SC #15H PBHL

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
9054.4	9059.0	0.85	79.55	182.9	45.1	44.1	0.0	Tie In Gyro
9055.4	9060.0	0.85	79.55	182.9	45.1	44.1	0.0	KOP 26.8°/100 DLS, 92.60° AZI
9266.0	9389.9	89.24	92.60	174.0	255.8	254.9	210.9	EOC - Hold to TD
9324.3	13787.3	89.24	92.60	-25.4	4648.4	4648.4	4608.0	TD at 13787.3



Great White Directional Services

Survey Report

Company:	Cimarex Energy Co	Local Co-ordinate Reference:	Site Sec 29 - T19S - R32E
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 29 - T19S - R32E	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Southern California 29 Fed #15H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Lea County (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 29 - T19S - R32E		
Site Position:		Northing:	591,606.30 usft
From:	Map	Easting:	706,799.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 37' 30.812 N
		Longitude:	103° 47' 45.203 W
		Grid Convergence:	0.29 °

Well	Southern California 29 Fed #15H		
Well Position	+N/-S	0.0 usft	Northing: 591,606.30 usft
	+E/-W	0.0 usft	Easting: 706,799.20 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 37' 30.812 N
		Longitude:	103° 47' 45.203 W
		Ground Level:	0.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	2010/01/15	7.88
			Dip Angle (°)
			60.57
			Field Strength (nT)
			49,032

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°)
			90.31

Survey Program	Date 2010/03/15		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
94.5	9,007.5	Gyro (Wellbore #1)	MWD
9,024.0	13,715.0	MWD Survey (Wellbore #1)	MWD
			Description
			MWD - Standard
			MWD - Standard

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,007.5	1.03	56.02	9,002.9	182.6	44.3	43.3	0.00	0.00	0.00
9,024.0	0.70	73.30	9,019.4	182.7	44.5	43.5	2.53	-2.00	104.73
First MWD Survey									
9,055.0	3.20	87.00	9,050.3	182.8	45.6	44.6	8.15	8.06	44.19
9,087.0	13.40	93.50	9,082.0	182.6	50.2	49.2	31.96	31.88	20.31
9,119.0	22.20	93.00	9,112.4	182.1	59.9	58.9	27.50	27.50	-1.56
9,150.0	27.00	95.00	9,140.6	181.1	72.8	71.8	15.71	15.48	6.45
9,182.0	33.10	97.30	9,168.3	179.4	88.7	87.7	19.40	19.06	7.19
9,214.0	41.80	98.70	9,193.6	176.7	108.0	107.0	27.32	27.19	4.38
9,245.0	51.30	97.20	9,214.9	173.6	130.2	129.3	30.84	30.65	-4.84

Great White Directional Services

Survey Report

Company:	Cimarex Energy Co.	Local Co-ordinate Reference:	Site Sec 29 - T19S - R32E
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 29 - T19S - R32E	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Southern California 29 Fed #15H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,277.0	59.30	88.80	9,233.2	172.3	156.4	155.5	32.99	25.00	-26.25
9,308.0	68.40	87.60	9,246.8	173.2	184.2	183.3	29.56	29.35	-3.87
9,350.0	81.40	92.30	9,257.7	173.2	224.7	223.7	32.77	30.95	11.19
9,382.0	88.70	92.50	9,260.5	171.8	256.5	255.6	22.82	22.81	0.63
9,414.0	89.60	92.10	9,261.0	170.6	288.5	287.5	3.08	2.81	-1.25
9,445.0	89.90	92.00	9,261.1	169.4	319.5	318.5	1.02	0.97	-0.32
9,477.0	90.10	91.60	9,261.1	168.4	351.4	350.5	1.40	0.63	-1.25
9,540.0	89.30	92.10	9,261.4	166.4	414.4	413.5	1.50	-1.27	0.79
9,603.0	89.70	91.20	9,262.0	164.6	477.4	476.5	1.56	0.63	-1.43
9,667.0	89.10	92.10	9,262.7	162.8	541.3	540.5	1.69	-0.94	1.41
9,730.0	87.30	92.10	9,264.6	160.4	604.3	603.4	2.86	-2.86	0.00
9,793.0	86.80	92.10	9,267.9	158.1	667.1	666.3	0.79	-0.79	0.00
9,856.0	87.50	93.00	9,271.0	155.3	730.0	729.2	1.81	1.11	1.43
9,919.0	87.40	92.80	9,273.8	152.2	792.9	792.0	0.35	-0.16	-0.32
9,983.0	87.80	93.40	9,276.5	148.7	856.7	855.9	1.13	0.63	0.94
10,046.0	88.90	94.00	9,278.3	144.6	919.6	918.8	1.99	1.75	0.95
10,110.0	90.30	93.20	9,278.8	140.6	983.4	982.6	2.52	2.19	-1.25
10,173.0	90.30	93.80	9,278.4	136.8	1,046.3	1,045.5	0.95	0.00	0.95
10,236.0	90.70	94.20	9,277.9	132.4	1,109.1	1,108.4	0.90	0.63	0.63
10,299.0	90.70	93.40	9,277.1	128.2	1,172.0	1,171.3	1.27	0.00	-1.27
10,363.0	90.20	92.00	9,276.6	125.2	1,235.9	1,235.2	2.32	-0.78	-2.19
10,426.0	89.70	93.40	9,276.7	122.2	1,298.9	1,298.2	2.36	-0.79	2.22
10,490.0	90.10	94.30	9,276.8	117.9	1,362.7	1,362.1	1.54	0.63	1.41
10,553.0	87.40	94.70	9,278.1	113.0	1,425.5	1,424.9	4.33	-4.29	0.63
10,616.0	87.60	93.20	9,280.9	108.6	1,488.3	1,487.7	2.40	0.32	-2.38
10,680.0	89.20	92.40	9,282.7	105.5	1,552.2	1,551.6	2.79	2.50	-1.25
10,743.0	89.50	92.10	9,283.4	103.0	1,615.1	1,614.5	0.67	0.48	-0.48
10,806.0	89.80	92.10	9,283.8	100.7	1,678.1	1,677.5	0.48	0.48	0.00
10,869.0	90.20	92.00	9,283.8	98.5	1,741.0	1,740.5	0.65	0.63	-0.16
10,933.0	90.10	90.80	9,283.6	96.9	1,805.0	1,804.5	1.88	-0.16	-1.88
10,996.0	89.20	89.90	9,284.0	96.5	1,868.0	1,867.5	2.02	-1.43	-1.43
11,060.0	89.50	90.10	9,284.7	96.5	1,932.0	1,931.5	0.56	0.47	0.31
11,123.0	89.70	90.20	9,285.2	96.4	1,995.0	1,994.5	0.35	0.32	0.16
11,186.0	90.20	92.60	9,285.2	94.8	2,058.0	2,057.4	3.89	0.79	3.81
11,250.0	88.40	90.30	9,286.0	93.2	2,122.0	2,121.4	4.56	-2.81	-3.59
11,313.0	89.20	90.60	9,287.3	92.7	2,184.9	2,184.4	1.36	1.27	0.48
11,377.0	89.40	91.60	9,288.1	91.5	2,248.9	2,248.4	1.59	0.31	1.56
11,440.0	89.30	91.50	9,288.8	89.8	2,311.9	2,311.4	0.22	-0.16	-0.16
11,503.0	89.70	91.60	9,289.4	88.1	2,374.9	2,374.4	0.65	0.63	0.16
11,567.0	90.20	91.70	9,289.4	86.2	2,438.8	2,438.3	0.80	0.78	0.16
11,630.0	89.80	91.30	9,289.4	84.6	2,501.8	2,501.3	0.90	-0.63	-0.63
11,694.0	90.30	91.50	9,289.4	83.0	2,565.8	2,565.3	0.84	0.78	0.31
11,757.0	89.50	91.30	9,289.5	81.5	2,628.8	2,628.3	1.31	-1.27	-0.32

Great White Directional Services

Survey Report

Company:	Cimarex Energy Co	Local Co-ordinate Reference:	Site Sec 29 - T19S - R32E
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 29 - T19S - R32E	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Southern California 29 Fed #15H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,820.0	90.10	91.60	9,289.7	79.9	2,691.8	2,691.3	1.06	0.95	0.48
11,884.0	89.70	92.80	9,289.8	77.4	2,755.7	2,755.3	1.98	-0.63	1.88
11,947.0	90.20	92.50	9,289.9	74.5	2,818.6	2,818.2	0.93	0.79	-0.48
12,010.0	90.70	92.80	9,289.4	71.6	2,881.6	2,881.1	0.93	0.79	0.48
12,074.0	91.50	91.70	9,288.1	69.1	2,945.5	2,945.1	2.12	1.25	-1.72
12,097.0	92.30	90.90	9,287.4	68.6	2,968.5	2,968.1	4.92	3.48	-3.48
12,160.0	91.20	90.90	9,285.4	67.6	3,031.5	3,031.0	1.75	-1.75	0.00
12,224.0	90.10	92.20	9,284.7	65.9	3,095.4	3,095.0	2.66	-1.72	2.03
12,287.0	89.90	92.40	9,284.7	63.3	3,158.4	3,158.0	0.45	-0.32	0.32
12,351.0	89.60	92.60	9,285.0	60.5	3,222.3	3,221.9	0.56	-0.47	0.31
12,414.0	89.80	92.60	9,285.3	57.7	3,285.2	3,284.9	0.32	0.32	0.00
12,478.0	87.90	92.80	9,286.6	54.7	3,349.2	3,348.8	2.99	-2.97	0.31
12,541.0	87.50	92.70	9,289.1	51.6	3,412.0	3,411.7	0.65	-0.63	-0.16
12,604.0	87.30	92.90	9,292.0	48.6	3,474.9	3,474.6	0.45	-0.32	0.32
12,668.0	86.70	92.10	9,295.3	45.8	3,538.7	3,538.4	1.56	-0.94	-1.25
12,794.0	87.70	92.00	9,301.5	41.3	3,664.5	3,664.2	0.80	0.79	-0.08
12,858.0	88.00	92.30	9,303.9	38.9	3,728.4	3,728.2	0.66	0.47	0.47
12,921.0	88.00	92.30	9,306.1	36.4	3,791.3	3,791.1	0.00	0.00	0.00
12,984.0	87.80	92.70	9,308.4	33.6	3,854.2	3,854.0	0.71	-0.32	0.63
13,047.0	88.00	92.80	9,310.7	30.6	3,917.1	3,916.9	0.35	0.32	0.16
13,111.0	88.10	93.00	9,312.9	27.4	3,981.0	3,980.8	0.35	0.16	0.31
13,174.0	88.10	93.40	9,315.0	23.8	4,043.9	4,043.7	0.63	0.00	0.63
13,237.0	88.10	93.50	9,317.1	20.0	4,106.7	4,106.6	0.16	0.00	0.16
13,300.0	88.70	93.40	9,318.8	16.3	4,169.6	4,169.4	0.97	0.95	-0.16
13,364.0	88.80	93.60	9,320.2	12.4	4,233.4	4,233.3	0.35	0.16	0.31
13,427.0	88.90	93.50	9,321.5	8.5	4,296.3	4,296.2	0.22	0.16	-0.16
13,490.0	89.90	93.50	9,322.2	4.6	4,359.2	4,359.1	1.59	1.59	0.00
13,554.0	90.40	93.60	9,322.0	0.6	4,423.1	4,423.0	0.80	0.78	0.16
13,617.0	90.50	93.40	9,321.5	-3.2	4,485.9	4,485.9	0.35	0.16	-0.32
Last MWD Survey									
13,715.0	90.50	93.30	9,320.6	-8.9	4,583.8	4,583.8	0.10	0.00	-0.10
Projection to TD - SC #15H PBHL									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,024.0	9,019.4	182.7	44.5	First MWD Survey
13,617.0	9,321.5	-3.2	4,485.9	Last MWD Survey
13,715.0	9,320.6	-8.9	4,583.8	Projection to TD

Checked By: _____ Approved By: _____ Date: _____