

Results of Directional Survey

API number:	30-025-41020	DD
OGRID:		Operator: CONOCOPHILLIPS COMPANY
		Property: RUBY FEDERAL # 59

surface	ULSTR:	N	18	T	17S	R	32E
				330	FSL	1850	FWL

BH Loc	ULSTR:	N	18	T	17S	R	32E
6911	MD	6902.0	TVD	298	FSL	1593	FWL

Top Perf/OH	ULSTR:	N	18	T	17S	R	32E
5372	MD	5366.8	TVD	302	FSL	1702	FWL

Bot Perf/OH	ULSTR:	N	18	T	17S	R	32E
6570	MD	6561.8	TVD	297	FSL	1617	FWL

	MD	N/S	E/W	VD
	5292	-28.02	-143.27	5287
TOP PERFS/OH	5372	-27.76	-148.39	5366.83
	5381	-27.73	-148.97	5375.81
	6545	-33.52	-231.05	6536.90
BOT PERFS/OH	6570	-33.50	-232.84	6561.84
	6635	-33.44	-237.49	6626.67

NEXT TO LAST	6859	-32.59	-253.13	6850.12
LAST READING	6911	-32.49	-256.66	6902.00
TD	6911	-32.49	-256.66	6902.00

Surface Location	330	FS	1850	FW
Projected BHL	298	FS	1593	FW
Location of				
Top Perfs/OH	302	FS	1702	FW
Bottom Perfs/OH	297	FS	1617	FW

SUMMARY of Subsurface Locations

Surface Location	N-18-17S-32E	330	FS	1850	FW	Vert. Depth
Top Perfs/OH	N-18-17S-32E	302	FS	1702	FW	5366.83
Bottom Perfs/OH	N-18-17S-32E	297	FS	1617	FW	6561.84
Projected TD	N-18-17S-32E	298	FS	1593	FW	6902.00

NOV 12 2013



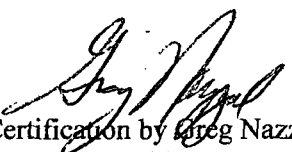
HOBBS OCD

OCT 21 2013

RECEIVED

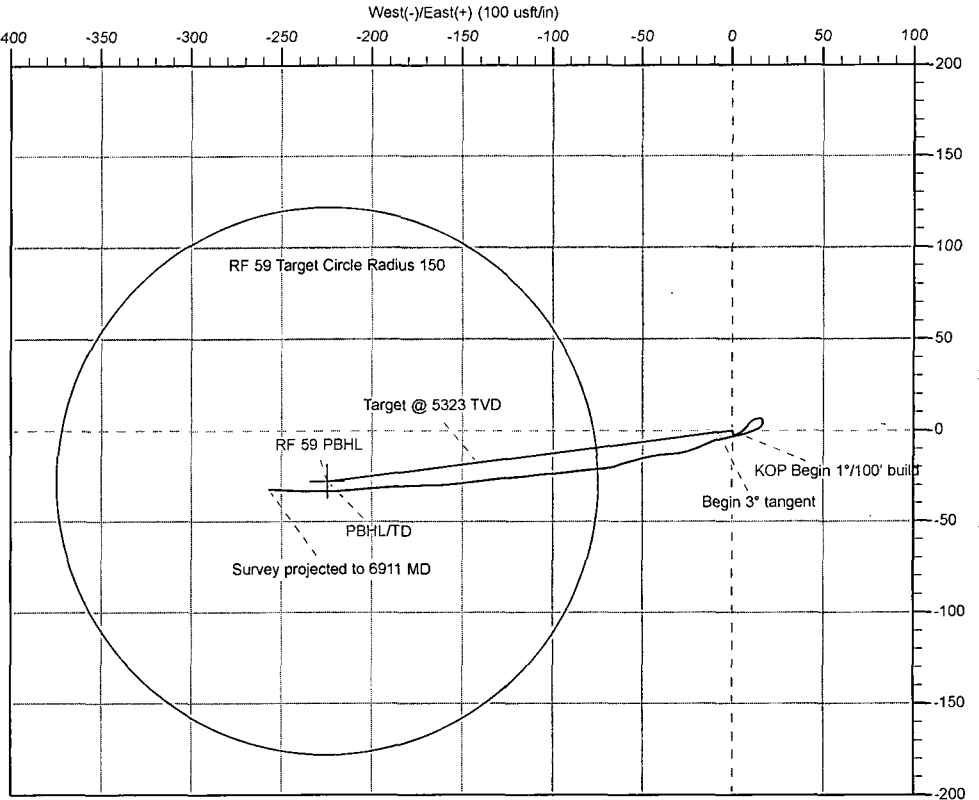
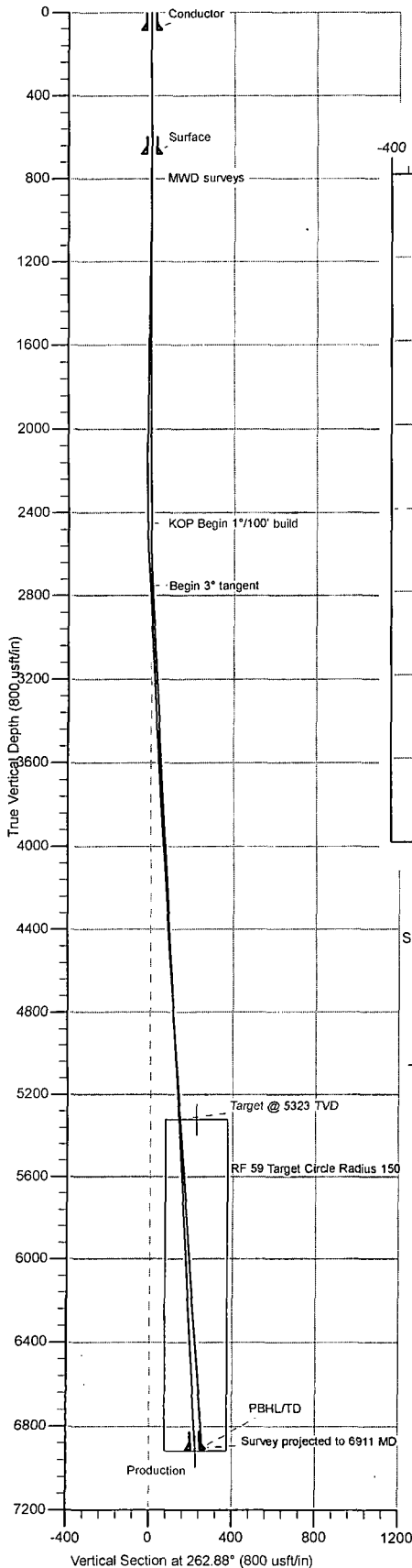
1407 Northpark Dr.
Kingwood, TX 77339
Cell: (281) 851-8112
Efax: (281) 966-1566

BlueStar MWD, LP performed a MWD survey for ConocoPhillips' Ruby Federal 59, located in Lea Co., NM. The API number is: 30-025-41020. The surveys were taken from 795 MD to 6859 MD and ranged over the dates from 25-July-13 to 31-July-13 and are certified as being true and correct.


Certification by Greg Nazzal
President



ConocoPhillips
Lea County, New Mexico
Ruby Federal
Ruby Federal 59
rev0
PD 822

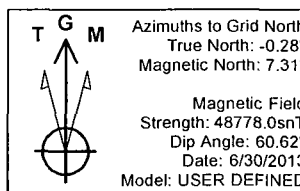


Section Details									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2451.80	0.00	0.00	2451.80	0.00	0.00	0.00	0.00	0.00
3	2751.80	3.00	262.88	2751.67	-0.97	-7.79	1.00	262.88	7.85
4	6924.86	3.00	262.88	6919.00	-28.05	-224.51	0.00	0.00	226.26

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation	
794.98	795.00	1.90	158.40	-1.42	0.56	-0.38	1.53	MWD surveys	
6902.00	6911.00	3.90	271.70	-32.49	-256.66	258.71	306.28	Survey projected to 6911 MD	

RKB Elevation: RKB=3949+13 @ 3962.00usft (PD 822)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	665416.10	661381.20	32° 49' 41.566563 N	103° 48' 28.677223 W

US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level





ConocoPhillips

Lea County, New Mexico

Ruby Federal

Ruby Federal 59

Original Hole

Design: Surveys Original Hole

Standard Survey Report

04 August, 2013



Company:	ConocoPhillips	Local Co-ordinate Reference:	Well Ruby Federal 59
Project:	Lea County, New Mexico	TVD Reference:	RKB=3949+13 @ 3962.00usft (PD 822)
Site:	Ruby Federal	MD Reference:	RKB=3949+13 @ 3962.00usft (PD 822)
Well:	Ruby Federal 59	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Ddatabase

Project	Lea County, New Mexico		
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	Ruby Federal		
Site Position:		Northing:	665,437.81 usft
From:	Map	Easting:	666,996.38 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 49' 41.500374 N
		Longitude:	103° 47' 22.870781 W
		Grid Convergence:	0.29 °

Well	Ruby Federal 59					
Well Position	+N/-S	0.00 usft	Northing:	665,416.10 usft	Latitude:	32° 49' 41.566563 N
	+E/-W	0.00 usft	Easting:	661,381.20 usft	Longitude:	103° 48' 28.677223 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,949.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	6/30/2013	7.60	60.62	48,778

Design	Surveys Original Hole			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	262.88

Survey Program		Date 8/4/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
703.00	6,911.00	MWD (Original Hole)	MWD	MWD - Standard

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
703.00	0.00	0.00	703.00	0.00	0.00	0.00	0.00	0.00	0.00
795.00	1.90	158.40	794.98	-1.42	0.56	-0.38	2.07	2.07	0.00
MWD surveys									
856.00	0.90	158.80	855.96	-2.81	1.11	-0.75	1.64	-1.64	0.66
945.00	0.30	306.80	944.96	-3.32	1.17	-0.75	1.31	-0.67	166.29
1,034.00	0.40	323.50	1,033.96	-2.93	0.80	-0.43	0.16	0.11	18.76
1,124.00	0.30	57.90	1,123.96	-2.55	0.81	-0.49	0.58	-0.11	104.89
1,213.00	0.80	70.00	1,212.95	-2.21	1.60	-1.31	0.57	0.56	13.60
1,303.00	1.00	71.00	1,302.94	-1.74	2.93	-2.69	0.22	0.22	1.11
1,392.00	1.50	66.20	1,391.92	-1.02	4.73	-4.57	0.57	0.56	-5.39

Company:	ConocoPhillips	Local Co-ordinate Reference:	Well Ruby Federal 59
Project:	Lea County, New Mexico	TVD Reference:	RKB=3949+13 @ 3962.00usft (PD 822)
Site:	Ruby Federal	MD Reference:	RKB=3949+13 @ 3962.00usft (PD 822)
Well:	Ruby Federal 59	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Ddatabase

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)
1,482.00	1.00	36.30	1,481.90	0.09	6.27	-6.23	0.90	-0.56	-33.22
1,572.00	1.40	38.90	1,571.88	1.58	7.43	-7.57	0.45	0.44	2.89
1,661.00	1.90	43.00	1,660.84	3.50	9.12	-9.48	0.58	0.56	4.61
1,751.00	0.60	60.10	1,750.82	4.83	10.54	-11.06	1.49	-1.44	19.00
1,841.00	0.90	54.80	1,840.81	5.47	11.53	-12.12	0.34	0.33	-5.89
1,930.00	0.90	73.30	1,929.80	6.07	12.77	-13.42	0.33	0.00	20.79
2,020.00	0.80	67.20	2,019.79	6.52	14.03	-14.73	0.15	-0.11	-6.78
2,110.00	0.90	94.50	2,109.78	6.71	15.31	-16.02	0.46	0.11	30.33
2,199.00	1.00	126.50	2,198.77	6.19	16.63	-17.27	0.60	0.11	35.96
2,334.00	1.20	201.90	2,333.75	4.18	17.05	-17.44	1.00	0.15	55.85
2,423.00	1.50	215.40	2,422.73	2.37	16.03	-16.20	0.49	0.34	15.17
2,513.00	2.40	246.00	2,512.68	0.64	13.62	-13.60	1.50	1.00	34.00
2,603.00	3.30	250.90	2,602.56	-0.98	9.45	-9.26	1.04	1.00	5.44
2,692.00	3.30	261.00	2,691.42	-2.21	4.50	-4.19	0.65	0.00	11.35
2,782.00	2.70	253.10	2,781.29	-3.24	-0.08	0.48	0.81	-0.67	-8.78
2,871.00	3.30	260.70	2,870.17	-4.26	-4.62	5.11	0.81	0.67	8.54
2,961.00	2.90	252.00	2,960.04	-5.38	-9.34	9.93	0.68	-0.44	-9.67
3,050.00	2.50	244.30	3,048.94	-6.92	-13.23	13.98	0.61	-0.45	-8.65
3,140.00	2.70	248.10	3,138.85	-8.56	-16.96	17.89	0.29	0.22	4.22
3,230.00	2.60	247.60	3,228.75	-10.13	-20.82	21.91	0.11	-0.11	-0.56
3,319.00	3.30	251.80	3,317.64	-11.70	-25.12	26.37	0.82	0.79	4.72
3,409.00	3.50	267.70	3,407.48	-12.62	-30.32	31.65	1.07	0.22	17.67
3,499.00	3.50	265.10	3,497.31	-12.96	-35.81	37.14	0.18	0.00	-2.89
3,589.00	3.30	262.00	3,587.15	-13.56	-41.11	42.47	0.30	-0.22	-3.44
3,678.00	3.10	260.60	3,676.01	-14.31	-46.02	47.44	0.24	-0.22	-1.57
3,768.00	3.30	254.50	3,765.87	-15.40	-50.92	52.43	0.44	0.22	-6.78
3,857.00	3.20	255.30	3,854.73	-16.71	-55.79	57.43	0.12	-0.11	0.90
3,947.00	3.20	253.80	3,944.59	-18.05	-60.63	62.40	0.09	0.00	-1.67
4,037.00	3.40	250.70	4,034.44	-19.63	-65.56	67.49	0.30	0.22	-3.44
4,126.00	3.40	262.90	4,123.29	-20.83	-70.67	72.71	0.81	0.00	13.71
4,216.00	3.40	265.80	4,213.13	-21.36	-75.98	78.04	0.19	0.00	3.22
4,306.00	3.40	265.20	4,302.97	-21.78	-81.30	83.37	0.04	0.00	-0.67
4,395.00	3.50	262.50	4,391.81	-22.35	-86.62	88.73	0.21	0.11	-3.03
4,485.00	3.70	263.70	4,481.63	-23.03	-92.24	94.38	0.24	0.22	1.33
4,575.00	3.80	266.70	4,571.44	-23.52	-98.10	100.26	0.24	0.11	3.33
4,664.00	3.70	266.00	4,660.25	-23.89	-103.91	106.07	0.12	-0.11	-0.79
4,753.00	3.50	262.00	4,749.07	-24.47	-109.46	111.65	0.36	-0.22	-4.49
4,843.00	3.60	264.80	4,838.90	-25.11	-115.00	117.22	0.22	0.11	3.11
4,933.00	3.70	264.60	4,928.72	-25.64	-120.70	122.95	0.11	0.11	-0.22
5,023.00	3.70	265.40	5,018.53	-26.14	-126.49	128.75	0.06	0.00	0.89
5,112.00	3.50	261.80	5,107.35	-26.76	-132.04	134.34	0.34	-0.22	-4.04
5,202.00	3.70	264.60	5,197.18	-27.42	-137.65	139.99	0.30	0.22	3.11
5,292.00	3.50	263.30	5,287.00	-28.02	-143.27	145.64	0.24	-0.22	-1.44

Company:	ConocoPhillips	Local Co-ordinate Reference:	Well Ruby Federal 59
Project:	Lea County, New Mexico	TVD Reference:	RKB=3949+13 @ 3962.00usft (PD 822)
Site:	Ruby Federal	MD Reference:	RKB=3949+13 @ 3962.00usft (PD 822)
Well:	Ruby Federal 59	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Ddatabase

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)	
5,381.00	3.90	262.50	5,375.81	-28.73	-148.97	151.38	0.45	0.45	-0.90	
5,471.00	3.90	262.70	5,465.60	-29.52	-155.04	157.50	0.02	0.00	0.22	
5,560.00	3.70	266.10	5,554.41	-30.10	-160.91	163.40	0.34	-0.22	3.82	
5,650.00	4.00	269.10	5,644.20	-30.35	-166.94	169.42	0.40	0.33	3.33	
5,739.00	4.30	270.20	5,732.97	-30.38	-173.38	175.81	0.35	0.34	1.24	
5,829.00	4.00	266.10	5,822.74	-30.58	-179.89	182.29	0.47	-0.33	-4.56	
5,919.00	4.30	266.80	5,912.50	-30.99	-186.39	188.79	0.34	0.33	0.78	
6,008.00	4.10	264.80	6,001.26	-31.46	-192.89	195.30	0.28	-0.22	-2.25	
6,098.00	4.00	267.60	6,091.04	-31.88	-199.23	201.64	0.25	-0.11	3.11	
6,187.00	4.10	265.10	6,179.81	-32.29	-205.50	207.92	0.23	0.11	-2.81	
6,277.00	4.10	265.50	6,269.58	-32.81	-211.91	214.35	0.03	0.00	0.44	
6,366.00	4.00	268.90	6,358.36	-33.12	-218.19	220.61	0.29	-0.11	3.82	
6,456.00	4.20	267.00	6,448.13	-33.35	-224.62	227.02	0.27	0.22	-2.11	
6,545.00	4.10	270.10	6,536.90	-33.52	-231.05	233.43	0.28	-0.11	3.48	
6,635.00	4.10	271.30	6,626.67	-33.44	-237.49	239.80	0.10	0.00	1.33	
6,725.00	4.00	273.70	6,716.44	-33.17	-243.84	246.07	0.22	-0.11	2.67	
6,814.00	4.00	274.00	6,805.23	-32.75	-250.03	252.16	0.02	0.00	0.34	
6,859.00	3.90	271.70	6,850.12	-32.59	-253.13	255.21	0.42	-0.22	-5.11	
6,911.00	3.90	271.70	6,902.00	-32.49	-256.66	258.71	0.00	0.00	0.00	
Survey projected to 6911 MD										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
795.00	794.98	-1.42	0.56	MWD surveys
6,911.00	6,902.00	-32.49	-256.66	Survey projected to 6911 MD

Checked By: _____	Approved By: _____	Date: _____
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