

Results of Directional Survey

API number:	30-025-40281		
OGRID:		Operator:	CONOCOPHILLIPS COMPANY
		Property:	BUCK 17 FEDERAL # 1H

surface	ULSTR:	P	17	T	26S	R	32E
				330	FSL	400	FEL

BH Loc	ULSTR:	A	17	T	26S	R	32E
13715	MD	9225.9	TVD	306	FNL	486	FEL
				4974	FSL		

Top Perf/OH	ULSTR:	P	17	T	26S	R	32E
9714	MD	9238.4	TVD	978	FSL	396	FEL

Bot Perf/OH	ULSTR:	A	17	T	26S	R	32E
13555	MD	9228.3	TVD	466	FNL	482	FEL
				4814	FSL		

	MD	N/S	E/W	VD
	9643	576.80	2.70	9240.6
TOP PERFS/OH	9714	647.73	3.90	9238.35
	9744	677.70	4.40	9237.40
	13549	4478.40	-82.00	9228.40
BOT PERFS/OH	13555	4484.40	-82.13	9228.27
	13644	4573.40	-84.10	9226.30

NEXT TO LAST	13644	4573.40	-84.10	9226.30
LAST READING	13715	4644.30	-86.20	9225.90
TD	13715	4644.30	-86.20	9225.90

Surface Location	330	FS	400	FE
Projected BHL	4974	FS	486	FE
Location of				
Top Perfs/OH	978	FS	396	FE
Bottom Perfs/OH	4814	FS	482	FE

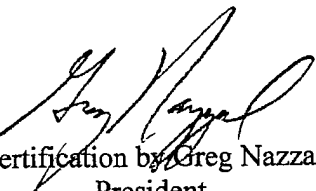
SUMMARY of Subsurface Locations

Surface Location	P-17-26S-32E	330	FS	400	FE	Vert. Depth
Top Perfs/OH	P-17-26S-32E	978	FS	396	FE	9238.35
Bottom Perfs/OH	A-17-26S-32E	4814	FS	482	FE	9228.27
Projected TD	A-17-26S-32E	4974	FS	486	FE	9225.90



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Cell: (281) 851-8112
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BlueStar MWD, LP performed a MWD survey for Conoco Phillips' Buck Federal 17 1H, located in Lea Co., NM. The API number is: 30-025-40281. The surveys were taken from 1025 MD to 2561 MD and ranged over the dates from 10-Nov-11 to 13-Nov-11 and are certified as being true and correct.


Certification by Greg Nazzal
President

SUR: P-17-26s-32e, 330/S & 400/E
BHL: A-17-26s-32e, 4974/S & 486/E
API # 30-025-40281

		Customer: Conoco Phillips		Job #: 526	
		Well: Buck Federal 17 #1H		MWD Operator: Ready	
MWD SURVEY SHEET		Field/Block: Sec 17, T26S, R32E		Directional Driller: N/A	
		Co./Parish: Lea County		Date of First Survey: :	
		State: NM		Date of Last Survey: :	
		BStr Job #: 526		Survey Type: MWD	
		Total Correction: 7.58		East	
Vertical Section Plane: 179.59		Nominal Dip Angle: 59.99		Magnetic Field Strength: 0.48406	
Coordinates					
Closure					
Measured					
Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S
					+E / -W
					Dist.
					Angle
					DLS
Nabors took Single Shot surveys from 0-950 ft. By rule, surface casing is assumed vertical. Nabors drift shots while drilling surface increased gradually from 0-5°. To avoid the appearance of a high DLS, the tie-in is at the first Directional Survey at 1025					
SS	0	0.00			
SS	250	0.00			
SS	500	0.00			
SS	750	2.00			
SS	950	5.00			
1	1025	6.20	269.30	1025.00	0.00
2	1136	6.10	275.20	1135.36	-0.55
3	1233	5.10	277.10	1231.90	-1.61
4	1328	4.20	275.30	1326.58	-2.51
5	1421	3.20	285.10	1419.39	-3.54
6	1515	2.70	282.90	1513.27	-4.76
7	1611	3.20	273.40	1609.14	-5.45
8	1706	2.80	274.30	1704.01	-5.82
9	1800	2.90	271.60	1797.89	-6.09
10	1893	2.90	263.50	1890.77	-5.93
11	1971	2.50	260.20	1968.69	-5.44
12	2088	1.90	223.80	2085.61	-3.63
13	2182	2.10	231.00	2179.55	-1.44
14	2277	2.30	220.40	2274.48	1.09
15	2372	2.20	219.00	2369.41	3.94
16	2466	1.80	202.30	2463.35	6.69
17	2561	1.60	201.40	2558.31	9.30



Conoco Phillips

Lea County, New Mexico
Sec 17, T26S,R32E
Buck Federal 17 #1H

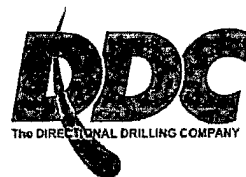
Wellbore #1

SUR: P-17-26s-32e, 330/S & 400/E
BHL: A-17-26s-32e, 4974/S & 486/E
API # 30-025-40281

Survey: MWD

DDC Survey Report

13 December, 2011



Company:	Conoco Phillips	Local Co-ordinate Reference:	Well Buck Federal 17 #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3206.0usft (Nabore M9)
Site:	Sec 17, T26S,R32E	MD Reference:	WELL @ 3206.0usft (Nabore M9)
Well:	Buck Federal 17 #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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	Sec 17, T26S,R32E		
Site Position:		Northing:	377,537.90 usft
From:	Map	Easting:	699,538.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 10.792 N
		Longitude:	103° 41' 21.842 W
		Grid Convergence:	0.34 °

Well	Buck Federal 17 #1H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 2' 10.792 N
		Longitude:	103° 41' 21.842 W
		Ground Level:	3,156.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	11/15/2011	(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
			7.58
			59.98
			48,450

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			359.59

Survey Program	Date 12/13/2011		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		Description
100.0	8,500.0	GYRO (Wellbore #1)	Good_gyro
8,586.0	13,715.0	MWD (Wellbore #1)	MWD default
			MWD - Standard

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)
Tie into Gyro									
8,500.0	0.84	193.08	8,494.0	-105.1	-16.6	-104.9	0.00	0.00	0.00
8,586.0	4.60	352.00	8,579.9	-102.3	-17.2	-102.1	6.27	4.37	184.79
8,650.0	8.00	355.50	8,643.5	-95.3	-17.9	-95.1	5.34	5.31	5.47
8,682.0	10.60	353.20	8,675.1	-90.1	-18.4	-90.0	8.21	8.13	-7.19
8,713.0	13.00	351.00	8,705.4	-83.8	-19.3	-83.7	7.88	7.74	-7.10
8,744.0	15.70	351.70	8,735.5	-76.3	-20.5	-76.1	8.73	8.71	2.26
8,776.0	18.50	350.60	8,766.0	-67.0	-21.9	-66.8	8.81	8.75	-3.44
8,808.0	20.80	352.50	8,796.2	-56.3	-23.5	-56.1	7.46	7.19	5.94
8,840.0	22.60	356.90	8,825.9	-44.5	-24.6	-44.4	7.58	5.63	13.75

Company:	Conoco Phillips	Local Co-ordinate Reference:	Well Buck Federal 17 #1H
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Site:	Sec 17, T26S,R32E	MD Reference:	WELL @ 3206.0usft (Nabore M9)
Well:	Buck Federal 17 #1H	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,872.0	23.90	0.80	8,855.3	-31.9	-24.8	-31.7	6.29	4.06	12.19
8,904.0	25.40	3.40	8,884.4	-18.6	-24.3	-18.4	5.78	4.69	8.13
8,935.0	28.30	4.80	8,912.0	-4.6	-23.3	-4.5	9.57	9.35	4.52
Crossed Hard Line @ 8944' MD									
8,944.0	29.03	4.86	8,919.9	-0.3	-22.9	-0.2	8.13	8.12	0.66
8,967.0	30.90	5.00	8,939.9	11.1	-22.0	11.3	8.13	8.13	0.61
8,999.0	34.20	3.30	8,966.8	28.3	-20.7	28.4	10.70	10.31	-5.31
9,031.0	36.90	0.60	8,992.9	46.9	-20.1	47.0	9.76	8.44	-8.44
9,063.0	39.80	0.80	9,018.0	66.7	-19.9	66.9	9.07	9.06	0.63
9,095.0	41.90	1.10	9,042.2	87.7	-19.5	87.8	6.59	6.56	0.94
9,127.0	44.30	0.30	9,065.5	109.5	-19.3	109.7	7.69	7.50	-2.50
9,158.0	46.70	0.80	9,087.3	131.6	-19.0	131.8	7.83	7.74	1.61
9,190.0	48.80	359.40	9,108.8	155.3	-19.0	155.4	7.32	6.56	-4.38
9,222.0	52.10	359.00	9,129.2	180.0	-19.3	180.1	10.36	10.31	-1.25
9,254.0	55.90	0.80	9,148.0	205.9	-19.4	206.0	12.72	11.88	5.63
9,286.0	60.10	4.10	9,164.9	233.0	-18.2	233.1	15.77	13.13	10.31
9,317.0	63.80	5.50	9,179.5	260.2	-15.9	260.3	12.58	11.94	4.52
9,349.0	67.20	6.10	9,192.8	289.2	-13.0	289.3	10.76	10.63	1.88
9,381.0	70.70	5.50	9,204.2	318.9	-10.0	319.0	11.08	10.94	-1.88
9,413.0	75.40	2.70	9,213.6	349.4	-7.8	349.5	16.90	14.69	-8.75
9,445.0	77.80	2.50	9,221.0	380.5	-6.4	380.5	7.52	7.50	-0.63
9,477.0	79.30	2.90	9,227.3	411.8	-4.9	411.9	4.84	4.69	1.25
9,508.0	81.30	4.70	9,232.6	442.3	-2.9	442.3	8.62	6.45	5.81
9,540.0	83.80	3.60	9,236.7	474.0	-0.6	474.0	8.52	7.81	-3.44
9,572.0	86.90	1.70	9,239.3	505.8	0.9	505.8	11.35	9.69	-5.94
9,604.0	88.90	1.50	9,240.5	537.8	1.8	537.8	6.28	6.25	-0.63
9,643.0	90.70	1.00	9,240.6	576.8	2.7	576.7	4.79	4.62	-1.28
9,744.0	92.90	1.00	9,237.4	677.7	4.4	677.7	2.18	2.18	0.00
9,847.0	91.30	359.70	9,233.7	780.6	5.0	780.6	2.00	-1.55	-1.26
9,941.0	90.10	1.10	9,232.5	874.6	5.7	874.6	1.96	-1.28	1.49
10,036.0	90.80	0.30	9,231.8	969.6	6.9	969.5	1.12	0.74	-0.84
10,132.0	88.70	358.70	9,232.2	1,065.6	6.0	1,065.5	2.75	-2.19	-1.67
10,227.0	90.00	358.00	9,233.3	1,160.5	3.3	1,160.5	1.55	1.37	-0.74
10,320.0	91.80	357.10	9,231.8	1,253.4	-0.7	1,253.4	2.16	1.94	-0.97
10,415.0	87.10	356.40	9,232.7	1,348.3	-6.1	1,348.3	5.00	-4.95	-0.74
10,511.0	86.90	356.40	9,237.8	1,443.9	-12.1	1,444.0	0.21	-0.21	0.00
10,606.0	86.80	355.70	9,243.0	1,538.6	-18.6	1,538.7	0.74	-0.11	-0.74
10,701.0	90.60	356.00	9,245.1	1,633.3	-25.5	1,633.4	4.01	4.00	0.32
10,796.0	90.00	355.50	9,244.6	1,728.0	-32.5	1,728.2	0.82	-0.63	-0.53
10,891.0	88.60	356.20	9,245.8	1,822.8	-39.4	1,823.0	1.65	-1.47	0.74
10,986.0	87.10	357.50	9,249.4	1,917.5	-44.6	1,917.8	2.09	-1.58	1.37
11,081.0	87.20	358.30	9,254.1	2,012.4	-48.1	2,012.6	0.85	0.11	0.84
11,176.0	87.60	359.90	9,258.4	2,107.2	-49.6	2,107.5	1.73	0.42	1.68



DDC
Survey Report



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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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,270.0	88.60	359.00	9,261.5	2,201.2	-50.5	2,201.5	1.43	1.06	-0.96
11,365.0	89.90	359.40	9,262.7	2,296.2	-51.8	2,296.5	1.43	1.37	0.42
11,459.0	92.90	1.00	9,260.5	2,390.1	-51.5	2,390.4	3.62	3.19	1.70
11,553.0	93.80	0.40	9,255.0	2,484.0	-50.3	2,484.2	1.15	0.96	-0.64
11,648.0	92.00	359.70	9,250.2	2,578.8	-50.3	2,579.1	2.03	-1.89	-0.74
11,743.0	92.20	1.00	9,246.7	2,673.8	-49.7	2,674.0	1.38	0.21	1.37
11,839.0	90.60	0.30	9,244.3	2,769.7	-48.6	2,770.0	1.82	-1.67	-0.73
11,934.0	90.70	0.60	9,243.2	2,864.7	-47.9	2,865.0	0.33	0.11	0.32
12,027.0	88.60	0.60	9,243.8	2,957.7	-46.9	2,958.0	2.26	-2.26	0.00
12,122.0	89.80	359.60	9,245.1	3,052.7	-46.7	3,052.9	1.64	1.26	-1.05
12,218.0	90.50	358.50	9,244.9	3,148.7	-48.3	3,148.9	1.36	0.73	-1.15
12,313.0	92.20	358.50	9,242.7	3,243.6	-50.8	3,243.9	1.79	1.79	0.00
12,409.0	89.50	357.50	9,241.2	3,339.5	-54.1	3,339.8	3.00	-2.81	-1.04
12,504.0	89.60	359.40	9,242.0	3,434.5	-56.7	3,434.8	2.00	0.11	2.00
12,599.0	90.90	358.40	9,241.6	3,529.5	-58.5	3,529.8	1.73	1.37	-1.05
12,694.0	92.20	359.00	9,239.0	3,624.4	-60.7	3,624.7	1.51	1.37	0.63
12,789.0	93.50	358.70	9,234.3	3,719.3	-62.6	3,719.6	1.40	1.37	-0.32
12,885.0	91.30	359.90	9,230.2	3,815.2	-63.8	3,815.5	2.61	-2.29	1.25
12,980.0	88.60	359.90	9,230.3	3,910.2	-63.9	3,910.5	2.84	-2.84	0.00
13,075.0	86.70	358.20	9,234.2	4,005.1	-65.5	4,005.4	2.68	-2.00	-1.79
13,170.0	89.30	357.30	9,237.5	4,099.9	-69.2	4,100.3	2.90	2.74	-0.95
13,265.0	89.80	357.10	9,238.3	4,194.8	-73.9	4,195.2	0.57	0.53	-0.21
13,359.0	91.30	358.00	9,237.4	4,288.7	-77.9	4,289.2	1.86	1.60	0.96
13,454.0	93.70	358.90	9,233.2	4,383.6	-80.5	4,384.0	2.70	2.53	0.95
13,549.0	92.20	359.20	9,228.4	4,478.4	-82.0	4,478.9	1.61	-1.58	0.32
13,644.0	90.30	358.30	9,226.3	4,573.4	-84.1	4,573.9	2.21	-2.00	-0.95
TD									
13,715.0	90.30	358.30	9,225.9	4,644.3	-86.2	4,644.8	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	
		+N/-S (usft)	+E/-W (usft)
8,500.0	8,494.0	-105.1	-16.6
8,944.0	8,919.9	-0.3	-22.9
13,715.0	9,225.9	4,644.3	-86.2

Tie into Gyro
Crossed Hard Line @ 8944' MD
TD

Checked By: _____	Approved By: _____	Date: _____
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