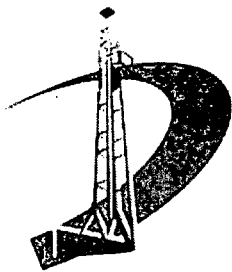


30-025-42017



PRODIRECTIONAL

P.O. Box 750 | Conroe, TX 77305 | Phone: 936-441-7266
www.prodirectional.com

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MAR 10 2015

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ConocoPhillips

SEMU No. 245
Lea County, NM

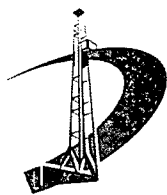
August 25, 2014

Job No. LNM 5113514

Survey Completion Report

MAR 17 2015

gm



PRODIRECTIONAL

Professional Directional Ltd.

P.O. Box 750 | Conroe, TX 77305 | (936) 441-7266

August 25, 2014


ConocoPhillips

ConocoPhillips

SEMU No. 245

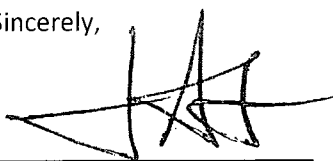
Lea County, NM

Job No. LNM 5113514

Survey Certification Form:

This is to certify surveys from **1,534'MD** to a depth of **4,262'MD** are true and correct MWD Surveys.
These surveys were taken from **08/19/2014** through **08/22/2014**.

Sincerely,



John Jordan | Well Planning

PRODIRECTIONAL



ConocoPhillips

Lea County, NM
SEMU No. 245
OH

Survey: ProDirectional

Survey Report

25 August, 2014





Professional Directional
Wellpath Report



Company:	Conoco Phillips	Local Co-ordinate Reference:	Well No. 245
Project:	Lea County, N.M.	TVD Reference:	WELL @ 3549.00usft (Original Well Elev)
Site:	SEMU	MD Reference:	WELL @ 3549.00usft (Original Well Elev)
Well:	No. 245	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Well_Planner1

Project	Lea County, N.M.		
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	SEMU		
Site Position:		Northing:	569,250.22 usft
From:	Map	Easting:	850,159.22 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 33' 35.417 N
		Longitude:	103° 11' 48.625 W
		Grid Convergence:	0.61 °

Well	No. 245		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 33' 19.399 N
		Longitude:	103° 11' 9.354 W
		Ground Level:	3,536.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	8/25/2014	7.03
			Dip Angle
			(°)
			Field Strength
			(nT)
			60.48
			48,535

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			242.99

Company:	Conoco Phillips	Local Co-ordinate Reference:	Well No. 245
Project:	Lea County, N.M.	TVD Reference:	WELL @ 3549.00usft (Original Well Elev)
Site:	SEMU	MD Reference:	WELL @ 3549.00usft (Original Well Elev)
Well:	No. 245	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Well_Planner1

Survey Program		Date	8/25/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
211.00	1,387.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,534.00	4,262.00	Survey #2 (OH)	MWD	MWD - Standard	

Survey											
MD (usft)	Incl (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	567,667.51	853,537.79	0.00	
211.00	0.70	310.10	210.99	0.83	-0.99	0.50	0.33	567,668.34	853,536.80	310.10	
418.00	0.70	306.10	417.98	2.39	-2.97	1.57	0.02	567,669.90	853,534.82	-92.00	
590.00	1.20	294.10	589.96	3.74	-5.47	3.17	0.31	567,671.25	853,532.32	-27.77	
796.00	0.30	285.10	795.94	4.77	-7.96	4.93	0.44	567,672.28	853,529.83	-177.03	
978.00	0.20	286.10	977.93	4.98	-8.72	5.51	0.05	567,672.49	853,529.07	178.00	
1,175.00	0.30	127.10	1,174.93	4.76	-8.64	5.54	0.25	567,672.27	853,529.15	-167.38	
1,387.00	0.00	333.10	1,386.93	4.43	-8.20	5.29	0.14	567,671.94	853,529.59	-180.00	
Last Teledrift Survey											
1,534.00	0.20	69.20	1,533.93	4.52	-7.96	5.04	0.14	567,672.03	853,529.83	69.20	
ProDirectional First Survey: 1,534' MD											
1,713.00	1.10	267.20	1,712.92	4.55	-9.38	6.30	0.72	567,672.06	853,528.41	-164.74	
1,891.00	4.20	254.30	1,890.71	2.70	-17.37	14.25	1.76	567,670.21	853,520.42	-17.38	
2,070.00	6.80	239.30	2,068.88	-4.49	-32.79	31.25	1.65	567,663.02	853,505.00	-36.55	
2,248.00	10.10	237.70	2,244.92	-18.21	-55.05	57.32	1.86	567,649.30	853,482.74	-4.87	
2,427.00	12.40	235.80	2,420.47	-37.40	-84.22	92.02	1.30	567,630.11	853,453.57	-10.09	
2,606.00	14.00	242.00	2,594.75	-58.37	-119.24	132.74	1.19	567,609.14	853,418.55	44.55	
2,785.00	13.00	241.00	2,768.80	-78.30	-155.96	174.51	0.57	567,589.21	853,381.83	-167.35	
2,965.00	15.60	243.80	2,943.21	-98.80	-195.39	218.95	1.49	567,568.71	853,342.40	16.26	
3,143.00	14.80	242.60	3,114.98	-119.83	-237.05	265.62	0.48	567,547.68	853,300.74	-159.11	
3,322.00	16.40	242.20	3,287.38	-142.14	-279.71	313.75	0.90	567,525.37	853,258.08	-4.04	
3,501.00	16.40	239.00	3,459.10	-166.94	-323.72	364.23	0.50	567,500.57	853,214.07	-91.53	

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Project:	Lea County, N.M.	TVD Reference:	WELL @ 3549.00usft (Original Well Elev)
Site:	SEMU	MD Reference:	WELL @ 3549.00usft (Original Well Elev)
Well:	No. 245	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Well_Planner1

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)
3,680.00	14.70	237.60	3,631.55	-192.13	-364.56	412.05	0.97	567,475.38	853,173.23	-168.22
3,859.00	15.80	238.70	3,804.24	-216.96	-404.56	458.96	0.64	567,450.55	853,133.23	15.27
4,038.00	15.90	240.00	3,976.43	-241.88	-446.62	507.75	0.21	567,425.63	853,091.17	74.90
4,214.00	15.70	241.00	4,145.79	-265.48	-488.32	555.63	0.19	567,402.03	853,049.47	126.78
Last Survey: 4,214' MD, 4,145.79' TVD										
4,262.00	15.70	241.00	4,191.99	-271.78	-499.68	568.61	0.00	567,395.73	853,038.11	0.00
PTB: 4,262' MD										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,387.00	1,386.93	4.43	-8.20	Last Teledrift Survey
1,534.00	1,533.93	4.52	-7.96	ProDirectional First Survey: 1,534' MD
4,214.00	4,145.79	-265.48	-488.32	Last Survey: 4,214' MD, 4,145.79' TVD
4,262.00	4,191.99	-271.78	-499.68	PTB: 4,262' MD