

PRODIRECTIONAL

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

HOBBS OCD

APR 27 2015

RECEIVED


ConocoPhillips

Vacuum ABO Unit No. 706 (OH)
Lea County, NM

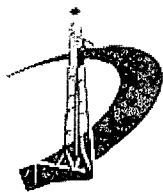
December 01, 2014

Job No. LNM 5114814

Survey Completion Report

MAY 19 2015

hm



PRODIRECTIONAL

Professional Directional Ltd.

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

December 01, 2014


ConocoPhillips

ConocoPhillips

Vacuum ABO Unit No. 706 (OH)

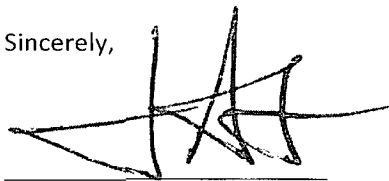
Lea County, NM

Job No. LNM 5114814

Survey Certification Form:

This is to certify surveys from **1,700'MD** to a depth of **4,427'MD** are true and correct MWD Surveys.
These surveys were taken from **11/07/2014** through **11/10/2014**.

Sincerely,



John Jordan | Well Planning

PRODIRECTIONAL



Conoco Phillips

Lea County, NM

Vacuum ABO Unit No. 706

OH

Survey: ProDirectional

Survey Report

01 December, 2014





Professional Directional
Wellpath Report



Company:	Conoco Phillips	Local Co-ordinate Reference:	Well No. 706
Project:	Lea County, N.M.	TVD Reference:	WELL @ 3943.80usft (Original Well Elev)
Site:	Vacuum ABO Unit	MD Reference:	WELL @ 3943.80usft (Original Well Elev)
Well:	No. 706	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	Vacuum ABO Unit				
Site Position:		Northing:	657,758.66 usft	Latitude:	32° 48' 17.957 N
From:	Map	Easting:	778,438.28 usft	Longitude:	103° 25' 37.702 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.49 °

Well	No. 706					
Well Position	+N/-S	0.00 usft	Northing:	656,340.88 usft	Latitude:	32° 48' 4.361 N
	+E/-W	0.00 usft	Easting:	773,296.81 usft	Longitude:	103° 26' 38.075 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,930.80 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	12/1/2014	7.14	60.65	48,626

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	91.01	



Professional Directional Wellpath Report



Company: Conoco Phillips
Project: Lea County, N.M.
Site: Vacuum ABO Unit
Well: No. 706
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well No. 706
TVD Reference: WELL @ 3943.80usft (Original Well Elev)
MD Reference: WELL @ 3943.80usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

Survey Program		Date	12/1/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
214.00	1,560.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,700.00	4,427.00	Survey #2 (OH)	MWD	MWD - Standard	

Survey											
MD (usft)	Inc (°)	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	0.00	656,340.88	773,296.81	0.00
214.00	0.50	20.23		214.00	0.88	0.32	0.31	0.23	656,341.76	773,297.13	20.23
450.00	0.10	94.23		449.99	1.83	0.88	0.85	0.20	656,342.71	773,297.69	168.50
660.00	0.10	160.23		659.99	1.64	1.13	1.10	0.05	656,342.52	773,297.94	123.00
840.00	0.40	218.23		839.99	1.00	0.79	0.78	0.20	656,341.88	773,297.60	71.73
1,060.00	0.40	205.23		1,059.99	-0.30	-0.01	0.00	0.04	656,340.58	773,296.80	-96.50
1,237.00	0.30	212.23		1,236.98	-1.25	-0.52	-0.50	0.06	656,339.63	773,296.29	160.32
1,420.00	0.40	208.23		1,419.98	-2.22	-1.08	-1.04	0.06	656,338.66	773,295.73	-15.74
1,560.00	0.60	203.23		1,559.97	-3.32	-1.60	-1.54	0.15	656,337.56	773,295.21	-14.81
Last Gyro: 1,560' MD											
1,700.00	0.60	198.80		1,699.97	-4.69	-2.12	-2.04	0.03	656,336.19	773,294.69	-92.21
ProDirectional First Survey: 1,700' MD											
1,835.00	2.30	104.40		1,834.93	-6.03	0.27	0.38	1.79	656,334.85	773,297.08	-108.70
1,924.00	3.90	99.40		1,923.80	-6.97	4.99	5.11	1.82	656,333.91	773,301.80	-12.10
2,013.00	5.70	95.50		2,012.48	-7.89	12.38	12.51	2.05	656,332.99	773,309.19	-12.22
2,103.00	7.20	96.00		2,101.91	-8.91	22.43	22.59	1.67	656,331.97	773,319.24	2.39
2,192.00	8.80	94.00		2,190.04	-9.96	34.77	34.94	1.82	656,330.92	773,331.58	-10.86
2,281.00	10.60	92.60		2,277.76	-10.81	49.74	49.93	2.04	656,330.07	773,346.55	-8.16
2,370.00	12.30	91.70		2,364.99	-11.46	67.40	67.59	1.92	656,329.42	773,364.21	-6.44
2,460.00	13.90	87.30		2,452.65	-11.24	87.78	87.96	2.09	656,329.64	773,384.59	-34.09
2,639.00	14.80	85.70		2,626.06	-8.51	132.06	132.18	0.55	656,332.37	773,428.87	-24.56
2,818.00	13.90	84.30		2,799.47	-4.66	176.25	176.30	0.54	656,336.22	773,473.06	-159.59



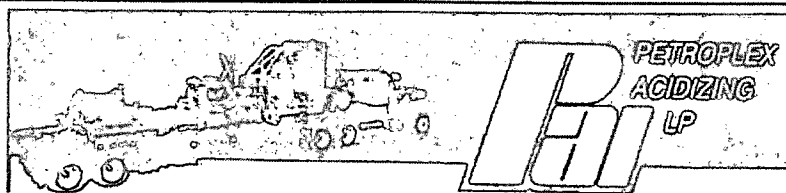
Professional Directional Wellpath Report



Company:	Conoco Phillips	Local Co-ordinate Reference:	Well No. 706
Project:	Lea County, N.M.	TVD Reference:	WELL @ 3943.80usft (Original Well Elev)
Site:	Vacuum ABO Unit	MD Reference:	WELL @ 3943.80usft (Original Well Elev)
Well:	No. 706	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 (°)	
2,997.00	13.50	89.70	2,973.39	-2.42	218.54	218.55	0.75	656,338.46	773,515.35	109.98	
3,175.00	13.50	90.50	3,146.47	-2.49	260.09	260.09	0.10	656,338.39	773,556.90	90.39	
3,354.00	12.40	89.90	3,320.92	-2.64	300.20	300.20	0.62	656,338.24	773,597.01	-173.32	
3,533.00	12.00	92.20	3,495.87	-3.32	338.02	338.02	0.35	656,337.56	773,634.83	130.57	
3,711.00	12.10	91.70	3,669.95	-4.58	375.15	375.18	0.08	656,336.30	773,671.96	-46.47	
3,890.00	11.90	90.60	3,845.04	-5.33	412.36	412.39	0.17	656,335.55	773,709.17	-131.71	
4,069.00	13.10	91.90	4,019.79	-6.20	451.09	451.13	0.69	656,334.68	773,747.90	13.83	
4,158.00	14.00	93.30	4,106.32	-7.15	471.92	471.97	1.08	656,333.73	773,768.73	20.71	
4,248.00	14.90	93.60	4,193.47	-8.51	494.34	494.41	1.00	656,332.37	773,791.15	4.90	
4,427.00	14.30	94.50	4,366.69	-11.69	539.34	539.47	0.36	656,329.19	773,836.15	159.72	
Last Survey(OH): 4,427' MD, 4,366.69' TVD											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,560.00	1,559.97	-3.32	-1.60	Last Gyro: 1,560' MD
1,700.00	1,699.97	-4.69	-2.12	ProDirectional First Survey: 1,700' MD
4,427.00	4,366.69	-11.69	539.34	Last Survey(OH): 4,427' MD, 4,366.69' TVD



BLOCK JOB

CONOCO PHILLIPS

ROBERT GARCIA

Treater: GERARDO ARIAS

1/16/2015

Well: 7-06

Field: VAC ABU

LEA, NM

HOBBS OOD

APR 27 2015

RECEIVED

Rolligon



Treatment Report

page 1

Customer: CONOCO PHILLIPS	Ticket#: 68897
Well Name & No.: VAC ABU#7-06	Formation: 0.00
County: LEA	Date: January 16, 2015
State: NM.	Well type: Oil / New / Stim.

Customer Information	
Address:	0.00
City, State:	0.00
Zip Code:	0
Customer Representative:	Robert Garcia



Remarks

BLOCK JOB	Arrive on Location:	7:00 AM
	Depart Location:	12:00 PM
	Total Hours:	5.00

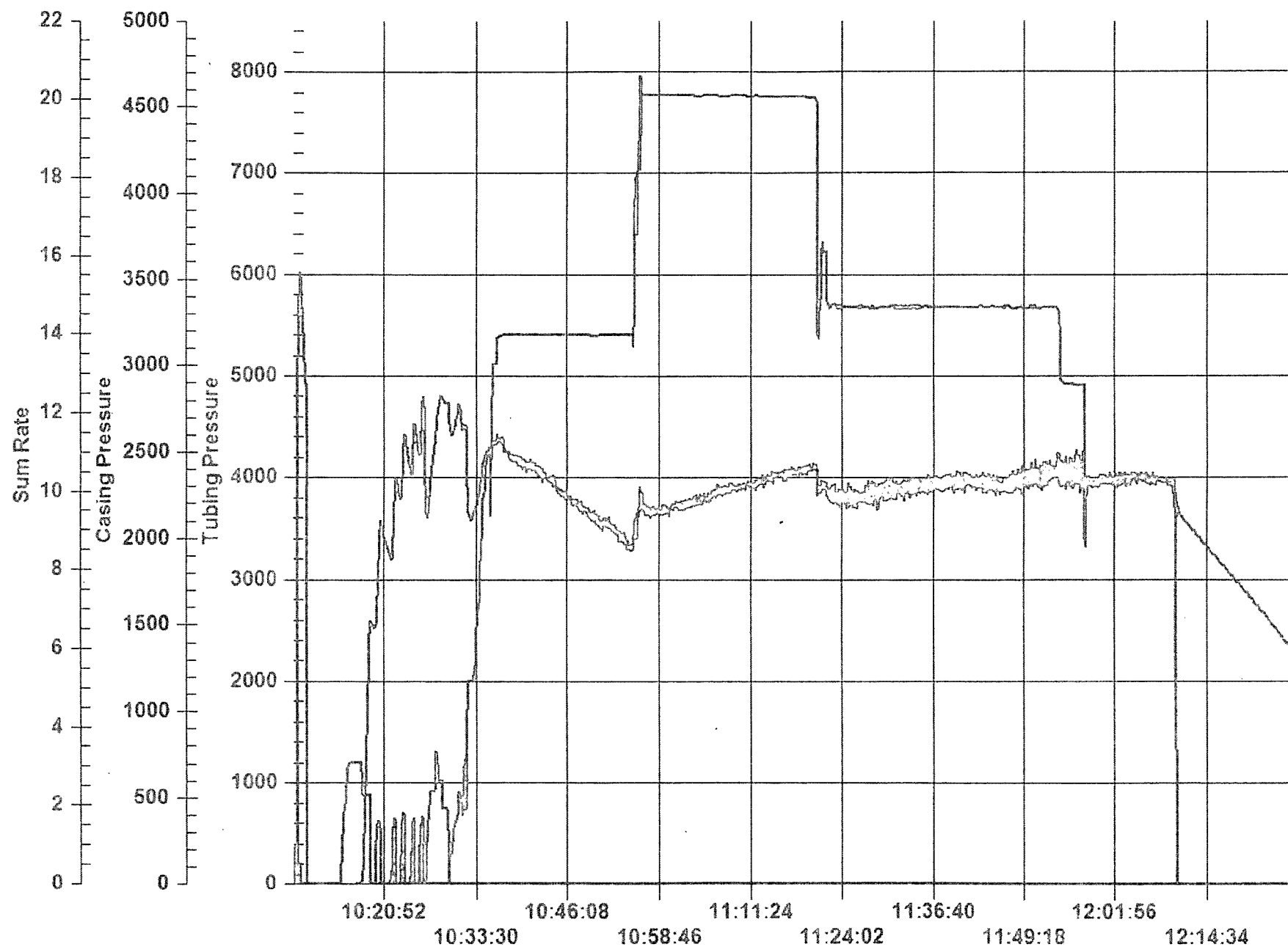
	Depth	O.D.	Weight	I.D.	Volume	Bbls/linear ft
Tubing 1 length ft:	-		0	0.000	0.00 BBLs.	0.00000
Tubing 2 length ft:					0.00 BBLs.	0.00000
Casing 1 length ft:	-		0.00	0.000	0.00 BBLs.	0.00000
Casing 2 length ft:					0.00 BBLs.	0.00000
Open Hole length ft:		N/A	N/A		0.00 BBLs.	0.00000
Combined Depth ft:	-				0.00 BBLs.	0.00000
Annular Vol:					BBLs.	0.00000

	Depth	Vol.	Maximum Pressure:	4800	ISIP:	3704
Top Perf/Open Hole:	0	0.00	Average Pressure:	3880	5 min:	3147
Bottom Perf/Open Hole:	0	0.00	Maximum Rate:	20.0	10 min:	2744
Number of Perfs:	0		Average Rate:	16.0	15 min:	2364
Perf Size:		in.	Fluid to Recover:	1499	Proppant Total:	
Packer Depth:	0	ft.				

Time	SIIP	Casing	Rate	Stage	Total	Comments
8:40:48 AM	0	0	0.0	0.0	0.0	SAFETY MEETING
10:07:49 AM	6000	0.0	0.0	0.0	0.0	PRESSURE TESTED LINES
10:13:53 AM	4	0.0	2.0	0.0	0.0	ON WATER
10:25:17 AM	4800	0.0	1.5	14.0	14.0	START FORM. BRK. DOWN
10:31:23 AM	3590	0.0	6.0	28.0	0.0	ON ACID
10:35:10 AM	4355	0.0	14.0	38.0	38.0	PSI & RATE CHECK
10:37:42 AM	4183	1.0	14.0	0.0	72.0	START ON BLOCK
10:38:49 AM	4121	1.0	14.0	15.0	87.0	ON BRINE SPACER
10:42:12 AM	4001	1.0	14.0	48.0	135.0	PSI & RATE CHECK
10:46:42 AM	3644	1.0	14.0	111.0	198.0	ACID ON FORM
10:51:54 AM	3440	1.0	14.0	183.0	270.0	BLOCK ON FORM.
10:53:05 AM	3318	1.0	14.0	198.0	285.0	BLOCK IS OVER
10:53:22 AM	3262	1.0	14.0	202.0	289.0	ON ACID
10:57:10 AM	3701	1.0	20.0	72.0	361.0	START ON BLOCK
10:58:18 AM	3700	1.0	20.0	23.0	384.0	ON BRINE SPACER
11:02:18 AM	3831	1.0	20.0	81.0	465.0	PSI & RATE CHECK
11:06:56 AM	3898	2.0	20.0	175.0	559.0	BLOCK ON FORM.
11:08:13 AM	3950	2.0	20.0	198.0	582.0	BLOCK IS OVER
11:08:26 AM	3905	2.0	20.0	202.0	586.0	ON ACID
11:12:01 AM	3995	2.0	20.0	73.0	659.0	START ON BLOCK
11:12:59 AM	3975	2.0	20.0	20.0	679.0	ON BRINE SPACER
11:17:00 AM	4098	2.0	20.0	81.0	760.0	PSI & RATE CHECK
11:22:43 AM	3787	2.0	15.0	178.0	857.0	BLOCK ON FORM.
11:24:04 AM	3800	2.0	15.0	198.0	877.0	BLOCK IS OVER
11:24:36 AM	3834	2.0	15.0	202.0	881.0	ON ACID
11:29:25 AM	3872	2.0	15.0	73.0	954.0	START ON BLOCK
11:30:29 AM	3858	2.0	15.0	16.0	970.0	ON BRINE SPACER
11:37:38 AM	3934	2.0	15.0	100.0	1070.0	PSI & RATE CHECK
11:42:49 AM	3898	2.0	15.0	182.0	1152.0	BLOCK ON FORM.
11:43:52 AM	4012	2.0	15.0	198.0	1168.0	BLOCK IS OVER
11:44:15 AM	3881	2.0	15.0	202.0	1172.0	ON ACID

[illegible]

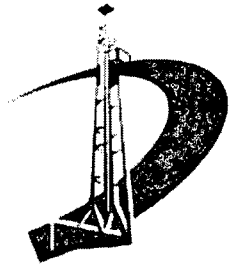
PETROPLEX--ACIDIIZNG--LP-----1-16-15-----CONOCO-PHILLIPS-VAC-ABU-7-06-----TREATER-GERARDO-ARIAS



30-023-42071
HOBBS OCD

MAY 18 2015

RECEIVED



PRODIRECTIONAL

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

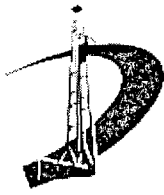

ConocoPhillips

Vacuum ABO Unit No. 706 (ST2)
Lea County, NM

December 01, 2014

Job No. LNM 5114814

Survey Completion Report



PRODIRECTIONAL

Professional Directional Ltd.

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

December 01, 2014



ConocoPhillips

Vacuum ABO Unit No. 706 (ST2)
Lea County, NM

Job No. LNM 5114814

Survey Certification Form:

This is to certify surveys from **1,693'MD** to a depth of **9,209'MD** are true and correct MWD Surveys. These surveys were taken from **11/15/2014** through **11/15/2014**.

Sincerely,

John Jordan | Well Planning

PRODIRECTIONAL



Conoco Phillips

Lea County, NM
Vacuum ABO Unit No. 706
ST02

Survey: ProDirectional

Survey Report

01 December, 2014





Professional Directional
Wellpath Report



Company:	Conoco Phillips	Local Co-ordinate Reference:	Well No. 706
Project:	Lea County, N.M.	TVD Reference:	WELL @ 3943.80usft (Original Well Elev)
Site:	Vacuum ABO Unit	MD Reference:	WELL @ 3943.80usft (Original Well Elev)
Well:	No. 706	North Reference:	Grid
Wellbore:	ST02	Survey Calculation Method:	Minimum Curvature
Design:	ST02	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		Vacuum ABO Unit									
Site Position:		Northing:		657,758.66 usft		Latitude:		32° 48' 17.957 N			
From:		Map		Easting:		778,438.28 usft		Longitude:		103° 25' 37.702 W	
Position Uncertainty:		0.00 usft		Slot Radius:		13-3/16 "		Grid Convergence:		0.49 "	

Well		No. 706				
Well Position	+N/-S	0.00 usft	Northing:	656,340.88 usft	Latitude:	32° 48' 4.361 N
	+E/-W	0.00 usft	Easting:	773,296.81 usft	Longitude:	103° 26' 38.075 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,930.80 usft	

Wellbore		ST02			
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	12/1/2014	7.14	60.65	48,626

Design:	ST02				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	1,560.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	91.01	



Professional Directional
Wellpath Report



Company: Conoco Phillips
Project: Lea County, N.M.
Site: Vacuum ABO Unit
Well: No. 706
Wellbore: ST02
Design: ST02

Local Co-ordinate Reference: Well No. 706
TVD Reference: WELL @ 3943.80usft (Original Well Elev)
MD Reference: WELL @ 3943.80usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

Survey Program Date 12/1/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
214.00	1,560.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s
1,693.00	9,209.00	Survey #1 (ST02)	MWD	MWD - Standard

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (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	656,340.88	773,296.81	0.00
214.00	0.50	20.23	214.00	0.88	0.32	0.31	0.23	656,341.76	773,297.13	20.23
450.00	0.10	94.23	449.99	1.83	0.88	0.85	0.20	656,342.71	773,297.69	168.50
660.00	0.10	160.23	659.99	1.64	1.13	1.10	0.05	656,342.52	773,297.94	123.00
840.00	0.40	218.23	839.99	1.00	0.79	0.78	0.20	656,341.88	773,297.60	71.73
1,060.00	0.40	205.23	1,059.99	-0.30	-0.01	0.00	0.04	656,340.58	773,296.80	-96.50
1,237.00	0.30	212.23	1,236.98	-1.25	-0.52	-0.50	0.06	656,339.63	773,296.29	160.32
1,420.00	0.40	208.23	1,419.98	-2.22	-1.08	-1.04	0.06	656,338.66	773,295.73	-15.74
1,560.00	0.60	203.23	1,559.97	-3.32	-1.60	-1.54	0.15	656,337.56	773,295.21	-14.81
Last Gyro: 1,560' MD										
1,693.00	0.70	195.10	1,692.97	-4.75	-2.08	-2.00	0.10	656,336.13	773,294.73	-46.80
First Survey(ST02): 1,693' MD										
1,872.00	2.00	107.60	1,871.92	-6.75	0.61	0.73	1.17	656,334.13	773,297.42	-107.04
2,051.00	5.50	97.60	2,050.52	-8.83	12.09	12.25	1.98	656,332.05	773,308.90	-15.60
2,230.00	8.50	94.60	2,228.16	-11.02	33.79	33.98	1.69	656,329.86	773,330.60	-8.44
2,409.00	12.10	92.10	2,404.25	-12.77	65.73	65.95	2.03	656,328.11	773,362.54	-8.31
2,587.00	14.10	85.90	2,577.62	-11.90	106.01	106.20	1.37	656,328.98	773,402.82	-38.14
2,766.00	14.50	84.20	2,751.07	-8.08	150.05	150.17	0.32	656,332.80	773,446.86	-47.22
2,945.00	13.60	85.80	2,924.71	-4.27	193.33	193.38	0.55	656,336.61	773,490.14	157.43
3,123.00	13.50	91.60	3,097.77	-3.32	234.98	235.00	0.77	656,337.56	773,531.79	97.02
3,302.00	13.00	89.10	3,272.00	-3.59	275.99	276.01	0.42	656,337.29	773,572.80	-132.32
3,480.00	12.30	91.50	3,445.68	-3.77	314.96	314.98	0.49	656,337.11	773,611.77	144.27



Professional Directional
Wellpath Report



Company:	Conoco Phillips	Local Co-ordinate Reference:	Well No. 706
Project:	Lea County, N.M.	TVD Reference:	WELL @ 3943.80usft (Original Well Elev)
Site:	Vacuum ABO Unit	MD Reference:	WELL @ 3943.80usft (Original Well Elev)
Well:	No. 706	North Reference:	Grid
Wellbore:	ST02	Survey Calculation Method:	Minimum Curvature
Design:	ST02	Database:	Well_Planner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)
3,659.00	11.50	91.80	3,620.83	-4.83	351.86	351.89	0.45	656,336.05	773,648.67	175.73
3,749.00	11.90	91.90	3,708.96	-5.42	370.10	370.14	0.45	656,335.46	773,666.91	2.95
3,838.00	11.00	92.00	3,796.19	-6.02	387.76	387.80	1.01	656,334.86	773,684.57	178.79
3,883.00	7.70	89.30	3,840.59	-6.13	395.07	395.11	7.40	656,334.75	773,691.88	-173.76
4,017.00	4.90	78.70	3,973.77	-4.90	409.66	409.68	2.25	656,335.98	773,706.47	-162.65
4,196.00	5.20	92.30	4,152.08	-3.73	425.26	425.26	0.69	656,337.15	773,722.07	82.77
4,374.00	5.90	93.20	4,329.25	-4.56	442.45	442.47	0.40	656,336.32	773,739.26	7.54
4,553.00	6.20	96.80	4,507.25	-6.22	461.24	461.28	0.27	656,334.66	773,758.05	53.47
4,732.00	6.90	96.20	4,685.08	-8.53	481.53	481.60	0.39	656,332.35	773,778.34	-5.88
4,911.00	7.40	95.30	4,862.69	-10.75	503.69	503.80	0.29	656,330.13	773,800.50	-13.07
5,089.00	8.10	95.40	5,039.06	-12.99	527.59	527.74	0.39	656,327.89	773,824.40	1.15
5,149.00	8.30	96.10	5,098.45	-13.85	536.11	536.27	0.37	656,327.03	773,832.92	26.88
5,262.00	8.50	97.10	5,210.24	-15.75	552.50	552.69	0.22	656,325.13	773,849.31	36.64
5,450.00	8.00	90.50	5,396.29	-17.58	579.37	579.59	0.57	656,323.30	773,876.18	-121.07
5,639.00	7.50	91.70	5,583.57	-18.06	604.85	605.08	0.28	656,322.82	773,901.66	162.66
5,827.00	4.80	88.00	5,770.47	-18.15	624.98	625.21	1.45	656,322.73	773,921.79	-173.48
6,016.00	4.60	86.00	5,958.83	-17.35	640.45	640.65	0.14	656,323.53	773,937.26	-141.66
6,205.00	4.30	89.70	6,147.26	-16.78	655.09	655.29	0.22	656,324.10	773,951.90	138.10
6,396.00	4.10	77.40	6,337.75	-15.25	668.92	669.08	0.48	656,325.63	773,965.73	-108.60
6,554.00	4.40	78.40	6,495.32	-12.80	680.36	680.48	0.20	656,328.08	773,977.17	14.37
6,743.00	5.90	86.20	6,683.55	-10.70	697.16	697.24	0.87	656,330.18	773,993.97	28.94
6,933.00	7.20	94.20	6,872.31	-10.93	718.78	718.86	0.83	656,329.95	774,015.59	39.09
7,122.00	5.30	93.00	7,060.18	-12.25	739.31	739.41	1.01	656,328.63	774,036.12	-176.66
7,311.00	6.60	63.10	7,248.20	-7.79	757.72	757.74	1.75	656,333.09	774,054.53	-82.59
7,499.00	7.40	56.50	7,434.80	3.78	777.45	777.26	0.60	656,344.66	774,074.26	-48.46
7,686.00	6.20	82.20	7,620.53	11.80	797.50	797.17	1.73	656,352.68	774,094.31	123.96
7,875.00	5.80	115.10	7,808.55	9.13	816.27	815.98	1.81	656,350.01	774,113.08	112.82



Professional Directional
Wellpath Report



Company: Conoco Phillips
Project: Lea County, N.M.
Site: Vacuum ABO Unit
Well: No. 706
Wellbore: ST02
Design: ST02

Local Co-ordinate Reference: Well No. 706
TVD Reference: WELL @ 3943.80usft (Original Well Elev)
MD Reference: WELL @ 3943.80usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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 (°)
8,063.00	4.40	108.50	7,995.80	2.81	831.71	831.53	0.81	656,343.69	774,128.52	-160.53
8,252.00	4.90	100.70	8,184.18	-0.99	846.52	846.40	0.43	656,339.89	774,143.33	-55.60
8,441.00	6.50	92.50	8,372.24	-2.95	865.14	865.06	0.95	656,337.93	774,161.95	-31.10
8,630.00	6.60	102.50	8,560.01	-5.77	886.43	888.39	0.61	656,335.11	774,183.24	89.97
8,821.00	6.00	111.60	8,749.86	-11.82	906.43	906.50	0.61	656,329.06	774,203.24	125.47
9,011.00	6.60	121.00	8,938.72	-21.10	925.02	925.25	0.63	656,319.78	774,221.83	64.54
9,156.00	7.10	121.60	9,082.68	-30.09	939.80	940.18	0.35	656,310.79	774,236.61	8.44
Last Survey: 9,156' MD, 9,082.68' TVD										
9,209.00	7.10	121.60	9,135.28	-33.52	945.38	945.82	0.00	656,307.36	774,242.19	0.00
PTB: 9,209' MD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,560.00	1,559.97	-3.32	-1.60	Last Gyro: 1,560' MD
1,693.00	1,692.97	-4.75	-2.08	First Survey(ST02): 1,693' MD
9,156.00	9,082.68	-30.09	939.80	Last Survey: 9,156' MD, 9,082.68' TVD
9,209.00	9,135.28	-33.52	945.38	PTB: 9,209' MD

RECEIVED

Well Name: VACUUM ABO UNIT 007-006 VAU 706

The figure consists of two plots: a Vertical Section and a Plan view.

Vertical Section: The y-axis represents True Vertical Depth (TVD) in feet below the kelly block (ftKB), ranging from 0 to 9000. The x-axis represents Vertical Section (VS) in feet (ft), ranging from -3000 to 4000. The wellbore path is shown as a solid black line, starting at 0 ftKB and 0 ft VS, and ending at approximately 9000 ftKB and 1000 ft VS.

Plan View: The y-axis represents North-South (NS) in feet (ft), ranging from -500 to 500. The x-axis represents East-West (EW) in feet (ft), ranging from 0 to 4000. The wellbore path is shown as a solid black line, starting at 0 ft NS and 0 ft EW, and ending at approximately -100 ft NS and 4000 ft EW.

