



PHOENIX
TECHNOLOGY SERVICES

RECEIVED

JUL 21 2014

BOPCO WTD PRODUCTION

July 16, 2014

Bopco, LP
Attention: Regulatory Department
PO Box 2760
Midland, TX 79702

Re: Bopco, LP
PLU CVX JV BS #027H
Eddy County, NM
API #30-015-42111
Job No. 1311615

Dear Regulatory Department,

Phoenix Technology Services, Inc. has filed the survey certification, surveys, and lease plat for the above referenced well with the State of New Mexico Oil Conservation Division – District 2 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Mike Layfield	027H	9,806	18,192	06/11/14	07/01/14	MWD

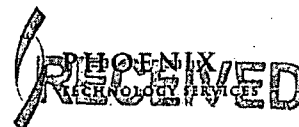
Thank you for the opportunity to be of service. Please contact me if you have any questions or require additional information.

Best Regards,

Dana Robinson

Dana Robinson
Operations Administrator

PHOENIX TECHNOLOGY SERVICES INC.
SURVEY DATA CERTIFICATION



JUL 21 2014

PHOENIX JOB NUMBER 1311615

OPERATOR Bopco, LP

BOPCO WTD PRODUCTION

WELL NAME PLU CVX JV BS #027H

COUNTY & STATE

Eddy Co. NM

API WELL NUMBER	30-015-42111
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PROPOSED DIRECTION	359.63
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TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
9,688 ft	9,686.48 ft	0.5	77.23	-38.76	12.73	Multi Shot

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
11-Jun-14	9,806 ft	6.6	357.9

SURVEY INSTRUMENT
TYPE
Phoenix P360

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
1-Jul-14	18,192 ft	91.7	357.7

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

Michael Layfield

PRINT YOUR NAME ABOVE

Michael Layfield

SIGN YOUR NAME ABOVE

7/1/2014

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.02
DECLINATION OR GRID	Grid

MWD SUPERVISOR 1 Mike Layfield

DIRECTIONAL DRILLER 1

Casey Hendrix

MWD SUPERVISOR 2 Peyton Paterson

DIRECTIONAL DRILLER 2

Donaldson / Kelly

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240
Phone (505) 393-9161 Fax: (505) 393-0720

DISTRICT II

811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax: (505) 748-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 354-6176 Fax: (505) 354-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED
Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

BOPCO WTD PRODUCTION

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name PLU BIG SINKS 3 25 31	Well Number 1H
OGRID No.	Operator Name BOPCO, L.P.	Elevation 3453'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	3	25 S	31 E		330	NORTH	1980	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	27	24 S	31 E		2640	SOUTH	1980	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°11'17.51"
Long - W 103°46'02.34"
NMSPCE - N 432646.7
E 675103.9
(NAD-27)

SURFACE LOCATION
Lat - N 32°09'56.77"
Long - W 103°46'02.23"
NMSPCE - N 424489.1
E 675156.4
(NAD-27)

OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature _____ Date _____

Printed Name _____

Email Address _____

SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

OCTOBER 25, 2013
Date Surveyed _____
Signature & Seal of Professional Surveyor _____
Certificate No. 7977
BASIN SURVEYS

0' 1500' 3000' 4500' 6000'
SCALE: 1" = 2000'
WO Num.: 29643



BOPCO, L P

Eddy County, NM (NAD27 NME)

Poker Lake Unit CVX JV BS

#027H

WB1/Job #1311615

Survey: Phoenix MWD Survey

Standard Survey Report

02 July, 2014



PHOENIX
TECHNOLOGY SERVICES



Phoenix Technology Services Survey Report



Company:	BOPCO, LP	Local Co-ordinate Reference:	Well #027H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3475.00usft (Latshaw 14)
Site:	Poker Lake Unit CVX JV BS	MD Reference:	KB @ 3475.00usft (Latshaw 14)
Well:	#027H	North Reference:	Grid
Wellbore:	WB1/Job #1311615	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Latshaw 14)	Database:	GCR DB

Project:	Eddy County, NM (NAD27 NME)		
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:	Poker Lake Unit CVX JV BS		
Site Position:	Map	From:	Position Uncertainty:
Northings:	424,489.10 usft	Latitude:	32° 9' 56.77628 N
Easting:	675,156.40 usft	Longitude:	103° 46' 2.23055 W
Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well:	#027H					
Well Position:	+N/-S	0.00 usft	Northings:	424,489.10 usft	Latitude:	32° 9' 56.77628 N
	+E/-W	0.00 usft	Easting:	675,156.40 usft	Longitude:	103° 46' 2.23055 W
Position Uncertainty:	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,453.00 usft	

Wellbore:	WB1/Job #1311615				
Magnetics:	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010_14	05/08/14	7.32	60.03	48,270

Design:	Surveys (Latshaw 14)				
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	359.63	

Survey Program:	Date: 07/02/14			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	9,688.00	MS Gyro Survey (WB1/Job #1311615)	NS-GYRO-MS	North sensing gyrocompassing m/s
9,688.00	18,245.00	Phoenix MWD Survey (WB1/Job #131161)	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)
	9,688.00	0.50	77.23	9,686.48	-38.76	12.73	-38.84	0.00	0.00	0.00
Tie-on to MS Gyro Survey	9,806.00	6.60	357.90	9,804.21	-31.86	12.99	-31.94	5.53	5.17	-67.23
First Phoenix MWD Survey	9,837.00	13.00	357.50	9,834.74	-26.59	12.77	-26.67	20.65	20.65	-1.29
	9,868.00	19.20	359.60	9,864.51	-18.00	12.58	-18.08	20.08	20.00	6.77
	9,900.00	24.40	1.00	9,894.21	-6.12	12.66	-6.21	16.33	16.25	4.38
	9,931.00	26.60	0.30	9,922.19	7.22	12.81	7.14	7.16	7.10	-2.26
	9,963.00	30.10	359.50	9,950.35	22.41	12.78	22.33	11.00	10.94	-2.50



Phoenix Technology Services
Survey Report



Company: BOPCO, L P
Project: Eddy County, NM (NAD27 NME)
Site: Poker Lake Unit CVX JV BS
Well: #027H
Wellbore: WB1/Job #1311615
Design: Surveys (Latshaw 14)

Local Co-ordinate Reference: Well #027H
TVD Reference: KB @ 3475.00usft (Latshaw 14)
MD Reference: KB @ 3475.00usft (Latshaw 14)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR 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)
9,994.00	32.70	358.00	9,976.81	38.56	12.42	38.48	8.76	8.39	-4.84
10,026.00	35.30	356.20	10,003.34	56.42	11.50	56.35	8.71	8.13	-5.63
10,057.00	37.70	357.20	10,028.25	74.83	10.44	74.76	7.98	7.74	3.23
10,089.00	39.70	357.40	10,053.23	94.82	9.50	94.75	6.26	6.25	0.63
10,120.00	42.20	355.60	10,076.64	115.09	8.26	115.04	8.92	8.06	-5.81
10,151.00	44.90	354.60	10,099.11	136.37	6.43	136.33	8.99	8.71	-3.23
10,183.00	46.90	355.40	10,121.37	159.26	4.43	159.23	6.50	6.25	2.50
10,214.00	49.50	356.80	10,142.04	182.31	2.86	182.29	9.04	8.39	4.52
10,246.00	52.30	357.60	10,162.22	207.12	1.65	207.10	8.96	8.75	2.50
10,277.00	55.10	358.60	10,180.57	232.08	0.83	232.07	9.40	9.03	3.23
10,309.00	58.40	359.40	10,198.11	258.84	0.36	258.83	10.52	10.31	2.50
10,340.00	61.60	0.10	10,213.61	285.68	0.25	285.67	10.51	10.32	2.26
10,371.00	63.70	0.30	10,227.85	313.21	0.35	313.20	6.80	6.77	0.65
10,403.00	63.10	0.00	10,242.18	341.82	0.42	341.81	2.05	-1.88	-0.94
10,434.00	63.00	359.70	10,256.23	369.46	0.35	369.45	0.92	-0.32	-0.97
10,466.00	62.40	359.50	10,270.90	397.89	0.15	397.88	1.96	-1.88	-0.63
10,497.00	61.70	358.70	10,285.43	425.27	-0.28	425.27	3.21	-2.26	-2.58
10,529.00	63.30	358.10	10,300.21	453.65	-1.07	453.64	5.27	5.00	-1.88
10,561.00	65.70	358.50	10,313.98	482.51	-1.93	482.52	7.58	7.50	1.25
10,593.00	68.60	358.90	10,326.41	511.99	-2.60	512.00	9.14	9.06	1.25
10,624.00	74.60	0.10	10,336.19	541.39	-2.85	541.40	19.70	19.35	3.87
10,656.00	78.30	1.00	10,343.69	572.49	-2.55	572.50	11.88	11.56	2.81
10,687.00	82.20	1.00	10,348.94	603.03	-2.01	603.04	12.58	12.58	0.00
10,784.00	93.00	1.00	10,352.99	699.79	-0.33	699.78	11.13	11.13	0.00
10,874.00	91.50	359.80	10,349.46	789.72	0.30	789.70	2.13	-1.67	-1.33
10,965.00	90.40	359.70	10,347.95	880.70	-0.10	880.68	1.21	-1.21	-0.11
11,055.00	92.70	0.20	10,345.51	970.66	-0.17	970.64	2.62	2.56	0.56
11,146.00	91.90	359.90	10,341.86	1,061.59	-0.10	1,061.57	0.94	-0.88	-0.33
11,236.00	90.30	359.20	10,340.14	1,151.56	-0.80	1,151.55	1.94	-1.78	-0.78
11,327.00	90.70	358.80	10,339.34	1,242.55	-2.39	1,242.54	0.62	0.44	-0.44
11,420.00	89.30	359.10	10,339.34	1,335.53	-4.09	1,335.53	1.54	-1.51	0.32
11,511.00	90.00	358.20	10,339.90	1,426.50	-6.24	1,426.51	1.25	0.77	-0.99
11,602.00	91.30	357.80	10,338.86	1,517.44	-9.41	1,517.47	1.49	1.43	-0.44
11,695.00	91.40	358.70	10,336.67	1,610.37	-12.25	1,610.41	0.97	0.11	0.97
11,787.00	91.40	358.70	10,334.43	1,702.32	-14.34	1,702.37	0.00	0.00	0.00
11,878.00	89.60	359.90	10,333.63	1,793.30	-15.45	1,793.36	2.38	-1.98	1.32
11,970.00	90.60	0.00	10,333.47	1,885.30	-15.53	1,885.36	1.09	1.09	0.11
12,062.00	69.60	0.20	10,333.31	1,977.30	-15.37	1,977.36	1.11	-1.09	0.22
12,155.00	90.10	0.40	10,333.55	2,070.30	-14.88	2,070.35	0.58	0.54	0.22
12,247.00	89.00	0.10	10,334.28	2,162.29	-14.48	2,162.34	1.24	-1.20	-0.33
12,338.00	90.00	0.10	10,335.07	2,253.29	-14.32	2,253.33	1.10	1.10	0.00
12,432.00	89.30	358.90	10,335.64	2,347.28	-15.14	2,347.33	1.48	-0.74	-1.28
12,526.00	88.00	359.90	10,337.86	2,441.24	-16.13	2,441.30	1.74	-1.38	1.06



Phoenix Technology Services

Survey Report



Company: BOPCO, LP
Project: Eddy County, NM (NAD27 NME)
Site: Poker Lake Unit CVX JV BS
Well: #027H
Wellbore: WB1/Job #1311615
Design: Surveys (Latshaw 14)

Local Co-ordinate Reference: Well #027H
TVD Reference: KB @ 3475.00usft (Latshaw 14)
MD Reference: KB @ 3475.00usft (Latshaw 14)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB

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)
12,620.00	88.40	0.30	10,340.81	2,535.20	-15.96	2,535.25	0.60	0.43	0.43
12,715.00	86.50	0.60	10,345.04	2,630.09	-15.22	2,630.14	2.02	-2.00	0.32
12,809.00	87.60	0.70	10,349.88	2,723.96	-14.15	2,724.00	1.18	1.17	0.11
12,904.00	89.00	0.30	10,352.69	2,818.91	-13.33	2,818.94	1.53	1.47	-0.42
12,998.00	89.50	0.20	10,353.92	2,912.91	-12.92	2,912.93	0.54	0.53	-0.11
13,092.00	90.70	0.20	10,353.76	3,006.90	-12.59	3,006.92	1.28	1.28	0.00
13,187.00	89.80	1.00	10,353.35	3,101.90	-11.59	3,101.91	1.27	-0.95	0.84
13,282.00	90.80	0.50	10,352.85	3,196.88	-10.35	3,196.88	1.18	1.05	-0.53
13,376.00	90.50	0.60	10,351.78	3,290.87	-9.45	3,290.87	0.34	-0.32	0.11
13,471.00	89.70	359.00	10,351.62	3,385.87	-9.78	3,385.86	1.88	-0.84	-1.68
13,565.00	90.60	357.70	10,351.37	3,479.83	-12.48	3,479.83	1.68	0.96	-1.38
13,657.00	90.80	355.20	10,350.25	3,571.64	-18.18	3,571.68	2.73	0.22	-2.72
13,752.00	89.60	355.40	10,349.91	3,666.31	-25.96	3,666.41	1.28	-1.26	0.21
13,847.00	90.60	359.00	10,349.75	3,761.18	-30.60	3,761.30	3.93	1.05	3.79
13,941.00	89.70	1.40	10,349.50	3,855.18	-30.28	3,855.29	2.73	-0.96	2.55
14,035.00	90.60	2.40	10,349.26	3,949.12	-27.16	3,949.21	1.43	0.96	1.06
14,129.00	91.30	1.80	10,347.70	4,043.04	-23.72	4,043.11	0.98	0.74	-0.64
14,229.00	89.90	1.00	10,346.65	4,143.01	-21.27	4,143.06	1.61	-1.40	-0.80
14,324.00	90.30	1.20	10,346.49	4,237.99	-19.45	4,238.02	0.47	0.42	0.21
14,418.00	88.10	1.10	10,347.80	4,331.95	-17.56	4,331.98	2.34	-2.34	-0.11
14,512.00	89.10	1.30	10,350.09	4,425.90	-15.59	4,425.91	1.08	1.06	0.21
14,607.00	88.20	0.30	10,352.33	4,520.87	-14.27	4,520.86	1.42	-0.95	-1.05
14,701.00	88.30	0.40	10,355.20	4,614.82	-13.69	4,614.81	0.15	0.11	0.11
14,796.00	88.70	359.80	10,357.69	4,709.79	-13.53	4,709.78	0.76	0.42	-0.63
14,889.00	88.90	0.10	10,359.64	4,802.77	-13.61	4,802.75	0.39	0.22	0.32
14,984.00	89.40	358.90	10,361.05	4,897.75	-14.44	4,897.74	1.37	0.53	-1.26
15,078.00	89.50	358.80	10,361.95	4,991.73	-16.33	4,991.73	0.15	0.11	-0.11
15,172.00	90.20	358.90	10,362.20	5,085.71	-18.21	5,085.72	0.75	0.74	0.11
15,266.00	90.70	359.00	10,361.46	5,179.69	-19.93	5,179.71	0.54	0.53	0.11
15,361.00	90.80	359.10	10,360.21	5,274.67	-21.51	5,274.70	0.15	0.11	0.11
15,456.00	90.80	359.50	10,358.89	5,369.65	-22.67	5,369.68	0.42	0.00	0.42
15,550.00	91.20	359.80	10,357.25	5,463.63	-23.24	5,463.67	0.53	0.43	0.32
15,644.00	90.60	359.90	10,355.77	5,557.62	-23.49	5,557.66	0.65	-0.64	0.11
15,738.00	91.20	359.60	10,354.29	5,651.61	-23.90	5,651.65	0.71	0.64	-0.32
15,833.00	89.60	359.60	10,353.63	5,746.60	-24.56	5,746.64	1.68	-1.68	0.00
15,927.00	90.60	0.60	10,353.47	5,840.60	-24.40	5,840.63	1.50	1.06	1.06
16,021.00	91.40	359.80	10,351.83	5,934.58	-24.07	5,934.61	1.20	0.85	-0.85
16,116.00	91.10	358.20	10,349.75	6,029.54	-25.73	6,029.58	1.71	-0.32	-1.68
16,210.00	89.50	357.70	10,349.26	6,123.48	-29.09	6,123.54	1.78	-1.70	-0.53
16,304.00	88.60	357.40	10,350.82	6,217.38	-33.11	6,217.46	1.01	-0.96	-0.32
16,399.00	88.90	357.70	10,352.89	6,312.27	-37.17	6,312.38	0.45	0.32	0.32
16,493.00	89.80	358.10	10,353.96	6,406.20	-40.61	6,406.33	1.05	0.96	0.43
16,587.00	91.10	358.90	10,353.22	6,500.16	-43.07	6,500.30	1.62	1.38	0.85
16,682.00	89.00	357.90	10,353.14	6,595.12	-45.73	6,595.27	2.45	-2.21	-1.05



Phoenix Technology Services
Survey Report



Company: BOPCO, LP
Project: Eddy County, NM (NAD27 NME)
Site: Poker Lake Unit CVX JV BS
Well: #027H
Wellbore: WB1/Job #1311615
Design: Surveys (Latslaw 14)

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well #027H
KB @ 3475.00usft (Latslaw 14)
KB @ 3475.00usft (Latslaw 14)
Grid
Minimum Curvature
GCR 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)
16,776.00	90.00	357.40	10,353.96	6,689.03	-49.58	6,689.21	1.19	1.06	-0.53
16,870.00	89.80	356.40	10,354.12	6,782.89	-54.66	6,783.10	1.08	-0.21	-1.06
16,964.00	90.00	356.90	10,354.29	6,876.73	-60.16	6,876.98	0.57	0.21	0.53
17,058.00	91.30	358.50	10,353.22	6,970.64	-63.93	6,970.91	2.19	1.38	1.70
17,153.00	92.00	358.70	10,350.48	7,065.58	-66.25	7,065.86	0.77	0.74	0.21
17,247.00	91.40	359.80	10,347.70	7,159.52	-67.48	7,159.81	1.33	-0.64	1.17
17,341.00	89.50	359.50	10,346.96	7,253.52	-68.05	7,253.80	2.05	-2.02	-0.32
17,435.00	89.70	359.40	10,347.61	7,347.51	-68.95	7,347.80	0.24	0.21	-0.11
17,530.00	88.30	359.70	10,349.27	7,442.49	-69.70	7,442.78	1.51	-1.47	0.32
17,624.00	88.60	359.30	10,351.81	7,536.45	-70.52	7,536.75	0.53	0.32	-0.43
17,719.00	88.10	357.70	10,354.55	7,631.38	-73.01	7,631.69	1.76	-0.53	-1.68
17,813.00	91.30	358.10	10,355.04	7,725.30	-76.45	7,725.63	3.43	3.40	0.43
17,907.00	89.70	356.60	10,354.22	7,819.19	-80.80	7,819.55	2.33	-1.70	-1.60
18,002.00	90.00	357.40	10,354.47	7,914.06	-85.77	7,914.45	0.90	0.32	0.84
18,097.00	90.90	357.20	10,353.72	8,008.95	-90.24	8,009.36	0.97	0.95	-0.21
18,192.00	91.70	357.70	10,351.57	8,103.83	-94.47	8,104.27	0.99	0.84	0.53
Last Phoenix MWD Survey									
18,245.00	91.70	357.70	10,350.00	8,156.76	-96.59	8,157.22	0.00	0.00	0.00
Projection to Bit									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,688.00	9,686.48	-38.76	12.73	Tie-on to MS Gyro Survey
9,806.00	9,804.21	-31.86	12.99	First Phoenix MWD Survey
18,192.00	10,351.57	8,103.83	-94.47	Last Phoenix MWD Survey
18,245.00	10,350.00	8,156.76	-96.59	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____



Job Number: SVMO-140743

Company: BOPCO, LP

Lease/Well: Poker Lane Unit CVXJV BS 027H

Location: Eddy County, NM

Rig Name: Latshaw #14

RKB: 20'

G.L. or M.S.L.: GL

State/Country: New Mexico/USA

Declination: 8.35°

Grid: East To Grid North

File name: Y:\WINSER~1\2014SU~1\BOPCO\MO\POKERL~1\CVXJV\BS027H.SVY

Date/Time: 10-Jun-14 / 13:01

Curve Name: Surface - 9688' M.D. (Rate Gyro)

MS Survey

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane .00

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
Surface M.D. to 9688' M.D. is, to the best of
our knowledge a true and accurate account of the
well bore.

Clayton Turner 6/10/14
MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.28	100.56	100.00	-.04	.24	-.04	.24	100.56	.28
200.00	.28	82.05	200.00	-.06	.72	-.06	.72	94.41	.09
300.00	.48	55.88	300.00	.21	1.31	.21	1.33	80.77	.26
400.00	.78	36.69	399.99	.99	2.06	.99	2.29	64.30	.36
500.00	.75	29.02	499.98	2.11	2.79	2.11	3.50	52.86	.11
600.00	.62	35.73	599.97	3.12	3.42	3.12	4.63	47.61	.15
700.00	.24	63.99	699.97	3.65	3.93	3.65	5.36	47.05	.42
800.00	.14	99.83	799.97	3.73	4.24	3.73	5.64	48.66	.15
900.00	.16	129.55	899.97	3.62	4.46	3.62	5.74	50.99	.08

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	.42	119.97	999.97	3.34	4.89	3.34	5.92	55.63	.26
1100.00	.80	102.87	1099.96	3.01	5.89	3.01	6.61	62.95	.42
1200.00	1.04	105.67	1199.95	2.60	7.44	2.60	7.88	70.71	.24
1300.00	1.39	106.31	1299.93	2.02	9.48	2.02	9.69	77.98	.35
1400.00	1.36	104.71	1399.90	1.38	11.79	1.38	11.87	83.34	.05
1500.00	1.43	101.25	1499.87	.83	14.16	.83	14.19	86.64	.11
1600.00	1.32	102.67	1599.84	.34	16.51	.34	16.51	88.83	.12
1700.00	1.21	98.55	1699.82	-.07	18.68	-.07	18.68	90.23	.14
1800.00	1.62	95.73	1799.79	-.37	21.13	-.37	21.13	91.01	.42
1900.00	1.76	93.71	1899.74	-.61	24.07	-.61	24.07	91.46	.15
2000.00	1.72	97.24	1999.70	-.90	27.09	-.90	27.10	91.90	.11
2100.00	1.54	110.05	2099.66	-1.55	29.84	-1.55	29.88	92.97	.41
2200.00	1.42	118.06	2199.62	-2.59	32.20	-2.59	32.30	94.61	.24
2300.00	1.45	122.92	2299.59	-3.86	34.35	-3.86	34.57	96.42	.13
2400.00	1.58	119.09	2399.56	-5.22	36.62	-5.22	36.99	98.12	.16
2500.00	1.22	135.48	2499.53	-6.65	38.57	-6.65	39.14	99.79	.54
2600.00	1.25	148.11	2599.50	-8.34	39.89	-8.34	40.75	101.80	.27
2700.00	1.38	163.55	2699.48	-10.42	40.81	-10.42	42.12	104.32	.38
2800.00	1.08	180.04	2799.45	-12.52	41.15	-12.52	43.01	106.92	.46
2900.00	.72	207.23	2899.44	-14.02	40.86	-14.02	43.20	108.93	.55
3000.00	.67	207.10	2999.44	-15.10	40.31	-15.10	43.04	110.53	.05
3100.00	.57	201.44	3099.43	-16.08	39.86	-16.08	42.98	111.97	.12
3200.00	.39	166.86	3199.43	-16.87	39.75	-16.87	43.19	113.00	.33
3300.00	.47	139.37	3299.42	-17.52	40.10	-17.52	43.76	113.60	.22
3400.00	.47	175.15	3399.42	-18.24	40.40	-18.24	44.33	114.29	.29
3500.00	.80	236.63	3499.41	-19.03	39.85	-19.03	44.16	115.52	.71
3600.00	.80	240.78	3599.40	-19.75	38.66	-19.75	43.41	117.07	.06
3700.00	.64	183.44	3699.40	-20.65	38.02	-20.65	43.26	118.51	.70
3800.00	.95	157.14	3799.39	-21.97	38.31	-21.97	44.16	119.84	.47

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3900.00	1.17	154.16	3899.37	-23.66	39.07	-23.66	45.68	121.19	.23
4000.00	1.77	147.72	3999.34	-25.88	40.34	-25.88	47.93	122.68	.62
4100.00	1.55	138.24	4099.30	-28.20	42.07	-28.20	50.64	123.83	.35
4200.00	1.50	137.09	4199.26	-30.16	43.86	-30.16	53.23	124.52	.06
4300.00	1.52	135.97	4299.23	-32.07	45.67	-32.07	55.81	125.08	.04
4400.00	1.41	141.72	4399.19	-33.99	47.36	-33.99	58.29	125.67	.18
4500.00	1.08	149.30	4499.17	-35.77	48.60	-35.77	60.34	126.35	.37
4600.00	.64	242.59	4599.16	-36.84	48.59	-36.84	60.97	127.17	1.29
4700.00	.75	260.01	4699.15	-37.21	47.45	-37.21	60.30	128.11	.24
4800.00	.64	253.05	4799.15	-37.48	46.27	-37.48	59.55	129.01	.14
4900.00	.55	250.22	4899.14	-37.81	45.28	-37.81	58.99	129.86	.09
5000.00	.47	241.21	4999.14	-38.17	44.47	-38.17	58.60	130.64	.11
5100.00	.47	243.95	5099.13	-38.55	43.74	-38.55	58.30	131.39	.02
5200.00	.44	233.45	5199.13	-38.96	43.06	-38.96	58.07	132.13	.09
5300.00	.64	226.48	5299.13	-39.57	42.35	-39.57	57.96	133.06	.21
5400.00	.70	231.77	5399.12	-40.33	41.47	-40.33	57.85	134.21	.09
5500.00	.82	238.32	5499.11	-41.09	40.38	-41.09	57.61	135.50	.15
5600.00	.82	240.63	5599.10	-41.81	39.14	-41.81	57.28	136.89	.03
5700.00	.89	242.93	5699.09	-42.52	37.83	-42.52	56.91	138.34	.08
5800.00	.96	245.84	5799.08	-43.21	36.37	-43.21	56.48	139.91	.08
5900.00	.98	252.71	5899.06	-43.81	34.79	-43.81	55.95	141.54	.12
6000.00	1.03	258.94	5999.05	-44.24	33.09	-44.24	55.25	143.20	.12
6100.00	.97	245.80	6099.03	-44.76	31.44	-44.76	54.70	144.91	.24
6200.00	.96	243.49	6199.02	-45.48	29.92	-45.48	54.44	146.66	.04
6300.00	.90	234.12	6299.01	-46.31	28.53	-46.31	54.40	148.36	.16
6400.00	.90	235.04	6398.99	-47.22	27.25	-47.22	54.52	150.01	.01
6500.00	1.42	266.38	6498.97	-47.75	25.37	-47.75	54.07	152.02	.80
6600.00	1.44	265.85	6598.94	-47.92	22.88	-47.92	53.10	154.47	.02
6700.00	1.63	307.96	6698.91	-47.14	20.51	-47.14	51.40	156.49	1.12

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6800.00	1.61	306.17	6798.87	-45.43	18.25	-45.43	48.96	158.11	.05
6900.00	.40	312.39	6898.85	-44.37	16.86	-44.37	47.46	159.19	1.21
7000.00	.48	284.90	6998.85	-44.02	16.20	-44.02	46.91	159.80	.22
7100.00	.71	266.40	7098.84	-43.96	15.17	-43.96	46.50	160.95	.30
7200.00	.88	257.26	7198.83	-44.16	13.81	-44.16	46.27	162.64	.21
7300.00	1.31	246.91	7298.82	-44.78	12.01	-44.78	46.36	164.99	.47
7400.00	1.13	242.20	7398.79	-45.69	10.08	-45.69	46.79	167.56	.21
7500.00	.56	234.09	7498.78	-46.44	8.81	-46.44	47.26	169.25	.58
7600.00	.58	225.22	7598.78	-47.08	8.06	-47.08	47.76	170.29	.09
7700.00	.86	192.04	7698.77	-48.17	7.54	-48.17	48.76	171.10	.49
7800.00	1.18	186.24	7798.75	-49.93	7.28	-49.93	50.45	171.71	.34
7900.00	1.23	220.29	7898.73	-51.77	6.47	-51.77	52.17	172.88	.71
8000.00	1.09	263.25	7998.71	-52.70	4.83	-52.70	52.92	174.76	.86
8100.00	1.70	321.77	8098.69	-51.65	2.97	-51.65	51.73	176.71	1.46
8200.00	1.20	326.83	8198.66	-49.60	1.48	-49.60	49.63	178.29	.52
8300.00	.90	354.66	8298.64	-47.95	.83	-47.95	47.95	179.01	.58
8400.00	.85	358.97	8398.63	-46.42	.75	-46.42	46.43	179.08	.08
8500.00	.91	352.34	8498.62	-44.89	.63	-44.89	44.90	179.20	.12
8600.00	.74	346.86	8598.61	-43.48	.37	-43.48	43.48	179.51	.19
8700.00	.52	346.16	8698.60	-42.41	.12	-42.41	42.41	179.84	.22
8800.00	.35	357.43	8798.60	-41.66	.00	-41.66	41.66	180.01	.19
8900.00	.34	78.43	8898.60	-41.30	.27	-41.30	41.30	179.62	.45
9000.00	.53	65.02	8998.59	-41.04	.98	-41.04	41.06	178.63	.21
9100.00	.83	60.94	9098.59	-40.50	2.04	-40.50	40.55	177.12	.30
9200.00	.81	68.78	9198.58	-39.89	3.33	-39.89	40.03	175.23	.11
9300.00	1.03	101.08	9298.56	-39.81	4.87	-39.81	40.10	173.03	.55
9400.00	1.24	89.70	9398.54	-39.97	6.83	-39.97	40.55	170.30	.31
9500.00	1.32	80.54	9498.52	-39.78	9.05	-39.78	40.79	167.18	.22
9600.00	1.40	71.10	9598.49	-39.19	11.34	-39.19	40.80	163.86	.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
Last Survey Depth Recorded									
9688.00	.50	77.23	9686.48	-38.76	12.73	-38.76	40.80	161.81	1.03