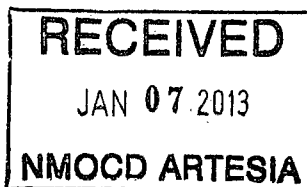




PHOENIX
TECHNOLOGY SERVICES

December 27, 2012

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240



HOBBS OCD

JAN 02 2013

RECEIVED

Dear District 1 - Hobbs

Re: Bopco, LP
PLU Phantom Banks 22-25-30 USA 1H
Eddy Co., NM
API #30-015-40763 ←
Job No. 1211114

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 606018). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Spencer Brown	1H	173	13430	12/01/12	12/17/12	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Kelly Jo Walter

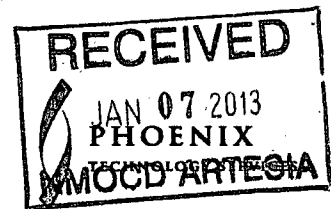
Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 9179

NEVIS ENERGY SERVICES INC. SURVEY DATA CERTIFICATION

HOBBS OCD

JAN 02 2013



RECEIVED

PHOENIX JOB NUMBER 1211114

OPERATOR Bopco

WELL NAME PLU Phantom Banks 22-25-30 USA 1H COUNTY & STATE

Eddy Co., NM

API WELL NUMBER 3001540763

PROPOSED DIRECTION 179.56

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
ft	ft	0	0	0	0	Surface

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
1-Dec-12	173 ft	1.7	123

SURVEY INSTRUMENT

TYPE

Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
17-Dec-12	13,430 ft	87.5	179.4

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

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
17-Dec-12	13,482 ft	87.5	179.4

Spencer Brown

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.3
DECLINATION OR GRID	Grid

12/18/2012

TODAY'S DATE

MWD SUPERVISOR 1

Spencer Brown

DIRECTIONAL DRILLER 1

Brady Welch

MWD SUPERVISOR 2

Jia Lewis

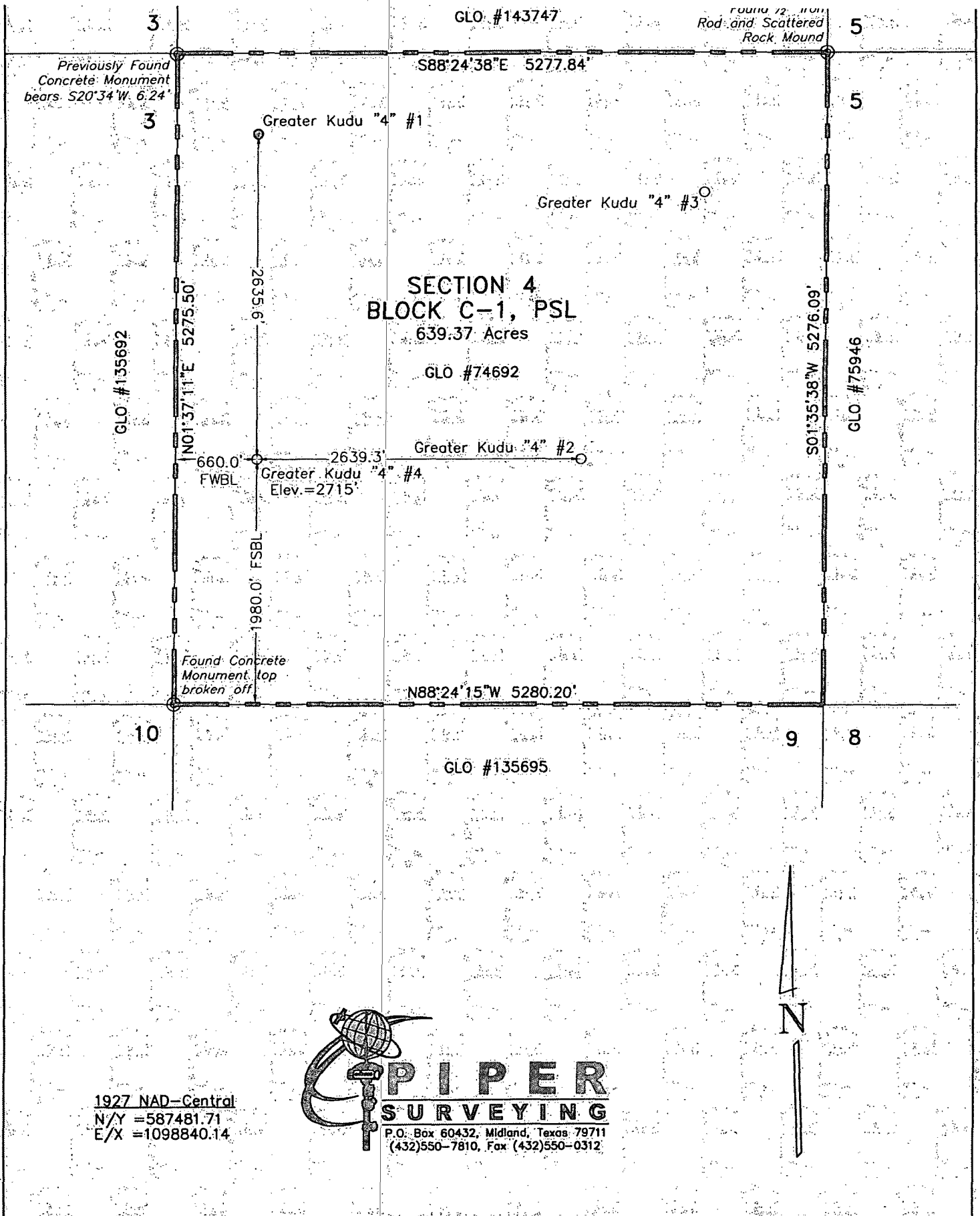
DIRECTIONAL DRILLER 2

Garrett Wright

1805 Brittmore Road

Houston, Texas 77043

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



OPERATOR:	GREATER KUDU "4" #4		FIELD:
Patriot Resources 110 W. Louisiana Suite 500 Midland, Texas 79701	DESCRIPTION:	All of Section 4, Block C-1, Public School Lands Reeves County, Texas	ACREAGE: 639.37 Acres
The well location shown on this plat represents an actual survey.			ELEVATION: 2715'
			DATE: 6/20/12
			SCALE: 1" = 1000'
			DRAWN BY:

HOBBS OCD
JAN 02 2013

RECEIVED

District I
1633 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 743-1243 Fax: (575) 743-9120
District III
1000 Rio Brazos Road, Artesia, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6179
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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code 96238		3 Pool Name CORRAL CANYON; BONE SPRING	
4 Property Code		5 Property Name PLU PHANTOM BANKS 22 25 30 USA			6 Well Number 1H
7 OGRID No. 147179		8 Operator Name CHESAPEAKE OPERATING, INC.			9 Elevation 3334

10 Surface Location

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
C	22	25S	30E		325'	NORTH	1980'	WEST	EDDY

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
N	22	25S	30E		330'	SOUTH	1980'	WEST	EDDY

12 Dedicated Acres 160	13 Joint or Infill	14 Consolidation Code	15 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.

PROJECTED FIRST PERFS 330' FNL & 1980' FWL Producing Area 162.41 ACRES 1980' 325' 330'	PLU PHANTOM BANKS 22 25 30 USA NO. 1H WELL X= 643,222 IAD 27 Y= 409,442 LAT. 32.122077 LONG. 103.870708 X= 684,407 IAD 83 Y= 408,800 LAT. 32.122202 LONG. 103.871189 ELEVATION 3334 IAD 83	16 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 information did not come from a working interest or leasehold 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, and that I am not a party to such a contract or pooling order. Signature: <i>Bryan Arrant</i> Date: 06/25/2012 Printed Name: Bryan Arrant E-mail Address: bryan.arrant@chk.com
	PROPOSED BOTTOM HOLE LOCATION X= 643,257 IAD 27 Y= 403,770 LAT. 32.109236 LONG. 103.870658 X= 684,443 IAD 83 Y= 403,828 LAT. 32.109360 LONG. 103.871139	17 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of a duly licensed surveyor made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: June 25, 2012 Signature and Seal of Professional Surveyor: <i>[Signature]</i> Certificate Number: 15078



HOBBS OCD

JAN 02 2013

RECEIVED

Bopco L P

Eddy County NM, (NAD 83)

PLU Phantom Banks 22-25-30 USA 1H (CVX)

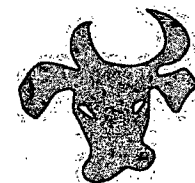
Job # 1211114

Rig: Latshaw 14

Survey: Phoenix MWD Surveys

Bopco LP Survey Report

18 December, 2012





Bopco LP Survey Report



Company:	Bopco LP	Local Co-ordinate Reference:	Well Job # 1211114
Project:	Eddy County NM, (NAD 83)	TVD Reference:	WELL @ 3351.00usft (Latshaw 14)
Site:	PLU/Phantom Banks 22-25-30 USA 1H (CVX)	MD Reference:	WELL @ 3351.00usft (Latshaw 14)
Well:	Job # 1211114	North Reference:	Grid
Wellbore:	Rig: Latshaw 14	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Latshaw 14 Surveys	Database:	Compass5000

Project	Eddy County NM, (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	PLU/Phantom Banks 22-25-30 USA 1H (CVX)		
Site Position:		Northing:	408,500.00 usft
From:	Map	Easting:	684,407.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 19.9277 N
		Longitude:	103° 52' 16.2813 W
		Grid Convergence:	0.25 °

Well		Job # 1211114				
Well Position	+N/-S	0.00 usft	Northing:	408,500.00 usft	Latitude:	32° 7' 19.9277 N
	+E/-W	0.00 usft	Easting:	684,407.00 usft	Longitude:	103° 52' 16.2813 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	17.00 usft	Ground Level:	3,334.00 usft	

Wellbore	Rig: Latshaw 14				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	11/15/12	7.54	60.01	48,381

Design		Rig: Latshaw, 14 Surveys		
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	179.56

Survey Program	Date	12/18/12		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
173.00	13,482.00	Phoenix MWD Surveys (Rig: Latshaw 14)	MWD	MWD - Standard



Bopco LP Survey Report



Company:	Bopco LP	Local Co-ordinate Reference:	Well Job # 1211114
Project:	Eddy County, NM. (NAD 83)	TVD Reference:	WELL @ 3351.00usft (Latshaw, 14)
Site:	PLU Phantom Banks 22-25-30 USA 1H (CVX)	MD Reference:	WELL @ 3351.00usft (Latshaw, 14)
Well:	Job # 1211114	North Reference:	Grd
Wellbore:	Rig: Latshaw, 14	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Latshaw, 14 Surveys	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	3,351.00	0.00	0.00	0.00	0.00	0.00	0.00	408,500.00	684,407.00
173.00	1.70	123.00	3,178.03	172.97	-1.40	2.15	1.41	0.98	408,498.60	684,409.15	
First Phoenix MWD Surveys											
361.00	1.10	116.70	2,990.08	360.92	-3.73	6.10	3.77	0.33	408,496.27	684,413.10	
546.00	0.50	138.30	2,805.10	545.90	-5.13	8.23	5.19	0.36	408,494.87	684,415.23	
730.00	0.40	276.10	2,621.10	729.90	-5.66	8.12	5.72	0.46	408,494.34	684,415.12	
952.00	0.60	275.70	2,399.11	951.89	-5.46	6.19	5.51	0.09	408,494.54	684,413.19	
1,142.00	0.60	219.60	2,209.12	1,141.88	-6.13	4.57	6.16	0.30	408,493.87	684,411.57	
1,361.00	1.10	202.80	1,990.15	1,360.85	-8.95	3.03	8.97	0.25	408,491.05	684,410.03	
1,552.00	1.10	210.50	1,799.18	1,551.82	-12.22	1.38	12.23	0.08	408,487.78	684,408.38	
1,742.00	1.80	179.70	1,609.24	1,741.76	-16.78	0.47	16.78	0.54	408,483.22	684,407.47	
1,932.00	2.20	167.10	1,419.35	1,931.65	-23.31	1.30	23.32	0.31	408,476.69	684,408.30	
2,122.00	1.10	159.00	1,229.44	2,121.56	-28.57	2.77	28.59	0.59	408,471.43	684,409.77	
2,311.00	0.40	38.70	1,040.45	2,310.55	-29.75	3.83	29.78	0.71	408,470.25	684,410.83	
2,501.00	1.20	18.80	850.47	2,500.53	-27.35	4.89	27.39	0.44	408,472.65	684,411.89	
2,691.00	1.50	19.50	660.52	2,690.48	-23.12	6.36	23.17	0.16	408,476.88	684,413.36	
2,881.00	1.70	25.00	470.59	2,880.41	-18.22	8.38	18.29	0.13	408,481.78	684,415.38	
3,071.00	1.30	24.00	280.66	3,070.34	-13.70	10.45	13.78	0.21	408,486.30	684,417.45	
3,261.00	1.50	38.10	90.72	3,260.28	-9.77	12.86	9.87	0.21	408,490.23	684,419.86	
3,450.00	1.50	70.80	-98.22	3,449.22	-7.01	16.72	7.14	0.45	408,492.99	684,423.72	
3,640.00	2.40	119.40	-288.12	3,639.12	-8.15	22.54	8.32	0.95	408,491.85	684,429.54	
3,829.00	2.30	129.20	-476.96	3,827.96	-12.49	28.93	12.71	0.22	408,487.51	684,435.93	
4,016.00	0.70	122.60	-663.89	4,014.89	-15.48	32.80	15.73	0.86	408,484.52	684,439.80	
4,206.00	0.60	110.60	-853.88	4,204.88	-16.45	34.71	16.72	0.09	408,483.55	684,441.71	
4,396.00	0.40	65.90	-1,043.88	4,394.88	-16.53	36.24	16.81	0.22	408,483.47	684,443.24	
4,586.00	0.60	86.10	-1,233.87	4,584.87	-16.19	37.84	16.48	0.14	408,483.81	684,444.84	
4,776.00	0.50	125.00	-1,423.86	4,774.86	-16.60	39.51	16.90	0.20	408,483.40	684,446.51	



Bopco LP Survey Report



Company: Bopco L.P.
Project: Eddy County NM, (NAD 83)
Site: PLU Phantom Banks 22-25-30 USA 1H (CVX)
Well: Job # 1211114
Wellbore: Rig: Latshaw 14
Design: Rig: Latshaw 14 Surveys

Local Co-ordinate Reference: Well Job # 1211114
TVD Reference: WELL @ 3351.00usft (Latshaw 14)
MD Reference: WELL @ 3351.00usft (Latshaw 14)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
4,965.00	0.40	157.90	-1,612.85	4,963.85	-17.68	40.43	17.99	0.14	408,482.32	684,447.43	
5,156.00	0.20	177.10	-1,803.85	5,154.85	-18.64	40.70	18.95	0.12	408,481.36	684,447.70	
5,346.00	0.30	274.90	-1,993.85	5,344.85	-18.92	40.22	19.23	0.20	408,481.08	684,447.22	
5,537.00	0.20	276.50	-2,184.85	5,535.85	-18.84	39.39	19.15	0.05	408,481.16	684,446.39	
5,726.00	0.10	82.40	-2,373.85	5,724.85	-18.78	39.23	19.09	0.16	408,481.22	684,446.23	
5,917.00	0.60	150.10	-2,564.84	5,915.84	-19.63	39.89	19.94	0.30	408,480.37	684,446.89	
6,107.00	0.70	165.90	-2,754.83	6,105.83	-21.62	40.67	21.93	0.11	408,478.38	684,447.67	
6,296.00	0.80	192.70	-2,943.82	6,294.82	-24.02	40.66	24.34	0.19	408,475.98	684,447.66	
6,486.00	1.20	171.70	-3,133.79	6,484.79	-27.29	40.66	27.60	0.28	408,472.71	684,447.66	
6,676.00	1.00	187.60	-3,323.75	6,674.75	-30.90	40.73	31.21	0.19	408,469.10	684,447.73	
6,866.00	1.30	177.10	-3,513.72	6,864.72	-34.70	40.62	35.01	0.19	408,465.30	684,447.62	
7,056.00	1.20	176.80	-3,703.67	7,054.67	-38.83	40.84	39.15	0.05	408,461.17	684,447.84	
7,247.00	1.50	171.90	-3,894.62	7,245.62	-43.31	41.30	43.62	0.17	408,456.69	684,448.30	
7,438.00	0.70	199.00	-4,085.58	7,436.58	-46.88	41.27	47.20	0.49	408,453.12	684,448.27	
7,628.00	0.90	200.80	-4,275.56	7,626.56	-49.38	40.37	49.68	0.11	408,450.62	684,447.37	
7,818.00	1.30	246.50	-4,465.53	7,816.53	-51.63	37.86	51.92	0.49	408,448.37	684,444.86	
8,008.00	1.30	286.40	-4,655.49	8,006.49	-51.88	33.81	52.14	0.47	408,448.12	684,440.81	
8,199.00	1.00	289.50	-4,846.45	8,197.45	-50.71	30.17	50.94	0.16	408,449.29	684,437.17	
8,389.00	2.50	282.10	-5,036.35	8,387.35	-49.29	24.55	49.48	0.80	408,450.71	684,431.55	
8,530.00	1.10	323.90	-5,177.29	8,528.29	-47.55	20.75	47.71	1.30	408,452.45	684,427.75	
8,595.00	1.80	196.80	-5,242.27	8,593.27	-48.03	20.08	48.18	4.02	408,451.97	684,427.08	
8,627.00	6.90	187.60	-5,274.17	8,625.17	-50.41	19.68	50.56	16.03	408,449.59	684,426.68	
8,658.00	11.30	184.10	-5,304.77	8,655.77	-55.29	19.22	55.44	14.30	408,444.71	684,426.22	
8,690.00	16.10	179.20	-5,335.86	8,686.86	-62.86	19.06	63.00	15.42	408,437.14	684,426.06	
8,722.00	21.60	182.90	-5,366.13	8,717.13	-73.19	18.82	73.33	17.58	408,426.81	684,425.82	
8,753.00	25.30	184.40	-5,394.56	8,745.56	-85.50	18.02	85.63	12.09	408,414.50	684,425.02	
8,785.00	27.40	186.40	-5,423.24	8,774.24	-99.63	16.68	99.76	7.12	408,400.37	684,423.68	



Bopco LP Survey Report



Company:	Bopco LP	Local Co-ordinate Reference:	Well Job # 1211114
Project:	Eddy County, NM. (NAD 83)	TVD Reference:	WELL @ 3351.00usft (Latshaw, 14)
Site:	PLU Phantom Banks 22-25-30 USA 1H (CVX)	MD Reference:	WELL @ 3351.00usft (Latshaw, 14)
Well:	Job # 1211114	North Reference:	Grid
Wellbore:	Rig: Latshaw, 14	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Latshaw, 14 Surveys	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,817.00	31.00	185.60	-5,451.17	8,802.17	-115.16	15.05	115.27	11.32	408,384.84	684,422.05	
8,849.00	35.00	184.20	-5,478.00	8,829.00	-132.52	13.58	132.62	12.72	408,367.48	684,420.58	
8,881.00	37.60	179.20	-5,503.79	8,854.79	-151.44	13.04	151.53	12.31	408,348.56	684,420.04	
8,912.00	40.00	179.10	-5,527.95	8,878.95	-170.86	13.33	170.96	7.74	408,329.14	684,420.33	
8,944.00	42.30	176.90	-5,552.05	8,903.05	-191.90	14.07	192.00	8.49	408,308.10	684,421.07	
8,975.00	44.20	176.40	-5,574.62	8,925.62	-213.10	15.32	213.21	6.23	408,286.90	684,422.32	
9,007.00	45.90	177.70	-5,597.23	8,948.23	-235.72	16.48	235.84	6.04	408,264.28	684,423.48	
9,039.00	50.50	179.90	-5,618.56	8,969.56	-259.56	16.96	259.68	15.26	408,240.44	684,423.96	
9,070.00	52.80	181.20	-5,637.79	8,988.79	-283.87	16.72	283.99	8.12	408,216.13	684,423.72	
9,101.00	55.10	181.00	-5,656.03	9,007.03	-308.92	16.24	309.04	7.44	408,191.08	684,423.24	
9,133.00	57.80	180.50	-5,673.72	9,024.72	-335.59	15.89	335.70	8.54	408,164.41	684,422.89	
9,165.00	60.40	180.10	-5,690.15	9,041.15	-363.04	15.75	363.15	8.20	408,136.96	684,422.75	
9,197.00	64.00	178.90	-5,705.07	9,056.07	-391.34	16.00	391.45	11.73	408,108.66	684,423.00	
9,228.00	67.50	178.20	-5,717.80	9,068.80	-419.59	16.72	419.71	11.48	408,080.41	684,423.72	
9,260.00	71.30	176.90	-5,729.06	9,080.06	-449.51	18.01	449.64	12.47	408,050.49	684,425.01	
9,291.00	75.70	177.80	-5,737.86	9,088.86	-479.20	19.38	479.33	14.46	408,020.80	684,426.38	
9,323.00	79.50	178.70	-5,744.73	9,095.73	-510.43	20.33	510.57	12.19	407,989.57	684,427.33	
9,355.00	84.00	179.90	-5,749.32	9,100.32	-542.09	20.71	542.23	14.54	407,957.91	684,427.71	
9,450.00	90.10	179.10	-5,754.21	9,105.21	-636.91	21.54	637.06	6.48	407,863.09	684,428.54	
9,546.00	91.10	179.10	-5,753.20	9,104.20	-732.90	23.05	733.05	1.04	407,767.10	684,430.05	
9,641.00	91.40	179.00	-5,751.13	9,102.13	-827.86	24.63	828.02	0.33	407,672.14	684,431.63	
9,736.00	90.30	180.40	-5,749.72	9,100.72	-922.84	25.12	923.01	1.87	407,577.16	684,432.12	
9,831.00	90.80	181.30	-5,748.81	9,099.81	-1,017.83	23.71	1,017.98	1.08	407,482.17	684,430.71	
9,926.00	91.30	181.00	-5,747.07	9,098.07	-1,112.79	21.81	1,112.93	0.61	407,387.21	684,428.81	
10,021.00	91.00	181.00	-5,745.16	9,096.16	-1,207.76	20.15	1,207.88	0.32	407,292.24	684,427.15	
10,116.00	91.60	180.20	-5,743.01	9,094.01	-1,302.73	19.16	1,302.84	1.05	407,197.27	684,426.16	
10,211.00	90.70	179.50	-5,741.10	9,092.10	-1,397.71	19.40	1,397.81	1.20	407,102.29	684,426.40	



Bopco LP Survey Report



Company:	Bopco LP	Local Co-ordinate Reference:	Well Job # 1211114
Project:	Eddy County, NM (NAD 83)	TVD Reference:	WELL @ 3351.00usft (Latshaw, 14)
Site:	PLU Phantom Banks 22-25-30 USA 1H (CVX)	MD Reference:	WELL @ 3351.00usft (Latshaw, 14)
Well:	Job # 1211114	North Reference:	Grid
Wellbore:	Rig: Latshaw, 14	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Latshaw, 14 Surveys	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
10,306.00	89.50	179.30	-5,740.93	9,091.93	-1,492.70	20.40	1,492.81	1.28	407,007.30	684,427.40	
10,401.00	90.90	181.90	-5,740.60	9,091.60	-1,587.68	19.40	1,587.79	3.11	406,912.32	684,426.40	
10,496.00	91.30	182.50	-5,738.78	9,089.78	-1,682.60	15.76	1,682.67	0.76	406,817.40	684,422.76	
10,590.00	91.30	181.80	-5,736.65	9,087.65	-1,776.50	12.23	1,776.55	0.74	406,723.50	684,419.23	
10,685.00	91.60	182.30	-5,734.24	9,085.24	-1,871.41	8.84	1,871.43	0.61	406,628.59	684,415.84	
10,780.00	90.70	181.20	-5,732.34	9,083.34	-1,966.35	5.94	1,966.33	1.50	406,533.65	684,412.94	
10,876.00	89.90	180.00	-5,731.83	9,082.83	-2,062.34	4.93	2,062.32	1.50	406,437.66	684,411.93	
10,970.00	89.40	181.00	-5,732.41	9,083.41	-2,156.33	4.11	2,156.30	1.19	406,343.67	684,411.11	
11,065.00	89.40	181.40	-5,733.40	9,084.40	-2,251.31	2.12	2,251.25	0.42	406,248.69	684,409.12	
11,161.00	90.20	179.80	-5,733.74	9,084.74	-2,347.30	1.12	2,347.23	1.86	406,152.70	684,408.12	
11,255.00	90.50	179.70	-5,733.16	9,084.16	-2,441.29	1.53	2,441.23	0.34	406,058.71	684,408.53	
11,350.00	90.60	179.60	-5,732.25	9,083.25	-2,536.29	2.11	2,536.23	0.15	405,963.71	684,409.11	
11,446.00	91.00	179.50	-5,730.91	9,081.91	-2,632.27	2.86	2,632.22	0.43	405,867.73	684,409.86	
11,541.00	91.90	179.40	-5,728.51	9,079.51	-2,727.24	3.77	2,727.19	0.95	405,772.76	684,410.77	
11,636.00	90.00	178.90	-5,726.93	9,077.93	-2,822.21	5.18	2,822.17	2.07	405,677.79	684,412.18	
11,732.00	89.60	178.30	-5,727.27	9,078.27	-2,918.18	7.53	2,918.15	0.75	405,581.82	684,414.53	
11,827.00	90.10	177.90	-5,727.52	9,078.52	-3,013.13	10.68	3,013.12	0.67	405,486.87	684,417.68	
11,922.00	90.80	178.80	-5,726.77	9,077.77	-3,108.08	13.41	3,108.09	1.20	405,391.92	684,420.41	
12,017.00	89.50	178.90	-5,726.52	9,077.52	-3,203.06	15.32	3,203.08	1.37	405,296.94	684,422.32	
12,069.00	89.50	178.90	-5,726.97	9,077.97	-3,255.05	16.32	3,255.08	0.00	405,244.95	684,423.32	
12,112.00	88.80	179.40	-5,727.61	9,078.61	-3,298.04	16.95	3,298.07	2.00	405,201.96	684,423.95	
12,207.00	88.30	179.10	-5,730.02	9,081.02	-3,393.00	18.20	3,393.04	0.61	405,107.00	684,425.20	
12,302.00	89.80	178.20	-5,731.59	9,082.59	-3,487.96	20.43	3,488.01	1.84	405,012.04	684,427.43	
12,397.00	90.40	179.20	-5,731.43	9,082.43	-3,582.93	22.59	3,583.00	1.23	404,917.07	684,429.59	
12,493.00	91.30	179.30	-5,730.00	9,081.00	-3,678.91	23.85	3,678.99	0.94	404,821.09	684,430.85	
12,588.00	91.00	178.80	-5,728.09	9,079.09	-3,773.88	25.42	3,773.96	0.61	404,726.12	684,432.42	
12,683.00	91.40	179.80	-5,726.11	9,077.11	-3,868.85	26.58	3,868.94	1.13	404,631.15	684,433.58	



Bopco LP Survey Report



Company: Bopco LP
Project: Eddy County NM (NAD 83)
Site: PLU Phantom Banks 22-25-30 USA 1H (CVX)
Well: Job # 1211114
Wellbore: Rig: Latshaw 14
Design: Rig: Latshaw 14 Surveys

Local Co-ordinate Reference:
TVD Reference: WELL @ 3351.00usft (Latshaw 14)
MD Reference: WELL @ 3351.00usft (Latshaw 14)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
12,778.00	88.40	179.20	-5,726.27	9,077.27	-3,963.84	27.41	3,963.93	3.22	404,536.16	684,434.41
12,873.00	90.10	179.70	-5,727.51	9,078.51	-4,058.82	28.32	4,058.92	1.87	404,441.18	684,435.32
12,968.00	90.30	180.10	-5,727.18	9,078.18	-4,153.82	28.49	4,153.91	0.47	404,346.18	684,435.49
13,063.00	92.00	180.40	-5,725.28	9,076.28	-4,248.79	28.07	4,248.88	1.82	404,251.21	684,435.07
13,158.00	90.50	180.20	-5,723.20	9,074.20	-4,343.77	27.58	4,343.85	1.59	404,156.23	684,434.58
13,253.00	87.50	179.90	-5,724.86	9,075.86	-4,438.74	27.49	4,438.82	3.17	404,061.26	684,434.49
13,347.00	87.60	179.90	-5,728.88	9,079.88	-4,532.66	27.66	4,532.73	0.11	403,967.34	684,434.66
13,430.00	87.50	179.40	-5,732.43	9,083.43	-4,615.58	28.16	4,615.66	0.61	403,884.42	684,435.16
Last Phoenix MWD Surveys @ 13430' MD										
13,482.00	87.50	179.40	-5,734.70	9,085.70	-4,667.53	28.71	4,667.61	0.00	403,832.47	684,435.71
Projection to TD @ 13482' MD										

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
173.00	172.97	-1.40	2.15	First Phoenix MWD Surveys
13,430.00	9,083.43	-4,615.58	28.16	Last Phoenix MWD Surveys @ 13430' MD
13,482.00	9,085.70	-4,667.53	28.71	Projection to TD @ 13482' MD

Checked By: _____ Approved By: _____ Date: _____