



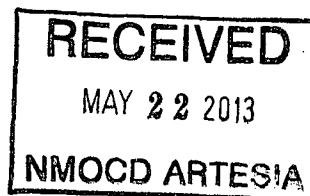
PHOENIX
TECHNOLOGY SERVICES

May 8, 2013

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

Dear District 2 – Artesia

Re: Bopco, LP
PLU Unit #331H
Eddy Co., NM
API #30-015-41039
Job No. 1310361



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	
Michael Layfield	331H	7043	14,388	04/20/2013	05/05/2013	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 000 9827

NEVIS ENERGY SERVICES INC. SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1310361

OPERATOR BOPCO LP

WELL NAME POKER LAKE UNIT #331H

COUNTY & STATE

EDDY, NM

API WELL NUMBER	30-015-41039
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PROPOSED DIRECTION	132.02
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TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
6,962 ft	. ft	1.24	168.48	-60.84	4.58	Gyrodata Directional

FIRST SURVEY DATE	FIRST SURVEY DEPTH		
DATE	DEPTH	INCLIN	AZIMUTH
20-Apr-13	7,043 ft	2.2	150.6

SURVEY INSTRUMENT TYPE
Phoenix P360 MWD

LAST SURVEY DATE	LAST SURVEY DEPTH		
DATE	DEPTH	INCLIN	AZIMUTH
5-May-13	14,388 ft	90.2	138.3

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

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH		
DATE	DEPTH	INCLIN	AZIMUTH
5-May-13	14,453 ft	90.2	138.3

Michael Layfield

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.26
DECLINATION OR GRID	Grid

5/5/2013

TODAY'S DATE

MWD SUPERVISOR 1

MIKE LAYFIELD

DIRECTIONAL DRILLER 1

CASEY HENDRIX

MWD SUPERVISOR 2

JOSH BRAUNIG

DIRECTIONAL DRILLER 2

TODD BOYLE

1805 Brittmore Road

Houston, Texas 77043

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

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

RECEIVED

MAY 22 2013

Form C-102
Revised July 18, 2010

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 47545	Pool Name NASH DRAW (DEL, BS, AV SAND)
Property Code 306402	Property Name POKER LAKE UNIT	Well Number 331H
OGRID No. 260737	Operator Name BOPCO, L.P.	Elevation 3448'

Surface Location

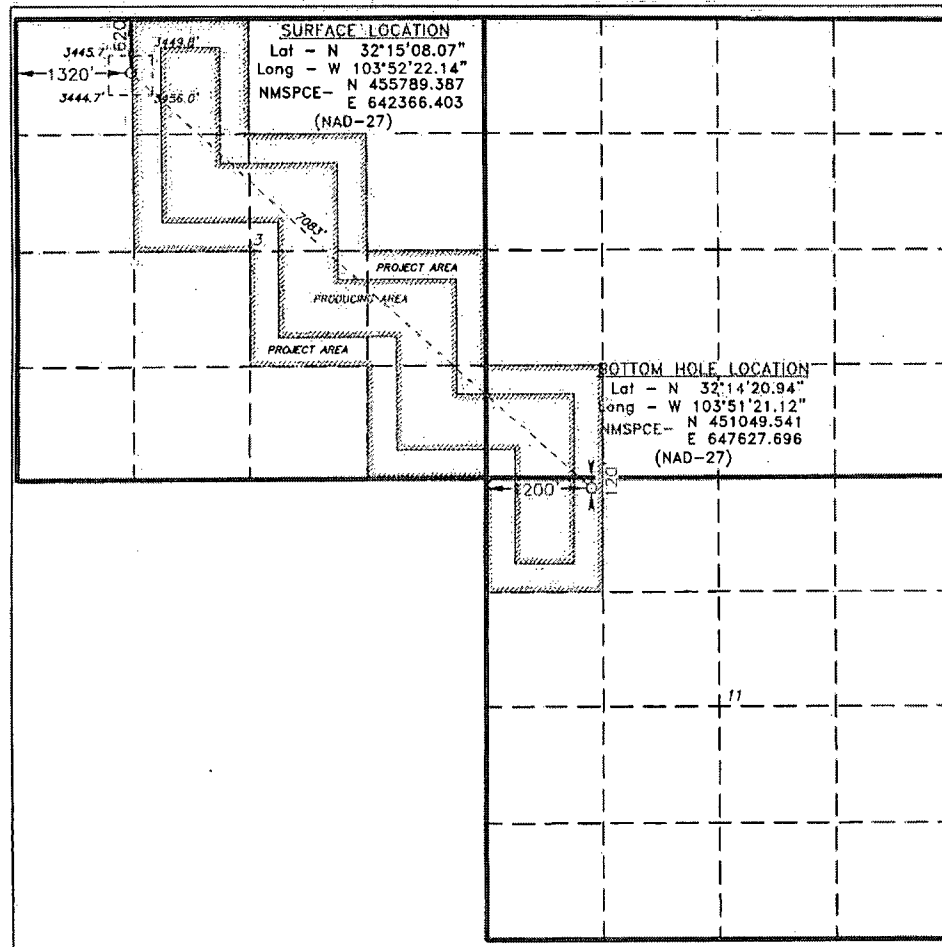
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	3	24 S	30 E		620	NORTH	1320	WEST	EDDY

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
D	11	24 S	30 E		120	NORTH	1200	WEST	EDDY

Dedicated Acres 320	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



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 undivided 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: *Jeremy Braden* Date: 10-10-12

Printed Name: Jeremy Braden
Email Address: jbraden@basspet.com

SURVEYOR CERTIFICATION

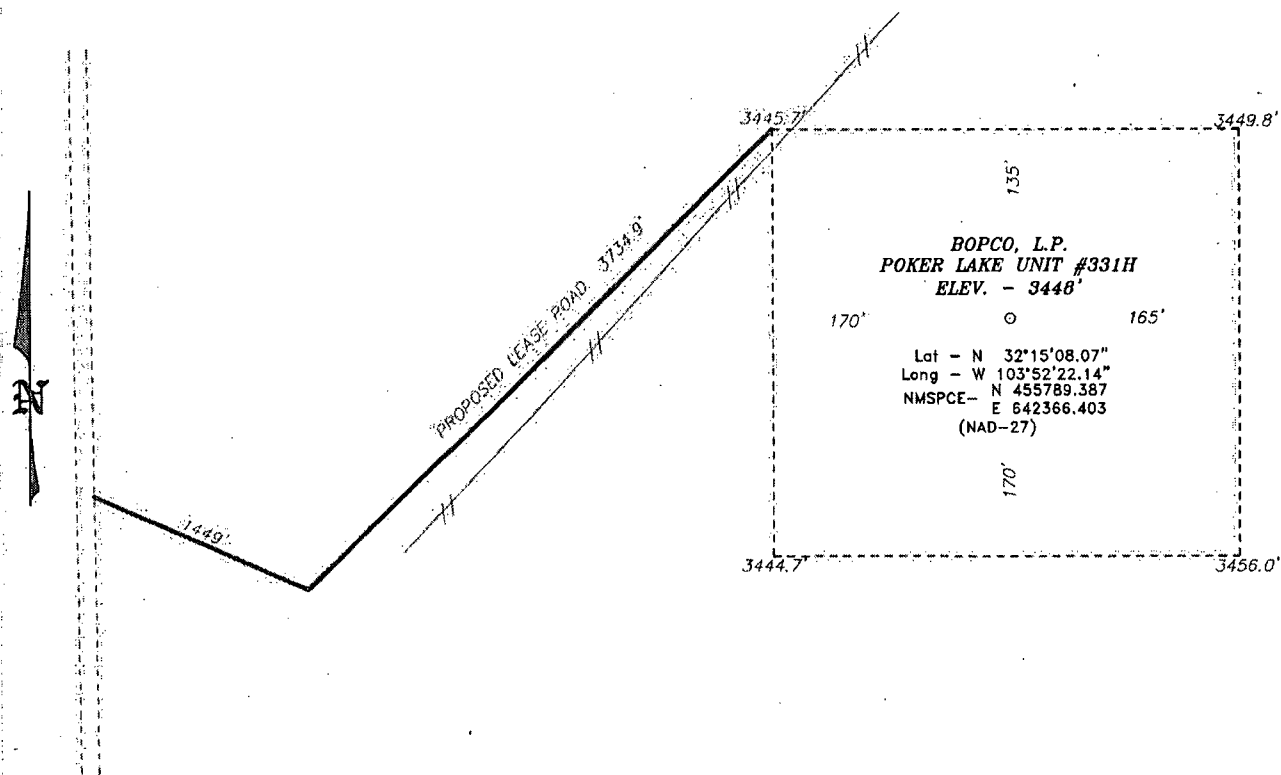
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.

Date Surveyed: May 11 2013
Signature & Seal of Professional Surveyor: *Gary L. Jones*
Professional Surveyor No. 11111

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 26011

SECTION 3, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, WELL PAD LAYOUT NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF HWY 128 AND MOBLEY RANCH GO SOUTH ON MOBLEY RANCH FOR 0.6 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTHERLY 5.9 MILES TO OLD LEASE ROAD SOUTH TO PROPOSED LEASE ROAD.



BOPCO, L.P.

REF: POKER LAKE UNIT #331H / WELL PAD TOPO

THE POKER LAKE UNIT #331H LOCATED 620'
FROM THE NORTH LINE AND 1320' FROM THE WEST LINE OF
SECTION 3, TOWNSHIP 24 SOUTH, RANGE 30 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 26011 Drawn By: J. GOAD

Date: 3-5-2012 Disk: JG - 26011WELL

Survey Date: 2-23-2012 Sheet 1 of 6 Sheets

TOPO MAP

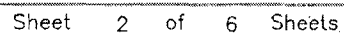
POKER LAKE UNIT #33111

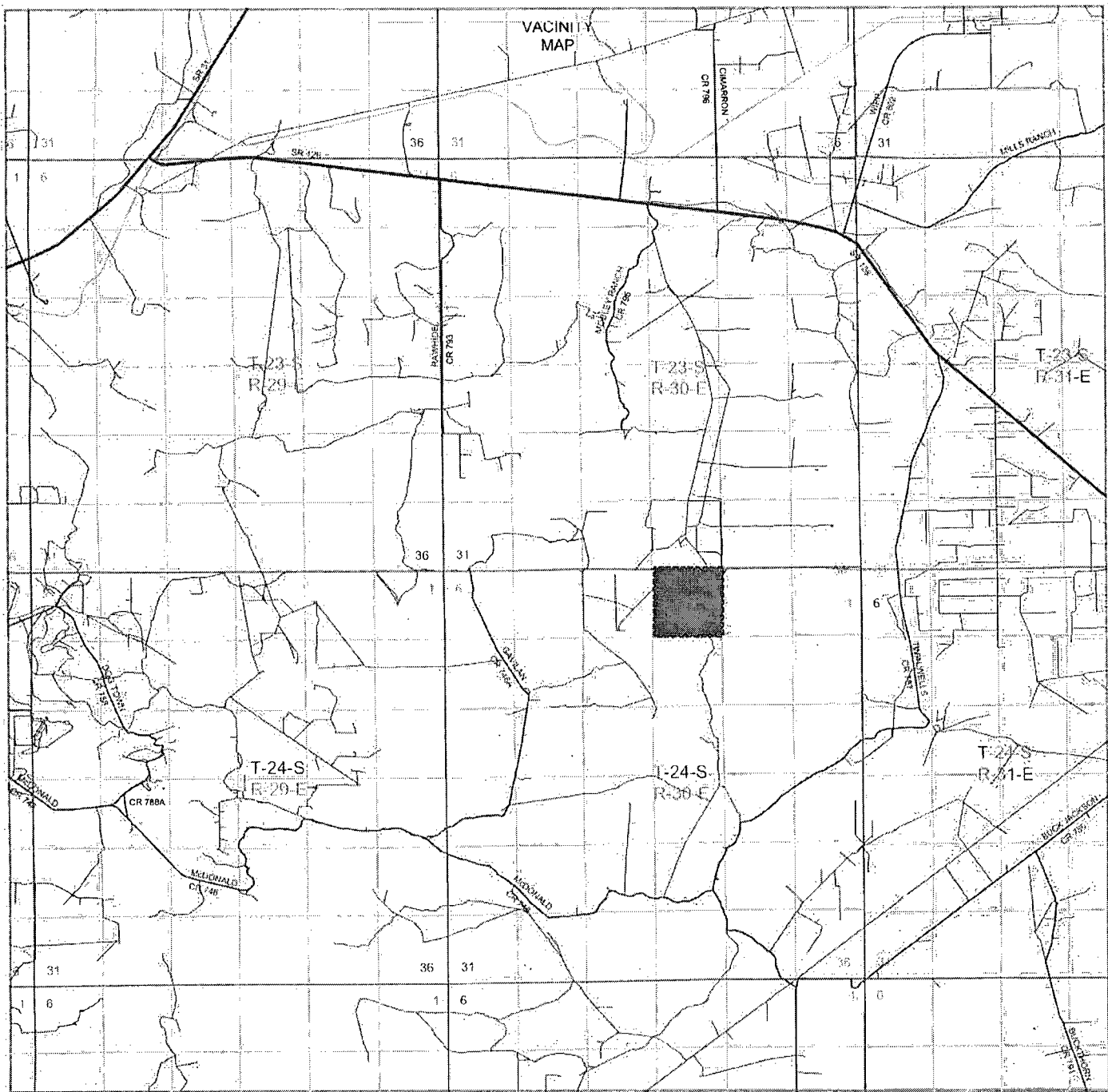
Centinela Mound

Gravel Pit

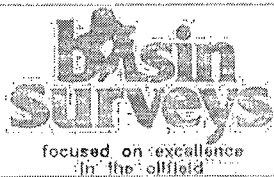
Gravel Pit

Section 3, Township 24 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.





POKER LAKE UNIT #331H
 Located 620' FNL and 1320' FWL
 Section 3, Township 24 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

W.O. Number: JG - 26011

Survey Date: 2-23-2012

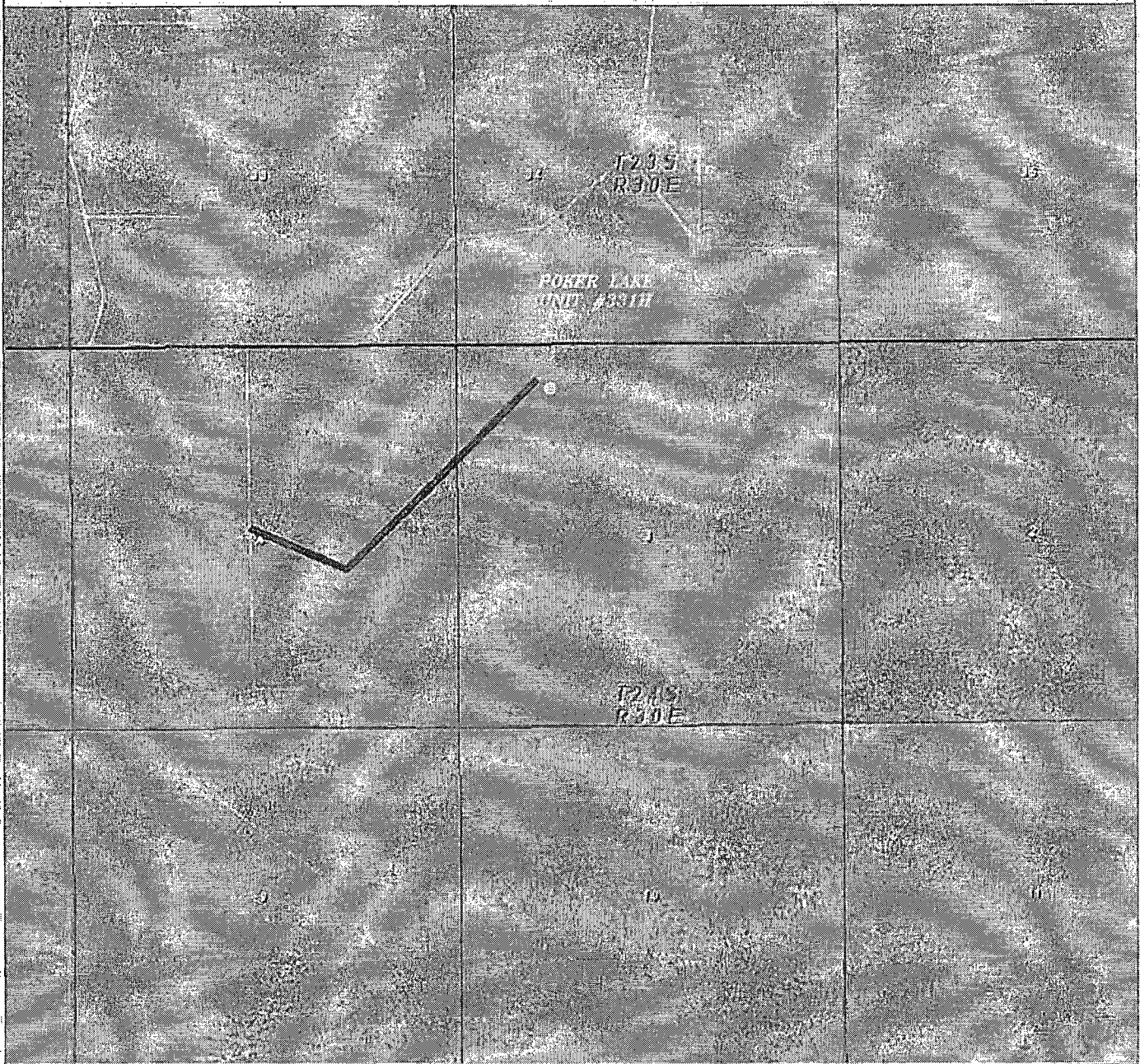
Scale: 1" = 2 Miles

Date: 3-5-2012

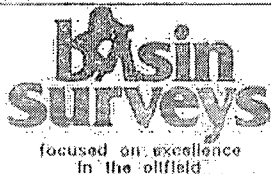
BOPCO, L.P.

Sheet 3 of 6. Sheets

AERIAL MAP



POKER LAKE UNIT #331H
 Located 620' FNL and 1320' FWL
 Section 3, Township 24 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786
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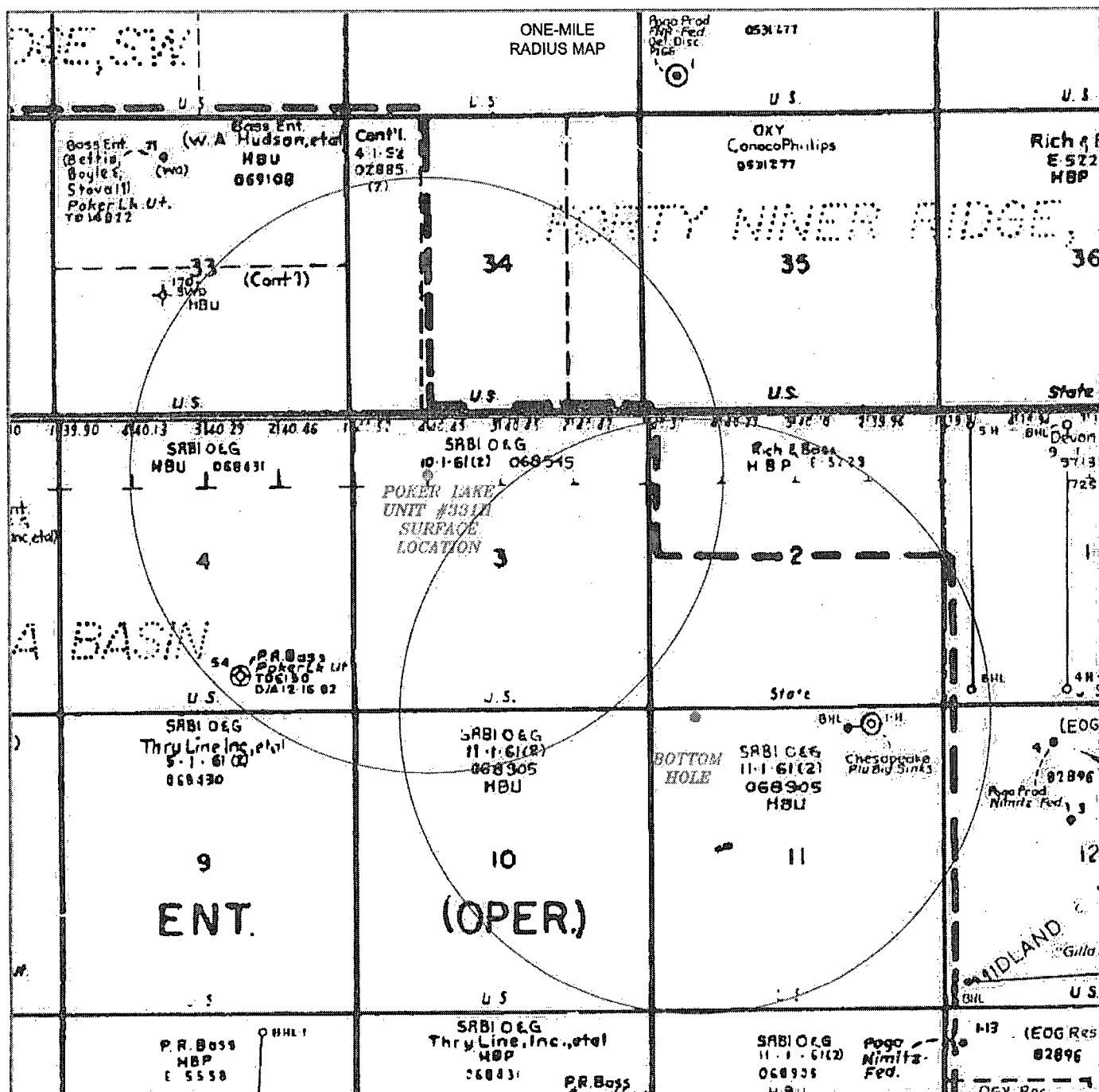
W.O. Number: JG - 26011

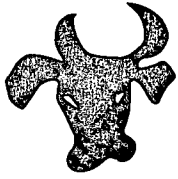
Scale: 1" = 2000'

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND

BOPCO, L.P.

Sheet 4 of 6 Sheets





Bopco L P

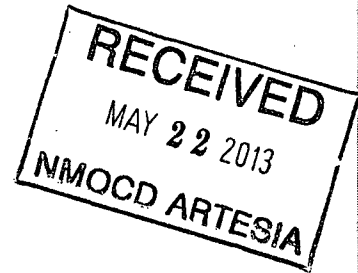
**Eddy County, NM (NAD27 NME)
Poker Lake Unit
#331H**

Wellbore #1 / Job #1310361

Survey: Phoenix MWD Surveys

Standard Survey Report

05 May, 2013



PHOENIX
TECHNOLOGY SERVICES



Phoenix Technology Services
Survey Report



Company:	Bopco L P	Local Co-ordinate Reference:	Well #331H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3467.00usft (McVay 5)
Site:	Poker Lake Unit	MD Reference:	KB @ 3467.00usft (McVay 5)
Well:	#331H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310361	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	Database:	GCR-DB v5000

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		
Site Position:		Northing:	435,896.68 usft
From:	Map	Easting:	646,110.12 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 51.053521 N
		Longitude:	103° 51' 39.561423 W
		Grid Convergence:	0.25 °

Well	#331H		
Well Position	+N-S	0.00 usft	Northing:
	+E-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 15' 8.073598 N
		Longitude:	103° 52' 22.137537 W
		Ground Level:	3,448.00 usft

Wellbore	Wellbore #1 / Job #1310361		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	03/25/13	(°)
			7.51
			Dip Angle
			(°)
			60.12
			Field Strength
			(nT)
			48,423

Design	Surveys (McVay 5)		
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
			(°)
			132.02

Survey Program	Date 05/05/13		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	6,961.51	Gyrodata Gyro Surveys (Wellbore #1 / Job	NS-GYRO-MS
7,044.00	14,453.00	Phoenix MWD Surveys (Wellbore #1 / Job	MWD
			Description
			North sensing gyrocompassing m/s
			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)
	6,961.51	1.24	168.48	6,960.37	-60.84	4.58	44.13	0.00	0.00	0.00
	Tie-on to Gyro Survey									
	7,043.00	2.20	150.60	7,041.82	-63.06	5.53	46.32	1.34	1.18	-21.94
	7,044.00	2.28	149.98	7,042.82	-63.10	5.55	46.36	8.60	8.25	-62.08
	Phoenix First MWD Survey									
	7,075.00	4.90	141.30	7,073.76	-64.67	6.69	48.25	8.60	8.44	-28.00
	7,106.00	8.40	138.80	7,104.54	-67.40	9.01	51.81	11.33	11.29	-8.06
	7,138.00	12.50	137.30	7,136.01	-71.71	12.89	57.58	12.84	12.81	-4.69
	7,170.00	16.90	135.60	7,166.95	-77.58	18.50	65.68	13.81	13.75	-5.31



Phoenix Technology Services

Survey Report



Company: Bopco L P
Project: Eddy County, NM (NAD27 NME)
Site: Poker Lake Unit
Well: #331H
Wellbore: Wellbore #1 / Job #1310361
Design: Surveys (McVay 5)

Local Co-ordinate Reference: Well #331H
TVD Reference: KB @ 3467.00usft (McVay 5)
MD Reference: KB @ 3467.00usft (McVay 5)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: GCR DB v5000

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)
7,201.00	20.00	133.40	7,196.35	-84.44	25.51	75.48	10.25	10.00	-7.10
7,233.00	22.50	131.30	7,226.18	-92.25	34.08	87.07	8.17	7.81	-6.56
7,264.00	24.60	130.20	7,254.59	-100.33	43.47	99.45	6.92	6.77	-3.55
7,295.00	26.20	129.80	7,282.60	-108.87	53.66	112.74	5.19	5.16	-1.29
7,327.00	27.50	129.60	7,311.14	-118.10	64.78	127.18	4.07	4.06	-0.63
7,358.00	29.30	129.50	7,338.41	-127.49	76.15	141.91	5.81	5.81	-0.32
7,390.00	30.80	129.40	7,366.11	-137.67	88.52	157.92	4.69	4.69	-0.31
7,421.00	32.40	129.70	7,392.51	-148.02	101.04	174.15	5.19	5.16	0.97
7,452.00	34.30	129.90	7,418.41	-158.93	114.13	191.18	6.14	6.13	0.65
7,483.00	36.70	130.40	7,443.64	-170.53	127.89	209.17	7.80	7.74	1.61
7,514.00	39.70	130.70	7,468.00	-183.00	142.46	228.33	9.70	9.68	0.97
7,547.00	42.90	130.00	7,492.79	-197.09	159.05	250.10	9.80	9.70	-2.12
7,577.00	45.50	129.30	7,514.30	-210.44	175.16	270.99	8.82	8.67	-2.33
7,609.00	48.20	129.00	7,536.18	-225.17	193.26	294.31	8.47	8.44	-0.94
7,640.00	51.80	128.70	7,556.10	-240.07	211.75	318.01	11.64	11.61	-0.97
7,671.00	55.60	127.60	7,574.45	-255.49	231.40	342.93	12.59	12.26	-3.55
7,702.00	58.60	126.60	7,591.29	-271.19	252.16	368.86	10.05	9.68	-3.23
7,732.00	61.50	127.00	7,606.26	-286.76	272.97	394.75	9.74	9.67	1.33
7,764.00	64.80	127.40	7,620.72	-304.02	295.71	423.19	10.37	10.31	1.25
7,795.00	66.90	127.70	7,633.40	-321.26	318.13	451.39	6.83	6.77	0.97
7,827.00	68.00	128.40	7,645.67	-339.47	341.40	480.87	3.99	3.44	2.19
7,858.00	68.50	128.00	7,657.16	-357.28	364.03	509.60	2.01	1.61	-1.29
7,889.00	68.40	127.80	7,668.54	-374.99	386.78	538.36	0.68	-0.32	-0.65
7,913.00	67.90	127.70	7,677.48	-388.63	404.40	560.57	2.12	-2.08	-0.42
8,014.00	71.70	127.80	7,712.34	-446.65	479.33	655.08	3.76	3.76	0.10
8,045.00	76.80	127.80	7,720.76	-464.93	502.90	684.83	16.45	16.45	0.00
8,075.00	81.90	127.00	7,726.30	-482.83	526.31	714.20	17.20	17.00	-2.67
8,106.00	86.90	126.40	7,729.32	-501.26	551.04	744.91	16.24	16.13	-1.94
8,137.00	89.50	129.10	7,730.30	-520.23	575.54	775.81	12.09	8.39	8.71
8,168.00	89.90	129.60	7,730.46	-539.88	599.51	806.77	2.07	1.29	1.61
8,262.00	87.70	127.90	7,732.43	-598.70	672.79	900.59	2.96	-2.34	-1.81
8,352.00	87.20	127.80	7,736.43	-653.87	743.79	990.26	0.57	-0.56	-0.11
8,444.00	91.00	130.90	7,737.88	-712.18	814.90	1,082.12	5.33	4.13	3.37
8,534.00	90.80	131.40	7,736.46	-771.39	882.66	1,172.10	0.60	-0.22	0.56
8,628.00	90.10	132.10	7,735.73	-833.98	952.79	1,266.10	1.05	-0.74	0.74
8,723.00	89.90	132.20	7,735.73	-897.73	1,023.22	1,361.09	0.24	-0.21	0.11
8,819.00	90.30	133.00	7,735.56	-962.71	1,093.88	1,457.09	0.93	0.42	0.83
8,915.00	90.20	133.90	7,735.14	-1,028.73	1,163.57	1,553.06	0.94	-0.10	0.94
9,011.00	90.00	134.90	7,734.97	-1,095.90	1,232.16	1,648.97	1.06	-0.21	1.04
9,106.00	89.50	134.80	7,735.39	-1,162.90	1,299.51	1,743.86	0.54	-0.53	-0.11
9,201.00	88.40	133.60	7,737.13	-1,229.12	1,367.61	1,838.77	1.71	-1.16	-1.26
9,296.00	87.30	133.30	7,740.69	-1,294.40	1,436.52	1,933.67	1.20	-1.16	-0.32
9,391.00	86.90	133.40	7,745.50	-1,359.53	1,505.52	2,028.52	0.43	-0.42	0.11



Phoenix Technology Services

Survey Report



Company:	Bopco L.P	Local Co-ordinate Reference:	Well #331H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3467.00usft (McVay 5)
Site:	Poker Lake Unit	MD Reference:	KB @ 3467.00usft (McVay 5)
Well:	#331H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310361	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	Database:	GCR DB v5000

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)	
9,486.00	86.80	132.20	7,750.72	-1,423.98	1,575.11	2,123.37	1.27	-0.11	-1.26	
9,581.00	87.70	131.10	7,755.28	-1,487.04	1,646.02	2,218.25	1.50	0.95	-1.16	
9,676.00	90.00	132.90	7,757.18	-1,550.59	1,716.59	2,313.23	3.07	2.42	1.89	
9,771.00	90.10	134.40	7,757.10	-1,616.16	1,785.33	2,408.18	1.58	0.11	1.58	
9,867.00	90.90	133.90	7,756.26	-1,683.03	1,854.21	2,504.11	0.98	0.83	-0.52	
9,962.00	90.20	132.90	7,755.35	-1,748.29	1,923.23	2,599.08	1.28	-0.74	-1.05	
10,057.00	90.10	132.00	7,755.10	-1,812.41	1,993.33	2,694.08	0.95	-0.11	-0.95	
10,152.00	89.40	129.30	7,755.52	-1,874.29	2,065.39	2,789.04	2.94	-0.74	-2.84	
10,248.00	92.40	129.20	7,754.01	-1,935.02	2,139.72	2,884.90	3.13	3.13	-0.10	
10,343.00	90.60	127.90	7,751.52	-1,994.20	2,213.98	2,979.69	2.34	-1.89	-1.37	
10,438.00	91.00	129.00	7,750.19	-2,053.27	2,288.38	3,074.49	1.23	0.42	1.16	
10,532.00	89.30	125.80	7,749.95	-2,110.35	2,363.04	3,168.17	3.85	-1.81	-3.40	
10,627.00	90.00	127.70	7,750.53	-2,167.19	2,439.15	3,262.77	2.13	0.74	2.00	
10,722.00	91.10	130.80	7,749.62	-2,227.28	2,512.71	3,357.64	3.46	1.16	3.26	
10,817.00	89.40	131.50	7,749.20	-2,289.79	2,584.24	3,452.62	1.94	-1.79	0.74	
10,912.00	89.80	135.60	7,749.87	-2,355.23	2,653.07	3,547.56	4.34	0.42	4.32	
11,008.00	89.60	137.80	7,750.37	-2,425.09	2,718.91	3,643.24	2.30	-0.21	2.29	
11,103.00	90.70	138.90	7,750.12	-2,496.07	2,782.04	3,737.65	1.64	1.16	1.16	
11,198.00	89.40	137.90	7,750.04	-2,567.11	2,845.11	3,832.06	1.73	-1.37	-1.05	
11,294.00	90.90	137.30	7,749.79	-2,638.00	2,909.84	3,927.60	1.68	1.56	-0.63	
11,389.00	88.30	132.60	7,750.45	-2,705.09	2,977.05	4,022.44	5.65	-2.74	-4.95	
11,484.00	88.30	132.90	7,753.27	-2,769.55	3,046.78	4,117.39	0.32	0.00	0.32	
11,579.00	87.90	134.20	7,756.42	-2,834.97	3,115.59	4,212.31	1.43	-0.42	1.37	
11,674.00	86.80	132.90	7,760.81	-2,900.35	3,184.37	4,307.17	1.79	-1.16	-1.37	
11,770.00	86.70	132.90	7,766.25	-2,965.59	3,254.58	4,403.00	0.10	-0.10	0.00	
11,864.00	87.20	131.40	7,771.25	-3,028.58	3,324.17	4,496.86	1.68	0.53	-1.60	
11,960.00	87.30	130.80	7,775.86	-3,091.62	3,396.43	4,592.74	0.63	0.10	-0.63	
12,053.00	88.20	130.30	7,779.51	-3,152.03	3,467.04	4,685.64	1.11	0.97	-0.54	
12,148.00	88.20	130.50	7,782.49	-3,213.57	3,539.35	4,780.55	0.21	0.00	0.21	
12,243.00	91.70	131.80	7,782.58	-3,276.07	3,610.87	4,875.52	3.93	3.68	1.37	
12,338.00	90.60	131.50	7,780.67	-3,339.19	3,681.84	4,970.50	1.20	-1.16	-0.32	
12,433.00	89.10	130.80	7,780.92	-3,401.70	3,753.37	5,065.49	1.74	-1.58	-0.74	
12,529.00	89.60	132.60	7,782.01	-3,465.56	3,825.04	5,161.48	1.95	0.52	1.88	
12,624.00	89.10	131.30	7,783.09	-3,529.06	3,895.69	5,256.47	1.47	-0.53	-1.37	
12,719.00	88.90	131.10	7,784.74	-3,591.63	3,967.16	5,351.44	0.30	-0.21	-0.21	
12,814.00	88.90	131.30	7,786.57	-3,654.19	4,038.62	5,446.42	0.21	0.00	0.21	
12,910.00	88.80	131.40	7,788.50	-3,717.60	4,110.67	5,542.39	0.15	-0.10	0.10	
13,004.00	88.70	131.50	7,790.55	-3,779.81	4,181.11	5,636.36	0.15	-0.11	0.11	
13,099.00	88.40	132.00	7,792.95	-3,843.05	4,251.97	5,731.33	0.61	-0.32	0.53	
13,194.00	88.00	132.90	7,795.93	-3,907.13	4,322.03	5,826.28	1.04	-0.42	0.95	
13,289.00	90.90	133.60	7,796.85	-3,972.22	4,391.21	5,921.24	3.14	3.05	0.74	
13,384.00	90.00	133.10	7,796.10	-4,037.43	4,460.29	6,016.21	1.08	-0.95	-0.53	
13,479.00	89.00	131.90	7,796.93	-4,101.60	4,530.33	6,111.20	1.64	-1.05	-1.26	
13,574.00	88.80	127.10	7,798.75	-4,162.00	4,603.60	6,206.07	5.06	-0.21	-5.05	



Phoenix Technology Services
Survey Report



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well #331H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3467.00usft (McVay 5)
Site:	Poker Lake Unit	MD Reference:	KB @ 3467.00usft (McVay 5)
Well:	#331H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310361	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	Database:	GCR DB v5000

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)
13,669.00	89.00	126.90	7,800.58	-4,219.16	-4,679.45	6,300.68	0.30	0.21	-0.21
13,764.00	89.70	123.60	7,801.66	-4,273.98	4,757.02	6,395.00	3.55	0.74	-3.47
13,859.00	93.50	126.70	7,799.00	-4,328.63	4,834.64	6,489.25	5.16	4.00	3.26
13,958.00	93.70	127.50	7,792.79	-4,388.23	4,913.45	6,587.69	0.83	0.20	0.81
14,053.00	93.30	130.10	7,786.99	-4,447.65	4,987.34	6,682.36	2.76	-0.42	2.74
14,148.00	90.70	132.10	7,783.67	-4,510.05	5,058.87	6,777.28	3.45	-2.74	2.11
14,243.00	89.10	134.60	7,783.84	-4,575.26	5,127.95	6,872.24	3.12	-1.68	2.63
14,338.00	89.00	137.60	7,785.41	-4,643.69	5,193.80	6,966.97	3.16	-0.11	3.16
14,388.00	90.20	138.30	7,785.76	-4,680.82	5,227.29	7,016.70	2.78	2.40	1.40
Phoenix Last MWD Survey									
14,453.00	90.20	138.30	7,785.53	-4,729.35	5,270.53	7,081.31	0.00	0.00	0.00
Projection to TD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,961.51	6,960.37	-60.84	4.58	Tie-on to Gyro Survey
7,044.00	7,042.82	-63.10	5.55	Phoenix First MWD Survey
14,388.00	7,785.76	-4,680.82	5,227.29	Phoenix Last MWD Survey
14,453.00	7,785.53	-4,729.35	5,270.53	Projection to TD

Checked By: _____ Approved By: _____ Date: _____