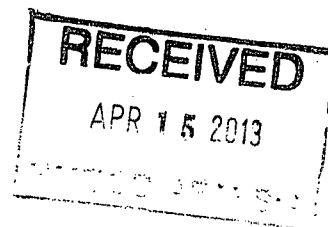
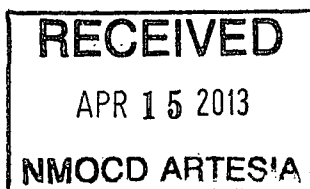




PHOENIX
TECHNOLOGY SERVICES

April 11, 2013

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



Dear District 2 – Artesia

Re: Bopco, LP
Poker Lake Unit #393H
Eddy Co., NM
API #30-015-40951
Job No. 1310191

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	
Josh Braunig	393	7,332	13,512	03/18/2013	04/02/2013	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 0001 4364 9582

NEVIS ENERGY SERVICES INC. SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1310191

OPERATOR Bopco L P

WELL NAME Poker Lake Unit #393H

COUNTY & STATE

Eddy County, NM

API WELL NUMBER	30-015-40951
-----------------	--------------

PROPOSED DIRECTION	135.01
--------------------	--------

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
7,308 ft	7,306.47 ft	1.19	233.24	37.85N	71.19W	GyroData Directional

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
18-Mar-13	7,332 ft	1.2	235.9

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
2-Apr-13	13,512 ft	89.9	134.8

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

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
2-Apr-13	13,572 ft	89.9	134.8

Josh Braunig

PRINT YOUR NAME ABOVE

Josh Braunig
SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.24
DECLINATION OR GRID	Grid

4/2/2013

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

RECEIVED

APR 15 2013

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 16, 2010

Submit one copy to appropriate
District Office

NMOC DARTESIA

CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 96047	Pool Name Poker Lake SW (Delaware)
Property Code 306402	Property Name POKER LAKE UNIT	Well Number 393H
OGRID No. 260737	Operator Name BOPCO, L.P.	Elevation 3495'

Surface Location

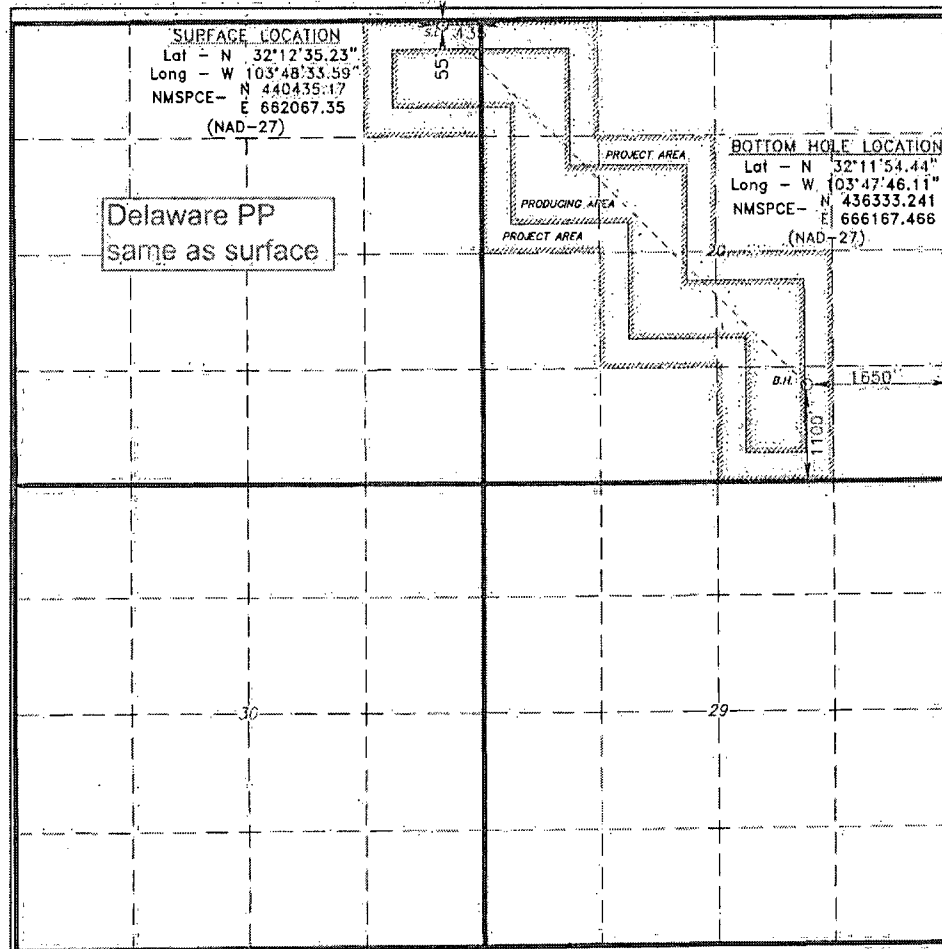
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	24 S	31 E		55	NORTH	435	EAST	EDDY

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
0	20	24 S	31 E		1100	SOUTH	1650	EAST	EDDY

Dedicated Acres 280	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 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: Jeremy Braden Date: 9-26-12

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

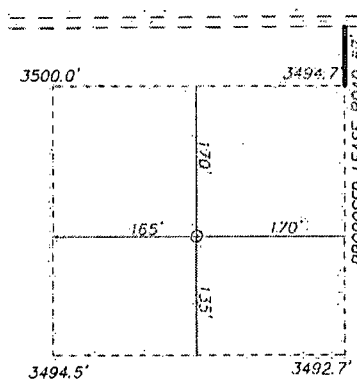
SURVEYOR CERTIFICATION

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: July 5, 2012
Signature of Professional Surveyor: [Signature]
Certificate No. Gary L. Jones 7977

BASIN SURVEYS 26960

SECTION 19, TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.
 EDDY COUNTY, WELL PAD LAYOUT NEW MEXICO.



BOPCO, L.P.
 POKER LAKE UNIT 393H
 ELEV. - 3495'

SURFACE LOCATION
 Lat - N 32°12'35.23"
 Long - W 103°48'33.59"
 NMSPCE- N 440435.17
 E 662067.35
 (NAD-27)

200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF ST 128 AND 786 BUCK
 JACKSON GO SOUTH ON BUCK JACKSON 5.5 MILES
 THEN NORTH ON LEASE ROAD 1.9 MILES THEN WEST
 ON LEASE ROAD 0.6 MILES TO BEGIN ROAD LATHE
 ON SOUTH.

BOPCO, L.P.

REF: POKER LAKE UNIT 393H / WELL PAD TOPO.

THE POKER LAKE UNIT 393H LOCATED 55'

FROM THE NORTH LINE AND 435' FROM THE EAST LINE OF

SECTION 19, TOWNSHIP 24 SOUTH, RANGE 31 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 26960

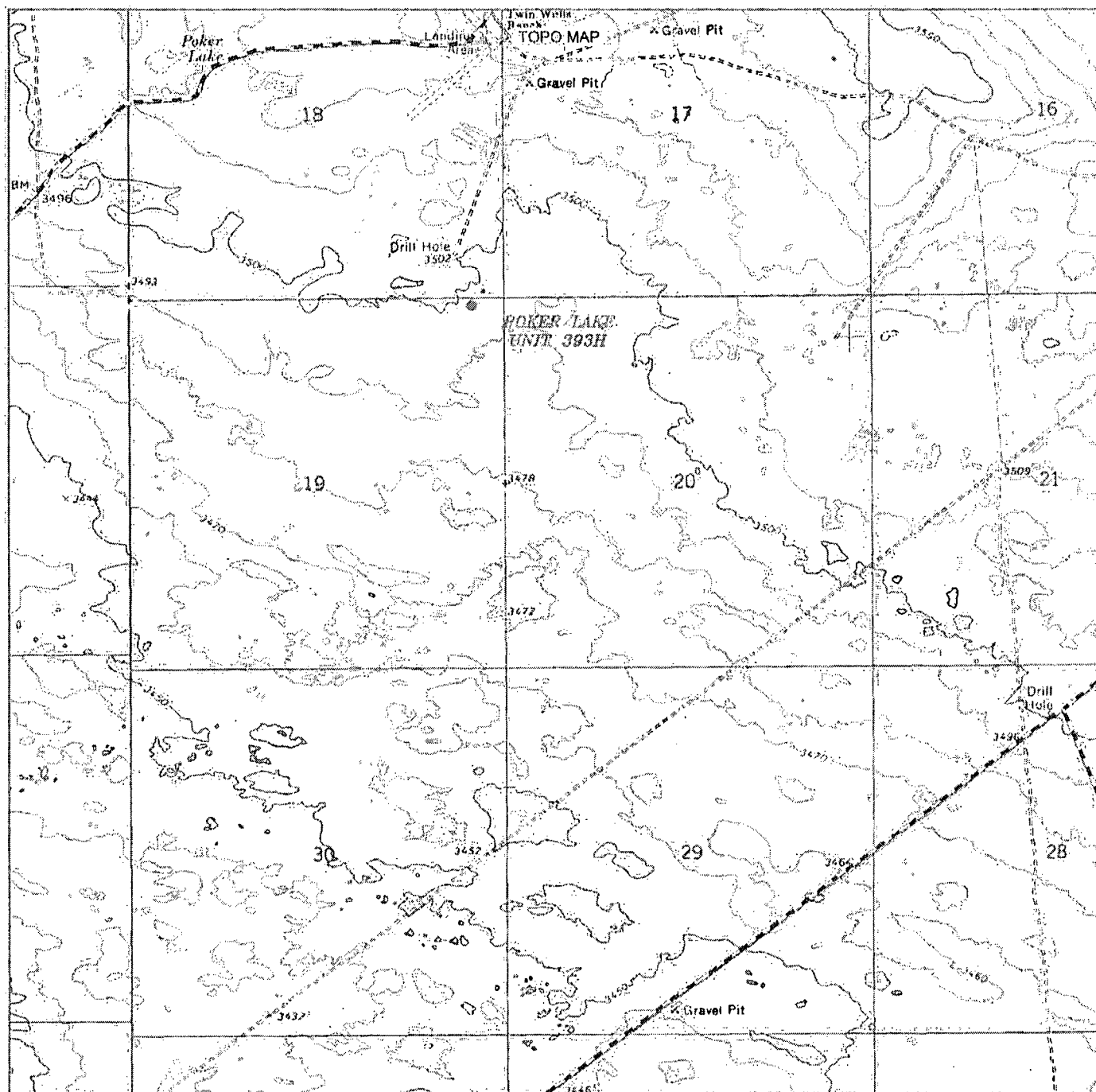
Drawn By: D. JONES

Date: 07-07-2012

Disk: DAJ 26960

Survey Date: 07-02-2012

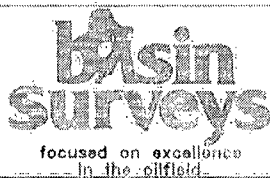
Sheet 1 of 6 Sheets



POKER LAKE UNIT 393H

Located 55' FNL and 435' FEL

Section 19, Township 24 South, Range 31 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: DAJ 26960

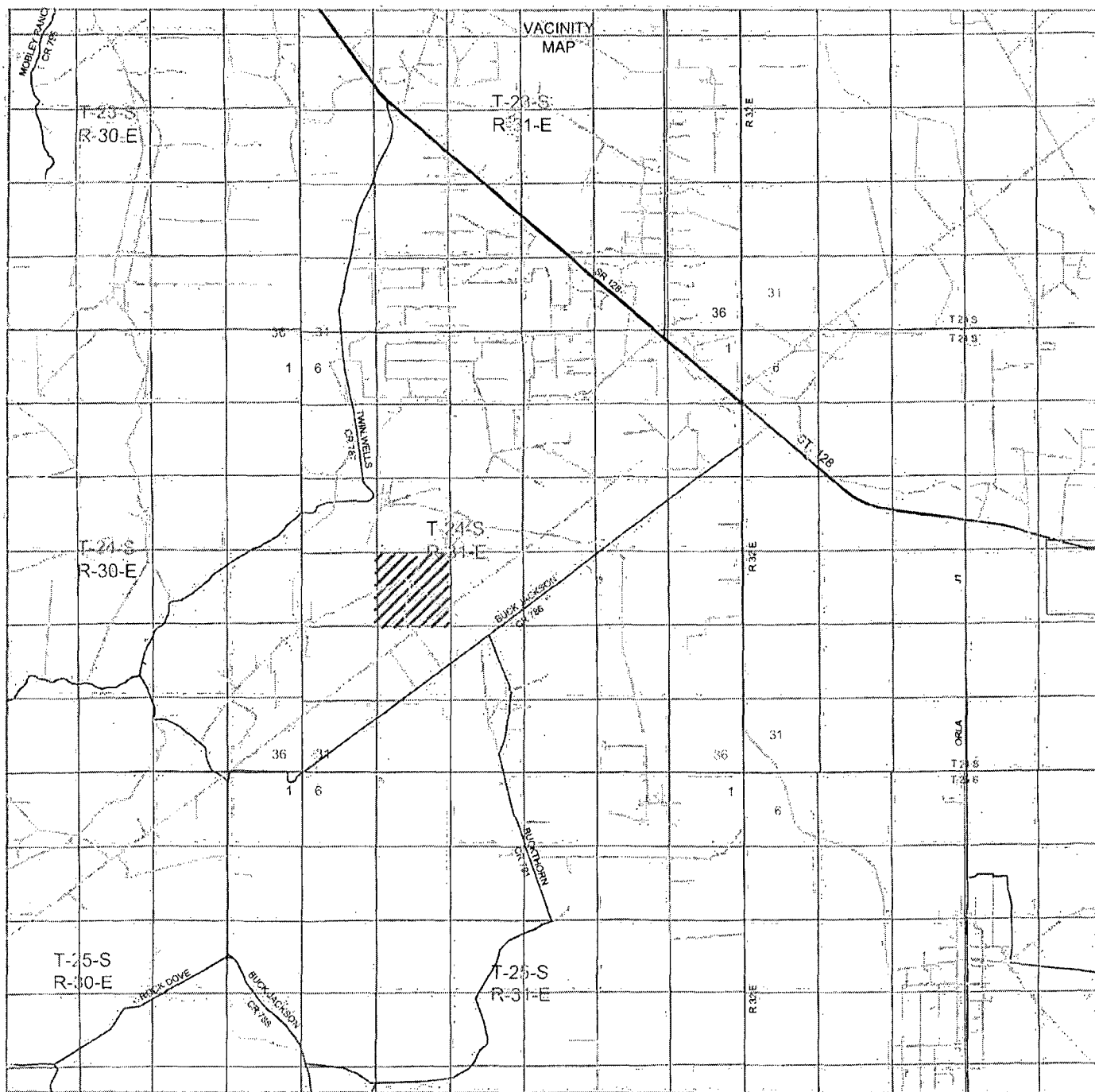
Survey Date: 07-02-2012

Scale: 1" = 2000'

Date: 07-07-2012

BOPCO, L.P.

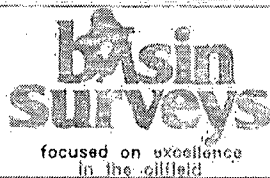
Sheet 2 of 6 Sheets



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W.O. Number: DAJ 26960

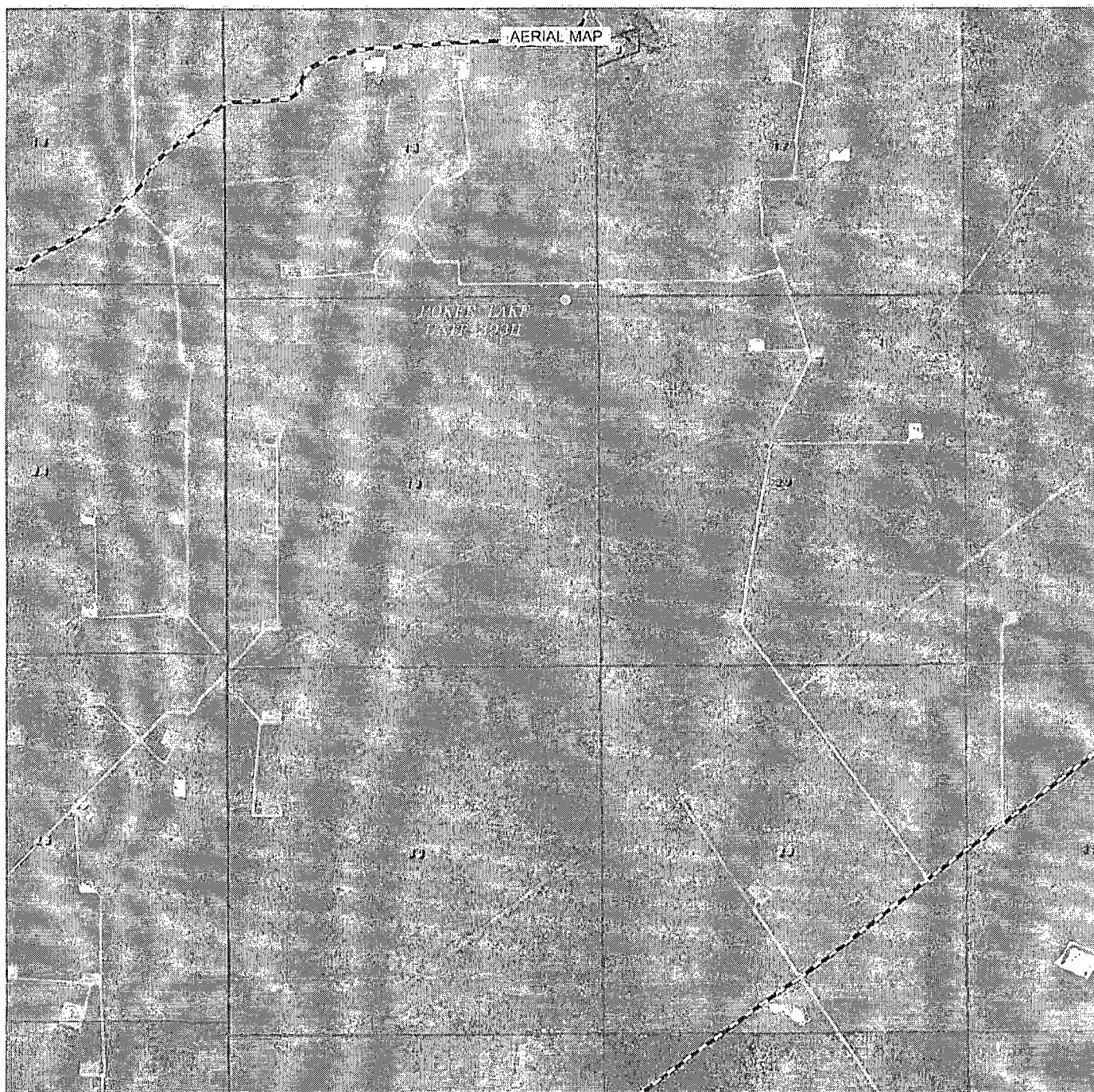
Survey Date: 07-02-2012

Scale: 1" = 2 Miles

Date: 07-07-2012

BOPCO, L.P.

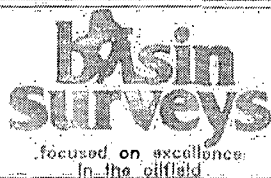
Sheet 3 of 6 Sheets



POKER LAKE UNIT 393H

Located 55' FNL and 435' FEL

Section 19, Township 24 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.



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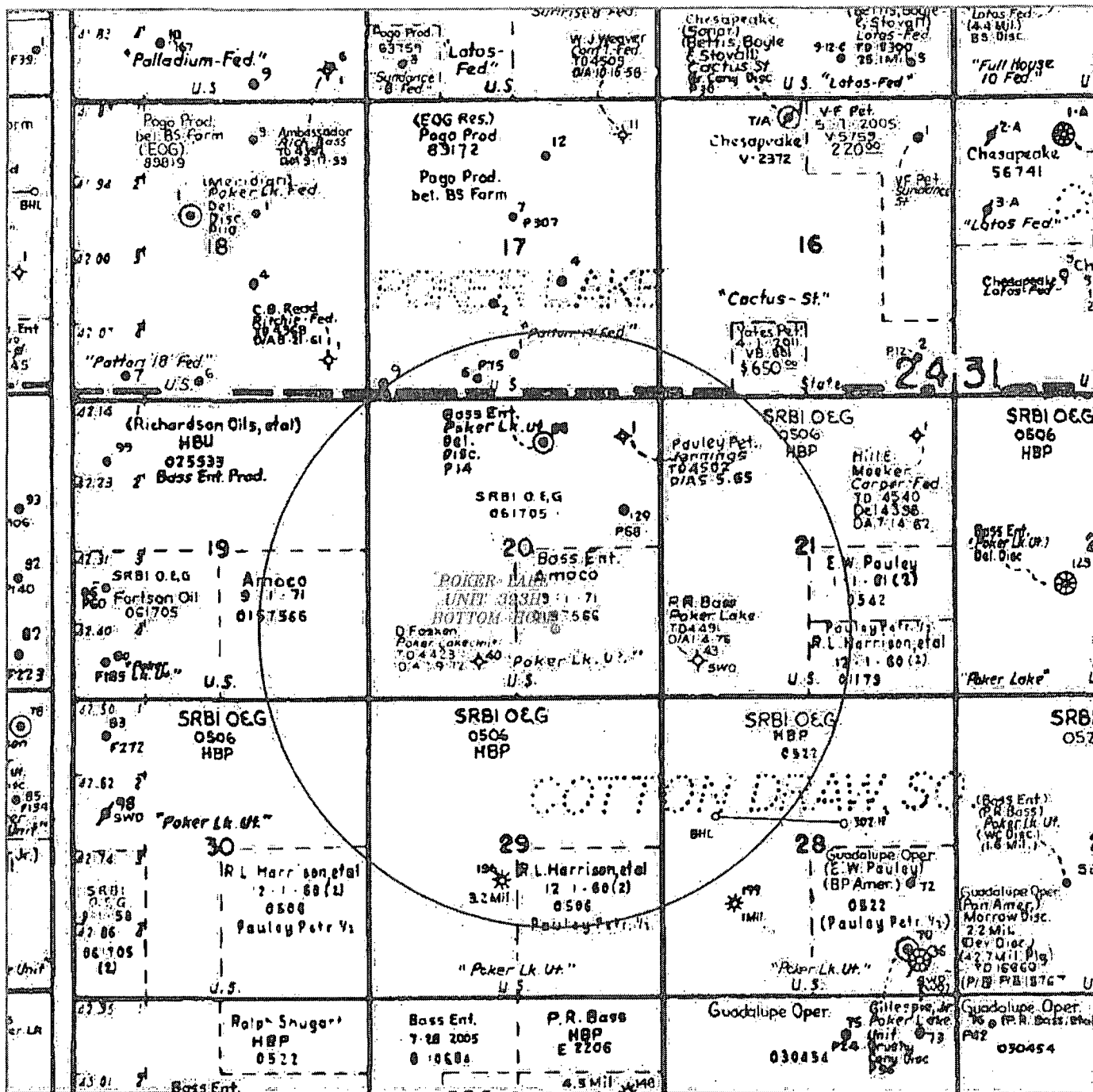
W.O. Number: DAJ 26960

Scale: 1" = 2000'

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

BOPCO, L.P.

Sheet 4 of 6 Sheets



POKER LAKE UNIT 393H

Located 55' FNL and 435' FEL

Section 19, Township 24 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.



focused on excellence
in the oilfield

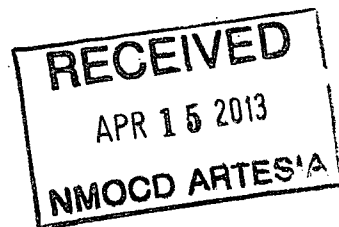
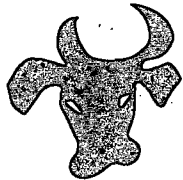
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: DAJ 26960

Scale: None

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

BOPCO, L.P.



Bopco L P

Eddy County, NM (NAD27 NME)

Poker Lake Unit #393H

Wellbore #1 / Job #1310191

Survey: Phoenix MWD Survey

Phoenix Final Survey Report

02 April, 2013





Phoenix Technology Services

Phoenix Final Survey Report



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well: #393H
Project:	Eddy County, NM (NAD27, NME)	TVD Reference:	KB @ 3514.00usft (McVay 5)
Site:	Poker Lake Unit	MD Reference:	KB @ 3514.00usft (McVay 5)
Well:	#393H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310191	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	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		
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	#393H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty		0.00 usft	Wellhead Elevation:
			usft
			Latitude:
			32° 12' 35.234824 N
			Longitude:
			103° 48' 33.599075 W
			Ground Level:
			3,495.00 usft

Wellbore	Wellbore #1 / Job #1310191		
Magnetics	Model Name	Sample Date	Declination
			(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
	IGRF2010_14	03/07/13	7.48
			60.09
			48,409

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
			(°)
			135.01



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Bobco L.P.	Local Co-ordinate Reference:	Well #393H
Project:	Eddy County, NM (NAD27,NME)	TVD Reference:	KB @ 3514.00usft (McVay 5)
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Well:	#393H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310191	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	Database:	GCR_DB

Survey Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	04/02/13	100.00	7,308.00	Gyrodata Survey (Wellbore #1 / Job #1310	NS-GYRO-MS	North sensing gyrocompassing m/s
		7,308.00	13,572.00	Phoenix MWD Survey (Wellbore #1 / Job #	MWD	MWD - Standard

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
7,308.00	1.19	233.24	-3,792.47	7,306.47	37.85	-71.19	440,473.02	661,996.16	-77.10	0.00
Tie-on to Gyrodata Survey										
7,332.00	1.20	235.90	-3,816.46	7,330.46	37.56	-71.60	440,472.73	661,995.75	-77.18	0.23
Phoenix First MWD Survey										
7,363.00	1.90	160.00	-3,847.46	7,361.46	36.89	-71.69	440,472.06	661,995.66	-76.78	6.40
7,394.00	5.40	143.00	-3,878.39	7,392.39	35.24	-70.64	440,470.41	661,996.71	-74.87	11.70
7,425.00	9.60	138.70	-3,909.12	7,423.12	32.14	-68.05	440,467.31	661,999.30	-70.84	13.66
7,456.00	14.00	136.40	-3,939.45	7,453.45	27.48	-63.76	440,462.65	662,003.59	-64.51	14.27
7,488.00	18.90	133.30	-3,970.14	7,484.14	21.11	-57.31	440,456.28	662,010.04	-55.45	15.55
7,519.00	23.00	129.90	-3,999.08	7,513.08	13.78	-49.01	440,448.95	662,018.34	-44.40	13.79
7,549.00	26.50	126.70	-4,026.32	7,540.32	6.02	-39.14	440,441.19	662,028.21	-31.93	12.49
7,581.00	29.60	125.90	-4,054.56	7,568.56	-2.88	-27.01	440,432.29	662,040.34	-17.06	9.76
7,612.00	32.50	125.60	-4,081.12	7,595.12	-12.22	-14.04	440,422.95	662,053.31	-1.28	9.37
7,643.00	34.90	125.70	-4,106.91	7,620.91	-22.25	-0.06	440,412.92	662,067.29	15.69	7.74
7,674.00	37.90	128.10	-4,131.86	7,645.86	-33.30	14.64	440,401.87	662,081.99	33.90	10.71
7,705.00	40.30	130.10	-4,155.91	7,669.91	-45.63	29.80	440,389.54	662,097.15	53.34	8.75
7,735.00	43.10	132.00	-4,178.31	7,692.31	-58.74	44.84	440,376.43	662,112.19	73.25	10.24
7,767.00	46.20	132.00	-4,201.07	7,715.07	-73.79	61.55	440,361.38	662,128.90	95.70	9.69
7,799.00	48.80	131.80	-4,222.69	7,736.69	-89.54	79.11	440,345.63	662,146.46	119.26	8.14
7,830.00	50.70	131.30	-4,242.72	7,756.72	-105.24	96.82	440,329.93	662,164.17	142.87	6.25
7,861.00	52.90	130.60	-4,261.89	7,775.89	-121.20	115.22	440,313.97	662,182.57	167.17	7.32
7,892.00	55.00	130.60	-4,280.13	7,794.13	-137.51	134.25	440,297.66	662,201.60	192.16	6.77



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well #393H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3514.00usft (McVay 5)
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Well:	#393H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310191	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	Database:	GCR DB

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)	
7,923.00	56.50	131.10	-4,297.58	7,811.58	-154.27	153.63	440,280.90	662,220.98	217.72	5.02	
7,955.00	58.20	132.00	-4,314.84	7,828.84	-172.14	173.79	440,263.03	662,241.14	244.61	5.82	
7,987.00	60.00	132.80	-4,331.27	7,845.27	-190.66	194.06	440,244.51	662,261.41	272.04	6.02	
8,019.00	62.00	133.40	-4,346.79	7,860.79	-209.78	214.50	440,225.39	662,281.85	300.01	6.46	
8,049.00	63.50	135.10	-4,360.52	7,874.52	-228.39	233.60	440,206.78	662,300.95	326.68	7.10	
8,081.00	64.20	135.60	-4,374.63	7,888.63	-248.83	253.79	440,186.34	662,321.14	355.40	2.60	
8,112.00	64.30	135.60	-4,388.09	7,902.09	-268.77	273.32	440,166.40	662,340.67	383.32	0.32	
8,143.00	64.00	135.50	-4,401.61	7,915.61	-288.69	292.86	440,146.48	662,360.21	411.22	1.01	
8,175.00	64.00	135.00	-4,415.64	7,929.64	-309.12	313.11	440,126.05	662,380.46	439.98	1.40	
8,206.00	63.40	135.00	-4,429.37	7,943.37	-328.77	332.76	440,106.40	662,400.11	467.77	1.94	
8,238.00	62.90	134.90	-4,443.83	7,957.83	-348.94	352.96	440,086.23	662,420.31	496.32	1.59	
8,321.00	62.60	133.00	-4,481.83	7,995.83	-400.15	406.08	440,035.02	662,473.43	570.09	2.07	
8,385.00	63.30	134.00	-4,510.94	8,024.94	-439.38	447.43	439,995.79	662,514.78	627.07	1.77	
8,416.00	65.70	134.70	-4,524.28	8,038.28	-458.94	467.43	439,976.23	662,534.78	655.04	8.01	
8,448.00	68.10	134.50	-4,536.84	8,050.84	-479.61	488.39	439,955.56	662,555.74	684.47	7.52	
8,479.00	69.50	135.50	-4,548.05	8,062.05	-500.04	508.82	439,935.13	662,576.17	713.38	5.43	
8,510.00	72.80	136.40	-4,558.06	8,072.06	-521.13	529.22	439,914.04	662,596.57	742.70	10.99	
8,542.00	76.70	136.90	-4,566.48	8,080.48	-543.57	550.40	439,891.60	662,617.75	773.56	12.28	
8,574.00	81.10	136.80	-4,572.64	8,086.64	-566.48	571.87	439,868.69	662,639.22	804.94	13.75	
8,605.00	85.40	136.40	-4,576.28	8,090.28	-588.84	593.02	439,846.33	662,660.37	835.70	13.93	
8,637.00	88.70	136.30	-4,577.93	8,091.93	-611.96	615.08	439,823.21	662,682.43	867.65	10.32	
8,668.00	89.70	136.20	-4,578.36	8,092.36	-634.35	636.51	439,800.82	662,703.86	898.64	3.24	
8,763.00	92.70	134.90	-4,576.37	8,090.37	-702.14	703.02	439,733.03	662,770.37	993.60	3.44	
8,857.00	93.30	133.60	-4,571.45	8,085.45	-767.65	770.25	439,667.52	662,837.60	1,087.46	1.52	
8,951.00	91.10	134.10	-4,567.84	8,081.84	-832.71	837.99	439,602.46	662,905.34	1,181.36	2.40	
9,045.00	91.40	132.90	-4,565.79	8,079.79	-897.40	906.16	439,537.77	662,973.51	1,275.31	1.32	
9,139.00	92.00	133.70	-4,563.00	8,077.00	-961.84	974.53	439,473.33	663,041.88	1,369.22	1.06	



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well #393H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	KB @ 3514.00usft (McVay.5)
Site:	Poker Lake Unit	MD Reference:	KB @ 3514.00usft (McVay.5)
Well:	#393H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310191	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay.5)	Database:	GCR DB

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
9,232.00	90.60	134.70	-4,560.89	8,074.89	-1,026.66	1,041.19	439,408.51	663,108.54	1,462.19	1.85
9,327.00	90.90	134.20	-4,559.65	8,073.65	-1,093.18	1,109.00	439,341.99	663,176.35	1,557.17	0.61
9,421.00	88.90	134.80	-4,559.81	8,073.81	-1,159.06	1,176.04	439,276.11	663,243.39	1,651.16	2.22
9,516.00	91.30	134.00	-4,559.65	8,073.65	-1,225.52	1,243.91	439,209.65	663,311.26	1,746.15	2.66
9,611.00	90.50	134.90	-4,558.15	8,072.15	-1,292.04	1,311.72	439,143.13	663,379.07	1,841.13	1.27
9,706.00	90.70	134.60	-4,557.16	8,071.16	-1,358.92	1,379.18	439,076.25	663,446.53	1,936.13	0.38
9,801.00	90.90	135.20	-4,555.83	8,069.83	-1,425.97	1,446.47	439,009.20	663,513.82	2,031.12	0.67
9,896.00	88.80	137.20	-4,556.08	8,070.08	-1,494.53	1,512.21	438,940.64	663,579.56	2,126.09	3.05
9,990.00	89.90	137.10	-4,557.15	8,071.15	-1,563.44	1,576.13	438,871.73	663,643.48	2,220.01	1.18
10,085.00	88.90	137.00	-4,558.14	8,072.14	-1,632.97	1,640.86	438,802.20	663,708.21	2,314.95	1.06
10,180.00	91.10	138.10	-4,558.14	8,072.14	-1,703.06	1,704.97	438,732.11	663,772.32	2,409.84	2.59
10,275.00	91.70	136.50	-4,555.82	8,069.82	-1,772.85	1,769.38	438,662.32	663,836.73	2,504.74	1.80
10,369.00	90.90	134.50	-4,553.69	8,067.69	-1,839.88	1,835.24	438,595.29	663,902.59	2,598.70	2.29
10,464.00	89.80	132.00	-4,553.11	8,067.11	-1,904.96	1,904.43	438,530.21	663,971.78	2,693.65	2.87
10,559.00	88.30	132.40	-4,554.68	8,068.68	-1,968.77	1,974.80	438,466.40	664,042.15	2,788.52	1.63
10,654.00	87.40	133.90	-4,558.25	8,072.25	-2,033.69	2,044.05	438,401.48	664,111.40	2,883.40	1.84
10,749.00	89.50	133.40	-4,560.82	8,074.82	-2,099.24	2,112.76	438,335.93	664,180.11	2,978.33	2.27
10,843.00	88.80	134.30	-4,562.21	8,076.21	-2,164.35	2,180.54	438,270.82	664,247.89	3,072.30	1.21
10,938.00	89.40	134.90	-4,563.70	8,077.70	-2,231.04	2,248.18	438,204.13	664,315.53	3,167.28	0.89
11,033.00	90.10	138.10	-4,564.12	8,078.12	-2,299.94	2,313.56	438,135.23	664,380.91	3,262.24	3.45
11,128.00	90.00	136.00	-4,564.04	8,078.04	-2,369.47	2,378.29	438,065.70	664,445.64	3,357.17	2.21
11,150.00	90.10	135.40	-4,564.02	8,078.02	-2,385.22	2,393.65	438,049.95	664,461.00	3,379.17	2.76
11,181.00	90.20	135.00	-4,563.94	8,077.94	-2,407.22	2,415.49	438,027.95	664,482.84	3,410.17	1.33
11,244.00	87.70	134.70	-4,565.09	8,079.09	-2,451.64	2,460.15	437,983.53	664,527.50	3,473.15	4.00
11,339.00	86.70	135.30	-4,569.73	8,083.73	-2,518.73	2,527.24	437,916.44	664,594.59	3,568.04	1.23
11,434.00	86.20	135.20	-4,575.61	8,089.61	-2,586.07	2,593.99	437,849.10	664,661.34	3,662.86	0.54
11,528.00	87.00	134.90	-4,581.19	8,095.19	-2,652.48	2,660.29	437,782.69	664,727.64	3,756.69	0.91



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Bopcoil P	Local Co-ordinate Reference:	Well #393H
Project:	Eddy County NM (NAD27 NME)	TVD Reference:	KB @ 3514.00usft (McVay 5)
Site:	Poker Lake Unit	MD Reference:	KB @ 3514.00usft (McVay 5)
Well:	#393H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310191	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	Database:	GCR DB

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
11,622.00	87.40	135.10	-4,585.78	8,099.78	-2,718.86	2,726.68	437,716.31	664,794.03	3,850.58	0.48
11,718.00	89.30	137.30	-4,588.54	8,102.54	-2,788.12	2,793.09	437,647.05	664,860.44	3,946.51	3.03
11,812.00	89.80	136.80	-4,589.28	8,103.28	-2,856.92	2,857.13	437,578.25	664,924.48	4,040.44	0.75
11,907.00	89.80	137.00	-4,589.61	8,103.61	-2,926.28	2,922.04	437,508.89	664,989.39	4,135.39	0.21
12,001.00	89.50	137.10	-4,590.19	8,104.19	-2,995.09	2,986.09	437,440.08	665,053.44	4,229.33	0.34
12,096.00	87.60	135.90	-4,592.59	8,106.59	-3,063.97	3,051.46	437,371.20	665,118.81	4,324.26	2.37
12,190.00	87.60	134.70	-4,596.53	8,110.53	-3,130.73	3,117.52	437,304.44	665,184.87	4,418.18	1.28
12,285.00	88.50	133.60	-4,599.76	8,113.76	-3,196.86	3,185.64	437,238.31	665,252.99	4,513.11	1.50
12,379.00	88.40	133.50	-4,602.30	8,116.30	-3,261.60	3,253.74	437,173.57	665,321.09	4,607.04	0.15
12,473.00	88.80	133.20	-4,604.60	8,118.60	-3,326.10	3,322.08	437,109.07	665,389.43	4,700.98	0.53
12,568.00	90.20	134.10	-4,605.43	8,119.43	-3,391.67	3,390.81	437,043.50	665,458.16	4,795.94	1.75
12,663.00	89.80	134.30	-4,605.43	8,119.43	-3,457.90	3,458.92	436,977.27	665,526.27	4,890.93	0.47
12,758.00	89.50	134.20	-4,606.01	8,120.01	-3,524.19	3,526.96	436,910.98	665,594.31	4,985.92	0.33
12,852.00	88.70	134.10	-4,607.49	8,121.49	-3,589.66	3,594.40	436,845.51	665,661.75	5,079.90	0.86
12,947.00	88.80	134.50	-4,609.56	8,123.56	-3,655.99	3,662.38	436,779.18	665,729.73	5,174.87	0.43
13,041.00	89.00	134.70	-4,611.36	8,125.36	-3,721.98	3,729.30	436,713.19	665,796.65	5,268.85	0.30
13,135.00	88.80	134.90	-4,613.17	8,127.17	-3,788.21	3,795.98	436,646.96	665,863.33	5,362.83	0.30
13,228.00	90.90	135.60	-4,613.41	8,127.41	-3,854.25	3,861.45	436,580.92	665,928.80	5,455.82	2.38
13,323.00	90.40	135.50	-4,612.33	8,126.33	-3,922.06	3,927.97	436,513.11	665,995.32	5,550.81	0.54
13,418.00	89.10	133.60	-4,612.75	8,126.75	-3,988.70	3,995.67	436,446.47	666,063.02	5,645.80	2.42
13,512.00	89.90	134.80	-4,613.57	8,127.57	-4,054.23	4,063.06	436,380.94	666,130.41	5,739.79	1.53
Current MWD Survey										
13,572.00	89.90	134.80	-4,613.67	8,127.67	-4,096.51	4,105.63	436,338.66	666,172.98	5,799.79	0.00
Projection to Bit										



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well #393H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3514:00usft (McVay 5)
Site:	Poker Lake Unit	MD Reference:	KB @ 3514:00usft (McVay 5)
Well:	#393H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310191	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (McVay 5)	Database:	GCR-DB

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,308.00	7,306.47	37.85	-71.19	Tie-on to Gyrodata Survey
7,332.00	7,330.46	37.56	-71.60	Phoenix First MWD Survey
13,512.00	8,127.57	-4,054.23	4,063.06	Current MWD Survey
13,572.00	8,127.67	-4,096.51	4,105.63	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County, NM (NAD27 NME)
Site: Poker Lake Unit
Well: #393H
Wellbore: Wellbore #1 / Job #1310191
Design: Plan #3 03-08-13

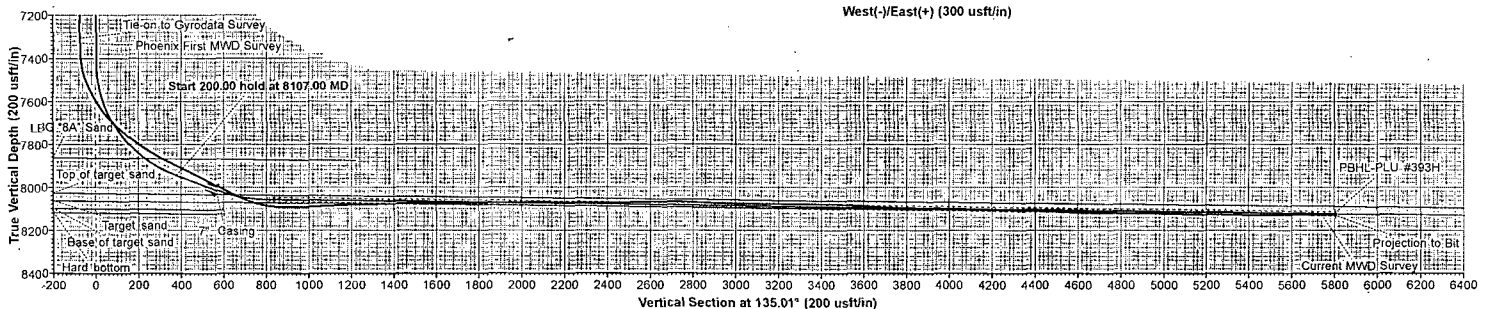
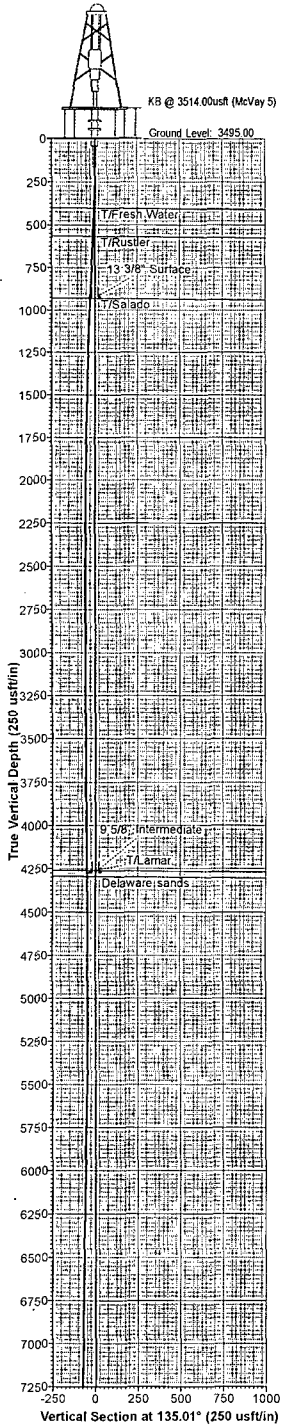


PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: -0.28°
Magnetic North: 7.20°

Magnetic Field
Strength: 48408.65nT
Dip Angle: 60.09°
Date: 03/07/2013
Model: IGRF2010_14



WELL DETAILS									
					Ground Level	3495.00			
					Ending		Latitude	Longitude	
+N-S	+E-W	Northing			662057.35	32° 12' 35.234824 N	103° 48' 33.599075 W		
0.00	0.00	440435.17							

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	V Sect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7407.00	0.00	0.00	7407.00	0.00	0.00	0.00	0.00	0.00
3	8107.00	70.00	135.01	7945.40	-266.62	266.53	10.00	135.01	376.99
4	8307.00	70.00	135.01	8013.81	-399.54	399.40	0.00	0.00	564.93
5	8547.54	89.24	135.01	8056.94	-566.09	565.88	8.00	0.01	800.42
6	13547.27	89.24	135.01	8123.00	-4101.93	4100.12	0.00	0.00	5799.72
									PBHL-PLU #393H
									TD at 13547.27

DESIGN TARGET DETAILS									
Name	TVD	+N-S	+E-W	Northing	East	Latitude	Longitude	Shape	
PBHL-PLU #393H	8123.00	-4101.93	4100.12	436333.24	666167.432	11° 54.441924 N 103° 47' 45.115662 W	Rectangle (Sides L20.00 W40.00)		
									- plan hits target center

SITE DETAILS: Poker Lake Unit	
Site Centre Northing	435896.68
East	646110.12
Positional Uncertainty	0.00
Convergence	0.25
Local North	Grid

PROJECT DETAILS: Eddy County, NM (NAD27 NME)	
Geodetic System	US State Plane 1927 (Exact solution)
Datum	NAD 1927 (NADCON CONUS)
Ellipsoid	Clarke 1866
Zone	New Mexico East 3001
System Datum	Mean Sea Level

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	DipAngle
400.00	400.00	T/Fresh Water	0.58
564.00	564.00	T/Rusler	0.58
929.00	929.00	T/Salado	0.58
4259.00	4259.00	T/Lamar	0.58
4294.00	4294.00	Delaware sands	0.58
7855.32	7938.22	LBC "BA" Sand	0.58
8035.43	8380.79	Top of target sand	0.58
8121.77	13454.11	Target sand	0.58

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well #393H, Grid North
Latitude: 32° 12' 35.234824 N
Longitude: 103° 48' 33.599075 W
Grid East: 662067.35
Grid North: 440435.17
Scale Factor: 1.000
Geomagnetic Model: IGRF2010_14
Sample Date: 07-Mar-13
Magnetic Declination: 7.48°
Dip Angle from Horizontal: 60.09°
Magnetic Field Strength: 48409

To convert a Magnetic Direction to a Grid Direction, Add 7.20°
To convert a Magnetic Direction to a True Direction, Add 7.48° East
To convert a True Direction to a Grid Direction, Subtract 0.28°

CASING DETAILS			
TVD	MD	Name	Size
927.00	927.00	13 3/8" Surface	13-3/8
4272.00	4272.00	9 5/8" Intermediate	9-5/8
8013.81	8307.00	7" Casing	7

