



PHOENIX
TECHNOLOGY SERVICES

May 30, 2012

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

30-015-39834

Dear District 2 – Artesia,

Re: Bopco, LP
Poker Lake Unit 319H
Eddy Co., NM
API #30-015-39834
Job No. 1210266

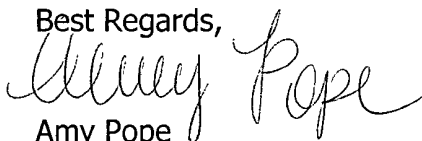


Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 606018). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
David Hayden	319H	6,894	15,821	04/27/12	05/16/12	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,


Amy Pope
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 9353

**Phoenix Technology Services
SURVEY DATA CERTIFICATION**



PHOENIX JOB NUMBER 1210266

OPERATOR Bopco LLP

WELL NAME Poker Lake Unit 319H

COUNTY & STATE

Eddy Co. / NM

API WELL NUMBER 30-015-39834

PROPOSED DIRECTION 135.01

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
6,836 ft	6,835.53 ft	.5 ft	202.4 ft	-29.82 ft	-2.12 ft	GYRO

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
27-Apr-12	6,894 ft	2.1	150.3

SURVEY INSTRUMENT
TYPE
Phoenix MWD

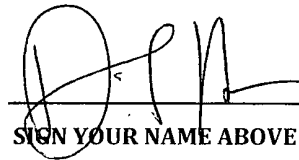
LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
16-May-12	15,821 ft	90.2	131.8

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
16-May-12	15,886 ft	90.2	131.8

David Hayden

PRINT YOUR NAME ABOVE



SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.39
DECLINATION OR GRID	DECLINATION

5/16/12

TODAY'S DATE

MWD SUPERVISOR 1

David Hayden

DIRECTIONAL DRILLER 1

Louie Corman

MWD SUPERVISOR 2

Tyler Landers

DIRECTIONAL DRILLER 2

Garrett Wright

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

Form C-102
Revised July 16, 2010

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number		Pool Code	Pool Name Remuda Basin (Delaware)
Property Code 306402	Property Name POKER LAKE UNIT		Well Number 319H
OCRID No. 260737	Operator Name BOPCO, L.P.		Elevation 3425'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	4	24 S	30 E		2200	SOUTH	1220	EAST	EDDY

Bottom Hole Location If Different From Surface

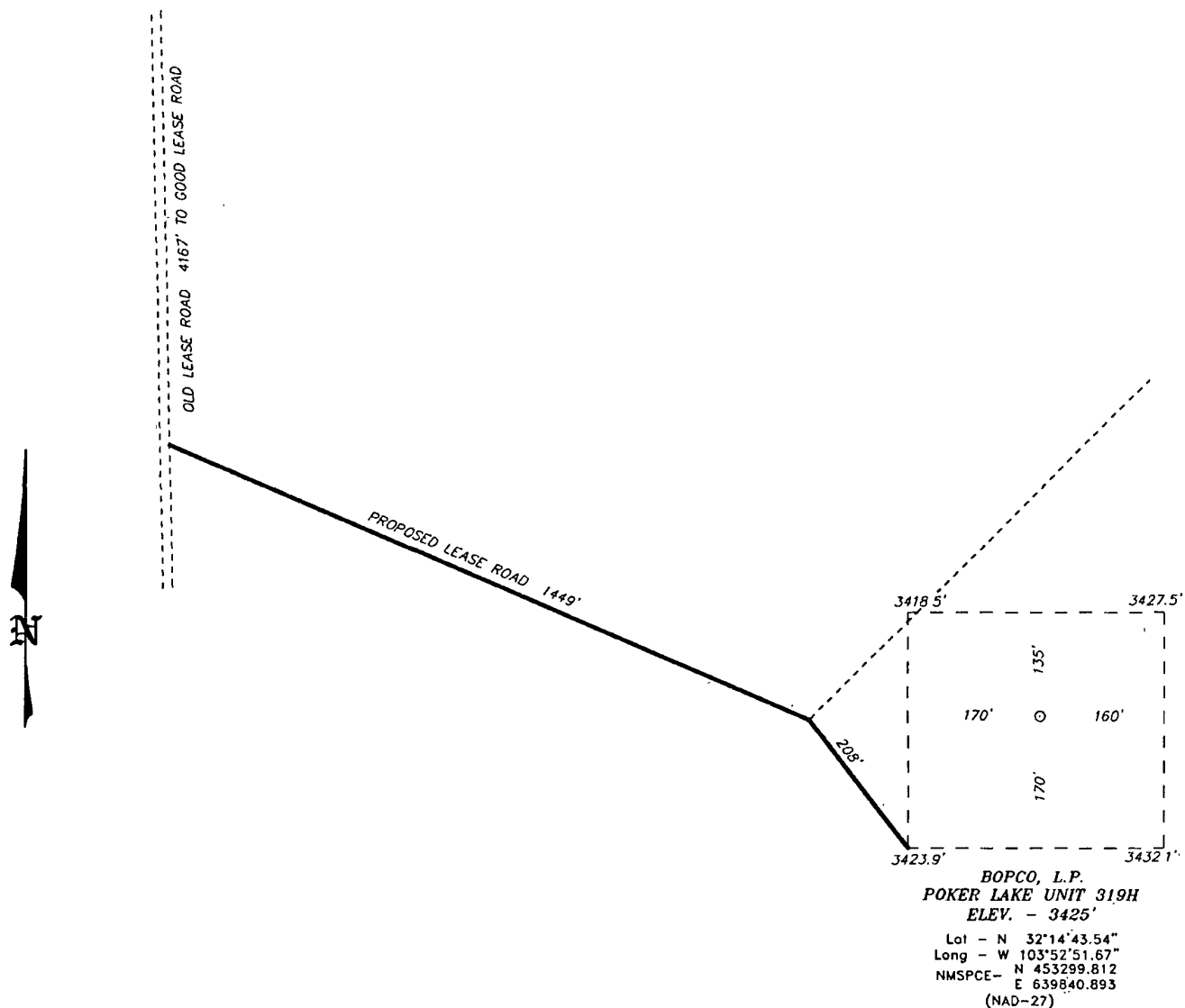
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	10	24 S	30 E		1415	SOUTH	600	EAST	EDDY

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

SURFACE LOCATION DELAWARE PT Lat - N 32°14'43.54" Long - W 103°52'51.67" NMSPC - E 639840.893 (NAD-27)	Delaware entry point same as surface Lat - N 32°14'43.54" Long - W 103°52'51.67"	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: <u>Jeremy Braden</u> 9-9-11 Date Printed Name JDBraden@basspet.com 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. Date Surveyed: <u>August 27, 2011</u> Signature & Seal of Professional Surveyor: <u>Gary L. Jones</u> Certificate No. Gary L. Jones 7977 BASIN SURVEYS 24976

SECTION 4, 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.

200 0 200 400 FEET
SCALE: 1" = 200'

BOPCO, L.P.

REF: POKER LAKE UNIT 319H / WELL PAD, TOPO

THE POKER LAKE UNIT 319H LOCATED 2200'

FROM THE SOUTH LINE AND 1220' FROM THE EAST LINE OF

SECTION 4, TOWNSHIP 24 SOUTH, RANGE 30 EAST,

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

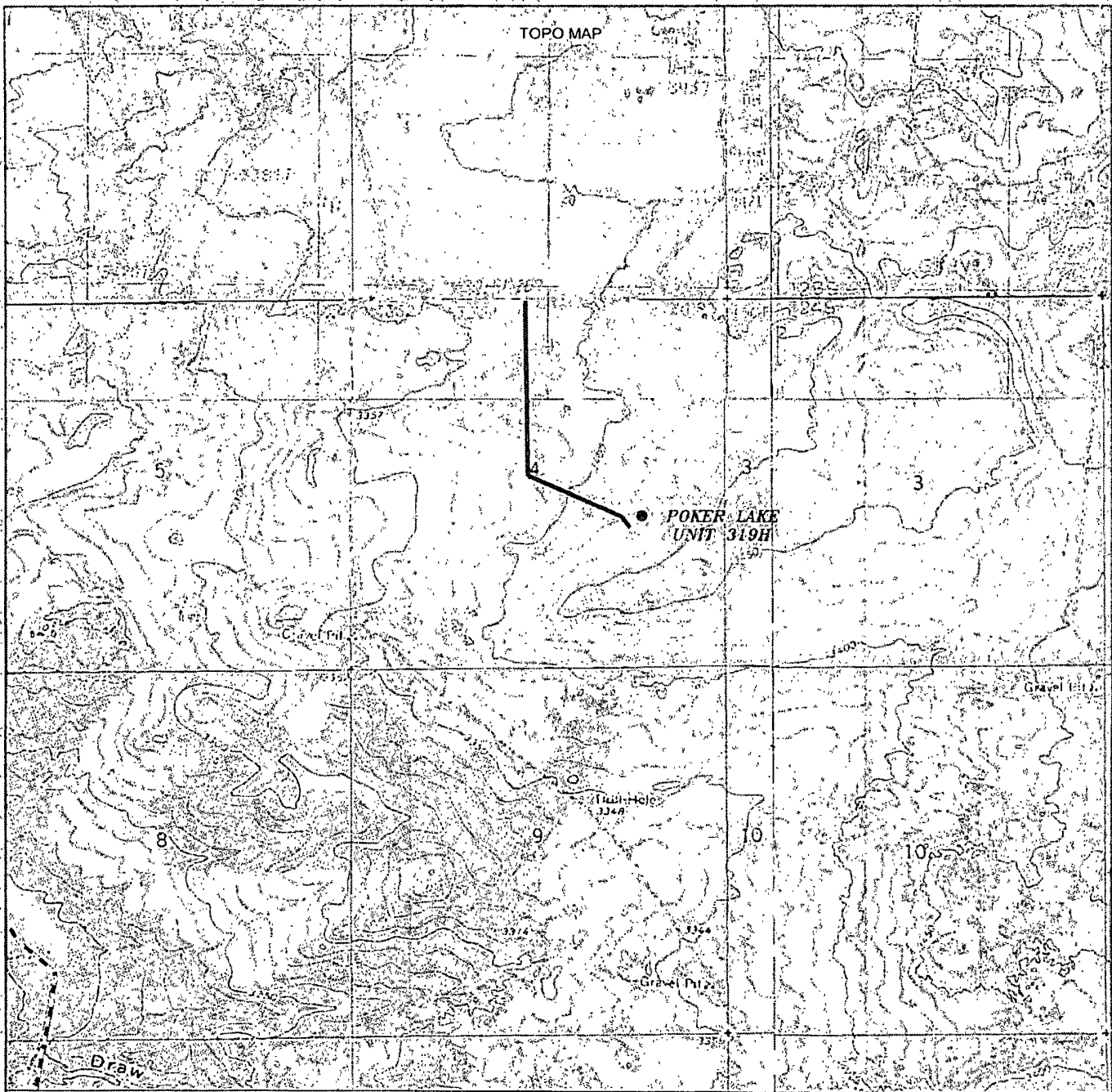
BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 24976 Drawn By: J. SMALL

Date: 08-29-2011 Disk: JMS 24976

Survey Date: 08-27-2011

Sheet 1 of 6 Sheets



POKER LAKE UNIT 319H

Located 2200' FSL and 1220' FEL

Section 4, 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.D. Number: JMS 24975

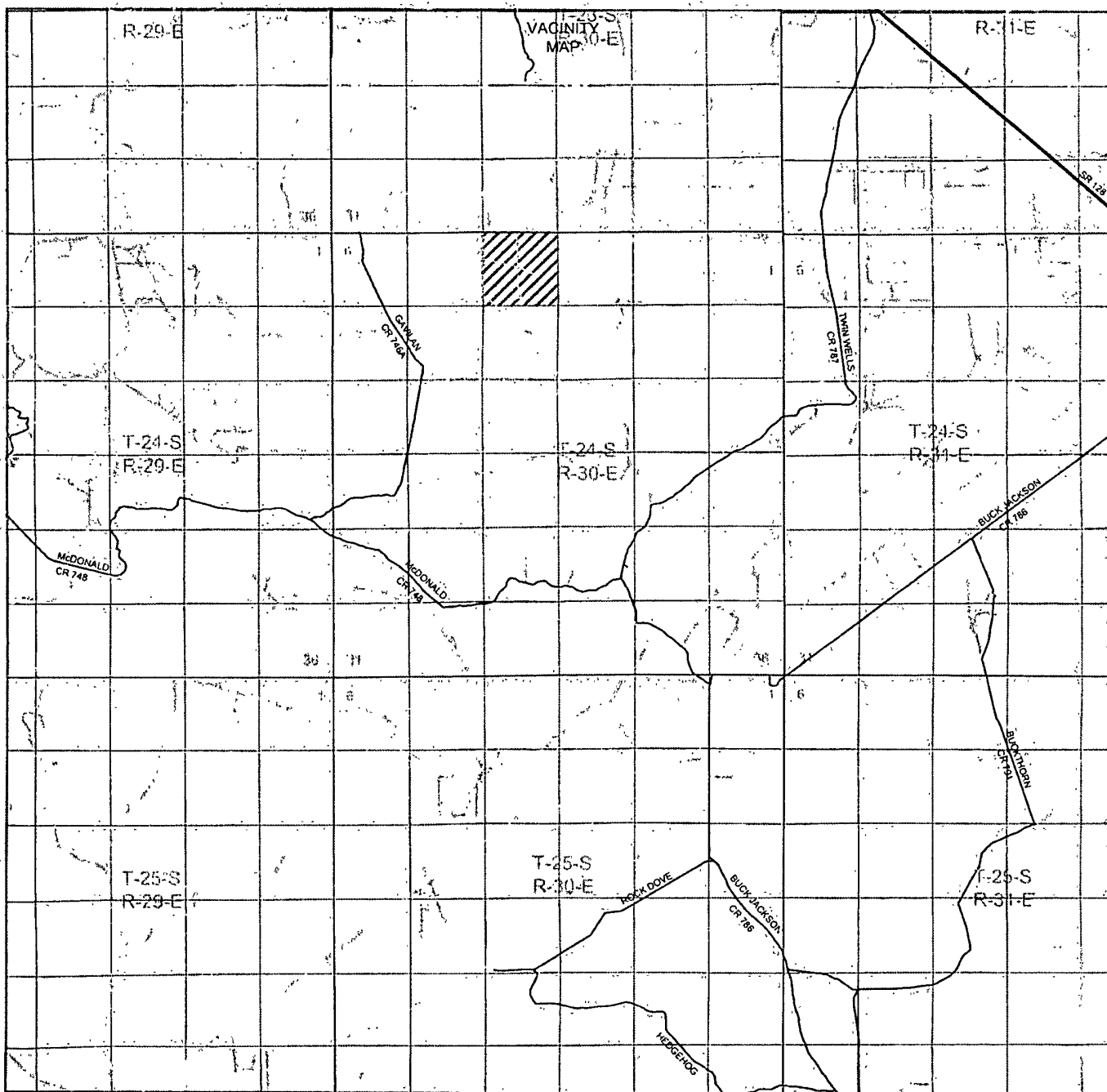
Survey Date: 08-29-2011

Scale: 1" = 2000'

Date: 08-29-2011

BOPCO, L.P.

Sheet 2 of 6 Sheets



POKER LAKE UNIT 319H

Located 2200' FSL and 1220' FEL

Section 4, Township 24 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.



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

W.O. Number: JMS 24976

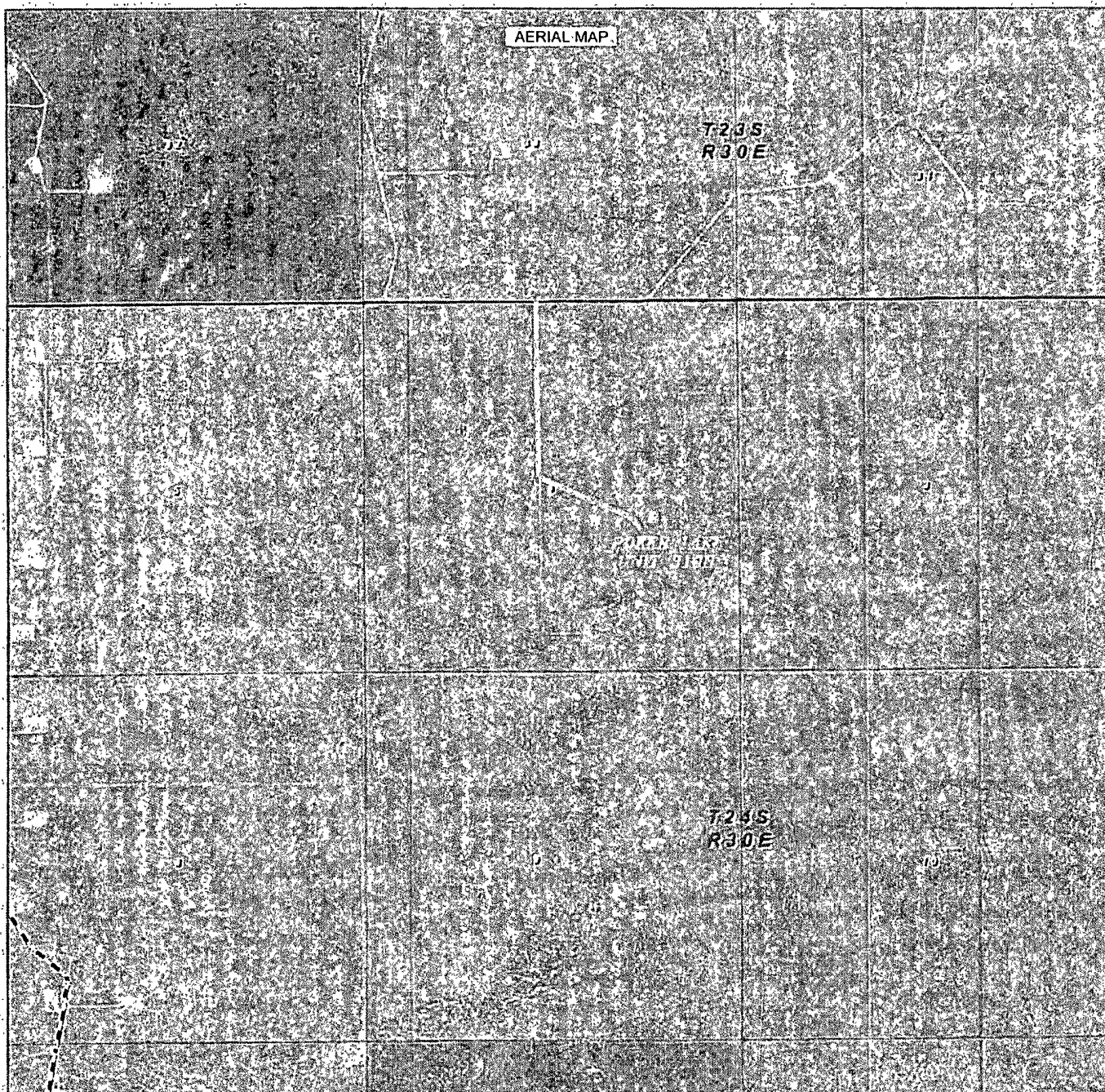
Survey Date: 08-27-2011

Scale: 1" = 2 Miles

Date: 08-29-2011

BOPCO, L.P.

Sheet 3 of 6 Sheets



POKER LAKE UNIT 319H
 Located 2200' FSL and 1220' FEL
 Section 4, Township 24 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



focused on excellence
 in the oilfield.

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 Hobbs, New Mexico 88241
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 basin-surveys.com

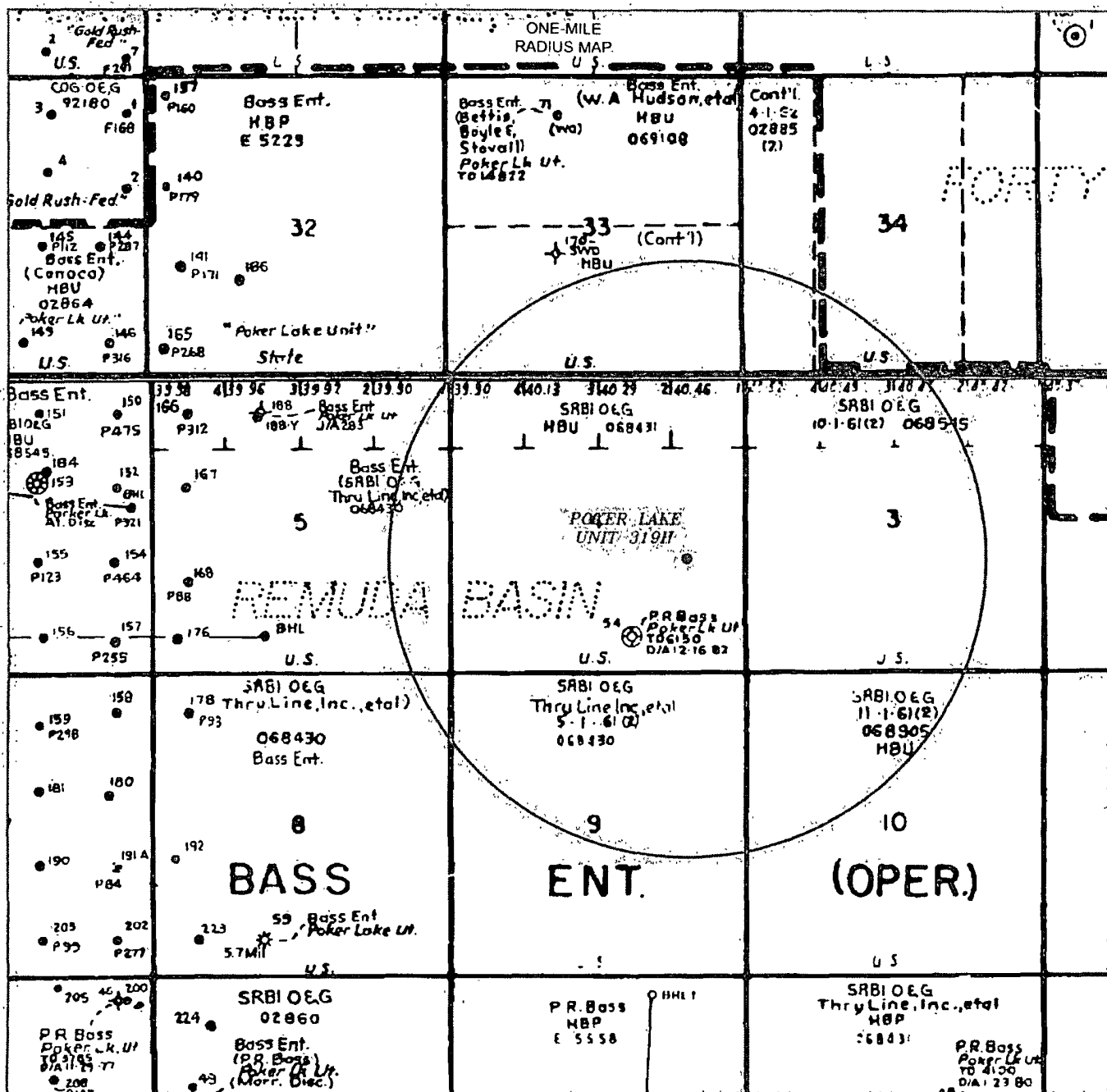
WFO Number JMS 24025

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 319H

Located 2200' FSL and 1220' FEL

Section 4, Township 24 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.



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in the oilfield.

P.O. Box 1786
1170 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.D. Number: JMS 24070

Scale: None

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

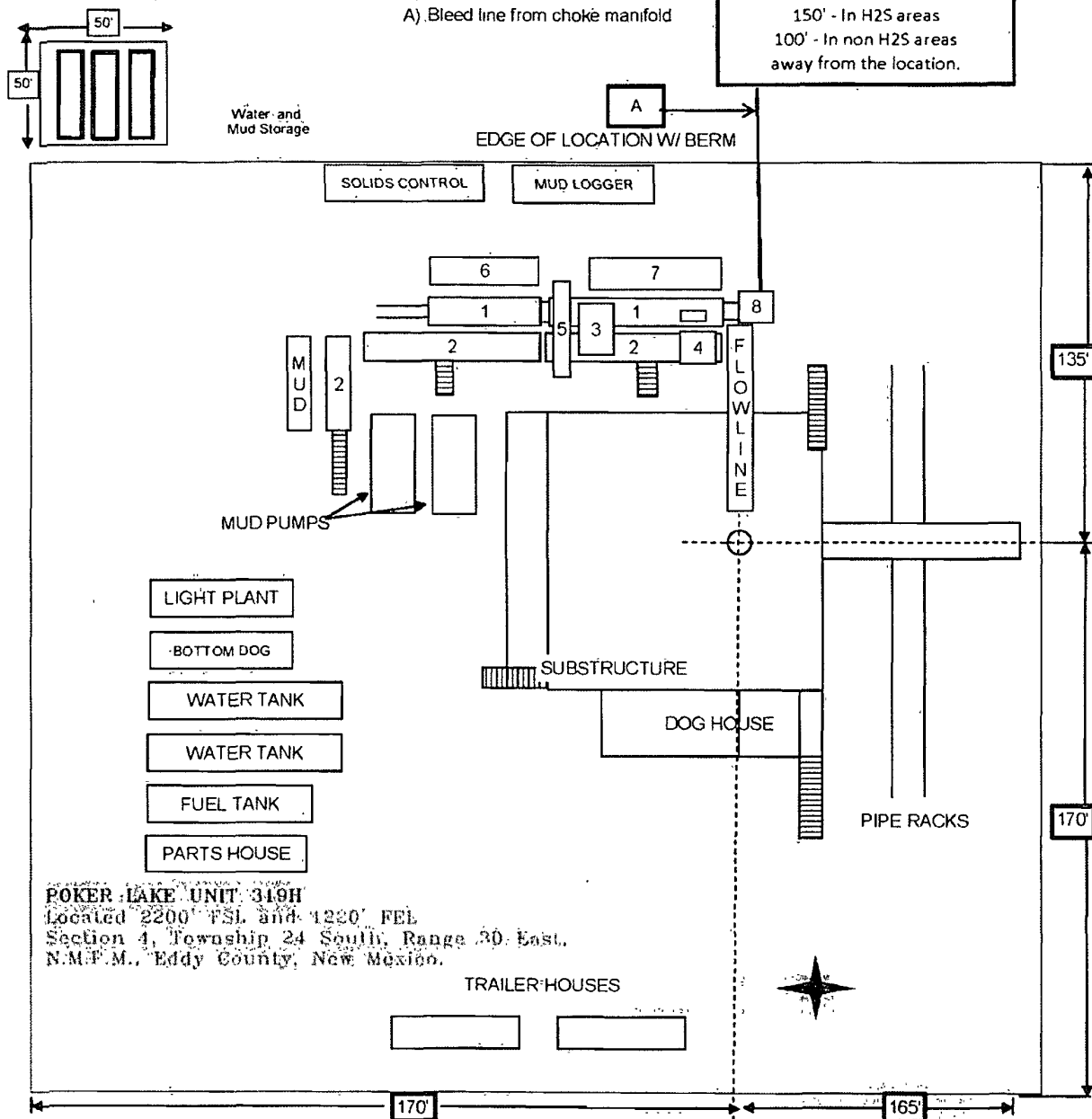
BOPCO, L.P.

Sheet 5 of 6 Sheets

RIG LAYOUT

RIG LAYOUT SCHEMATIC INCLUSIVE OF CLOSED-LOOP DESIGN PLAN Solids Control Equipment Legend

- | | |
|-----------------------------------|--------------------|
| 1) Roll Off Bin | 5) Centrifuge |
| 2) Steel Tank | 6) Dewatering Unit |
| 3) Mud Cleaner | 7) Catch Tank |
| 4) Shaker | 8) Choke Manifold |
| A) Bleed line from choke manifold | |



POKER LAKE UNIT 319H
Located 2200' FSL and 1220' FEL
Section 4, Township 24 South, Range 30 East,
N.M.F.M., Eddy County, New Mexico.

TRAILER HOUSES

Basin Surveys
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.Q. Number: JWS 24978

Survey Date: 08-27-2011

Scale: 1" = 2000'

Date: 08-29-2011

BOPCO, L.P.

Sheet 6 of 6 Sheets



Bopco L P

Eddy County NM

Poker Lake Unit #319H

Job # 1210266

Latshaw #7

Survey: Phoenix MWD Surveys

Bopco LP, Survey Report

17 May, 2012





Bopco LP, Survey Report



Company:	Bopco LP	Local Co-ordinate Reference:	Well Job # 1210266
Project:	Eddy County NM	TVD Reference:	WELL @ 3451.00usft (Latshaw #7)
Site:	Poker Lake Unit #319H	MD Reference:	WELL @ 3451.00usft (Latshaw #7)
Well:	Job # 1210266	North Reference:	Grid
Wellbore:	Latshaw #7	Survey Calculation Method:	Minimum Curvature
Design:	Latshaw #7	Database:	Compass5000

Project				Eddy County NM			
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 #319H					
Site Position:				Northing:		453,299.81 usft		Latitude:		32° 14' 43.5429 N	
From:		Map		Easting:		639,840.89 usft		Longitude:		103° 52' 51.6686 W	
Position Uncertainty:		0.00 usft		Slot Radius:		13-3/16 "		Grid Convergence:		0.24 °	

Well		Job # 1210266				
Well Position	+N/-S	0.00 usft	Northing:	453,299.81 usft	Latitude:	32° 14' 43.5429 N
	+E/-W	0.00 usft	Easting:	639,840.89 usft	Longitude:	103° 52' 51.6686 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	26.00 usft	Ground Level:	3,425.00 usft	

Wellbore	Latshaw #7				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	04/24/12	7.62	60.13	48,509

Design					Latshaw #7						
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		135.01			



Bopco LP, Survey Report



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well Job # 1210266
Project:	Eddy County NM	TVD Reference:	WELL @ 3451.00usft (Latshaw #7)
Site:	Poker Lake Unit #319H	MD Reference:	WELL @ 3451.00usft (Latshaw #7)
Well:	Job # 1210266	North Reference:	Grid
Wellbore:	Latshaw #7	Survey Calculation Method:	Minimum Curvature
Design:	Latshaw #7	Database:	Compass5000

Survey Program		Date	05/17/12		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
169.86	6,836.00	Gyro Surveys (Latshaw #7)	MWD	MWD - Standard	
6,836.00	15,886.00	Phoenix MWD Surveys (Latshaw #7)	MWD	MWD - Standard	

MD (usft)	Inc (")	Azi (azimuth) (")	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
6,836.00	0.52	202.35	-3,384.53	6,835.53	-29.82	-2.12	19.59	0.00	453,269.99	639,838.77
Tie In From Surveys @ 6836' MD										
6,894.00	2.10	150.30	-3,442.51	6,893.51	-30.99	-1.69	20.72	3.15	453,268.83	639,839.20
First Phoenix MWD Surveys @ 6894' MD										
6,988.00	5.40	135.30	-3,536.30	6,987.30	-35.63	2.27	26.80	3.63	453,264.18	639,843.16
7,082.00	5.20	132.90	-3,629.90	7,080.90	-41.67	8.50	35.48	0.32	453,258.14	639,849.39
7,177.00	8.40	136.30	-3,724.22	7,175.22	-49.62	16.45	46.73	3.39	453,250.19	639,857.34
7,208.00	11.70	138.00	-3,754.74	7,205.74	-53.59	20.12	52.13	10.69	453,246.22	639,861.01
7,240.00	15.10	138.10	-3,785.86	7,236.86	-59.11	25.08	59.53	10.63	453,240.70	639,865.97
7,271.00	18.80	137.20	-3,815.51	7,266.51	-65.78	31.17	68.56	11.97	453,234.03	639,872.06
7,302.00	22.80	137.10	-3,844.49	7,295.49	-73.85	38.66	79.56	12.90	453,225.96	639,879.55
7,334.00	26.30	136.40	-3,873.59	7,324.59	-83.53	47.77	92.85	10.98	453,216.28	639,888.66
7,366.00	28.50	135.60	-3,902.00	7,353.00	-94.12	58.00	107.57	6.97	453,205.69	639,898.89
7,397.00	31.50	135.20	-3,928.84	7,379.84	-105.15	68.88	123.07	9.70	453,194.66	639,909.77
7,428.00	33.70	134.70	-3,954.96	7,405.96	-116.95	80.71	139.77	7.15	453,182.86	639,921.60
7,460.00	35.60	134.70	-3,981.28	7,432.28	-129.75	93.64	157.96	5.94	453,170.06	639,934.53
7,491.00	39.60	134.70	-4,005.83	7,456.83	-143.05	107.08	176.87	12.90	453,156.76	639,947.97
7,523.00	42.50	132.50	-4,029.97	7,480.97	-157.53	122.30	197.87	10.12	453,142.28	639,963.19
7,555.00	44.00	134.90	-4,053.27	7,504.27	-172.68	138.15	219.79	6.95	453,127.13	639,979.04
7,586.00	45.10	134.50	-4,075.37	7,526.37	-187.98	153.60	241.54	3.66	453,111.84	639,994.49
7,618.00	46.30	136.10	-4,097.72	7,548.72	-204.26	169.71	264.44	5.18	453,095.56	640,010.60
7,649.00	47.50	136.70	-4,118.90	7,569.90	-220.65	185.32	287.07	4.12	453,079.16	640,026.21



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well Job # 1210266
Project:	Eddy County NM	TVD Reference:	WELL @ 3451.00usft (Latshaw #7)
Site:	Poker Lake Unit #319H	MD Reference:	WELL @ 3451.00usft (Latshaw #7)
Well:	Job # 1210266	North Reference:	Grid
Wellbore:	Latshaw #7	Survey Calculation Method:	Minimum Curvature
Design:	Latshaw #7	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)
7,680.00	50.40	136.50	-4,139.25	7,590.25	-237.63	201.38	310.43	9.37	453,062.18	640,042.27
7,711.00	54.90	135.00	-4,158.06	7,609.06	-255.27	218.58	335.07	15.02	453,044.54	640,059.47
7,743.00	59.50	134.10	-4,175.39	7,626.39	-274.13	237.74	361.96	14.57	453,025.68	640,078.63
7,773.00	64.30	133.40	-4,189.51	7,640.51	-292.42	256.86	388.40	16.13	453,007.39	640,097.75
7,805.00	69.50	133.20	-4,202.06	7,653.06	-312.60	278.27	417.82	16.26	452,987.21	640,119.16
7,836.00	74.20	133.50	-4,211.72	7,662.72	-332.82	299.69	447.25	15.19	452,966.99	640,140.58
7,868.00	80.40	134.00	-4,218.75	7,669.75	-354.40	322.22	478.45	19.43	452,945.42	640,163.11
7,899.00	86.60	134.90	-4,222.26	7,673.26	-375.96	344.20	509.23	20.21	452,923.86	640,185.09
7,930.00	90.10	135.20	-4,223.15	7,674.15	-397.88	366.09	540.21	11.33	452,901.93	640,206.98
8,085.00	92.00	136.90	-4,220.31	7,671.31	-509.45	473.64	695.15	1.64	452,790.37	640,314.53
8,181.00	91.50	136.10	-4,217.38	7,668.38	-579.05	539.69	791.07	0.98	452,720.76	640,380.58
8,275.00	90.40	135.10	-4,215.82	7,666.82	-646.20	605.44	885.05	1.58	452,653.61	640,446.33
8,370.00	89.40	134.70	-4,215.98	7,666.98	-713.25	672.74	980.05	1.13	452,586.56	640,513.63
8,465.00	88.90	135.10	-4,217.39	7,668.39	-780.30	740.02	1,075.04	0.67	452,519.51	640,580.91
8,560.00	88.70	135.30	-4,219.38	7,670.38	-847.70	806.95	1,170.02	0.30	452,452.11	640,647.84
8,656.00	87.50	134.80	-4,222.57	7,673.57	-915.60	874.73	1,265.96	1.35	452,384.21	640,715.62
8,752.00	86.20	133.20	-4,227.84	7,678.84	-982.19	943.68	1,361.80	2.15	452,317.63	640,784.57
8,847.00	88.10	133.70	-4,232.56	7,683.56	-1,047.43	1,012.56	1,456.64	2.07	452,252.38	640,853.45
8,942.00	89.80	133.40	-4,234.31	7,685.31	-1,112.88	1,081.40	1,551.59	1.82	452,186.94	640,922.29
9,036.00	86.80	131.70	-4,237.09	7,688.09	-1,176.40	1,150.60	1,645.45	3.67	452,123.41	640,991.49
9,131.00	89.40	133.20	-4,240.24	7,691.24	-1,240.48	1,220.65	1,740.29	3.16	452,059.33	641,061.54
9,226.00	89.10	132.20	-4,241.49	7,692.49	-1,304.90	1,290.46	1,835.20	1.10	451,994.91	641,131.35
9,321.00	90.30	132.60	-4,241.98	7,692.98	-1,368.96	1,360.61	1,930.10	1.33	451,930.85	641,201.50
9,416.00	89.90	133.20	-4,241.82	7,692.82	-1,433.63	1,430.21	2,025.03	0.76	451,866.19	641,271.10
9,512.00	93.20	133.40	-4,239.22	7,690.22	-1,499.43	1,500.04	2,120.94	3.44	451,800.38	641,340.93
9,607.00	95.00	134.00	-4,232.43	7,683.43	-1,564.89	1,568.54	2,215.67	2.00	451,734.92	641,409.43
9,702.00	93.30	134.50	-4,225.56	7,676.56	-1,631.01	1,636.41	2,310.41	1.86	451,668.80	641,477.30



Bopco LP, Survey Report



Company:	Bopco L P	Local Co-ordinate Reference:	Well Job # 1210266
Project:	Eddy County NM	TVD Reference:	WELL @ 3451.00usft (Latshaw #7)
Site:	Poker Lake Unit #319H	MD Reference:	WELL @ 3451.00usft (Latshaw #7)
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Design:	Latshaw #7	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)
9,795.00	91.40	135.40	-4,221.74	7,672.74	-1,696.65	1,702.17	2,403.33	2.26	451,603.16	641,543.06
9,890.00	87.90	136.60	-4,222.32	7,673.32	-1,764.98	1,768.15	2,498.29	3.89	451,534.84	641,609.04
9,985.00	88.50	136.90	-4,225.31	7,676.31	-1,834.14	1,833.21	2,593.20	0.71	451,465.68	641,674.10
10,080.00	87.10	136.10	-4,228.95	7,679.95	-1,902.99	1,898.55	2,688.10	1.70	451,396.82	641,739.44
10,176.00	90.60	135.40	-4,230.88	7,681.88	-1,971.73	1,965.51	2,784.05	3.72	451,328.08	641,806.40
10,271.00	85.90	136.10	-4,233.78	7,684.78	-2,039.73	2,031.75	2,878.98	5.00	451,260.08	641,872.64
10,367.00	88.00	136.40	-4,238.89	7,689.89	-2,108.98	2,098.04	2,974.81	2.21	451,190.84	641,938.93
10,461.00	90.10	134.50	-4,240.45	7,691.45	-2,175.95	2,163.97	3,068.79	3.01	451,123.86	642,004.86
10,556.00	88.40	133.10	-4,241.69	7,692.69	-2,241.69	2,232.53	3,163.75	2.32	451,058.12	642,073.42
10,650.00	89.80	132.40	-4,243.17	7,694.17	-2,305.49	2,301.54	3,257.66	1.67	450,994.32	642,142.43
10,745.00	89.80	132.30	-4,243.50	7,694.50	-2,369.49	2,371.75	3,352.56	0.11	450,930.33	642,212.64
10,840.00	89.20	132.80	-4,244.33	7,695.33	-2,433.73	2,441.73	3,447.47	0.82	450,866.09	642,282.62
10,935.00	89.80	132.80	-4,245.16	7,696.16	-2,498.27	2,511.43	3,542.39	0.63	450,801.54	642,352.32
11,030.00	90.60	132.50	-4,244.82	7,695.82	-2,562.63	2,581.31	3,637.31	0.90	450,737.18	642,422.20
11,125.00	88.40	133.70	-4,245.65	7,696.65	-2,627.54	2,650.66	3,732.25	2.64	450,672.28	642,491.55
11,221.00	88.90	136.50	-4,247.92	7,698.92	-2,695.51	2,718.40	3,828.21	2.96	450,604.30	642,559.29
11,316.00	88.70	137.50	-4,249.91	7,700.91	-2,764.97	2,783.18	3,923.13	1.07	450,534.84	642,624.07
11,443.00	89.60	138.30	-4,251.79	7,702.79	-2,859.19	2,868.31	4,049.95	0.95	450,440.62	642,709.20
11,536.00	89.80	137.60	-4,252.28	7,703.28	-2,928.25	2,930.60	4,142.83	0.78	450,371.56	642,771.49
11,631.00	88.00	135.40	-4,254.10	7,705.10	-2,997.14	2,995.97	4,237.77	2.99	450,302.67	642,836.86
11,726.00	88.10	136.10	-4,257.33	7,708.33	-3,065.15	3,062.22	4,332.71	0.74	450,234.66	642,903.11
11,821.00	88.90	135.60	-4,259.82	7,710.82	-3,133.29	3,128.37	4,427.66	0.99	450,166.52	642,969.26
11,916.00	88.40	137.60	-4,262.06	7,713.06	-3,202.29	3,193.62	4,522.59	2.17	450,097.52	643,034.51
12,011.00	90.30	140.50	-4,263.14	7,714.14	-3,274.03	3,255.87	4,617.34	3.65	450,025.78	643,096.76
12,107.00	89.50	138.60	-4,263.30	7,714.30	-3,347.08	3,318.15	4,713.03	2.15	449,952.74	643,159.04
12,203.00	88.10	136.80	-4,265.31	7,716.31	-3,418.06	3,382.74	4,808.90	2.38	449,881.75	643,223.63
12,298.00	88.60	136.50	-4,268.05	7,719.05	-3,487.11	3,447.93	4,903.82	0.61	449,812.70	643,288.82



Company:	Bopco L.P.	Local Co-ordinate Reference:	Well Job # 1210266
Project:	Eddy County NM	TVD Reference:	WELL @ 3451.00usft (Latshaw #7)
Site:	Poker Lake Unit #319H	MD Reference:	WELL @ 3451.00usft (Latshaw #7)
Well:	Job # 1210266	North Reference:	Grid
Wellbore:	Latshaw #7	Survey Calculation Method:	Minimum Curvature
Design:	Latshaw #7	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)
12,393.00	89.00	136.20	-4,270.04	7,721.04	-3,555.84	3,513.49	4,998.77	0.53	449,743.97	643,354.38
12,488.00	90.10	135.70	-4,270.79	7,721.79	-3,624.11	3,579.54	5,093.76	1.27	449,675.70	643,420.43
12,583.00	90.70	135.20	-4,270.12	7,721.12	-3,691.81	3,646.18	5,188.75	0.82	449,608.00	643,487.07
12,679.00	89.90	134.70	-4,269.62	7,720.62	-3,759.63	3,714.12	5,284.75	0.98	449,540.18	643,555.01
12,774.00	89.70	134.80	-4,269.95	7,720.95	-3,826.51	3,781.59	5,379.75	0.24	449,473.30	643,622.48
12,869.00	91.10	134.60	-4,269.29	7,720.29	-3,893.33	3,849.11	5,474.74	1.49	449,406.48	643,690.00
12,964.00	90.00	134.90	-4,268.38	7,719.38	-3,960.21	3,916.57	5,569.73	1.20	449,339.60	643,757.46
13,059.00	90.50	137.00	-4,267.96	7,718.96	-4,028.49	3,982.62	5,664.71	2.27	449,271.33	643,823.51
13,155.00	88.50	134.70	-4,268.80	7,719.80	-4,097.36	4,049.48	5,760.69	3.17	449,202.45	643,890.37
13,250.00	85.50	133.10	-4,273.77	7,724.77	-4,163.13	4,117.82	5,855.53	3.58	449,136.68	643,958.71
13,345.00	86.60	133.90	-4,280.31	7,731.31	-4,228.37	4,186.57	5,950.27	1.43	449,071.44	644,027.46
13,441.00	87.20	134.00	-4,285.51	7,736.51	-4,294.90	4,255.58	6,046.11	0.63	449,004.91	644,096.47
13,537.00	88.90	133.10	-4,288.77	7,739.77	-4,361.00	4,325.12	6,142.02	2.00	448,938.81	644,166.01
13,632.00	89.20	132.50	-4,290.35	7,741.35	-4,425.54	4,394.81	6,236.93	0.71	448,874.27	644,235.70
13,727.00	89.00	131.20	-4,291.84	7,742.84	-4,488.91	4,465.57	6,331.77	1.38	448,810.90	644,306.46
13,822.00	89.30	131.60	-4,293.25	7,744.25	-4,551.73	4,536.82	6,426.57	0.53	448,748.08	644,377.71
13,917.00	89.90	131.80	-4,293.91	7,744.91	-4,614.92	4,607.75	6,521.41	0.67	448,684.89	644,448.64
14,013.00	89.00	134.60	-4,294.83	7,745.83	-4,680.63	4,677.72	6,617.35	3.06	448,619.18	644,518.61
14,108.00	88.40	133.90	-4,296.99	7,747.99	-4,746.90	4,745.75	6,712.32	0.97	448,552.91	644,586.64
14,203.00	90.60	135.10	-4,297.82	7,748.82	-4,813.48	4,813.50	6,807.30	2.64	448,486.33	644,654.39
14,298.00	89.60	133.60	-4,297.65	7,748.65	-4,879.89	4,881.43	6,902.29	1.90	448,419.93	644,722.32
14,393.00	88.10	133.40	-4,299.56	7,750.56	-4,945.26	4,950.32	6,997.24	1.59	448,354.55	644,791.21
14,489.00	90.00	134.40	-4,301.15	7,752.15	-5,011.82	5,019.48	7,093.20	2.24	448,287.99	644,860.37
14,584.00	90.40	133.50	-4,300.82	7,751.82	-5,077.75	5,087.88	7,188.18	1.04	448,222.06	644,928.77
14,679.00	90.20	134.70	-4,300.32	7,751.32	-5,143.86	5,156.10	7,283.17	1.28	448,155.95	644,996.99
14,774.00	89.80	134.10	-4,300.32	7,751.32	-5,210.33	5,223.97	7,378.16	0.76	448,089.49	645,064.86
14,869.00	89.80	134.00	-4,300.65	7,751.65	-5,276.38	5,292.25	7,473.15	0.11	448,023.43	645,133.14



Bopco LP, Survey Report



Company:	Bopco L P	Local Co-ordinate Reference:	Well Job # 1210266
Project:	Eddy County NM	TVD Reference:	WELL @ 3451.00usft (Latshaw #7)
Site:	Poker Lake Unit #319H	MD Reference:	WELL @ 3451.00usft (Latshaw #7)
Well:	Job # 1210266	North Reference:	Grid
Wellbore:	Latshaw #7	Survey Calculation Method:	Minimum Curvature
Design:	Latshaw #7	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)
14,965.00	88.10	129.80	-4,302.41	7,753.41	-5,340.46	5,363.67	7,568.96	4.72	447,959.35	645,204.56
15,060.00	89.10	131.10	-4,304.73	7,755.73	-5,402.08	5,435.94	7,663.63	1.73	447,897.73	645,276.83
15,155.00	88.40	130.90	-4,306.81	7,757.81	-5,464.39	5,507.62	7,758.38	0.77	447,835.42	645,348.51
15,250.00	89.00	132.00	-4,308.96	7,759.96	-5,527.26	5,578.81	7,853.17	1.32	447,772.55	645,419.70
15,346.00	89.80	134.10	-4,309.97	7,760.97	-5,592.78	5,648.95	7,949.10	2.34	447,707.03	645,489.84
15,440.00	88.80	131.60	-4,311.12	7,762.12	-5,656.70	5,717.85	8,043.02	2.86	447,643.11	645,558.74
15,536.00	90.00	132.80	-4,312.12	7,763.12	-5,721.18	5,788.96	8,138.89	1.77	447,578.63	645,629.85
15,631.00	90.50	133.20	-4,311.71	7,762.71	-5,785.97	5,858.44	8,233.83	0.67	447,513.84	645,699.33
15,726.00	89.50	130.70	-4,311.71	7,762.71	-5,849.47	5,929.09	8,328.69	2.83	447,450.34	645,769.98
15,821.00	90.20	131.80	-4,311.96	7,762.96	-5,912.10	6,000.51	8,423.48	1.37	447,387.71	645,841.40
Last Phoenix MWD Surveys @ 15821' MD										
15,886.00	90.20	131.80	-4,311.73	7,762.73	-5,955.43	6,048.97	8,488.38	0.00	447,344.38	645,889.86
Projection to TD @ 15886' MD										

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,836.00	6,835.53	-29.82	-2.12	Tie In From Surveys @ 6836' MD
6,894.00	6,893.51	-30.99	-1.69	First Phoenix MWD Surveys @ 6894' MD
15,821.00	7,762.96	-5,912.10	6,000.51	Last Phoenix MWD Surveys @ 15821' MD
15,886.00	7,762.73	-5,955.43	6,048.97	Projection to TD @ 15886' MD

Checked By: _____	Approved By: _____	Date: _____
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