

BOPCO, L.P.
201 MAIN ST.
FORT WORTH, TEXAS 76102-3131
817/390-8400

February 20, 2015

RECEIVED OGD

2015 FEB 24 A 9:24

FEDERAL EXPRESS

30-015-40155

Bureau of Land Management
Carlsbad District Office
620 E. Green St.
Carlsbad, New Mexico 88220
Attn: Mr. Ed Fernandez

New Mexico State Land Office
Commissioner of Public Lands
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501
Attention: Mr. Pete Martinez

New Mexico Oil Conservation Division
1220 St. Francis
Santa Fe, New Mexico 87505
Attention: Mr. William Jones

Re: Commercial Determination
PLU CVX JV BS #013H (35-24-30)
1st Bone Spring Shale
Eddy County, New Mexico

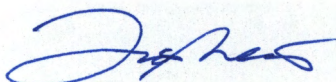
366

Gentlemen:

Please find attached hereto one (1) copy of Bass' commercial determination worksheets and exhibits which indicate that the subject well is a commercial well in the 1st Bone Spring Shale. Please indicate your concurrence to the above Commercial Determination. Upon your execution hereof, Bass will submit a participating area for the well.

Thank you very much and should you have any questions or comments in regard to the attached commercial determination, please do not hesitate to contact the undersigned.

Very truly yours,



R. Travis Mears

Bureau of Land Management

New Mexico State Land Office

New Mexico Oil Conservation Division

By: _____

By: _____

By: W. Jones

Its: _____

Its: _____

Its: Engineer

Date: _____

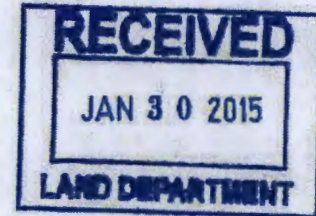
Date: _____

Date: 22 June 2015



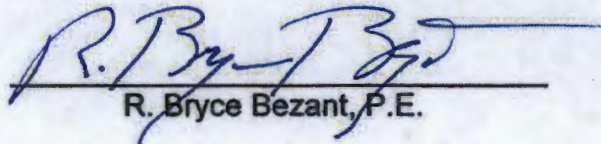
INTER-OFFICE MEMORANDUM

TO: Ross Sutton
FROM: Bryce Bezant
DATE: 1/20/2015
RE: Commercial Determination
PLU CVX JV BS #013H (35-24-30)
Poker Lake Unit (1ST Bone Spring Shale)
Eddy County, New Mexico



Attached are the worksheets and necessary exhibits for the subject well to be submitted for commercial determination. The Big Sinks #013H was drilled in 2012 to a total depth of 13,597' laterally and completed in the 1st Bone Spring Shale reservoir. The well is producing from perforations 9,128'-13,457'. On test 11/11/2012 the well flowed at the rate of 549 BOPD, 749 MCFD, and 1831 BWPD. This well has an expected recovery of approximately 389 MBOE (13:1 mcf/bbl) from the current completion.

The capital investment was taken from the AFE report and operating costs from the LIOR statement which included water hauling charges. The most recent strip price file was utilized adjusting for current area differentials. The Big Sinks #013H will be a commercial well and should be incorporated into a participating area.


R. Bryce Bezant, P.E.

RBB/tah

Cc: Andy Morrison
Tom McCarthy
Steve Johnson

ECONOMIC PROJECTION

Date: 1/23/2015

Lic: 1004615

2:28:59PM

Project Name: commercial determination

As Of Date: 05/01/2012

Lease Name: 1004615/PLU CVX JV BS/013H/1ST

Partner: All cases

Discount Rate (%): 5.00

Reserv Cat: Proved Producing

Case Type: LEASE CASE

Field: WILDCAT G-06 S243026M;B.S.

Archive Set: NS0714

1004615/PLU CVX JV BS/013H/1ST

Operator: BOPCO

Cum Oil (Mbbbl): 0.00

Reservoir: 1ST BONE SPRING SHALE

Cum Gas (MMcf): 0.00

Co., State: EDDY, NM

Risk: 0.000 Inherited/ 0.000 Compounded

Year	Gross Wet Production		Gross Dry Gas & NGL		Sales		
	Oil (Mbbbl)	Wet Gas (MMcf)	Dry Gas (MMcf)	NGL (Mgal)	Oil (Mbbbl)	Gas (MMcf)	NGL (Mgal)
2012	26.831	77.523	43.258	255.826	23.745	38.283	226.406
2013	56.132	430.561	240.253	1,420.851	49.677	212.624	1,257.453
2014	21.048	192.118	107.202	633.990	18.628	94.874	561.081
2015	15.989	154.141	86.010	508.664	14.150	76.119	450.167
2016	12.268	120.456	67.215	397.506	10.857	59.485	351.793
2017	10.000	99.220	55.365	327.427	8.850	48.998	289.773
2018	8.506	84.972	47.414	280.408	7.527	41.962	248.161
2019	7.429	74.572	41.611	246.087	6.575	36.826	217.787
2020	6.630	66.790	37.269	220.408	5.868	32.983	195.061
2021	5.970	60.304	33.650	199.003	5.283	29.780	176.118

Rem	63.816	646.263	360.615	2,132.638	56.477	319.144	1,887.385
Total	234.619	2,006.920	1,119.862	6,622.809	207.638	991.078	5,861.186
Ult	234.619	2,006.920					

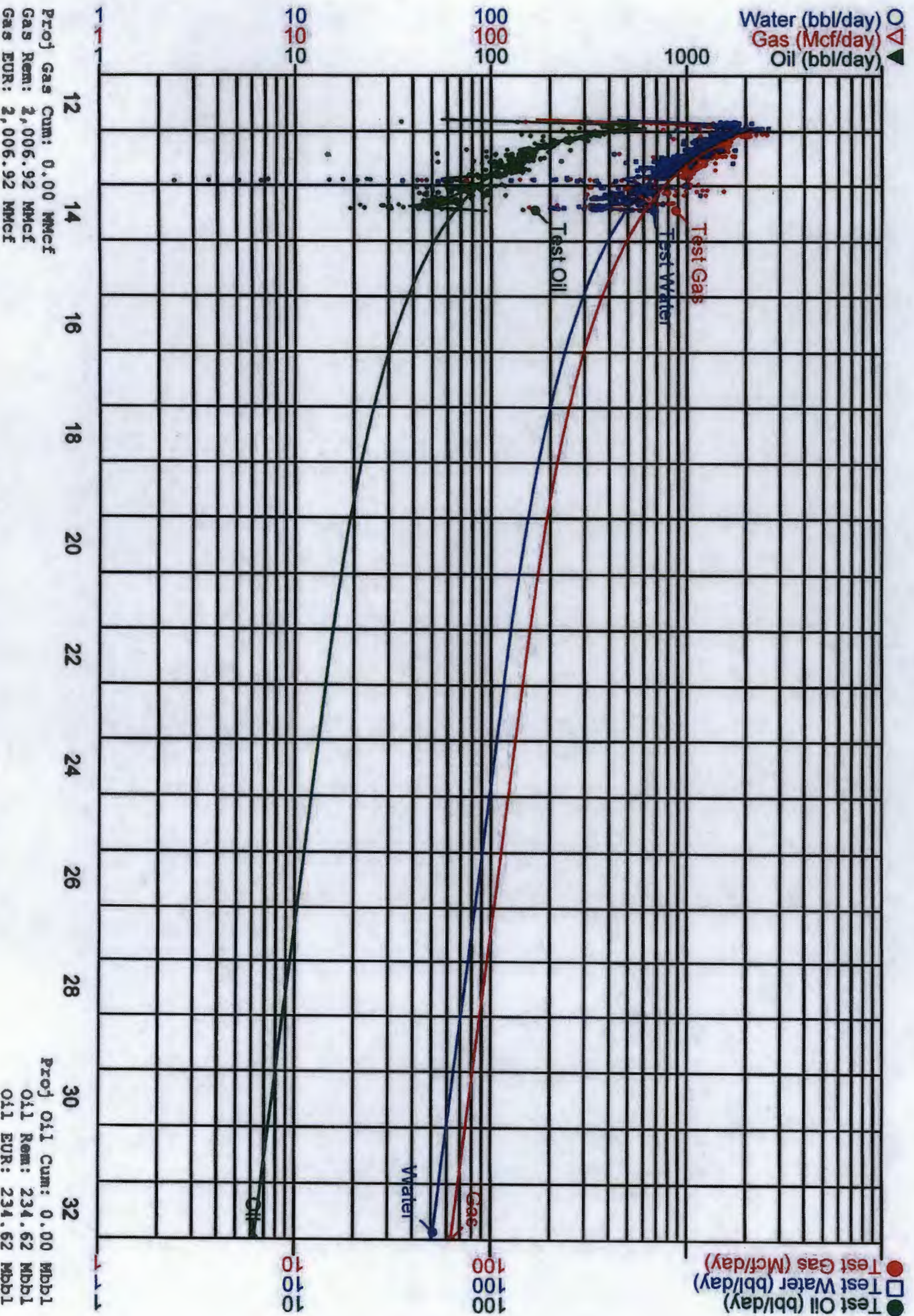
Year	Average Price			Net Revenue			
	Oil (\$/bbl)	Gas (\$/Mcf)	NGL (\$/gal)	Oil (M\$)	Gas (M\$)	NGL (M\$)	Total (M\$)
2012	78.51	3.27	0.75	1,864.24	125.08	169.80	2,159.12
2013	87.21	3.33	0.75	4,332.29	708.20	943.09	5,983.58
2014	88.28	4.48	0.89	1,644.45	425.50	499.68	2,569.62
2015	80.97	3.91	0.81	1,145.82	297.79	365.73	1,809.34
2016	75.62	3.77	0.80	821.06	224.50	281.29	1,326.85
2017	72.74	3.81	0.80	643.72	186.61	231.70	1,062.03
2018	71.05	3.86	0.80	534.86	162.16	198.43	895.44
2019	69.91	3.93	0.80	459.61	144.89	174.14	778.64
2020	69.41	4.04	0.80	407.29	133.16	155.97	696.42
2021	69.16	4.12	0.80	365.40	122.61	140.82	628.83
Rem	69.02	4.39	0.80	3,897.79	1,400.28	1,509.12	6,807.20
Total	77.62	3.97	0.80	16,116.53	3,930.77	4,669.77	24,717.07

Year	Expenditures				Future Net Revenue			
	Total Sev Taxes (M\$)	Total Adv Taxes (M\$)	Net Investments (M\$)	Total Net Opcosts (M\$)	Annual (M\$)	Cumulative (M\$)	Disc. Ann. CF 5.00 % (M\$)	Cum. Disc. CF 5.00 % (M\$)
2012	7.44	0.32	7,645.44	1.49	-5,495.56	-5,495.56	-5,493.90	-5,493.90
2013	441.26	18.84	0.00	2,448.35	3,075.12	-2,420.44	2,936.14	-2,557.76
2014	191.34	8.09	0.00	351.21	2,018.99	-401.45	1,818.28	-739.48
2015	134.83	5.69	0.00	406.14	1,262.68	861.23	1,084.04	344.56
2016	99.04	4.17	0.00	372.46	851.18	1,712.41	695.50	1,040.06
2017	79.38	3.34	0.00	351.22	628.08	2,340.49	488.61	1,528.67
2018	67.00	2.82	0.00	336.97	488.65	2,829.14	362.00	1,890.67
2019	58.31	2.45	0.00	326.57	391.31	3,220.45	276.06	2,166.73
2020	32.18	2.19	0.00	318.79	323.25	3,543.71	217.16	2,383.89
2021	47.14	1.98	0.00	312.30	267.41	3,811.12	171.08	2,554.97
Rem	510.76	21.41	0.00	8,979.78	-2,704.75	-2,704.75	-248.30	-248.30
Total	1,688.67	71.30	7,645.44	14,205.29	1,106.37	1,106.37	2,306.67	2,306.67

Major Phase:	Gas	Working Int:	1.00000000	Present Worth Profile (M\$)	
Perfs:	0	Revenue Int:	0.88500000		
Initial Rate:	45,894.00 Mcf/month	Disc. Initial Invest. (m\$):	7,583.395	5.00%:	2,306.67
Abandonment:	304.17 Mcf/month	Internal ROR (%):	22.80	9.00%:	1,844.03
Initial Decline:	87.00 % year b = 1.200	ROI Investment (disc/undisc):	1.30 / 1.14	10.00%:	1,693.39
Beg Ratio:	0.27 bbl/Mcf	Years to Payout:	2.93	12.00%:	1,387.97
End Ratio:	0.10 bbl/Mcf	Abandonment Date:	01/26/2055	15.00%:	948.55
Forecast Start:	12/01/2012			20.00%:	307.71
		Initial	1st Rev.	30.00%:	-653.57
		Working Interest:	0.00000000	40.00%:	-1,322.86
		Revenue Interest:	0.88500000	50.00%:	-1,813.06
		Rev. Date:		60.00%:	-2,187.05

1004615/PLU CVX JV BS/013H/1ST
 Oper: BOPCO
 Reservoir: 1ST BONE SPRING SHALE

Field: WILDCAT G-06 S243026M/B.S.
 EDDY, NM
 ECL Date: 01/26/2055



WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL PLU CVX JV BIG SINKS #013H (35-24-30) **FORMATION** BONE SPRING
LOCATION UNIT, 360 **FEET FROM NORTH LINE &** 1980 **FEET FROM WEST LINE**
SECTION 35 **TOWNSHIP** 24S **RANGE** 30E **COUNTY** Eddy **NEW MEXICO**
SPUD DATE 8/13/2012 **COMPLETION DATE** 10/17/2012 **INITIAL PRODUCTION** 11/11/2012
PERFORATIONS 9128-13457
BHL: 100' FSL & 1980' FWL SEC 35 T24S R30E

STIMULATION:

ACID _____

FRACTURE See Attached

POTENTIAL (11/11/2012): 549 BOPD, 749 MCFPD, 1631 BWPD

(Attach Copy of C-105. Attach Copy of Wellbore Sketch of Completed Well.)

VOLUMETRIC CALCULATION

	SANDS PERFORATED		POTENTIALLY PRODUCTIVE	
Area (A) proration unit size, acres	<u>160</u>	_____	_____	_____
Porosity (Φ), %	<u>8.8%</u>	_____	_____	_____
Water saturation (Sw), %	<u>23%</u>	_____	_____	_____
Net Thickness (H), ft	<u>65</u>	_____	_____	_____
Temperature (T), Fahrenheit	<u>140</u>	_____	_____	_____
Bottom Hole pressure (P), psia	<u>4,370</u>	_____	_____	_____
Recovery factor (RF), %	<u>12%</u>	_____	_____	_____
Recoverable oil, MBO *(See eq. below)	<u>1,115.3</u>	_____	_____	_____

*Sometimes unable to match performance due to volumetric uncertainty or low recovery efficiency of shale gas wells.

Formula = $((7758 \text{ rb/ac-ft}) (\text{por}) (1-S_w) (\text{BoI rbo/stb})(RF)(A) (h))/1000 \text{ bo/Mbo}$
 BoI = 1.70 rb/stb

PERFORMANCE DATA

(If sufficient history exists, attach plot of oil production rate v time.)

CUMULATIVE PRODUCTION TO 12/31/2014 105,357 BBL Oil 720,167 MCF Gas
INITIAL RATE (qi) 500 BOPD
ECONOMIC LIMIT (qi) 1 BOPD
HYPERBOLIC DECLINE RATE, dy n=1.2, d=99%/yr
REMAINING MCF (Q) = 130
ULTIMATE RECOVERABLE MBO 234

(Attach plot showing proration unit and participating area.)

ECONOMIC

GROSS WELL COST \$1,459,566 (to the depth of formation completed)

COMPLETION COST \$2,189,380

GROSS TOTAL COST \$3,648,946

YEAR	GROSS OIL MBO	8F1T NET INCOME (\$M)	OPERATING COST (\$M) INCL SEV & AD VAL TAX	5% NET 8F1T DISCOUNTED CASH FLOW
ZERO				
1	26.831	2159.1	9.3	-5493.9
2	56.132	5983.6	2908.5	2938.1
3	21.048	2509.6	550.6	1618.3
4	15.989	1809.3	546.7	1064.0
5	12.268	1326.9	475.7	695.5
6	10.000	1062.0	433.9	488.6
7	8.506	895.4	406.8	362.0
8	7.429	778.6	387.3	276.1
9	6.630	696.4	373.2	217.2
10	5.970	628.8	361.4	171.1
REMAINDER	63.816	6807.2	9512.0	-248.3
TOTAL	234.619	24717.1	15966.3	2306.7

WELL IS COMMERCIAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0137
Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
1b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resrv.,
Other:

2. Name of Operator
BOPCO, L.P.

3. Address
P O Box 2760 Midland TX 79707

3a. Phone No. (include area code)
(432) 683-2277

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface NENW UL C Sec.25 T24S R30E 360' FNL 1980' FWL

At top prod. interval reported below

At total depth SESW UL N Sec.35 T24S R30E 151' FSL 1992' FWL

14. Date Spudded 08/13/2012

15. Date T.D. Reached 09/04/2012

16. Date Completed 10/17/2012

17. Elevations (DF, RKB, RT, GL)*

18. Total Depth: MD 13,597
TVD 9128.31

19. Plug Back T.D.: MD
TVD

20. Depth Bridge Plug Set: MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
Caliper, CN, Induction

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit report)
Directional Survey? ☐ No ☒ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (H/L)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17 1/2	13 3/8 J55	48	0	1510'		2,000		Circulated	
11	8 5/8 J55	32	0	3843'		1,655		Circulated	
7 7/8	5 1/2 P-110	17	0	13,597'		1,900		4800'	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 7/8	8495'							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Bone Spring	9,128	13,457	9,128 - 13,457	Frac	Port	Producing
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
9,128 - 13,457	121,000 gals. 100 Mesh; 323,880 gals. 20/40 Super LC; 1,354,080 Lbs. 30/50 North White Sand; 349 gals. 15% HCL; 10,008 gals. 20# Linear Gel; 9521 gals. 20# X Link Gel

RECLAMATION

DIR 4-17-13

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
10/30/12	11/11/12	24	→	549	749	1,831			Flows from Well
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
46	800		→	549	749	1,831	1364	POW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						DEC 8 2012
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)

ACCEPTED FOR RECORD

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Am

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29. Disposition of Gas (Solid, used for fuel, vented, etc.)

SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Rustler	599'				
Sak	1,170'				
Delaware	3,961'				
Bell Canyon	4,002'				
Cherry Canyon	4,907'				
Brushy Canyon	6,499'				
Bone Spring	7,814'				
1st Bone Spring	8,731'				
Sand					

32. Additional remarks (include plugging procedure):

2 7/8" 7.9 ppf L-80 8rd tubing.

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☐ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Vanesa R. Espinoza

Title Regulatory Clerk

Signature *Vanesa R. Espinoza*

Date 11/27/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

(Form 3160-4, page 2)

RECEIVED

NOV 30 2012

NMOCD ARTESIA

Form C-108

Revised August 3, 2011

DISTRICT I

1425 N. French Dr., Hobbs, NM 88240
Phone (505) 338-0101 Fax: (505) 363-0700

DISTRICT II

811 S. First St., Artesia, NM 88210
Phone (505) 748-1200 Fax: (505) 738-0000

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-0170 Fax: (505) 334-0170

DISTRICT IV

1200 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3400 Fax: (505) 476-3400

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Submit one copy to appropriate District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

(surf loc change)

API Number 30-015-40155	Pool Code 97798	Pool Name WILDCAT; G-O6 S243026M; BONE SPRING
Property Code 39512	Property Name PLU BIG SINKS 35 24 30 USA	Well Number 1H
OGHD No. 147179	Operator Name CHESAPEAKE OPERATING CO.	Elevation 3346'

Surface Location

UL or lot No.	Section	Township	Range	Lot 14n	Feet from the	North/South line	Feet from the	East/West line	County
C	35	24 S	30 E		360	NORTH	1980	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot 14n	Feet from the	North/South line	Feet from the	East/West line	County
N	35	24 S	30 E		100	SOUTH	1980	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
161.45			

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

<p>Project Area</p> <p>Producing Area</p> <p>Proposed Penetration Point 330' FSL & 1980' FWL</p>	<p>SURFACE LOCATION</p> <p>Lat - N 32.180642570° Long - W 103.853872648° NMSPCE- E 689873.210 (NAD-83)</p> <p>Lat - N 32.180518966° Long - W 103.853389175° NMSPCE- N 429724.450 E 848488.670 (NAD-27)</p>	<p>OPERATOR CERTIFICATION</p> <p>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 unless 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.</p> <p><i>Bryan Arrant</i> 11/30/2012 Signature Date Bryan Arrant</p> <p>Printed Name bryan.arrant@chik.com</p> <p>Email Address</p>
	<p>PROPOSED BOTTOM HOLE LOCATION</p> <p>Lat - N 32.167408483° Long - W 103.853716894° NMSPCE- N 424968.822 E 689742.894 (NAD-83)</p> <p>Lat - N 32.167284632° Long - W 103.853231975° NMSPCE- N 424916.388 E 848558.787 (NAD-27)</p>	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date Surveyed Signature of Professional Surveyor Certificate No. Gary L. Jones 7877</p> <p>BASIN SURVEYS 26749</p>

Downhole Profile - Vertical Wells

Well Name: POKER LAKE UNIT CVX JV BS #013H (35-24-30)

Field: Wildcat - Bone Spring

BOPCO, L.P. - West Texas

Well ID: 30-015-40155

Sect: 35 Town: 24S Rng: 30E County: Eddy State: New Mexico

Surface Location: 150' FNL & 1,990' FWL, Section 35-24S-30E

[illegible]



Schematic - Vertical Production

BOPCO, L.P. - West Texas

Well Name: POKER LAKE UNIT CVX JV BS #013H (35-24-30)

Well ID: 30-015-40155

Field: Wildcat - Bone Spring

Sect: 35 Town: 24S Rng: 30E Eddy Co., State: New Mexico

Blk: Survey:

Most Recent Job

Job Category	Primary Job Type	Secondary Job Type	Job Start Date	Job End Date
Maintenance	Sub Pump	Pump Repair	11/3/2014	11/5/2014

