

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

February 20, 2015

RECEIVED OCD

2015 FEB 24 A 9:25

FEDERAL EXPRESS

30-015-39932

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 Phantom Banks #002H (3-26-30)
Lower Avalon Shale
Eddy County, New Mexico

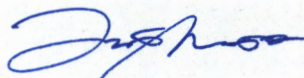
366

Gentlemen:

Please find attached hereto one (1) copy of Bass' commercial determination worksheets and exhibits which indicate that the subject well is not a commercial producer in the Lower Avalon Shale. Should you be in agreement that the Lower Avalon Shale is not commercial, please signify by executing one (1) copy of this letter in the space provided below and returning same to the undersigned at your earliest convenience.

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: William Jones

Its: _____

Its: _____

Its: Ernie

Date: _____

Date: _____

Date: 22 June 2015

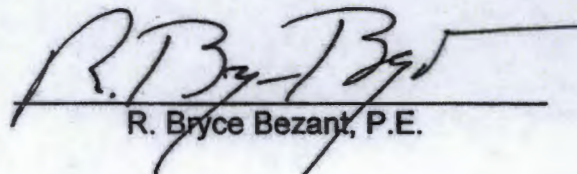


INTER-OFFICE MEMORANDUM

TO: Ross Sutton
FROM: Bryce Bezant
DATE: 1/14/2015
RE: Commercial Determination
PLU CVX JV Phantom Banks #002H (3-26-30)
Poker Lake Unit (Lower Avalon Shale)
Eddy County, New Mexico

Attached are the worksheets and necessary exhibits for the subject well to be submitted for commercial determination. The PLU CVX JV PB #002H was drilled in 2012 to a total depth of 12,963' laterally completed in the Lower Avalon Shale reservoir. The well is producing from perforations 8,644'-12,992'. On test 3/30/2012 the well flowed at the rate of 72 BOPD, 375 MCFD, and 1236 BWPD. This well has an expected recovery of approximately 118 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 Phantom Banks #002H will not be a commercial well and should not be incorporated into a participating area.


R. Bryce Bezant, P.E.

RBB/tah

Cc: Andy Morrison
Tom McCarthy
Steve Johnson

ECONOMIC PROJECTION

Date: 1/14/2015

Libr: 1004702

1:56:46PM

Project Name: commercial determination

As Of Date: 05/01/2012

Lease Name: 1004702/PLU CVX JV PB/002H/LOW

Partner: All cases

Discount Rate (%): 5.00

Reserv Cat: Proved Producing

Case Type: LEASE CASE

1004702/PLU CVX JV PB/002H/LOW

Field: WILDCAT G-03 S263016K; BONE SPRING

Archive Set: NS0714

Operator: BOPCO

Cum Oil (Mbbbl): 0.00

Reservoir: LOWER AVALON 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	12.896	105.512	46.425	305.985	11.916	42.897	282.730
2013	8.477	124.732	54.882	361.723	7.833	50.711	334.232
2014	8.934	123.906	54.519	359.327	8.255	50.375	332.018
2015	6.768	95.478	42.010	276.887	6.254	38.818	255.844
2016	5.108	77.160	33.950	223.764	4.720	31.370	206.758
2017	4.086	64.456	28.361	186.923	3.776	26.205	172.717
2018	3.413	55.471	24.407	160.867	3.154	22.552	148.641
2019	2.931	48.689	21.423	141.197	2.708	19.795	130.466
2020	2.575	43.498	19.139	126.145	2.379	17.685	116.558
2021	2.285	39.115	17.211	113.435	2.111	15.903	104.814

Rem	0.630	10.875	4.785	31.537	0.583	4.421	29.140
Total	58.103	788.893	347.113	2,287.789	53.687	320.732	2,113.917
It	58.103	788.893					

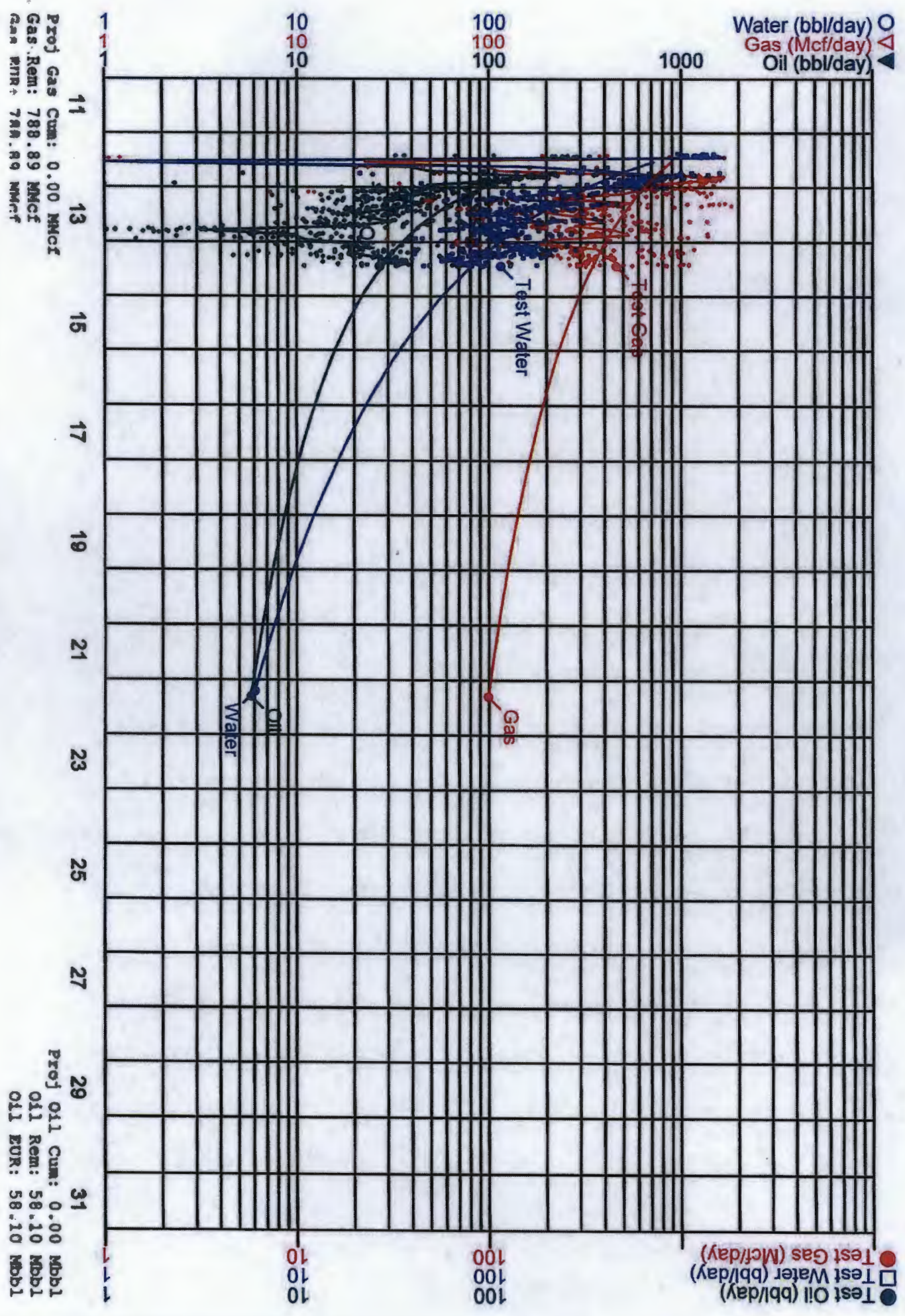
Year	Average Price			Net Revenue			
	Oil (\$/bbl)	Gas (\$/Mcf)	NGL (\$/gal)	Oil (M\$)	Gas (M\$)	NGL (M\$)	Total (M\$)
2012	81.65	2.99	0.75	972.99	128.39	212.05	1,313.43
2013	90.30	3.35	0.75	707.29	169.88	250.67	1,127.83
2014	91.88	4.63	0.88	758.51	233.48	292.89	1,284.88
2015	83.90	3.98	0.81	524.66	154.50	207.79	886.95
2016	78.35	3.84	0.80	369.81	120.56	165.32	655.69
2017	75.36	3.88	0.80	284.54	101.64	138.10	524.28
2018	73.61	3.94	0.80	232.15	88.76	118.85	439.76
2019	72.42	4.01	0.80	196.11	79.32	104.32	379.75
2020	71.91	4.11	0.80	171.06	72.71	93.20	336.97
2021	71.65	4.19	0.80	151.24	66.68	83.81	301.73
Rem	71.50	4.38	0.80	41.65	19.35	23.30	84.31
Total	82.14	3.85	0.80	4,410.01	1,235.29	1,690.30	7,335.60

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	81.64	3.48	6,328.13	368.07	-5,467.90	-5,467.90	-5,486.25	-5,486.25
2013	84.10	3.55	0.00	615.91	424.28	-5,043.61	405.61	-5,080.64
2014	96.21	4.04	0.00	267.37	917.25	-4,126.36	825.11	-4,255.54
2015	66.41	2.79	0.00	272.19	545.56	-3,580.80	468.50	-3,787.04
2016	49.25	2.06	0.00	264.82	339.57	-3,241.23	277.57	-3,509.48
2017	39.47	1.65	0.00	260.82	222.34	-3,018.89	173.06	-3,336.42
2018	33.16	1.38	0.00	258.46	146.75	-2,872.14	108.79	-3,227.63
2019	28.68	1.19	0.00	256.93	92.95	-2,779.19	65.64	-3,161.99
2020	25.47	1.06	0.00	255.90	54.54	-2,724.65	36.70	-3,125.28
2021	22.82	0.95	0.00	255.15	22.82	-2,701.83	14.65	-3,110.64
Rem	6.38	0.26	0.00	74.56	3.10	3.10	1.93	1.93
Total	533.60	22.42	6,328.13	3,150.18	-2,698.73	-2,698.73	-3,108.71	-3,108.71

Major Phase:	Gas	Working Int:	1.00000000	Present Worth Profile (M\$)	
Perfs:	0 0	Revenue Int:	0.92400000		
Initial Rate:	23.00 Mcf/month	Disc. Initial Invest. (m\$):	6,328.134	5.00%:	-3,108.71
Abandonment:	3,023.45 Mcf/month	Internal ROR (%):	>1000.0	9.00%:	-3,373.94
Initial Decline:	55.82 % year b = 1.000	ROI Investment (disc/undisc):	0.51 / 0.57	10.00%:	-3,433.24
3eg Ratio:	0.00 bbl/Mcf	Years to Payout:	0.00	12.00%:	-3,544.53
2nd Ratio:	0.06 bbl/Mcf	Abandonment Date:	04/18/2022	15.00%:	-3,695.24
Forecast Start:	07/01/2012			20.00%:	-3,910.42
		Initial	1st Rev.	30.00%:	-4,241.40
		Working Interest:	1.00000000	40.00%:	-4,482.82
		Revenue Interest:	0.92400000	50.00%:	-4,666.01
		Rev. Date:		60.00%:	-4,809.49

1004702/PLD CVX JV PB/002H/LOW
 Oper: BOPCO
 Reservoir: LOWER AVALON SHALE

Field: WILDCAT G-03 S263016K; BONE SPRING
 EDDY, NM
 ECL Date: 04/18/2022



WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL PLU CVX JV Phantom Banks #002H (3-26-30) FORMATION LOWER AVALON SHALE
 LOCATION UNIT, 300 FEET FROM SOUTH LINE & 1990 FEET FROM EAST LINE
 SECTION 2 TOWNSHIP 26S RANGE 30E COUNTY Eddy NEW MEXICO
 SPUD DATE 3/25/2012 COMPLETION DATE 5/12/2012 INITIAL PRODUCTION 5/30/2012
 PERFORATIONS 8644-12922
 BNL: 232' FNL & 1979' FEL SEC 3 T26S R30E

STIMULATION:

ACID _____

 FRACTURE See Attached

POTENTIAL (40998): 72 BOFPD, 375 MCFFD, 1236 BWPD

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

VOLUMETRIC CALCULATION

	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	<u>160</u>	_____
Porosity (ϕ), %	<u>16%</u>	_____
Water saturation (S_w), %	<u>11%</u>	_____
Net Thickness (H), ft	<u>110</u>	_____
Temperature (T), Fahrenheit	<u>120</u>	_____
Bottom Hole pressure (P), psia	<u>3,775</u>	_____
Recovery factor (RF), %	<u>60%</u>	_____
SHRINKAGE (f_g)	<u>96%</u>	_____
Recoverable gas, BCF *(See eq. below)	<u>19.5</u>	_____

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

Formula = $((43.560 \text{ MCF/sc-ft}) (\text{por}) (1-S_w)(RF)(Bgl \text{ scf/mcf})(f_g)(A) (h))/1000 \text{ MCF/MMCF}$ Bgl = 271.06 SCF/RCF

PERFORMANCE DATA

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

CUMULATIVE PRODUCTION TO	_____	BBL Oil	_____	MCF Gas
INITIAL RATE (q)	_____	881	_____	
ECONOMIC LIMIT (q)	_____	10 MCFD	_____	
HYPERBOLIC DECLINE RATE, d_y	_____	$n=1.0, d=55.6\%/yr$	_____	
REMAINING MCF (Q) =	_____	0	_____	
ULTIMATE RECOVERABLE MCF	_____	768,892	_____	

(Attach plot showing proration unit and participating area.)

ECONOMIC

GROSS WELL COST \$2,404,689 (to the depth of formation completed)

COMPLETION COST \$3,923,441

GROSS TOTAL COST \$6,328,130

YEAR	GROSS MCF MMCF	BFIT NET INCOME (\$M)	OPERATING COST (\$M) INCL SEV & AD VAL TAX	5% NET BFIT DISCOUNTED CASH FLOW
ZERO				
1	105,512	1313.4	453.2	-548.3
2	124,732	1127.9	703.6	405.6
3	123,906	1284.9	367.6	825.1
4	95,475	887.0	341.4	468.5
5	77,160	655.7	315.1	277.6
6	64,456	524.3	301.9	173.1
7	55,471	439.8	293.0	108.8
8	48,689	379.8	286.8	65.6
9	43,498	337.0	282.4	38.7
10	39,115	301.7	278.9	14.7
REMAINDER	10,875	84.3	81.2	1.9
TOTAL	768,892	7335.8	3708.2	-3108.7

WELL IS NOT COMMERCIAL

Confidential
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB No 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMLC069513A

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.
891000303X8. Lease Name and Well No.
PLU PHANTOM BANKS 3 26-30 USA 1H9. API Well No
30-015-39932-00-S110. Field and Pool, or Exploratory
WILDCAT11. Sec., T., R., M., or Block and Survey
or Area Sec 3 T26S R30E Mer NMP12. County or Parish
EDDY 13 State
NM17. Elevations (DF, KB, RT, GL)*
3389 GL1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
1b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Reavv
Other2. Name of Operator
CHESAPEAKE OPERATING INC Contact ERIN CARSON
E-Mail: erin.carson@chk.com3. Address
OKLAHOMA CITY, OK 73154-0496 3a. Phone No. (include area code)
Ph: 405-935-2896

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

At surface SWSE 300FSL 1980FEL

At top prod interval reported below SWSE 803FSL 1979FEL

At total depth NWNE 232FNL 1979FEL

14. Date Spudded
03/25/2012 15. Date T.D. Reached
04/13/201216. Date Completed
☐ D & A ☒ Ready to Prod.
05/12/201218. Total Depth: MD 12963
TVD 8327 19. Plug Back T.D.: MD
TVD 20. Depth Bridge Plug Set: MD
TVD21. Type Electric & Other Mechanical Logs Run (Submit copy of each) 22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13 375 H-40	48.0	0	1430		2200		0	
11.000	8 625 J-55	32.0	0	3698		1950		30	
7.875	5.500 L-80	20.0	0	12957		1850		3200	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	0	7750						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No Holes	Perf Status
A) BONE SPRING			8644 TO 12922			open
B) AVALON SAND	8644	12922				
C)						
D)						

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

Depth Interval	Amount and Type of Material
8644 TO 12922	gal 15% HCL, 52288 bbls, 2817020# sand
8644 TO 12922	ACID- 21,360 GAL, PROPPANT- 2,617,020,LBS, CLEAN FLUID- 52,288 BBL

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
05/30/2012	03/30/2012	24	→	72.0	375.0	1236.0			FLOW FROM WELL
Choke Size	Thg Press Flng SI	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well Status	
32/84	SI	520.0	→	72	375	1236	5208	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
05/30/2012	03/30/2012	24	→	72.0	375.0	1236.0			FLOW FROM WELL
Choke Size	Thg Press Flng SI	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well Status	
32/84	SI	520.0	→	72	375	1236		POW	

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #140430 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICERECEIVED
JUN 26 2012

NMOCD ARTESIA

RECEIVED
JUN 26 2012

NMOCD ARTESIA

RECLAMATION
DUE 11-12-12

ACCEPTED FOR RECORD

JUN 26 2012

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	Fig Press Flow St	Cog 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	Fig Press Flow St	Cog Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.) CAPTURED
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	1317
				TOP SALT	1637
				BASE OF SALT	3514
				BELL CANYON	3746
				CHERRY CANYON	4860
				BONE SPRING	7574
				FIRST BONE SPRING SAND	8512

32. Additional remarks (include plugging procedure)

52. Continued. SECOND BONE SPRING CARBONATE 8946

LOGS SENT VIA UPS OVERNIGHT

CHK PN 640121

33. Circle enclosed attachments.

- | | | | |
|--|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notices for plugging and cement verification | 6. Core Analysis | 7. Other | |

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

Electronic Submission #140430 Verified by the BLM Well Information System.
For CHESAPEAKE OPERATING INC, sent to the Carlsbad
Committed to AFMSS for processing by KURT SIMMONS on 06/18/2012 (12KMS2374SE)

Name (please print) ERIN CARSON

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 06/12/2012

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.

**** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ****

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone: (575) 393-6161 Fax: (575) 393-0720
 District II
 811 S. First St., Arco, NM 88210
 Phone: (575) 748-1283 Fax: (575) 748-9720
 District III
 1000 Rio Brazos Road, Aztec, NM 87410
 Phone: (505) 334-6178 Fax: (505) 334-6170
 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

Effective 04/01/14

API Number 30-015-39932		Pool Code 97863	Pool Name WC 8-05 S263001A; Bone Spring
Property Code 313363	Property Name Poker Lake Unit CVX JV PB		Well Number 2H
OGRID No. 260737	Operator Name BOPCO, LP		Elevation 3163

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	3	26S	30E		300	South	1980	East	Eddy

Bottom Hole Location If Different From Surface

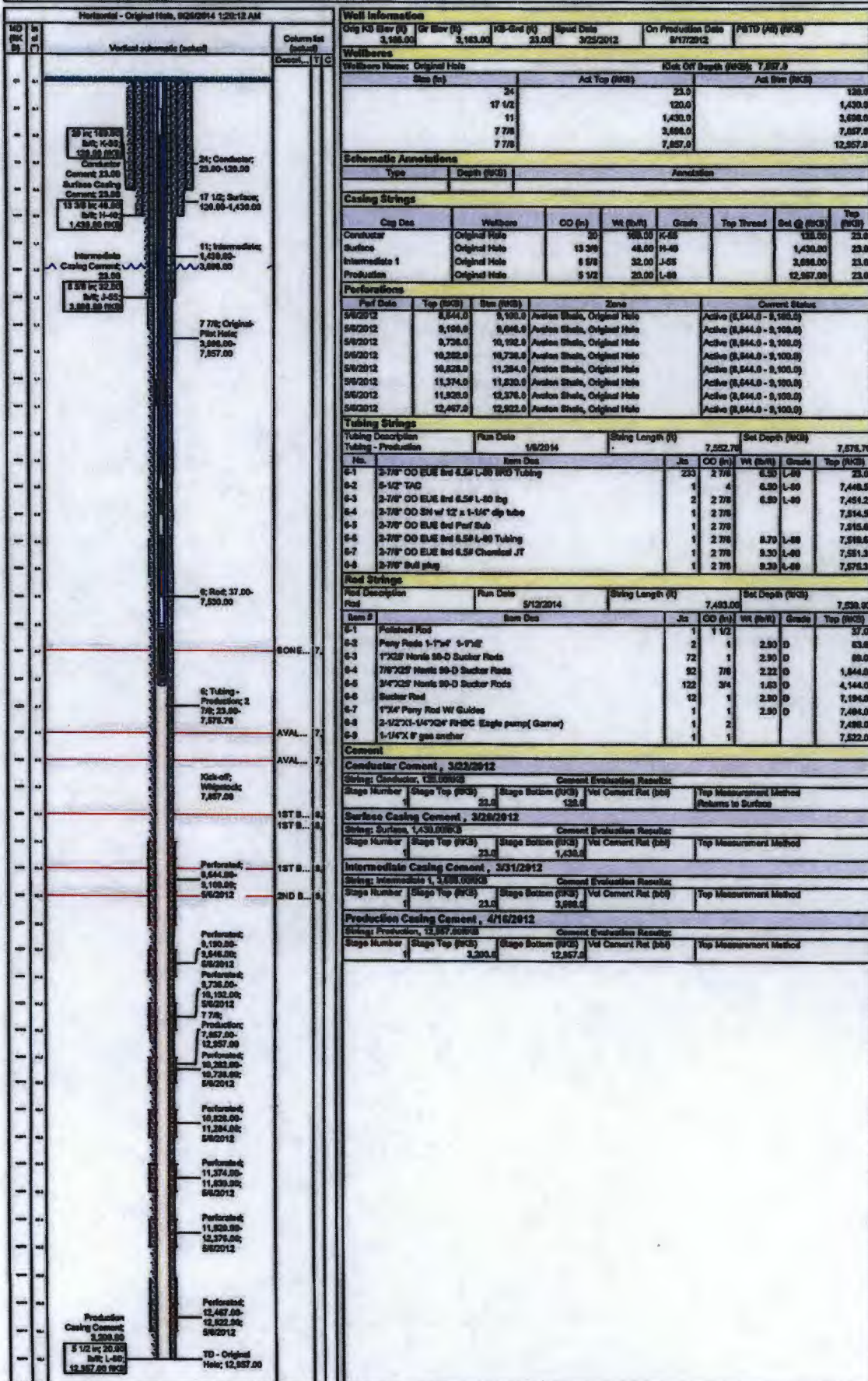
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	3	26S	30E		232	North	1979	East	Eddy

Dedicated Acres 160	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 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. <i>Tracie J Cherry</i> Signature Date
	Tracie J Cherry Printed Name tcherry@bassnet.com E-mail 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 of Survey Signature and Seal of Professional Surveyor: Certificate Number

Surface Location: 300' FSL & 1980' FEL, Sec 3, T26S, R30E





Schematic - Vertical Production

Well Name: POKER LAKE UNIT CVX JV PB #002H (03-26-30)

Field: Wildcat - Bone Spring

BOPCO, L.P. - West Texas

Well ID: 30-015-39932

Sect: 3 Town: 26S Rng: 30E Eddy Co., State: New Mexico

Bkt: Survey:

Most Recent Job

Job Category	Primary Job Type	Secondary Job Type	Job Start Date	Job End Date
Maintenance	Tubing	Tubing Repair	9/15/2014	

