

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

30-015-39846

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 #010H (24-24-30)
1st Bone Spring Shale
Eddy County, New Mexico

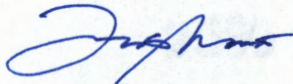
366

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: William Jones

Its: _____

Its: _____

Its: Engineer

Date: _____

Date: _____

Date: 22 June 2015




INTER-OFFICE MEMORANDUM

TO: Ross Sutton
FROM: Bryce Bezant
DATE: 1/12/2015
RE: Commercial Determination
PLU CVX JV BS #010H (24-24-30)
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 #010H was drilled in 2012 to a total depth of 13,966' laterally and completed in the 1st Bone Spring Shale reservoir. The well is producing from perforations 9,606'-13,931'. On test 5/23/2012 the well flowed at the rate of 417 BOPD, 1045 MCFD, and 1430 BWPD. This well has an expected recovery of approximately 413 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 #010H 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: 1/13/2015

Licor: 1004611

1:51:25PM

Project Name: commercial determination
Partner: All cases
Case Type: LEASE CASE
Archive Set: NS0714

Cum Oil (Mbbbl): 0.00
Cum Gas (MMcf): 0.00

As Of Date: 05/01/2012
Discount Rate (%): 5.00

1004611/PLU CVX JV BS/010H/1ST

Lease Name: 1004611/PLU CVX JV BS/010H/1ST
Reserv Cat: Proved Producing
Field: WILDCAT G-06 S243026M; BONE SPRING
Operator: BOPCO
Reservoir: BONE SPRING
Co., State: EDDY, NM
Risk: 0.000 Inherited/ 0.000 Compounded Sales

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	57.083	188.993	113.396	604.778	54.514	108.293	577.563
2013	49.513	410.434	246.260	1,313.389	47.285	235.179	1,254.286
2014	26.324	190.120	114.072	608.383	25.139	108.939	581.005
2015	18.596	153.900	92.340	492.481	17.759	88.185	470.320
2016	14.644	120.932	72.559	386.983	13.985	69.294	369.569
2017	12.116	99.934	59.961	319.790	11.571	57.262	305.399
2018	10.407	85.765	51.459	274.449	9.939	49.144	262.099
2019	9.153	75.381	45.229	241.220	8.741	43.193	230.365
2020	8.210	67.591	40.555	216.292	7.841	38.730	206.559
2021	7.422	61.080	36.648	195.457	7.088	34.999	186.662

Term	54.995	452.458	271.475	1,447.864	52.520	259.258	1,382.711
Total	268.463	1,906.590	1,143.954	6,101.087	256.382	1,092.476	5,826.538
Net	268.463	1,906.590					

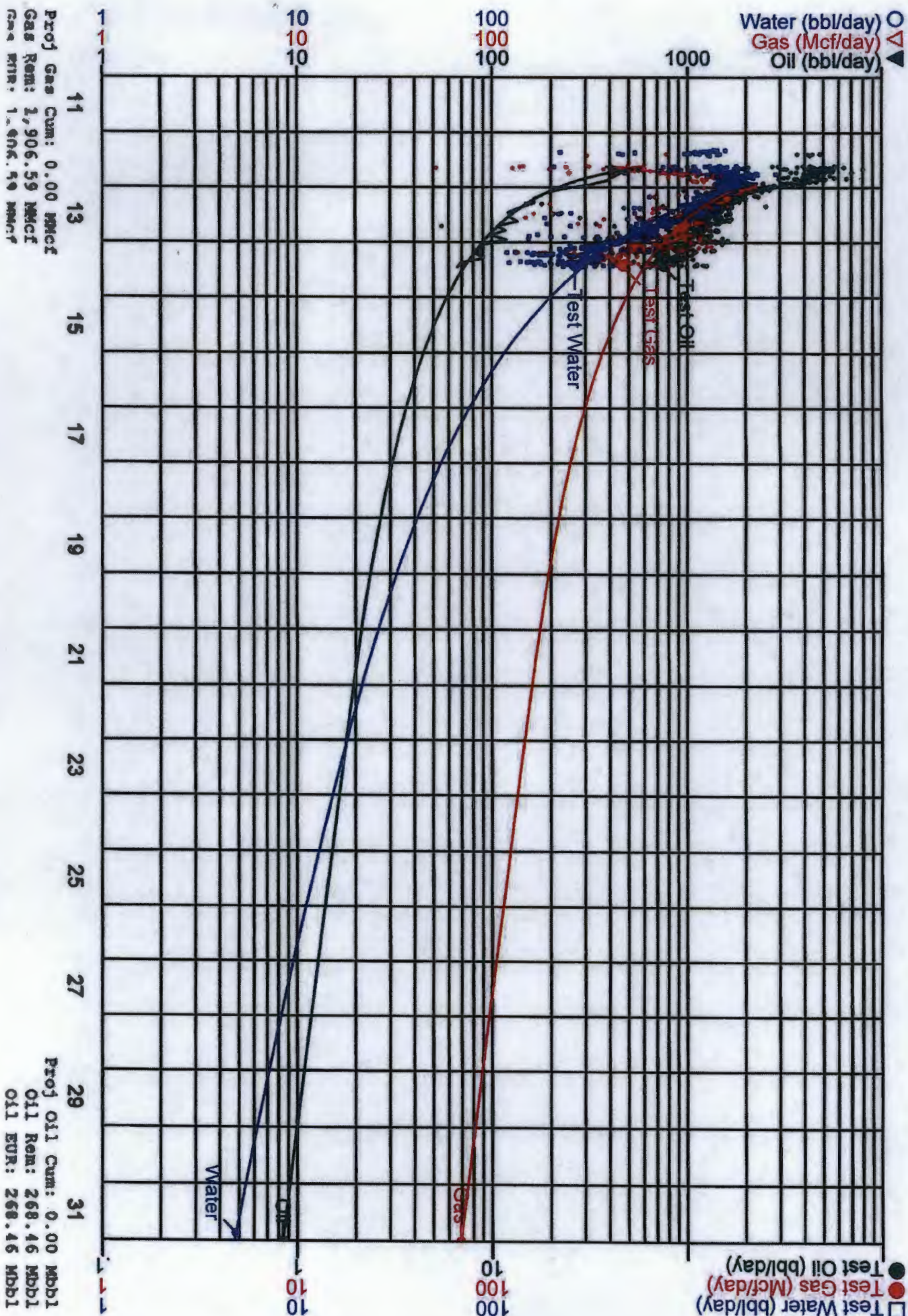
Year	Average Price			Net Revenue			
	Oil (\$/bbl)	Gas (\$/Mcf)	NGL (\$/gal)	Oil (M\$)	Gas (M\$)	NGL (M\$)	Total (M\$)
2012	84.45	3.08	0.75	4,603.59	333.54	433.17	5,370.29
2013	90.60	3.38	0.75	4,284.11	794.50	940.71	6,019.32
2014	91.65	4.58	0.89	2,303.92	498.52	519.50	3,321.94
2015	83.87	3.98	0.81	1,489.38	351.30	382.09	2,222.77
2016	78.34	3.84	0.80	1,095.54	266.33	295.50	1,657.37
2017	75.35	3.88	0.80	871.92	222.10	244.19	1,338.22
2018	73.61	3.94	0.80	731.59	193.41	209.57	1,134.57
2019	72.42	4.01	0.80	633.01	173.08	184.20	990.29
2020	71.91	4.11	0.80	563.84	159.24	165.16	888.24
2021	71.65	4.19	0.80	507.85	146.76	149.25	803.86
Rem	71.50	4.44	0.80	3,755.11	1,150.56	1,105.59	6,011.27
Total	81.28	3.93	0.79	20,839.87	4,289.33	4,628.95	29,758.15

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	72.58	3.11	6,497.03	942.96	-2,145.38	-2,145.38	-2,241.11	-2,241.11
2013	444.53	18.95	0.00	2,535.53	3,020.31	874.92	2,869.93	628.82
2014	245.84	10.46	0.00	362.24	2,703.41	3,578.33	2,436.42	3,065.24
2015	164.94	7.00	0.00	321.11	1,729.72	5,308.05	1,484.58	4,549.82
2016	123.11	5.22	0.00	295.11	1,233.94	6,541.99	1,008.05	5,557.86
2017	99.51	4.21	0.00	281.55	952.95	7,494.94	741.22	6,299.08
2018	84.43	3.57	0.00	273.68	772.89	8,267.83	572.48	6,871.56
2019	73.74	3.12	0.00	268.64	644.79	8,912.62	454.81	7,326.37
2020	66.18	2.80	0.00	265.24	554.02	9,466.64	372.14	7,698.51
2021	59.91	2.53	0.00	262.76	478.66	9,945.30	306.18	8,004.68
Rem	448.38	18.91	0.00	3,198.15	2,345.82	2,345.82	1,226.45	1,226.45
Total	1,883.16	79.87	6,497.03	9,006.96	12,291.13	12,291.13	9,231.13	9,231.13

Major Phase:	Gas	Working Int:	1.00000000	Present Worth Profile (M\$)
Perfs:	0 0	Revenue Int:	0.95500000	5.00%: 9,231.13
Initial Rate:	62,030.00 Mcf/month	Disc. Initial Invest. (m\$):	6,497.031	9.00%: 7,542.73
Abandonment:	1,716.05 Mcf/month	Internal ROR (%):	73.49	10.00%: 7,191.35
Initial Decline:	87.00 % year b = 1.200	ROI Investment (disc/undisc):	2.42 / 2.89	12.00%: 6,554.66
Beq Ratio:	0.16 bbl/Mcf	Years to Payout:	1.24	15.00%: 5,735.76
End Ratio:	0.12 bbl/Mcf	Abandonment Date:	06/26/2034	20.00%: 4,640.70
Forecast Start:	12/01/2012			30.00%: 3,088.49
		Initial	1st Rev.	40.00%: 2,026.07
		Working Interest: 1.00000000	0.00000000	50.00%: 1,242.93
		Revenue Interest: 0.95500000	0.00000000	60.00%: 636.07
		Rev. Date:		

1004611/PLU CVX JV BS/010H/1ST
 Oper: BOPCO
 Reservoir: BONE SPRING

Field: WILDCAT G-06 S243026M; BONE SPRING
 EDDY, NM
 ECL Date: 06/26/2034



WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL PLU CVX JV BIG SINKS #010H (23-24-30) FORMATION BONE SPRING
 LOCATION UNIT 10 FEET FROM NORTH LINE & 1900 FEET FROM EAST LINE
 SECTION 24 TOWNSHIP 24S RANGE 30E COUNTY Eddy NEW MEXICO
 SPUD DATE 1/29/2012 COMPLETION DATE 4/26/2012 INITIAL PRODUCTION 5/23/2012
 PERFORATIONS 9505-13931
 BHL: 350' FSL & 1968' FEL SEC 24 T24S R30E

STIMULATION:

ACID _____

 FRACTURE See Attached

POTENTIAL (41052) 417 BOPD, 1045 MCFPD, 1430 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>180</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>385.9</u>	

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

Formula = $((7758 \text{ rb/a-ft}) (por) (1-S_w) (Bo) (RF) (A) (h)) / 1000$ Bo = 1.70 rb/stb

Continued

PERFORMANCE DATA

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

CUMULATIVE PRODUCTION TO	_____	BBL Oil	_____	MCF Gas
INITIAL RATE (q _i)	_____	2,200	_____	
ECONOMIC LIMIT (q _e)	_____	10 MCFD	_____	
HYPERBOLIC DECLINE RATE, ϕ	_____	$n=1.2, d=57\%/yr$	_____	
REMAINING MCF (Q) =	_____	0	_____	
ULTIMATE RECOVERABLE MMCF	_____	1,907	_____	

(Attach plot showing proration unit and participating area.)

ECONOMIC

GROSS WELL COST \$2,488,871 (to the depth of formation completed)COMPLETION COST \$4,028,158GROSS TOTAL COST \$6,497,030

YEAR	GROSS MCF MMCF	8FET NET INCOME (\$M)	OPERATING COST (\$M) INCL SEV & AD VAL TAX	5% NET 8FET DISCOUNTED CASH FLOW
ZERO				
1	188,893	5370.3	1018.7	-2241.1
2	410,434	6019.3	2999.0	628.8
3	190,120	3321.9	618.5	3065.2
4	153,900	2222.8	493.1	4549.8
5	120,932	1657.4	423.4	5557.9
6	99,934	1338.2	385.3	6299.1
7	85,765	1134.6	361.7	6971.8
8	75,381	990.3	345.5	7326.4
9	67,591	888.2	334.2	7696.5
10	61,080	803.9	325.2	8004.7
REMAINDER	452,458	8011.3	3985.4	1228.5
TOTAL	1906,588	28768.1	10870.0	48887.3

WELL IS COMMERCIAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OFF Arapaho

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other		5. Lease Serial No NMNM030453	
1b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Reavr. Other		6. If Indian, Allottee or Tribe Name	
2. Name of Operator CHESAPEAKE OPERATING INC E-Mail: erin.carson@chk.com		7. Unit or CA Agreement Name and No. 891000303X	
3. Address OKLAHOMA CITY, OK 73154-0496		8. Lease Name and Well No. PLU BIG SINKS 24 24 30 USA 1M	
3a. Phone No. (include area code) Ph: 405-935-2896		9. API Well No. 30-015-39846-00-S1	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface NWNE 10FNL 1980FEL At top prod interval reported below NWNE 578FNL 1969FEL At total depth SWSE 350FSL 1980FEL		10. Field and Pool, or Exploratory WILDCAT, B-06 S243026m; B.S.	
14. Date Spudded 01/29/2012		15. Date T.D. Reached 02/23/2012	
16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod. 04/26/2012		17. Elevations (DF, KB, RT, GL)* 3472 GL	
18. Total Depth MD 13966 TVD 9346		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)	
22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> 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	665		700		29	
11.000	8.625 J-55	32.0	0	4053		1350		27	
7 875	5.500 L-80	20.0	0	13966	5031	2100		3500	

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		8800						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf Status
A) 1ST BONE SPRING			9606 TO 13931			
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
9606 TO 13931	PROP- 3,112,520#, ACID- 20,000 GAL, CLEAN FLUID- 85,039 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
05/20/2012	05/23/2012	24	→	417 0	1045 0	1430 0			FLOW FROM WELL
Choke Size	Tubg Press Flwg SI	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well Status	
32/64	SI	800 0	→	497	1046	1430	2506	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
			→						
Choke Size	Tubg Press Flwg SI	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well Status	
	SI		→						

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

ELECTRONIC SUBMISSION #139076 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

RECLAMATION
DUE 10-26-12

ACCEPTED FOR RECORD

JUN 16 2012

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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	Thg Press Plug 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	Thg Press Plug SI	Csg 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.)

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	543				
TOP SALT	901				
BASE OF SALT	3996				
BELL CANYON	4238				
CHERRY CANYON	5123				
BRUSHY CANYON	6347				
BONE SPRING	8057				
FIRST BONE SPRING SAND	9020				

32. Additional remarks (include plugging procedure):

CONFIDENTIAL

LOGS SENT VIA UPS OVERNIGHT.

CHK PN 639440

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)

2. Geologic Report

3. DST Report

4. Directional Survey

5. Sundry Notice 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 #139076 Verified by the BLM Well Information System.

For CHESAPEAKE OPERATING INC, sent to the Carlsbad

Committed to AFMSS for processing by KURT SIMMONS on 06/14/2012 (12KMS2279SE)

Name (please print) ERIN CARSON

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 05/29/2012

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 ** REVISED **

Division I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
Division II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
Division III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
Division IV
1229 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

Effective 8/26/14

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-39846		Pool Code 96403	Pool Name Wildcat; Bone Spring
Property Code 313213	Property Name Poker Lake Unit CVX JV BS		Well Number 10H
OGRID No. 260737	Operator Name BOPCO, LP		Elevation 3472

Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
B	24	24S	30E		10	North	1980	East	Eddy

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
O	24	24S	30E		350	South	1969	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.

	<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 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>[Signature]</i> <i>8/26/14</i> Signature Date</p> <p>Trace J. Cherry Printed Name</p> <p>jcherry@bassnet.com E-mail Address</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 of Survey</p> <p>Signature and Seal of Professional Surveyor:</p>	
	<p>Certificate Number</p>	



Downhole Profile - Vertical Wells

Well Name: POKER LAKE UNIT CVX JV BS #010H (24-24-30)

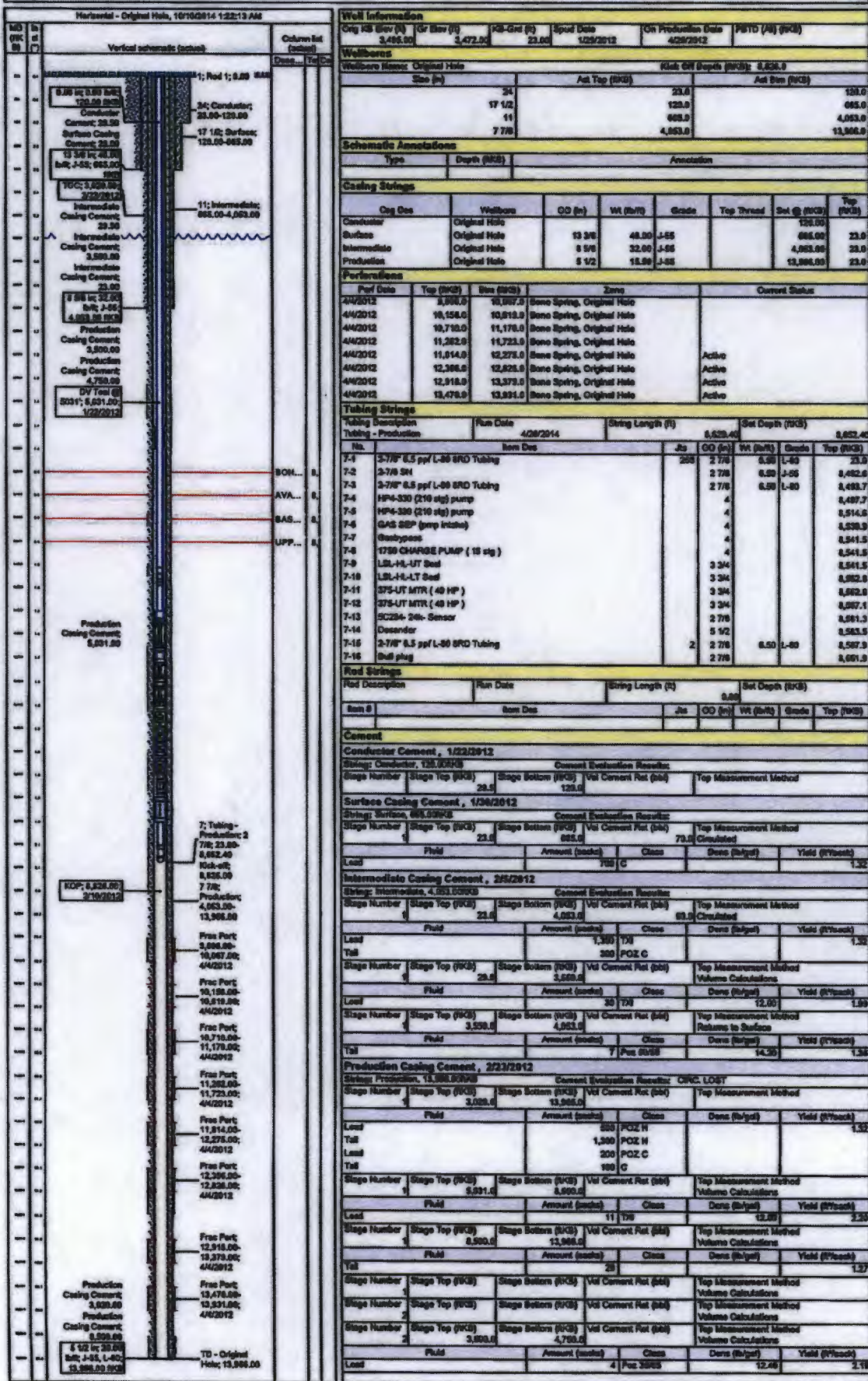
Field: Big Sinks (Delaware) Field

BOPCO, L.P. West Texas

Well ID: 30-015-39846

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

Surface Location: 10° FNL & 1980° FEL





Downhole Profile - Vertical Wells

BOPCO, L.P. - West Texas

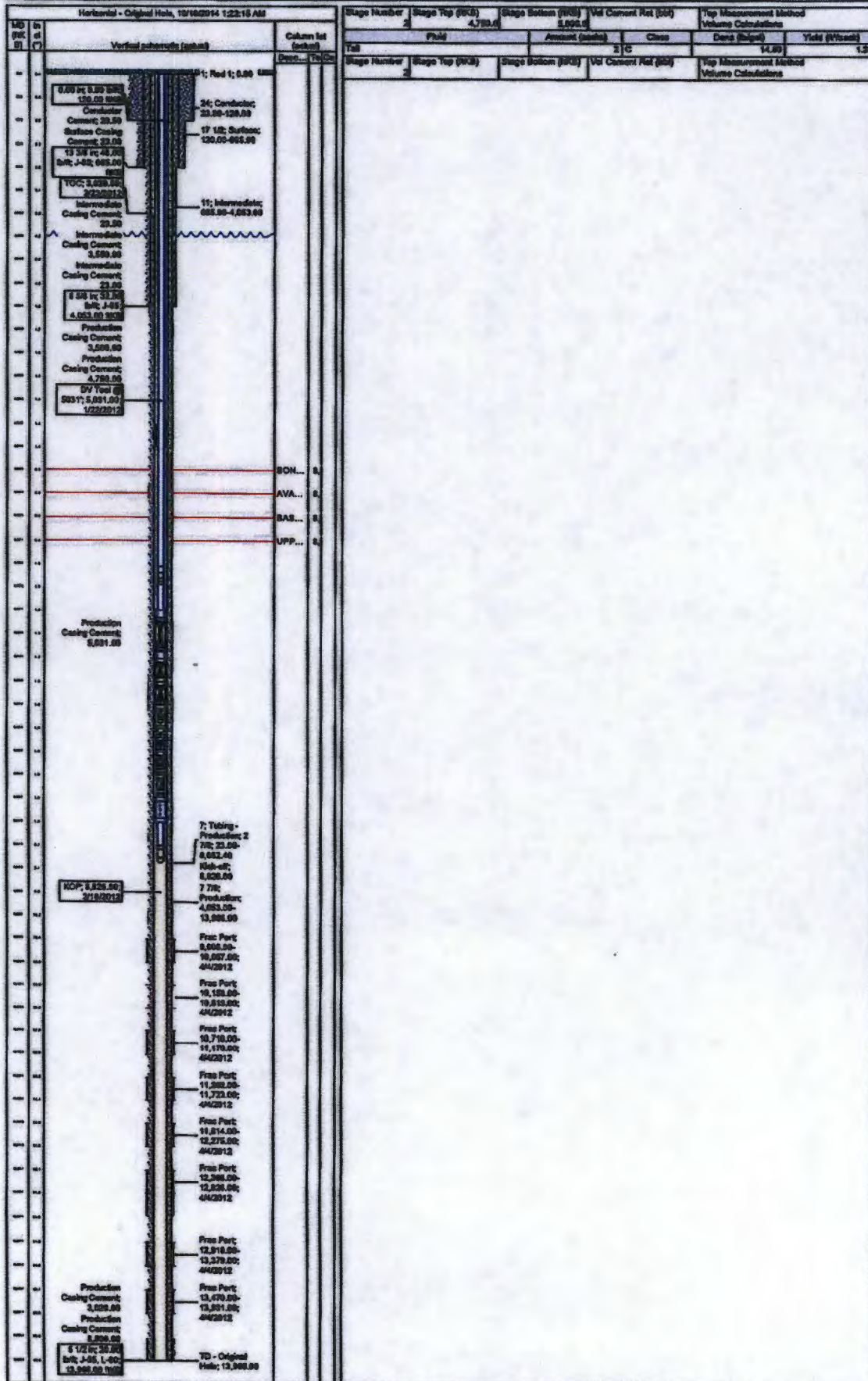
Well Name: POKER LAKE UNIT CVX JV BS #010H (24-24-30)

Well ID: 30-015-39848

Field: Big Sinks (Delaware) Field

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

Surface Location: 10' FNL & 1980' FEL





5/1/2014

