

366

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

November 3, 2015

RECEIVED OGD
2015 NOV -4 P 3:38

FEDERAL EXPRESS

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 Pierce Canyon #015H (19-24-30)
1st Bone Spring Shale
Eddy County, New Mexico

Case

Gentlemen:

Please find attached hereto one (1) copy of Bass' commercial determination worksheets and exhibits which indicate that the subject well is a commercial producer in the 1st Bone Spring Shale. Should you be in agreement that the 1st Bone Spring Shale is 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: _____

Its: _____

Its: _____

Its: _____

Date: _____

Date: _____

Date: _____



INTER-OFFICE MEMORANDUM

TO: Ross Sutton
FROM: Bryce Bezant
DATE: 10/22/2015
RE: Commercial Determination
PLU CVX JV Pierce Canyon #015H (19-24-30)
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 Pierce Canyon #015H was drilled in 2013 to a total depth of 14,371' laterally completed in the 1st Bone Spring Shale reservoir. The well is producing from perforations 9,069'-14,332'. On test 7/26/2013 the well flowed at the rate of 377 BOPD, 877 MCFD, and 1800 BWPD. This well has an expected recovery of approximately 264 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 Pierce Canyon #015H will be a **commercial well** and should be incorporated into a participating area.


R. Bryce Bezant, P.E.

RBB/tah

Cc: Travis Mears
Tom McCarthy
Steve Johnson

ECONOMIC PROJECTION

Date : 10/23/2015

Lior: 1000642

1:33:32PM

Project Name : 7-1-2014 NSAI Review For BOPCO, LP

As Of Date : 04/01/2013

Lease Name : 1000642/PLU CVX JV PC/015H/1ST

Partner : All cases

Discount Rate (%) : 5.00

Reserv Cat. : Proved Producing

Case Type : LEASE CASE

Field : PIERCE CROSSING (BONE SPRING), E.

Archive Set : NS0715

1000642/PLU CVX JV PC/015H/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)
2013	40.243	127.678	73.670	455.811	39.196	71.755	443.960
2014	25.523	154.098	88.915	550.130	24.859	86.603	535.826
2015	15.260	69.648	40.187	248.642	14.864	39.142	242.177
2016	13.787	58.000	33.466	207.059	13.428	32.596	201.676
2017	10.963	44.936	25.928	160.422	10.678	25.254	156.251
2018	9.181	36.764	21.213	131.246	8.943	20.661	127.833
2019	7.934	31.112	17.952	111.070	7.728	17.485	108.182
2020	7.026	27.039	15.601	96.527	6.844	15.196	94.018
2021	6.289	23.794	13.729	84.945	6.126	13.372	82.736
2022	5.717	21.295	12.287	76.022	5.568	11.968	74.046

Rem	61.122	195.409	112.751	757.670	59.533	109.819	737.971
Total	203.045	789.771	455.698	2,879.544	197.766	443.850	2,804.676
Ult.	203.045	789.771					

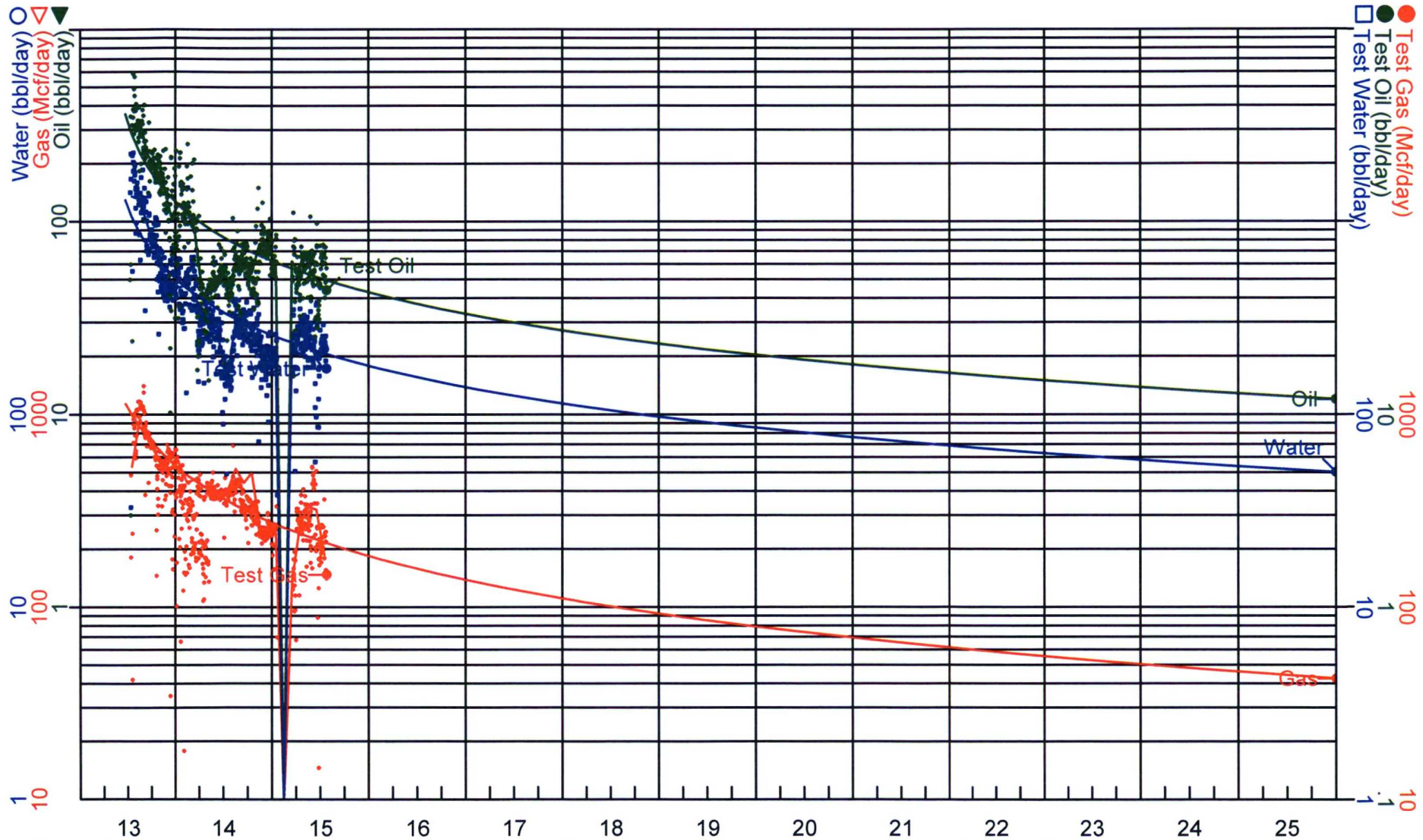
Year	Average Price			Net Revenue			
	Oil (\$/bbl)	Gas (\$/Mcf)	NGL (\$/gal)	Oil (M\$)	Gas (M\$)	NGL (M\$)	Total (M\$)
2013	96.44	3.54	0.75	3,780.15	254.35	332.97	4,367.46
2014	86.76	4.19	0.83	2,156.83	363.10	442.40	2,962.33
2015	47.41	2.64	0.40	704.66	103.16	97.11	904.94
2016	46.67	2.72	0.40	626.73	88.73	80.15	795.61
2017	49.79	2.94	0.40	531.64	74.15	62.10	667.89
2018	52.01	3.00	0.40	465.09	62.00	50.81	577.90
2019	53.86	3.06	0.40	416.23	53.51	43.00	512.73
2020	55.27	3.18	0.40	378.24	48.26	37.37	463.86
2021	56.03	3.32	0.40	343.23	44.34	32.88	420.45
2022	56.55	3.47	0.40	314.89	41.52	29.43	385.84
Rem	57.19	4.11	0.40	3,404.57	451.77	293.30	4,149.64
Total	66.35	3.57	0.54	13,122.26	1,584.90	1,501.51	16,208.67

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\$)
2013	335.56	8.68	5,611.52	465.26	-2,053.56	-2,053.56	-2,129.47	-2,129.47
2014	212.06	5.85	0.00	624.91	2,119.51	65.95	2,003.14	-126.33
2015	74.65	1.79	0.00	561.19	267.31	333.26	238.53	112.20
2016	65.62	1.58	250.00	408.76	69.66	402.91	58.83	171.03
2017	55.08	1.33	0.00	248.33	363.15	766.06	295.39	466.42
2018	47.64	1.15	0.00	238.68	290.42	1,056.49	224.96	691.39
2019	42.26	1.02	0.00	231.90	237.55	1,294.04	175.24	866.63
2020	38.23	0.92	0.00	226.96	197.75	1,491.79	138.93	1,005.56
2021	34.66	0.84	0.00	222.94	162.02	1,653.81	108.40	1,113.96
2022	31.81	0.77	0.00	219.81	133.46	1,787.27	85.04	1,199.00
Rem	342.16	8.25	0.00	4,170.28	-371.05	-371.05	-3.19	-3.19
Total	1,279.73	32.17	5,861.52	7,619.02	1,416.23	1,416.23	1,195.81	1,195.81

Major Phase :	Gas	Working Int :	1.00000000	Present Worth Profile (M\$)	
Perfs :	0 0	Revenue Int :	0.97400000		
Initial Rate :	34,402.99 Mcf/month	Disc. Initial Invest. (m\$) :	5,824.320	5.00% :	1,195.81
Abandonment :	304.17 Mcf/month	Internal ROR (%) :	21.95	9.00% :	877.58
Initial Decline :	87.00 % year b = 1.000	ROI Investment (disc/undisc) :	1.21 / 1.24	10.00% :	797.61
Beg Ratio :	0.32 bbl/Mcf	Years to Payout :	2.43	12.00% :	642.43
End Ratio :	0.41 bbl/Mcf	Abandonment Date :	05/10/2043	15.00% :	425.46
Forecast Start :	06/01/2013			20.00% :	109.23
		Initial	1st Rev.	30.00% :	-382.56
		Working Interest :	0.00000000	40.00% :	-747.98
		Revenue Interest :	0.00000000	50.00% :	-1,034.83
		Rev. Date :		60.00% :	-1,269.52

1000642/PLU CVX JV PC/015H/1ST
Oper: BOPCO
Major Phase: Gas

Field: PIERCE CROSSING (BONE SPRING), EAST
EDDY, NM
ECL Date: 05/10/2043



NS0715 Oil (ARPs)
Segment: 1 of 1
Cum: 0 bbl
Rem: 203,045 bbl
EUR: 203,045 bbl
06/20/2013 - 05/10/2043
Qi: 11,030 / Qact: N/A
Qf: 124
D: 98.000 / Dmin: 6.000
B: 1.20000

NS0715 Gas (ARPs)
Segment: 1 of 1
Cum: 0 Mcf
Rem: 789,771 Mcf
EUR: 789,771 Mcf
06/20/2013 - 05/10/2043
Qi: 34,403 / Qact: N/A
Qf: 304
D: 87.000 / Dmin: 8.000
B: 1.00000

NS0715 Water (ARPs)
Segment: 1 of 1
Cum: 0 bbl
Rem: 846,789 bbl
EUR: 846,789 bbl
06/20/2013 - 05/10/2043
Qi: 39,481 / Qact: N/A
Qf: 522
D: 96.000 / Dmin: 6.000
B: 1.20000

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL _____ PLU CVX JV PIERCE CANYON #015H (PLU 442) _____ FORMATION _____ BONE SPRING _____
 LOCATION _____ UNIT, _____ 820 _____ FEET FROM _____ SOUTH _____ LINE & _____ 2290 _____ FEET FROM _____ EAST _____ LINE
 SECTION _____ 19 _____ TOWNSHIP _____ 24S _____ RANGE _____ 30E _____ COUNTY _____ Eddy _____, NEW MEXICO
 SPUD DATE _____ 6/7/2013 _____ COMPLETION DATE _____ 8/5/2013 _____ INITIAL PRODUCTION _____ 8/7/2013 _____
 PERFORATIONS _____ 9069-14332 _____
 BHL: 1494' FSL & 2388' FEL SEC 18 T24S R30E _____
 STIMULATION:

ACID _____

FRACTURE _____ See Attached _____

POTENTIAL _____ (7/26/2013): 377 BOPD, 877 MCFPD, 1800 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	160	
Porosity (Φ), %	8.8%	
Water saturation (S_w), %	23%	
Net Thickness (H), ft.	65	
Temperature (T), Fahrenheit	140	
Bottom Hole pressure (P), psia	4,370	
Recovery factor (RF), %	12%	
Recoverable oil, MBO *(See eq. below)	305.1	

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

Formula = $((7758 \text{ rb/ac-ft}) (\text{por}) (1-S_w) / (\text{Boi rbo/stb})(\text{RF})(A) (h)) / 1000 \text{ bo/Mbo}$ Boi = 2.15 rb/stb

PERFORMANCE DATA

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

CUMULATIVE PRODUCTION TO 7/31/2015 70,207 BBL Oil 308,962 MCF Gas

INITIAL RATE (qi) 368 BOPD

ECONOMIC LIMIT (ql) 4 BOPD

HYPERBOLIC DECLINE RATE, dy n = 1.2, d = 98%/yr

REMAINING MBO (Q) = 133

ULTIMATE RECOVERABLE MBO 203

(Attach plat showing proration unit and participating area.)

ECONOMIC

GROSS WELL COST \$2,244,608 (to the depth of formation completed)

COMPLETION COST \$3,366,912

GROSS TOTAL COST \$5,611,520

YEAR	GROSS OIL MBO	BFIT NET INCOME (\$M)	OPERATING COST (\$M) INCL SEV & AD VAL TAX	5% NET BFIT DISCOUNTED CASH FLOW
ZERO				
1	40.243	4367.5	809.5	-2129.5
2	25.523	2962.3	842.8	2003.1
3	15.260	904.9	637.6	238.5
4	13.787	795.6	476.0	58.8
5	10.963	667.9	304.7	295.4
6	9.181	577.9	287.5	225.0
7	7.934	512.7	275.2	175.2
8	7.026	463.9	266.1	138.9
9	6.289	420.5	258.4	108.4
10	5.717	385.8	252.4	85.0
REMAINDER	61.122	4149.6	4520.7	-3.2
TOTAL	203.045	16208.7	8930.9	1195.8

WELL IS COMMERCIAL

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, 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

RECEIVED OGD

2014 JUN -9 P 3: 50

☐ AMENDED REPORT

Retrieved 6/11/14

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-41195	² Pool Code 96473	³ Pool Name Pierce Crossing; Bone Spring; East
⁴ Property Code 3/3369	⁵ Property Name Poker Lake Unit CVX JV PC	⁶ Well Number 15H
⁷ OGRID No. 260737	⁸ Operator Name BOPCO, LP	⁹ Elevation 3153

¹⁰ 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	19	24S	30E		820	South	2290	East	Eddy

¹¹ 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
J	18	24S	30E		1494	South	2388	East	Eddy

¹² Dedicated Acres 240	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

	¹⁷ 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. <i>Tracie J Cherry</i> Signature Date 6/11/14 Tracie J Cherry Printed Name tricherry@basspet.com E-mail Address
	¹⁸ 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

Confidential

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMNM05912

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		6. If Indian, Allottee or Tribe Name	
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other		7. Unit or CA Agreement Name and No. NMNM71016X	
2. Name of Operator BOPCO LP		8. Lease Name and Well No. POKER LAKE UNIT 442H	
3. Address P O BOX 2760 MIDLAND, TX 79702		3a. Phone No. (include area code) Ph: 432-221-7379	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* Sec 19 T24S R30E Mer At surface SWSE 820FSL 229FEL Sec 19 T24S R30E Mer At top prod interval reported below NWSE 1486FSL 2284FEL Sec 18 T24S R30E Mer At total depth NWSE 1494FSL 2388FEL		9. API Well No. 30-015-41198	
14. Date Spudded 04/21/2013		15. Date T.D. Reached 05/11/2013	
16. Date Completed ☐ D & A ☒ Ready to Prod. 07/09/2013		17. Elevations (DF, KB, RT, GL)*	
18. Total Depth: MD 14371 TVD 8650		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, POROSITY, RESISTIVITY, SPECTRAL GR	
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 Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 H40	48.0	0	567		620	147	0	0
11.000	8.625 J55	32.0	0	3450		1230	386	0	0
7.875	5.500 HCP110	17.0	0	14370	5026	2005	594	2270	0

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	8029							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
1st BONE SPRING SHALE	8485	8645	9069 TO 14332	0.570	264	OPEN
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
9069 TO 14332	FRAC USING 61048 BBLs FLUID, 2779157# SAND OVER 11 STAGES

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
07/12/2013	07/26/2013	24	→	377.0	877.0	1800.0	41.7	0.82	ELECTRIC PUMP SURFACE
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→	377	877	1800	2326	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	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 reverse side)

ELECTRONIC SUBMISSION #216550 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

ACCEPTED FOR RECORD
AUG 18 2013
BUREAU OF LAND MANAGEMENT
ELECTRIC PUMP SURFACE

RECLAMATION
DUE 1-9-14

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(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	180
				B. SALT	3186
				BELL CANYON	3426
				CHERRY CANYON	4328
				BRUSHY CANYON	5580
				BONE SPRING	7212
				U. AVALON	7447
				1ST BONE SPRING SHALE	8485

32. Additional remarks (include plugging procedure):

PLEASE HOLD CONFIDENTIAL

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 #216550 Verified by the BLM Well Information System.

For BOPCO LP, sent to the Carlsbad

Committed to AFMSS for processing by KURT SIMMONS on 08/13/2013 ()

Name (please print) TRACIE CHERRY Title REGULATORY ANALYST

Signature _____ (Electronic Submission) Date 08/09/2013

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.

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **



Downhole Profile - Vertical Wells

BOPCO, L.P. - West Texas

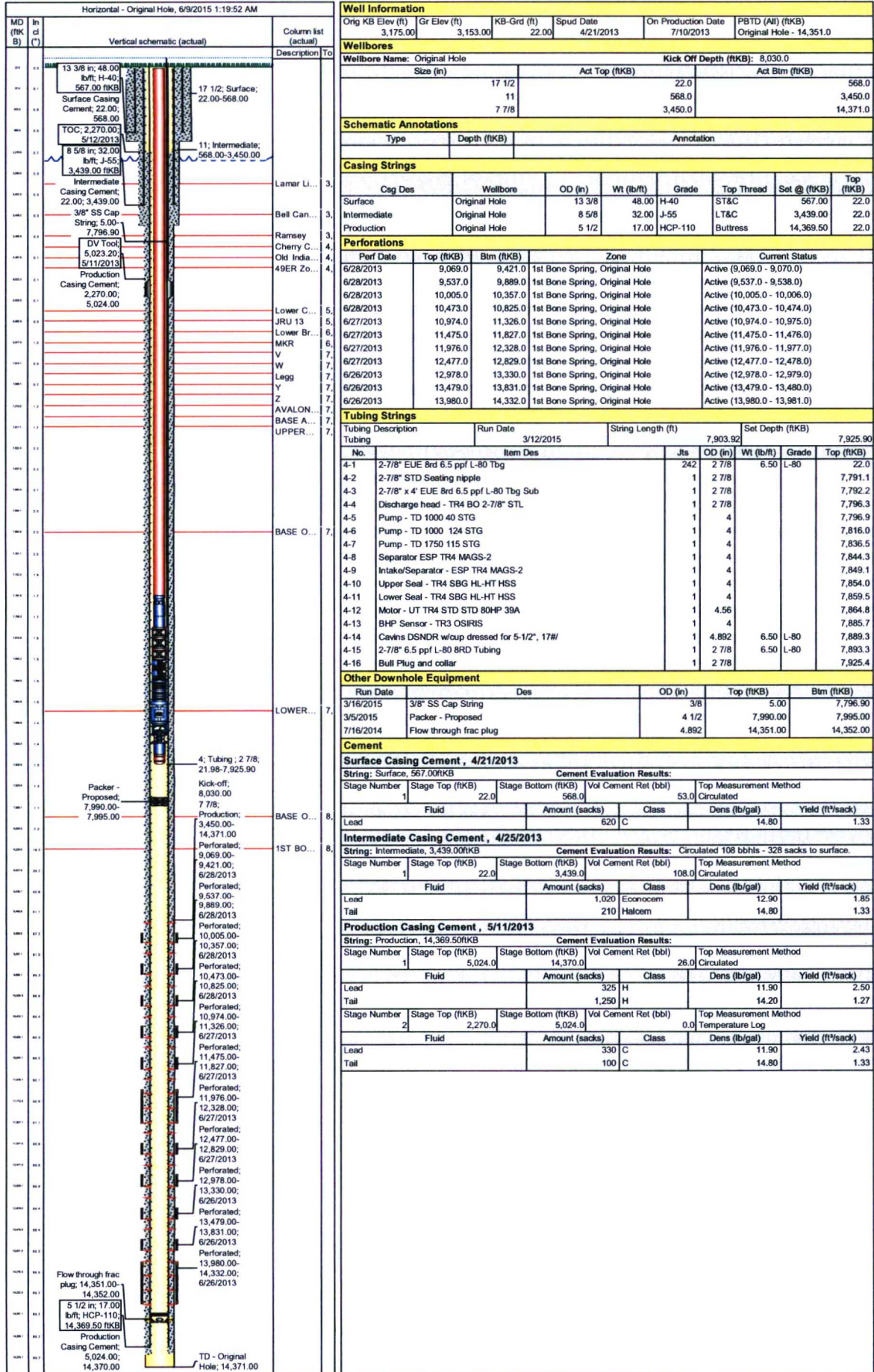
Well Name: POKER LAKE UNIT CVX JV PC #015H (19-24-30)

Well ID: 30-015-41195

Field: Nash Draw (Del, BS, AV)

Sect: 19 Town: 24S Rng: 30E County: Eddy State: New Mexico

Surface Location: 820' FSL & 2290' FEL, Sec 19, T24S-R30E





Schematic - Vertical Production

BOPCO, L.P. - West Texas

Well Name: POKER LAKE UNIT CVX JV PC #015H (19-24-30)

Well ID: 30-015-41195

Field: Nash Draw (Del, BS, AV)

Sect: 19 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	Surface Facility		5/28/2015	5/29/2015

