

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

July 6, 2010

FEDERAL EXPRESS

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

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
James Ranch Unit Well No. 106H
Delaware Formation
Eddy County, New Mexico

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 Delaware Formation. 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,



Brad Glasscock

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
MIDLAND OFFICE

April 8, 2010

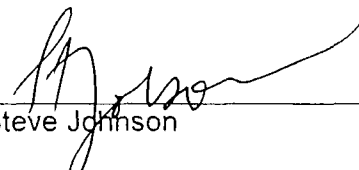
TO: FORT WORTH, FILES
FOR: FRANK McCREIGHT
FROM: STEVE F. JOHNSON
RE: COMMERCIAL DETERMINATION
JAMES RANCH UNIT #106H
QUAHADA RIDGE SE (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
FILE: 100-WF: JRU106HCD.DOC

Attached are the worksheets and necessary exhibits for the subject well to be submitted for commercial determination. The James Ranch Unit #106H was drilled in 2009 to a measured depth of 13,234' and was completed in the Delaware. The well is producing from Delaware perforations 8,110-13,134'. On test 11/19/2009 the well pumped at the rate of 625 BOPD, 505 MCFPD, and 1161 BWPD. This well is expected to recover approximately 503.056 MBOE from the current completion.

The most recent price file from Fort Worth was utilized and the oil price was adjusted by - \$3.44/BO plus a \$.57/mcf transportation fee. An operating cost of \$13,000/mo for 18 months and \$6,500 thereafter was also incorporated in this evaluation. The James Ranch Unit #106H will be a commercial well and should be incorporated into a participating area.

 RSD/cdp

cc: Ross Sutton
George Hillis
Brad Glasscock



Steve Johnson

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL James Ranch Unit #106H FORMATION DELAWARE
 LOCATION L UNIT 1595 FEET FROM SOUTH LINE & 1096 FEET FROM WEST LINE
 SECTION 36 TOWNSHIP 22S RANGE 30E COUNTY Eddy NEW MEXICO
 SPUD DATE 9/9/2009 COMPLETION DATE 11/11/2009 INITIAL PRODUCTION 11/11/2009
 PERFORATIONS 8110-13134'

* BHL UL E 2011' FSL 378' FWL SEC 35, T22S R30E
 STIMULATION:

ACID _____

FRACTURE SEE: Completion papers attached

POTENTIAL (11/19/2009): 625 BOPD, 505 MCFPD, 1161 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>200</u>	
Porosity (Φ), %	<u>12%</u>	
Water saturation (Sw), %	<u>55%</u>	
Net Thickness (H), ft.	<u>86</u>	
Temperature (T), Fahrenheit	<u>120</u>	
Bottom Hole pressure (P), psia	<u>3,487</u>	
Recovery factor (RF), %	<u>17%</u>	
Recoverable Oil, Bbls *(See eq. below)	<u>552,432</u>	

*Sometimes unable to match performance due to volumetric uncertainty.

Formula = $(7758) (A) (H) (\Phi) (1-S_w) (1/Bo) (RF)$

Bo = 1.50

Continued

PERFORMANCE DATA

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

CUMULATIVE PRODUCTION TO 2/28/2010 53,578 BBL OIL 65,191 MCFINITIAL RATE (qi) 767ECONOMIC LIMIT (ql) 2HYPERBOLIC DECLINE RATE, dy n = 1.0, d = 96%/yrREMAINING OIL (Q) = 333,524ULTIMATE RECOVERABLE OIL (BO) 398,715

(Attach plot showing proration unit and participating area.)

ECONOMIC

GROSS WELL COST \$1,779,707 (to the depth of formation completed)COMPLETION COST \$2,527,123GROSS TOTAL COST \$4,306,830

YEAR	GROSS OIL MBBLS	BFIT NET INCOME (\$M)	OPERATING COST (\$M) INCL SEV & AD VAL TAX	5% NET BFIT DISCOUNTED CASH FLOW
ZERO				
1	<u>27,893</u>	<u>1776.9</u>	<u>138.1</u>	<u>-2594.8</u>
2	<u>106,801</u>	<u>7886.8</u>	<u>796.7</u>	<u>6590.3</u>
3	<u>47,223</u>	<u>3701.9</u>	<u>375.6</u>	<u>2936.4</u>
4	<u>30,539</u>	<u>2425.3</u>	<u>190.1</u>	<u>1805.8</u>
5	<u>22,524</u>	<u>1804.0</u>	<u>223.3</u>	<u>1261.2</u>
6	<u>17,888</u>	<u>1445.4</u>	<u>194.5</u>	<u>949.2</u>
7	<u>14,839</u>	<u>1213.6</u>	<u>175.9</u>	<u>749.0</u>
8	<u>12,712</u>	<u>1052.0</u>	<u>162.9</u>	<u>610.3</u>
9	<u>11,066</u>	<u>928.2</u>	<u>152.9</u>	<u>506.1</u>
10	<u>9,821</u>	<u>836.0</u>	<u>145.5</u>	<u>428.8</u>
REMAINDER	<u>97,411</u>	<u>8547.4</u>	<u>2816.5</u>	<u>2515.2</u>
TOTAL	<u>398,717</u>	<u>31617.5</u>	<u>5371.8</u>	<u>15757.5</u>

WELL IS COMMERCIAL

ECONOMIC PROJECTION

Date : 4/8/2010

Lior:

1:48:38PM

Project Name : Exp of Risked 2009 New wells databa

As Of Date : 01/01/2009

Lease Name : James Ranch Unit #106H

Partner : ALL CASES

Discount Rate (%) : 5.00

Reserv Cat. : Proved Producing

Case Type : LEASE CASE

Field : LOS MEDANOS

Archive Set : BUDGET2009

James Ranch Unit #106H

Operator : BOPCO

Cum Oil (Mbbbl) : 0.00

Reservoir : DELAWARE

Cum Gas (MMcf) : 0.00

Co., State : EDDY, NM

Risk: 0.000 Inherited/ 0.000 Compounded Sales

Year	Gross Wet Production		Gross Dry Gas & NGL				
	Oil (Mbbbl)	Wet Gas (MMcf)	Dry Gas (MMcf)	NGL (Mgal)	Oil (Mbbbl)	Gas (MMcf)	NGL (Mgal)
2009	27.893	27.336	17.752	52.335	23.291	14.823	43.699
2010	106.801	159.552	103.613	558.433	89.179	86.517	466.291
2011	47.223	72.062	46.797	252.217	39.431	39.076	210.601
2012	30.539	47.107	30.591	164.875	25.500	25.544	137.670
2013	22.524	35.117	22.805	122.910	18.807	19.042	102.629
2014	17.888	28.188	18.305	98.656	14.936	15.285	82.378
2015	14.839	23.633	15.347	82.715	12.390	12.815	69.067
2016	12.712	20.462	13.288	71.617	10.615	11.096	59.801
2017	11.066	18.003	11.691	63.011	9.240	9.762	52.615
2018	9.821	16.147	10.486	56.515	8.200	8.756	47.190

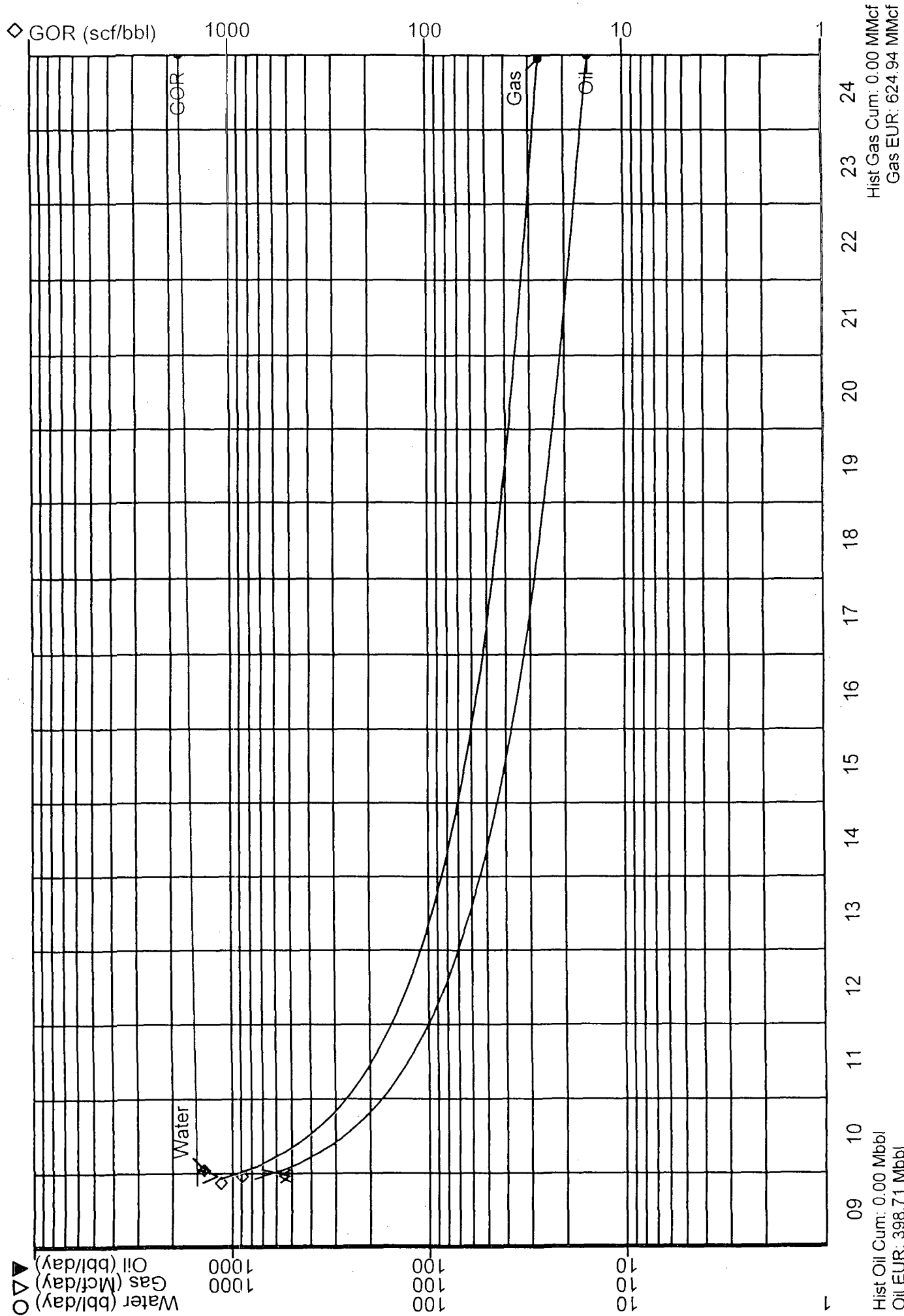
Rem	97.411	177.330	115.158	620.657	81.338	96.157	518.248
Total	398.715	624.938	405.835	2,143.941	332.927	338.872	1,790.190
It.	398.715	624.938					

Year	Average Price			Net Revenue			
	Oil (\$/bbl)	Gas (\$/Mcf)	NGL (\$/gal)	Oil (M\$)	Gas (M\$)	NGL (M\$)	Total (M\$)
2009	72.27	4.55	0.60	1,683.27	67.37	26.22	1,776.86
2010	79.40	4.84	0.83	7,081.04	418.73	387.02	7,886.79
2011	83.90	5.60	0.83	3,308.17	218.91	174.80	3,701.88
2012	84.58	6.04	0.83	2,156.71	154.28	114.27	2,425.26
2013	85.00	6.31	0.83	1,598.60	120.19	85.18	1,803.98
2014	85.44	6.60	0.83	1,276.22	100.85	68.37	1,445.44
2015	86.16	6.93	0.83	1,067.54	88.78	57.33	1,213.64
2016	86.83	7.26	0.83	921.72	80.61	49.63	1,051.96
2017	87.70	7.60	0.83	810.35	74.20	43.67	928.22
2018	88.68	7.96	0.83	727.20	69.66	39.17	836.03

Rem	89.39	8.80	0.83	7,270.78	846.49	430.15	8,547.42
Total	83.81	6.61	0.82	27,901.60	2,240.08	1,475.81	31,617.49

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\$)
2009	76.00	2.12	4,306.83	59.96	-2,668.05	-2,668.05	-2,594.81	-2,594.81
2010	570.06	15.77	0.00	210.84	7,090.12	4,422.08	6,590.33	3,995.52
2011	267.89	7.40	0.00	100.27	3,326.31	7,748.39	2,936.41	6,931.93
2012	175.70	4.85	0.00	92.56	2,152.15	9,900.54	1,805.81	8,737.74
2013	130.79	3.61	0.00	88.85	1,580.73	11,481.27	1,261.15	9,998.89
2014	104.87	2.89	0.00	86.71	1,250.96	12,732.24	949.19	10,948.08
2015	88.13	2.43	0.00	85.30	1,037.78	13,770.02	748.93	11,697.01
2016	76.45	2.10	0.00	84.32	889.08	14,659.10	610.25	12,307.26
2017	67.51	1.86	0.00	83.56	775.29	15,434.38	506.13	12,813.38
2018	60.85	1.67	0.00	82.99	690.51	16,124.90	428.79	13,242.17
Rem	624.85	17.09	0.00	2,174.55	5,730.93	5,730.93	2,515.24	2,515.24
Total	2,243.11	61.80	4,306.83	3,149.93	21,855.82	21,855.82	15,757.41	15,757.41

Major Phase :	Oil	Working Int :	1.00000000	Present Worth Profile (M\$)
Perfs :	0 0	Revenue Int :	0.83500000	1.00% : 20,318.97
Initial Rate :	17.921.00 bbl/month	Disc. Initial Invest. (m\$) :	4,156.602	5.00% : 15,757.41
Abandonment :	78.16 bbl/month	Internal ROR (%) :	134.96	10.00% : 12,170.59
Initial Decline :	96.00 % year b = 1.000	ROI Investment (disc/undisc) :	4.79 / 6.07	15.00% : 9,790.72
Seg Ratio :	0.89 Mcf/bbl	Years to Payout :	1.28	20.00% : 8,075.72
Prod Ratio :	2.21 Mcf/bbl	Abandonment Date :	03/06/2046	25.00% : 6,769.03
Forecast Start :	12/01/2009			30.00% : 5,734.64
		Initial	1st Rev.	40.00% : 4,195.64
		Working Interest : 1.00000000	0.00000000	50.00% : 3,108.23
		Revenue Interest : 0.83500000	0.00000000	60.00% : 2,307.13
		Rev. Date :		



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Operator Copy

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

CONFIDENTIAL

Lease Serial No.
02952A

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.							
2. Name of Operator BOPCO, L.P.		8. Lease Name and Well No. James Ranch Unit 106H							
3. Address P.O. Box 2760 Midland TX 79702		9. API Well No. 30-015-37063							
3a. Phone No. (Include area code) (432)683-2277		10. Field and Pool, or Exploratory Quahada Ridge SE (Delaware)							
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At Surface UL L, 1595' FSL, 1096' FWL, Lat N 32.345694732, Long W 103.839380013 At top prod. interval reported below At total depth UL L, 2011' FSL, 378' FWL		11. Sec., T., R., M., on Block and Survey or Area SEC 36, T22S, R30							
14. Date Spudded 09/09/2009		15. Date T.D. Reached 10/06/2009							
16. Date Completed ☐ D & A ☒ Ready to Prod. 11/11/2009		17. Elevations (DF, RKB, RT, GL)* 3294' GL							
18. Total Depth: MD 13234' TVD 7723'		19. Plug Back T.D.: MD TVD							
20. Depth Bridge Plug Set: MD TVD		21. Type of Electric & Other Mechanical Logs Run (Submit copy of each) CNL/GR/CCL							
22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit copy)									
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
17-1/2"	13-3/8"	48#	0	622'		600 sxs		0' circ	
12-1/4"	9-5/8"	40#	0	3810'		1300 sxs		0' circ	
8-3/4"	7"	26#	0	7651'	5070'	400 sxs Stg I		5070' DV	
						642 sxs Stg II		0' Topout	
6-1/8"	4-1/2"	11.6#	6817.5'	13,234'		n/a		n/a	RECEIVED
24. Tubing Record				25. Producing Intervals					
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size
2-7/8"	6478.54'								
26. Perforation Record				BOPCO WTD PRODUCTION					
Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status			
A) Delaware	3819'	7723' TVD	8110'-14', 8511'-15'	1, 1	6, 6,	Producing			
B)			8,909'-13', 9,256'-61"	1, 1	6, 6,	Producing			
C)			9,611'-16', 9,960'-64'	1, 1	6, 6	Producing			
D)			10,309'-13', 10,706'-09'	1, 1	6, 6	Producing			
27. Acid, Fracture, Treatment, Cement Squeeze, Etc.				See attachment for remaining details					
Depth Interval		Amount and Type of Material							
13,130'-34'		Frac'd w/ 794 gals 15% HCl, 5305 gals WF23, 40,209 gals YF123 w/ 82,921# 16/30 Ottawa sand							
12,386'-90'		Frac'd w/ 3201 gals 30# linear, 1039 gals 15% HCl, 84,799 gals YF130 w/ 204,7156# 16/30 Ottawa sand							
12,140'-44'		Frac'd w/ 3201 gals 30# linear, 748 gals 15% HCl, 83,522 gals YF130 w/ 195,511# 16/30 Ottawa sand							
		See attachment for remaining details							
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
11/11/09	11/19/09	24	→	625	505	1161			Pumping
Choice Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
WO	SI 420	370	→				808	Producing	
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.	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 page 2)

ACCEPTED FOR RECORD
DEC 11 2009
J/s/ Chris Walls
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	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 or 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
Delaware Sands	3819'			T/Rustler	216'
				T/Salt	670'
				T/Lamar	3784'
				T/Delaware Sands	3819'

32. Additional remarks (include plugging procedure):

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

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

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) Valerie Truax Title Regulatory Admin AssistantSignature  Date 11/23/2009

Title 18 U.S.C. Section 101 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 and false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

JRU 106H 3160-4

26. Perforated Interval Record:

Peforated Interval	Size	No. Holes	Perf. Status
11,053'-57', 11,393'-96'	1, 1	6, 6	Producing
11,748'-52', 12,140'-44'	1, 1	6, 6	Producing
12,386'-90', 13,130'-34'	1, 1	6, 6	Producing

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

Depth Interval	Amount and Type of Material
11,748'-52'	Frac'd w/ 2673 gals 30# linear, 919 gals 15% HCL, 84,525 gals YF130 w/ 204,116# 16/30 Ottawa sand
11,393'-96'	Frac'd w/ 3028 gals 30# linear, 1228 gals 15% HCL, 82,713 gals YF130 w/ 204,521# 16/30 Ottawa sand
11,053'-57'	Frac'd w/ 3813 gals 30# linear, 838 gals 15% HCL, 47,367 gals YF130 w/ 143,208# 16/30 Ottawa sand
10,706'-09'	Frac'd w/ 2574 gals 30# linear, 899 gals 15% HCL, 43,670 gals YF130 w/ 143,7464# 16/30 Ottawa sand
10,309'-13'	Frac'd w/ 1865 gals 30# linear, 975 gals 15% HCL, 45,384 gals YF130 w/ 144,132# 16/30 Ottawa sand
9,960'-64'	Frac'd w/ 1959 gals 30# linear, 852 gals 15% HCL, 45,453 gals YF130 w/ 141,671# 16/30 Ottawa sand
9,611'-16'	Frac'd w/ 2992 gals 30# linear, 969 gals 15% HCL, 46,322 gals YF130 w/ 145,243# 16/30 Ottawa sand
9,256'-61'	Frac'd w/ 1801 gals 30# linear, 754 gals 15% HCL, 44,573 gals YF130 w/ 145,437# 16/30 Ottawa sand
8909'-13'	Frac'd w/ 3098 gals 30# linear, 753 gals 15% HCL, 44,602 gals YF130 w/ 145,114# 16/30 Ottawa sand
8511'-15'	Frac'd w/ 2670 gals 30# linear, 1168 gals 15% HCL, 44,408 gals YF130 w/ 145,178# 16/30 Ottawa sand
8110'-14'	Frac'd w/ 3114 gals 30# linear, 800 gals 15% HCL, 48,102 gals YF130 w/ 167,791# 16/30 Ottawa sand

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 St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

□ AMENDED REPORT

API Number 30-015-37063	Pool Code 50443	Pool Name Quahada Ridge, SE (Delaware)
Property Code 306407	Property Name JAMES RANCH UNIT	Well Number 106H
GRID No. 260737	Operator Name BOPCO, L.P.	Elevation 3296'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	36	22 S	30 E		1595	SOUTH	1096	WEST	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
L	35	22 S	30 E		2011	SOUTH	378	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
200	N		

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 unleased mineral interest in the land including the proposed bottom hole 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.

Valerie Truax 11/13/09
Signature Date

Valerie Truax
Printed Name

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.

JANUARY 5, 2009

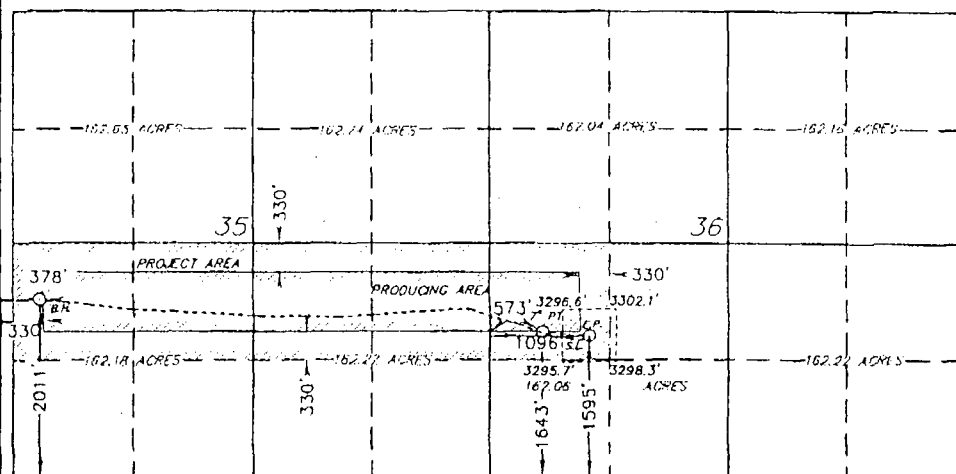
Date Surveyed

Signature & Seal of
Professional Surveyor

W.O. No. 20994

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



SURFACE LOCATION
LAT - N32°20'44.57"
LONG - W103°50'21.82"
SPC- N.: 489854.073
E.: 693876.291
(NAD-83)

DELAWARE ENTRY POINT
LAT - N32°20'44.57"
LONG - W103°50'21.82"
SPC- N.: 489854.073
E.: 693876.291
(NAD-83)

SCALE - 1" = 2000'

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

Well Name and Num: James Ranch Unit #106H
Location: Sec 36, T22S, R30E
Operator: BOPCo, LP
Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
0.4	210	0.89	2,829.00	0.21	5,482.00
0.84	578	0.86	2,923.00	0.15	5,671.00
1.34	762	1.44	3,017.00	0.32	5,858.00
1.61	857	1.68	3,109.00	1.6	5,920.00
1.94	953	1.33	3,202.00	0.51	6,046.00
2.69	1,048.00	0.93	3,296.00	0.38	6,170.00
2.83	1,143.00	1.24	3,390.00	0.62	6,235.00
0.89	1,297.00	1.48	3,484.00	0.68	6,423.00
0.9	1,420.00	1.02	3,578.00	0.92	6,484.00
0.07	1,511.00	0.69	3,672.00	1.07	6,623.00
1.66	1,608.00	0.06	3,759.00	0.2	6,701.00
1.6	1,703.00	0.44	3,883.00	1.17	6,724.00
1.83	1,797.00	0.39	3,977.00	1.11	6,757.00
1.62	1,890.00	0.21	4,165.00	1.27	6,787.00
0.7	1,983.00	0.5	4,226.00	2.03	6,818.00
1.28	2,076.00	0.35	4,354.00	5.89	6,849.00
1.62	2,171.00	0.25	4,602.00	10.48	6,881.00
0.08	2,265.00	0.17	4,730.00	13.69	6,912.00
0.42	2,358.00	0.11	4,918.00	15.82	6,943.00
0.96	2,472.00	0.69	5,012.00	19.58	6,975.00
0.78	2,547.00	0.17	5,106.00	24.03	7,006.00
0.83	2,643.00	0.15	5,294.00	28.72	7,037.00
0.66	2,734.00	0.74	5,419.00	33.71	7,069.00

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<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
38.46	7,100.00	89.52	8,073.00	89.04	11,729.00
43.38	7,132.00	89.97	8,170.00	90.31	11,825.00
47.78	7,163.00	89.66	8,363.00	88.66	11,922.00
51.65	7,195.00	90.93	8,459.00	91.34	12,019.00
55.98	7,225.00	88.31	8,555.00	89.21	12,109.00
58.22	7,257.00	89.66	8,651.00	88.28	12,213.00
60.47	7,288.00	90.17	8,747.00	91.03	12,305.00
64.72	7,320.00	90.55	8,843.00	90.21	12,404.00
69.59	7,352.00	89.76	8,992.00	91.72	12,499.00
74.36	7,384.00	90.83	9,162.00	91.62	12,596.00
76.32	7,414.00	90.24	9,350.00	92.27	12,691.00
77.46	7,446.00	92.48	9,541.00	90.41	12,787.00
78.16	7,478.00	90.03	9,732.00	92.27	12,882.00
80.15	7,509.00	90.79	9,911.00	89.76	12,977.00
84.14	7,540.00	86.8	10,104.00	90.65	13,073.00
88.87	7,572.00	86.39	10,299.00	89.28	13,234.00
88.14	7,658.00	83.31	10,460.00		
87.87	7,690.00	83.56	10,615.00		
89	7,723.00	85.6	10,811.00		
90.17	7,750.00	87.46	11,001.00		
90.41	7,782.00	88.59	11,190.00		
91.03	7,879.00	90.24	11,381.00		
90.24	7,976.00	89.83	11,574.00		

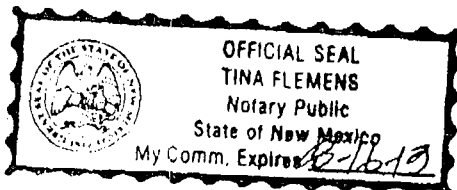
Drilling Contractor: McVay Drilling Company

By: Robert H. C. Smith

Subscribed and sworn to before me this 4th day of November, 2009

Tina Flemens
Notary Public

My Commission Expires: 12-16-13 Lea County, New Mexico



Handwritten initials



Bass James Ranch Unit 106H MWD Surveys 0ft to Update Survey Report

Report Date: October 1, 2009	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client: BOPCO, L.P.	Vertical Section Azimuth: 275.160°
Field: NM Eddy County (NAD 83)	Vertical Section Origin: N 0.000 ft, E 0.000 ft
Structure / Slot: Bass James Ranch Unit 106H / James Ranch Unit 106H	TVD Reference Datum: KB
Well: James Ranch Unit 106H	TVD Reference Elevation: 3315.0 ft relative to
Borehole: Original Borehole	Sea Bed / Ground Level Elevation: 3296.000 ft relative to
UWUAPI#:	Magnetic Declination: 7.975°
Survey Name / Date: Bass James Ranch Unit 106H MWD Surveys 0ft to Update / September 21, 2009	Total Field Strength: 48890.125 nT
Tort / AHD / DDI / ERD ratio: 218.710° / 6256.18 ft / 6.392 / 0.851	Magnetic Dip: 60.307°
Grid Coordinate System: NAD83 New Mexico State Planes, Eastern Zone, US Feet	Declination Date: September 21, 2009
Location Lat/Long: N 32 20 44.566, W 103 50 21.819	Magnetic Declination Model: BGGM 2009
Location Grid N/E Y/X: N 489854.073 ftUS, E 693876.291 ftUS	North Reference: Grid North
Grid Convergence Angle: +0.26427537°	Total Corr Mag North -> Grid North: +7.711°
Grid Scale Factor: 0.99993574	Local Coordinates Referenced To: Well Head

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Sub-Sea TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Mag / Grav Tool Face (deg)
James Ranch Unit 106H SHL	0.00	0.00	0.00	0.00	-3315.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	824.00	0.00	0.00	824.00	-2691.00	0.00	0.00	0.00	0.00	0.00	0.00	175.82M
	762.00	1.34	175.82	761.99	-2553.01	-0.26	-1.61	0.12	1.61	175.82	0.97	183.07M
	857.00	1.61	183.07	856.96	-2458.04	-0.49	-4.05	0.13	4.05	178.20	0.34	189.18M
	853.00	1.94	189.18	952.91	-2362.09	-0.43	-7.00	-0.20	7.00	181.67	0.40	187.02M
	1048.00	2.69	187.02	1047.83	-2267.17	-0.24	-10.80	-0.73	10.83	183.88	0.79	190.12M
	1143.00	2.83	190.12	1142.72	-2172.28	0.03	-15.32	-1.42	15.39	185.29	0.22	187.09M
	1235.00	1.74	187.09	1234.65	-2080.35	0.26	-18.84	-1.99	19.05	185.99	1.19	188.79M
	1297.00	0.89	188.79	1296.63	-2018.37	0.17	-20.35	-2.01	20.45	185.85	1.51	141.97M
	1420.00	0.90	141.97	1419.62	-1885.38	-0.76	-22.05	-1.23	22.08	183.20	0.34	142.51M
	1511.00	1.07	142.51	1510.60	-1804.40	-1.82	-23.29	-0.27	23.29	180.67	0.19	138.80M
	1608.00	1.66	138.80	1607.57	-1707.43	-3.45	-25.06	1.20	25.09	177.25	0.61	141.16M
	1703.00	1.60	141.16	1702.54	-1612.46	-5.37	-27.13	2.84	27.29	173.81	0.09	142.21M
	1797.00	1.83	142.21	1796.49	-1518.51	-7.30	-29.34	4.68	29.71	170.93	0.25	145.43M
	1890.00	1.82	145.43	1889.45	-1425.55	-9.16	-31.59	8.34	32.22	168.65	0.25	165.37M
	1983.00	0.70	165.37	1982.43	-1332.57	-10.19	-33.23	7.23	34.00	167.73	1.07	155.89M
	2076.00	1.28	155.89	2075.42	-1239.58	-10.89	-34.72	7.60	35.59	167.34	0.65	167.80M
	2170.00	1.62	167.80	2169.39	-1145.61	-11.80	-38.98	8.51	37.95	167.05	0.48	191.58M
	2265.00	0.78	191.58	2264.37	-1050.63	-12.13	-38.93	8.66	39.88	167.46	1.01	224.82M
	2358.00	0.42	224.82	2357.36	-957.64	-11.84	-39.79	8.29	40.84	168.23	0.52	264.27M
	2452.00	0.96	264.27	2451.35	-863.65	-10.84	-40.11	7.27	40.76	169.73	0.73	254.08M
	2547.00	0.78	254.08	2546.34	-768.66	-9.46	-40.37	5.85	40.79	171.75	0.25	226.30M
	2643.00	0.83	226.30	2642.33	-672.67	-8.39	-41.03	4.72	41.30	173.43	0.41	221.23M
	2734.00	0.66	221.23	2733.33	-581.67	-7.65	-41.88	3.90	42.06	174.68	0.20	236.13M
	2829.00	0.89	236.13	2828.32	-486.68	-6.76	-42.70	2.93	42.80	176.08	0.32	213.43M
	2923.00	0.86	213.43	2922.31	-392.69	-5.85	-43.70	1.93	43.74	177.47	0.37	147.38M
	3017.00	1.44	147.38	3016.29	-298.71	-6.24	-45.28	2.18	45.33	177.24	1.43	127.89M
	3109.00	1.68	127.89	3108.26	-206.74	-8.09	-47.08	3.87	47.24	175.30	0.63	79.43M
	3202.00	1.33	79.43	3201.23	-113.77	-10.27	-47.72	6.00	48.10	172.83	1.37	90.27M
	3296.00	0.93	90.27	3295.21	-19.79	-12.08	-47.52	7.84	48.17	170.63	0.48	124.75M
	3390.00	1.24	124.75	3389.20	74.20	-13.73	-48.11	9.44	49.02	168.90	0.75	141.41M
	3484.00	1.48	141.41	3483.17	168.17	-15.45	-48.64	11.03	50.85	167.47	0.49	139.68M
	3578.00	1.02	139.68	3577.15	262.15	-16.89	-51.22	12.33	52.69	166.47	0.49	137.86M
	3672.00	0.69	137.86	3671.14	356.14	-17.90	-52.28	13.25	53.93	165.78	0.35	140.98M
	3759.00	0.60	140.98	3758.13	443.13	-18.60	-53.02	13.89	54.81	165.32	0.11	159.41M
	3883.00	0.44	159.41	3882.13	567.13	-19.26	-53.97	14.47	55.88	165.00	0.19	151.80M
	3977.00	0.39	151.80	3976.12	661.12	-19.59	-54.59	14.74	56.55	164.89	0.08	157.66M
	4165.00	0.21	157.66	4164.12	849.12	-20.10	-55.48	15.18	57.51	164.70	0.10	170.25M
	4354.00	0.35	170.25	4353.12	1038.12	-20.41	-56.36	15.41	58.43	164.71	0.08	156.80M

4542.00	0.37	156.80	4541.11	1226.11	-20.85	-57.48	15.74	59.61	164.69	0.05	158.22M
4730.00	0.17	158.22	4729.11	1414.11	-21.27	-58.30	16.09	60.48	164.57	0.11	187.22M
4918.00	0.11	187.22	4917.11	1602.11	-21.40	-58.74	16.18	60.92	164.60	0.05	185.57M
5106.00	0.17	185.57	5105.11	1780.11	-21.39	-59.19	16.13	61.35	164.75	0.03	179.70M
5294.00	0.15	179.70	5293.11	1978.11	-21.41	-59.72	16.11	61.85	164.90	0.01	194.28M
5482.00	0.21	194.28	5481.11	2166.11	-21.38	-60.30	16.02	62.39	165.12	0.04	178.01M
5671.00	0.15	175.01	5670.11	2355.11	-21.37	-60.88	15.96	62.94	165.31	0.04	170.34M
5858.00	0.32	170.34	5857.11	2542.11	-21.54	-61.64	16.06	63.70	165.39	0.09	152.13M
6046.00	0.51	152.13	6045.10	2730.10	-22.13	-62.89	16.54	65.03	165.27	0.12	148.51M
6235.00	0.62	148.51	6234.09	2919.09	-23.20	-64.51	17.47	66.83	164.85	0.06	131.05M
6423.00	0.68	131.05	6422.08	3107.08	-24.71	-66.11	18.84	68.74	164.09	0.11	148.52M
6623.00	1.07	148.52	6622.06	3307.06	-26.79	-68.48	20.71	71.55	163.17	0.23	157.41M
6724.00	1.17	157.41	6723.04	3408.04	-27.83	-70.24	21.60	73.48	162.91	0.20	161.43M
6757.00	1.11	161.43	6756.03	3441.03	-28.11	-70.85	21.83	74.14	162.88	0.30	156.42M
6787.00	1.27	156.42	6786.03	3471.03	-28.39	-71.43	22.06	74.78	162.84	0.64	254.73M
6818.00	2.03	254.73	6817.02	3502.02	-28.04	-71.89	21.66	75.09	163.23	8.21	274.34M
6849.00	5.89	274.34	6847.94	3532.94	-25.94	-71.92	19.55	74.53	164.79	13.02	0.93R
6881.00	10.48	274.75	6879.60	3564.60	-21.38	-71.55	15.01	73.11	168.15	14.34	8.20R
6912.00	13.69	276.22	6909.91	3594.91	-14.89	-70.92	8.55	71.43	173.13	10.40	13.51L
6943.00	15.82	274.35	6939.89	3624.89	-7.00	-70.20	0.69	70.21	179.44	7.04	5.51R
6975.00	19.58	275.43	6970.37	3655.37	2.73	-69.36	-9.00	69.95	187.40	11.79	11.48R
7006.00	24.03	277.64	6999.14	3684.14	14.23	-68.03	-20.44	71.04	198.72	14.59	1.29R
7037.00	28.72	277.86	7026.91	3711.91	27.99	-66.17	-34.08	74.43	207.25	15.13	3.82L
7069.00	33.71	277.26	7054.27	3739.27	44.55	-64.00	-50.51	81.53	218.28	15.62	0.68R
7100.00	38.46	277.35	7079.31	3764.31	62.79	-61.68	-68.62	92.26	228.05	15.32	5.67R
7132.00	43.38	278.06	7103.49	3788.49	83.72	-58.86	-89.38	107.02	238.63	15.44	14.78R
7163.00	47.78	279.62	7125.18	3810.18	105.81	-55.45	-111.25	124.30	243.51	14.84	6.02R
7195.00	51.65	280.14	7145.87	3830.87	130.14	-51.26	-135.29	144.68	249.25	12.16	4.27R
7225.00	55.98	280.53	7163.57	3848.57	154.24	-46.91	-159.11	165.88	253.57	14.47	HS
7257.00	58.22	280.53	7180.95	3865.95	180.99	-42.00	-185.52	190.22	257.24	7.00	1.77R
7288.00	60.47	280.61	7196.76	3881.76	207.54	-37.11	-211.74	214.96	260.06	7.26	2.32R
7320.00	64.72	280.80	7211.48	3896.48	235.81	-31.83	-239.84	241.75	262.43	13.29	4.96L
7352.00	69.59	280.35	7223.90	3908.90	265.16	-26.43	-268.62	269.92	264.38	15.27	1.04L
7384.00	74.36	280.26	7233.80	3918.80	295.46	-20.98	-298.55	299.29	265.98	14.91	25.01R
7414.00	76.32	281.20	7241.40	3926.40	324.34	-15.58	-327.07	327.44	267.27	7.20	27.21R
7446.00	77.46	281.80	7248.85	3933.65	355.32	-9.37	-357.61	357.73	268.50	4.00	57.52R
7478.00	78.16	282.92	7255.41	3940.41	388.35	-2.67	-388.16	388.17	269.61	4.08	41.47R
7508.00	80.15	284.70	7261.24	3948.24	416.44	4.60	-417.72	417.75	270.63	8.54	20.41R
7540.00	84.14	286.19	7265.48	3950.48	446.65	12.78	-447.32	447.50	271.64	13.72	13.91R
7572.00	88.87	287.36	7267.43	3952.43	477.93	21.99	-477.89	478.39	272.63	15.22	133.12L
7658.00	88.14	286.53	7269.67	3954.67	562.08	47.08	-560.11	562.09	274.81	1.24	94.71R
7890.00	87.87	289.90	7270.79	3955.79	593.23	57.09	-590.48	593.24	275.52	10.40	23.01R
7723.00	89.00	290.33	7271.69	3956.69	625.09	68.45	-621.45	625.21	276.29	3.72	42.71R
7750.00	90.17	291.46	7271.88	3956.88	651.08	78.09	-646.67	651.37	276.89	5.90	61.93L
7782.00	90.41	291.01	7271.72	3956.72	681.82	89.68	-676.50	682.42	277.55	1.59	52.90R
7879.00	91.03	291.83	7270.50	3955.50	774.93	125.10	-768.79	776.93	279.27	1.06	113.00L
7978.00	90.24	289.97	7269.43	3954.43	868.29	159.70	-857.40	872.15	280.55	2.08	105.77L
8073.00	89.52	287.42	7269.63	3954.63	962.58	190.79	-949.27	968.28	281.36	2.73	51.71L
8170.00	89.97	286.85	7270.06	3955.06	1057.47	219.37	-1041.97	1064.81	281.89	0.75	97.85L
8363.00	89.66	284.60	7270.69	3955.69	1247.19	271.67	-1227.73	1257.43	282.48	1.18	75.03L
8459.00	90.93	279.85	7270.19	3955.19	1342.43	291.99	-1321.52	1353.40	282.46	5.12	107.90L
8555.00	88.31	271.74	7270.83	3955.83	1438.33	301.68	-1416.94	1448.70	282.02	8.88	89.00L
8651.00	89.66	268.23	7272.53	3957.53	1533.91	301.65	-1512.91	1542.69	281.28	3.92	71.45L
8747.00	90.17	266.71	7272.67	3957.67	1629.04	297.42	-1608.81	1636.07	280.47	1.67	77.25L
8843.00	90.55	265.03	7272.07	3957.07	1723.78	290.50	-1704.56	1729.13	279.67	1.79	116.56L
8992.00	89.76	263.45	7271.67	3956.67	1870.07	275.55	-1852.80	1873.18	278.46	1.19	1.61R
9162.00	90.83	263.48	7270.79	3955.79	2036.54	256.20	-2021.69	2037.86	277.22	0.63	125.73R
9350.00	90.24	264.30	7269.04	3954.04	2220.90	236.19	-2208.61	2221.20	276.10	0.54	60.89R
9541.00	92.48	268.33	7264.50	3949.50	2409.53	223.92	-2399.11	2409.54	275.33	2.41	174.40L
9732.00	90.03	268.09	7260.32	3945.32	2599.06	217.96	-2589.96	2599.11	274.81	1.29	62.50R

	9911.00	90.79	269.55	7259.04	3944.04	2776.96	214.27	-2768.91	2777.19	274.42	0.92	162.75R
	10104.00	86.80	270.79	7263.10	3948.10	2969.14	214.84	-2961.82	2969.60	274.15	2.16	123.12R
	10299.00	86.39	271.42	7274.68	3959.68	3163.31	218.59	-3156.44	3164.00	273.96	0.38	173.92R
	10460.00	83.31	271.75	7289.13	3974.13	3323.33	223.03	-3316.71	3324.20	273.85	1.92	84.23L
	10615.00	83.66	269.32	7306.85	3991.85	3476.80	224.46	-3470.67	3477.93	273.70	1.57	52.52R
	10811.00	85.60	271.98	7326.37	4010.37	3671.29	226.69	-3665.76	3672.76	273.54	1.71	60.88R
	11001.00	87.46	275.31	7336.87	4021.87	3880.84	238.75	-3854.99	3862.38	273.54	2.00	50.70L
	11190.00	88.59	273.93	7343.38	4028.38	4049.71	253.96	-4043.26	4051.22	273.59	0.94	58.11L
	11381.00	90.24	271.28	7345.33	4030.33	4240.49	262.64	-4234.02	4242.16	273.55	1.63	117.13L
	11574.00	89.83	270.48	7345.22	4030.22	4432.95	265.60	-4427.00	4434.98	273.43	0.47	108.30R
	11729.00	89.04	272.87	7346.74	4031.74	4587.64	270.13	-4581.91	4589.87	273.37	1.82	35.33R
	11825.00	80.31	273.77	7347.29	4032.29	4683.59	275.68	-4677.75	4685.87	273.37	1.62	130.39L
	11922.00	88.66	271.83	7348.16	4033.16	4780.49	280.43	-4774.62	4782.85	273.36	2.83	25.01R
	12019.00	91.34	273.08	7348.16	4033.16	4877.37	284.58	-4871.52	4879.83	273.34	3.06	178.24L
	12109.00	89.21	272.94	7347.73	4032.73	4967.30	289.31	-4961.39	4969.82	273.34	2.37	122.52R
	12213.00	88.28	274.40	7350.01	4035.01	5071.24	295.96	-5065.15	5073.79	273.34	1.66	4.16R
	12305.00	91.03	274.60	7350.56	4035.56	5163.22	303.18	-5156.85	5165.78	273.36	3.00	177.90R
	12404.00	90.21	274.63	7349.49	4034.49	5262.21	311.15	-5255.53	5264.73	273.39	0.83	49.68R
	12499.00	91.72	276.41	7347.89	4032.89	5357.19	320.28	-5350.07	5359.64	273.43	2.48	93.21R
	12596.00	91.82	278.18	7345.06	4030.06	5454.08	332.59	-5446.24	5456.38	273.49	1.83	42.20R
	12691.00	92.27	278.77	7341.84	4026.84	5548.86	346.59	-5540.14	5550.97	273.58	0.92	148.30L
	12787.00	90.41	277.53	7339.59	4024.59	5644.70	360.19	-5635.14	5646.64	273.66	2.33	3.08R
	12882.00	92.27	277.63	7337.37	4022.37	5739.59	372.72	-5728.28	5741.39	273.72	1.96	151.01L
	12977.00	89.76	276.24	7335.69	4020.69	5834.51	384.19	-5823.58	5836.22	273.77	3.02	55.40L
	13073.00	90.65	274.95	7335.35	4020.35	5930.51	393.54	-5919.10	5932.17	273.80	1.63	127.74L
Final Survey	13178.00	89.28	273.18	7335.41	4020.41	6035.48	400.99	-6023.83	6037.16	273.81	2.13	---
Projection to TD	13234.00	89.28	273.18	7336.11	4021.11	6091.44	404.09	-6079.74	6093.15	273.80	0.00	---

Survey Type: Non-Def Survey

Survey Error Model: SLB ISCWSA version 24 *** 3-D 95.00% Confidence 2.7955 sigma

Surveying Prog:

MD From (ft)

MD To (ft)

EQU Freq

Survey Tool Type

Borehole -> Survey

0.00

19.00

Act-Stns SLB_MWD-STD-Depth Only

Original Borehole -> Bass James Ranch Unit 106H MWD Surveys 0ft to 1

19.00

13178.00

Act-Stns SLB_MWD-STD

Original Borehole -> Bass James Ranch Unit 106H MWD Surveys 0ft to 1

13178.00

13234.00

Act-Stns SLB_BLIND+TREND

Original Borehole -> Bass James Ranch Unit 106H MWD Surveys 0ft to 1

**Italicized stations are NOT used in position calculations.*



Downhole Profile - Vertical Wells

BOPCO, L.P. - West Texas

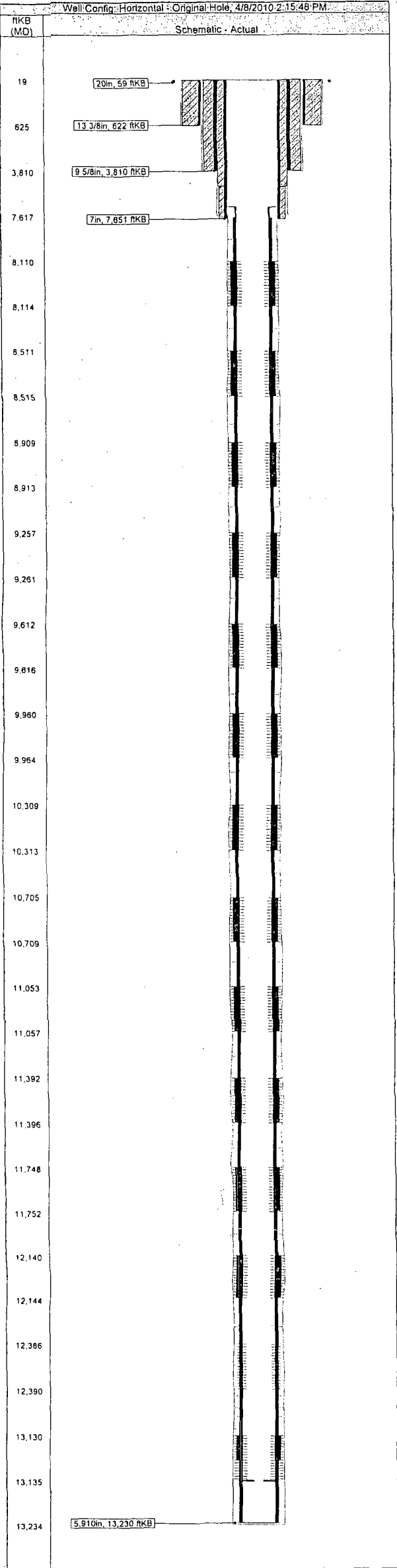
Well ID: 30-015-37063

Well Name: JAMES RANCH UNIT #106H

Field: Quahada Ridge SE - Delaware

Sect: 36 Town: 22S Rng: 30E County: Eddy State: New Mexico

Surface Location: 1595' FSL & 1096' FWL



Well Information						
Original KB Elevation (ft)	Ground Elevation (ft)	KB-Ground Distance (ft)	Spud Date	On Production Date		
3,312.60	3,294.10	18.50	9/9/2009	11/12/2009		
Wellbores						
Wellbore Name: Original Hole			Kick Off Depth (ftKB):			
Size (in)		Act.Top (ftKB)		Act Btm (ftKB)		
17 1/2		19.0		625.0		
12 1/4		625.0		3,810.0		
8 3/4		3,810.0		7,617.0		
6 1/8		7,617.0		13,234.0		
Casing Strings						
Casing Description	Wellbore	OD (in)	Wt. (lbs/ft)	Grade	Top Thread	Set @ (ftKB)
Conductor	Original Hole	20	52.70	Grade "B"		59.0
Surface	Original Hole	13 3/8	48.00	H-40	STC	621.5
Intermediate	Original Hole	9 5/8	40.00	J-55	LT&C	3,810.0
Intermediate 2	Original Hole	7	26.00	P110	LT&C	7,651.0
Production	Original Hole	4 1/2	11.60	HCP-110	Ultra FJ	13,230.0
Perforations						
Perf Date	Top (ftKB)	Btm (ftKB)	Zone		Current Status	
11/3/2009	8,109.9	8,113.9				
11/3/2009	8,511.1	8,515.1				
11/3/2009	8,909.5	8,913.4				
11/3/2009	9,256.8	9,260.8				
11/3/2009	9,611.8	9,615.7				
11/2/2009	9,959.6	9,963.5			Open - Active (9959.6 - 9963.5)	
11/2/2009	10,308.8	10,312.7			Open - Active (10308.8 - 10312.7)	
11/2/2009	10,705.5	10,709.4			Open - Active (10705.5 - 10709.4)	
11/2/2009	11,053.1	11,057.1			Open - Active (11053.1 - 11057.1)	
11/2/2009	11,392.5	11,396.4			Open - Active (11392.5 - 11396.4)	
11/2/2009	11,747.6	11,751.6			Open - Active (11747.6 - 11751.6)	
11/2/2009	12,140.0	12,143.9			Open - Active (12140 - 12143.9)	
11/1/2009	12,386.0	12,390.0			Open - Active (12386 - 12390)	
10/14/2009	13,129.6	13,134.4			Open - Active (13129.6 - 13134.4)	
Tubing Strings						
Tubing Description		Run Date	String Length (ft)		Set Depth (ftKB)	
No.	Item Description		Jts.	OD (in)	Wt (lbs/ft)	Grade
						Top (ftKB)
Cement						
Surface Casing Cement, 9/10/2009						
String: Surface, 621.5ftKB						
Cement Evaluation Results:						
Stage Number	Stage Top (ftKB)	Stage Bottom (ftKB)	Cmnt Rtn (bbl)		Top Measurement Method	
1	19.0	625.0	39.0		Circulated	
Fluid		Amount (sacks)	Class	Density (lb/gal)	Yield (ft ³ /sack)	
Lead		290	C	13.50	1.75	
Tail		310	C	14.80	1.35	
Intermediate Casing Cement, 9/15/2009						
String: Intermediate, 3,810.0ftKB						
Cement Evaluation Results:						
Stage Number	Stage Top (ftKB)	Stage Bottom (ftKB)	Cmnt Rtn (bbl)		Top Measurement Method	
1	19.0	3,810.0	102.0		Circulated	
Fluid		Amount (sacks)	Class	Density (lb/gal)	Yield (ft ³ /sack)	
Lead		1,050	C	12.90	1.87	
Tail		250	C	14.80	1.33	
2nd Intermediate Casing Cement, 9/22/2009						
String: Intermediate 2, 7,651.0ftKB						
Cement Evaluation Results:						
Stage Number	Stage Top (ftKB)	Stage Bottom (ftKB)	Cmnt Rtn (bbl)		Top Measurement Method	
1	5,064.0	7,651.0	50.0		Circulated	
Fluid		Amount (sacks)	Class	Density (lb/gal)	Yield (ft ³ /sack)	
Lead		170	C	9.70	3.13	
Tail		230	H	15.60	1.19	
Stage Number	Stage Top (ftKB)	Stage Bottom (ftKB)	Cmnt Rtn (bbl)		Top Measurement Method	
2	19.0	5,064.0			Tagged	
Fluid		Amount (sacks)	Class	Density (lb/gal)	Yield (ft ³ /sack)	
Lead		500	C	12.80	1.88	
Tail		100	C	14.80	1.33	
Top Out Cement		42		14.80	1.34	