

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.FORM APPROVED
OMB No 1004-0137
Expires March 31, 20075 Lease Serial No
BH- NM02952B, SH - NM89052

6 If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No.
James Ranch NMNM 70965X8 Well Name and No.
James Ranch Unit #138H

9. API Well No.

10. Field and Pool, or Exploratory Area
Quahada Ridge, SE (Delaware)

11. County or Parish, State

Eddy, New Mexico

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1 Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator BOPCO, L. P.

3a Address
P. O. Box 2760 Midland, TX 797023b. Phone No (include area code)
432-683-2277

4. Location of Well (Footage, Sec, T, R, M., or Survey Description)

NESW, UL K, 2365' FSL, 2010' FWL, Sec 25, T22S-R30E, Lat:N32.362247, Long:W103.835919
NWSW, UL L, 1980' FSL, 330' FWL, Sec 27, T22S-R30E, Lat:N32.361264, Long:W103.876036

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

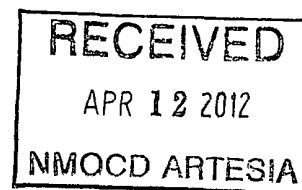
BOPCO L.P. would like to change the surface location of the James Ranch Unit 138H from a surface location located at 2365' FSL, 1980' FWL of Sec 25, T22S-R30E to a new location located at 2365' FSL, 2010' FWL, Sec 25, T22S-R30E. This move is to achieve a forty foot spacing between the James Ranch Unit 138H and James Ranch Unit 139H.

Attached are a new C-102 survey plat and new directional plans.

COB 000050

Accepted for record
NMOCD

4/13/2012

14 I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Jeremy Braden

Title Engineering Assistant

Signature

Date

1-30-12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ James Stovall

FIELD MANAGER

FEB 10 2012

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CARLSBAD FIELD OFFICE

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.

(Instructions on page 2)

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 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 18, 2010
Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number		Pool Code	Pool Name
		50443	Quahada Ridge, SE (Delaware)
Property Code	Property Name		Well Number
306407	JAMES RANCH UNIT		138H
OGRID No.	Operator Name		Elevation
260737	BOPCO, L.P.		3343'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	25	22 S	30 E		2365	SOUTH	2010	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	27	22 S	30 E		1980	SOUTH	330	WEST	EDDY
Dedicated Acres	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 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.

Jeremy Braden 1-9-12
Signature Date
Jeremy Braden
Printed Name
JDBraden@basspet.com
Email 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.

JANUARY 05, 2011
Date Surveyed
Signature & Seal of Professional Surveyor
W.C. JONES
Professional Land Surveyor

Certificate No. Gary L. Jones 7977
BASIN SURVEYS 25989

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°21'40.55"
Long - W 103°52'33.73"
NMSPCE- N 495445.053
E 641201.462
(NAD-27)

SURFACE LOCATION DELAWARE PP
Lat - N 32°21'44.09"
Long - W 103°50'09.31"
NMSPCE- N 495858.013
E 653587.389
(NAD-27)

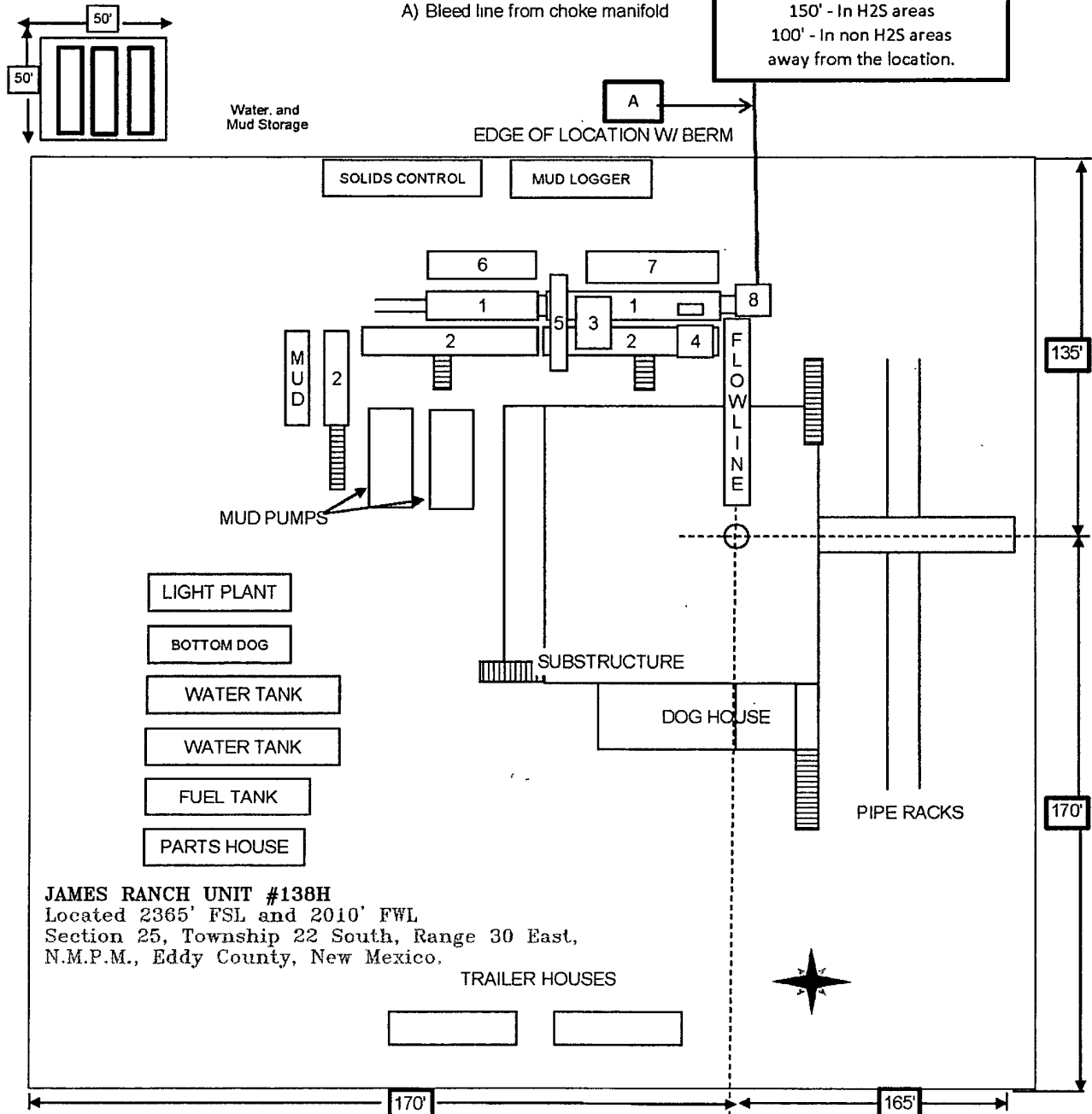
SCALE 1"=3000'

RIG LAYOUT

RIG LAYOUT SCHEMATIC INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

- | | |
|-----------------------------------|--------------------|
| 1) Roll Off Bin | 5) Centrifuge |
| 2) Steel Tank | 6) Dewatering Unit |
| 3) Mud Cleaner | 7) Catch Tank |
| 4) Shaker | 8) Choke Manifold |
| A) Bleed line from choke manifold | |



JAMES RANCH UNIT #138H
 Located 2365' FSL and 2010' FWL
 Section 25, Township 22 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.

TRAILER HOUSES

basin surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basin-surveys.com

W.O. Number: JMS 25989

Survey Date: 03-17-2011

Scale: 1" = 2000'

Date: 03-24-2011

BOPCO, L.P.

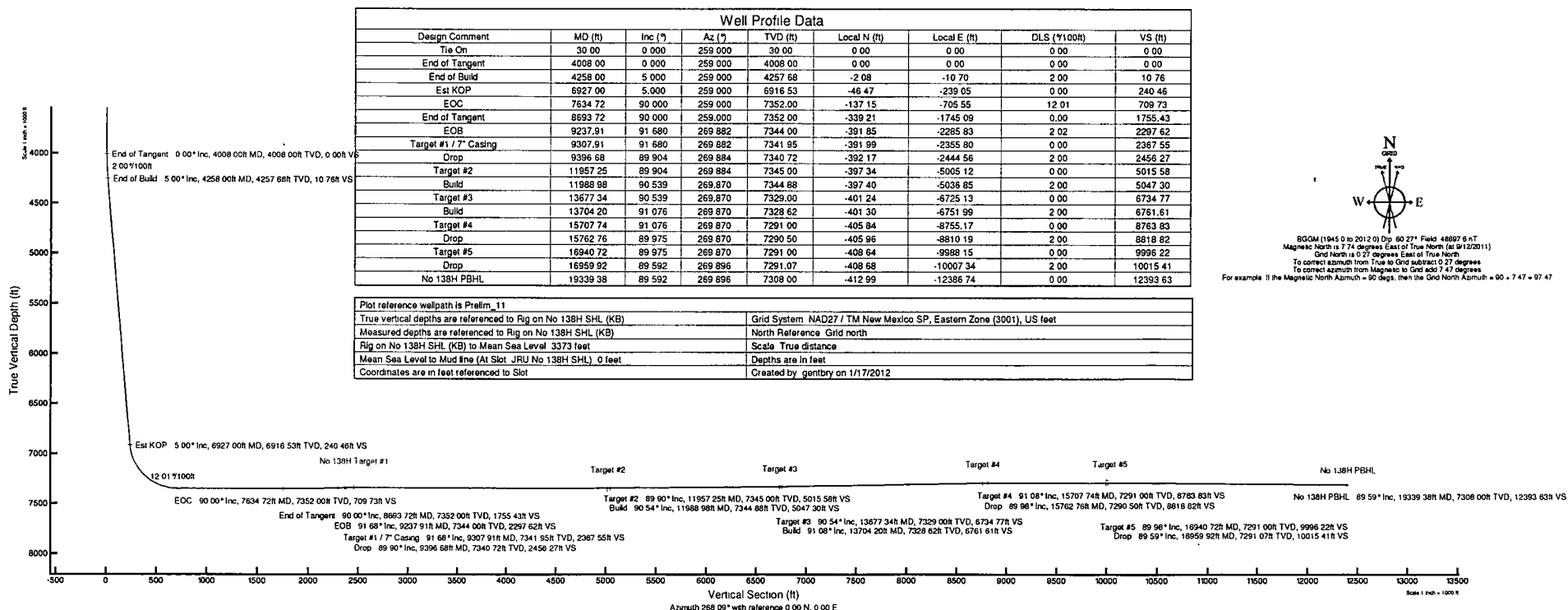
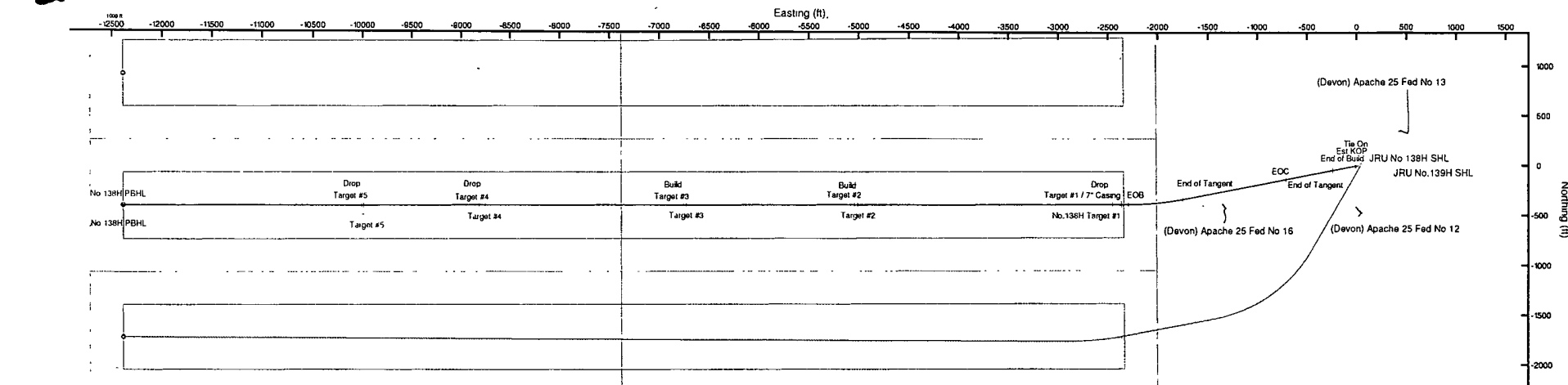
Sheet 6 of 6 Sheets



BOPCO, L.P.

Location Eddy County, NM
Field JRU NAD27
Facility (JR) No 138 & No 139

Slot JRU No.138H SHL
Well JRU No 138H
Wellbore JRU No 138H PWB





Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.138H SHL
Area	Eddy County, NM	Well	JRU No.138H
Field	JRU NAD27	Wellbore	JRU No.138H PWB
Facility	(JRU) No.138 & No.139		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Gentbry
Scale	0.999936	Report Generated	1/17/2012 at 1:58:33 PM
Convergence at slot	0.27° East	Database/Source file	WA Midland/JRU_No.138H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	953.15	1092.02	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W
Facility Reference Pt			652495.44	494904.92	32°21'34.711"N	103°50'22.090"W
Field Reference Pt			652495.44	494904.92	32°21'34.711"N	103°50'22.090"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.138H SHL (KB) to Facility Vertical Datum	3373.00ft
Horizontal Reference Pt	Slot	Rig on No.138H SHL (KB) to Mean Sea Level	3373.00ft
Vertical Reference Pt	Rig on No.138H SHL (KB)	Rig on No.138H SHL (KB) to Mud Line at Slot (JRU No.138H SHL)	3373.00ft
MD Reference Pt	Rig on No.138H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	268.09°



Planned Wellpath Report

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.138H SHL
Area	Eddy County, NM	Well	JRU No.138H
Field	JRU NAD27	Wellbore	JRU No.138H PWB
Facility	(JRU) No.138 & No.139		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	259.000	0.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
30.00	0.000	259.000	30.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	Tie On
130.00†	0.000	259.000	130.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
230.00†	0.000	259.000	230.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
330.00†	0.000	259.000	330.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
358.00†	0.000	259.000	358.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	Rustler
430.00†	0.000	259.000	430.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
530.00†	0.000	259.000	530.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
630.00†	0.000	259.000	630.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
650.00†	0.000	259.000	650.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	Salado
730.00†	0.000	259.000	730.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
830.00†	0.000	259.000	830.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
930.00†	0.000	259.000	930.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1030.00†	0.000	259.000	1030.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1130.00†	0.000	259.000	1130.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1230.00†	0.000	259.000	1230.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1330.00†	0.000	259.000	1330.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1430.00†	0.000	259.000	1430.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1530.00†	0.000	259.000	1530.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1630.00†	0.000	259.000	1630.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1730.00†	0.000	259.000	1730.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1830.00†	0.000	259.000	1830.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
1930.00†	0.000	259.000	1930.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2030.00†	0.000	259.000	2030.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2130.00†	0.000	259.000	2130.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2230.00†	0.000	259.000	2230.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2330.00†	0.000	259.000	2330.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2430.00†	0.000	259.000	2430.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2530.00†	0.000	259.000	2530.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2630.00†	0.000	259.000	2630.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2730.00†	0.000	259.000	2730.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2830.00†	0.000	259.000	2830.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
2930.00†	0.000	259.000	2930.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3030.00†	0.000	259.000	3030.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3130.00†	0.000	259.000	3130.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3230.00†	0.000	259.000	3230.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3330.00†	0.000	259.000	3330.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3430.00†	0.000	259.000	3430.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3530.00†	0.000	259.000	3530.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3630.00†	0.000	259.000	3630.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3730.00†	0.000	259.000	3730.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3812.00†	0.000	259.000	3812.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	Lamar
3830.00†	0.000	259.000	3830.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
3848.00†	0.000	259.000	3848.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	Delaware Sands
3930.00†	0.000	259.000	3930.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	



Planned Wellpath Report

Prelim_11

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**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.138H SHL
Area	Eddy County, NM	Well	JRU No.138H
Field	JRU NAD27	Wellbore	JRU No.138H PWB
Facility	(JRU) No.138 & No.139		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4008.00	0.000	259.000	4008.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	End of Tangent
4030.00†	0.440	259.000	4030.00	0.08	-0.02	-0.08	653587.31	495857.99	32°21'44.093"N	103°50'09.309"W	2.00	
4130.00†	2.440	259.000	4129.96	2.56	-0.50	-2.55	653584.84	495857.51	32°21'44.088"N	103°50'09.338"W	2.00	
4230.00†	4.440	259.000	4229.78	8.49	-1.64	-8.44	653578.95	495856.37	32°21'44.077"N	103°50'09.406"W	2.00	
4258.00	5.000	259.000	4257.68	10.76	-2.08	-10.70	653576.69	495855.93	32°21'44.073"N	103°50'09.433"W	2.00	End of Build
4330.00†	5.000	259.000	4329.41	16.96	-3.28	-16.86	653570.53	495854.73	32°21'44.061"N	103°50'09.505"W	0.00	
4430.00†	5.000	259.000	4429.03	25.57	-4.94	-25.42	653561.98	495853.07	32°21'44.045"N	103°50'09.604"W	0.00	
4530.00†	5.000	259.000	4528.65	34.17	-6.60	-33.97	653553.42	495851.41	32°21'44.029"N	103°50'09.704"W	0.00	
4630.00†	5.000	259.000	4628.27	42.78	-8.27	-42.53	653544.87	495849.74	32°21'44.013"N	103°50'09.804"W	0.00	
4730.00†	5.000	259.000	4727.89	51.39	-9.93	-51.08	653536.93	495848.08	32°21'43.997"N	103°50'09.904"W	0.00	
4830.00†	5.000	259.000	4827.51	59.99	-11.59	-59.64	653527.76	495846.42	32°21'43.981"N	103°50'10.004"W	0.00	
4930.00†	5.000	259.000	4927.13	68.60	-13.26	-68.19	653519.20	495844.76	32°21'43.965"N	103°50'10.104"W	0.00	
5030.00†	5.000	259.000	5026.75	77.20	-14.92	-76.75	653510.65	495843.09	32°21'43.949"N	103°50'10.203"W	0.00	
5130.00†	5.000	259.000	5126.36	85.81	-16.58	-85.30	653502.09	495841.43	32°21'43.933"N	103°50'10.303"W	0.00	
5230.00†	5.000	259.000	5225.98	94.42	-18.24	-93.86	653493.54	495839.77	32°21'43.917"N	103°50'10.403"W	0.00	
5330.00†	5.000	259.000	5325.60	103.02	-19.91	-102.42	653484.98	495838.10	32°21'43.900"N	103°50'10.503"W	0.00	
5430.00†	5.000	259.000	5425.22	111.63	-21.57	-110.97	653476.43	495836.44	32°21'43.884"N	103°50'10.603"W	0.00	
5530.00†	5.000	259.000	5524.84	120.23	-23.23	-119.53	653467.87	495834.78	32°21'43.868"N	103°50'10.702"W	0.00	
5630.00†	5.000	259.000	5624.46	128.84	-24.90	-128.08	653459.32	495833.12	32°21'43.852"N	103°50'10.802"W	0.00	
5730.00†	5.000	259.000	5724.08	137.45	-26.56	-136.64	653450.76	495831.45	32°21'43.836"N	103°50'10.902"W	0.00	
5830.00†	5.000	259.000	5823.70	146.05	-28.22	-145.19	653442.21	495829.79	32°21'43.820"N	103°50'11.002"W	0.00	
5930.00†	5.000	259.000	5923.32	154.66	-29.89	-153.75	653433.65	495828.13	32°21'43.804"N	103°50'11.102"W	0.00	
6030.00†	5.000	259.000	6022.94	163.26	-31.55	-162.30	653425.10	495826.46	32°21'43.788"N	103°50'11.202"W	0.00	
6130.00†	5.000	259.000	6122.56	171.87	-33.21	-170.86	653416.54	495824.80	32°21'43.772"N	103°50'11.301"W	0.00	
6230.00†	5.000	259.000	6222.18	180.48	-34.87	-179.41	653407.99	495823.14	32°21'43.756"N	103°50'11.401"W	0.00	
6230.82†	5.000	259.000	6223.00	180.55	-34.89	-179.48	653407.92	495823.12	32°21'43.756"N	103°50'11.402"W	0.00	Lower Cherry Canyon
6330.00†	5.000	259.000	6321.80	189.08	-36.54	-187.97	653399.43	495821.47	32°21'43.740"N	103°50'11.501"W	0.00	
6430.00†	5.000	259.000	6421.42	197.69	-38.20	-196.53	653390.88	495819.81	32°21'43.724"N	103°50'11.601"W	0.00	
6530.00†	5.000	259.000	6521.04	206.30	-39.86	-205.08	653382.32	495818.15	32°21'43.708"N	103°50'11.701"W	0.00	
6630.00†	5.000	259.000	6620.66	214.90	-41.53	-213.64	653373.77	495816.49	32°21'43.692"N	103°50'11.801"W	0.00	
6730.00†	5.000	259.000	6720.28	223.51	-43.19	-222.19	653365.21	495814.82	32°21'43.676"N	103°50'11.900"W	0.00	
6830.00†	5.000	259.000	6819.90	232.11	-44.85	-230.75	653356.66	495813.16	32°21'43.660"N	103°50'12.000"W	0.00	
6927.00	5.000	259.000	6916.53	240.46	-46.47	-239.05	653348.36	495811.55	32°21'43.644"N	103°50'12.097"W	0.00	Est KOP
6930.00†	5.360	259.000	6919.51	240.73	-46.52	-239.31	653348.09	495811.50	32°21'43.643"N	103°50'12.100"W	12.01	
7030.00†	17.371	259.000	7017.37	260.15	-50.27	-258.62	653328.79	495807.74	32°21'43.607"N	103°50'12.326"W	12.01	
7130.00†	29.381	259.000	7109.00	299.26	-57.83	-297.50	653289.91	495800.19	32°21'43.534"N	103°50'12.779"W	12.01	
7230.00†	41.392	259.000	7190.38	356.34	-68.86	-354.24	653233.18	495789.16	32°21'43.428"N	103°50'13.441"W	12.01	
7249.86†	43.777	259.000	7205.00	369.61	-71.42	-367.43	653219.98	495786.59	32°21'43.403"N	103°50'13.595"W	12.01	Brushy Canyon Up. "U"
7330.00†	53.402	259.000	7257.94	428.88	-82.88	-426.36	653161.06	495775.14	32°21'43.292"N	103°50'14.283"W	12.01	
7386.77†	60.220	259.000	7289.00	475.77	-91.94	-472.97	653114.46	495766.08	32°21'43.205"N	103°50'14.827"W	12.01	Brushy Canyon Lo. "U"
7430.00†	65.412	259.000	7308.74	513.73	-99.27	-510.70	653076.72	495758.75	32°21'43.134"N	103°50'15.267"W	12.01	
7530.00†	77.423	259.000	7340.55	607.15	-117.32	-603.58	652983.85	495740.69	32°21'42.959"N	103°50'16.351"W	12.01	
7630.00†	89.433	259.000	7351.98	705.07	-136.24	-700.92	652886.52	495721.77	32°21'42.777"N	103°50'17.486"W	12.01	
7634.72	90.000	259.000	7352.00	709.73	-137.15	-705.55	652881.89	495720.87	32°21'42.768"N	103°50'17.540"W	12.01	EOC
7730.00†	90.000	259.000	7352.00	803.81	-155.33	-799.08	652788.36	495702.69	32°21'42.592"N	103°50'18.632"W	0.00	



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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.138H SHL
Area	Eddy County, NM	Well	JRU No.138H
Field	JRU NAD27	Wellbore	JRU No.138H PWB
Facility	(JRU) No.138 & No.139		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7830.00†	90.000	259.000	7352.00	902.56	-174.41	-897.24	652690.21	495683.62	32°21'42.408"N	103°50'19.777"W	0.00	
7930.00†	90.000	259.000	7352.00	1001.30	-193.49	-995.41	652592.05	495664.54	32°21'42.224"N	103°50'20.923"W	0.00	
8030.00†	90.000	259.000	7352.00	1100.04	-212.57	-1093.57	652493.89	495645.46	32°21'42.039"N	103°50'22.068"W	0.00	
8130.00†	90.000	259.000	7352.00	1198.79	-231.65	-1191.73	652395.74	495626.38	32°21'41.855"N	103°50'23.213"W	0.00	
8230.00†	90.000	259.000	7352.00	1297.53	-250.73	-1289.89	652297.58	495607.30	32°21'41.671"N	103°50'24.359"W	0.00	
8330.00†	90.000	259.000	7352.00	1396.28	-269.81	-1388.06	652199.43	495588.22	32°21'41.486"N	103°50'25.504"W	0.00	
8430.00†	90.000	259.000	7352.00	1495.02	-288.89	-1486.22	652101.27	495569.14	32°21'41.302"N	103°50'26.650"W	0.00	
8530.00†	90.000	259.000	7352.00	1593.76	-307.97	-1584.38	652003.11	495550.06	32°21'41.118"N	103°50'27.795"W	0.00	
8630.00†	90.000	259.000	7352.00	1692.51	-327.05	-1682.54	651904.96	495530.98	32°21'40.933"N	103°50'28.940"W	0.00	
8693.72	90.000	259.000	7352.00	1755.43	-339.21	-1745.09	651842.41	495518.82	32°21'40.816"N	103°50'29.670"W	0.00	End of Tangent
8730.00†	90.113	259.725	7351.96	1791.29	-345.91	-1780.75	651806.76	495512.12	32°21'40.751"N	103°50'30.086"W	2.02	
8830.00†	90.423	261.725	7351.50	1890.46	-362.03	-1879.44	651708.08	495496.01	32°21'40.596"N	103°50'31.238"W	2.02	
8930.00†	90.733	263.724	7350.49	1990.01	-374.69	-1978.62	651608.90	495483.35	32°21'40.476"N	103°50'32.395"W	2.02	
9030.00†	91.042	265.724	7348.94	2089.82	-383.88	-2078.18	651509.35	495474.15	32°21'40.389"N	103°50'33.556"W	2.02	
9130.00†	91.349	267.724	7346.85	2189.76	-389.60	-2177.99	651409.54	495468.44	32°21'40.337"N	103°50'34.720"W	2.02	
9230.00†	91.656	269.724	7344.23	2289.72	-391.82	-2277.93	651309.61	495466.21	32°21'40.320"N	103°50'35.885"W	2.02	
9237.91	91.680	269.882	7344.00	2297.62	-391.85	-2285.83	651301.71	495466.19	32°21'40.320"N	103°50'35.977"W	2.02	EOB
9307.91	91.680	269.882	7341.95	2367.55	-391.99	-2355.80	651231.75	495466.04	32°21'40.321"N	103°50'36.793"W	0.00	Target #1 / 7" Casing
9330.00†	91.238	269.883	7341.39	2389.63	-392.04	-2377.88	651209.66	495466.00	32°21'40.322"N	103°50'37.050"W	2.00	
9396.68	89.904	269.884	7340.72	2456.27	-392.17	-2444.56	651142.99	495465.86	32°21'40.324"N	103°50'37.827"W	2.00	Drop
9430.00†	89.904	269.884	7340.78	2489.57	-392.24	-2477.88	651109.67	495465.79	32°21'40.324"N	103°50'38.216"W	0.00	
9530.00†	89.904	269.884	7340.94	2589.52	-392.44	-2577.88	651009.68	495465.59	32°21'40.327"N	103°50'39.382"W	0.00	
9630.00†	89.904	269.884	7341.11	2689.48	-392.64	-2677.88	650909.69	495465.39	32°21'40.330"N	103°50'40.547"W	0.00	
9730.00†	89.904	269.884	7341.28	2789.43	-392.85	-2777.88	650809.69	495465.19	32°21'40.332"N	103°50'41.713"W	0.00	
9830.00†	89.904	269.884	7341.45	2889.38	-393.05	-2877.88	650709.70	495464.99	32°21'40.335"N	103°50'42.879"W	0.00	
9930.00†	89.904	269.884	7341.61	2989.33	-393.25	-2977.88	650609.71	495464.79	32°21'40.337"N	103°50'44.045"W	0.00	
10030.00†	89.904	269.884	7341.78	3089.28	-393.45	-3077.88	650509.72	495464.59	32°21'40.340"N	103°50'45.211"W	0.00	
10130.00†	89.904	269.884	7341.95	3189.23	-393.65	-3177.88	650409.72	495464.38	32°21'40.342"N	103°50'46.376"W	0.00	
10230.00†	89.904	269.884	7342.11	3289.18	-393.85	-3277.88	650309.73	495464.18	32°21'40.345"N	103°50'47.542"W	0.00	
10330.00†	89.904	269.884	7342.28	3389.13	-394.06	-3377.88	650209.74	495463.98	32°21'40.347"N	103°50'48.708"W	0.00	
10430.00†	89.904	269.884	7342.45	3489.08	-394.26	-3477.88	650109.74	495463.78	32°21'40.350"N	103°50'49.874"W	0.00	
10530.00†	89.904	269.884	7342.62	3589.03	-394.46	-3577.88	650009.75	495463.58	32°21'40.352"N	103°50'51.039"W	0.00	
10630.00†	89.904	269.884	7342.78	3688.98	-394.66	-3677.88	649909.76	495463.38	32°21'40.355"N	103°50'52.205"W	0.00	
10730.00†	89.904	269.884	7342.95	3788.93	-394.86	-3777.88	649809.76	495463.17	32°21'40.357"N	103°50'53.371"W	0.00	
10830.00†	89.904	269.884	7343.12	3888.89	-395.06	-3877.87	649709.77	495462.97	32°21'40.360"N	103°50'54.537"W	0.00	
10930.00†	89.904	269.884	7343.28	3988.84	-395.27	-3977.87	649609.78	495462.77	32°21'40.362"N	103°50'55.703"W	0.00	
11030.00†	89.904	269.884	7343.45	4088.79	-395.47	-4077.87	649509.78	495462.57	32°21'40.365"N	103°50'56.868"W	0.00	
11130.00†	89.904	269.884	7343.62	4188.74	-395.67	-4177.87	649409.79	495462.37	32°21'40.367"N	103°50'58.034"W	0.00	
11230.00†	89.904	269.884	7343.78	4288.69	-395.87	-4277.87	649309.80	495462.17	32°21'40.369"N	103°50'59.200"W	0.00	
11330.00†	89.904	269.884	7343.95	4388.64	-396.07	-4377.87	649209.81	495461.96	32°21'40.372"N	103°51'00.366"W	0.00	
11430.00†	89.904	269.884	7344.12	4488.59	-396.27	-4477.87	649109.81	495461.76	32°21'40.374"N	103°51'01.532"W	0.00	
11530.00†	89.904	269.884	7344.29	4588.54	-396.47	-4577.87	649009.82	495461.56	32°21'40.377"N	103°51'02.697"W	0.00	
11630.00†	89.904	269.884	7344.45	4688.49	-396.68	-4677.87	648909.83	495461.36	32°21'40.379"N	103°51'03.863"W	0.00	
11730.00†	89.904	269.884	7344.62	4788.44	-396.88	-4777.87	648809.83	495461.16	32°21'40.382"N	103°51'05.029"W	0.00	
11830.00†	89.904	269.884	7344.79	4888.39	-397.08	-4877.87	648709.84	495460.96	32°21'40.384"N	103°51'06.195"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.138H SHL
Area	Eddy County, NM	Well	JRU No.138H
Field	JRU NAD27	Wellbore	JRU No.138H PWB
Facility	(JRU) No.138 & No.139		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11930.00†	89.904	269.884	7344.95	4988.34	-397.28	-4977.87	648609.85	495460.75	32°21'40.387"N	103°51'07.361"W	0.00	
11957.25	89.904	269.884	7345.00 ¹	5015.58	-397.34	-5005.12	648582.60	495460.70	32°21'40.387"N	103°51'07.678"W	0.00	Target #2
11988.98	90.539	269.870	7344.88	5047.30	-397.40	-5036.85	648550.87	495460.63	32°21'40.388"N	103°51'08.048"W	2.00	Build
12030.00†	90.539	269.870	7344.49	5088.29	-397.50	-5077.87	648509.86	495460.54	32°21'40.389"N	103°51'08.526"W	0.00	
12130.00†	90.539	269.870	7343.55	5188.24	-397.72	-5177.86	648409.87	495460.31	32°21'40.391"N	103°51'09.692"W	0.00	
12230.00†	90.539	269.870	7342.61	5288.19	-397.95	-5277.86	648309.88	495460.08	32°21'40.393"N	103°51'10.858"W	0.00	
12330.00†	90.539	269.870	7341.67	5388.14	-398.18	-5377.85	648209.89	495459.86	32°21'40.396"N	103°51'12.024"W	0.00	
12430.00†	90.539	269.870	7340.73	5488.08	-398.41	-5477.85	648109.90	495459.63	32°21'40.398"N	103°51'13.189"W	0.00	
12530.00†	90.539	269.870	7339.79	5588.03	-398.63	-5577.85	648009.91	495459.40	32°21'40.400"N	103°51'14.355"W	0.00	
12630.00†	90.539	269.870	7338.85	5687.98	-398.86	-5677.84	647909.92	495459.18	32°21'40.402"N	103°51'15.521"W	0.00	
12730.00†	90.539	269.870	7337.91	5787.93	-399.09	-5777.84	647809.93	495458.95	32°21'40.404"N	103°51'16.687"W	0.00	
12830.00†	90.539	269.870	7336.97	5887.87	-399.31	-5877.83	647709.95	495458.72	32°21'40.407"N	103°51'17.852"W	0.00	
12930.00†	90.539	269.870	7336.03	5987.82	-399.54	-5977.83	647609.96	495458.50	32°21'40.409"N	103°51'19.018"W	0.00	
13030.00†	90.539	269.870	7335.09	6087.77	-399.77	-6077.82	647509.97	495458.27	32°21'40.411"N	103°51'20.184"W	0.00	
13130.00†	90.539	269.870	7334.15	6187.71	-399.99	-6177.82	647409.98	495458.04	32°21'40.413"N	103°51'21.349"W	0.00	
13230.00†	90.539	269.870	7333.21	6287.66	-400.22	-6277.81	647309.99	495457.82	32°21'40.415"N	103°51'22.515"W	0.00	
13330.00†	90.539	269.870	7332.27	6387.61	-400.45	-6377.81	647210.00	495457.59	32°21'40.417"N	103°51'23.681"W	0.00	
13430.00†	90.539	269.870	7331.33	6487.56	-400.68	-6477.80	647110.01	495457.36	32°21'40.420"N	103°51'24.847"W	0.00	
13530.00†	90.539	269.870	7330.39	6587.50	-400.90	-6577.80	647010.03	495457.13	32°21'40.422"N	103°51'26.012"W	0.00	
13630.00†	90.539	269.870	7329.45	6687.45	-401.13	-6677.79	646910.04	495456.91	32°21'40.424"N	103°51'27.178"W	0.00	
13677.34	90.539	269.870	7329.00 ²	6734.77	-401.24	-6725.13	646862.70	495456.80	32°21'40.425"N	103°51'27.730"W	0.00	Target #3
13704.20	91.076	269.870	7328.62	6761.61	-401.30	-6751.99	646835.85	495456.74	32°21'40.425"N	103°51'28.043"W	2.00	Build
13730.00†	91.076	269.870	7328.14	6787.39	-401.36	-6777.78	646810.05	495456.68	32°21'40.426"N	103°51'28.344"W	0.00	
13830.00†	91.076	269.870	7326.26	6887.33	-401.58	-6877.77	646710.08	495456.45	32°21'40.428"N	103°51'29.509"W	0.00	
13930.00†	91.076	269.870	7324.38	6987.26	-401.81	-6977.75	646610.10	495456.23	32°21'40.430"N	103°51'30.675"W	0.00	
14030.00†	91.076	269.870	7322.50	7087.20	-402.04	-7077.73	646510.13	495456.00	32°21'40.432"N	103°51'31.841"W	0.00	
14130.00†	91.076	269.870	7320.63	7187.13	-402.26	-7177.71	646410.15	495455.77	32°21'40.435"N	103°51'33.006"W	0.00	
14230.00†	91.076	269.870	7318.75	7287.06	-402.49	-7277.69	646310.18	495455.55	32°21'40.437"N	103°51'34.172"W	0.00	
14330.00†	91.076	269.870	7316.87	7387.00	-402.72	-7377.68	646210.20	495455.32	32°21'40.439"N	103°51'35.337"W	0.00	
14430.00†	91.076	269.870	7314.99	7486.93	-402.94	-7477.66	646110.22	495455.09	32°21'40.441"N	103°51'36.503"W	0.00	
14530.00†	91.076	269.870	7313.12	7586.87	-403.17	-7577.64	646010.25	495454.87	32°21'40.443"N	103°51'37.669"W	0.00	
14630.00†	91.076	269.870	7311.24	7686.80	-403.39	-7677.62	645910.27	495454.64	32°21'40.445"N	103°51'38.834"W	0.00	
14730.00†	91.076	269.870	7309.36	7786.74	-403.62	-7777.61	645810.30	495454.42	32°21'40.447"N	103°51'40.000"W	0.00	
14830.00†	91.076	269.870	7307.48	7886.67	-403.85	-7877.59	645710.32	495454.19	32°21'40.450"N	103°51'41.165"W	0.00	
14930.00†	91.076	269.870	7305.60	7986.60	-404.07	-7977.57	645610.35	495453.96	32°21'40.452"N	103°51'42.331"W	0.00	
15030.00†	91.076	269.870	7303.73	8086.54	-404.30	-8077.55	645510.37	495453.74	32°21'40.454"N	103°51'43.497"W	0.00	
15130.00†	91.076	269.870	7301.85	8186.47	-404.53	-8177.53	645410.40	495453.51	32°21'40.456"N	103°51'44.662"W	0.00	
15230.00†	91.076	269.870	7299.97	8286.41	-404.75	-8277.52	645310.42	495453.28	32°21'40.458"N	103°51'45.828"W	0.00	
15330.00†	91.076	269.870	7298.09	8386.34	-404.98	-8377.50	645210.44	495453.06	32°21'40.460"N	103°51'46.993"W	0.00	
15430.00†	91.076	269.870	7296.22	8486.27	-405.21	-8477.48	645110.47	495452.83	32°21'40.462"N	103°51'48.159"W	0.00	
15530.00†	91.076	269.870	7294.34	8586.21	-405.43	-8577.46	645010.49	495452.60	32°21'40.464"N	103°51'49.325"W	0.00	
15630.00†	91.076	269.870	7292.46	8686.14	-405.66	-8677.44	644910.52	495452.38	32°21'40.466"N	103°51'50.490"W	0.00	
15707.74	91.076	269.870	7291.00 ³	8763.83	-405.84	-8755.17	644832.80	495452.20	32°21'40.468"N	103°51'51.396"W	0.00	Target #4
15730.00†	90.631	269.870	7290.67	8786.08	-405.89	-8777.43	644810.54	495452.15	32°21'40.468"N	103°51'51.656"W	2.00	
15762.76	89.975	269.870	7290.50	8818.82	-405.96	-8810.19	644777.78	495452.08	32°21'40.469"N	103°51'52.038"W	2.00	Drop



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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.138H SHL
Area	Eddy County, NM	Well	JRU No.138H
Field	JRU NAD27	Wellbore	JRU No.138H PWB
Facility	(JRU) No.138 & No.139		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15830.00†	89.975	269.870	7290.52	8886.03	-406.11	-8877.43	644710.55	495451.92	32°21'40.471"N	103°51'52.822"W	0.00	
15930.00†	89.975	269.870	7290.57	8985.98	-406.34	-8977.43	644610.56	495451.70	32°21'40.473"N	103°51'53.987"W	0.00	
16030.00†	89.975	269.870	7290.61	9085.93	-406.57	-9077.43	644510.56	495451.47	32°21'40.475"N	103°51'55.153"W	0.00	
16130.00†	89.975	269.870	7290.65	9185.88	-406.80	-9177.43	644410.57	495451.24	32°21'40.477"N	103°51'56.319"W	0.00	
16230.00†	89.975	269.870	7290.70	9285.84	-407.02	-9277.43	644310.58	495451.01	32°21'40.479"N	103°51'57.485"W	0.00	
16330.00†	89.975	269.870	7290.74	9385.79	-407.25	-9377.43	644210.58	495450.79	32°21'40.481"N	103°51'58.651"W	0.00	
16430.00†	89.975	269.870	7290.78	9485.74	-407.48	-9477.43	644110.59	495450.56	32°21'40.483"N	103°51'59.816"W	0.00	
16530.00†	89.975	269.870	7290.82	9585.69	-407.70	-9577.42	644010.60	495450.33	32°21'40.485"N	103°52'00.982"W	0.00	
16630.00†	89.975	269.870	7290.87	9685.64	-407.93	-9677.42	643910.60	495450.11	32°21'40.487"N	103°52'02.148"W	0.00	
16730.00†	89.975	269.870	7290.91	9785.60	-408.16	-9777.42	643810.61	495449.88	32°21'40.489"N	103°52'03.314"W	0.00	
16830.00†	89.975	269.870	7290.95	9885.55	-408.39	-9877.42	643710.62	495449.65	32°21'40.491"N	103°52'04.479"W	0.00	
16930.00†	89.975	269.870	7291.00	9985.50	-408.61	-9977.42	643610.62	495449.42	32°21'40.493"N	103°52'05.645"W	0.00	
16940.72	89.975	269.870	7291.00†	9996.22	-408.64	-9988.15	643599.90	495449.40	32°21'40.494"N	103°52'05.770"W	0.00	Target #5
16959.92	89.592	269.896	7291.07	10015.41	-408.68	-10007.34	643580.70	495449.36	32°21'40.494"N	103°52'05.994"W	2.00	Drop
17030.00†	89.592	269.896	7291.57	10085.45	-408.80	-10077.42	643510.63	495449.23	32°21'40.496"N	103°52'06.811"W	0.00	
17130.00†	89.592	269.896	7292.28	10185.40	-408.98	-10177.42	643410.64	495449.05	32°21'40.498"N	103°52'07.977"W	0.00	
17230.00†	89.592	269.896	7292.99	10285.34	-409.17	-10277.42	643310.65	495448.87	32°21'40.501"N	103°52'09.143"W	0.00	
17330.00†	89.592	269.896	7293.71	10385.29	-409.35	-10377.41	643210.66	495448.69	32°21'40.503"N	103°52'10.308"W	0.00	
17430.00†	89.592	269.896	7294.42	10485.24	-409.53	-10477.41	643110.67	495448.51	32°21'40.506"N	103°52'11.474"W	0.00	
17530.00†	89.592	269.896	7295.13	10585.19	-409.71	-10577.41	643010.68	495448.33	32°21'40.508"N	103°52'12.640"W	0.00	
17630.00†	89.592	269.896	7295.84	10685.13	-409.89	-10677.41	642910.69	495448.15	32°21'40.511"N	103°52'13.806"W	0.00	
17730.00†	89.592	269.896	7296.55	10785.08	-410.07	-10777.40	642810.70	495447.97	32°21'40.513"N	103°52'14.971"W	0.00	
17830.00†	89.592	269.896	7297.26	10885.03	-410.25	-10877.40	642710.71	495447.78	32°21'40.516"N	103°52'16.137"W	0.00	
17930.00†	89.592	269.896	7297.97	10984.98	-410.43	-10977.40	642610.72	495447.60	32°21'40.518"N	103°52'17.303"W	0.00	
18030.00†	89.592	269.896	7298.68	11084.93	-410.61	-11077.39	642510.73	495447.42	32°21'40.521"N	103°52'18.469"W	0.00	
18130.00†	89.592	269.896	7299.40	11184.87	-410.80	-11177.39	642410.73	495447.24	32°21'40.523"N	103°52'19.635"W	0.00	
18230.00†	89.592	269.896	7300.11	11284.82	-410.98	-11277.39	642310.74	495447.06	32°21'40.526"N	103°52'20.800"W	0.00	
18330.00†	89.592	269.896	7300.82	11384.77	-411.16	-11377.39	642210.75	495446.88	32°21'40.528"N	103°52'21.966"W	0.00	
18430.00†	89.592	269.896	7301.53	11484.72	-411.34	-11477.38	642110.76	495446.70	32°21'40.530"N	103°52'23.132"W	0.00	
18530.00†	89.592	269.896	7302.24	11584.66	-411.52	-11577.38	642010.77	495446.52	32°21'40.533"N	103°52'24.298"W	0.00	
18630.00†	89.592	269.896	7302.95	11684.61	-411.70	-11677.38	641910.78	495446.34	32°21'40.535"N	103°52'25.463"W	0.00	
18730.00†	89.592	269.896	7303.66	11784.56	-411.88	-11777.38	641810.79	495446.15	32°21'40.538"N	103°52'26.629"W	0.00	
18830.00†	89.592	269.896	7304.38	11884.51	-412.06	-11877.37	641710.80	495445.97	32°21'40.540"N	103°52'27.795"W	0.00	
18930.00†	89.592	269.896	7305.09	11984.46	-412.25	-11977.37	641610.81	495445.79	32°21'40.543"N	103°52'28.961"W	0.00	
19030.00†	89.592	269.896	7305.80	12084.40	-412.43	-12077.37	641510.82	495445.61	32°21'40.545"N	103°52'30.126"W	0.00	
19130.00†	89.592	269.896	7306.51	12184.35	-412.61	-12177.36	641410.83	495445.43	32°21'40.548"N	103°52'31.292"W	0.00	
19230.00†	89.592	269.896	7307.22	12284.30	-412.79	-12277.36	641310.84	495445.25	32°21'40.550"N	103°52'32.458"W	0.00	
19330.00†	89.592	269.896	7307.93	12384.25	-412.97	-12377.36	641210.85	495445.07	32°21'40.553"N	103°52'33.624"W	0.00	
19339.38	89.592	269.896	7308.00†	12393.63	-412.99	-12386.74	641201.46	495445.05	32°21'40.553"N	103°52'33.733"W	0.00	No.138H PBHL



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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.138H SHL
Area	Eddy County, NM	Well	JRU No.138H
Field	JRU NAD27	Wellbore	JRU No.138H PWB
Facility	(JRU) No.138 & No.139		

HOLE & CASING SECTIONS - Ref Wellbore: JRU No.138H PWB Ref Wellpath: Prelim_11

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	30.00	9507.00	9477.00	30.00	7340.91	0.00	0.00	-392.40	-2554.88
7in Casing	30.00	9487.90	9457.90	30.00	7340.87	0.00	0.00	-392.36	-2535.78
6.125in Open Hole	9487.79	19339.38	9851.59	7340.87	7308.00	-392.36	-2535.67	-412.99	-12386.74

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
3) Target #4	15707.74	7291.00	-405.84	-8755.17	644832.80	495452.20	32°21'40.468"N	103°51'51.396"W	point
4) Target #5	16940.72	7291.00	-408.64	-9988.15	643599.90	495449.40	32°21'40.494"N	103°52'05.770"W	point
5) No.138H PBHL	19339.38	7308.00	-412.99	-12386.74	641201.46	495445.05	32°21'40.553"N	103°52'33.733"W	point
2) Target #3	13677.34	7329.00	-401.24	-6725.13	646862.70	495456.80	32°21'40.425"N	103°51'27.730"W	point
1) Target #2	11957.25	7345.00	-397.34	-5005.12	648582.60	495460.70	32°21'40.387"N	103°51'07.678"W	point
No.138H Target #1		7347.00	-391.44	-2356.55	651231.00	495466.60	32°21'40.327"N	103°50'36.801"W	point

SURVEY PROGRAM - Ref Wellbore: JRU No.138H PWB Ref Wellpath: Prelim_11

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	4008.00	Generic gyro - northseeking (Standard)		JRU No.138H PWB
4008.00	19339.38	NaviTrak (Standard)		JRU No.138H PWB