

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**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.*5. Lease Serial No.
NMNM02952B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000558X8. Well Name and No.
JAMES RANCH UNIT D12 138H9. API Well No.
30-015-39766-00-X110. Field and Pool, or Exploratory
QUAHADA RIDGE SE11. County or Parish, and State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
BOPCO LPContact: WHITNEY MCKEE
E-Mail: wbmckee@basspet.com

3a. Address

MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-221-7353

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

Sec 25 T22S R30E NESW 2365FSL 2010FWL

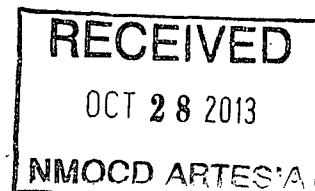
12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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. requests to extend the lateral and alter the bottom hole location of the James Ranch Unit D12 #138H to 1,980' FSL and 2,310' FEL of Section 28-T22S-R30E. This move is being requested to better optimize the development of the JRU Field. The 4-1/2" Open Hole Completion System will be extended to a depth of 21,656' to match the extended lateral. Cement will not be needed for this system. The updated directional plan and updated plats are attached.

Accepted for record
NMOCD *TES*
10/28/2013



14. I hereby certify that the foregoing is true and correct.

Electronic Submission #223275 verified by the BLM Well Information System
For BOPCO LP, sent to the Carlsbad
Committed to AFMSS for processing by JERRY BLAKLEY on 10/22/2013 (14JDB0244SE)

Name (Printed/Typed) CHRISTOPHER GIESE

Title DRILLING ENGINEER

Signature (Electronic Submission)

Date 10/17/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS

Title PETROLEUM ENGINEER

Date 10/22/2013

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

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.

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

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1901 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

OIL CONSERVATION DIVISION

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

RECEIVED

OCT 28 2013

NMOC D ARTESIA

Form C-102
Revised July 16, 2010
Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name JAMES RANCH UNIT D12	Well Number 138H
OGRID No.	Operator Name BOPCO, L.P.	Elevation 3343'

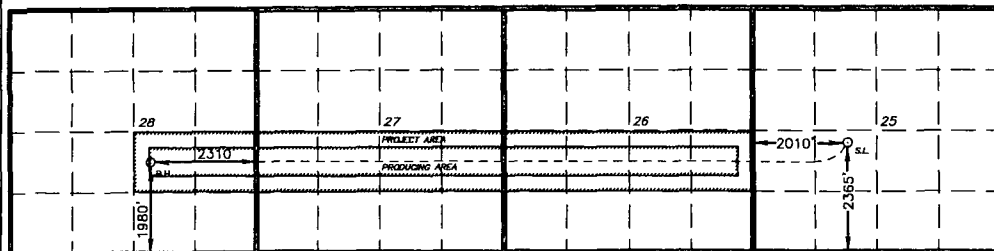
Surface Location

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
J	28	22 S	30 E		1980	SOUTH	2310	EAST	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



PROPOSED BOTTOM
HOLE LOCATION

Lat - N 32°21'40.63"
Long - W 103°53'04.51"
NMSPCE- N 495441.6
E 638561.6
(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)

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.

Signature _____ Date _____

Printed Name _____

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.

Date Surveyed _____
Signature & Seal of Professional Surveyor _____

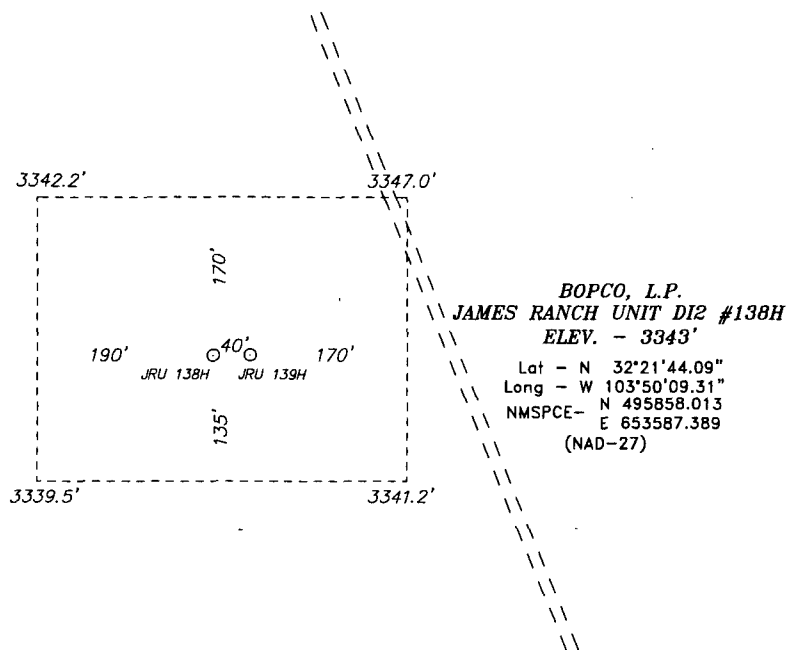
Certificate No. Gary L. Jones 7977

BASIN SURVEYS 25989

SCALE 1"=4000'

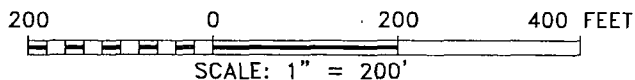
SECTION 25, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

WELL PAD LAYOUT



Directions to Location:

FROM THE WIPP SITE, GO NORTH 1.0 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTHWESTERLY FOR 1.8 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTH 0.9 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTHWESTERLY FOR 0.3 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTH 0.1 MILES TO PROPOSED WELL PAD.



BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 25989

Drawn By: J. SMALL

Date: 01-06-2012

Disk: JMS 25989

Survey Date: 01-05-2012

Sheet 1 of 6 Sheets

BOPCO, L.P.

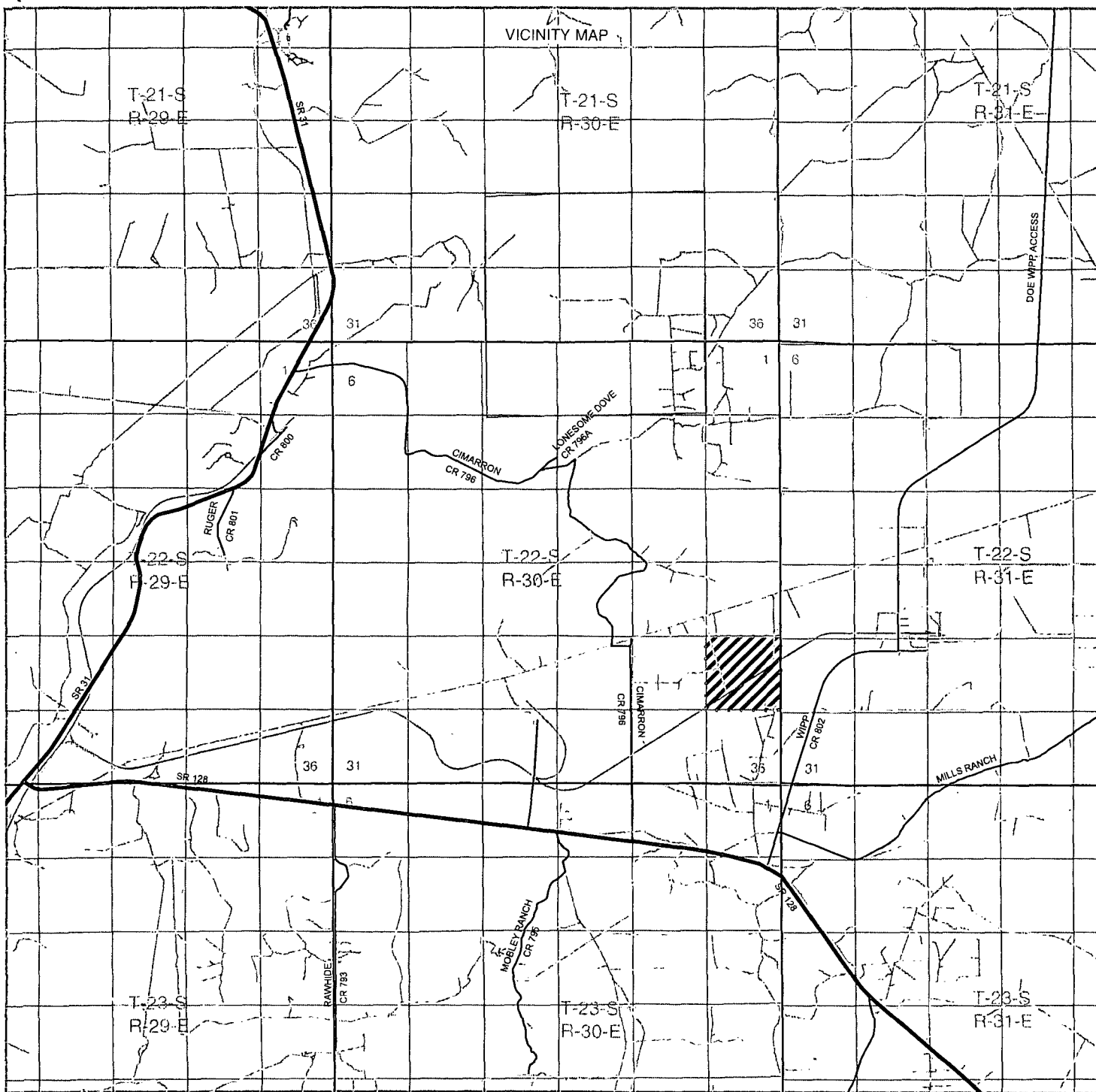
REF: JAMES RANCH UNIT D12 #138H / WELL PAD TOPO

THE JAMES RANCH UNIT D12 #138H LOCATED 2365'

FROM THE SOUTH LINE AND 2010' FROM THE WEST LINE OF

SECTION 25, TOWNSHIP 22 SOUTH, RANGE 30 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.



JAMES RANCH UNIT DI2 #138H

Located 2365' FSL and 2010' FWL

Section 25, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.



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
basinsurveys.com

W.O. Number: JMS 25989

Survey Date: 01-05-2012

Scale: 1" = 2 Miles

Date: 01-06-2012

BOPCO, L.P.

Sheet 3 of 6 Sheets

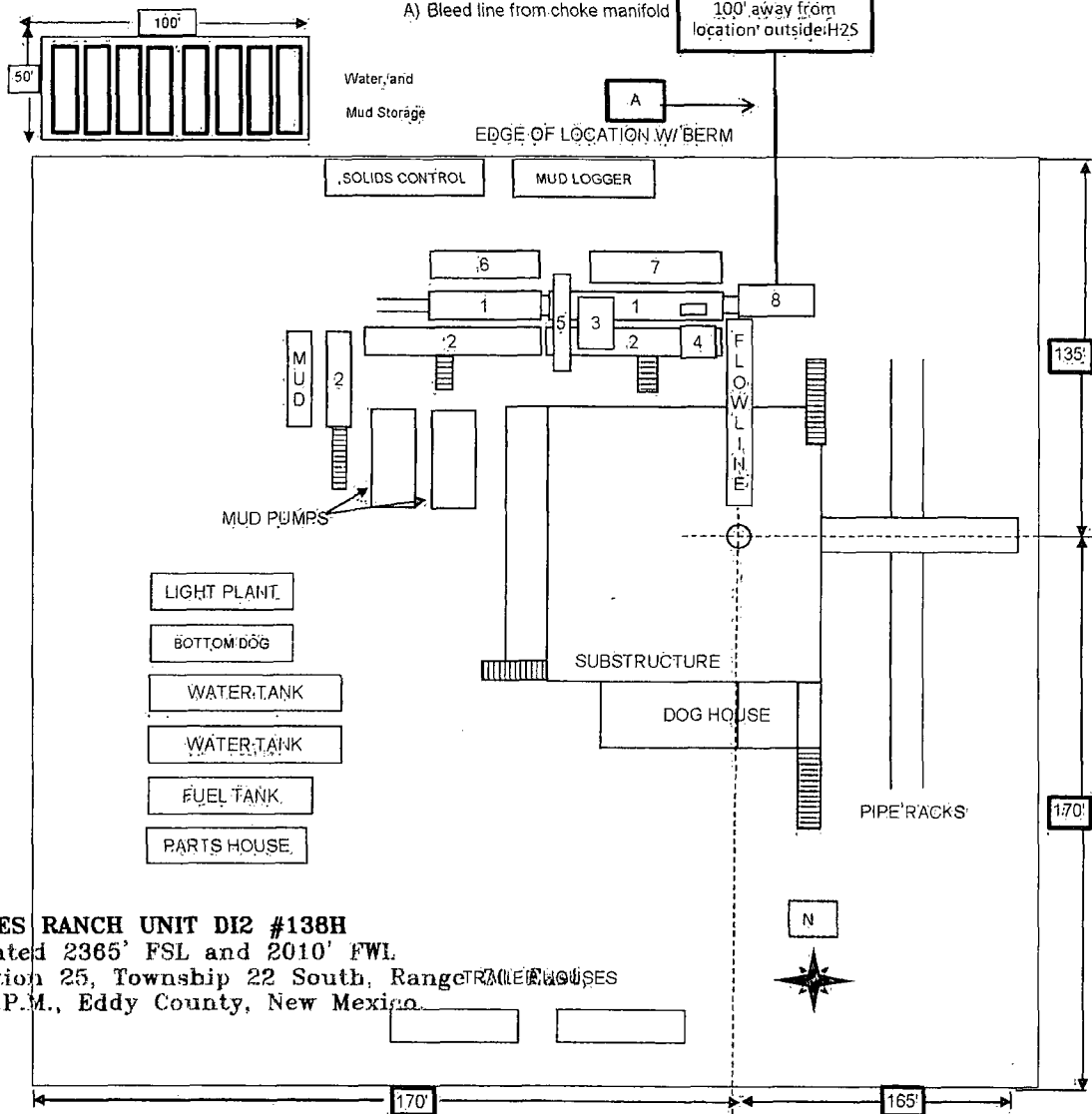
RIG LAYOUT



Exhibit "D"

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 D12 #138H
 Located 2365' FSL and 2010' FWL
 Section 25, Township 22 South, Range 10E, T12N
 N.M.P.M., Eddy County, New Mexico

Wtd-ser/Drilling/DrillingDiagrams/McVay#5 Rig Pad deminsions- Closed Loop Location, size with extended frac tank pad, Exhibit D.xlsRes.Pit Exhibit D w.rig

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
 basinsurveys.com

W.O. Number: JMS 25989

Survey Date: 03-17-2011

Scale: 1" = 2000'

Date: 03-24-2011

BOPCO, L.P.

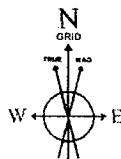
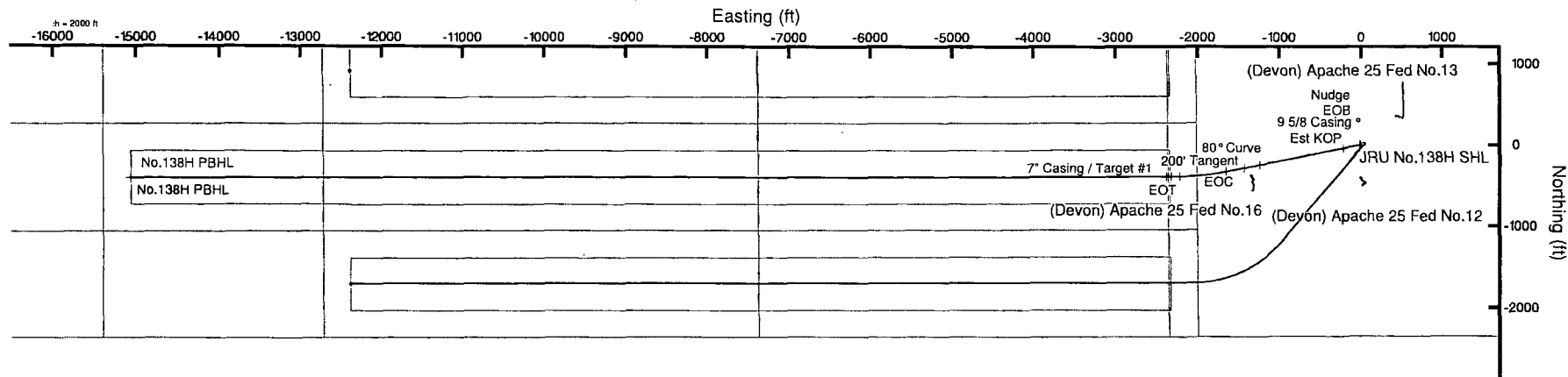
Sheet 6 of 6 Sheets



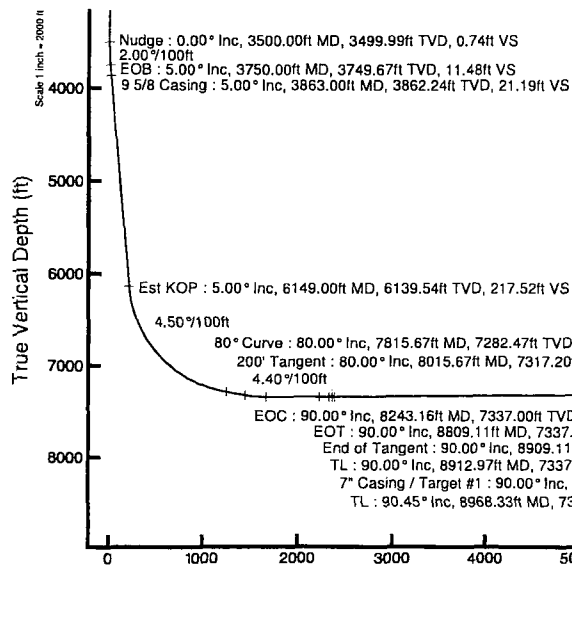
BOPCO, L.P.

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

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



BGGM (1945.0 to 2015.0) Dip: 60.20° Field: 48434.7 nT
Magnetic North is 7.58 degrees East of True North (at 05/Sep/2013)
Grid North is 0.27 degrees East of True North
To correct azimuth from True to Grid subtract 0.27 degrees
To correct azimuth from Magnetic to Grid add 7.29 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.29 = 97.29



Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)
Tie On	654.00	0.140	314.150	653.99	0.06	-0.73	0.00
End of Drop	661.00	0.000	258.600	660.99	0.07	-0.74	2.00
Nudge	3500.00	0.000	258.600	3499.99	0.07	-0.74	0.00
EOB	3750.00	5.000	258.600	3749.67	-2.08	-11.43	2.00
9 5/8 Casing	3863.00	5.000	258.600	3862.24	-4.03	-21.08	0.00
Est KOP	6149.00	5.000	258.600	6139.54	-43.41	-216.39	0.00
80° Curve	7815.67	80.000	258.600	7282.47	-250.42	-1243.03	4.50
200' Tangent	8015.67	80.000	258.600	7317.20	-289.35	-1436.10	0.00
EOC	8243.16	90.000	258.558	7337.00	-334.17	-1657.96	4.40
EOT	8809.11	90.000	269.877	7337.00	-391.10	-2220.11	2.00
End of Tangent	8909.11	90.000	269.877	7337.00	-391.31	-2320.11	0.00
TL	8912.97	90.000	269.800	7337.00	-391.32	-2323.98	2.00
7\" Casing / Target #1	8945.54	90.000	269.800	7337.00	-391.44	-2356.55	0.00
TL	8968.33	90.451	269.863	7336.91	-391.50	-2379.33	2.00
No.138H PBHL	21655.51	90.451	269.863	7237.00	-421.74	-15066.08	0.00

Plot reference wellpath is Rev-E.0	
True vertical depths are referenced to Rig on No.138H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.138H SHL (KB)	North Reference: Grid north
Rig on No.138H SHL (KB) to Mean Sea Level: 3373 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: JRU No.138H SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentry on 20/Sep/2013

No.138H PBHL
No.138H PBHL : 90.45° Inc, 21655.51ft MD, 7237.00ft TVD, 15071.98ft VS

Vertical Section (ft)
Azimuth 268.40° with reference 0.00 N, 0.00 E

Scale 1 inch = 2000 ft

Rev-E.0



Planned Wellpath Report

Rev-E.0
Page 1 of 8



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	20/Sep/2013 at 10:50
Convergence at slot	0.27° East	Database/Source file	Midland DB/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	268.40°



Planned Wellpath Report

Rev-E.0
Page 2 of 8



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 (240 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	269.260	0.00	0.00	0.00	0.00	653587.39	495858.01	32°21'44.093"N	103°50'09.308"W	0.00	
84.84	0.580	269.260	84.84	0.43	-0.01	-0.43	653586.96	495858.00	32°21'44.093"N	103°50'09.313"W	0.68	
179.70	0.640	273.090	179.69	1.44	0.02	-1.44	653585.95	495858.03	32°21'44.093"N	103°50'09.325"W	0.08	
203.01†	0.469	277.190	203.00	1.66	0.04	-1.66	653585.73	495858.05	32°21'44.093"N	103°50'09.327"W	0.75	Rustler
274.56	0.150	27.740	274.55	1.90	0.16	-1.91	653585.48	495858.17	32°21'44.094"N	103°50'09.330"W	0.75	
369.42	0.210	116.540	369.41	1.69	0.19	-1.70	653585.69	495858.20	32°21'44.095"N	103°50'09.328"W	0.27	
464.28	0.390	73.150	464.27	1.23	0.20	-1.23	653586.16	495858.21	32°21'44.095"N	103°50'09.322"W	0.29	
559.14	0.250	139.090	559.13	0.78	0.14	-0.79	653586.60	495858.15	32°21'44.094"N	103°50'09.317"W	0.39	
654.00	0.140	314.150	653.99	0.73	0.06	-0.73	653586.66	495858.07	32°21'44.093"N	103°50'09.316"W	0.00	Tie On
661.00	0.000	258.600	660.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	2.00	End of Drop
701.01†	0.000	258.600	701.00	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	Salado
754.00†	0.000	258.600	753.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
854.00†	0.000	258.600	853.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
954.00†	0.000	258.600	953.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1054.00†	0.000	258.600	1053.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1154.00†	0.000	258.600	1153.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1254.00†	0.000	258.600	1253.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1354.00†	0.000	258.600	1353.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1454.00†	0.000	258.600	1453.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1554.00†	0.000	258.600	1553.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1654.00†	0.000	258.600	1653.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1754.00†	0.000	258.600	1753.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1854.00†	0.000	258.600	1853.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
1954.00†	0.000	258.600	1953.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2054.00†	0.000	258.600	2053.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2154.00†	0.000	258.600	2153.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2254.00†	0.000	258.600	2253.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2354.00†	0.000	258.600	2353.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2454.00†	0.000	258.600	2453.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2554.00†	0.000	258.600	2553.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2654.00†	0.000	258.600	2653.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2754.00†	0.000	258.600	2753.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2854.00†	0.000	258.600	2853.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
2954.00†	0.000	258.600	2953.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
3054.00†	0.000	258.600	3053.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
3154.00†	0.000	258.600	3153.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
3254.00†	0.000	258.600	3253.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
3354.00†	0.000	258.600	3353.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
3454.00†	0.000	258.600	3453.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	
3500.00	0.000	258.600	3499.99	0.74	0.07	-0.74	653586.65	495858.08	32°21'44.093"N	103°50'09.316"W	0.00	Nudge
3554.00†	1.080	258.600	3553.99	1.24	-0.03	-1.24	653586.15	495857.98	32°21'44.092"N	103°50'09.322"W	2.00	
3654.00†	3.080	258.600	3653.91	4.82	-0.75	-4.80	653582.59	495857.26	32°21'44.086"N	103°50'09.364"W	2.00	
3750.00	5.000	258.600	3749.67	11.48	-2.08	-11.43	653575.96	495855.93	32°21'44.073"N	103°50'09.441"W	2.00	EOB
3754.00†	5.000	258.600	3753.66	11.82	-2.15	-11.77	653575.62	495855.86	32°21'44.072"N	103°50'09.445"W	0.00	
3854.00†	5.000	258.600	3853.28	20.41	-3.88	-20.31	653567.08	495854.13	32°21'44.055"N	103°50'09.545"W	0.00	



Planned Wellpath Report

Rev-E.0
Page 3 of 8



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 (240 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
3863.00	5.000	258.600	3862.24	21.19	-4.03	-21.08	653566.31	495853.98	32°21'44.054"N	103°50'09.554"W	0.00	9 5/8 Casing
3863.76†	5.000	258.600	3863.00	21.25	-4.04	-21.15	653566.24	495853.97	32°21'44.054"N	103°50'09.555"W	0.00	Lamar
3887.85†	5.000	258.600	3887.00	23.32	-4.46	-23.21	653564.19	495853.55	32°21'44.050"N	103°50'09.579"W	0.00	Delaware Sands
3954.00†	5.000	258.600	3952.89	29.00	-5.60	-28.86	653558.54	495852.41	32°21'44.039"N	103°50'09.645"W	0.00	
4054.00†	5.000	258.600	4052.51	37.59	-7.32	-37.40	653549.99	495850.69	32°21'44.022"N	103°50'09.744"W	0.00	
4154.00†	5.000	258.600	4152.13	46.18	-9.04	-45.94	653541.45	495848.97	32°21'44.005"N	103°50'09.844"W	0.00	
4254.00†	5.000	258.600	4251.75	54.77	-10.77	-54.49	653532.91	495847.24	32°21'43.989"N	103°50'09.944"W	0.00	
4354.00†	5.000	258.600	4351.37	63.36	-12.49	-63.03	653524.36	495845.52	32°21'43.972"N	103°50'10.043"W	0.00	
4454.00†	5.000	258.600	4450.99	71.94	-14.21	-71.57	653515.82	495843.80	32°21'43.955"N	103°50'10.143"W	0.00	
4554.00†	5.000	258.600	4550.61	80.53	-15.93	-80.12	653507.28	495842.08	32°21'43.939"N	103°50'10.243"W	0.00	
4654.00†	5.000	258.600	4650.23	89.12	-17.66	-88.66	653498.73	495840.35	32°21'43.922"N	103°50'10.342"W	0.00	
4754.00†	5.000	258.600	4749.85	97.71	-19.38	-97.21	653490.19	495838.63	32°21'43.905"N	103°50'10.442"W	0.00	
4854.00†	5.000	258.600	4849.47	106.30	-21.10	-105.75	653481.65	495836.91	32°21'43.889"N	103°50'10.542"W	0.00	
4954.00†	5.000	258.600	4949.09	114.89	-22.83	-114.29	653473.10	495835.19	32°21'43.872"N	103°50'10.641"W	0.00	
5054.00†	5.000	258.600	5048.71	123.48	-24.55	-122.84	653464.56	495833.46	32°21'43.855"N	103°50'10.741"W	0.00	
5154.00†	5.000	258.600	5148.33	132.06	-26.27	-131.38	653456.02	495831.74	32°21'43.839"N	103°50'10.841"W	0.00	
5254.00†	5.000	258.600	5247.95	140.65	-27.99	-139.92	653447.48	495830.02	32°21'43.822"N	103°50'10.941"W	0.00	
5354.00†	5.000	258.600	5347.57	149.24	-29.72	-148.47	653438.93	495828.30	32°21'43.806"N	103°50'11.040"W	0.00	
5454.00†	5.000	258.600	5447.19	157.83	-31.44	-157.01	653430.39	495826.57	32°21'43.789"N	103°50'11.140"W	0.00	
5554.00†	5.000	258.600	5546.81	166.42	-33.16	-165.55	653421.85	495824.85	32°21'43.772"N	103°50'11.240"W	0.00	
5654.00†	5.000	258.600	5646.43	175.01	-34.88	-174.10	653413.30	495823.13	32°21'43.756"N	103°50'11.339"W	0.00	
5754.00†	5.000	258.600	5746.05	183.59	-36.61	-182.64	653404.76	495821.41	32°21'43.739"N	103°50'11.439"W	0.00	
5854.00†	5.000	258.600	5845.66	192.18	-38.33	-191.19	653396.22	495819.68	32°21'43.722"N	103°50'11.539"W	0.00	
5954.00†	5.000	258.600	5945.28	200.77	-40.05	-199.73	653387.67	495817.96	32°21'43.706"N	103°50'11.638"W	0.00	
6054.00†	5.000	258.600	6044.90	209.36	-41.77	-208.27	653379.13	495816.24	32°21'43.689"N	103°50'11.738"W	0.00	
6149.00	5.000	258.600	6139.54	217.52	-43.41	-216.39	653371.02	495814.60	32°21'43.673"N	103°50'11.833"W	0.00	Est KOP
6154.00†	5.225	258.600	6144.52	217.96	-43.50	-216.83	653370.58	495814.51	32°21'43.672"N	103°50'11.838"W	4.50	
6164.53†	5.699	258.600	6155.00	218.95	-43.70	-217.81	653369.60	495814.32	32°21'43.670"N	103°50'11.849"W	4.50	Lower Cherry Canyon
6254.00†	9.725	258.600	6243.65	230.77	-46.07	-229.58	653357.83	495811.94	32°21'43.647"N	103°50'11.987"W	4.50	
6354.00†	14.225	258.600	6341.45	251.22	-50.17	-249.91	653337.50	495807.84	32°21'43.608"N	103°50'12.224"W	4.50	
6454.00†	18.725	258.600	6437.32	279.15	-55.77	-277.70	653309.71	495802.24	32°21'43.554"N	103°50'12.548"W	4.50	
6554.00†	23.225	258.600	6530.67	314.42	-62.85	-312.78	653274.63	495795.17	32°21'43.485"N	103°50'12.958"W	4.50	
6654.00†	27.725	258.600	6620.92	356.79	-71.35	-354.94	653232.48	495786.67	32°21'43.403"N	103°50'13.449"W	4.50	
6754.00†	32.225	258.600	6707.52	406.01	-81.22	-403.90	653183.52	495776.80	32°21'43.308"N	103°50'14.021"W	4.50	
6854.00†	36.725	258.600	6789.94	461.78	-92.41	-459.37	653128.05	495765.61	32°21'43.199"N	103°50'14.668"W	4.50	
6954.00†	41.225	258.600	6867.66	523.74	-104.83	-521.01	653066.41	495753.18	32°21'43.079"N	103°50'15.387"W	4.50	
7054.00†	45.725	258.600	6940.21	591.53	-118.43	-588.44	652998.99	495739.59	32°21'42.948"N	103°50'16.174"W	4.50	
7154.00†	50.225	258.600	7007.14	664.71	-133.11	-661.24	652926.19	495724.91	32°21'42.806"N	103°50'17.024"W	4.50	
7254.00†	54.725	258.600	7068.03	742.84	-148.78	-738.97	652848.47	495709.24	32°21'42.654"N	103°50'17.931"W	4.50	
7354.00†	59.225	258.600	7122.52	825.44	-165.35	-821.14	652766.31	495692.67	32°21'42.494"N	103°50'18.889"W	4.50	
7454.00†	63.725	258.600	7170.26	912.00	-182.71	-907.24	652680.21	495675.31	32°21'42.326"N	103°50'19.894"W	4.50	
7530.39†	67.162	258.600	7202.00	980.45	-196.44	-975.34	652612.12	495661.58	32°21'42.194"N	103°50'20.689"W	4.50	Brushy Canyon Up. "U"
7554.00†	68.225	258.600	7210.96	1001.98	-200.76	-996.75	652590.70	495657.26	32°21'42.152"N	103°50'20.939"W	4.50	
7654.00†	72.725	258.600	7244.38	1094.83	-219.38	-1089.12	652498.34	495638.64	32°21'41.972"N	103°50'22.017"W	4.50	
7754.00†	77.225	258.600	7270.29	1189.98	-238.47	-1183.77	652403.70	495619.56	32°21'41.787"N	103°50'23.121"W	4.50	



Planned Wellpath Report

Rev-E.0

Page 4 of 8



**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 (240 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
7815.67	80.000	258.600	7282.47	1249.55	-250.42	-1243.03	652344.45	495607.61	32°21'41.672"N	103°50'23.812"W	4.50	80° Curve
7854.00†	80.000	258.600	7289.12	1286.75	-257.88	-1280.03	652307.44	495600.15	32°21'41.600"N	103°50'24.244"W	0.00	
7928.15†	80.000	258.600	7302.00	1358.70	-272.31	-1351.61	652235.87	495585.72	32°21'41.460"N	103°50'25.079"W	0.00	Brushy Canyon Lo. "U"
7954.00†	80.000	258.600	7306.49	1383.79	-277.34	-1376.57	652210.91	495580.68	32°21'41.411"N	103°50'25.371"W	0.00	
8015.67†	80.000	258.600	7317.20	1443.64	-289.35	-1436.10	652151.38	495568.68	32°21'41.295"N	103°50'26.065"W	0.00	200" Tangent
8054.00†	81.685	258.593	7323.30	1480.93	-296.83	-1473.20	652114.29	495561.20	32°21'41.223"N	103°50'26.498"W	4.40	
8154.00†	86.081	258.574	7333.95	1578.88	-316.51	-1570.64	652016.86	495541.52	32°21'41.033"N	103°50'27.635"W	4.40	
8243.16	90.000	258.558	7337.00	1666.66	-334.17	-1657.96	651929.54	495523.86	32°21'40.862"N	103°50'28.654"W	4.40	EOC
8254.00†	90.000	258.775	7337.00	1677.35	-336.30	-1668.59	651918.91	495521.73	32°21'40.841"N	103°50'28.778"W	2.00	
8354.00†	90.000	260.775	7337.00	1776.21	-354.05	-1767.00	651820.51	495503.98	32°21'40.670"N	103°50'29.926"W	2.00	
8454.00†	90.000	262.775	7337.00	1875.54	-368.36	-1865.96	651721.55	495489.68	32°21'40.533"N	103°50'31.081"W	2.00	
8554.00†	90.000	264.775	7337.00	1975.21	-379.20	-1965.37	651622.15	495478.84	32°21'40.430"N	103°50'32.240"W	2.00	
8654.00†	90.000	266.775	7337.00	2075.10	-386.57	-2065.09	651522.44	495471.47	32°21'40.362"N	103°50'33.403"W	2.00	
8754.00†	90.000	268.775	7337.00	2175.09	-390.45	-2165.01	651422.52	495467.59	32°21'40.328"N	103°50'34.568"W	2.00	
8809.11	90.000	269.877	7337.00	2230.19	-391.10	-2220.11	651367.42	495466.94	32°21'40.324"N	103°50'35.211"W	2.00	EOT
8854.00†	90.000	269.877	7337.00	2275.06	-391.19	-2265.00	651322.53	495466.84	32°21'40.325"N	103°50'35.734"W	0.00	
8909.11	90.000	269.877	7337.00	2330.16	-391.31	-2320.11	651267.43	495466.72	32°21'40.327"N	103°50'36.376"W	0.00	End of Tangent
8912.97	90.000	269.800	7337.00	2334.02	-391.32	-2323.98	651263.57	495466.71	32°21'40.327"N	103°50'36.422"W	2.00	TL
8945.54	90.000	269.800	7337.00†	2366.58	-391.44	-2356.55	651231.00	495466.60	32°21'40.327"N	103°50'36.801"W	0.00	7" Casing / Target #1
8954.00†	90.168	269.823	7336.99	2375.03	-391.46	-2365.00	651222.54	495466.57	32°21'40.327"N	103°50'36.900"W	2.00	
8968.33	90.451	269.863	7336.91	2389.35	-391.50	-2379.33	651208.22	495466.53	32°21'40.327"N	103°50'37.067"W	2.00	TL
9054.00†	90.451	269.863	7336.24	2475.00	-391.71	-2465.00	651122.55	495466.33	32°21'40.329"N	103°50'38.066"W	0.00	
9154.00†	90.451	269.863	7335.45	2574.96	-391.95	-2565.00	651022.56	495466.09	32°21'40.331"N	103°50'39.231"W	0.00	
9254.00†	90.451	269.863	7334.66	2674.92	-392.18	-2664.99	650922.57	495465.85	32°21'40.333"N	103°50'40.397"W	0.00	
9354.00†	90.451	269.863	7333.87	2774.89	-392.42	-2764.99	650822.58	495465.61	32°21'40.336"N	103°50'41.563"W	0.00	
9454.00†	90.451	269.863	7333.09	2874.85	-392.66	-2864.99	650722.59	495465.38	32°21'40.338"N	103°50'42.729"W	0.00	
9554.00†	90.451	269.863	7332.30	2974.82	-392.90	-2964.98	650622.60	495465.14	32°21'40.340"N	103°50'43.894"W	0.00	
9654.00†	90.451	269.863	7331.51	3074.78	-393.14	-3064.98	650522.61	495464.90	32°21'40.342"N	103°50'45.060"W	0.00	
9754.00†	90.451	269.863	7330.72	3174.75	-393.38	-3164.98	650422.62	495464.66	32°21'40.344"N	103°50'46.226"W	0.00	
9854.00†	90.451	269.863	7329.94	3274.71	-393.61	-3264.97	650322.63	495464.42	32°21'40.346"N	103°50'47.392"W	0.00	
9954.00†	90.451	269.863	7329.15	3374.67	-393.85	-3364.97	650222.64	495464.18	32°21'40.349"N	103°50'48.557"W	0.00	
10054.00†	90.451	269.863	7328.36	3474.64	-394.09	-3464.97	650122.65	495463.95	32°21'40.351"N	103°50'49.723"W	0.00	
10154.00†	90.451	269.863	7327.57	3574.60	-394.33	-3564.96	650022.66	495463.71	32°21'40.353"N	103°50'50.889"W	0.00	
10254.00†	90.451	269.863	7326.79	3674.57	-394.57	-3664.96	649922.67	495463.47	32°21'40.355"N	103°50'52.055"W	0.00	
10354.00†	90.451	269.863	7326.00	3774.53	-394.80	-3764.96	649822.68	495463.23	32°21'40.357"N	103°50'53.220"W	0.00	
10454.00†	90.451	269.863	7325.21	3874.49	-395.04	-3864.95	649722.69	495462.99	32°21'40.359"N	103°50'54.386"W	0.00	
10554.00†	90.451	269.863	7324.42	3974.46	-395.28	-3964.95	649622.70	495462.75	32°21'40.361"N	103°50'55.552"W	0.00	
10654.00†	90.451	269.863	7323.64	4074.42	-395.52	-4064.95	649522.71	495462.52	32°21'40.363"N	103°50'56.718"W	0.00	
10754.00†	90.451	269.863	7322.85	4174.39	-395.76	-4164.94	649422.72	495462.28	32°21'40.366"N	103°50'57.883"W	0.00	
10854.00†	90.451	269.863	7322.06	4274.35	-396.00	-4264.94	649322.73	495462.04	32°21'40.368"N	103°50'59.049"W	0.00	
10954.00†	90.451	269.863	7321.27	4374.31	-396.23	-4364.94	649222.74	495461.80	32°21'40.370"N	103°51'00.215"W	0.00	
11054.00†	90.451	269.863	7320.49	4474.28	-396.47	-4464.93	649122.75	495461.56	32°21'40.372"N	103°51'01.381"W	0.00	
11154.00†	90.451	269.863	7319.70	4574.24	-396.71	-4564.93	649022.76	495461.32	32°21'40.374"N	103°51'02.547"W	0.00	
11254.00†	90.451	269.863	7318.91	4674.21	-396.95	-4664.93	648922.77	495461.09	32°21'40.376"N	103°51'03.712"W	0.00	
11354.00†	90.451	269.863	7318.12	4774.17	-397.19	-4764.92	648822.78	495460.85	32°21'40.378"N	103°51'04.878"W	0.00	



Planned Wellpath Report

Rev-E.0

Page 5 of 8



**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 (240 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
11454.00+	90.451	269.863	7317.34	4874.14	-397.43	-4864.92	648722.79	495460.61	32°21'40.380"N	103°51'06.044"W	0.00	
11554.00+	90.451	269.863	7316.55	4974.10	-397.66	-4964.92	648622.80	495460.37	32°21'40.382"N	103°51'07.210"W	0.00	
11654.00+	90.451	269.863	7315.76	5074.06	-397.90	-5064.91	648522.81	495460.13	32°21'40.384"N	103°51'08.375"W	0.00	
11754.00+	90.451	269.863	7314.97	5174.03	-398.14	-5164.91	648422.82	495459.89	32°21'40.387"N	103°51'09.541"W	0.00	
11854.00+	90.451	269.863	7314.19	5273.99	-398.38	-5264.91	648322.83	495459.66	32°21'40.389"N	103°51'10.707"W	0.00	
11954.00+	90.451	269.863	7313.40	5373.96	-398.62	-5364.90	648222.84	495459.42	32°21'40.391"N	103°51'11.873"W	0.00	
12054.00+	90.451	269.863	7312.61	5473.92	-398.86	-5464.90	648122.85	495459.18	32°21'40.393"N	103°51'13.038"W	0.00	
12154.00+	90.451	269.863	7311.82	5573.88	-399.09	-5564.90	648022.86	495458.94	32°21'40.395"N	103°51'14.204"W	0.00	
12254.00+	90.451	269.863	7311.04	5673.85	-399.33	-5664.89	647922.87	495458.70	32°21'40.397"N	103°51'15.370"W	0.00	
12354.00+	90.451	269.863	7310.25	5773.81	-399.57	-5764.89	647822.88	495458.47	32°21'40.399"N	103°51'16.536"W	0.00	
12454.00+	90.451	269.863	7309.46	5873.78	-399.81	-5864.89	647722.89	495458.23	32°21'40.401"N	103°51'17.701"W	0.00	
12554.00+	90.451	269.863	7308.67	5973.74	-400.05	-5964.88	647622.90	495457.99	32°21'40.403"N	103°51'18.867"W	0.00	
12654.00+	90.451	269.863	7307.89	6073.71	-400.29	-6064.88	647522.91	495457.75	32°21'40.405"N	103°51'20.033"W	0.00	
12754.00+	90.451	269.863	7307.10	6173.67	-400.52	-6164.88	647422.92	495457.51	32°21'40.407"N	103°51'21.199"W	0.00	
12854.00+	90.451	269.863	7306.31	6273.63	-400.76	-6264.87	647322.93	495457.27	32°21'40.409"N	103°51'22.364"W	0.00	
12954.00+	90.451	269.863	7305.52	6373.60	-401.00	-6364.87	647222.94	495457.04	32°21'40.411"N	103°51'23.530"W	0.00	
13054.00+	90.451	269.863	7304.74	6473.56	-401.24	-6464.87	647122.95	495456.80	32°21'40.413"N	103°51'24.696"W	0.00	
13154.00+	90.451	269.863	7303.95	6573.53	-401.48	-6564.86	647022.96	495456.56	32°21'40.415"N	103°51'25.862"W	0.00	
13254.00+	90.451	269.863	7303.16	6673.49	-401.72	-6664.86	646922.97	495456.32	32°21'40.417"N	103°51'27.027"W	0.00	
13354.00+	90.451	269.863	7302.37	6773.45	-401.95	-6764.86	646822.98	495456.08	32°21'40.420"N	103°51'28.193"W	0.00	
13401.43+	90.451	269.863	7302.00	6820.87	-402.07	-6812.29	646775.55	495455.97	32°21'40.421"N	103°51'28.746"W	0.00	Brushy Canyon Lo. "U"
13454.00+	90.451	269.863	7301.59	6873.42	-402.19	-6864.85	646722.99	495455.84	32°21'40.422"N	103°51'29.359"W	0.00	
13554.00+	90.451	269.863	7300.80	6973.38	-402.43	-6964.85	646623.00	495455.61	32°21'40.424"N	103°51'30.525"W	0.00	
13654.00+	90.451	269.863	7300.01	7073.35	-402.67	-7064.85	646523.01	495455.37	32°21'40.426"N	103°51'31.690"W	0.00	
13754.00+	90.451	269.863	7299.22	7173.31	-402.91	-7164.84	646423.02	495455.13	32°21'40.428"N	103°51'32.856"W	0.00	
13854.00+	90.451	269.863	7298.44	7273.27	-403.15	-7264.84	646323.03	495454.89	32°21'40.430"N	103°51'34.022"W	0.00	
13954.00+	90.451	269.863	7297.65	7373.24	-403.38	-7364.84	646223.04	495454.65	32°21'40.432"N	103°51'35.188"W	0.00	
14054.00+	90.451	269.863	7296.86	7473.20	-403.62	-7464.83	646123.05	495454.41	32°21'40.434"N	103°51'36.354"W	0.00	
14154.00+	90.451	269.863	7296.07	7573.17	-403.86	-7564.83	646023.06	495454.18	32°21'40.436"N	103°51'37.519"W	0.00	
14254.00+	90.451	269.863	7295.29	7673.13	-404.10	-7664.83	645923.07	495453.94	32°21'40.438"N	103°51'38.685"W	0.00	
14354.00+	90.451	269.863	7294.50	7773.10	-404.34	-7764.82	645823.08	495453.70	32°21'40.440"N	103°51'39.851"W	0.00	
14454.00+	90.451	269.863	7293.71	7873.06	-404.58	-7864.82	645723.09	495453.46	32°21'40.442"N	103°51'41.017"W	0.00	
14554.00+	90.451	269.863	7292.92	7973.02	-404.81	-7964.81	645623.10	495453.22	32°21'40.444"N	103°51'42.182"W	0.00	
14654.00+	90.451	269.863	7292.14	8072.99	-405.05	-8064.81	645523.11	495452.98	32°21'40.446"N	103°51'43.348"W	0.00	
14754.00+	90.451	269.863	7291.35	8172.95	-405.29	-8164.81	645423.12	495452.75	32°21'40.448"N	103°51'44.514"W	0.00	
14854.00+	90.451	269.863	7290.56	8272.92	-405.53	-8264.80	645323.13	495452.51	32°21'40.450"N	103°51'45.680"W	0.00	
14954.00+	90.451	269.863	7289.77	8372.88	-405.77	-8364.80	645223.14	495452.27	32°21'40.452"N	103°51'46.845"W	0.00	
15054.00+	90.451	269.863	7288.99	8472.84	-406.01	-8464.80	645123.15	495452.03	32°21'40.454"N	103°51'48.011"W	0.00	
15154.00+	90.451	269.863	7288.20	8572.81	-406.24	-8564.79	645023.16	495451.79	32°21'40.456"N	103°51'49.177"W	0.00	
15254.00+	90.451	269.863	7287.41	8672.77	-406.48	-8664.79	644923.17	495451.55	32°21'40.458"N	103°51'50.343"W	0.00	
15354.00+	90.451	269.863	7286.62	8772.74	-406.72	-8764.79	644823.18	495451.32	32°21'40.460"N	103°51'51.508"W	0.00	
15454.00+	90.451	269.863	7285.84	8872.70	-406.96	-8864.78	644723.19	495451.08	32°21'40.462"N	103°51'52.674"W	0.00	
15554.00+	90.451	269.863	7285.05	8972.66	-407.20	-8964.78	644623.20	495450.84	32°21'40.464"N	103°51'53.840"W	0.00	
15654.00+	90.451	269.863	7284.26	9072.63	-407.44	-9064.78	644523.21	495450.60	32°21'40.466"N	103°51'55.006"W	0.00	
15754.00+	90.451	269.863	7283.47	9172.59	-407.67	-9164.77	644423.22	495450.36	32°21'40.468"N	103°51'56.171"W	0.00	



Planned Wellpath Report

Rev-E.0

Page 6 of 8



**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 (240 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
15854.00+	90.451	269.863	7282.69	9272.56	-407.91	-9264.77	644323.23	495450.12	32°21'40.470"N	103°51'57.337"W	0.00	
15954.00+	90.451	269.863	7281.90	9372.52	-408.15	-9364.77	644223.24	495449.89	32°21'40.471"N	103°51'58.503"W	0.00	
16054.00+	90.451	269.863	7281.11	9472.49	-408.39	-9464.76	644123.25	495449.65	32°21'40.473"N	103°51'59.669"W	0.00	
16154.00+	90.451	269.863	7280.32	9572.45	-408.63	-9564.76	644023.26	495449.41	32°21'40.475"N	103°52'00.835"W	0.00	
16254.00+	90.451	269.863	7279.54	9672.41	-408.87	-9664.76	643923.27	495449.17	32°21'40.477"N	103°52'02.000"W	0.00	
16354.00+	90.451	269.863	7278.75	9772.38	-409.10	-9764.75	643823.28	495448.93	32°21'40.479"N	103°52'03.166"W	0.00	
16454.00+	90.451	269.863	7277.96	9872.34	-409.34	-9864.75	643723.29	495448.69	32°21'40.481"N	103°52'04.332"W	0.00	
16554.00+	90.451	269.863	7277.17	9972.31	-409.58	-9964.75	643623.30	495448.46	32°21'40.483"N	103°52'05.498"W	0.00	
16654.00+	90.451	269.863	7276.39	10072.27	-409.82	-10064.74	643523.31	495448.22	32°21'40.485"N	103°52'06.663"W	0.00	
16754.00+	90.451	269.863	7275.60	10172.23	-410.06	-10164.74	643423.32	495447.98	32°21'40.487"N	103°52'07.829"W	0.00	
16854.00+	90.451	269.863	7274.81	10272.20	-410.30	-10264.74	643323.33	495447.74	32°21'40.489"N	103°52'08.995"W	0.00	
16954.00+	90.451	269.863	7274.02	10372.16	-410.53	-10364.73	643223.34	495447.50	32°21'40.491"N	103°52'10.161"W	0.00	
17054.00+	90.451	269.863	7273.24	10472.13	-410.77	-10464.73	643123.35	495447.27	32°21'40.493"N	103°52'11.326"W	0.00	
17154.00+	90.451	269.863	7272.45	10572.09	-411.01	-10564.73	643023.36	495447.03	32°21'40.495"N	103°52'12.492"W	0.00	
17254.00+	90.451	269.863	7271.66	10672.05	-411.25	-10664.72	642923.37	495446.79	32°21'40.497"N	103°52'13.658"W	0.00	
17354.00+	90.451	269.863	7270.87	10772.02	-411.49	-10764.72	642823.38	495446.55	32°21'40.499"N	103°52'14.824"W	0.00	
17454.00+	90.451	269.863	7270.09	10871.98	-411.73	-10864.72	642723.39	495446.31	32°21'40.501"N	103°52'15.989"W	0.00	
17554.00+	90.451	269.863	7269.30	10971.95	-411.96	-10964.71	642623.40	495446.07	32°21'40.502"N	103°52'17.155"W	0.00	
17654.00+	90.451	269.863	7268.51	11071.91	-412.20	-11064.71	642523.41	495445.84	32°21'40.504"N	103°52'18.321"W	0.00	
17754.00+	90.451	269.863	7267.72	11171.88	-412.44	-11164.71	642423.42	495445.60	32°21'40.506"N	103°52'19.487"W	0.00	
17854.00+	90.451	269.863	7266.94	11271.84	-412.68	-11264.70	642323.43	495445.36	32°21'40.508"N	103°52'20.652"W	0.00	
17954.00+	90.451	269.863	7266.15	11371.80	-412.92	-11364.70	642223.44	495445.12	32°21'40.510"N	103°52'21.818"W	0.00	
18054.00+	90.451	269.863	7265.36	11471.77	-413.15	-11464.70	642123.45	495444.88	32°21'40.512"N	103°52'22.984"W	0.00	
18154.00+	90.451	269.863	7264.57	11571.73	-413.39	-11564.69	642023.46	495444.64	32°21'40.514"N	103°52'24.150"W	0.00	
18254.00+	90.451	269.863	7263.79	11671.70	-413.63	-11664.69	641923.47	495444.41	32°21'40.516"N	103°52'25.316"W	0.00	
18354.00+	90.451	269.863	7263.00	11771.66	-413.87	-11764.69	641823.48	495444.17	32°21'40.518"N	103°52'26.481"W	0.00	
18454.00+	90.451	269.863	7262.21	11871.62	-414.11	-11864.68	641723.49	495443.93	32°21'40.520"N	103°52'27.647"W	0.00	
18554.00+	90.451	269.863	7261.42	11971.59	-414.35	-11964.68	641623.50	495443.69	32°21'40.521"N	103°52'28.813"W	0.00	
18654.00+	90.451	269.863	7260.64	12071.55	-414.58	-12064.68	641523.51	495443.45	32°21'40.523"N	103°52'29.979"W	0.00	
18754.00+	90.451	269.863	7259.85	12171.52	-414.82	-12164.67	641423.52	495443.21	32°21'40.525"N	103°52'31.144"W	0.00	
18854.00+	90.451	269.863	7259.06	12271.48	-415.06	-12264.67	641323.53	495442.98	32°21'40.527"N	103°52'32.310"W	0.00	
18954.00+	90.451	269.863	7258.27	12371.45	-415.30	-12364.67	641223.54	495442.74	32°21'40.529"N	103°52'33.476"W	0.00	
19054.00+	90.451	269.863	7257.49	12471.41	-415.54	-12464.66	641123.55	495442.50	32°21'40.531"N	103°52'34.642"W	0.00	
19154.00+	90.451	269.863	7256.70	12571.37	-415.78	-12564.66	641023.56	495442.26	32°21'40.533"N	103°52'35.807"W	0.00	
19254.00+	90.451	269.863	7255.91	12671.34	-416.01	-12664.66	640923.57	495442.02	32°21'40.535"N	103°52'36.973"W	0.00	
19354.00+	90.451	269.863	7255.12	12771.30	-416.25	-12764.65	640823.58	495441.78	32°21'40.536"N	103°52'38.139"W	0.00	
19454.00+	90.451	269.863	7254.34	12871.27	-416.49	-12864.65	640723.59	495441.55	32°21'40.538"N	103°52'39.305"W	0.00	
19554.00+	90.451	269.863	7253.55	12971.23	-416.73	-12964.65	640623.60	495441.31	32°21'40.540"N	103°52'40.470"W	0.00	
19654.00+	90.451	269.863	7252.76	13071.19	-416.97	-13064.64	640523.61	495441.07	32°21'40.542"N	103°52'41.636"W	0.00	
19754.00+	90.451	269.863	7251.97	13171.16	-417.21	-13164.64	640423.62	495440.83	32°21'40.544"N	103°52'42.802"W	0.00	
19854.00+	90.451	269.863	7251.19	13271.12	-417.44	-13264.64	640323.63	495440.59	32°21'40.546"N	103°52'43.968"W	0.00	
19954.00+	90.451	269.863	7250.40	13371.09	-417.68	-13364.63	640223.64	495440.35	32°21'40.547"N	103°52'45.133"W	0.00	
20054.00+	90.451	269.863	7249.61	13471.05	-417.92	-13464.63	640123.65	495440.12	32°21'40.549"N	103°52'46.299"W	0.00	
20154.00+	90.451	269.863	7248.82	13571.01	-418.16	-13564.63	640023.66	495439.88	32°21'40.551"N	103°52'47.465"W	0.00	
20254.00+	90.451	269.863	7248.04	13670.98	-418.40	-13664.62	639923.67	495439.64	32°21'40.553"N	103°52'48.631"W	0.00	



Planned Wellpath Report

Rev-E.0

Page 7 of 8



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 (240 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
20354.00†	90.451	269.863	7247.25	13770.94	-418.64	-13764.62	639823.68	495439.40	32°21'40.555"N	103°52'49.797"W	0.00	
20454.00†	90.451	269.863	7246.46	13870.91	-418.87	-13864.62	639723.69	495439.16	32°21'40.557"N	103°52'50.962"W	0.00	
20554.00†	90.451	269.863	7245.67	13970.87	-419.11	-13964.61	639623.70	495438.92	32°21'40.558"N	103°52'52.128"W	0.00	
20654.00†	90.451	269.863	7244.89	14070.84	-419.35	-14064.61	639523.71	495438.69	32°21'40.560"N	103°52'53.294"W	0.00	
20754.00†	90.451	269.863	7244.10	14170.80	-419.59	-14164.61	639423.72	495438.45	32°21'40.562"N	103°52'54.460"W	0.00	
20854.00†	90.451	269.863	7243.31	14270.76	-419.83	-14264.60	639323.73	495438.21	32°21'40.564"N	103°52'55.625"W	0.00	
20954.00†	90.451	269.863	7242.52	14370.73	-420.07	-14364.60	639223.74	495437.97	32°21'40.566"N	103°52'56.791"W	0.00	
21054.00†	90.451	269.863	7241.74	14470.69	-420.30	-14464.59	639123.75	495437.73	32°21'40.568"N	103°52'57.957"W	0.00	
21154.00†	90.451	269.863	7240.95	14570.66	-420.54	-14564.59	639023.76	495437.50	32°21'40.569"N	103°52'59.123"W	0.00	
21254.00†	90.451	269.863	7240.16	14670.62	-420.78	-14664.59	638923.77	495437.26	32°21'40.571"N	103°53'00.288"W	0.00	
21354.00†	90.451	269.863	7239.37	14770.58	-421.02	-14764.58	638823.78	495437.02	32°21'40.573"N	103°53'01.454"W	0.00	
21454.00†	90.451	269.863	7238.59	14870.55	-421.26	-14864.58	638723.79	495436.78	32°21'40.575"N	103°53'02.620"W	0.00	
21554.00†	90.451	269.863	7237.80	14970.51	-421.50	-14964.58	638623.80	495436.54	32°21'40.577"N	103°53'03.786"W	0.00	
21654.00†	90.451	269.863	7237.01	15070.48	-421.73	-15064.57	638523.81	495436.30	32°21'40.578"N	103°53'04.951"W	0.00	
21655.51	90.451	269.863	7237.00	15071.98	-421.74	-15066.08	638522.30	495436.30	32°21'40.578"N	103°53'04.969"W	0.00	No.138H PBHL

HOLE & CASING SECTIONS - Ref Wellbore: JRU No.138H PWB - Ref Wellpath: Rev-E.0									
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	7332.67	0.00	-0.05	-392.79	-2917.99
7in Casing	30.00	9487.90	9457.90	30.00	7332.82	0.00	-0.05	-392.74	-2898.89
6.125in Open Hole	9487.79	21655.51	12167.72	7332.82	7237.00	-392.74	-2898.78	-421.74	-15066.08



Planned Wellpath Report

Rev-E.0
Page 8 of 8



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		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
2) No.138H PBHL	21655.51	7237.00	-421.74	-15066.08	638522.30	495436.30	32°21'40.578"N	103°53'04.969"W	point
Target #2		7293.00	-396.84	-4970.12	648617.60	495461.20	32°21'40.391"N	103°51'07.270"W	point
Target #3		7306.00	-405.34	-8990.38	644597.60	495452.70	32°21'40.483"N	103°51'54.138"W	point
1) No.138H Target #1	8945.54	7337.00	-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: Rev-E.0				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	654.00	Generic gyro - northseeking (Standard)		No.138H AWB
654.00	21655.51	NaviTrak (Standard)		JRU No.138H PWB