

HIGH CAVEKARST

R-111-POTASH

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM0006808	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator BOPCO, L.P.		7. If Unit or CA Agreement, Name and No. James Ranch Unit NMNM70965X	
3a. Address PO Box 2760 Midland, TX 79702		8. Lease Name and Well No. James Ranch Unit D11A #203H	
3b. Phone No. (include area code) 432-683-2277		9. API Well No. 30-015-43237	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NESW, UL F, 1360' FNL & 2560' FWL; Lat: 32.381097, Long: 103.886172 At proposed prod. zone 660'FNL & 330'FEL, Sec 23, T22S-R30E; Lat: 32.382933, Long: 103.84346		10. Field and Pool, or Exploratory Undesignated (Bone Spring)	
11. Sec., T. R. M. or Blk. and Survey or Area Section 21, T22S-R30E		12. County or Parish Eddy County	
13. State NM		14. Distance in miles and direction from nearest town or post office* 13 miles northeast of Loving, NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1360'		16. No. of acres in lease 2,440	
17. Spacing Unit dedicated to this well 400		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 660'	
19. Proposed Depth 23,490' MD/ 10,731' TVD		20. BLM/BIA Bond No. on file COB000050	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3161'		22. Approximate date work will start* 03/01/2015	
23. Estimated duration 30 days		24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature <i>Whitney McKee</i>	Name (Printed/Typed) Whitney McKee	Date 7/3/14
------------------------------------	------------------------------------	-------------

Title Engineering Assistant	
-----------------------------	--

Approved by (Signature) /s/George MacDoneli	Name (Printed/Typed)	Date JUL - 7 2015
---	----------------------	-------------------

Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
---------------------	------------------------------

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 10 2015

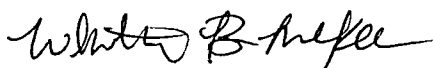
Approval Subject to General Requirements
& Special Stipulations Attached

RECEIVED

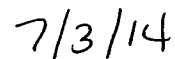
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Provisions of the MOA:

- A. No new Class III inventories are required of industry within the Project Area for those projects where industry elects to contribute to the mitigation fund.
- B. The amount of funds contributed was derived from the rate schedule established within Appendix B of the MOA. The amount of the funding contribution acknowledged on this form reflects those rates.
- C. The BLM will utilize the funding to carry out a program of mitigation at high-priority sited whose study is needed to answer key questions identified within the Regional Research Design.
- D. Donating to the fund is voluntary. Industry acknowledges that it is aware it has the right to pay for Class III survey rather than contributing to the mitigation fund, and that it must avoid or fund data recovery at those sites already recorded that are eligible for nomination to the National Register or whose eligibility is unknown and that any such payments are independent of the mitigation funds established by this MOA.
- E. Previously recorded archeological sites determined eligible for nomination to the National Register or whose eligibility remains undetermined must be avoided or mitigated.
- F. If any skeletal remains that might be human or funerary objects are discovered by any activities, the land-use applicant will cease activities in the area of discovery, protect the remains, and notify the BLM within 24 hours. The BLM will determine the appropriate treatment of the remains in consultation with culturally affiliated Indian Tribe(s) and lineal descendents. Applicants will be required to pay for treatment of the cultural items independent and outside of the mitigation fund.



Company-Authorized Officer



Date

BLM-Authorized Officer

Date

DISTRICT I

1625 N. French Dr. Hobbs, NM 88240
Phone:(575)393-6181 Fax:(575)393-0720

DISTRICT II

811 S. First St., Artesia, NM 88210
Phone:(575)748-1283 Fax:(575)748-0720

DISTRICT III

1000 Rio Hondo, Aztec, NM 87410
Phone:(505)334-6178 Fax:(505)334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone:(505)476-3460 Fax:(505)476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-43237		Pool Code 97905	Pool Name Undesignated; Bone Spring
Property Code 306407 315048	Property Name JAMES RANCH UNIT DHA DI IA		Well Number 203H
OGRID No. 260737	Operator Name BOPCO, L.P.		Elevation 3161'

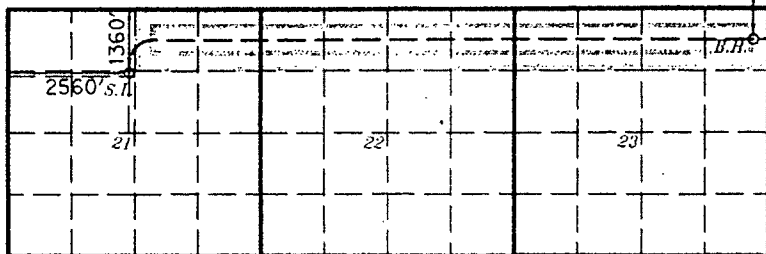
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	21	22 S	30 E		1360	NORTH	2560	WEST	EDDY

Bottom Hole 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
A	23	22 S	30 E		660	NORTH	330	EAST	EDDY
Dedicated Acres 400	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 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.

Whitney McKee 7/7/14
Signature Date

Whitney McKee

Printed Name
WBMckee@busspet.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 06, 2014

Date Surveyed

Signature & seal

Professional Surveyor

Tim C. Pappas

Certificate No. 21209

HALFF ASSOCIATES

29714-W027

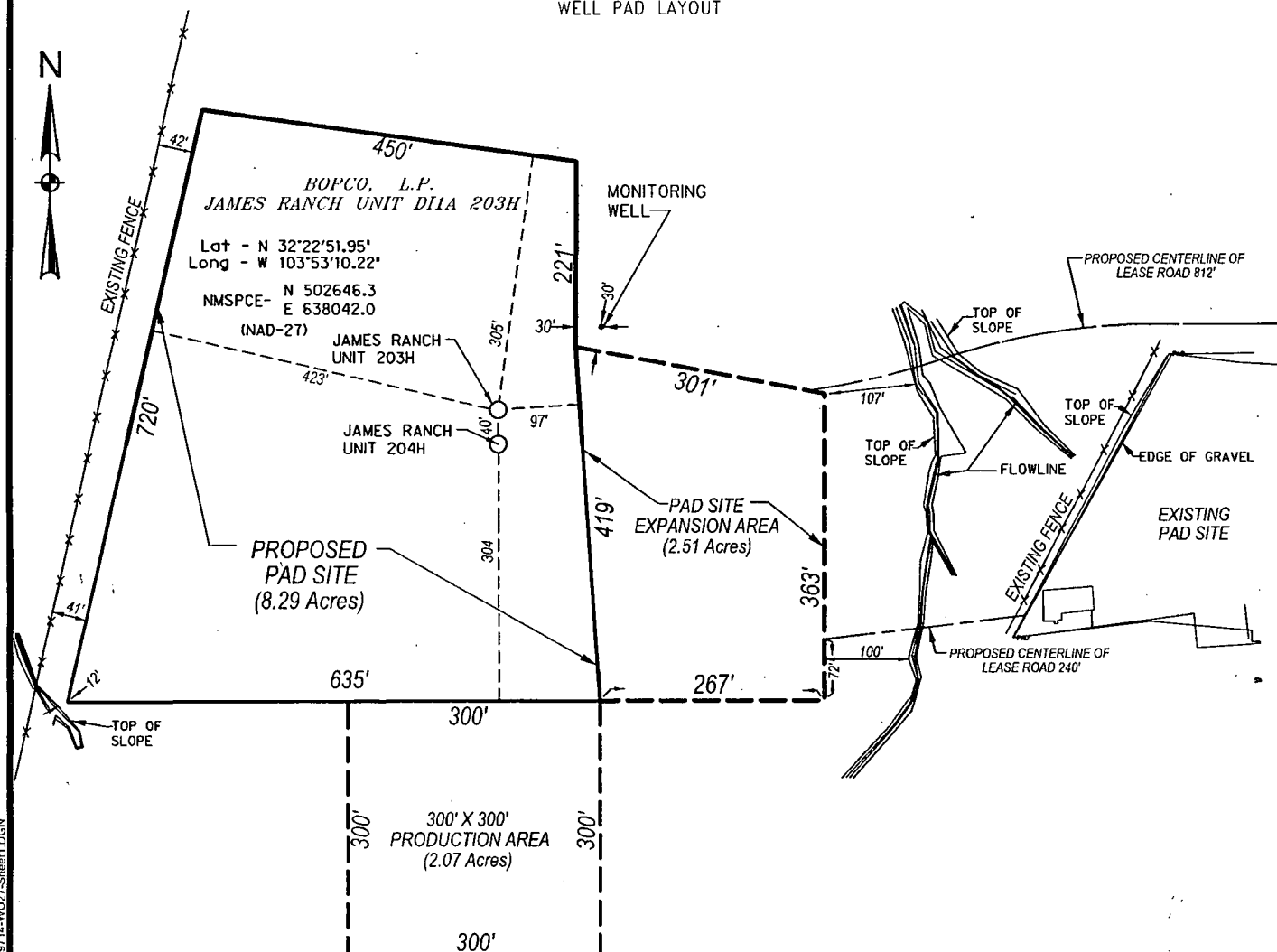
PROPOSED
SURFACE LOCATION
Lat - N 32°22'51.95"
Long - W 103°53'10.22"
NMSPCE- N 502646.3
E 638042.0
(NAD-27)

PROPOSED BOTTOM
HOLE LOCATION
Lat - N 32°22'58.56"
Long - W 103°50'36.48"
NMSPCE- N 503372.0
E 651222.3
(NAD-27)

SCALE 1"=4000'

SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, *BOPCO, L.P.* NEW MEXICO

WELL PAD LAYOUT



TOTAL PROPOSED PAD SITE ACREAGE: 12.95 ACRES

NOTE: PAD SITE LOCATED APPROXIMATELY
20 MILES EAST OF CARLSBAD, NM

Directions to Location:

FROM THE JUNCTION OF JAL HIGHWAY WITH CIMARRON ROAD,
RUNNING IN A NORTHERLY DIRECTION TURN NORTH ON CIMARRON
ROAD, CONTINUE NORTH ON CIMARRON ROAD FOR 2.63 MILES, TURN
LEFT IN A WESTERLY DIRECTION CONTINUE ALONG CIMARRON ROAD
FOR 0.5 MILES TO AN EXISTING GRAVEL ROAD RUNNING
IN A NORTHWESTERLY DIRECTION TURN RIGHT ON GRAVEL ROAD,
FOLLOW ROAD FOR 1.5 MILES TO AN EXISTING PAD SITE.

0 100 200 300 400

SCALE: 1"=200'



HALFF ASSOCIATES, INC.
ENGINEERS - SURVEYORS
1201 NORTH BOWSER ROAD
RICHARDSON, TEXAS - 75081-2275
PHONE: (214) 346-6200
FAX: (214) 739-0095

AVO. 29714-W027

Drawn By: RG

Date: 6/4/2014

Checked By: VK



BOPCO, L.P.

REF: JAMES RANCH UNIT D11A 203H

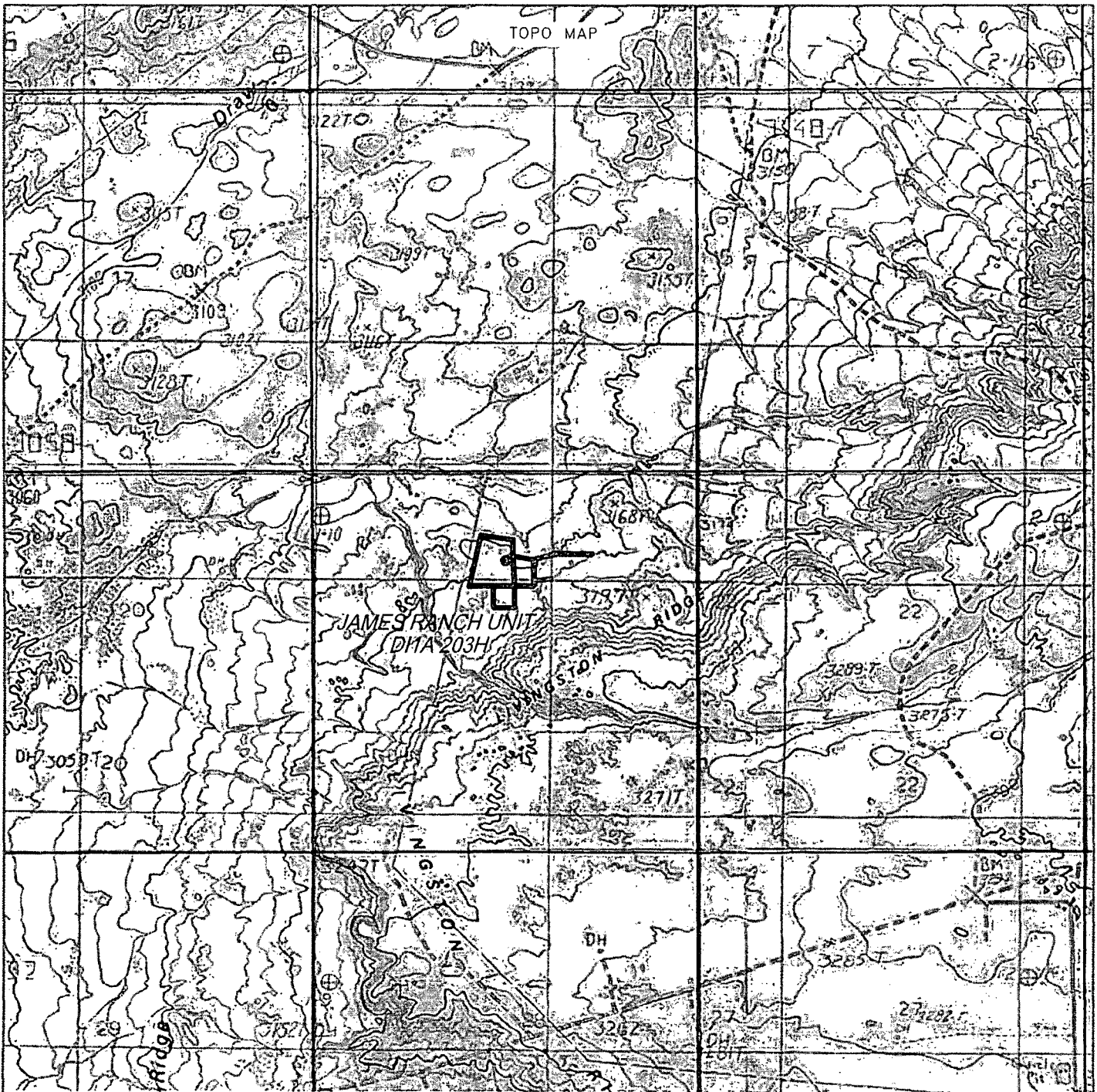
JAMES RANCH UNIT D11A 203H

SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST,

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

Survey Date: 05-30-2014

Sheet 1 of 1 Sheets



JAMES RANCH UNIT DI1A 203H
 Located 1360' FNL, 2560' FWL
 Section 21, Township 22 South, Range 30 East
 N.M.P.M., Eddy County, New Mexico.



HALFF

HALFF ASSOCIATES, INC.
 ENGINEERS - SURVEYORS
 1201 NORTH BOWSER ROAD
 RICHARDSON, TEXAS - 75081-2275
 PHONE: (214) 346-6200
 FAX: (214) 739-0095

AVO. 29714-W027

Survey Date: 05-30-2014

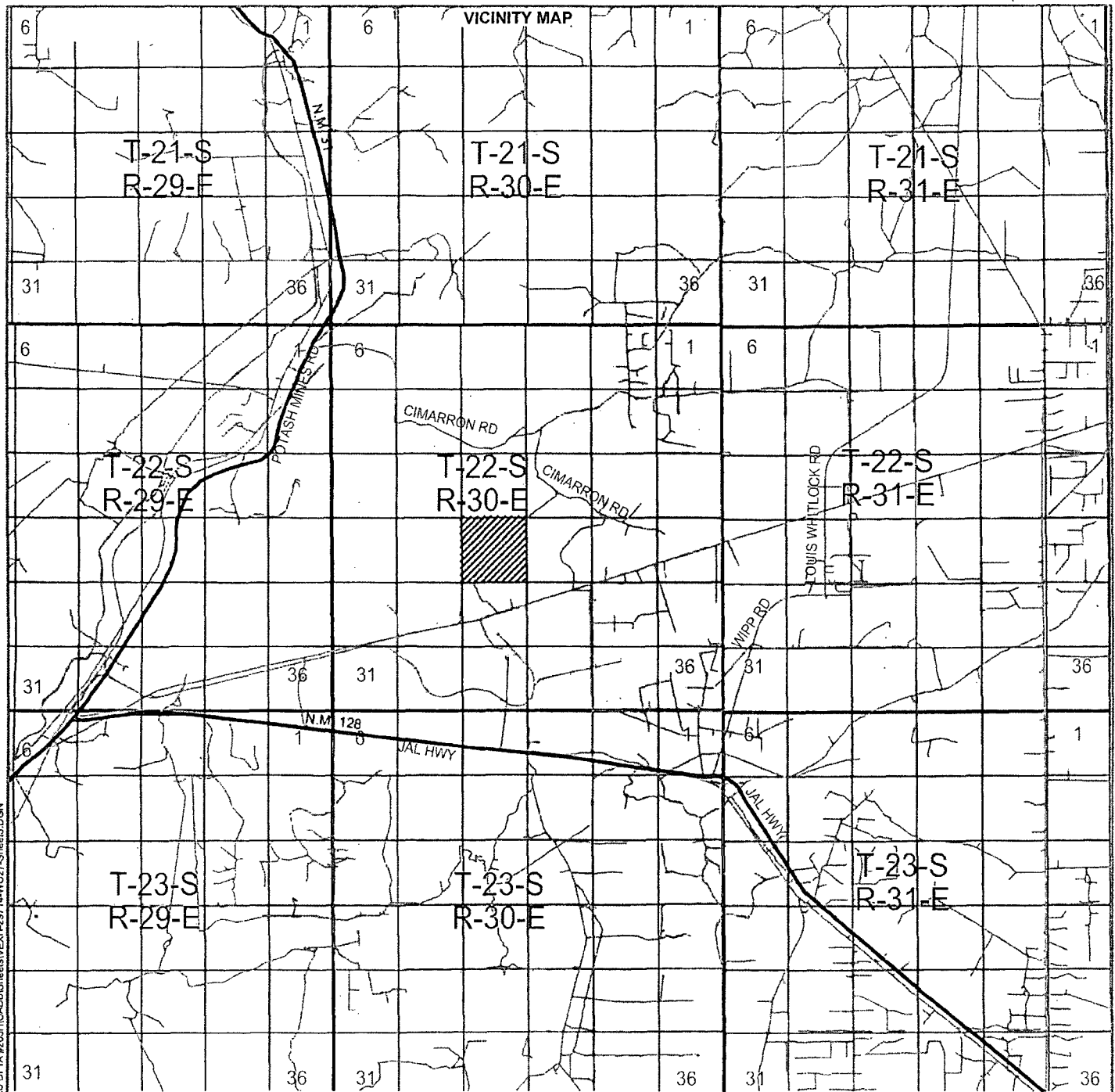
Scale: 1"=2000'

Date: 6/2/2014



BOPCO, L.P.

Sheet 2 of 7 Sheets



JAMES RANCH UNIT DI1A 203H
 Located 1360' FNL, 2560' FWL
 Section 21, Township 22 South, Range 30 East
 N.M.P.M., Eddy County, New Mexico.

8/2/2014 2:47:33 PM a12706 HALFF I:\29000\29714\W027_JRU DI 1A #203H\CADD\Sheets\EXH-29714-W027-Sheet3.DGN



HALFF

HALFF ASSOCIATES, INC.
 ENGINEERS - SURVEYORS
 1201 NORTH BOWSER ROAD
 RICHARDSON, TEXAS - 75081-2275
 PHONE: (214) 346-6200
 FAX: (214) 739-0095

AVO. 29714-W027

Survey Date: 05-30-2014

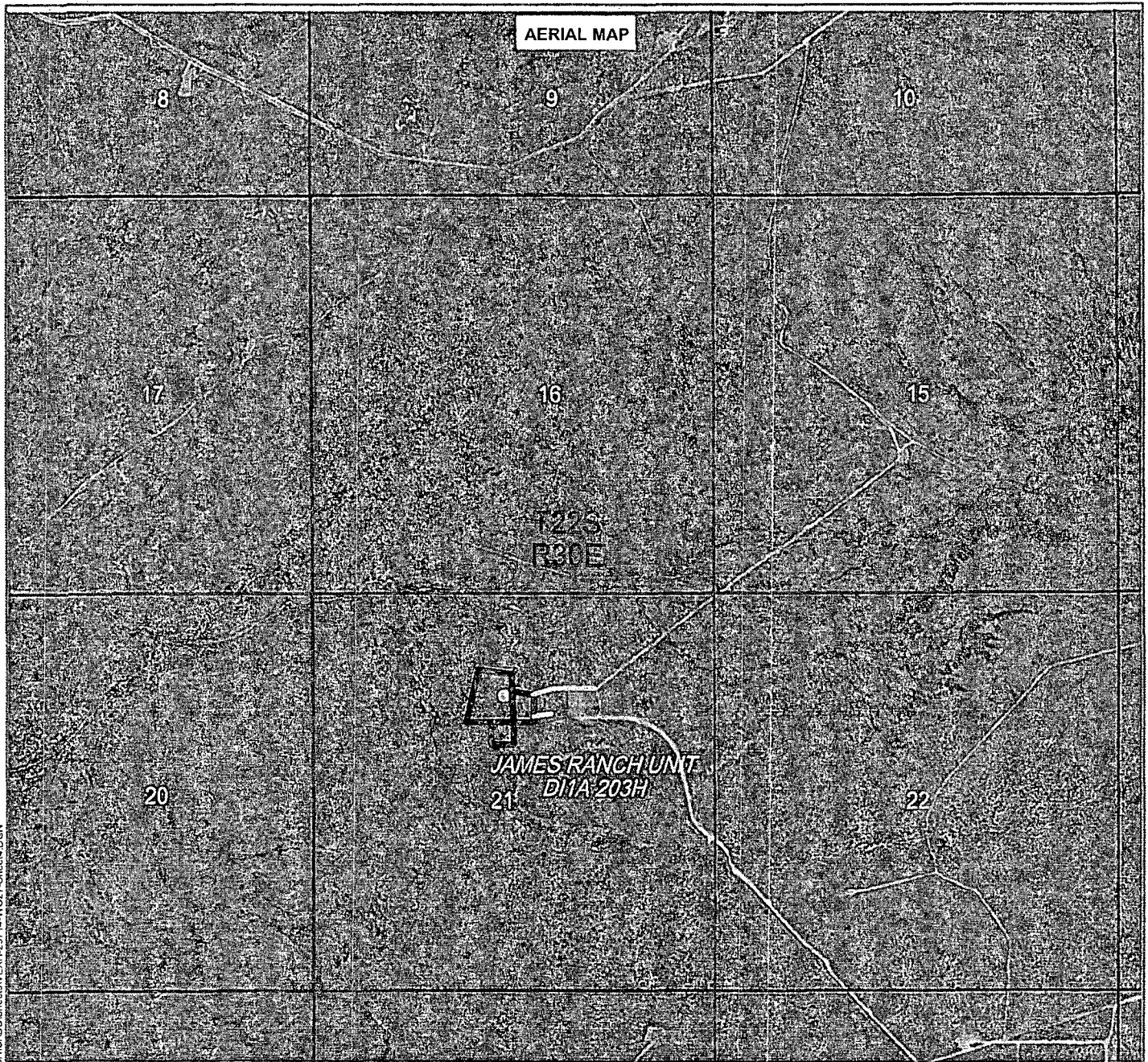
Scale: 1" = 2 MILES

Date: 6/2/2014



BOPCO, L.P.

Sheet 3 of 7 Sheets



JAMES RANCH UNIT DI1A 203H

Located 1360' FNL, 2560' FWL

Section 21, Township 22 South, Range 30 East
N.M.P.M., Eddy County, New Mexico.



HALFF

HALFF ASSOCIATES, INC.
ENGINEERS - SURVEYORS
1201 NORTH BOWSER ROAD
RICHARDSON, TEXAS - 75081-2275
PHONE: (214) 346-6200
FAX: (214) 739-0095

AV0. 29714-W027

Survey Date: 05-30-2014

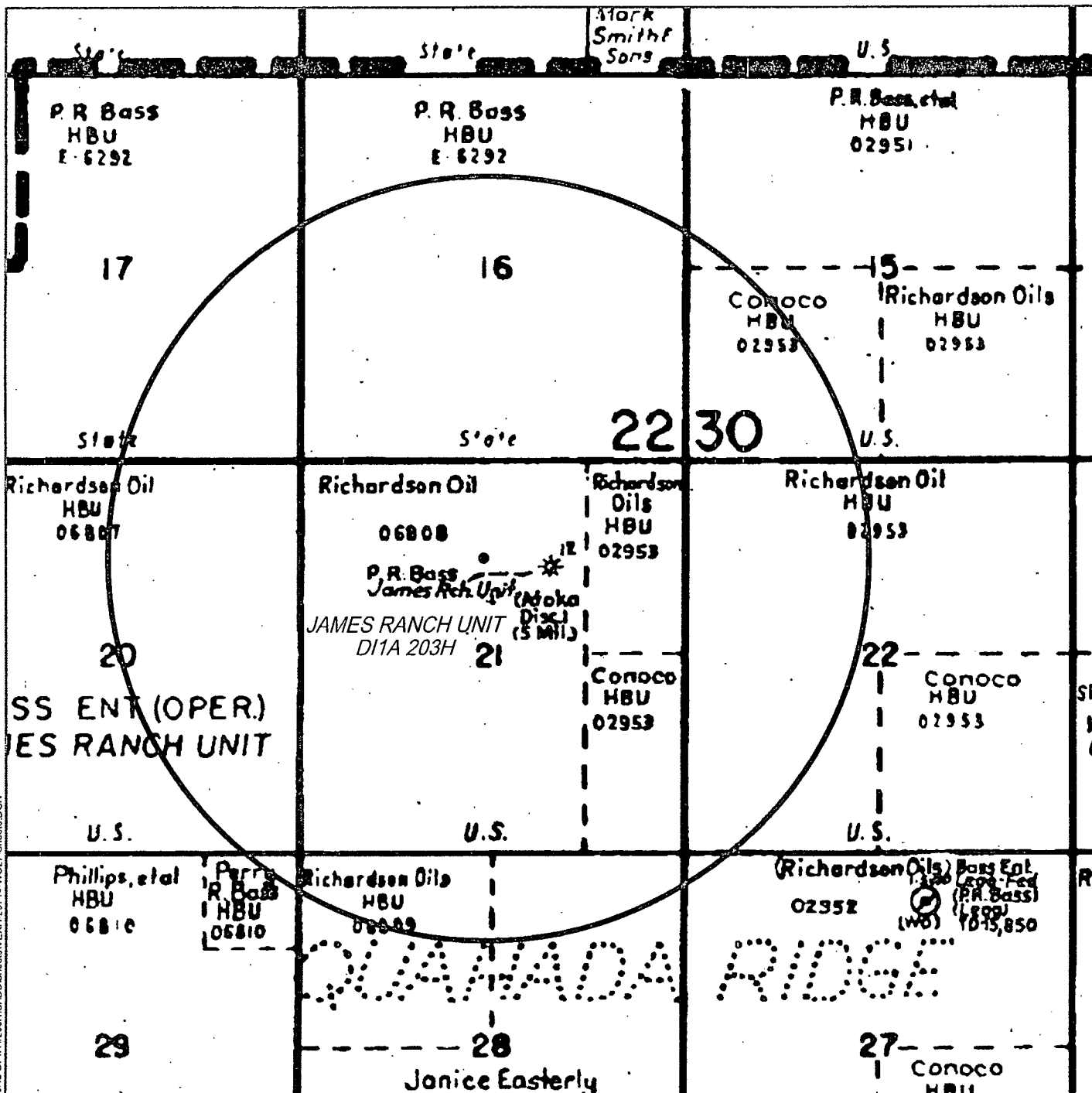
Scale: 1"=2000'

Date: 6/2/2014



BOPCO, L.P.

Sheet 4 of 7 Sheets



JAMES RANCH UNIT D11A 203H (SURFACE HOLE MAP)
 Located 1360' FNL, 2560' FWL
 Section 21, Township 22 South, Range 30 East
 N.M.P.M., Eddy County, New Mexico.



HALFF

HALFF ASSOCIATES, INC.
 ENGINEERS - SURVEYORS
 1201 NORTH BOWSER ROAD
 RICHARDSON, TEXAS - 75081-2275
 PHONE: (214) 346-6200
 FAX: (214) 739-0095

AVO. 29714-W027

Scale: 1"=2000'

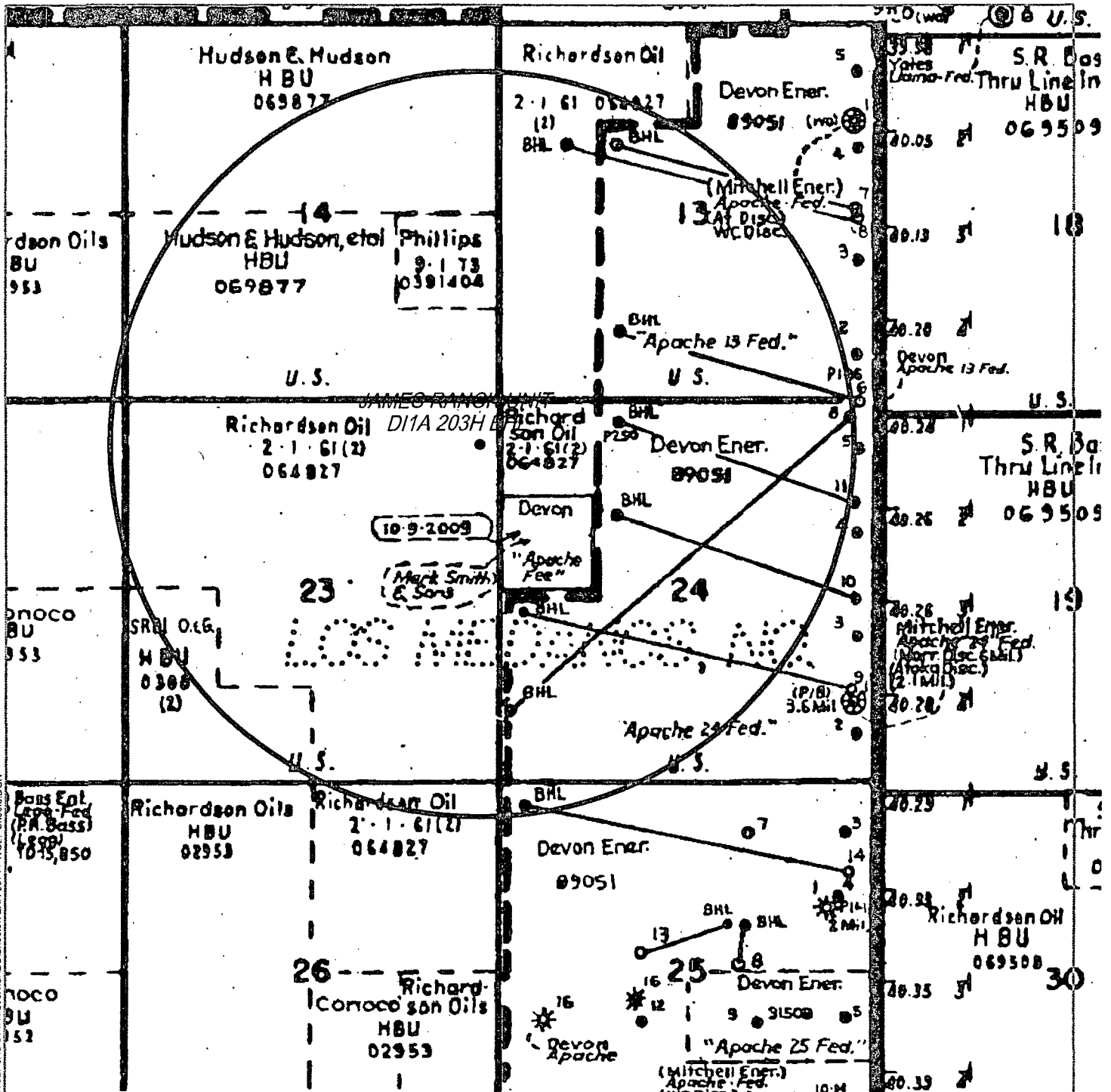
Survey Date: 05-30-2014
 Date: 6/2/2014

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



BOPCO, L.P.

Sheet 5 of 7 Sheets



JAMES RANCH UNIT D11A 203H (BOTTOM HOLE MAP)
 Located 660' FNL, 330' FEL
 Section 23, Township 22 South, Range 30 East
 N.M.P.M., Eddy County, New Mexico.



HALFF

HALFF ASSOCIATES, INC.
 ENGINEERS - SURVEYORS
 1201 NORTH BOWSER ROAD
 RICHARDSON, TEXAS - 75081-2275
 PHONE: (214) 346-6200
 FAX: (214) 739-0095

AVO. 29714-W027

Scale: 1"=2000'

Survey Date: 05-30-2014
 Date: 6/2/2014

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



BOPCO, L.P.

Sheet 6 of 7 Sheets

Exhibit "D"

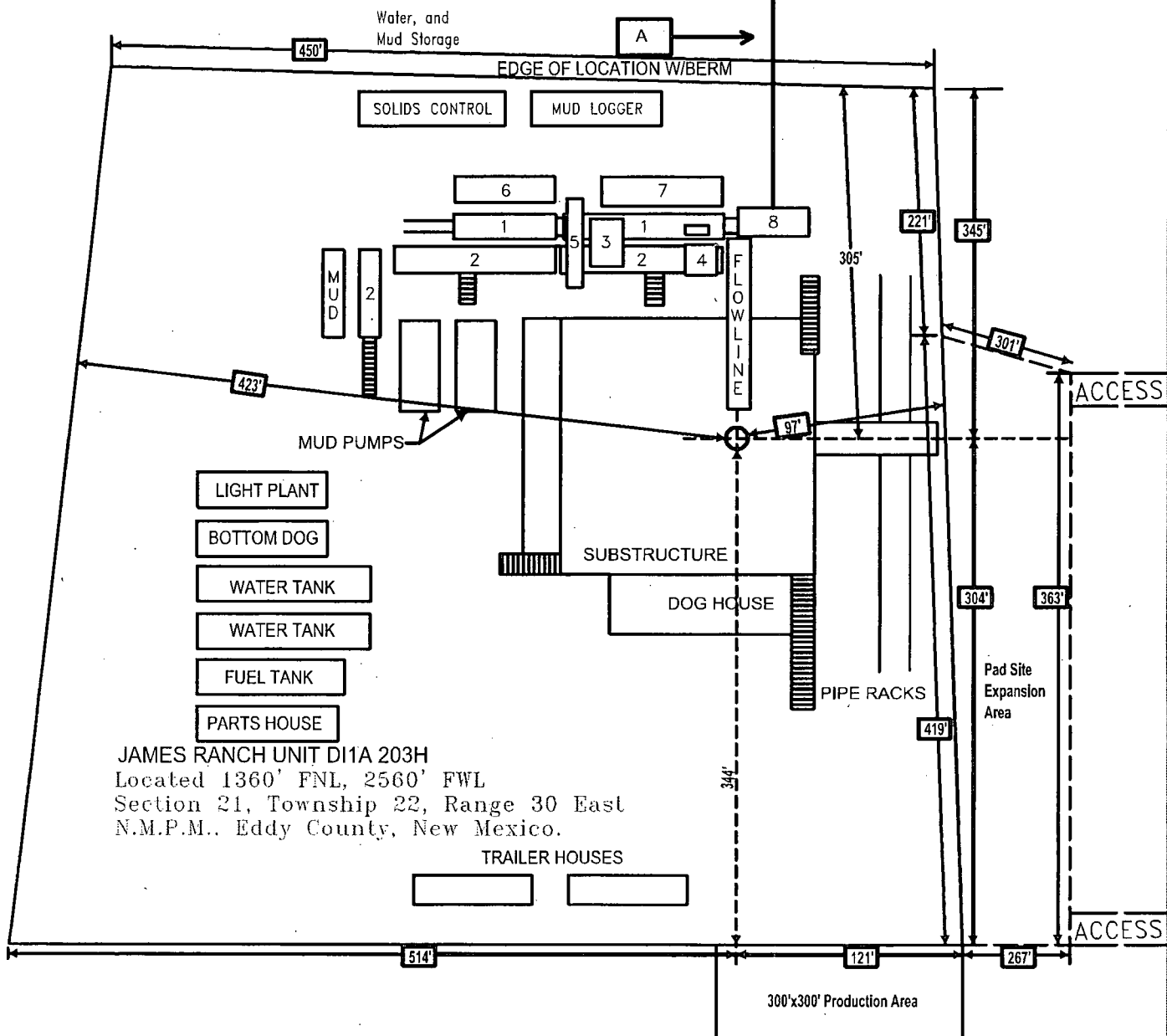
RIG LAYOUT
RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

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 |

100'

Flare Pit 150' away
from location in H2S
area,
100' away from
location outside H2S



JAMES RANCH UNIT D11A 203H
Located 1360' FNL, 2560' FWL
Section 21, Township 22, Range 30 East
N.M.P.M., Eddy County, New Mexico.

TRAILER HOUSES

300'x300' Production Area



HALFF

HALFF ASSOCIATES, INC.
ENGINEERS - SURVEYORS
1201 NORTH BOWSER ROAD
RICHARDSON, TEXAS - 75081-2275
PHONE: (214) 346-6200
FAX (214) 739-0095

AVO. 29714-W027

Survey Date: 05-30-2014

NOT TO SCALE

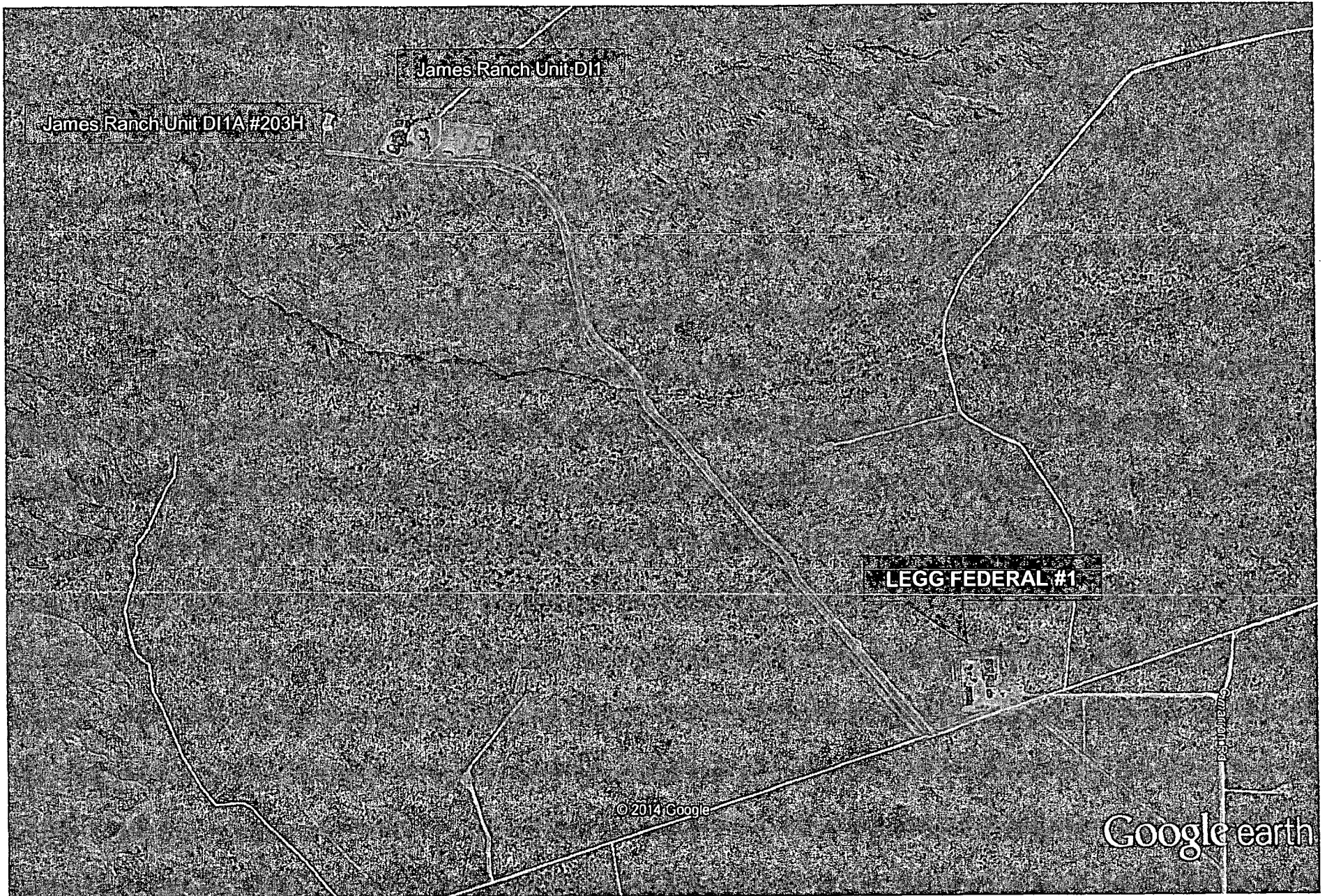
Date: 6/2/2014



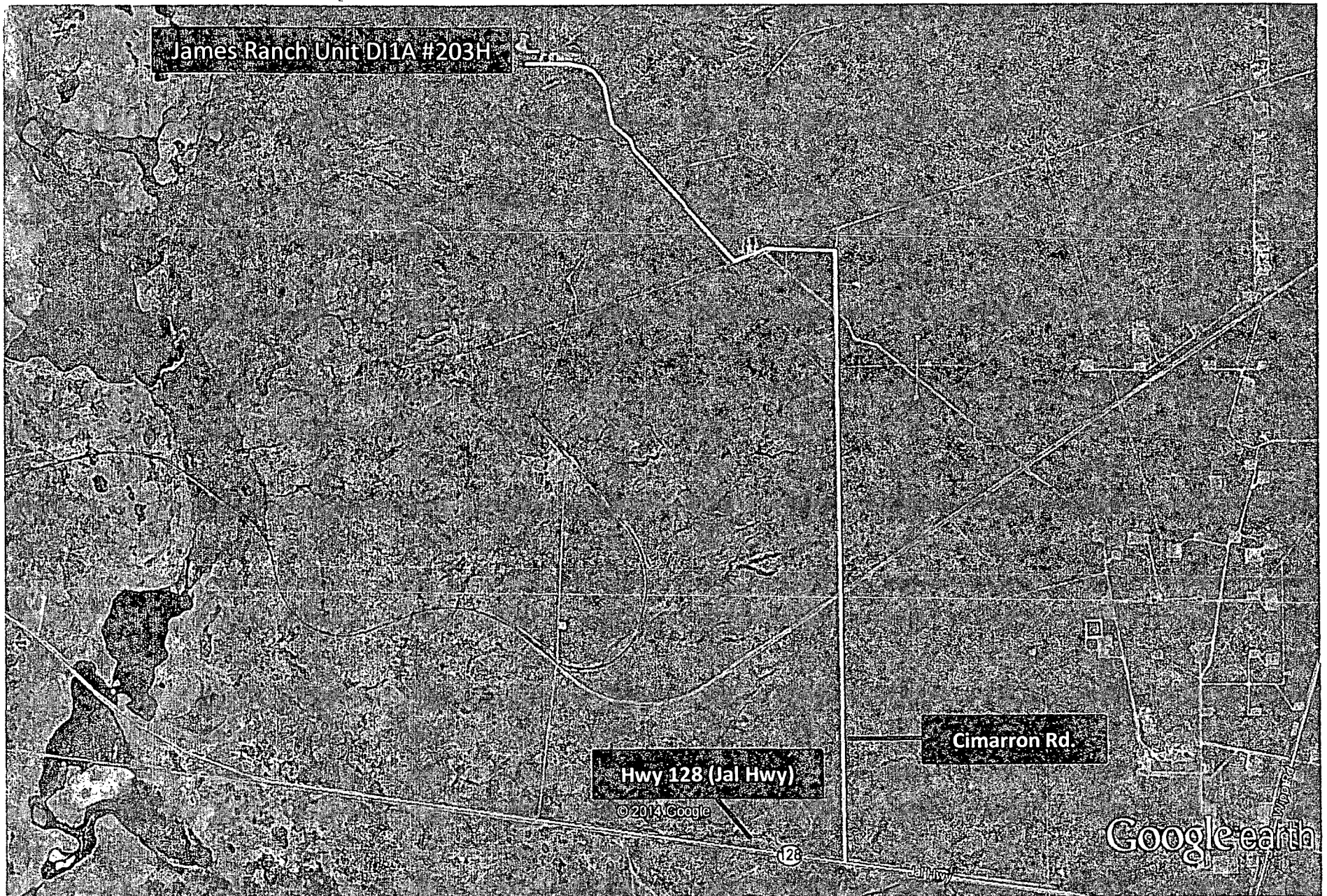
BOPCO, L.P.

Sheet 7 of 7 Sheets

Flowline Route Diagram 4



Access Road Diagram



DRILLING PROGRAM BOPCO, L.P.

NAME OF WELL: James Ranch Unit DI 1A 203H

1. LEGAL DESCRIPTION - SURFACE: 1360' FNL, 2560' FWL, Sec 21-T22S-R30E. BHL: 660' FNL, 330' FEL, Sec 23-T22S-R30E. **The James Ranch Unit DI 1A 203H has a nonstandard surface location.**

2. Ground level elevation: 3161' KB elevation (estimated): 3186'

3. Proposed Drilling Depth: 23,490' MD 10,731' TVD

4. WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS:

Formation Description	Est from KB (TVD)	BEARING
T/Fresh Water	130	Fresh Water
T/Rustler	186	Barren
T/Salado	551	Barren
T/Lamar	3531	Barren
Ramsey	3576	Oil/Gas
Cherry Canyon	4454	Oil/Gas
Brushy Canyon	5779	Oil/Gas
Bone Spring	7379	Oil/Gas
1st Bone Spring Sand	8383	Oil/Gas
2nd Bone Spring Sand	9118	Oil/Gas
3rd Bone Spring Sand	10291	Oil/Gas
TD Horizontal	10731	Oil/Gas

5. Possible mineral bearing formation: Shown above

6. Casing Program

Casing	Set Depth MD	Set Depth (Deepest) TVD	Casing Size	Hole Size	Casing Weight	Casing Grade	Thread	Condition	Tension SF	Collapse SF	Burst SF
Surface	0-531'	531'	13-3/8"	17-1/2"	48 #	H-40	ST&C	New	14.70	2.84	1.14
Intermediate	0-3551'	3551'	9-5/8"	12-1/4"	40 #	J-55	LT&C	New	5.25	1.25	1.99
Production	0-10980'	10579'	7"	8-3/4"	26 #	HCP-110	LT&C	New	2.92	1.29	1.69
Completion System/Liner	10930'-23490' 10880'	10731'	4-1/2"	6-1/8"	11.6 #	HCP-110	LT&C	New	2.61	1.33	1.79

* Depending on availability. *liner must tie back minimum of 100'*

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (13-3/8")

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).
Collapse	A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
Burst	A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING - (9-5/8")

- Tension** A 1.6 design factor utilizing the effects of buoyancy (10.2 ppg).
- Collapse** A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.
- Burst** A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

Production CASING - (7")

- Tension** A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).
- Collapse** A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
- Burst** A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

Completion System - (4-1/2")

- Tension** A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).
- Collapse** A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
- Burst** A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

7. CEMENT

Surface	Sacks	Weight (ppg)	Yield (FT ³ /SX)	GALS/SX	Cement Blend
Lead	190	13.50	1.75	8.69	Class C +2% CACL + 4% Bentonite + 0.25 LB/SK Cello Flake + 3 lb/sk LCM-1
Tail	310	14.80	1.35	6.35	Class C + 2% CACL + 0.25 LB/SK CF, 0.25LB/SK Cello Flake +3 lb/sk LCM-1

TOC: 0' 100% Excess

Intermediate	Sacks	Weight (ppg)	Yield (FT ³ /SX)	GALS/SX	Cement Blend
Lead	680	12.90	1.85	9.32	EconoCEM HLC + 5% CaCl + 5#/sk Gilsonite
Tail	190	14.80	1.33	6.34	HalCem C

TOC: 0' 30% Excess

Production Stage 1	Sacks	Weight (ppg)	Yield (FT ³ /SX)	GALS/SX	Cement Blend
Lead	400	11.0	2.64	14.87	Tuned Light + 0.125 pps Poly-E-Flake
Tail	170	12.00	2.03	11.41	Class "H" + 0.5% Halad-344 + 0.25% CFR-3 + 0.5% Econolite

TOC: 5000'

50% Excess

DV Tool @ 5000'

See COA

Production Stage 2	Sacks	Weight (ppg)	Yield (FT ³ /SX)	GALS/SX	Cement Blend
Lead	410	11.0	2.35	11.70	Tuned Light + 0.125 pps Poly-E-Flake

TOC: 0'

10% Excess inside casing, 50% excess in open hole

Cement volumes will be adjusted proportionately for depth changes of the multi stage tool.

COMPLETIONS SYSTEM

A 4-1/2" completion system with open hole packers will be run in the producing lateral to a depth of 23490'. The top of the Completion System will be set at approximately 10930'. Cement will not be required for this system.

See COA

8. PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM C or Z)

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the Cameron Multi-Bowl System (MBS) wellhead. The BOP/BOPE will be pressure tested to 250 psi low and 5000 psi high after installation on the surface casing which will cover testing requirements for the duration of the well as per Onshore Order #2. The 9-5/8" intermediate casing and 7" production casing will be run with a mandrel hanger through the 13-5/8" BOP/BOPE system without breaking any connections on the BOP/BOPE system and thus not requiring a pressure test. Please find attached wellhead schematic. The field reports from the Cameron representative and the BOP test information will be provided in a subsequent report.

These tests will be performed:

- Upon installation
- After any component changes
- Thirty days after a previous test
- As required by well conditions
- Any time a seal is broken within a system

A function test to insure that the preventers are operating correctly will be performed on each trip

See COA

BOPCO, L.P. would like to request a variance to use an armored, 3" flex hose for the choke line in the drilling of the well if the rig is equip with hose. (See specification for hose that might be used, attached with APD exhibits). **If an armored flex hose is utilized, the company man will have all of the proper certified paper work for that hose available on location.**

9. MUD PROGRAM

DEPTH	MUD TYPE	Weight	FV	PV	YP	Ph
0 - 531'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	9.5 – 10.5
531' – 3551'	Brine Water	9.8 – 10.2	28-30	NC	NC	9.5 - 10.5
3551' – 10980'	FW/Gel	8.7 – 9.0	28-36	NC	NC	9.5 – 10.5
10980'-23490'	Synthetic OBM	8.7 – 9.2	36-55	16-30	16-30	NA

NOTE: Sufficient mud materials will be kept on location at all times in order to combat lost circulation or control unexpected kicks. May increase vis for logging purposes only.

The mud monitoring system installed on the rig is an electronic Pason, which satisfies onshore order 1 requirements.

10. Drilling Plan

KOP: 9,613' EOC: 11,306' MD (10,636' TVD)

Set surface and intermediate casing strings. Drill production hole to KOP, continue drilling curve. Set and cement production casing at the end of a 70 degree, 200' tangent (in curve). Drill completion hole to TD. Run completions system.

11. TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING

Run #1: GR with MWD during drilling of build and horizontal portions of 8-3/4" and 6-1/8" hole.

Run #2: Shuttle log w/GR, PE, Density, Neutron, Resistivity in lateral leg open hole are possible.

Mud Logger: Rigged up at 100'

C) CONVENTIONAL CORING

None anticipated

12. H₂S SAFETY EQUIPMENT

H₂S monitors shall be installed prior to drilling out the surface shoe. If H₂S is encountered in quantities greater than 10 PPM, the well will be shut in and H₂S equipment will be installed, including a flare line that will be extended pursuant to Onshore Oil and Gas Order #6. **(Please refer to diagram B, or C for choke manifold and closed loop system layout when H₂S is present)** Please refer to H₂S location diagram for location of important H₂S safety items.

13. ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 5133 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware Section from 3,576'-10,731' TVD.

14. OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

30 days drilling operations

14 days completion operations

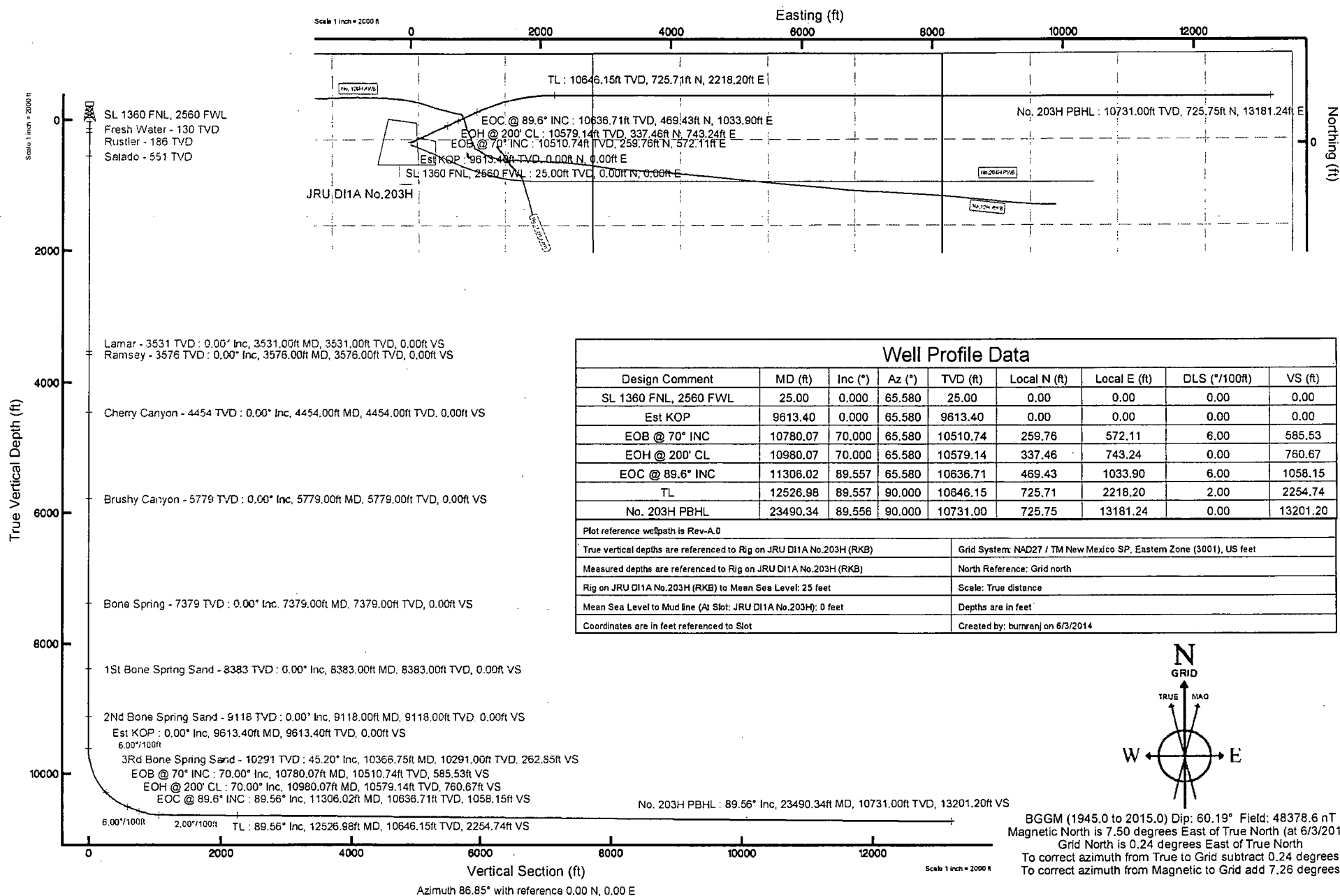
JRB



BOPCO, LP

Location: Eddy County, NM
Field: JRU NAD27
Facility: JRU Drilling Island 1A

Slot: JRU D11A No.203H
Well: No.203H
Wellbore: No.203H PWB





Planned Wellpath Report

Rev-A.0

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect@ 4.0.0
North Reference	Grid	User	Burnranj
Scale	0.999931	Report Generated	6/3/2014 at 3:06:40 PM
Convergence at slot	0.24° East	Database/Source file	WA_MIDLAND/C:\Users\burnranj\AppData\Roaming\Well Explorer\temp\BOPCO, LP JRU D11A No.203H (Rev-A.0).xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	40.00	-0.10	638042.00	502646.30	32°22'51.947"N	103°53'10.217"W
Facility Reference Pt			638042.10	502606.30	32°22'51.551"N	103°53'10.218"W
Field Reference Pt			652495.44	494904.92	32°21'34.711"N	103°50'22.090"W

WELLPATH DATUM			
Calculation method	Minimum curvature / Radius of curvature	Rig on JRU D11A No.203H (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Rig on JRU D11A No.203H (RKB) to Mean Sea Level	25.00ft
Vertical Reference Pt	Rig on JRU D11A No.203H (RKB)	Rig on JRU D11A No.203H (RKB) to Mud Line at Slot (JRU D11A No.203H)	25.00ft
MD Reference Pt	Rig on JRU D11A No.203H (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	86.85°



Planned Wellpath Report

Rev-A.0
Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H-PWB
Facility	JRU Drilling Island 1A		

WELLPATH DATA (158 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	65.580	0.00	0.00	0.00	0.00	0.00	
25.00	0.000	65.580	25.00	0.00	0.00	0.00	0.00	SL 1360 FNL, 2560 FWL
130.00†	0.000	65.580	130.00	0.00	0.00	0.00	0.00	Fresh Water - 130 TVD
186.00†	0.000	65.580	186.00	0.00	0.00	0.00	0.00	Rustler - 186 TVD
551.00†	0.000	65.580	551.00	0.00	0.00	0.00	0.00	Salado - 551 TVD
3531.00†	0.000	65.580	3531.00	0.00	0.00	0.00	0.00	Lamar - 3531 TVD
3576.00†	0.000	65.580	3576.00	0.00	0.00	0.00	0.00	Ramsey - 3576 TVD
4454.00†	0.000	65.580	4454.00	0.00	0.00	0.00	0.00	Cherry Canyon - 4454 TVD
5779.00†	0.000	65.580	5779.00	0.00	0.00	0.00	0.00	Brushy Canyon - 5779 TVD
7379.00†	0.000	65.580	7379.00	0.00	0.00	0.00	0.00	Bone Spring - 7379 TVD
8383.00†	0.000	65.580	8383.00	0.00	0.00	0.00	0.00	1st Bone Spring Sand - 8383 TVD
9118.00†	0.000	65.580	9118.00	0.00	0.00	0.00	0.00	2nd Bone Spring Sand - 9118 TVD
9600.00†	0.000	65.580	9600.00	0.00	0.00	0.00	0.00	
9613.40	0.000	65.580	9613.40	0.00	0.00	0.00	0.00	Est KOP
9700.00†	5.196	65.580	9699.88	3.66	1162	3.57	6.00	
9800.00†	11.196	65.580	9798.81	16.94	7.51	16.55	6.00	
9900.00†	17.196	65.580	9895.72	39.78	17.65	38.87	6.00	
10000.00†	23.196	65.580	9989.53	71.94	31.91	70.29	6.00	
10100.00†	29.196	65.580	10079.21	113.06	50.16	110.46	6.00	
10200.00†	35.196	65.580	10163.80	162.69	72.17	158.96	6.00	
10300.00†	41.196	65.580	10242.35	220.28	97.73	215.24	6.00	
10366.75†	45.201	65.580	10291.00	262.85	116.61	256.83	6.00	3rd Bone Spring Sand - 10291 TVD
10400.00†	47.196	65.580	10314.02	285.22	126.53	278.68	6.00	
10500.00†	53.196	65.580	10378.00	356.78	158.28	348.60	6.00	
10600.00†	59.196	65.580	10433.61	434.17	192.62	424.23	6.00	
10700.00†	65.196	65.580	10480.24	516.57	229.17	504.73	6.00	
10780.07	70.000	65.580	10510.74	585.53	259.76	572.11	6.00	EOB @ 70° INC
10800.00†	70.000	65.580	10517.56	602.99	267.51	589.17	0.00	
10900.00†	70.000	65.580	10551.76	690.55	306.36	674.73	0.00	
10980.07†	70.000	65.580	10579.14	760.67	337.46	743.24	0.00	EOH @ 200' CL
11000.00†	71.196	65.580	10585.77	778.19	345.23	760.36	6.00	
11100.00†	77.196	65.580	10612.99	867.81	385.00	847.93	6.00	
11200.00†	83.196	65.580	10630.01	959.60	425.72	937.61	6.00	
11300.00†	89.196	65.580	10636.64	1052.54	466.95	1028.43	6.00	
11306.02†	89.557	65.580	10636.71	1058.15	469.43	1033.90	6.00	EOC @ 89.6° INC
11400.00†	89.557	67.460	10637.43	1146.27	506.88	1120.10	2.00	
11500.00†	89.557	69.460	10638.20	1241.16	543.59	1213.11	2.00	
11600.00†	89.557	71.460	10638.98	1337.09	577.03	1307.34	2.00	
11700.00†	89.557	73.460	10639.75	1433.94	607.17	1402.68	2.00	
11800.00†	89.557	75.460	10640.52	1531.61	633.96	1499.02	2.00	
11900.00†	89.557	77.460	10641.30	1629.96	657.37	1596.23	2.00	
12000.00†	89.557	79.460	10642.07	1728.88	677.37	1694.20	2.00	
12100.00†	89.557	81.460	10642.84	1828.25	693.94	1792.81	2.00	
12200.00†	89.557	83.460	10643.62	1927.95	707.07	1891.94	2.00	
12300.00†	89.557	85.460	10644.39	2027.86	716.72	1991.46	2.00	



Planned Wellpath Report

Rev-A.0
Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

WELLPATH DATA (158 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
12400.00†	89.557	87.460	10645.16	2127.84	722.89	2091.27	2.00	
12500.00†	89.557	89.460	10645.94	2227.80	725.58	2191.22	2.00	
12526.98	89.557	90.000	10646.15	2254.74	725.71	2218.20	2.00	TL
12600.00†	89.557	90.000	10646.71	2327.65	725.71	2291.22	0.00	
12700.00†	89.557	90.000	10647.48	2427.50	725.71	2391.22	0.00	
12800.00†	89.557	90.000	10648.26	2527.34	725.71	2491.21	0.00	
12900.00†	89.557	90.000	10649.03	2627.19	725.71	2591.21	0.00	
13000.00†	89.557	90.000	10649.80	2727.03	725.71	2691.21	0.00	
13100.00†	89.557	90.000	10650.58	2826.88	725.71	2791.20	0.00	
13200.00†	89.557	90.000	10651.35	2926.72	725.71	2891.20	0.00	
13300.00†	89.557	90.000	10652.12	3026.57	725.71	2991.20	0.00	
13400.00†	89.557	90.000	10652.90	3126.42	725.71	3091.19	0.00	
13500.00†	89.557	90.000	10653.67	3226.26	725.71	3191.19	0.00	
13600.00†	89.557	90.000	10654.44	3326.11	725.71	3291.19	0.00	
13700.00†	89.557	90.000	10655.22	3425.95	725.71	3391.19	0.00	
13800.00†	89.557	90.000	10655.99	3525.80	725.71	3491.18	0.00	
13900.00†	89.557	90.000	10656.76	3625.64	725.71	3591.18	0.00	
14000.00†	89.557	90.000	10657.54	3725.49	725.71	3691.18	0.00	
14100.00†	89.557	90.000	10658.31	3825.34	725.71	3791.17	0.00	
14200.00†	89.557	90.000	10659.08	3925.18	725.71	3891.17	0.00	
14300.00†	89.557	90.000	10659.86	4025.03	725.71	3991.17	0.00	
14400.00†	89.557	90.000	10660.63	4124.87	725.71	4091.16	0.00	
14500.00†	89.557	90.000	10661.40	4224.72	725.71	4191.16	0.00	
14600.00†	89.557	90.000	10662.18	4324.57	725.71	4291.16	0.00	
14700.00†	89.557	90.000	10662.95	4424.41	725.71	4391.16	0.00	
14800.00†	89.557	90.000	10663.72	4524.26	725.71	4491.15	0.00	
14900.00†	89.557	90.000	10664.50	4624.10	725.71	4591.15	0.00	
15000.00†	89.557	90.000	10665.27	4723.95	725.71	4691.15	0.00	
15100.00†	89.557	90.000	10666.04	4823.79	725.71	4791.14	0.00	
15200.00†	89.557	90.000	10666.82	4923.64	725.71	4891.14	0.00	
15300.00†	89.557	90.000	10667.59	5023.49	725.71	4991.14	0.00	
15400.00†	89.557	90.000	10668.36	5123.33	725.71	5091.13	0.00	
15500.00†	89.557	90.000	10669.14	5223.18	725.71	5191.13	0.00	
15600.00†	89.557	90.000	10669.91	5323.02	725.71	5291.13	0.00	
15700.00†	89.557	90.000	10670.69	5422.87	725.71	5391.13	0.00	
15800.00†	89.557	90.000	10671.46	5522.71	725.71	5491.12	0.00	
15900.00†	89.557	90.000	10672.23	5622.56	725.71	5591.12	0.00	
16000.00†	89.557	90.000	10673.01	5722.41	725.71	5691.12	0.00	
16100.00†	89.557	90.000	10673.78	5822.25	725.71	5791.11	0.00	
16200.00†	89.557	90.000	10674.55	5922.10	725.71	5891.11	0.00	
16300.00†	89.557	90.000	10675.33	6021.94	725.71	5991.11	0.00	
16400.00†	89.557	90.000	10676.10	6121.79	725.71	6091.10	0.00	
16500.00†	89.557	90.000	10676.88	6221.64	725.71	6191.10	0.00	
16600.00†	89.557	90.000	10677.65	6321.48	725.71	6291.10	0.00	
16700.00†	89.557	90.000	10678.42	6421.33	725.71	6391.10	0.00	



Planned Wellpath Report

Rev-A.0
Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

WELLPATH DATA (158 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
16800.00†	89.557	90.000	10679.20	6521.17	725.71	6491.09	0.00	
16900.00†	89.557	90.000	10679.97	6621.02	725.71	6591.09	0.00	
17000.00†	89.557	90.000	10680.74	6720.86	725.71	6691.09	0.00	
17100.00†	89.557	90.000	10681.52	6820.71	725.71	6791.08	0.00	
17200.00†	89.557	90.000	10682.29	6920.56	725.71	6891.08	0.00	
17300.00†	89.557	90.000	10683.07	7020.40	725.71	6991.08	0.00	
17400.00†	89.557	90.000	10683.84	7120.25	725.71	7091.07	0.00	
17500.00†	89.557	90.000	10684.61	7220.09	725.71	7191.07	0.00	
17600.00†	89.557	90.000	10685.39	7319.94	725.72	7291.07	0.00	
17700.00†	89.557	90.000	10686.16	7419.78	725.72	7391.07	0.00	
17800.00†	89.557	90.000	10686.94	7519.63	725.72	7491.06	0.00	
17900.00†	89.557	90.000	10687.71	7619.48	725.72	7591.06	0.00	
18000.00†	89.557	90.000	10688.48	7719.32	725.72	7691.06	0.00	
18100.00†	89.557	90.000	10689.26	7819.17	725.72	7791.05	0.00	
18200.00†	89.557	90.000	10690.03	7919.01	725.72	7891.05	0.00	
18300.00†	89.557	90.000	10690.81	8018.86	725.72	7991.05	0.00	
18400.00†	89.557	90.000	10691.58	8118.71	725.72	8091.04	0.00	
18500.00†	89.556	90.000	10692.35	8218.55	725.72	8191.04	0.00	
18600.00†	89.556	90.000	10693.13	8318.40	725.72	8291.04	0.00	
18700.00†	89.556	90.000	10693.90	8418.24	725.72	8391.04	0.00	
18800.00†	89.556	90.000	10694.68	8518.09	725.72	8491.03	0.00	
18900.00†	89.556	90.000	10695.45	8617.93	725.72	8591.03	0.00	
19000.00†	89.556	90.000	10696.22	8717.78	725.72	8691.03	0.00	
19100.00†	89.556	90.000	10697.00	8817.63	725.72	8791.02	0.00	
19200.00†	89.556	90.000	10697.77	8917.47	725.72	8891.02	0.00	
19300.00†	89.556	90.000	10698.55	9017.32	725.72	8991.02	0.00	
19400.00†	89.556	90.000	10699.32	9117.16	725.72	9091.01	0.00	
19500.00†	89.556	90.000	10700.09	9217.01	725.72	9191.01	0.00	
19600.00†	89.556	90.000	10700.87	9316.86	725.72	9291.01	0.00	
19700.00†	89.556	90.000	10701.64	9416.70	725.73	9391.01	0.00	
19800.00†	89.556	90.000	10702.42	9516.55	725.73	9491.00	0.00	
19900.00†	89.556	90.000	10703.19	9616.39	725.73	9591.00	0.00	
20000.00†	89.556	90.000	10703.97	9716.24	725.73	9691.00	0.00	
20100.00†	89.556	90.000	10704.74	9816.08	725.73	9790.99	0.00	
20200.00†	89.556	90.000	10705.51	9915.93	725.73	9890.99	0.00	
20300.00†	89.556	90.000	10706.29	10015.78	725.73	9990.99	0.00	
20400.00†	89.556	90.000	10707.06	10115.62	725.73	10090.98	0.00	
20500.00†	89.556	90.000	10707.84	10215.47	725.73	10190.98	0.00	
20600.00†	89.556	90.000	10708.61	10315.31	725.73	10290.98	0.00	
20700.00†	89.556	90.000	10709.39	10415.16	725.73	10390.98	0.00	
20800.00†	89.556	90.000	10710.16	10515.00	725.73	10490.97	0.00	
20900.00†	89.556	90.000	10710.94	10614.85	725.73	10590.97	0.00	
21000.00†	89.556	90.000	10711.71	10714.70	725.73	10690.97	0.00	
21100.00†	89.556	90.000	10712.48	10814.54	725.73	10790.96	0.00	
21200.00†	89.556	90.000	10713.26	10914.39	725.73	10890.96	0.00	



Planned Wellpath Report

Rev-A.0

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

WELLPATH DATA (158 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
21300.00†	89.556	90.000	10714.03	11014.23	725.73	10990.96	0.00	
21400.00†	89.556	90.000	10714.81	11114.08	725.74	11090.95	0.00	
21500.00†	89.556	90.000	10715.58	11213.93	725.74	11190.95	0.00	
21600.00†	89.556	90.000	10716.36	11313.77	725.74	11290.95	0.00	
21700.00†	89.556	90.000	10717.13	11413.62	725.74	11390.95	0.00	
21800.00†	89.556	90.000	10717.91	11513.46	725.74	11490.94	0.00	
21900.00†	89.556	90.000	10718.68	11613.31	725.74	11590.94	0.00	
22000.00†	89.556	90.000	10719.45	11713.15	725.74	11690.94	0.00	
22100.00†	89.556	90.000	10720.23	11813.00	725.74	11790.93	0.00	
22200.00†	89.556	90.000	10721.00	11912.85	725.74	11890.93	0.00	
22300.00†	89.556	90.000	10721.78	12012.69	725.74	11990.93	0.00	
22400.00†	89.556	90.000	10722.55	12112.54	725.74	12090.92	0.00	
22500.00†	89.556	90.000	10723.33	12212.38	725.74	12190.92	0.00	
22600.00†	89.556	90.000	10724.10	12312.23	725.74	12290.92	0.00	
22700.00†	89.556	90.000	10724.88	12412.08	725.75	12390.92	0.00	
22800.00†	89.556	90.000	10725.65	12511.92	725.75	12490.91	0.00	
22900.00†	89.556	90.000	10726.43	12611.77	725.75	12590.91	0.00	
23000.00†	89.556	90.000	10727.20	12711.61	725.75	12690.91	0.00	
23100.00†	89.556	90.000	10727.98	12811.46	725.75	12790.90	0.00	
23200.00†	89.556	90.000	10728.75	12911.30	725.75	12890.90	0.00	
23300.00†	89.556	90.000	10729.53	13011.15	725.75	12990.90	0.00	
23400.00†	89.556	90.000	10730.30	13111.00	725.75	13090.89	0.00	
23490.34	89.556	90.000	10731.00	13201.20	725.75	13181.24	0.00	No. 203H PBHL

SURVEY PROGRAM - Ref Wellbore: No.203H PWB Ref Wellpath: Rev-A.0				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	23500.00	NaviTrak (Standard)		No.203H PWB



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.0
North Reference	Grid	User	Burnranj
Scale	0.999931	Report Generated	6/3/2014 at 2:26:05 PM
Convergence at slot	0.24° East	Database/Source file	WA_MIDLAND/C:\Users\burnranj\AppData\Roaming\Well Explorer\temp\BOPCO, LP JRU D11A No.203H (Rev-A.0) Clearance.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	40.00	-0.10	638042.00	502646.30	32°22'51.947"N	103°53'10.217"W
Facility Reference Pt			638042.10	502606.30	32°22'51.551"N	103°53'10.218"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 JRU D11A No.203H (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Rig on JRU D11A No.203H (RKB) to Mean Sea Level	25.00ft
Vertical Reference Pt	Rig on JRU D11A No.203H (RKB)	Rig on JRU D11A No.203H (RKB) to Mud Line at Slot (JRU D11A No.203H)	25.00ft
MD Reference Pt	Rig on JRU D11A No.203H (RKB)		
Field Vertical Reference	Mean Sea Level		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS

Ellipse Confidence Limit	3.00 Std Dev	Ellipse Start MD	25.00ft	Surface Position Uncertainty	included
Declination	7.50° East of TN	Dip Angle	60.19°	Mag Field Strength	48379 nT
Slot Surface Uncertainty @1SD		Horizontal	2.000ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD		Horizontal	3.300ft	Vertical	1.000ft

Positional Uncertainty values in the WELLPATH DATA table are the projection of the ellipsoid of uncertainty onto the vertical and horizontal planes

ANTI-COLLISION RULE

Rule Name	Baker Hughes Stop Drilling	Rule Based On	Ratio
Plane of Rule	Closest Approach	Threshold Value	1.00
Subtract Casing & Hole Size	yes	Apply Cone of Safety	no

SURVEY PROGRAM - Ref Wellbore: No.203H PWB Ref Wellpath: Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	23500.00	NaviTrak (Standard)		No.203H PWB



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CALCULATION RANGE & CUTOFF

From: 25.00ft MD	To: 23490.34ft MD	C-C Cutoff: (none)
------------------	-------------------	--------------------

OFFSET WELL CLEARANCE SUMMARY (6 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR Separation Ratio			
					Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	ACR Status
RU Drilling Island 1A	JRU D11A No.204H	No.204H	No.204H PWB	Rev-A.0	25.00	40.00	20700.00	6709.31	0.67	21000.00	FAIL
RU Drilling Island 1	JRU 21 No.1 SWD	No.1 SWD	No.1 SWD AWB	No.1 SWD AWP	10875.07	559.44	10875.07	10934.77	6.28	10934.77	PASS
RU Drilling Island 1	JRU D11 No.126H (Slot 4)	No.126H (Slot 4)	No.126H AWB	No.126H AWP	6000.00	611.39	6000.00	6039.03	9.01	13300.00	PASS
RU Drilling Island 1	JRU D11 No.163H (Slot 28)	No.163H	No.163H AWB	No.163H AWP	25.00	1426.45	20100.00	21681.96	13.43	21681.96	PASS
RU Drilling Island 1	JRU D11 No.12H (Slot 9)	No.12H	No.12H AWB	No.12H AWP	25.00	1065.84	20200.00	20800.00	15.35	20800.00	PASS
RU Drilling Island 1	JRU D11 No.135H	No.135H	No.135H AWB	No.135H AWP	25.00	3257.88	11400.00	23465.34	145.66	23465.34	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.204H PWB Offset Wellpath: Rev-A.0

Facility: JRU Drilling Island 1A		Slot: JRU D11A No.204H		Well: No.204H		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
25.00	25.00	0.00	0.00	3186.00	25.00	-40.00	0.10	179.86	40.00	17.36	2.30	PASS
100.00†	100.00	0.00	0.00	3261.00	100.00	-40.00	0.10	179.86	40.00	17.64	2.27	PASS
200.00†	200.00	0.00	0.00	3361.00	200.00	-40.00	0.10	179.86	40.00	18.03	2.22	PASS
300.00†	300.00	0.00	0.00	3461.00	300.00	-40.00	0.10	179.86	40.00	18.44	2.17	PASS
400.00†	400.00	0.00	0.00	3561.00	400.00	-40.00	0.10	179.86	40.00	18.87	2.12	PASS
500.00†	500.00	0.00	0.00	3661.00	500.00	-40.00	0.10	179.86	40.00	19.32	2.07	PASS
600.00†	600.00	0.00	0.00	3761.00	600.00	-40.00	0.10	179.86	40.00	19.79	2.02	PASS
700.00†	700.00	0.00	0.00	3861.00	700.00	-40.00	0.10	179.86	40.00	20.27	1.97	PASS
800.00†	800.00	0.00	0.00	3961.00	800.00	-40.00	0.10	179.86	40.00	20.78	1.93	PASS
900.00†	900.00	0.00	0.00	4061.00	900.00	-40.00	0.10	179.86	40.00	21.30	1.88	PASS
1000.00†	1000.00	0.00	0.00	4161.00	1000.00	-40.00	0.10	179.86	40.00	21.83	1.83	PASS
1100.00†	1100.00	0.00	0.00	4261.00	1100.00	-40.00	0.10	179.86	40.00	22.38	1.79	PASS
1200.00†	1200.00	0.00	0.00	4361.00	1200.00	-40.00	0.10	179.86	40.00	22.94	1.74	PASS
1300.00†	1300.00	0.00	0.00	4461.00	1300.00	-40.00	0.10	179.86	40.00	23.52	1.70	PASS
1400.00†	1400.00	0.00	0.00	4561.00	1400.00	-40.00	0.10	179.86	40.00	24.10	1.66	PASS
1500.00†	1500.00	0.00	0.00	4661.00	1500.00	-40.00	0.10	179.86	40.00	24.70	1.62	PASS
1600.00†	1600.00	0.00	0.00	4761.00	1600.00	-40.00	0.10	179.86	40.00	25.30	1.58	PASS
1700.00†	1700.00	0.00	0.00	4861.00	1700.00	-40.00	0.10	179.86	40.00	25.91	1.54	PASS
1800.00†	1800.00	0.00	0.00	4961.00	1800.00	-40.00	0.10	179.86	40.00	26.53	1.51	PASS
1900.00†	1900.00	0.00	0.00	5061.00	1900.00	-40.00	0.10	179.86	40.00	27.15	1.47	PASS
2000.00†	2000.00	0.00	0.00	5161.00	2000.00	-40.00	0.10	179.86	40.00	27.78	1.44	PASS
2100.00†	2100.00	0.00	0.00	5261.00	2100.00	-40.00	0.10	179.86	40.00	28.42	1.41	PASS
2200.00†	2200.00	0.00	0.00	5361.00	2200.00	-40.00	0.10	179.86	40.00	29.06	1.38	PASS
2300.00†	2300.00	0.00	0.00	5461.00	2300.00	-40.00	0.10	179.86	40.00	29.71	1.35	PASS
2400.00†	2400.00	0.00	0.00	5561.00	2400.00	-40.00	0.10	179.86	40.00	30.36	1.32	PASS
2500.00†	2500.00	0.00	0.00	5661.00	2500.00	-40.00	0.10	179.86	40.00	31.02	1.29	PASS
2600.00†	2600.00	0.00	0.00	5761.00	2600.00	-40.00	0.10	179.86	40.00	31.68	1.26	PASS
2700.00†	2700.00	0.00	0.00	5861.00	2700.00	-40.00	0.10	179.86	40.00	32.34	1.24	PASS
2800.00†	2800.00	0.00	0.00	5961.00	2800.00	-40.00	0.10	179.86	40.00	33.01	1.21	PASS
2900.00†	2900.00	0.00	0.00	6061.00	2900.00	-40.00	0.10	179.86	40.00	33.67	1.19	PASS
3000.00†	3000.00	0.00	0.00	6161.00	3000.00	-40.00	0.10	179.86	40.00	34.35	1.16	PASS
3100.00†	3100.00	0.00	0.00	6261.00	3100.00	-40.00	0.10	179.86	40.00	35.02	1.14	PASS
3200.00†	3200.00	0.00	0.00	6361.00	3200.00	-40.00	0.10	179.86	40.00	35.70	1.12	PASS
3300.00†	3300.00	0.00	0.00	6461.00	3300.00	-40.00	0.10	179.86	40.00	36.38	1.10	PASS
3400.00†	3400.00	0.00	0.00	6561.00	3400.00	-40.00	0.10	179.86	40.00	37.06	1.08	PASS
3500.00†	3500.00	0.00	0.00	6661.00	3500.00	-40.00	0.10	179.86	40.00	37.74	1.06	PASS
3600.00†	3600.00	0.00	0.00	6761.00	3600.00	-40.00	0.10	179.86	40.00	38.42	1.04	PASS
3700.00†	3700.00	0.00	0.00	6861.00	3700.00	-40.00	0.10	179.86	40.00	39.11	1.02	PASS
3800.00†	3800.00	0.00	0.00	6961.00	3800.00	-40.00	0.10	179.86	40.00	39.80	1.01	PASS
3900.00†	3900.00	0.00	0.00	7061.00	3900.00	-40.00	0.10	179.86	40.00	40.48	0.99	FAIL
4000.00†	4000.00	0.00	0.00	7161.00	4000.00	-40.00	0.10	179.86	40.00	41.17	0.97	FAIL
4100.00†	4100.00	0.00	0.00	7261.00	4100.00	-40.00	0.10	179.86	40.00	41.87	0.96	FAIL
4200.00†	4200.00	0.00	0.00	7361.00	4200.00	-40.00	0.10	179.86	40.00	42.56	0.94	FAIL
4300.00†	4300.00	0.00	0.00	7461.00	4300.00	-40.00	0.10	179.86	40.00	43.25	0.92	FAIL
4400.00†	4400.00	0.00	0.00	7561.00	4400.00	-40.00	0.10	179.86	40.00	43.95	0.91	FAIL



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.204H PWB - Offset Wellpath: Rev-A.0

Facility: JRU Drilling Island 1A Slot: JRU DIIA No.204H Well: No.204H Threshold Value=1.00 = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
4500.00†	4500.00	0.00	0.00	7661.00	4500.00	-40.00	0.10	179.86	40.00	44.64	0.90	FAIL	
4600.00†	4600.00	0.00	0.00	7761.00	4600.00	-40.00	0.10	179.86	40.00	45.34	0.88	FAIL	
4700.00†	4700.00	0.00	0.00	7861.00	4700.00	-40.00	0.10	179.86	40.00	46.04	0.87	FAIL	
4800.00†	4800.00	0.00	0.00	7961.00	4800.00	-40.00	0.10	179.86	40.00	46.73	0.86	FAIL	
4900.00†	4900.00	0.00	0.00	8061.00	4900.00	-40.00	0.10	179.86	40.00	47.43	0.84	FAIL	
5000.00†	5000.00	0.00	0.00	8161.00	5000.00	-40.00	0.10	179.86	40.00	48.13	0.83	FAIL	
5100.00†	5100.00	0.00	0.00	8261.00	5100.00	-40.00	0.10	179.86	40.00	48.83	0.82	FAIL	
5200.00†	5200.00	0.00	0.00	8361.00	5200.00	-40.00	0.10	179.86	40.00	49.53	0.81	FAIL	
5300.00†	5300.00	0.00	0.00	8461.00	5300.00	-40.00	0.10	179.86	40.00	50.24	0.80	FAIL	
5400.00†	5400.00	0.00	0.00	8561.00	5400.00	-40.00	0.10	179.86	40.00	50.94	0.79	FAIL	
5500.00†	5500.00	0.00	0.00	8661.00	5500.00	-40.00	0.10	179.86	40.00	51.64	0.77	FAIL	
5600.00†	5600.00	0.00	0.00	8761.00	5600.00	-40.00	0.10	179.86	40.00	52.34	0.76	FAIL	
5700.00†	5700.00	0.00	0.00	8861.00	5700.00	-40.00	0.10	179.86	40.00	53.05	0.75	FAIL	
5800.00†	5800.00	0.00	0.00	8961.00	5800.00	-40.00	0.10	179.86	40.00	53.75	0.74	FAIL	
5900.00†	5900.00	0.00	0.00	9061.00	5900.00	-40.00	0.10	179.86	40.00	54.46	0.73	FAIL	
6000.00†	6000.00	0.00	0.00	9161.00	6000.00	-40.00	0.10	179.86	40.00	55.16	0.73	FAIL	
6100.00†	6100.00	0.00	0.00	9261.00	6100.00	-40.00	0.10	179.86	40.00	55.87	0.72	FAIL	
6200.00†	6200.00	0.00	0.00	9361.00	6200.00	-40.00	0.10	179.86	40.00	56.57	0.71	FAIL	
6300.00†	6300.00	0.00	0.00	9461.00	6300.00	-40.00	0.10	179.86	40.00	57.28	0.70	FAIL	
6400.00†	6400.00	0.00	0.00	9561.00	6400.00	-40.00	0.10	179.86	40.00	57.99	0.69	FAIL	
6500.00†	6500.00	0.00	0.00	9661.00	6500.00	-40.00	0.10	179.86	40.00	58.69	0.68	FAIL	
6600.00†	6600.00	0.00	0.00	9761.00	6600.00	-40.00	0.10	179.86	40.00	59.40	0.67	FAIL	
6700.00†	6700.00	0.00	0.00	9861.00	6700.00	-40.00	0.10	179.86	40.00	60.11	0.67	FAIL	
6709.31†	6709.31	0.00	0.00	9870.12	6709.12	-40.02	0.15	179.79	40.02	60.17	0.67	FAIL	
6800.00†	6800.00	0.00	0.00	9958.32	6797.03	-42.49	6.14	171.77	43.03	60.76	0.71	FAIL	
6900.00†	6900.00	0.00	0.00	10052.19	6888.95	-49.60	23.44	154.71	55.96	61.22	0.91	FAIL	
7000.00†	7000.00	0.00	0.00	10139.82	6971.87	-60.31	49.49	140.63	82.93	61.35	1.35	PASS	
7100.00†	7100.00	0.00	0.00	10219.51	7043.78	-73.33	81.15	132.10	122.97	61.15	2.01	PASS	
7200.00†	7200.00	0.00	0.00	10290.59	7104.37	-87.44	115.47	127.13	173.56	60.75	2.86	PASS	
7300.00†	7300.00	0.00	0.00	10353.20	7154.48	-101.71	150.17	124.11	232.54	60.30	3.86	PASS	
7400.00†	7400.00	0.00	0.00	10407.98	7195.48	-115.51	183.75	122.15	298.23	59.87	4.98	PASS	
7500.00†	7500.00	0.00	0.00	10455.79	7228.90	-128.50	215.35	120.83	369.31	59.48	6.21	PASS	
7600.00†	7600.00	0.00	0.00	10497.51	7256.15	-140.52	244.57	119.88	444.74	59.17	7.52	PASS	
7700.00†	7700.00	0.00	0.00	10534.01	7278.45	-151.50	271.29	119.18	523.69	58.94	8.89	PASS	
7800.00†	7800.00	0.00	0.00	10566.05	7296.79	-161.49	295.59	118.65	605.54	58.77	10.30	PASS	
7900.00†	7900.00	0.00	0.00	10594.30	7311.96	-170.55	317.61	118.23	689.75	58.69	11.75	PASS	
8000.00†	8000.00	0.00	0.00	10619.31	7324.61	-178.75	337.57	117.90	775.92	58.67	13.22	PASS	
8100.00†	8100.00	0.00	0.00	10641.55	7335.22	-186.19	355.65	117.63	863.74	58.67	14.72	PASS	
8200.00†	8200.00	0.00	0.00	10661.44	7344.19	-192.94	372.07	117.41	952.93	58.73	16.23	PASS	
8300.00†	8300.00	0.00	0.00	10679.30	7351.82	-199.08	387.00	117.22	1043.29	58.85	17.73	PASS	
8400.00†	8400.00	0.00	0.00	10695.40	7358.35	-204.67	400.61	117.06	1134.65	59.03	19.22	PASS	
8500.00†	8500.00	0.00	0.00	10709.98	7363.97	-209.79	413.05	116.93	1226.86	59.25	20.71	PASS	
8600.00†	8600.00	0.00	0.00	10723.23	7368.85	-214.47	424.45	116.81	1319.80	59.51	22.18	PASS	
8700.00†	8700.00	0.00	0.00	10735.32	7373.10	-218.78	434.91	116.70	1413.39	59.73	23.66	PASS	
8800.00†	8800.00	0.00	0.00	10767.18	7384.00	-230.16	462.61	116.45	1507.33	60.18	25.05	PASS	

REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA:- Offset Wellbore: No.204H PWB Offset Wellpath: Rev-A.0

Facility: JRU Drilling Island 1A Slot: JRU DIIA No.204H Well: No.204H Threshold Value=1.00 * = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8900.00†	8900.00	0.00	0.00	10801.39	7395.70	-242.39	492.34	116.21	1601.27	60.64	26.41	PASS
9000.00†	9000.00	0.00	0.00	10835.59	7407.40	-254.61	522.06	116.00	1695.22	61.11	27.74	PASS
9100.00†	9100.00	0.00	0.00	10869.79	7419.09	-266.83	551.79	115.81	1789.17	61.59	29.05	PASS
9200.00†	9200.00	0.00	0.00	10903.99	7430.79	-279.05	581.51	115.64	1883.12	62.08	30.33	PASS
9300.00†	9300.00	0.00	0.00	10936.95	7442.06	-290.83	610.15	115.49	1977.07	62.56	31.60	PASS
9400.00†	9400.00	0.00	0.00	10945.71	7445.00	-293.97	617.79	115.45	2071.25	62.85	32.96	PASS
9500.00†	9500.00	0.00	0.00	10953.91	7447.66	-296.91	624.96	115.41	2165.83	63.15	34.30	PASS
9600.00†	9600.00	0.00	0.00	10961.57	7450.07	-299.68	631.69	115.38	2260.76	63.47	35.62	PASS
9613.40	9613.40	0.00	0.00	10962.56	7450.38	-300.04	632.56	115.38	2273.51	63.51	35.80	PASS
9700.00†	9699.88	1.62	3.57	10969.35	7452.43	-302.50	638.54	115.59	2355.14	63.89	36.86	PASS
9800.00†	9798.81	7.51	16.55	10978.15	7455.01	-305.70	646.32	116.44	2447.07	64.27	38.08	PASS
9900.00†	9895.72	17.65	38.87	10987.80	7457.71	-309.22	654.89	117.95	2535.78	64.65	39.22	PASS
10000.00†	9989.53	31.91	70.29	10998.18	7460.48	-313.03	664.15	120.15	2620.63	65.05	40.29	PASS
10100.00†	10079.21	50.16	110.46	11009.18	7463.26	-317.07	673.99	123.09	2701.04	65.46	41.26	PASS
10200.00†	10163.80	72.17	158.96	11020.58	7465.98	-321.32	684.32	126.83	2776.52	65.88	42.14	PASS
10300.00†	10242.35	97.73	215.24	11032.60	7468.62	-325.74	695.07	131.43	2846.60	66.36	42.90	PASS
10400.00†	10314.02	126.53	278.68	11044.84	7471.13	-330.30	706.16	136.90	2910.92	66.88	43.52	PASS
10500.00†	10378.00	158.28	348.60	11057.35	7473.47	-334.97	717.52	143.21	2969.12	67.43	44.03	PASS
10600.00†	10433.61	192.62	424.23	11070.05	7475.64	-339.73	729.09	150.20	3020.92	68.03	44.41	PASS
10700.00†	10480.24	229.17	504.73	11082.89	7477.60	-344.55	740.83	157.63	3066.06	68.67	44.65	PASS
10780.07	10510.74	259.76	572.11	11093.23	7479.01	-348.45	750.30	163.67	3097.26	68.77	45.04	PASS
10800.00†	10517.56	267.51	589.17	11095.81	7479.34	-349.42	752.66	165.16	3104.53	68.88	45.07	PASS
10900.00†	10551.76	306.36	674.73	11108.62	7480.84	-354.26	764.43	172.27	3142.45	69.30	45.34	PASS
10980.07	10579.14	337.46	743.24	11118.75	7481.87	-358.09	773.76	177.49	3174.56	69.65	45.58	PASS
11000.00†	10585.77	345.23	760.36	11121.26	7482.10	-359.04	776.06	178.72	3182.61	70.12	45.39	PASS
11100.00†	10612.99	385.00	847.93	11133.89	7483.13	-363.83	787.71	184.60	3218.75	70.72	45.51	PASS
11200.00†	10630.01	425.72	937.61	11146.57	7483.94	-368.64	799.41	189.87	3247.74	71.64	45.33	PASS
11300.00†	10636.64	466.95	1028.43	11159.24	7484.53	-373.45	811.12	194.50	3269.45	72.25	45.25	PASS
11306.02	10636.71	469.43	1033.90	11160.00	7484.56	-373.74	811.82	194.76	3270.52	72.20	45.30	PASS
11400.00†	10637.43	506.88	1120.10	11172.11	7484.90	-378.34	823.01	198.55	3287.91	72.95	45.07	PASS
11500.00†	10638.20	543.59	1213.11	11234.51	7485.58	-401.57	880.92	199.37	3307.98	74.15	44.61	PASS
11600.00†	10638.98	577.03	1307.34	11355.47	7486.84	-442.98	994.56	197.05	3327.80	76.02	43.77	PASS
11700.00†	10639.75	607.17	1402.68	11488.37	7488.23	-482.91	1121.30	194.47	3346.57	78.26	42.76	PASS
11800.00†	10640.52	633.96	1499.02	11632.99	7489.75	-519.63	1261.15	191.65	3363.74	80.88	41.59	PASS
11900.00†	10641.30	657.37	1596.23	11788.63	7491.39	-551.21	1413.54	188.60	3378.75	83.83	40.31	PASS
12000.00†	10642.07	677.37	1694.20	11954.14	7493.13	-575.66	1577.19	185.34	3391.11	87.13	38.92	PASS
12100.00†	10642.84	693.94	1792.81	12127.76	7494.95	-591.10	1750.09	181.90	3400.36	90.62	37.52	PASS
12200.00†	10643.62	707.07	1891.94	12301.72	7496.75	-596.05	1923.94	178.59	3406.16	94.12	36.19	PASS
12300.00†	10644.39	716.72	1991.46	12401.24	7497.78	-596.09	2023.46	178.60	3409.64	96.64	35.28	PASS
12400.00†	10645.16	722.89	2091.27	12501.04	7498.81	-596.14	2123.25	178.61	3411.80	99.18	34.40	PASS
12500.00†	10645.94	725.58	2191.22	12601.00	7499.85	-596.18	2223.20	178.61	3412.61	101.71	33.55	PASS
12526.98	10646.15	725.71	2218.20	12627.98	7500.13	-596.19	2250.18	178.61	3412.60	102.20	33.39	PASS
12600.00†	10646.71	725.71	2291.22	12701.00	7500.88	-596.22	2323.20	178.61	3412.44	104.21	32.75	PASS
12700.00†	10647.48	725.71	2391.22	12801.00	7501.91	-596.26	2423.19	178.61	3412.21	106.79	31.95	PASS
12800.00†	10648.26	725.71	2491.21	12901.00	7502.95	-596.30	2523.19	178.61	3411.99	109.43	31.18	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.204H PWB - Offset Wellpath: Rev-A.0

Facility: JRU Drilling Island 1A Slot: JRU D11A No.204H Well: No.204H Threshold Value=1.00 +/- interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
12900.00+	10649.03	725.71	2591.21	13001.00	7503.98	-596.34	2623.18	178.62	3411.77	112.11	30.43	PASS
13000.00+	10649.80	725.71	2691.21	13101.00	7505.02	-596.38	2723.18	178.62	3411.54	114.83	29.71	PASS
13100.00+	10650.58	725.71	2791.20	13201.00	7506.05	-596.42	2823.17	178.62	3411.32	117.59	29.01	PASS
13200.00+	10651.35	725.71	2891.20	13301.00	7507.08	-596.46	2923.16	178.62	3411.09	120.39	28.33	PASS
13300.00+	10652.12	725.71	2991.20	13401.00	7508.12	-596.50	3023.16	178.62	3410.87	123.22	27.68	PASS
13400.00+	10652.90	725.71	3091.19	13501.00	7509.15	-596.54	3123.15	178.62	3410.64	126.08	27.05	PASS
13500.00+	10653.67	725.71	3191.19	13601.00	7510.18	-596.58	3223.15	178.62	3410.42	128.98	26.44	PASS
13600.00+	10654.44	725.71	3291.19	13701.00	7511.22	-596.63	3323.14	178.62	3410.20	131.90	25.85	PASS
13700.00+	10655.22	725.71	3391.19	13801.00	7512.25	-596.67	3423.14	178.62	3409.97	134.85	25.29	PASS
13800.00+	10655.99	725.71	3491.18	13900.99	7513.29	-596.71	3523.13	178.62	3409.75	137.82	24.74	PASS
13900.00+	10656.76	725.71	3591.18	14000.99	7514.32	-596.75	3623.12	178.62	3409.52	140.82	24.21	PASS
14000.00+	10657.54	725.71	3691.18	14100.99	7515.35	-596.79	3723.12	178.62	3409.30	143.83	23.70	PASS
14100.00+	10658.31	725.71	3791.17	14200.99	7516.39	-596.83	3823.11	178.62	3409.08	146.87	23.21	PASS
14200.00+	10659.08	725.71	3891.17	14300.99	7517.42	-596.87	3923.11	178.62	3408.85	149.93	22.74	PASS
14300.00+	10659.86	725.71	3991.17	14400.99	7518.45	-596.91	4023.10	178.62	3408.63	153.00	22.28	PASS
14400.00+	10660.63	725.71	4091.16	14500.99	7519.49	-596.95	4123.10	178.62	3408.40	156.10	21.84	PASS
14500.00+	10661.40	725.71	4191.16	14600.99	7520.52	-596.99	4223.09	178.62	3408.18	159.20	21.41	PASS
14600.00+	10662.18	725.71	4291.16	14700.99	7521.56	-597.03	4323.08	178.62	3407.96	162.33	20.99	PASS
14700.00+	10662.95	725.71	4391.16	14800.99	7522.59	-597.08	4423.08	178.62	3407.73	165.46	20.60	PASS
14800.00+	10663.72	725.71	4491.15	14900.99	7523.62	-597.12	4523.07	178.62	3407.51	168.61	20.21	PASS
14900.00+	10664.50	725.71	4591.15	15000.99	7524.66	-597.16	4623.07	178.62	3407.28	171.78	19.84	PASS
15000.00+	10665.27	725.71	4691.15	15100.99	7525.69	-597.20	4723.06	178.62	3407.06	174.95	19.47	PASS
15100.00+	10666.04	725.71	4791.14	15200.99	7526.72	-597.24	4823.06	178.62	3406.84	178.14	19.12	PASS
15200.00+	10666.82	725.71	4891.14	15300.99	7527.76	-597.28	4923.05	178.62	3406.61	181.34	18.79	PASS
15300.00+	10667.59	725.71	4991.14	15400.99	7528.79	-597.32	5023.04	178.62	3406.39	184.54	18.46	PASS
15400.00+	10668.36	725.71	5091.13	15500.99	7529.82	-597.36	5123.04	178.62	3406.17	187.76	18.14	PASS
15500.00+	10669.14	725.71	5191.13	15600.99	7530.86	-597.40	5223.03	178.62	3405.94	190.99	17.83	PASS
15600.00+	10669.91	725.71	5291.13	15700.99	7531.89	-597.44	5323.03	178.62	3405.72	194.23	17.53	PASS
15700.00+	10670.69	725.71	5391.13	15800.99	7532.93	-597.48	5423.02	178.62	3405.49	197.47	17.25	PASS
15800.00+	10671.46	725.71	5491.12	15900.99	7533.96	-597.52	5523.02	178.62	3405.27	200.72	16.97	PASS
15900.00+	10672.23	725.71	5591.12	16000.99	7534.99	-597.57	5623.01	178.62	3405.05	203.98	16.69	PASS
16000.00+	10673.01	725.71	5691.12	16100.99	7536.03	-597.61	5723.00	178.62	3404.82	207.25	16.43	PASS
16100.00+	10673.78	725.71	5791.11	16200.99	7537.06	-597.65	5823.00	178.62	3404.60	210.53	16.17	PASS
16200.00+	10674.55	725.71	5891.11	16300.99	7538.09	-597.69	5922.99	178.62	3404.38	213.81	15.92	PASS
16300.00+	10675.33	725.71	5991.11	16400.99	7539.13	-597.73	6022.99	178.62	3404.15	217.10	15.68	PASS
16400.00+	10676.10	725.71	6091.10	16500.99	7540.16	-597.77	6122.98	178.62	3403.93	220.39	15.44	PASS
16500.00+	10676.88	725.71	6191.10	16600.99	7541.20	-597.81	6222.98	178.62	3403.71	223.69	15.22	PASS
16600.00+	10677.65	725.71	6291.10	16700.98	7542.23	-597.85	6322.97	178.62	3403.48	227.00	14.99	PASS
16700.00+	10678.42	725.71	6391.10	16800.98	7543.26	-597.89	6422.96	178.62	3403.26	230.31	14.78	PASS
16800.00+	10679.20	725.71	6491.09	16900.98	7544.30	-597.93	6522.96	178.62	3403.04	233.63	14.57	PASS
16900.00+	10679.97	725.71	6591.09	17000.98	7545.33	-597.97	6622.95	178.62	3402.81	236.95	14.36	PASS
17000.00+	10680.74	725.71	6691.09	17100.98	7546.36	-598.02	6722.95	178.62	3402.59	240.27	14.16	PASS
17100.00+	10681.52	725.71	6791.08	17200.98	7547.40	-598.06	6822.94	178.62	3402.37	243.61	13.97	PASS
17200.00+	10682.29	725.71	6891.08	17300.98	7548.43	-598.10	6922.94	178.62	3402.14	246.94	13.78	PASS
17300.00+	10683.07	725.71	6991.08	17400.98	7549.47	-598.14	7022.93	178.62	3401.92	250.28	13.59	PASS

Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA: Offset Wellbore: No.204H PWB Offset Wellpath: Rev-A.0

Facility: JRU Drilling-Island 1A Slot: JRU DIIA No.204H Well: No.204H Threshold Value=1.00 † = interpolated/extrapolated station

Ref MD	Ref TVD	Ref North	Ref East	Offset MD	Offset TVD	Offset North	Offset East	Horiz Bearing	C-C Clear Dist	ACR MASH	Sep Ratio	ACR Status
[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[°]	[ft]	[ft]		
17400.00†	10683.84	725.71	7091.07	17500.98	7550.50	-598.18	7122.92	178.62	3401.70	253.63	13.41	PASS
17500.00†	10684.61	725.71	7191.07	17600.98	7551.53	-598.22	7222.92	178.62	3401.47	256.97	13.24	PASS
17600.00†	10685.39	725.72	7291.07	17700.98	7552.57	-598.26	7322.91	178.62	3401.25	260.33	13.07	PASS
17700.00†	10686.16	725.72	7391.07	17800.98	7553.60	-598.30	7422.91	178.62	3401.03	263.68	12.90	PASS
17800.00†	10686.94	725.72	7491.06	17900.98	7554.63	-598.34	7522.90	178.62	3400.80	267.04	12.74	PASS
17900.00†	10687.71	725.72	7591.06	18000.98	7555.67	-598.38	7622.90	178.62	3400.58	270.41	12.58	PASS
18000.00†	10688.48	725.72	7691.06	18100.98	7556.70	-598.42	7722.89	178.62	3400.36	273.77	12.42	PASS
18100.00†	10689.26	725.72	7791.05	18200.98	7557.73	-598.46	7822.89	178.62	3400.13	277.14	12.27	PASS
18200.00†	10690.03	725.72	7891.05	18300.98	7558.77	-598.51	7922.88	178.62	3399.91	280.52	12.12	PASS
18300.00†	10690.81	725.72	7991.05	18400.98	7559.80	-598.55	8022.87	178.62	3399.69	283.89	11.98	PASS
18400.00†	10691.58	725.72	8091.04	18500.98	7560.84	-598.59	8122.87	178.62	3399.46	287.27	11.83	PASS
18500.00†	10692.35	725.72	8191.04	18600.98	7561.87	-598.63	8222.86	178.62	3399.24	290.66	11.70	PASS
18600.00†	10693.13	725.72	8291.04	18700.98	7562.90	-598.67	8322.86	178.62	3399.02	294.04	11.56	PASS
18700.00†	10693.90	725.72	8391.04	18800.98	7563.94	-598.71	8422.85	178.62	3398.79	297.43	11.43	PASS
18800.00†	10694.68	725.72	8491.03	18900.98	7564.97	-598.75	8522.85	178.62	3398.57	300.82	11.30	PASS
18900.00†	10695.45	725.72	8591.03	19000.98	7566.00	-598.79	8622.84	178.62	3398.35	304.21	11.17	PASS
19000.00†	10696.22	725.72	8691.03	19100.98	7567.04	-598.83	8722.83	178.62	3398.13	307.61	11.05	PASS
19100.00†	10697.00	725.72	8791.02	19200.98	7568.07	-598.87	8822.83	178.63	3397.90	311.01	10.93	PASS
19200.00†	10697.77	725.72	8891.02	19300.98	7569.11	-598.91	8922.82	178.63	3397.68	314.41	10.81	PASS
19300.00†	10698.55	725.72	8991.02	19400.98	7570.14	-598.96	9022.82	178.63	3397.46	317.81	10.69	PASS
19400.00†	10699.32	725.72	9091.01	19500.98	7571.17	-599.00	9122.81	178.63	3397.23	321.22	10.58	PASS
19500.00†	10700.09	725.72	9191.01	19600.97	7572.21	-599.04	9222.81	178.63	3397.01	324.62	10.46	PASS
19600.00†	10700.87	725.72	9291.01	19700.97	7573.24	-599.08	9322.80	178.63	3396.79	328.03	10.36	PASS
19700.00†	10701.64	725.73	9391.01	19800.97	7574.27	-599.12	9422.79	178.63	3396.57	331.45	10.25	PASS
19800.00†	10702.42	725.73	9491.00	19900.97	7575.31	-599.16	9522.79	178.63	3396.34	334.86	10.14	PASS
19900.00†	10703.19	725.73	9591.00	20000.97	7576.34	-599.20	9622.78	178.63	3396.12	338.27	10.04	PASS
20000.00†	10703.97	725.73	9691.00	20100.97	7577.38	-599.24	9722.78	178.63	3395.90	341.69	9.94	PASS
20100.00†	10704.74	725.73	9790.99	20200.97	7578.41	-599.28	9822.77	178.63	3395.67	345.11	9.84	PASS
20200.00†	10705.51	725.73	9890.99	20300.97	7579.44	-599.32	9922.77	178.63	3395.45	348.53	9.74	PASS
20300.00†	10706.29	725.73	9990.99	20400.97	7580.48	-599.36	10022.76	178.63	3395.23	351.96	9.65	PASS
20400.00†	10707.06	725.73	10090.98	20500.97	7581.51	-599.40	10122.75	178.63	3395.01	355.38	9.55	PASS
20500.00†	10707.84	725.73	10190.98	20600.97	7582.54	-599.45	10222.75	178.63	3394.78	358.81	9.46	PASS
20600.00†	10708.61	725.73	10290.98	20700.97	7583.58	-599.49	10322.74	178.63	3394.56	362.24	9.37	PASS
20700.00†	10709.39	725.73	10390.98	20800.97	7584.61	-599.53	10422.74	178.63	3394.34	365.67	9.28	PASS
20800.00†	10710.16	725.73	10490.97	20838.58	7585.00	-599.54	10460.34	181.32	3394.69	367.95	9.23	PASS
20900.00†	10710.94	725.73	10590.97	20838.58	7585.00	-599.54	10460.34	185.63	3397.78	369.30	9.20	PASS
21000.00†	10711.71	725.73	10690.97	20838.58	7585.00	-599.54	10460.34	189.87	3403.80	370.36	9.19	PASS
21100.00†	10712.48	725.73	10790.96	20838.58	7585.00	-599.54	10460.34	194.01	3412.74	371.12	9.20	PASS
21200.00†	10713.26	725.73	10890.96	20838.58	7585.00	-599.54	10460.34	198.00	3424.59	371.59	9.22	PASS
21300.00†	10714.03	725.73	10990.96	20838.58	7585.00	-599.54	10460.34	201.82	3439.30	371.77	9.25	PASS
21400.00†	10714.81	725.74	11090.95	20838.58	7585.00	-599.54	10460.34	205.45	3456.84	371.68	9.30	PASS
21500.00†	10715.58	725.74	11190.95	20838.58	7585.00	-599.54	10460.34	208.87	3477.17	371.31	9.36	PASS
21600.00†	10716.36	725.74	11290.95	20838.58	7585.00	-599.54	10460.34	212.08	3500.24	370.69	9.44	PASS
21700.00†	10717.13	725.74	11390.95	20838.58	7585.00	-599.54	10460.34	215.08	3525.99	369.81	9.53	PASS
21800.00†	10717.91	725.74	11490.94	20838.58	7585.00	-599.54	10460.34	217.87	3554.38	368.70	9.64	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.204H PWB Offset Wellpath: Rev-A.0

Facility: JRU Drilling Island 1A Slot: JRU D11A No.204H Well: No.204H Threshold Value=1.00 'I' = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
21900.00†	10718.68	725.74	11590.94	20838.58	7585.00	-599.54	10460.34	220.47	3585.33	367.38	9.76	PASS
22000.00†	10719.45	725.74	11690.94	20838.58	7585.00	-599.54	10460.34	222.88	3618.78	365.84	9.89	PASS
22100.00†	10720.23	725.74	11790.93	20838.58	7585.00	-599.54	10460.34	225.11	3654.66	364.12	10.04	PASS
22200.00†	10721.00	725.74	11890.93	20838.58	7585.00	-599.54	10460.34	227.19	3692.90	362.22	10.20	PASS
22300.00†	10721.78	725.74	11990.93	20838.58	7585.00	-599.54	10460.34	229.11	3733.42	360.16	10.37	PASS
22400.00†	10722.55	725.74	12090.92	20838.58	7585.00	-599.54	10460.34	230.90	3776.16	357.97	10.55	PASS
22500.00†	10723.33	725.74	12190.92	20838.58	7585.00	-599.54	10460.34	232.56	3821.04	355.64	10.74	PASS
22600.00†	10724.10	725.74	12290.92	20838.58	7585.00	-599.54	10460.34	234.10	3867.99	353.20	10.95	PASS
22700.00†	10724.88	725.75	12390.92	20838.58	7585.00	-599.54	10460.34	235.53	3916.93	350.67	11.17	PASS
22800.00†	10725.65	725.75	12490.91	20838.58	7585.00	-599.54	10460.34	236.87	3967.78	348.05	11.40	PASS
22900.00†	10726.43	725.75	12590.91	20838.58	7585.00	-599.54	10460.34	238.12	4020.48	345.36	11.64	PASS
23000.00†	10727.20	725.75	12690.91	20838.58	7585.00	-599.54	10460.34	239.28	4074.95	342.61	11.89	PASS
23100.00†	10727.98	725.75	12790.90	20838.58	7585.00	-599.54	10460.34	240.38	4131.13	339.82	12.16	PASS
23200.00†	10728.75	725.75	12890.90	20838.58	7585.00	-599.54	10460.34	241.40	4188.93	336.99	12.43	PASS
23300.00†	10729.53	725.75	12990.90	20838.58	7585.00	-599.54	10460.34	242.36	4248.31	334.13	12.71	PASS
23400.00†	10730.30	725.75	13090.89	20838.58	7585.00	-599.54	10460.34	243.26	4309.19	331.26	13.01	PASS
23465.34†	10730.81	725.75	13156.24	20838.58	7585.00	-599.54	10460.34	243.82	4349.75	329.38	13.21	PASS
23490.34	10731.00	725.75	13181.24	20838.58	7585.00	-599.54	10460.34	244.03	4365.43	328.50	13.29	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: No.204H PWB Offset Wellpath: Rev-A.0

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	0.100ft
Facility Surface Uncertainty @1SD	Horizontal	3.300ft	Vertical	1.000ft

SURVEY PROGRAM - Offset Wellbore: No.204H PWB Offset Wellpath: Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	20838.58	NaviTrak (Standard)		No.204H PWB

OFFSET WELLPATH MD REFERENCE - Offset Wellbore: No.204H PWB Offset Wellpath: Rev-A.0

MD Reference: Rig on JRU D11A No.204H (KB) Offset TVD & local coordinates use Reference Wellpath settings
(See WELLPATH DATUM on page 1 of this report)

Ellipse Start MD 25.00ft



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.1 SWD AWB Offset Wellpath: No.1 SWD AWP

Facility: JRU Drilling Island 1 Slot: JRU 21 No.1 SWD Well: No.1 SWD Threshold Value=1.00 f = interpolated/extrapolated station														Ref MD	Ref TVD	Ref North	Ref East	Offset MD	Offset TVD	Offset North	Offset East	Horiz Bearing	C-C Clear Dist	ACR MASD	Sep Ratio	ACR Status
	Ref MD	Ref TVD	Ref North	Ref East	Offset MD	Offset TVD	Offset North	Offset East																		
	25.00	25.00	0.00	0.00	3155.82	15.64	-176.06	872.68	101.41	890.31	21.26	41.88	PASS													
	100.00†	100.00	0.00	0.00	3229.60	89.42	-176.38	873.46	101.42	891.15	21.50	41.44	PASS													
	200.00†	200.00	0.00	0.00	3330.08	189.89	-176.76	874.58	101.43	892.32	21.82	40.89	PASS													
	300.00†	300.00	0.00	0.00	3430.84	290.64	-177.08	875.64	101.43	893.41	22.15	40.34	PASS													
	400.00†	400.00	0.00	0.00	3531.46	391.26	-177.33	876.62	101.44	894.42	22.48	39.79	PASS													
	500.00†	500.00	0.00	0.00	3631.99	491.78	-177.57	877.55	101.44	895.37	22.82	39.24	PASS													
	600.00†	600.00	0.00	0.00	3732.25	592.04	-177.80	878.41	101.44	896.26	23.16	38.69	PASS													
	700.00†	700.00	0.00	0.00	3831.42	691.21	-178.00	879.32	101.44	897.19	23.52	38.14	PASS													
	800.00†	800.00	0.00	0.00	3931.08	790.86	-178.15	880.32	101.44	898.21	23.90	37.59	PASS													
	900.00†	900.00	0.00	0.00	4031.93	891.70	-178.27	881.29	101.44	899.18	24.28	37.03	PASS													
	1000.00†	1000.00	0.00	0.00	4132.52	992.30	-178.35	882.18	101.43	900.06	24.68	36.47	PASS													
	1100.00†	1100.00	0.00	0.00	4232.78	1092.55	-178.32	883.05	101.42	900.90	25.08	35.92	PASS													
	1200.00†	1200.00	0.00	0.00	4333.76	1193.53	-178.21	883.89	101.40	901.70	25.50	35.36	PASS													
	1300.00†	1300.00	0.00	0.00	4435.36	1295.12	-178.22	884.54	101.39	902.32	25.94	34.79	PASS													
	1400.00†	1400.00	0.00	0.00	4536.19	1395.96	-178.30	885.02	101.39	902.81	26.38	34.23	PASS													
	1500.00†	1500.00	0.00	0.00	4636.70	1496.46	-178.17	885.47	101.38	903.23	26.82	33.67	PASS													
	1600.00†	1600.00	0.00	0.00	4735.46	1595.22	-177.89	885.98	101.35	903.67	27.26	33.15	PASS													
	1700.00†	1700.00	0.00	0.00	4833.91	1693.67	-177.56	886.66	101.32	904.29	27.70	32.64	PASS													
	1800.00†	1800.00	0.00	0.00	4934.68	1794.44	-177.29	887.40	101.30	904.95	28.18	32.12	PASS													
	1900.00†	1900.00	0.00	0.00	5035.52	1895.27	-177.22	887.99	101.29	905.52	28.66	31.59	PASS													
	2000.00†	2000.00	0.00	0.00	5134.71	1994.46	-177.23	888.56	101.28	906.08	29.16	31.07	PASS													
	2100.00†	2100.00	0.00	0.00	5234.02	2093.77	-177.24	889.22	101.27	906.74	29.68	30.55	PASS													
	2200.00†	2200.00	0.00	0.00	5334.00	2193.75	-177.33	889.91	101.27	907.43	30.20	30.04	PASS													
	2300.00†	2300.00	0.00	0.00	5433.97	2293.71	-177.55	890.57	101.28	908.12	30.74	29.54	PASS													
	2400.00†	2400.00	0.00	0.00	5533.91	2393.66	-177.95	891.20	101.29	908.81	31.29	29.05	PASS													
	2500.00†	2500.00	0.00	0.00	5634.29	2494.03	-178.56	891.78	101.32	909.50	31.85	28.56	PASS													
	2600.00†	2600.00	0.00	0.00	5735.32	2595.05	-179.18	892.28	101.36	910.10	32.42	28.07	PASS													
	2700.00†	2700.00	0.00	0.00	5836.68	2696.41	-179.75	892.65	101.39	910.58	32.99	27.60	PASS													
	2800.00†	2800.00	0.00	0.00	5938.31	2798.04	-180.20	892.88	101.41	910.89	33.57	27.13	PASS													
	2900.00†	2900.00	0.00	0.00	6039.09	2898.82	-180.57	892.97	101.43	911.04	34.15	26.68	PASS													
	3000.00†	3000.00	0.00	0.00	6139.53	2999.26	-181.03	892.98	101.46	911.15	34.73	26.24	PASS													
	3100.00†	3100.00	0.00	0.00	6239.63	3099.36	-181.58	892.95	101.49	911.22	35.30	25.81	PASS													
	3200.00†	3200.00	0.00	0.00	6339.67	3199.40	-182.23	892.88	101.54	911.29	35.88	25.40	PASS													
	3300.00†	3300.00	0.00	0.00	6440.03	3299.76	-182.88	892.80	101.58	911.34	36.46	24.99	PASS													
	3400.00†	3400.00	0.00	0.00	6540.28	3400.00	-183.43	892.69	101.61	911.34	37.05	24.60	PASS													
	3500.00†	3500.00	0.00	0.00	6638.84	3498.56	-184.04	892.65	101.65	911.42	37.64	24.21	PASS													
	3600.00†	3600.00	0.00	0.00	6737.92	3597.64	-184.83	892.72	101.70	911.65	38.24	23.84	PASS													
	3700.00†	3700.00	0.00	0.00	6839.77	3699.49	-185.83	892.68	101.76	911.81	38.85	23.47	PASS													
	3800.00†	3800.00	0.00	0.00	6941.49	3801.20	-186.98	892.39	101.83	911.77	39.46	23.10	PASS													
	3900.00†	3900.00	0.00	0.00	7042.91	3902.61	-188.20	891.92	101.92	911.56	40.07	22.75	PASS													
	4000.00†	4000.00	0.00	0.00	7143.89	4003.58	-189.46	891.29	102.00	911.21	40.67	22.40	PASS													
	4100.00†	4100.00	0.00	0.00	7244.33	4104.00	-190.87	890.56	102.10	910.79	41.28	22.07	PASS													
	4200.00†	4200.00	0.00	0.00	7343.85	4203.51	-192.39	889.79	102.20	910.36	41.88	21.74	PASS													
	4300.00†	4300.00	0.00	0.00	7442.67	4302.32	-193.88	889.14	102.30	910.04	42.49	21.42	PASS													
	4400.00†	4400.00	0.00	0.00	7543.72	4403.35	-195.32	888.55	102.40	909.77	43.11	21.10	PASS													



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.1 SWD AWB. Offset Wellpath: No.1 SWD AWP												
Facility: JRU Drilling Island 1 Slot: JRU 21 No.1 SWD Well: No.1 SWD Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4500.00†	4500.00	0.00	0.00	7645.84	4505.47	-196.56	887.76	102.49	909.28	43.73	20.79	PASS
4600.00†	4600.00	0.00	0.00	7745.63	4605.24	-197.75	886.88	102.57	908.67	44.34	20.49	PASS
4700.00†	4700.00	0.00	0.00	7844.97	4704.56	-199.27	885.99	102.68	908.13	44.96	20.20	PASS
4800.00†	4800.00	0.00	0.00	7938.33	4797.91	-200.74	885.52	102.77	907.99	45.58	19.92	PASS
4900.00†	4900.00	0.00	0.00	8031.57	4891.15	-201.96	885.82	102.84	908.59	46.19	19.67	PASS
5000.00†	5000.00	0.00	0.00	8125.40	4984.96	-203.24	886.79	102.91	909.91	46.90	19.40	PASS
5100.00†	5100.00	0.00	0.00	8219.22	5078.76	-204.91	888.32	102.99	911.90	47.46	19.21	PASS
5200.00†	5200.00	0.00	0.00	8319.38	5178.87	-207.00	890.23	103.09	914.23	48.23	18.96	PASS
5300.00†	5300.00	0.00	0.00	8419.74	5279.19	-209.30	892.06	103.20	916.52	48.81	18.78	PASS
5400.00†	5400.00	0.00	0.00	8520.24	5379.66	-211.44	893.87	103.31	918.76	49.47	18.57	PASS
5500.00†	5500.00	0.00	0.00	8622.25	5481.63	-213.19	895.73	103.39	920.93	50.13	18.37	PASS
5600.00†	5600.00	0.00	0.00	8729.64	5588.99	-214.87	897.08	103.47	922.52	50.83	18.15	PASS
5700.00†	5700.00	0.00	0.00	8832.96	5692.30	-216.48	897.65	103.56	923.42	51.51	17.93	PASS
5800.00†	5800.00	0.00	0.00	8931.41	5790.73	-218.31	898.14	103.66	924.34	52.18	17.71	PASS
5900.00†	5900.00	0.00	0.00	9030.22	5889.52	-220.47	898.71	103.78	925.41	52.85	17.51	PASS
6000.00†	6000.00	0.00	0.00	9129.34	5988.61	-222.82	899.33	103.92	926.59	53.52	17.31	PASS
6100.00†	6100.00	0.00	0.00	9231.10	6090.34	-225.31	899.95	104.06	927.78	54.20	17.12	PASS
6200.00†	6200.00	0.00	0.00	9334.36	6193.58	-227.53	900.32	104.18	928.65	54.88	16.92	PASS
6300.00†	6300.00	0.00	0.00	9438.16	6297.35	-229.44	900.36	104.30	929.14	55.56	16.72	PASS
6400.00†	6400.00	0.00	0.00	9542.07	6401.25	-231.10	900.02	104.40	929.21	56.25	16.52	PASS
6500.00†	6500.00	0.00	0.00	9643.68	6502.85	-231.97	899.56	104.46	928.99	56.86	16.34	PASS
6600.00†	6600.00	0.00	0.00	9743.05	6602.22	-231.61	899.27	104.44	928.62	57.48	16.16	PASS
6700.00†	6700.00	0.00	0.00	9828.71	6687.87	-231.04	899.88	104.40	929.15	58.07	16.00	PASS
6800.00†	6800.00	0.00	0.00	9915.02	6774.17	-230.69	901.83	104.35	931.23	58.67	15.87	PASS
6900.00†	6900.00	0.00	0.00	10018.58	6877.69	-231.00	904.51	104.33	933.81	59.45	15.71	PASS
7000.00†	7000.00	0.00	0.00	10122.52	6981.60	-232.43	906.50	104.38	936.00	60.17	15.56	PASS
7100.00†	7100.00	0.00	0.00	10228.95	7088.00	-234.07	907.86	104.46	937.62	60.89	15.40	PASS
7200.00†	7200.00	0.00	0.00	10335.37	7194.42	-235.30	908.57	104.52	938.56	61.60	15.24	PASS
7300.00†	7300.00	0.00	0.00	10441.74	7300.78	-236.33	908.58	104.58	938.82	62.29	15.07	PASS
7400.00†	7400.00	0.00	0.00	10545.14	7404.18	-237.17	908.01	104.64	938.48	62.95	14.91	PASS
7500.00†	7500.00	0.00	0.00	10646.26	7505.30	-237.65	907.35	104.68	937.98	63.58	14.75	PASS
7600.00†	7600.00	0.00	0.00	10744.53	7603.57	-237.80	906.76	104.70	937.43	64.20	14.60	PASS
7700.00†	7700.00	0.00	0.00	10840.35	7699.38	-237.68	906.64	104.69	937.28	64.79	14.47	PASS
7800.00†	7800.00	0.00	0.00	10937.12	7796.15	-237.34	906.99	104.66	937.54	65.39	14.34	PASS
7900.00†	7900.00	0.00	0.00	11034.62	7893.65	-236.91	907.65	104.63	938.08	65.99	14.22	PASS
8000.00†	8000.00	0.00	0.00	11134.80	7993.83	-236.50	908.50	104.59	938.80	66.61	14.09	PASS
8100.00†	8100.00	0.00	0.00	11236.48	8095.50	-236.45	909.11	104.58	939.37	67.27	13.96	PASS
8200.00†	8200.00	0.00	0.00	11338.13	8197.15	-236.98	909.38	104.61	939.76	67.93	13.83	PASS
8300.00†	8300.00	0.00	0.00	11441.08	8300.10	-237.87	909.31	104.66	939.91	68.62	13.70	PASS
8400.00†	8400.00	0.00	0.00	11544.05	8403.06	-238.77	908.89	104.72	939.74	69.31	13.56	PASS
8500.00†	8500.00	0.00	0.00	11643.35	8502.36	-239.52	908.40	104.77	939.45	69.97	13.43	PASS
8600.00†	8600.00	0.00	0.00	11743.21	8602.22	-240.02	908.04	104.81	939.23	70.43	13.34	PASS
8700.00†	8700.00	0.00	0.00	11846.25	8705.25	-240.09	907.60	104.82	938.83	69.21	13.57	PASS
8800.00†	8800.00	0.00	0.00	11949.16	8808.17	-239.62	906.96	104.80	938.11	71.85	13.06	PASS
8900.00†	8900.00	0.00	0.00	12051.83	8910.83	-238.91	906.07	104.77	937.10	72.44	12.94	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.1 SWD AWP - Offset Wellpath: No.1 SWD AWP

Facility: JRU Drilling Island 1 Slot: JRU 21 No.1 SWD Well: No.1 SWD Threshold Value=1.00 = interpolated/extrapolated station																		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status						
9000.00+	9000.00	0.00	0.00	12154.04	9013.02	-238.07	904.93	104.74	935.81	73.03	12.81	PASS						
9100.00+	9100.00	0.00	0.00	12255.76	9114.74	-237.15	903.61	104.71	934.33	73.62	12.69	PASS						
9200.00+	9200.00	0.00	0.00	12358.11	9217.07	-236.08	902.10	104.67	932.64	74.21	12.57	PASS						
9300.00+	9300.00	0.00	0.00	12460.81	9319.74	-234.67	900.37	104.61	930.66	74.80	12.44	PASS						
9400.00+	9400.00	0.00	0.00	12560.24	9419.14	-233.02	898.62	104.54	928.54	75.39	12.32	PASS						
9500.00+	9500.00	0.00	0.00	12658.83	9517.70	-231.19	897.07	104.45	926.55	75.97	12.20	PASS						
9600.00+	9600.00	0.00	0.00	12757.92	9616.77	-229.26	895.66	104.36	924.69	76.54	12.08	PASS						
9613.40	9613.40	0.00	0.00	12771.21	9630.05	-229.01	895.48	104.35	924.45	76.60	12.07	PASS						
9700.00+	9699.88	1.62	3.57	12856.96	9715.77	-227.39	894.33	104.42	919.86	77.16	11.92	PASS						
9800.00+	9798.81	17.51	16.55	12953.47	9812.26	-225.63	893.19	104.89	907.21	77.95	11.64	PASS						
9900.00+	9895.72	17.65	38.87	13048.08	9906.86	-223.95	892.31	105.81	887.05	78.69	11.27	PASS						
10000.00+	9989.53	31.91	70.29	13145.00	10003.76	-222.22	891.35	107.20	859.61	79.41	10.82	PASS						
10100.00+	10079.21	50.16	110.46	13237.36	10096.09	-220.47	890.13	109.14	825.47	80.08	10.31	PASS						
10200.00+	10163.80	72.17	158.96	13322.60	10181.30	-218.92	888.76	111.75	785.91	80.71	9.74	PASS						
10300.00+	10242.35	97.73	215.24	13401.32	10260.00	-217.68	887.32	115.14	742.62	81.35	9.13	PASS						
10400.00+	10314.02	126.53	278.68	13472.32	10330.98	-216.69	885.89	119.48	697.71	82.03	8.51	PASS						
10500.00+	10378.00	158.28	348.60	13535.18	10393.82	-215.91	884.58	124.92	653.87	82.86	7.89	PASS						
10600.00+	10433.61	192.62	424.23	13589.39	10448.02	-215.31	883.40	131.62	614.37	83.94	7.32	PASS						
10700.00+	10480.24	229.17	504.73	13634.47	10493.09	-214.85	882.40	139.62	583.05	85.36	6.83	PASS						
10780.07	10510.74	259.76	572.11	13663.73	10522.33	-214.56	881.75	146.86	566.56	86.56	6.55	PASS						
10800.00+	10517.56	267.51	589.17	13670.23	10528.83	-214.50	881.61	148.75	563.89	87.12	6.47	PASS						
10875.07	10543.23	296.67	653.40	13695.04	10553.64	-214.25	881.05	155.98	559.44	88.55	6.32	PASS						
10900.00+	10551.76	306.36	674.73	13702.82	10561.41	-214.18	880.87	158.40	559.95	89.00	6.29	PASS						
10934.77	10563.65	319.87	704.49	13714.15	10572.74	-214.07	880.62	161.74	562.31	89.55	6.28	PASS						
10980.07	10579.14	337.46	743.24	13728.90	10587.48	-213.93	880.29	166.04	568.23	90.20	6.30	PASS						
11000.00+	10585.77	345.23	760.36	13735.19	10593.77	-213.87	880.15	167.91	571.85	90.76	6.30	PASS						
11100.00+	10612.99	385.00	847.93	13760.74	10619.32	-213.63	879.57	176.97	599.49	92.17	6.50	PASS						
11200.00+	10630.01	425.72	937.61	13776.07	10634.64	-213.48	879.23	185.22	641.88	93.13	6.89	PASS						
11300.00+	10636.64	466.95	1028.43	13781.02	10639.59	-213.44	879.11	192.38	696.58	93.49	7.45	PASS						
11306.02	10636.71	469.43	1033.90	13780.98	10639.55	-213.44	879.11	192.77	700.20	93.46	7.49	PASS						
11400.00+	10637.43	506.88	1120.10	13780.11	10638.68	-213.45	879.13	198.50	759.56	93.87	8.09	PASS						
11500.00+	10638.20	543.59	1213.11	13779.13	10637.70	-213.46	879.16	203.80	827.43	93.92	8.81	PASS						
11600.00+	10638.98	577.03	1307.34	13778.09	10636.66	-213.47	879.18	208.44	899.01	93.84	9.58	PASS						
11700.00+	10639.75	607.17	1402.68	13776.99	10635.56	-213.48	879.20	212.53	973.40	93.69	10.39	PASS						
11800.00+	10640.52	633.96	1499.02	13775.84	10634.42	-213.49	879.23	216.18	1049.92	93.50	11.23	PASS						
11900.00+	10641.30	657.37	1596.23	13774.65	10633.22	-213.50	879.26	219.46	1128.06	93.27	12.09	PASS						
12000.00+	10642.07	677.37	1694.20	13773.40	10631.97	-213.51	879.29	222.45	1207.42	93.03	12.98	PASS						
12100.00+	10642.84	693.94	1792.81	13772.11	10630.68	-213.52	879.32	225.19	1287.68	92.78	13.88	PASS						
12200.00+	10643.62	707.07	1891.94	13770.77	10629.35	-213.53	879.35	227.73	1368.60	92.53	14.79	PASS						
12300.00+	10644.39	716.72	1991.46	13769.40	10627.97	-213.55	879.38	230.09	1449.97	92.27	15.71	PASS						
12400.00+	10645.16	722.89	2091.27	13767.99	10626.56	-213.56	879.41	232.31	1531.63	92.03	16.64	PASS						
12500.00+	10645.94	725.58	2191.22	13766.54	10625.11	-213.57	879.44	234.40	1613.45	91.78	17.58	PASS						
12526.98	10646.15	725.71	2218.20	13766.14	10624.72	-213.58	879.45	234.95	1635.53	91.58	17.86	PASS						
12600.00+	10646.71	725.71	2291.22	13765.07	10623.64	-213.59	879.47	236.36	1695.83	91.53	18.53	PASS						
12700.00+	10647.48	725.71	2391.22	13763.59	10622.17	-213.60	879.51	238.15	1779.94	91.30	19.50	PASS						



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.1 SWD/AWB - Offset Wellpath: No.1 SWD/AWP												
Facility: JRU Drilling Island 1 Slot: JRU 21 No.1 SWD Well: No.1 SWD Threshold Value: 1.00 Interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
12800.00+	10648.26	725.71	2491.21	13762.12	10620.70	-213.61	879.54	239.77	1865.63	91.09	20.48	PASS
12900.00+	10649.03	725.71	2591.21	13760.65	10619.23	-213.63	879.57	241.24	1952.67	90.90	21.48	PASS
13000.00+	10649.80	725.71	2691.21	13759.18	10617.76	-213.64	879.61	242.59	2040.90	90.74	22.49	PASS
13100.00+	10650.58	725.71	2791.20	13757.71	10616.29	-213.66	879.64	243.83	2130.18	90.59	23.52	PASS
13200.00+	10651.35	725.71	2891.20	13756.24	10614.82	-213.67	879.67	244.97	2220.36	90.46	24.55	PASS
13300.00+	10652.12	725.71	2991.20	13754.77	10613.35	-213.68	879.71	246.02	2311.35	90.34	25.59	PASS
13400.00+	10652.90	725.71	3091.19	13753.30	10611.88	-213.70	879.74	246.99	2403.06	90.24	26.63	PASS
13500.00+	10653.67	725.71	3191.19	13751.83	10610.41	-213.71	879.77	247.88	2495.40	90.15	27.68	PASS
13600.00+	10654.44	725.71	3291.19	13750.37	10608.94	-213.73	879.81	248.72	2588.31	90.07	28.74	PASS
13700.00+	10655.22	725.71	3391.19	13748.90	10607.48	-213.74	879.84	249.49	2681.73	90.01	29.79	PASS
13800.00+	10655.99	725.71	3491.18	13747.43	10606.01	-213.75	879.87	250.21	2775.61	89.96	30.85	PASS
13900.00+	10656.76	725.71	3591.18	13745.97	10604.55	-213.77	879.90	250.89	2869.90	89.91	31.92	PASS
14000.00+	10657.54	725.71	3691.18	13744.50	10603.08	-213.78	879.94	251.52	2964.57	89.88	32.98	PASS
14100.00+	10658.31	725.71	3791.17	13743.04	10601.62	-213.79	879.97	252.11	3059.57	89.86	34.05	PASS
14200.00+	10659.08	725.71	3891.17	13741.57	10600.16	-213.81	880.00	252.67	3154.88	89.84	35.12	PASS
14300.00+	10659.86	725.71	3991.17	13740.11	10598.69	-213.82	880.04	253.20	3250.48	89.83	36.18	PASS
14400.00+	10660.63	725.71	4091.16	13738.65	10597.23	-213.84	880.07	253.69	3346.32	89.83	37.25	PASS
14500.00+	10661.40	725.71	4191.16	13737.19	10595.77	-213.85	880.10	254.16	3442.41	89.83	38.32	PASS
14600.00+	10662.18	725.71	4291.16	13735.72	10594.31	-213.86	880.14	254.60	3538.71	89.85	39.39	PASS
14700.00+	10662.95	725.71	4391.16	13734.26	10592.85	-213.88	880.17	255.02	3635.21	89.86	40.45	PASS
14800.00+	10663.72	725.71	4491.15	13732.80	10591.39	-213.89	880.20	255.42	3731.90	89.89	41.52	PASS
14900.00+	10664.50	725.71	4591.15	13731.34	10589.93	-213.91	880.23	255.79	3828.75	89.92	42.58	PASS
15000.00+	10665.27	725.71	4691.15	13729.88	10588.47	-213.92	880.27	256.15	3925.76	89.95	43.64	PASS
15100.00+	10666.04	725.71	4791.14	13728.43	10587.01	-213.93	880.30	256.49	4022.92	89.99	44.70	PASS
15200.00+	10666.82	725.71	4891.14	13726.97	10585.55	-213.95	880.33	256.82	4120.21	90.03	45.76	PASS
15300.00+	10667.59	725.71	4991.14	13725.51	10584.10	-213.96	880.37	257.12	4217.63	90.08	46.82	PASS
15400.00+	10668.36	725.71	5091.13	13724.05	10582.64	-213.97	880.40	257.42	4315.17	90.13	47.88	PASS
15500.00+	10669.14	725.71	5191.13	13722.60	10581.18	-213.99	880.43	257.70	4412.81	90.19	48.93	PASS
15600.00+	10669.91	725.71	5291.13	13721.14	10579.73	-214.00	880.46	257.97	4510.56	90.25	49.98	PASS
15700.00+	10670.69	725.71	5391.13	13719.69	10578.27	-214.02	880.50	258.23	4608.41	90.31	51.03	PASS
15800.00+	10671.46	725.71	5491.12	13718.23	10576.82	-214.03	880.53	258.48	4706.34	90.38	52.07	PASS
15900.00+	10672.23	725.71	5591.12	13716.78	10575.37	-214.04	880.56	258.72	4804.36	90.45	53.12	PASS
16000.00+	10673.01	725.71	5691.12	13715.32	10573.91	-214.06	880.59	258.95	4902.46	90.52	54.16	PASS
16100.00+	10673.78	725.71	5791.11	13713.87	10572.46	-214.07	880.63	259.17	5000.63	90.60	55.19	PASS
16200.00+	10674.55	725.71	5891.11	13712.42	10571.01	-214.09	880.66	259.38	5098.88	90.68	56.23	PASS
16300.00+	10675.33	725.71	5991.11	13710.97	10569.56	-214.10	880.69	259.58	5197.19	90.76	57.26	PASS
16400.00+	10676.10	725.71	6091.10	13709.52	10568.11	-214.11	880.72	259.78	5295.56	90.85	58.29	PASS
16500.00+	10676.88	725.71	6191.10	13708.07	10566.66	-214.13	880.76	259.96	5394.00	90.94	59.31	PASS
16600.00+	10677.65	725.71	6291.10	13706.62	10565.21	-214.14	880.79	260.15	5492.49	91.03	60.34	PASS
16700.00+	10678.42	725.71	6391.10	13705.17	10563.76	-214.16	880.82	260.32	5591.03	91.13	61.35	PASS
16800.00+	10679.20	725.71	6491.09	13703.72	10562.31	-214.17	880.85	260.49	5689.62	91.22	62.37	PASS
16900.00+	10679.97	725.71	6591.09	13702.27	10560.86	-214.18	880.89	260.65	5788.26	91.32	63.38	PASS
17000.00+	10680.74	725.71	6691.09	13700.82	10559.41	-214.20	880.92	260.81	5886.95	91.43	64.39	PASS
17100.00+	10681.52	725.71	6791.08	13699.37	10557.97	-214.21	880.95	260.96	5985.68	91.53	65.39	PASS
17200.00+	10682.29	725.71	6891.08	13697.93	10556.52	-214.23	880.98	261.11	6084.45	91.64	66.40	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.1 SWD AWB; Offset Wellpath: No.1 SWD AWP												
Facility: JRU Drilling Island 1 Slot: JRU 21 No.1 SWD Well: No.1 SWD Threshold Value: 1.00 1 = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17300.00+	10683.07	725.71	6991.08	13696.48	10555.08	-214.24	881.02	261.25	6183.26	91.75	67.39	PASS
17400.00+	10683.84	725.71	7091.07	13695.04	10553.63	-214.25	881.05	261.39	6282.11	91.86	68.39	PASS
17500.00+	10684.61	725.71	7191.07	13693.59	10552.19	-214.27	881.08	261.53	6380.99	91.97	69.38	PASS
17600.00+	10685.39	725.72	7291.07	13692.15	10550.74	-214.28	881.11	261.66	6479.91	92.09	70.36	PASS
17700.00+	10686.16	725.72	7391.07	13690.70	10549.30	-214.30	881.15	261.78	6578.86	92.21	71.35	PASS
17800.00+	10686.94	725.72	7491.06	13689.26	10547.86	-214.31	881.18	261.91	6677.84	92.33	72.33	PASS
17900.00+	10687.71	725.72	7591.06	13687.82	10546.41	-214.32	881.21	262.03	6776.85	92.45	73.30	PASS
18000.00+	10688.48	725.72	7691.06	13686.38	10544.97	-214.34	881.24	262.14	6875.89	92.58	74.27	PASS
18100.00+	10689.26	725.72	7791.05	13684.93	10543.53	-214.35	881.28	262.25	6974.95	92.70	75.24	PASS
18200.00+	10690.03	725.72	7891.05	13683.49	10542.09	-214.37	881.31	262.36	7074.05	92.83	76.20	PASS
18300.00+	10690.81	725.72	7991.05	13682.05	10540.65	-214.38	881.34	262.47	7173.16	92.96	77.16	PASS
18400.00+	10691.58	725.72	8091.04	13680.61	10539.21	-214.39	881.37	262.57	7272.30	93.09	78.12	PASS
18500.00+	10692.35	725.72	8191.04	13679.17	10537.77	-214.41	881.40	262.67	7371.47	93.23	79.07	PASS
18600.00+	10693.13	725.72	8291.04	13677.74	10536.34	-214.42	881.44	262.77	7470.65	93.36	80.02	PASS
18700.00+	10693.90	725.72	8391.04	13676.30	10534.90	-214.44	881.47	262.86	7569.86	93.50	80.96	PASS
18800.00+	10694.68	725.72	8491.03	13674.86	10533.46	-214.45	881.50	262.96	7669.09	93.64	81.90	PASS
18900.00+	10695.45	725.72	8591.03	13673.42	10532.03	-214.46	881.53	263.05	7768.33	93.78	82.83	PASS
19000.00+	10696.22	725.72	8691.03	13671.99	10530.59	-214.48	881.57	263.14	7867.60	93.93	83.76	PASS
19100.00+	10697.00	725.72	8791.02	13670.55	10529.15	-214.49	881.60	263.22	7966.88	94.07	84.69	PASS
19200.00+	10697.77	725.72	8891.02	13669.12	10527.72	-214.51	881.63	263.31	8066.18	94.22	85.61	PASS
19300.00+	10698.55	725.72	8991.02	13667.68	10526.29	-214.52	881.66	263.39	8165.50	94.36	86.53	PASS
19400.00+	10699.32	725.72	9091.01	13666.25	10524.85	-214.53	881.69	263.47	8264.83	94.51	87.45	PASS
19500.00+	10700.09	725.72	9191.01	13664.82	10523.42	-214.55	881.73	263.54	8364.18	94.66	88.36	PASS
19600.00+	10700.87	725.72	9291.01	13663.38	10521.99	-214.56	881.76	263.62	8463.55	94.82	89.26	PASS
19700.00+	10701.64	725.73	9391.01	13661.95	10520.55	-214.58	881.79	263.69	8562.93	94.97	90.16	PASS
19800.00+	10702.42	725.73	9491.00	13660.52	10519.12	-214.59	881.82	263.77	8662.32	95.13	91.06	PASS
19900.00+	10703.19	725.73	9591.00	13659.09	10517.69	-214.60	881.85	263.84	8761.73	95.28	91.96	PASS
20000.00+	10703.97	725.73	9691.00	13657.66	10516.26	-214.62	881.89	263.91	8861.15	95.44	92.85	PASS
20100.00+	10704.74	725.73	9790.99	13656.23	10514.83	-214.63	881.92	263.98	8960.58	95.60	93.73	PASS
20200.00+	10705.51	725.73	9890.99	13654.80	10513.40	-214.65	881.95	264.04	9060.02	95.76	94.61	PASS
20300.00+	10706.29	725.73	9990.99	13653.37	10511.98	-214.66	881.98	264.11	9159.48	95.92	95.49	PASS
20400.00+	10707.06	725.73	10090.98	13651.94	10510.55	-214.68	882.01	264.17	9258.95	96.09	96.36	PASS
20500.00+	10707.84	725.73	10190.98	13650.51	10509.12	-214.69	882.05	264.23	9358.43	96.25	97.23	PASS
20600.00+	10708.61	725.73	10290.98	13649.09	10507.69	-214.70	882.08	264.29	9457.92	96.42	98.09	PASS
20700.00+	10709.39	725.73	10390.98	13647.66	10506.27	-214.72	882.11	264.35	9557.42	96.59	98.95	PASS
20800.00+	10710.16	725.73	10490.97	13646.23	10504.84	-214.73	882.14	264.41	9656.93	96.76	99.81	PASS
20900.00+	10710.94	725.73	10590.97	13644.81	10503.42	-214.75	882.17	264.47	9756.45	96.93	100.66	PASS
21000.00+	10711.71	725.73	10690.97	13643.38	10501.99	-214.76	882.21	264.52	9855.98	97.10	101.51	PASS
21100.00+	10712.48	725.73	10790.96	13641.96	10500.57	-214.77	882.24	264.58	9955.52	97.27	102.35	PASS
21200.00+	10713.26	725.73	10890.96	13640.53	10499.14	-214.79	882.27	264.63	10055.07	97.44	103.19	PASS
21300.00+	10714.03	725.73	10990.96	13639.11	10497.72	-214.80	882.30	264.68	10154.62	97.62	104.02	PASS
21400.00+	10714.81	725.74	11090.95	13637.69	10496.30	-214.82	882.33	264.74	10254.19	97.80	104.85	PASS
21500.00+	10715.58	725.74	11190.95	13636.27	10494.88	-214.83	882.36	264.79	10353.76	97.97	105.68	PASS
21600.00+	10716.36	725.74	11290.95	13634.84	10493.46	-214.84	882.40	264.84	10453.34	98.15	106.50	PASS
21700.00+	10717.13	725.74	11390.95	13633.42	10492.04	-214.86	882.43	264.89	10552.93	98.33	107.32	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.1 SWD AWP Offset Wellpath: No.1 SWD AWP

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
21800.00+	10717.91	725.74	11490.94	13632.00	10490.62	-214.87	882.46	264.93	10652.53	98.51	108.13	PASS
21900.00+	10718.68	725.74	11590.94	13630.58	10489.20	-214.89	882.49	264.98	10752.13	98.70	108.94	PASS
22000.00+	10719.45	725.74	11690.94	13629.16	10487.78	-214.90	882.52	265.03	10851.74	98.88	109.75	PASS
22100.00+	10720.23	725.74	11790.93	13627.74	10486.36	-214.92	882.55	265.07	10951.36	99.07	110.55	PASS
22200.00+	10721.00	725.74	11890.93	13626.33	10484.94	-214.93	882.59	265.12	11050.98	99.25	111.34	PASS
22300.00+	10721.78	725.74	11990.93	13624.91	10483.52	-214.94	882.62	265.16	11150.62	99.44	112.14	PASS
22400.00+	10722.55	725.74	12090.92	13623.49	10482.11	-214.96	882.65	265.20	11250.25	99.63	112.93	PASS
22500.00+	10723.33	725.74	12190.92	13622.07	10480.69	-214.97	882.68	265.25	11349.90	99.81	113.71	PASS
22600.00+	10724.10	725.74	12290.92	13620.66	10479.28	-214.99	882.71	265.29	11449.55	100.00	114.49	PASS
22700.00+	10724.88	725.75	12390.92	13619.24	10477.86	-215.00	882.74	265.33	11549.20	100.20	115.27	PASS
22800.00+	10725.65	725.75	12490.91	13617.83	10476.45	-215.01	882.78	265.37	11648.86	100.39	116.04	PASS
22900.00+	10726.43	725.75	12590.91	13616.41	10475.03	-215.03	882.81	265.41	11748.53	100.58	116.81	PASS
23000.00+	10727.20	725.75	12690.91	13615.00	10473.62	-215.04	882.84	265.45	11848.20	100.77	117.57	PASS
23100.00+	10727.98	725.75	12790.90	13613.64	10472.26	-215.06	882.87	265.48	11947.88	100.97	118.33	PASS
23200.00+	10728.75	725.75	12890.90	13612.39	10471.01	-215.07	882.90	265.52	12047.56	101.16	119.09	PASS
23300.00+	10729.53	725.75	12990.90	13611.15	10469.77	-215.08	882.92	265.56	12147.25	101.36	119.84	PASS
23400.00+	10730.30	725.75	13090.89	13609.91	10468.53	-215.09	882.95	265.59	12246.94	101.56	120.59	PASS
23465.34+	10730.81	725.75	13156.24	13609.10	10467.72	-215.10	882.97	265.62	12312.09	101.69	121.07	PASS
23490.34	10731.00	725.75	13181.24	13608.79	10467.41	-215.11	882.98	265.63	12337.01	101.73	121.27	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: No.1 SWD AWP Offset Wellpath: No.1 SWD AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	0.100ft
Facility Surface Uncertainty @1SD	Horizontal	1.000ft	Vertical	1.000ft

WELLPATH COMPOSITION - Offset Wellbore: No.1 SWD AWP Offset Wellpath: No.1 SWD AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	518.00	Generic gyro - northseeking (Standard)	MS Gyro <76-518>	No.1 SWD AWP
518.00	14292.00	NaviTrak (Standard)	BHI MWD NaviTrak <896-14292>	No.1 SWD AWP
14292.00	14345.00	Blind Drilling (std)	Projection to bit	No.1 SWD AWP

OFFSET WELLPATH MD REFERENCE - Offset Wellbore: No.1 SWD AWP Offset Wellpath: No.1 SWD AWP

MD Reference: Rig on JRU 21 No.1 SWD (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 126H-AWB Offset Wellpath: No. 126H-AWP

Facility: JRU Drilling Island 1 - Slot: JRU D11 No.126H (Slot 4) - Well: No.126H (Slot 4) - Threshold Value: 1.00 - = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
25.00	25.00	0.00	0.00	3233.63	63.89	16.78	957.64	89.00	958.58	21.78	44.01	PASS
100.00	100.00	0.00	0.00	3307.43	137.35	23.10	954.53	88.61	955.54	22.04	43.36	PASS
200.00	200.00	0.00	0.00	3403.69	233.25	30.52	950.80	88.16	951.87	22.38	42.53	PASS
300.00	300.00	0.00	0.00	3499.19	328.47	36.92	947.40	87.77	948.55	22.73	41.73	PASS
400.00	400.00	0.00	0.00	3600.10	429.02	44.82	944.19	87.28	945.70	23.12	40.90	PASS
500.00	500.00	0.00	0.00	3700.57	529.01	53.91	940.44	86.72	942.43	23.54	40.03	PASS
600.00	600.00	0.00	0.00	3799.30	627.29	62.65	937.01	86.18	939.50	23.97	39.19	PASS
700.00	700.00	0.00	0.00	3900.25	727.83	70.95	933.46	85.65	936.57	24.42	38.36	PASS
800.00	800.00	0.00	0.00	3996.86	824.06	78.90	930.10	85.15	933.75	24.86	37.56	PASS
900.00	900.00	0.00	0.00	4095.53	922.36	86.87	926.96	84.65	931.29	25.33	36.77	PASS
1000.00	1000.00	0.00	0.00	4195.46	1021.92	94.94	923.79	84.13	928.92	25.81	35.99	PASS
1100.00	1100.00	0.00	0.00	4295.66	1121.79	102.40	920.63	83.65	926.56	26.30	35.23	PASS
1200.00	1200.00	0.00	0.00	4395.16	1221.00	109.31	917.53	83.21	924.26	26.79	34.50	PASS
1300.00	1300.00	0.00	0.00	4500.80	1326.28	117.21	913.81	82.69	921.67	27.33	33.73	PASS
1400.00	1400.00	0.00	0.00	4601.74	1426.82	125.17	909.80	82.17	918.76	27.86	32.97	PASS
1500.00	1500.00	0.00	0.00	4700.53	1525.23	132.94	905.87	81.65	915.92	28.40	32.25	PASS
1600.00	1600.00	0.00	0.00	4799.52	1623.86	140.44	902.06	81.15	913.24	28.95	31.55	PASS
1700.00	1700.00	0.00	0.00	4898.46	1722.46	147.82	898.35	80.66	910.70	29.50	30.87	PASS
1800.00	1800.00	0.00	0.00	4996.12	1819.78	155.04	894.78	80.17	908.33	30.07	30.21	PASS
1900.00	1900.00	0.00	0.00	5092.86	1916.11	163.20	891.45	79.63	906.41	30.64	29.58	PASS
2000.00	2000.00	0.00	0.00	5196.20	2019.01	172.08	887.86	79.03	904.58	31.26	28.94	PASS
2100.00	2100.00	0.00	0.00	5295.14	2117.56	179.95	884.03	78.49	902.33	31.87	28.32	PASS
2200.00	2200.00	0.00	0.00	5389.15	2211.20	187.79	880.94	77.97	900.81	32.46	27.75	PASS
2300.00	2300.00	0.00	0.00	5489.47	2311.08	196.58	877.85	77.38	899.66	33.10	27.18	PASS
2400.00	2400.00	0.00	0.00	5588.24	2409.41	205.28	874.61	76.79	898.43	33.73	26.64	PASS
2500.00	2500.00	0.00	0.00	5686.53	2507.32	213.44	871.76	76.24	897.54	34.36	26.12	PASS
2600.00	2600.00	0.00	0.00	5788.40	2608.77	222.18	868.68	75.65	896.69	35.02	25.61	PASS
2700.00	2700.00	0.00	0.00	5885.46	2705.50	229.62	865.87	75.15	895.82	35.65	25.13	PASS
2800.00	2800.00	0.00	0.00	5982.76	2802.51	236.73	863.53	74.67	895.39	36.28	24.68	PASS
2900.00	2900.00	0.00	0.00	6078.28	2897.65	244.91	861.21	74.13	895.36	36.93	24.25	PASS
3000.00	3000.00	0.00	0.00	6179.74	2998.57	255.01	858.56	73.46	895.64	37.63	23.80	PASS
3100.00	3100.00	0.00	0.00	6280.28	3098.62	264.56	855.82	72.82	895.78	38.32	23.38	PASS
3200.00	3200.00	0.00	0.00	6376.95	3194.89	273.03	853.51	72.26	896.13	38.99	22.99	PASS
3300.00	3300.00	0.00	0.00	6477.61	3295.23	280.94	851.53	71.74	896.70	39.66	22.61	PASS
3400.00	3400.00	0.00	0.00	6578.64	3395.91	288.94	849.36	71.21	897.17	40.34	22.24	PASS
3500.00	3500.00	0.00	0.00	6676.08	3493.00	296.86	847.25	70.69	897.78	41.02	21.89	PASS
3600.00	3600.00	0.00	0.00	6773.29	3589.81	305.46	845.21	70.13	898.77	41.70	21.55	PASS
3700.00	3700.00	0.00	0.00	6874.19	3690.24	314.88	842.92	69.52	899.87	42.41	21.22	PASS
3800.00	3800.00	0.00	0.00	6975.29	3790.90	324.05	840.61	68.92	900.95	43.13	20.89	PASS
3900.00	3900.00	0.00	0.00	7075.84	3891.04	332.80	838.15	68.34	901.85	43.83	20.57	PASS
4000.00	4000.00	0.00	0.00	7175.93	3990.74	341.28	836.00	67.79	903.03	44.54	20.27	PASS
4100.00	4100.00	0.00	0.00	7283.80	4098.15	350.74	832.78	67.16	903.63	45.29	19.95	PASS
4200.00	4200.00	0.00	0.00	7390.54	4204.50	359.08	829.03	66.58	903.47	46.03	19.63	PASS
4300.00	4300.00	0.00	0.00	7490.46	4304.15	365.57	825.56	66.12	902.89	46.72	19.33	PASS
4400.00	4400.00	0.00	0.00	7590.97	4404.39	372.10	822.16	65.65	902.46	47.42	19.03	PASS



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP
Facility: JRU Drilling Island 1 Slot: JRU D11 No.126H (Slot 4) Well: No.126H (Slot 4) Threshold Value=1.00 t = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4500.00†	4500.00	0.00	0.00	7686.04	4499.14	379.03	818.71	65.16	902.19	48.10	18.76	PASS
4600.00†	4600.00	0.00	0.00	7783.38	4596.16	386.35	815.61	64.65	902.50	48.80	18.49	PASS
4700.00†	4700.00	0.00	0.00	7874.57	4687.09	392.80	813.38	64.22	903.36	49.47	18.26	PASS
4800.00†	4800.00	0.00	0.00	7978.92	4791.06	401.22	810.87	63.67	904.75	50.21	18.02	PASS
4900.00†	4900.00	0.00	0.00	8093.67	4905.43	409.64	806.90	63.09	904.94	50.99	17.75	PASS
5000.00†	5000.00	0.00	0.00	8203.48	5014.83	417.55	801.52	62.48	903.89	51.75	17.47	PASS
5100.00†	5100.00	0.00	0.00	8605.71	5401.35	442.17	706.31	57.95	886.12	52.25	16.96	PASS
5200.00†	5200.00	0.00	0.00	8700.43	5485.78	450.43	664.24	55.86	851.92	53.28	15.99	PASS
5300.00†	5300.00	0.00	0.00	8811.78	5582.00	466.04	610.46	52.64	818.16	54.42	15.03	PASS
5400.00†	5400.00	0.00	0.00	8955.31	5701.54	486.78	533.83	47.64	782.85	55.57	14.09	PASS
5500.00†	5500.00	0.00	0.00	9094.18	5808.54	503.92	447.20	41.59	741.02	56.90	13.02	PASS
5600.00†	5600.00	0.00	0.00	9183.29	5869.02	520.99	384.10	36.40	700.96	58.93	11.89	PASS
5700.00†	5700.00	0.00	0.00	9264.41	5917.44	540.03	321.92	30.80	665.24	61.32	10.85	PASS
5800.00†	5800.00	0.00	0.00	9342.08	5956.23	560.43	257.86	24.71	636.38	63.88	9.96	PASS
5900.00†	5900.00	0.00	0.00	9398.54	5978.60	575.92	208.41	19.89	617.49	66.10	9.34	PASS
6000.00†	6000.00	0.00	0.00	9454.38	5996.67	590.69	157.70	14.95	611.39	67.67	9.03	PASS
6039.03†	6039.03	0.00	0.00	9474.88	6002.38	595.63	138.64	13.10	612.65	68.03	9.01	PASS
6100.00†	6100.00	0.00	0.00	9499.48	6008.68	601.20	115.52	10.88	618.97	68.19	9.08	PASS
6200.00†	6200.00	0.00	0.00	9526.85	6015.03	607.00	89.54	8.39	640.85	67.54	9.49	PASS
6300.00†	6300.00	0.00	0.00	9547.67	6019.30	611.23	69.61	6.50	676.20	66.07	10.23	PASS
6400.00†	6400.00	0.00	0.00	9568.16	6023.38	615.33	49.95	4.64	723.17	64.21	11.26	PASS
6500.00†	6500.00	0.00	0.00	9585.20	6026.68	618.71	33.58	3.11	779.71	62.21	12.53	PASS
6600.00†	6600.00	0.00	0.00	9600.23	6029.46	621.65	19.10	1.76	844.00	60.29	14.00	PASS
6700.00†	6700.00	0.00	0.00	9613.57	6031.79	624.23	6.22	0.57	914.44	58.54	15.62	PASS
6800.00†	6800.00	0.00	0.00	9625.49	6033.77	626.49	-5.31	359.52	989.77	57.02	17.36	PASS
6900.00†	6900.00	0.00	0.00	9636.56	6035.50	628.57	-16.04	358.54	1068.98	55.74	19.18	PASS
7000.00†	7000.00	0.00	0.00	9647.96	6037.22	630.68	-27.12	357.54	1151.28	54.70	21.05	PASS
7100.00†	7100.00	0.00	0.00	9658.58	6038.77	632.63	-37.44	356.61	1236.06	53.85	22.96	PASS
7200.00†	7200.00	0.00	0.00	9669.29	6040.27	634.56	-47.87	355.69	1322.85	53.17	24.88	PASS
7300.00†	7300.00	0.00	0.00	9681.63	6041.95	636.73	-59.89	354.63	1411.28	52.67	26.80	PASS
7400.00†	7400.00	0.00	0.00	9693.25	6043.48	638.71	-71.24	353.64	1501.06	52.28	28.71	PASS
7500.00†	7500.00	0.00	0.00	9705.73	6045.09	640.77	-83.45	352.58	1591.95	52.02	30.61	PASS
7600.00†	7600.00	0.00	0.00	9718.76	6046.76	642.89	-96.19	351.49	1683.78	51.84	32.48	PASS
7700.00†	7700.00	0.00	0.00	9730.54	6048.25	644.79	-107.72	350.52	1776.41	51.74	34.33	PASS
7800.00†	7800.00	0.00	0.00	9737.73	6049.15	645.93	-114.76	349.93	1869.73	51.66	36.19	PASS
7900.00†	7900.00	0.00	0.00	9744.52	6049.97	647.00	-121.42	349.37	1963.66	51.64	38.02	PASS
8000.00†	8000.00	0.00	0.00	9750.95	6050.73	648.01	-127.72	348.85	2058.13	51.67	39.83	PASS
8100.00†	8100.00	0.00	0.00	9757.04	6051.42	648.95	-133.70	348.36	2153.06	51.75	41.61	PASS
8200.00†	8200.00	0.00	0.00	9761.79	6051.96	649.68	-138.37	347.98	2248.41	51.85	43.36	PASS
8300.00†	8300.00	0.00	0.00	9765.23	6052.32	650.21	-141.75	347.70	2344.12	51.98	45.10	PASS
8400.00†	8400.00	0.00	0.00	9768.43	6052.66	650.68	-144.89	347.45	2440.16	52.13	46.81	PASS
8500.00†	8500.00	0.00	0.00	9771.42	6052.96	651.12	-147.83	347.21	2536.50	52.32	48.48	PASS
8600.00†	8600.00	0.00	0.00	9774.21	6053.23	651.53	-150.58	346.99	2633.10	52.53	50.13	PASS
8700.00†	8700.00	0.00	0.00	9776.83	6053.47	651.91	-153.16	346.78	2729.94	52.76	51.74	PASS
8800.00†	8800.00	0.00	0.00	9779.29	6053.70	652.26	-155.59	346.58	2826.98	53.01	53.33	PASS



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP

Facility: JRU Drilling Island 1 Slot: JRU DII No.126H (Slot 4) Well: No.126H (Slot 4) Threshold Value=1.00 1 = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8900.00†	8900.00	0.00	0.00	9781.60	6053.90	652.58	-157.87	346.40	2924.22	53.28	54.89	PASS
9000.00†	9000.00	0.00	0.00	9783.79	6054.09	652.89	-160.02	346.23	3021.63	53.56	56.42	PASS
9100.00†	9100.00	0.00	0.00	9785.85	6054.26	653.17	-162.05	346.07	3119.21	53.86	57.92	PASS
9200.00†	9200.00	0.00	0.00	9787.79	6054.42	653.44	-163.98	345.91	3216.92	54.17	59.38	PASS
9300.00†	9300.00	0.00	0.00	9789.64	6054.56	653.69	-165.80	345.77	3314.77	54.50	60.82	PASS
9400.00†	9400.00	0.00	0.00	9791.39	6054.70	653.93	-167.53	345.63	3412.73	54.84	62.24	PASS
9500.00†	9500.00	0.00	0.00	9792.86	6054.80	654.12	-168.98	345.52	3510.81	55.18	63.62	PASS
9600.00†	9600.00	0.00	0.00	9794.14	6054.90	654.29	-170.25	345.42	3608.99	55.54	64.98	PASS
9613.40	9613.40	0.00	0.00	9794.31	6054.91	654.32	-170.42	345.40	3622.16	55.59	65.16	PASS
9700.00†	9699.88	1.62	3.57	9794.80	6054.95	654.38	-170.90	345.04	3707.03	55.94	66.27	PASS
9800.00†	9798.81	7.51	16.55	9793.97	6054.89	654.27	-170.08	343.90	3803.96	56.31	67.55	PASS
9900.00†	9895.72	17.65	38.87	9791.68	6054.72	653.97	-167.82	342.01	3898.83	56.68	68.79	PASS
10000.00†	9989.53	31.91	70.29	9787.39	6054.38	653.39	-163.58	339.38	3990.77	57.03	69.98	PASS
10100.00†	10079.21	50.16	110.46	9781.70	6053.91	652.60	-157.96	335.98	4078.98	57.39	71.08	PASS
10200.00†	10163.80	72.17	158.96	9774.75	6053.28	651.61	-151.11	331.85	4162.72	57.75	72.08	PASS
10300.00†	10242.35	97.73	215.24	9766.70	6052.48	650.43	-143.19	327.04	4241.34	58.13	72.96	PASS
10400.00†	10314.02	126.53	278.68	9755.77	6051.28	648.76	-132.45	321.79	4314.24	58.52	73.72	PASS
10500.00†	10378.00	158.28	348.60	9737.67	6049.14	645.92	-114.71	316.47	4380.81	58.90	74.37	PASS
10600.00†	10433.61	192.62	424.23	9699.91	6044.34	639.81	-77.75	311.70	4440.46	59.23	74.97	PASS
10700.00†	10480.24	229.17	504.73	9670.23	6040.40	634.73	-48.78	306.23	4492.55	59.64	75.33	PASS
10780.07	10510.74	259.76	572.11	9651.52	6037.75	631.34	-30.57	301.66	4528.68	59.58	76.01	PASS
10800.00†	10517.56	267.51	589.17	9647.05	6037.09	630.51	-26.23	300.54	4537.08	59.65	76.06	PASS
10900.00†	10551.76	306.36	674.73	9627.46	6034.08	626.87	-7.22	295.17	4580.09	59.86	76.51	PASS
10980.07	10579.14	337.46	743.24	9614.94	6032.02	624.49	4.90	291.24	4615.61	60.06	76.85	PASS
11000.00†	10585.77	345.23	760.36	9611.84	6031.50	623.89	7.90	290.32	4624.42	60.49	76.45	PASS
11100.00†	10612.99	385.00	847.93	9594.87	6028.48	620.60	24.27	285.96	4663.86	60.87	76.62	PASS
11200.00†	10630.01	425.72	937.61	9575.59	6024.84	616.81	42.82	282.06	4695.18	61.54	76.29	PASS
11300.00†	10636.64	466.95	1028.43	9537.39	6017.23	609.16	79.47	278.52	4718.02	61.77	76.37	PASS
11306.02	10636.71	469.43	1033.90	9536.70	6017.09	609.02	80.13	278.33	4719.11	61.71	76.47	PASS
11400.00†	10637.43	506.88	1120.10	9525.89	6014.82	606.80	90.46	275.54	4736.95	62.16	76.21	PASS
11500.00†	10638.20	543.59	1213.11	9514.27	6012.21	604.37	101.52	273.13	4758.06	62.63	75.97	PASS
11600.00†	10638.98	577.03	1307.34	9500.83	6009.01	601.50	114.25	271.18	4781.28	63.14	75.73	PASS
11700.00†	10639.75	607.17	1402.68	9485.38	6005.13	598.06	128.80	269.59	4806.51	63.67	75.49	PASS
11800.00†	10640.52	633.96	1499.02	9471.28	6001.41	594.79	142.00	268.35	4833.67	64.24	75.24	PASS
11900.00†	10641.30	657.37	1596.23	9459.27	5998.08	591.90	153.17	267.40	4862.74	64.85	74.98	PASS
12000.00†	10642.07	677.37	1694.20	9447.28	5994.58	588.91	164.25	266.69	4893.64	65.49	74.73	PASS
12100.00†	10642.84	693.94	1792.81	9436.05	5991.16	586.02	174.55	266.19	4926.32	66.15	74.48	PASS
12200.00†	10643.62	707.07	1891.94	9425.01	5987.64	583.12	184.59	265.85	4960.70	66.82	74.24	PASS
12300.00†	10644.39	716.72	1991.46	9414.01	5983.98	580.15	194.54	265.65	4996.70	67.51	74.02	PASS
12400.00†	10645.16	722.89	2091.27	9402.20	5979.90	576.92	205.14	265.58	5034.23	68.19	73.82	PASS
12500.00†	10645.94	725.58	2191.22	9390.33	5975.62	573.66	215.72	265.60	5073.22	68.88	73.65	PASS
12526.98	10646.15	725.71	2218.20	9387.13	5974.44	572.78	218.56	265.63	5083.97	69.01	73.67	PASS
12600.00†	10646.71	725.71	2291.22	9379.13	5971.44	570.58	225.64	265.71	5113.59	69.57	73.50	PASS
12700.00†	10647.48	725.71	2391.22	9370.34	5968.03	568.16	233.37	265.82	5155.42	70.29	73.34	PASS
12800.00†	10648.26	725.71	2491.21	9361.68	5964.55	565.79	240.94	265.94	5198.70	71.01	73.21	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP

Facility: JRU Drilling Island 1A Slot: JRU D11 No.126H (Slot 4) Well: No.126H (Slot 4) Threshold Value=1.00 1 = interpolated/extrapolated station												Horiz	C-C	ACR	Sep	ACR
Ref MD	Ref TVD	Ref North	Ref East	Offset MD	Offset TVD	Offset North	Offset East	Bearing	Clear Dist	MASD	Ratio	Status				
[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[°]	[ft]	[ft]						
12900.00+	10649.03	725.71	2591.21	9353.15	5961.00	563.45	248.34	266.04	5243.37	71.73	73.10	PASS				
13000.00+	10649.80	725.71	2691.21	9344.79	5957.41	561.17	255.54	266.14	5289.43	72.45	73.01	PASS				
13100.00+	10650.58	725.71	2791.20	9336.59	5953.78	558.95	262.55	266.23	5336.83	73.17	72.94	PASS				
13200.00+	10651.35	725.71	2891.20	9328.50	5950.10	556.78	269.41	266.31	5385.54	73.88	72.89	PASS				
13300.00+	10652.12	725.71	2991.20	9320.54	5946.37	554.66	276.12	266.40	5435.53	74.59	72.87	PASS				
13400.00+	10652.90	725.71	3091.19	9312.67	5942.59	552.58	282.70	266.47	5486.77	75.29	72.87	PASS				
13500.00+	10653.67	725.71	3191.19	9304.92	5938.77	550.54	289.13	266.55	5539.22	75.99	72.90	PASS				
13600.00+	10654.44	725.71	3291.19	9297.30	5934.93	548.54	295.39	266.62	5592.85	76.67	72.94	PASS				
13700.00+	10655.22	725.71	3391.19	9289.81	5931.06	546.58	301.51	266.68	5647.64	77.35	73.01	PASS				
13800.00+	10655.99	725.71	3491.18	9280.83	5926.33	544.23	308.77	266.74	5703.54	78.01	73.11	PASS				
13900.00+	10656.76	725.71	3591.18	9271.02	5921.05	541.71	316.65	266.78	5760.50	78.65	73.24	PASS				
14000.00+	10657.54	725.71	3691.18	9261.35	5915.75	539.26	324.35	266.83	5818.49	79.28	73.39	PASS				
14100.00+	10658.31	725.71	3791.17	9252.34	5910.72	537.01	331.48	266.88	5877.48	79.91	73.55	PASS				
14200.00+	10659.08	725.71	3891.17	9244.44	5906.22	535.07	337.67	266.93	5937.46	80.54	73.72	PASS				
14300.00+	10659.86	725.71	3991.17	9236.68	5901.73	533.18	343.71	266.98	5998.40	81.15	73.92	PASS				
14400.00+	10660.63	725.71	4091.16	9229.05	5897.23	531.36	349.60	267.03	6060.28	81.75	74.13	PASS				
14500.00+	10661.40	725.71	4191.16	9220.65	5892.20	529.38	356.03	267.07	6123.08	82.34	74.36	PASS				
14600.00+	10662.18	725.71	4291.16	9210.58	5886.08	527.05	363.67	267.10	6186.74	82.91	74.62	PASS				
14700.00+	10662.95	725.71	4391.16	9200.67	5879.96	524.81	371.14	267.14	6251.23	83.47	74.89	PASS				
14800.00+	10663.72	725.71	4491.15	9190.93	5873.86	522.66	378.43	267.17	6316.53	84.01	75.18	PASS				
14900.00+	10664.50	725.71	4591.15	9181.49	5867.88	520.60	385.43	267.21	6382.61	84.55	75.49	PASS				
15000.00+	10665.27	725.71	4691.15	9172.22	5861.91	518.61	392.25	267.24	6449.46	85.08	75.80	PASS				
15100.00+	10666.04	725.71	4791.14	9163.09	5855.98	516.68	398.91	267.28	6517.06	85.60	76.13	PASS				
15200.00+	10666.82	725.71	4891.14	9155.11	5850.73	515.03	404.69	267.31	6585.39	86.12	76.47	PASS				
15300.00+	10667.59	725.71	4991.14	9147.55	5845.69	513.50	410.11	267.35	6654.44	86.63	76.81	PASS				
15400.00+	10668.36	725.71	5091.13	9140.12	5840.68	512.04	415.40	267.38	6724.19	87.13	77.17	PASS				
15500.00+	10669.14	725.71	5191.13	9132.81	5835.70	510.65	420.56	267.42	6794.61	87.62	77.54	PASS				
15600.00+	10669.91	725.71	5291.13	9125.08	5830.37	509.22	425.98	267.45	6865.70	88.10	77.93	PASS				
15700.00+	10670.69	725.71	5391.13	9116.87	5824.65	507.74	431.68	267.48	6937.41	88.57	78.33	PASS				
15800.00+	10671.46	725.71	5491.12	9108.80	5818.97	506.34	437.24	267.52	7009.74	89.03	78.73	PASS				
15900.00+	10672.23	725.71	5591.12	9100.85	5813.32	505.00	442.67	267.55	7082.67	89.48	79.15	PASS				
16000.00+	10673.01	725.71	5691.12	9092.60	5807.40	503.67	448.27	267.58	7156.18	89.93	79.58	PASS				
16100.00+	10673.78	725.71	5791.11	9084.06	5801.22	502.35	454.01	267.60	7230.24	90.36	80.01	PASS				
16200.00+	10674.55	725.71	5891.11	9075.64	5795.07	501.14	459.63	267.63	7304.84	90.79	80.46	PASS				
16300.00+	10675.33	725.71	5991.11	9067.36	5788.97	500.01	465.12	267.66	7379.97	91.21	80.91	PASS				
16400.00+	10676.10	725.71	6091.10	9059.21	5782.92	498.98	470.47	267.69	7455.61	91.63	81.37	PASS				
16500.00+	10676.88	725.71	6191.10	9051.19	5776.91	498.03	475.70	267.72	7531.75	92.03	81.84	PASS				
16600.00+	10677.65	725.71	6291.10	9045.43	5772.57	497.38	479.42	267.75	7608.39	92.44	82.30	PASS				
16700.00+	10678.42	725.71	6391.10	9040.58	5768.88	496.84	482.53	267.78	7685.51	92.85	82.77	PASS				
16800.00+	10679.20	725.71	6491.09	9035.81	5765.23	496.31	485.56	267.81	7763.12	93.25	83.25	PASS				
16900.00+	10679.97	725.71	6591.09	9031.13	5761.63	495.79	488.50	267.84	7841.20	93.64	83.74	PASS				
17000.00+	10680.74	725.71	6691.09	9026.54	5758.08	495.28	491.36	267.87	7919.74	94.03	84.23	PASS				
17100.00+	10681.52	725.71	6791.08	9022.03	5754.57	494.78	494.15	267.90	7998.72	94.40	84.73	PASS				
17200.00+	10682.29	725.71	6891.08	9017.08	5750.69	494.24	497.18	267.93	8078.13	94.78	85.23	PASS				
17300.00+	10683.07	725.71	6991.08	9007.04	5742.79	493.12	503.28	267.95	8157.94	95.13	85.76	PASS				



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.126H (Slot 4) Well: No.126H (Slot 4) Threshold Value=1.00 1 = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
17400.00+	10683.84	725.71	7091.07	8997.16	5734.99	491.98	509.22	267.97	8238.12	95.48	86.28	PASS	
17500.00+	10684.61	725.71	7191.07	8987.45	5727.28	490.83	515.02	267.99	8318.65	95.82	86.81	PASS	
17600.00+	10685.39	725.72	7291.07	8978.75	5720.35	489.77	520.17	268.00	8399.54	96.16	87.35	PASS	
17700.00+	10686.16	725.72	7391.07	8970.34	5713.63	488.72	525.11	268.02	8480.78	96.49	87.89	PASS	
17800.00+	10686.94	725.72	7491.06	8962.08	5706.99	487.66	529.92	268.04	8562.36	96.82	88.43	PASS	
17900.00+	10687.71	725.72	7591.06	8954.34	5700.75	486.65	534.39	268.06	8644.27	97.15	88.98	PASS	
18000.00+	10688.48	725.72	7691.06	8949.28	5696.66	485.98	537.28	268.08	8726.52	97.47	89.53	PASS	
18100.00+	10689.26	725.72	7791.05	8944.32	5692.63	485.31	540.10	268.10	8809.11	97.80	90.08	PASS	
18200.00+	10690.03	725.72	7891.05	8939.43	5688.65	484.65	542.85	268.12	8892.02	98.11	90.63	PASS	
18300.00+	10690.81	725.72	7991.05	8934.64	5684.72	483.99	545.53	268.14	8975.25	98.43	91.19	PASS	
18400.00+	10691.58	725.72	8091.04	8929.92	5680.85	483.34	548.14	268.16	9058.78	98.73	91.75	PASS	
18500.00+	10692.35	725.72	8191.04	8925.28	5677.03	482.69	550.68	268.18	9142.63	99.04	92.31	PASS	
18600.00+	10693.13	725.72	8291.04	8917.12	5670.28	481.54	555.12	268.19	9226.76	99.33	92.89	PASS	
18700.00+	10693.90	725.72	8391.04	8905.52	5660.65	479.89	561.39	268.20	9311.14	99.62	93.47	PASS	
18800.00+	10694.68	725.72	8491.03	8894.08	5651.15	478.23	567.52	268.21	9395.77	99.90	94.05	PASS	
18900.00+	10695.45	725.72	8591.03	8880.64	5639.94	476.27	574.69	268.22	9480.62	100.17	94.64	PASS	
19000.00+	10696.22	725.72	8691.03	8866.89	5628.45	474.24	581.96	268.22	9565.70	100.44	95.23	PASS	
19100.00+	10697.00	725.72	8791.02	8855.46	5618.88	472.56	587.97	268.23	9650.98	100.72	95.82	PASS	
19200.00+	10697.77	725.72	8891.02	8846.38	5611.25	471.21	592.71	268.24	9736.50	100.99	96.41	PASS	
19300.00+	10698.55	725.72	8991.02	8837.43	5603.71	469.87	597.35	268.25	9822.24	101.26	97.00	PASS	
19400.00+	10699.32	725.72	9091.01	8828.61	5596.26	468.55	601.89	268.27	9908.21	101.53	97.59	PASS	
19500.00+	10700.09	725.72	9191.01	8819.89	5588.88	467.25	606.34	268.28	9994.39	101.79	98.18	PASS	
19600.00+	10700.87	725.72	9291.01	8811.29	5581.58	465.97	610.71	268.29	10080.78	102.06	98.77	PASS	
19700.00+	10701.64	725.73	9391.01	8802.82	5574.37	464.72	614.98	268.30	10167.38	102.32	99.37	PASS	
19800.00+	10702.42	725.73	9491.00	8794.06	5566.90	463.43	619.36	268.31	10254.19	102.58	99.96	PASS	
19900.00+	10703.19	725.73	9591.00	8784.54	5558.76	462.03	624.09	268.32	10341.19	102.84	100.56	PASS	
20000.00+	10703.97	725.73	9691.00	8775.14	5550.70	460.65	628.74	268.33	10428.37	103.09	101.16	PASS	
20100.00+	10704.74	725.73	9790.99	8765.90	5542.77	459.29	633.27	268.33	10515.75	103.34	101.76	PASS	
20200.00+	10705.51	725.73	9890.99	8758.97	5536.80	458.28	636.64	268.35	10603.30	103.59	102.35	PASS	
20300.00+	10706.29	725.73	9990.99	8752.14	5530.90	457.29	639.95	268.36	10691.05	103.85	102.95	PASS	
20400.00+	10707.06	725.73	10090.98	8745.40	5525.07	456.32	643.19	268.37	10778.98	104.10	103.55	PASS	
20500.00+	10707.84	725.73	10190.98	8738.75	5519.31	455.38	646.37	268.38	10867.09	104.34	104.15	PASS	
20600.00+	10708.61	725.73	10290.98	8732.31	5513.71	454.48	649.42	268.39	10955.37	104.59	104.75	PASS	
20700.00+	10709.39	725.73	10390.98	8726.26	5508.44	453.65	652.27	268.40	11043.83	104.84	105.34	PASS	
20800.00+	10710.16	725.73	10490.97	8720.29	5503.22	452.86	655.07	268.41	11132.46	105.08	105.94	PASS	
20900.00+	10710.94	725.73	10590.97	8714.40	5498.06	452.11	657.81	268.42	11221.26	105.32	106.54	PASS	
21000.00+	10711.71	725.73	10690.97	8708.58	5492.96	451.39	660.50	268.43	11310.22	105.56	107.14	PASS	
21100.00+	10712.48	725.73	10790.96	8702.56	5487.66	450.68	663.26	268.44	11399.33	105.80	107.74	PASS	
21200.00+	10713.26	725.73	10890.96	8696.65	5473.62	448.89	670.53	268.45	11488.59	106.05	108.33	PASS	
21300.00+	10714.03	725.73	10990.96	8690.95	5459.73	447.25	677.67	268.45	11577.96	106.29	108.93	PASS	
21400.00+	10714.81	725.74	11090.95	8684.18	5453.73	446.58	680.73	268.46	11667.46	106.53	109.52	PASS	
21500.00+	10715.58	725.74	11190.95	8675.50	5447.79	445.96	683.74	268.48	11757.10	106.77	110.12	PASS	
21600.00+	10716.36	725.74	11290.95	8665.90	5441.92	445.38	686.69	268.49	11846.88	107.01	110.71	PASS	
21700.00+	10717.13	725.74	11390.95	8644.38	5436.10	444.83	689.59	268.50	11936.80	107.25	111.30	PASS	
21800.00+	10717.91	725.74	11490.94	8638.34	5430.71	444.36	692.25	268.51	12026.86	107.48	111.90	PASS	



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.126H (Slot 4) Well: No.126H (Slot 4) Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
21900.00†	10718.68	725.74	11590.94	8633.24	5426.14	443.97	694.49	268.52	12117.06	107.72	112.49	PASS	
22000.00†	10719.45	725.74	11690.94	8628.20	5421.62	443.61	696.68	268.53	12207.39	107.95	113.08	PASS	
22100.00†	10720.23	725.74	11790.93	8623.23	5417.15	443.27	698.84	268.54	12297.85	108.19	113.67	PASS	
22200.00†	10721.00	725.74	11890.93	8618.32	5412.73	442.94	700.95	268.55	12388.44	108.42	114.26	PASS	
22300.00†	10721.78	725.74	11990.93	8613.48	5408.36	442.63	703.02	268.56	12479.16	108.65	114.85	PASS	
22400.00†	10722.55	725.74	12090.92	8608.69	5404.04	442.34	705.06	268.57	12570.00	108.88	115.44	PASS	
22500.00†	10723.33	725.74	12190.92	8602.32	5398.28	441.97	707.75	268.58	12660.96	109.12	116.03	PASS	
22600.00†	10724.10	725.74	12290.92	8595.74	5392.32	441.59	710.51	268.59	12752.04	109.35	116.61	PASS	
22700.00†	10724.88	725.75	12390.92	8589.24	5386.43	441.23	713.22	268.60	12843.23	109.58	117.20	PASS	
22800.00†	10725.65	725.75	12490.91	8582.82	5380.60	440.88	715.89	268.61	12934.53	109.82	117.78	PASS	
22900.00†	10726.43	725.75	12590.91	8576.48	5374.83	440.53	718.50	268.62	13025.93	110.05	118.37	PASS	
23000.00†	10727.20	725.75	12690.91	8568.19	5367.28	440.09	721.90	268.63	13117.44	110.28	118.95	PASS	
23100.00†	10727.98	725.75	12790.90	8559.83	5359.66	439.64	725.31	268.64	13209.05	110.51	119.52	PASS	
23200.00†	10728.75	725.75	12890.90	8551.57	5352.12	439.19	728.67	268.65	13300.76	110.75	120.10	PASS	
23300.00†	10729.53	725.75	12990.90	8544.41	5345.59	438.80	731.56	268.66	13392.55	110.98	120.68	PASS	
23400.00†	10730.30	725.75	13090.89	8541.45	5342.88	438.64	732.75	268.67	13484.45	111.20	121.27	PASS	
23465.34†	10730.81	725.75	13156.24	8539.54	5341.13	438.54	733.51	268.68	13544.56	111.34	121.65	PASS	
23490.34	10731.00	725.75	13181.24	8538.81	5340.47	438.50	733.80	268.68	13567.57	111.36	121.83	PASS	

POSITIONAL UNCERTAINTY - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	0.100ft
Facility Surface Uncertainty @1SD	Horizontal	1.000ft	Vertical	1.000ft

WELLPATH COMPOSITION - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	430.00	Generic gyro - northseeking (Standard)	Unknown Gyros <100-430>	No. 126H AWB
430.00	22515.00	NaviTrak (Standard)	BHI MWD NaviTrak <561-XXXX>	No. 126H AWB
22515.00	22593.00	Blind Drilling (std)	Projection to bit	No. 126H AWB

OFFSET WELLPATH MD REFERENCE - Offset Wellbore: No. 126H AWB Offset Wellpath: No. 126H AWP

MD Reference: Rig on No.4H SHL (KB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	25.00ft



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.163H AWB Offset Wellpath: No.163H AWP

Facility: JRU Drilling Island 1 Slot: JRU DII No.163H (Slot 28) Well: No.163H Threshold Value=1.00 = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
25.00	25.00	0.00	0.00	3098.84	-73.39	-167.10	1413.21	96.74	1426.45	21.91	66.29	PASS
100.00†	100.00	0.00	0.00	3175.67	3.15	-171.91	1417.91	96.91	1431.58	22.21	65.64	PASS
200.00†	200.00	0.00	0.00	3275.85	102.96	-178.14	1423.95	97.13	1438.32	22.59	64.80	PASS
300.00†	300.00	0.00	0.00	3382.30	209.04	-184.46	1430.14	97.35	1444.86	23.01	63.88	PASS
400.00†	400.00	0.00	0.00	3489.37	315.73	-191.50	1435.80	97.60	1450.96	23.46	62.91	PASS
500.00†	500.00	0.00	0.00	3593.13	419.06	-199.48	1440.64	97.88	1456.64	23.74	62.11	PASS
600.00†	600.00	0.00	0.00	3693.66	519.22	-206.92	1445.13	98.15	1462.11	23.96	61.78	PASS
700.00†	700.00	0.00	0.00	3793.40	618.58	-214.29	1449.70	98.41	1467.71	24.10	61.63	PASS
800.00†	800.00	0.00	0.00	3894.97	719.77	-221.87	1454.15	98.68	1473.17	24.27	61.42	PASS
900.00†	900.00	0.00	0.00	3995.36	819.80	-229.05	1458.57	98.93	1478.62	24.46	61.16	PASS
1000.00†	1000.00	0.00	0.00	4094.23	918.33	-236.22	1462.86	99.17	1484.06	24.67	60.85	PASS
1100.00†	1100.00	0.00	0.00	4195.21	1018.93	-243.66	1467.26	99.43	1489.56	24.91	60.49	PASS
1200.00†	1200.00	0.00	0.00	4297.54	1120.92	-250.84	1471.61	99.67	1494.93	25.17	60.07	PASS
1300.00†	1300.00	0.00	0.00	4404.10	1227.13	-258.22	1475.83	99.92	1500.02	25.46	59.59	PASS
1400.00†	1400.00	0.00	0.00	4482.86	1305.61	-263.95	1479.23	100.12	1505.55	25.72	59.19	PASS
1500.00†	1500.00	0.00	0.00	4571.34	1393.67	-271.15	1483.99	100.36	1512.30	26.04	58.73	PASS
1600.00†	1600.00	0.00	0.00	4670.37	1492.22	-279.10	1489.68	100.61	1519.42	26.34	58.32	PASS
1700.00†	1700.00	0.00	0.00	4772.15	1593.52	-287.14	1495.42	100.87	1526.46	26.64	57.92	PASS
1800.00†	1800.00	0.00	0.00	4872.05	1692.95	-294.93	1500.98	101.12	1533.43	26.91	57.59	PASS
1900.00†	1900.00	0.00	0.00	4971.59	1792.03	-302.70	1506.52	101.36	1540.42	27.18	57.27	PASS
2000.00†	2000.00	0.00	0.00	5080.51	1900.48	-311.04	1512.30	101.62	1547.16	27.50	56.85	PASS
2100.00†	2100.00	0.00	0.00	5189.37	2008.93	-319.01	1517.45	101.87	1553.29	27.83	56.39	PASS
2200.00†	2200.00	0.00	0.00	5295.64	2114.84	-326.42	1522.01	102.11	1558.95	28.18	55.88	PASS
2300.00†	2300.00	0.00	0.00	5391.79	2210.70	-332.84	1525.93	102.31	1564.35	28.54	55.37	PASS
2400.00†	2400.00	0.00	0.00	5474.52	2293.13	-338.40	1529.99	102.47	1570.61	28.88	54.92	PASS
2500.00†	2500.00	0.00	0.00	5560.09	2378.35	-344.28	1535.12	102.64	1577.95	29.25	54.48	PASS
2600.00†	2600.00	0.00	0.00	5664.67	2482.48	-351.43	1541.60	102.84	1585.51	29.69	53.92	PASS
2700.00†	2700.00	0.00	0.00	5771.04	2588.43	-358.55	1547.86	103.04	1592.76	30.18	53.28	PASS
2800.00†	2800.00	0.00	0.00	5881.26	2698.28	-365.39	1553.82	103.23	1599.44	30.61	52.74	PASS
2900.00†	2900.00	0.00	0.00	5978.81	2795.54	-370.98	1558.77	103.39	1605.71	31.03	52.23	PASS
3000.00†	3000.00	0.00	0.00	6067.91	2884.34	-376.20	1563.78	103.53	1612.55	31.44	51.77	PASS
3100.00†	3100.00	0.00	0.00	6156.64	2972.74	-381.59	1569.33	103.67	1620.06	31.86	51.31	PASS
3200.00†	3200.00	0.00	0.00	6244.94	3060.65	-387.29	1575.39	103.81	1628.27	32.30	50.86	PASS
3300.00†	3300.00	0.00	0.00	6340.91	3156.13	-393.85	1582.50	103.98	1637.10	32.77	50.40	PASS
3400.00†	3400.00	0.00	0.00	6453.57	3268.27	-401.24	1590.39	104.16	1645.50	33.30	49.84	PASS
3500.00†	3500.00	0.00	0.00	6567.41	3381.67	-408.24	1597.51	104.34	1653.09	33.84	49.26	PASS
3600.00†	3600.00	0.00	0.00	6681.93	3495.82	-415.05	1603.70	104.51	1659.81	34.39	48.67	PASS
3700.00†	3700.00	0.00	0.00	6768.53	3582.14	-420.31	1608.30	104.65	1666.48	34.87	48.18	PASS
3800.00†	3800.00	0.00	0.00	6854.99	3668.26	-425.95	1613.49	104.79	1673.96	35.36	47.73	PASS
3900.00†	3900.00	0.00	0.00	6953.47	3766.30	-432.71	1619.81	104.96	1681.93	35.90	47.23	PASS
4000.00†	4000.00	0.00	0.00	7054.69	3867.07	-439.78	1626.19	105.13	1689.84	36.45	46.73	PASS
4100.00†	4100.00	0.00	0.00	7165.18	3977.11	-447.31	1632.79	105.32	1697.41	37.02	46.21	PASS
4200.00†	4200.00	0.00	0.00	7274.27	4085.82	-454.16	1638.73	105.49	1704.33	37.57	45.71	PASS
4300.00†	4300.00	0.00	0.00	7371.44	4182.66	-460.24	1643.86	105.64	1711.10	38.02	45.35	PASS
4400.00†	4400.00	0.00	0.00	7470.10	4280.97	-466.70	1649.14	105.80	1718.03	38.45	45.02	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.163H AWB Offset Wellpath: No.163H AWP

Facility: JRU Drilling Island 1 Slot: JRU DII No.163H (Slot 28) Well: No.163H Threshold Value: 1.00													I = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status			
4500.00†	4500.00	0.00	0.00	7574.91	4385.42	-473.54	1654.58	105.97	1724.82	38.81	44.77	PASS			
4600.00†	4600.00	0.00	0.00	7676.49	4486.66	-480.02	1659.62	106.13	1731.36	39.18	44.51	PASS			
4700.00†	4700.00	0.00	0.00	7772.89	4582.75	-486.09	1664.52	106.28	1738.00	39.55	44.26	PASS			
4800.00†	4800.00	0.00	0.00	7865.14	4674.68	-491.89	1669.44	106.42	1744.90	39.93	44.02	PASS			
4900.00†	4900.00	0.00	0.00	7951.78	4760.98	-497.58	1674.57	106.55	1752.46	40.30	43.79	PASS			
5000.00†	5000.00	0.00	0.00	8039.80	4848.60	-503.69	1680.37	106.69	1760.75	40.69	43.57	PASS			
5100.00†	5100.00	0.00	0.00	8132.63	4940.94	-510.54	1686.82	106.84	1769.55	41.12	43.33	PASS			
5200.00†	5200.00	0.00	0.00	8228.07	5035.85	-518.02	1693.68	107.01	1778.72	41.55	43.10	PASS			
5300.00†	5300.00	0.00	0.00	8335.29	5142.42	-527.16	1700.97	107.22	1787.74	42.02	42.83	PASS			
5400.00†	5400.00	0.00	0.00	8424.33	5230.89	-535.65	1706.49	107.43	1796.56	42.46	42.60	PASS			
5500.00†	5500.00	0.00	0.00	8469.05	5275.08	-541.69	1709.66	107.58	1807.48	42.80	42.51	PASS			
5600.00†	5600.00	0.00	0.00	8516.79	5321.90	-549.98	1713.90	107.79	1821.34	43.16	42.48	PASS			
5700.00†	5700.00	0.00	0.00	8563.22	5366.99	-559.93	1718.76	108.04	1838.08	43.53	42.50	PASS			
5800.00†	5800.00	0.00	0.00	8656.75	5456.47	-585.17	1728.66	108.70	1857.07	44.16	42.33	PASS			
5900.00†	5900.00	0.00	0.00	8708.43	5505.31	-601.31	1733.62	109.13	1876.91	44.60	42.35	PASS			
6000.00†	6000.00	0.00	0.00	8782.39	5574.24	-627.06	1741.01	109.81	1898.84	45.19	42.28	PASS			
6100.00†	6100.00	0.00	0.00	8818.13	5606.99	-640.91	1744.64	110.17	1922.91	45.56	42.47	PASS			
6200.00†	6200.00	0.00	0.00	8863.24	5647.59	-659.89	1749.76	110.66	1949.94	46.00	42.66	PASS			
6300.00†	6300.00	0.00	0.00	8913.75	5692.44	-682.27	1755.93	111.23	1979.37	46.47	42.86	PASS			
6400.00†	6400.00	0.00	0.00	8947.04	5721.40	-698.10	1760.32	111.63	2011.61	46.78	43.26	PASS			
6500.00†	6500.00	0.00	0.00	8978.30	5747.95	-714.01	1764.67	112.03	2046.81	47.07	43.75	PASS			
6600.00†	6600.00	0.00	0.00	9004.15	5769.31	-728.05	1768.50	112.38	2085.12	47.31	44.34	PASS			
6700.00†	6700.00	0.00	0.00	9030.28	5790.32	-743.03	1772.60	112.74	2126.43	47.56	44.98	PASS			
6800.00†	6800.00	0.00	0.00	9053.58	5808.58	-756.97	1776.48	113.08	2170.67	47.78	45.70	PASS			
6900.00†	6900.00	0.00	0.00	9071.43	5822.24	-768.00	1779.66	113.34	2217.79	47.97	46.51	PASS			
7000.00†	7000.00	0.00	0.00	9085.83	5832.97	-777.22	1782.42	113.56	2267.83	48.12	47.41	PASS			
7100.00†	7100.00	0.00	0.00	9100.61	5843.67	-786.94	1785.43	113.79	2320.65	48.28	48.36	PASS			
7200.00†	7200.00	0.00	0.00	9115.84	5854.45	-797.19	1788.73	114.02	2376.04	48.44	49.34	PASS			
7300.00†	7300.00	0.00	0.00	9131.45	5865.22	-807.92	1792.29	114.27	2433.85	48.61	50.36	PASS			
7400.00†	7400.00	0.00	0.00	9147.95	5876.27	-819.55	1796.13	114.53	2493.89	48.79	51.41	PASS			
7500.00†	7500.00	0.00	0.00	9165.25	5887.50	-832.07	1800.18	114.81	2556.00	48.99	52.48	PASS			
7600.00†	7600.00	0.00	0.00	9183.19	5898.75	-845.42	1804.31	115.11	2620.02	49.19	53.57	PASS			
7700.00†	7700.00	0.00	0.00	9200.45	5909.22	-858.57	1808.21	115.40	2685.83	49.40	54.69	PASS			
7800.00†	7800.00	0.00	0.00	9216.88	5918.89	-871.33	1811.92	115.68	2753.34	49.60	55.83	PASS			
7900.00†	7900.00	0.00	0.00	9228.77	5925.68	-880.70	1814.60	115.89	2822.47	49.79	57.02	PASS			
8000.00†	8000.00	0.00	0.00	9239.10	5931.41	-888.98	1816.95	116.07	2893.21	49.97	58.23	PASS			
8100.00†	8100.00	0.00	0.00	9248.84	5936.65	-896.88	1819.17	116.24	2965.44	50.16	59.46	PASS			
8200.00†	8200.00	0.00	0.00	9257.27	5941.07	-903.80	1821.10	116.40	3039.09	50.36	60.70	PASS			
8300.00†	8300.00	0.00	0.00	9265.06	5945.04	-910.25	1822.92	116.54	3114.07	50.56	61.95	PASS			
8400.00†	8400.00	0.00	0.00	9272.45	5948.71	-916.42	1824.67	116.67	3190.31	50.77	63.20	PASS			
8500.00†	8500.00	0.00	0.00	9279.48	5952.12	-922.33	1826.36	116.79	3267.72	50.99	64.45	PASS			
8600.00†	8600.00	0.00	0.00	9287.00	5955.67	-928.70	1828.18	116.93	3346.22	51.23	65.69	PASS			
8700.00†	8700.00	0.00	0.00	9295.00	5959.35	-935.53	1830.12	117.08	3425.74	51.48	66.92	PASS			
8800.00†	8800.00	0.00	0.00	9302.59	5962.76	-942.06	1831.96	117.21	3506.21	51.74	68.14	PASS			
8900.00†	8900.00	0.00	0.00	9309.81	5965.92	-948.31	1833.71	117.35	3587.56	52.01	69.36	PASS			



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.163H AWB Offset Wellpath: No.163H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.163H (Slot 28) Well: No.163H Threshold Value=1.00 = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
9000.00+	9000.00	0.00	0.00	9316.58	5968.81	-954.21	1835.35	117.47	3669.76	52.29	70.57	PASS
9100.00+	9100.00	0.00	0.00	9322.72	5971.37	-959.59	1836.84	117.58	3752.75	52.58	71.77	PASS
9200.00+	9200.00	0.00	0.00	9328.57	5973.75	-964.74	1838.25	117.69	3836.48	52.87	72.96	PASS
9300.00+	9300.00	0.00	0.00	9334.15	5975.97	-969.68	1839.60	117.79	3920.92	53.18	74.14	PASS
9400.00+	9400.00	0.00	0.00	9339.48	5978.04	-974.43	1840.89	117.89	4006.02	53.49	75.30	PASS
9500.00+	9500.00	0.00	0.00	9344.58	5979.97	-978.98	1842.12	117.99	4091.75	53.81	76.44	PASS
9600.00+	9600.00	0.00	0.00	9351.51	5982.54	-985.19	1843.79	118.12	4178.06	54.15	77.57	PASS
9613.40	9613.40	0.00	0.00	9352.53	5982.92	-986.11	1844.04	118.14	4189.67	54.19	77.72	PASS
9700.00+	9699.88	1.62	3.57	9358.82	5985.20	-991.77	1845.54	118.34	4263.63	54.61	78.49	PASS
9800.00+	9798.81	7.51	16.55	9365.42	5987.55	-997.74	1847.11	118.77	4345.95	55.00	79.43	PASS
9900.00+	9895.72	17.65	38.87	9371.27	5989.59	-1003.05	1848.48	119.43	4424.29	55.39	80.29	PASS
10000.00+	9989.53	31.91	70.29	9376.36	5991.34	-1007.68	1849.67	120.30	4498.05	55.78	81.05	PASS
10100.00+	10079.21	50.16	110.46	9381.25	5992.99	-1012.14	1850.81	121.40	4566.67	56.18	81.71	PASS
10200.00+	10163.80	72.17	158.96	9385.53	5994.42	-1016.06	1851.79	122.74	4629.65	56.58	82.25	PASS
10300.00+	10242.35	97.73	215.24	9388.87	5995.52	-1019.11	1852.55	124.30	4686.54	56.99	82.65	PASS
10400.00+	10314.02	126.53	278.68	9391.30	5996.32	-1021.34	1853.10	126.10	4736.97	57.43	82.90	PASS
10500.00+	10378.00	158.28	348.60	9392.85	5996.82	-1022.76	1853.45	128.13	4780.60	57.89	82.99	PASS
10600.00+	10433.61	192.62	424.23	9393.56	5997.05	-1023.42	1853.61	130.39	4817.15	58.40	82.90	PASS
10700.00+	10480.24	229.17	504.73	9393.50	5997.03	-1023.36	1853.60	132.88	4846.38	58.94	82.63	PASS
10780.07	10510.74	259.76	572.11	9392.90	5996.84	-1022.81	1853.47	135.03	4864.38	58.98	82.88	PASS
10800.00+	10517.56	267.51	589.17	9392.70	5996.77	-1022.63	1853.42	135.58	4868.29	59.11	82.77	PASS
10900.00+	10551.76	306.36	674.73	9391.70	5996.45	-1021.71	1853.19	138.42	4889.11	59.44	82.65	PASS
10980.07	10579.14	337.46	743.24	9390.92	5996.19	-1020.99	1853.02	140.75	4907.18	59.70	82.59	PASS
11000.00+	10585.77	345.23	760.36	9390.72	5996.13	-1020.81	1852.97	141.35	4911.69	60.16	82.04	PASS
11100.00+	10612.99	385.00	847.93	9389.29	5995.66	-1019.50	1852.65	144.42	4929.68	60.68	81.62	PASS
11200.00+	10630.01	425.72	937.61	9387.22	5994.98	-1017.60	1852.18	147.64	4939.95	61.52	80.67	PASS
11300.00+	10636.64	466.95	1028.43	9384.56	5994.10	-1015.16	1851.57	150.95	4942.41	62.05	80.02	PASS
11306.02	10636.71	469.43	1033.90	9384.38	5994.04	-1015.00	1851.53	151.15	4942.31	62.00	80.09	PASS
11400.00+	10637.43	506.88	1120.10	9381.86	5993.19	-1012.69	1850.95	154.31	4940.87	62.72	79.14	PASS
11500.00+	10638.20	543.59	1213.11	9379.78	5992.50	-1010.80	1850.47	157.70	4940.14	63.41	78.26	PASS
11600.00+	10638.98	577.03	1307.34	9378.32	5992.00	-1009.46	1850.13	161.11	4940.24	64.16	77.35	PASS
11700.00+	10639.75	607.17	1402.68	9377.51	5991.73	-1008.73	1849.94	164.53	4941.18	64.96	76.40	PASS
11800.00+	10640.52	633.96	1499.02	9377.25	5991.64	-1008.49	1849.88	167.94	4942.96	65.81	75.45	PASS
11900.00+	10641.30	657.37	1596.23	9377.48	5991.72	-1008.70	1849.93	171.34	4945.58	66.69	74.48	PASS
12000.00+	10642.07	677.37	1694.20	9378.22	5991.97	-1009.37	1850.10	174.72	4949.03	67.62	73.51	PASS
12100.00+	10642.84	693.94	1792.81	9379.55	5992.42	-1010.59	1850.41	178.07	4953.30	68.57	72.54	PASS
12200.00+	10643.62	707.07	1891.94	9381.39	5993.04	-1012.27	1850.84	181.37	4958.40	69.55	71.58	PASS
12300.00+	10644.39	716.72	1991.46	9383.74	5993.82	-1014.41	1851.38	184.63	4964.29	70.56	70.65	PASS
12400.00+	10645.16	722.89	2091.27	9386.56	5994.76	-1017.00	1852.03	187.83	4970.99	71.58	69.73	PASS
12500.00+	10645.94	725.58	2191.22	9389.86	5995.85	-1020.02	1852.78	190.97	4978.45	72.62	68.83	PASS
12526.98	10646.15	725.71	2218.20	9390.83	5996.16	-1020.91	1853.00	191.81	4980.60	72.72	68.76	PASS
12600.00+	10646.71	725.71	2291.22	9393.48	5997.03	-1023.34	1853.59	194.05	4987.01	73.63	68.00	PASS
12700.00+	10647.48	725.71	2391.22	9397.06	5998.18	-1026.63	1854.40	197.03	4997.49	74.70	67.16	PASS
12800.00+	10648.26	725.71	2491.21	9400.59	5999.31	-1029.88	1855.18	199.92	5009.92	75.78	66.36	PASS
12900.00+	10649.03	725.71	2591.21	9404.06	6000.41	-1033.09	1855.95	202.69	5024.31	76.89	65.59	PASS



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.163H AWB Offset Wellpath: No.163H AWP												
Facility: JRU Drilling Island 1 Slot: JRU D11 No.163H (Slot 28) Well: No.163H Threshold Value=1.00 * = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13000.00†	10649.80	725.71	2691.21	9407.49	6001.48	-1036.26	1856.70	205.34	5040.62	78.00	64.86	PASS
13100.00†	10650.58	725.71	2791.20	9411.25	6002.65	-1039.74	1857.52	207.87	5058.84	79.13	64.17	PASS
13200.00†	10651.35	725.71	2891.20	9416.18	6004.16	-1044.31	1858.60	210.26	5078.94	80.28	63.49	PASS
13300.00†	10652.12	725.71	2991.20	9421.18	6005.67	-1048.94	1859.70	212.52	5100.90	81.44	62.85	PASS
13400.00†	10652.90	725.71	3091.19	9426.24	6007.18	-1053.64	1860.82	214.66	5124.70	82.61	62.25	PASS
13500.00†	10653.67	725.71	3191.19	9431.38	6008.70	-1058.42	1861.96	216.69	5150.31	83.78	61.69	PASS
13600.00†	10654.44	725.71	3291.19	9436.60	6010.21	-1063.27	1863.14	218.60	5177.70	84.95	61.16	PASS
13700.00†	10655.22	725.71	3391.19	9441.81	6011.71	-1068.12	1864.32	220.40	5206.85	86.12	60.66	PASS
13800.00†	10655.99	725.71	3491.18	11618.19	6175.72	-1930.76	3532.40	179.11	5208.78	124.24	41.99	PASS
13900.00†	10656.76	725.71	3591.18	11756.77	6175.41	-1927.07	3670.93	178.28	5208.27	127.87	40.79	PASS
14000.00†	10657.54	725.71	3691.18	11878.35	6176.00	-1923.86	3792.46	177.81	5207.17	131.41	39.68	PASS
14100.00†	10658.31	725.71	3791.17	11964.64	6176.40	-1921.42	3878.72	178.11	5206.00	134.65	38.71	PASS
14200.00†	10659.08	725.71	3891.17	12198.50	6179.15	-1911.73	4112.35	175.21	5203.35	139.39	37.38	PASS
14300.00†	10659.86	725.71	3991.17	12283.64	6180.48	-1906.97	4197.34	175.52	5199.84	142.67	36.49	PASS
14400.00†	10660.63	725.71	4091.16	12345.48	6181.40	-1904.14	4259.12	176.35	5196.90	145.75	35.70	PASS
14500.00†	10661.40	725.71	4191.16	12454.82	6182.93	-1899.78	4368.35	176.14	5194.36	149.35	34.82	PASS
14600.00†	10662.18	725.71	4291.16	12565.91	6184.59	-1894.63	4479.32	175.89	5191.38	152.98	33.97	PASS
14700.00†	10662.95	725.71	4391.16	12626.33	6185.48	-1892.29	4539.68	176.75	5188.80	156.11	33.28	PASS
14800.00†	10663.72	725.71	4491.15	12689.71	6186.39	-1890.71	4603.04	177.55	5186.97	159.29	32.60	PASS
14900.00†	10664.50	725.71	4591.15	12753.43	6187.36	-1890.07	4666.74	178.35	5185.82	162.52	31.95	PASS
15000.00†	10665.27	725.71	4691.15	12812.97	6188.16	-1890.18	4726.28	179.23	5185.42	165.72	31.33	PASS
15100.00†	10666.04	725.71	4791.14	12872.82	6188.75	-1890.85	4786.12	180.11	5185.80	168.94	30.73	PASS
15200.00†	10666.82	725.71	4891.14	12934.04	6189.09	-1892.02	4847.33	180.96	5186.95	172.19	30.16	PASS
15300.00†	10667.59	725.71	4991.14	13036.69	6189.55	-1894.54	4949.95	180.90	5188.47	176.05	29.50	PASS
15400.00†	10668.36	725.71	5091.13	13214.17	6190.64	-1896.76	5127.41	179.21	5189.28	180.93	28.71	PASS
15500.00†	10669.14	725.71	5191.13	13331.63	6191.50	-1895.95	5244.85	178.83	5188.95	184.92	28.09	PASS
15600.00†	10669.91	725.71	5291.13	13403.09	6192.20	-1896.07	5316.31	179.45	5188.86	188.36	27.57	PASS
15700.00†	10670.69	725.71	5391.13	13456.92	6192.64	-1896.77	5370.13	180.46	5189.48	193.22	26.88	PASS
15800.00†	10671.46	725.71	5491.12	13510.63	6192.83	-1898.00	5423.83	181.47	5191.00	194.79	26.67	PASS
15900.00†	10672.23	725.71	5591.12	13567.94	6192.85	-1899.97	5481.11	182.40	5193.38	198.08	26.24	PASS
16000.00†	10673.01	725.71	5691.12	13646.93	6192.71	-1903.56	5560.02	182.86	5196.47	201.75	25.78	PASS
16100.00†	10673.78	725.71	5791.11	13770.21	6192.29	-1908.63	5683.19	182.35	5199.53	206.12	25.25	PASS
16200.00†	10674.55	725.71	5891.11	13866.91	6191.78	-1911.68	5779.84	182.42	5202.26	210.05	24.79	PASS
16300.00†	10675.33	725.71	5991.11	13947.19	6190.93	-1913.89	5860.09	182.84	5205.23	213.70	24.38	PASS
16400.00†	10676.10	725.71	6091.10	14021.48	6189.75	-1915.89	5934.33	183.40	5208.65	217.24	24.00	PASS
16500.00†	10676.88	725.71	6191.10	14282.94	6188.46	-1922.68	6195.69	179.90	5211.51	223.77	23.31	PASS
16600.00†	10677.65	725.71	6291.10	14348.52	6189.24	-1924.30	6261.24	180.65	5212.42	227.28	22.95	PASS
16700.00†	10678.42	725.71	6391.10	14752.49	6197.98	-1915.93	6664.78	174.09	5208.41	235.18	22.16	PASS
16800.00†	10679.20	725.71	6491.09	14778.69	6198.38	-1914.27	6690.92	175.67	5204.53	238.11	21.87	PASS
16900.00†	10679.97	725.71	6591.09	14804.88	6198.35	-1912.60	6717.06	177.27	5202.07	240.98	21.60	PASS
17000.00†	10680.74	725.71	6691.09	14833.88	6197.81	-1910.73	6745.99	178.81	5201.02	243.80	21.35	PASS
17100.00†	10681.52	725.71	6791.08	14884.17	6196.32	-1907.63	6796.16	179.89	5201.11	246.65	21.10	PASS
17200.00†	10682.29	725.71	6891.08	14929.32	6194.63	-1905.06	6841.21	181.09	5202.17	249.41	20.87	PASS
17300.00†	10683.07	725.71	6991.08	15554.06	6224.46	-1911.45	7463.84	169.84	5201.66	256.86	20.27	PASS
17400.00†	10683.84	725.71	7091.07	15578.47	6226.71	-1911.24	7488.15	171.44	5193.96	259.90	20.00	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.163H AWB, Offset Wellpath: No.163H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.163H (Slot 28) Well: No.163H Threshold Value: 1.00 = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17500.00+	10684.61	725.71	7191.07	15602.94	6228.52	-1910.97	7512.55	173.05	5187.70	262.89	19.75	PASS
17600.00+	10685.39	725.72	7291.07	15680.97	6232.50	-1909.10	7590.45	173.52	5182.67	266.11	19.49	PASS
17700.00+	10686.16	725.72	7391.07	15722.77	6234.05	-1907.39	7632.19	174.77	5178.10	269.03	19.26	PASS
17800.00+	10686.94	725.72	7491.06	15762.36	6234.93	-1905.72	7671.74	176.07	5174.69	271.90	19.04	PASS
17900.00+	10687.71	725.72	7591.06	15804.23	6235.29	-1903.94	7713.56	177.33	5172.44	274.73	18.84	PASS
18000.00+	10688.48	725.72	7691.06	15847.93	6235.27	-1902.33	7757.24	178.56	5171.28	277.55	18.64	PASS
18100.00+	10689.26	725.72	7791.05	15901.61	6234.80	-1900.78	7810.89	179.57	5171.18	280.40	18.45	PASS
18200.00+	10690.03	725.72	7891.05	15972.42	6234.30	-1899.81	7881.69	180.20	5171.75	283.41	18.26	PASS
18300.00+	10690.81	725.72	7991.05	16107.40	6234.84	-1900.70	8016.67	179.44	5172.46	287.06	18.03	PASS
18400.00+	10691.58	725.72	8091.04	16230.42	6237.30	-1902.58	8139.65	178.94	5172.13	290.71	17.80	PASS
18500.00+	10692.35	725.72	8191.04	16361.17	6239.82	-1903.74	8270.36	178.27	5171.60	294.38	17.58	PASS
18600.00+	10693.13	725.72	8291.04	16420.93	6240.54	-1903.61	8330.12	179.15	5171.12	297.44	17.40	PASS
18700.00+	10693.90	725.72	8391.04	16500.79	6240.74	-1903.24	8409.98	179.59	5171.31	300.61	17.21	PASS
18800.00+	10694.68	725.72	8491.03	16611.13	6240.97	-1902.75	8520.31	179.36	5171.57	304.02	17.02	PASS
18900.00+	10695.45	725.72	8591.03	16730.69	6241.30	-1901.53	8639.87	178.94	5171.48	307.47	16.83	PASS
19000.00+	10696.22	725.72	8691.03	16842.00	6241.49	-1899.25	8751.15	178.69	5170.95	310.81	16.65	PASS
19100.00+	10697.00	725.72	8791.02	16897.95	6241.37	-1898.23	8807.10	179.65	5170.88	313.80	16.49	PASS
19200.00+	10697.77	725.72	8891.02	16970.07	6240.93	-1897.57	8879.21	180.26	5171.58	316.92	16.33	PASS
19300.00+	10698.55	725.72	8991.02	17055.53	6240.57	-1897.57	8964.67	180.58	5172.62	320.20	16.16	PASS
19400.00+	10699.32	725.72	9091.01	17143.19	6240.01	-1897.74	9052.33	180.85	5173.92	323.52	16.00	PASS
19500.00+	10700.09	725.72	9191.01	17261.50	6239.32	-1898.26	9170.63	180.45	5175.35	327.16	15.83	PASS
19600.00+	10700.87	725.72	9291.01	17393.61	6239.47	-1898.51	9302.74	179.74	5175.99	330.94	15.65	PASS
19700.00+	10701.64	725.73	9391.01	17489.81	6239.64	-1898.42	9398.95	179.83	5176.46	334.40	15.49	PASS
19800.00+	10702.42	725.73	9491.00	17611.66	6240.61	-1899.07	9520.79	179.35	5176.70	338.19	15.31	PASS
19900.00+	10703.19	725.73	9591.00	17708.21	6242.04	-1900.52	9617.32	179.43	5176.85	341.85	15.15	PASS
20000.00+	10703.97	725.73	9691.00	17828.55	6244.09	-1902.48	9737.62	178.98	5176.88	345.81	14.98	PASS
20100.00+	10704.74	725.73	9790.99	17922.88	6245.71	-1903.38	9831.93	179.11	5176.56	349.45	14.82	PASS
20200.00+	10705.51	725.73	9890.99	18008.03	6247.07	-1904.74	9917.06	179.43	5176.66	353.04	14.67	PASS
20300.00+	10706.29	725.73	9990.99	18099.00	6248.45	-1906.20	10008.01	179.63	5176.84	356.71	14.52	PASS
20400.00+	10707.06	725.73	10090.98	18177.98	6249.27	-1907.44	10086.97	180.09	5177.40	360.22	14.38	PASS
20500.00+	10707.84	725.73	10190.98	18273.64	6249.99	-1908.93	10182.62	180.18	5178.22	363.93	14.24	PASS
20600.00+	10708.61	725.73	10290.98	18380.93	6250.74	-1910.35	10289.90	180.02	5178.95	367.78	14.09	PASS
20700.00+	10709.39	725.73	10390.98	18480.92	6251.44	-1911.57	10389.88	180.02	5179.64	371.60	13.95	PASS
20800.00+	10710.16	725.73	10490.97	18546.00	6251.89	-1912.37	10454.95	180.78	5180.45	374.99	13.82	PASS
20900.00+	10710.94	725.73	10590.97	18546.00	6251.89	-1912.37	10454.95	182.95	5182.77	377.48	13.74	PASS
21000.00+	10711.71	725.73	10690.97	18546.00	6251.89	-1912.37	10454.95	185.11	5187.03	379.84	13.66	PASS
21100.00+	10712.48	725.73	10790.96	18546.00	6251.89	-1912.37	10454.95	187.26	5193.20	382.06	13.60	PASS
21200.00+	10713.26	725.73	10890.96	18546.00	6251.89	-1912.37	10454.95	189.39	5201.29	384.15	13.55	PASS
21300.00+	10714.03	725.73	10990.96	18546.00	6251.89	-1912.37	10454.95	191.49	5211.29	386.10	13.50	PASS
21400.00+	10714.81	725.74	11090.95	18546.00	6251.89	-1912.37	10454.95	193.55	5223.19	387.91	13.47	PASS
21500.00+	10715.58	725.74	11190.95	18546.00	6251.89	-1912.37	10454.95	195.59	5236.97	389.57	13.45	PASS
21600.00+	10716.36	725.74	11290.95	18546.00	6251.89	-1912.37	10454.95	197.58	5252.61	391.10	13.44	PASS
21681.96+	10716.99	725.74	11372.91	18546.00	6251.89	-1912.37	10454.95	199.19	5266.82	392.25	13.43	PASS
21700.00+	10717.13	725.74	11390.95	18546.00	6251.89	-1912.37	10454.95	199.54	5270.11	392.49	13.43	PASS
21800.00+	10717.91	725.74	11490.94	18546.00	6251.89	-1912.37	10454.95	201.44	5289.44	393.75	13.44	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.163H AWB Offset Wellpath: No.163H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.163H (Slot 28) Well: No.163H Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
21900.00†	10718.68	725.74	11590.94	18546.00	6251.89	-1912.37	10454.95	203.30	5310.58	394.86	13.46	PASS
22000.00†	10719.45	725.74	11690.94	18546.00	6251.89	-1912.37	10454.95	205.10	5333.51	395.85	13.48	PASS
22100.00†	10720.23	725.74	11790.93	18546.00	6251.89	-1912.37	10454.95	206.86	5358.22	396.70	13.51	PASS
22200.00†	10721.00	725.74	11890.93	18546.00	6251.89	-1912.37	10454.95	208.56	5384.66	397.42	13.55	PASS
22300.00†	10721.78	725.74	11990.93	18546.00	6251.89	-1912.37	10454.95	210.21	5412.83	398.02	13.61	PASS
22400.00†	10722.55	725.74	12090.92	18546.00	6251.89	-1912.37	10454.95	211.80	5442.69	398.50	13.66	PASS
22500.00†	10723.33	725.74	12190.92	18546.00	6251.89	-1912.37	10454.95	213.35	5474.21	398.85	13.73	PASS
22600.00†	10724.10	725.74	12290.92	18546.00	6251.89	-1912.37	10454.95	214.84	5507.36	399.10	13.81	PASS
22700.00†	10724.88	725.75	12390.92	18546.00	6251.89	-1912.37	10454.95	216.27	5542.13	399.23	13.89	PASS
22800.00†	10725.65	725.75	12490.91	18546.00	6251.89	-1912.37	10454.95	217.66	5578.47	399.25	13.98	PASS
22900.00†	10726.43	725.75	12590.91	18546.00	6251.89	-1912.37	10454.95	219.00	5616.35	399.17	14.08	PASS
23000.00†	10727.20	725.75	12690.91	18546.00	6251.89	-1912.37	10454.95	220.28	5655.75	399.00	14.18	PASS
23100.00†	10727.98	725.75	12790.90	18546.00	6251.89	-1912.37	10454.95	221.52	5696.63	398.73	14.29	PASS
23200.00†	10728.75	725.75	12890.90	18546.00	6251.89	-1912.37	10454.95	222.72	5738.97	398.37	14.41	PASS
23300.00†	10729.53	725.75	12990.90	18546.00	6251.89	-1912.37	10454.95	223.87	5782.72	397.92	14.54	PASS
23400.00†	10730.30	725.75	13090.89	18546.00	6251.89	-1912.37	10454.95	224.98	5827.86	397.39	14.67	PASS
23465.34†	10730.81	725.75	13156.24	18546.00	6251.89	-1912.37	10454.95	225.68	5858.10	397.01	14.76	PASS
23490.34	10731.00	725.75	13181.24	18546.00	6251.89	-1912.37	10454.95	225.94	5869.81	396.63	14.81	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: No.163H AWB Offset Wellpath: No.163H AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	0.100ft
Facility Surface Uncertainty @1SD	Horizontal	1.000ft	Vertical	1.000ft

HOLE & CASING SECTIONS - Offset Wellbore: No.163H AWB Offset Wellpath: No.163H AWP

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]
17.5in Open Hole	26.00	513.00	487.00	-3139.00	-2652.08	-44.98	807.17	-42.39	807.3
13.375in Casing Surface	26.00	513.00	487.00	-3139.00	-2652.08	-44.98	807.17	-42.39	807.3
12.25in Open Hole	513.00	3521.00	3008.00	-2652.08	348.23	-42.39	807.39	-81.60	841.6
10.625in Casing Intermediate	26.00	3521.00	3495.00	-3139.00	348.23	-44.98	807.17	-81.60	841.6
1.75in Open Hole	3521.00	10793.00	7272.00	348.23	6183.03	-81.60	841.67	-609.46	1228.7
7in Casing	26.00	10793.00	10767.00	-3139.00	6183.03	-44.98	807.17	-609.46	1228.7
6.125in Open Hole	10793.00	18546.00	7753.00	6183.03	6252.89	-609.46	1228.77	-605.39	3590.2
1.5in Liner	10686.00	18546.00	7860.00	6180.21	6252.89	-607.91	1196.22	-605.39	3590.2



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

WELLPATH COMPOSITION - Offset Wellbore: No.163H AWB - Offset Wellpath: No.163H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	470.00	Generic gyro - northseeking (Standard)	Gyro Data <100-470>	No.163H AWB
470.00	3555.00	NaviTrak (Standard)	BHI 8" UPA (SN:DHP81416) BHA #2 <627-3555>	No.163H AWB
3555.00	4598.00	NaviTrak (Standard)	BHI 6.75" MWD (SN:DHP61413) BHA #3 <3650-4598>	No.163H AWB
4598.00	7260.00	NaviTrak (Standard)	BHI 6.75" MWD (SN:DHP6141111) BHA #4 <4788-7260>	No.163H AWB
7260.00	8904.00	NaviTrak (Standard)	BHI 6.75" LCPG (SN:DHP614126) BHA #5 <7449-8904>	No.163H AWB
8904.00	10808.00	NaviTrak (Standard)	BHI 6.75" LCPG (SN:DHP61412) BHA #6 <8935-10808>	No.163H AWB
10808.00	14828.00	NaviTrak (Standard)	BHI 4 5/8" MWD (SN:10487934) BHA #8-9 <10839-14828>	No.163H AWB
14828.00	15015.00	NaviTrak (Standard)	BHI 4 5/8" MWD (SN:10595616) BHA #10 <14923-15015>	No.163H AWB
15015.00	15617.00	NaviTrak (Standard)	BHI 4.75" UPAG (SN:SHP41410) BHA #11 <15046-15617>	No.163H AWB
15617.00	16065.00	NaviTrak (Standard)	BHI 4 5/8" MWD (SN:10595616) BHA #12 <15684-16065>	No.163H AWB
16065.00	18349.00	AutoTrak G3 (Standard)	BHI 4 5/8" AutoTrak (SN:10573186) BHA #13-14 <16162-18349>	No.163H AWB
18349.00	18546.00	Blind Drilling (std)	Projection to bit	No.163H AWB

OFFSET WELLPATH MD REFERENCE - Offset Wellbore: No.163H AWB - Offset Wellpath: No.163H AWP

MD Reference: Rig on No.28H SHL (KB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	26.00ft



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.12H AWB Offset Wellpath: No.12H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.12H (Slot 9) Well: No.12H Threshold Value: 1.00 = interpolated/extrapolated station															
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status			
25.00	25.00	0.00	0.00	3108.71	-56.12	-127.22	1055.11	96.88	1065.84	24.10	44.22	PASS			
100.00	100.00	0.00	0.00	3182.13	17.04	-130.37	1060.40	97.01	1071.60	24.39	43.94	PASS			
200.00	200.00	0.00	0.00	3284.62	119.17	-134.78	1067.75	97.19	1079.25	24.79	43.54	PASS			
300.00	300.00	0.00	0.00	3393.94	228.15	-139.43	1074.96	97.39	1086.35	25.23	43.05	PASS			
400.00	400.00	0.00	0.00	3496.66	330.60	-143.74	1081.09	97.57	1092.81	25.66	42.59	PASS			
500.00	500.00	0.00	0.00	3600.20	433.88	-147.90	1086.99	97.75	1098.99	26.10	42.11	PASS			
600.00	600.00	0.00	0.00	3701.62	535.08	-151.78	1092.54	97.91	1104.94	26.53	41.64	PASS			
700.00	700.00	0.00	0.00	3802.65	635.89	-155.81	1097.91	98.08	1110.76	26.98	41.17	PASS			
800.00	800.00	0.00	0.00	3903.11	736.14	-159.60	1103.20	98.23	1116.51	27.44	40.70	PASS			
900.00	900.00	0.00	0.00	4004.68	837.51	-162.92	1108.48	98.36	1122.13	27.91	40.20	PASS			
1000.00	1000.00	0.00	0.00	4096.30	928.94	-166.01	1113.52	98.48	1128.07	28.36	39.78	PASS			
1100.00	1100.00	0.00	0.00	4194.95	1027.36	-169.49	1119.34	98.61	1134.43	28.85	39.33	PASS			
1200.00	1200.00	0.00	0.00	4300.12	1132.30	-173.00	1125.38	98.74	1140.61	29.37	38.83	PASS			
1300.00	1300.00	0.00	0.00	4400.54	1232.52	-176.11	1130.91	98.85	1146.52	29.89	38.36	PASS			
1400.00	1400.00	0.00	0.00	4503.32	1335.11	-179.11	1136.42	98.96	1152.28	30.43	37.87	PASS			
1500.00	1500.00	0.00	0.00	4601.63	1433.24	-181.97	1141.64	99.06	1157.98	30.95	37.41	PASS			
1600.00	1600.00	0.00	0.00	4706.50	1537.92	-185.02	1147.03	99.16	1163.52	31.52	36.92	PASS			
1700.00	1700.00	0.00	0.00	4806.64	1637.90	-187.63	1152.01	99.25	1168.84	32.07	36.45	PASS			
1800.00	1800.00	0.00	0.00	4906.13	1737.24	-190.08	1156.99	99.33	1174.18	32.63	35.99	PASS			
1900.00	1900.00	0.00	0.00	5008.61	1839.56	-192.49	1162.03	99.41	1179.42	33.21	35.52	PASS			
2000.00	2000.00	0.00	0.00	5113.42	1944.24	-194.75	1166.87	99.48	1184.32	33.81	35.03	PASS			
2100.00	2100.00	0.00	0.00	5216.21	2046.91	-196.84	1171.31	99.54	1188.92	34.40	34.56	PASS			
2200.00	2200.00	0.00	0.00	5319.48	2150.08	-198.94	1175.46	99.61	1193.22	35.01	34.09	PASS			
2300.00	2300.00	0.00	0.00	5422.10	2252.60	-200.86	1179.43	99.67	1197.35	35.61	33.62	PASS			
2400.00	2400.00	0.00	0.00	5529.41	2359.84	-202.53	1183.05	99.72	1200.94	36.25	33.13	PASS			
2500.00	2500.00	0.00	0.00	5631.04	2461.41	-203.85	1186.20	99.75	1204.21	36.87	32.66	PASS			
2600.00	2600.00	0.00	0.00	5731.70	2562.02	-204.98	1189.23	99.78	1207.36	37.49	32.21	PASS			
2700.00	2700.00	0.00	0.00	5831.56	2661.83	-206.19	1192.23	99.81	1210.53	38.11	31.77	PASS			
2800.00	2800.00	0.00	0.00	5933.30	2763.52	-207.55	1195.19	99.85	1213.63	38.74	31.33	PASS			
2900.00	2900.00	0.00	0.00	6036.85	2867.02	-208.70	1198.01	99.88	1216.50	39.39	30.89	PASS			
3000.00	3000.00	0.00	0.00	6141.41	2971.54	-209.86	1200.48	99.92	1219.02	40.04	30.45	PASS			
3100.00	3100.00	0.00	0.00	6243.73	3073.84	-210.88	1202.58	99.95	1221.21	40.69	30.02	PASS			
3200.00	3200.00	0.00	0.00	6343.62	3173.70	-211.83	1204.60	99.97	1223.36	41.33	29.60	PASS			
3300.00	3300.00	0.00	0.00	6445.78	3275.84	-212.78	1206.61	100.00	1225.47	41.98	29.19	PASS			
3400.00	3400.00	0.00	0.00	6554.63	3384.67	-213.81	1208.30	100.04	1227.16	42.65	28.77	PASS			
3500.00	3500.00	0.00	0.00	6661.38	3491.42	-214.85	1209.06	100.08	1228.03	43.27	28.38	PASS			
3600.00	3600.00	0.00	0.00	6759.98	3590.01	-215.85	1209.58	100.12	1228.73	43.85	28.02	PASS			
3700.00	3700.00	0.00	0.00	6859.49	3689.51	-216.85	1210.30	100.16	1229.62	44.46	27.66	PASS			
3800.00	3800.00	0.00	0.00	6955.37	3785.38	-217.58	1211.07	100.19	1230.54	45.08	27.30	PASS			
3900.00	3900.00	0.00	0.00	7051.50	3881.50	-218.68	1212.26	100.23	1231.97	45.70	26.95	PASS			
4000.00	4000.00	0.00	0.00	7145.71	3975.69	-220.21	1213.53	100.29	1233.59	46.32	26.63	PASS			
4100.00	4100.00	0.00	0.00	7184.55	4014.47	-221.49	1214.95	100.33	1237.94	46.67	26.52	PASS			
4200.00	4200.00	0.00	0.00	7221.25	4050.99	-223.35	1218.15	100.39	1247.39	46.93	26.58	PASS			
4300.00	4300.00	0.00	0.00	7272.05	4101.27	-226.10	1224.80	100.46	1261.25	47.22	26.71	PASS			
4400.00	4400.00	0.00	0.00	7395.66	4223.40	-230.94	1243.22	100.52	1276.76	47.69	26.77	PASS			



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.12HAWB - Offset Wellpath: No.12HAWP												
Facility: JRU Drilling Island 1 Slot: JRU D11 No.12H (Slot 9) Well: No.12H Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4500.00†	4500.00	0.00	0.00	7539.20	4365.92	-231.75	1260.20	100.42	1288.33	48.16	26.75	PASS
4600.00†	4600.00	0.00	0.00	7662.02	4488.17	-234.05	1271.70	100.43	1297.88	48.54	26.74	PASS
4700.00†	4700.00	0.00	0.00	7739.91	4565.68	-237.58	1278.51	100.53	1307.31	48.84	26.77	PASS
4800.00†	4800.00	0.00	0.00	7798.45	4623.78	-240.98	1284.74	100.62	1318.97	49.09	26.87	PASS
4900.00†	4900.00	0.00	0.00	7850.81	4675.50	-244.37	1292.14	100.71	1334.07	49.29	27.07	PASS
5000.00†	5000.00	0.00	0.00	7915.30	4738.89	-248.47	1303.24	100.79	1352.16	49.58	27.27	PASS
5100.00†	5100.00	0.00	0.00	8072.71	4893.60	-255.72	1331.23	100.87	1371.19	50.29	27.26	PASS
5200.00†	5200.00	0.00	0.00	8184.64	5004.51	-261.47	1345.15	101.00	1384.20	50.80	27.25	PASS
5300.00†	5300.00	0.00	0.00	8242.30	5061.44	-264.52	1353.74	101.06	1399.82	51.07	27.41	PASS
5400.00†	5400.00	0.00	0.00	8305.97	5124.03	-267.04	1365.08	101.07	1418.07	51.34	27.62	PASS
5500.00†	5500.00	0.00	0.00	8395.87	5212.10	-268.93	1383.09	101.00	1438.10	51.71	27.81	PASS
5600.00†	5600.00	0.00	0.00	8478.15	5292.62	-270.03	1399.92	100.92	1458.48	52.01	28.04	PASS
5700.00†	5700.00	0.00	0.00	8633.98	5445.28	-272.07	1431.04	100.77	1478.78	52.68	28.07	PASS
5800.00†	5800.00	0.00	0.00	8754.53	5564.24	-272.97	1450.57	100.66	1494.74	39.80	37.56	PASS
5900.00†	5900.00	0.00	0.00	8849.21	5657.69	-274.55	1465.66	100.61	1510.71	53.58	28.19	PASS
6000.00†	6000.00	0.00	0.00	8894.97	5702.76	-276.61	1473.28	100.63	1528.20	53.77	28.42	PASS
6100.00†	6100.00	0.00	0.00	8919.64	5726.84	-277.93	1478.47	100.65	1549.96	53.84	28.79	PASS
6200.00†	6200.00	0.00	0.00	8943.08	5749.45	-279.07	1484.54	100.65	1576.30	53.85	29.27	PASS
6300.00†	6300.00	0.00	0.00	8965.47	5770.75	-279.96	1491.37	100.63	1607.07	53.82	29.86	PASS
6400.00†	6400.00	0.00	0.00	8985.70	5789.69	-280.56	1498.47	100.61	1642.13	53.75	30.55	PASS
6500.00†	6500.00	0.00	0.00	9006.57	5808.85	-280.95	1506.70	100.56	1681.30	53.59	31.37	PASS
6600.00†	6600.00	0.00	0.00	9030.63	5830.50	-281.12	1517.21	100.50	1724.26	53.56	32.19	PASS
6700.00†	6700.00	0.00	0.00	9068.72	5864.23	-281.07	1534.90	100.38	1770.15	53.59	33.03	PASS
6800.00†	6800.00	0.00	0.00	9097.02	5888.87	-280.85	1548.82	100.28	1818.76	53.52	33.98	PASS
6900.00†	6900.00	0.00	0.00	9118.34	5907.03	-280.56	1559.99	100.20	1870.37	53.41	35.02	PASS
7000.00†	7000.00	0.00	0.00	9138.88	5924.14	-280.26	1571.34	100.11	1924.87	53.31	36.11	PASS
7100.00†	7100.00	0.00	0.00	9158.59	5940.20	-280.09	1582.75	100.04	1982.09	53.21	37.25	PASS
7200.00†	7200.00	0.00	0.00	9177.50	5955.27	-280.00	1594.17	99.96	2041.84	53.12	38.44	PASS
7300.00†	7300.00	0.00	0.00	9195.58	5969.36	-280.00	1605.50	99.89	2103.96	53.04	39.67	PASS
7400.00†	7400.00	0.00	0.00	9212.85	5982.51	-280.08	1616.70	99.83	2168.28	52.98	40.93	PASS
7500.00†	7500.00	0.00	0.00	9225.41	5991.85	-280.18	1625.10	99.78	2234.72	52.89	42.25	PASS
7600.00†	7600.00	0.00	0.00	9237.08	6000.30	-280.30	1633.14	99.74	2303.20	52.83	43.60	PASS
7700.00†	7700.00	0.00	0.00	9248.11	6008.09	-280.45	1640.94	99.70	2373.58	52.78	44.97	PASS
7800.00†	7800.00	0.00	0.00	9258.37	6015.16	-280.62	1648.38	99.66	2445.72	52.73	46.38	PASS
7900.00†	7900.00	0.00	0.00	9268.13	6021.72	-280.82	1655.61	99.63	2519.50	52.73	47.78	PASS
8000.00†	8000.00	0.00	0.00	9277.41	6027.79	-281.05	1662.62	99.59	2594.78	52.77	49.18	PASS
8100.00†	8100.00	0.00	0.00	9285.73	6033.10	-281.27	1669.02	99.57	2671.48	52.78	50.62	PASS
8200.00†	8200.00	0.00	0.00	9293.60	6038.00	-281.47	1675.18	99.54	2749.49	52.82	52.05	PASS
8300.00†	8300.00	0.00	0.00	9301.09	6042.54	-281.67	1681.13	99.51	2828.71	52.90	53.47	PASS
8400.00†	8400.00	0.00	0.00	9308.21	6046.76	-281.85	1686.86	99.49	2909.07	53.02	54.87	PASS
8500.00†	8500.00	0.00	0.00	9329.96	6059.33	-282.39	1704.60	99.41	2990.37	53.24	56.16	PASS
8600.00†	8600.00	0.00	0.00	9349.06	6070.22	-282.83	1720.29	99.34	3072.32	53.47	57.46	PASS
8700.00†	8700.00	0.00	0.00	9362.43	6077.68	-283.10	1731.38	99.29	3155.05	53.66	58.80	PASS
8800.00†	8800.00	0.00	0.00	9374.42	6084.25	-283.32	1741.42	99.24	3238.54	53.86	60.13	PASS
8900.00†	8900.00	0.00	0.00	9382.14	6088.38	-283.47	1747.94	99.21	3322.78	54.05	61.47	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.12HAWB Offset Wellpath: No.12HAWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.12H (Slot 9) Well: No.12H Threshold Value=1.00 I = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
9000.00+	9000.00	0.00	0.00	9389.53	6092.24	-283.62	1754.23	99.18	3407.76	54.26	62.81	PASS
9100.00+	9100.00	0.00	0.00	9396.61	6095.87	-283.77	1760.30	99.16	3493.42	54.48	64.12	PASS
9200.00+	9200.00	0.00	0.00	9403.39	6099.28	-283.93	1766.17	99.13	3579.73	54.72	65.42	PASS
9300.00+	9300.00	0.00	0.00	9408.86	6101.96	-284.06	1770.93	99.11	3666.65	54.96	66.71	PASS
9400.00+	9400.00	0.00	0.00	9413.78	6104.33	-284.20	1775.24	99.10	3754.16	55.22	67.98	PASS
9500.00+	9500.00	0.00	0.00	9418.50	6106.55	-284.34	1779.40	99.08	3842.21	55.49	69.24	PASS
9600.00+	9600.00	0.00	0.00	9423.02	6108.64	-284.48	1783.41	99.06	3930.79	55.77	70.48	PASS
9613.40	9613.40	0.00	0.00	9423.61	6108.91	-284.50	1783.94	99.06	3942.69	55.81	70.65	PASS
9700.00+	9699.88	1.62	3.57	9427.66	6110.74	-284.64	1787.55	99.12	4018.27	56.20	71.50	PASS
9800.00+	9798.81	7.51	16.55	9432.86	6113.03	-284.83	1792.21	99.35	4101.64	56.60	72.47	PASS
9900.00+	9895.72	17.65	38.87	9439.59	6115.92	-285.09	1798.28	99.76	4180.19	57.02	73.31	PASS
10000.00+	9989.53	31.91	70.29	9449.85	6120.22	-285.53	1807.59	100.36	4253.30	57.47	74.01	PASS
10100.00+	10079.21	50.16	110.46	9460.72	6124.63	-286.05	1817.51	101.14	4320.39	57.93	74.58	PASS
10200.00+	10163.80	72.17	158.96	9471.41	6128.82	-286.60	1827.32	102.14	4381.00	58.40	75.02	PASS
10300.00+	10242.35	97.73	215.24	9481.21	6132.53	-287.12	1836.38	103.35	4434.73	58.87	75.33	PASS
10400.00+	10314.02	126.53	278.68	9491.30	6136.19	-287.66	1845.76	104.81	4481.24	59.35	75.50	PASS
10500.00+	10378.00	158.28	348.60	9501.28	6139.67	-288.20	1855.11	106.51	4520.22	59.86	75.52	PASS
10600.00+	10433.61	192.62	424.23	9509.66	6142.44	-288.64	1863.00	108.50	4551.47	60.37	75.39	PASS
10700.00+	10480.24	229.17	504.73	9518.12	6145.10	-289.07	1871.02	110.77	4574.80	60.91	75.11	PASS
10780.07	10510.74	259.76	572.11	9524.93	6147.13	-289.40	1877.51	112.82	4587.67	60.90	75.33	PASS
10800.00+	10517.56	267.51	589.17	9526.63	6147.62	-289.48	1879.14	113.35	4590.27	60.99	75.26	PASS
10900.00+	10551.76	306.36	674.73	9534.76	6149.90	-289.85	1886.94	116.19	4604.48	61.23	75.20	PASS
10980.07	10579.14	337.46	743.24	9540.76	6151.48	-290.10	1892.71	118.63	4617.29	61.41	75.18	PASS
11000.00+	10585.77	345.23	760.36	9542.25	6151.86	-290.16	1894.16	119.27	4620.47	61.86	74.70	PASS
11100.00+	10612.99	385.00	847.93	9549.76	6153.69	-290.44	1901.43	122.67	4631.57	62.25	74.40	PASS
11200.00+	10630.01	425.72	937.61	9557.27	6155.38	-290.68	1908.74	126.42	4634.50	62.97	73.60	PASS
11300.00+	10636.64	466.95	1028.43	9564.52	6156.89	-290.89	1915.84	130.50	4629.25	63.35	73.08	PASS
11306.02	10636.71	469.43	1033.90	9564.91	6156.97	-290.90	1916.22	130.75	4628.67	63.28	73.14	PASS
11400.00+	10637.43	506.88	1120.10	9571.10	6158.14	-291.09	1922.29	134.85	4619.99	63.79	72.43	PASS
11500.00+	10638.20	543.59	1213.11	9577.81	6159.30	-291.30	1928.90	139.39	4611.94	64.25	71.78	PASS
11600.00+	10638.98	577.03	1307.34	9584.64	6160.36	-291.55	1935.64	144.12	4605.13	64.76	71.11	PASS
11700.00+	10639.75	607.17	1402.68	9591.57	6161.31	-291.81	1942.50	149.02	4599.57	65.29	70.44	PASS
11800.00+	10640.52	633.96	1499.02	9598.09	6162.08	-292.08	1948.97	154.09	4595.27	65.86	69.78	PASS
11900.00+	10641.30	657.37	1596.23	9604.19	6162.68	-292.36	1955.03	159.30	4592.24	66.44	69.11	PASS
12000.00+	10642.07	677.37	1694.20	9610.35	6163.18	-292.65	1961.17	164.61	4590.50	67.05	68.46	PASS
12100.00+	10642.84	693.94	1792.81	9616.57	6163.55	-292.97	1967.37	169.97	4590.05	67.67	67.83	PASS
12200.00+	10643.62	707.07	1891.94	9622.85	6163.81	-293.31	1973.63	175.33	4590.87	68.31	67.20	PASS
12300.00+	10644.39	716.72	1991.46	9631.74	6163.97	-293.82	1982.50	180.51	4592.97	68.98	66.58	PASS
12400.00+	10645.16	722.89	2091.27	9645.67	6164.01	-294.70	1996.41	185.33	4596.22	69.69	65.95	PASS
12500.00+	10645.94	725.58	2191.22	9757.95	6163.04	-302.21	2108.43	184.61	4599.96	71.09	64.71	PASS
12526.98	10646.15	725.71	2218.20	9806.99	6162.85	-304.84	2157.40	183.38	4600.61	71.48	64.36	PASS
12600.00+	10646.71	725.71	2291.22	9877.50	6162.75	-307.93	2227.84	183.51	4601.99	72.58	63.41	PASS
12700.00+	10647.48	725.71	2391.22	9933.13	6162.36	-310.79	2283.40	185.94	4604.60	73.67	62.51	PASS
12800.00+	10648.26	725.71	2491.21	10003.92	6161.40	-315.14	2354.05	187.51	4608.04	74.94	61.49	PASS
12900.00+	10649.03	725.71	2591.21	10089.49	6160.03	-321.33	2439.37	188.25	4611.99	76.40	60.37	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.12H AWB Offset Wellpath: No.12H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.12H (Slot 9) Well: No.12H Threshold Value=1.00 Interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13000.00+	10649.80	725.71	2691.21	10190.21	6158.87	-330.95	2539.63	188.16	4616.05	78.10	59.11	PASS
13100.00+	10650.58	725.71	2791.20	10280.09	6157.79	-339.32	2629.11	188.65	4620.14	79.75	57.93	PASS
13200.00+	10651.35	725.71	2891.20	10359.39	6156.83	-347.99	2707.92	189.69	4624.62	81.38	56.83	PASS
13300.00+	10652.12	725.71	2991.20	10439.94	6155.95	-358.74	2787.75	190.63	4629.57	83.09	55.72	PASS
13400.00+	10652.90	725.71	3091.19	10546.50	6154.87	-374.23	2893.17	190.21	4634.79	85.22	54.39	PASS
13500.00+	10653.67	725.71	3191.19	10655.49	6154.25	-389.45	3001.10	189.67	4639.45	87.46	53.05	PASS
13600.00+	10654.44	725.71	3291.19	10843.38	6153.56	-412.16	3187.58	185.20	4643.64	90.83	51.12	PASS
13700.00+	10655.22	725.71	3391.19	10996.20	6154.02	-426.52	3339.72	182.56	4646.62	93.82	49.53	PASS
13800.00+	10655.99	725.71	3491.18	11095.95	6154.97	-434.66	3439.13	182.57	4648.48	96.11	48.37	PASS
13900.00+	10656.76	725.71	3591.18	11193.69	6155.72	-442.03	3536.59	182.68	4650.37	98.40	47.26	PASS
14000.00+	10657.54	725.71	3691.18	11289.10	6156.29	-448.82	3631.75	182.90	4652.34	100.70	46.20	PASS
14100.00+	10658.31	725.71	3791.17	11379.14	6156.58	-454.83	3721.60	183.37	4654.47	102.95	45.21	PASS
14200.00+	10659.08	725.71	3891.17	11457.89	6156.53	-459.98	3800.18	184.39	4656.94	105.06	44.33	PASS
14300.00+	10659.86	725.71	3991.17	11527.40	6156.12	-464.55	3869.53	185.84	4659.96	107.05	43.53	PASS
14400.00+	10660.63	725.71	4091.16	11666.14	6154.98	-473.70	4007.97	183.97	4663.30	110.13	42.34	PASS
14500.00+	10661.40	725.71	4191.16	11734.73	6154.89	-478.98	4076.35	185.44	4666.17	112.20	41.59	PASS
14600.00+	10662.18	725.71	4291.16	11838.76	6154.65	-488.28	4179.97	185.23	4669.47	114.89	40.64	PASS
14700.00+	10662.95	725.71	4391.16	12048.71	6156.74	-507.44	4389.02	180.10	4671.90	119.43	39.12	PASS
14800.00+	10663.72	725.71	4491.15	12099.21	6157.63	-511.79	4439.33	182.40	4673.22	121.32	38.52	PASS
14900.00+	10664.50	725.71	4591.15	12149.76	6157.90	-515.89	4489.71	184.67	4675.61	123.22	37.95	PASS
15000.00+	10665.27	725.71	4691.15	12196.29	6157.61	-519.59	4536.09	187.10	4679.08	125.04	37.42	PASS
15100.00+	10666.04	725.71	4791.14	12240.44	6156.94	-523.62	4580.05	189.59	4683.73	126.84	36.92	PASS
15200.00+	10666.82	725.71	4891.14	12318.31	6155.13	-531.56	4657.49	190.53	4689.42	129.28	36.27	PASS
15300.00+	10667.59	725.71	4991.14	12405.28	6153.03	-540.08	4744.03	191.05	4695.16	131.89	35.60	PASS
15400.00+	10668.36	725.71	5091.13	12537.11	6149.40	-552.88	4875.18	189.59	4701.33	135.35	34.74	PASS
15500.00+	10669.14	725.71	5191.13	12762.79	6150.31	-577.58	5099.48	184.02	4703.91	140.76	33.42	PASS
15600.00+	10669.91	725.71	5291.13	12818.16	6150.65	-583.56	5154.53	185.96	4707.08	142.94	32.93	PASS
15700.00+	10670.69	725.71	5391.13	13130.33	6156.86	-615.95	5464.92	176.85	4709.58	150.10	31.38	PASS
15800.00+	10671.46	725.71	5491.12	13188.36	6159.15	-621.37	5522.65	178.66	4709.20	152.42	30.90	PASS
15900.00+	10672.23	725.71	5591.12	13235.60	6160.57	-625.73	5569.66	180.91	4709.77	154.54	30.48	PASS
16000.00+	10673.01	725.71	5691.12	13270.76	6161.10	-628.92	5604.68	183.65	4711.66	156.41	30.12	PASS
16100.00+	10673.78	725.71	5791.11	13305.94	6161.12	-632.03	5639.71	186.36	4714.92	158.25	29.79	PASS
16200.00+	10674.55	725.71	5891.11	13377.60	6160.34	-638.46	5711.09	187.52	4719.27	160.81	29.35	PASS
16300.00+	10675.33	725.71	5991.11	13452.90	6159.37	-645.68	5786.03	188.51	4724.05	163.47	28.90	PASS
16400.00+	10676.10	725.71	6091.10	13637.83	6157.38	-662.73	5970.16	184.98	4728.77	168.34	28.09	PASS
16500.00+	10676.88	725.71	6191.10	13726.05	6157.06	-669.28	6058.13	185.45	4732.07	171.24	27.63	PASS
16600.00+	10677.65	725.71	6291.10	13789.57	6156.41	-674.04	6121.46	186.91	4736.00	173.66	27.27	PASS
16700.00+	10678.42	725.71	6391.10	13879.14	6155.23	-681.40	6210.72	187.31	4740.44	176.64	26.84	PASS
16800.00+	10679.20	725.71	6491.09	13960.08	6154.14	-688.74	6291.32	188.04	4745.18	179.48	26.44	PASS
16900.00+	10679.97	725.71	6591.09	14110.66	6152.81	-703.46	6441.17	185.99	4749.75	183.86	25.83	PASS
17000.00+	10680.74	725.71	6691.09	14506.15	6166.27	-737.68	6834.79	174.39	4747.91	193.28	24.57	PASS
17100.00+	10681.52	725.71	6791.08	14539.60	6167.80	-739.91	6868.13	176.99	4746.32	195.35	24.30	PASS
17200.00+	10682.29	725.71	6891.08	14573.18	6168.92	-742.35	6901.59	179.59	4746.14	197.40	24.04	PASS
17300.00+	10683.07	725.71	6991.08	14606.85	6169.57	-744.86	6935.17	182.18	4747.35	199.43	23.80	PASS
17400.00+	10683.84	725.71	7091.07	14640.52	6169.74	-747.41	6968.74	184.75	4749.96	201.42	23.58	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.12H AWB Offset Wellpath: No.12H AWP

Facility: JRU Drilling Island 1A Slot: JRU D11 No.12H (Slot 9) Well: No.12H Threshold Value=1.00 Interpolated/extrapolated station													Horiz	C-C	ACR	Sep	ACR
Ref MD	Ref TVD	Ref North	Ref East	Offset MD	Offset TVD	Offset North	Offset East	Bearing	Clear Dist	MASD	Ratio	Status	[°]	[ft]	[ft]		
17500.00†	10684.61	725.71	7191.07	14813.95	6170.47	-757.46	7141.86	181.90	4751.81	206.13	23.05	PASS					
17600.00†	10685.39	725.72	7291.07	14985.89	6172.36	-765.60	7313.59	179.14	4753.10	210.69	22.56	PASS					
17700.00†	10686.16	725.72	7391.07	15064.88	6174.32	-770.04	7392.44	179.95	4753.32	213.61	22.25	PASS					
17800.00†	10686.94	725.72	7491.06	15111.35	6175.07	-773.09	7438.80	182.00	4754.59	215.92	22.02	PASS					
17900.00†	10687.71	725.72	7591.06	15238.37	6176.66	-781.80	7565.52	180.97	4756.35	219.87	21.63	PASS					
18000.00†	10688.48	725.72	7691.06	15550.79	6188.70	-800.20	7877.10	173.05	4755.12	227.41	20.91	PASS					
18100.00†	10689.26	725.72	7791.05	15615.52	6192.39	-803.99	7941.62	174.38	4752.31	230.23	20.64	PASS					
18200.00†	10690.03	725.72	7891.05	15682.00	6195.92	-808.58	8007.85	175.65	4750.23	233.12	20.38	PASS					
18300.00†	10690.81	725.72	7991.05	15815.17	6203.05	-817.71	8140.51	174.47	4748.10	237.36	20.00	PASS					
18400.00†	10691.58	725.72	8091.04	15888.87	6207.24	-823.35	8213.87	175.47	4745.94	240.48	19.74	PASS					
18500.00†	10692.35	725.72	8191.04	15931.31	6209.37	-826.94	8256.11	177.60	4744.69	242.94	19.53	PASS					
18600.00†	10693.13	725.72	8291.04	15973.80	6210.93	-830.46	8298.42	179.73	4744.66	245.37	19.34	PASS					
18700.00†	10693.90	725.72	8391.04	16038.39	6212.70	-836.10	8362.74	181.04	4745.65	248.29	19.11	PASS					
18800.00†	10694.68	725.72	8491.03	16137.90	6215.38	-845.79	8461.75	181.07	4747.06	252.08	18.83	PASS					
18900.00†	10695.45	725.72	8591.03	16226.00	6217.67	-854.22	8549.41	181.51	4748.52	255.61	18.58	PASS					
19000.00†	10696.22	725.72	8691.03	16379.08	6222.47	-868.25	8701.77	179.61	4749.25	260.67	18.22	PASS					
19100.00†	10697.00	725.72	8791.02	16447.07	6224.71	-874.69	8769.41	180.77	4750.07	263.78	18.01	PASS					
19200.00†	10697.77	725.72	8891.02	16506.88	6226.25	-880.56	8828.91	182.21	4751.68	266.70	17.82	PASS					
19300.00†	10698.55	725.72	8991.02	16576.18	6227.53	-887.55	8897.85	183.31	4754.08	269.86	17.62	PASS					
19400.00†	10699.32	725.72	9091.01	16657.46	6228.59	-895.73	8978.70	183.96	4757.01	273.31	17.41	PASS					
19500.00†	10700.09	725.72	9191.01	16751.93	6229.46	-904.84	9072.73	184.15	4760.17	277.06	17.18	PASS					
19600.00†	10700.87	725.72	9291.01	16845.55	6230.01	-913.17	9165.97	184.36	4763.43	280.75	16.97	PASS					
19700.00†	10701.64	725.73	9391.01	16937.16	6230.24	-921.14	9257.24	184.64	4766.91	284.39	16.76	PASS					
19800.00†	10702.42	725.73	9491.00	17028.59	6230.36	-928.73	9348.35	184.93	4770.42	288.00	16.56	PASS					
19900.00†	10703.19	725.73	9591.00	17495.06	6240.41	-952.92	9813.68	172.44	4773.24	299.09	15.96	PASS					
20000.00†	10703.97	725.73	9691.00	17575.00	6245.07	-955.18	9893.46	173.13	4769.51	302.34	15.78	PASS					
20100.00†	10704.74	725.73	9790.99	17575.00	6245.07	-955.18	9893.46	176.51	4767.04	304.13	15.67	PASS					
20200.00†	10705.51	725.73	9890.99	17575.00	6245.07	-955.18	9893.46	179.92	4766.66	305.80	15.59	PASS					
20300.00†	10706.29	725.73	9990.99	17575.00	6245.07	-955.18	9893.46	183.32	4768.38	307.35	15.51	PASS					
20400.00†	10707.06	725.73	10090.98	17575.00	6245.07	-955.18	9893.46	186.70	4772.20	308.78	15.45	PASS					
20500.00†	10707.84	725.73	10190.98	17575.00	6245.07	-955.18	9893.46	190.04	4778.11	310.09	15.41	PASS					
20600.00†	10708.61	725.73	10290.98	17575.00	6245.07	-955.18	9893.46	193.31	4786.10	311.27	15.38	PASS					
20700.00†	10709.39	725.73	10390.98	17575.00	6245.07	-955.18	9893.46	196.49	4796.16	312.32	15.36	PASS					
20800.00†	10710.16	725.73	10490.97	17575.00	6245.07	-955.18	9893.46	199.57	4808.28	313.25	15.35	PASS					
20900.00†	10710.94	725.73	10590.97	17575.00	6245.07	-955.18	9893.46	202.54	4822.45	314.06	15.36	PASS					
21000.00†	10711.71	725.73	10690.97	17575.00	6245.07	-955.18	9893.46	205.38	4838.64	314.74	15.37	PASS					
21100.00†	10712.48	725.73	10790.96	17575.00	6245.07	-955.18	9893.46	208.10	4856.83	315.30	15.40	PASS					
21200.00†	10713.26	725.73	10890.96	17575.00	6245.07	-955.18	9893.46	210.69	4877.01	315.75	15.45	PASS					
21300.00†	10714.03	725.73	10990.96	17575.00	6245.07	-955.18	9893.46	213.14	4899.15	316.07	15.50	PASS					
21400.00†	10714.81	725.74	11090.95	17575.00	6245.07	-955.18	9893.46	215.47	4923.22	316.28	15.57	PASS					
21500.00†	10715.58	725.74	11190.95	17575.00	6245.07	-955.18	9893.46	217.66	4949.19	316.38	15.64	PASS					
21600.00†	10716.36	725.74	11290.95	17575.00	6245.07	-955.18	9893.46	219.74	4977.04	316.38	15.73	PASS					
21700.00†	10717.13	725.74	11390.95	17575.00	6245.07	-955.18	9893.46	221.70	5006.73	316.27	15.83	PASS					
21800.00†	10717.91	725.74	11490.94	17575.00	6245.07	-955.18	9893.46	223.54	5038.23	316.06	15.94	PASS					
21900.00†	10718.68	725.74	11590.94	17575.00	6245.07	-955.18	9893.46	225.28	5071.50	315.75	16.06	PASS					



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.12H AWB Offset Wellpath: No.12H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.12H (Slot 9) Well: No.12H Threshold Value=1.00 ft = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
22000.00†	10719.45	725.74	11690.94	17575.00	6245.07	-955.18	9893.46	226.92	5106.52	315.35	16.19	PASS
22100.00†	10720.23	725.74	11790.93	17575.00	6245.07	-955.18	9893.46	228.46	5143.25	314.87	16.33	PASS
22200.00†	10721.00	725.74	11890.93	17575.00	6245.07	-955.18	9893.46	229.92	5181.64	314.30	16.49	PASS
22300.00†	10721.78	725.74	11990.93	17575.00	6245.07	-955.18	9893.46	231.29	5221.67	313.66	16.65	PASS
22400.00†	10722.55	725.74	12090.92	17575.00	6245.07	-955.18	9893.46	232.59	5263.29	312.94	16.82	PASS
22500.00†	10723.33	725.74	12190.92	17575.00	6245.07	-955.18	9893.46	233.81	5306.48	312.15	17.00	PASS
22600.00†	10724.10	725.74	12290.92	17575.00	6245.07	-955.18	9893.46	234.97	5351.18	311.30	17.19	PASS
22700.00†	10724.88	725.75	12390.92	17575.00	6245.07	-955.18	9893.46	236.06	5397.36	310.39	17.39	PASS
22800.00†	10725.65	725.75	12490.91	17575.00	6245.07	-955.18	9893.46	237.09	5444.99	309.42	17.60	PASS
22900.00†	10726.43	725.75	12590.91	17575.00	6245.07	-955.18	9893.46	238.07	5494.03	308.40	17.81	PASS
23000.00†	10727.20	725.75	12690.91	17575.00	6245.07	-955.18	9893.46	239.00	5544.44	307.34	18.04	PASS
23100.00†	10727.98	725.75	12790.90	17575.00	6245.07	-955.18	9893.46	239.88	5596.18	306.23	18.27	PASS
23200.00†	10728.75	725.75	12890.90	17575.00	6245.07	-955.18	9893.46	240.72	5649.21	305.08	18.52	PASS
23300.00†	10729.53	725.75	12990.90	17575.00	6245.07	-955.18	9893.46	241.51	5703.51	303.90	18.77	PASS
23400.00†	10730.30	725.75	13090.89	17575.00	6245.07	-955.18	9893.46	242.27	5759.03	302.68	19.03	PASS
23465.34†	10730.81	725.75	13156.24	17575.00	6245.07	-955.18	9893.46	242.74	5795.96	301.88	19.20	PASS
23490.34	10731.00	725.75	13181.24	17575.00	6245.07	-955.18	9893.46	242.92	5810.22	301.40	19.28	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: No.12H AWB Offset Wellpath: No.12H AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	0.100ft
Facility Surface Uncertainty @1SD	Horizontal	1.000ft	Vertical	1.000ft

WELLPATH COMPOSITION - Offset Wellbore: No.12H AWB Offset Wellpath: No.12H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	7150.00	Generic gyro - northseeking (Standard)	Gyro	No.12H AWB
7150.00	17575.00	NaviTrak (Standard)	MWD	No.12H AWB

OFFSET WELLPATH-MD REFERENCE - Offset Wellbore: No.12H AWB Offset Wellpath: No.12H AWP

MD Reference: Rig on No.12H SHL (KB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	19.00ft



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 135H/AWB Offset Wellpath: No. 135H/AWP

Activity: JRU Drilling Island 1 Slot: JRU D11 No.135H Well: No.135H Threshold Value=1.00 1 = interpolated/extrapolated station															
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status			
25.00	25.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3257.88	10.09	322.77	PASS			
100.00†	100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3324.46	10.71	310.33	PASS			
200.00†	200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3413.77	10.65	320.56	PASS			
300.00†	300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3503.66	10.60	330.62	PASS			
400.00†	400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3594.08	10.56	340.51	PASS			
500.00†	500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3685.00	10.52	350.19	PASS			
600.00†	600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3776.38	10.50	359.66	PASS			
700.00†	700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3868.18	10.49	368.89	PASS			
800.00†	800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	3960.38	10.48	377.87	PASS			
900.00†	900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4052.95	10.48	386.58	PASS			
1000.00†	1000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4145.87	10.50	395.03	PASS			
1100.00†	1100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4239.11	10.51	403.20	PASS			
1200.00†	1200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4332.65	10.54	411.08	PASS			
1300.00†	1300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4426.47	10.57	418.66	PASS			
1400.00†	1400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4520.56	10.61	425.95	PASS			
1500.00†	1500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4614.89	10.66	432.93	PASS			
1600.00†	1600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4709.46	10.71	439.61	PASS			
1700.00†	1700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4804.25	10.77	445.98	PASS			
1800.00†	1800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4899.25	10.84	452.05	PASS			
1900.00†	1900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	4994.44	10.91	457.82	PASS			
2000.00†	2000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5089.82	10.99	463.28	PASS			
2100.00†	2100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5185.37	11.07	468.44	PASS			
2200.00†	2200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5281.08	11.16	473.30	PASS			
2300.00†	2300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5376.96	11.25	477.87	PASS			
2400.00†	2400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5472.98	11.35	482.14	PASS			
2500.00†	2500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5569.13	11.46	486.14	PASS			
2600.00†	2600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5665.43	11.57	489.85	PASS			
2700.00†	2700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5761.85	11.68	493.28	PASS			
2800.00†	2800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5858.38	11.80	496.45	PASS			
2900.00†	2900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	5955.04	11.93	499.36	PASS			
3000.00†	3000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6051.80	12.06	502.00	PASS			
3100.00†	3100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6148.66	12.19	504.40	PASS			
3200.00†	3200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6245.63	12.33	506.55	PASS			
3300.00†	3300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6342.69	12.47	508.47	PASS			
3400.00†	3400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6439.84	12.62	510.16	PASS			
3500.00†	3500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6537.07	12.78	511.62	PASS			
3600.00†	3600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6634.39	12.94	512.87	PASS			
3700.00†	3700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6731.78	13.10	513.90	PASS			
3800.00†	3800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6829.25	13.27	514.74	PASS			
3900.00†	3900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	6926.80	13.44	515.38	PASS			
4000.00†	4000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7024.41	13.62	515.84	PASS			
4100.00†	4100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7122.09	13.80	516.11	PASS			
4200.00†	4200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7219.83	13.99	516.21	PASS			
4300.00†	4300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7317.63	14.18	516.14	PASS			
4400.00†	4400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7415.49	14.37	515.92	PASS			



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELL PATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 135H AWB Offset Wellpath: No. 135H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.135H Well: No.135H Threshold Value=1.00 † = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4500.00†	4500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7513.41	14.57	515.54	PASS
4600.00†	4600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7611.38	14.78	515.01	PASS
4700.00†	4700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7709.40	14.99	514.35	PASS
4800.00†	4800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7807.48	15.20	513.55	PASS
4900.00†	4900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	7905.60	15.42	512.63	PASS
5000.00†	5000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8003.77	15.65	511.58	PASS
5100.00†	5100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8101.98	15.87	510.42	PASS
5200.00†	5200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8200.24	16.11	509.15	PASS
5300.00†	5300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8298.54	16.34	507.77	PASS
5400.00†	5400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8396.88	16.58	506.30	PASS
5500.00†	5500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8495.25	16.83	504.74	PASS
5600.00†	5600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8593.67	17.08	503.08	PASS
5700.00†	5700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8692.12	17.34	501.35	PASS
5800.00†	5800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8790.60	17.60	499.54	PASS
5900.00†	5900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8889.12	17.86	497.65	PASS
6000.00†	6000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	8987.68	18.13	495.70	PASS
6100.00†	6100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9086.26	18.41	493.68	PASS
6200.00†	6200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9184.88	18.68	491.61	PASS
6300.00†	6300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9283.52	18.97	489.47	PASS
6400.00†	6400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9382.19	19.25	487.29	PASS
6500.00†	6500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9480.89	19.55	485.06	PASS
6600.00†	6600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9579.62	19.84	482.78	PASS
6700.00†	6700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9678.38	20.14	480.46	PASS
6800.00†	6800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9777.15	20.45	478.11	PASS
6900.00†	6900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9875.96	20.76	475.72	PASS
7000.00†	7000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	9974.79	21.08	473.30	PASS
7100.00†	7100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10073.64	21.39	470.85	PASS
7200.00†	7200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10172.51	21.72	468.37	PASS
7300.00†	7300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10271.41	22.05	465.87	PASS
7400.00†	7400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10370.32	22.38	463.35	PASS
7500.00†	7500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10469.26	22.72	460.82	PASS
7600.00†	7600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10568.22	23.06	458.26	PASS
7700.00†	7700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10667.19	23.41	455.70	PASS
7800.00†	7800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10766.19	23.76	453.12	PASS
7900.00†	7900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10865.20	24.12	450.53	PASS
8000.00†	8000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	10964.23	24.48	447.93	PASS
8100.00†	8100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11063.28	24.84	445.33	PASS
8200.00†	8200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11162.35	25.21	442.72	PASS
8300.00†	8300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11261.43	25.59	440.11	PASS
8400.00†	8400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11360.53	25.97	437.50	PASS
8500.00†	8500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11459.64	26.35	434.89	PASS
8600.00†	8600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11558.77	26.74	432.28	PASS
8700.00†	8700.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11657.92	27.13	429.67	PASS
8800.00†	8800.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11757.07	27.53	427.07	PASS
8900.00†	8900.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11856.25	27.93	424.47	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 135H AWP Offset Wellpath: No. 135H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.135H Well: No.135H Threshold Value: 1.00 1 = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
9000.00+	9000.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	11955.43	28.34	421.88	PASS
9100.00+	9100.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	12054.63	28.75	419.29	PASS
9200.00+	9200.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	12153.85	29.17	416.71	PASS
9300.00+	9300.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	12253.07	29.59	414.14	PASS
9400.00+	9400.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	12352.31	30.01	411.58	PASS
9500.00+	9500.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	12451.56	30.44	409.03	PASS
9600.00+	9600.00	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	12550.83	30.88	406.49	PASS
9613.40	9613.40	0.00	0.00	283.00	-2859.01	-154.89	1507.41	95.87	12564.13	30.93	406.16	PASS
9700.00+	9699.88	1.62	3.57	283.00	-2859.01	-154.89	1507.41	95.94	12649.58	31.38	403.09	PASS
9800.00+	9798.81	7.51	16.55	283.00	-2859.01	-154.89	1507.41	96.22	12746.36	31.87	399.98	PASS
9900.00+	9895.72	17.65	38.87	283.00	-2859.01	-154.89	1507.41	96.70	12840.15	32.37	396.73	PASS
10000.00+	9989.53	31.91	70.29	283.00	-2859.01	-154.89	1507.41	97.41	12930.01	32.87	393.31	PASS
10100.00+	10079.21	50.16	110.46	283.00	-2859.01	-154.89	1507.41	98.35	13015.04	33.40	389.71	PASS
10200.00+	10163.80	72.17	158.96	283.00	-2859.01	-154.89	1507.41	99.56	13094.40	33.93	385.93	PASS
10300.00+	10242.35	97.73	215.24	283.00	-2859.01	-154.89	1507.41	101.06	13167.35	34.47	381.96	PASS
10400.00+	10314.02	126.53	278.68	283.00	-2859.01	-154.89	1507.41	102.90	13233.20	35.03	377.78	PASS
10500.00+	10378.00	158.28	348.60	283.00	-2859.01	-154.89	1507.41	105.12	13291.33	35.60	373.38	PASS
10600.00+	10433.61	192.62	424.23	283.00	-2859.01	-154.89	1507.41	107.79	13341.21	36.18	368.76	PASS
10700.00+	10480.24	229.17	504.73	283.00	-2859.01	-154.89	1507.41	110.96	13382.39	36.77	363.93	PASS
10780.07	10510.74	259.76	572.11	283.00	-2859.01	-154.89	1507.41	113.91	13408.84	36.79	364.51	PASS
10800.00+	10517.56	267.51	589.17	283.00	-2859.01	-154.89	1507.41	114.70	13414.70	36.87	363.82	PASS
10900.00+	10551.76	306.36	674.73	283.00	-2859.01	-154.89	1507.41	118.98	13444.51	37.13	362.08	PASS
10980.07	10579.14	337.46	743.24	283.00	-2859.01	-154.89	1507.41	122.79	13468.87	37.33	360.77	PASS
11000.00+	10585.77	345.23	760.36	283.00	-2859.01	-154.89	1507.41	123.80	13474.80	37.79	356.59	PASS
11100.00+	10612.99	385.00	847.93	283.00	-2859.01	-154.89	1507.41	129.31	13498.93	38.16	353.74	PASS
11200.00+	10630.01	425.72	937.61	283.00	-2859.01	-154.89	1507.41	135.54	13513.53	38.85	347.85	PASS
11300.00+	10636.64	466.95	1028.43	283.00	-2859.01	-154.89	1507.41	142.39	13518.46	39.15	345.28	PASS
11306.02	10636.71	469.43	1033.90	283.00	-2859.01	-154.89	1507.41	142.82	13518.44	39.08	345.91	PASS
11400.00+	10637.43	506.88	1120.10	283.00	-2859.01	-154.89	1507.41	149.66	13518.21	39.45	342.63	PASS
11500.00+	10638.20	543.59	1213.11	283.00	-2859.01	-154.89	1507.41	157.15	13518.48	39.81	339.60	PASS
11600.00+	10638.98	577.03	1307.34	283.00	-2859.01	-154.89	1507.41	164.71	13519.30	40.19	336.37	PASS
11700.00+	10639.75	607.17	1402.68	283.00	-2859.01	-154.89	1507.41	172.18	13520.66	40.61	332.97	PASS
11800.00+	10640.52	633.96	1499.02	283.00	-2859.01	-154.89	1507.41	179.39	13522.57	41.05	329.42	PASS
11900.00+	10641.30	657.37	1596.23	283.00	-2859.01	-154.89	1507.41	186.24	13525.01	41.52	325.74	PASS
12000.00+	10642.07	677.37	1694.20	283.00	-2859.01	-154.89	1507.41	192.65	13528.00	42.02	321.95	PASS
12100.00+	10642.84	693.94	1792.81	283.00	-2859.01	-154.89	1507.41	198.58	13531.52	42.54	318.08	PASS
12200.00+	10643.62	707.07	1891.94	283.00	-2859.01	-154.89	1507.41	204.04	13535.58	43.09	314.15	PASS
12300.00+	10644.39	716.72	1991.46	283.00	-2859.01	-154.89	1507.41	209.05	13540.16	43.66	310.16	PASS
12400.00+	10645.16	722.89	2091.27	283.00	-2859.01	-154.89	1507.41	213.63	13545.26	44.25	306.14	PASS
12500.00+	10645.94	725.58	2191.22	283.00	-2859.01	-154.89	1507.41	217.84	13550.88	44.86	302.09	PASS
12526.98	10646.15	725.71	2218.20	283.00	-2859.01	-154.89	1507.41	218.91	13552.49	44.94	301.59	PASS
12600.00+	10646.71	725.71	2291.22	283.00	-2859.01	-154.89	1507.41	221.67	13557.08	45.48	298.10	PASS
12700.00+	10647.48	725.71	2391.22	283.00	-2859.01	-154.89	1507.41	225.10	13563.99	46.13	294.06	PASS
12800.00+	10648.26	725.71	2491.21	283.00	-2859.01	-154.89	1507.41	228.17	13571.65	46.79	290.03	PASS
12900.00+	10649.03	725.71	2591.21	283.00	-2859.01	-154.89	1507.41	230.91	13580.03	47.48	286.02	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU DIIA No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 135H AWB Offset Wellpath: No. 135H AWP

Facility: JRU Drilling Island 1 Slot: JRU DII No.135H Well: No.135H Threshold Value: 1.00 - 1 = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist. [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13000.00†	10649.80	725.71	2691.21	283.00	-2859.01	-154.89	1507.41	233.36	13589.15	48.18	282.06	PASS
13100.00†	10650.58	725.71	2791.20	283.00	-2859.01	-154.89	1507.41	235.55	13598.99	48.89	278.13	PASS
13200.00†	10651.35	725.71	2891.20	283.00	-2859.01	-154.89	1507.41	237.53	13609.56	49.62	274.26	PASS
13300.00†	10652.12	725.71	2991.20	283.00	-2859.01	-154.89	1507.41	239.31	13620.86	50.36	270.45	PASS
13400.00†	10652.90	725.71	3091.19	283.00	-2859.01	-154.89	1507.41	240.93	13632.88	51.12	266.69	PASS
13500.00†	10653.67	725.71	3191.19	283.00	-2859.01	-154.89	1507.41	242.39	13645.63	51.88	263.01	PASS
13600.00†	10654.44	725.71	3291.19	283.00	-2859.01	-154.89	1507.41	243.73	13659.09	52.66	259.39	PASS
13700.00†	10655.22	725.71	3391.19	283.00	-2859.01	-154.89	1507.41	244.95	13673.27	53.44	255.85	PASS
13800.00†	10655.99	725.71	3491.18	283.00	-2859.01	-154.89	1507.41	246.06	13688.17	54.24	252.38	PASS
13900.00†	10656.76	725.71	3591.18	283.00	-2859.01	-154.89	1507.41	247.09	13703.78	55.04	248.99	PASS
14000.00†	10657.54	725.71	3691.18	283.00	-2859.01	-154.89	1507.41	248.04	13720.11	55.84	245.68	PASS
14100.00†	10658.31	725.71	3791.17	283.00	-2859.01	-154.89	1507.41	248.91	13737.14	56.66	242.45	PASS
14200.00†	10659.08	725.71	3891.17	283.00	-2859.01	-154.89	1507.41	249.73	13754.88	57.48	239.30	PASS
14300.00†	10659.86	725.71	3991.17	283.00	-2859.01	-154.89	1507.41	250.48	13773.32	58.31	236.23	PASS
14400.00†	10660.63	725.71	4091.16	283.00	-2859.01	-154.89	1507.41	251.18	13792.46	59.14	233.23	PASS
14500.00†	10661.40	725.71	4191.16	283.00	-2859.01	-154.89	1507.41	251.83	13812.30	59.97	230.32	PASS
14600.00†	10662.18	725.71	4291.16	283.00	-2859.01	-154.89	1507.41	252.45	13832.83	60.81	227.48	PASS
14700.00†	10662.95	725.71	4391.16	283.00	-2859.01	-154.89	1507.41	253.02	13854.06	61.65	224.72	PASS
14800.00†	10663.72	725.71	4491.15	283.00	-2859.01	-154.89	1507.41	253.56	13875.97	62.49	222.04	PASS
14900.00†	10664.50	725.71	4591.15	283.00	-2859.01	-154.89	1507.41	254.06	13898.57	63.34	219.43	PASS
15000.00†	10665.27	725.71	4691.15	283.00	-2859.01	-154.89	1507.41	254.54	13921.85	64.19	216.90	PASS
15100.00†	10666.04	725.71	4791.14	283.00	-2859.01	-154.89	1507.41	254.99	13945.81	65.03	214.44	PASS
15200.00†	10666.82	725.71	4891.14	283.00	-2859.01	-154.89	1507.41	255.41	13970.44	65.88	212.05	PASS
15300.00†	10667.59	725.71	4991.14	283.00	-2859.01	-154.89	1507.41	255.81	13995.74	66.73	209.73	PASS
15400.00†	10668.36	725.71	5091.13	283.00	-2859.01	-154.89	1507.41	256.20	14021.71	67.58	207.48	PASS
15500.00†	10669.14	725.71	5191.13	283.00	-2859.01	-154.89	1507.41	256.56	14048.35	68.43	205.29	PASS
15600.00†	10669.91	725.71	5291.13	283.00	-2859.01	-154.89	1507.41	256.90	14075.64	69.28	203.17	PASS
15700.00†	10670.69	725.71	5391.13	283.00	-2859.01	-154.89	1507.41	257.23	14103.60	70.13	201.11	PASS
15800.00†	10671.46	725.71	5491.12	283.00	-2859.01	-154.89	1507.41	257.54	14132.20	70.97	199.12	PASS
15900.00†	10672.23	725.71	5591.12	283.00	-2859.01	-154.89	1507.41	257.83	14161.45	71.82	197.18	PASS
16000.00†	10673.01	725.71	5691.12	283.00	-2859.01	-154.89	1507.41	258.11	14191.35	72.66	195.31	PASS
16100.00†	10673.78	725.71	5791.11	283.00	-2859.01	-154.89	1507.41	258.38	14221.89	73.50	193.49	PASS
16200.00†	10674.55	725.71	5891.11	283.00	-2859.01	-154.89	1507.41	258.64	14253.06	74.34	191.72	PASS
16300.00†	10675.33	725.71	5991.11	283.00	-2859.01	-154.89	1507.41	258.89	14284.86	75.18	190.01	PASS
16400.00†	10676.10	725.71	6091.10	283.00	-2859.01	-154.89	1507.41	259.13	14317.30	76.01	188.36	PASS
16500.00†	10676.88	725.71	6191.10	283.00	-2859.01	-154.89	1507.41	259.35	14350.35	76.84	186.75	PASS
16600.00†	10677.65	725.71	6291.10	283.00	-2859.01	-154.89	1507.41	259.57	14384.03	77.67	185.19	PASS
16700.00†	10678.42	725.71	6391.10	283.00	-2859.01	-154.89	1507.41	259.78	14418.32	78.50	183.68	PASS
16800.00†	10679.20	725.71	6491.09	283.00	-2859.01	-154.89	1507.41	259.98	14453.22	79.32	182.22	PASS
16900.00†	10679.97	725.71	6591.09	283.00	-2859.01	-154.89	1507.41	260.17	14488.73	80.13	180.81	PASS
17000.00†	10680.74	725.71	6691.09	283.00	-2859.01	-154.89	1507.41	260.36	14524.84	80.95	179.43	PASS
17100.00†	10681.52	725.71	6791.08	283.00	-2859.01	-154.89	1507.41	260.54	14561.55	81.76	178.11	PASS
17200.00†	10682.29	725.71	6891.08	283.00	-2859.01	-154.89	1507.41	260.71	14598.85	82.56	176.82	PASS
17300.00†	10683.07	725.71	6991.08	283.00	-2859.01	-154.89	1507.41	260.88	14636.73	83.37	175.57	PASS
17400.00†	10683.84	725.71	7091.07	283.00	-2859.01	-154.89	1507.41	261.04	14675.20	84.16	174.37	PASS



Clearance Report

Rev-A.0

Closest Approach

Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No.135H AWP Offset Wellpath: No.135H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.135H Well: No.135H Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
17500.00†	10684.61	725.71	7191.07	283.00	-2859.01	-154.89	1507.41	261.19	14714.25	84.96	173.20	PASS	
17600.00†	10685.39	725.72	7291.07	283.00	-2859.01	-154.89	1507.41	261.34	14753.88	85.74	172.07	PASS	
17700.00†	10686.16	725.72	7391.07	283.00	-2859.01	-154.89	1507.41	261.49	14794.07	86.53	170.97	PASS	
17800.00†	10686.94	725.72	7491.06	283.00	-2859.01	-154.89	1507.41	261.63	14834.83	87.31	169.91	PASS	
17900.00†	10687.71	725.72	7591.06	283.00	-2859.01	-154.89	1507.41	261.76	14876.15	88.08	168.89	PASS	
18000.00†	10688.48	725.72	7691.06	283.00	-2859.01	-154.89	1507.41	261.90	14918.03	88.85	167.90	PASS	
18100.00†	10689.26	725.72	7791.05	283.00	-2859.01	-154.89	1507.41	262.02	14960.46	89.62	166.94	PASS	
18200.00†	10690.03	725.72	7891.05	283.00	-2859.01	-154.89	1507.41	262.15	15003.43	90.38	166.01	PASS	
18300.00†	10690.81	725.72	7991.05	283.00	-2859.01	-154.89	1507.41	262.27	15046.95	91.13	165.11	PASS	
18400.00†	10691.58	725.72	8091.04	283.00	-2859.01	-154.89	1507.41	262.38	15091.00	91.88	164.24	PASS	
18500.00†	10692.35	725.72	8191.04	283.00	-2859.01	-154.89	1507.41	262.49	15135.58	92.63	163.40	PASS	
18600.00†	10693.13	725.72	8291.04	283.00	-2859.01	-154.89	1507.41	262.60	15180.70	93.37	162.59	PASS	
18700.00†	10693.90	725.72	8391.04	283.00	-2859.01	-154.89	1507.41	262.71	15226.33	94.10	161.81	PASS	
18800.00†	10694.68	725.72	8491.03	283.00	-2859.01	-154.89	1507.41	262.81	15272.49	94.83	161.05	PASS	
18900.00†	10695.45	725.72	8591.03	283.00	-2859.01	-154.89	1507.41	262.91	15319.16	95.55	160.32	PASS	
19000.00†	10696.22	725.72	8691.03	283.00	-2859.01	-154.89	1507.41	263.01	15366.34	96.27	159.61	PASS	
19100.00†	10697.00	725.72	8791.02	283.00	-2859.01	-154.89	1507.41	263.11	15414.02	96.98	158.93	PASS	
19200.00†	10697.77	725.72	8891.02	283.00	-2859.01	-154.89	1507.41	263.20	15462.20	97.69	158.27	PASS	
19300.00†	10698.55	725.72	8991.02	283.00	-2859.01	-154.89	1507.41	263.29	15510.88	98.39	157.64	PASS	
19400.00†	10699.32	725.72	9091.01	283.00	-2859.01	-154.89	1507.41	263.38	15560.04	99.09	157.03	PASS	
19500.00†	10700.09	725.72	9191.01	283.00	-2859.01	-154.89	1507.41	263.46	15609.70	99.78	156.44	PASS	
19600.00†	10700.87	725.72	9291.01	283.00	-2859.01	-154.89	1507.41	263.55	15659.83	100.47	155.87	PASS	
19700.00†	10701.64	725.73	9391.01	283.00	-2859.01	-154.89	1507.41	263.63	15710.44	101.15	155.32	PASS	
19800.00†	10702.42	725.73	9491.00	283.00	-2859.01	-154.89	1507.41	263.71	15761.52	101.83	154.79	PASS	
19900.00†	10703.19	725.73	9591.00	283.00	-2859.01	-154.89	1507.41	263.78	15813.07	102.50	154.28	PASS	
20000.00†	10703.97	725.73	9691.00	283.00	-2859.01	-154.89	1507.41	263.86	15865.09	103.16	153.79	PASS	
20100.00†	10704.74	725.73	9790.99	283.00	-2859.01	-154.89	1507.41	263.93	15917.56	103.82	153.32	PASS	
20200.00†	10705.51	725.73	9890.99	283.00	-2859.01	-154.89	1507.41	264.00	15970.48	104.47	152.87	PASS	
20300.00†	10706.29	725.73	9990.99	283.00	-2859.01	-154.89	1507.41	264.07	16023.86	105.12	152.43	PASS	
20400.00†	10707.06	725.73	10090.98	283.00	-2859.01	-154.89	1507.41	264.14	16077.68	105.76	152.01	PASS	
20500.00†	10707.84	725.73	10190.98	283.00	-2859.01	-154.89	1507.41	264.21	16131.94	106.40	151.61	PASS	
20600.00†	10708.61	725.73	10290.98	283.00	-2859.01	-154.89	1507.41	264.28	16186.63	107.04	151.23	PASS	
20700.00†	10709.39	725.73	10390.98	283.00	-2859.01	-154.89	1507.41	264.34	16241.76	107.66	150.86	PASS	
20800.00†	10710.16	725.73	10490.97	283.00	-2859.01	-154.89	1507.41	264.40	16297.31	108.28	150.50	PASS	
20900.00†	10710.94	725.73	10590.97	283.00	-2859.01	-154.89	1507.41	264.46	16353.29	108.90	150.17	PASS	
21000.00†	10711.71	725.73	10690.97	283.00	-2859.01	-154.89	1507.41	264.52	16409.68	109.51	149.84	PASS	
21100.00†	10712.48	725.73	10790.96	283.00	-2859.01	-154.89	1507.41	264.58	16466.49	110.12	149.53	PASS	
21200.00†	10713.26	725.73	10890.96	283.00	-2859.01	-154.89	1507.41	264.64	16523.71	110.72	149.24	PASS	
21300.00†	10714.03	725.73	10990.96	283.00	-2859.01	-154.89	1507.41	264.70	16581.34	111.32	148.96	PASS	
21400.00†	10714.81	725.74	11090.95	283.00	-2859.01	-154.89	1507.41	264.75	16639.36	111.91	148.69	PASS	
21500.00†	10715.58	725.74	11190.95	283.00	-2859.01	-154.89	1507.41	264.80	16697.79	112.49	148.44	PASS	
21600.00†	10716.36	725.74	11290.95	283.00	-2859.01	-154.89	1507.41	264.86	16756.60	113.07	148.19	PASS	
21700.00†	10717.13	725.74	11390.95	283.00	-2859.01	-154.89	1507.41	264.91	16815.81	113.65	147.96	PASS	
21800.00†	10717.91	725.74	11490.94	283.00	-2859.01	-154.89	1507.41	264.96	16875.40	114.22	147.75	PASS	
21900.00†	10718.68	725.74	11590.94	283.00	-2859.01	-154.89	1507.41	265.01	16935.37	114.78	147.54	PASS	



Clearance Report

Rev-A.0
Closest Approach
Page x of xx



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	JRU D11A No.203H
Area	Eddy County, NM	Well	No.203H
Field	JRU NAD27	Wellbore	No.203H PWB
Facility	JRU Drilling Island 1A		

CLEARANCE DATA - Offset Wellbore: No. 135H AWB Offset Wellpath: No. 135H AWP

Facility: JRU Drilling Island 1 Slot: JRU D11 No.135H Well: No.135H Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
22000.00†	10719.45	725.74	11690.94	283.00	-2859.01	-154.89	1507.41	265.06	16995.72	115.35	147.35	PASS	
22100.00†	10720.23	725.74	11790.93	283.00	-2859.01	-154.89	1507.41	265.11	17056.44	115.90	147.16	PASS	
22200.00†	10721.00	725.74	11890.93	283.00	-2859.01	-154.89	1507.41	265.15	17117.53	116.45	146.99	PASS	
22300.00†	10721.78	725.74	11990.93	283.00	-2859.01	-154.89	1507.41	265.20	17178.99	117.00	146.83	PASS	
22400.00†	10722.55	725.74	12090.92	283.00	-2859.01	-154.89	1507.41	265.24	17240.80	117.54	146.68	PASS	
22500.00†	10723.33	725.74	12190.92	283.00	-2859.01	-154.89	1507.41	265.29	17302.97	118.08	146.54	PASS	
22600.00†	10724.10	725.74	12290.92	283.00	-2859.01	-154.89	1507.41	265.33	17365.50	118.61	146.41	PASS	
22700.00†	10724.88	725.75	12390.92	283.00	-2859.01	-154.89	1507.41	265.37	17428.38	119.14	146.29	PASS	
22800.00†	10725.65	725.75	12490.91	283.00	-2859.01	-154.89	1507.41	265.42	17491.60	119.66	146.18	PASS	
22900.00†	10726.43	725.75	12590.91	283.00	-2859.01	-154.89	1507.41	265.46	17555.16	120.18	146.07	PASS	
23000.00†	10727.20	725.75	12690.91	283.00	-2859.01	-154.89	1507.41	265.50	17619.06	120.69	145.98	PASS	
23100.00†	10727.98	725.75	12790.90	283.00	-2859.01	-154.89	1507.41	265.54	17683.30	121.20	145.90	PASS	
23200.00†	10728.75	725.75	12890.90	283.00	-2859.01	-154.89	1507.41	265.58	17747.86	121.71	145.82	PASS	
23300.00†	10729.53	725.75	12990.90	283.00	-2859.01	-154.89	1507.41	265.62	17812.76	122.21	145.76	PASS	
23400.00†	10730.30	725.75	13090.89	283.00	-2859.01	-154.89	1507.41	265.65	17877.98	122.71	145.70	PASS	
23465.34†	10730.81	725.75	13156.24	283.00	-2859.01	-154.89	1507.41	265.68	17920.77	123.03	145.66	PASS	
23490.34	10731.00	725.75	13181.24	283.00	-2859.01	-154.89	1507.41	265.69	17937.17	123.06	145.76	PASS	

POSITIONAL UNCERTAINTY - Offset Wellbore: No. 135H AWB Offset Wellpath: No. 135H AWP

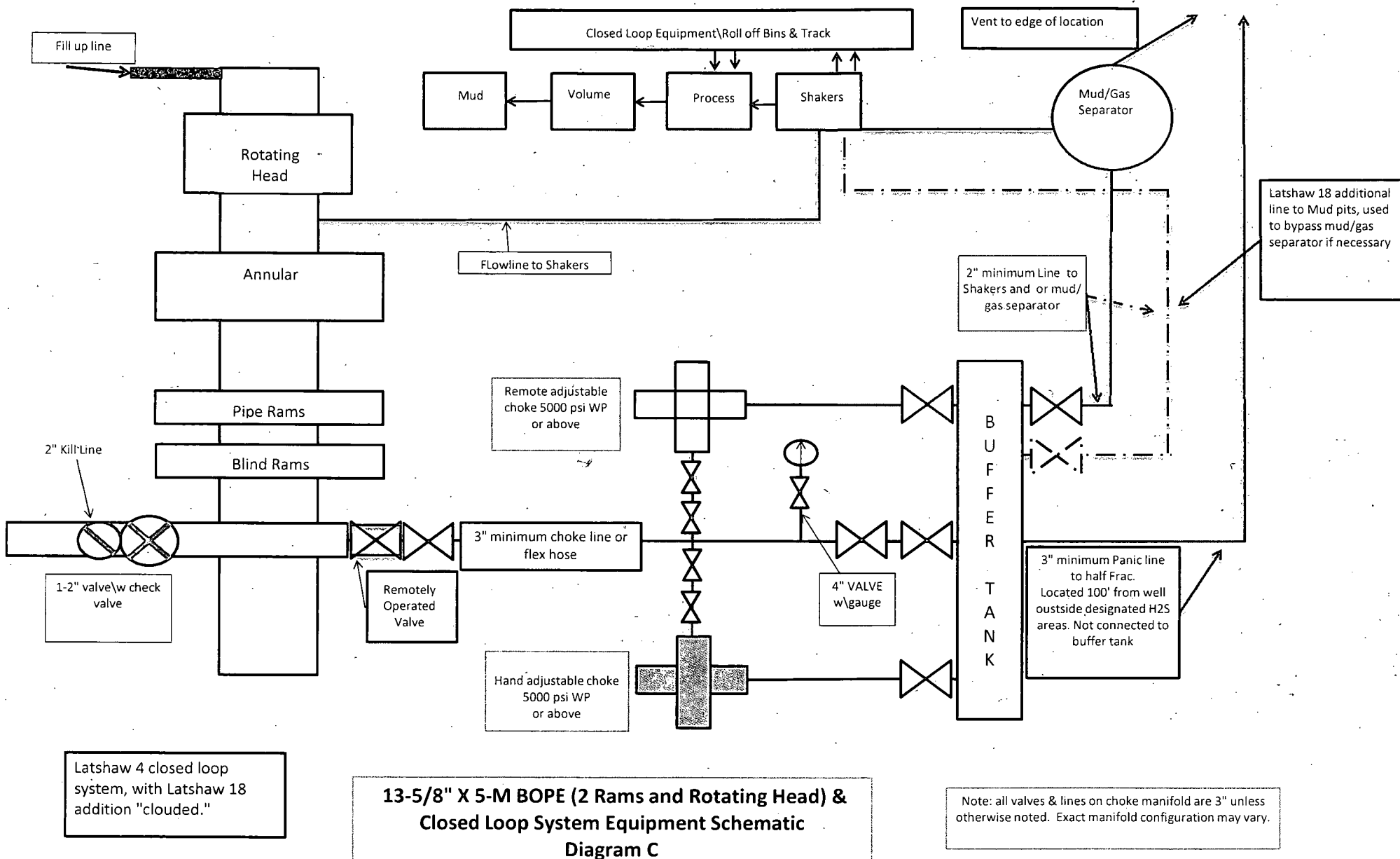
Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	0.100ft
Facility Surface Uncertainty @1SD	Horizontal	1.000ft	Vertical	1.000ft

WELLPATH COMPOSITION - Offset Wellbore: No. 135H AWB Offset Wellpath: No. 135H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	283.00	Generic gyro - northseeking (Standard)	Surface Gyros <192-283>	No. 135H AWB

OFFSET WELLPATH MD REFERENCE - Offset Wellbore: No. 135H AWB Offset Wellpath: No. 135H AWP

MD Reference: Rig on No.39H SHL (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Note: Dimensional information reflected on this drawing are estimated measurements only.

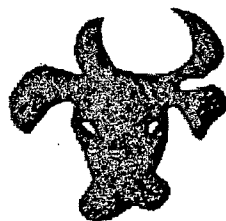
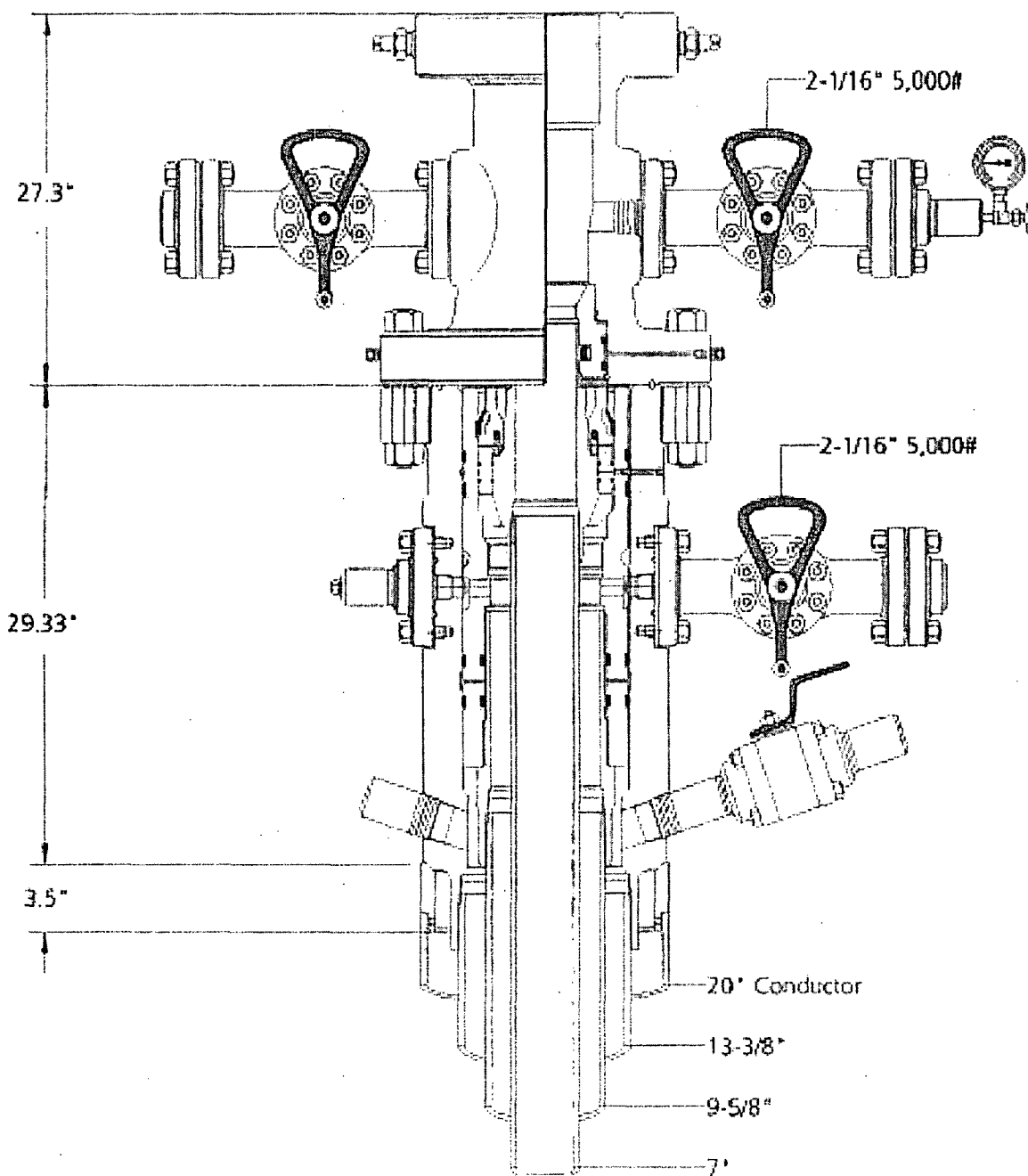


Diagram Z



BOPCO
Project: South East New Mexico

CAMERON

Jeanette

7-22-13

#

21077904-A



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

April 4, 2012

Customer: Latshaw

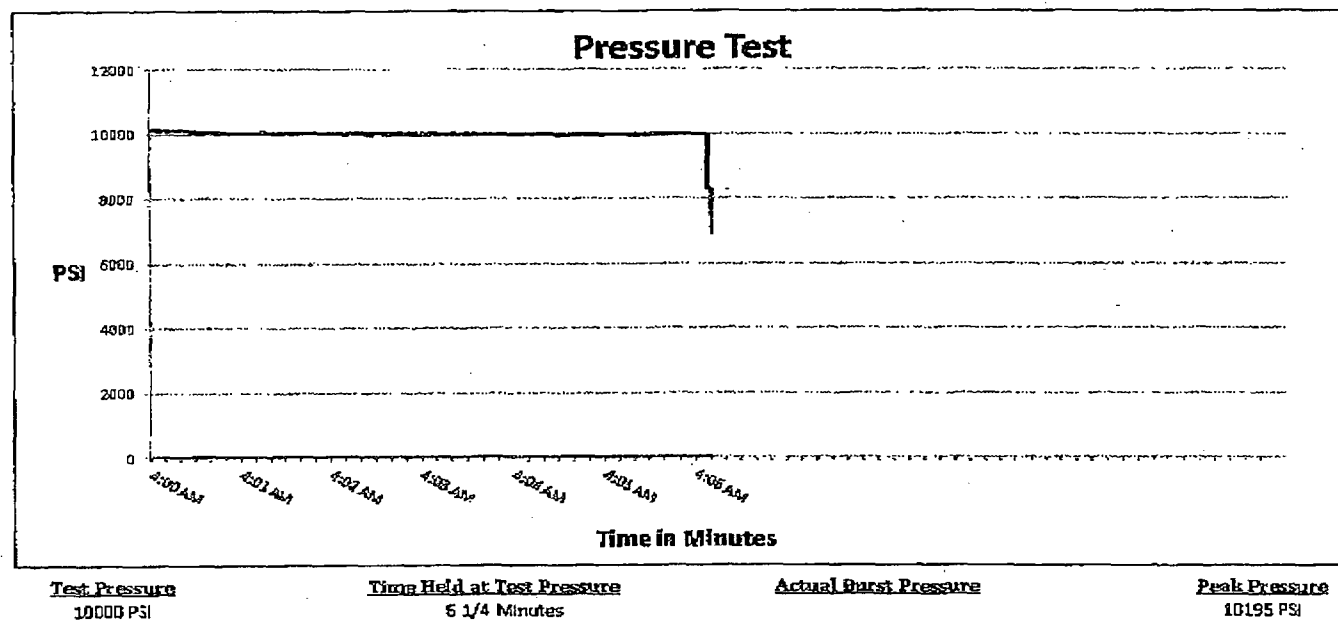
Pick Ticket #: 81610

Hose Specifications

<u>Hose Type</u>	<u>Length</u>
D	30'
<u>I.D.</u>	<u>O.D.</u>
3"	4 15/32
<u>Working Pressure</u>	<u>Burst Pressure</u>
5000 PSI	Standard Safety Multiplier Applies

Verification

<u>Type of Fitting</u>	<u>Coupling Method</u>
41/16 SK	Swage
<u>Die Size</u>	<u>Final O.D.</u>
5.12"	5.16"
<u>Hose Serial #</u>	<u>Hose Assembly Serial #</u>
6884	81610



Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Donnie Mclemore

Approved By: Bobby Fink

Donnie Mclemore

Bobby Fink

M I D W E S T
HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT			
Customer: LATSHAW DRILLING		P.O. Number: RIG#4	
HOSE SPECIFICATIONS			
Type: CHOKE LINE		Length: 30'	
I.D. 3" INCHES		O.D. 6" INCHES	
WORKING PRESSURE 5,000 PSI	TEST PRESSURE 10,000 PSI		BURST PRESSURE PSI
COUPLINGS			
Type of End Fitting 4 1/16 5K FLANGE			
Type of Coupling: SWEDGED		MANUFACTURED BY MIDWEST HOSE & SPECIALTY	
PROCEDURE			
<i>Hose assembly pressure tested with water at ambient temperature.</i>			
TIME HELD AT TEST PRESSURE 1 MIN.		ACTUAL BURST PRESSURE: 0 PSI	
COMMENTS: SO#81610 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes			
Date: 3/2/2011	Tested By: BOBBY FINK		Approved: MENDI JACKSON

TABLE OF CONTENTS

I. H₂S Contingency Plan

- A. Scope
- B. Objective
- C. Discussion of Plan

II. Emergency Procedures

- A. Emergency Procedures and Public Protection
- B. Emergency Procedures Implementation
- C. Simulated Blowout Control Drills

III. Ignition Procedures

- A. Responsibility
- B. Instructions

IV. Training Requirements

V. Emergency Equipment

VI. Evacuation Plan

- A. General Plan
- B. Emergency Phone Lists

VII. General Information

- A. H₂S Toxicity Table
- B. Respirator Use
- C. Emergency Rescue

H₂S CONTINGENCY PLAN SECTION

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release, or following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H₂S).

Objective:

Prevent any and all accidents, and prevent the uncontrolled release of H₂S into the atmosphere.

Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

Discussion of Plan:

Suspected Problem Zones:

Implementation: This plan, with all details, is to be fully implemented 500' above or three days prior to drilling into the first known sour zone

Emergency Response and Public Protection Procedure: This section outlines the conditions and denotes steps to be taken in the event of an emergency.

Emergency Equipment and Procedure: This section outlines the safety and emergency equipment that will be required for the drilling of this well.

Training Provisions: This section outlines the training provisions that must be adhered to 500 feet above or three days prior to drilling into the first known sour zone.

Emergency call lists: Included are the telephone numbers of all persons that would need to be contacted should an H₂S emergency occur.

Briefing: This section deals with the briefing of all persons involved with the drilling of this well.

Public Safety: Public Safety Personnel will be made aware of the drilling of this well.

EMERGENCY PROCEDURES AND PUBLIC PROTECTION SECTION

- I. In the event of any evidence of H₂S levels above 10 ppm, take the following steps immediately:
 - A. Secure breathing apparatus.
 - B. Order non-essential personnel out of the danger zone.
 - C. Take steps to determine if the H₂S level can be corrected or suppressed, and if so, proceed with normal operations.
- II. If uncontrollable conditions occur, proceed with the following:
 - A. Take steps to protect and/or remove any public downwind of the rig, including partial evacuation or isolation. Notify necessary public safety personnel and the New Mexico Oil & Gas of the situation.
 - B. Isolate area and prevent entry by unauthorized persons into the 100 ppm ROE.
 - C. Remove all personnel to the Safe Briefing Area.
 - D. Notify public safety personnel for help with maintaining roadblocks and implementing evacuation. Phone number list attached.
 - E. Determine and proceed with the best possible plan to regain control of the well. Maintain tight security and safety measures.
- III. Responsibility:
 - A. The Company Approved Supervisor shall be responsible for the total implementation of the plan.
 - B. The Company Approved Supervisor shall be in complete command during any emergency.
 - C. The Company Approved Supervisor shall designate a back up Supervisor in the event that he/she is not available.

EMERGENCY PROCEDURE IMPLEMENTATION

I. Drilling or Tripping

A. All Personnel

1. When alarm sounds, don escape unit and report to upwind Safe Briefing Area.
2. Check status of other personnel (buddy system).
3. Secure breathing apparatus.
4. Wait for orders from supervisor.

B. Drilling Foreman

1. Report to the upwind Safe Briefing Area.
2. Don Breathing Apparatus and return to the point of release with the Tool Pusher or Driller (buddy system).
3. Determine the concentration of H₂S.
4. Assess the situation and take appropriate control measures.

C. Tool Pusher

1. Report to the upwind Safe Briefing Area.
2. Don breathing apparatus and return to the point of release with the Drilling Foreman or the Driller (buddy system).
3. Determine the concentration.
4. Assess the situation and take appropriate control measures.

D. Driller

1. Check the status of other personnel (in a rescue attempt, always use the buddy system).
2. Assign the least essential person to notify the Drilling Foreman and Tool Pusher, in the event of their absence.

3. Assume the responsibility of the Drilling Foreman and the Tool Pusher until they arrive, in the event of their absence.

E. Derrick Man and Floor Hands

1. Remain in the upwind Safe Briefing Area until otherwise instructed by a supervisor.

F. Mud Engineer

1. Report to the upwind Safe Briefing Area.
2. When instructed, begin check of mud for pH level and H₂S level.

G. On-site Safety Personnel

1. Don Breathing Apparatus.
2. Check status of all personnel.
3. Wait for instructions from Drilling Foreman or Tool Pusher.

II. Taking a Kick

- A. All personnel report to the upwind Safe Briefing Area.
- B. Follow standard BOP procedures.

III. Open Hole Logging

- A. All unnecessary personnel should leave the rig floor.
- B. Drilling Foreman and Safety Personnel should monitor the conditions and make necessary safety equipment recommendations.

IV. Running Casing or Plugging

- A. Follow "Drilling or Tripping" procedures.
- B. Assure that all personnel have access to protective equipment.

SIMULATED BLOWOUT CONTROL DRILLS

All drills will be initiated by activating alarm devices (air horn). Use one long blast on the air horn for ACTUAL and SIMULATED Blowout Control Drills. This operation will be performed by the Drilling Foreman or Tool Pusher at least one time per week for each of the following conditions, with each crew:

Drill # 1 Bottom Drilling

Drill # 2 Tripping Drill Pipe

In each of these drills, the initial reaction time to shutting in the well shall be timed as well as the total time for the crew to complete its entire pit drill assignment. The times must be recorded on the IADC Driller's Log as "Blowout Control Drill".

Drill No.:

Reaction Time to Shut-In:

minutes,

seconds.

Total Time to Complete Assignment:

minutes,

seconds.

I. Drill Overviews

A. Drill No. 1- Bottom Drilling

1. Sound the alarm immediately.
2. Stop the rotary and hoist kelly joint above the rotary table.
3. Stop the circulatory pump.
4. Close the drill pipe rams.
5. Record casing and drill pipe shut-in pressures and pit volume increases.

B. Drill No. 2 – Tripping Drill Pipe

1. Sound the alarm immediately.
2. Position the upper tool joint just above the rotary table and set the slips.

3. Install a full opening valve or inside blowout preventor tool in order to close the drill pipe.
4. Close the drill pipe rams.
5. Record the shut-in annular pressure.

II. Crew Assignments

A. Drill No. 1 – Bottom Drilling

1. Driller
 - a) Stop the rotary and hoist kelly joint above the rotary table.
 - b) Stop the circulatory pump.
 - c) Check flow.
 - d) If flowing, sound the alarm immediately.
 - e) Record the shut-in drill pipe pressure.
 - f) Determine the mud weight increase needed or other courses of action.
2. Derrickman
 - a) Open choke line valve at BOP.
 - b) Signal Floor Man # 1 at accumulator that choke line is open.
 - c) Close choke and upstream valve after pipe tams have been closed.
 - d) Read the shut-in annular pressure and report readings to Driller.
3. Floor Man # 1
 - a) Close the pipe rams after receiving the signal from the Derrickman.
 - b) Report to Driller for further instructions.

4. Floor Man # 2

- a) Notify the Tool Pusher and Operator Representative of the H₂S alarms.
- b) Check for open fires and, if safe to do so, extinguish them.
- c) Stop all welding operations.
- d) Turn-off all non-explosion proof lights and instruments.
- e) Report to Driller for further instructions.

5. Tool Pusher

- a) Report to the rig floor.
- b) Have a meeting with all crews.
- c) Compile and summarize all information.
- d) Calculate the proper kill weight.
- e) Ensure that proper well procedures are put into action.

6. Operator Representative

- a) Notify the Drilling Superintendent.
- b) Determine if an emergency exists and if so, activate the contingency plan.

B. Drill No. 2 – Tripping Pipe

1. Driller

- a) Sound the alarm immediately when mud volume increase has been detected.
- b) Position the upper tool joint just above the rotary table and set slips.
- c) Install a full opening valve or inside blowout preventor tool to close the drill pipe.
- d) Check flow.

e) Record all data reported by the crew.

f) Determine the course of action.

2. Derrickman

a) Come down out of derrick.

b) Notify Tool Pusher and Operator Representative.

c) Check for open fires and, if safe to do so, extinguish them.

d) Stop all welding operations.

e) Report to Driller for further instructions.

3. Floor Man # 1

a) Pick up full opening valve or inside blowout preventor tool and stab into tool joint above rotary table (with Floor Man # 2).

b) Tighten valve with back-up tongs.

c) Close pipe rams after signal from Floor Man # 2.

d) Read accumulator pressure and check for possible high pressure fluid leaks in valves or piping.

e) Report to Driller for further instructions.

4. Floor Man # 2

a) Pick-up full opening valve or inside blowout preventor tool and stab into tool joint above rotary table (with Floor Man # 1).

b) Position back-up tongs on drill pipe.

c) Open choke line valve at BOP.

d) Signal Floor Man # 1 at accumulator that choke line is open.

e) Close choke and upstream valve after pipe rams have been closed.

f) Check for leaks on BOP stack and choke manifold.

- g) Read annular pressure.
- h) Report readings to the Driller.

5. Tool Pusher

- a) Report to the rig floor.
- b) Have a meeting with all of the crews.
- c) Compile and summarize all information.
- d) See that proper well kill procedures are put into action.

6. Operator Representative

- a) Notify Drilling Superintendent
- b) Determine if an emergency exists, and if so, activate the contingency plan.

IGNITION PROCEDURES

Responsibility:

The decision to ignite the well is the responsibility of the DRILLING FOREMAN in concurrence with the STATE POLICE. The State Police shall be the Incident Command on the scene of any major release. Intentional ignition must be coordinated with the NMOCD and local officials. In the event the Drilling Foreman is incapacitated, it becomes the responsibility of the RIG TOOL PUSHER. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope of controlling the blowout under the prevailing conditions.

If time permits, notify the main office, but do not delay if human life is in danger. Initiate the first phase of the evacuation plan.

Instructions for Igniting the Well:

1. Two people are required for the actual igniting operation. Both men must wear self-contained breathing apparatus and must use a full body harness and attach a retrievable safety line to the D-Ring in the back. One man must monitor the atmosphere for explosive gases with the LEL monitor, while the Drilling Foreman is responsible for igniting the well.
2. The primary method to ignite is a 25mm flare gun with a range of approximately 500 feet.
3. Ignite from upwind and do not approach any closer than is warranted.
4. Select the ignition site best suited for protection and which offers an easy escape route.
5. Before igniting, check for the presence of combustible gases.
6. After igniting, continue emergency actions and procedures as before.
7. All unassigned personnel will limit their actions to those directed by the Drilling Foreman.

NOTE: After the well is ignited, burning Hydrogen Sulfide will convert to Sulfur Dioxide (SO₂), which is also highly toxic. Do not assume the area is safe after the well is ignited.

TRAINING REQUIREMENTS

When working in an area where Hydrogen Sulfide (H_2S) might be encountered, definite training requirements must be carried out. The Company Supervisor will ensure that all personnel at the well site, whether regularly assigned, contracted, or employed on an unscheduled basis, have had adequate training by a qualified instructor in the following:

1. Hazards and Characteristics of Hydrogen Sulfide and Sulfur Dioxide.
2. Physicals effects of Hydrogen Sulfide on the human body.
3. Toxicity of Hydrogen Sulfide and Sulfur Dioxide.
4. H_2S detection, emergency alarm and sensor location.
5. Emergency rescue.
6. First aid and artificial resuscitation.
7. The effects of Hydrogen Sulfide on metals.
8. Location safety.

In addition, Supervisory Personnel will be trained in the following areas:

1. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well as well as blowout prevention and well control procedures.
3. The contents and requirements of the H_2S Drilling Operations Contingency Plan and the Public Protection Plan.

Service company personnel and visiting personnel must be notified if the zone contains H_2S , and each service company must provide adequate training and equipment for their employees before they arrive at the well site.

EMERGENCY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located in a known H₂S areas, H₂S equipment will be rigged up after setting surface casing. For wells located inside known H₂S areas, the flare pit will be located 150' from the location and for wells located outside known H₂S areas, the flare pit will be located 100' away from the location. (See page 6 of Survey plat package and diagram B or C.)

It is not anticipated that any H₂S is in the area, however in the event that H₂S is encountered, the attached H₂S Contingency Plan will be implemented. (Please refer to diagrams B or C for choke manifold and closed loop system layout.) See H₂S location layout diagram for location of all H₂S equipment on location.

All H₂S safety equipment and systems will be installed, tested and be operational when drilling reaches a depth of 500' above, or three days prior to penetrating a known formation containing H₂S.

Lease Entrance Sign:

Caution signs should be located at all roads providing direct access to the location. Signs shall have a yellow background with black lettering and contain the words "CAUTION" and "POISON GAS" that is legible from a distance of at least 50 feet.

**LEASE NAME
CAUTION – POTENTIAL POISON GAS
HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION**

Windssocks or Wind Streamers:

- A minimum of two 10" windssocks located at strategic locations so that they may be seen from any point on location.
- Wind streamers (if preferred) should be placed at various locations on the well site to ensure wind consciousness at all times. (Corners of location)

Hydrogen Sulfide Detector and Alarms:

- H₂S monitors with alarms will be located on the rig floor, at the cellar, and at the mud pits. These monitors will be set to alarm at 10 PPM with a red light and to alarm at 15 PPM with a red light and audible alarm.

Well Condition Flags:

The Well Condition flags should be located at all roads providing direct access to the location. It should have three (3) color coded flags (green, yellow and red) that will be used to denote the following location conditions:

GREEN – Normal Operating Conditions
YELLOW – Potential Danger
RED – Danger, H₂S Gas Present

Respiratory Equipment:

- Fresh air breathing equipment should be placed at the company supervision trailer and the safe briefing areas and should include the following:
 - A minimum of two SCBA's at each briefing area and the supervisor company supervision trailer.
 - Enough air line units to operate safely, anytime the H₂S concentration reaches the IDLH level (100 PPM).
 - Cascade system with enough breathing air hose and manifolds to reach the rig floor, the derrickman and the other operation areas.

Fire Extinguishers:

Adequate fire extinguishers shall be located at strategic locations.

Mud Program:

The mud program has been designed to minimize the volume of H₂S circulated to the surface. Proper mud weight, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

Metallurgy:

All drill strings, casing, tubing, wellhead; blowout preventer, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.

Well Control Equipment:

- Flare Line (See page 6 of survey plat package for flare line reference).
- Choke manifold (See diagram B or C and refer to H2S location diagram for location of important H2S safety items).
- Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing units.
- Auxiliary equipment may include, if applicable, annular preventer & rotating head.

Communication Equipment:

- Proper communication equipment such as cell phones or 2 – way radios should be available for communication between the company man's trailer, rig floor and tool pusher's trailer.

Well Testing:

- There will be no drill stem testing.

Evacuation Plan:

- Evacuation routes should be established prior to spudding the well.
- Should be discussed with all rig personnel.

Designated Areas:***Parking and Visitor area:***

- All vehicles are to be parked at a pre-determined safe distance from the wellhead.
- A smoking area will be designated at a pre-determined safe distance from the wellhead and any other possible flammable areas.

Safe Briefing Areas:

- Two Safe Briefing Areas shall be designated on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds or they are at a 180 degree angle if wind directions tend to shift in the area.

- Personal protective equipment should be stored at both briefing areas or if a moveable cascade trailer is used, it should be kept upwind of existing winds. When wind is from the prevailing direction, both briefing areas should be accessible.

NOTE:

- Additional equipment will be available at Indian Fire and Safety in Hobbs, NM or at Total Safety in Hobbs, NM.

EVACUATION PLAN

General Plan

The direct lines of action to protect the public from hazardous gas situations are as follows:

1. When the company approved supervisor (Drilling Foremen, Tool Pusher or Driller) determine that Hydrogen Sulfide gas cannot be limited to the well location, and the public will be involved, he will activate the evacuation plan. Escape routes are noted on the Area Map.
2. Company safety personnel or designee will notify the appropriate local government agency that a hazardous condition exists and evacuation needs to be implemented.
3. Company approved safety personnel that have been trained in the use of the proper emergency equipment will be utilized.
4. Law enforcement personnel (State Police, Local Police Department, Fire Department, and the Sheriff's Department) will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.

NOTE: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

5. After the discharge of gas has been controlled, Company approved safety personnel will determine when the area is safe for re-entry.

See Emergency Action Plan

Contacting Authorities

BOPCO L.P. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S CONTINGENCY PLAN EMERGENCY CONTACTS

BOPCO L.P. Midland Office

432-683-2277

Key Personnel

Name	Title	Cell Phone Number
Stephen Martinez	Drilling & Completions Manager	432-556-0262
Charles Warne	Division Engineer	432-312-4431
Don Wood	Division Drilling Specialist	432-266-2674
Leo Bojorquez	Area Drilling Superintendent	702-280-4424
Chris Giese	Engineer	432-661-7328
Chris Volek	Engineer	785-979-2643
Brian Braun	Engineer	210-683-9849
Jeremy Braden	Engineer	432-312-1113
Kevin Burns	Engineer	432-934-5499

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National Emergency Response Center (Washington, DC)	800-424-8802

Other

Wild Well Control	432-550-6202 (Permian Basin)
Cudd PressureControl	432-580-3544 or 432-570-5300 (Permian Basin)
Flight For Life – 4000 24 th St. Lubbock, Texas	806-743-9911
Aerocare – R3, Box 49F, Lubbock, Texas	806-747-8923
Med Flight Air Amb – 2301 Yale Blvd SE #D3, Albuquerque, NM	505-842-4433
S B Air Med Service – 2505 Clark Carr Loop SE, Albuquerque, NM	505-842-4949
Indian Fire and Safety – 3317 NW Cnty Rd, Hobbs, NM	575-393-3093
Total Safety – 3229 Industrial Dr., Hobbs, NM	575-392-2973

TOXIC EFFECTS OF HYDROGEN SULFIDE

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity = 1.192) and colorless. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. Hydrogen sulfide is almost as toxic as hydrogen cyanide and is between five and six times more toxic than carbon monoxide. Toxicity data for hydrogen sulfide and various other gases are compared in Table I. Physical effects at various Hydrogen Sulfide exposure levels are shown in Table II.

Table I - TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity (SC=1)	Threshold Limit (1)	Hazardous Limit (2)	Lethal Concentration (3)
Hydrogen Cyanide	HCN	0.94	10 PPM	150 PPM/HR	300 PPM
Hydrogen Sulfide	H ₂ S	1.18	10 PPM	250 PPM/HR	600 PPM
Sulfur Dioxide	SO ₂	2.21	5 PPM	--	1000 PPM
Chlorine	CL ₂	2.45	1 PPM	4 PPM/HR	1000 PPM
Carbon Monoxide	CO	0.97	50 PPM	400 PPM/HR	1000 PPM
Carbon Dioxide	CO ₂	1.52	5000 PPM	5%	10%
Methane	CH ₄	0.55	90,000 PPM	Combustible in air	Above 5%

- 1) **Threshold Limit** – Concentration at which it is believed that all worker may be repeatedly exposed day after day without adverse effects.
- 2) **Hazardous Limit** – Concentration that will cause death with short-term exposure.
- 3) **Lethal Concentration** – Concentration that will cause death with short-term exposure.

Table II – PHYSICAL EFFECTS OF HYDROGEN SULFIDE

Percent (%)	PPM	Concentration Grains 100 STD. FT3*	Physical Effects
0.001	< 10	00.65	Obvious & unpleasant odor.
0.002	10	01.30	Safe for 8 hours of exposure.
0.010	100	06.48	Kills smell in 3-15 minutes. May sting eyes & throat.
0.020	200	12.96	Kills smell shortly; stings eyes & throat.
0.050	500	32.96	Dizziness; Breathing ceases in a few minutes. Needs prompt artificial respiration.
0.070	700	45.36	Unconscious quickly; Death will result if not rescued promptly.
0.100	1000	64.30	Unconscious at once; Followed by death within minutes.

- At 15.00 PSIA and 60° F.

USE OF SELF-CONTAINED BREATHING APPARATUS

1. Anyone who uses an SCBA shall: Be approved by a physician or licensed health care practitioner; Pass a fit test; Be trained in donning and doffing, proper use, including how to ensure a proper face seal, conducting an inspection of the SCBA, and conduct proper maintenance.
2. Such items as facial hair (beard or sideburns) and eyeglasses will not allow a proper face mask seal.
3. Anyone reasonably expected to wear SCBA's shall have these items removed before entering a toxic atmosphere.
4. A special mask with a mount for prescription glasses must be obtained for anyone who must wear eyeglasses in order to see while using an SCBA.
5. SCBA's should be worn in H₂S concentrations above 10 PPM.

RESCUE & FIRST AID FOR H₂S POISONING

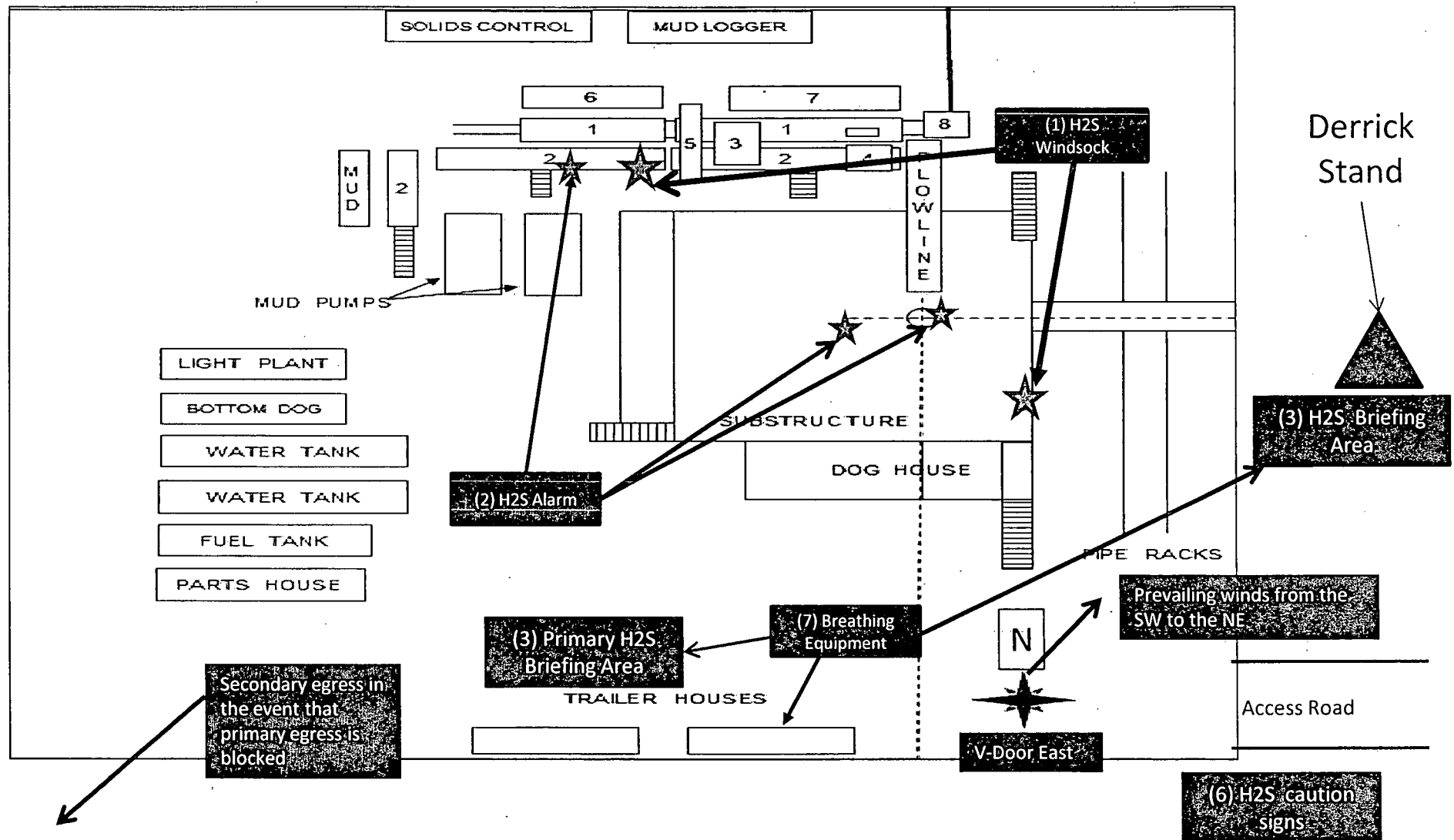
DO NOT PANIC – REMAIN CALM – THINK

1. Hold your breath – do not inhale first.
2. Put on SCBA.
3. Remove victim(s) to fresh air as quickly as possible. Go upwind from source or at right angle to the wind. Do not go downwind.
4. Briefly apply chest pressure – using arm lift method of artificial respiration to clean victim's lungs and to avoid inhaling any toxic gas directly from victim's lungs.
5. Provide artificial respiration if needed.
6. Provide for prompt transportation to the hospital and continue giving artificial respiration if needed.
7. Inform hospital/medical facilities of the possibility of H₂S gas poisoning before they treat.

Besides basic first aid, everyone on location should have a good working knowledge of artificial respiration and CPR, as well as first aid for eyes and skin contact with liquid H₂S.

Proposed H2S Safety Schematic

- 1) Location of windsocks.
- 2) Location of H2S alarms
- 3) Location of briefing areas.
- 4) Terrain of surrounding area (Please refer to page 2 of survey plat package also see point 11 of multi-surface use plan)
- 5) Location of flare line(s) and pit(s) (Please refer to diagram 2 choke manifold diagram and or page six of survey plat packet)
- 6) Location of caution and/or danger signs.
- 7) Location of Breathing Equipment



Location On-Site Notes

Location on-site conducted by Todd Carpenter –BOPCO, L.P., Cecil Watkins-BOPCO, L.P., Wesley Hanna- BOPCO, L.P., Vasileios Kalogirou- Halff and Associates, John Teague- Halff and Associates, Jim Rutley- BLM, Amanda Lynch- BLM, Cody Layton- BLM on 11/01/2013. The James Ranch Unit Drilling Island 1A was approved as is, as well as a facilities pad on the SSE corner of the pad. Furthermore, two new access roads were also approved, one tying the James Ranch Unit DI1 Island to the new pad, and another access to the James Ranch Unit DI1 Island itself.

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: James Ranch Unit DI1A #203H

LEGAL DESCRIPTION

SURFACE: 1360' FNL, 2560' FWL, Section 21, T22S, R30E, Eddy County, NM.

BHL: 660' FNL, 330' FEL, Section 23, T22S, R30E, Eddy County, NM.

POINT 1: EXISTING ROADS

- A) Proposed Well Site Location:

See Form C-102 (Survey Plat).

- B) Existing Roads:

From the junction of Jal Highway & Cimarron Road, running in a northerly direction turn north on Cimarron road, continue north on Cimarron Road for 2.63 miles. Turn left and continue along Cimarron Road for 0.5 mile to an existing gravel road. Turn right on gravel road and follow for 1.5 miles to an existing pad.

- C) Existing Road Maintenance or Improvement Plan:

Existing roads will be maintained and kept in the same or better condition than before operations began. See the Well Pad Layout and Topo Map of the survey plat (Sheet 1 and 2 of plat package)

POINT 2: NEW PLANNED ACCESS ROUTE

- A) Route Location:

There will be 1052' of new road built. (See the Well Pad Layout of the survey plat (Sheet 1 of plat package).

- B) Width

14' wide

- C) Maximum Grade

Grade to match existing topography or as per BLM requirements.

- D) Turnout Ditches

As required by BLM stipulations.

- E) Culverts, Cattle Guards, and Surfacing Equipment

If required, culverts and cattle guards will be set per BLM Specs.

POINT 3: LOCATION OF EXISTING WELLS

The following wells are located within a one-mile radius of the location site. See the One-Mile Radius Map (Sheet 5 of the plat package).

Existing wells.....	5 (Five)
Water wells.....	1 (One)

POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

- A) A BOPCO, L.P. operated production facility is located within the ideal operating range of the James Ranch Unit D11A 203H location.

- B) In the Event of Production:

James Ranch Unit D11A 203H will pipe production to JRU Legg Battery (located in Sec 21, T22S, R30E). A new 3-1/2" in diameter steel flowline is to be run above ground, approx. 8550 feet in length. The flowline is expected to carry oil, water, and gas.

- C) Rehabilitation of Disturbed Areas Unnecessary for Production:

See Point 10.

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

- A) Location and Type of Water Supply

Fresh water will be hauled from Johnson Station 50 miles east of Carlsbad, New Mexico or other commercial facilities. Brine water will be hauled from commercial facilities.

- B) Water Transportation System

Water hauling to the location will be over the existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

- A) Materials

On-site caliche will be used. If this is not sufficient, caliche will be hauled from a BLM approved pit.

- B) Land Ownership

Federally Owned

C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site.

D) Access Roads

See the Well Pad Layout and Aerial Map of the survey plat (Sheet 1 and 4 of plat package).

POINT 7: METHODS FOR HANDLING WASTE MATERIAL

A) Cuttings

Cuttings will be contained in the roll off bins and disposed at R360 Environmental located in Lea County, NM.

B) Drilling Fluids

Drilling fluids will be contained in the steel pits, frac tanks and disposed at licensed disposal sites.

C) Produced Fluids

Water production will be contained in the steel pits.

Hydrocarbon fluid or other fluids that may be produced during testing will be retained in test tanks. Prior to cleanup operations, any hydrocarbon material in the reserve pit will be removed by skimming or burning as the situation would dictate.

D) Sewage

Current laws and regulations pertaining to the disposal of human waste will be complied with.

E) Garbage

Portable containers will be utilized for garbage disposal during the drilling of this well.

F) Cleanup of Well Site

Upon release of the drilling rig, the surface of the drilling pad will be graded to accommodate a completion rig if electric log analysis indicate potential productive zones. Reasonable cleanup will be performed prior to the final restoration of the site.

POINT 8: ANCILLARY FACILITIES

None required.

POINT 9: WELL SITE LAYOUT

A) Rig Orientation and Layout

The "Rig Layout Schematic" (Sheet 6 of plat package) shows the dimensions of the well pad, closed loop system, and the location of major rig components. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary. **The top soil will be stockpiled on the west side of the location.**

B) Locations of Access Road

See the Well Pad Layout, Topo Map, and Vicinity Map of the survey plat (Sheet 1, 2, and 3 of plat package).

C) Lining of the Pits

No reserve pits - closed loop system.

POINT 10: PLANS FOR RESTORATION OF THE SURFACE

A) Reserve Pit Cleanup - Not applicable. Closed loop drilling fluid system will be used

B) Restoration Plans - Production Developed

BOPCO, L.P. has no plans for interim reclamation to allow for additional wells to be drilled on this pad

C) Restoration Plans - No Production Developed

BOPCO, L.P. has no plans for interim reclamation to allow for additional wells to be drilled on this pad

POINT 11: OTHER INFORMATION

A) On-Site

Location on-site conducted by Todd Carpenter -BOPCO, L.P., Cecil Watkins-BOPCO, L.P., Wesley Hanna- BOPCO, L.P., Vasileios Kalogirou- Halff and Associates, John Teague- Halff and Associates, Jim Rutley- BLM, Amanda Lynch- BLM, Cody Layton- BLM on 11/01/2013. The James Ranch Unit Drilling Island 1A was approved as is, as well as a facilities pad on the SSE corner of the pad. Furthermore, two new access roads were also approved, one tying the James Ranch Unit DI1 Island to the new pad, and another access to the James Ranch Unit DI1 Island itself.

B) Soil

Caliche and sand.

C) Vegetation

Sparse, primarily grasses and mesquite with very little grass.

D) Surface Use

Primarily grazing.

E) Surface Water

There are no ponds, lakes, streams or rivers within several miles of the wellsite.

F) Water Wells

There is one water wells located within a 1 mile radius of the proposed location.

G) Residences and Buildings

None in the immediate vicinity.

H) Historical Sites

None observed.

I) Archeological Resources

No independent archeological survey has been done. This pad location is located in the area covered by Memorandum of Agreement – Permian Basin. The James Ranch Unit Drilling Island 1A is covered by a blanketed MOA for the entire Drilling Island. Any location or construction conflicts will be resolved before construction begins. Please see diagram 4 for flowline route.

J) Surface Ownership

The well site is on federally owned land. There will be 1052' of new road required for this location.

K) Well signs will be posted at the drilling site.

L) Open Pits

No open pits will be used for drilling or production. Any open top tanks will be netted.

M) Terrain

Slightly rolling hills.

POINT 12: OPERATOR'S FIELD REPRESENTATIVE

(Field personnel responsible for compliance with development plan for surface use).

DRILLING

Stephen Martinez
Box 2760
Midland, Texas 79702
(432) 683-2277

PRODUCTION

Gary Fletcher
3104 East Green Street
Carlsbad, New Mexico 88220
(575) 887-7329

Fritz Schoch
Box 2760
Midland, Texas 79702
(432) 683-2277

WBM

OPERATOR'S CERTIFICATION**APPLICATION FOR PERMIT TO DRILL****JAMES RANCH UNIT D11A #203H****1360' FNL, 2560' FWL, Section 21, T2422S, R30E, Eddy County, NM.**

In reference to the above captioned well, I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 3rd day of July, 2014.

If you have any questions regarding the accuracy of the plan provided herein, please do not hesitate to contact me at (432) 683-2277.



Whitney McKee
Engineering Assistant

Form NM 8140-9

(March 2008)

**United States Department of the Interior
Bureau of Land Management
New Mexico State Office**

Permian Basin Cultural Resource Mitigation Fund

The company shown below has agreed to contribute funding to the Permian Basin Cultural Resource Fund in lieu of being required to conduct a Class III survey for cultural resources associated with their project. This form verifies that the company has elected to have the Bureau of Land Management (BLM) follow the procedures specified within the Memorandum of Agreement (MOA) concerning improved strategies for managing historic properties within the Permian Basin, New Mexico, for the undertaking rather than the Protocol to meet the agency's Section 106 obligations.

Company Name: BOPCO, L.P.

Address: P. O. Box 2760

Midland, Texas 79702

Project description: James Ranch Unit DI1A #203H. The PA (MOA) was included with the
James Ranch Unit DI1A #204H APD.

T, 22S, R 30E, Section 21 NMPM, Eddy County, New Mexico

Amount of contribution: \$ 0.00

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NMLC-064827A
WELL NAME & NO.:	James Ranch Unit DI 1A 203H
SURFACE HOLE FOOTAGE:	1360' FNL & 2560' FWL
BOTTOM HOLE FOOTAGE	0660' FNL & 0330' FEL Sec. 23, T. 22 S., R 30 E.
LOCATION:	Section 21, T. 22 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Karst
 - Commercial Well Determination
 - Unit Well Sign Specs
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Cement Requirements
 - H2S Requirements
 - R-111-P-Potash
 - High Cave/Karst
 - Logging Requirements
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:

Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

Drilling:**Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months.

Unit Wells

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS**Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts

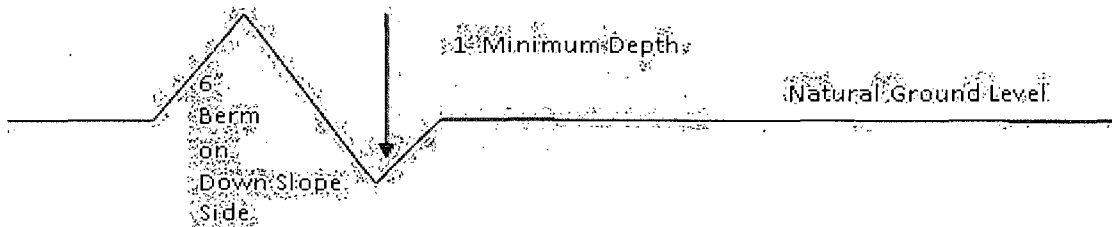
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

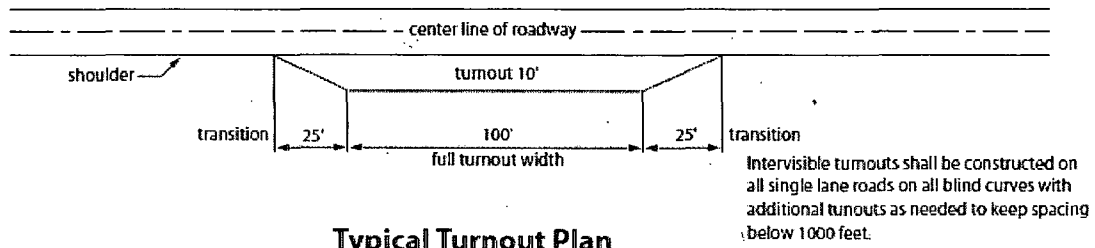
Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

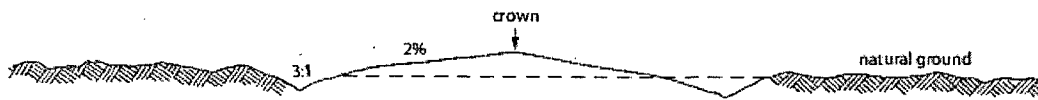
Construction Steps

1. Salvage topsoil
2. Construct road

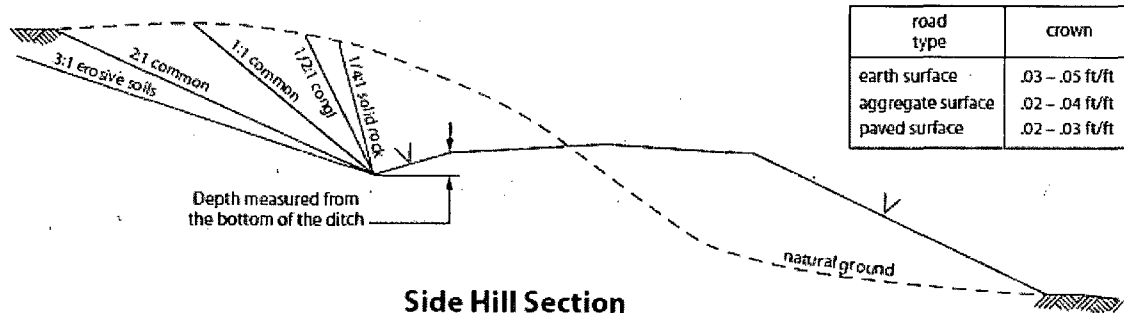
3. Redistribute topsoil
4. Revegetate slopes



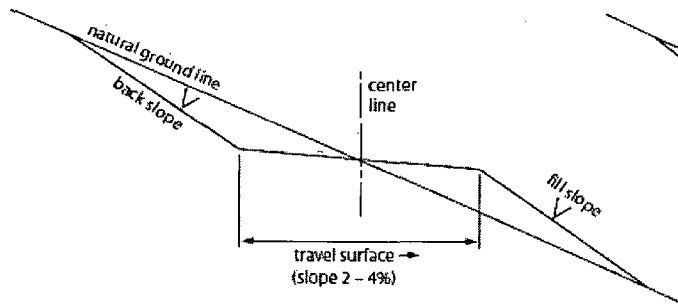
Typical Turnout Plan



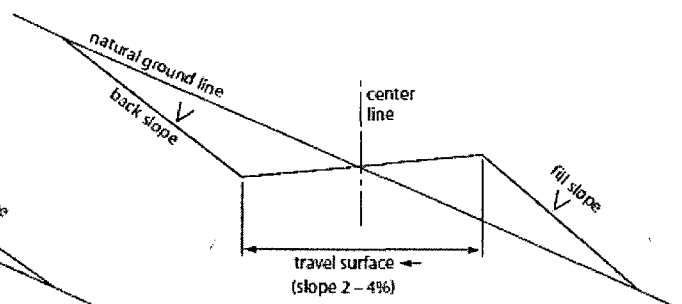
Level Ground Section



Side Hill Section



Typical Outslowed Section



Typical Insloped Section

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is encountered in quantities greater than 10 PPM the well shall be shut in and H₂S equipment shall be installed and flare line must be extended pursuant to Onshore Oil and Gas Order #6. Report measured values and formation to the BLM. After detection, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Potash Areas:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

R-111-P-Potash

High Cave/Karst

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

Abnormal pressure may be encountered when penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.

1. The 13-3/8 inch surface casing shall be set at approximately **531** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 13-3/8" shoe to be tested according to Onshore Order

2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required through the curve and a minimum of one every other joint.

3. The minimum required fill of cement behind the 7 inch production casing is:

Operator has proposed DV tool at depth of 5000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

- a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

- b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash. Excess calculates to 23% - Additional cement may be required.**

Formation below the 7" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

4. Cement not required on the 4-1/2" casing. **Packer system being used. Liner must tie back a minimum of 100' into 7" casing.**
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.**
 - a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
 - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
 - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
 - d. **Operator shall perform the 9-5/8" and 7" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.**
 - e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer.**

- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 070115

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by

drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

SEED MIXTURE 1 (LOAMY LOCATIONS)

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine months prior to purchase. Commercial seed will be certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first; the holder shall take appropriate measures to ensure this does not occur). Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be double the amounts listed below. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre (**note: if broadcasting seed, amounts are to be doubled**):

Species	Pound/acre
Plains Lovegrass (<i>Eragrostis intermedia</i>)	0.5
Sand Dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sideoats grama (<i>Bouteloua curtipendula</i>)	5.0

* Pounds of pure live seed = (Pounds of seed) x (Percent purity) x (Percent germination)