

oed Artesia

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMLC064827A

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

7. If Unit or CA/Agreement, Name and/or No.
891000558X

8. Well Name and No.
JAMES RANCH UNIT DI 1 164H

9. API Well No.
30-015-42627-00-X1

10. Field and Pool, or Exploratory
UNDESIGNATED

11. County or Parish, and State

EDDY COUNTY, NM

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

2. Name of Operator
BOPCO LP
Contact: WHITNEY MCKEE
E-Mail: wbmckee@basspet.com

3a. Address
P O BOX 2760
MIDLAND, TX 79702
3b. Phone No. (include area code)
Ph: 432-683-2277

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

Sec 21 T22S R30E SWNE 1434FNL 1495FEL
32.225116 N Lat, 103.525501 W Lon

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

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

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

BOPCO, L.P. respectfully requested to change the surface hole location for James Ranch Unit DI1 #164H to 1,513? FNL & 1,544? FEL, Sec. 21, T22S-R30E. This will allow us to optimize wellhead placement within the pre-cast concrete cellar system. We would also like to alter the proposed bottom hole location and shorten the lateral to 660? FSL & 2,310? FWL, Sec. 23, T22S-R30E. Devon will be drilling from the east to pick up the originally planned proration units that will be left out on this shortened lateral.

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 30 2014

RECEIVED

OK CRL 12/15/14

APD 1/5/2015
Accepted for record
NMLC064827A

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

Electronic Submission #281229 verified by the BLM Well Information System
For BOPCO LP, sent to the Carlsbad

Committed to AFMSS for processing by JENNIFER MASON on 12/09/2014 (15JAM0118SE)

Name (Printed/Typed) CHRISTOPHER GIESE

Title DRILLING ENGINEER

Signature (Electronic Submission)

Date 11/24/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Stephen J. Coffey

FORFIELD MANAGER

Title

Date

12/22/14

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

CARLSBAD FIELD OFFICE

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
SL:NMNM 06808;BHL:NMLC 064827A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.
James Ranch Unit 70965X

8. Lease Name and Well No.
James Ranch Unit D11 #164H

9. API Well No.

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator BOPCO, L.P.

3a. Address P.O. Box 2760
Midland, TX 79702

3b. Phone No. (include area code)
432-683-2277

10. Field and Pool, or Exploratory
Undesignated; Bone Spring

4. Location of Well (Report location clearly and in accordance with any State requirements.)
At surface SWNE, ULG, 1513' FNL & 1544' FEL, Lat:N32.380878,Long:W103.881947
At proposed prod. zone 660' FSL,330'FEL,Sec23,T22S-R30E,Lat:N32.3720,Long:W103.85231

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 21, T22S-R30E

14. Distance in miles and direction from nearest town or post office*
12 miles northeast of Loving, NM

12. County or Parish
Eddy County

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft.
(Also to nearest drig. unit line, if any)
330'

16. No. of acres in lease
2,600.86

17. Spacing Unit dedicated to this well
280 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
20'

19. Proposed Depth
19,381 MD / 9,461 TVD

20. BLM/BIA Bond No. on file
COB 000050

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3165' GL

22. Approximate date work will start*
12/05/2014

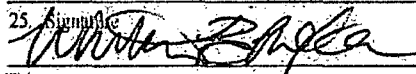
23. Estimated duration
45 days

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.
2. A Drilling Plan.
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).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature 

Name (Printed/Typed)
Whitney McKee

Date
11/24/14

Title
Engineering Assistant

Approved by (Signature)

Name (Printed/Typed)

Date

Title

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.

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)

DISTRICT I
1626 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 746-1263 Fax: (575) 746-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 354-3176 Fax: (505) 354-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3480 Fax: (505) 476-3480

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	Pool Code 97905	Pool Name UNDESIGNATED, BONE SPRING
Property Code 360407	Property Name JAMES RANCH UNIT D11	Well Number 164H
GRID No. 260737	Operator Name BOPCO, L.P.	Elevation 3165'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	21	22 S	30 E		1513	NORTH	1544	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	23	22 S	30 E		660	SOUTH	2310	WEST	EDDY

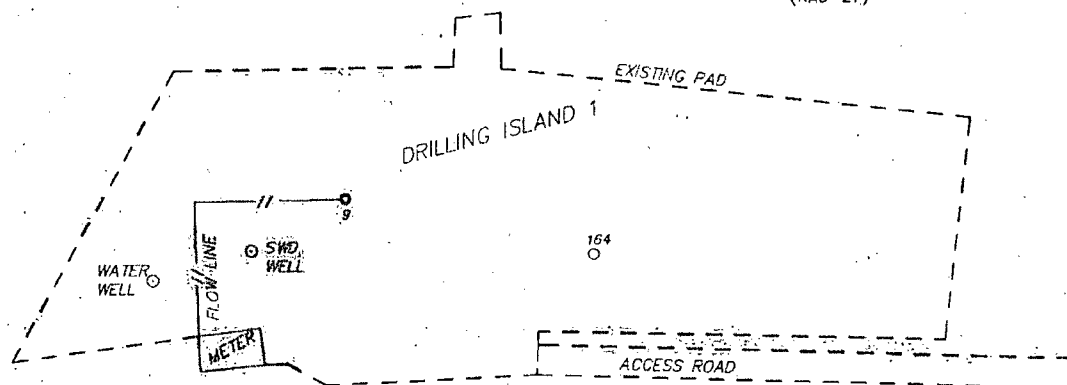
Dedicated Acres 280	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

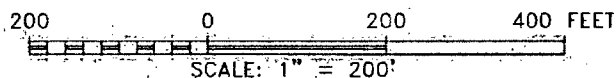
N: 504002.6 E: 635478.1 NAD 27 N: 504007.1 E: 640837.4 NAD 27 N: 504018.2 E: 646169.9 NAD 27 N: 504025.0 E: 649971.9 NAD 27 N: 504030.3 E: 651550.9 NAD 27 N: 501367.7 E: 640843.9 NAD 27 N: 501390.4 E: 646190.0 NAD 27 N: 501382.0 E: 651547.8 NAD 27 N: 498722.8 E: 635469.9 NAD 27 N: 498731.2 E: 640852.9 NAD 27 N: 498741.3 E: 648195.4 NAD 27 N: 498748.4 E: 648966.9 NAD 27 N: 498752.0 E: 651544.7 NAD 27	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Whitney McKee</i> 11/24/11 Signature Date Whitney McKee Printed Name Wmckee@basered.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. October 19, 2013 Date Surveyed <i>[Signature]</i> Signature of Professional Surveyor Certification No. 7977 BASIN SURVEYS 0' 1500' 3000' 4500' 6000' SCALE: 1" = 3000' WO Num.: D11 WELL PLATS
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SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

BOPCO, L.P.
JAMES RANCH UNIT D11 164H
ELEV. - 3165'
Lat - N 32°22'50.37"
Long - W 103°52'55.59"
NMSPCE - N 502492.8
E 639297.0
(NAD-27)

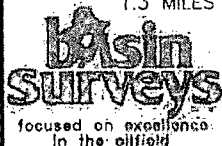


LOVING, NM IS ±14 MILES TO THE SOUTHWEST OF LOCATION.



Directions to Location:

FROM THE JUNCTION OF HWY 128 AND CIMARRON,
GO NORTH ON CIMARRON FOR APPROX. 6.2 MILES
TO LEASE ROAD, ON LEASE ROAD GO
SOUTHWESTERLY 0.2 MILES TURNING NORTHWESTERLY
1.3 MILES TO PROPOSED WELL LOCATION.



P.O. Box 1786 (575) 393-7316 - Office
focused on excellence 1120 N. West County Rd. (575) 392-2206 - Fax
in the oilfield Hobbs, New Mexico 88241 basinsurveys.com

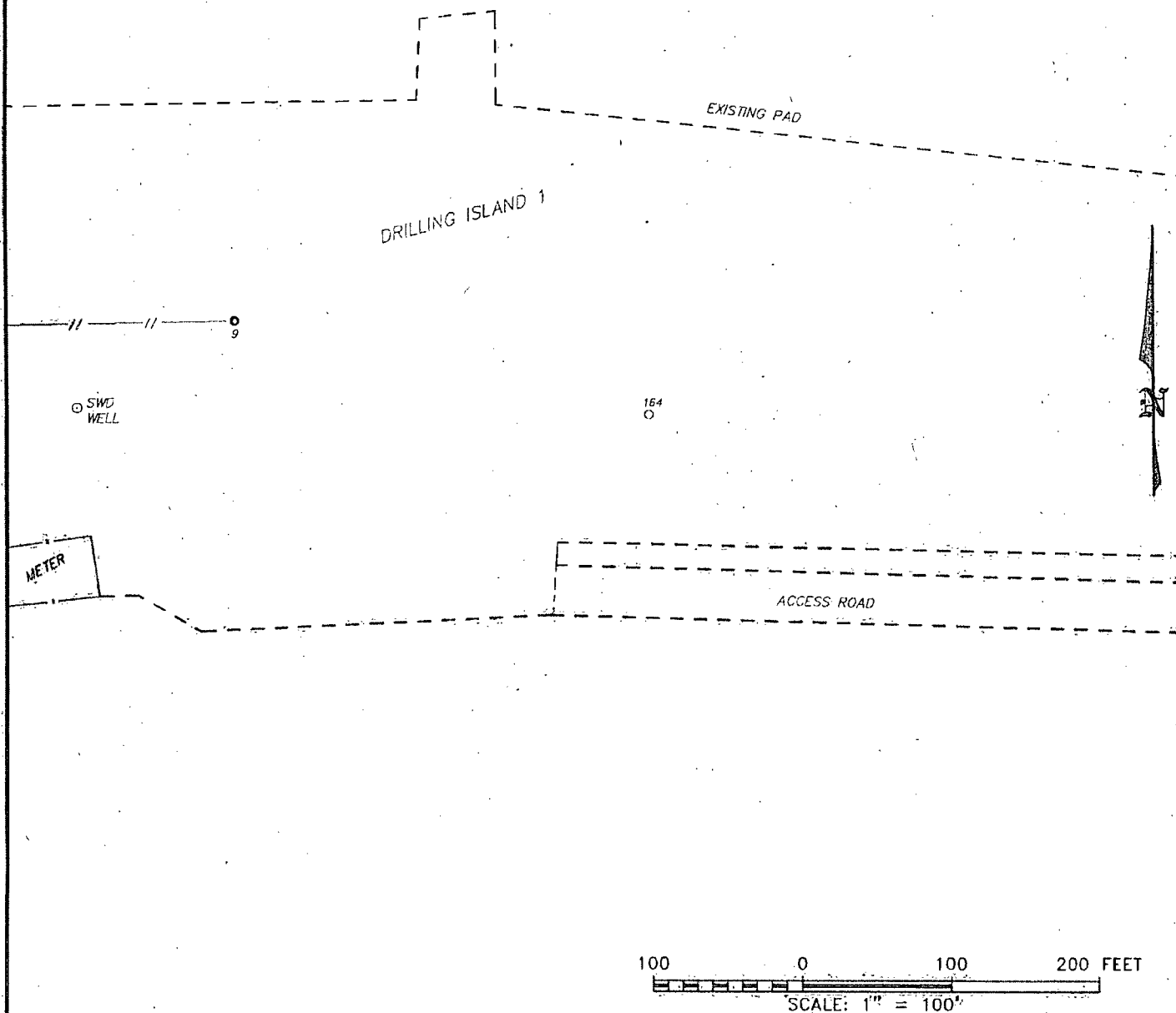
BOPCO, L.P.

REF: JAMES RANCH UNIT D11 164H / WELL PAD TOPO

THE JAMES RANCH UNIT D11 164H LOCATED 1513' FROM
THE NORTH LINE AND 1544' FROM THE EAST LINE OF
SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: D11 WELL Drawn By: J. SMALL Date: 10-16-2013 Survey Date: 10-17-2013 Sheet 1 of 1 Sheets

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



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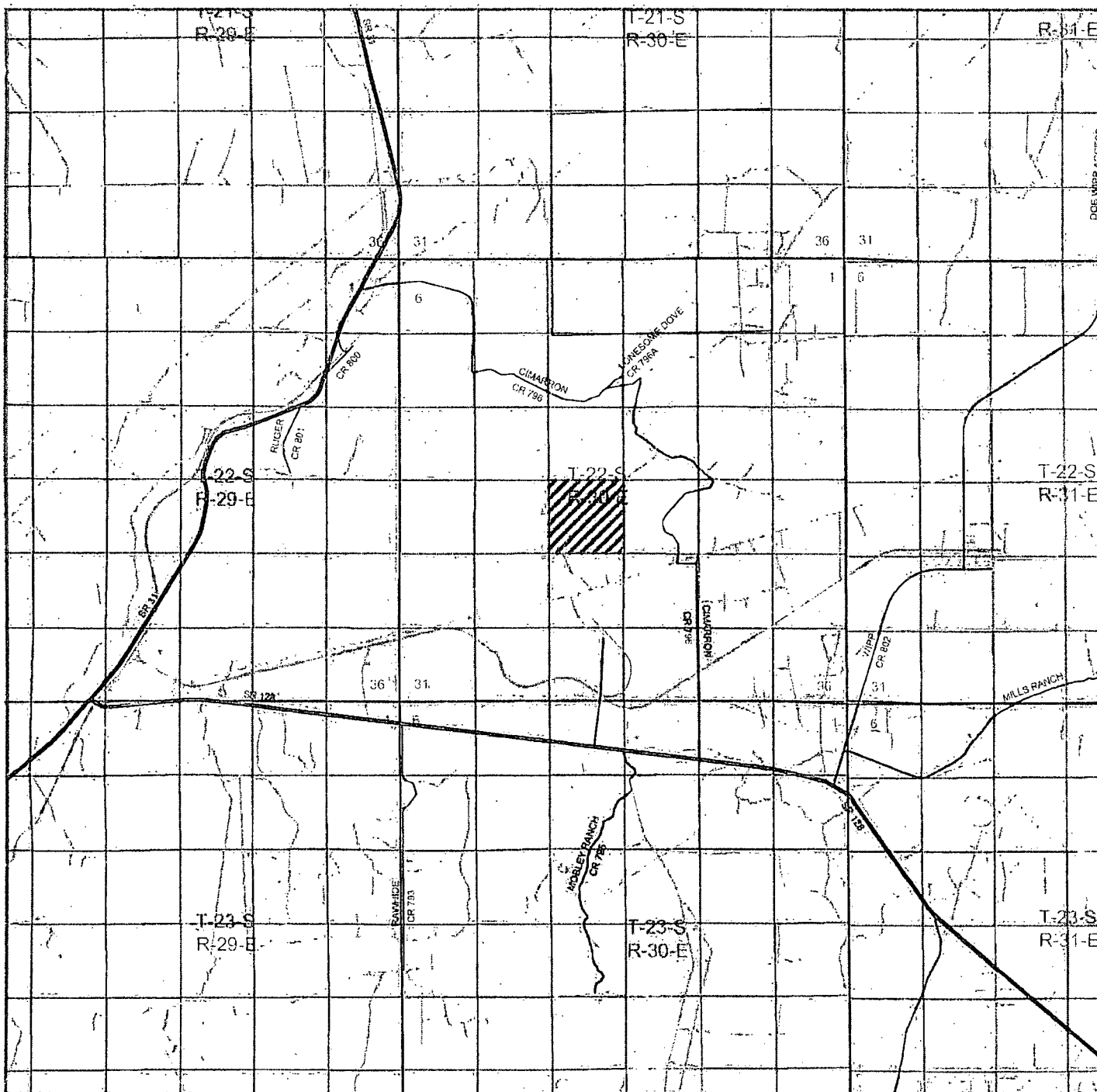
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1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
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N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: D11 WEL | Drawn By: J. SMALL | Date: 08-09-2013 | Survey Date: 10-17-2013 | Sheet 1 of 1 Sheets



JAMES RANCH UNIT DI1 164H

Located 1513' FNL and 1544' FEL
 Section 21, Township 22 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.

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0 1 MI 2 MI 3 MI 4 MI

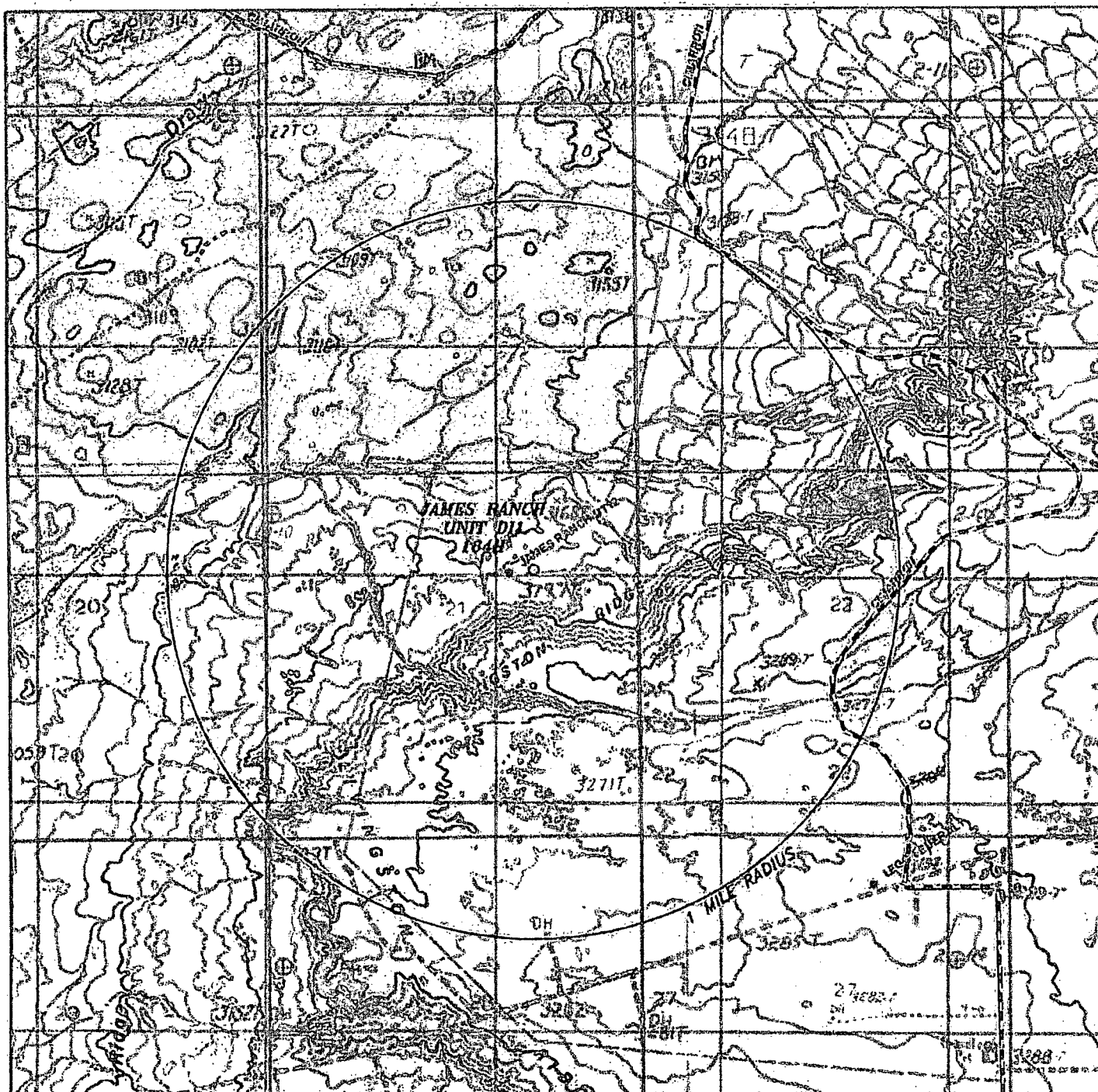
SCALE: 1" = 2 MILES

W.O. Number: JMS DI1 WELL PLATS

Survey Date: 10-17-2013

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

BOPCO, L.P.



JAMES RANCH UNIT D11 164H

Located 1513' FNL and 1544' FEL
 Section 21, Township 22 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.

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0' 1000' 2000' 3000' 4000'
 SCALE: 1" = 2000'

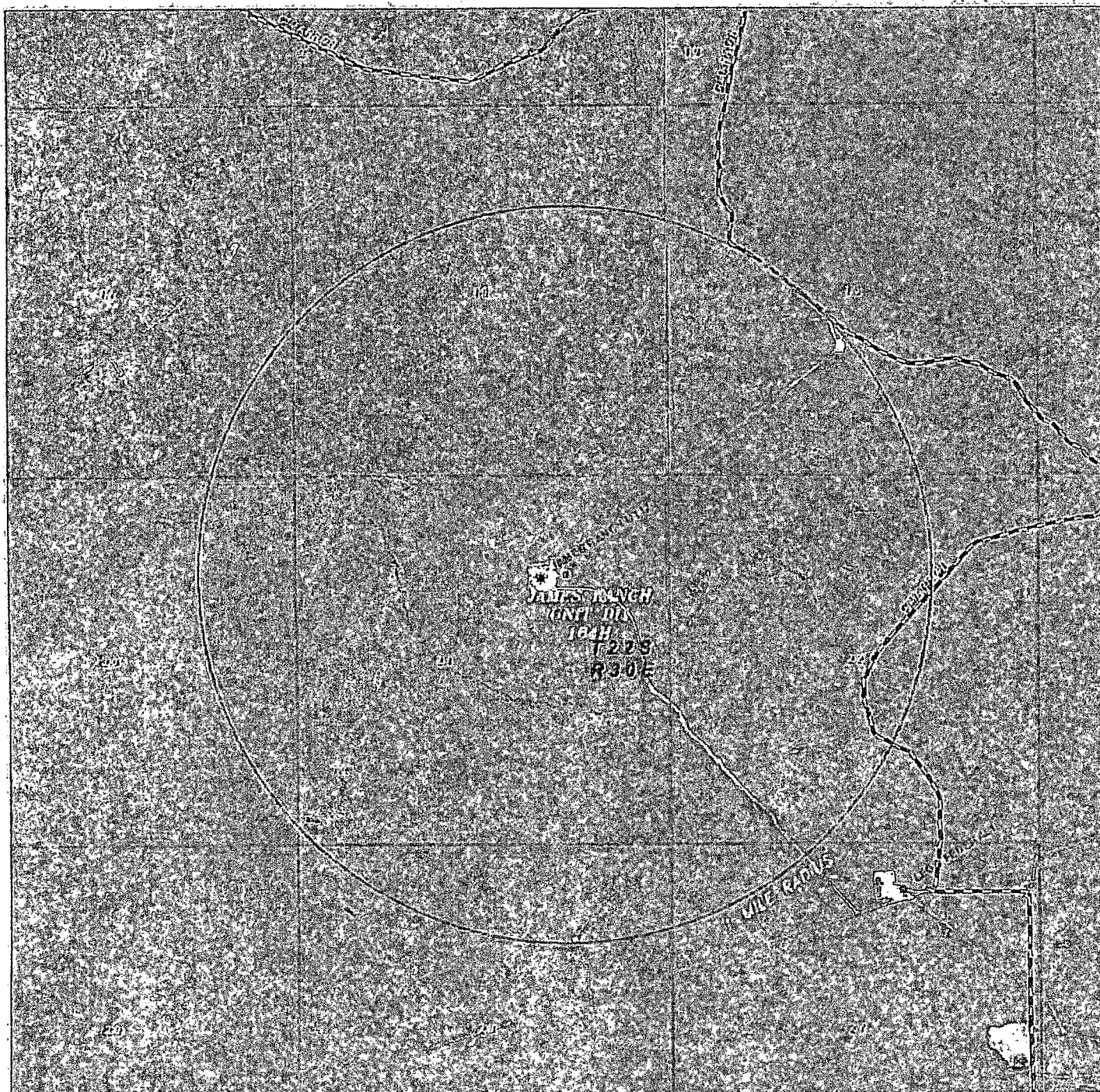
W.O. Number: JMS D11 WELL PLATS

Survey Date: 10-17-2013

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



BOPCO, L.P.



JAMES RANCH UNIT D11 164H

Located 1513' FNL and 1544' FEL
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 N.M.P.M., Eddy County, New Mexico.



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0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

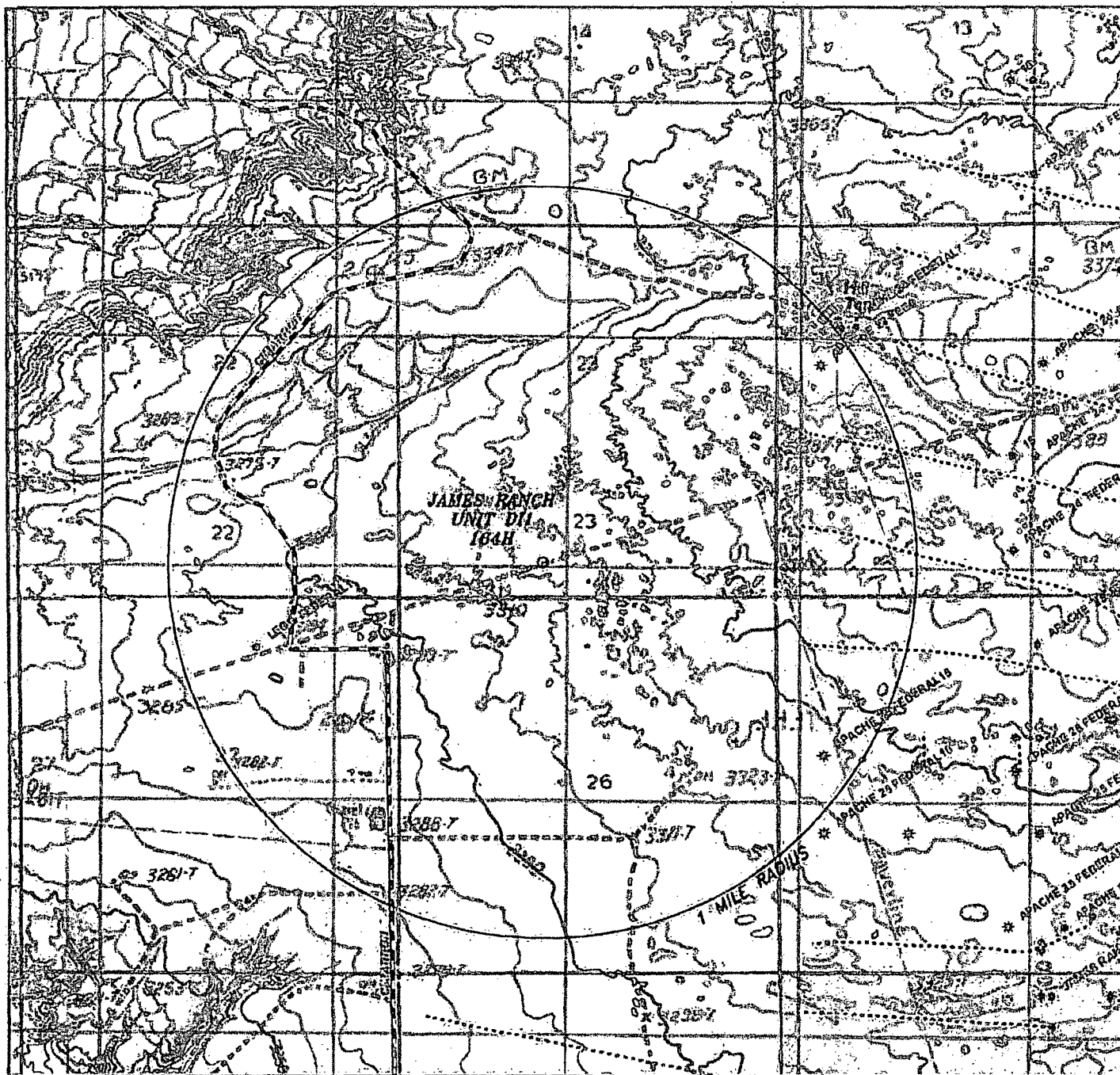
W.O. Number: JMS D11 WELL PLATS

Survey Date: 10-17-2013.

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



BOPCO, L.P.



JAMES RANCH UNIT DI1 164H BOTTOM

Located 660' FSL and 2310' FWL

Section 23, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

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basinsurveys.com

0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'

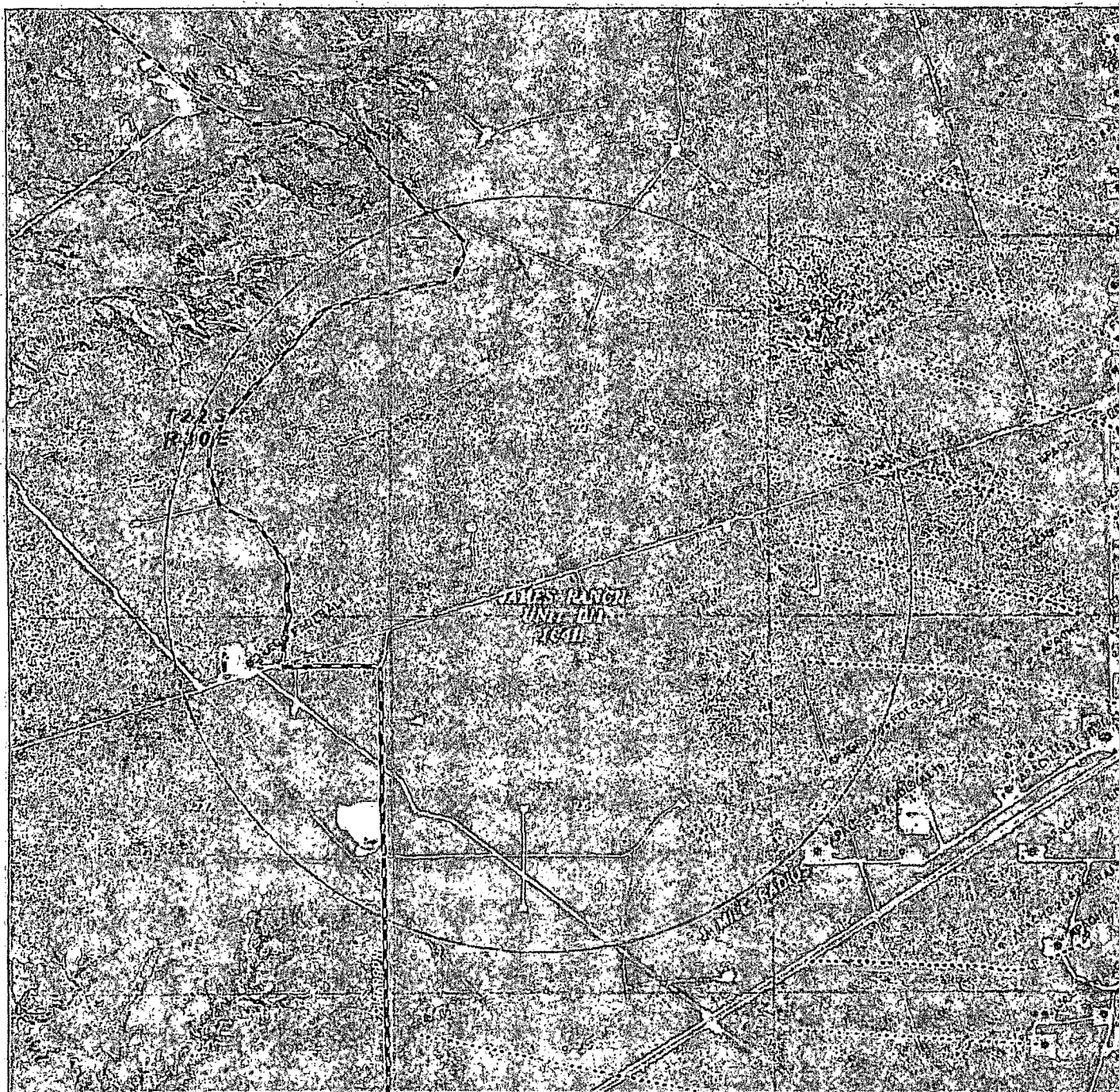
W.O. Number: JMS DI1 WELL PLATS

Survey Date: 10-17-2013

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



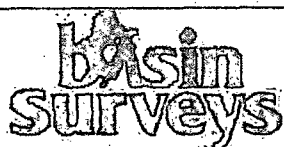
BOPCO, L.P.



JAMES RANCH UNIT DI1 164H BOTTOM

Located 660' FSL and 2310' FWL

Section 23, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.



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1120 N. West County Rd.
Hobbs, New Mexico 88241
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(575) 392-2206 - Fax
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0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

W.O. Number: JMS DI1 WELL PLATS

Survey Date: 10-17-2013

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



BOPCO, L.P.

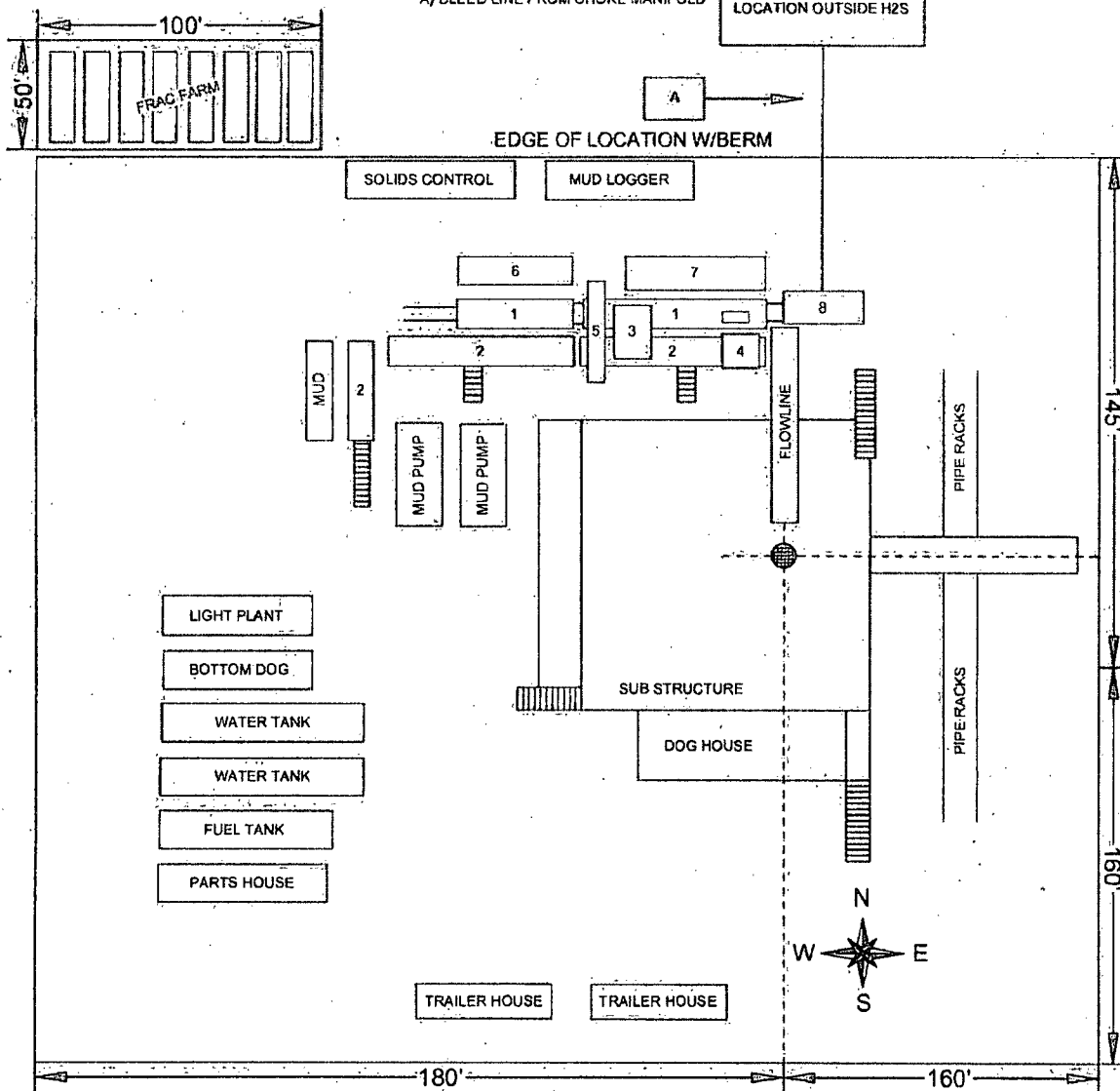
EXHIBIT "D"

RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

SOLIDS CONTROL EQUIPMENT LEGEND

- | | |
|-----------------------------------|--------------------|
| 1) ROLL OFF BIN | 5) CENTRIFUGE |
| 2) STEEL TANK | 6) DEWATERING UNIT |
| 3) MUD CLEANER | 7) CATCH TANK |
| 4) SHAKER | 8) CHOKE MANIFOLD |
| A) BLEED LINE FROM CHOKE MANIFOLD | |

FLARE PIT 150' AWAY
FROM LOCATION IN H2S
AREA, 100' AWAY FROM
LOCATION OUTSIDE H2S



JAMES RANCH UNIT DI1 164H

Located 1513' FNL and 1544' FEL
Section 21, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

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SCALE: NONE

W.O. Number: JMS DI1 WELL PLATS

Survey Date: 10-17-2013

BOPCO, L.P.

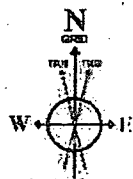
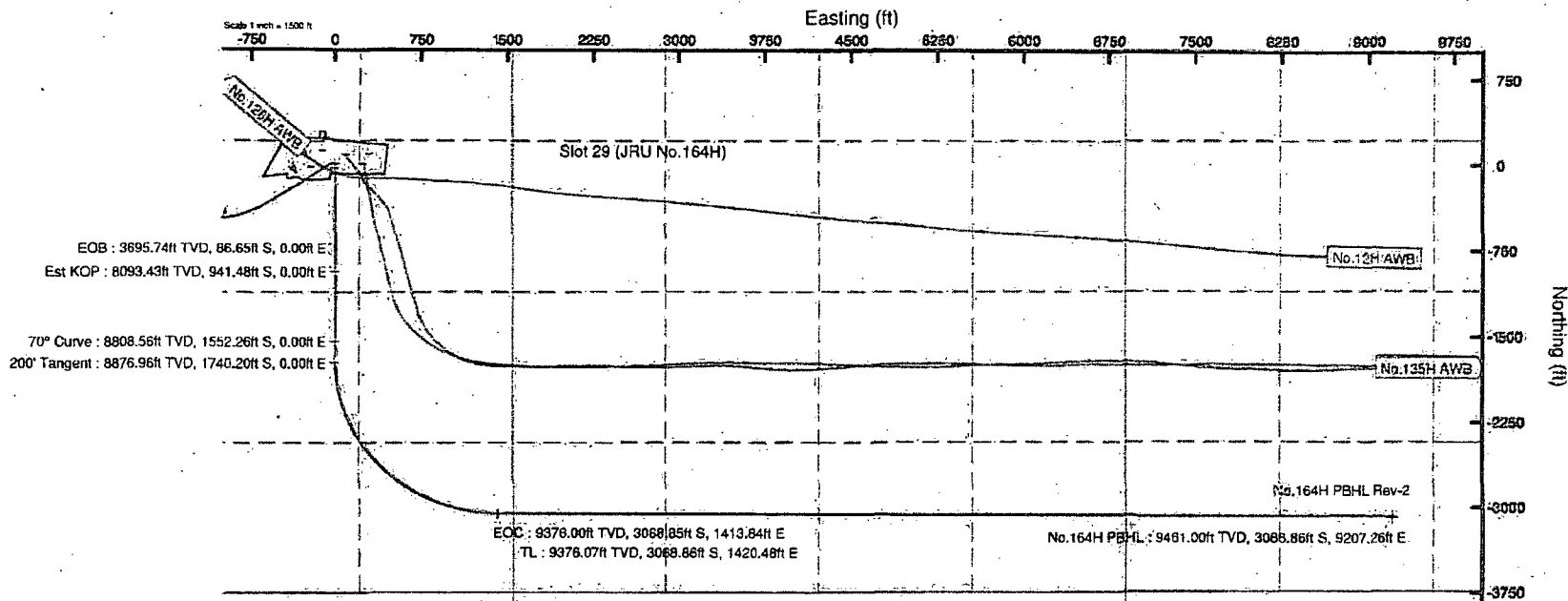


WTD - West Texas Division

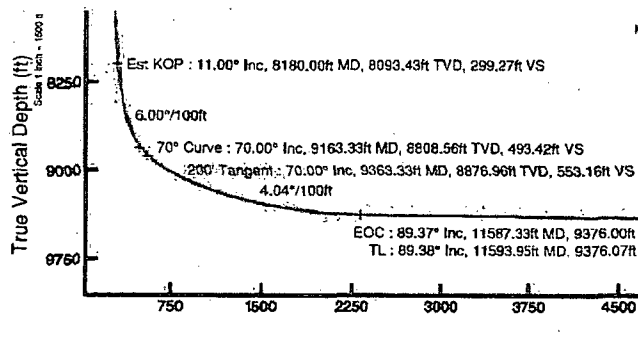
Location: Eddy County, NM
Field: James Ranch Unit
Facility: Drilling Island 1

Slot: Slot 29 (JRU No.164H)
Well: Slot 29
Wellbore: Slot 29

BOPCO, L.P.



IGRF-11 (1900.0 thru 2014.0) Dip: 60.21° Field: 48388.4 nT
Magnetic North is 7.38 degrees East of True North (at 5/13/2014)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0.24 degrees
To correct azimuth from Magnetic to Grid add 7.14 degrees



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.00	180.00	28.00	0.00	0.00	0.00	0.00
Nudge	2500.00	0.00	180.00	2500.00	0.00	0.00	0.00	0.00
EOB	2650.00	3.00	180.00	2649.93	-3.93	0.00	2.00	1.25
2nd Nudge	3300.00	3.00	180.00	3299.04	-37.94	0.00	0.00	12.06
EOB	3700.00	11.00	180.00	3685.74	-86.65	0.00	2.00	27.54
Est KOP	6180.00	11.00	180.00	6093.43	-941.48	0.00	0.00	299.27
70° Curve	9163.33	70.00	180.00	8808.56	-1552.26	0.00	0.00	493.42
200' Tangent	9363.33	70.00	180.00	8876.96	-1740.20	0.00	0.00	553.16
EOC	11587.33	89.37	90.00	9376.00	-3068.85	1413.84	4.04	2316.02
TL	11593.95	89.37	90.132	9376.07	-3068.86	1420.46	2.00	2322.30
No.164H PBHL	19381.24	89.37	90.132	9461.00	-3085.86	9207.26	0.00	9710.94

Notes	
1. True vertical depth is referenced to RIG on Oct 29, 2014.	2. Wellbore is referenced to RIG on Oct 29, 2014.
3. Measured depth is referenced to RIG on Oct 29, 2014.	4. True vertical depth is referenced to RIG on Oct 29, 2014.
5. True vertical depth is referenced to RIG on Oct 29, 2014.	6. True vertical depth is referenced to RIG on Oct 29, 2014.
7. True vertical depth is referenced to RIG on Oct 29, 2014.	8. True vertical depth is referenced to RIG on Oct 29, 2014.
9. True vertical depth is referenced to RIG on Oct 29, 2014.	10. True vertical depth is referenced to RIG on Oct 29, 2014.

No.164H PBHL Rev-2
No.164H PBHL: 89.38° Inc, 19381.24ft MD, 9461.00ft TVD, 9710.94ft VS



Planned Wellpath Report

B-5

Page 1 of 7

BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION

Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	BWGentry
Scale	0.999931	Report Generated	10/8/2014 at 10:06:18 AM
Convergence at slot	0.24° East	Database/Source file	WellArchitectDB/Slot_29.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [ft]	East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Location	-60.25	279.46	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W
Facility Reference Pt			639020.08	502555.10	32°22'51.004"N	103°52'58.816"W
Field Reference Pt			639020.08	502555.11	32°22'51.004"N	103°52'58.816"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on Slot 29 (KB) to Facility Vertical Datum	3191.00ft
Horizontal Reference Pt	Slot	Rig on Slot 29 (KB) to Mean Sea Level	3191.00ft
Vertical Reference Pt	Rig on Slot 29 (KB)	Rig on Slot 29 (KB) to Mud Line at Slot (Slot 29 (JRU No.164H))	3191.00ft
MD Reference Pt	Rig on Slot 29 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	108.53°



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	180.000	0.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
26.00†	0.000	180.000	26.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Tie On
126.00†	0.000	180.000	126.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
191.00†	0.000	180.000	191.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Rustler
226.00†	0.000	180.000	226.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
326.00†	0.000	180.000	326.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
426.00†	0.000	180.000	426.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
526.00†	0.000	180.000	526.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
556.00†	0.000	180.000	556.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Salado
626.00†	0.000	180.000	626.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
726.00†	0.000	180.000	726.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
826.00†	0.000	180.000	826.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
926.00†	0.000	180.000	926.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1026.00†	0.000	180.000	1026.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1126.00†	0.000	180.000	1126.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1226.00†	0.000	180.000	1226.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1326.00†	0.000	180.000	1326.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1426.00†	0.000	180.000	1426.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1526.00†	0.000	180.000	1526.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1626.00†	0.000	180.000	1626.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1726.00†	0.000	180.000	1726.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1826.00†	0.000	180.000	1826.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1926.00†	0.000	180.000	1926.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2026.00†	0.000	180.000	2026.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2126.00†	0.000	180.000	2126.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2226.00†	0.000	180.000	2226.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2326.00†	0.000	180.000	2326.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2426.00†	0.000	180.000	2426.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2500.00	0.000	180.000	2500.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Nudge
2526.00†	0.520	180.000	2526.00	0.04	-0.12	0.00	639299.52	502494.73	32°22'50.395"N	103°52'55.561"W	2.00	
2626.00†	2.520	180.000	2625.96	0.88	-2.77	0.00	639299.52	502492.08	32°22'50.369"N	103°52'55.561"W	2.00	
2650.00	3.000	180.000	2649.93	1.25	-3.93	0.00	639299.52	502490.92	32°22'50.357"N	103°52'55.561"W	2.00	EOB
2726.00†	3.000	180.000	2725.83	2.51	-7.90	0.00	639299.52	502486.95	32°22'50.318"N	103°52'55.561"W	0.00	
2826.00†	3.000	180.000	2825.69	4.18	-13.14	0.00	639299.52	502481.71	32°22'50.266"N	103°52'55.561"W	0.00	
2926.00†	3.000	180.000	2925.55	5.84	-18.37	0.00	639299.52	502476.48	32°22'50.215"N	103°52'55.562"W	0.00	
3026.00†	3.000	180.000	3025.42	7.50	-23.60	0.00	639299.52	502471.25	32°22'50.163"N	103°52'55.562"W	0.00	
3126.00†	3.000	180.000	3125.28	9.17	-28.84	0.00	639299.52	502466.01	32°22'50.111"N	103°52'55.562"W	0.00	
3226.00†	3.000	180.000	3225.14	10.83	-34.07	0.00	639299.52	502460.78	32°22'50.059"N	103°52'55.562"W	0.00	
3300.00	3.000	180.000	3299.04	12.06	-37.94	0.00	639299.52	502456.91	32°22'50.021"N	103°52'55.563"W	0.00	2nd Nudge
3326.00†	3.520	180.000	3325.00	12.53	-39.42	0.00	639299.52	502455.43	32°22'50.006"N	103°52'55.563"W	2.00	
3426.00†	5.520	180.000	3424.68	15.04	-47.30	0.00	639299.52	502447.55	32°22'49.928"N	103°52'55.563"W	2.00	
3526.00†	7.520	180.000	3524.03	18.65	-58.66	0.00	639299.52	502436.20	32°22'49.816"N	103°52'55.564"W	2.00	
3538.08†	7.762	180.000	3536.00	19.16	-60.26	0.00	639299.52	502434.59	32°22'49.800"N	103°52'55.564"W	2.00	Lamar
3583.54†	8.671	180.000	3581.00	21.22	-66.76	0.00	639299.52	502428.09	32°22'49.736"N	103°52'55.564"W	2.00	Delaware
3626.00†	9.520	180.000	3622.92	23.36	-73.47	0.00	639299.52	502421.38	32°22'49.669"N	103°52'55.564"W	2.00	



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

WELLPATH DATA (214 stations) = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3700.00	11.000	180.000	3695.74	27.54	-86.65	0.00	639299.52	502408.20	32°22'49.539"N	103°52'55.565"W	2.00	EOB
3726.00†	11.000	180.000	3721.26	29.12	-91.61	0.00	639299.52	502403.24	32°22'49.490"N	103°52'55.565"W	0.00	
3826.00†	11.000	180.000	3819.42	35.19	-110.69	0.00	639299.52	502384.16	32°22'49.301"N	103°52'55.566"W	0.00	
3926.00†	11.000	180.000	3917.58	41.25	-129.78	0.00	639299.52	502365.08	32°22'49.112"N	103°52'55.567"W	0.00	
4026.00†	11.000	180.000	4015.75	47.32	-148.86	0.00	639299.52	502346.00	32°22'48.923"N	103°52'55.568"W	0.00	
4126.00†	11.000	180.000	4113.91	53.38	-167.94	0.00	639299.52	502326.92	32°22'48.735"N	103°52'55.569"W	0.00	
4226.00†	11.000	180.000	4212.07	59.45	-187.02	0.00	639299.52	502307.84	32°22'48.546"N	103°52'55.570"W	0.00	
4326.00†	11.000	180.000	4310.24	65.51	-206.10	0.00	639299.52	502288.77	32°22'48.357"N	103°52'55.571"W	0.00	
4426.00†	11.000	180.000	4408.40	71.58	-225.18	0.00	639299.52	502269.69	32°22'48.168"N	103°52'55.572"W	0.00	
4526.00†	11.000	180.000	4506.56	77.64	-244.26	0.00	639299.52	502250.61	32°22'47.979"N	103°52'55.573"W	0.00	
4626.00†	11.000	180.000	4604.72	83.71	-263.34	0.00	639299.52	502231.53	32°22'47.791"N	103°52'55.574"W	0.00	
4726.00†	11.000	180.000	4702.89	89.77	-282.42	0.00	639299.52	502212.45	32°22'47.602"N	103°52'55.575"W	0.00	
4826.00†	11.000	180.000	4801.05	95.84	-301.50	0.00	639299.52	502193.37	32°22'47.413"N	103°52'55.576"W	0.00	
4926.00†	11.000	180.000	4899.21	101.91	-320.58	0.00	639299.52	502174.29	32°22'47.224"N	103°52'55.577"W	0.00	
5026.00†	11.000	180.000	4997.37	107.97	-339.67	0.00	639299.52	502155.21	32°22'47.035"N	103°52'55.577"W	0.00	
5126.00†	11.000	180.000	5095.54	114.04	-358.75	0.00	639299.52	502136.13	32°22'46.846"N	103°52'55.578"W	0.00	
5226.00†	11.000	180.000	5193.70	120.10	-377.83	0.00	639299.52	502117.05	32°22'46.658"N	103°52'55.579"W	0.00	
5326.00†	11.000	180.000	5291.86	126.17	-396.91	0.00	639299.52	502097.97	32°22'46.469"N	103°52'55.580"W	0.00	
5426.00†	11.000	180.000	5390.03	132.23	-415.99	0.00	639299.52	502078.89	32°22'46.280"N	103°52'55.581"W	0.00	
5526.00†	11.000	180.000	5488.19	138.30	-435.07	0.00	639299.52	502059.81	32°22'46.091"N	103°52'55.582"W	0.00	
5626.00†	11.000	180.000	5586.35	144.36	-454.15	0.00	639299.52	502040.73	32°22'45.902"N	103°52'55.583"W	0.00	
5726.00†	11.000	180.000	5684.51	150.43	-473.23	0.00	639299.52	502021.65	32°22'45.714"N	103°52'55.584"W	0.00	
5826.00†	11.000	180.000	5782.68	156.49	-492.31	0.00	639299.52	502002.57	32°22'45.525"N	103°52'55.585"W	0.00	
5926.00†	11.000	180.000	5880.84	162.56	-511.39	0.00	639299.52	501983.49	32°22'45.336"N	103°52'55.586"W	0.00	
6026.00†	11.000	180.000	5979.00	168.62	-530.47	0.00	639299.52	501964.41	32°22'45.147"N	103°52'55.587"W	0.00	
6126.00†	11.000	180.000	6077.16	174.69	-549.56	0.00	639299.52	501945.33	32°22'44.958"N	103°52'55.588"W	0.00	
6226.00†	11.000	180.000	6175.33	180.75	-568.64	0.00	639299.52	501926.25	32°22'44.770"N	103°52'55.589"W	0.00	
6326.00†	11.000	180.000	6273.49	186.82	-587.72	0.00	639299.52	501907.17	32°22'44.581"N	103°52'55.590"W	0.00	
6426.00†	11.000	180.000	6371.65	192.89	-606.80	0.00	639299.52	501888.09	32°22'44.392"N	103°52'55.591"W	0.00	
6526.00†	11.000	180.000	6469.82	198.95	-625.88	0.00	639299.52	501869.02	32°22'44.203"N	103°52'55.592"W	0.00	
6626.00†	11.000	180.000	6567.98	205.02	-644.96	0.00	639299.52	501849.94	32°22'44.014"N	103°52'55.592"W	0.00	
6726.00†	11.000	180.000	6666.14	211.08	-664.04	0.00	639299.52	501830.86	32°22'43.826"N	103°52'55.593"W	0.00	
6826.00†	11.000	180.000	6764.30	217.15	-683.12	0.00	639299.52	501811.78	32°22'43.637"N	103°52'55.594"W	0.00	
6926.00†	11.000	180.000	6862.47	223.21	-702.20	0.00	639299.52	501792.70	32°22'43.448"N	103°52'55.595"W	0.00	
7026.00†	11.000	180.000	6960.63	229.28	-721.28	0.00	639299.52	501773.62	32°22'43.259"N	103°52'55.596"W	0.00	
7126.00†	11.000	180.000	7058.79	235.34	-740.36	0.00	639299.52	501754.54	32°22'43.070"N	103°52'55.597"W	0.00	
7172.05†	11.000	180.000	7104.00	238.14	-749.15	0.00	639299.52	501745.75	32°22'42.983"N	103°52'55.598"W	0.00	Lower Brushy Canyon
7226.00†	11.000	180.000	7156.95	241.41	-759.45	0.00	639299.52	501735.46	32°22'42.882"N	103°52'55.598"W	0.00	
7326.00†	11.000	180.000	7255.12	247.47	-778.53	0.00	639299.52	501716.38	32°22'42.693"N	103°52'55.599"W	0.00	
7426.00†	11.000	180.000	7353.28	253.54	-797.61	0.00	639299.52	501697.30	32°22'42.504"N	103°52'55.600"W	0.00	
7457.30†	11.000	180.000	7384.00	255.44	-803.58	0.00	639299.52	501691.33	32°22'42.445"N	103°52'55.600"W	0.00	Bone Spring Lime Sand
7526.00†	11.000	180.000	7451.44	259.60	-816.69	0.00	639299.52	501678.22	32°22'42.315"N	103°52'55.601"W	0.00	
7626.00†	11.000	180.000	7549.61	265.67	-835.77	0.00	639299.52	501659.14	32°22'42.126"N	103°52'55.602"W	0.00	
7726.00†	11.000	180.000	7647.77	271.73	-854.85	0.00	639299.52	501640.06	32°22'41.937"N	103°52'55.603"W	0.00	
7826.00†	11.000	180.000	7745.93	277.80	-873.93	0.00	639299.52	501620.98	32°22'41.749"N	103°52'55.604"W	0.00	



Planned Wellpath Report

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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [ft/100ft]	Comments
7926.00†	11.000	180.000	7844.09	283.87	-893.01	0.00	639299.52	501601.90	32°22'41.560"N	103°52'55.605"W	0.00	
8026.00†	11.000	180.000	7942.26	289.93	-912.09	0.00	639299.52	501582.82	32°22'41.371"N	103°52'55.606"W	0.00	
8126.00†	11.000	180.000	8040.42	296.00	-931.17	0.00	639299.52	501563.74	32°22'41.182"N	103°52'55.607"W	0.00	
8180.00†	11.000	180.000	8093.43	299.27	-941.48	0.00	639299.52	501553.44	32°22'41.080"N	103°52'55.607"W	0.00	Est KOP
8226.00†	13.760	180.000	8138.35	302.41	-951.34	0.00	639299.52	501543.58	32°22'40.983"N	103°52'55.608"W	6.00	
8326.00†	19.760	180.000	8234.06	311.57	-980.16	0.00	639299.52	501514.76	32°22'40.698"N	103°52'55.609"W	6.00	
8426.00†	25.760	180.000	8326.23	323.86	-1018.83	0.00	639299.52	501476.09	32°22'40.315"N	103°52'55.611"W	6.00	
8495.88†	29.953	180.000	8388.00	334.24	-1051.48	0.00	639299.52	501443.45	32°22'39.992"N	103°52'55.612"W	6.00	Bone Spring 1 Sand
8526.00†	31.760	180.000	8413.86	339.15	-1066.92	0.00	639299.52	501428.00	32°22'39.839"N	103°52'55.613"W	6.00	
8626.00†	37.760	180.000	8495.97	357.26	-1123.91	0.00	639299.52	501371.02	32°22'39.275"N	103°52'55.616"W	6.00	
8726.00†	43.760	180.000	8571.68	378.01	-1189.17	0.00	639299.52	501305.76	32°22'38.629"N	103°52'55.619"W	6.00	
8826.00†	49.760	180.000	8640.16	401.15	-1261.99	0.00	639299.52	501232.95	32°22'37.909"N	103°52'55.623"W	6.00	
8926.00†	55.760	180.000	8700.65	426.45	-1341.56	0.00	639299.52	501153.38	32°22'37.121"N	103°52'55.627"W	6.00	
9026.00†	61.760	180.000	8752.48	453.61	-1427.02	0.00	639299.52	501067.93	32°22'36.276"N	103°52'55.631"W	6.00	
9126.00†	67.760	180.000	8795.11	482.35	-1517.43	0.00	639299.52	500977.52	32°22'35.381"N	103°52'55.635"W	6.00	
9163.33	70.000	180.000	8808.56	493.42	-1552.26	0.00	639299.52	500942.70	32°22'35.037"N	103°52'55.637"W	6.00	70° Curve
9226.00†	70.000	180.000	8829.99	512.14	-1611.14	0.00	639299.52	500883.82	32°22'34.454"N	103°52'55.640"W	0.00	
9326.00†	70.000	180.000	8864.19	542.01	-1705.11	0.00	639299.52	500789.86	32°22'33.524"N	103°52'55.645"W	0.00	
9363.33	70.000	180.000	8876.96	553.16	-1740.20	0.00	639299.52	500754.78	32°22'33.177"N	103°52'55.646"W	0.00	200' Tangent
9426.00†	69.994	177.308	8898.40	573.19	-1799.06	1.38	639300.90	500695.92	32°22'32.594"N	103°52'55.633"W	4.04	
9526.00†	70.070	173.013	8932.57	610.46	-1892.68	9.31	639308.83	500602.30	32°22'31.668"N	103°52'55.545"W	4.04	
9626.00†	70.248	168.725	8966.52	654.13	-1985.53	24.24	639323.75	500509.46	32°22'30.748"N	103°52'55.376"W	4.04	
9726.00†	70.528	164.449	9000.10	703.96	-2077.13	46.08	639345.60	500417.87	32°22'29.841"N	103°52'55.126"W	4.04	
9826.00†	70.907	160.191	9033.14	759.71	-2167.04	74.75	639374.26	500327.97	32°22'28.950"N	103°52'54.796"W	4.04	
9926.00†	71.384	155.955	9065.47	821.11	-2254.80	110.08	639409.59	500240.21	32°22'28.080"N	103°52'54.388"W	4.04	
10026.00†	71.956	151.745	9096.93	887.85	-2339.98	151.91	639451.41	500155.03	32°22'27.236"N	103°52'53.905"W	4.04	
10111.43†	72.516	148.171	9123.00	948.85	-2410.40	192.64	639492.14	500084.62	32°22'26.537"N	103°52'53.433"W	4.04	Bone Spring 2 A Sand
10126.00†	72.617	147.564	9127.36	959.60	-2422.17	200.03	639499.53	500072.86	32°22'26.420"N	103°52'53.348"W	4.04	
10196.00†	73.132	144.656	9147.98	1012.61	-2477.69	237.33	639536.83	500017.34	32°22'25.869"N	103°52'52.915"W	4.04	FTP
10226.00†	73.365	143.415	9156.63	1036.00	-2500.94	254.20	639553.70	499994.09	32°22'25.639"N	103°52'52.720"W	4.04	
10326.00†	74.195	139.300	9184.57	1116.67	-2575.91	314.15	639613.64	499919.12	32°22'24.894"N	103°52'52.025"W	4.04	
10426.00†	75.102	135.220	9211.05	1201.22	-2646.71	379.58	639679.07	499848.32	32°22'24.191"N	103°52'51.265"W	4.04	
10526.00†	76.080	131.176	9235.95	1289.22	-2712.99	450.18	639749.66	499782.05	32°22'23.532"N	103°52'50.445"W	4.04	
10626.00†	77.124	127.167	9259.13	1380.23	-2774.42	525.58	639825.06	499720.63	32°22'22.921"N	103°52'49.569"W	4.04	
10726.00†	78.228	123.192	9280.48	1473.82	-2830.68	605.41	639904.89	499664.37	32°22'22.361"N	103°52'48.641"W	4.04	
10826.00†	79.387	119.250	9299.90	1569.50	-2881.51	689.29	639988.76	499613.54	32°22'21.855"N	103°52'47.666"W	4.04	
10926.00†	80.595	115.338	9317.29	1666.81	-2926.66	776.79	640076.25	499568.40	32°22'21.404"N	103°52'46.648"W	4.04	
11026.00†	81.845	111.454	9332.55	1765.26	-2965.89	867.47	640166.93	499529.17	32°22'21.012"N	103°52'45.592"W	4.04	
11126.00†	83.133	107.594	9345.63	1864.36	-2999.01	960.89	640260.34	499496.05	32°22'20.681"N	103°52'44.505"W	4.04	
11226.00†	84.451	103.750	9356.45	1963.63	-3025.86	1056.59	640356.03	499469.21	32°22'20.411"N	103°52'43.390"W	4.04	
11326.00†	85.793	99.935	9364.96	2062.57	-3046.30	1154.09	640453.52	499448.76	32°22'20.204"N	103°52'42.255"W	4.04	
11426.00†	87.154	96.126	9371.11	2160.69	-3060.24	1252.90	640552.33	499434.82	32°22'20.062"N	103°52'41.103"W	4.04	
11526.00†	88.528	92.327	9374.88	2257.50	-3067.60	1352.54	640651.96	499427.46	32°22'19.985"N	103°52'39.942"W	4.04	
11587.33	89.374	90.000	9376.00	2316.02	-3068.85	1413.84	640713.26	499426.22	32°22'19.970"N	103°52'39.227"W	4.04	EOC
11593.95	89.375	90.132	9376.07	2322.30	-3068.86	1420.46	640719.88	499426.21	32°22'19.970"N	103°52'39.150"W	2.00	IL



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION				
Operator	WTD - West Texas Division			Slot
Area	Eddy County, NM			Slot 29 (JRU No.164H)
Field	James Ranch Unit			Well
Facility	Drilling Island 1			Wellbore
				Slot 29

WELLPATH DATA (214 stations) * = interpolated/extrapolated station													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [ft/100ft]	Comments	
11626.00	89.375	90.132	9376.42	2352.70	-3068.93	1452.51	640751.92	499426.14	32°22'19.968"N	103°52'38.776"W	0.00		
11726.00	89.375	90.132	9377.51	2447.58	-3069.16	1552.50	640851.91	499425.90	32°22'19.961"N	103°52'37.611"W	0.00		
11826.00	89.375	90.132	9378.60	2542.46	-3069.39	1652.49	640951.89	499425.67	32°22'19.955"N	103°52'36.445"W	0.00		
11926.00	89.375	90.132	9379.69	2637.35	-3069.62	1752.49	641051.88	499425.44	32°22'19.948"N	103°52'35.279"W	0.00		
12026.00	89.375	90.132	9380.78	2732.23	-3069.86	1852.48	641151.87	499425.21	32°22'19.942"N	103°52'34.113"W	0.00		
12126.00	89.375	90.132	9381.87	2827.11	-3070.09	1952.47	641251.85	499424.98	32°22'19.935"N	103°52'32.947"W	0.00		
12226.00	89.375	90.132	9382.97	2921.99	-3070.32	2052.47	641351.84	499424.75	32°22'19.929"N	103°52'31.781"W	0.00		
12326.00	89.375	90.132	9384.06	3016.87	-3070.55	2152.46	641451.83	499424.52	32°22'19.922"N	103°52'30.616"W	0.00		
12426.00	89.375	90.132	9385.15	3111.75	-3070.78	2252.46	641551.81	499424.29	32°22'19.916"N	103°52'29.450"W	0.00		
12526.00	89.375	90.132	9386.24	3206.63	-3071.01	2352.45	641651.80	499424.06	32°22'19.909"N	103°52'28.284"W	0.00		
12626.00	89.375	90.132	9387.33	3301.51	-3071.24	2452.44	641751.79	499423.83	32°22'19.903"N	103°52'27.118"W	0.00		
12726.00	89.375	90.132	9388.42	3396.39	-3071.47	2552.44	641851.77	499423.59	32°22'19.896"N	103°52'25.952"W	0.00		
12826.00	89.375	90.132	9389.51	3491.27	-3071.70	2652.43	641951.76	499423.36	32°22'19.890"N	103°52'24.786"W	0.00		
12926.00	89.375	90.132	9390.60	3586.15	-3071.94	2752.43	642051.75	499423.13	32°22'19.883"N	103°52'23.621"W	0.00		
13026.00	89.375	90.132	9391.69	3681.04	-3072.17	2852.42	642151.73	499422.90	32°22'19.877"N	103°52'22.455"W	0.00		
13126.00	89.375	90.132	9392.78	3775.92	-3072.40	2952.41	642251.72	499422.67	32°22'19.870"N	103°52'21.289"W	0.00		
13226.00	89.375	90.132	9393.87	3870.80	-3072.63	3052.41	642351.71	499422.44	32°22'19.863"N	103°52'20.123"W	0.00		
13326.00	89.375	90.132	9394.96	3965.68	-3072.86	3152.40	642451.69	499422.21	32°22'19.857"N	103°52'18.957"W	0.00		
13426.00	89.375	90.132	9396.05	4060.56	-3073.09	3252.39	642551.68	499421.98	32°22'19.850"N	103°52'17.791"W	0.00		
13526.00	89.375	90.132	9397.14	4155.44	-3073.32	3352.39	642651.67	499421.74	32°22'19.844"N	103°52'16.626"W	0.00		
13626.00	89.375	90.132	9398.23	4250.32	-3073.55	3452.38	642751.65	499421.51	32°22'19.837"N	103°52'15.460"W	0.00		
13726.00	89.375	90.132	9399.32	4345.20	-3073.79	3552.38	642851.64	499421.28	32°22'19.831"N	103°52'14.294"W	0.00		
13826.00	89.375	90.132	9400.41	4440.08	-3074.02	3652.37	642951.63	499421.05	32°22'19.824"N	103°52'13.128"W	0.00		
13926.00	89.375	90.132	9401.51	4534.96	-3074.25	3752.36	643051.61	499420.82	32°22'19.818"N	103°52'11.962"W	0.00		
14026.00	89.375	90.132	9402.60	4629.84	-3074.48	3852.36	643151.60	499420.59	32°22'19.811"N	103°52'10.796"W	0.00		
14126.00	89.375	90.132	9403.69	4724.72	-3074.71	3952.35	643251.59	499420.36	32°22'19.804"N	103°52'09.630"W	0.00		
14226.00	89.375	90.132	9404.78	4819.61	-3074.94	4052.34	643351.57	499420.13	32°22'19.798"N	103°52'08.465"W	0.00		
14326.00	89.375	90.132	9405.87	4914.49	-3075.17	4152.34	643451.56	499419.89	32°22'19.791"N	103°52'07.299"W	0.00		
14426.00	89.375	90.132	9406.96	5009.37	-3075.40	4252.33	643551.55	499419.66	32°22'19.785"N	103°52'06.133"W	0.00		
14526.00	89.375	90.132	9408.05	5104.25	-3075.63	4352.33	643651.53	499419.43	32°22'19.778"N	103°52'04.967"W	0.00		
14626.00	89.375	90.132	9409.14	5199.13	-3075.87	4452.32	643751.52	499419.20	32°22'19.771"N	103°52'03.801"W	0.00		
14726.00	89.375	90.132	9410.23	5294.01	-3076.10	4552.31	643851.51	499418.97	32°22'19.765"N	103°52'02.635"W	0.00		
14826.00	89.375	90.132	9411.32	5388.89	-3076.33	4652.31	643951.49	499418.74	32°22'19.758"N	103°52'01.470"W	0.00		
14926.00	89.375	90.132	9412.41	5483.77	-3076.56	4752.30	644051.48	499418.51	32°22'19.752"N	103°52'00.304"W	0.00		
15026.00	89.375	90.132	9413.50	5578.65	-3076.79	4852.29	644151.47	499418.28	32°22'19.745"N	103°51'59.138"W	0.00		
15126.00	89.375	90.132	9414.59	5673.53	-3077.02	4952.29	644251.45	499418.05	32°22'19.738"N	103°51'57.972"W	0.00		
15226.00	89.375	90.132	9415.68	5768.41	-3077.25	5052.28	644351.44	499417.81	32°22'19.732"N	103°51'56.806"W	0.00		
15326.00	89.375	90.132	9416.77	5863.30	-3077.48	5152.28	644451.43	499417.58	32°22'19.725"N	103°51'55.640"W	0.00		
15426.00	89.375	90.132	9417.86	5958.18	-3077.72	5252.27	644551.41	499417.35	32°22'19.719"N	103°51'54.475"W	0.00		
15526.00	89.375	90.132	9418.95	6053.06	-3077.95	5352.26	644651.40	499417.12	32°22'19.712"N	103°51'53.309"W	0.00		
15626.00	89.375	90.132	9420.05	6147.94	-3078.18	5452.26	644751.39	499416.89	32°22'19.705"N	103°51'52.143"W	0.00		
15726.00	89.375	90.132	9421.14	6242.82	-3078.41	5552.25	644851.37	499416.66	32°22'19.699"N	103°51'50.977"W	0.00		
15826.00	89.375	90.132	9422.23	6337.70	-3078.64	5652.24	644951.36	499416.43	32°22'19.692"N	103°51'49.811"W	0.00		
15926.00	89.375	90.132	9423.32	6432.58	-3078.87	5752.24	645051.35	499416.20	32°22'19.686"N	103°51'48.645"W	0.00		
16026.00	89.375	90.132	9424.41	6527.46	-3079.10	5852.23	645151.33	499415.96	32°22'19.679"N	103°51'47.480"W	0.00		



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16126.00†	89.375	90.132	9425.50	6622.34	-3079.33	5952.23	645251.32	499415.73	32°22'19.672"N	103°51'46.314"W	0.00	
16226.00†	89.375	90.132	9426.59	6717.22	-3079.57	6052.22	645351.31	499415.50	32°22'19.666"N	103°51'45.148"W	0.00	
16326.00†	89.375	90.132	9427.68	6812.10	-3079.80	6152.21	645451.29	499415.27	32°22'19.659"N	103°51'43.982"W	0.00	
16426.00†	89.375	90.132	9428.77	6906.99	-3080.03	6252.21	645551.28	499415.04	32°22'19.652"N	103°51'42.816"W	0.00	
16526.00†	89.375	90.132	9429.86	7001.87	-3080.26	6352.20	645651.27	499414.81	32°22'19.646"N	103°51'41.650"W	0.00	
16626.00†	89.375	90.132	9430.95	7096.75	-3080.49	6452.20	645751.25	499414.58	32°22'19.639"N	103°51'40.485"W	0.00	
16726.00†	89.375	90.132	9432.04	7191.63	-3080.72	6552.19	645851.24	499414.35	32°22'19.632"N	103°51'39.319"W	0.00	
16826.00†	89.375	90.132	9433.13	7286.51	-3080.95	6652.18	645951.23	499414.12	32°22'19.626"N	103°51'38.153"W	0.00	
16926.00†	89.375	90.132	9434.22	7381.39	-3081.18	6752.18	646051.21	499413.88	32°22'19.619"N	103°51'36.987"W	0.00	
17026.00†	89.375	90.132	9435.31	7476.27	-3081.41	6852.17	646151.20	499413.65	32°22'19.612"N	103°51'35.821"W	0.00	
17126.00†	89.375	90.132	9436.40	7571.15	-3081.65	6952.16	646251.19	499413.42	32°22'19.606"N	103°51'34.655"W	0.00	
17226.00†	89.375	90.132	9437.50	7666.03	-3081.88	7052.16	646351.18	499413.19	32°22'19.599"N	103°51'33.489"W	0.00	
17326.00†	89.375	90.132	9438.59	7760.91	-3082.11	7152.15	646451.16	499412.96	32°22'19.592"N	103°51'32.324"W	0.00	
17426.00†	89.375	90.132	9439.68	7855.79	-3082.34	7252.15	646551.15	499412.73	32°22'19.586"N	103°51'31.158"W	0.00	
17526.00†	89.375	90.132	9440.77	7950.67	-3082.57	7352.14	646651.14	499412.50	32°22'19.579"N	103°51'29.992"W	0.00	
17626.00†	89.375	90.132	9441.86	8045.56	-3082.80	7452.13	646751.12	499412.27	32°22'19.572"N	103°51'28.826"W	0.00	
17726.00†	89.375	90.132	9442.95	8140.44	-3083.03	7552.13	646851.11	499412.03	32°22'19.566"N	103°51'27.660"W	0.00	
17826.00†	89.375	90.132	9444.04	8235.32	-3083.26	7652.12	646951.10	499411.80	32°22'19.559"N	103°51'26.494"W	0.00	
17926.00†	89.375	90.132	9445.13	8330.20	-3083.50	7752.11	647051.08	499411.57	32°22'19.552"N	103°51'25.329"W	0.00	
18026.00†	89.375	90.132	9446.22	8425.08	-3083.73	7852.11	647151.07	499411.34	32°22'19.546"N	103°51'24.163"W	0.00	
18126.00†	89.375	90.132	9447.31	8519.96	-3083.96	7952.10	647251.06	499411.11	32°22'19.539"N	103°51'22.997"W	0.00	
18226.00†	89.375	90.132	9448.40	8614.84	-3084.19	8052.10	647351.04	499410.88	32°22'19.532"N	103°51'21.831"W	0.00	
18326.00†	89.375	90.132	9449.49	8709.72	-3084.42	8152.09	647451.03	499410.65	32°22'19.526"N	103°51'20.665"W	0.00	
18426.00†	89.375	90.132	9450.58	8804.60	-3084.65	8252.08	647551.02	499410.42	32°22'19.519"N	103°51'19.499"W	0.00	
18526.00†	89.375	90.132	9451.67	8899.48	-3084.88	8352.08	647651.00	499410.19	32°22'19.512"N	103°51'18.334"W	0.00	
18626.00†	89.375	90.132	9452.76	8994.36	-3085.11	8452.07	647750.99	499409.95	32°22'19.505"N	103°51'17.168"W	0.00	
18726.00†	89.375	90.132	9453.85	9089.25	-3085.34	8552.06	647850.98	499409.72	32°22'19.499"N	103°51'16.002"W	0.00	
18826.00†	89.375	90.132	9454.94	9184.13	-3085.58	8652.06	647950.96	499409.49	32°22'19.492"N	103°51'14.836"W	0.00	
18926.00†	89.375	90.132	9456.04	9279.01	-3085.81	8752.05	648050.95	499409.26	32°22'19.485"N	103°51'13.670"W	0.00	
19026.00†	89.375	90.132	9457.13	9373.89	-3086.04	8852.05	648150.94	499409.03	32°22'19.479"N	103°51'12.504"W	0.00	
19126.00†	89.375	90.132	9458.22	9468.77	-3086.27	8952.04	648250.92	499408.80	32°22'19.472"N	103°51'11.339"W	0.00	
19226.00†	89.375	90.132	9459.31	9563.65	-3086.50	9052.03	648350.91	499408.57	32°22'19.465"N	103°51'10.173"W	0.00	
19326.00†	89.375	90.132	9460.40	9658.53	-3086.73	9152.03	648450.90	499408.34	32°22'19.458"N	103°51'09.007"W	0.00	
19381.24	89.375	90.132	9461.00†	9710.94	-3086.86	9207.26	648506.13	499408.21	32°22'19.455"N	103°51'08.363"W	0.00	No.164H PBHL



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Slot 29		9380.00	-3125.00	-14527.12	624773.42	499370.07	32°22'20.049"N	103°55'45.090"W	point
No.164H PBHL		9461.00	-3081.06	11918.90	651217.57	499414.01	32°22'19.390"N	103°50'36.747"W	point
1) No.164H PBHL Rev-2	19381.24	9461.00	-3086.86	9207.26	648506.13	499408.21	32°22'19.455"N	103°51'08.363"W	point

SURVEY PROGRAM - Ref Wellbore: Slot 29 Ref Wellpath: B-5				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	8100.00	Generic gyro - northseeking (Standard)		Slot 29
8100.00	22098.46	NaviTrak (Standard)		Slot 29

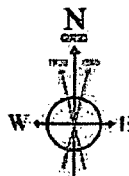
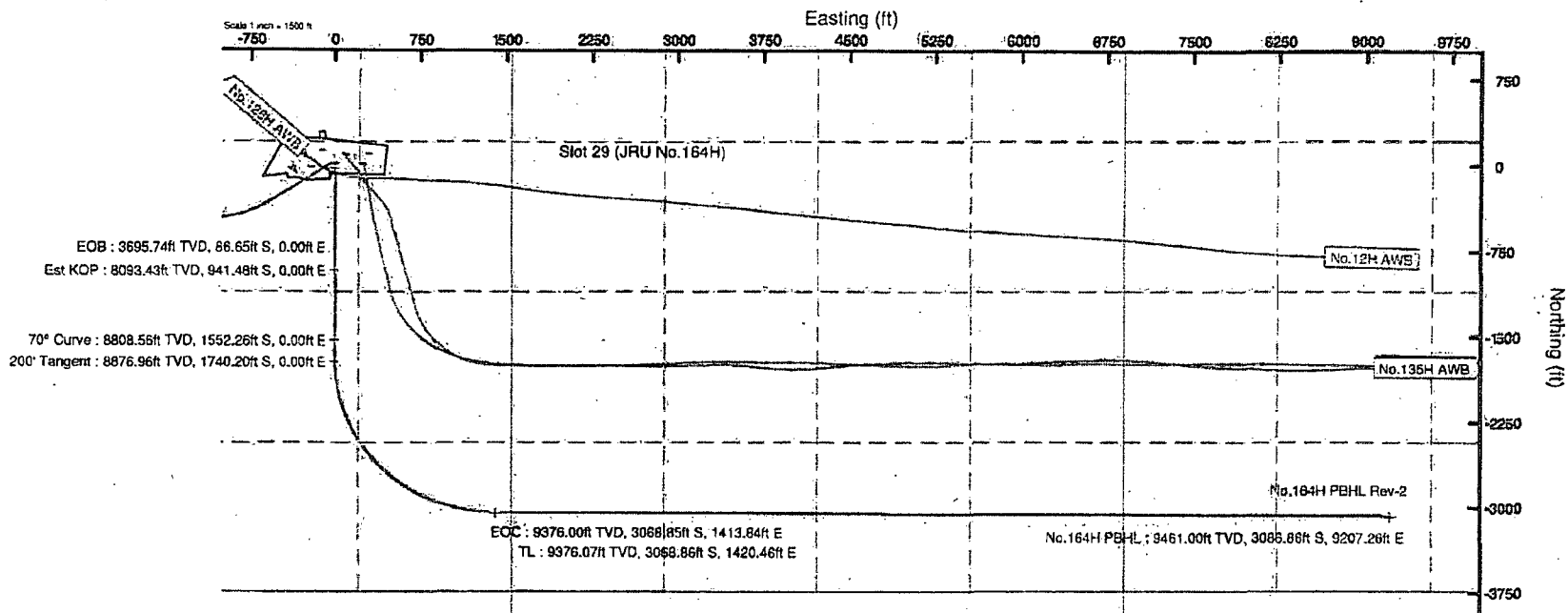


WTD - West Texas Division

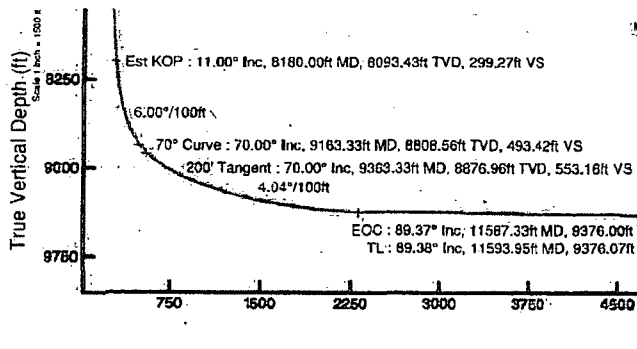
Location: Eddy County, NM
Field: James Ranch Unit
Facility: Drilling Island 1

Slot: Slot 29 (JRU No.164H)
Well: Slot 29
Wellbore: Slot 29

BOPCO, L.P.



GRF-11 (1900.0 thru 2014.0) Dip: 60.21° Field: 48388.4 nT
Magnetic North is 7.39 degrees East of True North (at 5/13/2014)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0.24 degrees
To correct azimuth from Magnetic to Grid add 7.14 degrees



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.00	180.00	26.00	0.00	0.00	0.00	0.00
Nudge	2500.00	0.00	180.00	2500.00	0.00	0.00	0.00	0.00
EOB	2850.00	3.00	180.00	2849.93	-3.93	0.00	2.00	1.25
2nd Nudge	3300.00	3.00	180.00	3299.04	-37.94	0.00	0.00	12.08
EOB	3700.00	11.00	180.00	3695.74	-86.65	0.00	2.00	27.54
Est KOP	8180.00	11.00	180.00	8093.43	-941.48	0.00	0.00	299.27
70° Curve	9163.33	70.00	180.00	8808.56	-1652.26	0.00	6.00	493.42
200° Tangent	9363.33	70.00	180.00	8876.96	-1740.20	0.00	0.00	553.16
EOC	11587.33	89.37	90.00	9376.00	-3068.85	1413.84	4.04	2316.02
TL	11593.95	89.375	90.132	9376.07	-3068.86	1420.46	2.00	2322.30
No. 164H PBHL	19381.24	89.375	90.132	9461.00	-3068.86	9207.26	0.00	9710.94

Plot references: 48388.4 nT	
True vertical depth by reference to Rig at Slot 29 (W)	Grid System: NAD83 / 114 New Mexico SP, Eastern Zone (NAD83), UTM
Measured depth are reference to Rig at Slot 29 (W)	Notes Reference: 12nd well
Rig on Slot 29 (W) is 1000 ft from Rig Level 1000 ft	Scale: True depth
Mean Sea Level is 1000 ft from Rig Level 1000 ft	Depth are in feet
Drawings are in feet reference to Slot	1. Created by: BOPCO on 10/2/2014



Planned Wellpath Report

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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect@ 4.0.1
North Reference	Grid	User	BWGeniry
Scale	0.999931	Report Generated	10/8/2014 at 10:06:18 AM
Convergence at slot	0.24° East	Database/Source file	WellArchitectDB/Slot_29.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-60.25	279.46	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W
Facility Reference Pt			639020.08	502555.10	32°22'51.004"N	103°52'58.816"W
Field Reference Pt			639020.08	502555.11	32°22'51.004"N	103°52'58.816"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on Slot 29 (KB) to Facility Vertical Datum	3191.00ft
Horizontal Reference Pt	Slot	Rig on Slot 29 (KB) to Mean Sea Level	3191.00ft
Vertical Reference Pt	Rig on Slot 29 (KB)	Rig on Slot 29 (KB) to Mud Line at Slot (Slot 29 (JRU No.164H))	3191.00ft
MD Reference Pt	Rig on Slot 29 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	108.53°



Planned Wellpath Report

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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island I		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	180.000	0.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
26.00	0.000	180.000	26.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Tie On
126.00†	0.000	180.000	126.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
191.00†	0.000	180.000	191.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Rustler
226.00†	0.000	180.000	226.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
326.00†	0.000	180.000	326.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
426.00†	0.000	180.000	426.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
526.00†	0.000	180.000	526.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
556.00†	0.000	180.000	556.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Salado
626.00†	0.000	180.000	626.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
726.00†	0.000	180.000	726.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
826.00†	0.000	180.000	826.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
926.00†	0.000	180.000	926.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1026.00†	0.000	180.000	1026.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1126.00†	0.000	180.000	1126.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1226.00†	0.000	180.000	1226.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1326.00†	0.000	180.000	1326.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1426.00†	0.000	180.000	1426.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1526.00†	0.000	180.000	1526.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1626.00†	0.000	180.000	1626.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1726.00†	0.000	180.000	1726.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1826.00†	0.000	180.000	1826.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
1926.00†	0.000	180.000	1926.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2026.00†	0.000	180.000	2026.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2126.00†	0.000	180.000	2126.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2226.00†	0.000	180.000	2226.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2326.00†	0.000	180.000	2326.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2426.00†	0.000	180.000	2426.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	
2500.00	0.000	180.000	2500.00	0.00	0.00	0.00	639299.52	502494.85	32°22'50.396"N	103°52'55.561"W	0.00	Nudge
2526.00†	0.520	180.000	2526.00	0.04	-0.12	0.00	639299.52	502494.73	32°22'50.395"N	103°52'55.561"W	2.00	
2626.00†	2.520	180.000	2625.96	-0.88	-2.77	0.00	639299.52	502492.08	32°22'50.369"N	103°52'55.561"W	2.00	
2650.00	3.000	180.000	2649.93	1.25	-3.93	0.00	639299.52	502490.92	32°22'50.357"N	103°52'55.561"W	2.00	EOB
2726.00†	3.000	180.000	2725.83	2.51	-7.90	0.00	639299.52	502486.95	32°22'50.318"N	103°52'55.561"W	0.00	
2826.00†	3.000	180.000	2825.69	4.18	-13.14	0.00	639299.52	502481.71	32°22'50.266"N	103°52'55.561"W	0.00	
2926.00†	3.000	180.000	2925.55	5.84	-18.37	0.00	639299.52	502476.48	32°22'50.215"N	103°52'55.562"W	0.00	
3026.00†	3.000	180.000	3025.42	7.50	-23.60	0.00	639299.52	502471.25	32°22'50.163"N	103°52'55.562"W	0.00	
3126.00†	3.000	180.000	3125.28	9.17	-28.84	0.00	639299.52	502466.01	32°22'50.111"N	103°52'55.562"W	0.00	
3226.00†	3.000	180.000	3225.14	10.83	-34.07	0.00	639299.52	502460.78	32°22'50.059"N	103°52'55.562"W	0.00	
3300.00	3.000	180.000	3299.04	12.06	-37.94	0.00	639299.52	502456.91	32°22'50.021"N	103°52'55.563"W	0.00	2nd Nudge
3326.00†	3.520	180.000	3325.00	12.53	-39.42	0.00	639299.52	502453.43	32°22'50.006"N	103°52'55.563"W	2.00	
3426.00†	5.520	180.000	3424.68	15.04	-47.30	0.00	639299.52	502447.55	32°22'49.928"N	103°52'55.563"W	2.00	
3526.00†	7.520	180.000	3524.03	18.65	-58.66	0.00	639299.52	502436.20	32°22'49.816"N	103°52'55.564"W	2.00	
3538.08†	7.762	180.000	3536.00	19.16	-60.26	0.00	639299.52	502434.59	32°22'49.800"N	103°52'55.564"W	2.00	Lamar
3583.54†	8.671	180.000	3581.00	21.22	-66.76	0.00	639299.52	502428.09	32°22'49.736"N	103°52'55.564"W	2.00	Delaware
3626.00†	9.520	180.000	3622.92	23.36	-73.47	0.00	639299.52	502421.38	32°22'49.669"N	103°52'55.564"W	2.00	



Planned Wellpath Report

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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION				
Operator	WTD - West Texas Division		Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM		Well	Slot 29
Field	James Ranch Unit		Wellbore	Slot 29
Facility	Drilling Island 1			

WELLPATH DATA (214 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3700.00	11.000	180.000	3695.74	27.54	-86.65	0.00	639299.52	502408.20	32°22'49.539"N	103°52'55.565"W	2.00	BOB
3726.00†	11.000	180.000	3721.26	29.12	-91.61	0.00	639299.52	502403.24	32°22'49.490"N	103°52'55.565"W	0.00	
3826.00†	11.000	180.000	3819.42	35.19	-110.69	0.00	639299.52	502384.16	32°22'49.301"N	103°52'55.566"W	0.00	
3926.00†	11.000	180.000	3917.58	41.25	-129.78	0.00	639299.52	502365.08	32°22'49.112"N	103°52'55.567"W	0.00	
4026.00†	11.000	180.000	4015.75	47.32	-148.86	0.00	639299.52	502346.00	32°22'48.923"N	103°52'55.568"W	0.00	
4126.00†	11.000	180.000	4113.91	53.38	-167.94	0.00	639299.52	502326.92	32°22'48.735"N	103°52'55.569"W	0.00	
4226.00†	11.000	180.000	4212.07	59.45	-187.02	0.00	639299.52	502307.84	32°22'48.546"N	103°52'55.570"W	0.00	
4326.00†	11.000	180.000	4310.24	65.51	-206.10	0.00	639299.52	502288.77	32°22'48.357"N	103°52'55.571"W	0.00	
4426.00†	11.000	180.000	4408.40	71.58	-225.18	0.00	639299.52	502269.69	32°22'48.168"N	103°52'55.572"W	0.00	
4526.00†	11.000	180.000	4506.56	77.64	-244.26	0.00	639299.52	502250.61	32°22'47.979"N	103°52'55.573"W	0.00	
4626.00†	11.000	180.000	4604.72	83.71	-263.34	0.00	639299.52	502231.53	32°22'47.791"N	103°52'55.574"W	0.00	
4726.00†	11.000	180.000	4702.89	89.77	-282.42	0.00	639299.52	502212.45	32°22'47.602"N	103°52'55.575"W	0.00	
4826.00†	11.000	180.000	4801.05	95.84	-301.50	0.00	639299.52	502193.37	32°22'47.413"N	103°52'55.576"W	0.00	
4926.00†	11.000	180.000	4899.21	101.91	-320.58	0.00	639299.52	502174.29	32°22'47.224"N	103°52'55.577"W	0.00	
5026.00†	11.000	180.000	4997.37	107.97	-339.67	0.00	639299.52	502155.21	32°22'47.035"N	103°52'55.577"W	0.00	
5126.00†	11.000	180.000	5095.54	114.04	-358.75	0.00	639299.52	502136.13	32°22'46.846"N	103°52'55.578"W	0.00	
5226.00†	11.000	180.000	5193.70	120.10	-377.83	0.00	639299.52	502117.05	32°22'46.658"N	103°52'55.579"W	0.00	
5326.00†	11.000	180.000	5291.86	126.17	-396.91	0.00	639299.52	502097.97	32°22'46.469"N	103°52'55.580"W	0.00	
5426.00†	11.000	180.000	5390.03	132.23	-415.99	0.00	639299.52	502078.89	32°22'46.280"N	103°52'55.581"W	0.00	
5526.00†	11.000	180.000	5488.19	138.30	-435.07	0.00	639299.52	502059.81	32°22'46.091"N	103°52'55.582"W	0.00	
5626.00†	11.000	180.000	5586.35	144.36	-454.15	0.00	639299.52	502040.73	32°22'45.902"N	103°52'55.583"W	0.00	
5726.00†	11.000	180.000	5684.51	150.43	-473.23	0.00	639299.52	502021.65	32°22'45.714"N	103°52'55.584"W	0.00	
5826.00†	11.000	180.000	5782.68	156.49	-492.31	0.00	639299.52	502002.57	32°22'45.525"N	103°52'55.585"W	0.00	
5926.00†	11.000	180.000	5880.84	162.56	-511.39	0.00	639299.52	501983.49	32°22'45.336"N	103°52'55.586"W	0.00	
6026.00†	11.000	180.000	5979.00	168.62	-530.47	0.00	639299.52	501964.41	32°22'45.147"N	103°52'55.587"W	0.00	
6126.00†	11.000	180.000	6077.16	174.69	-549.56	0.00	639299.52	501945.33	32°22'44.958"N	103°52'55.588"W	0.00	
6226.00†	11.000	180.000	6175.33	180.75	-568.64	0.00	639299.52	501926.25	32°22'44.770"N	103°52'55.589"W	0.00	
6326.00†	11.000	180.000	6273.49	186.82	-587.72	0.00	639299.52	501907.17	32°22'44.581"N	103°52'55.590"W	0.00	
6426.00†	11.000	180.000	6371.65	192.89	-606.80	0.00	639299.52	501888.09	32°22'44.392"N	103°52'55.591"W	0.00	
6526.00†	11.000	180.000	6469.82	198.95	-625.88	0.00	639299.52	501869.02	32°22'44.203"N	103°52'55.592"W	0.00	
6626.00†	11.000	180.000	6567.98	205.02	-644.96	0.00	639299.52	501849.94	32°22'44.014"N	103°52'55.592"W	0.00	
6726.00†	11.000	180.000	6666.14	211.08	-664.04	0.00	639299.52	501830.86	32°22'43.826"N	103°52'55.593"W	0.00	
6826.00†	11.000	180.000	6764.30	217.15	-683.12	0.00	639299.52	501811.78	32°22'43.637"N	103°52'55.594"W	0.00	
6926.00†	11.000	180.000	6862.47	223.21	-702.20	0.00	639299.52	501792.70	32°22'43.448"N	103°52'55.595"W	0.00	
7026.00†	11.000	180.000	6960.63	229.28	-721.28	0.00	639299.52	501773.62	32°22'43.259"N	103°52'55.596"W	0.00	
7126.00†	11.000	180.000	7058.79	235.34	-740.36	0.00	639299.52	501754.54	32°22'43.070"N	103°52'55.597"W	0.00	
7172.05†	11.000	180.000	7104.00	238.14	-749.15	0.00	639299.52	501745.75	32°22'42.983"N	103°52'55.598"W	0.00	Lower Brushy Canyon
7226.00†	11.000	180.000	7156.95	241.41	-759.45	0.00	639299.52	501735.46	32°22'42.882"N	103°52'55.598"W	0.00	
7326.00†	11.000	180.000	7255.12	247.47	-778.53	0.00	639299.52	501716.38	32°22'42.693"N	103°52'55.599"W	0.00	
7426.00†	11.000	180.000	7353.28	253.54	-797.61	0.00	639299.52	501697.30	32°22'42.504"N	103°52'55.600"W	0.00	
7457.30†	11.000	180.000	7384.00	255.44	-803.58	0.00	639299.52	501691.33	32°22'42.445"N	103°52'55.600"W	0.00	Bone Spring Lime Sand
7526.00†	11.000	180.000	7451.44	259.60	-816.69	0.00	639299.52	501678.22	32°22'42.315"N	103°52'55.601"W	0.00	
7626.00†	11.000	180.000	7549.61	265.67	-835.77	0.00	639299.52	501659.14	32°22'42.126"N	103°52'55.602"W	0.00	
7726.00†	11.000	180.000	7647.77	271.73	-854.85	0.00	639299.52	501640.06	32°22'41.937"N	103°52'55.603"W	0.00	
7826.00†	11.000	180.000	7745.93	277.80	-873.93	0.00	639299.52	501620.98	32°22'41.749"N	103°52'55.604"W	0.00	



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

WELLPATH DATA (214 stations) = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7926.00+	11.000	180.000	7844.09	283.87	-893.01	0.00	639299.52	501601.90	32°22'41.560"N	103°52'55.605"W	0.00	
8026.00+	11.000	180.000	7942.26	289.93	-912.09	0.00	639299.52	501582.82	32°22'41.371"N	103°52'55.606"W	0.00	
8126.00+	11.000	180.000	8040.42	296.00	-931.17	0.00	639299.52	501563.74	32°22'41.182"N	103°52'55.607"W	0.00	
8180.00+	11.000	180.000	8093.43	299.27	-941.48	0.00	639299.52	501553.44	32°22'41.080"N	103°52'55.607"W	0.00	Est KOP
8226.00+	13.760	180.000	8138.35	302.41	-951.34	0.00	639299.52	501543.58	32°22'40.983"N	103°52'55.608"W	6.00	
8326.00+	19.760	180.000	8234.06	311.57	-980.16	0.00	639299.52	501514.76	32°22'40.698"N	103°52'55.609"W	6.00	
8426.00+	25.760	180.000	8326.23	323.86	-1018.83	0.00	639299.52	501476.09	32°22'40.315"N	103°52'55.611"W	6.00	
8495.88+	29.953	180.000	8388.00	334.24	-1051.48	0.00	639299.52	501443.45	32°22'39.992"N	103°52'55.612"W	6.00	Bone Spring 1 Sand
8526.00+	31.760	180.000	8413.86	339.15	-1066.92	0.00	639299.52	501428.00	32°22'39.839"N	103°52'55.613"W	6.00	
8626.00+	37.760	180.000	8495.97	357.26	-1123.91	0.00	639299.52	501371.02	32°22'39.275"N	103°52'55.616"W	6.00	
8726.00+	43.760	180.000	8571.68	378.01	-1189.17	0.00	639299.52	501305.76	32°22'38.629"N	103°52'55.619"W	6.00	
8826.00+	49.760	180.000	8640.16	401.15	-1261.99	0.00	639299.52	501232.95	32°22'37.909"N	103°52'55.623"W	6.00	
8926.00+	55.760	180.000	8700.65	426.45	-1341.56	0.00	639299.52	501153.38	32°22'37.121"N	103°52'55.627"W	6.00	
9026.00+	61.760	180.000	8752.48	453.61	-1427.02	0.00	639299.52	501067.93	32°22'36.276"N	103°52'55.631"W	6.00	
9126.00+	67.760	180.000	8795.11	482.35	-1517.43	0.00	639299.52	500977.52	32°22'35.381"N	103°52'55.635"W	6.00	
9163.33	70.000	180.000	8808.56	493.42	-1552.26	0.00	639299.52	500942.70	32°22'35.037"N	103°52'55.637"W	6.00	70° Curve
9226.00+	70.000	180.000	8829.99	512.14	-1611.14	0.00	639299.52	500883.82	32°22'34.454"N	103°52'55.640"W	0.00	
9326.00+	70.000	180.000	8864.19	542.01	-1705.11	0.00	639299.52	500789.86	32°22'33.524"N	103°52'55.645"W	0.00	
9363.33	70.000	180.000	8876.96	553.16	-1740.20	0.00	639299.52	500754.78	32°22'33.177"N	103°52'55.646"W	0.00	200' Tangent
9426.00+	69.994	177.308	8898.40	573.19	-1799.06	1.38	639300.90	500695.92	32°22'32.594"N	103°52'55.633"W	4.04	
9526.00+	70.070	173.013	8932.57	610.46	-1892.68	9.31	639308.83	500602.30	32°22'31.668"N	103°52'55.545"W	4.04	
9626.00+	70.248	168.725	8966.52	654.13	-1985.53	24.24	639323.75	500509.46	32°22'30.748"N	103°52'55.376"W	4.04	
9726.00+	70.528	164.449	9000.10	703.96	-2077.13	46.08	639345.60	500417.87	32°22'29.841"N	103°52'55.126"W	4.04	
9826.00+	70.907	160.191	9033.14	759.71	-2167.04	74.75	639374.26	500327.97	32°22'28.950"N	103°52'54.796"W	4.04	
9926.00+	71.384	155.955	9065.47	821.11	-2254.80	110.08	639409.59	500240.21	32°22'28.080"N	103°52'54.388"W	4.04	
10026.00+	71.956	151.745	9096.93	887.85	-2339.98	151.91	639451.41	500155.03	32°22'27.236"N	103°52'53.905"W	4.04	
10111.43+	72.516	148.171	9123.00	948.85	-2410.40	192.64	639492.14	500084.62	32°22'26.537"N	103°52'53.433"W	4.04	Bone Spring 2 A Sand
10126.00+	72.617	147.564	9127.36	959.60	-2422.17	200.03	639499.53	500072.86	32°22'26.420"N	103°52'53.348"W	4.04	
10196.00+	73.132	144.656	9147.98	1012.61	-2477.69	237.33	639536.83	500017.34	32°22'25.869"N	103°52'52.915"W	4.04	FTP
10226.00+	73.365	143.415	9156.63	1036.00	-2500.94	254.20	639553.70	499994.09	32°22'25.639"N	103°52'52.720"W	4.04	
10326.00+	74.195	139.300	9184.57	1116.67	-2575.91	314.15	639613.64	499919.12	32°22'24.894"N	103°52'52.025"W	4.04	
10426.00+	75.102	135.220	9211.05	1201.22	-2646.71	379.58	639679.07	499848.32	32°22'24.191"N	103°52'51.265"W	4.04	
10526.00+	76.080	131.176	9235.95	1289.22	-2712.99	450.18	639749.66	499782.05	32°22'23.532"N	103°52'50.445"W	4.04	
10626.00+	77.124	127.167	9259.13	1380.23	-2774.42	525.58	639825.06	499720.63	32°22'22.921"N	103°52'49.569"W	4.04	
10726.00+	78.228	123.192	9280.48	1473.82	-2830.68	605.41	639904.89	499664.37	32°22'22.361"N	103°52'48.641"W	4.04	
10826.00+	79.387	119.250	9299.90	1569.50	-2881.51	689.29	639988.76	499613.54	32°22'21.855"N	103°52'47.666"W	4.04	
10926.00+	80.595	115.338	9317.29	1666.81	-2926.66	776.79	640076.25	499568.40	32°22'21.404"N	103°52'46.648"W	4.04	
11026.00+	81.845	111.454	9332.55	1765.26	-2965.89	867.47	640166.93	499529.17	32°22'21.012"N	103°52'45.592"W	4.04	
11126.00+	83.133	107.594	9345.63	1864.36	-2999.01	960.89	640260.34	499496.05	32°22'20.681"N	103°52'44.505"W	4.04	
11226.00+	84.451	103.756	9356.45	1963.63	-3025.86	1056.59	640356.03	499469.21	32°22'20.411"N	103°52'43.390"W	4.04	
11326.00+	85.793	99.935	9364.96	2062.57	-3046.30	1154.09	640453.52	499448.76	32°22'20.204"N	103°52'42.255"W	4.04	
11426.00+	87.154	96.126	9371.11	2160.69	-3060.24	1252.90	640552.33	499434.82	32°22'20.062"N	103°52'41.103"W	4.04	
11526.00+	88.528	92.327	9374.88	2257.50	-3067.60	1352.54	640651.96	499427.46	32°22'19.985"N	103°52'39.942"W	4.04	
11587.33	89.374	90.000	9376.00	2316.02	-3068.85	1413.84	640713.26	499426.22	32°22'19.970"N	103°52'39.227"W	4.04	EOC
11593.95	89.375	90.132	9376.07	2322.30	-3068.86	1420.46	640719.88	499426.21	32°22'19.970"N	103°52'39.150"W	2.00	TL



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11626.00†	89.375	90.132	9376.42	2352.70	-3068.93	1452.51	640751.92	499426.14	32°22'19.968"N	103°52'38.776"W	0.00	
11726.00†	89.375	90.132	9377.51	2447.58	-3069.16	1552.50	640851.91	499425.90	32°22'19.961"N	103°52'37.611"W	0.00	
11826.00†	89.375	90.132	9378.60	2542.46	-3069.39	1652.49	640951.89	499425.67	32°22'19.955"N	103°52'36.445"W	0.00	
11926.00†	89.375	90.132	9379.69	2637.35	-3069.62	1752.49	641051.88	499425.44	32°22'19.948"N	103°52'35.279"W	0.00	
12026.00†	89.375	90.132	9380.78	2732.23	-3069.86	1852.48	641151.87	499425.21	32°22'19.942"N	103°52'34.113"W	0.00	
12126.00†	89.375	90.132	9381.87	2827.11	-3070.09	1952.47	641251.85	499424.98	32°22'19.935"N	103°52'32.947"W	0.00	
12226.00†	89.375	90.132	9382.97	2921.99	-3070.32	2052.47	641351.84	499424.75	32°22'19.929"N	103°52'31.781"W	0.00	
12326.00†	89.375	90.132	9384.06	3016.87	-3070.55	2152.46	641451.83	499424.52	32°22'19.922"N	103°52'30.616"W	0.00	
12426.00†	89.375	90.132	9385.15	3111.75	-3070.78	2252.46	641551.81	499424.29	32°22'19.916"N	103°52'29.450"W	0.00	
12526.00†	89.375	90.132	9386.24	3206.63	-3071.01	2352.45	641651.80	499424.06	32°22'19.909"N	103°52'28.284"W	0.00	
12626.00†	89.375	90.132	9387.33	3301.51	-3071.24	2452.44	641751.79	499423.82	32°22'19.903"N	103°52'27.118"W	0.00	
12726.00†	89.375	90.132	9388.42	3396.39	-3071.47	2552.44	641851.77	499423.59	32°22'19.896"N	103°52'25.952"W	0.00	
12826.00†	89.375	90.132	9389.51	3491.27	-3071.70	2652.43	641951.76	499423.36	32°22'19.890"N	103°52'24.786"W	0.00	
12926.00†	89.375	90.132	9390.60	3586.15	-3071.94	2752.43	642051.75	499423.13	32°22'19.883"N	103°52'23.621"W	0.00	
13026.00†	89.375	90.132	9391.69	3681.04	-3072.17	2852.42	642151.73	499422.90	32°22'19.877"N	103°52'22.455"W	0.00	
13126.00†	89.375	90.132	9392.78	3775.92	-3072.40	2952.41	642251.72	499422.67	32°22'19.870"N	103°52'21.289"W	0.00	
13226.00†	89.375	90.132	9393.87	3870.80	-3072.63	3052.41	642351.71	499422.44	32°22'19.863"N	103°52'20.123"W	0.00	
13326.00†	89.375	90.132	9394.96	3965.68	-3072.86	3152.40	642451.69	499422.21	32°22'19.857"N	103°52'18.957"W	0.00	
13426.00†	89.375	90.132	9396.05	4060.56	-3073.09	3252.39	642551.68	499421.98	32°22'19.850"N	103°52'17.791"W	0.00	
13526.00†	89.375	90.132	9397.14	4155.44	-3073.32	3352.39	642651.67	499421.74	32°22'19.844"N	103°52'16.626"W	0.00	
13626.00†	89.375	90.132	9398.23	4250.32	-3073.55	3452.38	642751.65	499421.51	32°22'19.837"N	103°52'15.460"W	0.00	
13726.00†	89.375	90.132	9399.32	4345.20	-3073.79	3552.38	642851.64	499421.28	32°22'19.831"N	103°52'14.294"W	0.00	
13826.00†	89.375	90.132	9400.41	4440.08	-3074.02	3652.37	642951.63	499421.05	32°22'19.824"N	103°52'13.128"W	0.00	
13926.00†	89.375	90.132	9401.51	4534.96	-3074.25	3752.36	643051.61	499420.82	32°22'19.818"N	103°52'11.962"W	0.00	
14026.00†	89.375	90.132	9402.60	4629.84	-3074.48	3852.36	643151.60	499420.59	32°22'19.811"N	103°52'10.796"W	0.00	
14126.00†	89.375	90.132	9403.69	4724.72	-3074.71	3952.35	643251.59	499420.36	32°22'19.804"N	103°52'09.630"W	0.00	
14226.00†	89.375	90.132	9404.78	4819.61	-3074.94	4052.34	643351.57	499420.13	32°22'19.798"N	103°52'08.465"W	0.00	
14326.00†	89.375	90.132	9405.87	4914.49	-3075.17	4152.34	643451.56	499419.89	32°22'19.791"N	103°52'07.299"W	0.00	
14426.00†	89.375	90.132	9406.96	5009.37	-3075.40	4252.33	643551.55	499419.66	32°22'19.785"N	103°52'06.133"W	0.00	
14526.00†	89.375	90.132	9408.05	5104.25	-3075.63	4352.33	643651.53	499419.43	32°22'19.778"N	103°52'04.967"W	0.00	
14626.00†	89.375	90.132	9409.14	5199.13	-3075.87	4452.32	643751.52	499419.20	32°22'19.771"N	103°52'03.801"W	0.00	
14726.00†	89.375	90.132	9410.23	5294.01	-3076.10	4552.31	643851.51	499418.97	32°22'19.765"N	103°52'02.635"W	0.00	
14826.00†	89.375	90.132	9411.32	5388.89	-3076.33	4652.31	643951.49	499418.74	32°22'19.758"N	103°52'01.470"W	0.00	
14926.00†	89.375	90.132	9412.41	5483.77	-3076.56	4752.30	644051.48	499418.51	32°22'19.752"N	103°52'00.304"W	0.00	
15026.00†	89.375	90.132	9413.50	5578.65	-3076.79	4852.29	644151.47	499418.28	32°22'19.745"N	103°51'59.138"W	0.00	
15126.00†	89.375	90.132	9414.59	5673.53	-3077.02	4952.29	644251.45	499418.05	32°22'19.738"N	103°51'57.972"W	0.00	
15226.00†	89.375	90.132	9415.68	5768.41	-3077.25	5052.28	644351.44	499417.81	32°22'19.732"N	103°51'56.806"W	0.00	
15326.00†	89.375	90.132	9416.77	5863.30	-3077.48	5152.28	644451.43	499417.58	32°22'19.725"N	103°51'55.640"W	0.00	
15426.00†	89.375	90.132	9417.86	5958.18	-3077.72	5252.27	644551.41	499417.35	32°22'19.719"N	103°51'54.475"W	0.00	
15526.00†	89.375	90.132	9418.95	6053.06	-3077.95	5352.26	644651.40	499417.12	32°22'19.712"N	103°51'53.309"W	0.00	
15626.00†	89.375	90.132	9420.05	6147.94	-3078.18	5452.26	644751.39	499416.89	32°22'19.705"N	103°51'52.143"W	0.00	
15726.00†	89.375	90.132	9421.14	6242.82	-3078.41	5552.25	644851.37	499416.66	32°22'19.699"N	103°51'50.977"W	0.00	
15826.00†	89.375	90.132	9422.23	6337.70	-3078.64	5652.24	644951.36	499416.43	32°22'19.692"N	103°51'49.811"W	0.00	
15926.00†	89.375	90.132	9423.32	6432.58	-3078.87	5752.24	645051.35	499416.20	32°22'19.686"N	103°51'48.645"W	0.00	
16026.00†	89.375	90.132	9424.41	6527.46	-3079.10	5852.23	645151.33	499415.96	32°22'19.679"N	103°51'47.480"W	0.00	



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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [%/100ft]	Comments
16126.00†	89.375	90.132	9425.50	6622.34	-3079.33	5952.23	645251.32	499415.73	32°22'19.672"N	103°51'46.314"W	0.00	
16226.00†	89.375	90.132	9426.59	6717.22	-3079.57	6052.22	645351.31	499415.50	32°22'19.666"N	103°51'45.148"W	0.00	
16326.00†	89.375	90.132	9427.68	6812.10	-3079.80	6152.21	645451.29	499415.27	32°22'19.659"N	103°51'43.982"W	0.00	
16426.00†	89.375	90.132	9428.77	6906.99	-3080.03	6252.21	645551.28	499415.04	32°22'19.652"N	103°51'42.816"W	0.00	
16526.00†	89.375	90.132	9429.86	7001.87	-3080.26	6352.20	645651.27	499414.81	32°22'19.646"N	103°51'41.650"W	0.00	
16626.00†	89.375	90.132	9430.95	7096.75	-3080.49	6452.20	645751.25	499414.58	32°22'19.639"N	103°51'40.485"W	0.00	
16726.00†	89.375	90.132	9432.04	7191.63	-3080.72	6552.19	645851.24	499414.35	32°22'19.632"N	103°51'39.319"W	0.00	
16826.00†	89.375	90.132	9433.13	7286.51	-3080.95	6652.18	645951.23	499414.12	32°22'19.626"N	103°51'38.153"W	0.00	
16926.00†	89.375	90.132	9434.22	7381.39	-3081.18	6752.18	646051.21	499413.88	32°22'19.619"N	103°51'36.987"W	0.00	
17026.00†	89.375	90.132	9435.31	7476.27	-3081.41	6852.17	646151.20	499413.65	32°22'19.612"N	103°51'35.821"W	0.00	
17126.00†	89.375	90.132	9436.40	7571.15	-3081.65	6952.16	646251.19	499413.42	32°22'19.606"N	103°51'34.655"W	0.00	
17226.00†	89.375	90.132	9437.50	7666.03	-3081.88	7052.16	646351.18	499413.19	32°22'19.599"N	103°51'33.489"W	0.00	
17326.00†	89.375	90.132	9438.59	7760.91	-3082.11	7152.15	646451.16	499412.96	32°22'19.592"N	103°51'32.324"W	0.00	
17426.00†	89.375	90.132	9439.68	7855.79	-3082.34	7252.15	646551.15	499412.73	32°22'19.586"N	103°51'31.158"W	0.00	
17526.00†	89.375	90.132	9440.77	7950.67	-3082.57	7352.14	646651.14	499412.50	32°22'19.579"N	103°51'29.992"W	0.00	
17626.00†	89.375	90.132	9441.86	8045.56	-3082.80	7452.13	646751.12	499412.27	32°22'19.572"N	103°51'28.826"W	0.00	
17726.00†	89.375	90.132	9442.95	8140.44	-3083.03	7552.13	646851.11	499412.03	32°22'19.566"N	103°51'27.660"W	0.00	
17826.00†	89.375	90.132	9444.04	8235.32	-3083.26	7652.12	646951.10	499411.80	32°22'19.559"N	103°51'26.494"W	0.00	
17926.00†	89.375	90.132	9445.13	8330.20	-3083.50	7752.11	647051.08	499411.57	32°22'19.552"N	103°51'25.329"W	0.00	
18026.00†	89.375	90.132	9446.22	8425.08	-3083.73	7852.11	647151.07	499411.34	32°22'19.546"N	103°51'24.163"W	0.00	
18126.00†	89.375	90.132	9447.31	8519.96	-3083.96	7952.10	647251.06	499411.11	32°22'19.539"N	103°51'22.997"W	0.00	
18226.00†	89.375	90.132	9448.40	8614.84	-3084.19	8052.10	647351.04	499410.88	32°22'19.532"N	103°51'21.831"W	0.00	
18326.00†	89.375	90.132	9449.49	8709.72	-3084.42	8152.09	647451.03	499410.65	32°22'19.526"N	103°51'20.665"W	0.00	
18426.00†	89.375	90.132	9450.58	8804.60	-3084.65	8252.08	647551.02	499410.42	32°22'19.519"N	103°51'19.499"W	0.00	
18526.00†	89.375	90.132	9451.67	8899.48	-3084.88	8352.08	647651.00	499410.19	32°22'19.512"N	103°51'18.334"W	0.00	
18626.00†	89.375	90.132	9452.76	8994.36	-3085.11	8452.07	647750.99	499409.95	32°22'19.505"N	103°51'17.168"W	0.00	
18726.00†	89.375	90.132	9453.85	9089.25	-3085.34	8552.06	647850.98	499409.72	32°22'19.499"N	103°51'16.002"W	0.00	
18826.00†	89.375	90.132	9454.94	9184.13	-3085.58	8652.06	647950.96	499409.49	32°22'19.492"N	103°51'14.836"W	0.00	
18926.00†	89.375	90.132	9456.04	9279.01	-3085.81	8752.05	648050.95	499409.26	32°22'19.485"N	103°51'13.670"W	0.00	
19026.00†	89.375	90.132	9457.13	9373.89	-3086.04	8852.05	648150.94	499409.03	32°22'19.479"N	103°51'12.504"W	0.00	
19126.00†	89.375	90.132	9458.22	9468.77	-3086.27	8952.04	648250.92	499408.80	32°22'19.472"N	103°51'11.339"W	0.00	
19226.00†	89.375	90.132	9459.31	9563.65	-3086.50	9052.03	648350.91	499408.57	32°22'19.465"N	103°51'10.173"W	0.00	
19326.00†	89.375	90.132	9460.40	9658.53	-3086.73	9152.03	648450.90	499408.34	32°22'19.458"N	103°51'09.007"W	0.00	
19381.24	89.375	90.132	9461.00†	9710.94	-3086.86	9207.26	648506.13	499408.21	32°22'19.455"N	103°51'08.363"W	0.00	No. 164H PBHL



Planned Wellpath Report

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BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 29 (JRU No.164H)
Area	Eddy County, NM	Well	Slot 29
Field	James Ranch Unit	Wellbore	Slot 29
Facility	Drilling Island 1		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Slot 29		9380.00	-3125.00	-14527.12	624773.42	499370.07	32°22'20.049"N	103°55'45.090"W	point
No.164H PBHL		9461.00	-3081.06	11918.90	651217.57	499414.01	32°22'19.390"N	103°50'36.747"W	point
1) No.164H PBHL Rev-2	19381.24	9461.00	-3086.86	9207.26	648506.13	499408.21	32°22'19.455"N	103°51'08.363"W	point

SURVEY PROGRAM - Ref Wellbore: Slot 29 Ref Wellpath: B-5				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	8100.00	Generic gyro - northseeking (Standard)		Slot 29
8100.00	22098.46	NaviTrak (Standard)		Slot 29