OCD Artesia

Form 3160-5
(August 2007)

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.***

***SUBMIT IN TRIPLICATE - Other instructions on reverse side.***

5. Lease Serial No.
NMLC068408

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000326X

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

8. Well Name and No.
BIG EDDY UNIT DI4 264H

2. Name of Operator
BOPCO LP
Contact: LESLIE BARNES
E-Mail: lbarnes@basspet.com

9. API Well No.
30-015-42478-00-X1

3a. Address
P O BOX 2760
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-221-7341

10. Field and Pool, or Exploratory
WILLIAMS SINK

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 5 T20S R31E Lot 2 0660FNL 2220FEL
32.362767 N Lat, 103.531527 W Lon

11. County or Parish, and State
EDDY COUNTY, NM

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 to Original A PD |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| | ☐ Convert to Injection | ☐ Plug Back | ☐ Water Disposal | |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete 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 recompletion 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.)

Please see attached.

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 19 2014
RECEIVED

Accepted for record
NMOCD

SEE ATTACHED FOR CONDITIONS OF APPROVAL

POTASH APPROVED, JSR, 2014-08-14

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

**Electronic Submission #254507 verified by the BLM Well Information System**
**For BOPCO LP, sent to the Carlsbad**
**Committed to AFMSS for processing by JENNIFER MASON on 08/14/2014 (14JAM0384SE)**

Name *(Printed/Typed)* JEREMY BRADEN — Title ENGINEERING ASSISTANT

Signature (Electronic Submission) — Date 07/24/2014

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

APPROVED

Approved By — Title — Date AUG 14 2014

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

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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

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

BEU DI4 #264H

BOPCO, LP respectfully requests to alter target formation to the 1st Bone Spring, from the approved 2nd Bone Spring sand. Attached is the new proposed directional plan. With this change, BOPCO, L.P. will also be altering the 7", 26#, HCP-110, BTC casing string. An 8-3/4" hole will be drilled from the base of the 9-5/8" casing shoe through the curve and out to TD of the lateral. A 5-1/2", 17#, HCP-110, BTC long string will be ran from TD of the well to surface. A DV tool will be placed at approximately 5,000' and the 5-1/2" casing string will be cemented in two stages. Top of cement of stage 2 will be placed at least 50' above the top of the Capitan Reef at 2,754'. Casing safety factors are as follows: Collapse – 1.95, Burst – 2.30, Tension – 4.51. Updated cement volumes and slurries are in the below table. Open hole cement volumes are estimated with 30% excess over caliper log.

| INTERVAL | AMOUNT SXS | FT of FILL | TYPE | GAL/SX | PPG | FT3/SX |
|---|---|---|---|---|---|---|
| **PRODUCTION** | | | | | | |
| **Stage 1** | | | | | | |
| Lead: 5,000'-7,446' | 370 | 2,516 | VersaCem + 10% Bentonite + 0.125 pps Poly-E-Flake + 0.5 pps D-Air + 0.1% HR-601 | 12.8 | 11.9 | 2.24 |
| Tail: 7,446'-13,282' | 1590 | 5,835 | VersaCem + 0.5% LAP-1 + 0.3% CFR-3 + 0.1% FWCA + 0.125 pps Poly-E-Flake + 0.5 pps D-Air + 0.2% HR-601 | 5.32 | 14.5 | 1.21 |
| **DV TOOL AT 5,000'** | | | | | | |
| **Stage 2** | | | | | | |
| Lead: 2,754'-4,500' | 290 | 1,746 | VersaCem + 10% Bentonite + 0.125 pps Poly-E-Flake + 0.5 pps D-Air | 12.67 | 11.9 | 2.23 |
| Tail: 4,500'-5,000' | 100 | 500 | Halcem "C" Neat | 6.34 | 14.8 | 1.33 |

# BOPCO, LP

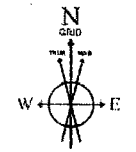
Location: Eddy County, NM
Field: Big Eddy
Facility: Big Eddy Unit DI-4

Slot: No.264H SHL
Well: No.264H
Wellbore: No.264H PWB

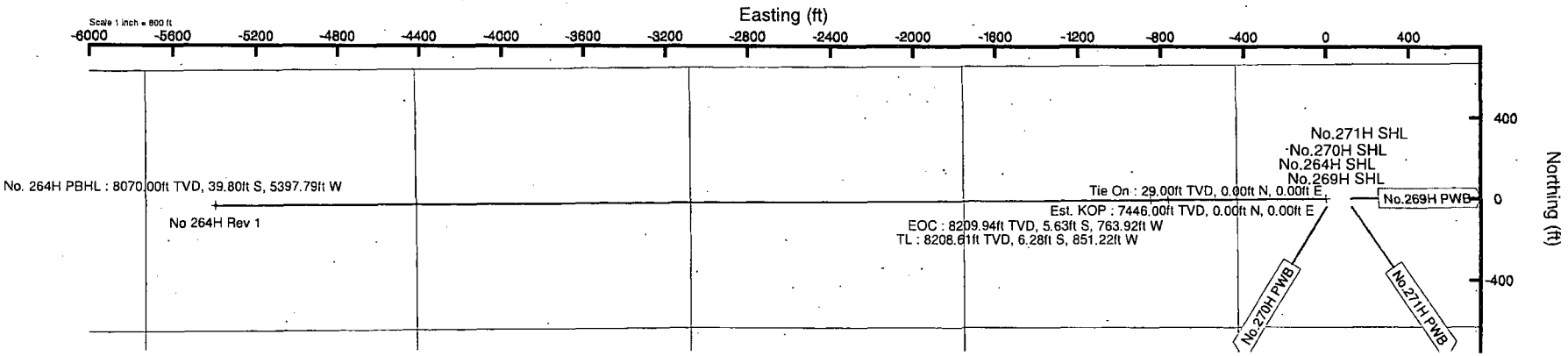
| | |
|---|---|
| Plot reference wellpath is Rev 1.0 | |
| True vertical depths are referenced to Rig on No 264H SHL (KB) | Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet |
| Measured depths are referenced to Rig on No 264H SHL (KB) | North Reference: Grid north |
| Rig on No 264H SHL (KB) to Mean Sea Level: 3494 feet | Scale: True distance |
| Mean Sea Level to Well Bore (At Slot: No 264H SHL): 0 feet | Depths are in feet |
| Coordinates are in feet referenced to Slot | Created by: gtaylor on 1/7/2014 |

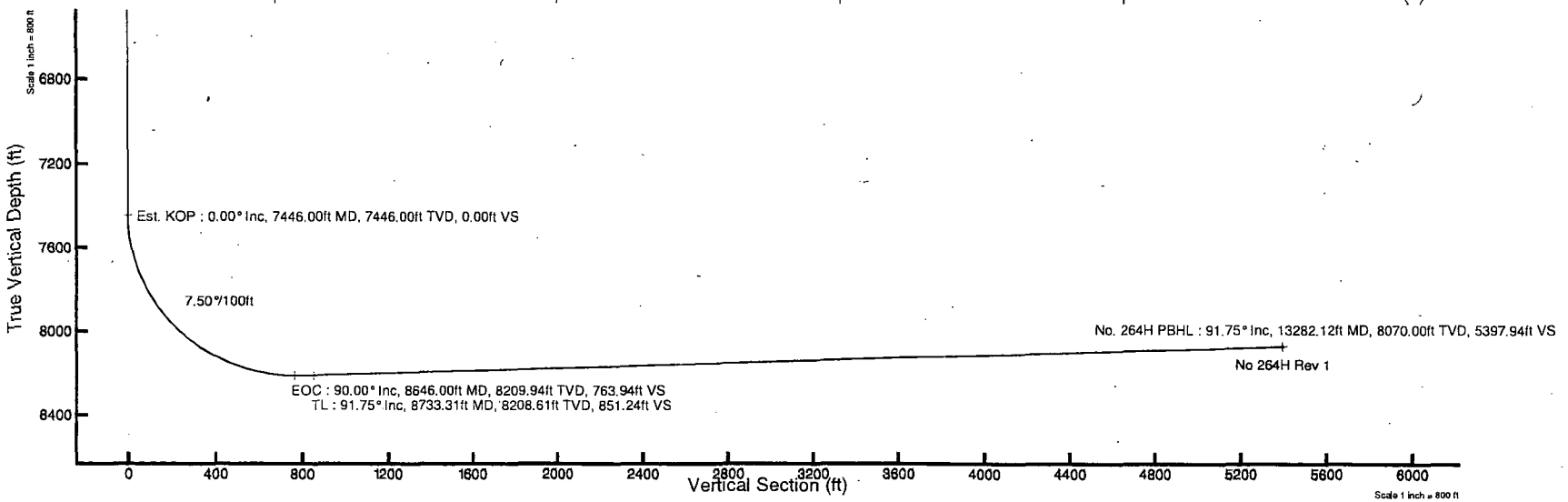
Well Profile Data

| Design Comment | MD (ft) | Inc (°) | Az (°) | TVD (ft) | Local N (ft) | Local E (ft) | DLS (°/100ft) | VS (ft) |
|---|---|---|---|---|---|---|---|---|
| Tie On | 29.00 | 0.000 | 269.578 | 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Est. KOP | 7446.00 | 0.000 | 269.578 | 7446.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EOC | 8646.00 | 90.000 | 269.578 | 8209.94 | -5.63 | -763.92 | 7.50 | 763.94 |
| TL | 8733.31 | 91.745 | 269.578 | 8208.61 | -6.28 | -851.22 | 2.00 | 851.24 |
| No. 264H PBHL | 13282.12 | 91.745 | 269.578 | 8070.00 | -39.80 | -5397.79 | 0.00 | 5397.94 |




BGGM (1945.0 to 2015.0) Dip: 60.41° Field: 48529.2 nT
Magnetic North is 7.56 degrees East of True North (at 28/Jan/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 7.32 degrees




Azimuth 269.58° with reference 0.00 N, 0.00 E

Rev-1.0

# Planned Wellpath Report

**Rev I.0**



BAKER HUGHES

| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **BOPCO, LP** | Slot | **No.264H SHL** |
| Area | **Eddy County, NM** | Well | **No.264H** |
| Field | **Big Eddy** | Wellbore | **No.264H PWB** |
| Facility | **Big Eddy Unit DI-4** | | |

| 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 | **Gilbjosl** |
| Scale | **0.99993** | Report Generated | **17/Jul/2014** at **2:45:18 PM** |
| Convergence at slot | **0.24° East** | Database/Source file | **WA Midland/No.264H_PWB.xml** |

| WELLPATH LOCATION | Local coordinates | | Grid coordinates | | Geographic coordinates | |
|---|---|---|---|---|---|---|
| | **North[ft]** | **East[ft]** | **Easting[US ft]** | **Northing[US ft]** | **Latitude** | **Longitude** |
| Slot Location | -7.40 | -617.24 | **636646.70** | **585067.70** | 32°36'27.619"N | 103°53'22.489"W |
| Facility Reference Pt | | | **637263.90** | **585075.10** | 32°36'27.666"N | 103°53'15.274"W |
| Field Reference Pt | | | **610823.03** | **524402.80** | 32°26'28.262"N | 103°58'26.774"W |

| WELLPATH DATUM | | | |
|---|---|---|---|
| Calculation method | **Minimum curvature** | Rig on No.264H SHL (KB) to Facility Vertical Datum | **3494.00ft** |
| Horizontal Reference Pt | **Slot** | Rig on No.264H SHL (KB) to Mean Sea Level | **3494.00ft** |
| Vertical Reference Pt | **Rig on No.264H SHL (KB)** | Rig on No.264H SHL (KB) to Mud Line at Slot (No.264H SHL) | **3494.00ft** |
| MD Reference Pt | **Rig on No.264H SHL (KB)** | Section Origin | **N 0.00, E 0.00 ft** |
| Field Vertical Reference | **Mean Sea Level** | Section Azimuth | **269.58°** |

# Planned Wellpath Report

**Rev I.0**



BAKER HUGHES

| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **BOPCO, LP** | Slot | **No.264H SHL** |
| Area | **Eddy County, NM** | Well | **No.264H** |
| Field | **Big Eddy** | Wellbore | **No.264H PWB** |
| Facility | **Big Eddy Unit DI-4** | | |

**WELLPATH DATA (146 stations)** †=interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00† | 0.000 | 269.578 | 0.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 29.00 | 0.000 | 269.578 | 29.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Tie On |
| 129.00† | 0.000 | 269.578 | 129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 229.00† | 0.000 | 269.578 | 229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 329.00† | 0.000 | 269.578 | 329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 429.00† | 0.000 | 269.578 | 429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 529.00† | 0.000 | 269.578 | 529.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 582.00† | 0.000 | 269.578 | 582.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Top Rustler Anhydrite |
| 629.00† | 0.000 | 269.578 | 629.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 729.00† | 0.000 | 269.578 | 729.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 829.00† | 0.000 | 269.578 | 829.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 845.00† | 0.000 | 269.578 | 845.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Top Salt |
| 929.00† | 0.000 | 269.578 | 929.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1029.00† | 0.000 | 269.578 | 1029.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1129.00† | 0.000 | 269.578 | 1129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1229.00† | 0.000 | 269.578 | 1229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1329.00† | 0.000 | 269.578 | 1329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1429.00† | 0.000 | 269.578 | 1429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1529.00† | 0.000 | 269.578 | 1529.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1629.00† | 0.000 | 269.578 | 1629.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1729.00† | 0.000 | 269.578 | 1729.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1829.00† | 0.000 | 269.578 | 1829.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 1929.00† | 0.000 | 269.578 | 1929.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2029.00† | 0.000 | 269.578 | 2029.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2129.00† | 0.000 | 269.578 | 2129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2229.00† | 0.000 | 269.578 | 2229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2324.00† | 0.000 | 269.578 | 2324.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Base Salt |
| 2329.00† | 0.000 | 269.578 | 2329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2429.00† | 0.000 | 269.578 | 2429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2529.00† | 0.000 | 269.578 | 2529.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |

# Planned Wellpath Report

**Rev I.0**



BAKER HUGHES

| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **BOPCO, LP** | Slot | **No.264H SHL** |
| Area | **Eddy County, NM** | Well | **No.264H** |
| Field | **Big Eddy** | Wellbore | **No.264H PWB** |
| Facility | **Big Eddy Unit DI-4** | | |

**WELLPATH DATA (146 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2629.00† | 0.000 | 269.578 | 2629.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2729.00† | 0.000 | 269.578 | 2729.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2829.00† | 0.000 | 269.578 | 2829.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 2848.00† | 0.000 | 269.578 | 2848.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Top Reef |
| 2929.00† | 0.000 | 269.578 | 2929.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3029.00† | 0.000 | 269.578 | 3029.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3129.00† | 0.000 | 269.578 | 3129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3229.00† | 0.000 | 269.578 | 3229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3329.00† | 0.000 | 269.578 | 3329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3429.00† | 0.000 | 269.578 | 3429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3529.00† | 0.000 | 269.578 | 3529.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3629.00† | 0.000 | 269.578 | 3629.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3729.00† | 0.000 | 269.578 | 3729.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3829.00† | 0.000 | 269.578 | 3829.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 3929.00† | 0.000 | 269.578 | 3929.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4029.00† | 0.000 | 269.578 | 4029.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4083.00† | 0.000 | 269.578 | 4083.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Top del. Mtn. Grp. |
| 4129.00† | 0.000 | 269.578 | 4129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4229.00† | 0.000 | 269.578 | 4229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4329.00† | 0.000 | 269.578 | 4329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4429.00† | 0.000 | 269.578 | 4429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4529.00† | 0.000 | 269.578 | 4529.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4629.00† | 0.000 | 269.578 | 4629.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4729.00† | 0.000 | 269.578 | 4729.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4829.00† | 0.000 | 269.578 | 4829.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 4929.00† | 0.000 | 269.578 | 4929.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5029.00† | 0.000 | 269.578 | 5029.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5129.00† | 0.000 | 269.578 | 5129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5229.00† | 0.000 | 269.578 | 5229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5329.00† | 0.000 | 269.578 | 5329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |

# Planned Wellpath Report

**Rev I.0**



BAKER HUGHES

| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **BOPCO, LP** | Slot | **No.264H SHL** |
| Area | **Eddy County, NM** | Well | **No.264H** |
| Field | **Big Eddy** | Wellbore | **No.264H PWB** |
| Facility | **Big Eddy Unit DI-4** | | |

**WELLPATH DATA (146 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5429.00† | 0.000 | 269.578 | 5429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5529.00† | 0.000 | 269.578 | 5529.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5629.00† | 0.000 | 269.578 | 5629.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5729.00† | 0.000 | 269.578 | 5729.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5829.00† | 0.000 | 269.578 | 5829.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 5929.00† | 0.000 | 269.578 | 5929.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6029.00† | 0.000 | 269.578 | 6029.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6129.00† | 0.000 | 269.578 | 6129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6229.00† | 0.000 | 269.578 | 6229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6329.00† | 0.000 | 269.578 | 6329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6429.00† | 0.000 | 269.578 | 6429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6529.00† | 0.000 | 269.578 | 6529.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6629.00† | 0.000 | 269.578 | 6629.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6729.00† | 0.000 | 269.578 | 6729.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6829.00† | 0.000 | 269.578 | 6829.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 6893.00† | 0.000 | 269.578 | 6893.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Top Bone Spring Lime |
| 6929.00† | 0.000 | 269.578 | 6929.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 7029.00† | 0.000 | 269.578 | 7029.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 7129.00† | 0.000 | 269.578 | 7129.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 7229.00† | 0.000 | 269.578 | 7229.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 7329.00† | 0.000 | 269.578 | 7329.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 7429.00† | 0.000 | 269.578 | 7429.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | |
| 7446.00 | 0.000 | 269.578 | 7446.00 | 0.00 | 0.00 | 0.00 | 636646.70 | 585067.70 | 32°36'27.619"N | 103°53'22.489"W | 0.00 | Est. KOP |
| 7529.00† | 6.225 | 269.578 | 7528.84 | 4.50 | -0.03 | -4.50 | 636642.20 | 585067.67 | 32°36'27.618"N | 103°53'22.542"W | 7.50 | |
| 7629.00† | 13.725 | 269.578 | 7627.25 | 21.81 | -0.16 | -21.81 | 636624.89 | 585067.54 | 32°36'27.618"N | 103°53'22.744"W | 7.50 | |
| 7729.00† | 21.225 | 269.578 | 7722.57 | 51.82 | -0.38 | -51.82 | 636594.88 | 585067.32 | 32°36'27.617"N | 103°53'23.095"W | 7.50 | |
| 7829.00† | 28.725 | 269.578 | 7813.16 | 94.01 | -0.69 | -94.01 | 636552.70 | 585067.01 | 32°36'27.616"N | 103°53'23.588"W | 7.50 | |
| 7929.00† | 36.225 | 269.578 | 7897.46 | 147.67 | -1.09 | -147.66 | 636499.05 | 585066.61 | 32°36'27.614"N | 103°53'24.216"W | 7.50 | |
| 8029.00† | 43.725 | 269.578 | 7974.04 | 211.87 | -1.56 | -211.86 | 636434.85 | 585066.14 | 32°36'27.612"N | 103°53'24.966"W | 7.50 | |
| 8129.00† | 51.225 | 269.578 | 8041.58 | 285.51 | -2.11 | -285.51 | 636361.21 | 585065.60 | 32°36'27.610"N | 103°53'25.827"W | 7.50 | |

# Planned Wellpath Report

**Rev I.0**



BAKER HUGHES

| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **BOPCO, LP** | Slot | **No.264H SHL** |
| Area | **Eddy County, NM** | Well | **No.264H** |
| Field | **Big Eddy** | Wellbore | **No.264H PWB** |
| Facility | **Big Eddy Unit DI-4** | | |

**WELLPATH DATA (146 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8229.00† | 58.725 | 269.578 | 8098.93 | 367.35 | -2.71 | -367.34 | 636279.39 | 585064.99 | 32°36'27.607"N | 103°53'26.783"W | 7.50 | |
| 8323.80† | 65.835 | 269.578 | 8143.00 | 451.21 | -3.33 | -451.20 | 636195.53 | 585064.37 | 32°36'27.604"N | 103°53'27.764"W | 7.50 | 1st Bone Spring Lime |
| 8329.00† | 66.225 | 269.578 | 8145.11 | 455.96 | -3.36 | -455.95 | 636190.78 | 585064.34 | 32°36'27.604"N | 103°53'27.819"W | 7.50 | |
| 8429.00† | 73.725 | 269.578 | 8179.33 | 549.85 | -4.05 | -549.84 | 636096.90 | 585063.65 | 32°36'27.601"N | 103°53'28.917"W | 7.50 | |
| 8529.00† | 81.225 | 269.578 | 8201.00 | 647.40 | -4.77 | -647.38 | 635999.36 | 585062.93 | 32°36'27.598"N | 103°53'30.057"W | 7.50 | |
| 8629.00† | 88.725 | 269.578 | 8209.75 | 746.95 | -5.51 | -746.92 | 635899.83 | 585062.19 | 32°36'27.595"N | 103°53'31.221"W | 7.50 | |
| 8646.00 | 90.000 | 269.578 | 8209.94 | 763.94 | -5.63 | -763.92 | 635882.83 | 585062.07 | 32°36'27.594"N | 103°53'31.420"W | 7.50 | EOC |
| 8729.00† | 91.660 | 269.578 | 8208.74 | 846.93 | -6.24 | -846.91 | 635799.85 | 585061.46 | 32°36'27.592"N | 103°53'32.390"W | 2.00 | |
| 8733.31 | 91.746 | 269.578 | 8208.61 | 851.24 | -6.28 | -851.22 | 635795.54 | 585061.42 | 32°36'27.592"N | 103°53'32.440"W | 2.00 | TL |
| 8829.00† | 91.746 | 269.578 | 8205.70 | 946.89 | -6.98 | -946.86 | 635699.91 | 585060.72 | 32°36'27.588"N | 103°53'33.558"W | 0.00 | |
| 8929.00† | 91.746 | 269.578 | 8202.65 | 1046.84 | -7.72 | -1046.81 | 635599.96 | 585059.98 | 32°36'27.585"N | 103°53'34.727"W | 0.00 | |
| 9029.00† | 91.746 | 269.578 | 8199.60 | 1146.79 | -8.46 | -1146.76 | 635500.02 | 585059.25 | 32°36'27.582"N | 103°53'35.895"W | 0.00 | |
| 9129.00† | 91.746 | 269.578 | 8196.56 | 1246.75 | -9.19 | -1246.71 | 635400.08 | 585058.51 | 32°36'27.579"N | 103°53'37.063"W | 0.00 | |
| 9229.00† | 91.746 | 269.578 | 8193.51 | 1346.70 | -9.93 | -1346.66 | 635300.13 | 585057.77 | 32°36'27.576"N | 103°53'38.232"W | 0.00 | |
| 9329.00† | 91.746 | 269.578 | 8190.46 | 1446.65 | -10.67 | -1446.61 | 635200.19 | 585057.03 | 32°36'27.572"N | 103°53'39.400"W | 0.00 | |
| 9429.00† | 91.746 | 269.578 | 8187.41 | 1546.61 | -11.40 | -1546.57 | 635100.25 | 585056.30 | 32°36'27.569"N | 103°53'40.569"W | 0.00 | |
| 9529.00† | 91.746 | 269.578 | 8184.37 | 1646.56 | -12.14 | -1646.52 | 635000.30 | 585055.56 | 32°36'27.566"N | 103°53'41.737"W | 0.00 | |
| 9629.00† | 91.746 | 269.578 | 8181.32 | 1746.51 | -12.88 | -1746.47 | 634900.36 | 585054.82 | 32°36'27.563"N | 103°53'42.906"W | 0.00 | |
| 9729.00† | 91.746 | 269.578 | 8178.27 | 1846.47 | -13.61 | -1846.42 | 634800.41 | 585054.09 | 32°36'27.560"N | 103°53'44.074"W | 0.00 | |
| 9829.00† | 91.746 | 269.578 | 8175.22 | 1946.42 | -14.35 | -1946.37 | 634700.47 | 585053.35 | 32°36'27.556"N | 103°53'45.242"W | 0.00 | |
| 9929.00† | 91.746 | 269.578 | 8172.18 | 2046.37 | -15.09 | -2046.32 | 634600.53 | 585052.61 | 32°36'27.553"N | 103°53'46.411"W | 0.00 | |
| 10029.00† | 91.746 | 269.578 | 8169.13 | 2146.33 | -15.83 | -2146.27 | 634500.58 | 585051.88 | 32°36'27.550"N | 103°53'47.579"W | 0.00 | |
| 10129.00† | 91.746 | 269.578 | 8166.08 | 2246.28 | -16.56 | -2246.22 | 634400.64 | 585051.14 | 32°36'27.547"N | 103°53'48.748"W | 0.00 | |
| 10229.00† | 91.746 | 269.578 | 8163.04 | 2346.24 | -17.30 | -2346.17 | 634300.70 | 585050.40 | 32°36'27.543"N | 103°53'49.916"W | 0.00 | |
| 10329.00† | 91.746 | 269.578 | 8159.99 | 2446.19 | -18.04 | -2446.12 | 634200.75 | 585049.67 | 32°36'27.540"N | 103°53'51.085"W | 0.00 | |
| 10429.00† | 91.746 | 269.578 | 8156.94 | 2546.14 | -18.77 | -2546.07 | 634100.81 | 585048.93 | 32°36'27.537"N | 103°53'52.253"W | 0.00 | |
| 10529.00† | 91.746 | 269.578 | 8153.89 | 2646.10 | -19.51 | -2646.02 | 634000.86 | 585048.19 | 32°36'27.534"N | 103°53'53.421"W | 0.00 | |
| 10629.00† | 91.746 | 269.578 | 8150.85 | 2746.05 | -20.25 | -2745.98 | 633900.92 | 585047.45 | 32°36'27.531"N | 103°53'54.590"W | 0.00 | |
| 10729.00† | 91.746 | 269.578 | 8147.80 | 2846.00 | -20.98 | -2845.93 | 633800.98 | 585046.72 | 32°36'27.527"N | 103°53'55.758"W | 0.00 | |
| 10829.00† | 91.746 | 269.578 | 8144.75 | 2945.96 | -21.72 | -2945.88 | 633701.03 | 585045.98 | 32°36'27.524"N | 103°53'56.927"W | 0.00 | |

# Planned Wellpath Report

**Rev I.0**



BAKER HUGHES

| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **BOPCO, LP** | Slot | **No.264H SHL** |
| Area | **Eddy County, NM** | Well | **No.264H** |
| Field | **Big Eddy** | Wellbore | **No.264H PWB** |
| Facility | **Big Eddy Unit DI-4** | | |

**WELLPATH DATA (146 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10886.51† | 91.746 | 269.578 | 8143.00 | 3003.44 | -22.14 | -3003.36 | 633643.55 | 585045.56 | 32°36'27.522"N | 103°53'57.599"W | 0.00 | 1st Bone Spring Lime |
| 10929.00† | 91.746 | 269.578 | 8141.71 | 3045.91 | -22.46 | -3045.83 | 633601.09 | 585045.24 | 32°36'27.521"N | 103°53'58.095"W | 0.00 | |
| 11029.00† | 91.746 | 269.578 | 8138.66 | 3145.86 | -23.20 | -3145.78 | 633501.15 | 585044.51 | 32°36'27.518"N | 103°53'59.264"W | 0.00 | |
| 11129.00† | 91.746 | 269.578 | 8135.61 | 3245.82 | -23.93 | -3245.73 | 633401.20 | 585043.77 | 32°36'27.514"N | 103°54'00.432"W | 0.00 | |
| 11229.00† | 91.746 | 269.578 | 8132.56 | 3345.77 | -24.67 | -3345.68 | 633301.26 | 585043.03 | 32°36'27.511"N | 103°54'01.600"W | 0.00 | |
| 11329.00† | 91.746 | 269.578 | 8129.52 | 3445.72 | -25.41 | -3445.63 | 633201.32 | 585042.30 | 32°36'27.508"N | 103°54'02.769"W | 0.00 | |
| 11429.00† | 91.746 | 269.578 | 8126.47 | 3545.68 | -26.14 | -3545.58 | 633101.37 | 585041.56 | 32°36'27.504"N | 103°54'03.937"W | 0.00 | |
| 11529.00† | 91.746 | 269.578 | 8123.42 | 3645.63 | -26.88 | -3645.53 | 633001.43 | 585040.82 | 32°36'27.501"N | 103°54'05.106"W | 0.00 | |
| 11629.00† | 91.746 | 269.578 | 8120.37 | 3745.59 | -27.62 | -3745.48 | 632901.48 | 585040.09 | 32°36'27.498"N | 103°54'06.274"W | 0.00 | |
| 11729.00† | 91.746 | 269.578 | 8117.33 | 3845.54 | -28.35 | -3845.43 | 632801.54 | 585039.35 | 32°36'27.495"N | 103°54'07.443"W | 0.00 | |
| 11829.00† | 91.746 | 269.578 | 8114.28 | 3945.49 | -29.09 | -3945.39 | 632701.60 | 585038.61 | 32°36'27.491"N | 103°54'08.611"W | 0.00 | |
| 11929.00† | 91.746 | 269.578 | 8111.23 | 4045.45 | -29.83 | -4045.34 | 632601.65 | 585037.87 | 32°36'27.488"N | 103°54'09.779"W | 0.00 | |
| 12029.00† | 91.746 | 269.578 | 8108.19 | 4145.40 | -30.56 | -4145.29 | 632501.71 | 585037.14 | 32°36'27.485"N | 103°54'10.948"W | 0.00 | |
| 12129.00† | 91.746 | 269.578 | 8105.14 | 4245.35 | -31.30 | -4245.24 | 632401.77 | 585036.40 | 32°36'27.481"N | 103°54'12.116"W | 0.00 | |
| 12229.00† | 91.746 | 269.578 | 8102.09 | 4345.31 | -32.04 | -4345.19 | 632301.82 | 585035.66 | 32°36'27.478"N | 103°54'13.285"W | 0.00 | |
| 12329.00† | 91.746 | 269.578 | 8099.04 | 4445.26 | -32.78 | -4445.14 | 632201.88 | 585034.93 | 32°36'27.475"N | 103°54'14.453"W | 0.00 | |
| 12429.00† | 91.746 | 269.578 | 8096.00 | 4545.21 | -33.51 | -4545.09 | 632101.93 | 585034.19 | 32°36'27.472"N | 103°54'15.622"W | 0.00 | |
| 12529.00† | 91.746 | 269.578 | 8092.95 | 4645.17 | -34.25 | -4645.04 | 632001.99 | 585033.45 | 32°36'27.468"N | 103°54'16.790"W | 0.00 | |
| 12629.00† | 91.746 | 269.578 | 8089.90 | 4745.12 | -34.99 | -4744.99 | 631902.05 | 585032.72 | 32°36'27.465"N | 103°54'17.958"W | 0.00 | |
| 12729.00† | 91.746 | 269.578 | 8086.85 | 4845.07 | -35.72 | -4844.94 | 631802.10 | 585031.98 | 32°36'27.462"N | 103°54'19.127"W | 0.00 | |
| 12829.00† | 91.746 | 269.578 | 8083.81 | 4945.03 | -36.46 | -4944.89 | 631702.16 | 585031.24 | 32°36'27.458"N | 103°54'20.295"W | 0.00 | |
| 12929.00† | 91.746 | 269.578 | 8080.76 | 5044.98 | -37.20 | -5044.84 | 631602.22 | 585030.51 | 32°36'27.455"N | 103°54'21.464"W | 0.00 | |
| 13029.00† | 91.746 | 269.578 | 8077.71 | 5144.94 | -37.93 | -5144.80 | 631502.27 | 585029.77 | 32°36'27.452"N | 103°54'22.632"W | 0.00 | |
| 13129.00† | 91.746 | 269.578 | 8074.67 | 5244.89 | -38.67 | -5244.75 | 631402.33 | 585029.03 | 32°36'27.448"N | 103°54'23.801"W | 0.00 | |
| 13229.00† | 91.746 | 269.578 | 8071.62 | 5344.84 | -39.41 | -5344.70 | 631302.39 | 585028.29 | 32°36'27.445"N | 103°54'24.969"W | 0.00 | |
| 13282.12 | 91.746 | 269.578 | 8070.00[1] | 5397.94 | -39.80 | -5397.79 | 631249.30 | 585027.90 | 32°36'27.443"N | 103°54'25.590"W | 0.00 | No. 264H PBHL |

# Planned Wellpath Report

**Rev I.0**



BAKER HUGHES

| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **BOPCO, LP** | Slot | **No.264H SHL** |
| Area | **Eddy County, NM** | Well | **No.264H** |
| Field | **Big Eddy** | Wellbore | **No.264H PWB** |
| Facility | **Big Eddy Unit DI-4** | | |

**TARGETS**

| Name | MD [ft] | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|---|
| **1) No 264H Rev 1** | 13282.12 | 8070.00 | -39.80 | -5397.79 | 631249.30 | 585027.90 | 32°36'27.443"N | 103°54'25.590"W | point |

**SURVEY PROGRAM - Ref Wellbore: No.264H PWB Ref Wellpath: Rev I.0**

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
|---|---|---|---|---|
| 29.00 | 499.00 | Generic gyro - northseeking (Standard) | | No.264H PWB |
| 499.00 | 13282.12 | NaviTrak (Standard) | | No.264H PWB |

# PECOS DISTRICT
# CONDITIONS OF APPROVAL

| | |
|---|---|
| OPERATOR'S NAME: | BOPCO, L.P. |
| LEASE NO.: | NMLC-068408 |
| WELL NAME & NO.: | Big Eddy Unit 264H |
| SURFACE HOLE FOOTAGE: | 0660' FNL & 2220' FEL |
| BOTTOM HOLE FOOTAGE LOCATION: | 0660' FNL & 2320' FEL Sec. 06, T. 20 S., R 31 E., Section 05, T. 20 S., R 31 E., NMPM |
| COUNTY: | Eddy County, New Mexico |
| API: | 30-015-42478 |

## I. 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. 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.).**
**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.**

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

**Secretary's Potash**
**Possibility of water flows in the Artesia Group and Salado.**
**Possibility of lost circulation in the Red Beds, Artesia Group, Rustler, Capitan Reef, and Delaware.**

1. The **16** inch surface casing shall be set at approximately **830** 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.

2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing, which shall be set at approximately **2750** feet, 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 potash.**

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

**Operator has proposed DV tool at depth of 2895', 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. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.**

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 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 potash and Capitan Reef. Excess calculates to 17% - Additional cement may be required.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

4. The minimum required fill of cement behind the **5-1/2** 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 approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement should tie-back at least **50 feet above the Capitan Reef** (Top of Capitan Reef estimated at 2804'). Operator shall provide method of verification. **Excess calculates to 18% - Additional cement may be required**

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.

## 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 RP 53 Sec. 17.

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. **A variance is granted for the use of a diverter on the 16" surface casing.**

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8 inch 1st intermediate casing shoe shall be **3000 (3M)** psi.

5. 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 081414**