RECEIVED

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AUG 23 2011
Farmington Field Office
Bureau of Land Management

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

**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 page 2.*

| | |
|---|---|
| 1 Type of Well<br>☐ Oil Well ☒ Gas Well ☐ Other | 5 Lease Serial No<br>NMSF-078772 |
| | 6 If Indian, Allottee or Tribe Name |
| | 7 If Unit of CA/Agreement, Name and/or No.<br>Rosa Unit |
| | 8. Well Name and No.<br>Rosa Unit COM #329A |
| 2 Name of Operator<br>Williams Production Company, LLC | 9 API Well No<br>30-039-29398 |
| 3a. Address<br>PO Box 640 Aztec, NM 87410<br>3b. Phone No. *(include area code)*<br>505-634-4208 | 10. Field and Pool or Exploratory Area<br>Basin Fruitland Coal |
| 4 Location of Well *(Footage, Sec , T.,R ,M , or Survey Description)*<br>Sur 2254' FSL & 752' FEL, BHL 22' FSL & 2013' FEL, sec 34, T32N, R6W | 11 Country or Parish, State<br>Rio Arriba |

12. CHECK THE 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 |
| | ☐ Alter Casing | ☐ Fracture Treat | ☐ Reclamation | ☐ Well Integrity |
| ☒ Subsequent Report | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☒ Other BHL ADJUSTED |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| ☐ Final Abandonment Notice | ☐ 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 must 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 must be filed once testing has been completed Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Williams Production would like to update the adjusted BHL on this well. Due to surveyed data per attached As-Drilled Plat.

ACCEPTED FOR RECORD
SEP 06 2011
FARMINGTON FIELD OFFICE
BY TL Salyers

RCVD SEP 6 '11
OIL CONS. DIV.
DIST. 3

| | |
|---|---|
| 14 I hereby certify that the foregoing is true and correct<br>Name *(Printed/Typed)*<br>Larry Higgins | Title Permit Supervisor |
| Signature Larry Higgins | Date 8/22/11 |

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

| | | |
|---|---|---|
| Approved by | Title | Date RCVD SEP 6 '11 |
| 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 | |

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

(Instructions on page 2)

NMOCD

District I
1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| [1] API Number | [2] Pool Code | [3] Pool Name |
|---|---|---|
| 30-039-29396 | 71629 | BASIN FRUITLAND COAL |

| [4] Property Code | [5] Property Name | [6] Well Number |
|---|---|---|
| 17033 | ROSA UNIT COM | 329A |

| [7] OGRID No. | [8] Operator Name | [9] Elevation |
|---|---|---|
| 120782 | WILLIAMS PRODUCTION COMPANY | 6315' |

## [10] Surface Location

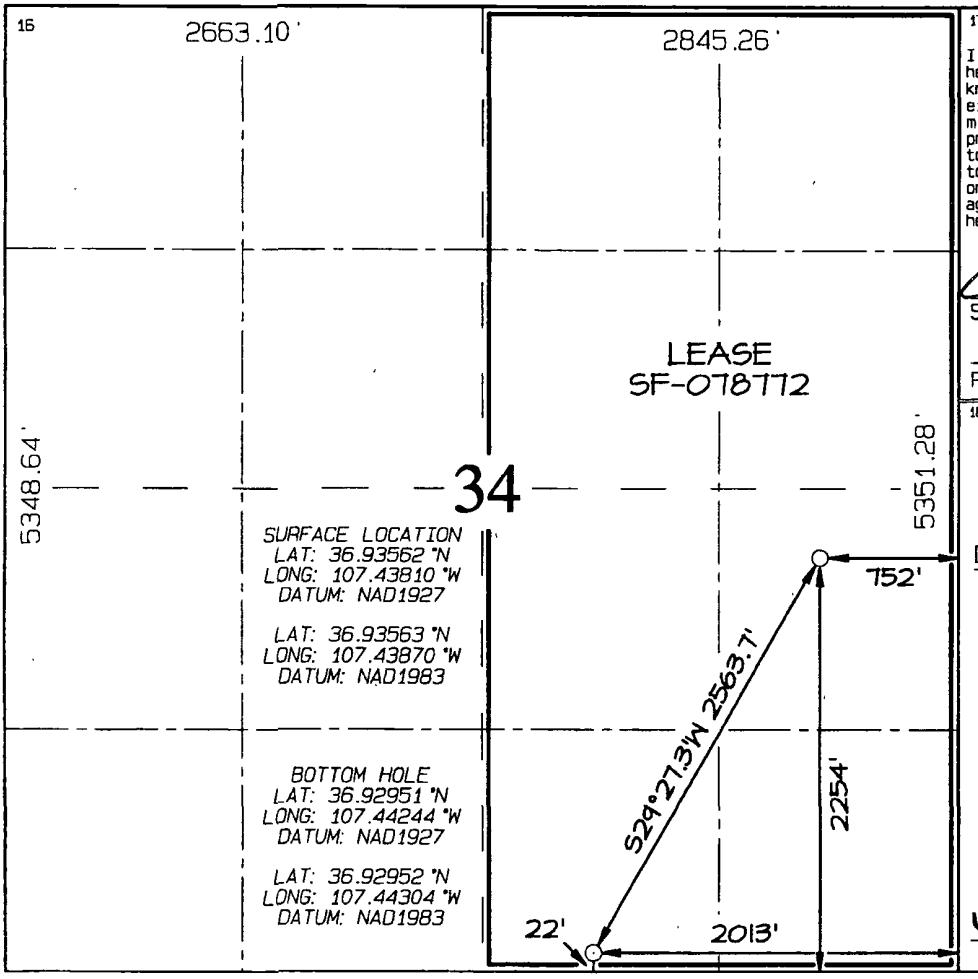
| UL or lot no | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| I | 34 | 32N | 6W | | 2254 | SOUTH | 752 | EAST | RIO ARRIBA |

## [11] 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 |
|---|---|---|---|---|---|---|---|---|---|
| O | 34 | 32N | 6W | | 22 | SOUTH | 2013 | EAST | RIO ARRIBA |

| [12] Dedicated Acres | [13] Joint or Infill | [14] Consolidation Code | [15] Order No. |
|---|---|---|---|
| 320.0 Acres - (E/2) | | | |

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




## [17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Larry Higgins 8-22-11
Signature Date

Larry Higgins
Printed Name

## [18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief

Date Revised: AUGUST 11, 2011
Date of Survey: APRIL 25, 2011

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

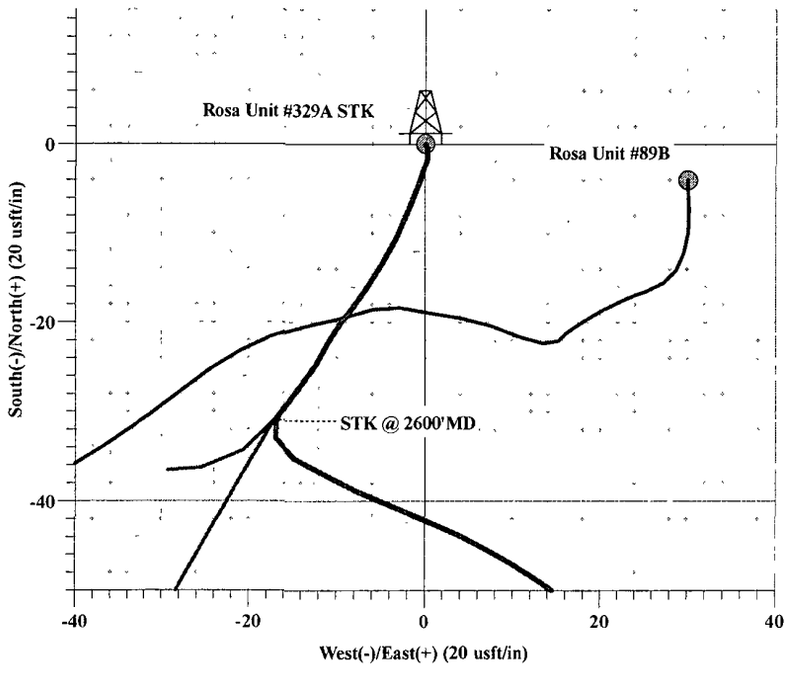
# Williams Energy

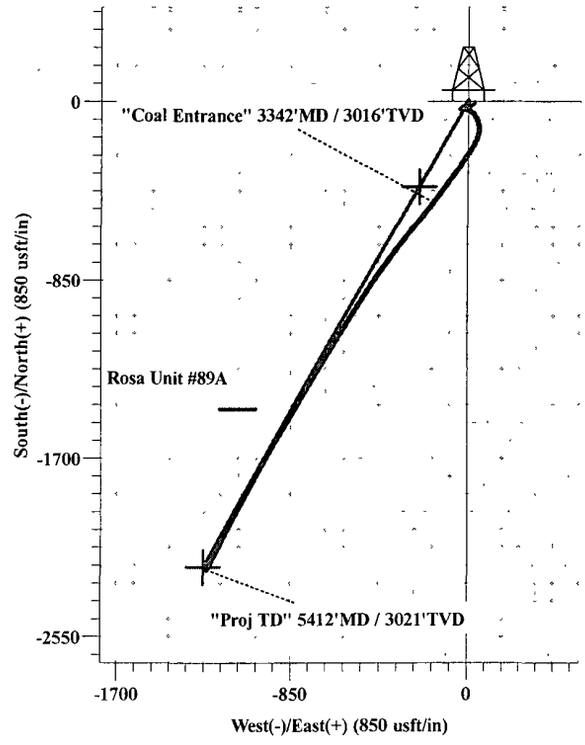
*Rosa Unit #329A STK*
*Sec34 T32N-R6W - 329A*
*Rio Arriba Co. NM*
*GL: 6692' KB: 14'*

PATHFINDER®
A Schlumberger Company

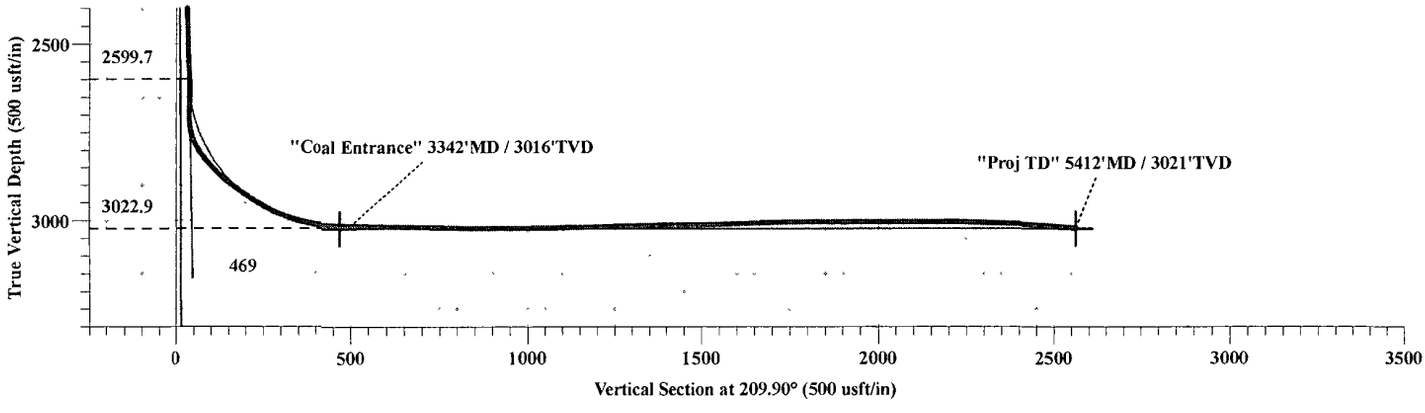
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Shape |
|---|---|---|---|---|---|---|
| LAND-329 | 3023 0 | -406 2 | -233 8 | 2161555 94 | 152524 38 | Point |
| TD-329 | 3023 0 | -2221 0 | -1277.4 | 2159754 30 | 151458 21 | Point |




| WELL DETAILS: Rosa Unit #329A STK | | | |
|---|---|---|---|
| | | 6315.0 | |
| Northing | Easting | Latittude | Longitude |
| 2161959.20 | 152763 23 | 36° 56' 8 232 N | 107° 26' 17 160 W |




SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Target |
|---|---|---|---|---|---|---|---|---|---|
| 2600 0 | 1 35 | 214 75 | 2599 7 | -31 0 | -17 1 | 0 00 | 0 00 | 35 4 | |
| 3270 6 | 90 00 | 209 90 | 3022 9 | -406 2 | -233 8 | 13 22 | -4 85 | 468 7 | |
| 5364 1 | 90 00 | 209 90 | 3023 0 | -2221 0 | -1277 4 | 0 00 | 0 00 | 2562 2 | TD-329 |

Plan: Design #2 (Rosa Unit #329A STK/STK)

Created By: Frank C. Scardino Date: 7/22/2011

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Williams Energy | **Local Co-ordinate Reference:** | Site Sec34 T32N-R6W - 329A |
| **Project:** | Rio Arriba Co NM | **TVD Reference:** | WELL @ 6329 0usft (Original Well Elev) |
| **Site:** | Sec34 T32N-R6W - 329A | **MD Reference:** | WELL @ 6329 0usft (Original Well Elev) |
| **Well:** | Rosa Unit #329A STK | **North Reference:** | True |
| **Wellbore:** | STK | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | STK | **Database:** | EDM 5000 1 Single User Db |

**Project** Rio Arriba Co NM

| | | | |
|---|---|---|---|
| **Map System:** | US State Plane 1927 (Exact solution) | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 (NADCON CONUS) | | |
| **Map Zone:** | New Mexico Central 3002 | | |

**Site** Sec34 T32N-R6W - 329A

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 2,161,959 19 usft | **Latitude:** | 36° 56' 8 232 N |
| **From:** | Lat/Long | **Easting:** | 152,763 23 usft | **Longitude:** | 107° 26' 17 160 W |
| **Position Uncertainty:** | 0.0 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | -0.71 ° |

**Well** Rosa Unit #329A STK

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0 0 usft | **Northing:** | 2,161,959 19 usft | **Latitude:** | 36° 56' 8.232 N |
| | **+E/-W** | 0 0 usft | **Easting:** | 152,763 23 usft | **Longitude:** | 107° 26' 17 160 W |
| **Position Uncertainty** | | 0 0 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 6,315 0 usft |

**Wellbore** STK

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2010 | 06/13/11 | 9 78 | 63 69 | 50,891 |

**Design** STK

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 1 0 | **Phase:** | ACTUAL | **Tie On Depth:** | 0 0 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0 0 | 0 0 | 0 0 | 209 90 |

**Survey Program** **Date** 06/08/11

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 200 0 | 5,412 0 | Survey #1 (STK) | MWD | MWD - Standard |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0 0 | 0 00 | 0.00 | 0 0 | 0 0 | 0 0 | 0 0 | 0 00 | 0 00 | 0 00 |
| 200 0 | 0 30 | 156 00 | 200 0 | -0 5 | 0 2 | 0 3 | 0 15 | 0 15 | 0 00 |
| 400 0 | 0.48 | 191 81 | 400 0 | -1 8 | 0 3 | 1 4 | 0 15 | 0 09 | 17 91 |
| 600 0 | 0 84 | 201 40 | 600 0 | -4 0 | -0 5 | 3 7 | 0 19 | 0 18 | 4 80 |
| 800 0 | 1 09 | 202 20 | 800 0 | -7 1 | -1 7 | 7 0 | 0.13 | 0 13 | 0 40 |
| 1,000 0 | 1 07 | 206 05 | 999 9 | -10 5 | -3 2 | 10 7 | 0 04 | -0 01 | 1 93 |
| 1,200 0 | 0 90 | 212 57 | 1,199 9 | -13 5 | -4 9 | 14 2 | 0 10 | -0.09 | 3 26 |
| 1,400 0 | 0 84 | 212 84 | 1,399 9 | -16 1 | -6 6 | 17 2 | 0 03 | -0.03 | 0 14 |
| 1,600 0 | 0 75 | 218 65 | 1,599 8 | -18.3 | -8 2 | 20 0 | 0 06 | -0 05 | 2.91 |
| 1,800 0 | 0 68 | 215 28 | 1,799 8 | -20 3 | -9 7 | 22 4 | 0 04 | -0 04 | -1 69 |

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Williams Energy | **Local Co-ordinate Reference:** | Site Sec34 T32N-R6W - 329A |
| **Project:** | Rio Arriba Co NM | **TVD Reference:** | WELL @ 6329 0usft (Original Well Elev) |
| **Site:** | Sec34 T32N-R6W - 329A | **MD Reference:** | WELL @ 6329 0usft (Original Well Elev) |
| **Well:** | Rosa Unit #329A STK | **North Reference:** | True |
| **Wellbore:** | STK | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | STK | **Database:** | EDM 5000 1 Single User Db |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 2,000 0 | 0 73 | 209 56 | 1,999 8 | -22 4 | -11 0 | 24.9 | 0 04 | 0 03 | -2.86 |
| 2,200 0 | 0 89 | 209 51 | 2,199 8 | -24 9 | -12 4 | 27 7 | 0 08 | 0 08 | -0 03 |
| 2,400 0 | 1 11 | 222.62 | 2,399 8 | -27 6 | -14 5 | 31.2 | 0 16 | 0 11 | 6.56 |
| 2,493 0 | 1 40 | 211 00 | 2,492 7 | -29 3 | -15 6 | 33 2 | 0 41 | 0 31 | -12 49 |
| 2,525.0 | 1.30 | 220 40 | 2,524 7 | -29.9 | -16 1 | 33 9 | 0 76 | -0 31 | 29 38 |
| 2,557.0 | 3 55 | 211 36 | 2,556 7 | -31.0 | -16.8 | 35 3 | 7 11 | 7 03 | -28 25 |
| 2,590 0 | 4.17 | 158 24 | 2,589 6 | -33 0 | -16 9 | 37 0 | 10 59 | 1 88 | -160 97 |
| 2,620 0 | 8 18 | 126 79 | 2,619 5 | -35 3 | -14 8 | 38 0 | 17 02 | 13 37 | -104 83 |
| 2,658 0 | 16 36 | 112 53 | 2,656 6 | -39.0 | -7 7 | 37 6 | 22.80 | 21 53 | -37 53 |
| 2,686 0 | 22 95 | 112 16 | 2,682.9 | -42.5 | 1 0 | 36 4 | 23 54 | 23 54 | -1 32 |
| 2,718 0 | 28 49 | 123 41 | 2,711.8 | -49 1 | 13 2 | 36 0 | 23 01 | 17 31 | 35.16 |
| 2,750 0 | 33 77 | 136 12 | 2,739.2 | -59 7 | 25 7 | 39 0 | 26 27 | 16 50 | 39.72 |
| 2,782 0 | 38 34 | 147 37 | 2,765 1 | -74 5 | 37 3 | 46 0 | 25 09 | 14 28 | 35 16 |
| 2,813 0 | 41 24 | 159 80 | 2,788 9 | -92 3 | 46.0 | 57 0 | 27 27 | 9 35 | 40 10 |
| 2,845 0 | 43 26 | 170 35 | 2,812 6 | -113 0 | 51.5 | 72 3 | 23 03 | 6 31 | 32 97 |
| 2,877 0 | 45 02 | 180 82 | 2,835 6 | -135 1 | 53 2 | 90 7 | 23.42 | 5 50 | 32 72 |
| 2,908 0 | 46 96 | 191 87 | 2,857 2 | -157 2 | 50 7 | 111 0 | 26 37 | 6 26 | 35 65 |
| 2,941 0 | 49 07 | 202 07 | 2,879 3 | -180 6 | 43 5 | 134 9 | 23 83 | 6 39 | 30 91 |
| 2,972 0 | 51 44 | 211 10 | 2,899.1 | -201 9 | 32 8 | 158 6 | 23 65 | 7 65 | 29 13 |
| 3,005 0 | 54 69 | 212 79 | 2,919 0 | -224.3 | 18 9 | 185 0 | 10 66 | 9 85 | 5.12 |
| 3,037 0 | 57 60 | 213 16 | 2,936 8 | -246 5 | 4.4 | 211 5 | 9 14 | 9 09 | 1 16 |
| 3,068 0 | 60 15 | 213 97 | 2,952.8 | -268 7 | -10 3 | 238 0 | 8 52 | 8 23 | 2 61 |
| 3,099 0 | 62 96 | 214 21 | 2,967 6 | -291 2 | -25 5 | 265 2 | 9 09 | 9 06 | 0 77 |
| 3,131 0 | 66 83 | 215 32 | 2,981 2 | -315 0 | -42 1 | 294 1 | 12 49 | 12 09 | 3 47 |
| 3,162 0 | 71 67 | 216 17 | 2,992 1 | -338 5 | -59 0 | 322 9 | 15 82 | 15 61 | 2 74 |
| 3,195 0 | 76 94 | 216 24 | 3,001 1 | -364 2 | -77 8 | 354 5 | 15 97 | 15 97 | 0 21 |
| 3,227 0 | 80 55 | 216.78 | 3,007 3 | -389 4 | -96 4 | 385 6 | 11 40 | 11 28 | 1 69 |
| 3,258 0 | 84 50 | 217 40 | 3,011 3 | -413 9 | -115 0 | 416.1 | 12 90 | 12 74 | 2 00 |
| 3,290 0 | 86 88 | 217 45 | 3,013.7 | -439 2 | -134 3 | 447 7 | 7 44 | 7 44 | 0 16 |
| 3,342 0 | 88 84 | 217.52 | 3,015 7 | -480 5 | -166 0 | 499 3 | 3 76 | 3 76 | 0.13 |
| **Coal Entrance 3342'MD / 3016'TVD** | | | | | | | | | |
| 3,353 0 | 89 25 | 217 53 | 3,015 9 | -489 2 | -172.7 | 510 2 | 3 76 | 3 76 | 0 13 |
| 3,417 0 | 88.90 | 218.15 | 3,016 9 | -539 7 | -211.9 | 573.5 | 1 11 | -0 55 | 0 97 |
| 3,481 0 | 88 55 | 218 67 | 3,018 3 | -589 9 | -251 7 | 636 8 | 0 98 | -0 55 | 0 81 |
| 3,545 0 | 88 81 | 219 24 | 3,019 8 | -639 6 | -291 9 | 700 0 | 0 98 | 0 41 | 0 89 |
| 3,608 0 | 89 08 | 218 05 | 3,021 0 | -688 8 | -331 2 | 762 3 | 1 94 | 0 43 | -1 89 |
| 3,672 0 | 89 87 | 216 43 | 3,021 6 | -739 8 | -370 0 | 825 7 | 2 82 | 1 23 | -2 53 |
| 3,736 0 | 89 96 | 216 00 | 3,021 6 | -791 4 | -407 8 | 889 3 | 0 69 | 0 14 | -0 67 |
| 3,799 0 | 89 69 | 214 18 | 3,021 8 | -843 0 | -444 0 | 952 1 | 2 92 | -0 43 | -2 89 |
| 3,862 0 | 90 40 | 212 74 | 3,021 8 | -895 5 | -478 7 | 1,015 0 | 2 55 | 1 13 | -2 29 |
| 3,925 0 | 91 28 | 212 02 | 3,020 9 | -948 7 | -512.5 | 1,077 9 | 1 80 | 1 40 | -1 14 |
| 3,989 0 | 91 28 | 211 88 | 3,019 4 | -1,003 0 | -546 3 | 1,141 8 | 0 22 | 0 00 | -0 22 |
| 4,052 0 | 91 80 | 212 19 | 3,017 7 | -1,056 4 | -579 7 | 1,204 8 | 0 96 | 0 83 | 0 49 |
| 4,116 0 | 91 80 | 211 81 | 3,015 7 | -1,110 6 | -613 6 | 1,268 7 | 0 59 | 0 00 | -0 59 |

| | | | |
|---|---|---|---|
| **Company:** | Williams Energy | **Local Co-ordinate Reference:** | Site Sec34 T32N-R6W - 329A |
| **Project:** | Rio Arriba Co NM | **TVD Reference:** | WELL @ 6329 0usft (Original Well Elev) |
| **Site:** | Sec34 T32N-R6W - 329A | **MD Reference:** | WELL @ 6329 0usft (Original Well Elev) |
| **Well:** | Rosa Unit #329A STK | **North Reference:** | True |
| **Wellbore:** | STK | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | STK | **Database:** | EDM 5000 1 Single User Db |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,180.0 | 90 92 | 211 53 | 3,014 2 | -1,165.1 | -647 2 | 1,332 6 | 1 44 | -1 38 | -0.44 |
| 4,244 0 | 90 84 | 211 49 | 3,013 2 | -1,219 6 | -680 7 | 1,396 6 | 0 14 | -0 13 | -0 06 |
| 4,308 0 | 90.84 | 211 56 | 3,012.3 | -1,274.2 | -714 1 | 1,460 6 | 0 11 | 0 00 | 0 11 |
| 4,371 0 | 91.36 | 211.08 | 3,011.1 | -1,328 0 | -746.9 | 1,523 5 | 1 12 | 0 83 | -0 76 |
| 4,434 0 | 91.89 | 210 34 | 3,009 3 | -1,382 1 | -779 0 | 1,586.5 | 1 44 | 0 84 | -1.17 |
| 4,497 0 | 91 80 | 210.95 | 3,007 3 | -1,436 3 | -811.1 | 1,649 5 | 0.98 | -0 14 | 0 97 |
| 4,561.0 | 91 10 | 211.73 | 3,005 7 | -1,491 0 | -844 4 | 1,713.4 | 1 64 | -1 09 | 1 22 |
| 4,624 0 | 90 31 | 211.13 | 3,004 9 | -1,544 7 | -877.2 | 1,776 4 | 1 57 | -1 25 | -0.95 |
| 4,688 0 | 90 57 | 211.91 | 3,004 4 | -1,599 3 | -910 7 | 1,840.4 | 1.28 | 0 41 | 1.22 |
| 4,751 0 | 91.01 | 211.45 | 3,003.5 | -1,652 9 | -943 8 | 1,903 3 | 1 01 | 0.70 | -0.73 |
| 4,815 0 | 89 43 | 210.11 | 3,003 3 | -1,707 9 | -976 5 | 1,967.3 | 3.24 | -2.47 | -2 09 |
| 4,879 0 | 89 96 | 209 02 | 3,003 6 | -1,763 5 | -1,008.1 | 2,031.3 | 1 89 | 0 83 | -1 70 |
| 4,943 0 | 89.78 | 208.17 | 3,003 8 | -1,819 7 | -1,038 7 | 2,095 3 | 1 36 | -0 28 | -1.33 |
| 5,008 0 | 90 57 | 208 75 | 3,003.6 | -1,876.9 | -1,069 7 | 2,160 3 | 1.51 | 1.22 | 0 89 |
| 5,072 0 | 89 08 | 208 55 | 3,003 8 | -1,933.0 | -1,100 4 | 2,224 3 | 2.35 | -2 33 | -0 31 |
| 5,136 0 | 87 32 | 208 51 | 3,005.8 | -1,989.2 | -1,130.9 | 2,288 2 | 2 75 | -2 75 | -0 06 |
| 5,200 0 | 88 90 | 208 74 | 3,007 9 | -2,045.4 | -1,161 6 | 2,352 2 | 2 49 | 2 47 | 0 36 |
| 5,264 0 | 86.35 | 208 19 | 3,010 5 | -2,101 6 | -1,192 1 | 2,416 1 | 4 08 | -3 98 | -0 86 |
| 5,328 0 | 85 82 | 207 74 | 3,014.9 | -2,158 0 | -1,222 0 | 2,479 9 | 1.09 | -0 83 | -0 70 |
| 5,356 0 | 86 09 | 207.42 | 3,016 9 | -2,182 7 | -1,234 9 | 2,507.8 | 1 49 | 0 96 | -1 14 |
| 5,412 0 | 86 09 | 207 42 | 3,020 7 | -2,232 3 | -1,260 7 | 2,563 6 | 0.00 | 0 00 | 0.00 |
| "Proj TD" 5412'MD / 3021'TVD | | | | | | | | | |

**Design Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 3,342 0 | 3,015 7 | -480.5 | -166 0 | "Coal Entrance" 3342'MD / 3016'TVD |
| 5,412 0 | 3,020.7 | -2,232 3 | -1,260 7 | "Proj TD" 5412'MD / 3021'TVD |

Checked By _____ Approved By _____ Date: _____