

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 *As Drilled*

*API Number 30-039-27817	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 226A
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6336'

¹⁰ Surface Location

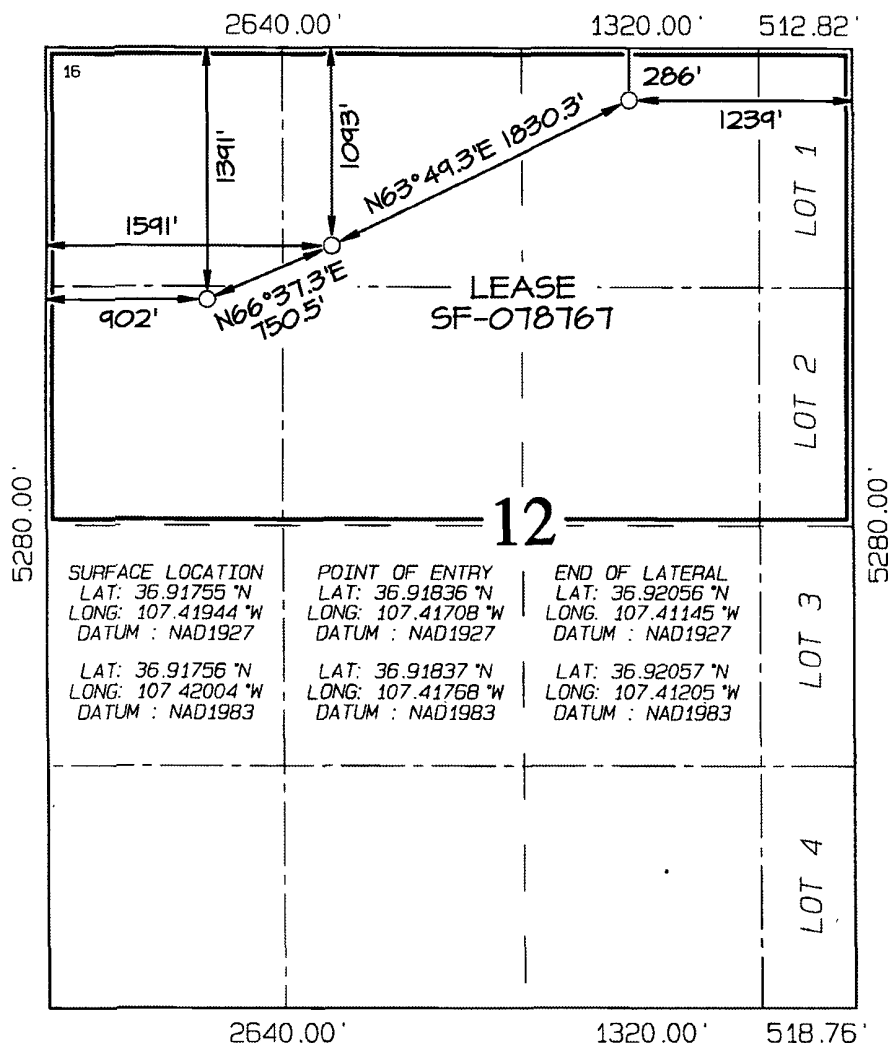
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	12	31N	6W		1391	NORTH	902	WEST	RIO ARRIBA

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
B	12	31N	6W		286	NORTH	1239	EAST	RIO ARRIBA

¹² Dedicated Acres 271.17 Acres - (N/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. SD-20119-0
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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



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.

Ben Mitchell 11/16/2014
Signature Date
Ben Mitchell
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: OCTOBER 19, 2011
Date of Survey: MAY 7, 2004

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
15269
JASON C. EDWARDS
Certificate Number 15269

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

SUBMIT IN
DUPLICATE

NOV 17 2011

(See other instructions on
reverse side)

FORM APPROVED
OMB NO 1004-0137
Expires: February 28, 1995

Farmington Field Office

Bureau of Land Management

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a TYPE OF WELL OIL WELL ☒ GAS WELL DRY OTHER						5 LEASE DESIGNATION AND LEASE NO NMSF-078767	
b TYPE OF COMPLETION NEW WELL WORKOVER DEEPEN PLUG BACK DIFF RESVR ☒ OTHER - horizontal reentry						6 IF INDIAN, ALLOTTEE OR	
2 NAME OF OPERATOR WILLIAMS PRODUCTION COMPANY						7 UNIT AGREEMENT NAME Rosa Unit	
3 ADDRESS AND TELEPHONE NO P O. Box 640, Aztec, NM 87410 (505) 333-1822						8 FARM OR LEASE NAME, WELL NO Rosa Unit 226A	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* SURF 1391' FNL & 902' FWL BHL 286' FNL & 1239' FEL						9 API WELL NO 30-039-27817-0151	
						10 FIELD AND POOL, OR WILDCAT BASIN FRUITLAND COAL	
						11 SEC. T, R, M, OR BLOCK AND SURVEY OR AREA SEC 12, 31N, 6W	
						12 COUNTY OR Rio Arriba	13 STATE New Mexico
15 DATE SPUDDED 8-26-2004	16 DATE T D REACHED 10-14-11	17 DATE COMPLETED (READY TO PRODUCE) 11-10-11		14 PERMIT NO	DATE ISSUED		
				18 ELEVATIONS (OK, RKB, RT, GR, ETC)* 6336' GR		19 ELEVATION CASING HEAD	
20 TOTAL DEPTH, MD & TVD 5391' MD / 3081' TVD		21 PLUG, BACK T D, MD & TVD 5379' MD 3081' TVD		22 IF MULTICOMP, HOW MANY	23 INTERVALS DRILLED BY	ROTARY TOOLS x	
24 PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* BASIN FRUITLAND COAL 3500'-5374' MD						25 WAS DIRECTIONAL SURVEY MADE YES	
26 TYPE ELECTRIC AND OTHER LOGS RUN						27 WAS WELL CORED No	
28 CASING REPORT (Report all strings set in well)							
CASING SIZE/GRADE		WEIGHT, LB /FT	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD		
9-5/8", J-55		36#	317'	12-1/4"	416 SX - SURFACE		
7", N-80		23#	3014'	8-3/4"	500 SX - SURFACE		
5 1/2", N-80		17#	3288'	6-1/4"	0		
29 LINER RECORD							
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	
4 1/2"	2455'	5379'	0 SX		2-7/8", 6.5#, J-55	3257'	
31 PERFORATION RECORD (Interval, size, and number)				32 ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC			
Basin Fruitland Coal 3500'-5374' (Pre-Perforated Liner, 28, 0.50" dia holes p/ft)				DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED		
				3500'-5374'	Well was not stimulated		
33 PRODUCTION							
DATE OF FIRST PRODUCTION 10/21/04		PRODUCTION METHOD (Flowing, gas lift, pumping-size and type of pump)			WELL STATUS (PRODUCING OR SI) PR		
DATE OF TEST	TESTED	CHOKE SIZE	PROD'N FOR TEST PERIOD	OIL - BBL	GAS - MCF	WATER - BBL	
FLOW TBG PRESS	CASING PRESSURE	CALCULATED 24-HOUR RATE		OIL - BBL	GAS - MCF	WATER - BBL	
34 DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) non flaring						TEST WITNESSED BY	
35 LIST OF ATTACHMENTS SUMMARY OF POROUS ZONES, WELLBORE DIAGRAM, Directional EOW report						ACCEPTED FOR RECORD	

36 I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

TITLE Heather Riley

DATE 11/17/11

NOV 18 2011

FARMINGTON FIELD OFFICE
BY *[Signature]*

MOCD

[illegible]

ROSA UNIT Re-Entry #226A FRUITLAND COAL

Pumping Unit
Luffkin 114-143-74

Spud 08/26/04
Completed 10/06/04
1st Delivery 10/21/04
Pump Install 11/10/11
Horz 11/9/11

Location:

SHL: 1391' FNL and 902' FWL
SW/4 NW/4 Sec 12(E), T31N, R6W
BHL: 286' FNL and 1239' FEL
NW/4 NE/4 Sec 12(B), T31N, R6W
Rio Arriba, New Mexico

Elevation: 6336' GR
API # 30-039-27817

Top	Depth
Ojo Alamo	2408'
Kirtland	2534'
Fruitland	2938'
Pictured Cliffs	3191'

H Latch Lnr Hgr @ 2920'

0.50", 4 SPF,
320 holes total

3024'
3032'
3060'
3082'
3096'
3122'
3168'
3192'

7 jts 9-5/8", 36#, J-55,
ST&C @ 317'

64 jts 7", 23#, n-80, ST&C csg @ 3014'

Window Cut @ 2438'-2449' MD

4.5" Liner top @ 2455'

TD @ 5391' MD
PBTD @ 5379' MD
TVD @ 3081'

Run 1 Alum nose guide Shoe, 42 jts preperforated casing (28, 0.50" holes p/ft) and 23 jts blank, 4-1/2", 11.6#, J-55, LT&C, 8rd csg. TOL @ 2455', BOL @ 5379' MD (3081' TVD). Top perfs @ 3500', bottom perfs @ 5374'. Casing was not cemented.

Land well at 3257' as follows: one 1/2 M/S and 26' 2-7/8" mud anchor, 2-9/32" F Nipple, 103 jts of 2-7/8", J-55, 6.5 lb/ft, EUE, 8 rd tbg, F Nipple set at 3231'. Strapped 1/4" stainless steel capillary tbg to last 220' of 2-7/8" production tbg.

Run pump as follows: 2 1/2" x 1 3/4" x 16' RHAC SandPro Rod Pump, tested good, continue to PU 3 Norris 1 1/4" sinker bars, 124 API Grade D rods, 8', 6', 4', and 2' pony rods, and a 1 1/4" x 22' polished rod w/ 1 1/2" x 10' polished rod liner.

8 jts 5-1/2", 17#, N-80,
LT&C @ 2920' - 3288'

Underream 6-1/4" to 9-1/2" from
3020' to 3190'

PBTD @ 3287'
TD @ 3288'

Hole Size	Casing	Cement	Volume	Top of Cmt
12-1/4"	9-5/8", 36#	416 sx	587 cu. ft.	Surface
8-3/4"	7", 23#	500 sx	1006 cu. ft.	Surface
6-1/4"	5-1/2", 17#	Did Not Cmt		
6-1/4"	4-1/2"	Did Not Cmt		

LG 11/17/2011



Williams Energy

Rosa Unit #226A STK
Sec12 T31N-R6W - 226A

Rio Arriba Co. NM

GL: 6336' KB: 14'



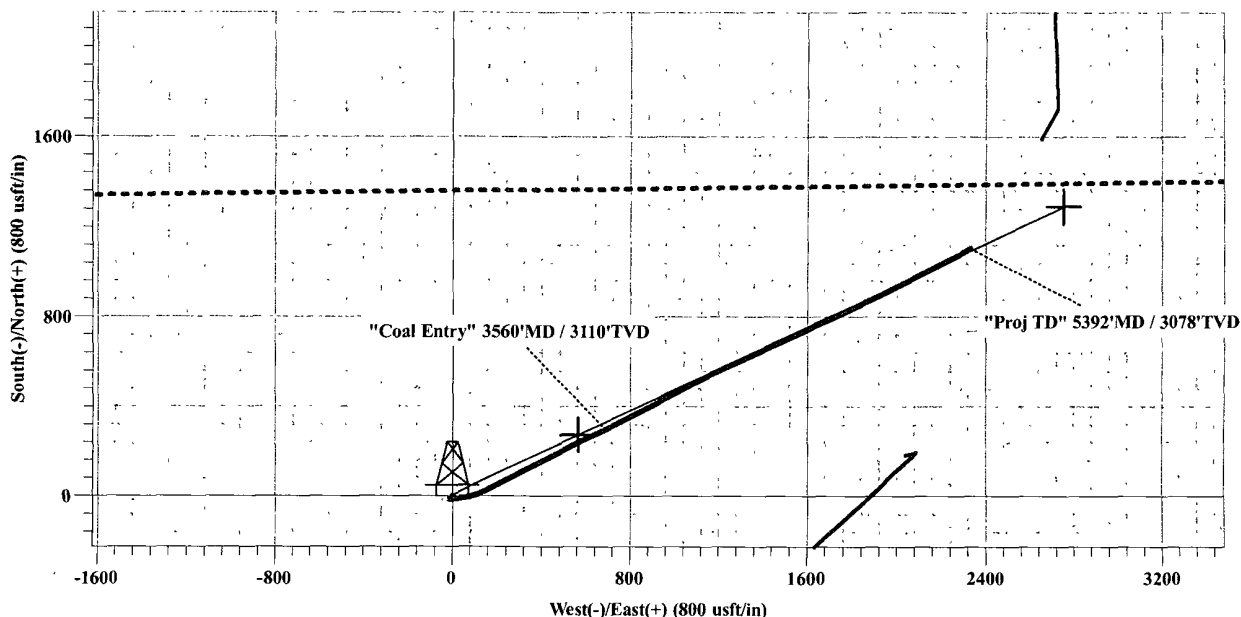
A Schlumberger Company

LEGEND

- △ Rosa Unit #226A STK, STK, STK V0
- ⊗ Rosa Unit #226A STK, Wellbore #1, Wellbore #1 V0
- ✕ Rosa Unit #149C, Wellbore #1, Wellbore #1 V0
- △ Rosa Unit #164C, Wellbore #1, Wellbore #1 V0
- Design #5

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

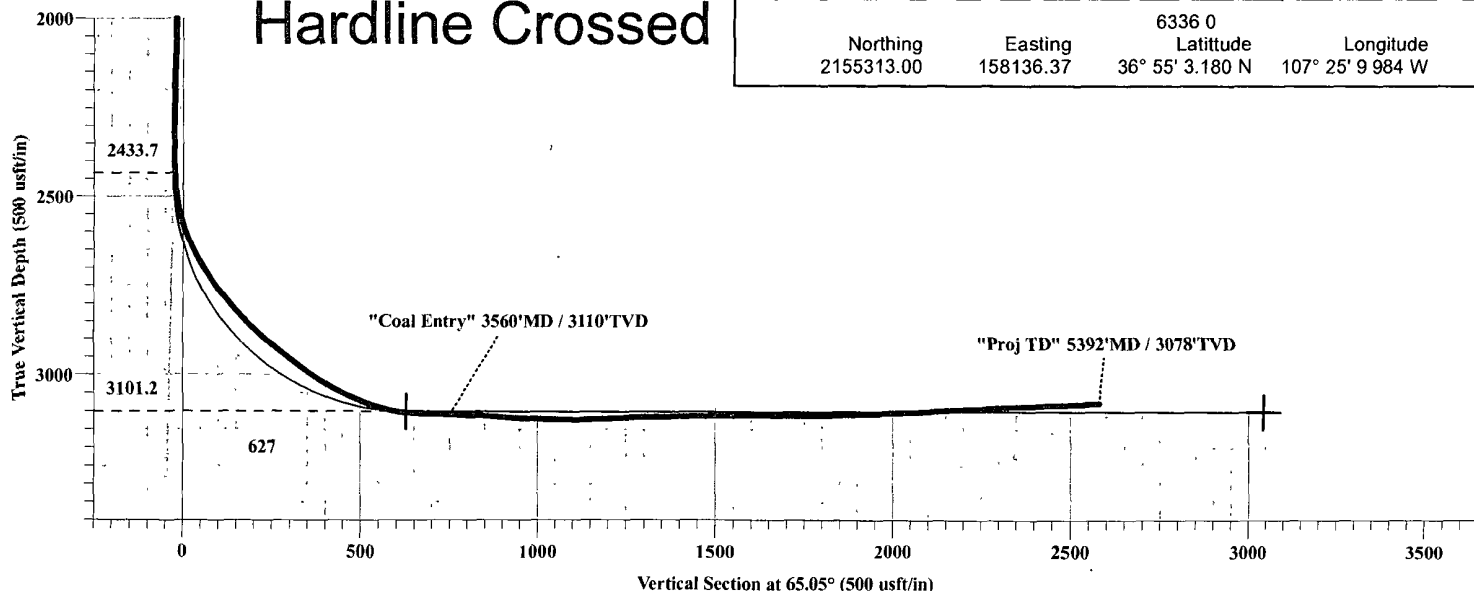
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
LAND-226	3101.0	273.8	564.4	2155579.86	158704.09	Point
TD-226	3101.0	1292.3	2754.5	2156571.45	160906.54	Point



No
Hardline Crossed

WELL DETAILS: Rosa Unit #226A STK

Northing	Easting	Latitude	Longitude
2155313.00	158136.37	36° 55' 3.180 N	107° 25' 9.984 W



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2434.0	1.58	278.87	2433.7	-10.7	-22.8	0.00	0.00	-25.2	
3474.1	90.00	65.06	3101.2	273.8	564.4	8.78	146.18	627.2	
5889.4	90.00	65.06	3101.0	1292.3	2754.5	0.00	0.00	3042.6	TD-226

Plan: Design #5 (Rosa Unit #226A STK/STK)

Created By: Frank C. Scardino

Date: 10/06/2011

Williams Energy

Rio Arriba Co. NM

Sec12 T31N-R6W - 226A

Rosa Unit #226A STK

STK

Design: STK

Standard Survey Report

17 October, 2011

Survey Report

Company:	Williams Energy	Local Co-ordinate Reference:	Site Sec12 T31N-R6W - 226A
Project:	Rio Arriba Co. NM	TVD Reference:	WELL @ 6350 0usft (Original Well Elev)
Site:	Sec12 T31N-R6W - 226A	MD Reference:	WELL @ 6350 0usft (Original Well Elev)
Well:	Rosa Unit #226A 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:	Sec12 T31N-R6W - 226A				
Site Position:	Northing:	2,155,313 00 usft	Latitude:	36° 55' 3 180 N	
From:	Lat/Long	Easting:	158,136 38 usft	Longitude:	107° 25' 9 984 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.70 °

Well:	Rosa Unit #226A STK					
Well Position	+N/-S	0 0 usft	Northing:	2,155,313 00 usft	Latitude:	36° 55' 3 180 N
	+E/-W	0 0 usft	Easting:	158,136 38 usft	Longitude:	107° 25' 9 984 W
Position Uncertainty	0 0 usft	Wellhead Elevation:	usft	Ground Level:	6,336 0 usft	

Wellbore	STK				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	10/04/11	(°)	(°)	(nT)
			9 73	63 67	50,853

Design	STK				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0 0	0 0	0 0	65 05	

Survey Program	Date	10/17/11		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
200 0	5,392 0	Survey #1 (STK)	MWD	MWD - Standard

Survey	Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
	Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
	(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	0 0	0 00	0 00	0 0	0 0	0 0	0 0	0 00	0 00	0 00
	200 0	0 65	243.73	200 0	-0.5	-1.0	-1.1	0.33	0.33	0 00
	400 0	1 02	203.34	400 0	-2.6	-2.7	-3.6	0.34	0.19	-20.20
	600 0	0 72	186.12	600 0	-5.5	-3.6	-5.6	0.20	-0.15	-8.61
	800 0	0 64	179.02	799.9	-7.9	-3.7	-6.7	0.06	-0.04	-3.55
	1,000.0	0 85	179.03	999.9	-10.5	-3.6	-7.7	0.11	-0.11	0.01
	1,200 0	0 63	224.55	1,199.9	-12.8	-4.4	-9.4	0.30	-0.11	22.76
	1,400 0	0 30	275.07	1,399.9	-13.5	-5.7	-10.8	0.25	-0.17	25.26
	1,600 0	0 49	293.96	1,599.9	-13.1	-7.0	-11.9	0.11	0.10	9.45
	1,800 0	0 98	248.90	1,799.9	-13.4	-9.4	-14.1	0.36	0.25	-22.53

Survey Report

Company: Williams Energy
 Project: Rio Arriba Co NM
 Site: Sec12 T31N-R6W - 226A
 Well: Rosa Unit #226A STK
 Wellbore: STK
 Design: STK

Local Co-ordinate Reference: Site Sec12 T31N-R6W - 226A
 TVD Reference: WELL @ 6350 0usft (Original Well Elev)
 MD Reference: WELL @ 6350 0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 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	1.13	281.25	1,999.8	-13.6	-12.9	-17.4	0.30	0.08	16.18
2,200.0	1.36	293.63	2,199.8	-12.3	-17.0	-20.6	0.18	0.12	6.19
2,400.0	1.59	280.12	2,399.7	-10.8	-21.9	-24.4	0.21	0.12	-6.76
2,501.0	10.02	89.55	2,500.3	-10.5	-14.5	-17.6	11.47	8.35	167.75
2,533.0	13.28	96.43	2,531.6	-10.9	-8.0	-11.9	11.06	10.19	21.50
2,565.0	17.59	93.18	2,562.5	-11.6	0.4	-4.5	13.73	13.47	-10.16
2,597.0	22.16	88.70	2,592.6	-11.7	11.3	5.3	15.04	14.28	-14.00
2,629.0	26.20	86.20	2,621.7	-11.1	24.4	17.4	13.02	12.63	-7.81
2,661.0	28.75	84.99	2,650.1	-10.0	39.1	31.3	8.16	7.97	-3.78
2,694.0	30.51	81.53	2,678.8	-8.0	55.3	46.8	7.44	5.33	-10.48
2,725.0	32.54	77.17	2,705.2	-5.0	71.2	62.5	9.84	6.55	-14.06
2,757.0	35.09	74.22	2,731.8	-0.6	88.5	80.0	9.48	7.97	-9.22
2,789.0	36.76	70.69	2,757.7	5.1	106.4	98.6	8.31	5.22	-11.03
2,821.0	38.51	67.90	2,783.1	12.0	124.6	118.1	7.63	5.47	-8.72
2,853.0	40.63	64.37	2,807.8	20.2	143.3	138.4	9.66	6.63	-11.03
2,885.0	42.82	62.06	2,831.6	29.8	162.3	159.7	8.36	6.84	-7.22
2,917.0	45.37	61.25	2,854.6	40.4	181.9	181.9	8.16	7.97	-2.53
2,948.0	47.40	61.72	2,876.0	51.1	201.6	204.3	6.64	6.55	1.52
2,979.0	49.24	62.38	2,896.6	62.0	222.0	227.5	6.14	5.94	2.13
3,011.0	50.47	62.04	2,917.2	73.4	243.7	251.9	3.93	3.84	-1.06
3,043.0	51.88	62.21	2,937.3	85.0	265.7	276.8	4.43	4.41	0.53
3,075.0	52.67	62.27	2,956.9	96.8	288.1	302.1	2.47	2.47	0.19
3,107.0	54.08	61.93	2,976.0	108.8	310.8	327.7	4.49	4.41	-1.06
3,139.0	56.01	61.82	2,994.3	121.2	333.9	353.9	6.04	6.03	-0.34
3,171.0	58.21	61.96	3,011.7	133.9	357.6	380.7	6.88	6.88	0.44
3,203.0	59.88	62.24	3,028.1	146.7	381.9	408.1	5.27	5.22	0.88
3,235.0	62.26	63.24	3,043.6	159.5	406.8	436.1	7.92	7.44	3.13
3,266.0	66.39	63.67	3,057.1	172.0	431.8	464.0	13.38	13.32	1.39
3,298.0	68.59	64.42	3,069.3	184.9	458.3	493.6	7.21	6.88	2.34
3,330.0	70.61	63.69	3,080.5	198.1	485.3	523.6	6.66	6.31	-2.28
3,363.0	73.42	62.70	3,090.6	212.2	513.3	554.9	8.98	8.52	-3.00
3,395.0	78.26	63.14	3,098.5	226.3	540.9	585.9	15.18	15.13	1.38
3,427.0	83.01	63.59	3,103.7	240.5	569.2	617.5	14.91	14.84	1.41
3,487.0	89.08	65.03	3,107.8	266.4	623.1	677.3	10.40	10.12	2.40
3,551.0	87.49	64.17	3,109.7	293.9	680.9	741.3	2.82	-2.48	-1.34
3,560.0	87.74	63.98	3,110.1	297.8	688.9	750.3	3.46	2.75	-2.10
"Coal Entry" 3560'MD / 3110'TVD									
3,615.0	89.25	62.83	3,111.5	322.4	738.1	805.2	3.46	2.75	-2.09
3,679.0	86.17	62.79	3,114.1	351.6	795.0	869.1	4.81	-4.81	-0.06
3,742.0	86.61	62.40	3,118.1	380.6	850.8	931.9	0.93	0.70	-0.62
3,806.0	87.85	61.77	3,121.2	410.5	907.3	995.8	2.17	1.94	-0.98
3,870.0	89.08	62.07	3,122.9	440.6	963.7	1,059.6	1.98	1.92	0.47
3,934.0	90.48	63.14	3,123.1	470.0	1,020.6	1,123.6	2.75	2.19	1.67
3,998.0	92.77	63.03	3,121.3	499.0	1,077.6	1,187.5	3.58	3.58	-0.17

Survey Report

Company:	Williams Energy	Local Co-ordinate Reference:	Site Sec12 T31N-R6W - 226A
Project:	Rio Arriba Co NM	TVD Reference:	WELL @ 6350.0usft (Original Well Elev)
Site:	Sec12 T31N-R6W - 226A	MD Reference:	WELL @ 6350.0usft (Original Well Elev)
Well:	Rosa Unit #226A 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)
4,062.0	92.68	63.70	3,118.3	527.7	1,134.7	1,251.4	1.06	-0.14	1.05
4,126.0	91.63	64.93	3,115.9	555.4	1,192.4	1,315.4	2.53	-1.64	1.92
4,190.0	90.84	65.89	3,114.5	582.0	1,250.6	1,379.4	1.94	-1.23	1.50
4,254.0	91.36	64.89	3,113.3	608.7	1,308.7	1,443.3	1.76	0.81	-1.56
4,318.0	90.75	65.86	3,112.1	635.3	1,366.9	1,507.3	1.79	-0.95	1.52
4,381.0	91.10	65.81	3,111.1	661.1	1,424.4	1,570.3	0.56	0.56	-0.08
4,445.0	88.37	65.26	3,111.4	687.6	1,482.6	1,634.3	4.35	-4.27	-0.86
4,509.0	89.43	64.79	3,112.6	714.6	1,540.6	1,698.3	1.81	1.66	-0.73
4,573.0	90.57	64.30	3,112.6	742.1	1,598.4	1,762.3	1.94	1.78	-0.77
4,635.0	90.75	65.20	3,111.9	768.6	1,654.5	1,824.3	1.48	0.29	1.45
4,699.0	92.15	65.94	3,110.2	795.0	1,712.7	1,888.3	2.47	2.19	1.16
4,763.0	92.24	64.43	3,107.8	821.9	1,770.8	1,952.2	2.36	0.14	-2.36
4,826.0	92.51	63.71	3,105.2	849.4	1,827.4	2,015.1	1.22	0.43	-1.14
4,890.0	92.59	63.41	3,102.3	877.9	1,884.6	2,079.1	0.48	0.13	-0.47
4,953.0	92.86	63.93	3,099.3	905.8	1,941.0	2,142.0	0.93	0.43	0.83
5,017.0	93.03	64.10	3,096.1	933.8	1,998.5	2,205.9	0.38	0.27	0.27
5,081.0	92.77	63.27	3,092.8	962.1	2,055.8	2,269.8	1.36	-0.41	-1.30
5,146.0	93.21	62.74	3,089.4	991.6	2,113.6	2,334.6	1.06	0.68	-0.82
5,209.0	92.68	62.81	3,086.2	1,020.4	2,169.6	2,397.5	0.85	-0.84	0.11
5,272.0	92.15	62.75	3,083.5	1,049.2	2,225.5	2,460.4	0.85	-0.84	-0.10
5,334.0	92.59	61.86	3,081.0	1,077.9	2,280.4	2,522.3	1.60	0.71	-1.44
5,392.0	92.59	61.86	3,078.4	1,105.3	2,331.5	2,580.1	0.00	0.00	0.00

"Proj TD" 5392'MD / 3078'TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
3,560.0	3,110.1	297.8 688.9	"Coal Entry" 3560'MD / 3110'TVD
5,392.0	3,078.4	1,105.3 2,331.5	"Proj TD" 5392'MD / 3078'TVD

Checked By _____ Approved By: _____ Date: _____