

District I
1625 N. French Dr., Hobbs, NM
88240
District II
1301 W. Grand Avenue, Artesia,
NM 88210
District III
1000 Rio Brazos Road, Aztec,
NM 87410
District IV
1220 S. St. Francis Dr., Santa
Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
June 16, 2008

Submit to appropriate
District Office

☒ AMENDED REPORT

RCVD AUG 12 '11
OIL CONS. DIV.

DIST. 3

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR
ADD A ZONE

1 Operator Name and Address Williams Production Company, LLC. P.O. Box 640 Phone: 505-634-4208 Aztec, New Mexico 87410						2 OGRID Number 120782					
3 Property Code 17033			5 Property Name Rosa Unit				3 API Number 30 - 039 29509			6 Well No. 243A	
9 Proposed Pool 1 Basin Fruitland Coal						10 Proposed Pool 2					
7 Surface Location											
UL or lot C	Sect 36	Town 32N	Range 6W	Lot Idn	Feet 1031	Line NORTH	Feet from the 1921	Line WEST	County RIO ARRIBA		
8 Proposed Bottom Hole Location If Different From Surface											
UL or lot N	Sect 36	Town s 32N	Range 6W	Lot Idn	Feet 1250	Line SOUTH	Feet from the 2161	Line WEST	County RIO ARRIBA		
Additional Well Information											
11 Work Type Code E		12 Well Type Code G		13 Cable/Rotary R		14 Lease Type Code S		15 Ground Level Elevation 6651			
16 Multiple NO		17 Proposed Depth 6222'		18 Formation BASIN FRUITLAND		19 Contractor AWS		20 Spud Date 08021011			

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.5	9.675	36#	314'	EXISTING	
8.750	7	20#	3313'	EXISTING	
9.5	5.5	15.5	3218' - 3500'	EXISTING	
6.250	4.5	11.6	2960' - 6222'	NONE	SIDETRACK OH

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Williams plans to re enter this existing wellbore and convert this well from a horizontal cavitation to a horizontal completion as per attached plat, operation plan and directional plan
* HOLD C-104 for NSL order and approval from SF

NOTE: Williams would like to update the existing SHL records for this well. Due to resurveyed data and advancements in technology the SHL from the existing C-102 is inconsistent with the attached. It is our belief that the more accurate C-102 is the most recent of the two and would like provide the attached for record.

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name:
Larry Higgins

Title:
Permit Supervisor

E-mail Address:
Larry.higgins@williams.com

OIL CONSERVATION DIVISION

Approved by:

Title:

SUPERVISOR DISTRICT #3

Approval Date:

AUG 22 2011

Expiration Date:

AUG 22 2012

AUG 22 2011 A

Date: Aug 11, 2011	Phone: 505 634 4208	Conditions of Approval Attached ☐
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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

*API Number 30-039-29509	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 243A
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6651'

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
C	36	32N	6W		1031	NORTH	1921	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
N	36	32N	6W		1250	SOUTH	2161	WEST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (W/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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

16 5415.96' 1031' 1428' 1921' 506°20.1'E 400.0' 1953' 5353.92' 506°20.1'E 2650.1' 2161' 1250' 2647.26' 2634.06' 2651.88' 2642.64' LEASE STATE E-346 36	SURFACE LOCATION LAT: 36.94131°N LONG: 107.41088°W DATUM: NAD1927 LAT: 36.94132°N LONG: 107.41148°W DATUM: NAD1983 POINT OF ENTRY LAT: 36.94022°N LONG: 107.41073°W DATUM: NAD1927 LAT: 36.94023°N LONG: 107.41133°W DATUM: NAD1983 END OF LATERAL LAT: 36.93298°N LONG: 107.40977°W DATUM: NAD1927 LAT: 36.93299°N LONG: 107.41037°W DATUM: NAD1983	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. <i>Larry Higgins</i> 8-10-11 Signature Date <i>LARRY HIGGINS</i> 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 4, 2011 Survey Date: OCTOBER 18, 2004 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269
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WILLIAMS PRODUCTION COMPANY

Operations Plan

(Note: This procedure will be adjusted on site based upon actual conditions)

DATE: 8/10/2011

WELLNAME: Rosa Unit #243A **FIELD:** Basin Fruitland Coal

BH LOCATION: SESW Sec. 36-T32N-6W **SURFACE:** STATE
Rio Arriba, NM

ELEVATION: 6,651' GR **MINERALS:** STATE

TOTAL DEPTH: 6,222' **LEASE #** State E-346

API#: 30-039-29509

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

NAME		TVD	MD
Kirtland		2,784	2,784
Fruitland		3,228	3,259
Top Target Coal		3,338	3,575
Bottom Target Coal		3,363	
Picture Cliffs		3,426	
TD		3,338	6,222

B. LOGGING PROGRAM: None

C. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

D. MUD LOGGING PRORAM: Mud logger will be on location from mill out to TD.

II. PREPARATORY WORK

- A. MIRU w/ workover rig
- B. POOH/LD rods and pump
- C. POOH/LD production tbg
- D. Set retrievable bridge plug at 2,950' inside 7" casing
- E. Pressure test 7" csg and bridge plug to 1,500 psi for 30 minutes
- F. RDMO

III. DRILLING

- A. MUD PROGRAM:** LSND mud during mill out and while drilling curve. Treat for lost circulation as necessary. Notify Engineering of any mud losses.

B. DRILLING FLUID: Horizontal section will be drilled with produced water.

C. BOP TESTING: While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

IV. MATERIALS

A. CASING PROGRAM (as is):

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	314'	9-5/8"	36# K-55
Intermediate	8-3/4"	3,313'	7"	20# J-55
Prod. Liner	6-1/4"	3,218' - 3,500'	5-1/2"	17# N-80

B. CASING PROGRAM (after sidetrack):

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	314'	9-5/8"	36# K-55
Intermediate	8-3/4"	3,313'	7"	20# J-55
Prod. Liner (Motherbore)	6-1/4"	3,218' - 3,500'	5-1/2"	17# N-80
Prod. Liner (sidetrack)	6-1/4"	~2,960' - 6,222'	4-1/2"	11.6# K-55

- Sidetrack production liner is pre-perforated and will be dropped off with top of liner in open hole 5-10' outside of window.

C. FLOAT EQUIPMENT:

- PRODUCTION LINER (sidetrack): No centralization

D. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

- PRODUCTION LINER (sidetrack): Open hole completion. No cement.

V. COMPLETION

A. STIMULATION

- No stimulation

B. RUNNING TUBING

- Fruitland Coal: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing at approximately 3,461' MD inside of motherbore.


 Larry Higgins
 Permit Supervisor



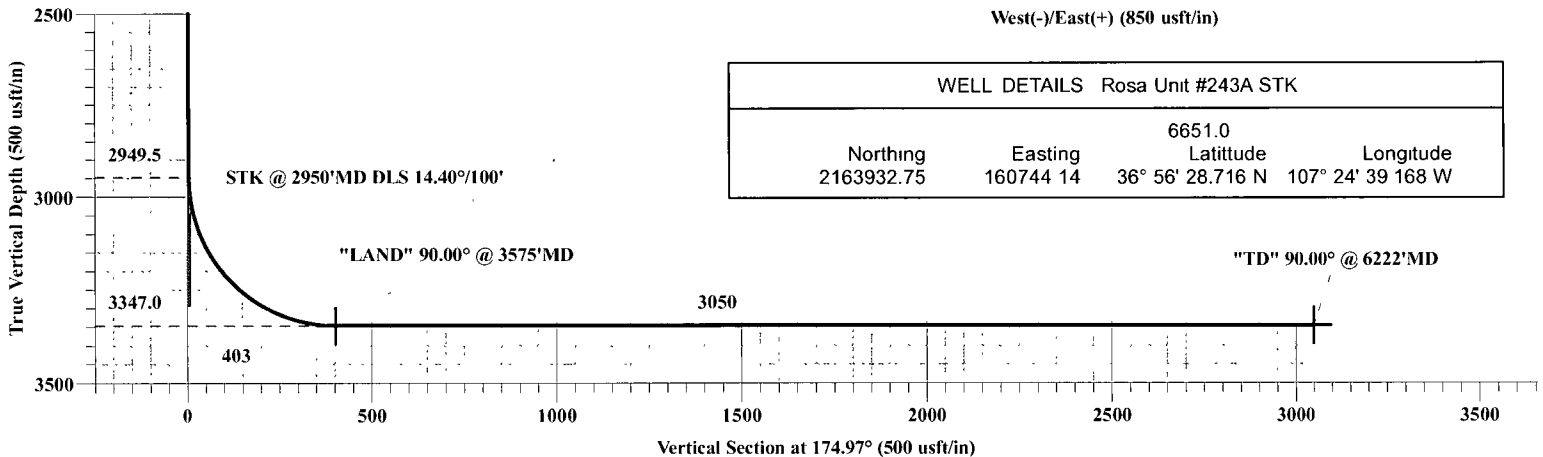
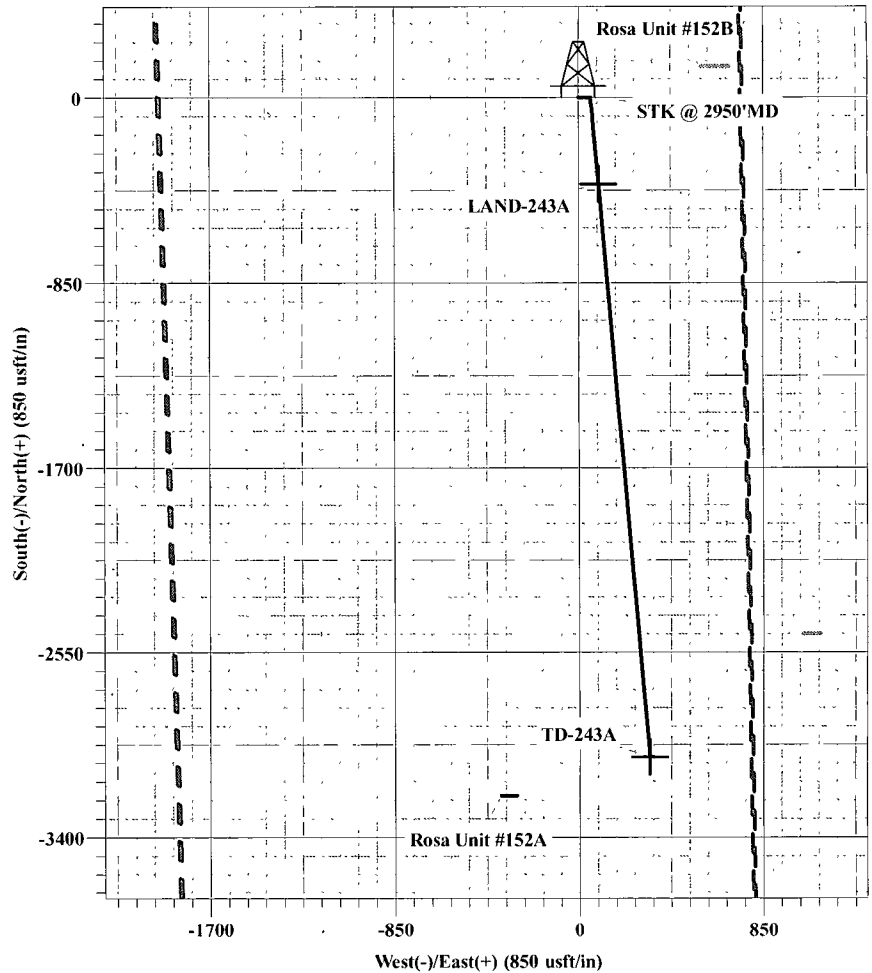
Williams Energy

Rosa Unit #243A STK
Sec36 T32N-R6W - #243A
Rio Arriba Co. NM
GL: 6651' KB: 14'

PATHFINDER®
A Schlumberger Company

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
LAND-243A	3347 0	-396 0	92 4	2163535 65	160831 71	Point
TD-243A	3347 0	-3032 9	324 5	2160896 09	161031 65	Point



WELL DETAILS Rosa Unit #243A STK

Northing	Easting	Latitude	Longitude
2163932.75	160744 14	36° 56' 28.716 N	107° 24' 39 168 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2950 0	0 57	90 00	2949 5	0 0	53 6	0 00	0 00	4 7	
3574 7	90 00	174 97	3347 0	-396 0	92 4	14 40	84 97	402 6	
6221 8	90 00	174 97	3347 0	-3032 9	324 5	0 00	0 00	3049 7	TD-243A

Plan: Design #1 (Rosa Unit #243A STK/STK)

Created By: Frank C. Scardino

Date: 8/10/2011

Planning Report

Database:	EDM 5000 1: Single User Db	Local Co-ordinate Reference:	Site Sec36 T32N-R6W - #243A
Company:	Williams Energy	TVD Reference:	WELL @ 6665 0usft (Original Well Elev)
Project:	Rio Arriba Co. NM	MD Reference:	WELL @ 6665 0usft (Original Well Elev)
Site:	Sec36 T32N-R6W - #243A	North Reference:	True
Well:	Rosa Unit #243A STK	Survey Calculation Method:	Minimum Curvature
Wellbore:	STK		
Design:	Design #1		

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	Sec36 T32N-R6W - #243A		
Site Position:		Northing:	2,163,932 75 usft
From:	Lat/Long	Easting:	160,744 15 usft
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 56' 28 716 N
		Longitude:	107° 24' 39 168 W
		Grid Convergence:	-0 70 °

Well	Rosa Unit #243A STK		
Well Position	+N/-S	0 0 usft	Northing:
	+E/-W	0 0 usft	Easting:
Position Uncertainty	0 0 usft	Wellhead Elevation:	2,163,932 75 usft
		Ground Level:	6,651 0 usft
		Latitude:	36° 56' 28 716 N
		Longitude:	107° 24' 39 168 W

Wellbore	STK		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	08/10/11	9 75
			Dip Angle
			63 70
			Field Strength
			50,880

Design	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			2,950 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0 0	0 0	0 0
			Direction
			174 97

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
2,950 0	0 57	90 00	2,949 5	0 0	53 6	0 00	0 00	0 00	0 00	
3,574 7	90 00	174 97	3,347 0	-396 0	92 4	14 40	14 32	13 60	84 97	
6,221 8	90 00	174 97	3,347 0	-3,032 9	324 5	0 00	0 00	0 00	0 00	TD-243A

Planning Report

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Company:	Williams Energy	TVD Reference:	WELL @ 6665 0usft (Original Well Elev)
Project:	Rio Arriba Co NM	MD Reference:	WELL @ 6665 0usft (Original Well Elev)
Site:	Sec36 T32N-R6W - #243A	North Reference:	True
Well:	Rosa Unit #243A STK	Survey Calculation Method:	Minimum Curvature
Wellbore:	STK		
Design:	Design #1		

Planned 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)	
2,950 0	0 57	90 00	2,949 5	0 0	53 6	4 7	0 11	-0 11	0 00	
STK @ 2950 MD DLS 14.40°/100'										
2,975 0	3 69	166 17	2,974 5	-0 8	53 9	5 5	14 40	12 50	304 70	
3,000 0	7 27	170 53	2,999 3	-3 1	54 3	7 9	14 40	14 31	17 44	
3,025 0	10 86	172 02	3,024 0	-7 0	54 9	11 8	14 40	14 37	5 95	
3,050 0	14 46	172 78	3,048 4	-12 5	55 6	17 3	14 40	14 39	3 02	
3,075 0	18 06	173 23	3,072 4	-19 4	56 5	24 3	14 40	14 39	1 83	
3,100 0	21 66	173 55	3,095 9	-27 8	57 5	32 8	14 40	14 39	1 24	
3,125 0	25 26	173 77	3,118 8	-37 7	58 6	42 7	14 40	14 40	0 90	
3,150 0	28 85	173 94	3,141 1	-49 0	59 8	54 1	14 40	14 40	0 69	
3,175 0	32 45	174 08	3,162 6	-61 7	61 1	66 8	14 40	14 40	0 55	
3,200 0	36 05	174 19	3,183 3	-75 7	62 5	80 9	14 40	14 40	0 45	
3,225 0	39 65	174 29	3,203 0	-91 0	64 1	96 2	14 40	14 40	0 38	
3,250 0	43 25	174 37	3,221 7	-107 4	65 7	112 8	14 40	14 40	0 32	
3,275 0	46 85	174 44	3,239 4	-125 0	67 4	130 5	14 40	14 40	0 28	
3,300 0	50 45	174 50	3,255 9	-143 7	69 3	149 2	14 40	14 40	0 25	
3,325 0	54 05	174 56	3,271 2	-163 4	71 1	169 0	14 40	14 40	0 23	
3,350 0	57 65	174 61	3,285 2	-184 0	73 1	189 7	14 40	14 40	0 21	
3,375 0	61 25	174 66	3,297 9	-205 4	75 1	211 2	14 40	14 40	0 19	
3,400 0	64 85	174 70	3,309 3	-227 6	77 2	233 5	14 40	14 40	0 18	
3,425 0	68 45	174 75	3,319 2	-250 4	79 3	256 4	14 40	14 40	0 17	
3,450 0	72 05	174 79	3,327 6	-273 9	81 4	280 0	14 40	14 40	0 16	
3,475 0	75 65	174 83	3,334 6	-297 8	83 6	304 0	14 40	14 40	0 15	
3,500 0	79 25	174 86	3,340 0	-322 1	85 8	328 4	14 40	14 40	0 15	
3,525 0	82 85	174 90	3,343 9	-346 7	88 0	353 1	14 40	14 40	0 15	
3,550 0	86 45	174 93	3,346 2	-371 5	90 2	377 9	14 40	14 40	0 14	
3,574 7	90 00	174 97	3,347 0	-396 0	92 4	402 6	14 40	14 40	0 14	
"LAND" 90.00° @ 3575 MD										
3,600 0	90 00	174 97	3,347 0	-421 3	94 6	427 9	0 00	0 00	0 00	
3,700 0	90 00	174 97	3,347 0	-520 9	103 4	527 9	0 00	0 00	0 00	
3,800 0	90 00	174 97	3,347 0	-620 5	112 1	627 9	0 00	0 00	0 00	
3,900 0	90 00	174 97	3,347 0	-720 1	120 9	727 9	0 00	0 00	0 00	
4,000 0	90 00	174 97	3,347 0	-819 7	129 7	827 9	0 00	0 00	0 00	
4,100 0	90 00	174 97	3,347 0	-919 3	138 4	927 9	0 00	0 00	0 00	
4,200 0	90 00	174 97	3,347 0	-1,018 9	147 2	1,027 9	0 00	0 00	0 00	
4,300 0	90 00	174 97	3,347 0	-1,118 6	156 0	1,127 9	0 00	0 00	0 00	
4,400 0	90 00	174 97	3,347 0	-1,218 2	164 7	1,227 9	0 00	0 00	0 00	
4,500 0	90 00	174 97	3,347 0	-1,317 8	173 5	1,327 9	0 00	0 00	0 00	
4,600 0	90 00	174 97	3,347 0	-1,417 4	182 3	1,427 9	0 00	0 00	0 00	
4,700 0	90 00	174 97	3,347 0	-1,517 0	191 0	1,527 9	0 00	0 00	0 00	
4,800 0	90 00	174 97	3,347 0	-1,616 6	199 8	1,627 9	0 00	0 00	0 00	
4,900 0	90 00	174 97	3,347 0	-1,716 3	208 6	1,727 9	0 00	0 00	0 00	
5,000 0	90 00	174 97	3,347 0	-1,815 9	217 3	1,827 9	0 00	0 00	0 00	
5,100 0	90 00	174 97	3,347 0	-1,915 5	226 1	1,927 9	0 00	0 00	0 00	
5,200 0	90 00	174 97	3,347 0	-2,015 1	234 9	2,027 9	0 00	0 00	0 00	
5,300 0	90 00	174 97	3,347 0	-2,114 7	243 6	2,127 9	0 00	0 00	0 00	
5,400 0	90 00	174 97	3,347 0	-2,214 3	252 4	2,227 9	0 00	0 00	0 00	
5,500 0	90 00	174 97	3,347 0	-2,313 9	261 2	2,327 9	0 00	0 00	0 00	
5,600 0	90 00	174 97	3,347 0	-2,413 6	269 9	2,427 9	0 00	0 00	0 00	
5,700 0	90 00	174 97	3,347 0	-2,513 2	278 7	2,527 9	0 00	0 00	0 00	
5,800 0	90 00	174 97	3,347 0	-2,612 8	287 5	2,627 9	0 00	0 00	0 00	
5,900 0	90 00	174 97	3,347 0	-2,712 4	296 3	2,727 9	0 00	0 00	0 00	
6,000 0	90 00	174 97	3,347 0	-2,812 0	305 0	2,827 9	0 00	0 00	0 00	
6,100 0	90 00	174 97	3,347 0	-2,911 6	313 8	2,927 9	0 00	0 00	0 00	

Planning Report

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Sec36 T32N-R6W - #243A
Company:	Williams Energy	TVD Reference:	WELL @ 6665'0usft (Original Well Elev)
Project:	Rio Arriba Co- NM	MD Reference:	WELL @ 6665'0usft (Original Well Elev)
Site:	Sec36 T32N-R6W - #243A	North Reference:	True
Well:	Rosa Unit #243A STK	Survey Calculation Method:	Minimum Curvature
Wellbore:	STK		
Design:	Design #1		

Planned 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)
6,200 0	90 00	174 97	3,347 0	-3,011 2	322 6	3,027 9	0 00	0 00	0 00
6,221 8	90 00	174 97	3,347 0	-3,032 9	324 5	3,049 7	0 00	0 00	0 00
"TD" 90.00° @ 6222' MD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LAND-243A - plan hits target center - Point	0 00	0 00	3,347 0	-396 0	92 4	2,163,535 65	160,831 72	36° 56' 24 801 N	107° 24' 38 030 W
TD-243A - plan hits target center - Point	0 00	0 00	3,347 0	-3,032 9	324 5	2,160,896 09	161,031 65	36° 55' 58 728 N	107° 24' 35 172 W

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,950 0	2,949 5	0 0	53 6	STK @ 2950' MD DLS 14 40°/100'
3,574 7	3,347 0	-396 0	92 4	"LAND" 90 00° @ 3575' MD
6,221 8	3,347 0	-3,032 9	324 5	"TD" 90 00° @ 6222' MD