

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

Hold C104
for Directional Survey
and "As Drilled" plat

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				6 Well No. 339A	
9 Proposed Pool 1 Basin Fruitland Coal						10 Proposed Pool 2					
7 Surface Location											
UL or lot I	Sect 32	Town s 32N	Range 6W	Lot Idn	Feet 1353	Line SOUTH	Feet from the 1045	Line EAST	County SAN JUAN		
8 Proposed Bottom Hole Location If Different From Surface											
UL or lot B	Sect 32	Town s 32N	Range 6W	Lot Idn	Feet 1300	Line NORTH	Feet from the 2525	Line EAST	County SAN JUAN		
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 Elev 6373			
16 Multiple NO		17 Proposed Depth 5874'		18 Formation BASIN FRUITLAND		19 Contractor AWS		20 Spud Date 07012011			

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#	317'	EXISTING	
8.750	7	20#	2978'	EXISTING	
9.5	5.5	17.00	2839' -3109'	EXISTING	
6.250	4.5	11.6	2676' -5874'	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. Williams will file for simultaneous dedication.

A COMPLETE C-144 MUST BE SUBMITTED TO AND
APPROVED BY THE NMCD FOR: A PIT, CLOSED
LOOP SYSTEM, BELOW GRADE TANK, OR
PROPOSED ALTERNATIVE METHOD, PURSUANT
TO NMCD PART 19.15.17, PRIOR TO THE USE OR
CONSTRUCTION OF THE ABOVE APPLICATIONS.

Hold C104

for Directional Survey
and "As Drilled" plat

RCVD JUN 29 '11
OIL CONS. DIV.

DIST. 3

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:

JUL 01 2011

Expiration Date:

JUL 01 2012

PRIOR TO CASING & CEMENT

Date: June 28, 2011	Phone: 505 634 4208	Conditions of Approval Attached ☐
------------------------	------------------------	--

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised October 12, 2005

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

Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-31762	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 339A
*OGRID No 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6373'

¹⁰ Surface Location

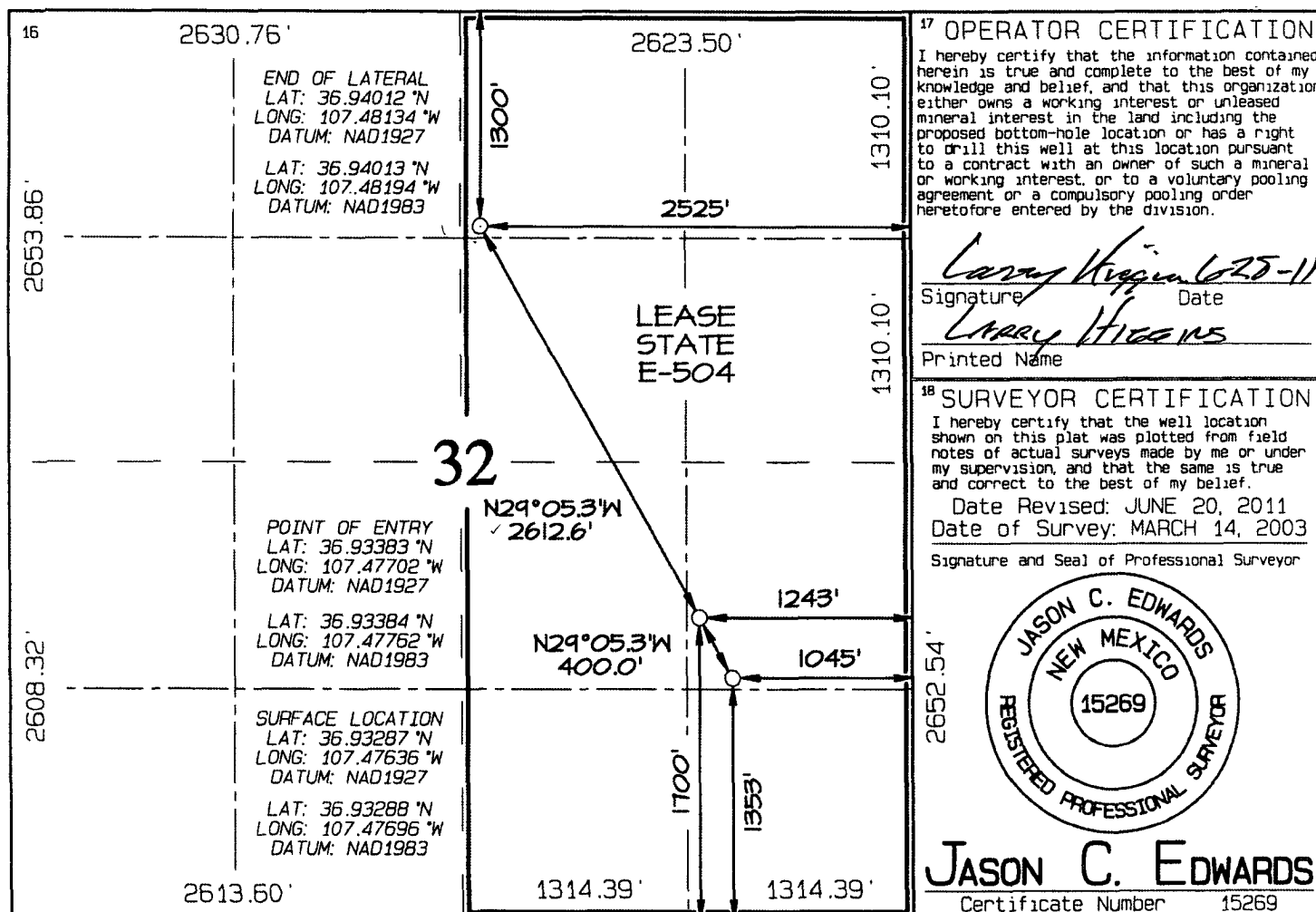
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	32	32N	6W		1353	SOUTH	1045	EAST	SAN JUAN

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	32	32N	6W		1300	NORTH	2525	EAST	SAN JUAN

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

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





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 6/27/2011

WELLNAME: Rosa Unit #339A **FIELD:** Basin Fruitland Coal

BH LOCATION: NWNE Sec. 32-T32N-6W **SURFACE:** State
San Juan, NM

ELEVATION: 6,373' GR **MINERALS:** State

TOTAL DEPTH: 5,874' **LEASE #** State E-504

API#: 30-045-31762

I. **GEOLOGY:** Surface formation - San Jose

A. **FORMATION TOPS:** (KB)

NAME		TVD	MD
Kirtland		2,415	2,415
Fruitland		2,989	3,059
Top Target Coal		3,045	3,260
Bottom Target Coal		3,061	
Picture Cliffs		3,120	
TD		3,041	5,874

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 2,666' 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"	317'	9-5/8"	36# K-55
Intermediate	8-3/4"	2,978'	7"	20# K-55
Prod. Liner	6-1/4"	2,839' - 3,109'	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"	317'	9-5/8"	36# K-55
Intermediate	8-3/4"	2,978'	7"	20# K-55
Prod. Liner (motherbore)	9-1/2"	2,839' - 3,109'	5-1/2"	17# N-80
Prod. Liner (sidetrack)	6-1/4"	~2,676' - 5,874'	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 3,100' MD inside of motherbore.

Brian Alleman
Drilling Engineer II



Williams Energy

Rosa Unit #339A-ST01
Sec32 T32N-R6W - 339A

San Juan Co. NM

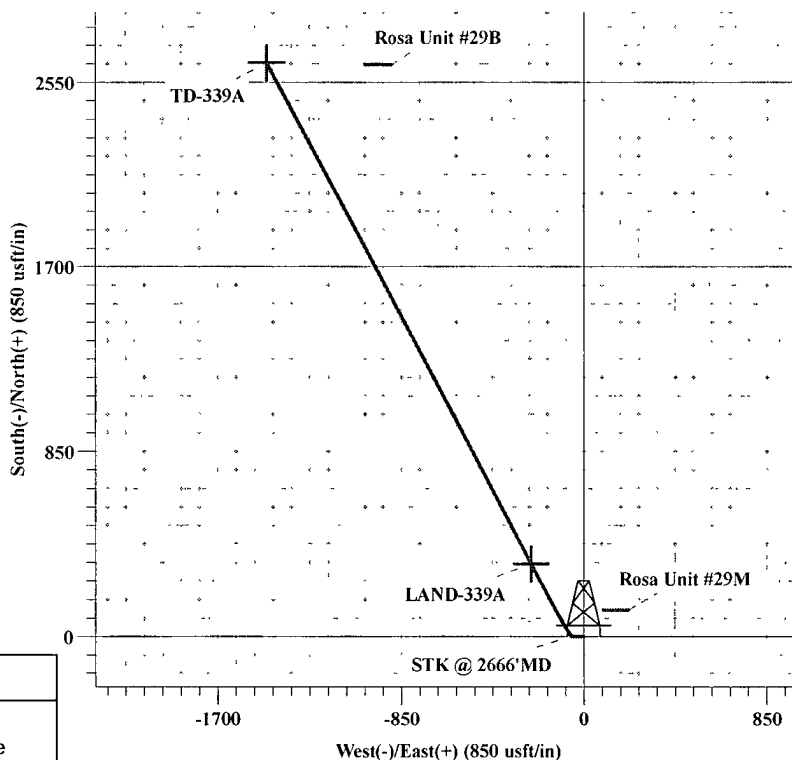
GL: 6368' KB: 14'



A Schlumberger Company

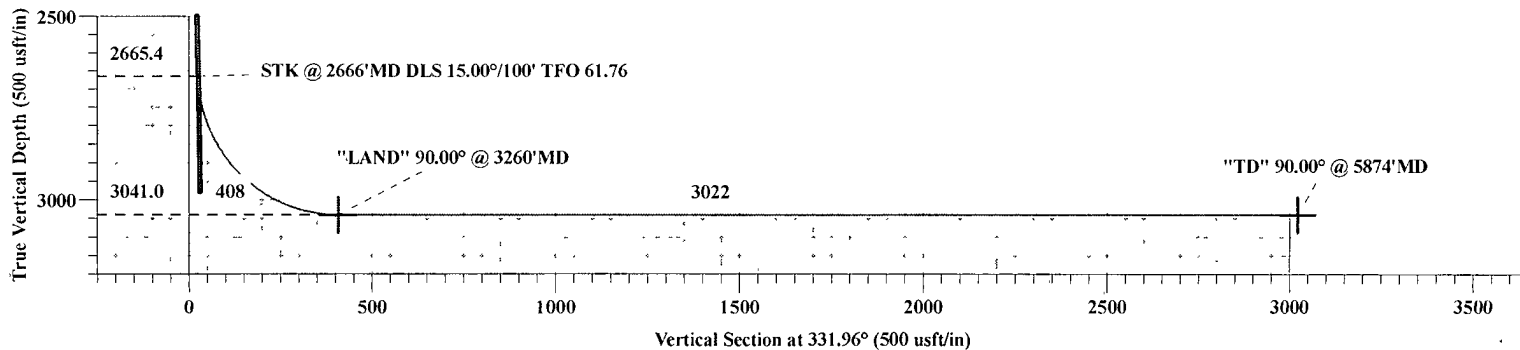
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
LAND-339A	3041.0	332.0	-244.4	2159358.64	604087.76	Point
TD-339A	3041.0	2639.5	-1473.2	2161661.51	602850.31	Point



WELL DETAILS: Rosa Unit #339A-ST01

		6368.0	
Northing	Easting	Latitude	Longitude
2159027.56	604333.40	36° 55' 58.350 N	107° 28' 34.896 W



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2666.0	1.97	270.21	2665.4	0.2	-54.9	0.00	0.00	26.0	
3259.8	90.00	331.96	3041.0	332.0	-244.4	15.00	61.76	407.9	
5874.1	90.00	331.96	3041.0	2639.5	-1473.2	0.00	0.00	3022.2	TD-339A

Plan: Design #1 (Rosa Unit #339A-ST01/ST01)

Created By: Frank C. Scardino

Date: 6/17/2011

Planning Report

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Sec32.T32N-R6W - 339A
Company:	Williams Energy	TVD Reference:	WELL @ 6382 0usft (Original Well Elev)
Project:	San Juan Co NM	MD Reference:	WELL @ 6382 0usft (Original Well Elev)
Site:	Sec32 T32N-R6W - 339A	North Reference:	True
Well:	Rosa Unit #339A-ST01	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	Design #1		

Project	San Juan 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 West 3003		

Site	Sec32 T32N-R6W - 339A		
Site Position:		Northing:	2,159,027.56 usft
From:	Lat/Long	Easting:	604,333.40 usft
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 55' 58.350 N
		Longitude:	107° 28' 34.896 W
		Grid Convergence:	0 21 °

Well	Rosa Unit #339A-ST01					
Well Position	+N/-S	0 0 usft	Northing:	2,159,027.56 usft	Latitude:	36° 55' 58.350 N
	+E/-W	0 0 usft	Easting:	604,333.40 usft	Longitude:	107° 28' 34.896 W
Position Uncertainty		0 0 usft	Wellhead Elevation:		Ground Level:	6,368 0 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	06/16/11	9 80	63 68	50,883

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE		Tie On Depth: 2,666 0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0 0	0 0	0 0	331 96

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
2,666 0	1 97	270 21	2,665 4	0 2	-54 9	0 00	0 00	0 00	0 00	
3,259 8	90 00	331 96	3,041 0	332 0	-244 4	15 00	14 83	10 40	61 76	
5,874.1	90 00	331 96	3,041 0	2,639 5	-1,473 2	0 00	0 00	0 00	0 00	TD-339A

Planning Report

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Sec32 T32N-R6W - 339A
Company:	Williams Energy	TVD Reference:	WELL @ 6382 0usft (Original Well Elev)
Project:	San Juan Co NM	MD Reference:	WELL @ 6382 0usft (Original Well Elev)
Site:	Sec32 T32N-R6W - 339A	North Reference:	True
Well:	Rosa Unit #339A-ST01	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
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)
2,666 0	1 97	270 21	2,665 4	0 2	-54 9	26 0	0 05	0 05	0 00
STK @ 2666' MD DLS 15.00°/100' TFO 61.76									
2,675 0	2 86	294 75	2,674 4	0 3	-55.2	26 2	15 00	9 97	272 66
2,700 0	6 27	315 99	2,699 3	1 5	-56 7	28 0	15 00	13 64	84 94
2,725 0	9 93	322 01	2,724 0	4 2	-59 0	31 5	15 00	14 63	24 10
2,750 0	13 64	324 80	2,748 5	8 3	-62 1	36 5	15 00	14 83	11 15
2,775 0	17 37	326 41	2,772 6	13 9	-65 8	43.2	15 00	14 90	6 44
2,800.0	21 10	327 47	2,796 2	20 8	-70 3	51 4	15 00	14 94	4 22
2,825 0	24 84	328 22	2,819 2	29 0	-75 5	61 1	15.00	14 95	3 00
2,850 0	28 58	328 78	2,841 5	38 6	-81 4	72 3	15 00	14 97	2 26
2,875 0	32 32	329 22	2,863 1	49 5	-87 9	85 0	15 00	14 97	1 77
2,900 0	36 07	329 58	2,883 7	61 6	-95 0	99 0	15 00	14 98	1 44
2,925 0	39 81	329.88	2,903 5	74 8	-102 8	114 4	15 00	14 98	1 20
2,950 0	43 56	330 14	2,922 1	89 2	-111.1	131.0	15 00	14 98	1 03
2,975 0	47 31	330 36	2,939 7	104 7	-119 9	148 8	15 00	14 99	0 90
3,000 0	51 05	330 56	2,956 0	121 1	-129 2	167 7	15 00	14 99	0 79
3,025 0	54 80	330 74	2,971 1	138 5	-139 0	187 6	15 00	14 99	0 71
3,050 0	58 55	330 90	2,984 8	156 8	-149 2	208 5	15 00	14 99	0 65
3,075 0	62 29	331 05	2,997 1	175 8	-159.7	230 2	15 00	14 99	0 60
3,100.0	66 04	331 19	3,008 0	195 5	-170 6	252 7	15 00	14 99	0 56
3,125 0	69 79	331 33	3,017 4	215 8	-181 7	275 9	15.00	14 99	0 53
3,150 0	73 54	331 45	3,025 3	236 6	-193 1	299 6	15.00	14 99	0 50
3,175 0	77.29	331 57	3,031 6	257 9	-204 6	323 8	15 00	14 99	0 48
3,200.0	81 04	331 69	3,036 3	279 5	-216 3	348 3	15.00	14 99	0 47
3,225 0	84 78	331.81	3,039 4	301 3	-228 0	373 2	15 00	14 99	0 46
3,250 0	88 53	331 92	3,040 8	323 3	-239 8	398 1	15 00	14 99	0 46
3,259 8	90 00	331 96	3,041 0	332 0	-244 4	407 9	15 00	14 99	0 45
"LAND" 90.00° @ 3260' MD									
3,300 0	90 00	331 96	3,041 0	367 5	-263 3	448.1	0 00	0 00	0 00
3,400 0	90 00	331 96	3,041 0	455 7	-310 3	548 1	0.00	0 00	0 00
3,500 0	90 00	331 96	3,041 0	544 0	-357 3	648 1	0 00	0 00	0 00
3,600 0	90 00	331 96	3,041 0	632 3	-404 3	748 1	0 00	0 00	0 00
3,700 0	90 00	331 96	3,041 0	720 5	-451 3	848 1	0 00	0 00	0 00
3,800 0	90 00	331.96	3,041 0	808 8	-498 3	948 1	0 00	0 00	0 00
3,900 0	90 00	331 96	3,041 0	897 0	-545 3	1,048 1	0 00	0 00	0 00
4,000 0	90 00	331 96	3,041 0	985 3	-592 3	1,148 1	0 00	0 00	0 00
4,100 0	90 00	331 96	3,041 0	1,073 6	-639 3	1,248 1	0 00	0 00	0 00
4,200 0	90 00	331 96	3,041 0	1,161 8	-686 3	1,348 1	0 00	0 00	0 00
4,300 0	90 00	331 96	3,041 0	1,250 1	-733 3	1,448 1	0 00	0 00	0 00
4,400 0	90 00	331 96	3,041 0	1,338 4	-780 4	1,548 1	0 00	0 00	0 00
4,500 0	90 00	331 96	3,041 0	1,426 6	-827 4	1,648 1	0 00	0 00	0 00
4,600 0	90 00	331 96	3,041 0	1,514 9	-874 4	1,748 1	0 00	0 00	0 00
4,700 0	90 00	331 96	3,041 0	1,603 2	-921 4	1,848.1	0 00	0 00	0 00
4,800 0	90 00	331 96	3,041 0	1,691 4	-968 4	1,948 1	0 00	0 00	0 00
4,900 0	90 00	331 96	3,041 0	1,779 7	-1,015 4	2,048 1	0 00	0 00	0 00
5,000 0	90 00	331 96	3,041.0	1,868 0	-1,062 4	2,148 1	0 00	0 00	0 00
5,100 0	90 00	331 96	3,041 0	1,956 2	-1,109 4	2,248 1	0 00	0 00	0 00
5,200 0	90 00	331 96	3,041 0	2,044 5	-1,156 4	2,348 1	0 00	0 00	0 00
5,300 0	90 00	331 96	3,041 0	2,132 8	-1,203 4	2,448 1	0 00	0 00	0 00
5,400 0	90 00	331 96	3,041 0	2,221 0	-1,250 4	2,548 1	0 00	0 00	0 00
5,500 0	90 00	331 96	3,041 0	2,309 3	-1,297 4	2,648 1	0 00	0 00	0 00
5,600 0	90.00	331 96	3,041 0	2,397 6	-1,344 4	2,748 1	0 00	0 00	0 00
5,700 0	90 00	331 96	3,041 0	2,485 8	-1,391 4	2,848 1	0 00	0 00	0 00
5,800 0	90 00	331 96	3,041 0	2,574 1	-1,438 4	2,948 1	0 00	0 00	0 00

Planning Report

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Sec32 T32N-R6W - 339A
Company:	Williams Energy	TVD Reference:	WELL @ 6382.0usft (Original Well Elev)
Project:	San Juan Co NM	MD Reference:	WELL @ 6382.0usft (Original Well Elev)
Site:	Sec32 T32N-R6W - 339A	North Reference:	True
Well:	Rosa Unit #339A-ST01	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
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)
5,874 1	90 00	331.96	3,041 0	2,639.5	-1,473 2	3,022 2	0 00	0 00	0 00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
TD-339A	0 00	0 21	3,041.0	2,639 5	-1,473 2	2,161,661.51	602,850 31	36° 56' 24 450 N	107° 28' 53 044 W
- plan hits target center									
- Point									
LAND-339A	0.00	0 00	3,041 0	332.0	-244 4	2,159,358 64	604,087 76	36° 56' 1 633 N	107° 28' 37.906 W
- plan misses target center by 0 1usft at 3259 8usft MD (3041 0 TVD, 332 0 N, -244 4 E)									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,666 0	2,665 4	0 2	-54 9	STK @ 2666'MD DLS 15 00°/100' TFO 61 76
3,259 8	3,041.0	332 0	-244 4	"LAND" 90 00° @ 3260'MD
5,874 1	3,041 0	2,639 5	-1,473 2	"TD" 90 00° @ 5874'MD