

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

Form C-101
June 16, 2008

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

Submit to appropriate
District Office

AMENDED REPORT

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 API Number 30 - 039 29488			
3 Property Code 17033			5 Property Name Rosa Unit				6 Well No. 357A		
9 Proposed Pool 1 Basin Fruitland Coal						10 Proposed Pool 2			
7 Surface Location									
UL or lot J	Sect 36	Town s 32N	Range 6W	Lot Idn	Feet 1370	Line SOUTH	Feet from the 1490	Line EAST	County RIO ARRIBA
8 Proposed Bottom Hole Location If Different From Surface									
UL or lot G	Sect 36	Town s 32N	Range 6W	Lot Idn	Feet 1520	Line NORTH	Feet from the 2500	Line EAST	County RIO ARRIBA
Additional Well Information									
11 Work Type Code #E		12 Well Type Code G		13 Cable/Rotary R		14 Lease Type Code		15 Ground Level Elevation 6369	
16 Multiple NO		17 Proposed Depth		18 Formation BASIN FRUITLAND		19 Contractor AWS		20 Spud Date 06012011	

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#	338'	EXISTING	
8.750	7	20#	3017'	EXISTING	
9.5	5.5	15.5	2980' -3265'	EXISTING	
6.250	4.5	11.6	2710' -5499'	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

**NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT**

Hold C104
for Directional Survey
and "As Drilled" plat
→ requires Simultaneous dedication

RCVD MAY 20 '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.		OIL CONSERVATION DIVISION	
Signature: <i>Larry Higgins</i>		Approved by: <i>Chuck Hill</i>	
Printed name: Larry Higgins		Title: SUPERVISOR DISTRICT # 3	
Title: Permit Supervisor		Approval Date: JUN 09 2011	
		Expiration Date: JUN 09 2012	

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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 30-039-29488		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 357A
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6369'

¹⁰ Surface Location

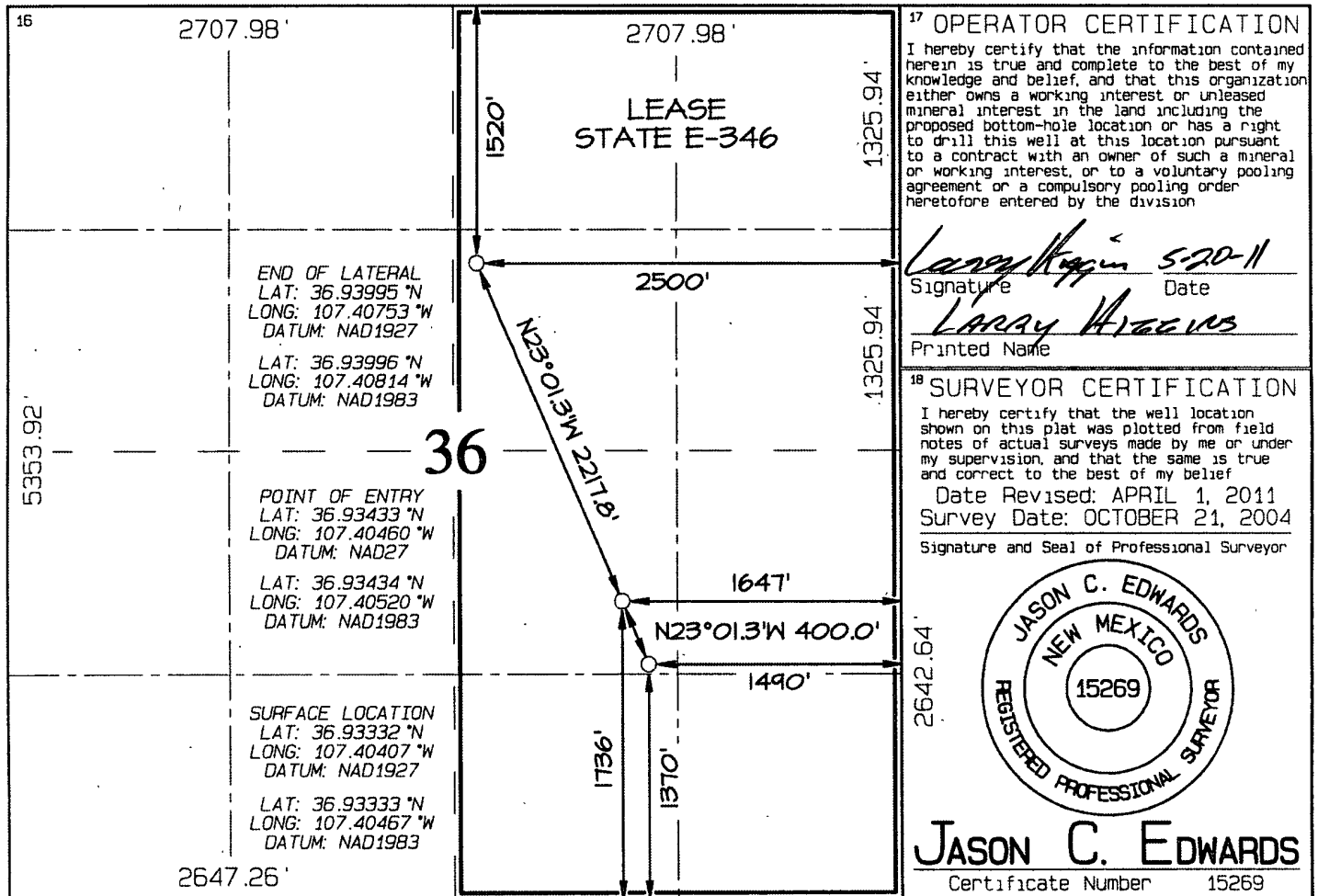
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	36	32N	6W		1370	SOUTH	1490	EAST	RIO ARRIBA

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
G	36	32N	6W		1520	NORTH	2500	EAST	RIO ARRIBA

¹² Dedicated Acres 320.0 Acres - (E/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



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"	338'	9-5/8"	36# K-55
Intermediate	8-3/4"	3,017'	7"	20# K-55
Prod. Liner	6-1/4"	2,980'- 3,265'	5-1/2"	15.5# J-55

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"	338'	9-5/8"	36# K-55
Intermediate	8-3/4"	3,017'	7"	20# K-55
Prod. Liner (motherbore)	9-1/2"	2,980'- 3,265'	5-1/2"	15.5# J-55
Prod. Liner (sidetrack)	6-1/4"	~2,710'-5,499'	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:

1. PRODUCTION LINER (sidetrack): No centralization

D. CEMENTING:

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

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

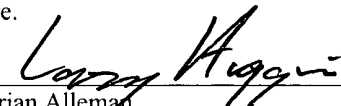
V. COMPLETION

A. STIMULATION

1. No stimulation

B. RUNNING TUBING

1. Fruitland Coal: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing at approximately 3,237' MD inside of motherbore.


 Brian Alleman
 Drilling Engineer II

FOC



Azimuths to True North
Magnetic North: 9.78°

Magnetic Field
Strength: 50949.2snT
Dip Angle: 63.72°
Date: 03/31/2011
Model: IGRF200510

PROJECT DETAILS Rio Arriba County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico Central 3002
System Datum: Mean Sea Level
Local North: True



Project: Rio Arriba County
Site: Rosa Unit
Well: #357A
Wellbore: ST1
Plan: Plan #3 (#357A/ST1)

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
2698.50	0.50	345.00	2698.31	30.19	-8.09	0.00	0.00	30.97	
3295.24	90.00	337.17	3077.00	382.43	-155.88	15.00	-7.83	412.96	
5499.53	90.00	337.17	3077.00	2414.04	-1011.15	0.00	0.00	2617.25	PBHL(357A)

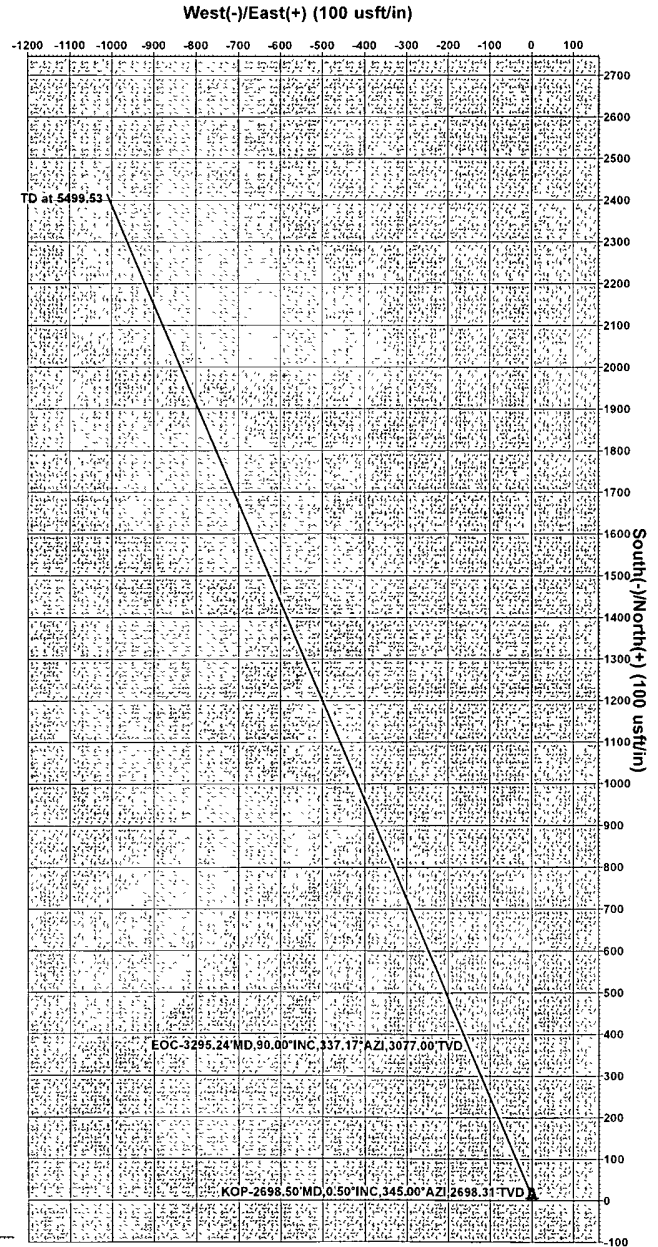
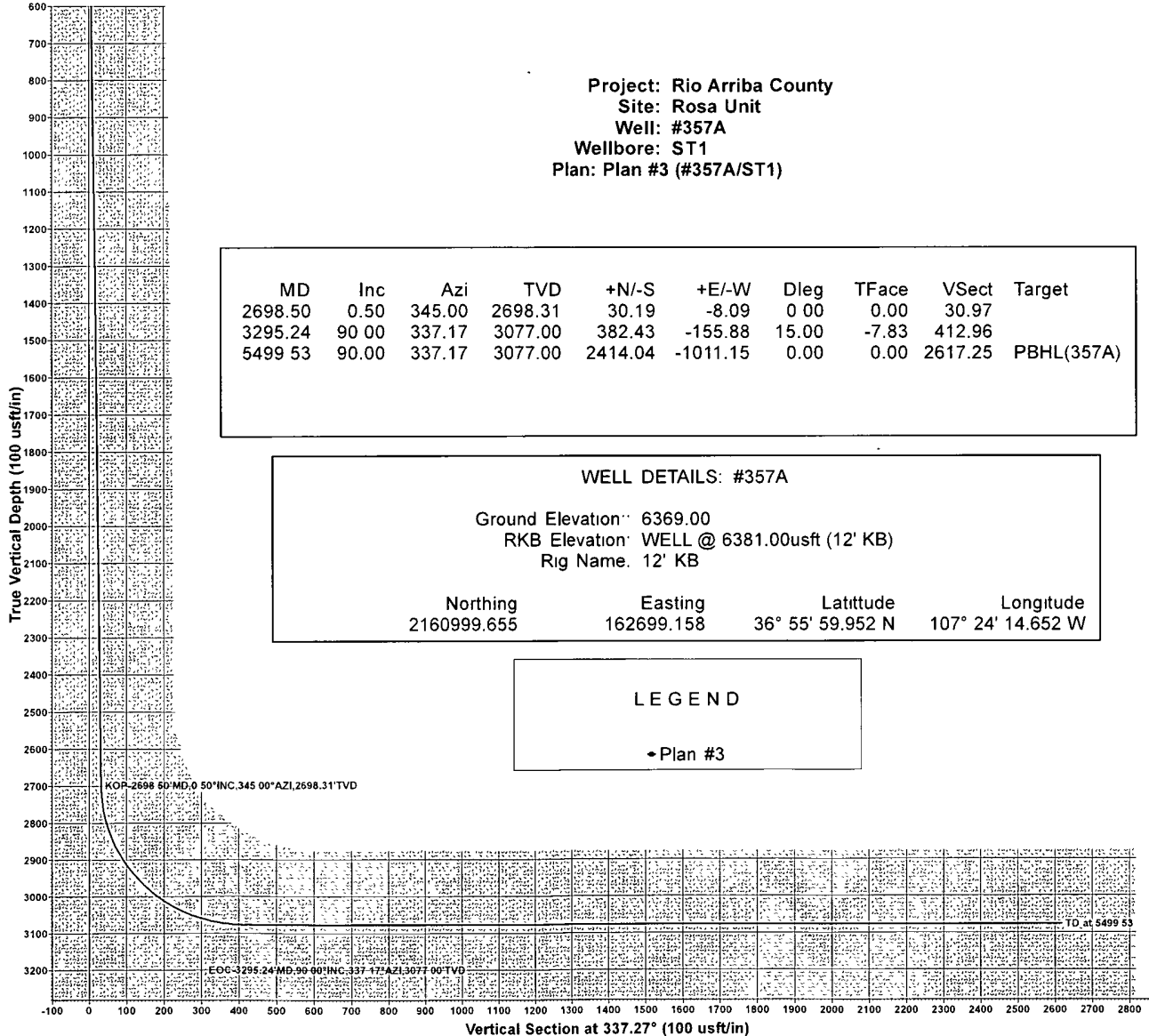
WELL DETAILS: #357A

Ground Elevation: 6369.00
RKB Elevation: WELL @ 6381.00usft (12' KB)
Rig Name: 12' KB

Northing	Easting	Latitude	Longitude
2160999.655	162699.158	36° 55' 59.952 N	107° 24' 14.652 W

LEGEND

◆ Plan #3





Williams Production

Rio Arriba County

Rosa Unit

#357A

ST1

Plan: Plan #3

Pathfinder X & Y Planning Report

05 April, 2011



A Schlumberger Company



Pathfinder

Pathfinder X & Y Planning Report



Company:	Williams Production	Local Co-ordinate Reference:	Well #357A
Project:	Rio Arriba County	TVD Reference:	WELL @ 6381.00usft (12' KB)
Site:	Rosa Unit	MD Reference:	WELL @ 6381.00usft (12' KB)
Well:	#357A	North Reference:	True
Wellbore:	ST1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000.1 Single User Db

Project	Rio Arriba County		
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	Rosa Unit		
Site Position:		Northing:	2,173,444.807 usft
From:	Lat/Long	Easting:	-397,626.039 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 56' 0.193 N
		Longitude:	109° 19' 15.108 W
		Grid Convergence:	-1.85 °

Well	#357A		
Well Position	+N-S	0.00 usft	Northing: 2,160,999.655 usft
	+E-W	0.00 usft	Easting: 162,699.158 usft
Position Uncertainty		0.00 usft	Wellhead Elevation: usft
			Latitude: 36° 55' 59.952 N
			Longitude: 107° 24' 14.652 W
			Ground Level: 6,369.00 usft

Wellbore	ST1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	03/31/11	9.78	63.72	50,949

Design	Plan #3		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 2,698.50
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)
	0.00	0.00	0.00
			Direction (°) 337.27



Pathfinder
Pathfinder X & Y Planning Report



Company:	Williams Production	Local Co-ordinate Reference:	Well #357A
Project:	Rio Arriba County	TVD Reference:	WELL @ 6381.00usft (12' KB)
Site:	Rosa Unit	MD Reference:	WELL @ 6381.00usft (12' KB)
Well:	#357A	North Reference:	True
Wellbore:	ST1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000.1 Single User Db

Survey Tool Program	Date 04/05/11			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
114.00	2,698.50	Survey #1 (OH)	MWD	MWD - Standard
2,698.50	5,499.53	Plan #3 (ST1)		

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	6,381.00	0.00	0.00	0.00	0.00	2,160,999.65	162,699.16	
114.00	1.00	345.00	113.99	6,267.01	0.96	-0.26	0.99	0.88	2,161,000.62	162,698.91	
315.00	0.25	345.00	314.98	6,066.02	3.08	-0.82	3.16	0.37	2,161,002.74	162,698.37	
829.00	1.00	345.00	828.95	5,552.05	8.49	-2.28	8.71	0.15	2,161,008.18	162,696.98	
1,328.00	0.75	345.00	1,327.89	5,053.11	15.85	-4.25	16.27	0.05	2,161,015.56	162,695.10	
1,800.00	0.50	345.00	1,799.86	4,581.14	20.83	-5.58	21.37	0.05	2,161,020.55	162,693.83	
2,276.00	0.75	345.00	2,275.83	4,105.17	25.84	-6.92	26.51	0.05	2,161,025.58	162,692.55	
2,650.00	0.50	345.00	2,649.81	3,731.19	29.78	-7.98	30.55	0.07	2,161,029.53	162,691.54	
2,698.50	0.50	345.00	2,698.31	3,682.69	30.19	-8.09	30.97	0.00	2,161,029.94	162,691.43	
KOP-2698.50' MD, 0.50° INC, 345.00° AZI, 2698.31' TVD											
2,700.00	0.72	342.57	2,699.81	3,681.19	30.21	-8.09	30.99	15.00	2,161,029.96	162,691.43	
2,725.00	4.47	338.04	2,724.78	3,656.22	31.26	-8.51	32.12	15.00	2,161,031.02	162,691.03	
2,750.00	8.22	337.64	2,749.62	3,631.38	33.82	-9.55	34.88	15.00	2,161,033.59	162,690.02	
2,775.00	11.97	337.49	2,774.23	3,606.77	37.87	-11.22	39.27	15.00	2,161,037.66	162,688.39	
2,800.00	15.72	337.41	2,798.50	3,582.50	43.39	-13.52	45.25	15.00	2,161,043.21	162,686.17	
2,825.00	19.47	337.36	2,822.32	3,558.68	50.37	-16.42	52.80	15.00	2,161,050.22	162,683.35	
2,850.00	23.22	337.33	2,845.60	3,535.40	58.76	-19.93	61.90	15.00	2,161,058.66	162,679.94	
2,875.00	26.97	337.30	2,868.24	3,512.76	68.54	-24.02	72.50	15.00	2,161,068.48	162,675.97	
2,900.00	30.72	337.28	2,890.13	3,490.87	79.67	-28.67	84.56	15.00	2,161,079.66	162,671.45	
2,925.00	34.47	337.27	2,911.19	3,469.81	92.09	-33.87	98.02	15.00	2,161,092.15	162,666.40	
2,950.00	38.22	337.26	2,931.33	3,449.67	105.75	-39.60	112.84	15.00	2,161,105.88	162,660.84	



Pathfinder
Pathfinder X & Y Planning Report



Company:	Williams Production	Local Co-ordinate Reference:	Well #357A
Project:	Rio Arriba County	TVD Reference:	WELL @ 6381.00usft (12' KB)
Site:	Rosa Unit	MD Reference:	WELL @ 6381.00usft (12' KB)
Well:	#357A	North Reference:	True
Wellbore:	ST1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
2,975.00	41.97	337.25	2,950.45	3,430.55	120.59	-45.82	128.93	15.00	2,161,120.79	162,654.80	
3,000.00	45.72	337.24	2,968.48	3,412.52	136.56	-52.52	146.25	15.00	2,161,136.84	162,648.29	
3,025.00	49.47	337.23	2,985.33	3,395.67	153.58	-59.66	164.70	15.00	2,161,153.94	162,641.36	
3,050.00	53.22	337.22	3,000.95	3,380.05	171.57	-67.22	184.22	15.00	2,161,172.03	162,634.02	
3,075.00	56.97	337.21	3,015.25	3,365.75	190.47	-75.16	204.72	15.00	2,161,191.02	162,626.31	
3,100.00	60.72	337.21	3,028.18	3,352.82	210.19	-83.44	226.11	15.00	2,161,210.84	162,618.27	
3,125.00	64.47	337.20	3,039.69	3,341.31	230.65	-92.04	248.30	15.00	2,161,231.40	162,609.92	
3,150.00	68.22	337.20	3,049.72	3,331.28	251.76	-100.91	271.19	15.00	2,161,252.61	162,601.30	
3,175.00	71.97	337.19	3,058.23	3,322.77	273.42	-110.02	294.70	15.00	2,161,274.39	162,592.46	
3,200.00	75.72	337.19	3,065.19	3,315.81	295.55	-119.33	318.70	15.00	2,161,296.63	162,583.42	
3,225.00	79.47	337.18	3,070.56	3,310.44	318.05	-128.79	343.12	15.00	2,161,319.24	162,574.22	
3,250.00	83.22	337.18	3,074.32	3,306.68	340.83	-138.38	367.83	15.00	2,161,342.13	162,564.92	
3,275.00	86.96	337.17	3,076.46	3,304.54	363.78	-148.04	392.73	15.00	2,161,365.20	162,555.54	
3,295.24	90.00	337.17	3,077.00	3,304.00	382.43	-155.88	412.96	15.00	2,161,383.94	162,547.91	
EOC-3295.24°MD,90.00°INC,337.17°AZI,3077.00°TVD											
3,300.00	90.00	337.17	3,077.00	3,304.00	386.82	-157.73	417.72	0.00	2,161,388.35	162,546.12	
3,400.00	90.00	337.17	3,077.00	3,304.00	478.98	-196.53	517.72	0.00	2,161,480.98	162,508.44	
3,500.00	90.00	337.17	3,077.00	3,304.00	571.15	-235.33	617.72	0.00	2,161,573.61	162,470.76	
3,600.00	90.00	337.17	3,077.00	3,304.00	663.31	-274.13	717.72	0.00	2,161,666.24	162,433.08	
3,700.00	90.00	337.17	3,077.00	3,304.00	755.48	-312.93	817.72	0.00	2,161,758.87	162,395.39	
3,800.00	90.00	337.17	3,077.00	3,304.00	847.65	-351.73	917.72	0.00	2,161,851.50	162,357.71	
3,900.00	90.00	337.17	3,077.00	3,304.00	939.81	-390.53	1,017.72	0.00	2,161,944.13	162,320.03	
4,000.00	90.00	337.17	3,077.00	3,304.00	1,031.98	-429.33	1,117.72	0.00	2,162,036.75	162,282.35	
4,100.00	90.00	337.17	3,077.00	3,304.00	1,124.14	-468.13	1,217.72	0.00	2,162,129.38	162,244.67	
4,200.00	90.00	337.17	3,077.00	3,304.00	1,216.31	-506.93	1,317.72	0.00	2,162,222.01	162,206.99	
4,300.00	90.00	337.17	3,077.00	3,304.00	1,308.48	-545.73	1,417.72	0.00	2,162,314.64	162,169.31	
4,400.00	90.00	337.17	3,077.00	3,304.00	1,400.64	-584.53	1,517.72	0.00	2,162,407.27	162,131.63	



Pathfinder

Pathfinder X & Y Planning Report



Company: Williams Production
Project: Rio Arriba County
Site: Rosa Unit
Well: #357A
Wellbore: ST1
Design: Plan #3

Local Co-ordinate Reference: Well #357A
TVD Reference: WELL @ 6381.00usft (12' KB)
MD Reference: WELL @ 6381.00usft (12' KB)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
4,500.00	90.00	337.17	3,077.00	3,304.00	1,492.81	-623.33	1,617.72	0.00	2,162,499.90	162,093.94
4,600.00	90.00	337.17	3,077.00	3,304.00	1,584.97	-662.13	1,717.72	0.00	2,162,592.53	162,056.26
4,700.00	90.00	337.17	3,077.00	3,304.00	1,677.14	-700.93	1,817.72	0.00	2,162,685.16	162,018.58
4,800.00	90.00	337.17	3,077.00	3,304.00	1,769.31	-739.73	1,917.72	0.00	2,162,777.79	161,980.90
4,900.00	90.00	337.17	3,077.00	3,304.00	1,861.47	-778.53	2,017.72	0.00	2,162,870.41	161,943.22
5,000.00	90.00	337.17	3,077.00	3,304.00	1,953.64	-817.33	2,117.72	0.00	2,162,963.04	161,905.54
5,100.00	90.00	337.17	3,077.00	3,304.00	2,045.80	-856.13	2,217.72	0.00	2,163,055.67	161,867.86
5,200.00	90.00	337.17	3,077.00	3,304.00	2,137.97	-894.93	2,317.72	0.00	2,163,148.30	161,830.17
5,300.00	90.00	337.17	3,077.00	3,304.00	2,230.14	-933.73	2,417.72	0.00	2,163,240.93	161,792.49
5,400.00	90.00	337.17	3,077.00	3,304.00	2,322.30	-972.53	2,517.72	0.00	2,163,333.56	161,754.81
5,499.53	90.00	337.17	3,077.00	3,304.00	2,414.04	-1,011.15	2,617.25	0.00	2,163,425.76	161,717.31

TD at 5499.53

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
2,698.50	2,698.31	30.19	-8.09	KOP-2698.50'MD,0.50'INC,345.00°AZI,2698.31'TVD
3,295.24	3,077.00	382.43	-155.88	EOC-3295.24'MD,90.00'INC,337.17°AZI,3077.00'TVD
5,499.53	3,077.00	2,414.04	-1,011.15	TD at 5499.53

Checked By: _____ Approved By: _____ Date: _____