RECEIVED

FORM APPROVED OMB No 1004-0136 Expires January 31, 2004

5. Lease Serial No.

UNITED STATES DEPARTMENT OF THE INTERIOR

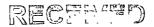
FEB 2 5 2009

BUREAU OF LAND MA	NAGEMENI 👢		uademo	NMSF-078766	
APPLICATION FOR PERMIT TO	DRILL OR RE	Han Eington Fiel	d Office	6. If Indian, Allottee or Trib	e Name
la. Type of Work: ☑ DRILL ☐ REE	VEED		-	7. If Unit or CA Agreement,	Name and No.
Ia. Type of Work: DRILL REE	NIEK			Rosa Unit	
1b. Type of Well: Oil Well 🛛 Gas Well 🔲 Other	☐ Sing	gle Zone 🛛 Multi	ole Zone	8. Lease Name and Well No	
2. Name of Operator				9. API Well No.	
Williams Production Company, LLC				30-039-3	0690
3a. Address	3b. Phone No. (include area code)		10. Field and Pool, or Explora-	tory
P.O Box 640 Aztec, NM 87410	(505) 63	34-4208		Basin Mancos/Basin Dakota	al Busin Ma
4. Location of Well (Report location clearly and in accordance with				11. Sec , T., R., M., or Blk. an	d Survey or Area
At surface C 1280/N 1635/W					
At proposed prod. zone RHC D// A/A/ /(A/A/	;;;;)				
WAT DEGREE IN NOUT	*			Section 25, 31N, 6W	12 64-4-
4. Distance in miles and direction from nearest town or post office				12. County or Parish	13. State
approximately 31 miles northeast of Blanco, New Mexic 15. Distance from proposed*			1.7.6	Rio Arriba	NM
location to nearest	16 No. of Ac	res in lease	17. Spacing	g Unit dedicated to this well	
property or lease line, ft.	0.555			10 100	
8. Distance from proposed location*	2,552.7 19. Proposed			.16 – (1/2) BIA Bond No. on file	
to nearest well, drilling, completed,	8340M		ZU. BLIVI/E	OTA DOING INO. OF THE	
applied for, on this lease, ft 280' Rosa 165A		8222 TVD	LITOS	₈₄₇ 899	
1. Elevations (Show whether DF, KDB, RT, GL, etc.)		nate date work will st		23. Estimated duration	
-6,372 GR 6403	April 1,			1 month	
	24. Attach			Driin Tii	L 14'09
he following, completed in accordance with the requirements of Oi			1 11.		
5. Signature	Name (F	authorized office	r.	Date	2 · - 20
Title Magn	La	irry Higgins			25-09
Drilling COM Approved by (Signature)	Name (I	Printed/Typed)		Date	
\$ /// anles w	216110 (2	· ·····ca 1 ypca)		ラ	113/89
Fitle AFM	Office	FFO		<u>.</u>	7,00
Application approval does not warrant or certify that the applicant he	olds legal or equitable	title to those rights in	the subject l	ease which would entitle the app	olicant to conduct
perations thereon. Conditions of approval, if any, are attached.					
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, ma States any false, fictitious or fraudulent statements or representations			l willfully to	make to any department or age	ncy of the United
(Instructions on reverse)					
Villiams Production Company, LLC, proposes to develop the ne attached drilling and surface use plans.	Basin Mancos and	Basin Dakota forma	itions at the	above described location in	accordance with
he well pad surface is under jurisdiction of the Bureau of Lar	nd Management, Fa	rmington Field Offic	e (BLM/FF	O).	
his location has been archaeologically surveyed by La Plata	Archaeological Cor	nsultants. Copies of	their report	pakapaan shouluted diragily	华州 原6.
o new access road will be required for this proposed well.		DDIO	T T (CACING & CI	EMENT
his APD is also sexing or an energy to the traine mortion. Mr. Approximation and the contract of the contract	inght-of-way. An as	sociated bibeline ti	e of 70.2 fee	et would be required for this v	vell.
TION DOES NOT RELIEVE THE LESSEE AND	ט	Hold Clost			
DERATOR FROM OBTAINING ANY OTHER	t	or Directional Survey and "As Drilled" plat	•		
JTHORIZATION REQUIRED FOR OPERATION	NS	ally ADDITION FOR	orna i	NL 2 7 2009	
N FEDERAL AND INDIAN LANDS		IBBOOR '	. M.	IL & I LOOG	
	N	IMOCD			

6

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED 'GENERAL REQUIREMENTS'.

This action is subject to technical and procedural review pursuant to 43 CFR 3165 3 and appeal oursuant to 43 CFR 3165 4



Form 3160-5
• (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

JUN 1 \$ 2009

FORM APPROVED

		OMB No 1004-0137
ນເດົໄສກເ	Managaman.	Expires: July 31, 2010

Farmington 5: Lease Serial No. NMSF-078766

ease Serial No.

Do not use this	NOTICES AND REP form for proposals Use Form 3160-3 (A	6. If Indian, Allottce or Tribe Name					
SUBMI	T IN TRIPLICATE – Othe	r instructions on page 2.		7. If Unit of CA/Agree	ement, Name and/or No.		
1. Type of Well Oil Well Gas V	Vell Other	-		8. Well Name and No. ROSA UNIT #165D			
2 Name of Operator WILLIAMS PRODUCTION CO., LLC	 C			9. APJ Well Nº9 2	501090		
3a. Address P. O BOX 640 AZTEC, NM 87410	,	3b. Phone No. (include area co	ode)	10. Field and Pool or I BLANCO MV/BASIN			
4. Location of Well <i>(Footage, Sec , T ,</i> Surface - 1280' FNL & 1635' FWL BHL - 660' FNL & 1100' FWL Sec 25	R ,M., or Survey Description 5, T31N, R6W	1)		11. Country or Parish, RIO ARRIBA, NM	State		
12 CHEC	CK THE APPROPRIATE BO	DX(ES) TO INDICATE NATUR	E OF NOTIC	CE, REPORT OR OTH	ER DATA		
TYPE OF SUBMISSION		TY	PE OF ACT	ION			
Notice of Intent	Acidize Alter Casing	Deepen Fracture Treat	Recla	action (Start/Resume) amation	Water Shut-Off Well Integrity		
Subsequent Report	Casing Repair Change Plans	✓ New Construction✓ Plug and Abandon	=	mplete oranly Abandon	Other		
Final Abandonment Notice	Convert to Injection	Plug Back		r Disposal			
This well was originaly permitted as Blanco Mesa Verde, Basin Mancos plan, directional plan, surface use pl	and Basın Dakota. We al	so wish to change the name o					
4. I hereby certify that the foregoing is tr	ue and correct Name (Printed		2014	•			
Larry Higgins	1/	Title Drilling C	OIVI				
Signature Convey of	Higgin	Date 06/12/20	Date 06/12/2009				
,	THIS SPACE	FOR FEDERAL OR ST	ATE OFF	ICE USE			
Approved by Conditions of approval, if any, are attached			11-19	D	713/09		
hat the applicant holds legal or equitable tr ntitle the applicant to conduct operations t	tle to those rights in the subjec		FTO				

fictitious or fraudulent statements or representations as to any matter within its jurisdiction

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,

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

1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals & Natural Resources Department

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

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

OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 State Lease - 4 Copies Fee Lease - 3 Copies

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

AMENDED REPORT

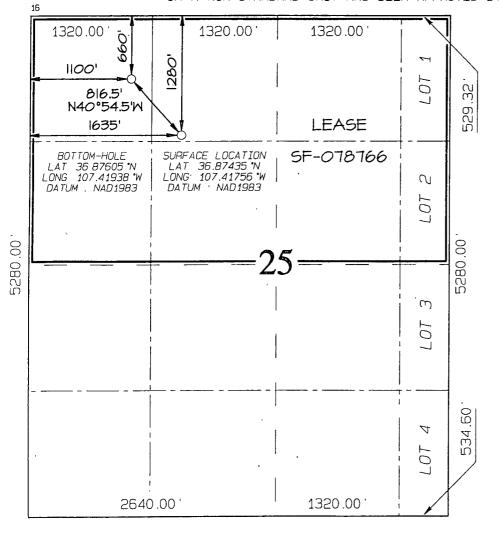
WELL LOCATION AND ACREAGE DEDICATION PLAT

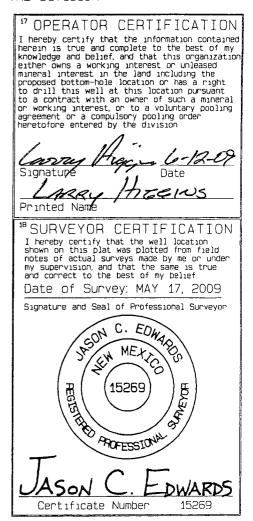
'API Number	²Pool Code		
30.039.35690	97232 / 72319 / 71599	BASIN MANCOS / BLANCO MESAVERDE	/ BASIN DAKOTA
¹Property Code		°Well Number	
17033		165D	
'OGRID No.		"Elevation	
120782	WILLIAMS	PRODUCTION COMPANY	6403 '

¹⁰ Surface Location

UL or lot no	Sect ion	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
С	25	31N	6W		1280	NORTH	1635	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	
D	25	31N	БW		660	NORTH	1100	WEST	ARRIBA	
¹² Dedicated Acres					13 Joint or Infill	14 Consolidation Code	¹⁵ Order No			
272.16 Acres - N/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







WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE:

6/11/2009

FIELD:

Basın DK/ Basin MC/BlancoMV

WELL NAME:

Rosa Unit #165D

Rio Arriba, NM

SURFACE:

BLM

BH LOCATION:

NWNW Sec 25-31N-6W

MINERALS:

FEDERAL

ELEVATION:

6,403° GR

LEASE #

SF-078766

MEASURED DEPTH: 8,341'

I. I. GEOLOGY:

Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TV	D MI	D
Ojo Alamo	2,497	2,592	Point Lookout	5,69	5,8	10
Kirtland	2,612	2,713	Mancos	6,04	7 6,4	65
Fruitand	2,992	3,105	Gallup	7,00	7,1	25
Pictured Cliffs	3,267	3,384	Greenhorn	7,71	7 7,8	35
Lewis	3,552	3,670	Graneros	7,77	2 7,8	90
Cliff House	5,422	5,540	Dakota	7,89	7 8,0°	15
Menefee	5,467	5,585	Morrison	8,14	2 8,26	30
			TD	8,22	2 8,34	40

- B. MUD LOGGING PROGRAM: Mudlogger on location from intermediate csg to TD. Mudlogger to pick TD.
- C. LOGGING PROGRAM: HRI/Temp from intermediate casing to TD. SDL\DSEN over zones of interest.
- **D.** <u>NATURAL GAUGES:</u> Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

- A. MUD PROGRAM: Use Water + Gel/Polymer sweeps to drill Surface hole. Convert to a LSLD EZ-MUD system mud (+/-50 Vis.) to drill 9-7/8 in. Intermediate Hole. Increase vis to +/-60 to run Casing. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses. Use Air, Air Hammer and 6-3/4 in. Flat btm. bit to drill-out of 7-5/8 in. csg. and to TD well at +/- 8,341 ft. (MD).
- B. 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.

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	14 3/4	300	10 3/4	40.5	K-55
Intermediate	9 7/8	3,860	7 5/8	26.4	K-55
Longstring	6 3/4	8,340	5 1/2	17	N-80

B. FLOAT EQUIPMENT:

- 1. <u>SURFACE CASING:</u> 10 3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
- 2. <u>INTERMEDIATE CASING:</u> 7 5/8" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. (NTL-FRA 90-1).
- 3. <u>PRODUCTION LINER / CASING:</u> 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place marker joint above 5,400'. Place centralizers as needed across selected production intervals.

C. CEMENTING:

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

- 1. SURFACE: Slurry: 290sx (521 cu.ft.) of "Type III" + 2% Cal-Seal 60 + ¼ # of poly-e-flake/sk + 0.3% Versaset + 2% Econolite + 6% Salt (Yield = 1.796 cu.ft./sk, Weight = 13.5 #/gal.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi. For 30 min
- 2. INTERMEDIATE: Lead 525 sx (1430 cu.ft.) of "EXTENDACEM" + 5 #/sk pheno-seal + 5% Cal-Seal 60 (Yield = 2.723 cu.ft./sk, Weight = 11.5 #/gal.). Tail 100 sx (117.8cu.ft.) of Premium cement + 0.125 #/sk Poly-E-Flake, (Yield = 1.178 cu.ft./sk, Weight = 15.6#/gal.). NO EXCESS PUMP AS WRITTEN SHOULD CIRCULATE TO SURFACE Total volume = 1548 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface Test csg to 1500 psi. Tor 30min
- 3. PRODUCTION CASING: 10 bbl Gelled Water spacer. Cement: 375 sx (525 ft³) of "FRACCEM" + 0.8% Halad-9 + 0.1% CFR-3 + 5 #/sk Gilsonite + 0.125 #/sk Poly-E-Flake + 0.15% HR-800. (Yield =1.398 ft³/sk, Weight = 13.1 #/gal.). Displace cement at a minimum of 8 BPM. NO EXCESS SHOULD COVER 150 FEET INTO 7° CASING Total volume (525) ft³. WOC 12 hours.

IV. IV COMPLETION

A. <u>CBL</u>

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings if cement not circulated to surface..

B. PRESSURE TEST

1. Pressure test 5-1/2" casing to 6000 psi max, hold at 1500 psi for 30 minutes.

C. STIMULATION

- 1. Stimulate Dakota with approximately 5000# 100 mesh sand and 120,000# Ottawa Sand in slick water.
- 2. Isolate Dakota with a RBP.
- 3. Perforate Mancos as determined from the open hole logs
- 4. Stimulate Mancos with 3 stages of approximates 5000# 100 mesh sand and 150,000# 40/70 Ottawa sand
- 5. Stimulate Point Lookout with approximately 40,000# 20/40 Ottawa sand in slick water.
- 6. Isolate Point Lookout with a RBP.
- 7. Perforate the Menefee/Cliff House as determined from the open hole logs.
- 8. Stimulate with approximately 40,000# 20/40 Ottawa sand in slick water.
- 9. Test each zone before removing bridge plugs.

D. **RUNNING TUBING**

1. <u>Production Tubing:</u> Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforation

Brian Alleman
Drilling Engineer

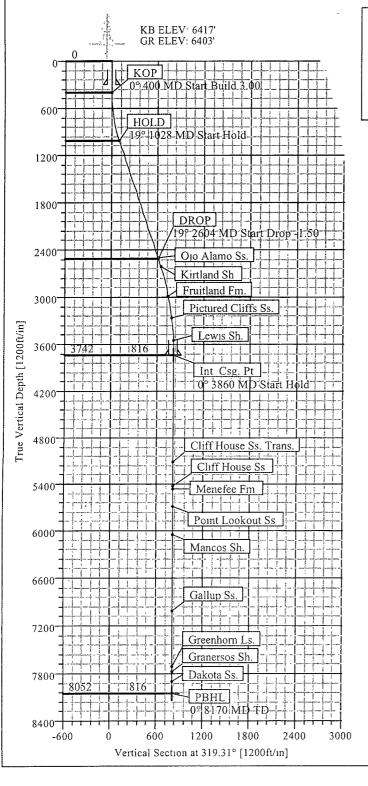


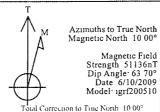
ROSA UNIT #165D RIO ARRIBA CO., NEW MEXICO

					SECTION I	DETAILS				
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0.00	319.31	0.00	0.00	0 00	0.00	0 00	0.00	1
2	400.00	0.00	319.31	400.00	0 00	0.00	0.00	0.00	0.00	i
3	1028.41	18.85	319.31	1017.14	77.69	-66.80	3.00	31931	102.46	
4	2603.50	18.85	319.31	2507.73	463.61	-398.62	0.00	0.00	611.42	
5	3860.33	0.00	319.31	3742.00	618.98	-532.22	1.50	180.00	816.33	Int. Csg Pt.
6	8170.33	0.00	319.31	8052.00	618.98	-532.22	0.00	319.31	816.33	PBHL

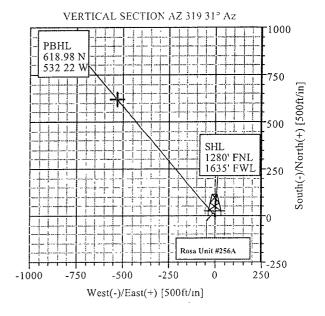
	WELL DETAILS							
Slot	Longitude	Latitude	Easting	Northing	+E/-W	+N/-S	Name	
N/A	107°25'03 220W	36°52'27.660N	1298920.77	2139644.84	0 00	0.00	#165D	

	TARGET DETAILS										
'	Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
	Int. Csg. Pt. PBHL	3742.00 8052.00	618.98 618.98	-532.22 -532.22	2140270.28 2140270.28	1298396.16 1298396.16	36°52'33.780N 36°52'33.780N	107°25'09.770W 107°25'09.770W	Point Point		





	FORMATION TOP DETAILS -								
No.	TVDPath	MDPath	Formation						
1 2 3 4 5 6 7 8 9 10 11	2497.00 2612.00 2992.00 3267.00 3552.00 5107.00 5422.00 5467.00 5692.00 6047.00 7007.00	2592.17 2713.16 3105.43 3384.10 3670.25 5225.33 5540.33 5585.33 5810.33 6165.33 7125.33 7835.33	Pictured Chffs Ss. Lewis Sh. Cliff House Ss. Trans.						
13 14	7772.00 7897.00	7890.33 8015.33	Granersos Sh. Dakota Ss.						





Weatherford^{*}

CASING DETAILS									
	No.	TVD	MD	Name	Size				
	I 2	300.00 3742.00	300.00 3860.33	10 3/4" 7 5/8" Int. Csg.	10.750 0 000				

Plan Plan #1 (#165D/1)

Created By. Lindsey Maddux

Date: 6/10/2009



Weatherford International, Inc. **Proposal Plan Report**



Company: WILLIAMS PRODUCTION
Date: 6/10/2009 Time: 16:48.46 Page: 3
Field: Rio Arriba Co. NM (NAD 83)
Co-ordinate(NE) Reference: Well: #165D. True North
Vertical (TVD) Reference: SITE: 6417.0
Well: #165D Section (VS) Reference: Well: (0.00N,0:00E,319.31Azı)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey											
MD	Incl		TVD	N/S	E/W	VS	Build	Turn	DLS	TFO	Comment
St. St.	* *ded	deg	ft	ft	is ft side	\$ \$\$ m \$\$ \$	deg/100ft	deg/100ft	deg/100	n deg	
6100.00	0.00	319.31	5981.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
6165.33	0.00	319.31	6047.00	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	Mancos Sh.
6200.00	0.00	319.31	6081.67	618 98	-532.22	816.33	0.00	0.00	0.00	319.31	
6300.00	0.00	319.31	6181.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
6400.00	0.00	319.31	6281 67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
6500.00	0.00	319.31	6381 67	618 98	-532.22	816.33	0.00	0.00	0.00	319.31	
6600.00	0.00	319.31	6481.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
0700.00	0.00	040.04	0504.07	040.00	500.00	040.00	0.00	0.00	0.00	040.04	
6700.00	0.00	319.31	6581.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
6800.00 6900.00	0.00 0 00	319.31 319.31	6681.67 6781.67	618.98 618.98	-532 22 -532.22	816.33 816.33	0.00	0.00 0.00	0.00	319.31 319.31	
7000.00	0.00	319.31	6881.67	618.98	-532.22 -532.22	816.33	0 00 0.00	0.00	0.00	319.31	
7100.00	0.00	319.31	6981.67	618 98	-532.22	816.33	0.00	0.00	0.00	319.31	
1 100.00	0.00	010.01	0301.01	010 00	002.22	010.00	0.00	0.00	0.00	010.01	
7125.33	0.00	319.31	7007.00	618.98	-532.22	816.33	0.00	0 00	0.00	319.31	Gallup Ss.
7200.00	0.00	319.31	7081.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
7300.00	0.00	319.31	7181.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
7400.00	0.00	319.31	7281.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
7500.00	0.00	319.31	7381.67	618.98	-532 22	816.33	0.00	0.00	0.00	319.31	
7600.00	0.00	319.31	7481.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	-
7700.00	0.00	319.31	7581.67	618.98	-532 22	816.33	0.00	0.00	0.00	319.31	
7800.00 7835.33	0.00	319.31 319.31	7681.67 7717.00	618.98 618.98	-532.22	816.33	0.00	0.00	0.00	319.31	Crambarala
					-532.22	816.33	0.00	0.00	0.00	319 31	Greenhorn Ls.
7890.33	0.00	319.31	7772 00	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	Granersos Sh.
7900.00	0.00	319.31	7781.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
8000.00	0.00	319.31	7881.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	[]
8015.33	0.00	319.31	7897.00	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	Dakota Ss.
8100.00	0.00	319.31	7981.67	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	
8170.33	0.00	319 31	8052.00	618.98	-532.22	816.33	0.00	0.00	0.00	319.31	PBHL

Targets

Name Description Dip.	Dir. ft	+N/_Ŝ	+E/≟W ft	Map Map Northing Easting ft ft	< Deg	Latitude ——	> \< Deg	Lon Min	gitude>
Int. Csg. Pt. -Plan hit target	3742.00	618.98	-532 22 ৢ	2140270,281298396.16	36	52 33.780 N	107	25	9.770 W
PBHL -Plan hit target	8052.00	618.98	-532.22	2140270.281298396.16	36	52 33 780 N	107	25	9 770 W

Formations

MD-15	TVD ft	Formations Lithology.	Dip Angle deg	Dip Direction deg
2592.17	2497.00	Ojo Alamo Ss.	0.00	0.00
2713.16	2612.00	Kirtland Sh.	0.00	0.00
3105 43	2992 00	Fruitland Fm.	0.00	0 00
3384.10	3267.00	Pictured Cliffs Ss.	0.00	0.00
3670.25	3552.00	Lewis Sh.	0.00	0 00
5225.33	5107.00	Cliff House Ss. Trans.	0.00	0.00
5540.33	5422.00	Cliff House Ss.	0.00	0 00
5585.33	5467.00	Menefee Fm.	0.00	0.00
5810.33	5692.00	Point Lookout Ss.	0.00	0.00
6165.33	6047.00	Mancos Sh.	0.00	0.00
7125.33	7007 00	Gallup Ss.	0.00	0 00
7835.33	7717.00	Greenhorn Ls.	0.00	0 00
7890.33	7772.00	Granersos Sh.	0.00	0.00
8015.33	7897 00	Dakota Ss	0.00	0.00



Weatherford International, Inc. **Proposal Plan Report**



Company: WILLIAMS PRODUCTION
Field: Rio Arriba Co., NM (NAD 83)
Site: Rosa Unit #165D
Well: #165D

#165D Wellpath: 1

Date: 6/10/2009 Time: 16:48:46 Page: 4
Co-ordinate(NE) Reference: Well: #165D, True North
Vertical (TVD) Reference: SITE 6417:0
Section (VS) Reference: Well: (0:00N)0:00E,319:31AZI)

Survey Calculation Method: Minimum Curvature Db: Sybase

Annotation

MD ft	TVD		
400.00	400.00	KOP	
1028.41	1017.13	HOLD	
2603.50	2507.72	DROP	·
3860.33	3742.00	Int. Csg. Pt.	
8170.33	8052.00	PBHL	

Casing Points

I,	MD	Ve run e	7 - SP 1 No. 20	TILL CONTRACT	BERTEIN, CONTROPE, IN BESTELL AND BELT OF THE STATE OF TH
	tt	LYD	Diameter	Hole Size	Name
-	4 2 It 182				
	300.00	300.00	10.750	12.250	10 3/4"
i	3860.33	3742.00	0.000	0.000	7 5/8" Int. Csg.

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Exhibit #1 Typical BOP setup

