UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT 2008 , HIN 14

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

5. Lease Serial No.

SF-078765

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,	~-	-10	. II Indian.	Allouee of	i ilibe nan

APPLICATION FOR PERMIT TO DR	RILL OR REENTER	i	- To. II Indian, Allottee or 1	THE NAME	
la. Type of Work: DRILL REENTER	RECEIV	~~ ~ <i>J</i>	7. If Unit or CA Agreemen	nt, Name and No.	
ia. Type of work.	° 070 FARMING	TON IN	Rosa Unit NM NM -678407/		
1h Type of Well □ Oil Well □ Gas Well □ Other			8. Lease Name and Well N	0.	
To. Type of tron.	☑ Single Zone ☐ Mult	iple Zone	35C		
Name of Operator Williams Production Company, LLC			9. API Well No. 30 -045 -	33795	
3a. Address	3b. Phone No. (include area code)		10. Field and Pool, or Expl-	oratory	
P.O. Box 640 Aztec, NM 87410	(505) 634-4208		Blanco Mesaverde		
4. Location of Well (Report location clearly and in accordance with any	State requirements. *)		11. Sec., T., R., M., or Blk.	and Survey or Area	
At surface 2100' FSL & 1925' FWL K		i			
At proposed prod. zone 2100' FSL & 2310' FWL J			K Section 5, 31N, 6W		
14. Distance in miles and direction from nearest town or post office*			12. County or Parish	13. State	
approximately 26 miles northeast of Blanco, New Mexico			San Juan	NM	
15. Distance from proposed* location to nearest property or lease line, ft.	16. No. of Acres in lease		g Unit dedicated to this well		
(Also to nearest drig. unit line, if any) 1925'	2,460.230		.16 (Entire Section)		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth		3IA Bond No. on file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	6,250' 22. Approximate date work will:	UTO	23. Estimated duration		
6.337' GR	Aug 1, 2006	, tar t	1 month		
0,007 GR	24. Attachments				
The following, completed in accordance with the requirements of Onshor		tached to this	form:		
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office). 	Lands, the Item 20 above).	cation. specific info	s unless covered by an exist		
25. Signature	Name (Printed/Typed)		Dat	e	
Com Hugger	Larry Higgins		6	-13-06	
Title					
Drilling COM					
Approved by (Signature) Manlee (154)	Name (Printed/Typed)		Dat	6/26/8	
Title AFM	Office TT	>		<i>,</i>	
Application approval does not warrant or certify that the applicant holds operations thereon. Conditions of approval, if any, are attached.	legal or equitable title to those rights	n the subject	lease which would entitle the	applicant to conduct	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it States any false, fictitious or fraudulent statements or representations as to	a crime for any person knowingly as any matter within its jurisdiction.	nd willfully to	o make to any department or	agency of the United	
*(Instructions on reverse)					

Williams Exploration and Production Company, LLC, proposes to drill a well to develop the Blanco Mesaverde formation at the above described location in accordance with the attached drilling and surface use plans.

The surface is under jurisdiction of the Bureau of Land Management, Farmington Field Office.

This location has been archaeologically surveyed La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM/FFO.

This APD is also serving as an application to obtain a pipeline right-of-way (ROW) grant. A 193.8-foot pipeline tie would be required for this location, to be operated by Williams Field Servines operated by Williams Field Services.

directional Survey,
NMOCD

Form 3160-3

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

District I PO Box 1980, Hobbs, NM 88241-1980

District II PO Drawer DD, Artesia, NM 88211-0719

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

District IV PO Box 2088, Santa Fe, NM 87504-2088

'API Number

State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088 Form C-102 Revised February 21, 1994 Instructions on back

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

*Pool Name

AMENDED REPORT

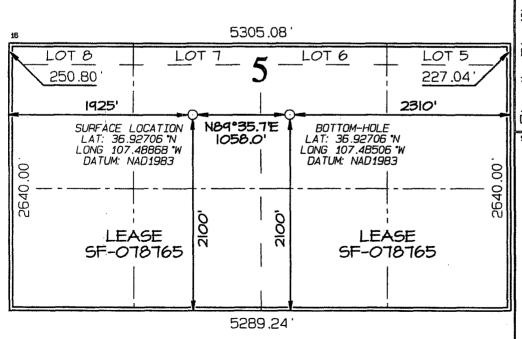
WELL LOCATION AND ACREAGE DEDICATION PLAT

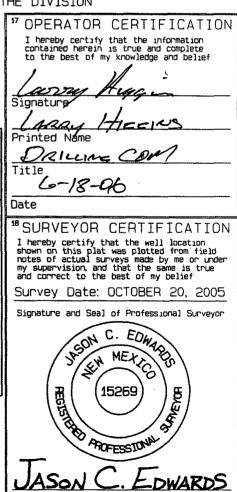
30-04	5-3	3795	>	72319	9 BLANCO MESAVERDE						
*Property		34-	······································		*Property	Name			*We	1 Number	
1703	3 🔃				ROSA (UNIT				35C _	
'OGRID !	₩.		···		[©] Operator	Name			•E]	evat 100	
12078	12 .			WILLIAMS PRODUCTION COMPANY 6337							
	· · · · · · · · · · · · · · · · · · ·				^{lo} Surface	Location					
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West 1	ine	County	
К	5	31N	N 6W 2100 SOUTH 1925 WEST SAN JUAN					'N			
	¹¹ Bottom Hole Location If Different From Surface										

Popl Code

North/South line UL or lot no. Section Township Range Lot Idn Feet from the Feet from the East/West line County **EAST** 5 2100 SOUTH 2310 31N 6W SAN JUAN 12 Dedicated Acres ¹³ Joint or Infill ¹⁴ Consolidation Code ⁹⁵ Order No. 350.16 Acres – Entire Section

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



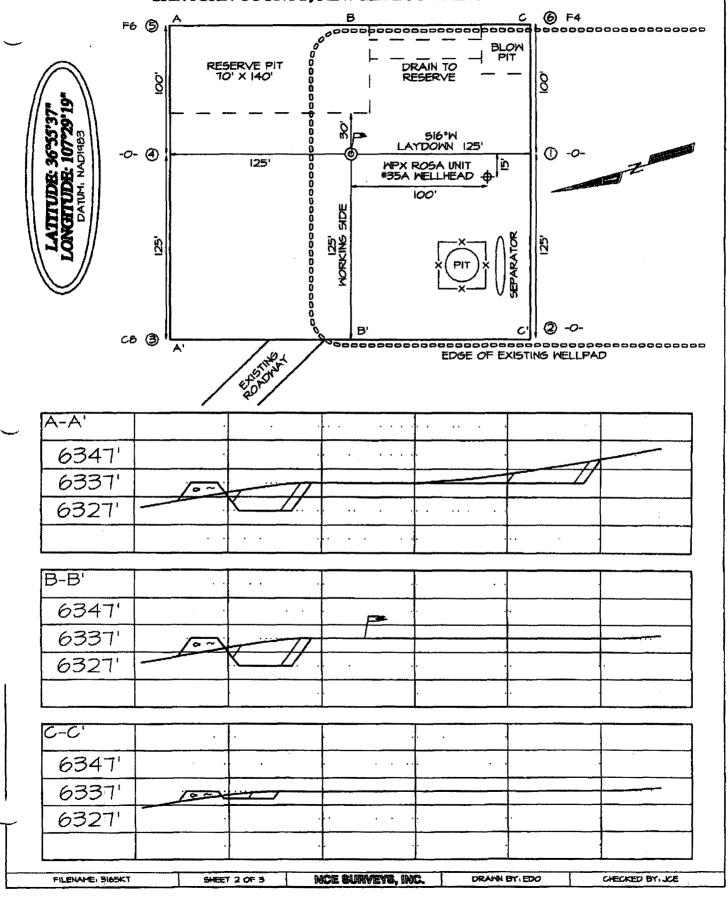


Certificate Number

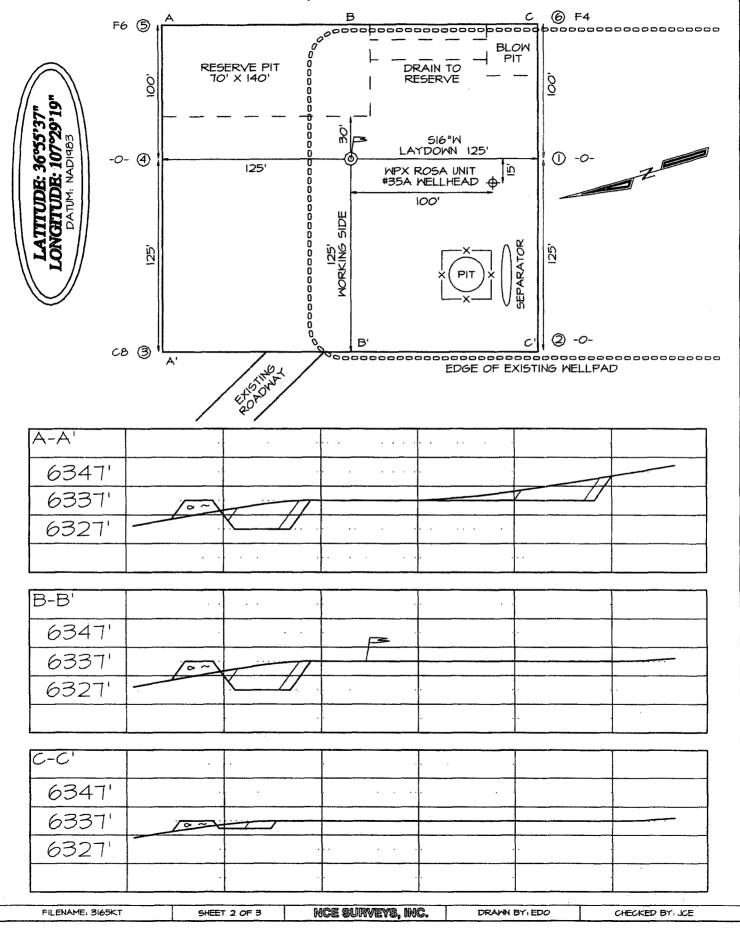
15269

Submit 3 Copies To Appropriate District	State of New Me	xico	Form C-103
Office District I	Energy, Minerals and Natu	ral Resources	WELL API NO.
1625 N. French Dr., Hobbs, NM 88240 District II	OIL CONCEDUATION	DIVICION	30-045-33795
1301 W. Grand Ave., Artesia, NM 88210 District III	OIL CONSERVATION 1220 South St. Frar		5. Indicate Type of Lease FEDERAL X
1000 Rio Brazos Rd., Aztec, NM 87410	Santa Fe, NM 87		STATE FEE 6. State Oil & Gas Lease No.
District IV 1220 S. St. Francis Dr., Santa Fe, NM	Summer 20, 1111 0.		SF-078765
87505 SUNDRY NOT	ICES AND REPORTS ON WELLS		7. Lease Name or Unit Agreement Name
(DO NOT USE THIS FORM FOR PROPO	SALS TO DRILL OR TO DEEPEN OR PL CATION FOR PERMIT" (FORM C-101) FO	JG BACK TO A	D 11.
PROPOSALS.)		, section	Rosa Unit 8. Well Number 35C
Type of Well: Oil Well Name of Operator	Gas Well Other		9. OGRID Number 120782
Williams Production Company, Ll	LC .		9. OGRID Number 120/82
3. Address of Operator			Blanco Mesaverde
P.O. Box 640 Aztec, NM 87410			
4. Well Location	from the south line and 1925 feet fro	om the west line	
Section 5 Township		NMPM	County San Juan
Section 5 formship	11. Elevation (Show whether DR,		
	6,337' GR		
Pit or Below-grade Tank Application			21 000?
	ter_>100'_Distance from nearest fresh wa Grade Tank: Volume	bbls; Construction N	
	Appropriate Box to Indicate N		
12. Check	Appropriate Box to fidicate is	ature of Notice,	Report of Other Data
	ITENTION TO:	í .	SEQUENT REPORT OF:
PERFORM REMEDIAL WORK TEMPORARILY ABANDON	PLUG AND ABANDON ☐ CHANGE PLANS	REMEDIAL WOR COMMENCE DRI	
PULL OR ALTER CASING	=	CASING/CEMEN	
OTHER.		OTUED.	П
OTHER: 13. Describe proposed or compared to the compared to t	oleted operations. (Clearly state all	OTHER:	d give pertinent dates, including estimated date
of starting any proposed w			tach wellbore diagram of proposed completion
or recompletion.			
Dellin of Operated and with the territory	1 a d		w re a large de la large de la large
			it multi-use drilling and completion to avoid tubing set. Pit to be constructed,
	nce with NMOCD guidelines and		
71 1 10 11 10			
I hereby certify that the information grade tank has been/will be constructed or	above is true and complete to the be refesed according to NMOCD guidelines [est of my knowledg Ⅺ, a general permit □	e and belief. I further certify that any pit or below- or an (attached) alternative OCD-approved plan .
	_		
SIGNATURE Correspond	77TLE_1	Orilling COM	_DATE6-13-2006_
Type or print name Larry Higgins	E-mail address: larry.higgins(@williams.com	Felephone No. (505) 634-4208
For State Use Only	A .		
APPROVED BY:	TITLE S	eputy oil & gas ii	HSPECTOR, DIST. P DATE JUN 2 8 2000
Conditions of Approval (if any):			
	•		

WILLIAMS PRODUCTION COMPANY ROSA UNIT #35C 2100' FSL & 1925' FWL, SECTION 5, T31N, R6W, NMPM SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6337'



WILLIAMS PRODUCTION COMPANY ROSA UNIT #35C 2100' FSL & 1925' FWL, SECTION 5, T31N, R6W, NMPM SAN JUAN COUNTY, NEW MEXICO BLEVATION: 6337'





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE:

5/10/2006

FIELD:

Blanco MV

WELL NAME:

Rosa #35C

SURFACE:

BLM

BH LOCATION:

NWSE Sec 5-31N-6W

MINERALS:

BLM

SURF LOCATION:

NESW Sec 5-31N-6W

LEASE#

SF-078765

ELEVATION:

6,337' GR

San Juan, NM

MEASURED DEPTH:

I. GEOLOGY:

Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	2,246	2,398	Cliff House	5,301	5,515
Kirtland	2,381	2,550	Menefee	5,346	5,560
Fruitland	2,816	3,019	Point Lookout	5,586	5,800
Picture Cliffs	3,116	3,328	Mancos	5,901	6,115
Lewis	3,386	3,600	TD	6,036	6,250

- B. MUD LOGGING PROGRAM: none
- C. LOGGING PROGRAM: Cased hole logs only.
- **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: Clear water with benex to 7" casing point. Convert to a LSND mud to log and run pipe. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses. Use air w/Air Hammer from 7 in. csg.to TD.
- B. <u>BOP TESTING</u>: 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	HOLE SIZE	<u>DEPTH</u> (MD)	CASING SIZE	WT. & GRADE
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3,814'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3,714'-6,250'	4-1/2"	10.5# K-55

B. FLOAT EQUIPMENT:

- 1. <u>SURFACE CASING:</u> 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (3) joints of Surface Casing.
- 2. <u>INTERMEDIATE CASING:</u> 7" 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 CASING:</u> 4-1/2" & 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.

IV. CEMENTING:

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

- 1. SURFACE: Slurry: 150sx 205 cu.ft.) of "Type III" + 2% CaCl₂ + ½ # of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
- 2. INTERMEDIATE: Lead 485 sx (1,006) cu.ft.) of "Premium Light with 8% gel, 1% CaCl₂ and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail 50 sx (70cu.ft.) of "Type III" with 1/4# cello-flake/sk, and (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use 100% excess in Lead Slurry to circulate to surface. No excess in Tail Slurry. Total volume = 1,076 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
- 3. PRODUCTION LINER: 10 bbl Gelled Water space. Lead: $50s\underline{x}$ (130ft³) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE. (Yield = 2.59 cu.ft./sk, Weight = 11.6 #/gal.). Tail: $100 \underline{sx}$ (215 ft³) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, ¼ #/sk cello flake and 4% Phenoseal. (Yield = 2.15 ft³/sk, Weight = 12.3 #/gal.). Displace cement at a minimum of 8 BPM. The 20% excess in lead and tail should cover 100 ft into intermediate casing. Total volume 324 ft³. WOC 12 hours

V. IV COMPLETION

A. CBL

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

B. PRESSURE TEST

1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

- 1. Perforate the Point Lookout as determined from the open hole logs.
- 2. Stimulate with approximately 9,300# of 14/30 LitePropTM sand in slick water.
- 3. Isolate Point Lookout with a CIBP.
- 4. Perforate the Menefee/Cliff House as determined from the open hole logs.
- 5. Stimulate with approximately 9,300# of 14/30 LitePropTM sand in slick water.
- 6. Test each zone before removing bridge plugs.

D. RUNNING TUBING

1. <u>Mesa Verde:</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.

Sr. Drilling Engineer

Rosa #035C Dir Ops Plan.doc



ROSA UNIT #35C SEC 5 T31N R6W 2100 FSL & 1925 FWL SAN JUAN COUNTY, NM

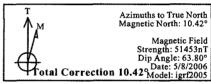
					SECTION	SECTION DETAILS				
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	89.60	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	89.60	400.00	0.00	0.00	0.00	0.00	0.00	KOP
3	1300.00	27.00	89.60	1267.06	1.47	208.16	3.00	89.60	208.16	HOLD
4	2556.89	27.00	89.60	2386.95	5.50	778.76	0.00	0.00	778.78	DROP
5	3764.12	0.00	89.60	3550.00	7.48	1057.97	2.24	180.00	1058.00	HOLD
6	3814.12	0.00	89.60	3600.00	7.48	1057.97	0.00	0.00	1058.00	Interm. Cs Pt
7	6250.12	0.00	89.60	6036.00	7.48	1057.97	0.00	89.60	1058.00	TOTAL DEPTH

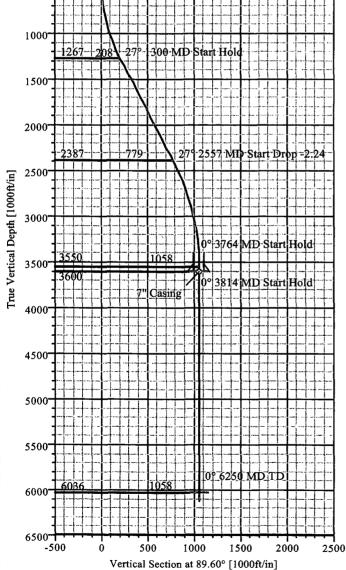
	WELL DETAILS								
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot		
Rosa Unit #35C	0.00	0.00	2156964.92	2824033.87	36°55'37.416N	107°29'16.800W	N/A		

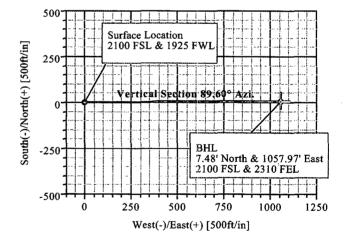
TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	
Interm. Cs Pt BHL	3600.00 6036.00	7.48 7.48	1057.97 1057.97	2156976.23 2156976.23	2825091.81 2825091.81	Point Point	



		FORM.	ATION TOP	DETAILS
	No.	TVDPath	MDPath	Formation
400 408 Ostart-Build 3.00	1 2 3	2246.00 2381.00 2816.00	2398.69 2550.21 3019.69	Ojo Alamo SS Kirtland Fruitland
500	4 5	3116.00 3386.00	3328.02 3600.01	Pictured Cliffs Lewis
	7 8	4981.00 5301.00 5346.00	5195.12 5515.12 5560.12	Cliff House Trans. Cliff House Menefee
1000 1267 208 27° 300 MD Start Hold	9 10	5586.00 5901.00	5800.12 6115.12	Point Lookout Mancos
1207-7208-727-1300-MD-Stant Hold	т			









Weatherford

Plan: Plan #1 (Rosa Unit #35C/1)

Created By: Jose Perez Date: 5/8/2006
Weatherford Drilling Services
Granbury Office
3611 Plaza East Court
Granbury, TX 76049
(817) 573 8500 Main
(817) 573 8001 Fax



DIRECTIONAL WELL INFORMATION SHEET

5/8/2006 DATE:

Attention:

Rod Middleton

From:

Gary Sizemore

Company:

Weatherford

Company:

Williams Production

Telephone #: 432-561-8892

Telephone #: 918-573-8776

Fax #:

432-561-8895

Fax #:

918-573-4839

918-573-1298

WELL INFO:

ROSA UNIT # 35-C MV

Rig KB: 14 ft.

9-5/8 in. Surface Casing will be set @ +/- 300 ft. Estimated KOP is 400 ft. (TVD). Drill 8-3/4 in. "S" shaped wellbore to a (TVD) of 3,600 ft. Have wellbore at less than 5 degrees angle at 3,600 ft. TVD. 7 in. Intermediate Casing will be set at this point. Well will be air drilled from this point to "TD". Please place Formation Names at corresponding TVD's on the Survey listing sheets. The Rosa #35-A well is on the same pad but won't be a problem.

ATTACHMENTS:

- (1) Section Staking Plat
- (2) Well-Pad Plat
- (3) Formation Tops List

Any questions, please give me a call.

Gary Sizemore

GEOLOGIC PROGNOSIS

Company: Project:

Willams Production Company. LLC

2006 Drilling Plan

Area:

Rosa Unit

Operator: Well Name: Williams Production Company. LLC Rosa Unit No. 35C (Kmv-Directional)

Location: NESW 05-31N-06W
Footage: 2100' FSL & 1925' FWL
County/State: San Juan/New Mexico

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- OL	41 V 🗢	veu	QL.	

6337

Estimate (14') KB:

6351

<u>Formation</u>	<u>Thickness</u>	<u>TVD</u>	Struct. Elev.
San Jose Fm.	2246	Surface	6337
Ojo Alamo Ss.	135	2246	4105
Kirtland Sh.	435	2381	3970
Fruitland Fm.	300	2816	3535
Pictured Cliffs Ss.	270	3116	3235
Lewis Sh.	205	3386	2965
Intermediate Casing Depth	1390	<u>3591</u>	2760
Cliff House Ss. Trans.	320	4981	1370
Cliff House Ss.	45	5301	1050
Menefee Fm.	240	5346	1005
Point Lookout Ss.	315	5586	765
Mancos Sh.	135	5901	450
Total Depth	NA	<u>6036</u>	315

Mechanical Logs:

Cased hole (TMDL, CBL) logs only

Correlation Logs:

Rosa Unit No. 167A (NENE 08-31N-06W)

Rosa Unit No. 150A (SWSW 32-32N-06W)

Notes:

This well will be directionally drilled to a BHL

2100' FSL & 2310' FEL 05-31N-06W

GENERAL ROSA DRILLING PLAN

Rosa Unit boundries:

T31N, R4W: all except sections 32-36 T31N, R5W: all except sections 1 & 2

T31N, R6W: all except sections 6,7,18,20, & 27-36

T32N, R6W: sections 32-36

FORMATION	LITHOLOGY	WATER	GAS	OILICOND	OVER-PRES	LOST CIRC
Nacimiento	Interbedded shales, siltstones and sandstones	Possible	Possible	No	No	No
Ojo Alamo	Sandstone and conglomerates with lenses of shale	Fresh	No	No	No	No
Kirtland	Shale W/interbedded sandstones	No	Possible	No	No	Νo
Fruitland	Inter, SS, SiltSt, SH &Coals w/carb, SS, SiltSt, SH	Yes	Yes	No	Possible	Possible
	Massive Sandstone w/thin interbedded shales	Possible	Yes	Possible	No	Possible
Lewis	Shale within interbedded sandstones and siltstones	No	Possible	No	No	No
Cliff House	Transgressive sandstones	Possible	Yes	No	No	No
Menefee	Sandstones, carb shales and coal	Possible	Yes	No	No	No
. 1	Regressive coastal barrier sandstone	Possible	Yes	Possible	No	Yes
Mancos	Marine shale and interbedded sandstone	No	Possible	Possible	No	Possible
Jpr Dadota	Marine sand and shales	No	Yes	Possible	No	Possible
wr Dakota	Fluvial sands, shales, & coal	Possible	Yes	Possible	No	Possible

DRILLING

Potential Hazards:

- 1. There are no overpressured zones expected in this well.
- 2. No H2S zones will be penetrated while drilling this well.

Mud System:

- Surface The surface hole will be drilled with a low-solids, non-dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 lb per gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
- 2. Intermediate The intermediate hole will be drilled with clear water and Benex to TD where the well will be mudded up to log and run casing. The mud system will be low-solids, non-dispersed with mud weights in the 9 to 10 lb per gal range as needed to control the well. Viscosities will be in the 45 to 55 range as needed to support any weight material. The weight material will consist of Barite.
- Production The well will be drilled using air from the intermediate casing point to TD. For Fruitland Coal wells, the coal section will be drilled with air/mist.

williams rroduction company, LLC

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Typical BOP setup

