Form 3160 DEPARTME (June 1990) BUREAU OF LA SUNDRY NOTICE AND		TED STATES ENT OF INTERIOR AND MANAGEMENT	5.	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993 Lease Designation and Serial No		
Do not ı	use this form for proposals to drill or to deepen of TO DRILL" for perm	6.	NMSF-078770 If Indian, Allottee or Tribe Name			
		210 FARMEIGTON NM	7			
	SUBMIT IN T		7.	If Unit or CA, Agreement Designation Rosa Unit		
1.	Type of Well Oıl Well Gas Well ★ Other	•	8.	Well Name and No Rosa Unit #186		
2.	Name of Operator WILLIAMS PRODUCTION COMPANY		9.	API Well No 30-039-30160		
3.	Address and Telephone No. PO Box 640 Aztec, NM 87410-0640	2	10	Field and Pool, or Exploratory Area BLANCO MV/BASIN DK		
4.	Location of Well (Footage, Sec., T., R., M., or 1660' FNL & 930' FWL Sec	Survey Description) 27, T31N, R5W NMPM	11.	County or Parish, State Rio Arriba, New Mexico		
	CHECK APPROPRIA	TE BOX(s) TO INDICATE NATURE OF NOTICE, REP	ORT, OR O	THER DATA		
	TYPE OF SUBMISSION	. ТҮРЕ С	OF ACTION			
H.	Notice of Intent X Subsequent Report Final Abandonment	Abandonment Recompletion Pluggmg Back Casing Repair Altering Casing X Other <u>Multiple zone completion</u>		Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form)		
13	directionally drilled, give subsurface locations	learly state all pertinent details, and give pertinent dates, ind and measured and true vertical depths for all markers and hereby requests authority to drill this as a Mes	zones pertin	ent to this work)*		
	I hereby certify that the foregoing intrue and co Signed Larry Higgins		te <u>7-</u> 2	3-07		
	(This space for Federal or State office use) Approved by Conditions of approval, if any	Title Petr.Eng.		Date [6/07		
	S.C. Section 1001, makes it a crime for any pers or representations as to any matter within its jur	on knowingly and willfully to make to any department or a isdiction.	gency of the	United States any false, fictitious or fraudulent		
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NMOCD

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District I 1625 N French District II 1301 W Grand District III 1000 Rio Brazo District IV 1220 S St Fre	Avenue, is Rd., A	Artesia, NM Aztec, NM 87	E 88210 7410	0IL 1220	CONSERVA) South S [.]	New Mexico Mal Resources Dep TION DIVISI t. Francis [NM 87505	[ON	Submit 7007 JUL 320	to Appro	Instri opriate State Le	Form C-102 Dectober 12, 2005 Uctions on back District Office Pase - 4 Copies Pase - 3 Copies
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Property 0 17033		1			Propert ROSA	•		-		€ We	186
'OGRID No 120782				*Operator Name WILLIAMS PRODUCTION COMPANY					*Elevation 6765 '		
L		<u> </u>	·····		¹⁰ Surface	Location				L <u></u>	
UL or lot no E	Section 27	Township 31N	Range 5W	Lot Ion	Feet from the 1660	North/South line	Fe	et from the 930	East/We WE	ist line ST	RIO ARRIBA
UL or lot no	Section	11 B	ottom Range	Hole L	OCATION I	f Different		om Surf	ace East/We	ct 1100	County
¹² Dedicated Acres				- 	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Orde		Edst/ #2		
NO ALLOWA	BLE W	ILL BE A OR A	SSIGNE	D TO TH ANDARD	IS COMPLETI UNIT HAS BE	ON UNTIL ALL EEN APPROVED	INT BY	THE DIVIS	SION		
15 930' <i>LAT. 36.8732</i> <i>LONG. 107.35</i> <i>DATUM: NAD.</i> 00 00 00 00 00 00 00 00 00 0	548 W I		Ŀ	278.68' EASE 07877 27 = 	0		5280.00	I hereby cer herein is tr knowledge ar either owns mineral intege proposed bot to drill thi to a contract or working agreement or heretofore e Signature I hereby c I hereby c Supature Brinted M ¹⁹ SURVE I hereby c Suparture Date o Signature	tify that we and co to belaef, a working erest in ti- tiom-hole is well at interest. co a compul- intered by well at to the and a compul- terest of the this plat of to the f to to to to the f to to t	the informality of the informality of the information of the informati	The state of the s
	- 		52	 77.36'				JASO	NC cate Nu	.ED	WARDS 15269



WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE:	7/2/2007	FIELD:	Basin DK/ BlancoMV
WELL NAME:	Rosa #186	SURFACE:	USFS
BH LOCATION:	SWNW Sec 27-31N-5W ⁷ R10 Arriba, NM	MINERALS:	BLM
ELEVATION:	6,765' GR	LEASE #	SF-078770

MEASURED DEPTH: 8,434'

- I. I. <u>GEOLOGY:</u> Surface formation San Jose
 - A. FORMATION TOPS: (KB)

Name	MD	Name	MD
Ojo Alamo	2,904	Menefee	5,879
Kirtland	3,054	Point Lookout	6,089
Fruitland	3,414	Mancos	6,399
Pictured Cliffs	3,684	Gallup	7,324
Lewis	3,929	Greenhorn	8,114
Cliff House	5,839	Graneros	8,169
		Dakota	8,304
		TD	8,434

- B. MUD LOGGING PROGRAM: Mudlogger on location at 100' above Gallup SS to TD. Mud logger to pick TD.
- C. LOGGING PROGRAM: HRI from surface casing to TD. SDL\DSN\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

- MUD PROGRAM: Clear water with benex to 7-5/8" 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 7-5/8in. 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.

Rosa #186 MVDK Ops Plan

Page 2 of 3 III. <u>MATERIALS</u>

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	4,159	7 5/8	26.4	K-55
Longstring	6 3/4	8,434	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.
- <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. <u>CEMENTING:</u>

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

- <u>SURFACE:</u> Slurry: <u>255sx</u> (356 cu.ft.) of "Type III" + 2% CaCl₂ + ¼ # 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. <u>INTERMEDIATE:</u> Lead <u>725 sx</u> (1,509) cu.ft.) of "Premium Light with 8% gel and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail 1<u>00 sx</u> (139cu.ft.) of "Type III" with 1/4# cello-flake/sk, (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 = 1,648 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
- 3. <u>PRODUCTION CASING</u>: 10 bbl Gelled Water space. Cement: 205 sx (438 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 slurry should cover 100 ft into intermediate casing. Total volume 438ft³. 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.

Rosa #186 MVDK Ops Plan

Page 3 of 3 C. STIMULATION

- 1. Stimulate Dakota with approximately 10,000# of LiteProp 108[™] sand in slick water..
- 2. Isolate Dakota with a RBP.
- 3. Stimulate Point Lookout with approximately 9300# of 14/30 LiteProp[™] in slick water.
- 4. Isolate Point Lookout with a RBP.
- 5. Perforate the Menefee/Cliff House as determined from the open hole logs.
- 6. Stimulate with approximately 9300# of 14/30 LiteProp[™] in slick water.
- 7. Test each zone before removing bridge plugs

D. RUNNING TUBING

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- 1. <u>Dakota</u>: Run 2-1/16", 3.25#, J-55, IJ tubing with 1/2 mule shoe on bottom, SN with pump-out plug on top of adeem joint and 5 Seal Units. Land tubing approximately 100' below top Dakota perf.
- 2. <u>Mesa Verde</u>: Run 2-1/16", 2.9#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforations.

Gary Sizemore Sr. Drilling Engineer