

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

MAY 06 2009

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
WILLIAMS PRODUCTION CO., LLC

3a. Address
P. O. BOX 640
AZTEC, NM 87410

3b. Phone No. (include area code)
(505) 634-4208

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Surface - 1655 FNL & 1855 FEL
BHL - 990 FNL & 660 FEL Sec 33, T32N, R6W

5. Lease Serial No
NMSF- 078772

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No
ROSA UNIT

8. Well Name and No.
ROSA UNIT COM #90C

9. API Well No.
30-045-34278

10. Field and Pool or Exploratory Area
BLANCO MV/BASIN MC/BASIN DK

11. Country or Parish, State
SAN JUAN, NEW MEXICO

12 CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize ☐ Deepen ☐ Production (Start/Resume) ☐ Water Shut-Off
☐ Alter Casing ☐ Fracture Treat ☐ Reclamation ☐ Well Integrity
☐ Casing Repair ☐ New Construction ☐ Recomplete ☐ Other
☒ Change Plans ☐ Plug and Abandon ☐ Temporarily Abandon
☐ Convert to Injection ☐ Plug Back ☐ Water Disposal

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

RCVD MAY 14 '09
OIL CONS. DIV.
DIST. 3

Due to a change of plan, Williams Production intends to drill this well to include Blanco Mesa Verde, Basin Mancos and Basin Dakota formations. See attached plat, operation plan and directional plan.

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

Hold C104

for Directional Survey
and "As Drilled" plat

14 I hereby certify that the foregoing is true and correct Name (Printed/Typed)

Larry Higgins

Title Drilling COM

Signature

Larry Higgins

Date 05/05/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Troy L. Sayers

Title Petroleum Eng.

Date 5/13/2009

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Office FFO

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

(Instructions on page 2)

NMOC

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210

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

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

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	*Pool Code	*Pool Name
	97232 / 72319 / 71599	BASIN MANCOS / BLANCO MESAVERDE / BASIN DAKOTA
*Property Code	*Property Name	*Well Number
17033	ROSA UNIT COM	90C
*OGRID No	*Operator Name	*Elevation
120782	WILLIAMS PRODUCTION COMPANY	6383'

¹⁰ Surface Location

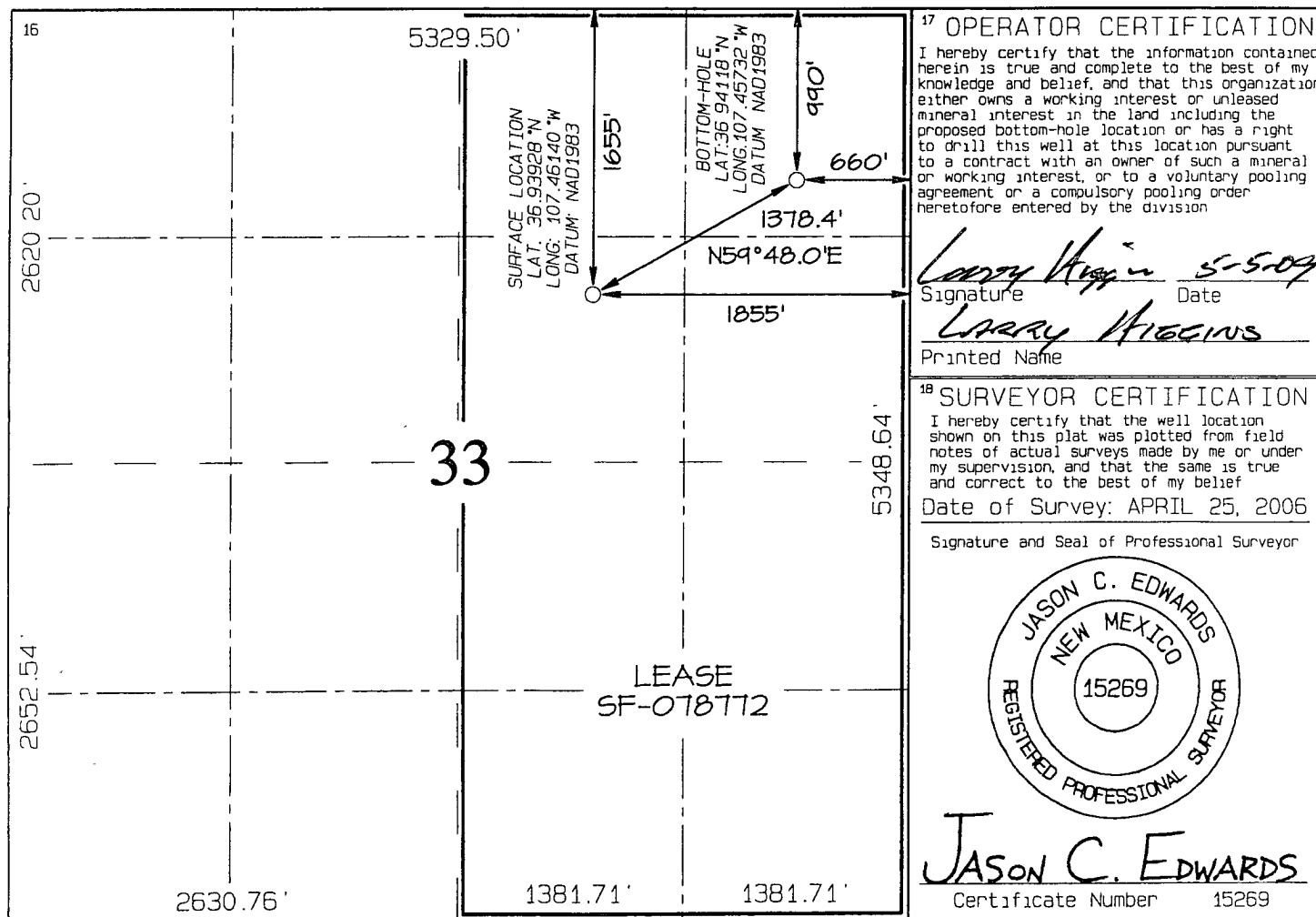
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	33	32N	6W		1655	NORTH	1855	EAST	SAN JUAN

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
A	33	32N	6W		990	NORTH	660	EAST	SAN JUAN

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No
320.0 Acres - (E/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: 2/18/2009 **FIELD:** Basin DK/ Basin MN/BlancoMV
WELL NAME: Rosa #90C **SURFACE:** BLM
BH LOCATION: ~~SWNE~~ **NE NE** Sec 33-32N-6W **MINERALS:** BLM
San Juan, NM
ELEVATION: 6,383' GR **LEASE #** SF-078772
MEASURED DEPTH: 8,363'

I. I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	2,327	2,650	Menefee	5,422	5,793
Kirtland	2,447	2,783	Point Lookout	5,627	5,998
Fruitland	2,917	2,917	Mancos	5,922	6,293
Pictured Cliffs	3,142	3,511	Gallup	6,977	7,348
Lewis	3,452	3,823	Greenhorn	7,702	8,073
Cliff House Trans	5,067	5,438	Graneros	7,760	8,133
Cliff House	5,377	5,748	Dakota	7,887	8,258
			TD	7,992	8,363 ✓

- B. MUD LOGGING PROGRAM:** Mudlogger on location from intermediate csg to TD. Mud logger to pick TD.
- C. LOGGING PROGRAM:** HRI/Temp from intermediate casing to TD. SDL\DSN\DSN over zones of interest.
- D. NATURAL GAUGES:** 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 7-5/8" 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. 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	3,988	7 5/8	26.4	K-55
Longstring	6 3/4	8,363	5 1/2	17	N-80

B. FLOAT EQUIPMENT:

- SURFACE CASING: 10 3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
- INTERMEDIATE CASING: 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).
- PRODUCTION LINER / CASING: 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)

- SURFACE: Slurry: ~~290sx~~ ^{520 F³} (341 cu.ft.) of "Type III" + 2% Cal-Seal 60 + 1/4 # 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.
- 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 = ~~1498 cu.ft.~~ ^{1550 F³} Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface **Test csg to 1500 psi / 30 min**
- PRODUCTION CASING: 10 bbl Gelled Water spacer. Cement: 325 sx (454 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 ~~(342) ft³~~ ^{454 F³} WOC 12 hours.

IV. IV COMPLETION**A. CBL**

- 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

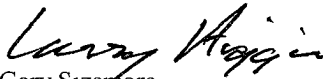
- Pressure test 5-1/2" casing to 6000 psi max, hold at 1500 psi for 30 minutes.

C. STIMULATION

1. Stimulate Dakota with approximately 10,000# of LiteProp 108™ 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 117,000# 40/70 white sand and 7500# 100 mesh white sand
5. Stimulate Point Lookout with approximately 9300# of 14/30 LiteProp™ 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 9300# of 14/30 LiteProp™ in slick water.
9. Test each zone before removing bridge plugs.

D. RUNNING TUBING

1. Production Tubing: 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


Gary Sizemore

 Sr. Drilling Engineer



Weatherford

Drilling Services

PROPOSAL



WILLIAMS PRODUCTION COMPANY
ROSA UNIT #90-C
SAN JUAN CO., NEW MEXICO
WELL FILE: **PLAN 1**

Submitted: February 24, 2009

Weatherford International Ltd.
P.O. Box 61028
Midland, Texas 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com



ROSA UNIT #90-C
SAN JUAN CO., NEW MEXICO

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	59.88	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	59.88	400.00	0.00	0.00	0.00	0.00	0.00	
3	1384.95	39.40	59.88	1309.14	163.33	281.56	4.00	59.88	325.50	
4	2018.48	39.40	59.88	1798.71	365.10	629.38	0.00	0.00	727.61	
5	3988.38	0.00	59.88	3617.00	691.76	1192.49	2.00	180.00	1378.61	Int. Csg. Pt.
6	8363.38	0.00	59.88	7992.00	691.76	1192.49	0.00	59.88	1378.61	PBHL

WELL DETAILS

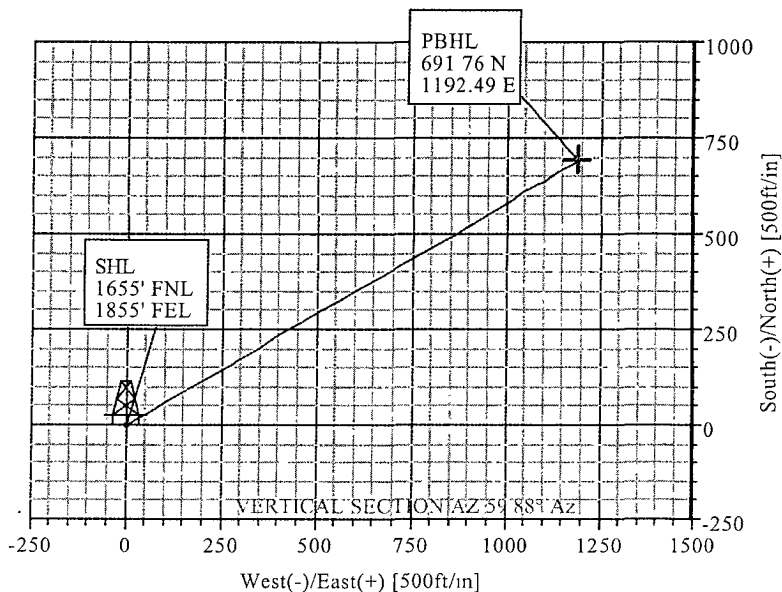
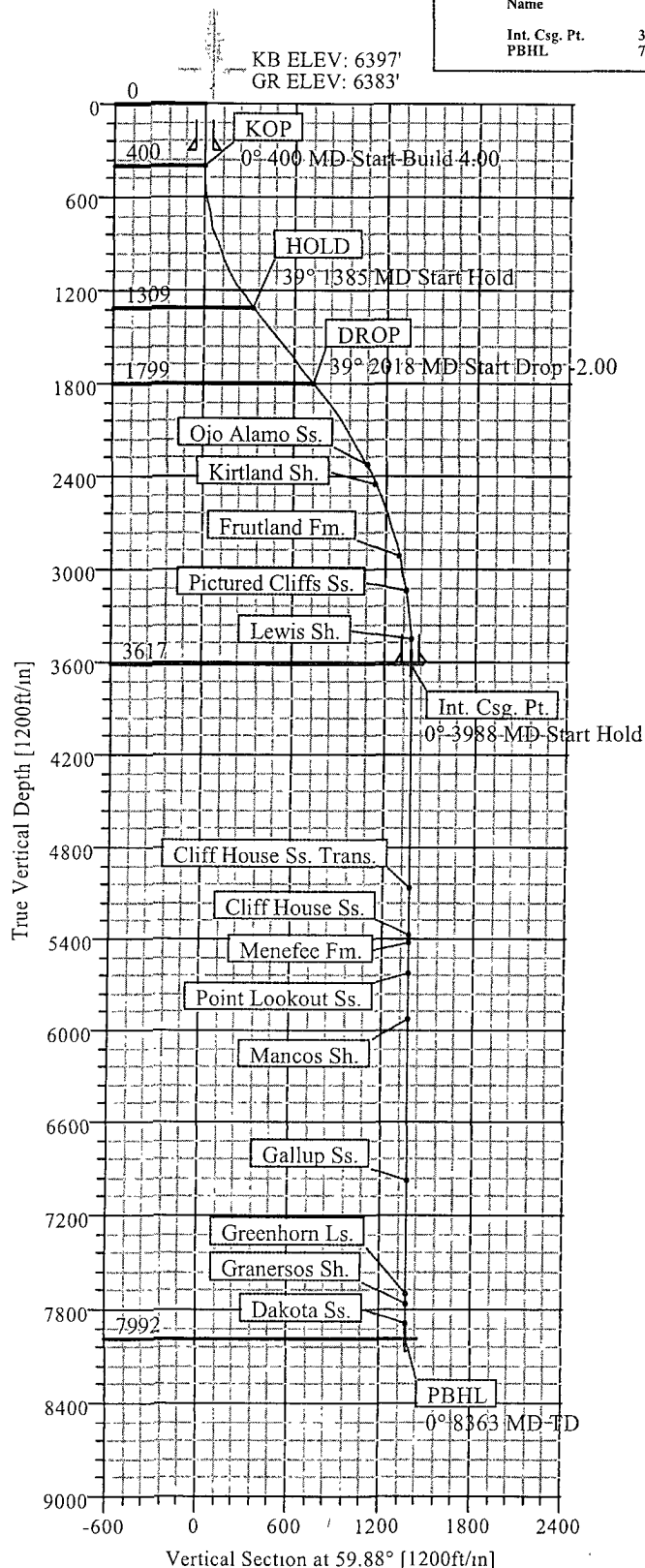
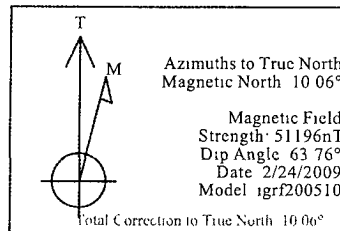
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#90-C	0.00	0.00	2161443.27	2831791.40	36°56'21.410N	107°27'41.040W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Int. Csg. Pt.	3617.00	691.76	1192.49	2162139.68	2832981.18	36°56'28.250N	107°27'26.350W	Point
PBHL	7992.00	691.76	1192.49	2162139.68	2832981.18	36°56'28.250N	107°27'26.350W	Point

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	2327.00	2650.25	Ojo Alamo Ss.
2	2447.00	2783.14	Kirtland Sh.
3	2917.00	3281.22	Fruitland Fm.
4	3142.00	3511.17	Pictured Cliffs Ss.
5	3452.00	3823.29	Lewis Sh.
6	5067.00	5438.38	Cliff House Ss. Trans.
7	5377.00	5748.38	Cliff House Ss.
8	5422.00	5793.38	Menefee Fm.
9	5627.00	5998.38	Point Lookout Ss.
10	5922.00	6293.38	Mancos Sh.
11	6977.00	7348.38	Gallup Ss.
12	7702.00	8073.38	Greenhorn Ls.
13	7762.00	8133.38	Graneros Sh.
14	7887.00	8258.38	Dakota Ss.



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CASING DETAILS

No.	TVD	MD	Name	Size
1	300.00	300.00	10 3/4"	10.750
2	3617.00	3988.38	7 5/8" Int. Csg. Pt.	0.000

Plan. Plan #1 (#90-C/1)

Created By: Lindsey Maddux

Date: 2/24/2009



Weatherford International, Inc.

Proposal Plan Report



Weatherford

Company: WILLIAMS PRODUCTION	Date: 2/24/2009	Time: 10:25:01	Page: 1
Field: San Juan County, NM (NAD 83)	Co-ordinate(NE) Reference: Site: Rosa Unit #90-C, True North		
Site: Rosa Unit #90-C	Vertical (TVD) Reference: SITE 6397.0		
Well: #90-C	Section (VS) Reference: Well: (0.00N, 0.00E, 59.88Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 2/24/2009
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: San Juan County, NM (NAD 83)

Map System: US State Plane Coordinate System 1983	Map Zone: New Mexico, Western Zone
Geo Datum: GRS 1980	Coordinate System: Site Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: igrf200510

Site: Rosa Unit #90-C

1655' FNL 1855' FEL of SEC 33 T32N R6W

Site Position:	Northing: 2161443.27 ft	Latitude: 36 56 21.410 N
From: Geographic	Easting: 2831791.40 ft	Longitude: 107 27 41.040 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 6383.00 ft		Grid Convergence: 0.22 deg

Well: #90-C

Slot Name:

Well Position:	+N/-S 0.00 ft	Northing: 2161443.27 ft	Latitude: 36 56 21.410 N
	+E/-W 0.00 ft	Easting: 2831791.40 ft	Longitude: 107 27 41.040 W
Position Uncertainty: 0.00 ft			

Wellpath: 1

Current Datum: SITE	Height 6397.00 ft	Drilled From: Surface
Magnetic Data: 2/24/2009		Tie-on Depth: 0.00 ft
Field Strength: 51196 nT		Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S ft	Declination: 10.06 deg
		Mag Dip Angle: 63.76 deg
		+E/-W ft
		Direction deg
0.00	0.00	0.00 59.88

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	59.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	59.88	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1384.95	39.40	59.88	1309.14	163.33	281.56	4.00	4.00	0.00	59.88	
2018.48	39.40	59.88	1798.71	365.10	629.38	0.00	0.00	0.00	0.00	
3988.38	0.00	59.88	3617.00	691.76	1192.49	2.00	-2.00	0.00	180.00	Int. Csg. Pt.
8363.38	0.00	59.88	7992.00	691.76	1192.49	0.00	0.00	0.00	59.88	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
300.00	0.00	59.88	300.00	0.00	0.00	0.00	0.00	0.00	0.00	59.88	10 3/4"
400.00	0.00	59.88	400.00	0.00	0.00	0.00	0.00	0.00	0.00	59.88	KOP
500.00	4.00	59.88	499.92	1.75	3.02	3.49	4.00	0.00	4.00	0.00	
600.00	8.00	59.88	599.35	6.99	12.06	13.94	4.00	0.00	4.00	0.00	
700.00	12.00	59.88	697.81	15.71	27.08	31.30	4.00	0.00	4.00	0.00	
800.00	16.00	59.88	794.82	27.84	48.00	55.49	4.00	0.00	4.00	0.00	
900.00	20.00	59.88	889.91	43.35	74.72	86.38	4.00	0.00	4.00	0.00	
1000.00	24.00	59.88	982.61	62.14	107.12	123.84	4.00	0.00	4.00	0.00	
1100.00	28.00	59.88	1072.47	84.13	145.03	167.67	4.00	0.00	4.00	0.00	
1200.00	32.00	59.88	1159.05	109.22	188.27	217.66	4.00	0.00	4.00	0.00	
1300.00	36.00	59.88	1241.94	137.27	236.63	273.56	4.00	0.00	4.00	0.00	
1384.95	39.40	59.88	1309.14	163.33	281.56	325.50	4.00	0.00	4.00	0.00	HOLD
1400.00	39.40	59.88	1320.78	168.12	289.82	335.06	0.00	0.00	0.00	0.00	
1500.00	39.40	59.88	1398.05	199.97	344.72	398.53	0.00	0.00	0.00	0.00	
1600.00	39.40	59.88	1475.33	231.82	399.62	462.00	0.00	0.00	0.00	0.00	



Weatherford International, Inc.

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Weatherford

Company: WILLIAMS PRODUCTION	Date: 2/24/2009	Time: 10:25:01	Page: 2
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Site: Rosa Unit #90-C	Vertical (TVD) Reference:	SITE: 6397.0	
Well: #90-C	Section (VS) Reference:	Well: (0.00N, 0.00E; 59.88Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
1700.00	39.40	59.88	1552.60	263.67	454.53	525.47	0.00	0.00	0.00	0.00	
1800.00	39.40	59.88	1629.88	295.52	509.43	588.94	0.00	0.00	0.00	0.00	
1900.00	39.40	59.88	1707.15	327.36	564.33	652.41	0.00	0.00	0.00	0.00	
2000.00	39.40	59.88	1784.43	359.21	619.23	715.88	0.00	0.00	0.00	0.00	
2018.48	39.40	59.88	1798.71	365.10	629.38	727.61	0.00	0.00	0.00	0.00	DROP
2100.00	37.77	59.88	1862.43	390.61	673.35	778.44	-2.00	0.00	2.00	180.00	
2200.00	35.77	59.88	1942.54	420.64	725.12	838.30	-2.00	0.00	2.00	180.00	
2300.00	33.77	59.88	2024.68	449.25	774.45	895.32	-2.00	0.00	2.00	180.00	
2400.00	31.77	59.88	2108.76	476.41	821.26	949.44	-2.00	0.00	2.00	180.00	
2500.00	29.77	59.88	2194.68	502.08	865.51	1000.59	-2.00	0.00	2.00	180.00	
2600.00	27.77	59.88	2282.34	526.23	907.13	1048.72	-2.00	0.00	2.00	180.00	
2650.25	26.76	59.88	2327.00	537.78	927.04	1071.73	-2.00	0.00	2.00	180.00	Ojo Alamo Ss.
2700.00	25.77	59.88	2371.62	548.82	946.09	1093.75	-2.00	0.00	2.00	180.00	
2783.14	24.10	59.88	2447.00	566.41	976.41	1128.80	-2.00	0.00	2.00	180.00	Kirtland Sh.
2800.00	23.77	59.88	2462.41	569.84	982.33	1135.64	-2.00	0.00	2.00	180.00	
2900.00	21.77	59.88	2554.62	589.26	1015.80	1174.34	-2.00	0.00	2.00	180.00	
3000.00	19.77	59.88	2648.11	607.05	1046.47	1209.80	-2.00	0.00	2.00	180.00	
3100.00	17.77	59.88	2742.79	623.19	1074.30	1241.97	-2.00	0.00	2.00	180.00	
3200.00	15.77	59.88	2838.54	637.67	1099.25	1270.81	-2.00	0.00	2.00	180.00	
3281.22	14.14	59.88	2917.00	648.19	1117.38	1291.77	-2.00	0.00	2.00	180.00	Fruitland Fm.
3300.00	13.77	59.88	2935.23	650.46	1121.30	1296.30	-2.00	0.00	2.00	180.00	
3400.00	11.77	59.88	3032.75	661.55	1140.41	1318.40	-2.00	0.00	2.00	180.00	
3500.00	9.77	59.88	3130.99	670.92	1156.57	1337.08	-2.00	0.00	2.00	180.00	
3511.17	9.54	59.88	3142.00	671.86	1158.19	1338.96	-2.00	0.00	2.00	180.00	Pictured Cliffs Ss.
3600.00	7.77	59.88	3229.81	678.57	1169.75	1352.33	-2.00	0.00	2.00	180.00	
3700.00	5.77	59.88	3329.11	684.48	1179.95	1364.11	-2.00	0.00	2.00	180.00	
3800.00	3.77	59.88	3428.76	688.65	1187.14	1372.42	-2.00	0.00	2.00	180.00	
3823.29	3.30	59.88	3452.00	689.37	1188.38	1373.86	-2.00	0.00	2.00	180.00	Lewis Sh.
3900.00	1.77	59.88	3528.64	691.08	1191.31	1377.25	-2.00	0.00	2.00	180.00	
3988.38	0.00	59.88	3617.00	691.76	1192.49	1378.61	-2.00	0.00	2.00	180.00	Int. Csg. Pt.
4000.00	0.00	59.88	3628.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4100.00	0.00	59.88	3728.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4200.00	0.00	59.88	3828.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4300.00	0.00	59.88	3928.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4400.00	0.00	59.88	4028.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4500.00	0.00	59.88	4128.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4600.00	0.00	59.88	4228.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4700.00	0.00	59.88	4328.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4800.00	0.00	59.88	4428.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
4900.00	0.00	59.88	4528.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5000.00	0.00	59.88	4628.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5100.00	0.00	59.88	4728.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5200.00	0.00	59.88	4828.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5300.00	0.00	59.88	4928.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5400.00	0.00	59.88	5028.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5438.38	0.00	59.88	5067.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Cliff House Ss. Trans.
5500.00	0.00	59.88	5128.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5600.00	0.00	59.88	5228.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5700.00	0.00	59.88	5328.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5748.38	0.00	59.88	5377.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Cliff House Ss.
5793.38	0.00	59.88	5422.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Menefee Fm.
5800.00	0.00	59.88	5428.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
5900.00	0.00	59.88	5528.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	



Weatherford International, Inc.

Proposal Plan Report



Weatherford

Company: WILLIAMS PRODUCTION	Date: 2/24/2009	Time: 10:25:01	Page: 3
Field: San Juan County, NM (NAD 83)	Co-ordinate(NE) Reference:	Site: Rosa Unit #90-C, True North	
Site: Rosa Unit #90-C	Vertical (TVD) Reference:	SITE: 6397.0	
Well: #90-C	Section (VS) Reference:	Well: (0.00N;0.00E;59.88Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
5998.38	0.00	59.88	5627.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Point Lookout Ss.
6000.00	0.00	59.88	5628.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6100.00	0.00	59.88	5728.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6200.00	0.00	59.88	5828.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6293.38	0.00	59.88	5922.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Mancos Sh.
6300.00	0.00	59.88	5928.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6400.00	0.00	59.88	6028.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6500.00	0.00	59.88	6128.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6600.00	0.00	59.88	6228.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6700.00	0.00	59.88	6328.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6800.00	0.00	59.88	6428.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
6900.00	0.00	59.88	6528.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7000.00	0.00	59.88	6628.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7100.00	0.00	59.88	6728.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7200.00	0.00	59.88	6828.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7300.00	0.00	59.88	6928.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7348.38	0.00	59.88	6977.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Gallup Ss.
7400.00	0.00	59.88	7028.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7500.00	0.00	59.88	7128.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7600.00	0.00	59.88	7228.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7700.00	0.00	59.88	7328.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7800.00	0.00	59.88	7428.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
7900.00	0.00	59.88	7528.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
8000.00	0.00	59.88	7628.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
8073.38	0.00	59.88	7702.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Greenhorn Ls.
8100.00	0.00	59.88	7728.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
8133.38	0.00	59.88	7762.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Graneros Sh.
8200.00	0.00	59.88	7828.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
8258.38	0.00	59.88	7887.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	Dakota Ss.
8300.00	0.00	59.88	7928.62	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	
8363.38	0.00	59.88	7992.00	691.76	1192.49	1378.61	0.00	0.00	0.00	59.88	PBHL

Targets

Name	Description Dip.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec	<--- Longitude ---> Deg Min Sec
Int. Csg. Pt.		3617.00	691.76	1192.49	2162139.68	2832981.18	36 56 28.250 N	107 27 26.350 W
-Plan hit target								
PBHL		7992.00	691.76	1192.49	2162139.68	2832981.18	36 56 28.250 N	107 27 26.350 W
-Plan hit target								

Formations

MD ft	TVD ft	Formations	Lithology	Dip/Angle deg	Dip Direction deg
2650.25	2327.00	Ojo Alamo Ss.		0.00	0.00
2783.14	2447.00	Kirtland Sh.		0.00	0.00
3281.22	2917.00	Fruitland Fm.		0.00	0.00
3511.17	3142.00	Pictured Cliffs Ss.		0.00	0.00
3823.29	3452.00	Lewis Sh.		0.00	0.00
5438.38	5067.00	Cliff House Ss. Trans.		0.00	0.00
5748.38	5377.00	Cliff House Ss.		0.00	0.00
5793.38	5422.00	Menefee Fm.		0.00	0.00
5998.38	5627.00	Point Lookout Ss.		0.00	0.00
6293.38	5922.00	Mancos Sh.		0.00	0.00
7348.38	6977.00	Gallup Ss.		0.00	0.00



Weatherford International, Inc.

Proposal Plan Report

**Weatherford**

Company:	WILLIAMS PRODUCTION	Date:	2/24/2009	Time:	10:25:01	Page:	4
Field:	San Juan County, NM (NAD 83)	Co-ordinate(NE) Reference:	Site: Rosa Unit #90-C, True North				
Site:	Rosa Unit #90-C	Vertical (TVD) Reference:	SITE 6397.0				
Well:	#90-C	Section (VS) Reference:	Well (0.00N;0.00E;59.88Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
8073.38	7702.00	Greenhorn Ls.		0.00	0.00
8133.38	7762.00	Graneros Sh		0.00	0.00
8258.38	7887.00	Dakota Ss.		0.00	0.00

Annotation

MD ft	TVD ft	
400.00	400.00	KOP
1384.95	1309.15	HOLD
2018.48	1798.71	DROP
3988.38	3617.00	Int. Csg. Pt.
8363.38	7992.00	PBHL

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	10.750	12.250	10 3/4"
3988.38	3617.00	0.000	0.000	7 5/8" Int. Csg. Pt.