



WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 7/31/2006

WELLNAME: Rosa Unit #310A **FIELD:** Basin Fruitland Coal

BH LOCATION: NENW Sec 26-31N-4W
Rio Arriba, NM **SURFACE:** USFS

SURF. LOCATION: SENW Sec 26-31N-4W

ELEVATION: 6,986' GR **MINERALS:** BLM

TOTAL DEPTH: 4,102' **LEASE #** SF-078894

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

NAME	TVD	MD	NAME	TVD	MD
San Jose	Surface	Surface	Top Coal	3,745	3,936
Nacimiento	1,985	2,084	Bottom Coal	3,810	4,001
Ojo Alamo	3,270	3,460	Pictured Cliffs	3,825	4,016
Kirtland	3,400	3,591	TD	3,910	4,102
Fruitland	3,535	3,726			

B. LOGGING PROGRAM: None

C. 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" casing point. Treat for lost circulation as necessary. Expect 100% returns prior to cementing. Notify Engineering of any mud losses. If coal is detected before 3,916' (MD) DO NOT drill deeper until Engineering is contacted.
- B. Drilling Fluid:** Coal section will be drilled with Fruitland Coal water. Mud logger will pick TD .
- C. MUD LOGGING PRORAM:** Mud logger will be on location at drill out below 7" casing to TD.

- D. **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:

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3,916'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3,816'-4,001'	5-1/2"	15.5# K-55

B. FLOAT EQUIPMENT:

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. **INTERMEDIATE CASING:** 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. (**NFL-FRA 90-1**).
3. **PRODUCTION LINER / CASING:** 4-1/2" & 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place centralizers as needed across selected production intervals.

C. CEMENTING:

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

1. **SURFACE:** Use 190 sx (264 cu.ft.) of "Type III" with 2% CaCl₂ and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). Use **100% excess** to circulate the surface. WOC 12 hours. Total volume = 264 cu.ft. Test to 1500#.
2. **INTERMEDIATE:** Lead - 545 sx (1,140 cu.ft.) of "Type III" 65/35 poz 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 1% CaCl₂ (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use **120% excess in Lead Slurry** to circulate to surface. **No excess in Tail Slurry**. Total volume = 1,210 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. **PRODUCTION LINER:** Open hole completion. No cement.

IV COMPLETION

A. PRESSURE TEST

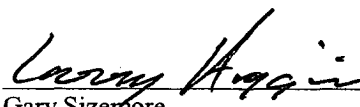
Pressure test 7" casing to 3300# for 15 minutes.

B. STIMULATION

Cavitate Well with reciprocation and rotation. Surge wells with water and air and then flow back to pit.
Cavitate for 2 to 3 weeks. Maximum pressure not expected to exceed 2,000 psi.

C. RUNNING TUBING

1. Fruitland Coal: Run 2-7/8", 4.7#, J-55, EUE tubing with a SN (1.375" ID) on top of bottom joint. Land tubing approximately 50' above TD.



Gary Sizenmore

 Sr. Drilling Engineer



Weatherford

Drilling Services

PROPOSAL



WILLIAMS PRODUCTION COMPANY

ROSA UNIT 310 A (BHL 2)

Prepared by: Jose A Perez

Submitted: 07/28/06

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Weatherford

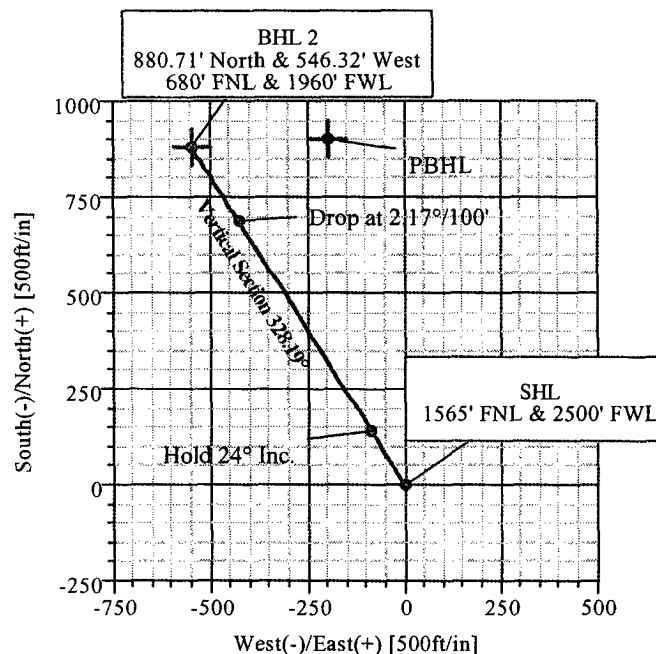
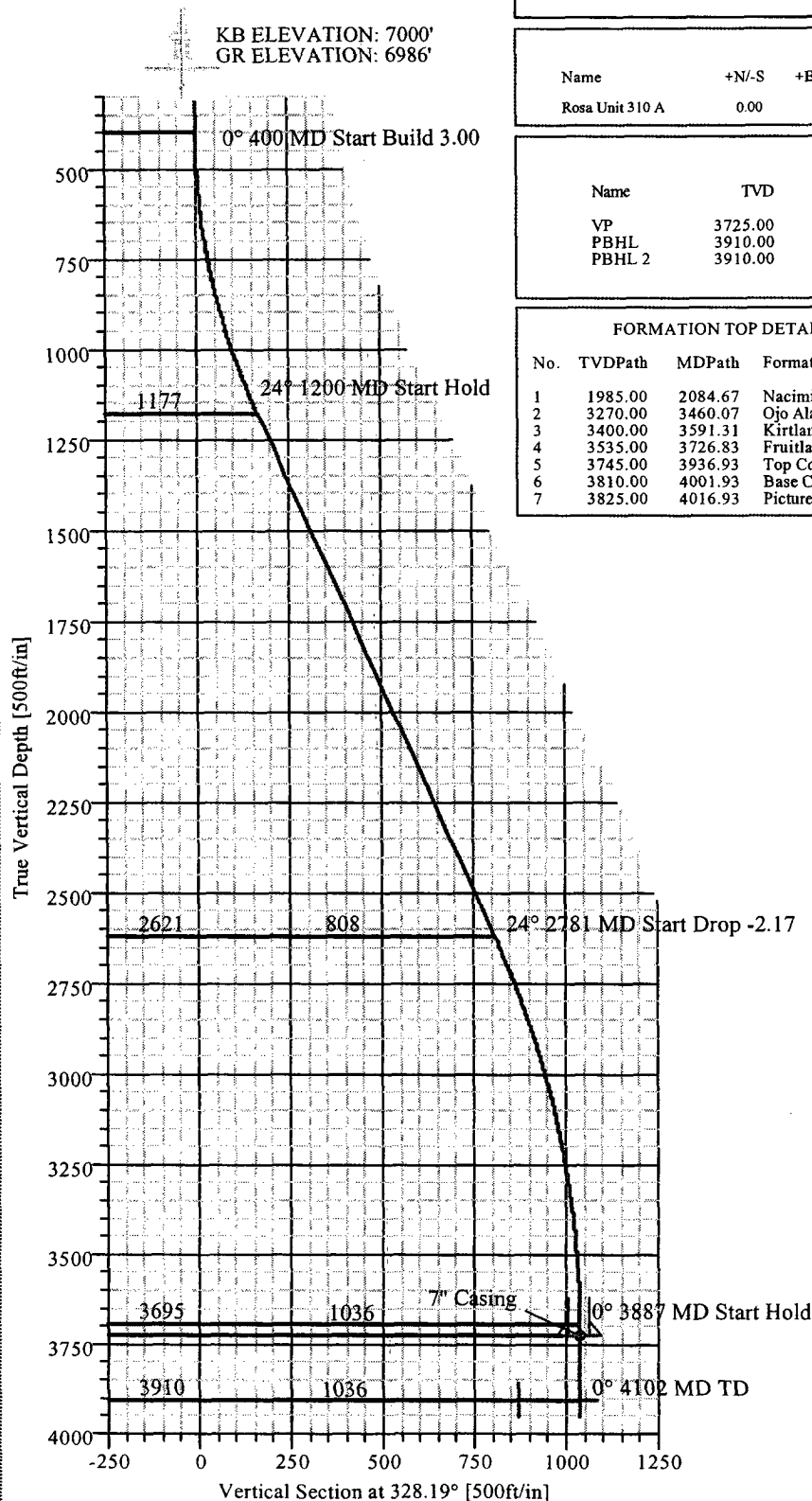
ROSA UNIT 310 A
Section 26 T 31N R 4W
1565' FNL & 2500' FWL
RIO ARriba COUNTY, NM
Plan 2 (new BHL)

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	328.19	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	328.19	400.00	0.00	0.00	0.00	0.00	0.00	
3	1200.00	24.00	328.19	1176.81	140.31	-87.04	3.00	328.19	165.12	
4	2780.88	24.00	328.19	2621.01	686.72	-425.99	0.00	0.00	808.12	
5	3886.93	0.00	328.19	3695.00	880.71	-546.32	2.17	180.00	1036.40	VP
6	3916.93	0.00	328.19	3725.00	880.71	-546.32	0.00	0.00	1036.40	PBHL 2
7	4101.93	0.00	328.19	3910.00	880.71	-546.32	0.00	328.19	1036.40	

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Rosa Unit 310 A	0.00	0.00	2137825.38	678180.88	36°52'25.000N	107°13'27.000W	N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
VP	3725.00	880.71	-546.32	36°52'33.709N	107°13'33.724W	Point
PBHL	3910.00	903.09	-195.92	36°52'33.930N	107°13'29.411W	Point
PBHL 2	3910.00	880.71	-546.32	36°52'33.709N	107°13'33.724W	Point

FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	1985.00	2084.67	Nacimiento
2	3270.00	3460.07	Ojo Alamo
3	3400.00	3591.31	Kirtland
4	3535.00	3726.83	Fruitland
5	3745.00	3936.93	Top Coal Interval
6	3810.00	4001.93	Base Coal Interval
7	3825.00	4016.93	Pictured Cliffs



T
Azimuths to True North
Magnetic North: 10.27°
Magnetic Field
Strength: 51438nT
Dip Angle: 63.80°
Date: 7/28/2006
Model: igrf2005
Total Correction 10.27°

Plan: Plan #1 (Rosa Unit 310A/1) p2
Created By: Jose Perez
Weatherford Drilling Services
3611 Plaza East Court
Granbury TX 76049
(817) 573 8500 MAIN
(817) 573 8001 FAX
Date: 07/28/2006

Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION Field: RIO ARRIBA COUNTY (NAD 27) Site: Rosa Unit 310 A Well: Rosa Unit 310 A Wellpath: 1		Date: 7/28/2006 Co-ordinate(NE) Reference: Site: Rosa Unit 310 A, True North Vertical (TVD) Reference: SITE 7000.0 Section (VS) Reference: Well (0.00N,0.00E,328.19Azi) Plan: Plan #2		Page: 1
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Field: RIO ARRIBA COUNTY (NAD 27) NEW MEXICO	
Map System: US State Plane Coordinate System 1927 Geo Datum: NAD27 (Clarke 1866) Sys Datum: Mean Sea Level	Map Zone: New Mexico, Western Zone Coordinate System: Site Centre Geomagnetic Model: igrf2005

Site: Rosa Unit 310 A Well Pad 26 1565' FNL & 2500' FWL	
Site Position: From: Geographic Position Uncertainty: 0.00 ft Ground Level: 6986.00 ft	Northing: 2137825.38 ft Easting: 678180.88 ft Latitude: 36 52 25.000 N Longitude: 107 13 27.000 W North Reference: True Grid Convergence: 0.37 deg

Well: Rosa Unit 310 A S well		Slot Name:
Well Position: +N/-S 0.00 ft +E/-W 0.00 ft Position Uncertainty: 0.00 ft	Northing: 2137825.38 ft Easting: 678180.88 ft	Latitude: 36 52 25.000 N Longitude: 107 13 27.000 W

Wellpath: 1		Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 10.27 deg Mag Dip Angle: 63.80 deg
Current Datum: SITE Magnetic Data: 7/28/2006 Field Strength: 51438 nT Vertical Section: Depth From (TVD)	Height: 7000.00 ft +N/-S ft	+E/-W ft Direction deg
3910.00	0.00	0.00 328.19

Plan: Plan #2 Principal: No	Date Composed: 7/28/2006 Version: 1 Tied-to: From Surface
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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	328.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	328.19	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	24.00	328.19	1176.81	140.31	-87.04	3.00	3.00	0.00	328.19	
2780.88	24.00	328.19	2621.01	686.72	-425.99	0.00	0.00	0.00	0.00	
3886.93	0.00	328.19	3695.00	880.71	-546.32	2.17	-2.17	0.00	180.00	
3916.93	0.00	328.19	3725.00	880.71	-546.32	0.00	0.00	0.00	0.00	VP
4101.93	0.00	328.19	3910.00	880.71	-546.32	0.00	0.00	0.00	328.19	PBHL 2

Section 1 : Start Hold										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.00	0.00	328.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	328.19	400.00	0.00	0.00	0.00	0.00	0.00	0.00	328.19

Section 2 : Start Build 3.00										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
500.00	3.00	328.19	499.95	2.22	-1.38	2.62	3.00	3.00	0.00	0.00
600.00	6.00	328.19	599.63	8.89	-5.52	10.46	3.00	3.00	0.00	0.00
700.00	9.00	328.19	698.77	19.98	-12.39	23.51	3.00	3.00	0.00	0.00
800.00	12.00	328.19	797.08	35.47	-22.00	41.74	3.00	3.00	0.00	0.00
900.00	15.00	328.19	894.31	55.30	-34.30	65.08	3.00	3.00	0.00	0.00
1000.00	18.00	328.19	990.18	79.43	-49.27	93.48	3.00	3.00	0.00	0.00
1100.00	21.00	328.19	1084.43	107.80	-66.87	126.85	3.00	3.00	0.00	0.00
1200.00	24.00	328.19	1176.81	140.31	-87.04	165.12	3.00	3.00	0.00	0.00

Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION
Field: RIO ARRIBA COUNTY (NAD 27)
Site: Rosa Unit 310 A
Well: Rosa Unit 310 A
Wellpath: 1

Date: 7/28/2006 **Time:** 10:45:20 **Page:** 2
Co-ordinate(N/E) Reference: Site: Rosa Unit 310 A, True North
Vertical (TVD) Reference: SITE 7000.0
Section (VS) Reference: Well (0.00N,0.00E,328.19Azi)
Plan: Plan #2

Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1300.00	24.00	328.19	1268.16	174.88	-108.48	205.79	0.00	0.00	0.00	0.00
1400.00	24.00	328.19	1359.52	209.44	-129.92	246.46	0.00	0.00	0.00	0.00
1500.00	24.00	328.19	1450.87	244.00	-151.36	287.14	0.00	0.00	0.00	0.00
1600.00	24.00	328.19	1542.23	278.57	-172.80	327.81	0.00	0.00	0.00	0.00
1700.00	24.00	328.19	1633.58	313.13	-194.24	368.48	0.00	0.00	0.00	0.00
1800.00	24.00	328.19	1724.94	347.70	-215.68	409.16	0.00	0.00	0.00	0.00
1900.00	24.00	328.19	1816.29	382.26	-237.12	449.83	0.00	0.00	0.00	0.00
2000.00	24.00	328.19	1907.65	416.82	-258.56	490.51	0.00	0.00	0.00	0.00
2084.67	24.00	328.19	1985.00	446.09	-276.72	524.95	0.00	0.00	0.00	0.00
2100.00	24.00	328.19	1999.00	451.39	-280.00	531.18	0.00	0.00	0.00	0.00
2200.00	24.00	328.19	2090.36	485.95	-301.44	571.85	0.00	0.00	0.00	0.00
2300.00	24.00	328.19	2181.71	520.51	-322.88	612.53	0.00	0.00	0.00	0.00
2400.00	24.00	328.19	2273.06	555.08	-344.32	653.20	0.00	0.00	0.00	0.00
2500.00	24.00	328.19	2364.42	589.64	-365.76	693.87	0.00	0.00	0.00	0.00
2600.00	24.00	328.19	2455.77	624.21	-387.20	734.55	0.00	0.00	0.00	0.00
2700.00	24.00	328.19	2547.13	658.77	-408.65	775.22	0.00	0.00	0.00	0.00
2780.88	24.00	328.19	2621.01	686.72	-425.99	808.12	0.00	0.00	0.00	0.00

Section 4 : Start Drop -2.17

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
2800.00	23.59	328.19	2638.51	693.28	-430.05	815.83	2.17	-2.17	0.00	180.00
2900.00	21.42	328.19	2730.89	725.80	-450.22	854.10	2.17	-2.17	0.00	180.00
3000.00	19.25	328.19	2824.66	755.32	-468.54	888.84	2.17	-2.17	0.00	180.00
3100.00	17.08	328.19	2919.67	781.80	-484.97	920.00	2.17	-2.17	0.00	180.00
3200.00	14.91	328.19	3015.80	805.21	-499.49	947.55	2.17	-2.17	0.00	180.00
3300.00	12.74	328.19	3112.89	825.51	-512.08	971.44	2.17	-2.17	0.00	180.00
3400.00	10.57	328.19	3210.83	842.67	-522.72	991.63	2.17	-2.17	0.00	180.00
3460.07	9.26	328.19	3270.00	851.46	-528.17	1001.97	2.17	-2.17	0.00	-180.00
3500.00	8.40	328.19	3309.46	856.67	-531.40	1008.10	2.17	-2.17	0.00	180.00
3591.31	6.41	328.19	3400.00	866.67	-537.61	1019.87	2.17	-2.17	0.00	180.00
3600.00	6.23	328.19	3408.64	867.48	-538.11	1020.83	2.17	-2.17	0.00	-180.00
3700.00	4.06	328.19	3508.23	875.09	-542.84	1029.79	2.17	-2.17	0.00	180.00
3726.83	3.47	328.19	3535.00	876.59	-543.76	1031.55	2.17	-2.17	0.00	180.00
3800.00	1.89	328.19	3608.09	879.50	-545.57	1034.97	2.17	-2.17	0.00	-180.00
3886.93	0.00	328.19	3695.00	880.71	-546.32	1036.40	2.17	-2.17	0.00	-180.00

Section 5 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3900.00	0.00	328.19	3708.07	880.71	-546.32	1036.40	0.00	0.00	0.00	328.19
3916.93	0.00	328.19	3725.00	880.71	-546.32	1036.40	0.00	0.00	0.00	328.19

Section 6 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3936.93	0.00	328.19	3745.00	880.71	-546.32	1036.40	0.00	0.00	0.00	328.19
4000.00	0.00	328.19	3808.07	880.71	-546.32	1036.40	0.00	0.00	0.00	328.19
4001.93	0.00	328.19	3810.00	880.71	-546.32	1036.40	0.00	0.00	0.00	328.19
4016.93	0.00	328.19	3825.00	880.71	-546.32	1036.40	0.00	0.00	0.00	328.19
4101.93	0.00	328.19	3910.00	880.71	-546.32	1036.40	0.00	0.00	0.00	328.19

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
400.00	0.00	328.19	400.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP-Build at 3"/100'
500.00	3.00	328.19	499.95	2.22	-1.38	2.62	3.00	3.00	0.00	
600.00	6.00	328.19	599.63	8.89	-5.52	10.46	3.00	3.00	0.00	
700.00	9.00	328.19	698.77	19.98	-12.39	23.51	3.00	3.00	0.00	
800.00	12.00	328.19	797.08	35.47	-22.00	41.74	3.00	3.00	0.00	

Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION Field: RIO ARriba COUNTY (NAD 27) Site: Rosa Unit 310 A Well: Rosa Unit 310 A Wellpath: 1	Date: 7/28/2006 Time: 10:45:20 Page: 3 Co-ordinate(NE) Reference: Site: Rosa Unit 310 A, True North Vertical (TVD) Reference: SITE 7000.0 Section (VS) Reference: Well (0.00N,0.00E,328.19Azi) Plan: Plan #2
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
900.00	15.00	328.19	894.31	55.30	-34.30	65.08	3.00	3.00	0.00	
1000.00	18.00	328.19	990.18	79.43	-49.27	93.48	3.00	3.00	0.00	
1100.00	21.00	328.19	1084.43	107.80	-66.87	126.85	3.00	3.00	0.00	
1200.00	24.00	328.19	1176.81	140.31	-87.04	165.12	3.00	3.00	0.00	Hold 24° Inc.
1300.00	24.00	328.19	1268.16	174.88	-108.48	205.79	0.00	0.00	0.00	
1400.00	24.00	328.19	1359.52	209.44	-129.92	246.46	0.00	0.00	0.00	
1500.00	24.00	328.19	1450.87	244.00	-151.36	287.14	0.00	0.00	0.00	
1600.00	24.00	328.19	1542.23	278.57	-172.80	327.81	0.00	0.00	0.00	
1700.00	24.00	328.19	1633.58	313.13	-194.24	368.48	0.00	0.00	0.00	
1800.00	24.00	328.19	1724.94	347.70	-215.68	409.16	0.00	0.00	0.00	
1900.00	24.00	328.19	1816.29	382.26	-237.12	449.83	0.00	0.00	0.00	
2000.00	24.00	328.19	1907.65	416.82	-258.56	490.51	0.00	0.00	0.00	
2084.67	24.00	328.19	1985.00	446.09	-276.72	524.95	0.00	0.00	0.00	Nacimiento
2100.00	24.00	328.19	1999.00	451.39	-280.00	531.18	0.00	0.00	0.00	
2200.00	24.00	328.19	2090.36	485.95	-301.44	571.85	0.00	0.00	0.00	
2300.00	24.00	328.19	2181.71	520.51	-322.88	612.53	0.00	0.00	0.00	
2400.00	24.00	328.19	2273.06	555.08	-344.32	653.20	0.00	0.00	0.00	
2500.00	24.00	328.19	2364.42	589.64	-365.76	693.87	0.00	0.00	0.00	
2600.00	24.00	328.19	2455.77	624.21	-387.20	734.55	0.00	0.00	0.00	
2700.00	24.00	328.19	2547.13	658.77	-408.65	775.22	0.00	0.00	0.00	
2780.88	24.00	328.19	2621.01	686.72	-425.99	808.12	0.00	0.00	0.00	Drop at 2.17°/100'
2800.00	23.59	328.19	2638.51	693.28	-430.05	815.83	2.17	-2.17	0.00	
2900.00	21.42	328.19	2730.89	725.80	-450.22	854.10	2.17	-2.17	0.00	
3000.00	19.25	328.19	2824.66	755.32	-468.54	888.84	2.17	-2.17	0.00	
3100.00	17.08	328.19	2919.67	781.80	-484.97	920.00	2.17	-2.17	0.00	
3200.00	14.91	328.19	3015.80	805.21	-499.49	947.55	2.17	-2.17	0.00	
3300.00	12.74	328.19	3112.89	825.51	-512.08	971.44	2.17	-2.17	0.00	
3400.00	10.57	328.19	3210.83	842.67	-522.72	991.63	2.17	-2.17	0.00	
3460.07	9.26	328.19	3270.00	851.46	-528.17	1001.97	2.17	-2.17	0.00	Ojo Alamo
3500.00	8.40	328.19	3309.46	856.67	-531.40	1008.10	2.17	-2.17	0.00	
3591.31	6.41	328.19	3400.00	866.67	-537.61	1019.87	2.17	-2.17	0.00	Kirtland
3600.00	6.23	328.19	3408.64	867.48	-538.11	1020.83	2.17	-2.17	0.00	
3700.00	4.06	328.19	3508.23	875.09	-542.84	1029.79	2.17	-2.17	0.00	
3726.83	3.47	328.19	3535.00	876.59	-543.76	1031.55	2.17	-2.17	0.00	Fruitland
3800.00	1.89	328.19	3608.09	879.50	-545.57	1034.97	2.17	-2.17	0.00	
3886.93	0.00	328.19	3695.00	880.71	-546.32	1036.40	2.17	-2.17	0.00	Hold 0° Inc.
3900.00	0.00	328.19	3708.07	880.71	-546.32	1036.40	0.00	0.00	0.00	
3916.93	0.00	328.19	3725.00	880.71	-546.32	1036.40	0.00	0.00	0.00	Casing pt.
3936.93	0.00	328.19	3745.00	880.71	-546.32	1036.40	0.00	0.00	0.00	Top Coal Interval
4000.00	0.00	328.19	3808.07	880.71	-546.32	1036.40	0.00	0.00	0.00	
4001.93	0.00	328.19	3810.00	880.71	-546.32	1036.40	0.00	0.00	0.00	Base Coal Interval
4016.93	0.00	328.19	3825.00	880.71	-546.32	1036.40	0.00	0.00	0.00	Pictured Cliffs
4101.93	0.00	328.19	3910.00	880.71	-546.32	1036.40	0.00	0.00	0.00	PBHL 2

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->		
							Deg	Min	Sec	Deg	Min	Sec
Casing Pt. -Plan hit target		3725.00	880.71	-546.32	2138702.59	677628.95	36	52	33.709 N	107	13	33.724 W
PBHL 2		3910.00	880.71	-546.32	2138702.59	677628.95	36	52	33.709 N	107	13	33.724 W

Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION Field: RIO ARRIBA COUNTY (NAD 27) Site: Rosa Unit 310 A Well: Rosa Unit 310 A Wellpath: 1	Date: 7/28/2006 Time: 10:45:20 Page: 4 Co-ordinate(NE) Reference: Rosa Unit 310 A, True North Vertical (TVD) Reference: SITE 7000.0 Section (VS) Reference: Well (0.00N,0.00E,328.19Azi) Plan: Plan #2
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Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude			Longitude		
								Deg	Min	Sec	Deg	Min	Sec
-Plan hit target													

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
2084.67	1985.00	Nacimiento		0.00	0.00
3460.07	3270.00	Ojo Alamo		0.00	0.00
3591.31	3400.00	Kirtland		0.00	0.00
3726.83	3535.00	Fruitland		0.00	0.00
3936.93	3745.00	Top Coal Interval		0.00	0.00
4001.93	3810.00	Base Coal Interval		0.00	0.00
4016.93	3825.00	Pictured Cliffs		0.00	0.00

Annotation

MD ft	TVD ft	
400.00	400.00	KOP-Build at 3°/100'
1200.00	1176.81	Hold 24° Inc.
2780.88	2621.02	Drop at 2.17°/100'
3886.93	3695.00	Hold 0° Inc.
3916.93	3725.00	Casing Point
		Total Depth



DIRECTIONAL WELL INFORMATION SHEET

DATE: 7/28/2006

Attention: Jose Perez / Rod Middleton

From: Gary Sizemore

Company: Weatherford

Company: Williams Production

Telephone #: 817-573-8500

Telephone #: 918-573-8776

Fax #: 817-573-8001

Fax #: 918-573-4839
918-573-1298

WELL INFO: ROSA UNIT # 310-A FC (REV)
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 3,725 ft. Wellbore to be less than 5 degrees angle at 3,725 ft. TVD. 7 in. Intermediate Casing will be set at this point. The Drilling Rig will rig down at this point. Please place Formation Names at corresponding TVD's on the Survey listing sheets. No wells on this pad. (JOSE: The BHL on this well had to be moved !)

ATTACHMENTS:

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

Any questions, please give me a call.

Gary Sizemore

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

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

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 310A
*GRID No 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6986'

¹⁰ Surface Location

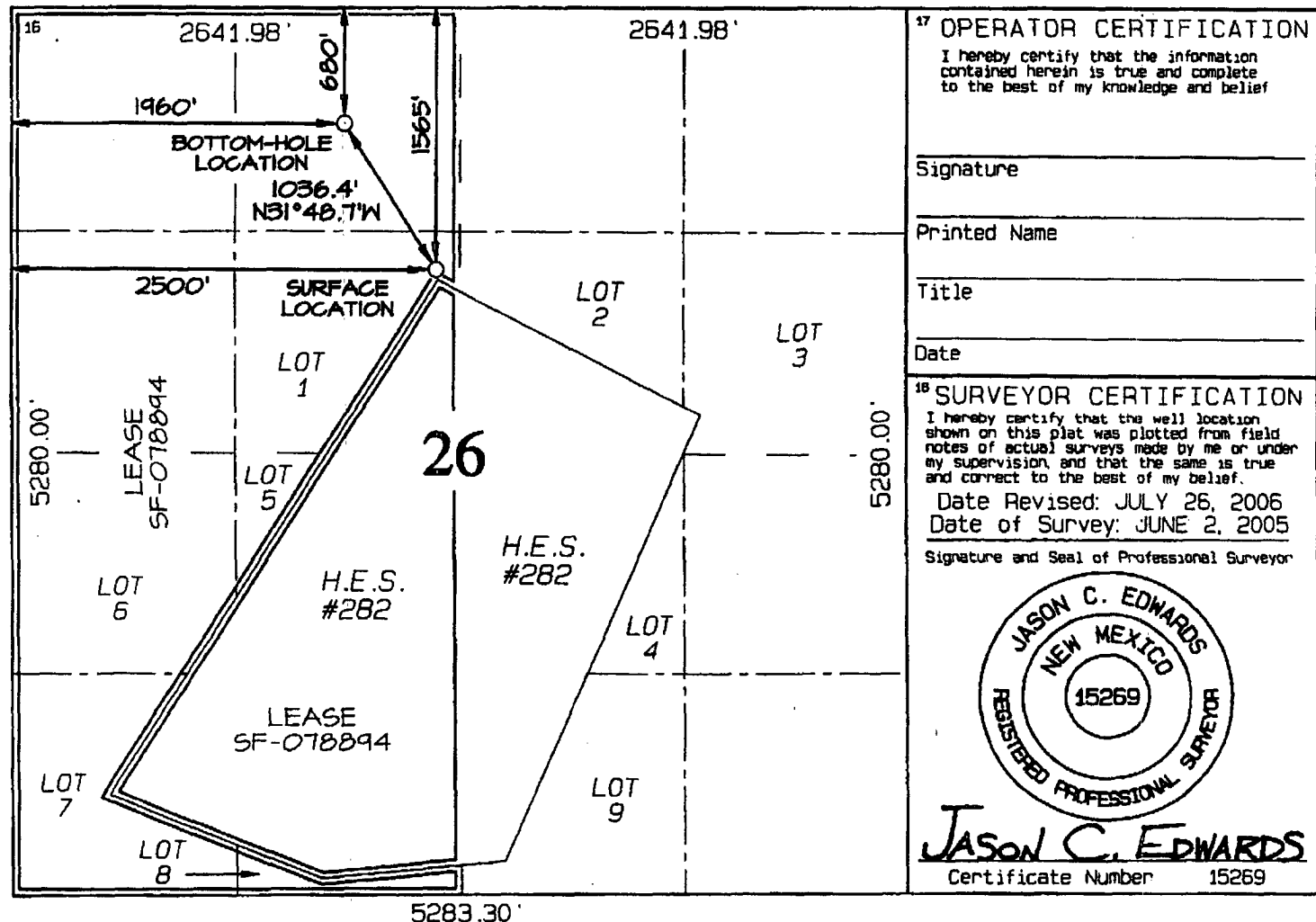
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	26	31N	4W		1565	NORTH	2500	WEST	RIO ARriba

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
C	26	31N	4W		680	NORTH	1960	WEST	RIO ARriba

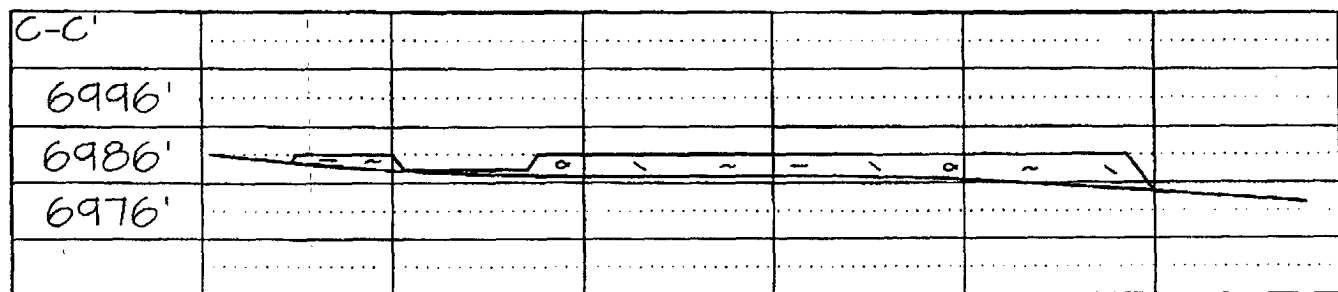
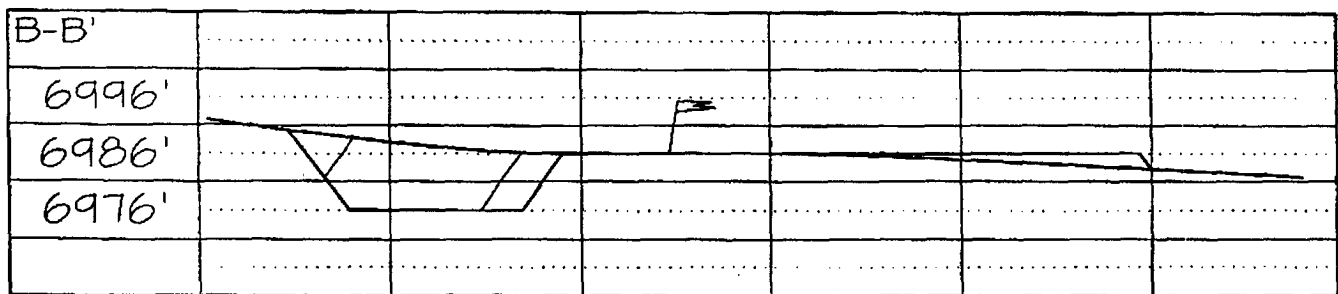
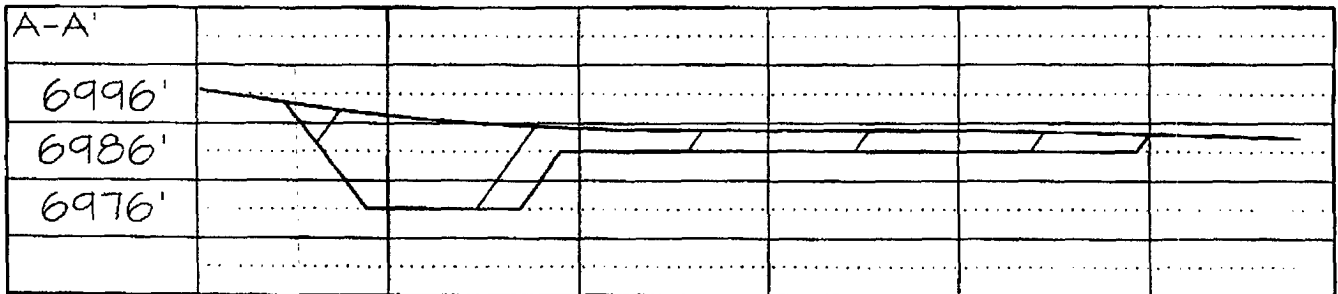
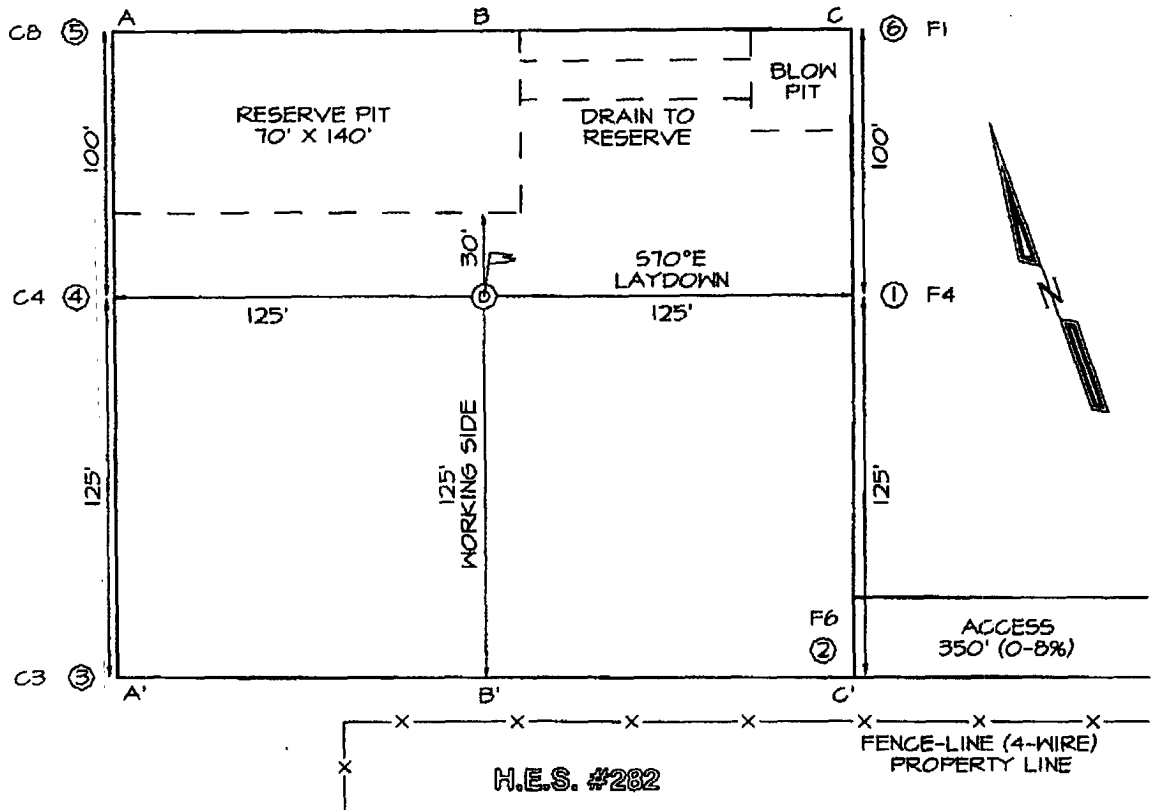
¹² Dedicated Acres 320.0 Acres - (W/2)	¹³ Joint or [nfl]	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



WILLIAMS PRODUCTION COMPANY ROSA UNIT #310A
1565' FNL & 2500' FWL, SECTION 26, T31N, R4W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6986'

LATITUDE: 36°52'25"
 LONGITUDE: 107°13'27"
 DATUM: NAD1927



GEOLOGIC PROGNOSIS

Company: **Williams Production Company. LLC**
Project: **2006 Drilling Plan (Fruitland Fm. Coal)**
Area: **Rosa Unit**

Operator: **Williams Production Company. LLC**
Well Name: **Rosa Unit No. 310A (Kfc-Directional)**
Location: **SENW 26-31N-04W**
Footage: **1565' FNL & 2500' FWL**
County/State: **Rio Arriba/New Mexico**

Surveyed GL: 6986 Est: (14') KB: 7000

<u>Formation</u>	<u>Thickness</u>	<u>TVD</u>	<u>Struct. Elev.</u>
<i>San Jose Fm.</i>	1985	Surface	6986
<i>Nacimiento Fm.</i>	1285	1985	5015
<i>Ojo Alamo Ss.</i>	130	3270	3730
<i>Kirtland Sh.</i>	135	3400	3600
<i>Fruitland Fm.</i>	190	3535	3465
<u>Int. Csg. Depth</u>	20	<u>3725</u>	3275
<i>Top Coal Interval</i>	65	3745	<u>3255</u>
<i>Base Coal Interval</i>	15	3810	3190
<i>Pictured Cliffs Ss.</i>	85	3825	3175
<u>Total Depth</u>	NA	<u>3910</u>	3090

Mud Log Mud log (5"=100') from intermediate casing to TD
(Mud Logger to pick TD)

Mechanical Logs: None

Correlation Logs: Rosa Unit No. 309(NENE 26-31N-04W)
Rosa Unit No. 305 (SESE 22-31N-04W)

Notes: This well will be directionally drilled to a BHL
0680' FNL & 1960' FWL 26-31N-04W

**Revised to correct quarter/quarter on surface
location (01-17-06)**

Revised for BHL change