

UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No 1004-0135
Expires March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use APPLICATION TO DRILL for permit for such proposals.

RECEIVED
210 FARMINGTON NM

SUBMIT IN TRIPLICATE

1. Type of Well Oil Well Gas Well ☒ Other	5. Lease Designation and Serial No. NMSF-078764
2. Name of Operator WILLIAMS PRODUCTION COMPANY	6. If Indian, Allottee or Tribe Name
3. Address and Telephone No. PO Box 640 Aztec, NM 87410-0640	7. If Unit or CA, Agreement Designation Rosa Unit
4. Location of Well (Footage, Sec , T., R., M , or Survey Description) Surface - 990' FNL & 1330' FEL / BHL - 990' FNL & 2310' FEL, Sec. 18, T31, R5 NMPM	8. Well Name and No Rosa Unit #22B
	9. API Well No 30-039-30244
	10. Field and Pool, or Exploratory Area BLANCO MV/BASIN DK
	11. County or Parish, State Rio Arriba, New Mexico

CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
☒ Notice of Intent	Abandonment
☒ Subsequent Report	Recompletion
Final Abandonment	Plugging Back
	Casing Repair
	Altering Casing
	☒ 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. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work)*

Williams Production Company, LLC. requests authority to drill this as a Mesa Verde/Dakota dual as per attached plat, directional plan and operations plan.

RCVD AUG 29 '07
OIL CONS. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct

Signed Larry Higgins
Larry Higgins

Title Drilling C.O.M.

Date 8-21-07

(This space for Federal or State office use)

Approved by [Signature]

Title Petr. Eng.

Date 8/27/07

Conditions of approval, if any.

NMOCD

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

2007 AUG 21 2:11 PM
RECEIVED
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30039-30244		*Pool Code 72319 / 71599	*Pool Name BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 228
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6465'

¹⁰ Surface Location

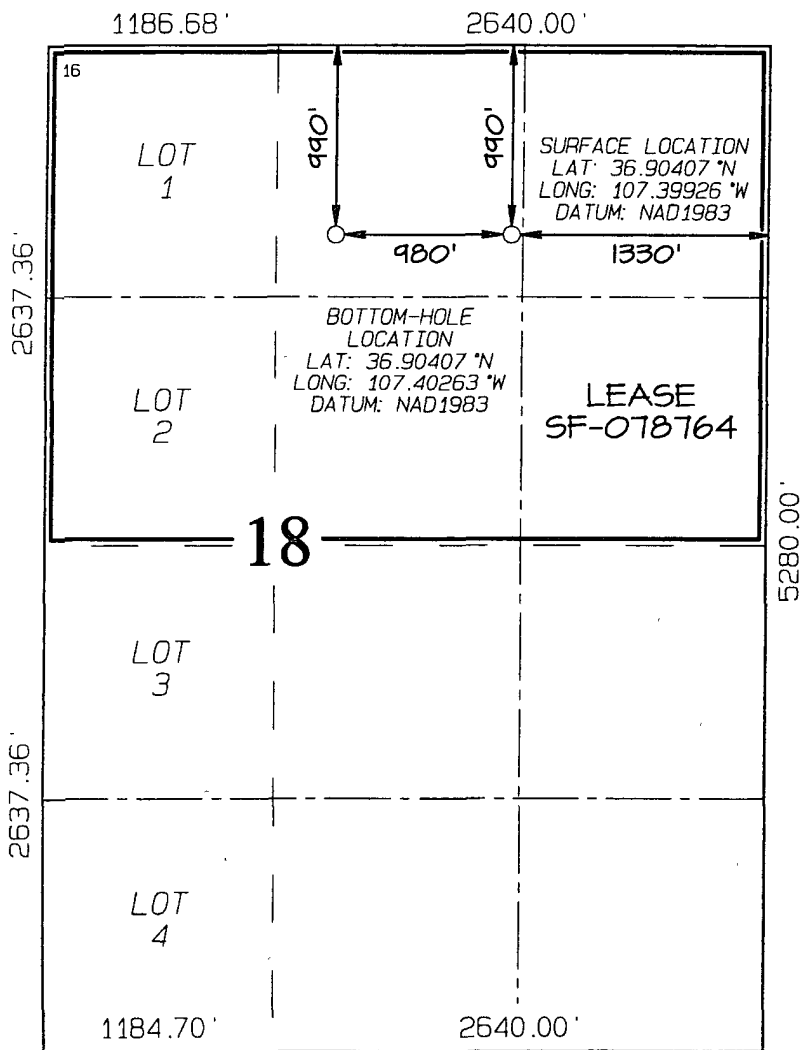
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	18	31N	5W		990	NORTH	1330	EAST	RIO ARriba

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
B	18	31N	5W		990	NORTH	2310	EAST	RIO ARriba

¹² Dedicated Acres 231.89 Acres - (N/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCVD AUG 29 07 OIL CONS. DIV. DIST. 3
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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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division

Larry Higgins 8-21-07
Signature Date
LARRY HIGGINS
Printed Name

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief

Survey Date: DECEMBER 7, 2006

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 8/21/2007 **FIELD:** Basin DK/ BlancoMV
WELL NAME: Rosa #22B **SURFACE:** BLM
BH LOCATION: NWNE Sec 18-31N-5W **MINERALS:** BLM
Rio Arriba, NM
SURF LOCATION: NWNE Sec 18-31N-5W
Rio Arriba, NM
ELEVATION: 6,465' GR **LEASE #** SF-078764
MEASURED DEPTH: 8,284'

I. **I. GEOLOGY:** Surface formation - San Jose

A. **FORMATION TOPS:** (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	2,679	2,564	Menefee	5,734	5,574
Kirtland	2,791	2,669	Point Lookout	5,944	5,784
Fruitland	3,212	3,064	Mancos	6,304	6,144
Pictured Cliffs	3,491	3,334	Gallup	7,289	7,129
Lewis	3,784	3,624	Greenhorn	7,994	7,834
Cliff House	5,689	5,529	Graneros	8,049	7,889
			Dakota	8,174	8,014
			TD	8,284	8,124

- B. **MUD LOGGING PROGRAM:** Mudlogger on location at 100' above Gallup SS to TD. Mud logger to pick TD.
- C. **LOGGING PROGRAM:** Cased Hole Logs only.
- 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	310	10 3/4	40.5	K-55
Intermediate	9 7/8	3,960	7 5/8	26.4	K-55
Longstring	6 3/4	8,284	5 1/2	17	N-80

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 10 3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. 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).
3. 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)

1. SURFACE: Slurry: 255sx (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. INTERMEDIATE: Lead - 685 sx (1,423) 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 - 100 sx (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 = 1,562 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. PRODUCTION CASING: 10 bbl Gelled Water space. Cement: 210 sx (443 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 443ft³. WOC 12 hours

IV. 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 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 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

1. Dakota: 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. Mesa Verde: 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.

FOL Gary Sizemore
Sr. Drilling Engineer

Larry Higgins



Weatherford[®]

Drilling Services

PROPOSAL (Plan 2)



WILLIAMS PRODUCTION COMPANY

ROSA UNIT 22B

Prepared by: Jose A Perez

Submitted: 08/07/07

Weatherford Drilling Services

11943 FM 529
Houston, TX 77041 USA
+1.713.896.8194 Main
+1.713.896.0498 Fax
www.weatherford.com

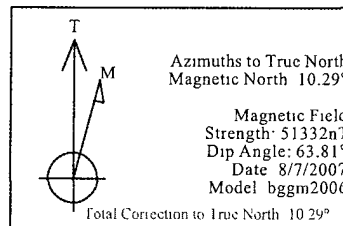
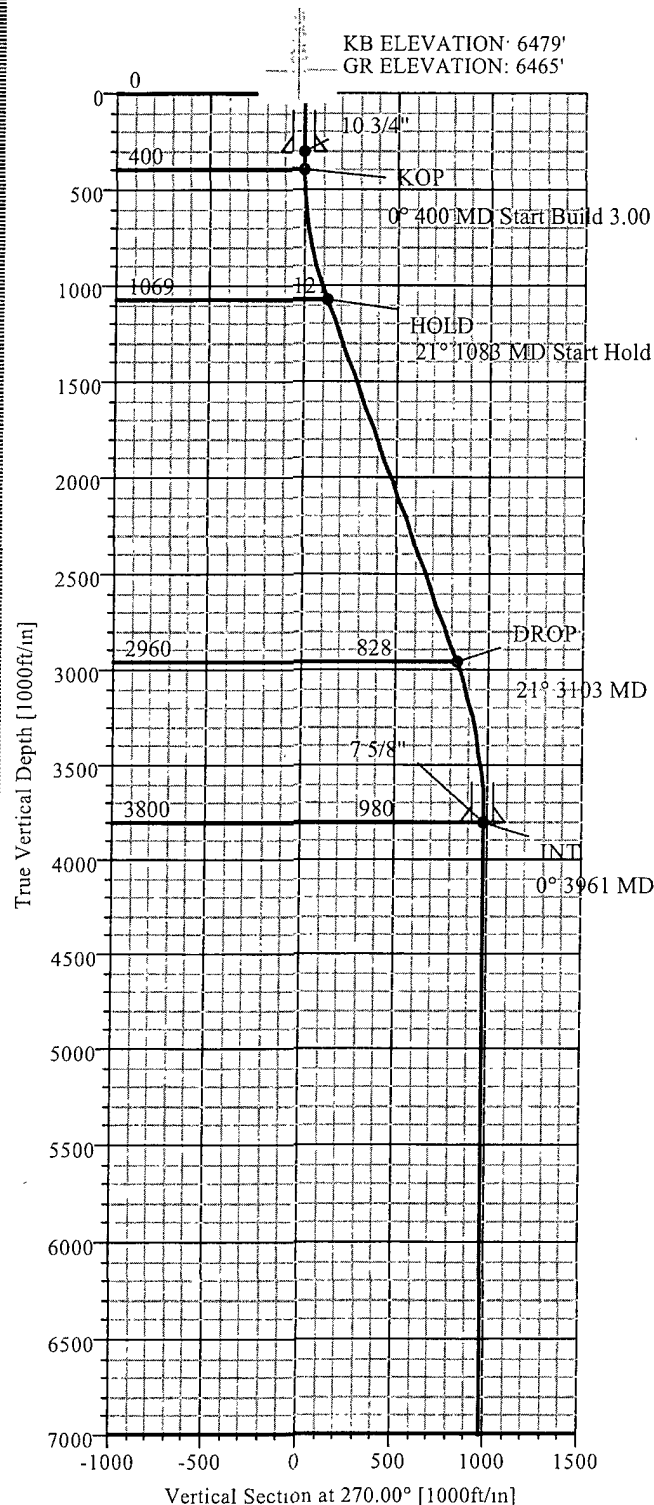


ROSA UNIT #22B
SEC18 T31N R5W
990' FNL, 1330' FEL
RIO ARriba COUNTY, NM
PLAN 2

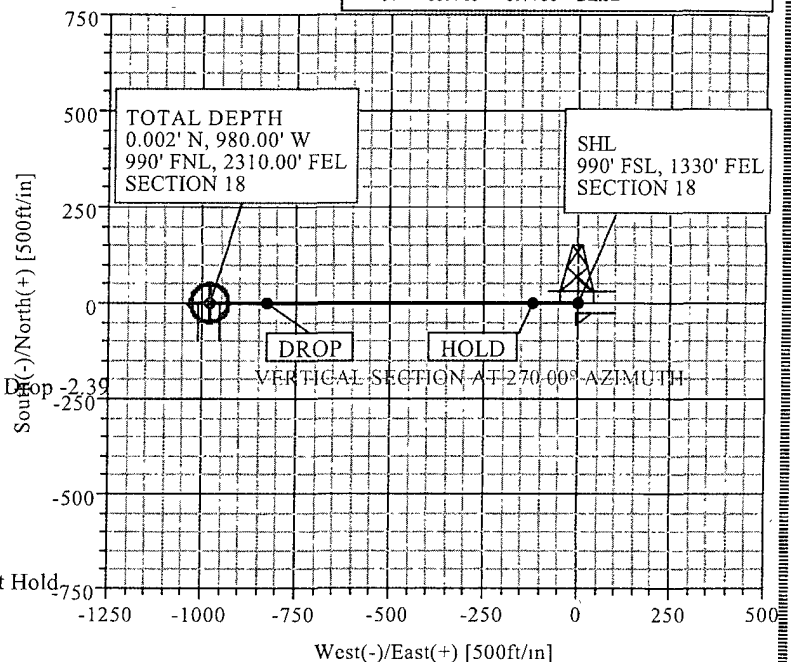
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	270.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1083.33	20.50	270.00	1068.85	0.00	-120.95	3.00	270.00	120.95	
4	3102.80	20.50	270.00	2960.43	0.02	-828.18	0.00	0.00	828.18	
5	3960.56	0.00	270.00	3800.00	0.02	-980.00	2.39	180.00	980.00	INT. CSG. PT.
6	8284.56	0.00	270.00	8124.00	0.02	-980.00	0.00	270.00	980.00	PBHL

WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
ROSA UNIT #22B	0.00	0.00	2150400.26	1304404.15	36°54'14.652N	107°23'57.336W

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
INT CSG PT	3800.00	0.02	-980.00	2150412.09	1303424.22	Point
PBHL	8124.00	0.02	-980.00	2150412.09	1303424.22	Circle (Radius 50)



FORMATION TOP DETAILS			
No	TVDPath	MDPath	Formation
1	2564.00	2679.57	Ojo Alamo Ss
2	2669.00	2791.67	Kirtland Sh
3	3064.00	3212.48	Fruitland Fm
4	3334.00	3491.57	Cliffs Ss
5	3624.00	3784.40	Lewis Sh
6	5214.00	5374.56	Cliff House Ss Trans
7	5529.00	5689.56	Cliff House Ss
8	5574.00	5734.56	Menefee Fm
9	5784.00	5944.56	Point Lockout Ss
10	6144.00	6304.56	Mancos Sh
11	7129.00	7289.56	Gallup
12	7834.00	7994.56	Greenhorn
13	7889.00	8049.56	Graneros
14	8014.00	8174.56	Dakota



Weatherford®

Plan: Plan #2 (ROSA UNIT #22B/1)
Created By: J.A.P. Date: 8/7/2007
Checked: _____ Date: _____



Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION
Field: Rio Arriba, NM (NAD 83)
Site: ROSA UNIT #22B
Well: ROSA UNIT #22B
Wellpath: 1

Date: 8/7/2007 Time: 14:31:09 Page: 1
Co-ordinate(NE) Reference: Site: ROSA UNIT #22B, True North
Vertical (TVD) Reference: SITE 6479.0
Section (VS) Reference: Well (0.00N,0.00E,270.00Azi)
Plan: Plan #2

Field: Rio Arriba, NM (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Central Zone
Coordinate System: Site Centre
Geomagnetic Model: bggm2006

Site: ROSA UNIT #22B

Site Position: Northing: 2150400.26 ft Latitude: 36 54 14.652 N
From: Geographic Easting: 1304404 15 ft Longitude: 107 23 57.336 W
Position Uncertainty: 0.00 ft North Reference: True
Ground Level: 6465.00 ft Grid Convergence: 0.26 deg

Well: ROSA UNIT #22B

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 2150400.26 ft Latitude: 36 54 14.652 N
+E/-W 0.00 ft Easting: 1304404 15 ft Longitude: 107 23 57.336 W
Position Uncertainty: 0.00 ft

Wellpath: 1

Current Datum: SITE Height 6479.00 ft
Magnetic Data: 8/7/2007
Field Strength: 51332 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
8124.00 0.00 0.00 270.00

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 10.29 deg
Mag Dip Angle: 63.81 deg
+E/-W Direction
ft deg

Plan: Plan #2

Date Composed: 8/7/2007
Version: 1
Tied-to: From Surface

Principal: No

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	270.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	270.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1083.33	20.50	270.00	1068.85	0.00	-120.95	3.00	3.00	0.00	270.00	
3102.80	20.50	270.00	2960.43	0.02	-828.18	0.00	0.00	0.00	0.00	
3960.56	0.00	270.00	3800.00	0.02	-980.00	2.39	-2.39	0.00	180.00	INT CSG. PT.
8284.56	0.00	270.00	8124.00	0.02	-980.00	0.00	0.00	0.00	270.00	PBHL

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	270.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	270.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00

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	270.00	499.95	0.00	-2.62	2.62	3.00	3.00	0.00	0.00
600.00	6.00	270.00	599.63	0.00	-10.46	10.46	3.00	3.00	0.00	0.00
700.00	9.00	270.00	698.77	0.00	-23.51	23.51	3.00	3.00	0.00	0.00
800.00	12.00	270.00	797.08	0.00	-41.74	41.74	3.00	3.00	0.00	0.00
900.00	15.00	270.00	894.31	0.00	-65.08	65.08	3.00	3.00	0.00	0.00
1000.00	18.00	270.00	990.18	0.00	-93.48	93.48	3.00	3.00	0.00	0.00
1083.33	20.50	270.00	1068.85	0.00	-120.95	120.95	3.00	3.00	0.00	0.00



Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION
Field: Rio Arriba, NM (NAD 83)
Site: ROSA UNIT #22B
Well: ROSA UNIT #22B
Wellpath: 1

Date: 8/7/2007 Time: 14:31:09 Page: 2
Co-ordinate(NE) Reference: Site: ROSA UNIT #22B, True North
Vertical (TVD) Reference: SITE 6479.0
Section (VS) Reference: Well: (0.00N,0.00E,270.00Azi)
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
1100.00	20.50	270.00	1084.46	0.00	-126.78	126.78	0.00	0.00	0.00	180.00
1200.00	20.50	270.00	1178.13	0.00	-161.80	161.80	0.00	0.00	0.00	180.00
1300.00	20.50	270.00	1271.79	0.00	-196.83	196.83	0.00	0.00	0.00	180.00
1400.00	20.50	270.00	1365.46	0.00	-231.85	231.85	0.00	0.00	0.00	180.00
1500.00	20.50	270.00	1459.13	0.01	-266.87	266.87	0.00	0.00	0.00	180.00
1600.00	20.50	270.00	1552.79	0.01	-301.89	301.89	0.00	0.00	0.00	180.00
1700.00	20.50	270.00	1646.46	0.01	-336.91	336.91	0.00	0.00	0.00	180.00
1800.00	20.50	270.00	1740.13	0.01	-371.93	371.93	0.00	0.00	0.00	180.00
1900.00	20.50	270.00	1833.80	0.01	-406.95	406.95	0.00	0.00	0.00	180.00
2000.00	20.50	270.00	1927.46	0.01	-441.97	441.97	0.00	0.00	0.00	180.00
2100.00	20.50	270.00	2021.13	0.01	-476.99	476.99	0.00	0.00	0.00	180.00
2200.00	20.50	270.00	2114.80	0.01	-512.01	512.01	0.00	0.00	0.00	180.00
2300.00	20.50	270.00	2208.46	0.01	-547.03	547.03	0.00	0.00	0.00	180.00
2400.00	20.50	270.00	2302.13	0.01	-582.05	582.05	0.00	0.00	0.00	180.00
2500.00	20.50	270.00	2395.80	0.01	-617.07	617.07	0.00	0.00	0.00	180.00
2600.00	20.50	270.00	2489.47	0.01	-652.10	652.10	0.00	0.00	0.00	180.00
2679.57	20.50	270.00	2564.00	0.01	-679.96	679.96	0.00	0.00	0.00	180.00
2700.00	20.50	270.00	2583.13	0.01	-687.12	687.12	0.00	0.00	0.00	180.00
2791.67	20.50	270.00	2669.00	0.01	-719.22	719.22	0.00	0.00	0.00	180.00
2800.00	20.50	270.00	2676.80	0.01	-722.14	722.14	0.00	0.00	0.00	180.00
2900.00	20.50	270.00	2770.47	0.02	-757.16	757.16	0.00	0.00	0.00	180.00
3000.00	20.50	270.00	2864.14	0.02	-792.18	792.18	0.00	0.00	0.00	180.00
3100.00	20.50	270.00	2957.80	0.02	-827.20	827.20	0.00	0.00	0.00	180.00
3102.80	20.50	270.00	2960.43	0.02	-828.18	828.18	0.00	0.00	0.00	180.00

Section 4 : Start Drop -2.39

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
3200.00	18.18	270.00	3052.13	0.02	-860.36	860.36	2.39	-2.39	0.00	180.00
3212.48	17.88	270.00	3064.00	0.02	-864.23	864.23	2.39	-2.39	0.00	180.00
3300.00	15.79	270.00	3147.77	0.02	-889.57	889.57	2.39	-2.39	0.00	180.00
3400.00	13.40	270.00	3244.53	0.02	-914.76	914.76	2.39	-2.39	0.00	180.00
3491.57	11.21	270.00	3334.00	0.02	-934.27	934.27	2.39	-2.39	0.00	180.00
3500.00	11.01	270.00	3342.27	0.02	-935.90	935.90	2.39	-2.39	0.00	180.00
3600.00	8.62	270.00	3440.80	0.02	-952.94	952.94	2.39	-2.39	0.00	180.00
3700.00	6.23	270.00	3539.95	0.02	-965.85	965.85	2.39	-2.39	0.00	180.00
3784.40	4.21	270.00	3624.00	0.02	-973.53	973.53	2.39	-2.39	0.00	180.00
3800.00	3.84	270.00	3639.56	0.02	-974.63	974.63	2.39	-2.39	0.00	-180.00
3900.00	1.45	270.00	3739.45	0.02	-979.24	979.24	2.39	-2.39	0.00	180.00
3960.56	0.00	270.00	3800.00	0.02	-980.00	980.00	2.39	-2.39	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
4000.00	0.00	270.00	3839.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4100.00	0.00	270.00	3939.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4200.00	0.00	270.00	4039.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4300.00	0.00	270.00	4139.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4400.00	0.00	270.00	4239.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4500.00	0.00	270.00	4339.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4600.00	0.00	270.00	4439.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4700.00	0.00	270.00	4539.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4800.00	0.00	270.00	4639.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
4900.00	0.00	270.00	4739.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5000.00	0.00	270.00	4839.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5100.00	0.00	270.00	4939.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5200.00	0.00	270.00	5039.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5300.00	0.00	270.00	5139.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5374.56	0.00	270.00	5214.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5400.00	0.00	270.00	5239.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5500.00	0.00	270.00	5339.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5600.00	0.00	270.00	5439.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00



Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION
 Field: Rio Arriba, NM (NAD 83)
 Site: ROSA UNIT #22B
 Well: ROSA UNIT #22B
 Wellpath: 1

Date: 8/7/2007 Time: 14:31:09 Page: 3
 Co-ordinate(NE) Reference: Site: ROSA UNIT #22B, True North
 Vertical (TVD) Reference: SITE 6479.0
 Section (VS) Reference: Well (0.00N,0.00E,270.00Azi)
 Plan: Plan #2

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
5689.56	0.00	270.00	5529.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5700.00	0.00	270.00	5539.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5734.56	0.00	270.00	5574.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5800.00	0.00	270.00	5639.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5900.00	0.00	270.00	5739.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
5944.56	0.00	270.00	5784.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6000.00	0.00	270.00	5839.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6100.00	0.00	270.00	5939.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6200.00	0.00	270.00	6039.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6300.00	0.00	270.00	6139.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6304.56	0.00	270.00	6144.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6400.00	0.00	270.00	6239.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6500.00	0.00	270.00	6339.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6600.00	0.00	270.00	6439.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6700.00	0.00	270.00	6539.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6800.00	0.00	270.00	6639.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
6900.00	0.00	270.00	6739.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7000.00	0.00	270.00	6839.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7100.00	0.00	270.00	6939.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7200.00	0.00	270.00	7039.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7289.56	0.00	270.00	7129.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7300.00	0.00	270.00	7139.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7400.00	0.00	270.00	7239.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7500.00	0.00	270.00	7339.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7600.00	0.00	270.00	7439.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7700.00	0.00	270.00	7539.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7800.00	0.00	270.00	7639.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7900.00	0.00	270.00	7739.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
7994.56	0.00	270.00	7834.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
8000.00	0.00	270.00	7839.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
8049.56	0.00	270.00	7889.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
8100.00	0.00	270.00	7939.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
8174.56	0.00	270.00	8014.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
8200.00	0.00	270.00	8039.44	0.02	-980.00	980.00	0.00	0.00	0.00	270.00
8284.56	0.00	270.00	8124.00	0.02	-980.00	980.00	0.00	0.00	0.00	270.00

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	270.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP
500.00	3.00	270.00	499.95	0.00	-2.62	2.62	3.00	3.00	0.00	
600.00	6.00	270.00	599.63	0.00	-10.46	10.46	3.00	3.00	0.00	
700.00	9.00	270.00	698.77	0.00	-23.51	23.51	3.00	3.00	0.00	
800.00	12.00	270.00	797.08	0.00	-41.74	41.74	3.00	3.00	0.00	
900.00	15.00	270.00	894.31	0.00	-65.08	65.08	3.00	3.00	0.00	
1000.00	18.00	270.00	990.18	0.00	-93.48	93.48	3.00	3.00	0.00	
1083.33	20.50	270.00	1068.85	0.00	-120.95	120.95	3.00	3.00	0.00	HOLD
1100.00	20.50	270.00	1084.46	0.00	-126.78	126.78	0.00	0.00	0.00	
1200.00	20.50	270.00	1178.13	0.00	-161.80	161.80	0.00	0.00	0.00	
1300.00	20.50	270.00	1271.79	0.00	-196.83	196.83	0.00	0.00	0.00	
1400.00	20.50	270.00	1365.46	0.00	-231.85	231.85	0.00	0.00	0.00	
1500.00	20.50	270.00	1459.13	0.01	-266.87	266.87	0.00	0.00	0.00	
1600.00	20.50	270.00	1552.79	0.01	-301.89	301.89	0.00	0.00	0.00	
1700.00	20.50	270.00	1646.46	0.01	-336.91	336.91	0.00	0.00	0.00	
1800.00	20.50	270.00	1740.13	0.01	-371.93	371.93	0.00	0.00	0.00	
1900.00	20.50	270.00	1833.80	0.01	-406.95	406.95	0.00	0.00	0.00	
2000.00	20.50	270.00	1927.46	0.01	-441.97	441.97	0.00	0.00	0.00	
2100.00	20.50	270.00	2021.13	0.01	-476.99	476.99	0.00	0.00	0.00	
2200.00	20.50	270.00	2114.80	0.01	-512.01	512.01	0.00	0.00	0.00	



Weatherford Drilling Services

Planning Report

Company:	WILLIAMS PRODUCTION	Date:	8/7/2007	Time:	14:31:09	Page:	4
Field:	Rio Arriba, NM (NAD 83)	Co-ordinate(NE) Reference:	Site: ROSA UNIT #22B, True North	Vertical (TVD) Reference:	SITE 6479.0		
Site:	ROSA UNIT #22B	Section (VS) Reference:	Well: (0.00N,0.00E,270.00Azi)	Plan:	Plan #2		
Well:	ROSA UNIT #22B						
Wellpath:	1						

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
2300.00	20.50	270.00	2208.46	0.01	-547.03	547.03	0.00	0.00	0.00	
2400.00	20.50	270.00	2302.13	0.01	-582.05	582.05	0.00	0.00	0.00	
2500.00	20.50	270.00	2395.80	0.01	-617.07	617.07	0.00	0.00	0.00	
2600.00	20.50	270.00	2489.47	0.01	-652.10	652.10	0.00	0.00	0.00	
2679.57	20.50	270.00	2564.00	0.01	-679.96	679.96	0.00	0.00	0.00	Ojo Alamo Ss
2700.00	20.50	270.00	2583.13	0.01	-687.12	687.12	0.00	0.00	0.00	
2791.67	20.50	270.00	2669.00	0.01	-719.22	719.22	0.00	0.00	0.00	Kirtland Sh.
2800.00	20.50	270.00	2676.80	0.01	-722.14	722.14	0.00	0.00	0.00	
2900.00	20.50	270.00	2770.47	0.02	-757.16	757.16	0.00	0.00	0.00	
3000.00	20.50	270.00	2864.14	0.02	-792.18	792.18	0.00	0.00	0.00	
3100.00	20.50	270.00	2957.80	0.02	-827.20	827.20	0.00	0.00	0.00	
3102.80	20.50	270.00	2960.43	0.02	-828.18	828.18	0.00	0.00	0.00	DROP
3200.00	18.18	270.00	3052.13	0.02	-860.36	860.36	2.39	-2.39	0.00	
3212.48	17.88	270.00	3064.00	0.02	-864.23	864.23	2.39	-2.39	0.00	Fruitland Fm.
3300.00	15.79	270.00	3147.77	0.02	-889.57	889.57	2.39	-2.39	0.00	
3400.00	13.40	270.00	3244.53	0.02	-914.76	914.76	2.39	-2.39	0.00	
3491.57	11.21	270.00	3334.00	0.02	-934.27	934.27	2.39	-2.39	0.00	Cliffs Ss.
3500.00	11.01	270.00	3342.27	0.02	-935.90	935.90	2.39	-2.39	0.00	
3600.00	8.62	270.00	3440.80	0.02	-952.94	952.94	2.39	-2.39	0.00	
3700.00	6.23	270.00	3539.95	0.02	-965.85	965.85	2.39	-2.39	0.00	
3784.40	4.21	270.00	3624.00	0.02	-973.53	973.53	2.39	-2.39	0.00	Lewis Sh.
3800.00	3.84	270.00	3639.56	0.02	-974.63	974.63	2.39	-2.39	0.00	
3900.00	1.45	270.00	3739.45	0.02	-979.24	979.24	2.39	-2.39	0.00	
3960.56	0.00	270.00	3800.00	0.02	-980.00	980.00	2.39	-2.39	0.00	INT. CSG. PT.
4000.00	0.00	270.00	3839.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4100.00	0.00	270.00	3939.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4200.00	0.00	270.00	4039.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4300.00	0.00	270.00	4139.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4400.00	0.00	270.00	4239.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4500.00	0.00	270.00	4339.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4600.00	0.00	270.00	4439.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4700.00	0.00	270.00	4539.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4800.00	0.00	270.00	4639.44	0.02	-980.00	980.00	0.00	0.00	0.00	
4900.00	0.00	270.00	4739.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5000.00	0.00	270.00	4839.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5100.00	0.00	270.00	4939.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5200.00	0.00	270.00	5039.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5300.00	0.00	270.00	5139.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5374.56	0.00	270.00	5214.00	0.02	-980.00	980.00	0.00	0.00	0.00	Cliff House Ss. Trans.
5400.00	0.00	270.00	5239.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5500.00	0.00	270.00	5339.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5600.00	0.00	270.00	5439.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5689.56	0.00	270.00	5529.00	0.02	-980.00	980.00	0.00	0.00	0.00	Cliff House Ss
5700.00	0.00	270.00	5539.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5734.56	0.00	270.00	5574.00	0.02	-980.00	980.00	0.00	0.00	0.00	Menefee Fm.
5800.00	0.00	270.00	5639.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5900.00	0.00	270.00	5739.44	0.02	-980.00	980.00	0.00	0.00	0.00	
5944.56	0.00	270.00	5784.00	0.02	-980.00	980.00	0.00	0.00	0.00	Point Lockou Ss
6000.00	0.00	270.00	5839.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6100.00	0.00	270.00	5939.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6200.00	0.00	270.00	6039.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6300.00	0.00	270.00	6139.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6304.56	0.00	270.00	6144.00	0.02	-980.00	980.00	0.00	0.00	0.00	Mancos Sh
6400.00	0.00	270.00	6239.44	0.02	-980.00	980.00	0.00	0.00	0.00	



Weatherford Drilling Services

Planning Report

Company: WILLIAMS PRODUCTION	Date: 8/7/2007	Time: 14:31:09	Page: 5
Field: Rio Arriba, NM (NAD 83)	Co-ordinate(NE) Reference: Site: ROSA UNIT #22B, True North		
Site: ROSA UNIT #22B	Vertical (TVD) Reference: SITE 6479.0		
Well: ROSA UNIT #22B	Section (VS) Reference: Well (0.00N;0.00E;270.00Azi)		
Wellpath: 1	Plan: Plan #2		

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
6500.00	0.00	270.00	6339.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6600.00	0.00	270.00	6439.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6700.00	0.00	270.00	6539.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6800.00	0.00	270.00	6639.44	0.02	-980.00	980.00	0.00	0.00	0.00	
6900.00	0.00	270.00	6739.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7000.00	0.00	270.00	6839.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7100.00	0.00	270.00	6939.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7200.00	0.00	270.00	7039.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7289.56	0.00	270.00	7129.00	0.02	-980.00	980.00	0.00	0.00	0.00	Gallup
7300.00	0.00	270.00	7139.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7400.00	0.00	270.00	7239.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7500.00	0.00	270.00	7339.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7600.00	0.00	270.00	7439.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7700.00	0.00	270.00	7539.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7800.00	0.00	270.00	7639.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7900.00	0.00	270.00	7739.44	0.02	-980.00	980.00	0.00	0.00	0.00	
7994.56	0.00	270.00	7834.00	0.02	-980.00	980.00	0.00	0.00	0.00	Greenhorn
8000.00	0.00	270.00	7839.44	0.02	-980.00	980.00	0.00	0.00	0.00	
8049.56	0.00	270.00	7889.00	0.02	-980.00	980.00	0.00	0.00	0.00	Granerosos
8100.00	0.00	270.00	7939.44	0.02	-980.00	980.00	0.00	0.00	0.00	
8174.56	0.00	270.00	8014.00	0.02	-980.00	980.00	0.00	0.00	0.00	Dakota
8200.00	0.00	270.00	8039.44	0.02	-980.00	980.00	0.00	0.00	0.00	
8284.56	0.00	270.00	8124.00	0.02	-980.00	980.00	0.00	0.00	0.00	PBHL

Targets

Name	Description	TVD	+N/-S	+E/-W	Map Northing	Map Easting	Latitude	Longitude
Dip	Dir.	ft	ft	ft	ft	ft	Deg Min Sec	Deg Min Sec
INT. CSG. PT.		3800.00	0.02	-980.00	2150412.091303424.22		36 54 14.652 N	107 24 9.401 W
-Plan hit target								
PBHL		8124.00	0.02	-980.00	2150412.091303424.22		36 54 14.652 N	107 24 9.401 W
-Circle (Radius: 50)								
-Plan hit target								

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
2679.57	2564.00	Ojo Alamo Ss		0.00	0.00
2791.67	2669.00	Kirtland Sh.		0.00	0.00
3212.48	3064.00	Fruitland Fm.		0.00	0.00
3491.57	3334.00	Cliffs Ss.		0.00	0.00
3784.40	3624.00	Lewis Sh.		0.00	0.00
5374.56	5214.00	Cliff House Ss. Trans.		0.00	0.00
5689.56	5529.00	Cliff House Ss		0.00	0.00
5734.56	5574.00	Menefee Fm.		0.00	0.00
5944.56	5784.00	Point Lockou Ss		0.00	0.00
6304.56	6144.00	Mancos Sh		0.00	0.00
7289.56	7129.00	Gallup		0.00	0.00
7994.56	7834.00	Greenhorn		0.00	0.00
8049.56	7889.00	Granerosos		0.00	0.00
8174.56	8014.00	Dakota		0.00	0.00