



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

30-039-30244

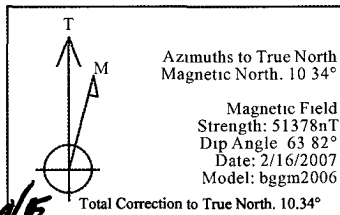
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0 00	270 00	0 00	0 00	0 00	0 00	0 00	0 00	
2	400 00	0 00	270 00	400 00	0 00	0 00	0 00	0 00	0 00	
3	1077 15	20 31	270 00	1063 05	0 00	-118 79	3 00	270 00	118 79	
4	3147 19	20 31	270 00	3004 34	0 02	-837 45	0 00	0 00	837 45	
5	3959 77	0 00	270 00	3800 00	0 02	-980 00	2 50	180 00	980 00	INT CSG PT
6	6418 77	0 00	270 00	6259 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	6259 00	0.02	-980.00	2150412.09	1303424 22	Circle (Radius: 50)



KB ELEVATION: 6479'
GR ELEVATION: 6465'

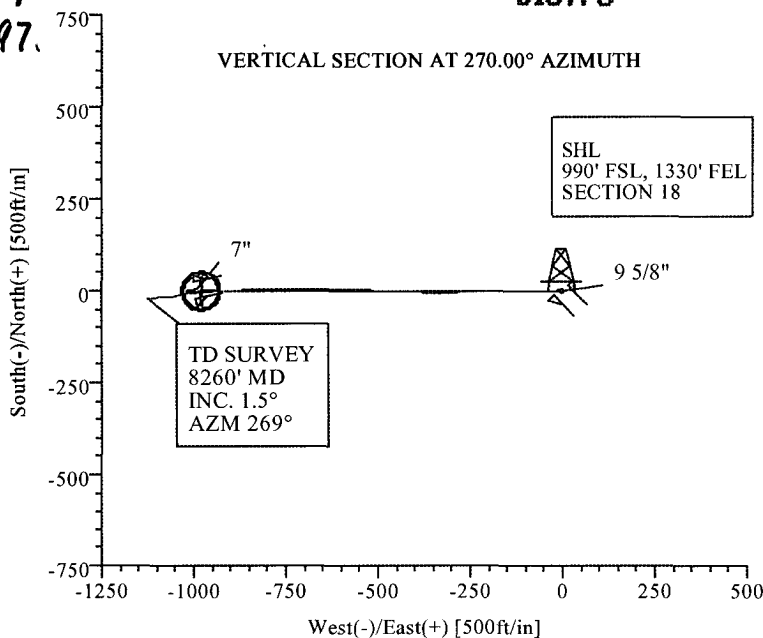
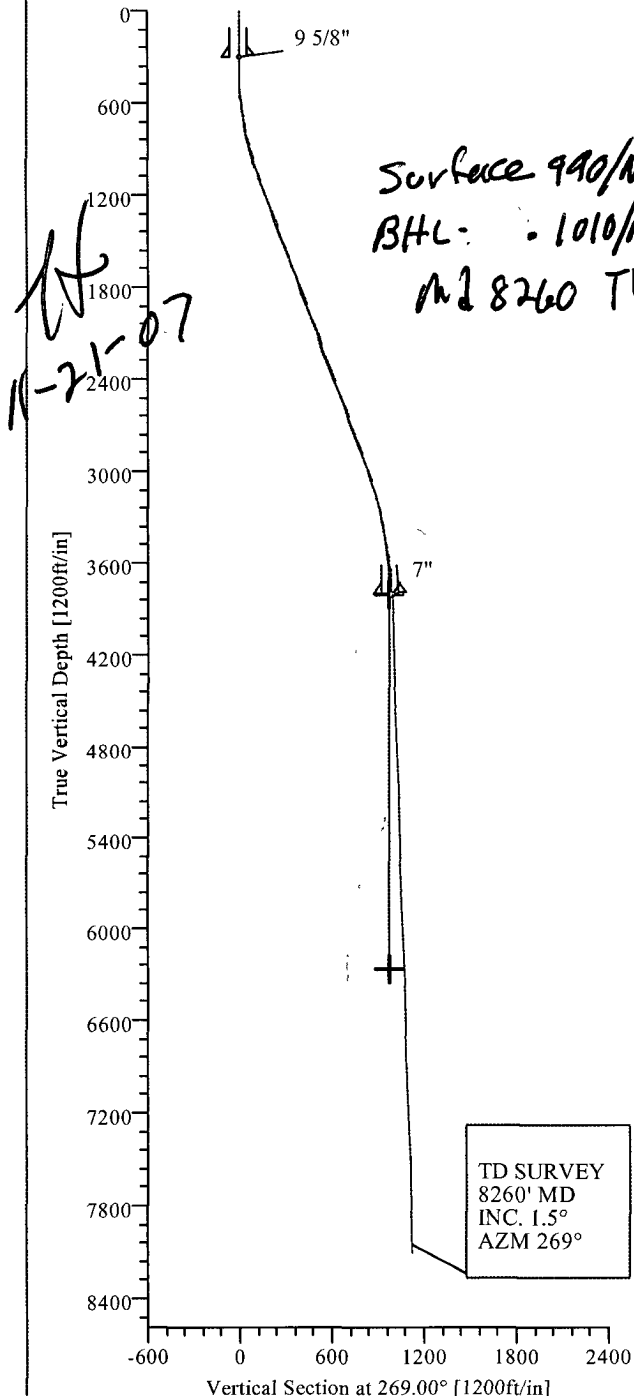


LEGEND

== ROSA UNIT #22B, 1, Plan #1

WFT SVY

RCVD NOV 19 '07
OIL CONS. DIV.
DIST. 3



Weatherford®



Weatherford International, Inc.

Survey Report



DIST. 3

Weatherford

Company: WILLIAMS PRODUCTION	Date: 11/7/2007	Time: 08:21:28	Page: 1
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,269.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

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	Drilled From: Surface
Magnetic Data: 2/16/2007		Tie-on Depth: 0.00 ft
Field Strength: 51378 nT		Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)		Declination: 10.34 deg
	+N/-S	Mag Dip Angle: 63.82 deg
	ft	+E/-W
		Direction
		deg
0.00	0.00	0.00 269.00

Survey: WFT SVY

Start Date: 10/15/2007

Company: Weatherford International, Inc
Tool: MWD, MWD - Standard

Engineer: Lindsey Maddux
Tied-to: From Surface

Survey: WFT SVY

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
300.00	0.46	316.04	300.00	0.87	-0.84	0.83	0.15	0.15	0.00	9 5/8"
408.00	0.63	316.04	407.99	1.61	-1.56	1.53	0.15	0.15	0.00	MWD
439.00	0.94	343.17	438.99	1.98	-1.75	1.71	1.53	1.00	87.52	MWD
470.00	1.00	304.92	469.98	2.38	-2.04	2.00	2.06	0.19	-123.39	MWD
501.00	1.94	285.67	500.97	2.68	-2.77	2.72	3.38	3.03	-62.10	MWD
530.00	2.81	271.29	529.95	2.82	-3.95	3.90	3.61	3.00	-49.59	MWD
560.00	4.25	273.42	559.89	2.91	-5.80	5.75	4.82	4.80	7.10	MWD
591.00	6.00	267.59	590.77	2.91	-8.57	8.51	5.88	5.65	-18.81	MWD
621.00	7.17	267.51	620.57	2.76	-12.00	11.95	3.90	3.90	-0.27	MWD
651.00	8.31	267.00	650.29	2.57	-16.04	15.99	3.81	3.80	-1.70	MWD
681.00	9.31	264.82	679.94	2.23	-20.62	20.58	3.51	3.33	-7.27	MWD
712.00	10.40	264.51	710.48	1.74	-25.90	25.87	3.52	3.52	-1.00	MWD
742.00	11.08	266.83	739.96	1.32	-31.48	31.45	2.69	2.27	7.73	MWD
772.00	11.79	268.99	769.36	1.11	-37.42	37.39	2.76	2.37	7.20	MWD
802.00	12.54	268.68	798.69	0.98	-43.74	43.72	2.51	2.50	-1.03	MWD
833.00	13.31	270.04	828.90	0.90	-50.67	50.65	2.67	2.48	4.39	MWD
863.00	14.25	269.04	858.04	0.84	-57.82	57.79	3.23	3.13	-3.33	MWD
893.00	14.86	269.69	887.08	0.76	-65.36	65.33	2.10	2.03	2.17	MWD
924.00	15.55	271.35	916.99	0.84	-73.49	73.46	2.63	2.23	5.35	MWD
954.00	16.27	271.66	945.84	1.05	-81.71	81.68	2.42	2.40	1.03	MWD
985.00	17.06	270.17	975.54	1.19	-90.59	90.56	2.90	2.55	-4.81	MWD
1017.00	17.75	269.67	1006.07	1.18	-100.17	100.13	2.21	2.16	-1.56	MWD
1049.00	18.56	270.04	1036.48	1.15	-110.14	110.10	2.56	2.53	1.16	MWD



Weatherford International, Inc.

Survey Report



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

Date: 11/7/2007 Time: 08:21:28 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,269 00Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: WFT SVY

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
1081.00	19.31	270.04	1066.75	1.16	-120.52	120.48	2.34	2.34	0.00	MWD
1113.00	20.05	270.23	1096.88	1.19	-131.30	131.26	2.32	2.31	0.59	MWD
1144.00	20.81	269.68	1125.93	1.18	-142.12	142.08	2.53	2.45	-1.77	MWD
1176.00	21.25	269.29	1155.80	1.07	-153.60	153.56	1.44	1.37	-1.22	MWD
1208.00	21.57	268.88	1185.59	0.89	-165.28	165.24	1.10	1.00	-1.28	MWD
1240.00	21.25	268.67	1215.38	0.64	-176.96	176.92	1.03	-1.00	-0.66	MWD
1272.00	21.14	269.23	1245.22	0.43	-188.53	188.49	0.72	-0.34	1.75	MWD
1303.00	20.94	268.79	1274.15	0.23	-199.65	199.62	0.82	-0.65	-1.42	MWD
1335.00	20.65	269.15	1304.06	0.03	-211.01	210.98	0.99	-0.91	1.12	MWD
1367.00	20.25	268.17	1334.05	-0.23	-222.19	222.16	1.65	-1.25	-3.06	MWD
1398.00	20.19	268.86	1363.14	-0.51	-232.90	232.87	0.79	-0.19	2.23	MWD
1430.00	20.44	267.79	1393.15	-0.83	-244.01	243.98	1.40	0.78	-3.34	MWD
1462.00	21.00	267.04	1423.08	-1.35	-255.32	255.30	1.94	1.75	-2.34	MWD
1493.00	21.06	266.54	1452.01	-1.97	-266.42	266.42	0.61	0.19	-1.61	MWD
1525.00	20.50	267.29	1481.93	-2.58	-277.76	277.76	1.94	-1.75	2.34	MWD
1557.00	20.38	267.29	1511.92	-3.11	-288.92	288.93	0.37	-0.37	0.00	MWD
1587.00	20.38	268.29	1540.04	-3.51	-299.36	299.38	1.16	0.00	3.33	MWD
1618.00	19.94	268.29	1569.14	-3.83	-310.04	310.06	1.42	-1.42	0.00	MWD
1648.00	19.81	269.17	1597.35	-4.06	-320.24	320.26	1.09	-0.43	2.93	MWD
1680.00	20.00	270.79	1627.44	-4.06	-331.13	331.15	1.82	0.59	5.06	MWD
1711.00	20.44	270.29	1656.53	-3.96	-341.84	341.86	1.52	1.42	-1.61	MWD
1743.00	20.44	271.42	1686.52	-3.79	-353.02	353.03	1.23	0.00	3.53	MWD
1775.00	20.63	271.67	1716.48	-3.49	-364.24	364.24	0.65	0.59	0.78	MWD
1807.00	20.67	272.69	1746.43	-3.06	-375.51	375.51	1.13	0.12	3.19	MWD
1838.00	20.88	272.17	1775.41	-2.60	-386.50	386.49	0.90	0.68	-1.68	MWD
1870.00	21.31	271.29	1805.27	-2.25	-398.01	397.99	1.67	1.34	-2.75	MWD
1902.00	20.94	271.67	1835.12	-1.95	-409.54	409.51	1.23	-1.16	1.19	MWD
1933.00	20.88	271.67	1864.07	-1.63	-420.60	420.56	0.19	-0.19	0.00	MWD
1965.00	20.63	271.17	1894.00	-1.35	-431.94	431.89	0.96	-0.78	-1.56	MWD
1997.00	21.00	271.17	1923.91	-1.12	-443.31	443.26	1.16	1.16	0.00	MWD
2029.00	20.69	271.67	1953.81	-0.83	-454.69	454.63	1.12	-0.97	1.56	MWD
2060.00	20.38	273.29	1982.84	-0.36	-465.55	465.49	2.09	-1.00	5.23	MWD
2092.00	20.44	272.54	2012.84	0.20	-476.70	476.62	0.84	0.19	-2.34	MWD
2124.00	20.88	274.17	2042.78	0.87	-487.97	487.88	2.26	1.37	5.09	MWD
2155.00	20.56	274.17	2071.77	1.66	-498.90	498.80	1.03	-1.03	0.00	MWD
2187.00	20.44	273.17	2101.75	2.38	-510.09	509.97	1.16	-0.37	-3.12	MWD
2218.00	20.69	273.67	2130.77	3.03	-520.96	520.82	0.99	0.81	1.61	MWD
2249.00	20.56	273.29	2159.78	3.69	-531.86	531.71	0.60	-0.42	-1.23	MWD
2281.00	20.44	273.17	2189.76	4.33	-543.05	542.89	0.40	-0.37	-0.37	MWD
2313.00	20.13	272.42	2219.77	4.87	-554.13	553.96	1.26	-0.97	-2.34	MWD
2345.00	19.81	271.04	2249.85	5.20	-565.05	564.87	1.78	-1.00	-4.31	MWD
2377.00	20.31	271.29	2279.91	5.42	-576.02	575.84	1.59	1.56	0.78	MWD
2408.00	20.06	270.17	2309.00	5.56	-586.72	586.53	1.48	-0.81	-3.61	MWD
2440.00	20.19	270.17	2339.05	5.59	-597.73	597.54	0.41	0.41	0.00	MWD
2472.00	20.50	269.92	2369.05	5.60	-608.85	608.66	1.01	0.97	-0.78	MWD
2503.00	20.38	269.42	2398.10	5.54	-619.68	619.49	0.68	-0.39	-1.61	MWD
2535.00	20.38	269.92	2428.10	5.47	-630.82	630.63	0.54	0.00	1.56	MWD
2567.00	20.31	268.86	2458.10	5.35	-641.95	641.76	1.17	-0.22	-3.31	MWD
2599.00	20.38	268.79	2488.11	5.13	-653.07	652.88	0.23	0.22	-0.22	MWD
2630.00	20.56	269.92	2517.15	5.00	-663.91	663.72	1.40	0.58	3.65	MWD
2662.00	20.63	270.17	2547.10	5.01	-675.17	674.98	0.35	0.22	0.78	MWD
2692.00	20.38	269.54	2575.20	4.99	-685.68	685.48	1.11	-0.83	-2.10	MWD
2724.00	20.00	269.04	2605.24	4.85	-696.72	696.53	1.30	-1.19	-1.56	MWD



Weatherford International, Inc.

Survey Report

**Weatherford**

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

Date: 11/7/2007 Time: 08:21.28 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,269.00Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: WFT SVY

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
2755.00	20.19	268.29	2634.35	4.60	-707.37	707.18	1.03	0.61	-2.42	MWD
2787.00	20.26	268.77	2664.38	4.32	-718.43	718.24	0.56	0.22	1.50	MWD
2819.00	20.44	268.29	2694.38	4.03	-729.55	729.37	0.77	0.56	-1.50	MWD
2851.00	20.44	268.92	2724.36	3.76	-740.72	740.54	0.69	0.00	1.97	MWD
2882.00	20.38	268.29	2753.42	3.50	-751.53	751.35	0.73	-0.19	-2.03	MWD
2914.00	20.44	268.67	2783.41	3.20	-762.69	762.51	0.45	0.19	1.19	MWD
2946.00	20.38	269.79	2813.40	3.05	-773.84	773.67	1.23	-0.19	3.50	MWD
2977.00	20.06	270.79	2842.49	3.11	-784.56	784.38	1.52	-1.03	3.23	MWD
3009.00	19.88	270.67	2872.57	3.24	-795.49	795.31	0.58	-0.56	-0.37	MWD
3041.00	19.75	271.04	2902.67	3.41	-806.33	806.15	0.56	-0.41	1.16	MWD
3073.00	19.31	270.29	2932.83	3.53	-817.03	816.84	1.58	-1.37	-2.34	MWD
3104.00	19.00	269.54	2962.11	3.52	-827.20	827.01	1.28	-1.00	-2.42	MWD
3136.00	18.75	270.29	2992.39	3.50	-837.55	837.36	1.09	-0.78	2.34	MWD
3168.00	18.31	268.79	3022.73	3.42	-847.72	847.53	2.03	-1.37	-4.69	MWD
3200.00	17.50	268.04	3053.18	3.15	-857.55	857.37	2.63	-2.53	-2.34	MWD
3232.00	16.75	267.54	3083.77	2.79	-866.97	866.79	2.39	-2.34	-1.56	MWD
3264.00	16.44	267.79	3114.43	2.42	-876.10	875.92	0.99	-0.97	0.78	MWD
3296.00	15.88	267.42	3145.17	2.04	-885.00	884.83	1.78	-1.75	-1.16	MWD
3328.00	15.31	267.54	3175.99	1.66	-893.59	893.43	1.78	-1.78	0.37	MWD
3359.00	14.75	267.29	3205.93	1.30	-901.63	901.46	1.82	-1.81	-0.81	MWD
3391.00	13.81	267.92	3236.94	0.97	-909.51	909.35	2.98	-2.94	1.97	MWD
3432.00	13.13	267.92	3276.81	0.62	-919.06	918.90	1.66	-1.66	0.00	MWD
3455.00	12.69	268.54	3299.23	0.47	-924.19	924.04	2.01	-1.91	2.70	MWD
3485.00	12.00	266.92	3328.54	0.21	-930.60	930.45	2.57	-2.30	-5.40	MWD
3516.00	11.50	268.79	3358.89	-0.02	-936.91	936.76	2.03	-1.61	6.03	MWD
3548.00	11.13	268.42	3390.27	-0.18	-943.18	943.04	1.18	-1.16	-1.16	MWD
3580.00	10.80	267.73	3421.68	-0.38	-949.27	949.13	1.11	-1.03	-2.16	MWD
3612.00	9.94	269.29	3453.16	-0.53	-955.02	954.89	2.83	-2.69	4.87	MWD
3643.00	9.31	268.04	3483.72	-0.65	-960.21	960.07	2.14	-2.03	-4.03	MWD
3675.00	9.13	268.42	3515.31	-0.81	-965.33	965.20	0.59	-0.56	1.19	MWD
3707.00	8.75	269.92	3546.92	-0.88	-970.30	970.17	1.39	-1.19	4.69	MWD
3739.00	8.44	271.17	3578.56	-0.84	-975.08	974.95	1.13	-0.97	3.91	MWD
3770.00	7.69	270.29	3609.25	-0.78	-979.43	979.30	2.45	-2.42	-2.84	MWD
3802.00	6.19	264.42	3641.02	-0.94	-983.29	983.16	5.18	-4.69	-18.34	MWD
3834.00	5.19	264.92	3672.86	-1.24	-986.45	986.32	3.13	-3.12	1.56	MWD
3866.00	4.06	262.42	3704.76	-1.51	-989.02	988.89	3.59	-3.53	-7.81	MWD
3897.00	3.50	258.29	3735.69	-1.85	-991.03	990.91	2.01	-1.81	-13.32	MWD
3928.00	2.38	257.29	3766.65	-2.18	-992.58	992.47	3.62	-3.61	-3.23	MWD
3944.00	2.06	257.92	3782.63	-2.32	-993.19	993.08	2.01	-2.00	3.94	LAST WFT SVY
3961.38	2.06	257.92	3800.00	-2.45	-993.80	993.69	0.00	0.00	0.00	7"
4000.00	2.06	257.92	3838.60	-2.74	-995.16	995.05	0.00	0.00	0.00	WFT PROJ TO BIT
8260.00	1.50	269.00	8096.54	-19.74	-1125.78	1125.95	0.02	-0.01	0.26	LAST RIG SVY

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	9.620	12.250	9 5/8"
3961.38	3800.00	7.000	8.500	7"



Weatherford International, Inc.

Survey Report



Weatherford

Company: WILLIAMS PRODUCTION	Date: 11/7/2007	Time: 08:21.28	Page: 4
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,269.00Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Annotation

MD ft	TVD ft	
3944.00	3782.63	LAST WFT SVY
4000 00	3838.60	WFT PROJ TO BIT
8260 00	8096.54	LAST RIG SVY