

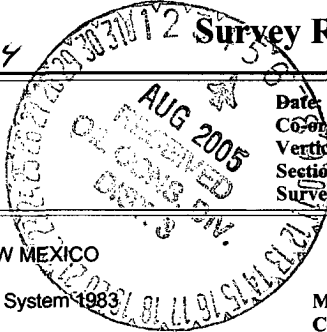


Scientific Drilling

Survey Report



30-045-32874



Company: BP
Field: SAN JUAN, New Mexico
Site: SEC 25-T31N-R10W
Well: Atlantic LS #1B
Wellpath: OH

Date: 6/30/2005
Coordinate(NE) Reference: Well: Atlantic LS #1B, Grid North
Vertical (TVD) Reference: SITE 6560.0
Section (VS) Reference: Well (0.00N,0.00E,324.32Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Field: SAN JUAN, New Mexico
SAN JUAN COUNTY, NEW MEXICO
USA

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

Map Zone: New Mexico, Western Zone
Coordinate System: Well Centre
Geomagnetic Model: bggm2005

Site: SEC 25-T31N-R10W

SAN JUAN NEW MEXICO

Site Position: Northing: ft
From: Lease Line Easting: ft
Position Uncertainty: 0.00 ft
Ground Level: 6408.00 ft

Latitude: ft
Longitude: ft
North Reference: Grid
Grid Convergence: 0.00 deg

Surface 1500' N 960' E
1314 L 725' N 1307' E

Well: Atlantic LS #1B

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 2136955.10 ft Latitude: 36 52 21.358 N
+E/-W 0.00 ft Easting: 2724243.86 ft Longitude: 107 49 45.886 W
Position Uncertainty: 0.00 ft

Wellpath: OH

Current Datum: SITE Height 6560.00 ft
Magnetic Data: 6/6/2005
Field Strength: 51461 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
0.00 0.00 0.00 324.32

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 10.66 deg
Mag Dip Angle: 63.70 deg
+E/-W Direction
ft deg

Survey Program for Definitive Wellpath

Date: 6/30/2005 Validated: No
Actual From To Survey
ft ft

Version: 3
Toolcode

Tool Name

Actual From	To	Survey	Toolcode	Tool Name
265.00	3133.00	MWD Survey (265.00-3133.00)	MWD ISCWSA	MWD - Standard
3760.00	6200.00	Projection survey (3760.00-6200.00)	UNKNOWN	Unknown survey

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
200.01	1.11	260.22	200.00	-0.33	-1.91	0.85	0.55	0.55	0.00	9 5/8"
265.00	1.47	260.22	264.97	-0.58	-3.35	1.48	0.55	0.55	0.00	MWD ISCWSA
295.00	1.62	235.64	294.96	-0.88	-4.08	1.66	2.25	0.50	-81.93	MWD ISCWSA
355.00	1.77	277.58	354.94	-1.24	-5.70	2.32	2.04	0.25	69.90	MWD ISCWSA
415.00	3.41	330.08	414.88	0.43	-7.51	4.73	4.54	2.73	87.50	MWD ISCWSA
475.00	4.13	320.06	474.75	3.63	-9.78	8.66	1.62	1.20	-16.70	MWD ISCWSA
536.00	6.74	334.14	535.47	8.54	-12.76	14.38	4.77	4.28	23.08	MWD ISCWSA
595.00	8.55	337.87	593.95	15.72	-15.92	22.05	3.18	3.07	6.32	MWD ISCWSA
657.00	9.55	338.79	655.17	24.78	-19.52	31.51	1.63	1.61	1.48	MWD ISCWSA
717.00	10.82	337.45	714.23	34.63	-23.48	41.82	2.15	2.12	-2.23	MWD ISCWSA
781.00	12.41	336.05	776.92	46.46	-28.57	54.40	2.52	2.48	-2.19	MWD ISCWSA
844.00	13.86	338.28	838.27	59.66	-34.11	68.35	2.44	2.30	3.54	MWD ISCWSA
908.00	15.56	334.21	900.17	74.51	-40.68	84.25	3.11	2.66	-6.36	MWD ISCWSA
972.00	17.42	328.89	961.54	90.44	-49.37	102.26	3.74	2.91	-8.31	MWD ISCWSA
1037.00	19.10	326.92	1023.26	107.68	-60.20	122.58	2.75	2.58	-3.03	MWD ISCWSA
1101.00	20.37	327.08	1083.50	125.81	-71.97	144.17	1.99	1.98	0.25	MWD ISCWSA
1132.00	20.68	326.62	1112.53	134.91	-77.92	155.03	1.13	1.00	-1.48	MWD ISCWSA
1196.00	20.57	321.59	1172.44	153.16	-91.12	177.55	2.77	-0.17	-7.86	MWD ISCWSA
1260.00	20.67	319.53	1232.34	170.56	-105.44	200.04	1.14	0.16	-3.22	MWD ISCWSA
1324.00	20.58	318.62	1292.23	187.59	-120.20	222.49	0.52	-0.14	-1.42	MWD ISCWSA
1387.00	19.91	321.92	1351.34	204.35	-134.14	244.23	2.10	-1.06	5.24	MWD ISCWSA



Scientific Drilling
Drilling Operations

30-045-32874

Scientific Drilling Survey Report



bp

Company: BP	Date: 6/30/2005	Time: 15:49:54	Page: 3
Field: SAN JUAN, New Mexico	Co-ordinate(NE) Reference:	Well: Atlantic LS #1B, Grid North	
Site: SEC 25-T31N-R10W	Vertical (TVD) Reference:	SITE 6560.0	
Well: Atlantic LS #1B	Section (VS) Reference:	Well (0.00N,0.00E,324.32Azi)	
Wellpath: OH	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
3508.45	3355.00	PICTURED CLIFFS		0.00	0.00
3654.12	3500.00	LEWIS		0.00	0.00
5005.18	4851.00	CLIFF HOUSE		0.00	0.00
5331.18	5177.00	MENEFEE		0.00	0.00
5749.18	5595.00	POINT LOOK OUT		0.00	0.00
6052.18	5898.00	MANCOS		0.00	0.00

Annotation

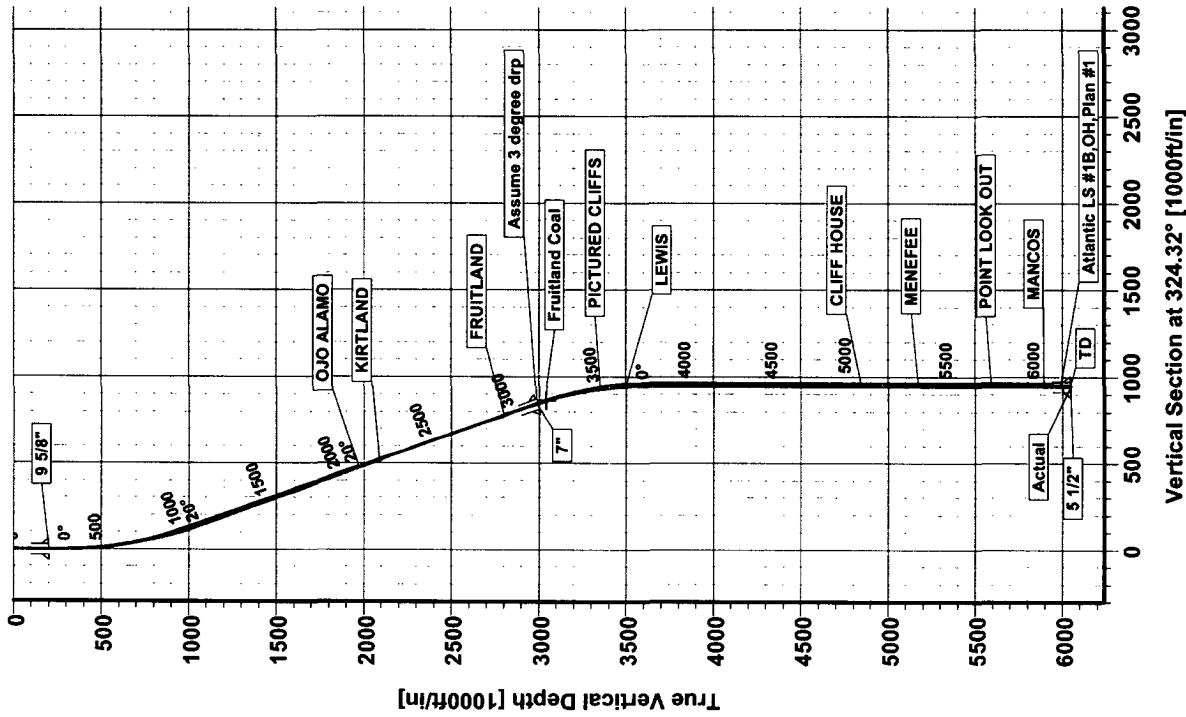
MD ft	TVD ft	
3133.00	2990.05	Release SDI
3133.00	2990.05	Assume 3 degree drp
6200.00	6045.82	TD



Field: SAN JUAN, New Mexico
Site: SEC 25-T31N-R10W
Well: Atlantic LS #1B
Wellpath: OH



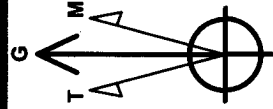
COMPARISON PLOT



PLANNED
ACTUAL

LEGEND

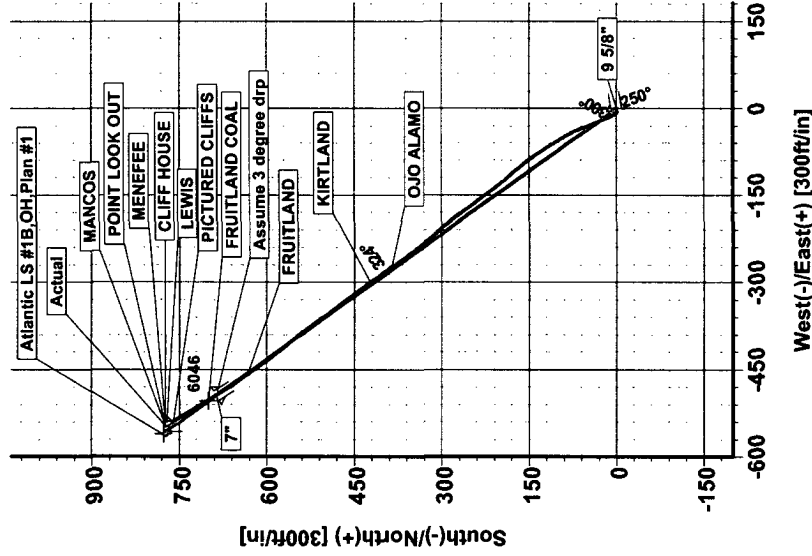
— Atlantic LS #1B, OH, Plan #1
— Actual



Azimuths to Grid North
True North: 0.00°
Magnetic North: 10.66°
Magnetic Field
Strength: 51461nT
Dip Angle: 63.70°
Date: 6/6/2005
Model: bggm2005

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	1972.00	2048.80	OJO ALAMO
2	2088.00	2172.99	KIRTLAND
3	2803.00	2934.86	FRUITLAND
4	3038.00	3183.44	FRUITLAND COAL
5	3355.00	3508.45	PICTURED CLIFFS
6	3500.00	3654.12	LEWIS
7	4851.00	5005.18	CLIFF HOUSE
8	5177.00	5331.18	MENEFE
9	5595.00	5749.18	POINT LOOK OUT
10	5898.00	6052.18	MANCOS



SURVEY PROGRAM

Date : 6/30/2005 Validated : No Version : 3

Depth Fm	Depth To	Survey/Plan	Tool
265.00	3133.00	MWD Survey	MWD ISCWSA
3760.00	6200.00	Projection survey	UNKNOWN

SITE DETAILS

SEC 25-T31N-R10W
SAN JUAN NEW MEXICO
Ground Level: 6408.00
Positional Uncertainty: 0.00
Convergence: 0.00

FIELD DETAILS

SAN JUAN, New Mexico
SAN JUAN COUNTY, NEW MEXICO
USA
Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Western Zone
Magnetic Model: bggm2005
System Datum: Mean Sea Level
Local North: Grid North