

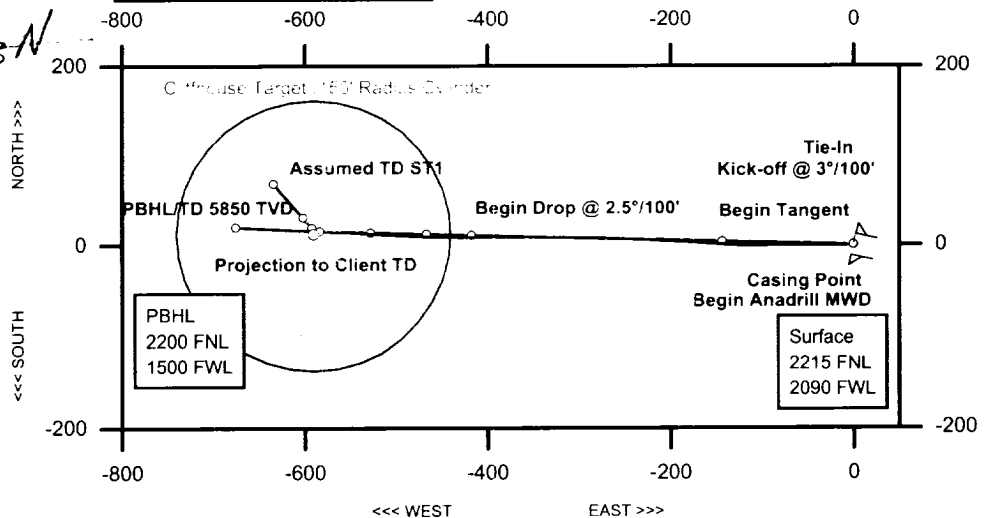
WELL	FIELD	RIG
Florance 28B	San Juan County, New Mexico	Aztec 184
Magnetic Parameters Model: BGGM 2001 Dip: 63.361° Mag Dec: 11.235° Date: April 15, 2002 FS: 51522.2 nT	Surface Location Lat: N36 31 0.000 Lon: W108 23 0.001 North: 2007835.00 ftUS East: 2561475.60 ftUS Grid Conv: -0.3273° Scale Fact: 0.9999	Plan# : Rev1 05-Feb-02 Slot: Florance 28B Elev Ref: KB(6185.00ft above MSL) Date Drawn: 01:40:21PM 15-Apr-2002

20-045-30756

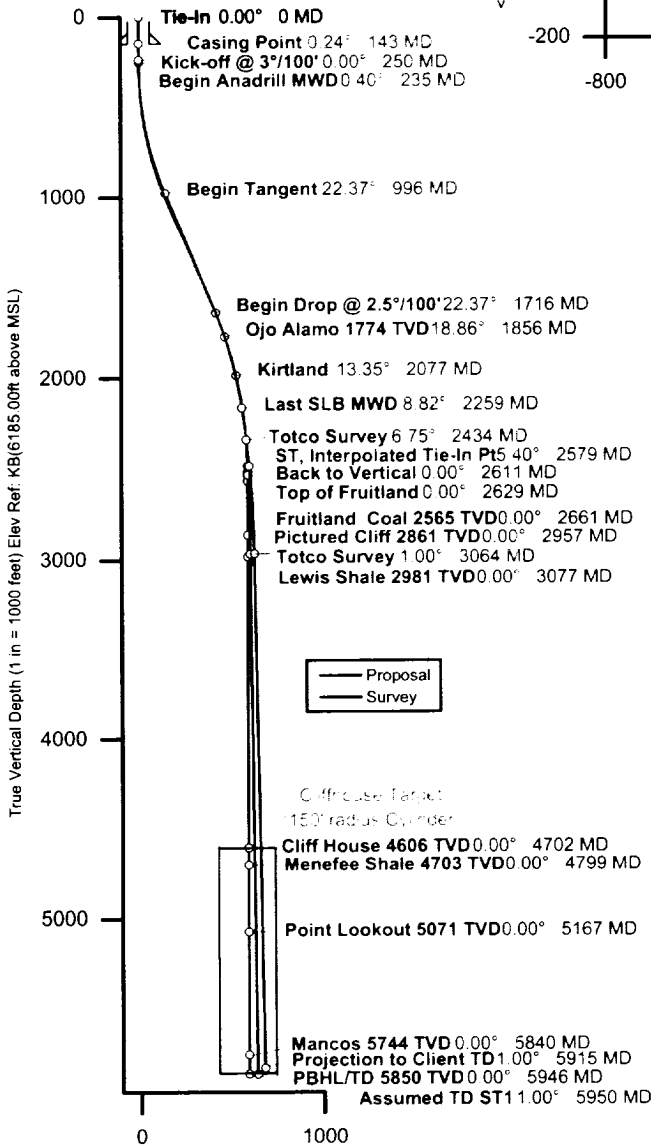
Florance T 123N

F-3-29N-8W

PLAN VIEW Scale (1 in = 200 feet)



Vertical Section View



True North
Tot Corr (E 11.23°)
Mag Dec (E 11.23°)

No Certified Plat

2125/N
-19.
BHL: 2106/N

2090/N
-676
1424/W

SH
to approve
DR

Vertical Section Departure at 271.46 deg from (0.0, 0.0). (1 in = 1000 feet)

Quality Control
Date Drawn: 15-Apr-2002
Drawn by: John O'Keefe
Checked by: Allen Starkey
Client OK: _____

Survey Report - Standard

Report Date: 15-Apr-2002	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client: BP	Vertical Section Azimuth: 271.460°
Field: NM, San Juan County	Vertical Section Origin: N 0.000 ft, E 0.000 ft
Structure / Slot: BP 3-29N-8W (Florance 28B) No Certified Plat / Florance 28B	TVD Reference Datum: KB
Well: Florance 28B	TVD Reference Elevation: 6185.000 ft relative to MSL
Borehole: Original Hole	Sea Bed / Ground Level Elevation: 6171.000 ft relative to MSL
UWI / API#:	Magnetic Declination:
Survey Name / Date: Florance 28B OH Surveys / April 9, 2002	Total Field Strength:
Tort / AHD / DDI / ERD ratio: 50.015° / 676.21 ft / 4.536 / 0.116	Magnetic Dip:
Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet	Declination Date:
Location Lat / Long:	Magnetic Declination Model:
Location Grid N/E Y/X:	North Reference: True North
Grid Convergence Angle:	Total Corr Mag North -> True North:
Grid Scale Factor:	Local Coordinates Referenced To: Well Head

Station ID	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSec (ft)	N-S (ft)	E-W (ft)	Closure (ft)	at Azim (°)	DLS (°/100ft)	TF (°)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		-76.80 M
Begin Anadroll MWLD	235.00	0.40	283.20	235.00	0.80	0.19	-0.80	0.82	283.20	0.17	-83.73 M
	266.00	0.61	276.27	266.00	1.07	0.23	-1.07	1.09	282.16	0.70	-94.34 M
	297.00	1.12	265.66	296.99	1.54	0.23	-1.53	1.55	278.35	1.72	-98.79 M
	328.00	1.79	261.21	327.98	2.32	0.13	-2.31	2.32	273.17	2.19	-97.73 M
	360.00	2.51	262.27	359.96	3.50	-0.04	-3.50	3.50	269.31	2.25	-98.11 M
	392.00	3.27	261.89	391.92	5.09	-0.27	-5.10	5.11	267.02	2.38	-94.81 M
	424.00	4.10	265.19	423.85	7.13	-0.49	-7.14	7.16	266.08	2.68	-93.32 M
	455.00	5.13	266.68	454.75	9.61	-0.66	-9.63	9.66	266.06	3.34	16.00 G
	487.00	6.19	269.48	486.60	12.76	-0.76	-12.79	12.81	266.59	3.42	3.39 G
	519.00	7.28	269.99	518.37	16.51	-0.78	-16.54	16.56	267.31	3.41	1.81 G
	551.00	8.28	270.21	550.08	20.84	-0.77	-20.87	20.88	267.89	3.13	0.39 G

583.00	9.21	270.25	581.71	25.71	-0.75	-25.74	25.75	268.33	2.91	1.81 G
615.00	10.35	270.45	613.24	31.14	-0.72	-31.17	31.18	268.68	3.56	-8.57 G
646.00	11.23	269.77	643.69	36.94	-0.71	-36.97	36.98	268.91	2.87	14.59 G
678.00	12.05	270.79	675.03	43.40	-0.67	-43.43	43.44	269.11	2.64	-1.79 G
710.00	12.91	270.67	706.28	50.31	-0.59	-50.34	50.35	269.33	2.69	-13.03 G
741.00	13.71	269.89	736.45	57.45	-0.55	-57.48	57.48	269.45	2.64	-3.24 G
774.00	14.60	269.69	768.44	65.52	-0.58	-65.55	65.55	269.49	2.70	-9.43 G
805.00	15.40	269.19	798.39	73.53	-0.66	-73.57	73.58	269.49	2.61	9.38 G
837.00	16.41	269.78	829.16	82.30	-0.74	-82.34	82.35	269.49	3.20	-5.67 G
869.00	17.31	269.48	859.79	91.57	-0.80	-91.62	91.63	269.50	2.83	0.00 G
900.00	18.48	269.47	889.29	101.09	-0.89	-101.15	101.15	269.50	3.77	19.91 G
932.00	19.40	270.47	919.55	111.48	-0.89	-111.53	111.54	269.54	3.05	18.52 G
964.00	20.59	271.60	949.62	122.42	-0.69	-122.47	122.48	269.68	3.91	21.70 G
996.00	21.71	272.80	979.47	133.96	-0.24	-134.01	134.01	269.90	3.75	26.53 G
1027.00	22.25	273.51	1008.21	145.56	0.40	-145.60	145.60	270.16	1.94	21.24 G
1058.00	22.83	274.09	1036.85	157.43	1.18	-157.45	157.46	270.43	2.00	-14.14 G
1120.00	23.61	273.60	1093.82	181.85	2.82	-181.84	181.86	270.89	1.30	-42.10 G
1216.00	23.88	273.00	1181.70	220.49	5.05	-220.43	220.49	271.31	0.38	-20.83 G
1279.00	24.16	272.74	1239.24	246.13	6.33	-246.05	246.13	271.47	0.48	-162.46 G
1343.00	23.25	272.01	1297.84	271.85	7.40	-271.75	271.85	271.56	1.49	-132.61 G
1437.00	22.65	270.29	1384.40	308.50	8.14	-308.39	308.50	271.51	0.96	16.12 G
1533.00	23.14	270.65	1472.84	345.84	8.45	-345.74	345.84	271.40	0.53	-101.06 G
1627.00	23.08	269.84	1559.29	382.73	8.61	-382.63	382.73	271.29	0.34	-177.55 G
1689.00	22.63	269.79	1616.43	406.80	8.53	-406.71	406.80	271.20	0.73	-68.68 G
1721.00	22.68	269.46	1645.96	419.12	8.45	-419.04	419.13	271.16	0.43	164.04 G
1752.00	21.65	270.26	1674.67	430.81	8.42	-430.74	430.82	271.12	3.46	175.84 G
1784.00	20.45	270.51	1704.53	442.30	8.50	-442.23	442.31	271.10	3.76	163.67 G
1816.00	20.11	270.80	1734.55	453.39	8.62	-453.32	453.40	271.09	1.11	168.62 G
1848.00	18.65	271.72	1764.73	464.01	8.85	-463.93	464.02	271.09	4.66	169.23 G
1880.00	17.22	272.64	1795.18	473.86	9.22	-473.78	473.87	271.12	4.56	171.63 G
1912.00	16.75	272.88	1825.78	483.21	9.67	-483.12	483.21	271.15	1.48	-174.32 G
1944.00	15.69	272.49	1856.51	492.14	10.09	-492.05	492.15	271.18	3.33	165.70 G
1975.00	15.02	273.15	1886.40	500.35	10.50	-500.25	500.36	271.20	2.23	166.71 G

	2007.00	14.44	273.70	1917.35	508.48	10.98	-508.37	508.49	271.24	1.86	-173.52 G
	2038.00	13.85	273.42	1947.41	516.05	11.45	-515.93	516.06	271.27	1.92	-167.24 G
	2068.00	13.53	273.11	1976.56	523.15	11.86	-523.02	523.15	271.30	1.09	-174.71 G
	2099.00	12.61	272.72	2006.75	530.16	12.21	-530.02	530.16	271.32	2.98	165.74 G
	2131.00	11.89	273.61	2038.02	536.94	12.59	-536.80	536.94	271.34	2.33	169.06 G
Last SLB MWD Totco Survey	2163.00	11.16	274.34	2069.38	543.33	13.03	-543.17	543.33	271.37	2.33	-168.24 G
	2195.00	10.35	273.40	2100.82	549.30	13.43	-549.13	549.30	271.40	2.59	-164.77 G
	2227.00	9.76	272.45	2132.32	554.88	13.72	-554.71	554.88	271.42	1.92	178.22 G
	2259.00	8.82	272.64	2163.90	560.05	13.95	-559.87	560.05	271.43	2.94	180.00 G
ST, Interpolated Tie-In Pt	2579.00	5.40	272.64	2481.46	599.09	15.75	-598.88	599.09	271.51	0.93	180.00 G
Totco Survey	3064.00	1.00	272.64	2965.59	626.15	17.00	-625.92	626.15	271.56	0.91	-87.36 M
Projection to Client TD	5915.00	1.00	272.64	5816.16	675.89	19.29	-675.62	675.90	271.64	0.00	---

Survey Error Model: Wolff & deWardt 1.0000 sigma

Surveying Programme:		MD To (ft)		EOU Freq		Survey Tool Type	
MD From (ft)							
0.00		2434.00		Act-Slins		Anadrill MWD	
2434.00		5915.00		Act-Slins		Poor Mag	