

608174038800

SPERRY-SUN DRILLING SERVICES

SHELL OFFSHORE INC.
 MISSISSIPPI CANYON BLOCK 807
 HOUSTON HNMM90E123

BEST AVAILABLE COPY

OC5-6-7963 NO. 4
 ZANE BARNES
 NORTH REFERENCE : GRID NORTH

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
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TIE IN DATA FROM SEA FLOOR

3053.00	.00	.00	3053.00	.00	.00	.00	.00
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SURVEYS FROM SPERRY-SUN DRILLING SERVICES MWD

3352.27	1.21	76.02	3352.25	.76	3.07	-3.05	.40
3520.71	.41	96.46	3520.67	.88	5.43	-5.18	.50
3613.96	.52	187.50	3613.92	.33	5.84	-5.28	.70
3706.04	.52	197.10	3705.99	-.48	5.66	-4.73	.09
3831.58	.48	229.34	3831.53	-1.39	5.07	-3.77	.22
3926.88	.52	220.54	3926.82	-1.98	4.48	-2.97	.09
4018.79	.48	219.85	4018.73	-2.59	3.97	-2.22	.04
4120.78	1.12	210.51	4120.71	-8.75	3.15	-.95	.64
4235.91	1.01	212.79	4235.82	-5.57	2.02	.92	.10
4341.13	1.19	205.61	4341.02	-7.33	1.04	2.63	.22
4438.73	.95	205.12	4438.60	-8.98	.26	4.11	.25
4531.62	.82	199.67	4531.48	-10.31	-.29	5.23	.17
4626.45	.92	202.20	4626.30	-11.65	-1.80	6.33	.11
4720.32	1.00	204.04	4720.16	-13.10	-1.42	7.57	.09
4809.71	.91	197.53	4809.54	-14.49	-1.95	8.70	.16
4908.01	.36	223.13	4907.83	-15.42	-2.49	9.63	.62
4999.50	.54	235.23	4999.32	-15.83	-3.04	10.33	.23
5097.63	.49	234.05	5097.44	-16.40	-3.76	11.21	.65
5190.68	.47	210.62	5190.49	-16.97	-4.26	11.94	.21
5253.61	.41	183.97	5253.42	-17.43	-4.42	12.28	.39
5341.10	.40	202.37	5340.91	-18.03	-4.56	12.70	.18
5435.26	.83	205.77	5435.06	-18.95	-4.97	13.50	.16
5528.90	.93	210.24	5528.69	-20.22	-5.65	14.71	.17
5623.29	.60	204.55	5623.07	-21.34	-6.23	15.75	.30
5719.36	.62	193.49	5719.13	-22.31	-6.56	16.81	.11
5812.97	.44	214.99	5812.74	-23.09	-6.91	17.20	.28
5904.64	.52	211.82	5904.41	-23.73	-7.32	17.88	.23
5998.79	.46	189.13	5998.55	-24.48	-7.61	18.45	.14
6093.89	.23	153.19	6093.65	-25.04	-7.53	18.68	.22
6188.47	.32	209.21	6188.23	-25.47	-7.54	18.96	.17
6276.02	.16	219.24	6275.78	-25.78	-7.74	19.22	.15
6361.44	.08	214.94	6361.20	-25.92	-7.80	19.59	.14
6457.29	.32	233.55	6457.05	-26.16	-8.06	19.88	.17
6548.04	.12	254.05	6547.80	-26.31	-8.39	20.05	.22
6643.34	.24	269.08	6643.10	-26.36	-8.69	20.23	.20
6734.17	.18	277.03	6733.93	-26.34	-9.02	20.61	.17
6837.56	.12	333.61	6837.32	-26.19	-9.25	20.73	.23
6930.87	.11	239.73	6930.63	-26.14	-9.39	20.84	.17
7042.41	.02	155.62	7042.17	-26.25	-9.43	20.92	.17

BEST AVAILABLE COPY



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SHELL OFFSHORE INC.
 MISSISSIPPI CANYON BLOCK 807
 HOUSTON HMM90E123

BEST AVAILABLE COPY

OCS-G-7963 NO. 4
 ZANE BARNES

NORTH REFERENCE : GRID NORTH

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
7119.39	.15	30.79	7119.15	-25.26	-9.34	20.95	.24
7216.15	.21	304.52	7215.91	-25.99	-9.39	20.77	.26
7312.99	.07	262.91	7312.75	-25.93	-9.62	20.94	.17
7377.39	.18	162.09	7377.15	-26.03	-9.69	21.05	.32
7468.37	.32	159.56	7468.13	-26.41	-9.56	21.12	.15
7540.43	.26	244.97	7540.18	-26.72	-9.68	21.37	.55
7617.80	.27	241.71	7617.55	-26.88	-10.00	21.73	.02
7718.58	.38	272.01	7718.33	-27.01	-10.55	22.27	.20
7820.77	.21	278.10	7820.52	-26.96	-11.07	22.71	.17
7913.14	.25	268.61	7912.89	-26.94	-11.44	23.02	.06
8008.90	.02	148.88	8008.65	-27.10	-11.53	23.18	.27
8096.84	.12	42.32	8096.59	-27.11	-11.44	23.11	.14
8162.63	.21	37.72	8162.40	-26.95	-11.32	22.93	.14
8257.64	.16	353.78	8257.39	-26.68	-11.24	22.72	.15
8351.71	.04	28.35	8351.46	-26.52	-11.21	22.67	.14
8454.33	.28	48.16	8454.08	-26.29	-11.03	22.35	.24
8544.22	.27	19.11	8543.97	-25.94	-10.80	21.97	.15
8608.86	.23	69.11	8608.61	-25.74	-10.61	21.71	.32
8704.75	.02	326.44	8704.50	-25.57	-10.55	21.58	.25
8798.88	.21	4.98	8798.63	-25.39	-10.60	21.53	.21
8883.80	.10	338.67	8883.55	-25.16	-10.63	21.45	.13
8985.24	.35	223.37	8984.98	-25.10	-10.96	21.71	.40
9083.45	.02	184.57	9083.19	-25.38	-11.08	21.36	.34
9177.06	.31	288.83	9176.80	-25.51	-11.29	21.19	.24
9275.94	.15	244.12	9275.68	-25.54	-11.66	21.34	.24
9371.12	.08	340.86	9370.86	-25.47	-11.82	22.65	.19
9465.83	.35	82.38	9465.57	-25.21	-11.66	22.38	.40
9555.66	.08	66.93	9555.40	-25.12	-11.32	22.05	.19
9652.10	.30	20.82	9651.84	-24.89	-11.12	21.75	.24
9757.37	.11	31.54	9757.11	-24.56	-10.95	21.44	.20
9841.37	.49	317.19	9841.11	-24.15	-10.99	21.28	.53
9945.01	.43	302.86	9944.75	-23.52	-11.69	21.58	.47
10035.01	.43	305.76	10034.74	-23.23	-12.19	21.38	.62
10134.38	.54	306.96	10134.11	-22.74	-12.86	21.34	.71
10261.83	.66	303.98	10261.55	-21.56	-13.95	21.54	.78
10354.71	.99	296.51	10354.42	-21.29	-15.10	21.34	.97
10447.44	1.27	294.04	10447.13	-20.51	-16.75	21.34	.94
10535.54	1.35	298.32	10535.21	-19.62	-18.58	21.34	.78
10634.10	1.26	294.31	10633.75	-18.52	-20.58	21.34	.75
10697.80	1.25	286.30	10697.43	-18.14	-21.68	21.34	.76

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OCS-6-7963 NO. 4

ZANE BARNES

NORTH REFERENCE : GRID NORTH

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DCG LEG SEVERITY
10786.02	1.31	273.71	10785.63	-17.80	-23.82	29.45	.23
10883.53	1.41	280.68	10883.11	-17.51	-26.11	31.32	.20
10975.98	1.42	284.18	10975.53	-17.02	-28.34	33.04	.07
11065.35	1.55	283.93	11064.87	-16.35	-30.55	34.65	.20
11162.78	1.43	291.90	11162.27	-15.48	-32.94	36.32	.15
11258.80	1.43	299.90	11258.26	-14.43	-35.09	37.70	.21
11351.43	1.31	294.54	11350.85	-13.42	-37.06	38.93	.19
11443.89	1.32	281.06	11443.30	-12.77	-39.07	40.39	.33
11506.14	1.18	263.53	11505.53	-12.48	-40.40	41.41	.24
11601.22	1.28	285.44	11600.53	-11.97	-42.38	42.89	.11
11691.85	1.32	288.52	11691.20	-11.37	-44.34	44.32	.09
11787.29	1.23	289.72	11786.62	-10.67	-46.35	45.74	.10
11881.80	1.43	290.90	11881.10	-9.89	-48.45	47.21	.34
11973.92	1.41	288.79	11973.19	-9.10	-50.65	48.75	.30
12099.04	1.16	295.98	12098.28	-8.03	-53.24	50.50	.24
12192.59	1.11	271.55	12191.81	-7.60	-55.02	51.86	.33
12254.28	1.03	258.76	12253.49	-7.69	-56.17	53.91	.41
12349.86	1.12	256.28	12349.05	-8.98	-57.92	54.68	.71
12445.04	1.36	240.56	12444.21	-8.84	-59.83	56.66	.44
12536.00	1.33	262.05	12535.14	-9.52	-61.84	58.75	.53
12629.87	1.59	264.56	12628.98	-9.79	-64.22	60.97	.39
12692.24	1.68	255.28	12691.33	-10.11	-65.97	62.63	.43
12783.82	1.67	260.97	12782.87	-10.86	-68.58	63.21	.18
12881.23	2.34	269.97	12880.22	-10.92	-71.98	68.31	.36
12973.57	2.59	273.00	12972.77	-10.82	-75.96	71.75	.39
13036.57	2.53	268.92	13035.41	-10.77	-78.76	74.18	.41
13126.99	2.18	269.33	13127.73	-11.16	-82.53	77.67	.67
13193.70	2.08	255.57	13192.42	-11.69	-84.88	79.88	.37
13291.31	2.23	253.45	13289.96	-12.67	-88.42	83.55	.17
13471.45	2.61	247.10	13469.94	-13.23	-95.57	91.66	.36
13533.04	2.59	244.40	13531.45	-13.38	-98.12	93.54	.30
13637.05	2.82	243.91	13635.36	-13.52	-102.54	95.74	.32
13727.70	2.98	252.79	13725.89	-20.21	-106.53	101.25	.30
13811.45	3.03	253.99	13809.53	-21.46	-111.00	101.56	.10
13898.27	3.40	257.35	13896.21	-22.67	-115.72	101.79	.14
13964.12	3.83	263.60	13961.93	-23.36	-119.81	101.71	.16
14056.22	4.15	260.05	14053.81	-24.27	-125.16	101.76	.14
14154.26	4.54	257.45	14151.56	-25.72	-133.44	101.26	.15
14191.77	4.74	255.62	14183.95	-26.40	-136.40	101.26	.12
14274.22	5.42	261.15	14271.08	-27.80	-143.56	101.15	.10

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SHELL OFFSHORE INC.
MISSISSIPPI CANYON BLOCK 807
HOUSTON HNMM90E123

BEST AVAILABLE COPY DCS-G-7963 NO. 4
ZANE BARNES
NORTH REFERENCE : GRID NORTH

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
14330.96	4.97	258.15	14327.58	-28.73	-148.61	144.02	.93
14365.00	4.70	255.70	14361.50	-29.38	-151.41	146.78	1.00
14395.56	4.47	252.49	14391.96	-30.04	-153.76	149.16	1.13
14456.26	4.30	247.70	14452.49	-31.62	-158.12	153.75	.66
14498.87	4.06	244.86	14494.98	-32.87	-160.96	156.84	.74
14582.00	3.92	240.15	14577.91	-35.54	-166.09	162.62	.43
14659.84	3.70	234.78	14665.56	-38.68	-171.01	168.44	.43
14735.54	3.33	231.48	14731.13	-41.10	-174.23	172.43	.64
14799.30	3.20	226.50	14794.79	-43.48	-176.97	175.98	.49
14875.75	2.63	223.39	14871.14	-46.23	-179.72	179.71	.77
14968.91	2.19	213.55	14964.22	-49.29	-182.15	183.32	.69
15063.49	2.21	206.58	15058.73	-52.43	-183.97	186.43	.28
15127.12	2.18	207.74	15122.31	-54.60	-185.08	188.45	.08
15189.20	2.00	203.55	15184.33	-56.64	-186.06	190.29	.38
15250.71	1.79	205.13	15245.83	-58.50	-186.90	191.93	.33
15342.58	1.53	208.03	15337.66	-60.68	-188.09	194.11	.30
15434.88	1.40	203.93	15429.93	-63.00	-189.12	196.04	.14
15502.55	1.42	193.41	15497.58	-64.57	-189.66	197.27	.39
15593.38	1.54	194.32	15588.38	-66.85	-190.22	198.86	.13
15689.26	1.24	196.95	15684.23	-69.09	-190.84	200.49	.33
15781.38	1.39	201.96	15776.32	-71.68	-191.33	202.07	.21
15873.79	1.45	211.47	15868.71	-73.13	-192.58	203.96	.26
15965.15	1.24	208.95	15960.04	-74.98	-193.66	205.79	.24
16063.38	1.17	227.75	16058.25	-76.59	-194.32	207.69	.41
16153.76	1.30	229.68	16148.61	-77.87	-196.40	209.59	.13
16246.93	1.48	226.11	16241.75	-79.39	-196.08	211.79	.22
16343.17	1.27	225.81	16337.96	-80.93	-199.74	214.42	.21
16434.51	1.12	229.46	16429.28	-82.27	-201.14	215.77	.14
16538.21	.81	227.65	16532.97	-83.43	-202.45	217.58	.34
16623.32	1.12	222.02	16618.07	-84.45	-203.46	218.95	.34
16716.31	.86	201.45	16711.04	-85.61	-204.30	220.35	.47
16810.86	1.01	228.84	16805.58	-87.06	-205.18	221.72	.43
16872.44	1.13	229.14	16867.15	-87.81	-206.05	222.64	.20
16967.70	1.05	240.72	16962.39	-88.85	-207.59	224.64	.27
17067.10	1.16	243.30	17061.77	-89.75	-209.22	226.56	.17
17150.69	1.44	250.30	17145.34	-90.50	-210.37	228.49	.24
17242.89	1.93	252.26	17237.50	-91.27	-213.17	231.27	.33
17338.00	1.87	246.33	17332.56	-92.40	-216.48	234.92	.23
17437.60	1.71	242.96	17432.11	-93.81	-219.22	238.41	.23
17532.22	1.60	240.11	17526.69	-95.11	-221.51	241.75	.23

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 MISSISSIPPI CANYON BLOCK 807
 HOUSTON HNNM90E123

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OCS-6-7963 NO. 4
 ZANE BARNES

NORTH REFERENCE : GRID NORTH

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
17624.71	1.76	237.62	17619.14	-96.52	-224.02	242.79	.19
17720.71	2.01	237.61	17715.09	-98.21	-226.68	245.93	.26
17814.90	2.26	238.85	17809.21	-100.06	-229.67	249.44	.27
17907.59	2.18	231.92	17901.83	-102.09	-232.62	253.01	.30
18000.27	2.16	231.86	17994.45	-104.26	-235.38	256.47	.02
18093.98	2.14	226.30	18088.09	-106.56	-238.03	259.91	.22
18187.92	2.16	229.02	18181.97	-108.93	-240.64	263.33	.11
18282.02	2.15	224.97	18276.00	-111.35	-243.23	266.76	.16
18383.13	1.88	221.52	18377.05	-113.94	-245.66	270.15	.29
18480.56	1.94	212.98	18474.42	-116.52	-247.63	273.11	.30
18566.84	1.77	203.25	18560.66	-118.98	-248.94	275.45	.41
18662.62	1.82	203.51	18656.39	-121.73	-250.13	277.82	.05
18723.15	1.86	180.08	18716.89	-123.62	-250.53	279.08	1.24
18813.00	1.70	160.58	18806.70	-126.36	-250.06	279.99	.69
18902.65	1.78	158.15	18896.30	-128.91	-249.10	280.38	.12
18964.47	1.69	158.67	18958.10	-130.65	-248.41	280.62	.15
19026.17	1.60	160.68	19019.77	-132.31	-247.80	280.88	.17
19108.34	1.82	161.27	19101.90	-134.63	-247.00	281.30	.27
SURVEY PROJECTED TO TD							
19150.00	1.82	161.27	19143.54	-135.88	-246.37	281.53	.00

RADIUS OF CURVATURE CALCULATION METHOD

HORIZONTAL DISPLACEMENT AT BOTTOM HOLE IS
 281.53 FEET ALONG S 61 DEG 8 MIN W
 RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD
 VERTICAL SECTION COMPUTED ALONG 241.14 DEG

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7963
 SHELL OIL SHORE, INCORPORATED
 OCS-G 7963 WELL NO. 4
 MISSISSIPPI CANYON BLOCK 807
 (ZANE BARNES)
 JOB NO(S): MPHT-0310138
 DATE(S) : MARCH 2, 4, 1991
 UTM GRID CORRECTION 2 DEGREES 49 MINUTES EAST
 ALL DIRECTIONS FROM UTM GRID NORTH

MULTISHOT SURVEY



THE BOB FOURNET COMPANY

RECORD OF SURVEY

ALL CALCULATIONS PERFORMED BY A TEXAS INSTRUMENTS 990/10 MODEL 8 ELECTRONIC COMPUTER
 RADIUS OF CURVATURE METHOD

MEASURED DEPTH	DRIFT ANGLE DG MN	TRUE VERTICAL DEPTH	DRIFT DIRECTION DG MN	TOTAL COORDINATES	CLOSURE S		DOG LEGS SEVERITY DEG/100'
					DISTANCE	ANGLE DG MN SC	

TOTAL COORDINATES AT 13291.31 FT MWD FURNISHED BY CUSTOMER

13291	2 14	13289.96	S 73 0 W	12.67 S 88.42 W	89.32 S 81 50 43 W	0.000
13451	2 45	13449.50	S 67 0 W	15.04 S 94.94 W	96.13 S 80 57 47 W	0.000
13544	2 45	13542.39	S 65 0 W	16.86 S 99.02 W	100.44 S 80 20 16 W	0.100
13638	3 0	13636.27	S 68 0 W	18.74 S 103.34 W	105.03 S 79 43 21 W	0.310
13731	3 0	13729.15	S 74 0 W	20.32 S 107.94 W	109.84 S 79 20 16 W	0.380
13825	3 0	13823.02	S 75 0 W	21.64 S 112.68 W	114.74 S 79 7 50 W	0.420
13918	3 30	13915.87	S 79 0 W	22.82 S 117.82 W	119.91 S 79 2 13 W	0.500
14011	3 45	14008.68	S 83 0 W	23.71 S 123.62 W	125.88 S 79 7 43 W	0.550
14103	4 15	14102.45	S 78 0 W	24.82 S 130.09 W	132.44 S 79 11 48 W	0.600
14198	4 45	14195.17	S 78 0 W	26.34 S 137.23 W	139.73 S 79 8 3 W	0.650
14291	4 45	14287.85	S 79 0 W	27.83 S 144.77 W	147.43 S 79 3 3 W	0.700
14385	4 30	14381.54	S 72 0 W	29.77 S 152.11 W	154.72 S 79 55 30 W	0.750
14478	4 15	14474.27	S 68 0 W	32.20 S 158.77 W	162.00 S 78 37 9 W	0.800

BEST AVAILABLE COPY

MEASURED DEPTH	DRIFT ANGLE DG MN	TRUE VERTICAL DEPTH	DRIFT DIRECTION DG MN	TOTAL COORDINATES	CLOSURE DISTANCE	ANGLE DG MN SC	DOG-LEG SEVERITY DEG/100FT
14572	4 0	14568.03	S 44 0 W	34.95 S 164.95 W	168.81 S	73 2 14 W	.403
14665	3 45	14660.81	S 57 0 W	38.04 S 170.41 W	174.61 S	77 24 53 W	.572
14758	3 30	14753.63	S 49 0 W	41.58 S 175.11 W	179.97 S	76 38 35 W	.607
14852	3 0	14847.48	S 43 0 W	45.28 S 178.94 W	184.58 S	75 48 1 W	.643
14945	2 45	14940.36	S 39 0 W	48.80 S 182.00 W	188.43 S	74 52 27 W	.685
15038	2 30	15033.26	S 28 0 W	52.34 S 184.34 W	191.63 S	74 8 54 W	.605
15132	2 15	15127.18	S 29 0 W	55.77 S 186.20 W	194.87 S	73 19 39 W	.670
15225	1 45	15220.12	S 25 0 W	58.66 S 187.68 W	196.63 S	72 33 34 W	.538
15319	1 45	15314.08	S 23 0 W	61.28 S 188.84 W	198.54 S	72 1 18 W	.665
15412	1 30	15407.04	S 24 0 W	63.70 S 189.90 W	200.29 S	71 27 23 W	.671
15505	1 30	15500.01	S 19 0 W	65.96 S 190.79 W	201.87 S	70 55 39 W	.641
15599	2 30	15593.93	S 29 0 W	68.96 S 192.12 W	204.12 S	70 15 21 W	.607
15692	2 45	15686.85	S 24 0 W	72.77 S 194.02 W	207.21 S	69 26 36 W	.608
15785	2 45	15779.73	S 20 0 W	76.90 S 195.69 W	210.26 S	68 32 46 W	.606
15879	2 30	15873.65	S 21 0 W	80.94 S 197.20 W	213.16 S	67 41 8 W	.570
15972	2 15	15966.57	S 31 0 W	84.39 S 198.89 W	216.05 S	67 0 24 W	.620
16066	2 15	16060.50	S 32 0 W	87.54 S 200.81 W	219.07 S	66 26 46 W	.642
16159	2 0	16153.43	S 31 0 W	90.48 S 202.62 W	221.90 S	65 56 10 W	.672
16190	2 0	16184.41	S 31 0 W	91.41 S 203.17 W	222.79 S	65 46 24 W	.605
PROJECTED							
16250	2 0	16244.38	S 31 0 W	93.20 S 204.25 W	224.51 S	65 23 19 W	.606

BOTTOM HOLE CLOSURE 224.51 FEET AT S 65 23 19 W



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This is to certify that the above described work was done in accordance with the provisions of the Field Surveying and Engineering Act of the State of Louisiana, and that the work was done to the best of the knowledge, skill and experience of the Surveyor at the time the Survey was run.

[Signature]

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