

SPERRY-SUN DRILLING SERVICES
GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
90DY-03

CX-LB-10111A
1991 02 09

TOTAL DEPTH	DIRECTION DEG	ANGLE DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0	247.0	0.20	0.00	0.00 N	0.00 E	0.00	0.00
50	90.0	0.23	50.00	0.03 S	0.02 E	-0.03	0.85
100	346.8	0.33	100.00	0.11 N	0.09 E	-0.05	0.90
150	144.7	0.03	150.00	0.24 N	0.06 E	0.02	0.73
200	116.1	0.08	200.00	0.21 N	0.11 E	-0.03	0.11
250	273.4	0.85	250.00	0.22 N	0.23 W	0.29	1.85
300	268.3	1.50	299.99	0.22 N	1.26 W	1.25	1.32
350	274.7	1.78	349.97	0.26 N	2.69 W	2.61	0.67
400	271.1	1.87	399.94	0.34 N	4.28 W	4.13	0.29
450	277.0	2.30	449.91	0.48 N	6.09 W	5.88	0.97
500	278.9	2.38	499.87	0.77 N	8.11 W	7.87	0.23
550	281.8	2.65	549.82	1.16 N	10.27 W	10.04	0.59
600	288.2	2.58	599.77	1.75 N	12.47 W	12.30	0.60
650	296.0	2.95	649.71	2.67 N	14.69 W	14.71	1.05
700	291.9	3.37	699.63	3.78 N	17.21 W	17.46	0.95
750	292.7	3.37	749.55	4.89 N	19.93 W	20.39	0.09
800	293.4	3.50	799.46	6.07 N	22.69 W	23.38	0.28
850	292.7	3.70	849.36	7.29 N	25.58 W	26.52	0.41
900	291.0	4.00	899.24	8.54 N	28.69 W	29.87	0.64
950	294.9	4.17	949.12	9.93 N	31.97 W	33.43	0.64
1000	294.2	4.33	998.98	11.46 N	35.34 W	37.12	0.35
1050	293.5	4.37	1048.84	13.00 N	38.81 W	40.91	0.13
1100	290.8	4.67	1098.68	14.48 N	42.46 W	44.84	0.73
1150	287.6	4.85	1148.51	15.84 N	46.37 W	48.99	0.64
1200	286.5	5.17	1198.32	17.12 N	50.55 W	53.35	0.66
1250	286.3	5.40	1248.10	18.42 N	54.96 W	57.94	0.47
1300	286.7	5.50	1297.88	19.77 N	59.52 W	62.68	0.21
1350	286.1	5.62	1347.64	21.14 N	64.16 W	67.51	0.26
1400	287.7	5.50	1397.41	22.55 N	68.79 W	72.35	0.39
1450	289.5	5.53	1447.18	24.08 N	73.35 W	77.15	0.35
1500	287.9	5.67	1496.94	25.64 N	77.97 W	82.03	0.41
1550	290.3	6.20	1546.67	27.33 N	82.85 W	87.19	1.18
1600	292.7	6.68	1596.35	29.40 N	88.07 W	92.80	1.11
1650	293.1	7.08	1645.99	31.73 N	93.59 W	98.79	0.80
1700	293.5	7.12	1695.61	34.17 N	99.27 W	104.96	0.13
1750	294.0	7.07	1745.23	36.66 N	104.91 W	111.12	0.16
1800	295.4	7.07	1794.85	39.24 N	110.50 W	117.25	0.34
1850	296.3	7.28	1844.46	41.96 N	116.12 W	123.47	0.48
1900	298.1	7.53	1894.04	44.91 N	121.85 W	129.86	0.69

SPERRY-SUN DRILLING SERVICES
GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
90DY-03

CX-LB-10111A
1991 02 09

THE DOGLEG SEVERITY IS IN DEGREES PER 100 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG AZ. 290.23

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE
DISPLACEMENT IS 129.86 FEET, IN THE DIRECTION OF AZ. 290.23

GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
90DY-04-DS
REFERENCE DIRECTION IS TRUE NORTH

1990 08 22
CX-LB-00455
VERTICAL SECTION ALONG CLOSURE
DISTANCES ARE IN FEET
SURVEYOR BGG

TOTAL MEAS DEPTH	ANGLE DEG.DEC	AZIMUTH DEG.DEC	TRUE VERTICAL DEPTH	TOTAL NORTH	CO-ORDINATES EAST	VERTICAL SECTION	DLS PER 100
0.	0.46	183.20	0.00	369.49	304.99	0.00	
25.	0.55	176.63	25.00	369.27	304.99	0.20	0.43
50.	0.51	176.35	50.00	369.04	305.01	0.40	0.19
75.	0.51	189.00	75.00	368.82	305.00	0.61	0.45
100.	0.65	195.40	100.00	368.57	304.94	0.85	0.61
125.	0.80	199.27	124.99	368.27	304.85	1.17	0.63
150.	0.87	203.63	149.99	367.93	304.71	1.53	0.39
175.	0.94	199.74	174.99	367.56	304.57	1.92	0.36
200.	0.90	198.58	199.98	367.18	304.43	2.32	0.15
225.	0.86	210.25	224.98	366.84	304.28	2.71	0.74
250.	1.01	211.17	249.98	366.49	304.07	3.11	0.60
275.	1.23	209.11	274.97	366.06	303.82	3.60	0.92
300.	1.28	210.58	299.97	365.59	303.55	4.15	0.21
325.	1.29	207.68	324.96	365.10	303.28	4.70	0.27
350.	1.32	203.75	349.95	364.58	303.03	5.27	0.38
375.	1.34	211.17	374.95	364.07	302.76	5.85	0.69
400.	1.34	212.29	399.94	363.57	302.46	6.43	0.11
425.	1.33	209.66	424.93	363.07	302.16	7.01	0.25
450.	1.23	213.38	449.93	362.60	301.87	7.56	0.52
475.	1.29	213.54	474.92	362.14	301.56	8.11	0.26
500.	1.30	209.67	499.92	361.66	301.27	8.67	0.36
525.	1.45	206.84	524.91	361.13	300.98	9.27	0.63
550.	1.48	202.84	549.90	360.55	300.72	9.91	0.43
575.	1.33	201.51	574.89	359.99	300.49	10.52	0.63
600.	1.49	204.11	599.89	359.42	300.25	11.13	0.69
625.	1.46	202.94	624.88	358.83	299.99	11.77	0.15
637.	1.45	203.77	636.87	358.55	299.87	12.08	0.21
650.	1.45	203.78	649.87	358.25	299.74	12.41	0.00

LAST DEPTH WAS EXTRAPOLATED ALONG LAST INC AND DIR

MINIMUM CURVATURE METHOD

HORIZONTAL DISPLACEMENT AT BOTTOM HOLE IS
12.41 FEET ALONG 205.05 DEG
RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD

NORTH AND EAST CO-ORDINATES RELATIVE TO GRID OR LEASE LINE

GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
90DY-04-DS
REFERENCE DIRECTION IS TRUE NORTH

1990 09 21
CX-LB-00515
VERTICAL SECTION ALONG CLOSURE
DISTANCES ARE IN FEET
SURVEYOR BGG

TOTAL MEAS DEPTH	ANGLE DEG.DEC	AZIMUTH DEG.DEC	TRUE VERTICAL DEPTH	TOTAL NORTH	CO-ORDINATES EAST	VERTICAL SECTION	DLS PER 100
600.	1.49	204.11	599.89	-10.07	-4.74	-2.88	
625.	1.41	202.33	624.88	-10.65	-4.99	-3.06	0.37
650.	1.22	203.98	649.88	-11.18	-5.21	-3.23	0.77
675.	1.08	211.28	674.87	-11.62	-5.45	-3.34	0.81
700.	0.49	221.81	699.87	-11.90	-5.64	-3.37	2.42
725.	0.24	73.88	724.87	-11.97	-5.66	-3.40	2.82
750.	0.86	56.09	749.87	-11.85	-5.45	-3.48	2.55
775.	1.10	49.86	774.86	-11.59	-5.11	-3.57	1.03
800.	1.01	50.63	799.86	-11.30	-4.76	-3.65	0.36
825.	1.00	47.57	824.85	-11.01	-4.43	-3.72	0.22
850.	1.02	40.14	849.85	-10.69	-4.13	-3.75	0.54
875.	0.97	30.75	874.85	-10.34	-3.87	-3.71	0.69
900.	0.93	26.17	899.84	-9.98	-3.68	-3.63	0.34
925.	0.92	19.04	924.84	-9.60	-3.52	-3.51	0.46
950.	0.83	15.45	949.84	-9.24	-3.41	-3.36	0.45
975.	0.85	6.15	974.83	-8.88	-3.34	-3.18	0.56
1000.	0.82	4.51	999.83	-8.52	-3.30	-2.97	0.15
1025.	0.82	356.86	1024.83	-8.16	-3.30	-2.74	0.44
1050.	0.78	358.29	1049.83	-7.81	-3.32	-2.51	0.19
1075.	0.81	357.89	1074.82	-7.46	-3.33	-2.27	0.11
1100.	0.92	2.55	1099.82	-7.09	-3.32	-2.03	0.53
1125.	0.91	355.44	1124.82	-6.69	-3.33	-1.77	0.45
1150.	0.89	357.27	1149.82	-6.30	-3.36	-1.50	0.14
1175.	0.93	358.98	1174.81	-5.90	-3.37	-1.23	0.18
1200.	0.89	359.90	1199.81	-5.50	-3.37	-0.97	0.17
1225.	0.89	356.93	1224.81	-5.11	-3.38	-0.72	0.18
1250.	0.93	358.44	1249.80	-4.72	-3.40	-0.45	0.17
1275.	0.93	351.08	1274.80	-4.32	-3.44	-0.16	0.48
1300.	1.01	348.34	1299.80	-3.90	-3.51	0.17	0.36
1325.	1.02	348.25	1324.79	-3.47	-3.60	0.52	0.06
1350.	1.19	342.65	1349.79	-3.00	-3.73	0.91	0.79
1375.	1.29	341.77	1374.78	-2.48	-3.89	1.37	0.42
1400.	1.26	337.03	1399.78	-1.96	-4.09	1.85	0.44
1425.	1.18	338.86	1424.77	-1.47	-4.29	2.33	0.34
1450.	1.17	341.53	1449.76	-0.99	-4.46	2.77	0.23
1475.	1.04	342.64	1474.76	-0.53	-4.61	3.18	0.51
1500.	1.06	343.62	1499.76	-0.09	-4.74	3.56	0.10
1525.	1.18	348.08	1524.75	0.38	-4.86	3.96	0.60
1550.	1.16	345.48	1549.75	0.88	-4.98	4.37	0.22
1575.	1.21	349.46	1574.74	1.38	-5.09	4.78	0.39

GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
 90DY-04-DS
 REFERENCE DIRECTION IS TRUE NORTH

1990 09 21
 CX-LB-00515
 VERTICAL SECTION ALONG CLOSURE
 DISTANCES ARE IN FEET
 SURVEYOR BGG

TOTAL MEAS DEPTH	ANGLE DEG.DEC	AZIMUTH DEG.DEC	TRUE VERTICAL DEPTH	TOTAL NORTH	CO-ORDINATES EAST	VERTICAL SECTION	DLS PER 100
1600.	1.32	349.37	1599.73	1.93	-5.19	5.21	0.44
1625.	1.43	351.10	1624.73	2.52	-5.29	5.67	0.44
1650.	1.50	346.34	1649.72	3.14	-5.42	6.16	0.56
1675.	1.72	347.79	1674.71	3.83	-5.57	6.73	0.90
1700.	1.73	347.59	1699.70	4.56	-5.73	7.32	0.05
1712.	1.75	345.42	1711.69	4.91	-5.82	7.62	0.57

MINIMUM CURVATURE METHOD

HORIZONTAL DISPLACEMENT AT BOTTOM HOLE IS
 7.62 FEET ALONG 310.19 DEG
 RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD

SPERRY-SUN DRILLING SERVICES

CURRAGH RESOURCES INC.
90DY-051990 11 07
CX-LB-00602

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0.00	89.43	319.50	0.00	0.00	0.00	0.00	0.00
50.00	89.63	231.80	50.00	0.09 N	0.29 W	0.29	1.33
100.00	88.73	265.97	99.99	0.05 S	0.96 W	0.76	1.97
150.00	88.46	255.15	149.98	0.26 S	2.16 W	1.61	0.75
200.00	88.05	264.34	199.96	0.51 S	3.65 W	2.68	1.00
250.00	88.00	265.57	249.93	0.67 S	5.37 W	4.00	0.13
300.00	88.21	267.27	299.90	0.77 S	7.02 W	5.28	0.45
350.00	88.00	266.37	349.87	0.86 S	8.67 W	6.57	0.44
400.00	88.00	274.52	399.84	0.85 S	10.41 W	8.00	0.57
450.00	87.83	270.64	449.81	0.77 S	12.22 W	9.52	0.44
500.00	87.66	275.75	499.77	0.66 S	14.18 W	11.19	0.52
550.00	87.50	270.83	549.72	0.54 S	16.28 W	12.97	0.53
600.00	87.50	273.89	599.68	0.45 S	18.46 W	14.80	0.27
650.00	87.31	270.94	649.63	0.36 S	20.72 W	16.69	0.45
700.00	87.21	271.94	699.57	0.30 S	23.10 W	18.67	0.22
750.00	87.20	274.97	749.51	0.15 S	25.53 W	20.74	0.30
800.00	87.20	270.00	799.45	0.04 S	27.97 W	22.79	0.49
850.00	87.05	284.15	849.39	0.27 N	30.44 W	24.98	1.45
900.00	86.85	287.80	899.32	1.01 N	32.99 W	27.49	0.56
950.00	86.66	290.58	949.24	1.94 N	35.66 W	30.21	0.48
1000.00	86.61	292.43	999.15	3.01 N	38.39 W	33.05	0.24
1050.00	86.56	292.63	1049.06	4.15 N	41.13 W	35.95	0.10
1100.00	86.38	293.82	1098.97	5.36 N	43.96 W	38.96	0.40
1150.00	86.36	295.03	1148.87	6.67 N	46.84 W	42.06	0.16
1200.00	86.31	298.25	1198.77	8.10 N	49.69 W	45.21	0.42
1250.00	86.16	299.92	1248.66	9.69 N	52.55 W	48.47	0.37
1300.00	85.86	302.82	1298.54	11.50 N	55.51 W	51.93	0.72
1350.00	85.33	307.97	1348.39	13.73 N	58.63 W	55.77	1.33
1400.00	85.13	309.08	1398.22	16.32 N	61.88 W	59.91	0.44
1450.00	85.03	311.20	1448.03	19.08 N	65.15 W	64.18	0.41
1500.00	85.10	310.30	1497.85	21.89 N	68.41 W	68.47	0.20
1550.00	85.11	309.40	1547.67	24.62 N	71.68 W	72.72	0.16
1600.00	85.13	308.51	1597.49	27.29 N	74.99 W	76.96	0.15
1650.00	85.00	309.60	1647.30	30.00 N	78.33 W	81.25	0.33
1700.00	84.95	311.03	1697.11	32.84 N	81.67 W	85.61	0.27
1750.00	84.95	311.10	1746.91	35.73 N	84.98 W	89.99	0.01
1800.00	83.10	317.28	1796.64	39.38 N	88.68 W	95.12	3.91
1850.00	82.28	325.38	1846.24	44.35 N	92.63 W	101.21	2.63
1900.00	82.15	329.42	1895.78	50.05 N	96.27 W	107.48	1.13
1950.00	82.13	330.44	1945.31	55.97 N	99.69 W	113.70	0.28

SPERRY-SUN DRILLING SERVICES

CURRAGH RESOURCES INC.
90DY-051990 11 07
CX-LB-00602

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
2000.00	82.03	332.45	1994.83	62.02 N	102.99 W	119.88	0.59
2050.00	82.18	333.44	2044.36	68.13 N	106.11 W	125.96	0.40
2100.00	82.08	333.40	2093.89	74.25 N	109.17 W	132.00	0.20
2140.00	82.08	333.40	2133.50	79.18 N	111.64 W	136.87	0.00

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG 305.35° (GRID)

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE
DISPLACEMENT IS 136.87 FEET, IN THE DIRECTION OF 305.35° (GRID)

SPERRY-SUN DRILLING SERVICES
GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
90DY-06

CX-LB-00651
1990 11 21

TOTAL DEPTH	DIRECTION DEG	ANGLE DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0	33.3	1.22	0.00	0.00 N	0.00 E	0.00	0.00
50	42.1	1.13	49.99	0.81 N	0.62 E	0.66	0.40
100	44.2	1.55	99.98	1.66 N	1.43 E	1.31	0.84
150	41.3	1.82	149.95	2.74 N	2.42 E	2.15	0.56
200	38.9	1.50	199.93	3.85 N	3.35 E	3.02	0.65
250	34.7	1.53	249.92	4.91 N	4.15 E	3.89	0.23
300	37.8	1.28	299.90	5.90 N	4.87 E	4.70	0.52
350	32.9	1.20	349.89	6.78 N	5.50 E	5.42	0.27
400	35.5	1.25	399.88	7.66 N	6.10 E	6.15	0.15
450	17.1	1.50	449.86	8.73 N	6.61 E	7.08	1.01
500	18.2	1.50	499.85	9.98 N	7.01 E	8.22	0.06
550	6.3	1.85	549.82	11.40 N	7.30 E	9.54	0.99
600	352.9	1.92	599.80	13.04 N	7.28 E	11.14	0.89
650	348.1	2.23	649.77	14.82 N	6.98 E	12.94	0.72
700	342.2	2.20	699.73	16.69 N	6.49 E	14.87	0.46
750	336.4	2.67	749.68	18.67 N	5.73 E	16.97	1.06
800	340.6	2.97	799.62	20.95 N	4.83 E	19.40	0.73
850	337.2	3.22	849.55	23.47 N	3.86 E	22.06	0.62
900	335.5	3.55	899.46	26.17 N	2.67 E	24.96	0.70
950	337.2	3.87	949.36	29.13 N	1.38 E	28.13	0.67
1000	335.5	4.22	999.23	32.36 N	0.04 W	31.59	0.74
1050	333.7	4.67	1049.08	35.85 N	1.70 W	35.36	0.94
1100	331.9	5.00	1098.90	39.60 N	3.63 W	39.44	0.73
1150	331.7	5.33	1148.70	43.57 N	5.76 W	43.78	0.67
1200	335.8	5.93	1198.46	47.97 N	7.92 W	48.54	1.45
1250	337.7	6.85	1248.15	53.09 N	10.11 W	54.01	1.88
1300	340.9	7.33	1297.77	58.86 N	12.29 W	60.12	1.25
1350	339.7	8.03	1347.32	65.15 N	14.54 W	66.76	1.44

THE DOGLEG SEVERITY IS IN DEGREES PER 100 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG AZ. 347.42

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE
DISPLACEMENT IS 66.76 FEET, IN THE DIRECTION OF AZ. 347.42

SPERRY-SUN DRILLING SERVICES

CURRAGH RESOURCES INC.
90DY-071990 12 01
CX-LB-00690

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0.00	0.42	42.86	0.00	0.00	0.00	0.00	0.00
50.00	0.25	9.72	50.00	0.24 N	0.14 E	0.08	0.50
100.00	0.33	319.66	100.00	0.46 N	0.07 E	0.29	0.52
150.00	0.52	314.59	150.00	0.73 N	0.19 W	0.66	0.38
200.00	0.62	307.49	199.99	1.05 N	0.56 W	1.15	0.24
250.00	1.00	301.18	249.99	1.44 N	1.15 W	1.84	0.79
300.00	1.35	295.10	299.98	1.92 N	2.06 W	2.80	0.74
350.00	1.58	298.01	349.96	2.49 N	3.20 W	4.00	0.49
400.00	1.75	300.93	399.94	3.21 N	4.46 W	5.38	0.37
450.00	1.97	297.84	449.92	4.00 N	5.88 W	6.92	0.48
500.00	2.25	297.75	499.88	4.86 N	7.50 W	8.66	0.57
550.00	2.78	304.65	549.83	6.00 N	9.37 W	10.76	1.22
600.00	3.23	308.57	599.76	7.57 N	11.47 W	13.34	0.99
650.00	3.73	310.24	649.67	9.50 N	13.82 W	16.35	1.02
700.00	4.02	310.16	699.56	11.69 N	16.40 W	19.70	0.57
750.00	4.27	310.08	749.43	14.01 N	19.16 W	23.29	0.50
800.00	4.25	308.00	799.29	16.35 N	22.04 W	26.96	0.31
850.00	4.50	309.93	849.14	18.75 N	25.01 W	30.73	0.58
900.00	4.52	309.85	898.99	21.27 N	28.02 W	34.63	0.04
950.00	4.88	310.79	948.82	23.92 N	31.15 W	38.69	0.75
1000.00	5.12	315.73	998.63	26.91 N	34.31 W	43.04	0.98
1050.00	5.52	317.68	1048.41	30.28 N	37.49 W	47.67	0.88
1100.00	5.72	317.64	1098.17	33.90 N	40.78 W	52.56	0.40
1150.00	5.87	317.43	1147.92	37.62 N	44.19 W	57.61	0.30
1200.00	6.00	313.39	1197.65	41.30 N	47.82 W	62.77	0.88
1250.00	6.17	309.36	1247.37	44.80 N	51.79 W	68.04	0.92
1300.00	6.50	309.33	1297.07	48.30 N	56.06 W	73.50	0.67
1350.00	6.75	310.30	1346.73	51.99 N	60.49 W	79.22	0.55
1400.00	6.67	310.26	1396.39	55.77 N	64.95 W	85.01	0.17
1450.00	6.67	310.23	1446.05	59.52 N	69.38 W	90.77	0.01
1500.00	6.67	312.20	1495.71	63.34 N	73.74 W	96.54	0.46
1550.00	6.47	312.09	1545.38	67.18 N	77.98 W	102.24	0.40
1600.00	6.25	310.04	1595.08	70.82 N	82.16 W	107.74	0.63
1650.00	6.25	313.00	1644.78	74.42 N	86.23 W	113.15	0.64
1700.00	5.52	312.92	1694.52	77.92 N	89.98 W	118.26	1.47
1750.00	4.75	311.84	1744.32	80.93 N	93.28 W	122.72	1.55
1800.00	4.62	320.78	1794.15	83.87 N	96.10 W	126.79	1.48
1850.00	4.53	330.71	1843.99	87.16 N	98.34 W	130.72	1.59
1900.00	4.47	340.65	1893.84	90.72 N	99.95 W	134.43	1.56
1950.00	4.28	341.43	1943.69	94.32 N	101.19 W	137.93	0.39

SPERRY-SUN DRILLING SERVICES

CURRAGH RESOURCES INC.
90DY-07

1990 12 01
CX-LB-00690

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
2000.00	4.38	346.36	1993.55	97.95 N	102.24 W	141.30	0.77
2050.00	4.48	351.27	2043.40	101.74 N	102.98 W	144.60	0.78
2100.00	4.27	351.20	2093.25	105.51 N	103.56 W	147.77	0.43
2150.00	4.25	355.11	2143.12	109.19 N	104.01 W	150.78	0.58
2200.00	4.53	4.98	2192.97	113.01 N	103.99 W	153.57	1.61

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG 317.38° (TRUE)

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE
DISPLACEMENT IS 153.57 FEET, IN THE DIRECTION OF 317.38° (TRUE)

SPERRY-SUN DRILLING SERVICES

CURRAGH RESOURCES INC.
90DY-081990 12 03
CX-LB-00673

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0.00	0.17	76.75	0.00	0.00	0.00	0.00	0.00
50.00	0.12	293.48	50.00	0.04 N	0.02 E	0.04	0.54
100.00	0.17	288.76	100.00	0.08 N	0.09 W	0.08	0.10
150.00	0.50	320.02	150.00	0.27 N	0.30 W	0.27	0.74
200.00	0.70	332.24	200.00	0.71 N	0.58 W	0.70	0.47
250.00	0.83	344.05	249.99	1.33 N	0.83 W	1.32	0.41
300.00	1.00	341.56	299.99	2.09 N	1.06 W	2.08	0.34
350.00	1.38	14.24	349.97	3.09 N	1.05 W	3.08	1.53
400.00	1.83	9.96	399.96	4.46 N	0.77 W	4.46	0.93
450.00	2.23	7.71	449.92	6.22 N	0.50 W	6.21	0.82
500.00	2.32	8.03	499.88	8.18 N	0.23 W	8.18	0.17
550.00	2.57	11.33	549.84	10.28 N	0.14 E	10.28	0.57
600.00	2.50	16.23	599.79	12.43 N	0.66 E	12.43	0.45
650.00	2.50	18.82	649.74	14.50 N	1.32 E	14.51	0.23
700.00	2.53	8.72	699.69	16.63 N	1.84 E	16.64	0.89
750.00	2.72	13.59	749.64	18.87 N	2.28 E	18.89	0.58
800.00	2.82	1.99	799.58	21.25 N	2.60 E	21.27	1.13
850.00	3.07	7.36	849.52	23.81 N	2.82 E	23.83	0.74
900.00	3.27	7.22	899.44	26.55 N	3.17 E	26.57	0.40
950.00	3.57	8.14	949.35	29.50 N	3.57 E	29.53	0.61
1000.00	3.43	5.78	999.26	32.53 N	3.94 E	32.56	0.39
1050.00	3.87	3.68	1049.16	35.70 N	4.20 E	35.73	0.91
1100.00	4.40	1.59	1099.03	39.30 N	4.36 E	39.33	1.11
1150.00	4.83	2.52	1148.87	43.32 N	4.50 E	43.36	0.88
1200.00	4.95	0.46	1198.68	47.58 N	4.61 E	47.62	0.42
1250.00	5.08	0.41	1248.49	51.96 N	4.65 E	51.99	0.27
1300.00	5.62	357.39	1298.27	56.62 N	4.55 E	56.65	1.21
1350.00	6.58	353.30	1347.99	61.91 N	4.11 E	61.94	2.12
1400.00	6.67	352.26	1397.66	67.63 N	3.38 E	67.65	0.29
1450.00	6.73	352.21	1447.32	73.41 N	2.59 E	73.43	0.13
1500.00	6.75	351.14	1496.97	79.22 N	1.74 E	79.23	0.25
1550.00	7.00	348.12	1546.61	85.10 N	0.66 E	85.10	0.88

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG 0.45° (TRUE)

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE
DISPLACEMENT IS 85.10 FEET, IN THE DIRECTION OF 0.45° (TRUE)

SPERRY-SUN DRILLING SERVICES

CURRAGH RESOURCES INC.
90DY-091990 12 15
CX-LB-00728

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0.00	1.18	270.00	0.00	0.00	0.00	0.00	0.00
50.00	0.71	254.91	49.99	0.08 S	0.82 W	0.79	1.05
100.00	0.35	262.07	99.99	0.18 S	1.27 W	1.21	0.74
150.00	0.61	251.20	149.99	0.29 S	1.68 W	1.59	0.56
200.00	0.83	249.34	199.98	0.51 S	2.27 W	2.13	0.43
250.00	1.25	261.45	249.98	0.72 S	3.15 W	2.96	0.94
300.00	2.20	265.06	299.95	0.88 S	4.65 W	4.39	1.91
350.00	3.23	273.24	349.90	0.88 S	7.01 W	6.71	2.20
400.00	3.96	273.38	399.80	0.70 S	10.15 W	9.82	1.47
450.00	4.61	273.54	449.66	0.47 S	13.88 W	13.53	1.30
500.00	5.08	271.64	499.48	0.29 S	18.10 W	17.71	0.99
550.00	5.31	273.70	549.27	0.07 S	22.63 W	22.19	0.60
600.00	5.75	275.96	599.04	0.34 N	27.43 W	26.99	0.97
650.00	5.96	273.05	648.78	0.73 N	32.52 W	32.05	0.74
700.00	5.96	273.12	698.51	1.01 N	37.71 W	37.20	0.81
750.00	5.70	273.22	748.25	1.29 N	42.78 W	42.23	0.53
800.00	5.61	267.29	798.01	1.32 N	47.71 W	47.07	1.18
850.00	5.41	266.92	847.77	1.07 N	52.51 W	51.74	0.41
900.00	5.45	267.49	897.55	0.84 N	57.24 W	56.33	0.13
950.00	5.40	268.80	947.32	0.69 N	61.96 W	60.94	0.27
1000.00	5.40	269.86	997.10	0.64 N	66.67 W	65.55	0.20
1050.00	5.18	271.91	1046.89	0.71 N	71.28 W	70.08	0.57
1100.00	5.10	270.00	1096.69	0.78 N	75.75 W	74.49	0.38
1150.00	5.16	270.00	1146.49	0.78 N	80.23 W	78.88	0.13
1200.00	5.25	270.00	1196.28	0.78 N	84.77 W	83.34	0.17
1250.00	5.28	279.69	1246.07	1.17 N	89.32 W	87.89	1.78
1300.00	5.53	280.17	1295.85	1.98 N	93.97 W	92.60	0.51
1350.00	6.13	280.16	1345.59	2.88 N	98.97 W	97.68	1.20
1400.00	6.33	283.68	1395.29	4.00 N	104.28 W	103.10	0.86
1450.00	6.38	289.76	1444.99	5.59 N	109.57 W	108.61	1.35
1500.00	6.76	289.81	1494.66	7.53 N	114.96 W	114.26	0.77
1550.00	7.16	291.06	1544.29	9.65 N	120.64 W	120.25	0.86
1600.00	7.48	290.15	1593.88	11.89 N	126.61 W	126.53	0.67
1650.00	7.71	293.25	1643.44	14.34 N	132.75 W	133.03	0.95
1700.00	7.75	294.34	1692.99	17.05 N	138.90 W	139.59	0.30
1750.00	8.20	295.95	1742.50	20.00 N	145.18 W	146.32	1.01
1800.00	8.66	296.03	1791.96	23.22 N	151.77 W	153.41	0.93
1850.00	8.66	296.27	1841.39	26.54 N	158.54 W	160.68	0.07
1900.00	8.95	297.40	1890.80	29.99 N	165.37 W	168.05	0.66
1950.00	9.20	299.07	1940.18	33.73 N	172.32 W	175.58	0.73

SPERRY-SUN DRILLING SERVICES

CURRAGH RESOURCES INC.
90DY-09

1990 12 15
CX-LB-00728

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG 281.07° (TRUE)

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE
DISPLACEMENT IS 175.58 FEET, IN THE DIRECTION OF 281.07° (TRUE)