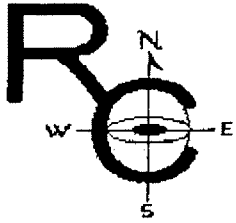


**Rusty Clark
Survey
Company, Inc.**

1805 East Bridge Street, P. O. Box 100,
Breaux Bridge, LA 70517



FAX

Date: 9/15/09

Number of pages including cover sheet: 8

To:

SANDIA DAVID FREEMAN

Phone:

Fax phone: 832-286-0477

CC:

From:

PHILLIP BROUSSARD

Office Phone & Fax #'s Below:

Phone: (337) 237-7593 & 800-256-7593

Fax phone: (337) 332-3104

REMARKS:

☐

Urgent

☒

For your review

☐

Reply ASAP

☐

Please comment

TURNKEYED FOR:

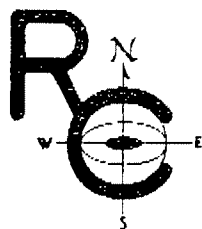
WELL NAME & NUMBER: CFU 31F, WELL #3

LOCATION: CRANFIELD FIELD UNIT

RIG NAME: SCHLUMBERGER W/L

SURVEY FROM 0' TO 10,647' MEASURED DEPTH

Efficiently providing you with an array of Multi-shot & Single Shot Surveys using quality Gyroscopic, Magnetic, & Surface Readout Gyroscopic equipment.



RUSTY CLARK SURVEY COMPANY, INC.

MSL-09090162-GS

SEPTEMBER 11, 2009

Report of Sub-Surface Directional Survey

SANDIA TECHNOLOGIES, LLC

CFU 31F, WELL #3

CRANFIELD FIELD UNIT

SURVEY FROM SURFACE TO 10,647 FEET M. D.

P.O. BOX 100

BREAUX BRIDGE, LOUISIANA 70517

PHONE (337) 237-7593

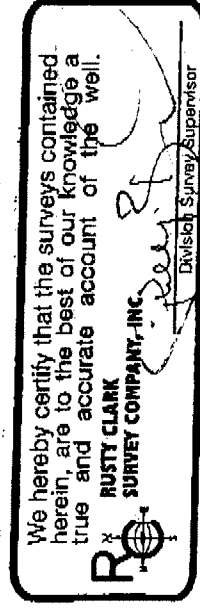
Rusty Clark Survey Co.
P.O. Box 100
Breaux Bridge, LA 70517
(337)-237-7593

SANDIA TECHNOLOGIES, LLC
CFU 31F, WELL #3
CRANFIELD FIELD UNIT
RIG: SCHLUMBERGER WIRELINE

Surface Readout Gyroscopic Survey - MSL-09090162-GS - 9/1 1/2009

KELLY BUSHING ELEVATION = -18 FEET
MAGNETIC DECLINATION = ORIENTED TO GRID NORTH
PLANE OF PROPOSAL DIRECTION IS .00

MINIMUM CURVATURE METHOD - RESULTS IN FEET



Rusty Clark Survey Co.
SURVEY DATA

MEASURED DEPTH	DRIFT ANGLE	QUADRANT	AZIMUTH DIRECTION	VERTICAL DEPTH	SUB SEA TVD	VERTICAL SECTION	RECTANGULAR COORDINATES	CLOSURES DISTANCE	AZIMUTH DIRECTION	DOG LEG DEG/100FT.
0.00	0.00	N 0.00 E	0.00	0.00	18.00	0.00	0.00 N	0.00	0.00 E	0.00
100.00	0.54	S 38.40 E	141.60	100.00	118.00	-0.37	0.37 S	0.47	S 38.40 E	0.54
200.00	0.35	S 32.70 E	147.30	200.00	218.00	-1.00	1.00 S	1.25	S 36.89 E	0.19
300.00	0.17	S 54.90 E	125.10	299.99	317.99	-1.34	1.34 S	1.70	S 37.67 E	0.20
400.00	0.42	S 29.40 E	150.60	399.99	417.99	1.75	1.74 S	2.20	S 37.55 E	0.28
500.00	0.98	S 5.30 E	174.70	499.99	517.99	-2.91	2.91 S	3.32	S 28.78 E	0.62
600.00	1.00	S 18.90 W	198.90	599.97	617.97	-4.59	4.59 S	4.79	S 16.93 E	0.42
700.00	0.89	S 22.30 W	202.30	699.96	717.96	-6.13	6.13 S	6.19	S 7.64 E	0.12
800.00	0.83	S 25.20 W	205.20	799.95	817.95	-7.50	7.50 S	7.51	S 1.66 E	0.07
900.00	0.92	S 6.80 W	186.60	899.93	917.93	-8.95	8.95 S	8.95	S 1.17 W	0.29
1000.00	0.94	S 10.20 W	190.20	999.92	1017.92	-10.55	10.55 S	10.56	S 2.28 W	0.06
1100.00	1.13	S 38.00 W	218.00	1099.91	1117.91	12.13	12.13 S	12.19	S 5.52 W	0.53
1200.00	1.26	S 48.50 W	228.50	1199.88	1217.88	-13.64	13.64 S	13.88	S 10.80 W	0.25
1300.00	0.73	S 38.40 W	218.40	1299.87	1317.87	-14.87	14.87 S	15.35	S 14.41 W	0.56
1400.00	0.58	S 70.30 W	250.30	1399.86	1417.86	-15.54	15.54 S	16.23	S 16.80 W	0.39
1500.00	1.05	N 61.80 W	298.20	1499.85	1517.85	-15.28	15.28 S	16.40	S 21.36 W	0.79
1600.00	1.37	N 77.30 W	282.70	1599.83	1617.83	-14.58	14.58 S	16.61	S 28.58 W	0.45
1700.00	1.65	N 71.60 W	288.40	1699.80	1717.80	-13.86	13.86 S	17.37	S 37.07 W	0.32
1800.00	1.68	N 87.70 W	272.30	1799.75	1817.75	-13.35	13.35 S	18.84	S 44.90 W	0.47
1900.00	1.28	S 81.00 W	261.00	1899.72	1917.72	-13.47	13.47 S	20.81	S 49.68 W	0.49
2000.00	0.78	S 71.80 W	251.80	1999.70	2017.70	-13.86	13.86 S	22.42	S 51.82 W	0.53
2100.00	0.32	N 19.40 W	340.60	2099.70	2117.70	-13.81	13.81 S	22.97	S 53.05 W	0.84
2200.00	0.62	S 78.00 W	258.00	2199.70	2217.70	-13.66	13.66 S	23.39	S 54.26 W	0.66
2300.00	0.93	S 60.20 W	240.20	2299.69	2317.69	-14.18	14.18 S	24.69	S 54.96 W	0.39
2400.00	0.81	S 1.50 E	178.50	2399.68	2417.68	-15.29	15.29 S	25.89	S 53.81 W	0.90
2500.00	0.33	S 78.80 E	101.20	2499.68	2517.68	-16.05	16.05 S	26.12	S 52.07 W	0.80
2600.00	0.39	N 29.10 W	330.90	2599.67	2617.67	-15.81	15.81 S	25.87	S 52.34 W	0.65
2700.00	0.56	S 77.80 W	257.80	2699.67	2717.67	-15.62	15.62 S	26.27	S 53.53 W	0.58
2800.00	0.16	N 76.70 W	283.30	2799.67	2817.67	-15.69	15.69 S	26.81	S 54.17 W	0.42
2900.00	0.46	S 58.10 W	238.10	2899.67	2917.67	-15.87	15.87 S	27.29	S 54.45 W	0.37
3000.00	0.77	S 48.20 W	228.20	2999.66	3017.66	-16.53	16.53 S	28.37	S 54.36 W	0.33
3100.00	0.83	S 12.00 W	192.00	3099.65	3117.65	-17.69	17.69 S	29.57	S 53.27 W	0.50
3200.00	0.67	S 1.60 W	181.60	3199.64	3217.64	-18.96	18.96 S	30.50	S 51.50 W	0.21
3300.00	0.43	S 89.70 E	90.30	3299.64	3317.64	-19.57	19.57 S	30.59	S 50.23 W	0.80

SANDIA TECHNOLOGIES, LLC CFU 31F, WELL #3
MINIMUM CURVATURE METHOD ** RESULTS IN FEET **

Rusty Clark Survey Co.
SURVEY DATA

MEASURED DEPTH	DRIFT ANGLE	QUADRANT	AZIMUTH DIRECTION	VERTICAL DEPTH	SUB SEA TVD	VERTICAL SECTION	RECTANGULAR COORDINATES	CLOSURES DISTANCE	AZIMUTH DIRECTION	DOG LEG DEG/100FT.
3400.00	0.43	N 5.30 E	5.30	3399.64	3417.64	-19.20	19.20 S	30.04	230.27 S 50.27 W	0.58
3500.00	0.47	N 24.30 W	335.70	3499.64	3517.64	-18.45	18.45 S	29.67	231.54 S 51.54 W	0.23
3600.00	0.56	N 60.40 W	299.60	3599.63	3617.63	-17.84	17.83 S	29.76	233.18 S 53.18 W	0.33
3700.00	0.45	S 74.50 W	254.50	3699.63	3717.63	-17.69	17.69 S	30.32	234.30 S 54.30 W	0.40
3800.00	0.45	S 79.70 W	259.70	3799.63	3817.63	-17.86	17.87 S	31.04	234.86 S 54.86 W	0.04
3900.00	0.43	S 71.30 W	251.30	3899.62	3917.62	-18.06	18.06 S	31.76	235.34 S 55.34 W	0.07
4000.00	0.49	S 75.60 W	255.60	3999.62	4017.62	-18.29	18.29 S	32.52	235.78 S 55.78 W	0.07
4100.00	0.29	S 17.60 W	197.60	4099.62	4117.62	-18.64	18.64 S	33.12	235.76 S 55.76 W	0.42
4200.00	0.24	S 23.10 W	203.10	4199.62	4217.62	-19.07	19.07 S	33.50	235.29 S 55.29 W	0.06
4300.00	0.27	N 7.70 E	7.70	4299.62	4317.62	-19.03	19.03 S	33.52	235.41 S 55.41 W	0.51
4400.00	0.40	N 26.70 E	26.70	4399.61	4417.61	-18.49	18.48 S	33.05	236.00 S 56.00 W	0.17
4500.00	0.72	N 10.00 W	350.00	4499.61	4517.61	-17.55	17.55 S	32.50	237.32 S 57.32 W	0.47
4600.00	0.49	N 29.00 W	331.00	4599.60	4617.60	-16.56	16.56 S	32.24	239.10 S 59.10 W	0.30
4700.00	0.50	N 10.30 W	349.70	4699.60	4717.60	-15.76	15.76 S	32.09	240.59 S 60.59 W	0.16
4800.00	0.39	N 48.70 W	311.30	4799.60	4817.60	-15.11	15.11 S	32.07	241.90 S 61.90 W	0.31
4900.00	0.74	N 67.30 W	292.70	4899.59	4917.59	-14.64	14.64 S	32.61	243.33 S 63.33 W	0.39
5000.00	0.18	S 39.10 E	140.90	4999.59	5017.59	-14.51	14.51 S	33.00	243.91 S 63.91 W	0.90
5100.00	0.38	N 88.90 E	88.90	5099.59	5117.59	-14.63	14.63 S	32.67	243.40 S 63.40 W	0.30
5200.00	0.57	N 58.00 E	58.00	5199.59	5217.59	14.36	14.36 S	31.87	243.22 S 63.22 W	0.31
5300.00	0.62	N 46.10 E	46.10	5299.58	5317.58	13.72	13.72 S	30.87	243.61 S 63.61 W	0.13
5400.00	0.63	N 16.80 W	343.20	5399.58	5417.58	12.82	12.82 S	30.27	244.94 S 64.94 W	0.65
5500.00	0.33	N 65.80 W	294.20	5499.57	5517.57	-12.18	12.18 S	30.39	246.38 S 66.38 W	0.48
5600.00	0.32	S 41.70 E	138.30	5599.57	5617.57	12.27	12.27 S	30.49	246.27 S 66.27 W	0.64
5700.00	0.39	N 60.70 E	60.70	5699.57	5717.57	-12.31	12.31 S	30.07	245.83 S 65.83 W	0.45
5800.00	0.21	N 2.40 E	2.40	5799.57	5817.57	11.96	11.96 S	29.65	246.21 S 66.21 W	0.33
5900.00	0.61	S 32.40 W	212.40	5899.57	5917.57	-12.23	12.23 S	30.02	245.97 S 65.97 W	0.80
6000.00	0.66	N 39.10 E	39.10	5999.57	6017.57	12.23	12.23 S	29.95	245.90 S 65.90 W	1.27
6100.00	0.54	S 30.30 W	210.30	6099.56	6117.56	12.19	12.19 S	29.82	245.87 S 65.87 W	1.20
6200.00	0.30	N 75.60 E	75.60	6199.56	6217.56	12.53	12.53 S	29.94	245.26 S 65.26 W	0.78
6300.00	0.39	S 39.50 W	219.50	6299.56	6317.56	12.73	12.73 S	29.99	244.89 S 64.89 W	0.66
6400.00	0.44	N 7.90 W	352.10	6399.56	6417.56	-12.61	12.61 S	30.18	245.30 S 65.30 W	0.76
6500.00	0.40	S 62.80 E	117.20	6499.56	6517.56	12.39	12.39 S	29.85	245.48 S 65.48 W	0.75
6600.00	0.17	N 1.20 W	358.80	6599.56	6617.56	-12.40	12.40 S	29.58	245.21 S 65.21 W	0.50

SANDIA TECHNOLOGIES, LLC - CFU 31F, WELL #3
MINIMUM CURVATURE METHOD **RESULTS IN FEET**

Rusty Clark Survey Co.
SURVEY DATA

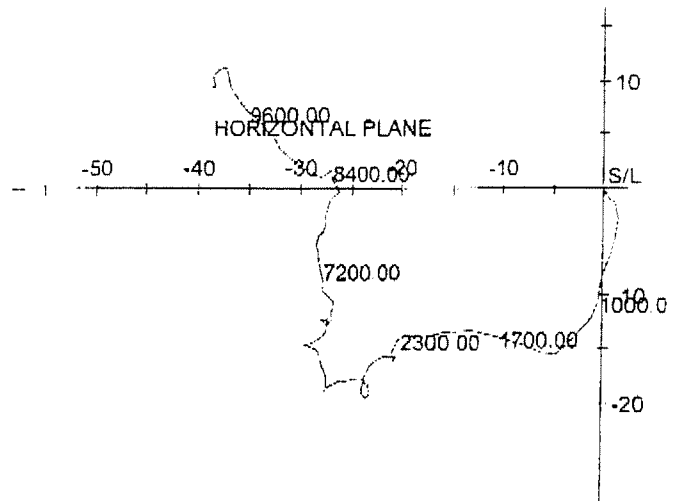
MEASURED DEPTH	DRIFT ANGLE	QUADRANT	AZIMUTH DIRECTION	VERTICAL DEPTH	SUB SEA TVD	VERTICAL SECTION	RECTANGULAR COORDINATES	CLOSURES DISTANCE	AZIMUTH DIRECTION	DOG LEG DEG/100FT.
6700.00	0.73	N 8.40 W	351.60	6699.55	6717.55	-11.62	11.62 S	29.35	245.67 S 66.67 W	0.56
6800.00	0.42	N 44.60 E	44.60	6799.55	6817.55	10.73	10.73 S	28.85	248.17 S 68.17 W	0.58
6900.00	0.58	N 72.40 W	287.60	6899.55	6917.55	-10.32	10.32 S	28.92	249.10 S 69.10 W	0.86
7000.00	0.75	N 21.70 W	338.30	6999.54	7017.54	-9.56	9.56 S	29.34	250.99 S 70.99 W	0.59
7100.00	0.62	N 20.80 E	20.80	7099.54	7117.54	-8.45	8.45 S	29.05	253.10 S 73.10 W	0.51
7200.00	0.50	N 50.90 W	309.10	7199.53	7217.53	-7.67	7.67 S	28.97	254.65 S 74.65 W	0.66
7300.00	0.87	N 7.80 E	7.80	7299.53	7317.53	-6.64	6.64 S	28.95	256.73 S 76.73 W	0.74
7400.00	0.16	S 83.20 W	263.20	7399.52	7417.52	-5.90	5.90 S	28.83	258.18 S 78.18 W	0.92
7500.00	0.66	N 7.90 W	352.10	7499.52	7517.52	-5.35	5.35 S	28.94	259.35 S 79.35 W	0.88
7600.00	0.51	N 46.30 E	46.30	7599.52	7617.52	-4.47	4.47 S	28.55	260.99 S 80.99 W	0.55
7700.00	0.13	N 41.00 E	41.00	7699.51	7717.51	-4.08	4.08 S	28.10	261.66 S 81.66 W	0.38
7800.00	0.53	N 14.00 E	14.00	7799.51	7817.51	-3.55	3.55 S	27.84	262.68 S 82.68 W	0.42
7900.00	0.79	N 3.60 W	356.40	7899.50	7917.50	-2.41	2.41 S	27.65	264.99 S 84.99 W	0.33
8000.00	0.94	N 38.90 E	38.90	7999.49	8017.49	-1.08	1.08 S	27.09	267.71 S 87.71 W	0.64
8100.00	0.33	N 82.20 E	82.20	8099.49	8117.49	-0.40	0.40 S	26.27	269.12 S 89.12 W	0.74
8200.00	0.58	N 54.40 W	305.60	8199.49	8217.49	-0.07	0.07 S	26.40	269.86 S 89.86 W	0.85
8300.00	0.60	N 18.10 W	341.90	8299.48	8317.48	0.72	0.72 N	26.98	271.53 N 88.47 W	0.37
8400.00	0.39	N 8.20 E	8.20	8399.48	8417.48	1.56	1.55 N	27.13	273.29 N 86.72 W	0.30
8500.00	0.16	S 17.50 W	197.50	8499.48	8517.48	1.75	1.75 N	27.13	273.71 N 86.29 W	0.55
8600.00	0.30	S 34.70 W	214.70	8599.48	8617.48	1.40	1.40 N	27.30	272.94 N 87.06 W	0.15
8700.00	0.64	S 73.80 W	253.80	8699.47	8717.47	1.03	1.03 N	27.96	272.11 N 87.89 W	0.45
8800.00	0.90	N 49.40 W	310.60	8799.47	8817.47	1.39	1.39 N	29.12	272.73 N 87.27 W	0.77
8900.00	0.82	N 62.90 W	297.10	8899.45	8917.45	2.23	2.23 N	30.40	274.20 N 85.80 W	0.22
9000.00	0.63	N 47.50 W	312.50	8999.45	9017.45	2.93	2.93 N	31.49	275.33 N 84.67 W	0.27
9100.00	0.36	N 26.80 W	333.20	9099.44	9117.44	3.58	3.58 N	32.10	276.41 N 83.59 W	0.32
9200.00	0.18	N 23.20 W	336.80	9199.44	9217.44	4.01	4.00 N	32.35	277.11 N 82.89 W	0.18
9300.00	0.37	N 40.80 W	319.20	9299.44	9317.44	4.39	4.39 N	32.67	277.72 N 82.28 W	0.21
9400.00	0.70	N 43.20 W	316.80	9399.44	9417.44	5.08	5.08 N	33.39	278.75 N 81.25 W	0.33
9500.00	0.82	N 45.80 W	314.20	9499.43	9517.43	6.02	6.02 N	34.46	280.07 N 79.93 W	0.12
9600.00	0.96	N 51.00 W	309.00	9599.41	9617.41	7.05	7.05 N	35.79	281.35 N 78.65 W	0.16
9700.00	0.76	N 31.90 W	328.10	9699.40	9717.40	8.14	8.14 N	37.00	282.71 N 77.29 W	0.35
9800.00	0.78	N 33.60 W	326.40	9799.39	9817.39	9.27	9.27 N	37.97	284.13 N 75.87 W	0.03
9900.00	0.60	N 0.50 W	359.50	9899.39	9917.39	10.36	10.36 N	38.62	285.56 N 74.44 W	0.43

SANDIA TECHNOLOGIES, LLC CFU 31F, WELL #3
MINIMUM CURVATURE METHOD ** RESULTS IN FEET **

Rusty Clark Survey Co.
SURVEY DATA

MEASURED DEPTH	DRIFT ANGLE	QUADRANT	AZIMUTH DIRECTION	VERTICAL DEPTH	SUB SEA TVD	VERTICAL SECTION	RECTANGULAR COORDINATES	CLOSURES DISTANCE	AZIMUTH DIRECTION	DOG LEG DEG/100FT.
10000.00	0.35	N 47.10 W	312.90	9999.38	10017.38	11.09	11.09 N	39.04	286.51 N 73.49 W	0.44
10100.00	0.34	S 45.00 W	225.00	10099.38	10117.38	11.09	11.09 N	39.45	286.32 N 73.68 W	0.48
10200.00	0.39	S 54.70 W	234.70	10199.38	10217.38	10.68	10.68 N	39.81	285.57 N 74.43 W	0.08
10300.00	0.25	S 3.70 W	183.70	10299.38	10317.38	10.27	10.27 N	39.98	284.88 N 75.12 W	0.30
10400.00	0.24	S 39.70 E	140.30	10399.38	10417.38	9.89	9.89 N	39.77	284.40 N 75.60 W	0.18
10500.00	0.20	S 35.00 W	215.00	10499.38	10517.38	9.59	9.59 N	39.66	283.99 N 76.01 W	0.27
10600.00	0.16	S 62.80 W	242.80	10599.38	10617.38	9.38	9.38 N	39.84	283.62 N 76.38 W	0.09
10647.00	0.38	S 88.10 W	268.10	10646.38	10664.38	9.35	9.34 N	40.03	283.50 N 76.50 W	0.52

BOTTOM HOLE CLOSURE: 40.03 FEET AT N 76.50 W



B.H.L.
40.03' N 78.50' W
N-9' W-39'
T.V.D.-10646'
M.D.-10647'

VERTICAL SECTION

