

**SUB-SURFACE
DIRECTIONAL
SURVEY
REPORT**

CHARLES B. GILLESPIE, JR.

COMPANY

SHIPP WELL NO. 2

WELL NAME

LEA COUNTY, NEW MEXICO

STATE AND COUNTY

CERTIFIED REPORT

CHARLES B. GILLESPIE, JR.

WELL # 1
SHIPP WELL NO. 2

LOCATION 1
LEA COUNTY, NEW MEXICO

DATE 1
7/20/87, 7/20/87, 7/23/87-8/01/87

JOB TYPE 1
GYRO, MULTISHOT, SINGLES

JOB # 1
MS-1881, CS-1882, D-1885

SURVEYOR 1
L. MASSEY, L. MASSEY, B. BURKE

DEPTHS 1
0' - 4440', 4440' - 8794', 8794' - 11405'

DECL. 1
9 DEGREES EAST

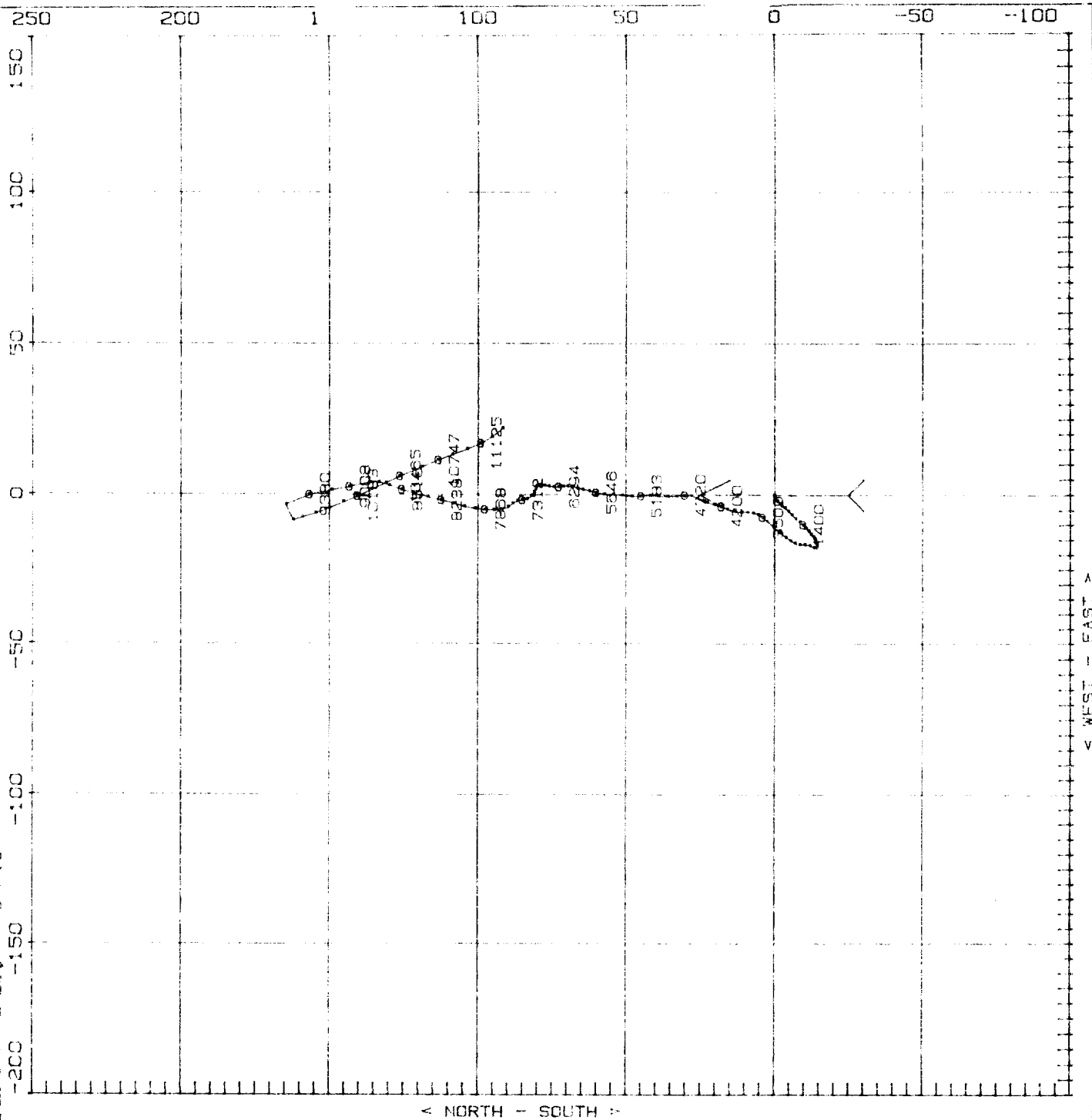
ELEV. 1
0'

FILE # 1
WT-007S

FINAL STATION DATA:
MD. 11405.00
TVD. 11399.87
N/S 91.61
E/W 22.18

CLOSURE DISTANCE
94.26 FEET
CLOSURE DIRECTION
N 13.61 E

1 IN. = 50 FT.



CUSTOMER :CHARLES B. GILLESPIE, JR.

WELL # :SHIPP WELL NO. 2

LOCATION :LEA COUNTY, NEW MEXICO

DATE :7/20/87,7/20/87,7/23/87-8/01/87

LOG TYPE :GYRO, MULTISHOT, SINGLESHOT

:MS-1861,GS-1862,D-1865

SURVEYOR :L.MASSEY, L.MASSEY, B.MURKE

DEPTH :0'-4440',4440'-8794',8794'-11405'

DECL. :9 DEGREES EAST

ELEV. :0'

FILE # :WT-DD7S

METHOD :RADIUS OF CURVATURE

SECTION :0

FINAL STATION DATA!

THIS SURVEY IS CORRECT TO THE
BEST OF MY KNOWLEDGE AND IS
SUPPORTED BY ACTUAL FIELD DATA.

Larry Massey
DIG REPRESENTATIVE

MEASURED : INCL. : HOLE : COURSE : VERTICAL : TRUE :
DEPTH : ANGLE : DIRECTION : LENGTH : DEPTH :
FEET : PLGS. : PLGS. : FEET : FEET :
N/S : feet : E/W : FEET : DEGS. : DG/100F

11405.00 : 1.75 : S 43.00 E : 154.00 : 1399.87 : 91.61 N : 22.18 E : 94.26' N 13.61 E : 10

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CHARLES R. GILLESPIE, JR.
SHIPWELL NO. 2
WT-0075

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MEASURED INCL. A HOLE A COURSE A VERTICAL S TRUE S C L O S U R E S DUG/100FT

DEPTH ANGLE DEGS. S DIRECTION S LENGTH S POPH S CURB IN A F E S DISTANCE DIRECTION S SEVERITY

FEET S DEGS. S FEET S FEET S N/S feet E/W S FEET DEGS. S DUG/100FT

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	.10	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
200.00	.20	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
300.00	.30	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00
400.00	.40	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00
500.00	.50	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
600.00	.60	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00
700.00	.70	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00	700.00
800.00	.80	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00
900.00	.90	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00
1000.00	1.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
1100.00	1.10	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00
1200.00	1.20	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00	1200.00
1300.00	1.30	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00	1300.00
1400.00	1.40	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00	1400.00
1500.00	1.50	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00
1600.00	1.60	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00
1700.00	1.70	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00	1700.00
1800.00	1.80	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00	1800.00
1900.00	1.90	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00	1900.00
2000.00	2.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
2100.00	2.10	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00
2200.00	2.20	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00
2300.00	2.30	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
2400.00	2.40	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00	2400.00

CHARLES R. VILLESPIE, JR.
SHIP WELD NO. 2
WT-DD78

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MEASURED	INCL.	HOLE	COURSE	VERTICAL	R E C T A N G U L A R	C L O S U R E	DIRECTION	SEVERITY
DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH	C O U R D I N A T E S	DISTANCE		
FEET	DEGS.	DEGS.	FEET	FEET	N. S. feet E/W	FEET	DEGS.	DEGS.
2500.00	.70	N 31.00 E	100.00	2499.84	13.26 S	17.56 W	22.01' S 52.94 W	.64
2600.00	1.00	N 23.00 E	100.00	2099.83	11.94 S	16.89 W	20.69' S 54.76 W	.62
2700.00	1.10	N 02.00 W	100.00	2099.82	10.16 S	16.50 W	19.42' S 58.48 W	.36
2800.00	.90	N 03.00 E	100.00	2099.80	6.31 S	16.54 W	16.56' S 63.05 W	.22
2900.00	1.00	N 29.00 E	100.00	2099.79	5.63 S	16.01 W	17.48' S 66.96 W	.34
3000.00	1.00	N 32.00 E	100.00	3099.77	5.35 S	15.20 W	16.11' S 78.69 W	.67
3100.00	1.30	N 38.00 E	100.00	3099.75	5.60 S	14.00 W	14.53' S 75.31 W	.32
3200.00	1.50	N 41.00 E	100.00	3099.72	3.88 S	12.50 W	12.63' S 81.81 W	.21
3300.00	1.70	N 43.00 E	100.00	3099.68	3.1 N	10.62 W	10.62' N 80.35 W	.28
3400.00	1.50	N 40.00 E	100.00	3099.64	2.43 N	8.85 W	9.18' N 74.65 W	.20
3500.00	1.10	N 40.00 S	100.00	3099.62	4.12 N	7.48 W	9.49' N 60.59 W	.40
3600.00	1.00	N 22.00 E	100.00	3099.61	5.68 N	6.39 W	8.56' N 48.20 W	.26
3700.00	1.60	N 11.00 E	100.00	3099.59	7.30 N	5.80 W	9.37' N 38.42 W	.26
3800.00	1.10	N 02.00 E	100.00	3099.57	9.15 N	5.53 W	10.69' N 31.11 W	.32
3900.00	1.30	N 04.00 W	100.00	3099.55	11.24 N	5.40 W	12.50' N 25.92 W	.30
4000.00	1.50	N 14.00 E	100.00	3999.52	13.63 N	5.27 W	14.64' N 21.80 W	.40
4100.00	1.30	N 22.00 E	100.00	4099.49	15.98 N	4.51 W	16.61' N 15.76 W	.28
4200.00	1.20	N 21.00 E	100.00	4199.45	18.31 N	3.71 W	18.39' N 11.65 W	.18
4300.00	1.50	N 03.00 E	100.00	4299.44	20.22 N	3.12 W	20.53' N 08.75 W	.43
4400.00	1.50	N 23.00 E	100.00	4399.43	22.81 N	2.43 W	22.93' N 03.07 W	.39
4440.00	1.20	N 18.00 E	40.00	4439.39	23.65 W	2.10 W	23.78' N 05.06 W	.81
4472.00	1.50	N 31.00 E	32.00	4471.30	24.37 N	1.76 W	24.44' N 04.19 W	1.33
4534.00	1.20	N 26.00 E	62.00	4533.36	25.99 N	.96 W	25.91' N 02.12 W	.39
4627.00	1.20	N 09.00 E	93.06	4626.33	26.15 N	.25 W	26.13' N 00.50 W	.70
4720.00	1.50	N 04.00 W	93.60	4719.30	30.31 N	.14 W	30.31' N 00.23 W	.44

CHARLES R. GILLESPIE, JR.
SHIPWELL NO. 2
WT-DD7S

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MEASURED	INCL.	HOLE	COURSE	TRUE	VERTICAL	RECTOR	U	L	O	S	U	N	E	LOG-ELL
DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH	DEPTH	COUR	D	I	N	A	I	E	S	VELOCITY
FEET	DEGS.	DLOG.	FEET	FEET	FEET	N/S	FEET	E/W	FEET	DEGS.	DEGS.	DEGS.	DEGS.	DEGS.
4812.00	1.90	N 08.00 W	92.00	4011.26		33.03	N 00.70 W							.46
4905.00	1.50	E 02.00 E	93.00	4004.21		36.03	N 00.89 W							.36
4997.00	2.00	N 03.00 E	92.00	4000.16		39.07	N 00.85 W							.24
5090.00	1.70	N 05.00 E	93.00	3999.11		42.07	N 00.30 W							.37
5183.00	1.90	E 07.00 W	93.00	3998.07		44.57	N 00.50 W							.32
5275.00	2.00	N 04.00 E	92.00	5274.01		49.11	N 00.60 W							.47
5369.00	2.00	E 01.00 E	93.00	5368.96		51.33	N 00.10 W							.10
5460.00	1.90	N 03.00 E	92.00	5458.91		54.37	N 00.14 E							.20
5553.00	2.00	N 02.00 E	93.00	5551.85		57.45	N 00.26 E							.20
5646.00	1.50	E 16.00 E	93.00	5644.81		60.25	N 00.67 E							.70
5738.00	1.50	N 15.00 E	92.00	5736.78		62.50	N 01.24 E							.06
5831.00	1.30	E 07.00 E	93.00	5829.75		64.74	N 01.57 E							.38
5923.00	1.10	N 19.00 E	92.00	5921.74		66.50	N 01.88 E							.28
6016.00	1.00	E 16.00 E	93.00	6014.72		68.19	N 02.27 E							.11
6109.00	1.00	N 06.00 W	93.00	6107.71		69.80	N 02.30 E							.35
6201.00	.90	N 06.00 W	92.00	6199.69		71.38	N 02.20 E							.12
6294.00	1.00	N 06.00 W	93.00	6292.60		72.84	N 02.04 E							.11
6386.00	1.00	E 06.00 E	92.00	6384.67		74.44	N 02.00 E							.20
6479.00	1.00	N 09.00 E	93.00	6477.65		76.01	N 02.10 E							.06
6572.00	1.00	E 07.00 E	93.00	6570.64		77.67	N 02.26 E							0.00
6664.00	.80	N 05.00 E	92.00	6662.63		79.11	N 02.35 E							.23
6757.00	.50	N 31.00 W	93.00	6755.62		80.11	N 02.15 E							.53
6849.00	.30	N 70.00 W	92.00	6847.62		80.46	N 01.78 E							.40
6942.00	.50	N 70.00 W	93.00	6940.62		80.62	N 01.33 E							.22
7035.00	.90	E 57.00 W	93.00	7033.61		81.11	N 00.61 E							.46

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CHARLES B. GILLESPIE, JR.
SHIPP WELL NO. 2
WT-ED75

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MEASURED INCL. HOLE COURSE VERTICAL RECTANGULAR C L O S U R E DUG-LLG
DEPTH ANGLE DIRECTION LENGTH DEPTH COURDINATES DISTANCE DIRECTION SEVERITY
FEET DEGS. FEET FEET N/S feet L/W DEGS. DEG. DEG/1000

MEASURED	INCL.	HOLE	COURSE	VERTICAL	RECTANGULAR	C	L	O	S	U	R	E	DUG-LLG
DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH	COURDINATES	DISTANCE	DIRECTION	SEVERITY					
FEET	DEGS.	FEET	FEET	FEET	N/S	feet	L/W	DEGS.	DEG/1000				
7127.00	1.00	N 47.00 W	92.00	7125.60	07.04 N	134 W		02.04	N 00.24 W				.21
7220.00	1.20	N 24.00 W	93.00	7218.80	03.40 N	137 W		02.56	N 00.94 W				.52
7312.00	1.00	N 02.00 E	92.00	7310.80	05.20 N	175 W		05.20	N 01.15 W				.58
7405.00	1.00	N 23.00 W	90.00	7403.80	06.79 N	2.00 W		06.81	N 01.32 W				.47
7498.00	1.20	N 34.00 W	91.00	7496.60	08.35 N	2.87 W		08.40	N 01.00 W				.31
7590.00	1.30	N 35.00 W	92.00	7588.70	09.01 N	3.90 W		09.10	N 02.53 W				.11
7683.00	1.50	N 05.00 W	93.00	7681.30	02.12 N	4.75 W		02.24	N 02.95 W				.81
7775.00	1.60	N 03.00 W	92.00	7773.40	04.76 N	4.95 W		04.89	N 02.92 W				.33
7868.00	1.90	N 07.00 E	93.00	7866.30	07.76 N	4.83 W		07.80	N 02.83 W				.36
7961.00	2.20	N 07.00 E	93.00	7959.30	101.06 N	4.43 W		101.16	N 02.51 W				.32
8053.00	2.20	N 13.00 E	92.00	8051.20	104.54 N	3.01 W		104.61	N 02.09 W				.25
8146.00	2.60	N 17.00 E	93.00	8144.18	108.30 N	2.81 W		108.33	N 01.40 W				.47
8238.00	2.80	N 11.00 E	92.00	8236.08	112.50 N	1.76 W		112.51	N 00.90 W				.38
8331.00	2.70	N 14.00 E	93.00	8328.98	116.86 N	1.79 W		116.86	N 00.39 W				.19
8424.00	3.00	N 16.00 E	93.00	8421.60	121.32 N	1.40 E		121.32	N 00.19 E				.34
8516.00	2.70	N 16.00 E	92.00	8513.75	125.72 N	1.66 E		125.73	N 00.76 E				.33
8609.00	2.70	N 23.00 E	93.00	8606.64	129.85 N	3.13 E		129.88	N 01.38 E				.35
8701.00	1.90	N 10.00 E	92.00	8698.57	133.38 N	4.17 E		133.44	N 01.79 E				1.03
8794.00	2.00	N 11.00 W	93.00	8791.51	136.53 N	4.14 E		136.59	N 01.74 E				.77
8908.00	1.75	N 15.00 W	214.00	8905.40	143.35 N	2.57 E		143.37	N 01.03 E				.13
9194.00	2.00	N 05.00 W	186.00	9191.30	149.33 N	1.51 E		149.34	N 00.58 E				.22
9280.00	2.75	N 18.00 W	185.00	9277.14	156.87 N	1.02 W		156.87	N 00.01 W				.49
9365.00	2.50	N 28.00 W	185.00	9361.94	164.66 N	3.33 W		164.69	N 01.16 W				.28
9445.00	3.00	S 21.00 E	186.00	9441.74	182.29 N	8.52 W		182.51	N 03.01 W				3.05
9508.00	3.00	S 16.00 E	63.00	9504.65	159.16 N	7.48 W		159.34	N 02.69 W				.42

CHARLES B. GILLESPIE, JR.

SHIP WELL NO. 2

WT-1078

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MEASURED INCL. HOLE COURSE VERTICAL R E C T A N G U L A R C L O S U R E D O G L E G

DEPTH ANGLE DIRECTION LENGTH INCHES C U R D I N A T E S I N T E R S E C T I O N D I R E C T I O N S E V E R I T Y

FEET DEGS. DEGS. FEET FEET R/S FEET C/W DEGS. DEGS. DEGS.

9901.00	3.00	S	19.00	E	93.00	1092.50	154.52	N	6.01	W	154.64	N	02.23	W	17
9996.00	3.00	S	23.00	E	95.00	992.39	149.06	N	8.22	W	149.84	N	01.62	W	22
10092.00	3.00	S	20.00	E	96.00	1058.26	145.21	N	2.30	W	145.23	N	00.94	W	16
10183.00	3.25	S	25.00	E	91.00	1179.14	140.66	N	1.45	W	140.67	N	00.24	W	41
10337.00	3.25	S	25.00	E	94.00	1074.97	141.28	N	1.73	E	135.01	N	00.7	E	40
10621.00	3.25	S	24.00	E	94.00	1036.82	130.95	N	3.92	E	131.01	N	01.74	E	86
10465.00	3.00	S	25.00	E	94.00	1060.60	120.20	N	6.10	E	126.43	N	02.76	E	27
10622.00	3.00	S	26.00	E	157.00	1017.47	119.76	N	9.24	E	119.05	N	04.45	E	17
10742.00	2.25	S	24.00	E	125.00	10742.34	113.39	N	11.30	E	113.90	N	05.73	E	62
10873.00	2.50	S	20.00	E	126.00	10668.23	108.55	N	13.34	E	109.37	N	07.01	E	24
10998.00	2.25	S	20.00	E	125.00	10936.12	103.69	N	15.11	E	104.78	N	08.29	E	20
11125.00	2.25	S	20.00	E	127.00	11120.02	99.09	N	17.06	E	100.55	N	09.77	E	19
11251.00	1.75	S	34.00	E	126.00	11240.95	98.29	N	19.25	E	97.21	N	11.42	E	45
11405.00	1.75	S	43.00	E	154.00	10359.87	89.51	N	23.10	E	94.26	N	13.51	E	10

CLOSURE DISTANCE = 94.26 FEET

CLOSURE DIRECTION = N 13.61 E