

EASTMAN CHRISTENSEN

RECORD OF SURVEY

FOR

* OPERATOR : SUN EXPLORATION AND PRODUCTION COMPANY *
* WELL NAME : LOTTIE YORK 23 NO. 1 - N 23-17-37 *
* LOCATION : LEA COUNTY, NEW MEXICO *
* JOB NUMBER : *
* RIG : WILLBRO'S RIG 4 *
* DECLINATION : 10.00 E *

EC DISTRICT : WEST TEXAS BASE



RECEIVED

AUG 23 1988

**OCD
HOBBS OFFICE**

SUN EXPLORATION AND PRODUCTION COMPANY
 -LOTTE YORK 23 NO. 1
 -LEA COUNTY, NEW MEXICO

DATE PRINTED : 22-JUL-88
 OUR REF. NO. : S01279.4SU
 DECLINATION : 10.00 JOB NUMBER :
 PAGE NO. 2

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
0.00	0 0	N 0 0 E	0.00	0.00	0.00 N 0.00 E	0.00
100.00	0 30	N 42 0 W	100.00	100.00	0.32 N 0.29 W	0.50
200.00	0 30	N 39 0 W	100.00	199.99	0.99 N 0.86 W	0.03
300.00	0 45	N 33 0 W	100.00	299.99	1.87 N 1.50 W	0.26
400.00	0 30	N 8 0 E	100.00	399.98	2.92 N 1.73 W	0.50
500.00	0 30	N 14 0 E	100.00	499.98	3.77 N 1.57 W	0.05
600.00	0 15	N 7 0 W	100.00	599.98	4.42 N 1.53 W	0.28
700.00	0 30	N 51 0 E	100.00	699.97	5.01 N 1.29 W	0.42
800.00	0 30	N 81 0 E	100.00	799.97	5.36 N 0.50 W	0.26
900.00	0 30	S 48 0 E	100.00	899.97	5.12 N 0.31 E	0.43
1000.00	0 45	S 72 0 E	100.00	999.96	4.57 N 1.25 E	0.36
1100.00	0 45	S 60 0 E	100.00	1099.95	4.04 N 2.44 E	0.16
1200.00	1 0	S 59 0 E	100.00	1199.94	3.27 N 3.75 E	0.25
1300.00	0 45	N 81 0 E	100.00	1299.93	2.98 N 5.22 E	0.64
1400.00	0 30	N 41 0 E	100.00	1399.92	3.50 N 6.16 E	0.49
1500.00	1 15	N 46 0 E	100.00	1499.91	4.61 N 7.21 E	0.75
1600.00	1 15	N 72 0 E	100.00	1599.89	5.72 N 9.06 E	0.56
1700.00	1 15	N 81 0 E	100.00	1699.86	6.23 N 11.18 E	0.20
1800.00	1 0	N 68 0 E	100.00	1799.84	6.76 N 13.07 E	0.36
1900.00	1 0	N 88 0 E	100.00	1899.83	7.12 N 14.77 E	0.35
2000.00	1 0	S 66 0 E	100.00	1999.81	6.79 N 16.47 E	0.45
2100.00	0 45	S 57 0 E	100.00	2099.80	6.06 N 17.81 E	0.28
2200.00	0 45	S 54 0 E	100.00	2199.79	5.32 N 18.89 E	0.04
2300.00	0 45	S 66 0 E	100.00	2299.78	4.67 N 20.02 E	0.16
2400.00	0 30	S 79 0 E	100.00	2399.78	4.34 N 21.06 E	0.29
2500.00	0 45	S 76 0 E	100.00	2499.77	4.10 N 22.13 E	0.25
2600.00	0 30	S 78 0 E	100.00	2599.77	3.85 N 23.19 E	0.25
2700.00	0 30	N 74 0 E	100.00	2699.76	3.89 N 24.05 E	0.24
2800.00	0 30	S 69 0 E	100.00	2799.76	3.85 N 24.91 E	0.32
2900.00	0 30	S 63 0 E	100.00	2899.75	3.49 N 25.71 E	0.05

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 PAGE NO. 3

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
3000.00	0 30	S 41 O E	100.00	2999.75	2.96 N 26.39 E	0.19
3100.00	0 45	S 15 O E	100.00	3099.74	2.00 N 26.90 E	0.37
3200.00	0 30	S 53 O E	100.00	3199.74	1.11 N 27.50 E	0.47
3300.00	0 30	N 71 O E	100.00	3299.73	0.98 N 28.33 E	0.47
3400.00	0 30	N 71 O E	100.00	3399.73	1.27 N 29.15 E	0.00
3500.00	1 0	N 56 O E	100.00	3499.72	1.85 N 30.32 E	0.53
3600.00	0 45	N 40 O E	100.00	3599.71	2.87 N 31.45 E	0.35
3700.00	0 30	N 52 O E	100.00	3699.70	3.62 N 32.24 E	0.28
3800.00	0 30	N 41 O E	100.00	3799.70	4.22 N 32.87 E	0.10
3900.00	0 30	N 14 O E	100.00	3899.70	4.99 N 33.27 E	0.23
4000.00	0 30	N 1 O E	100.00	3999.69	5.85 N 33.38 E	0.11
4100.00	0 45	N 11 O W	100.00	4099.69	6.94 N 33.29 E	0.28
4200.00	1 30	N 9 O E	100.00	4199.67	8.89 N 33.25 E	0.84
4300.00	1 0	N 12 O E	100.00	4299.64	11.04 N 33.65 E	0.50
4400.00	1 0	N 24 O E	100.00	4399.63	12.69 N 34.19 E	0.21
4500.00	0 45	N 28 O E	100.00	4499.62	14.07 N 34.86 E	0.26
4600.00	0 45	N 40 O E	100.00	4599.61	15.15 N 35.59 E	0.16
4700.00	1 0	N 64 O E	100.00	4699.59	16.08 N 36.78 E	0.44
4800.00	0 45	N 81 O E	100.00	4799.58	16.54 N 38.23 E	0.36
4900.00	0 45	N 51 O E	100.00	4899.57	17.07 N 39.41 E	0.39
5000.00	1 0	N 74 O E	100.00	4999.56	17.77 N 40.76 E	0.43
5100.00	1 0	N 56 O E	100.00	5099.55	18.50 N 42.33 E	0.31
5200.00	0 45	N 56 O E	100.00	5199.54	19.35 N 43.60 E	0.25
5300.00	0 30	N 71 O E	100.00	5299.53	19.84 N 44.57 E	0.30
5400.00	0 30	N 84 O E	100.00	5399.53	20.03 N 45.42 E	0.11
5500.00	0 15	N 82 O E	100.00	5499.52	20.11 N 46.07 E	0.25
5600.00	0 30	N 60 O E	100.00	5599.52	20.32 N 46.69 E	0.28
5700.00	0 15	N 8 O E	100.00	5699.52	20.84 N 47.04 E	0.40
5800.00	0 15	N 32 O E	100.00	5799.52	21.25 N 47.19 E	0.10
5900.00	0 15	N 6 O E	100.00	5899.52	21.66 N 47.33 E	0.11

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DATE PRINTED : 22-JUL-88
 OUR REF. NO. : S01279.43U
 DECLINATION : 10.00 JOB NUMBER :
 PAGE NO. 4

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY	
6000.00	0 15	N 4	100.00	5999.52	22.10 N	47.34 E	0.04
6100.00	0 15	N 1	100.00	6099.51	22.53 N	47.33 E	0.02
6200.00	0 30	N 0	100.00	6199.51	23.19 N	47.33 E	0.25
6300.00	0 30	N 1	100.00	6299.51	24.06 N	47.33 E	0.01
6400.00	0 45	N 4	100.00	6399.50	25.15 N	47.36 E	0.26
6500.00	0 45	N 2	100.00	6499.49	26.46 N	47.38 E	0.08
6600.00	0 45	N 1	100.00	6599.48	27.77 N	47.34 E	0.01
6700.00	1 0	N 24	100.00	6699.47	29.25 N	47.02 E	0.43
6800.00	1 15	N 18	100.00	6799.45	31.08 N	46.31 E	0.28
6900.00	1 45	N 16	100.00	6899.42	33.59 N	45.55 E	0.50
7000.00	2 0	N 18	100.00	6999.37	36.71 N	44.59 E	0.26
7100.00	2 15	N 8	100.00	7099.30	40.32 N	43.76 E	0.45
7200.00	2 45	N 9	100.00	7199.20	44.64 N	43.11 E	0.50
7300.00	2 30	N 16	100.00	7299.10	49.10 N	42.12 E	0.41
7400.00	2 45	N 19	100.00	7398.99	53.47 N	40.75 E	0.29
7500.00	2 45	N 18	100.00	7498.88	58.02 N	39.22 E	0.05
7600.00	3 0	N 25	100.00	7598.75	62.68 N	37.39 E	0.43
7700.00	3 0	N 22	100.00	7698.61	67.48 N	35.30 E	0.16
7800.00	3 0	N 21	100.00	7798.48	72.35 N	33.38 E	0.05
7900.00	2 45	N 22	100.00	7898.35	77.02 N	31.54 E	0.25
8000.00	3 0	N 25	100.00	7998.22	81.62 N	29.54 E	0.29
8100.00	2 45	N 30	100.00	8098.10	86.07 N	27.23 E	0.35
8200.00	2 45	N 19	100.00	8197.98	90.43 N	25.24 E	0.53
8300.00	2 30	N 22	100.00	8297.88	94.71 N	23.64 E	0.29
8400.00	2 0	N 17	100.00	8397.80	98.41 N	22.33 E	0.54
8500.00	2 0	N 16	100.00	8497.74	101.76 N	21.34 E	0.03
8600.00	1 45	N 18	100.00	8597.69	104.89 N	20.38 E	0.26
8700.00	1 30	N 20	100.00	8697.65	107.57 N	19.46 E	0.26
8800.00	1 45	N 21	100.00	8797.61	110.23 N	18.46 E	0.25
8900.00	1 30	N 17	100.00	8897.57	112.91 N	17.54 E	0.27

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MEASURED DEPTH	D R I F T ANGLE D M	D R I F T DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
9000.00	1 15	N 31 0 W	100.00	8997.54	115.09 N 16.57 E	0.42
9100.00	1 15	N 43 0 W	100.00	9097.51	116.83 N 15.26 E	0.26
9200.00	1 0	N 41 0 W	100.00	9197.49	118.29 N 13.94 E	0.25
9300.00	0 45	N 59 0 W	100.00	9297.48	119.27 N 12.78 E	0.37
9400.00	0 45	N 49 0 W	100.00	9397.47	120.04 N 11.72 E	0.13
9500.00	1 0	N 65 0 W	100.00	9497.46	120.86 N 10.45 E	0.35
9600.00	1 0	N 62 0 W	100.00	9597.45	121.64 N 8.88 E	0.05
9700.00	0 45	S 79 0 W	100.00	9697.43	121.86 N 7.40 E	0.63
9800.00	1 0	S 24 0 W	100.00	9797.42	120.95 N 6.25 E	0.84
9900.00	1 0	S 29 0 W	100.00	9897.41	119.39 N 5.48 E	0.09
10000.00	1 15	S 25 0 W	100.00	9997.39	117.64 N 4.58 E	0.26
10100.00	1 15	S 22 0 W	100.00	10097.36	115.64 N 3.71 E	0.07
10170.00	1 45	S 33 0 W	70.00	10167.34	114.02 N 2.87 E	0.82

CLOSURE - DISTANCE : 114.05
 DIRECTION : N 1 27 E

REPORT UNITS : Feet
 SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

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GYROSCOPIC MULTI-SHOT SURVEY

SURVEYOR: TIM STEPHENS

(0'-4500')

MAGNETIC MULTI-SHOT SURVEY

SURVEYOR: TIM STEPHENS

(4500'-10170')

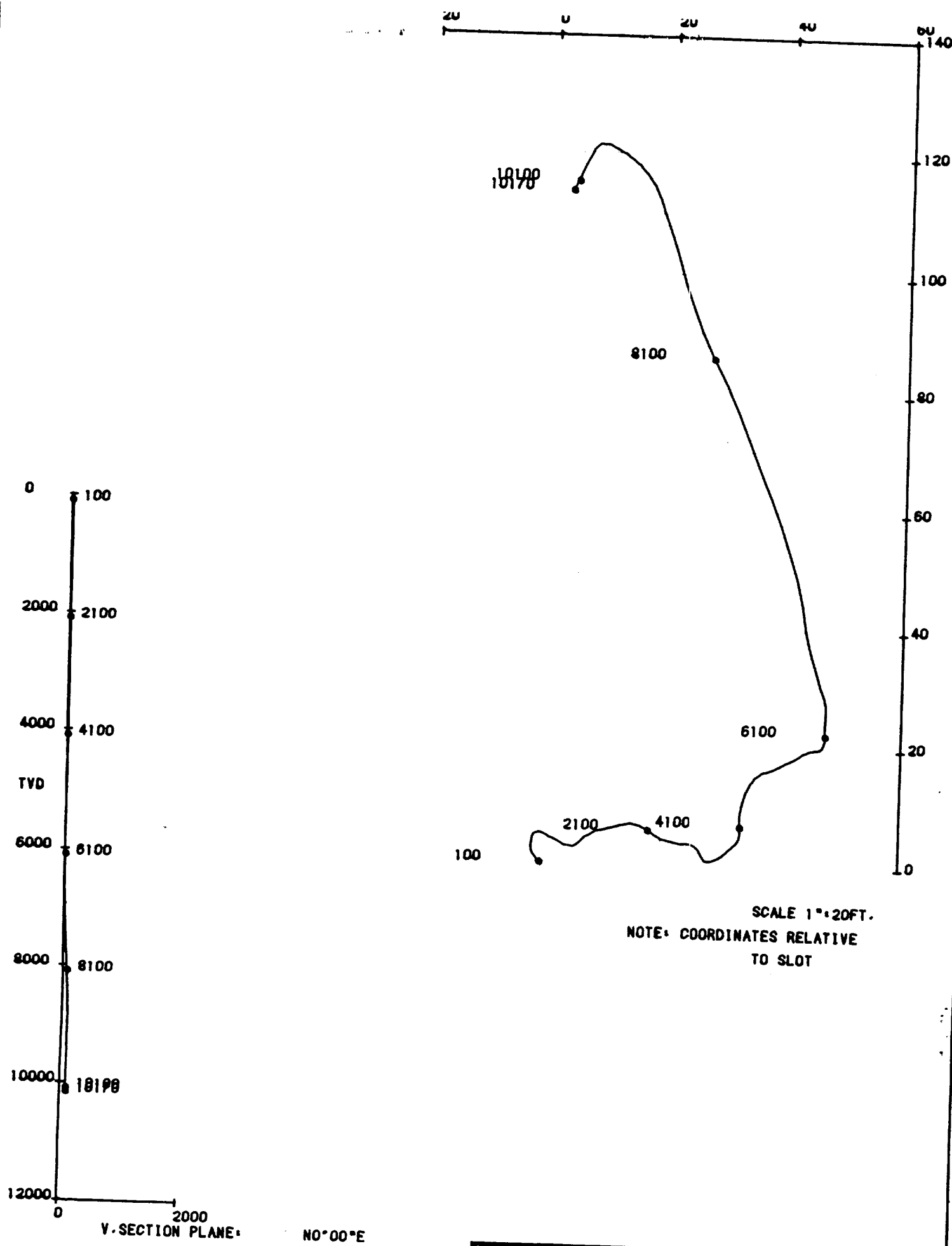


100-100000

AUG 23 1988

OCD

HOBBS OFFICE



SUN EXPLORATION AND PRODUCTION COMPANY
 LOTTIE YORK 23 NO. 1
 LEA COUNTY, NEW MEXICO
 WELL: LOTTIE YORK
 SLOT: 1

SCALE 1"=2000FT.

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AUG 23 1988

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