Eastman Whipstock
A PETROLANE COMPANY

REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

Amoco Production Company
COMPANY

South Hobbs Unit Coop. Well No. 3
WELL NAME

Lea County, New Mexico
LOCATION

JOB NUMBER	TYPE OF SURVEY	DATE
WT0983-S0048	Magnetic Multi Shot	9/30/83

SURVEY BY
Gary DeSpain

OFFICE
West Texas

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT COOP. WELL NO. 289
LEA COUNTY, NEW MEXICO BD1-438
SEPTEMBER 30, 1983

EASTMAN WHIPSTOCK, INC.
MAGNETIC MULTI SHOT SURVEY WT0983-S0048
SURVEYOR: GARY DESPAIN (1465'-4469')

TIE-IN INFORMANTION AT A DEPTH OF 1465 FEET
WAS ACQUIRED FROM D.I.G. SURVEY

VERTICAL SECTION CALCULATED IN PLANE OF PROPOSAL
DIRECTION: N 49 DEG. 7 MIN. W

Eastman Whipstock

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT COOP. WELL NO. 289
LEA COUNTY, NEW MEXICO BD1-438

COMPUTATION TIME 08:12:30 DATE 03-OCT-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
1465.	0 15	N 10 E	0.	1464.96	-2.67	0.06 S	3.48 E	0.00
1586.	0 30	N 65 W	121.	1585.96	-1.98	0.59 N	3.14 E	0.41
1648.	0 30	N 57 W	62.	1647.96	-1.46	0.86 N	2.67 E	0.11
1710.	2 45	N 72 W	62.	1709.93	0.24	1.61 N	1.08 E	3.66
1772.	5 45	N 70 W	62.	1771.75	4.50	3.11 N	3.26 W	4.84
1834.	8 15	N 70 W	62.	1833.28	11.56	5.69 N	10.36 W	4.03
1896.	9 30	N 69 W	62.	1894.54	20.52	9.04 N	19.32 W	2.03
1958.	10 45	N 67 W	62.	1955.57	30.84	13.12 N	29.42 W	2.09
2020.	12 0	N 66 W	62.	2016.35	42.50	18.00 N	40.64 W	2.04
2082.	13 30	N 65 W	62.	2076.82	55.63	23.67 N	53.09 W	2.45
2144.	15 0	N 65 W	62.	2136.91	70.31	30.12 N	66.92 W	2.42
2206.	16 30	N 64 W	62.	2196.58	86.51	37.37 N	82.11 W	2.46
2268.	18 15	N 65 W	62.	2255.75	104.3	45.34 N	98.82 W	2.86
2330.	20 0	N 65 W	62.	2314.33	123.92	53.92 N	117.23 W	2.82
2392.	21 0	N 65 W	62.	2372.40	144.81	63.10 N	136.91 W	1.61
2454.	23 0	N 65 W	62.	2429.88	167.14	72.91 N	157.95 W	3.23
2516.	24 30	N 64 W	62.	2486.63	191.22	83.66 N	180.49 W	2.50
2578.	25 45	N 65 W	62.	2542.76	216.60	95.00 N	204.25 W	2.13
2640.	26 30	N 65 W	62.	2598.43	242.86	106.53 N	228.99 W	1.21
2702.	26 15	N 64 W	62.	2653.97	269.41	118.39 N	253.85 W	0.82
2764.	27 0	N 63 W	62.	2709.40	296.33	130.79 N	278.72 W	1.41
2826.	26 30	N 62 W	62.	2764.76	323.48	143.67 N	303.47 W	1.09
2888.	26 30	N 62 W	62.	2820.25	350.44	156.66 N	327.90 W	0.00
2950.	26 30	N 61 W	62.	2875.74	377.46	169.86 N	352.21 W	0.72
3012.	26 0	N 61 W	62.	2931.34	404.30	183.16 N	376.19 W	0.81
3074.	26 0	N 61 W	62.	2987.07	430.90	196.33 N	399.97 W	0.00
3136.	26 0	N 61 W	62.	3042.79	457.49	209.51 N	423.74 W	0.00
3198.	26 0	N 61 W	62.	3098.52	484.09	222.69 N	447.51 W	0.00
3260.	25 45	N 60 W	62.	3154.30	510.61	236.01 N	471.06 W	0.81
3322.	25 15	N 61 W	62.	3210.26	536.78	249.15 N	494.29 W	1.06

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MEASURED DEPTH FEET	DRIFT ANGLE D	M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
3384.	25	0	N 61 W	62.	3266.40	562.54	261.92 N	517.31 W	0.40
3446.	25	0	N 56 W	62.	3322.59	588.38	275.60 N	539.65 W	3.41
3508.	25	45	N 50 W	62.	3378.60	614.88	291.58 N	560.86 W	4.32
3570.	24	0	N 42 W	62.	3434.85	640.90	309.69 N	579.60 W	6.11
3632.	24	0	N 41 W	62.	3491.49	665.89	328.57 N	596.31 W	0.66
3694.	23	15	N 41 W	62.	3548.29	690.49	347.32 N	612.61 W	1.21
3756.	23	0	N 40 W	62.	3605.31	714.57	365.84 N	628.42 W	0.75
3818.	22	30	N 40 W	62.	3662.49	738.24	384.21 N	643.84 W	0.81
3880.	22	0	N 39 W	62.	3719.87	761.38	402.32 N	658.77 W	1.01
3942.	22	0	N 37 W	62.	3777.36	784.17	420.62 N	673.07 W	1.21
4004.	21	15	N 22 W	62.	3834.99	805.63	440.45 N	684.28 W	8.97
4066.	21	15	N 15 W	62.	3892.78	824.96	461.75 N	691.41 W	4.09
4128.	22	45	N 15 W	62.	3950.26	844.[illegible]	484.18 N	697.42 W	2.42
4190.	22	0	N 15 W	62.	4007.59	863.73	506.98 N	703.53 W	1.21
4252.	22	15	N 15 W	62.	4065.03	883.06	529.54 N	709.57 W	0.40
4314.	23	0	N 15 W	62.	4122.25	902.81	552.57 N	715.75 W	1.21
4376.	24	0	N 15 W	62.	4179.11	923.27	576.45 N	722.15 W	1.61
4469.	24	15	N 16 W	93.	4263.99	954.93	613.08 N	732.30 W	0.52

Eastman Whipstock

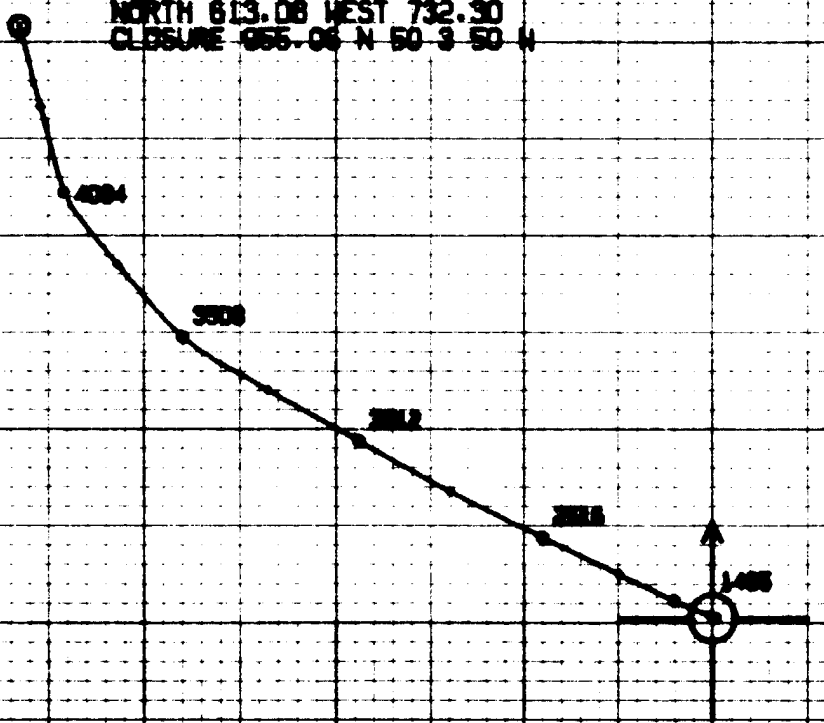
FINAL CLOSURE - DIRECTION: N 50 DEGS 4 MINS W
DISTANCE: 955.06 FEET

[illegible] PRODUCTION COMPANY
[illegible] HOBBS UNIT COMP. WELL NO. 288
LEA COUNTY, NEW MEXICO 001-436

EASTMAN WHIPSTOCK, INC.

HORIZONTAL PROJECTION
SCALE 1 IN. = 200 FEET
DEPTH INDICATOR: MD

FINAL STATION:
DEPTH 4469 MD, 4269.98 TVD
NORTH 613.08 WEST 732.30
CLOSURE 955.06 N 50 3 50 W



Eastman Whipstock
A PETROLANE COMPANY
P. O. Box 5577/Midland, Texas 79704/(915) 563-0511

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Gary DeSpain, in the employ of Eastman Whipstock, Inc., did on the days of September 30, 19 83 thru September 30, 19 83 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 1465 feet to 4469 feet, with recordings of inclination and direction being obtained at approximate intervals of 62 feet.

This survey was conducted at the request of Amoco Production Company for their South Hobbs Unit Coop. #3, Lea County, State of New Mexico, in the _____ field.

This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Whipstock, Inc. and is true and correct to the best of my knowledge.

Directional Supervisor/ Surveyor

The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Whipstock, Inc.

Tim Stephens

Before me, the undersigned authority, on this day personally appeared Gary De Spain, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that this instrument is a true statement of facts therein recited.

Subscribed and sworn to before me on this 3RD day of OCT., 1983

Notary Public in and for the
County of Midland, Texas
My commission expires 7/9/85

NOTARY PUBLIC · STATE OF TEXAS · COUNTY OF MIDLAND