



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

LAGUNA PETROLEUM
COMPANY

FEDERAL 7 WELL NO. 1
WELL NAME

LEA COUNTY, NEW MEXICO
LOCATION

JOB NUMBER
WT1181-S0094

TYPE OF SURVEY
INCLINATION SURVEY

DATE
10-NOV-81

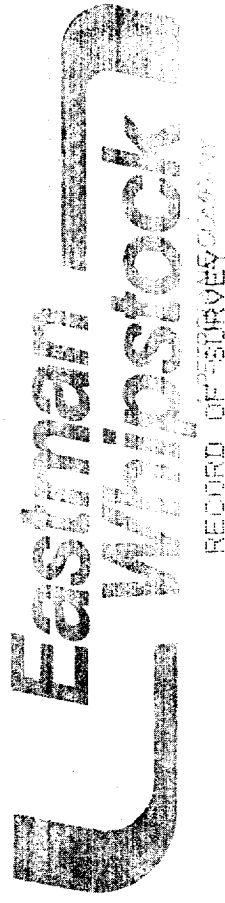
SURVEY BY
TROY ONEY

OFFICE
WEST TEXAS DISTRICT

LAGUNA PETROLEUM
FEDERAL 7 WELL NO. 1
LEA COUNTY NEW MEXICO BD1-349
NOVEMBER 10 1981

EASTMAN WHIPSTOCK INC.
INCLINATION SURVEY WT1181-S0094
SURVEYOR: TROY ONEY (500'-7370')

TIE-IN DATA FROM DEPTH OF 7327 FROM FILE BD1-340. NEED
TO KEEP RECORDS OF OLD HOLE ON COMPUTER FOR COMPLETION.



RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE		R E C T A N G U L A R C O O R D I N A T E S F E E T	DOGLEG SEVERITY DG/100FT.
				VERTICAL DEPTH FEET			
0.	0 0	0	0.	0.00		0.00	0.00
500.	5 0	N O E	500.	499.37		21.80 N	1.00
890.	9 45	N O E	390.	886.03		71.85 N	1.22
922.	9 30	N O E	32.	917.58		77.20 N	0.73
1100.	9 0	N O E	178.	1093.26		105.81 N	0.28
1329.	7 15	N O E	229.	1319.96		138.13 N	0.76
1500.	5 30	N O E	171.	1489.89		157.16 N	1.02
1710.	3 45	N O E	210.	1699.20		174.09 N	0.93
1800.	3 30	N O E	90.	1789.02		179.79 N	0.28
2000.	3 15	N O E	200.	1988.67		191.56 N	0.13
2202.	3 15	N O E	202.	2090.35		202.01 N	0.00
2400.	3 45	N O E	193.	2387.88		215.10 N	0.25
2600.	4 15	N O E	1700.	2587.49		229.05 N	0.25
2702.	4 15	N O E	102.	2689.21		236.61 N	0.00
2838.	4 0	N O E	136.	2824.86		246.39 N	0.13
2900.	3 15	N O E	62.	2886.73		250.31 N	1.21
2943.	3 0	N O E	63.	2949.64		253.74 N	0.40
3100.	2 0	N O E	137.	3086.51		259.72 N	0.73
3176.	1 30	N O E	76.	3162.47		262.04 N	0.66
3300.	1 0	N O E	124.	3286.44		264.75 N	0.40
3500.	0 30	N O E	200.	3486.42		267.36 N	0.25
4000.	0 45	N O E	500.	3986.39		272.81 N	0.05
4500.	0 45	N O E	500.	4486.35		279.36 N	0.00
5000.	0 30	N O E	500.	4986.32		284.81 N	0.05
5500.	0 15	N O E	500.	5486.31		288.09 N	0.05
6000.	0 45	N O E	500.	5986.29		292.45 N	0.10
6500.	0 45	N O E	500.	6486.25		299.00 N	0.00
7000.	0 45	N O E	500.	6986.20		305.54 N	0.00
7370.	0 30	N O E	370.	7356.18		309.57 N	0.07

FINAL CLOSURE - DIRECTION:

N 0 DEGS 0 MINS E

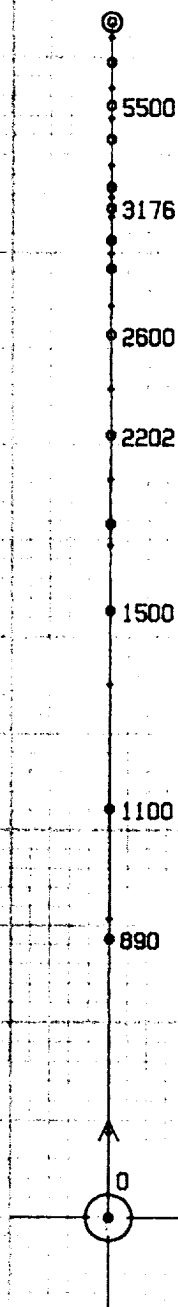
DISTANCE:

309.57 FEET

LAGUNA PETROLEUM
FEDERAL 7 WELL NO. 1
LEA COUNTY NEW MEXICO BD1-349
EASTMAN WHIPSTOCK, INC.

HORIZONTAL PROJECTION

SCALE 1 IN. = 50 FEET
DEPTH INDICATOR: MD



FINAL STATION:
DEPTH 7370 MD. 7356.18 TVD
NORTH 309.57 EAST 0.00
CLOSURE 309.57 N 0 0 0 E



P. O. Box 5577/Midland, Texas 79704/(915) 563-0511

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, TROY ONEY in the employ of Eastman Whipstock, Inc. did on the days of NOVEMBER 10, 19 81 thru NOVEMBER 10, 19 81 conduct or supervise the taking of a INCLINATION survey by the method of magnetic orientation from a depth of 500 feet to 7370 feet, with recordings of inclination and direction being obtained at approximate intervals of 200 feet.

This survey was conducted at the request of LAGUNA PETROLEUM for their FEDERAL 7 WELL # 1, LEA County, State of NEW MEXICO, in the _____ field.

The data for this survey and the calculations 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.

Troy Oney
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 the day personally appeared TROY ONEY, known to me to be the person whose name is subscribed to the 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 31ST day of DEC., 19 81.

Ray G. Steinkamp
Notary Public in and for the County
Midland, Texas
My commission expires 7/9/85