



KEN REYNOLDS-PRESIDENT  
GARY W. CHAPPELL-VICE PRESIDENT

DRILLING CO., INC. - OIL WELL DRILLING CONTRACTORS

P. O. Box 1498 ROSWELL, NEW MEXICO 88202-1498  
505/623-5070 505/746-2719  
ROSWELL, NM ARTESIA, NM

May 7, 1998

Manzano Oil Corporation  
P.O. Box 2107  
Roswell, New Mexico 88202-2107

RE: Esperanza State #1

Gentlemen:

The following is a Deviation Survey on the above referenced well located in Eddy County, New Mexico.

428' - 3/4°	1,347' - 4 1/2°	3,279' - 1/2°	5,922' - 1 3/4°	9,525' - 1 1/4°
607' - 2°	1,410' - 4°	3,725' - 3/4°	6,169' - 1 1/4°	10,025' - 1°
777' - 1 3/4°	1,473' - 3°	4,090' - 1°	6,570' - 1°	10,196' - 1°
958' - 2 1/2°	1,600' - 2 3/4°	4,569' - 1 1/4°	7,069' - 1°	10,663' - 3/4°
1,085' - 3°	1,727' - 2°	5,069' - 3/4°	7,569' - 1 1/4°	11,171' - 1°
1,149' - 4 1/4°	2,043' - 2°	5,288' - 1°	8,063' - 2 1/4°	11,668' - 1°
1,213' - 4 3/4°	2,391' - 1 1/2°	5,705' - 2 1/2°	8,558' - 3/4°	11,800' - 1 3/4°
1,276' - 4 1/2°	2,837' - 1/2°	5,798' - 2 1/4°	8,930' - 3/4°	

Sincerely,

Gary W. Chappell  
Contracts Manager

STATE OF NEW MEXICO)  
COUNTY OF CHAVES )

The foregoing was acknowledged before me this 7th day of May 1998 by  
Gary W. Chappell.

MY COMMISSION EXPIRES

JUNE 20, 2000

NOTARY PUBLIC