Deviation surveys taken on Santa Fe Energy Resources' Hackberry "18" Fed #2 well in Eddy County, New Mexico:

Depth	Degree
206	2.00
430	2.50
669	2.00
857	2.00
1041	2.00
1230	1.50
1727	.75
2195	.75
3118	.25
3591	.25
4090	.75
4584	.75
5076	1.00
5568	.50
6057	1.00
6586	1.50
7076	.75
7457	1.00
7956	1.50
8430	1.50
8929	1.75
9455	2.00
9924	1.75
10,422	1.25
10,922	1.00
11,387	.75
12,118	.75
12,251	1.00

I hereby certify that I have personal knowledge of the facts placed on this sheet and that such information given above is true and complete.

Norton Drilling Company

Before me, the undersigned authority, on this day personally appeared John W. Norton, known to me to be the person whose name is subscribed hereto, who, after being duly sworn, on oath states that he is the drilling contractor of the well identified in this instrument and that such well was not intentionally deviated from the vertical whatsoever.

John W. Norton

SWORN AND SUBSCRIBED TO before me this 9th day of February 1999.

PAT FARRELL
Notary Public, State of Texas
My Commission Expires 04-09-2000

Notary Public in and for Lubbock County, Texas.