


MAY 28, 1997

WELL NAME AND NUMBER: HB 15 FEDERAL #1
LOCATION: Sec. 15 T24S R29E
OPERATOR: SANTA FE ENERGY
DRILLING CONTRACTOR: PATTERSON DRILLING CO.

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

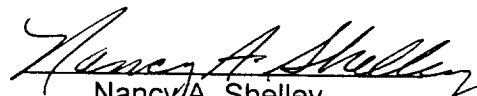
<u>DEGREE AND DEPTH</u>		<u>DEGREE AND DEPTH</u>		<u>DEGREE AND DEPTH</u>	
0.50	358'	1.00	2969'	1.25	7030'
0.50	830'	1.00	3439'	1.00	7213'
1.25	1313'	1.00	3935'	1.75	7377'
1.00	1625'	1.00	4420'	1.75	7531'
0.75	1975'	1.00	4919'	1.25	7655'
1.25	2444'	1.25	5910'	1.25	7998'
2.00	2715'	1.00	6410'	3.25	8305'
1.50	2847'	1.75	6860'		

PATTERSON DRILLING
Drilling Superintendent

By: 
Billy Jensen

Subscribed and sworn to before me this 28th day of May, 1997.

My Commission Expires:
December 6, 2000


Nancy A. Shelley