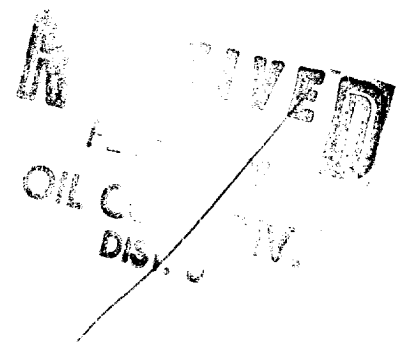


H - 11-23N-4W

ARAPAHOE DRILLING CO., INC.  
P. O. BOX 26687  
ALBUQUERQUE, NEW MEXICO 87125



STEVE SCHALK  
PRESIDENT

February 9, 1988  
Jicarilla Apache #47419  
Rio Arriba County, New Mexico

Date	Footage	Deviation
9-30-87	238'	1/4°
	268'	1/2°
	295'	1/2°
	325'	1/2°
	380'	1/2°
	415'	1/2°
10-1-87	518'	1/2°
	576'	1/2°
	634'	1/2°
	697'	1/2°
	760'	1/2°
	853'	3/4°
	948'	3/4°
	1,105'	3/4°
	1,260'	1°
1,414'	1°	
10-2-87	1,570'	1°
	1,724'	1°
	2,000'	1°
	2,280'	1°
10-3-87	2,509'	1°
	2,830'	3/4°
10-4-87	3,086'	7/8°
	3,523'	1°
10-5-87	4,023'	1°
	4,542'	1 3/4°
10-8-87	5,048'	1 1/2°
10-9-87	5,665'	1 1/2°
10-10-87	6,181'	1 1/4°
10-11-87	6,690'	1 1/4°
	7,190'	1 1/2°
10-12-87	7,363'	2°
10-14-87	7,700'	2°

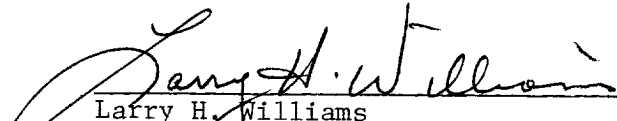
ARAPAHOE DRILLING CO., INC.

P O BOX 26687

ALBUQUERQUE, NEW MEXICO 87125

STEVE SCHALK  
PRESIDENT

The foregoing Deviation Report dated February 9, 1988, for the Jicarilla Apache #47-19 well is a true and complete report to the best of my knowledge and belief.

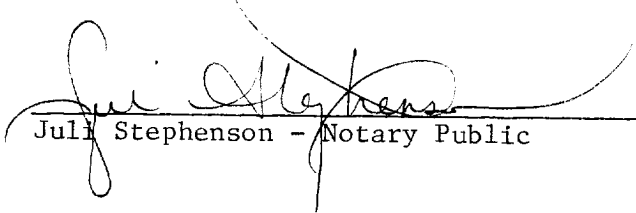
  
Larry H. Williams  
Office Manager

February 9, 1988

SUBSCRIBED and SWORN to this 9th day of February, 1988, by Larry H. Williams, known by me to be the office manager for Arapahoe Drilling Co., Inc..

My Commission Expires:

October 24, 1988

  
Juli Stephenson - Notary Public

RECEIVED  
FEB 12 1988  
OIL CON. DIV.  
DIST. 3