

EXHIBIT NO. 19  
(Corrected - January 17, 1983)  
SUMMARY OF CORE PERMEABILITY DATA

WELL NAME	LOCATION	TOTAL SAMPLE FOOTAGE (ft)	TOTAL LABORATORY PERMEABILITY (md)	AVERAGE LABORATORY PERMEABILITY (md)
1. Amoco Production Company Jicarilla 358 No. 6	SW/NE Section 6 T22N, R2W	12	29.55	2.46
2. Mobil Producing Texas and New Mexico Jicarilla A No. 1	SW/SE Section 18 T23N, R2W	15	3.44	0.23
3. Amerada Hess Corporation Jicarilla B-4	SE/SE Section 19 T24N, R5W	12	8.57	0.71
4. Amerada Hess Corporation Jicarilla F-5	NW/SE Section 16 T25N, R5W	41	1.88	0.05
*5. Conoco, Inc. Jicarilla Apache AXI C-1	SW/SW Section 4 T23N, R5W	24	63.29	2.64
**6. Skelly Oil Company Jicarilla D No. 1	SW/SW Section 6 T23N, R4W	44	18.20	0.41
**7. Humble Oil and Refining Jicarilla D-1	NW/NW Section 17 T24N, R4W	60	0.25	0.00
**8. Pure Oil Company Jicarilla #31	NE/SW Section 25 T24N, R4W	58	1.34	0.02
**9. Amerada Hess Corporation Jicarilla Apache A-3	SE/SW Section 23 T25N, R5W	40	0.04	0.00

\* - Well not used in average, "sweet spot" well.  
\*\* - Well not used in average, dry hole.

TOTAL (only wells 1 through 4 used, see report)

$$\begin{aligned} \text{Average Laboratory Permeability} &= \frac{43.44}{80} = 0.54 \text{ md} \\ \text{Average In Situ Permeability} &= 0.011 \text{ md} \\ \text{(2\% of Laboratory Permeability)} \end{aligned}$$

NOTE: At request of Examiner, core analysis for this area was recalculated eliminating zero permeability values. These recalculated values are presented on this corrected Exhibit.

(January 17, 1983)  
COMPARISON OF NATURAL PRODUCTION RATES  
AND ON-LINE PRODUCTION RATES

Out of eight natural production tests recently taken in the area, three wells have on-line production rates:

WELL	LOCATION	INITIAL POTENTIAL (MCFGPD)	UNSTIMULATED	STIMULATED	RATIO ON-LINE/NATURAL
			NATURAL PRODUCTION RATE (MCFGPD)	ON-LINE PRODUCTION RATE (MCFGPD)	
1. Amerada Hess Corporation Jicarilla Apache I-9	NW/SE Section 1 T23N, R3W	872	24.5	189	7.7
2. Amerada Hess Corporation Jicarilla Apache D-3	NE/NE Section 1 T23N, R5W	80	33.0	59	1.8
3. Amerada Hess Corporation Jicarilla Apache C-3	NW/NW Section 35 T24N, R5W	1141	259.0	263	1.0
Two older wells were found that reported natural production tests:					
4. Amerada Hess Corporation Jicarilla Apache B-1	SE/NW Section 20 T24N, R5W	999	72.0	387	5.4
5. Amerada Hess Corporation Jicarilla Apache B-2	SE/SE Section 20 T24N, R5W	2404	4.0	247	61.8

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Analysis of the above wells suggest:

- (a) The fracture stimulation of well #3 doesn't appear to have helped this well. It could be assumed that natural fracturing may have caused the natural production test on this well to be very high.
- (b) The fracture stimulation of well #5 appears to have greatly helped this well. It is very possible that this well had tremendous formation damage while drilling which effected the natural production test on the well.
- (c) It is assumed that wells #3 and #5 are not normal for the area, but wells #1, #2, and #4 are typical wells.

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Comparison of Natural Production Rates, Continued  
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The average ratio of on-line production rate divided by natural production rate for the three normal wells for the area is 5.0. The maximum allowable natural production rate for this area is 79 MCFGPD. Using this ratio, wells with 395 MCFGPD or greater would be expected to have natural production tests exceeding the 79 MCFGPD limit.

On the completion and production map provided, on-line production rates are presented for the wells drilled between 1979 and 1982 in the Five Lakes Canyon Tight Gas Area. These on-line production numbers are an average of the first three months of production for each well. Using the on-line/natural rates analysis, only one well exceeds the 395 MCFGPD production limit. This well is Conoco's Northeast Haynes #11 well, located in SW/SW of Section 15, T24N, R5W. A natural production test on this well would be expected to exceed 79 MCFGPD.

The completion and production map presented for the Five Lakes Canyon Tight Gas Area highlights all producing spacing units that were drilled prior to July 16, 1979. These areas in blue indicate acreage that will not be eligible for 107 Tight Gas pricing due to the age of the well. The remaining acreage on the map is eligible for 107 Tight Gas pricing if gas contracts on this acreage allow for the higher pricing. This map clearly shows that a large portion of the 466 wells in the Five Lakes Tight Gas Area are not eligible for 107 Tight Gas pricing.