MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

VIII - Supplemental Testimony to

Section VIII of the Oil Conservation Division

Form C-108

The proposed injection interval in the Marshall Pipe and Supply Cook #1 is the Montoya formation of the Ordovician period. As described by rotary sample cuttings, the lithology of the injection interval is as follows: Dolomite, buff tan to off white in color, fine crystalline to sucrosic in texture, naturally occuring fractures are probable. The depth to the top of the Montoya in the Cook #1 is 7088' and its described thickness is 73'. The proposed injection well is immediately south of established Montoya production as defined by the Tule Field. A map based on the subsurface structure of the Pre-Penn unconformity has been provided to illustrate the relationship between the well and existing production. The contour interval is 50'. Datum points are noted by circles and the appropriate datum is listed. Well spots colored in red indicate Montoya producers. Well spots in blue indicate production from the Pennsylvanian formation. Well spots in red and blue denote dual completions in the Montoya and Pennsylvanian formations. Cross section A-A' is so labeled.

The structure map shows a north-northeast, south-southwest trending horst block which is fault bounded to the east, west and

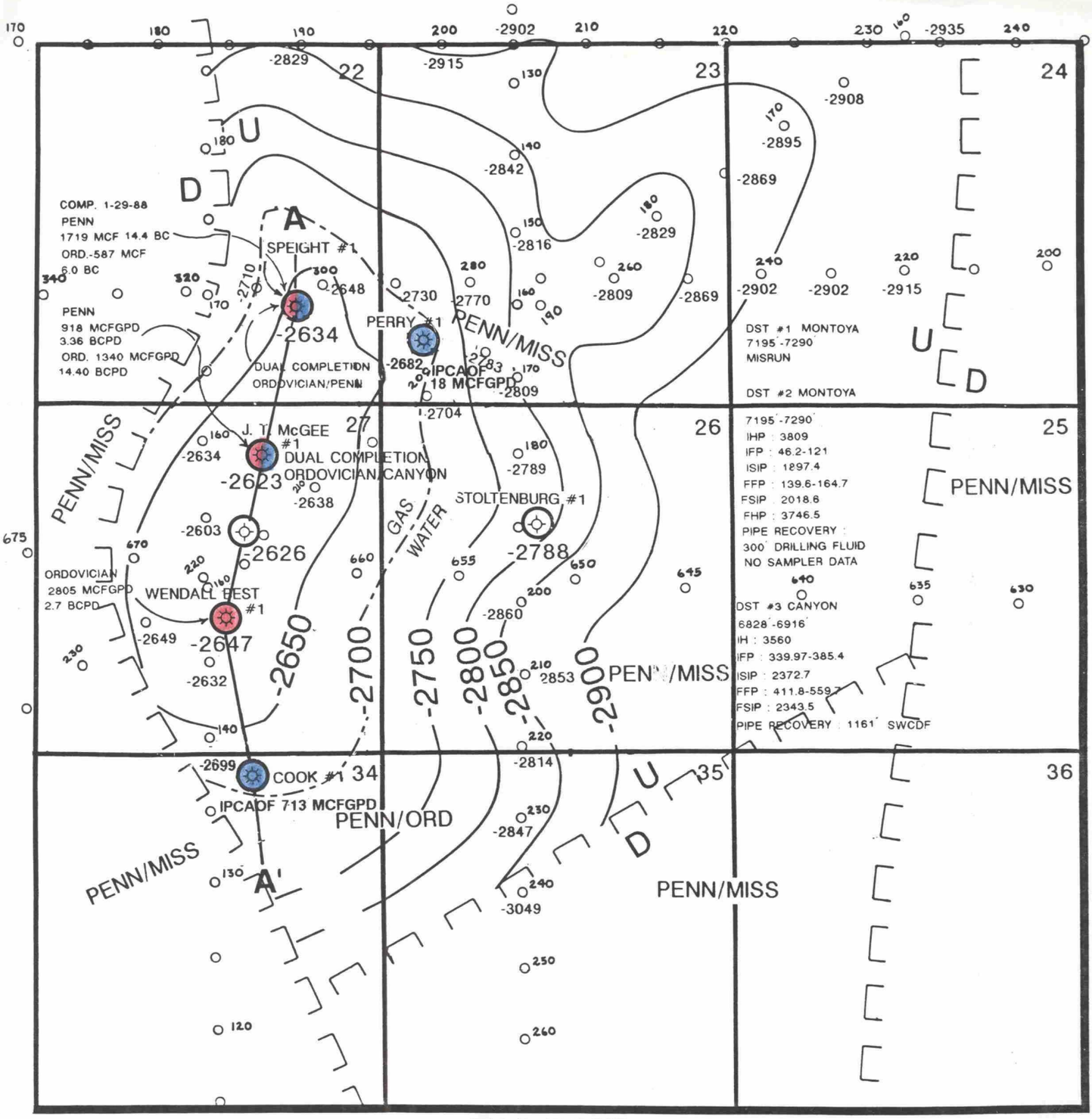
[redacted]

MARSHALL PIPE & SUPPLY CO.
Case No. 9574
2/15/89 Examiner Hearing
Exhibit No. 1

south. Throw on the bounding faults is approximately 200 feet. Closure into the west fault provides the trapping mechanism. Gas production is limited downdip by water. The gas/water contact in the Montoya formation has been established at 2700'. It is defined on the map by a dashed-dot line. The Montoya formation in the proposed injection well is below the contact as indicated by a drill strem test. Refer to structural cross section A-A' which describes the drill stem test. The test indicates that the Montoya formation, the proposed injection zone, is not capable of producing gas in commercial amounts.

In addition, structural cross section A-A' illustrates the Pennsylvanian zone that produces also in the Tule Field. The correlation carbonate pay does exist in the Cook #1 and production tests indicate that which compression, the zone is capable of substaining commercial gas production. Please note specifics as marked on cross section A-A'.

The proposed water injection well is located outside of a declared water basin. The underground source of fresh water in the area is Quaternary alluvium. The estimated depth is 70' to 80'. The aquifer is behind the surface pipe and cement of the proposed injection well. There are no other known sources of fresh water overlying the proposed injection zone and there are no known sources immediately underlying the injection interval.



T2S-R29E

TULE FIELD
ROOSEVELT COUNTY, NM
STRUCTURE MAP

HORIZON : PRE-PENN UNCONFORMITY

C. I. = 50'

GAS/WATER CONTACT MONTOYA

DATUM POINTS

ORDOVICIAN PRODUCERS

DUAL COMPLETION ORDOVICIAN/PENN

LESLIE BENTZ 2/15/89 SCALE 1"=2000'

MARSHALL PIPE & SUPPLY CO.
Case No. 9574
2/15/89 Examiner Hearing
Exhibit No. 2