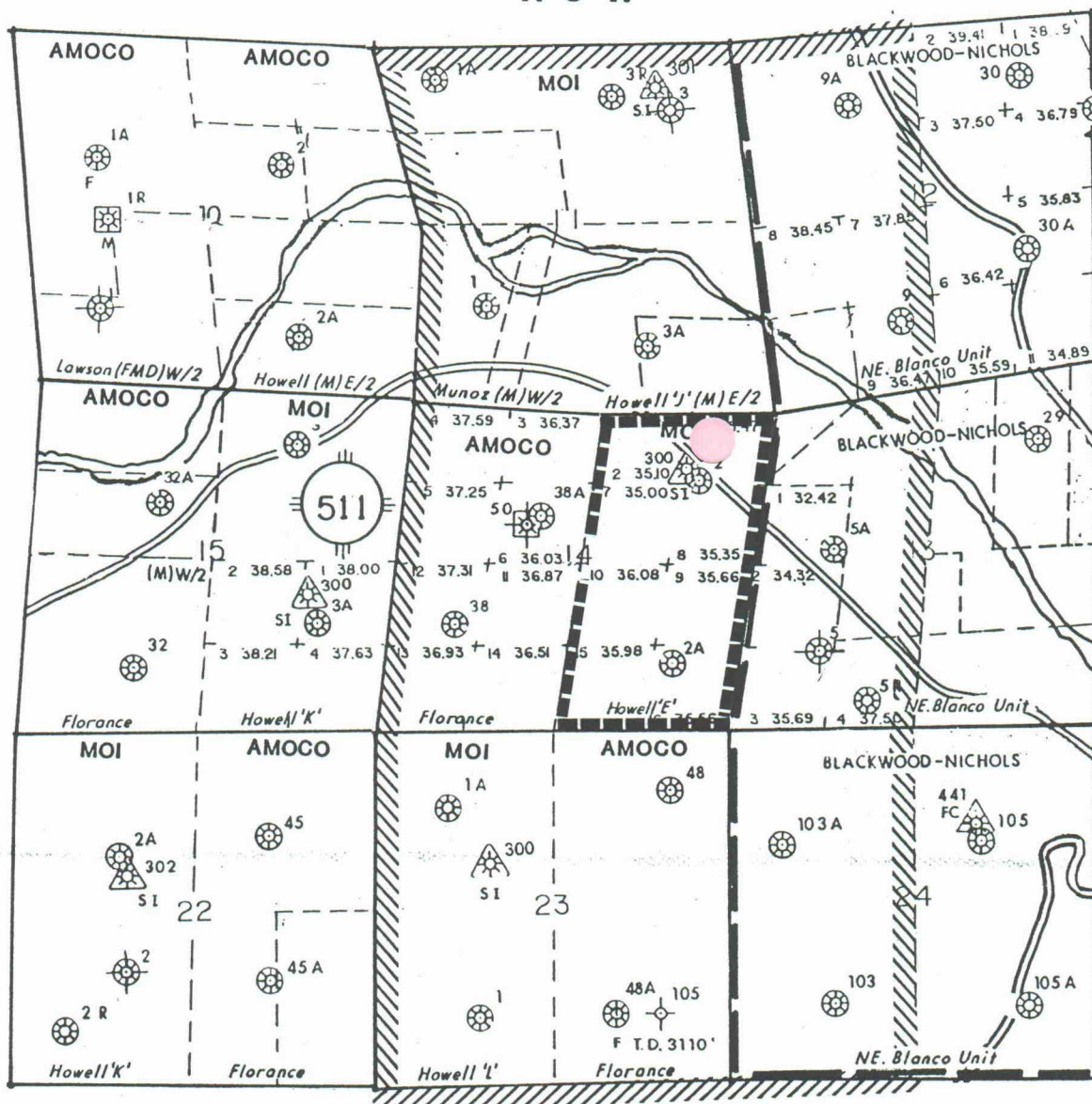


R 8 W



**T
30
N**



OFFSET OPERATOR NOTIFICATION AREA



SPACING UNIT

SUBJECT WELL SPOT

MERIDIAN OIL

HOWELL E #2R
SEC. 14, T30N - R8W
OFFSET OPERATOR PLAT
SAN JUAN COUNTY, N. M.

Amoco = TOC-Rocky Mountains Inc. c/o Amoco

Landman: Bob Hopkins

c.a.g.

Aug. 1989

DATE: 8/14/89

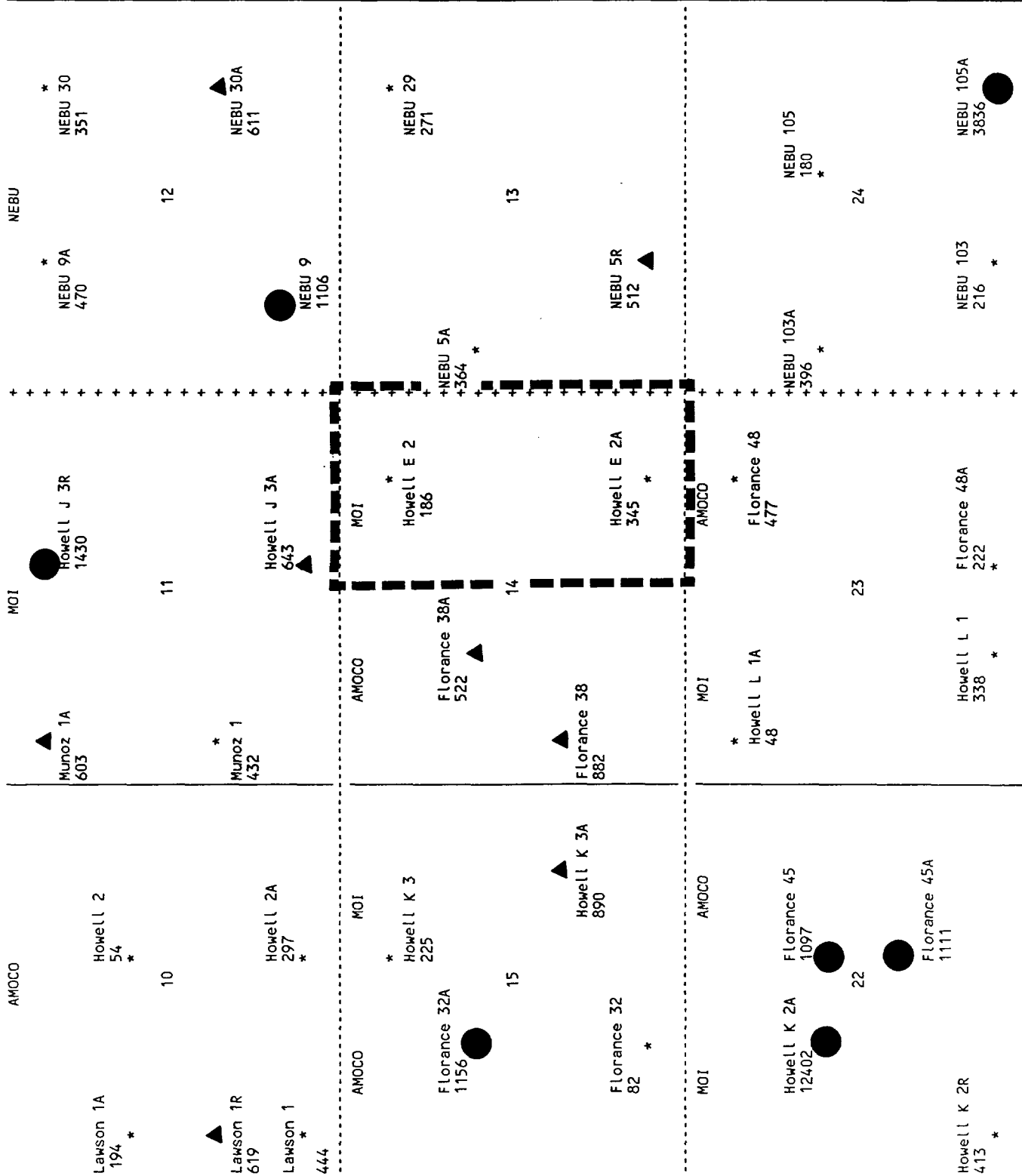
NAME: STATE DELIVERABILITY

FORMATION: Mesaverde

LOCATION: 9 SEC. PLAT; T30N,R08W

3

HOWELL E 2R 9-SECTION PLAT Northeast Blanco Unit



LEGEND
=====

Well Name

* WELL LOCATION

DELIVERABILITY - MCFD

● >1000 MCFD

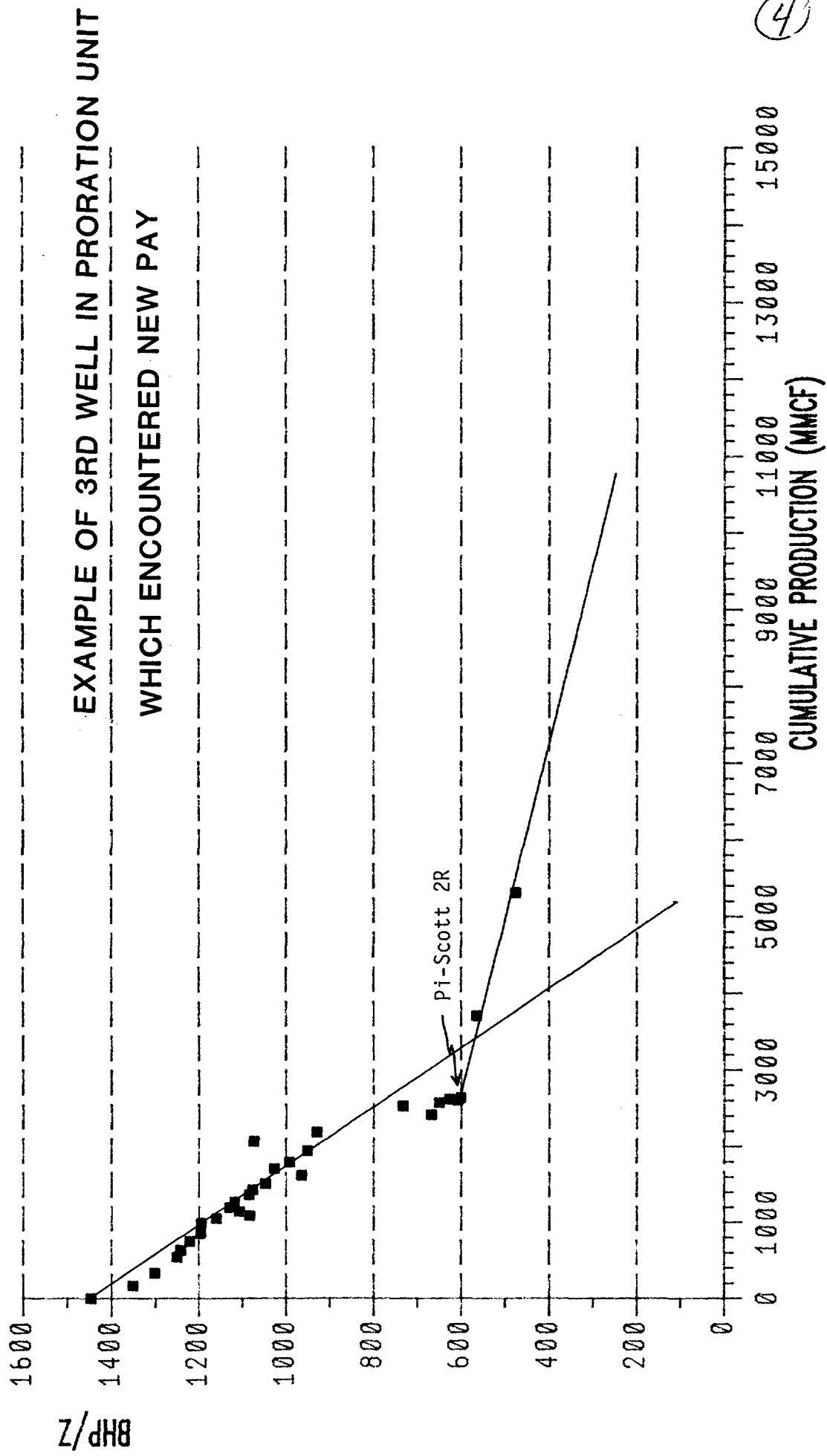
▲ >500 MCFD

R08W

T32N, R10W

Scott 2 & 2R Mesaverde

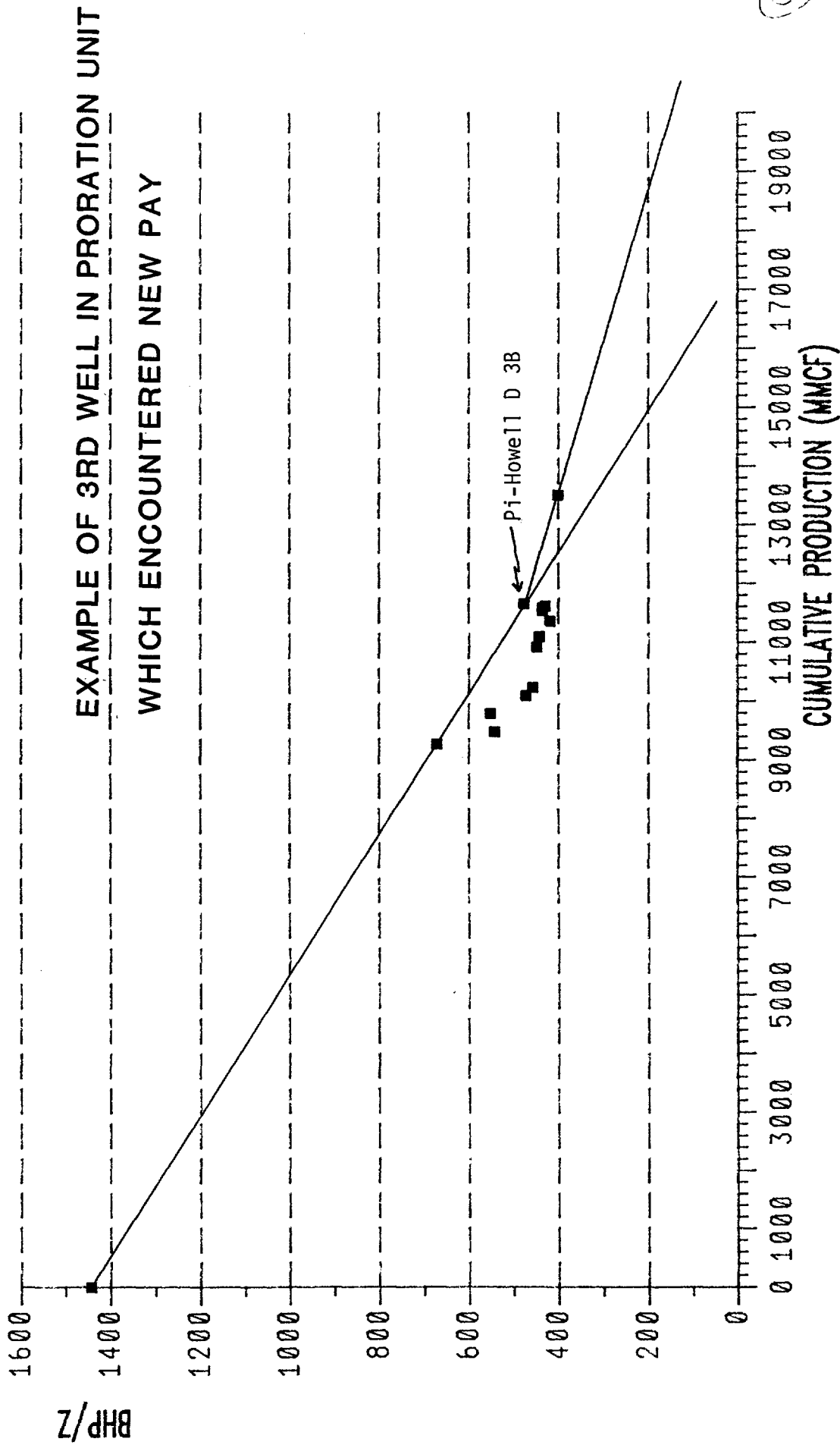
9/15/89



t31n,r8w

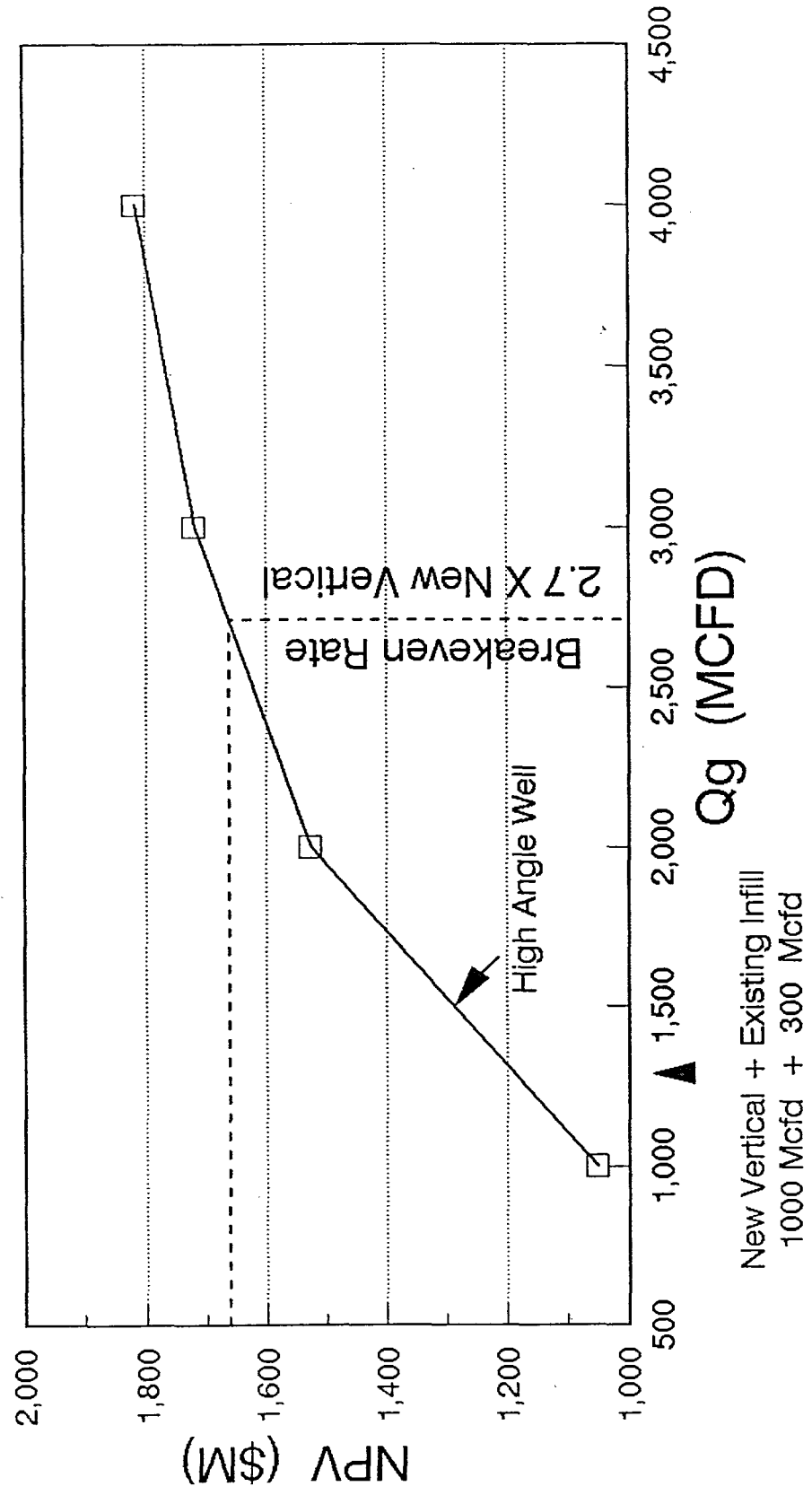
Howell D #3 & #3B Mesaverde

9/13/89



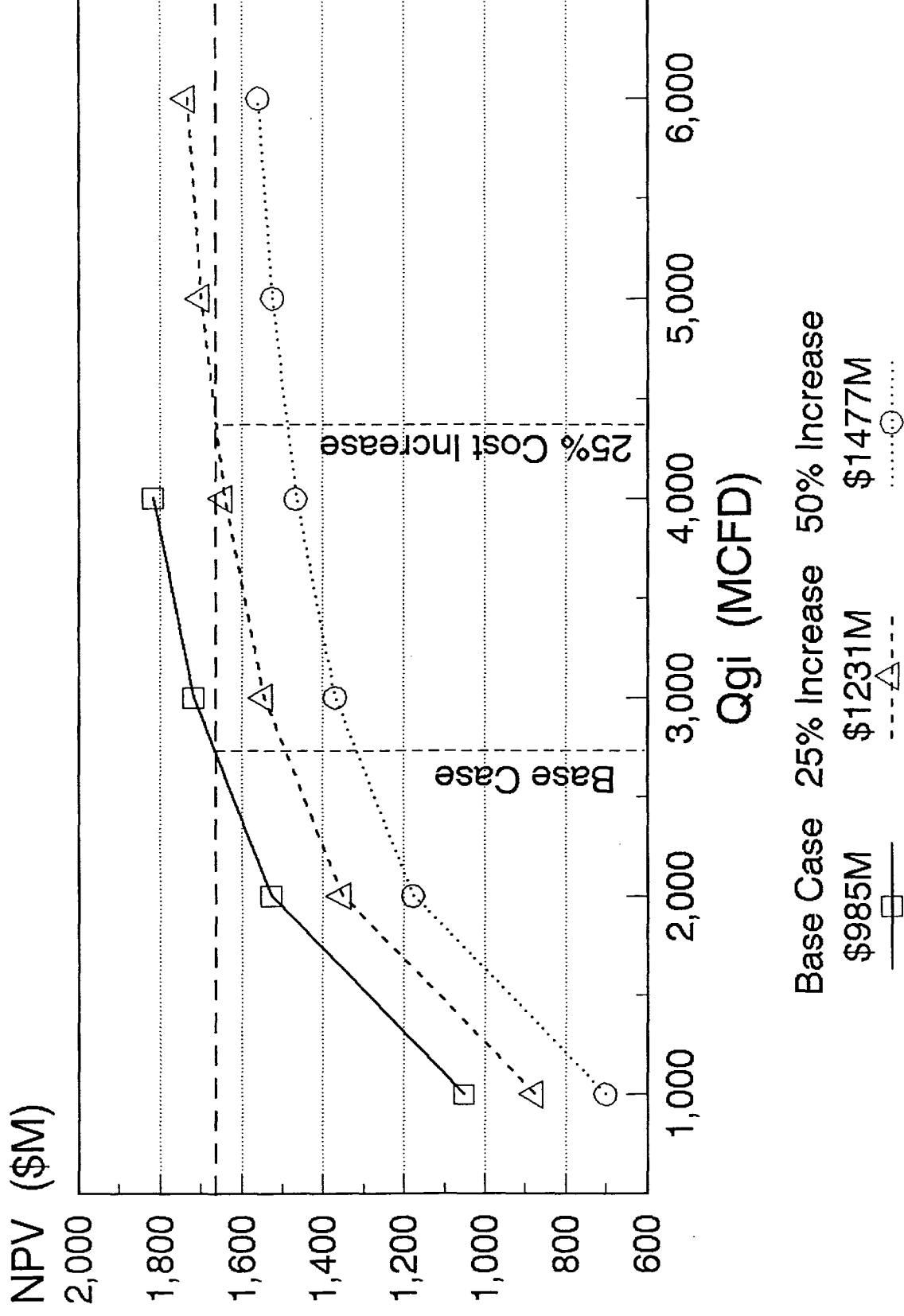
HIGH ANGLE VS VERTICAL MESAVERDE WELLS

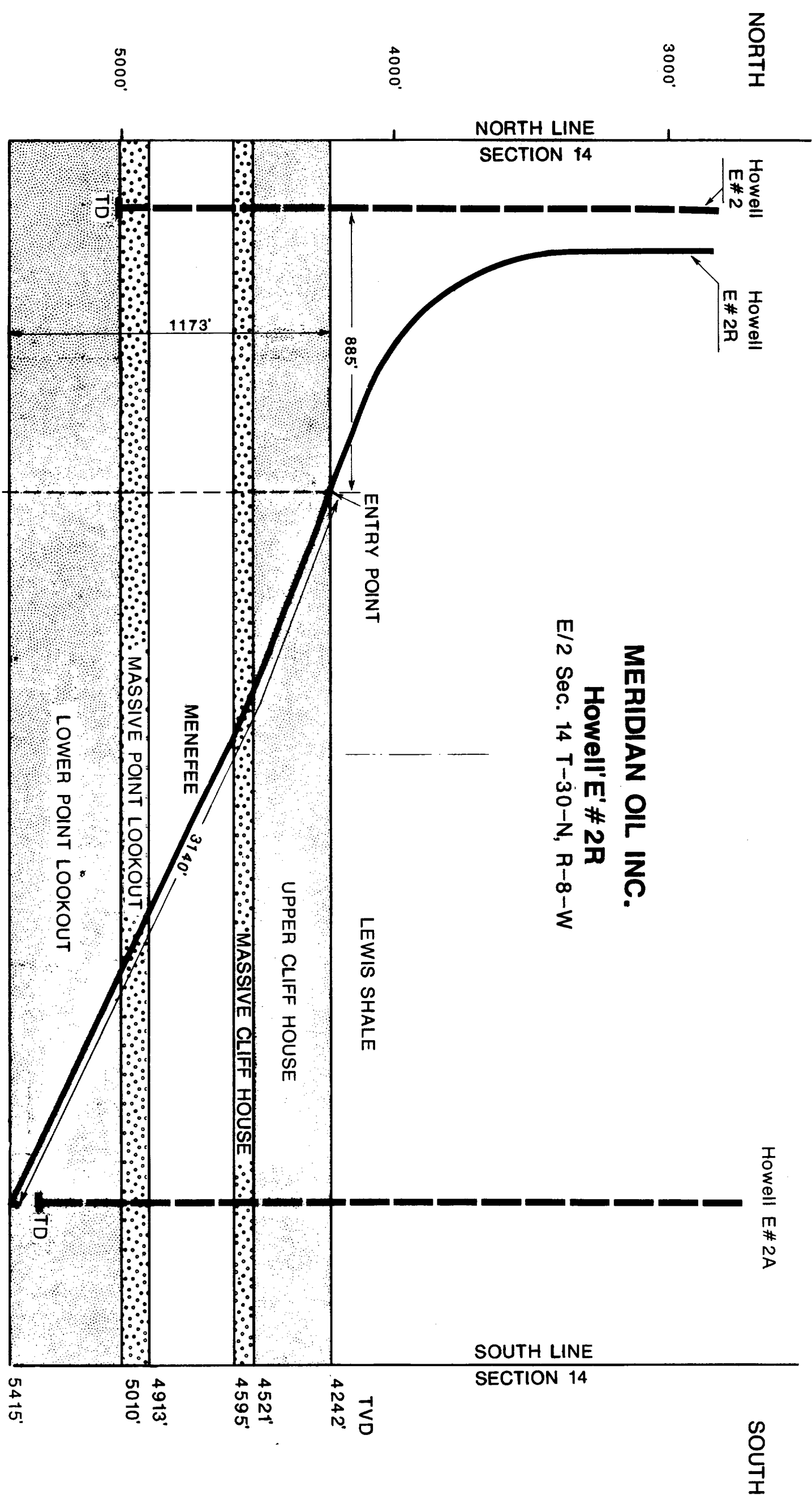
BREAKEVEN ANALYSIS



HIGH ANGLE COST SENSITIVITIES

Economic Comparison to Vertical Case



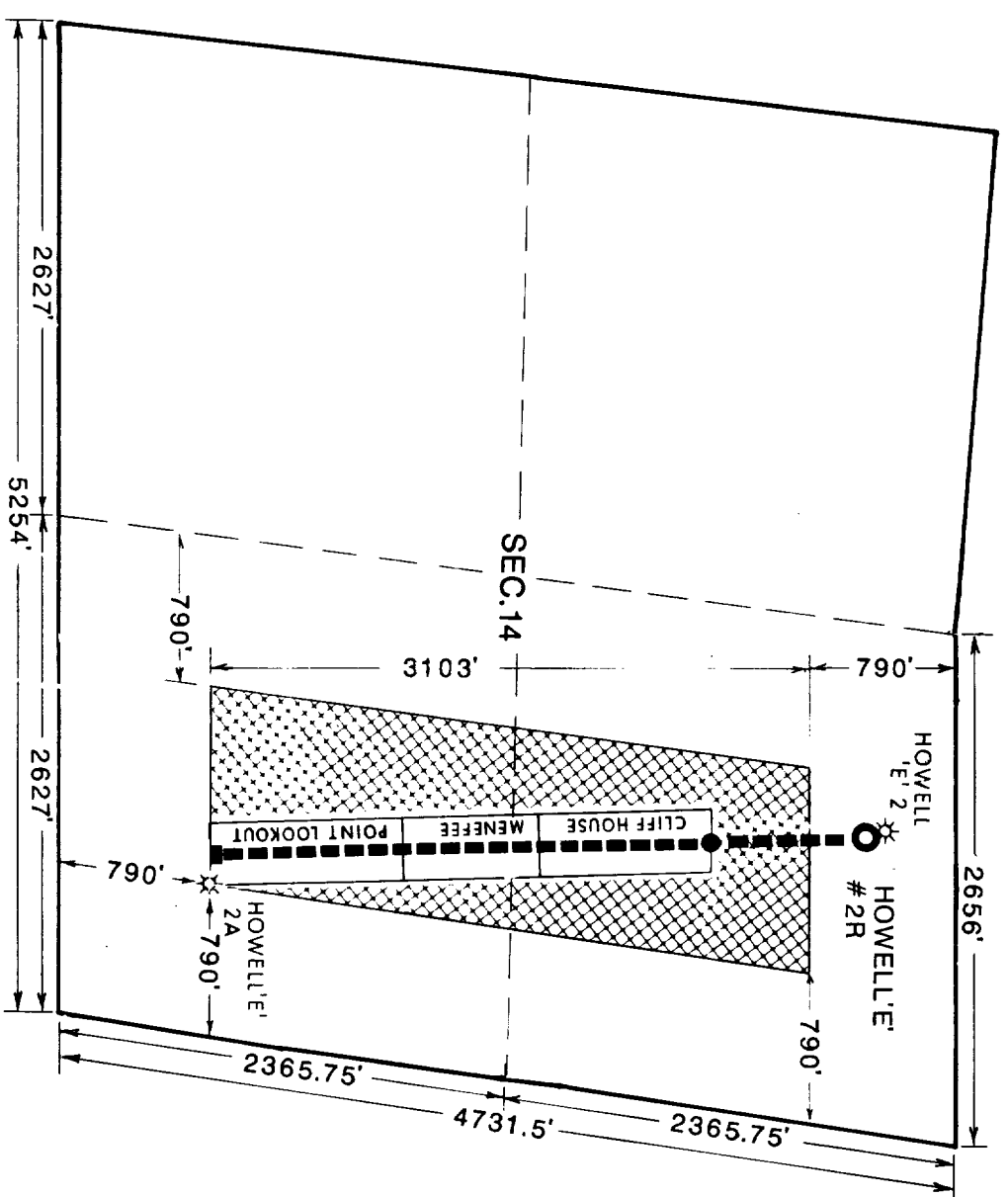


ADVANTAGES OF HIGHLY DEVIATED WELL

1. MORE EFFICIENTLY DRAIN THE MESAVERDE BY INCREASING THE FORMATION CONTACT AREA AND THEREBY INCREASING THE PROBABILITY OF INTERSECTING UNDRAINED GAS POCKETS AND/OR GREATER PERMEABILITY REGIONS.
2. UTILIZE HIGH ANGLE RAMP TO "SPREAD" DRAINAGE PATTERN OVER THE 320 ACRES.
3. PROVIDE OPTIMUM INTERCEPT OF FORMATION WHERE TOPOGRAPHIC OR ENVIRONMENTAL CONCERNS RESTRICT SURFACE LOCATIONS.

DISADVANTAGES

1. HIGH MECHANICAL RISK OF FAILURE
2. HIGH COST.
3. FAILURE TO INCREASE ULTIMATE RECOVERY BEYOND THAT OF VERTICAL WELL.



HOWELL E#2R
E/2 SEC. 14, T-30-N, R-08-W
SAN JUAN COUNTY, NEW MEXICO
SCALE: 1"=1000 FT.