

## SE/4 Section 2 T31N R14W

### Current Producing Morrison Wells

Well	10/00 CUM (mmcf)	Decline EUR (mmcf)
Ute Indians A #27-Case #1	680	1,230
Ute Indians A #27-Case #2	680	810

### Recoverable Gas In Place (RGIP)

Sand	GIP (mmcf)	RGIP (mmcf)
3rd Morrison	1,675	1,472

### Estimation of Remaining Recoverable Gas

Case #1	(mmcf)
Calculated RGIP from Net Sand Isopach	1,472
Less Decline EUR Current Producers	1,230
Estimated Remaining Recoverable Gas	242

Case #2	(mmcf)
Calculated RGIP from Net Sand Isopach	1,472
Less Decline EUR Current Producers	810
Estimated Remaining Recoverable Gas	662

OIL CONSERVATION DIVISION

CASE NUMBER \_\_\_\_\_

EXHIBIT 8

Remaining Reserve Estimation - Case #1

Oct-00 21,000 MCFM Start Rate  
85 % Decline  
550 MMCF Remaining  
680 MMCF as of 10/00  
1,230 MMCF EUR

Run Date: 03/09/00  
Run Time: 15:06:39

GAS (mcf/mo)  $\nabla$   $\square$   
OIL (bbls/mo)  $\Delta$

UTE INDIANS A 27

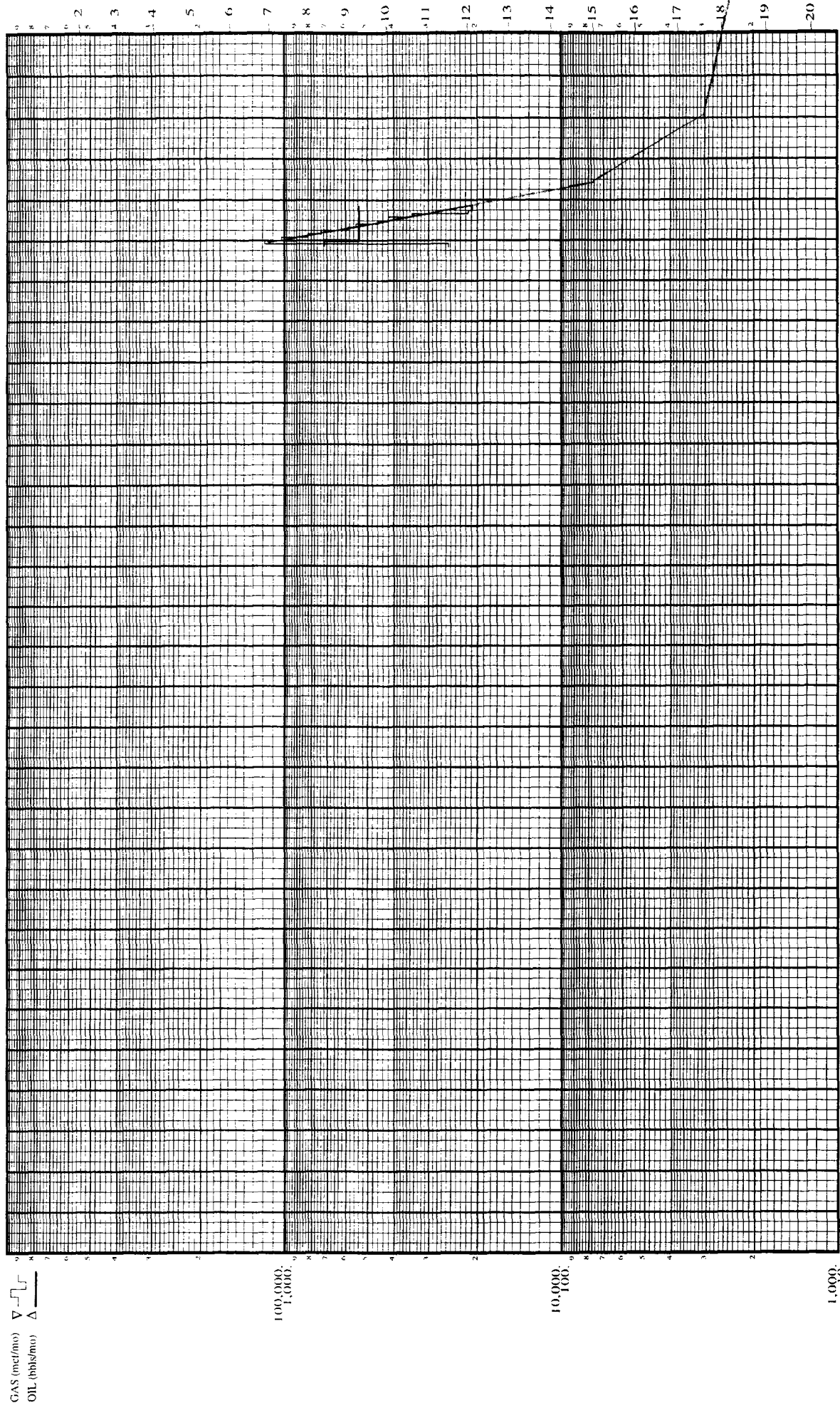
CROSS TIMBERS  
UTE DOME ( MORRISON )  
SAN JUAN, NEW MEXICO  
21 31N 14W  
BGV

SAN JUAN  
71075

BASE  
506215

CTOC - 1/00

TWD JEB SMJ



Remaining Reserve Estimation - Case #2

Oct-00 21,000 MCFM Start Rate 130 MMCF Remaining  
85 % Decline 680 MMCF as of 10/00  
810 MMCF EUR

Run Date: 03/09/00  
Run Time: 15:06:39

GAS (mcf/mo) ☒  
OIL (bbls/mo) ☐

UTE INDIANS A 27

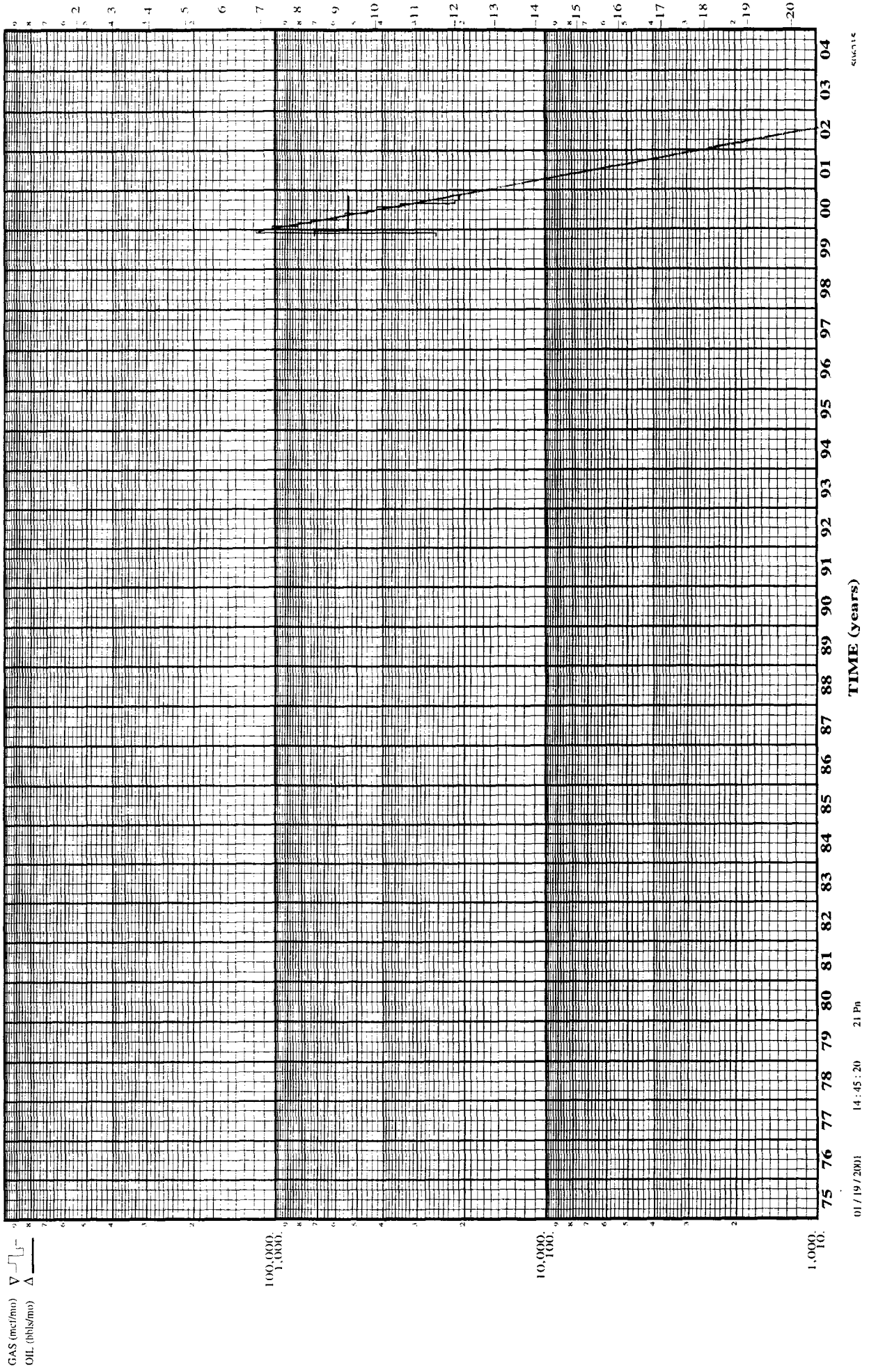
CROSS TIMBERS  
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UTE DOME  
SE/4 SECTION 2-T31N-R14W  
3<sup>rd</sup> MORRISON

Fluid Properties

Gas Gravity	=	0.630	Gas Analysis
T <sub>c</sub>	=	363°R	Standing's Correlation
P <sub>c</sub>	=	667 psi	Standing's Correlation
T <sub>r</sub>	=	113 °F	Log Measurement
P <sub>ri</sub>	=	1,000 psi	Calculated from Surface Pressure
P <sub>ra</sub>	=	135 psi	Estimate
B <sub>gi</sub>	=	0.01433 ft <sup>3</sup> /SCF	Standing & Katz's Correlation
B <sub>ga</sub>	=	0.11797 ft <sup>3</sup> /SCF	Standing & Katz's Correlation

Calculate Theoretical Recovery Factor:

$$RF_t = 1 - \frac{B_{gi}}{B_{ga}}$$

$$RF_t = 1 - \frac{0.01433}{0.11797}$$

$$RF_t = 0.8785 \text{ (fraction)}$$

Rock Properties

Acre - Feet	=	3,868	Planimetered from net sand thickness maps
Average Porosity	=	0.19	(Fraction) $\phi_{an}$ Ute Indians A #27
Water Saturation	=	0.25	(Fraction) Ute Indians A #27

Calculate GIP, Theoretical and Actual EUR:

$$GIP = \frac{.04356Ah_o(1-S_w)}{B_{gi}} MMCF$$

$$GIP = \frac{.04356(3,868)(0.19)(1-0.25)}{0.01433} MMCF$$

$$GIP = 1,675 \text{ MMCF}$$

$$EUR_t = RF_t \times GIP$$

$$EUR_t = (0.8785)(1,675)$$

$$EUR_t = 1,472 \text{ MMCF}$$