

SUPPORT FOR 320-ACRE WINDOWS ON  
BRINNINSTOOL '21' FEDERAL NO. 1  
AND OCHOA FEDERAL NO. 1

# **VACA DRAW/PITCHFORK AREA TGF DESIGNATION - MORROW SANDS**

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BRINNINSTOOL '21' FEDERAL NO. 1 AND  
OCHOA FEDERAL NO. 1**

**ENRON OIL AND GAS COMPANY**

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**VACA DRAW/PITCHFORK RANCH AREA TGF DESIGNATION**  
**SUMMARY OF PERMEABILITY AND STABILIZED RATES**

lh119rcl

Anomalous Wells in TGF Area  
Recommended to be excluded by  
320 Acre "Windows"

WELL NAME	INTERVAL	PRE-STIM K (MD)	POST-STIM K (MD)	K USED	CALCULATED STABILIZED FLOW RATE (MCFPD)
Brinninstool '21' Federal No. 1	15,759 - 66'	1.0227	-	1.0227	4,150
	15,170 - 383'	0.3016	-	0.3245	4,871
	Average			0.4540	9,021
Ochoa Federal No. 1	15,594 - 908'	0.0419	-	0.0419	388
	15,082 - 236'	0.8692	-	0.8692	8,274
	Average			0.4874	8,662

These wells' reservoirs are limited in extent and are not representative of the TGF area.  
Please see volumetric calculations defining limited areal extent.

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### AREAL EXTENT CALCULATION FOR BRINNINSTOOL '21' FEDERAL NO. 1 AND OCHOA FEDERAL NO. 1

#### BRINNINSTOOL

Interval: 15,159 – 66'

Porosity – 9%

Pay Height: 7'

Gas Saturation – 61%

Expected Ultimate Production: 1,082 MMCFG

Initial Reservoir Pressure: 10,734 psia

Abandonment Pressure: 500 psia

$$\text{MCF/Acre} = 43.56 \times 0.09 \times 7 \times 0.61 \times (412.18 - 28.72) = 6,419 \text{ MCF/Acre}$$

$$\text{Number of Acres} = 1,082,000/6,419 = 169 \text{ Acres}$$

#### OCHOA

Interval: 15,082 – 236'

Porosity – 8.5%

Pay Height: 26'

Gas Saturation – 70%

Expected Ultimate Production: 40 MMCFG

Initial Reservoir Pressure: 9,311 psia

Abandonment Pressure: 500 psia

$$\text{MCF/Acre} = 43.56 \times 0.085 \times 26 \times 0.70 \times (383.50 - 28.72) = 23,908 \text{ MCF/Acre}$$

$$\text{Number of Acres} = 40,000/23,908 = 1.7 \text{ Acres}$$

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WELLBORE DIAGRAM

