

5/7/2000 DCP

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Updated Ocean Energy Townsend #5 Volumetric Calculations

Update reflects more accurate Formation Volume Factor from actual PVT measurement rather than correlations.

For Small Case:

$$N = \frac{7758 (20.3 \text{ acres}) (91 \text{ ft}) (0.069) (1 - 0.32)}{2.65 \frac{RB}{STB}} = 253,746 \text{ STB}$$

Small Case OOIP = 254 ~~MSTB~~ MSTBFor Large Case:

$$N = \frac{7758 (38.7 \text{ acres}) (91 \text{ ft}) (0.069) (1 - 0.32)}{2.65 \frac{RB}{STB}} = 483,743 \text{ STB}$$

Large Case OOIP = 484 M STB

From Ocean's Map:

Iso peak (ft)	Area (acres)	Volume (acre-ft) (using frustum of a pyramid method)
0'	67.61	
20'	55.51	$\frac{1}{3}(20)(67.61 + 55.51 + [(67.61)(55.51)]^{\frac{1}{2}}) = 1229$
40'	45.90	$\frac{1}{3}(20)(55.51 + 45.90 + [(55.51)(45.90)]^{\frac{1}{2}}) = 1013$
60'	33.09	$\frac{1}{3}(20)(45.90 + 33.09 + [(45.90)(33.09)]^{\frac{1}{2}}) = 786.4$
80'	22.06	$\frac{1}{3}(20)(33.09 + 22.06 + [(33.09)(22.06)]^{\frac{1}{2}}) = 547.8$
100'	14.59	$\frac{1}{3}(20)(22.06 + 14.59 + [(22.06)(14.59)]^{\frac{1}{2}}) = 363.9$
120'	4.98	$\frac{1}{3}(20)(14.59 + 4.98 + [(14.59)(4.98)]^{\frac{1}{2}}) = 187.3$
		$\frac{1}{3}(20)(4.98 + 0 + [(4.98)(0)]^{\frac{1}{2}}) = 33.2$
		4160.6 acre-ft

$$N = \frac{7758 (4160.9) (0.069) (1 - 0.32)}{2.65} = 571,543 \text{ STB}$$

Ocean's Map OOIP = 572 M STB