CL 319

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

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Well Indian Basin No. 1

CORE SUMMARY AND CALCULATED RECOVERABLE OIL

FORMATION NAME AND DEPTH INTERVAL: Pennsylvanian 7610.0-7635.0

FEET OF CORE RECOVERED FROM ABOVE INTERVAL		25.0	AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE		48.7
FEET OF CORE INCLUDED IN AVERAGES		14.4	AVERAGE CONNATE WATER SATURATION: PER CENT OF PORE SPACE	(c)	48.7
AVERAGE PERMEABILITY: MILLIDARCYS	Max.	0.6	OIL GRAVITY: °API		
	90°	0.3			
PRODUCTIVE CAPACITY: MILLIDARCY-FEET	Max.	8.6	ORIGINAL SOLUTION GAS-OIL RATIO: CUBIC FEET PER BARREL		
	90°	4.3			
AVERAGE POROSITY: PER CENT		5.0	ORIGINAL FORMATION VOLUME FACTOR: BARRELS SATURATED OIL PER BARREL STOCK-TANK OIL		
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE		1.4	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT		

Calculated maximum solution gas drive recovery is barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. *(Please refer to footnotes for further discussion of recovery estimates.)*

FORMATION NAME AND DEPTH INTERVAL: Pennsylvanian 9200.0-9204.5

FEET OF CORE RECOVERED FROM ABOVE INTERVAL		4.5	AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE		19.3
FEET OF CORE INCLUDED IN AVERAGES		4.5	AVERAGE CONNATE WATER SATURATION: PER CENT OF PORE SPACE	(c)	19.3
AVERAGE PERMEABILITY: MILLIDARCYS	Max.	2.5	OIL GRAVITY: °API		
	90°	2.2			
PRODUCTIVE CAPACITY: MILLIDARCY-FEET	Max.	11	ORIGINAL SOLUTION GAS-OIL RATIO: CUBIC FEET PER BARREL		
	90°	9.9			
AVERAGE POROSITY: PER CENT		6.6	ORIGINAL FORMATION VOLUME FACTOR: BARRELS SATURATED OIL PER BARREL STOCK-TANK OIL		
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE		2.2	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT		

Calculated maximum solution gas drive recovery is barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. *(Please refer to footnotes for further discussion of recovery estimates.)*

(c) Calculated (e) Estimated (m) Measured (*) Refer to attached letter.

These recovery estimates represent theoretical maximum values for solution gas and water drive. They assume that production is started at original reservoir pressure; i.e., no account is taken of production to date or of prior drainage to other areas. The effects of factors tending to reduce actual ultimate recovery, such as economic limits on oil production rates, gas-oil ratios, or water-oil ratios, have not been taken into account. Neither have factors been considered which may result in actual recovery intermediate between solution gas and complete water drive recoveries, such as gas cap expansion, gravity drainage, or partial water drive. Detailed predictions of ultimate oil recovery to specific abandonment conditions may be made in an engineering study in which consideration is given to overall reservoir characteristics and economic factors.