

CORE ANALYSIS RESULTS FOR
TEXAS OIL & GAS CORPORATION

EVANS 'E' NO. 2

STOCKHOLM FIELD

GREELEY COUNTY, KANSAS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

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TEXAS OIL & GAS CORPORATION
 EVANS 'E' NO. 2
 STOCKHOLM FIELD
 GREELEY COUNTY

FORMATION : MORROW
 DRLG. FLUID: WATER BASE MUD
 LOCATION : NW SE SEC. 11-T16S-R43W
 STATE : KANSAS

DATE : 6-21-80
 FILE NO. : RP-2-6190
 ANALYSTS : FD:RS
 ELEVATION: 3920' KR

CONVENTIONAL CORE ANALYSIS

SAMP. NO.	DEPTH	PERM. TO AIR (MD)		POR. FLD.	FLUID SATS.		GR. DNS.	DESCRIPTION
		HORZ.	VERTICAL		OIL	WATER		
	5156-5162							SHALE - NO ANALYSIS
1	5162-63	0.12		9.6	0.0	54.4		SD GY FN-CSE CONGL
2	5163-64	41		18.0	8.0	55.2		SD GY FN-CSE CONGL
3	5164-65	425		14.4	7.8	40.4		SD GY FN-CSE CONGL
4	5165-66	2.8		9.5	12.7	33.9		SD GY FN-CSE CONGL
5	5166-67	25		17.1	9.6	47.2		SD GY FN-CSE CONGL
6	5167-68	0.92		16.0	5.4	57.3		SD GY FN-CSE CONGL
7	5168-69	123		12.7	0.7	52.3		SD GY FN-CSE CONGL
8	5169-70	12		13.1	0.0	60.1		SD GY FN-CSE CONGL
9	5170-71	40		12.4	9.2	35.4		SD GY FN-CSE CONGL
10	5171-72	674		16.3	8.5	41.0		SD GY FN-CSE CONGL
11	5172-73	277		15.2	7.5	46.0		SD GY FN-CSE CONGL
12	5173-74	232		15.2	7.5	45.1		SD GY FN-CSE CONGL
13	5174-75	247		16.0	5.3	49.1		SD GY FN-CSE CONGL
14	5175-76	14		10.7	6.4	49.3		SD GY FN-CSE CONGL
15	5176-77	53		11.8	9.9	41.4		SD GY FN-CSE CONGL
16	5177-78	9.4		10.4	11.3	30.2	VF	SD GY FN-CSE CONGL
17	5178-79	0.38		3.7	0.0	44.6	VF	SD GY FN-CSE CONGL
	5179-5183							DENSE LIME - NO ANALYSIS
	5183-5189							SHALE - NO ANALYSIS
	5189-5199							DENSE LIME - NO ANALYSIS
	5199-5200							LOST CORE

VF = VERTICAL FRACTURE



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COMPANY TEXAS OIL & GAS CORPORATION FIELD STOCKHOLM FILE RP-2-6190
 WELL EVANS "E" NO. 2 COUNTY GREELEY DATE 6-21-80
 LOCATION NW SE SEC. 11-T16S-R43W STATE KANSAS ELEV. 3920' KB

CORE-GAMMA CORRELATION

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VERTICAL SCALE: 5" = 100'

CORE-GAMMA SURFACE LOG

(PATENT APPLIED FOR)

GAMMA RAY

RADIATION INCREASE →

COREGRAPH

TOTAL WATER

PERCENT TOTAL WATER
80 60 40 20

PERMEABILITY

MILLIDARCY

100 50 10 5 1

POROSITY

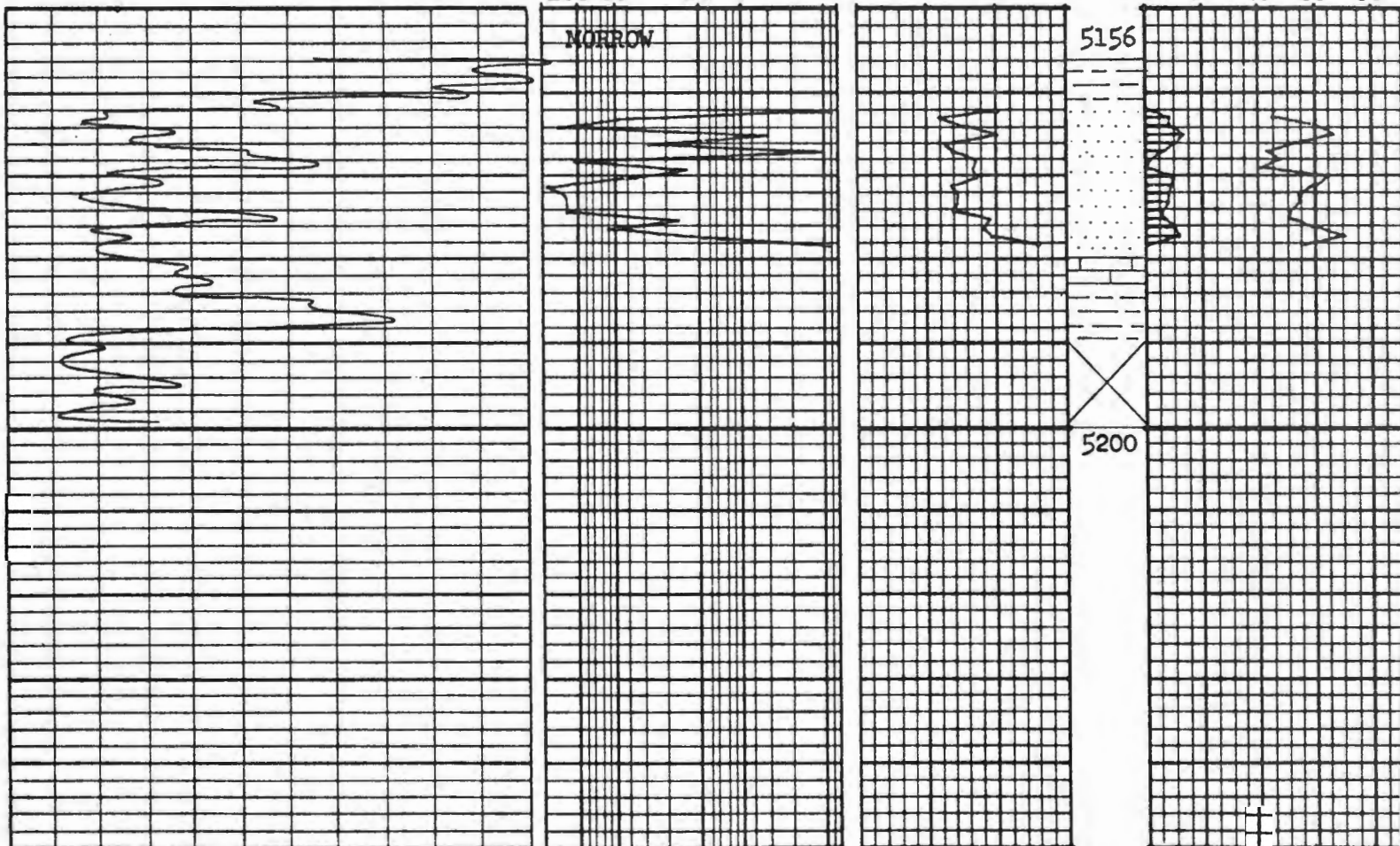
PERCENT

20 10 0

OIL SATURATION

PERCENT PORE SPACE

0 20 40 60 80



CORE SUMMARY AND CALCULATED RECOVERABLE OIL

FORMATION NAME AND DEPTH INTERVAL: Morrow - 5162.0-5179.0 Feet

FEET OF CORE RECOVERED FROM ABOVE INTERVAL	17	AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE	45.6
FEET OF CORE INCLUDED IN AVERAGES	15	AVERAGE CONNATE WATER SATURATION: PER CENT OF PORE SPACE	40 (e)
AVERAGE PERMEABILITY: MILLIDARCY	145.1	OIL GRAVITY: °API	40 (e)
PRODUCTIVE CAPACITY: MILLIDARCY-Feet	2176.1	ORIGINAL SOLUTION GAS-OIL RATIO: CUBIC FEET PER BARREL	
AVERAGE POROSITY: PER CENT	13.9	ORIGINAL FORMATION VOLUME FACTOR: BARRELS SATURATED OIL PER BARREL STOCK-TANK OIL	1.30 (e)
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE	7.3	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT	498

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.

INTERPRETATION OF DATA

5162.0-5179.0 Feet - Oil productive after successful artificial stimulation.

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.

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