

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

February 27, 1974

REPLY TO
S N. W. 42ND ST.
OKLAHOMA CITY, OKLA.
73118

Aspen Drilling Company
Box 1783
Great Bend, Kansas 67530

Attn: Mr. John Volosin

Subject: Core Analysis Data
Buckman No. 1-14 Well
Pawnee County, Kansas
CLI File 3402-7994

Gentlemen:

The Herington formation was diamond cored from 2183 to 2222 feet and the Winfield formation cored from 2233 to 2275 feet in the subject well utilizing a water base mud. The cores were placed in plastic bags at the well-site by a representative of Aspen Drilling Company and shipped to the Oklahoma City laboratory via motor freight. The accompanying Core-Gamma Surface Log was recorded to aid in correlation with downhole electrical surveys.

Conventional core analysis was utilized in analyzing intervals selected by a representative of Aspen Drilling Company. The resulting data are presented on pages one through three of this report.

Samples analyzed in the interval from 2186 to 2222 feet indicate water production can be expected in this interval. Samples analyzed in the zone from 2236 to 2275 feet exhibit total water saturations which also indicate water production where permeable.

We are pleased to have had this opportunity to be of service.

Very truly yours,

CORE LABORATORIES, INC.

Dale E. Boyle
Dale E. Boyle, Manager
Core Analysis Services

DEB:CLM:lc

6 cc - Addressee

3 cc - Northern Natural Gas Company
Attn: Mr. Chet Jameson
5155 E. 51st Street
Tulsa, Oklahoma 74100

CORE ANALYSIS RESULTS

Company ASPEN DRILLING COMPANY Formation AS NOTED File 3402-7994
 Well RICKMAN NO. 1-14 Core Type DIAMOND Date Report 2-26-74
 Field _____ Drilling Fluid WATER BASE MUD Analysts MAYS
 County PAWNEE State KANSAS Elev 2201' KB Location C SE SW SEC. 14-20S-18W

Lithological Abbreviations

SAND-SB SHALE-SM LINE-LM DOLOMITE-DOL CHERY-CH GYPSUM-GYP ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSILIFEROUS-FOSS SANDY-SBY SHALY-SHY LIMY-LMY FINE-FM MEDIUM-MED COARSE-CSE CRYSTALLINE-XLN GRAIN-GRN GRANULAR-GRNL BROWN-BRN GRAY-GY VUGGY-VGY FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY SLIGHTLY-SL/ VERY-V/ WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
CONVENTIONAL ANALYSIS						HERINGTON FORMATION
	2183-86					No Analysis
1	86-87	<0.1	13.9	0.0	86.2	Sh w/scattered dol
	87-88					Dol
						No Analysis
2	88-89	0.3	21.1	6.8	85.1	Dol, shy
	89-90					Dol, shy
						No Analysis
3	90-91	0.1	12.6	0.0	88.1	Dol, shy
	91-92					Dol, sl/shy, sl/anh
						No Analysis
4	92-93	0.1	12.8	0.0	57.7	Dol, sl/shy
	93-95					Dol, sl/shy
	95-99					Dol, v/shy
5	99-00	0.2	19.4	0.0	89.9	Sh w/scattered dol
	2200-01					Dol, shy
						No Analysis
6	01-02	0.1	18.7	0.0	88.8	Dol, sl/shy, sl/slty, anhy
	02-03					Dol, sl/slty
						No Analysis
7	03-04	0.1	17.8	0.0	86.7	Dol, sl/slty
	04-05					Dol, sl/slty
						No Analysis
8	05-06	<0.1	13.0	0.0	84.3	Dol, sl/slty
	06-07					Dol, sl/shy, sl/slty
						No Analysis
						Dol, sl/slty
9	07-08	0.2	20.2	0.0	89.0	Dol, sl/slty
10	08-09	0.5	22.0	0.0	82.7	Dol, sl/slty, sl/anh
11	09-10	0.1	16.2	0.0	78.1	Dol, sl/slty, sl/anh
12	10-11	0.1	13.4	0.0	80.1	Lm, sl/anh
13	11-12	<0.1	13.1	0.0	74.8	Lm, sl/anh
14	12-13	0.1	15.8	0.0	80.8	Lm
15	13-14	0.1	16.9	0.0	78.0	Lm
16	14-15	0.1	15.7	0.0	75.5	Lm
17	15-16	0.1	16.0	0.0	79.7	Lm
18	16-17	0.1	15.4	0.0	75.1	Lm
19	17-18	0.6	14.2	0.0	73.5	Lm
20	18-19	<0.1	10.1	0.0	68.2	Lm
21	19-20	<0.1	8.3	0.0	83.2	Lm
	2220-22					Lost Core

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Well BUCKMAN NO. 1-14

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
						WINFIELD FORMATION
	2222-33					Drilled
	33-36					Sh, lmy
22	36-37	<0.1	17.6	0.0	92.4	Dol, v/shy, slty
	37-38					No Analysis
						Lm, sl/shy
23	38-39	<0.1	7.0	0.0	87.1	Lm
	39-40					No Analysis
						Lm
24	40-41	0.1	14.8	0.0	84.1	Lm, chty
	41-42					No Analysis
						Lm, chty
25	42-43	0.1	16.7	0.0	81.8	Lm, v/chty
	43-44					No Analysis
						Lm, chty
26	44-45	0.1	18.7	0.0	89.1	Lm, chty
	45-46					No Analysis
						Lm, chty, sl/any
27	46-47	0.1	14.7	0.0	87.4	Lm, chty, sl/any
	47-48					No Analysis
						Lm
28	48-49	0.1	17.4	0.0	85.0	Lm, vert frac
	49-50					No Analysis
						Lm, any
29	50-51	<0.1	11.9	0.0	94.6	Lm, any
	51-52					No Analysis
						Lm, sl/shy
30	52-53	0.1	13.2	1.9	98.1	Lm, sl/any
	53-54					No Analysis
						Lm, sl/any
31	54-55	0.1	13.0	0.0	81.2	Lm, sl/shy
	55-56					No Analysis
						Lm, foss
32	56-57	0.1	17.5	1.4	87.2	Lm
	57-58					No Analysis
						Lm
33	58-59	0.5	28.1	0.0	74.0	Lm
34	59-60	0.1	23.8	0.0	88.2	Lm
35	60-61	0.1	26.7	0.0	87.9	Lm
36	61-62	0.1	27.6	0.0	78.1	Lm
37	62-63	0.1	15.5	0.0	85.0	Lm, sl/shy
38	63-64	0.1	17.3	0.0	77.3	Lm
39	64-65	0.7	19.0	0.0	81.8	Lm, foss
40	65-66	1.0	20.7	0.0	80.1	Lm, foss
41	66-67	0.4	19.5	0.0	76.0	Lm, sty
42	67-68	1.1	14.6	0.0	82.9	Lm, sl/shy
43	2268-69	0.4	18.4	0.0	88.1	Lm

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CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
44	2269-70	0.1	19.1	0.0	78.8	Lm
	70-71					No Analysis Lm, shy, slty
45	71-72	0.1	12.3	0.0	79.8	Lm
	72-73					No Analysis Lm, shy
46	73-74	0.1	12.7	0.0	70.4	Lm, v/shy
	2274-75					No Analysis Lm, v/shy

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