CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

September 12, 1973

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

Aspen Drilling Company
P. O. Box 783
Great Bend, Kansas 67530

Attn: Mr. John Volosin

Subject: Core Analysis Data
Owen No. 1 Well
Wildcat Field
Stafford County, Kansas
CLI File 3402-7836

Gentlemen:

The Owen No. 1 Well was diamond cored from 1966 to 2002 feet. The cores were preserved at the well-site and shipped via motor freight to the Oklahoma City laboratory where the accompanying Core-Gamma Surface Log was recorded.

Low temperature extraction--Boyle's law grain volume--density balance technique was utilized in the whole-core analysis. The resulting data are presented on page one of this report.

The interval from 1966 to 2002 feet is interpreted as water productive.

The core has been slabbed and returned to Aspen Drilling Company

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:es

6 cc - Addressee
1 cc - Mr. Bob Dougherty
P. O. Box 1065
Great Bend, Kansas 67530

CORE ANALYSIS RESULTS

Company ASPEN DRILLING COMPANY | Formation TOWANDA | File 3402-7836
Well OWEN NO. 1 | Core Type DIAMOND | Date Report 9-12-73
Field WILDCAT | Drilling Fluid WATER BASE MUD | Analysts MAYS
County STAFFORD State KANSAS Elev. 1927' KB Location SEC. 21-24-13

Lithological Abbreviations

SAND-SD, SHALE-SH, LIME-LM, DOLOMITE-DOL, CHERT-CH, GYPSUM-GYP, ANHYDRITE-ANHY, CONGLOMERATE-CONG, FOSSILIFEROUS-FOSS, SANDY-SDY, SHALY-SHY, LIMY-LMY, FINE-FN, 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		BULK DENS.	GRAIN DENS.	COMMENTS
		PERM. MAX.	PERM. 90°		OIL	TOTAL WATER			
	WHOLE-CORE ANALYSIS								
1	1966-67	0.4	0.4	11.1	0.0	83.6	2.50	2.69	Lm,shy,v/slty
2	67-68		<0.1*	16.1	0.0	89.2	2.47	2.76	Lm,dol,v/shy
3	68-69	0.1	0.1	8.4	0.0	80.0	2.65	2.80	Dol,shy,slty
4	69-70	1.3	0.5	16.2	0.0	89.2	2.52	2.82	Dol,slty
5	70-71	0.4	0.4	20.1	0.0	91.9	2.45	2.81	Dol,slty,sl/shy
6	71-72	0.4	0.3	14.3	0.0	88.4	2.49	2.74	Dol,v/slty,cherty
7	72-73	0.2	0.2	12.8	0.0	83.3	2.51	2.74	Dol,v/slty,cherty
8	73-74	0.2	0.1	10.5	0.0	84.4	2.54	2.72	Lm,slty,sl/anhy
9	74-75	0.3	0.2	12.2	0.0	81.4	2.52	2.73	Lm,slty,sl/cherty
10	75-76	0.9	0.6	14.4	0.0	85.7	2.50	2.75	Dol,v/cherty,lmy
11	76-77	0.1	0.1	9.4	0.7	77.4	2.54	2.70	Lm,slty,cherty
12	77-78	0.4	0.4	16.0	1.0	87.9	2.53	2.83	Dol,sl/shy,sl/anhy
13	78-79	0.6	0.5	10.2	1.6	77.3	2.68	2.87	Dol,sl/shy,sl/anhy
14	79-80	0.4	0.3	12.5	0.0	90.8	2.63	2.86	Dol,v/anhy,slty
15	80-81	0.8	0.7	17.7	0.0	82.5	2.51	2.83	Dol,sl/shy,sl/anhy
16	81-82	1.9	1.7	26.2	0.0	80.9	2.33	2.81	Dol
17	82-83	0.7	0.4	11.2	0.0	84.2	2.57	2.76	Dol,v/slty,shy
18	83-84	0.3	0.3	12.8	0.0	85.9	2.55	2.78	Dol,sl/slty,shy
19	84-85	0.2	0.2	11.0	0.0	83.5	2.55	2.74	Lm,dol,slty
20	85-86	0.4	0.3	14.9	0.0	82.0	2.50	2.77	Lm,dol,slty
21	86-87	1.7	1.8	18.4	0.0	63.4	2.51	2.85	Dol,anhy
22	87-88	0.7	0.7	17.9	0.0	76.0	2.50	2.83	Dol,anhy
23	88-89	0.1	0.1	15.1	0.0	77.9	2.50	2.77	Dol,slty,sl/lmy
24	89-90	0.4	0.5	16.7	0.0	72.1	2.48	2.78	Dol,slty,sl/lmy
25	90-91	1.9	1.8	18.4	0.0	74.8	2.49	2.83	Dol,sl/slty
26	91-92	4.1	4.1	21.2	0.0	68.7	2.43	2.82	Dol
27	92-93	3.3	3.2	22.1	0.0	74.5	2.40	2.80	Dol
28	93-94	4.3	4.3	22.3	0.0	73.7	2.41	2.82	Dol
29	94-95	3.4	3.3	19.7	0.0	75.6	2.49	2.85	Dol,v/anhy
30	95-96	1.4	1.3	22.6	0.0	78.9	2.44	2.85	Dol,v/anhy
31	96-97	0.2	0.2	17.1	0.0	76.9	2.47	2.77	Dol,lmy,slty
32	97-98	0.1	0.1	13.2	0.0	80.0	2.48	2.70	Lm,slty
33	98-99	0.5	0.5	17.6	0.0	78.9	2.43	2.73	Lm,slty
34	99-00	0.2	0.2	12.3	0.0	74.4	2.50	2.72	Lm,sl/slty
35	2000-01	<0.1	<0.1	8.5	0.0	62.8	2.56	2.70	Lm,sl/slty
36	2001-02	0.1	0.1	13.5	0.0	78.1	2.48	2.72	Lm,sl/slty

* DENOTES PLUG PERMEABILITY

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY ASPEN DRILLING COMPANY FIELD WILDCAT FILE CP-1-7836

WELL OWEN NO. 1 COUNTY STAFFORD DATE 7-2-73

LOCATION S 1/2 N 1/2 NE SEC. 21-24-13 STATE KANSAS ELEV. 1927' KB

CORE-GAMMA CORRELATION

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 0

PERMEABILITY

MILLIDARCYS

100 50 10 5 .1

POROSITY

PERCENT

20 10

OIL SATURATION

PERCENT PORE SPACE

0 20 40 60 80

1966

2002