CORE ANALYSIS RESULTS

Company TENNECO OIL COMPANY Formation BARTLESVILLE File CP-1-6190
Well DAVIS "A" NO. 46 Core Type DIAMOND Date Report 11-10-66
Field CHETOPA Drilling Fluid WATER Analysts KUHLMAN
County LABETTE State KANSAS Elev. 819'GL Location 900'FEL 1650'FSL SEC 3-35S-21E

Lithological Abbreviations

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, SLIGHT, VERY, WITH

DEPTH FEET	PERMEABILITY MILLIDARCYS PERM. MAX.	PERM. 90°	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
						Have for: log T/1st B'kss 3C473.
66-67	29.2		15.6	46.2	29.5	Sd, fn grn, mica, sl/shy, bld oil
67-79						Shale
79-79.5	19.4		15.6	44.2	28.8	Sd, fn grn, mica, sl/shy, bld oil
79.5-80.5						Shale
80.5-81	11.7		15.7	40.8	30.6	Sd, fn grn, mica, sl/lmy, bld oil
81-82						Shale T/Sd by Core
82-83	1 99.5		19.9	46.2	30.2	Sd, fn grn, mica, bld oil
83-84	2 104.8	↓ oil sd	21.3	44.6	31.0	Sd, fn grn, mica, bld oil
84-85	3 115.2		22.7	41.4	34.4	Sd, fn grn, mica, bld oil
85-86	4 11.7	24' ilt+oil sd above +712	20.5	39.5	38.0	Sd, fn grn, mica, sl/shy, bld oil
86-87	5 120.5		22.3	42.6	31.4	Sd, fn grn, mica, bld oil
87-88	6 196.5		22.5	41.3	29.3	Sd, fn grn, mica, bld oil
88-89	7 120.5		20.6	38.3	37.4	Sd, fn grn, mica, bld oil
89-90	8 99.5		21.5	44.2	29.3	Sd, fn grn, mica, bld oil
90-91	9 209.5	25' ilt oil sd above +711	25.7	45.1	30.4	Sd, fn grn, mica, bld oil
91-92	10 146.7		25.6	44.1	30.1	Sd, fn grn, mica, bld oil
92-93	11 167.6		24.1	41.5	30.3	Sd, fn grn, mica, bld oil
93-94	12 199.1		24.1	41.5	28.6	Sd, fn grn, mica, bld oil
94-95	13 57.6		23.7	39.7	31.2	Sd, fn grn, mica, bld oil
95-96	14 60.3		24.1	37.3	32.8	Sd, fn grn, mica, bld oil
96-97	15 99.5		20.1	31.8	33.8	Sd, fn grn, mica, bld oil
97-97.5	16 138.8		23.3	40.8	33.9	Sd, fn grn, mica, bld oil
97.5-99	Shale					Shale
99-00	17 193.8		24.4	46.3	25.4	Sd, fn grn, mica, bld oil
100-01	18 136.2		24.0	40.4	31.3	Sd, fn grn, mica, bld oil
101-02	19 89.0		23.3	42.5	31.8	Sd, fn grn, mica, bld oil
102-03	20 146.7		24.2	42.1	31.4	Sd, fn grn, mica, bld oil
103-04	21 151.9		24.4	43.0	29.5	Sd, fn grn, mica, bld oil
104-05	22 238.3		23.9	43.5	25.9	Sd, fn grn, mica, bld oil

Petroleum Reservoir Engineering
DALLAS, TEXAS

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CORE ANALYSIS RESULTS

DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	RESIDUAL SATURATION PER CENT PORE TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
105-06	23 115.2	23.6	43.2	32.6	Sd, fn grn, mica, bld oil Ak. F
106-07	24 136.2	22.3	40.4	30.0	Sd, fn grn, mica, bld oil s/w i
107-08	25 144.1	23.9	43.9	31.8	Sd, fn grn, mica, bld oil Ac Lu
108-09	1 115.2	23.1	29.9	40.7	Sd, fn grn, mica s/w 10
109-10	2 180.7	25.8	24.4	51.2	Sd, fn grn, mica Cf7
110-11	3 497.7	27.6	19.9	56.5	Sd, fn grn, mica
111-12	4 413.8	27.0	18.9	64.4	Sd, fn grn, mica
112-13	5 167.6 13'	26.2	23.7	52.7	Sd, fn grn, mica
113-14	6 340.5 Net	26.2	19.1	52.7	Sd, fn grn, mica
114-15	7 335.3 water	26.0	19.2	53.5	Sd, fn grn, mica
115-16	8 518.6 52	29.4	13.3	65.6	Sd, fn grn, mica
116-17	9 908.0	33.4	14.7	74.6	Sd, fn grn, mica
117-18	10 1030.3	35.6	13.8	73.9	Sd, fn grn, mica
118-19	11 1021.6	32.3	12.1	78.3	Sd, fn grn, mica
119-20	12 1292.2	36.2	11.6	69.1	Sd, fn grn, mica
120-21	13 864.4	34.3	11.1	70.3	Sd, fn grn, mica
121-22	324.8	28.4	32.4	51.8	Sd, fn grn, mica T/Asphaltic SS
122-23	707.2 2	32.2	16.8	70.5	Sd, fn grn, mica 121(+697)
123-24	838.2 3	30.1	17.6	71.1	Sd, fn grn, mica
124-25	1030.3 4	31.1	15.1	71.4	Sd, fn grn, mica
125-26 14	1327.1 5	34.1	17.3	62.2	Sd, fn grn, mica
126-27 Net	1004.1 6	31.6	20.9	60.1	Sd, fn grn, mica
127-28 Asphaltic	908.07	34.2	19.9	60.5	Sd, fn grn, mica
128-29	1344.6 8	33.8	16.3	72.8	Sd, fn grn, mica
129-30 SS	1641.59	35.7	14.8	73.1	Sd, fn grn, mica
130-31	855.710	30.2	19.9	61.3	Sd, fn grn, mica
131-32	1073.9 11	32.5	20.3	58.5	Sd, fn grn, mica
132-33	943.0 12	29.3	24.2	64.2	Sd, fn grn, mica
133-34	1274.8 13	28.8	22.6	65.3	Sd, fn grn, mica
134-34.5	1222.4 14	31.3	21.4	60.7	Sd, fn grn, mica
134.5-38					Shale

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TENNECO OIL COMPANY

DRILLING RECORD

I.D.C. A.F.E. NO.
T.D.C. A.F.E. NO.

CHETOPA LEASE ROY E. DAVIS UNIT WELL NO. 46

	DEPTH	DETAIL OF OPERATION
6		Location: 900' FEL & 1,650' FSL; Section 3-35S-21E
		Labette County, Kansas
		Elevation: 819' G.L.
7		Rig up Eugene Smith Drilling Company rig. Drilled 16-1/2' of 11" hole.
		Set 15-1/2' of 10" pipe. Drilled 9-7/8" hole from 15' to 66'. Cored fr
		66' to 138'.
		Core No. 1 66 - 92' Full Recovery
		66 - 67 Sand; gray-white, fine grain, angular to subangular,
		Sli shaley, very micaceous. - BO - 20%.
		67 - 77 Shale; gray-black - No show
		77 - 79½ Shale; gray-sandy - No show
		79½ - 80½ Sand; gray, fine grain micaceous, sli shaley, angular
		BO - 15%
		80½ - 83 Shale; gray-black - No show.
		83 - 85¼ Sand; white, fine grain, subrounded to subangular, thin
		micaceous partings, partly friable. - BO - 80-85%.
		85¼ - 87 Sand; as above with increase in mica. - BO - 40%.
		87 - 87-3/4 Shale; gray-green - No show
		87-3/4 - 92 Sand; white, med-fine grain, clean, porous. - BO - 98%
		Core No. 2 92 - 117' Full Recovery
		92 - 93' Sand; as above, few mica. laminations - BO -85%
		93 - 97 Sand; as above, clean and porous - BO - 90-98%
		97 - 99½ Shale; gray-black, few sand laminations - BO - 5%
		99½ - 105 Sand; same as 93 to 97'. - BO - 95%
		105 - 108 Sand; slight increase in mica, decrease - BO - 60-80%

TENNECO OIL COMPANY

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DRILLING RECORD

I.D.C. A.F.E. NO. _____

T.D.C. A.F.E. NO. _____

CHETOPA LEASE ROY E. DAVIS UNIT WELL NO. 46

E	DEPTH	DETAIL OF OPERATION
7		Oil Water Contact - in oil
		108 - 110 Sand; some tarry stain, spotted bleeding trace of water.
		BO - 15%.
		110 - 113 Sand; more tarry stain & Water - BO - trace
		113 - 117 Sand; clean with water bleeding - No show
		Base of sand 134½'
		Gilsonite Zone - 121-134½'
		Reamed hole from 66' to 138' with 9-7/8" bit and drilled to 155'. Ran 149.48' of 7", N-80, 23#, buttress thread casing with bell nipple set at G.L. Circulated and conditioned hole with mud for 20 minutes. Released rig and move off.
		Rig up Dowell and circulated hole with 20 bbls. fresh water. Cemented with 50 sacks of Class A cement with 35% D-30 plus 8.5% perlite. Mixed cement at 2 bbls. per minute and pumped plug down at 1/2 bbl. per min. Plug down at 8:10 P.M. Released pressure. Float held okay. Pressured to 200 psi and closed well in.
-17		Rig up Dowell and H & H Oilwell Service pulling unit. Ran 2-3/8" tubing with Dowell 3-way abrasijet tool and cut circular notch at 96'. Rotated tubing and pumped water containing 1 lb. 20/40 sand per gal. at 2600 # for 35 minutes. Washed sand from notch. Lowered tubing to 106' and wash out sand. Pressured up and broke down formation. Formation broke from 600 psi to 100 psi. Pumped 3 bbls. into formation and pulled tubing and tools.