

PRELIMINARY REPORT
CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

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CORE LAB SERVICES
 WELL LOGGING (HYDROCARBON DETECTION); DIAMOND CORING EQUIPMENT
 RENTAL SERVICE; CORE ANALYSIS; RESERVOIR FLUID ANALYSIS; ENGINEERING
 CALCULATIONS AND REPORTS

FIELD DATA CORE ANALYSIS REPORT

DEAN STARK PLUG ANALYSIS

DATE 12/24/76

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY'S PLUG	POROSITY PERCENT	RESIDUAL LIQUID SATURATION			Grain Density	REMARKS
				% VOL OIL	% PORE	TOTAL WATER % PORE		
	710-14							Sh, Sltty
1	14-15	12	17.4		27.6	40.9	2.68	
2	15-16	<0.1	12.0		16.6	56.9	2.70	
3	16-17	29	19.9		42.1	26.3	2.68	
4	17-18	33	20.6		57.3	29.9	2.68	
5	18-19	62	20.2		37.2	36.2	2.68	
6	19-20	44	21.4		37.1	31.9	2.66	
	720-22							Sh
7	22-23	12	18.3		36.0	37.2	2.70	
8	23-24	25	18.9		36.3	34.0	2.70	
9	24-25	24	19.3		38.9	27.9	2.69	
10	25-26	173	22.8		45.0	24.3	2.67	
11	26-27	39	20.2		37.4	29.4	2.69	
12	27-28	21	18.4		34.2	31.0	2.70	
13	28-29	66	20.7		40.8	28.2	2.68	
14	29-30	173	22.7		38.5	29.6	2.67	
15	30-31	27	20.1		33.2	24.7	2.69	
16	31-32	17	18.6		37.5	29.7	2.69	
17	32-33	78	21.6		38.5	30.8	2.67	
18	33-34	53	20.5		36.3	32.8	2.67	
19	34-35	61	19.8		35.6	32.5	2.65	
20	35-36	8.1	15.1		33.4	42.9	2.68	
21	36-37	197	21.5		50.8	33.1	2.66	
22	37-38	74	18.9		40.9	42.8	2.67	
23	38-39	60	19.2		49.9	32.6	2.65	
24	39-40	186	20.8		56.6	28.9	2.66	
25	40-41	48	19.3		56.2	25.9	2.64	
26	41-41.5	22	18.5		57.7	26.2	2.64	
	741.5-50							Sh

COMPANY M. C. CoLT WELL Monroe 1-T
 COUNTY Anderson STATE KANSAS FIELD Selma ELEVATION _____

Monroe 1-T

- 710-714.4 Sh med dk grey uniform
- MIN RIBBLE 715. Ss vly fn gr. ^{min.} rippled somewhat of biot. lt. sat
- 716.4 (Sh gry) & ss vly fn gr. interstr. & interl. ss w/ lt. sat
- 718.6 Ss vly fn gr. w/ num. ^{min. rippled} wavy biot. lam. good sat
- 720.2 Ibid w/ local X strat fr. 718.6 → 719.4, good sat.
- LAM. ZN 721.9 Sh dk gry & ss wh, interl. and interbed. crinkles of both show horiz. flowage adjust and minor faulting, no sat
- 724 Ss vly fn gr w/ paper thin lam. biot. horiz bedding, fair sat
- FESTOON 726.1 Ibid w/ 20° X strat.
- 729.5 Ss vly fn gr. num biot. ^{horiz} lam, 1/2" 3rd flattened & ridged sid pebs @ base good sat
- FESTOON 731.5 " " " " 25° X strat good sat
- 734.2 " " " " horiz. strat. " "
- LAM ZN 735.3 Ss wh & sh dk gry. interlam no sat
- BASAL ZN 737.4 Ss. vly fn gr. flat sid pebs fr. 736.8 - 737, good sat
- 741.6 Ss " " " 5°-25° X strat, good sat fr. 737.6 - 738.2; rest of interval w/ dead oil sat
- 742.3 Sh lt gry ds.
- 750.1 Sh lt → med gry crumbly "pencil case"

1-12-11

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

COMPANY M. C. COLT, INC.
WELL MONROE NO. 1-T
FILE NO. 3402-8848 DATE 1/6/77

CHLORIDE DETERMINATIONS

<u>SAMPLE NUMBER</u>	<u>DEPTH FEET</u>	<u>NaCl PPM</u>
1	714.0-715.0	36,000
2	715.0-716.0	30,000
3	716.0-717.0	32,000
4	717.0-718.0	32,000
5	718.0-719.0	49,000
6	719.0-720.0	52,000
7	722.0-723.0	37,000
8	723.0-724.0	33,000
9	724.0-725.0	34,000
10	725.0-726.0	31,000
11	726.0-727.0	36,000
12	727.0-728.0	30,000
13	728.0-729.0	30,000
14	729.0-730.0	50,000
15	730.0-731.0	31,000
16	731.0-732.0	32,000
17	732.0-733.0	37,000
18	733.0-734.0	28,000
19	734.0-735.0	28,000
20	735.0-736.0	31,000
21	736.0-737.0	36,000
22	737.0-738.0	28,000
23	738.0-739.0	28,000
24	739.0-740.0	32,000
25	740.0-741.0	30,000
26	741.0-741.5	35,000

726.0 - 729.2 SS, P.Yl.Bn (10YR 6/2), LVF-UVF, v. sty.-cly., qtz.-rf.-carb-mica-access., lo. amp. (2-5mm)
ass. rip. x-bd.; hvy. oil stn.

— cont. shp (not eros.)

729.2 - 734.0 SS, P.Yl.Bn (10YR 6/2) - P.Bn. (5YR 5/2), LVF-UVF, v. sty.-cly., qtz.-rf.-carb-mica-access.,

(check interv. 733.4-35.5 for inversion) hi. ang. x-beds (4 sets; 2.3', 0.9', 0.9', 0.7') bdg. shows as more or less cly-sty lam.; (sets 25°^u, 5°-0°^d, 2°-0°^d, 15°-0°^d)
imbr. sid. clyst. pebs. at 734.0; hvy oil. stn.

— cont. grad. (arbit.)

734.0 - 735.2 ? SS 80% - Sh 20%; bottom 2 cm. M.Gy. (N5), lam. M.Lt Gy (N6) + V.Lt Gy (N8), then P.Yl.Bn (10YR 6/2) w/ M.Gy. lam. at top (v. grad. change; Sh - SS^u); bottom 1 cm. is rip-form SS lam.; Sh, sty-carb-mic., a.a.; SS, LVF, v. sty.-v. cly.; qtz.-rf.-carb-mica-access. lower 1/2: horiz., smooth lamin. sh-ss, upper 1/2: sli. wavy (rip.?) lamin., sli. incl. lt. oil stn. in SS.

— cont. shp. (minor scour)

735.2 - 737.9 SS, P.Bn. (5YR 5/2) - Bn sh Gy (5YR 4/1), LVF-UVF, v. sty.-cly., qtz.-rf.-carb-mica-access.; subhoriz., sli. irreg. bdg. (shows as more or less well sorted or carb. lamin.); flat sid. clyst. pebs. at 736.5, 737.6, 737.8; hvy oil stn.; in top 0.4', bds (carb-mic. lam.) incl. 17°-0°^d (wage cross-cutting sets of lam.)

— cont. shp. (scour, concave up)

737.9 - 741.6 SS, striped P.Yl.Bn (10YR 6/2) and M.Gy (N5), LVF-UVF, v. sty.-cly., qtz.-rf.-carb-mica-access.; top 0.4' massive (disturbed beneath scour), next 1.2' subhoriz., sli. uneven lamin., rest hi. ang. 22°-5°^d, tangent. at base (festoon); lamin. show as alt. more or less well sorted lamin.; calc. cem. in 1-2 mm. spots to 741.4, solid below; hvy oil stn. to 738.2, dead oil sat. below.

— cont. shp., uneven

741.6 - 742.3 Sh, Gn Gy (5G 4/1), dy-tr. qtz-tr. carb-tr. sid.; platy, hd, subconch. frac.; < 1mm. sid. lam.; horiz. even lamin.; vert. clay-filled contemp. frac. in mid.

— cont. shp., uneven

742.3 - 744.5 Sh, Ol. Gy (5Y 6/1) ^{mottled Gn Gy (as sh above)}, cly-tr. qtz-carb-sid. pyr.; soft, crumbly, flakes in water; lamin. dist. by root traces (cly-sid. filled) or blk carb. threads; bottom 0.2' grad. to dk. gy. (N3) Sh, fiss. w/ qtz. silt-LVF sd in rd. burr. fill. + irreg. lamin.

— cont. shp., even

744.5 - 750.1 Sh, aa. (O1 Gy), but no Gn Gy Sh in mott.; grades ↓ into Sh, Ol. Gy. (5Y 6/1) streaked w/ M.Gy (N5); cly-carb-tr. sid.; soft, crumbly, less flaky; sub-horiz. ptgs.; few carb. lined near vert. tubular mottles (root traces).

POIT Rk name, color, text/gr. size, comp., modifiers, bedding, other struct., contacts(?)

1-T Monroe
Selma Fld
Anderson Co., Ks.

51st @ 713.2

710-714.4 Sh, m.lt.gy - m.gy (N7-N6), bottom 1cm. m.dk.gy (N4), v.sty., sli.sdy (LVF),
qtz-clay-mica-carb-pyr., sli.sld (few sm.nod.w/pyr.cent. and few brn bands),
v.carb. (macr.pl.deb?) "shreds" on bdg.pl., horiz. - 10° incl. smooth lamin. except sli.
wavy lam. below 713.2 (corres. to coarsening from Sh-51st), non-foss., non-calc.

— cont. alter. over 2cm.

714.4-716 SS (70%) - Sh (30%): Sh, m.lt.gy (N-7) a.a.; SS, P.Yl.Bn. (10 YR 6/2) - v.Lt.Gy (N8),
LVF-UVF, v.sty, sli.cly; qtz-rk.fr. - carb-mica-access.; alter. of biot. ss-sh
horiz. lam. ^{ass.} and rip.x-bd ss; biot. as 1 cm diam. vert. curv. bur., 1 mm. horiz. tubes,
1 mm diam. incl. strt. tubes; most alter./ss-sh grad., but shp. (ss > des. ck mud)
at 715.4 and scour (SS-sh-ss) at 714.9-715, SS lt. oil stn.

— cont. shp. uneven

716-720.2 SS, P.Bn (5 YR 5/2) - Bnsh Gy (5 YR 4/1), LVF-UVF, v.sty-sli.cly; qtz-rk.fr.-carb-mica-access.;
lo.amp. (5mm) ass. rip.x-bd, except 718.6-719.5 hi ang. (18-25°) fest. x-bd set (tang. ~~over~~
rip.x-beds below); ^{even} hvy. oil stn. — (note: poss. bubble-track? at 719)

— cont. shp, uneven

720.2-721.9 S1st-Sh (60%) SS (40%): S1st-Sh, m.Lt.Gy (N6), 15 cm. bed at top of sty. Sh;
rest, cly S1st interlam. < 1mm - 2mm w/ SS., v.carb, ^{tr. sld,} coaly ptg. @ 721.4, comp. aa.,
even horiz. lam.; SS v Lt Gy (N8), LVF-UVF, v.sty-v.cly; qtz-rk.fr.-carb-mica-
access.; 1 mm. ^{horiz.} wavy-lens lamin. w/ S1st-sh; minor sed. faults & dist. bdg. at 721.6, no oil stn.

— cont. shp, uneven

721.9-723.8 SS, P.Yl.Bn. (10 YR 6/2), LVF-UVF, v.sty-sli.cly; qtz-rk.fr.-carb-mica-access.; lo.amp. (2-6mm)
ass. rip. x-bd (rip. forms outlined by lamin. of carb-mica); hvy. oil stn.

— cont. shp (not eros.)

723.8-726.0 SS, aa., but 20° hi ang. x-bd.; laminae: alter. of more or less silty, or more or less
carb-mica sd.;

— cont. shp. scour (not tangent.)

