EXXON CORE RESEARCH CENTER
WEST WILLOW # 3
SAMPLE LITHOLOGY

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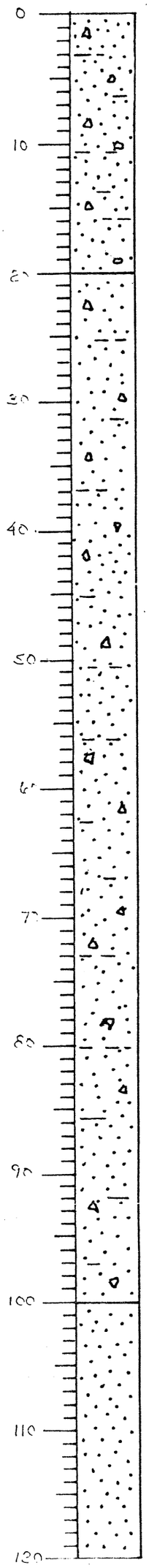

From	To	Thick.	
0	20	20	Alluvium; lt-med brn sandy-silty sand is vfg sl arg grades to sandy from 10'-20' uncons-friable, sl calc, sl ox, p-mod srt
20	100	80	Alluvium; lt-med brn sandy-silty vfg-slty, sl arg, uncons-hd, abnt ho slt & ss frags thru, sl ox thru sl-mod calc, unsrt.
100	122	22	SS: lt-med brn vfg w srtd mod calc firm-med hd mod ox fm 100-110, tr carbo mat'l, few firm hily ox fg ss frags.

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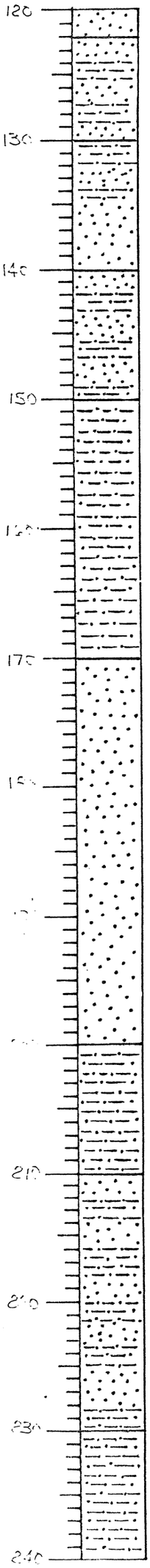

From	To	Thick.	
122	130	08	SS: lt. brn & lt-med gry, vfg-fg p srtd, hily calc, tr ox, tr Asph ctg on frag surf, tr carbo. mat'l within frags, overall - mixed SS types, colors composition, & grain size, tr slt
130	140	10	SS; v lt gry-wht, fg-mg, mod-w srtd, fri-firm, sl calc, Abnt pyr frags & mnrl, p cmt, tr slt
140	150	10	SS & slt; intbd; SS is lt brn-orng, fg, mod-w srtd, sl calc, sl ox, p cmt; slt is lt gry, firm, sl sndy.
150	170		Slt; lt gry, hily calc, firm-mod hd, sl sndy in places; few lt gry-wht fri SS frags (as in 130-140' interval); > 7% SS fm 150'-160'; grds to v fg SS.
170	200	30	SS; lt brnsh gry, slty-vfg, mod-hily calc, mod w srtd, firm-mod hd, tr pyr, tr carbo mat'l, tr blk Asph ctg, few intbd slt strgs.
200	210	10	Slt, lt-dk gry, sl-mod calc, firm-mod hd, tr SS frags
210	230	20	SS & Slt. intbd. lt brnsh gry, mod-v calc; SS is fg, p cmt, fri-firm, mod-w srtd, w/ Abnt pyr mnrl (as 130-140' interval). slt is v calc, firm-mod hd, sl sndy, sl Arg.
230	240	10	Slt, lt brnsh gry, v calc, sl sndy in places, firm-mod hd, tr Asph or/carbo mat'l as ctg on few frags.

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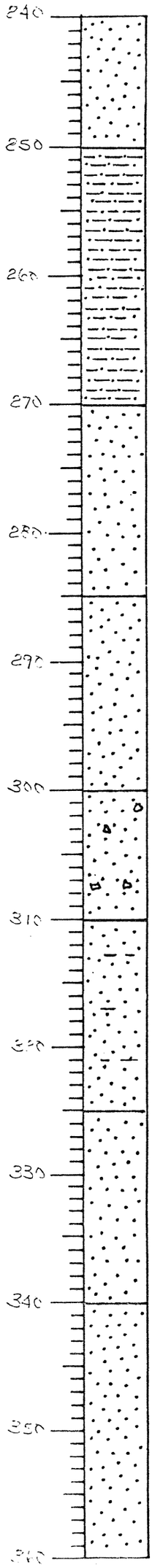

From	To	Thick.	
240	250	10	SS; v lt gy - buf, fg - mg, sl - mod calc, fri - firm, abnt pyr frags & mnrl, mod - w srtd, p cmt, (AS 130-140 interval)
250	270	20	slt, lt brn, mod - hily calc, fnt lam on few frags, few fg SS frags w/ pyr mnrl, tr carbo mat'l.
270	285	15	SS; lt brn - v lt gry, vfg - fg, mod srtd, hily calc; fg SS AS in interval 240-250 w/ abnt pyr mnrl; tr asph, tr mrlst, firm - mod hd.
285	300	15	SS; lt brn, vfg, w srtd, hily calc, tr pyr, tr fg SS frags AS above, fri - firm
300	310	10	SS; v lt gry - wht, fg, v calc, mod srtd, fri - firm, abnt pyr mnrl, abnt carbo SS grains (sl S&P); tr dk gry v calc v arg slt frags w/ solution pitting (SF ZN)?
310	325	15	SS; lt brn & lt gry, vfg - fg, occ slty, v calc, firm - mod hd, sl ox, sl arg skewed to vfg; some intbd slt (poss sndy slt?).
325	340	15	SS; v lt brnsh gry - wht, fg, mod calc, fri - firm, p cmt, mod srtd (SAME AS 240-250), abnt pyr mnrl, abnt carbo grains (sl S&P).
340	360	20	SS; v lt brnsh gry, vfg - fg, fri - firm, hily calc, few frags from imed. above (SS); abnt slty - vfg SS frags (poss slt?)

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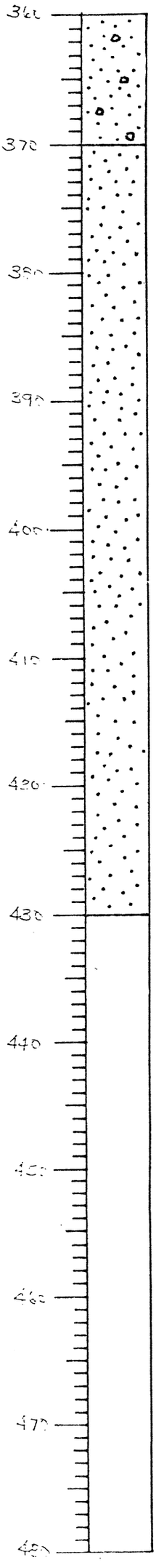

From	To	Thick.	
360	370	10	SS: lt gry, lt brn, lt brnsh orng, & wht, unsorted, v calc, sl ox, sltu-fg, Abnt brecciated & recmt frags w/ < rot particles, Appears as a sol frac zn. Fri-firm, tr pyr
370	430	60	SS: v lt brnsh gry-wht, fg, mod srtd, mod-v calc, tr pyr, tr Asph, tr carbo ss grains (S&P), p cmt (poss CO_3), fri-firm, grds to v fg ss. Abnt cave-in matl (ox lg ss frags) fm 400-410.
430	510	80	O Sh, med-dk brn, mod hd, v calc v lo grd, mrly w/ mrlst frags in places, fnt lam, some ox (poss cave-in/carryover). Abnt dk gry calc mrl sltu sh - indication of sol frac zns fm 460-490 & 500-510; few intbd slt & ss strs thru-out.

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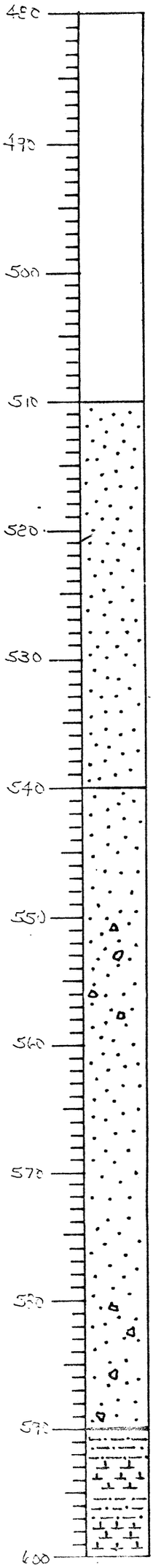

From	To	Thick.	
510	540	30	SS; med - v lt brn, lt gry, & wht, vfg - fg, unsrtd, v calc, fri - firm, abnt pitted dk gry calc mnrl slty sh sol frags - sol frac zn; some slt frags.
540	590	60	SS, slt, & o sh; rbbl, unsorted, med brn; v fine frags; SS is vfg - fg, lt brn; slt is lt - med brn; o sh is med brn to grd, sl mrly in places; overall, is hi - v hi calc, abnt dk gy pitted calc mnrl slty sh sol frac frags; v hily rbbl w/ sol frac frags fm 550 - 560 & 580 - 590.
590	632	42'	Slt & Mrlst, intbd. slt is lt gry, firm, v calc; mrlst is v lt brn, mod hd; overall is lt grysh brn, v calc, v sml frags, few pitted dk gry calc (CO_3) mnrl slty sh frags - indicates some sol fract.

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From	To	Thick.	
632	680	48	OUSh, v dk gy - blk, h grd, firm - mod hd, v calc, v fine frags, tr mrlst, tr pitted sol frac calc mnrl frags.
			680' Total Rotary Depth / Core Point (see Core lithologic logs for Core descriptions)

600
610
620
630
640
650
660
670
680 Total Rotary Depth T.D.