ENCLOSURE 1.

T/12P Geological Completion Report

460122

Amoco Australia Petroleum Company

TPR 02-358A.

COMPOSITE WELL LOG

Cape Sorell 1

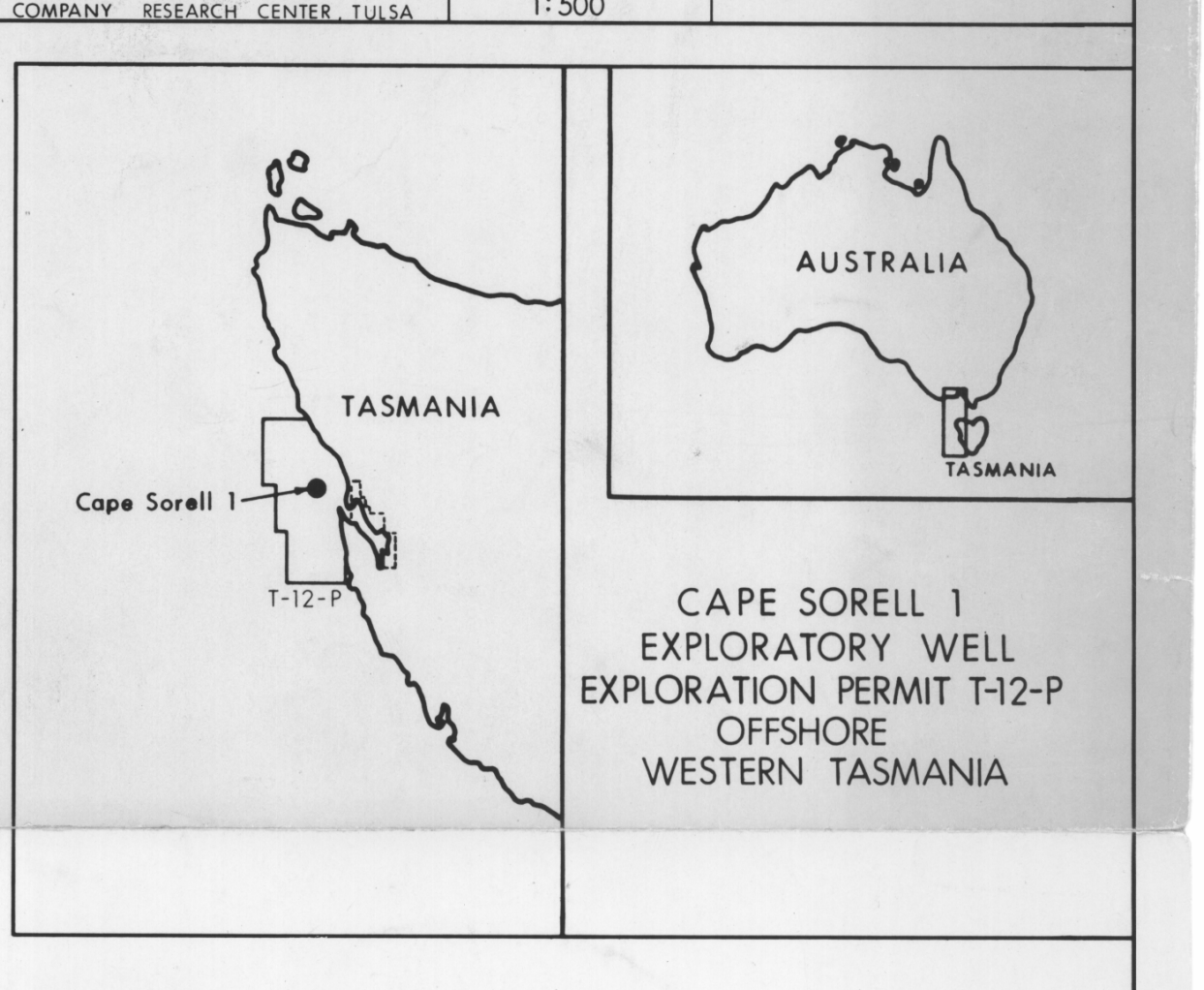
5 cm

WELL DATA

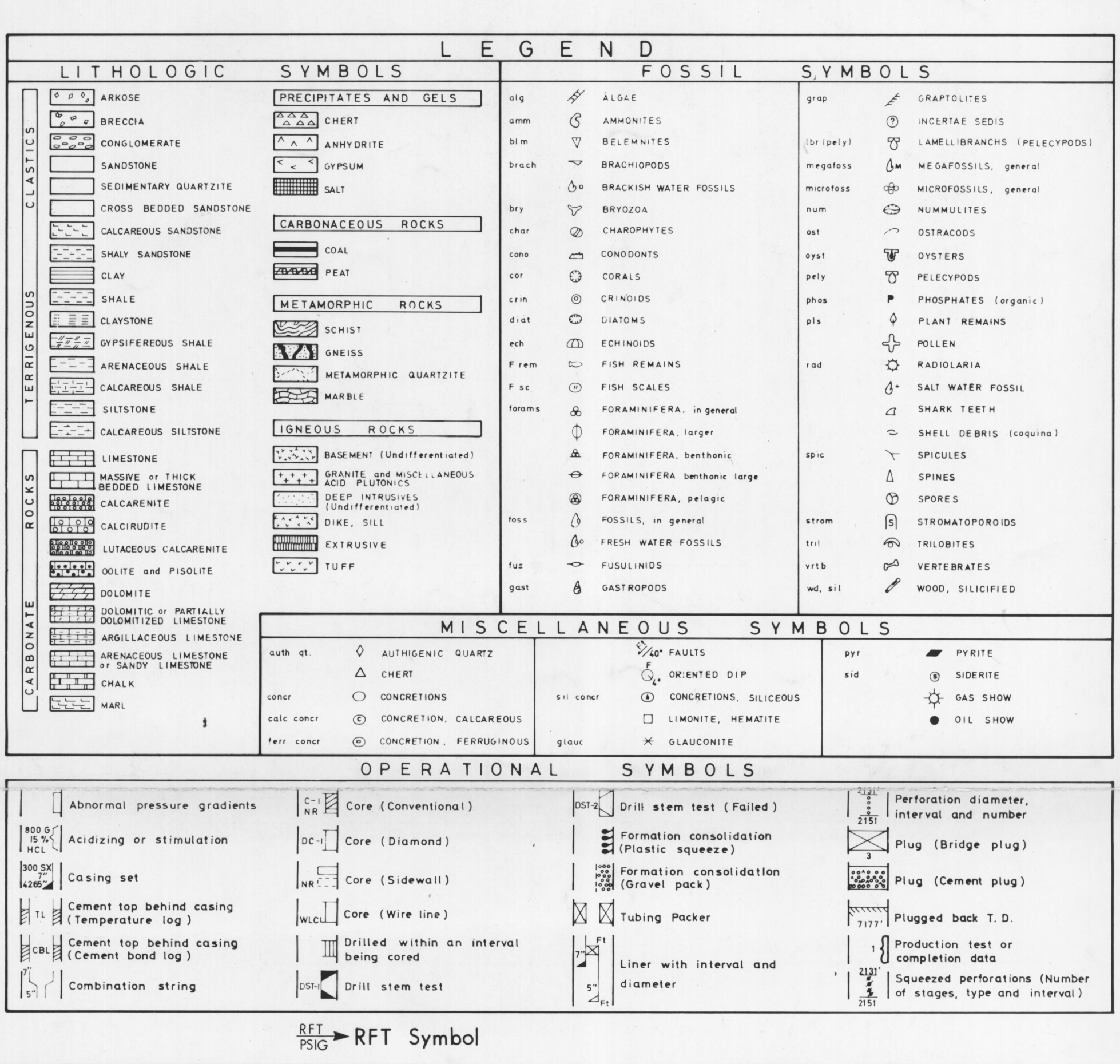
COORDINATES: 42° 08' 09.646" S 145° 01' 45.84" E		COUNTRY: AUSTRALIA	PERMIT: EXPLORATION PERMIT T-12-P
ELEVATION: RKB - MSL 73'; RKB - MUDLINE 381'	WATER DEPTH: 308'	SPUD DATE: 5 JULY 1982	COMPLETION DATE: 3 SEPTEMBER 1982
TOTAL DAYS: 60 DAYS, 9½ HRS	TOTAL DEPTH: 11,576'	PLUG BACK TOTAL DEPTH: 380'	CASING: 30" at 693'; 20" at 1393'; 13 3/8" at 4144'; 9 5/8" at 9002'
RIG NAME: EPOCH	RIG TYPE: SEMISUBMERSIBLE	OWNED BY: DIAMOND M	CLASSIFICATION WHEN STARTED: EXPLORATORY WILDCAT
CLASSIFICATION AFTER COMPLETED: DRY HOLE		METHOD OF COMPLETION: PLUGGED AND ABANDONED	
GEOLOGIST(S): W.F. BARRETT, W.L. WEIBEL	PALEONTOLOGIST: ROBERTSON RESEACH SINGAPORE PTE. LTD. AMOCO PRODUCTION COMPANY RESEARCH CENTER, TULSA	SCALE: 1:500	DRAFTSMAN:

LOGGING DATA

SUITE NO.	TYPE	DATES	SCALES 1:500	SCALES 1:200	FIRST READING	LAST READING
	SCHLUMBERGER LOGS AND SERVICES					
1	DIS-BHC-GR	7-8-'82	X	X	300'	1440'
1	FDC-CNL-GR	7-8-'82	X	X	693'	1437'
1	HDT	7-8-'82		X	693'	1437'
2	DIS-BHC-CAL-GR-SP	7-22-'82	X	X	1392'	4146'
2	HDT	7-22-'82		X	1392'	4146'
3	DIL-BHC-GR	8-10-'82	X	X	4140'	9025'
3	DLL-MSFL-GR	8-11-'82	X	X	4140'	9010'
3	LDL-CNL-GR	8-11-'82	X	X	4140'	9022'
3	HDT	8-11-'82		X	4140'	9025'
4	DIL-SLS-GR	9-3-'82	X	X	8998'	11556'
4	LDL-CNL-GR	9-4-'82	X	X	8998'	11558'
4	HDT	9-4-'82	X	X	8998'	11558'
4	RFT	9-4-'82			8898'	11556'
4	CST	9-5-'82	RECOVERED 44 OF 51 ATTEMPTS			
4	VELOCITY SURVEY	9-5-'82	24 CHECK SHOT LEVELS			
	GEOSERVICES OVERSEAS S.A.					
	CONTINUOUS MUD LOGGING & PRESSURE ENGINEERING		X		SPUD	11576



CAPE SORELL 1
EXPLORATORY WELL
EXPLORATION PERMIT T-12-P
OFFSHORE
WESTERN TASMANIA



AGE
FORMATION
ENVIRONMENT
GAMMA RAY API UNITS 0.0 150.0
SPONTANEOUS POTENTIAL MILLIVOLTS -80.0 20.0
R.O.P. (FEET/HOUR)
500 400 300 200 100 0
CASING PLUGS PACKER PERFS DEVIAT
TESTS CORES
SHOWS POOR FAIR GOOD
DIP METER
GRAPHIC LITHOLOGY & DEPTH IN FEET RKB
RESISTIVITY OHMS-M DEEP INDUCTION RILD 0.2 2,000
MICRO SPHERICALLY FOCUSED RESISTIVITY RMSFL
MEDIUM INDUCTION RILM
INTERVAL TRANSIT TIME ΔT MICRO SECONDS PER FOOT 140.0 40.0
Sea Level
Plug No. 2
GR
SP
693' 30" Casing Shoe
1393' 20" Casing Shoe
13 3/8
Early Eocene
Middle Sublittoral
Middle Paleocene
Shallow Marine

LITHOLOGICAL DESCRIPTION PALEONTOLOGY AND REMARKS

CAPE SORELL NO. 1
TASMANIA

309 to 690 ft.
100% LIMESTONE sampled from bit and H.O. Grey/White mega; creamy white micro; very hard very brittle. Reworked and recemented, no apparent porosity, no cut. Abundant crinoids, shell fragments and micro fossils with abundant pyritised limestone, highly calcitic.

720 to 930 ft.
REEF LIMESTONE (60-90%): Crmy wht, highly calcitic, mod hd; dom coral stems w-minor shell frags and forams. ARGILLACEOUS LIMESTONE (10-40%): Med gry w/ wht mottling; mod calcitic; v hd - v brtle ang frac v fine xln.

930 to 1137 ft.
REEF LIMESTONE (20-60%): Continued. ARGILLACEOUS LIMESTONE (30-50%): Med gry cont'd w/ appearance v dk gry-grn to med lt grn dom pelletoid glauc tr micro-pyrite and pyritized fossils. ARGILLACEOUS LIMESTONE(30-70%) - begin at 990'; med lt brn v hd, v brtl; med to highly argillaceous variably abund dk to lt grn glauc tr to occas abund micro-pyrite.

1169 to 1230 ft.
SANDSTONE (10-20%): Fn, mod to well sorted, dom clr w/ minor frosted, sub ang, dom qtz; mod micaceous tr dk grn glauc; sample grains only w/ frags absent. LIMESTONE (80-90%): Cont'd. dom crmy-wht reef ls extremely porous, minor red-brn mod to highly argillaceous ls and gry-wht, micro-xln, glauconitic and pyritic ls.

1230 to 1260 ft.
SANDSTONE (100%): Fn, mod to well sorted, dom clr w/ minor frsted dom sub-rnd w/ minor sub-ang, dom qtz; highly micaceous w/ tr micro-pyrite; frags absent. (very abund ls slough).

1260 to 1380 ft.
SANDSTONE (30-70%): Fn, cont'd. SILTSTONE (30-70%): Red-brn; v soft, highly soluble; micro-mica tr pyritic and glauconitic, tr calc.

1380 to 1440 ft.
SANDSTONE (100%): Fn cont'd. (Abund ls, sd and siltstn slough).

1440 to 1560 ft.
SAND (100%): Fn-med, poor sort, ang dom w/ minor sub-rnd and tr rnd, dom clr w/ minor frsted and tr-abund wht, abund muscovite, tr wht kaol, tr micro-pyrite aggregates, 100% as unconsol. drlg resid, cut absent. MUDSTONE (Tr): Dk red-brn, mod soft, highly sol, sdy and silty, tr dk grn glauc, no cut.

1560 to 1800 ft.
SAND (50-80%): Vfn-fn, ang-sub-ang, clr-frsted, 10%-30% pyrite esp. at 1680-1710', no cut. MUDSTONE (10-30%): Dk red-brn, med soft, highly sol, vfn sdy-silty, tr dk grn glauc, no cut. DOLOMITE (Tr-20%): Med brn, mod mottled w/ lt brns, micritic, v hd, v brtl, no crush cut. LIMESTONE (Tr-50% 50% at 1770-1800'): Dk red-brn, v hd, v brtl, variably vfn sdy and silty, micritic, highly calcitic, v abund dissem pyrite.

1800 to 2067 ft.
SAND (100%): Vfn-fn w/ minor med, dom poor sort, sub-ang to sub-rnd, clr-frsted dom qtz, tr-abund micro-pyrite aggregates, no cut.

2067 to 2100 ft.
SAND (100%): Fn-med, sub-ang w/ minor ang and sub-rnd, dom clr w/ minor frsted qtz, 100% as unconsolidated drlg resid, cut absent.

2100 to 2130 ft.
TUFF (10-50%): Wet, med dk gry-brn w/ abund disseminated blk and dk red-brn mafic (?) rk frags, dry wht w/ vitreous ("glassy") mafic lustre, mod firm, highly frl, tr calc, v abund gry-striated slickensided wht cly flakes from apparent bit tooth action, cut absent. SAND (50-60%): Fn-cse, poor sort, fn-med, ang to sub-ang, dom clr qtz w/ tr vitreous sanidine, cse, dom rnd w/ minor sub-rnd and tr ang, cut absent.

2130 to 2250 ft.
SAND (100%): Fn-med w/ minor cse, ang to sub-rnd, dom sub-ang, dom clr qtz, cut absent. MUDSTONE (Tr): Dk red-brn, v soft, sol, non-calc.

2250 to 2550 ft.
MUDSTONE (20-90%): Med brn to brnsh-blk, v soft, highly sol, variably fn to super fine sd to silty, tr to highly micro-micaceous, tr micro-pyritic, non-calc. LIMESTONE (Tr-10%): Med brn, micro-xln, tr dolo. SAND (10-80%): Fn-cse, ang-rnd, clr-frst qtz.

2550 to 2700 ft.
MUDSTONE (70-90%): Vdk brn, v soft, sol, v silty to vfn sdy, non-calc, abund micro-fos, tr pyrite. SAND (10-30%): Vfn-fn, mod well-sort, ang-rnd, clr-frst, tr lt-med gry, 100% drlg resid, cut absent.

2700 to 2940 ft.
SAND (60-100%): Fn-med, ang to sub-ang, clr-frsted dom qtz, abund vit sanidine and vein qtz. MUDSTONE (Tr-40%): Vdk brn to med brn, v soft and sol, v silty and sdy, abund micro-fossils, non-calc.

2940 to 3090 ft.
SAND (50-90%): Fn-cse, mod poor sort, clr to frst, dom sub-ang qtz, 100% drlg resid, cut absent. MUDSTONE (10-70%): Vdk brn w/ minor med brn, v soft and sol, v silty and vfn sdy, non-calc, cut absent.

3090 to 3210 ft.
SILTSTONE (30-90%): Vdk brn to mod brn w/ minor brnsh-blk, med soft and sol, v clyey, abund sub-fis w/ tr fis as v slty SHALE, no cut. SAND (10-70%): Fn-med, fairly well-sort, ang to sub-ang, clr to frsted dom qtz, 100% drly resid.

3210 to 3300 ft.
SAND (60-100%): Fn-med, dom sub-ang, clr-frst. MUDSTONE (Tr-40%): Vdk brn to med brn, soft, non-calc.

3300 to 3380 ft.
SAND (40-60%): Fn-med w/ minor cse, mod sort, clr. SILTSTONE (10-40%): V dk brn to med brn, soft, non-calc.

3380 to 3953 ft.
SAND (70-100%): Fn-med, variably abund cse, ang to sub-ang w/ variably abund sub-rnd to rnd cse, clr to frsted w/ very minor lt-med gry dom qtz w/ tr vitreous sanidine and vein qtz, mod well-sort, 100% drlg resid, cut absent.

3953 to 4028 ft.
MUDSTONE (90-100%): Vdk brn, brnsh-blk to blk, mod soft to mod hd, highly soluble to mod soluble, tr sub-fis, non-calc, tr micro-pyritic, cut absent. SAND (Tr-10%): Fn-med, ang to sub-ang, dom clr-frsted, dom cut absent.

4028 to 4112 ft.
SAND (70-100%: Fn-med, very well-sorted, ang-to sub-rnd, clr-frsted w/ tr whd, dom clr, "Clean" sd grains, 100% as drlg. resid, cut absent.

4112 to 4158 ft.
MUDSTONE (70%): Lt brn, med brn to v dk brn, mod hd, variably sub-fis and silty, non-calc, tr micro-pyrite, crush cut absent. SHALE (30%): Vdk brn-med dk brn, sub-fis to hi fis, tr pyrite, non-calc, abund curvilinear.

4158 to 4170 ft.
SHALE (100%): Med dk brn - v dk gry, sl hd-mod hd, subfiss-mod fiss, occ non fiss, variably sdy and slty, tr-comm pyrite, blky, non-calc, crush cut abs.

4170 to 4275 ft.
SANDSTONE (70-80%): Clr-wht, fn-v crse, poorly srtd- mod srtd, subanglr-rdd, dom qtz, common - abund glauc, comm-abund pyrite frags ranging from 1-2 mm in size, tr shell frags, calcite cement, no crush cut. SHALE (20-30%): Med brn - v dk gry, sl-mod hd, cl sdy and slty, subfiss med fiss, non-calc, no crush cut. SILTSTONE (Tr-10%): Med lt brn, sl sdy, clayey - v clayey, mod hd-v hd, comm abund glauc, calcite cement.

4275 to 4390 ft.
SANDSTONE (80-90%): Clr-wht, fn-v crse, poorly-mod srtd, subanglr-rdd, dom qtz, comm-abund glauc, tr-common pryite frags, calcite cement, no crush cut. SHALE (10%): Med dk brn-v dk gry, mod hd, blky, platy, subfiss-fiss, sl sdy and slty, non-calc. SILTSTONE (Tr-10%): Med lt brn, sdy, clayey-v clayey, tr-common glauc, calcite cement, no crush cut.

4390 to 4410 ft.
SHALE (80-90%): Med dk brn-v dk gry, variably sandy and silty, mod hd, blk, platy, non-clac. SANDSTONE (10-20%): Clr-brnsh yell, fn-v crse, poorly srtd, tr comm glauc, dom qtz, tr pryite frags, no crush cut.

4410 to 4590 ft.
SANDSTONE (40-80%): Clr-wht and lt brnsh yell, vfn-v crse, sub-anglr-subrdd, v poor to mod srtd, tr glauc, tr-common pyrite frags ranging from 1-2 mm in size, prrite encapsulates med sd gns, calcite cement, occ lithic frags, no crush cut. SHALE (10-50%): Med dk brn-med dk gy, var sdy and silty, subfiss, occ non-fiss, mod hd, sl calc-calc. SILTSTONE (Tr-10%): Med dk gy, sdy, clyy, v prly srtd, calc.

4590 to 4720 ft.
MUDSTN/SHALE (50-90%): Med lt brn-med dk brn, v sft - mod hd, occ silty, insoluble. SANDSTONE (10-30%): Fn-crse, clr, dom qtz, poorly srtd, subanglr-subrdd, no glauc, tr pyrite frags, calcite cement, occ lithic frags, no crush cut. SILTSTONE (20-40%): Med-lt dk brn, argillaceous, tuffaceous (?), sl sdy, occ calc, no crush cut.

4720 to 4830 ft.
SAND (60-70%): Fn-v crse, occ pebbly, clr, v poor-mod srtd, sl-v argill, subanglr - rdd, occ lithic frags including tr-comm pyrite, tr malachite (?) ls, 20% of sampling is SANDSTONE, clr, fn-med, clacite cemented, SANDSTONE decreasing with depth, tr wood frags, 80% as drlg resdl. MUDSTONE (30-40%): Med dk gry, soluble, silty, occ subfiss, non-sticky v sft-sl hd. SILTSTONE (Tr-10%): Med dk gry-dk brn, variably sdy and clayey, mod sft-mod hd, sl calc.

4830 to 5005 ft.
SAND (50-70%): Clr, fn-v crse, occ pebbly, calc, poorly-mod srtd, subanglr-rdd, tr pyrite frags, tr intact forams, 100% as drlg resdl. MUDSTONE (10-30%): Med dk gry-med dk brn, mod sft, silty, occ subfiss, calc, sl hd, occ non-calc. SILTSTONE (10-30%): Med brn-dk med brn, ccc sdy, mod hd, sl calc.

5005 to 5290 ft.
SAND (30-70%): Clr-wht, v fn-crse, subanglr-subrdd, v poorly-poorly srtd, occ mod srtd, comm silty, clayey, tr pyrite frags, chlorite, glauc, occ lithic frags, 100% as drlg resdl. MUDSTONE (30-50%): Med grysh brn-v dk brn, mod sft-mod frm, sl. soluble, var sdy and slty, non-calc, occ subfissile. SANDSTONE (0-20%): Med lt gry-clr, fn-med, mod srtd, sub-anglr-subrdd, tr glauc, tightly cemented with calcite, sl argil. SILTSTONE (0-20%): Med lt brn, v argil, sdy, calc, v hd.

5290 to 5330 ft.
MUDSTN/CLAY (80-100%): Med brnsh gry, sl slty, sticky, v soft-mod sft, smooth, insoluble, ptly identified by distinct change in corrected drlg expment. SILTSTONE (0-10%): Med lt brn-med brn, mod hd, v argillaceous, sandy, non-calc. SAND (Tr-10%): Clr, white, and dk gray, (lithics), fn-v crse, poorly srtd, subanglr-subrdd, tr pyrite frags, 100% as drlg resdl.

5330 to 5370 ft.
MUDSTONE (50-70%): Med brnsh gry-med dk gry, sl slty, sticky and becoming less sticky w/ depth, mod sft, non-calc and becoming calc with depth. SAND (10-30%): Clr and med lt gry, occ med dk gry, tr brnsh yell, v fn-v crse, poorly srtd, anglr-rdd, occ lithic frags, occ pyrite frags, 100% as drlg resdl. SANDSTONE (Tr-10%): Med brnsh gry-med gry, fn-med, mod srtd, subanglr-subrdd, argil, tr mafic minerals, calcite-cemented.

5370 to 5590 ft.
SANDSTONE (40-90%): V lt med gry-med lt brnsh gry, v fn-med, occ crse, v anglr-subanglr, occ subrdd, argil, sl slty, poorly-mod srtd, dom qtz, tr pryite-cemented SANDSTONE frags within framework grains, occ lithic frags, tightly calcite-cemented. SAND (Tr-60%): Clr-wht, occ med gry, v fn-v crse, v poorly std, sub-anglr-subrdd, tr-v comm pyrite frags, both as massive xtlne and cementing med-grnd SANDSTONE frags, 100% as drlg resdl. MUDSTONE (Tr-10%): Lt-dk gry, slty, mod sft, occ frm, calc.

5590 to 5730 ft.
SAND (40-70%): Clr-wht, fn-v crse, poorly srtd, subanglr-subrdd, tr lithic frags, mica comm. pyrite frags, 100% as drlg resdl. SANDSTONE (20-30%): Med gry, v fn-crse anglr, argil, poorly srtd, dom qtz, calcite-cmtd. MUDSTONE (Tr-60%): Lt grysh brn, sft, sl slty, soluble, sl pyritic, non-calc.

5730 to 5870 ft.
SANDSTONE (70-90%): Lt to dk med gry, fn-crse, mod srtd, occ prly srtd, argl, slty, subanglr-subrdd, tr lithic frags, comm. pyrite frags, rare K-feldspar, calcite cemented, no visual porosity, cut absent. MUDSTONE (10-30%): Med lt gry-med gry, slty, v sft, soluble, non-calc.

5870 to 5970 ft.
SANDSTONE (90-100%): Med gry-lt dk gry, fn-crse, prly-mod srtd, argl, tr lithic frags, comm pyrite frags, calcite-cemented, cut absent. MUDSTONE (Tr-10%): Lt med gry, v sft, non-calc, slty, occ sdy.

5970 to 6130 ft.
SANDSTONE (70-100%): Lt grysh brn-med brnsh gry, fn-crse, prly-mod srtd, argl. - v argl, tr lithic frags, tr pyrite frags, subanglr-subrdd, calcite-cemented, cut absent, no visual porosity. MUDSTONE (Tr-30%): Med gry - med brnsh gry, var sdy and slty, occ v sdy and v slty, mod soft, sl calc.

6130 to 6210 ft.
MUDSTONE (50%): V slty, v sdy, mod dk grysh brn,