

HORIZON

WELL LOGGING

711 St. Andrews Way
Lompoc, California 93436
(805) 733-0972

COMPANY Taylor Operating Co. LLC
WELL CC 13-3-55
LOCATION XXX'E & XXX'S f/XX corner
Sec. 3, T5N, R5W, W.B.6M.

ELEVATION GL XXX' KB XXXX'
FIELD Mist
COUNTY Columbia, Oregon
SPUD DATE May 12, 2004
LOGGING DATES May 12 to May 16, 2004
OPERATOR Taylor Operating Co. LLC
GEOLOGIST Anders Elgerd
DRILL REP. Ed Vadder
CONTRACTOR Taylor Drilling Inc.
RIG #7
MUD COMPANY Beaver Drilling Fluids
MUD TYPE Gel Water
LOGGING GEOLOGIST Jim Eastes

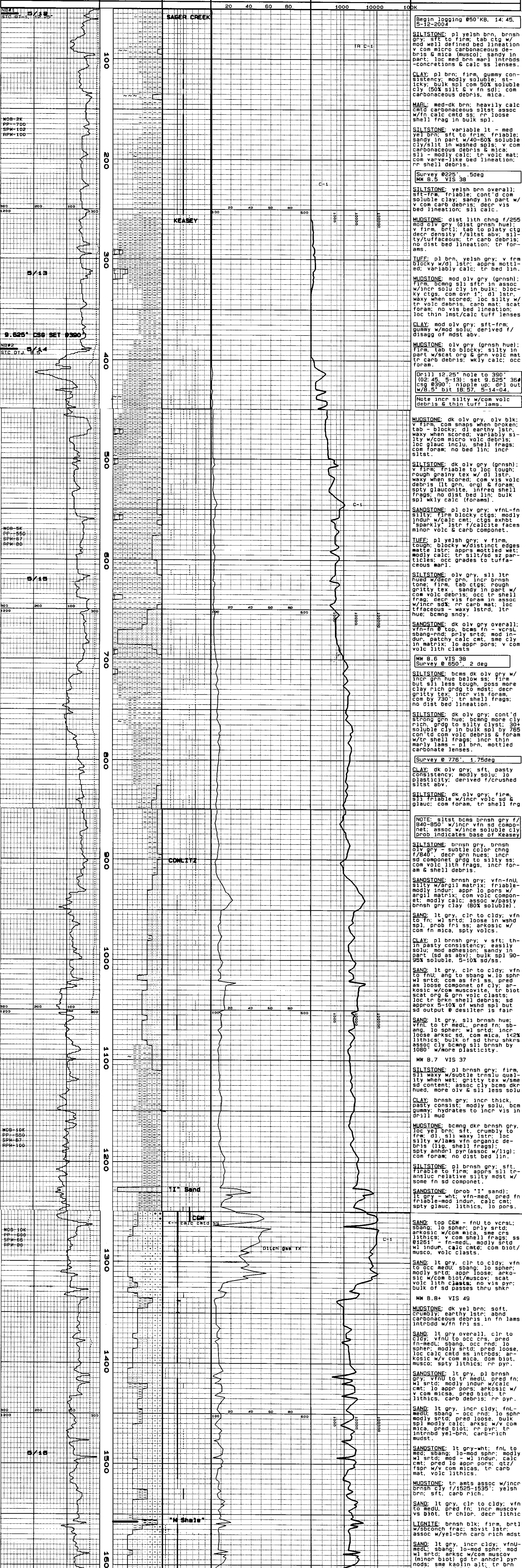
BIT SIZE 12.25 in. to 390'
8.50 in. to 1617'

CASING: 15.00 in. to 40'
9.625 in. to 390'

CALIBRATION: 2% METHANE + 100 UNITS

ABBREVIATIONS		SYMBOLS	
CO	Circulate Out	PEBBLES >2mm	
LAT	Logged After Trip	SAND	
CG	Connection Gas	SANDSTONE	
WG	Wiper Gas	MUDSTONE	
TG	Trip Gas	SHALE	
SG	Survey Gas	MARL	
NR	No Returns	CLAY	
NB	New Bit	LIGNITE	
WR	Wiper Run	DOLSTONE	
CORE INTERVAL		LIMESTONE	
MOB	(100,000# full scale)	VOLCANICS	
PP	Pump pressure	TUFF	
SPM	Strokes per minute	BASALT	

DRILL RATE	LITH	MINERAL	GASES	CHROMATOGRAPH	REMARKS
ROP 300 100K		SHALE LIGNITE MUDSTONE SANDSTONE TUFF	DITCH GAS OFFSCALE CUTTINGS GAS OFFSCALE	METHANE ETHANE PROPANE BUTANE PENTANE	DESCRIPTIONS SURVEYS MUD CHECKS MISCELLANEOUS



MOB-2K
PP=700
SPM=102
RPM=100

MOB-5K
PP=550
SPM=67
RPM=80

MOB-10K
PP=550
SPM=67
RPM=100

MOB-10K
PP=550
SPM=67
RPM=80

MOB-10K
PP=550
SPM=67
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MOB-10K
PP=550
SPM=67
RPM=80

Begin logging @50'KB, 14:45, 5-12-2004

SILTSTONE: pl yelsh brn, brnsh gry; sft to firm; tab ctg w/ mod shell defined bed lineation v com micro carbonaceous debris & mica (musco); sandy in part; loc med brn marl intrbds - concretions & calc ss lenses.

CLAY: pl brn; firm, gummy consistency; modly soluble; sticky; bulk spl com 50% soluble cly; 50% silt & vfn sdt; com carbonaceous debris, mica.

MARL: med-dk brn; heavily calc cmt'd carbonaceous siltst assoc w/loc calc cmt; loose shell frag in bulk spl.

SILTSTONE: variable lt - med yel brn; sft to firm; fr: friable; sandy in part w/40-60% soluble cly/silt in washed spis; v com carbonaceous debris & mica; silt; modly calc; tr volc mat; com varve-like bed lineation; nr shell debris.

Survey @225' - 5deg
MW 8.5 VIS 38

SILTSTONE: yelsh brn overall; sft-frn, friable; cont'd com soluble clay; sandy in part w/ v com carb debris; decr vis bed lineation; silt calc.

MUDSTONE: dist lith chng h/255 mod oliv gry; (dist chng h/255 v firm, brtl; tab to platy ctg decr density f/siltst abv; siltst/tuffaceous; tr carb debris; no dist bed lineation; tr forams.

TUFF: pl brn, yelsh gry; v frm blocky w/ silt; apprs mottled; ed; variably calc; tr bed lin.

MUDSTONE: mod oliv gry (grnsh); firm, bcmg silt sft in assoc w/incr solub cly in bulk; blocky ctgs, com ovr 1'; dl lstr, waxy when scored; loc silty w/ tr volc debris, carb mat; seat foram; no vis bed lineation; loc thin lstr/calc tuff lenses

CLAY: mod oliv gry; sft-frn; gummy w/mod solu; derived f/ disagg of mdst abv.

MUDSTONE: oliv gry (grnsh hue); firm, tab to blocky; silty in part w/sat org & grn volc mat to carb debris; wkly calc; occ foram.

Drill 12.25" hole to 390' (02:45 - 5-13); set 9.625" 36# C/S 8390'; nipple up; drl out w/8.5" bit 18:57, 5-14-04.

Note incr silty w/com volc debris & thin tuff lams.

MUDSTONE: dk oliv gry, olv blk; v firm, com snaps when broken; tab - blocky; dl earthy lstr, waxy when scored; variably silty w/com micro volc debris; loc glauc; loc shell frags; com foram; no bed lin; incr siltst.

SILTSTONE: dk oliv gry (grnsh); v firm, friable to loc tough; rough grainy tex w/ dl lstr, waxy when scored; com vis volc debris (lt grn, org) & foram; spty glauconite, -frags; silt frags; no dist bed lin; bulk spl wkly calc (forams).

SANDSTONE: pl oliv gry; vfn-fn silty; firm blocky ctgs; modly indur w/calc cmt; ctgs exhibit "sparkly" lstr f/calcite faces minor volc & carb componet.

TUFF: pl yelsh gry; v firm, tough; blocky w/distinct edges matte lstr; apprs mottled wet; modly calc; bulk of sd thru shkr; spty glauc; occ grades to tuffaceous marl.

SILTSTONE: oliv gry, silt ltr hue w/decr grn, incr brnsh tone; firm, tab ctgs; rough gritty tex, sandy in part w/ com volc debris; occ tr shell frags; decr in vis foram w/incr sd%; nr carb mat; loc tuffaceous - waxy lstr, ltr hue; bcmg snyd.

SANDSTONE: dk oliv gry overall; vfn-fn @ top, bcms fn - vcrsl; sbang-rnd; prly srt'd; mod indur; spty glauc; calc cmt; silt cly in matrix; lo appr pors; v com volc lith clasts

MW 8.6 VIS 38
Survey @ 650', 2 deg

SILTSTONE: bcms dk oliv gry w/ incr grn hue below ss; firm but silt less tough; poss med clay rich grg to must; decr gritty tex; incr vis foram; com by 730'; tr shell frags; no dist bed lineation.

SILTSTONE: dk oliv gry; cont'd strong grn hue; bcmg more cly rich, grg to silty clyst; 30+ soluble cly in bulk spl by 765 con't'd com volc debris & foram w/tr shell frags; incr thin marly lams - pl brn, mottled carbonate lenses.

Survey @ 776', 1.75deg

CLAY: dk oliv gry; sft, pasty consistency; modly solu; lo plasticity; derived f/crushed siltst abv.

SILTSTONE: dk oliv gry; firm, silt friable w/incr volc sd & glauc; com foram, tr shell frg

NOTE: siltst bcms brnsh gry f/ 840-850' w/incr vfn sd componet; assoc w/intr soluble cly prob indicates base of Keasey

SILTSTONE: brnsh gry, brnsh oliv gry - subtle color chng f/840', decr grn hues; incr sd componet; grg to silty ss; com volc lith frags; incr foram & shell debris.

SANDSTONE: brnsh gry; vfn-fnu, sily w/argil matrix; friable; modly indur; appr lo pors w/ argil matrix; com volc componet; modly calc; assoc w/pasty brnsh gry clay (80% soluble).

SAND: lt gry, clr to cld; vfn to fn; wl srt'd; loose in wshd spl; prob fri ss; arkosic w/ com fn mica, spty volcs.

CLAY: pl brnsh gry; v sft; th-in pasty consistency; easily solu; mod adhesion; sandy in part (sd as abv); bulk spl 90-95% soluble, 5-10% sd/ss.

SAND: lt gry, clr to cld; vfn to fnu; any to sbang w/lo sphr wl srt'd; com as fri ss, pred as loose componet of cly; arkosic w/com muscovite, tr biot scat org & grn volc clasts; loc tr brnsh shell debris; sd approx 5-10% of wshd spl but sd output @ desilter is fair

SAND: lt gry, silt brnsh hue; vfn to tr medl, pred fn; sb-ang, lo sphr; wl srt'd; incr loose arkosic sd, com mica, <2% lithics; bulk of sd thru shkr; assoc cly bcmg silt brnsh by 1080' w/more plasticity.

MW 8.7 VIS 37

SILTSTONE: pl brnsh gry; firm, silt waxy w/subtle translu quality when wet; gritty tex w/sme sd content; assoc cly; bcms dk nued, more olv & silt less solu

CLAY: brnsh gry; incr thick, pasty consist; modly solu, bcm gammy; hydrates to incr vis in drill mud

MUDSTONE: bcmg dkr brnsh gry, loc yel brn; sft; crumbly to frm; dl; silt; waxy lstr; loc silty w/lams vfn organic debris (lig, shell frags); spty anhdrl pyr (assoc w/lig); com foram; no dist bed lin.

SILTSTONE: pl brnsh gry; sft, friable to firm; apprs silt w-angly relative silty mdst w/ some fn sd componet.

SANDSTONE: (prob "I" sand); lt gry; wht; vfn-med, pred. fn friable-mod indur, calc cmt; spty glauc, lithics, lo pors.

SAND: top C&W - fnu to vcrsl; siltst; loc srt'd; arkosic w/com mica, medly lithics; v com shell frags; ss @1261' - vfn-med, modly srt'd; w/indur; calc cmt; com biot/ musco, volc clasts.

SAND: lt gry, clr to cld; vfn to occ medu; sbang; lo sphr; modly srt'd; pred loose, bulk spl modly calc; arksc w/v com mica; pred biot; nr pyr; tr intrbnd yel-brn, carb-rich mudst.

SANDSTONE: lt gry-wht; fnu to med; sbang; lo-mod sphr; modly wl srt'd; mod-l wl indur, calc cmt; pred lo appr pors; qtz/ fspw w/v com micas, tr carb mat, volc lithics.

MUDSTONE: tr amts assoc w/incr brnsh cly f/1525-1535'; yelsh brn; sft, carb rich.

SAND: lt gry, clr to cld; vfn to medu, pred fn; incr muscov vs biot, tr chlor, decr lithic

LIGNITE: brnsh blk; firm, brtl w/sbconch frac; sbvit lstr; assoc w/yel-brn carb rich mdst

SAND: lt gry, incr cld; vfn-med; sbang; lo-mod sphr; mod wl srt'd; arksc w/com muscov (minor biot) gd tr anhdrl pyr nod; sme kap in ltr, tr mn nod; ried mdst in bulk, poss slough f/"N" marker.

TO @ 1617'KB, 02:53, 5-16-04