SIMON PETROLEUM TECHNOLOGY WELL: 6407/6-3

Print: 5447 L	Units: [✓ M] F	Top	Bottom	Scale	TD
Length: 26 FT	Initials: MC	400	3220	1/500	3220

DIGITAL WIRELINE LOGS PACKAGE
1993
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SIMON PETROLEUM TECHNOLOGY SPT

COMPLETION LOG

B10 - C08

statoil PARTNERS **MOBIL/BRITOIL**

6407/6-3 WELL

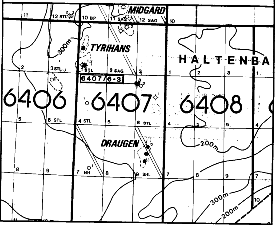
Beta PROSPECT STRUCTURE

[illegible] AUG. 1987

COMPLETION LOG
Scale 1:500

AREA:	**HALTENBANKEN**
LICENCE:	**PL 092**
COORDINATES:	**64° 42' 31,77" N** **07° 40' 09,84" E**
K.B.:	**29m**
WATER DEPTH:	**222m**
TOTAL DEPTH:	**3220m**
DEEPEST FORM. PEN.:	**HITRA FM.**
SPUD DATE:	**13/12-86**
RIG RELEASE DATE:	**17/02-87**
WELL STATUS:	**GAS/CONDENS. DISC.**
RIG:	**DYVI DELTA**
CONTRACTOR:	**DYVI OFFSHORE**
GEOLOGISTS:	T.W.SNÅRE, D.ALM, S.BJERKNES, O.HUNNES, T.SVÅNÅ, T.DODSON
PREPARED BY:	K.RUUD, T.W.SNÅRE
DATE:	29/07 87

LOCATION MAP



CASING DATA:		LEAK OFF TESTS:
30" at	324m	
20" at	430m	1.55 S.G
16" at		
13 3/8" at	1391m	1.95 S.G
9 5/8" at	2460m	1.98 S.G
7" at	3083m	1.89 S.G

VELOCITY SURVEY: **SCHLUMBERGER**

CHECK SHOT LEVELS:

FROM 3215m AND APPROX. EVERY 15m TO 1265m THEN AT 1200m AND TO 400m EVERY 100m
A TOTAL OF 136 LEVELS SHOT

LOGS RUN

CONTRACTOR: **DRESSER ATLAS**

DIFL LSBHC GR	CDL D CNL GR SPECTRALOG	DLL MLL GR	DIPLOG	CST	FMT	CBL GR
1A :1209-430m (GR TO SEABED) 2B:2463-1392m 3C:2455-3090m 4D:3078-3218m	3A:2455-3090m 4B:3078-3218m	3A:2455-3090m	3A:2455-3090m	1A :519-501m Recovered 36 Cores Lost 1 Bullet Mis-fires 13 Shots	3A:2455-3018m 3B:2455 2505m TL 1A: 200-900	4A: 1100-2303

COMMENTS:

1. Final location was 6m 023° from prognosed location
2. Shallow gas: Slightly increased resistivities in sandy beds 508-512m. Backgroundgas readings 0,1-0.2%, maximum 0,56% at 679m. No clear indications of sandbeds with shallow gas.
3. Cores are displayed on log in accordance to log respons. Core depth are 1 to 3m low compared to loggers depth
4. MWD-log used in interval 1210m -1395m because

no electric logs performed in that interval.

LITHOLOGICAL SYMBOLS

CONGLOMERATE
SHALE
MARL
COAL LIGNITE
FORAMS
MICA

SAND SANDSTONE
LIMESTONE
TUFF
WOOD FRAGS
BURROWS
KAOLINITE

SILT SILTSTONE
CHALK
SALT GEN'L
FOSSILS GEN'L
PYRITE
CHERT

CLAY CLAYSTONE
DOLOMITE
ANHYDRITE
SHELL FRAGS
GLAUCONITE
SIDERITE

STAIN
FLUORESCENCE
CUT FLUOR
GAS SHOWS

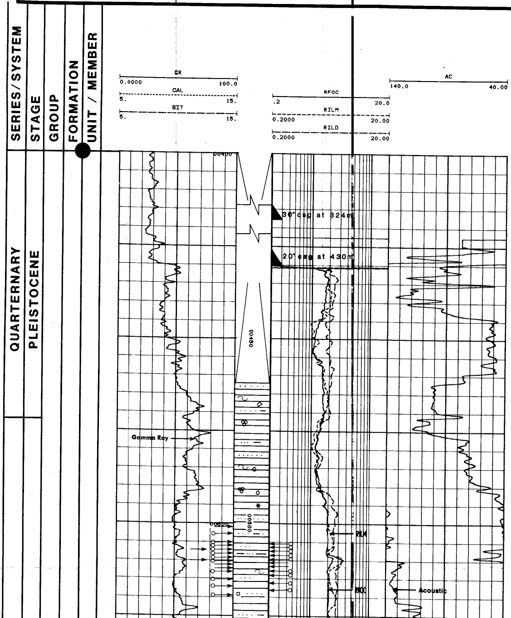
SIDEWALL CORES
- REC.
- REC. W/SHOW
- NO REC

CORES
CORE NO.

DST

RFT/FMT
UNSUCCESSFUL

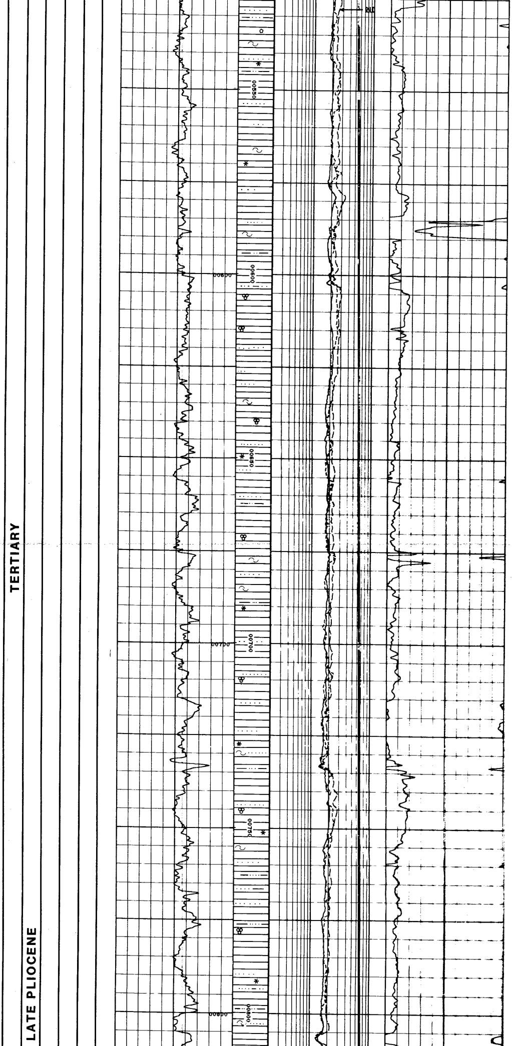
CASING SHOE/LINER



SD: clr-mlky wh qtz, fn-crs,ang-subrnd,lse

CLY: dk gn gry,slty-sdy, pred v fn-fn qtz and rck frgs,mic, blk spks,sft,hydr,amor,sl stcky,sl, occ mod, calc

RCK FRGS:varicol,fn-v crs,ign,meta fspr

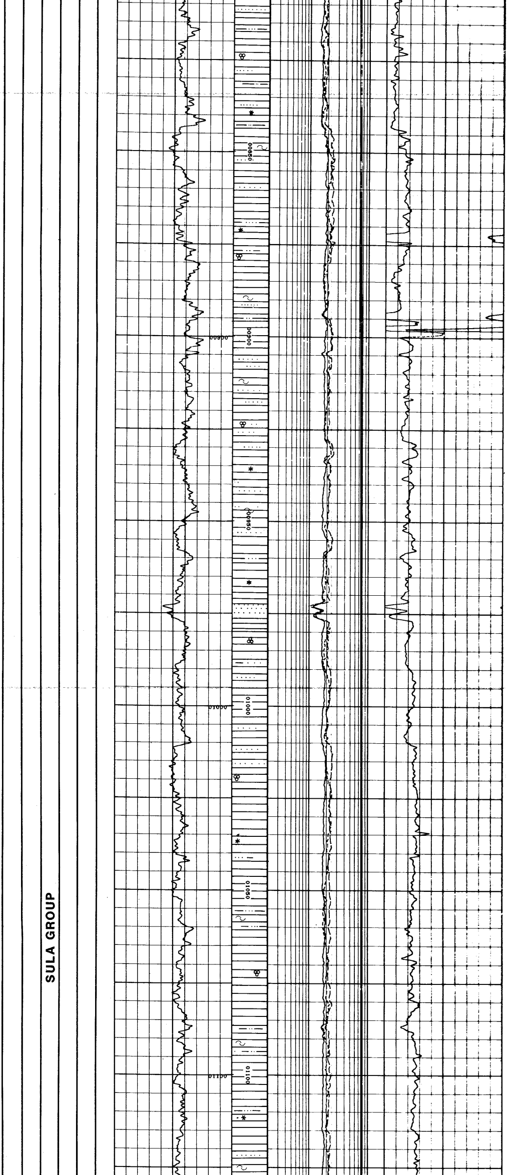


CLY: v slty/sdy,else A/A
SD: clr-mlky wh-smky qtz, vfn-vcrs,pr srtd,ang-rnd,lse
glau,rck frgs,shl frgs

CLY: A/A
SD: A/A
A/A

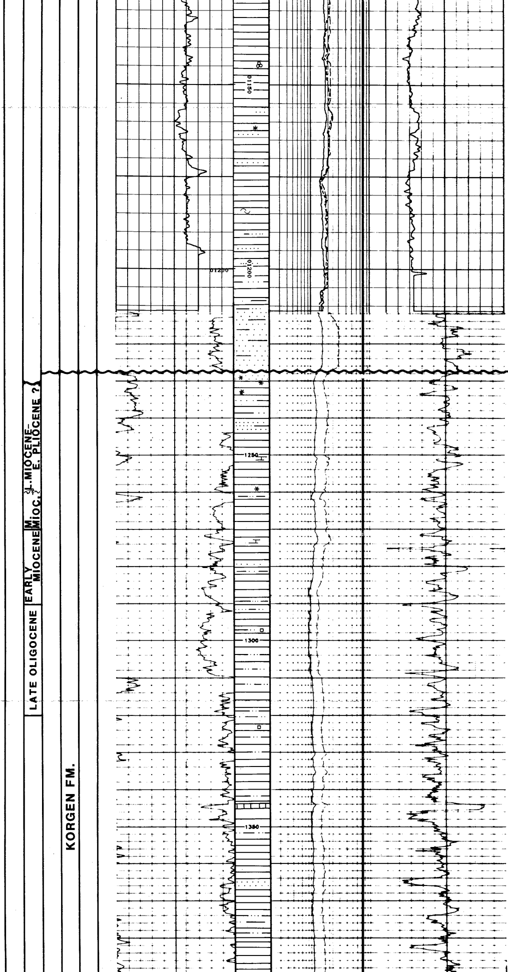
A/A but the sd is crser and more ang.

CLY: A/A
SD: A/A
GLAU,SHL FRGS,FORAMS



CLY: A/A
SD: A/A
A/A

CLY: A/A
SD: A/A
A/A



CLY is med dk gry-dk gry and sl frmer,else A/A

CLY: v slty/sdy,med dk gry-dk gn gry,pred v fn-fn qtz, prtly rck frgs,mic, sft-frm,hydr,amor, occ frm, stcky,non-sl calc

SD: ~~clr-mlky wh-lt~~ brn transl qtz, fn-med,prtly v crs-cravel,fair srtd,ang- subrnd,lse

GLAU,SHL FRGS,RCK FRGS

Top Sklinna Group 1227 (-1198)

Korgen Fm. 1.166 sec.

SD: A/A,but mainly v crs-gravel size,pris of gravel are rck frgs,highly glau

CALCITE

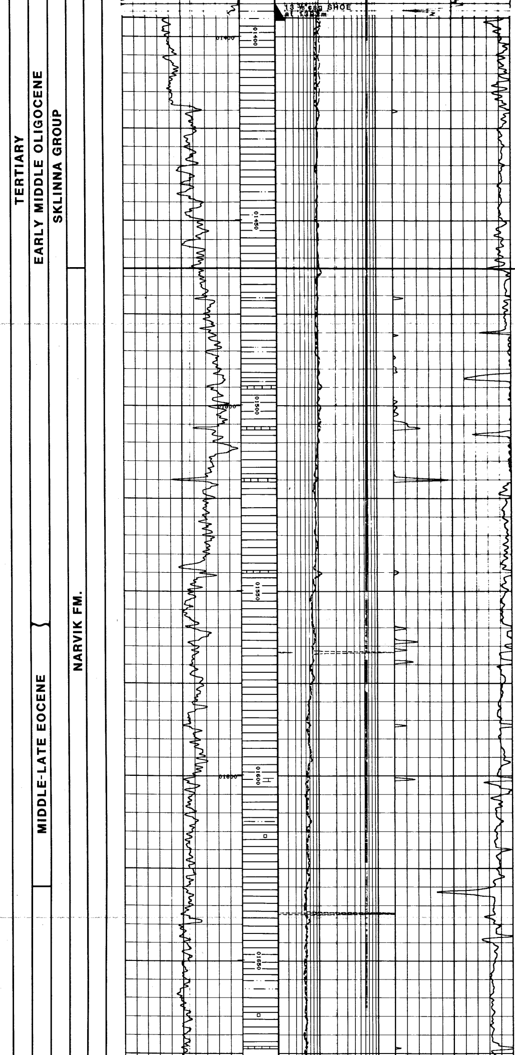
CLY: olv gry,mod slty,sl sdy, micromic,sft,amor,sl stky, non-sl calc

CLY: brn gry-olv gry,v slty, sl sdy, pred non calc,else A/A

A/A but no brn gry clyst,sd pred fn

LST: off wh-lt brn,arg,occ slty, frm-crmbly,prtly vhd,blky,occ sl blk spkld

CLYST: brn gry,med-lt gry,occ gn gry,occ subfiss,non-mod slty, sft-frm,hydr,sol, non-sl calc,



occ mod calc,stky,occ blk spks
in upper part

LST: lt gry brn,dsky yel,hd, blky, also off wh,frm,blky, occ arg, lst also bec dol, microxln from 1690 m

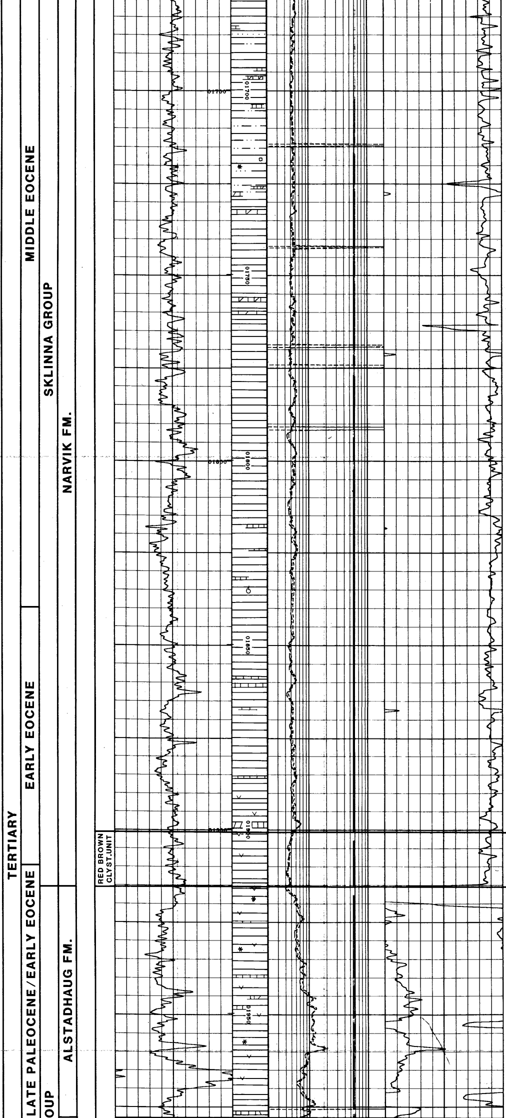
tr of pyr,glau and lse qtz grns

Top Narvik Fm. 1463 (-1434)

1.389 sec.

CLYST: lt-med-dk gry,dk-med gn gry,gn gry-olv gry,tr med brn,sft-frm, v sol, micromic,blky-subfiss, sl-v slty,non calc

A/A



A/A, clyst bec more slty

LST/DOL: off wh-lt yel gry-lt gry, hd-mod hd occ brit,occ sl arg, microxln I/P

clyst pred A/A, but bec waxy

occ sl tr foss frgs

CLYST: lt gn gry-gn gry,sft, hydr, sol,blky,sl slty,blk spks,waxy, tuff, non calc

Top "Red Brown" Clystone 1901 (-1872)

CLYST: pred rd brn occ med brn,mass, blky,sl waxy,calc-v calc

Top Skomvær Group 1915 (-1886)

1.843sec.

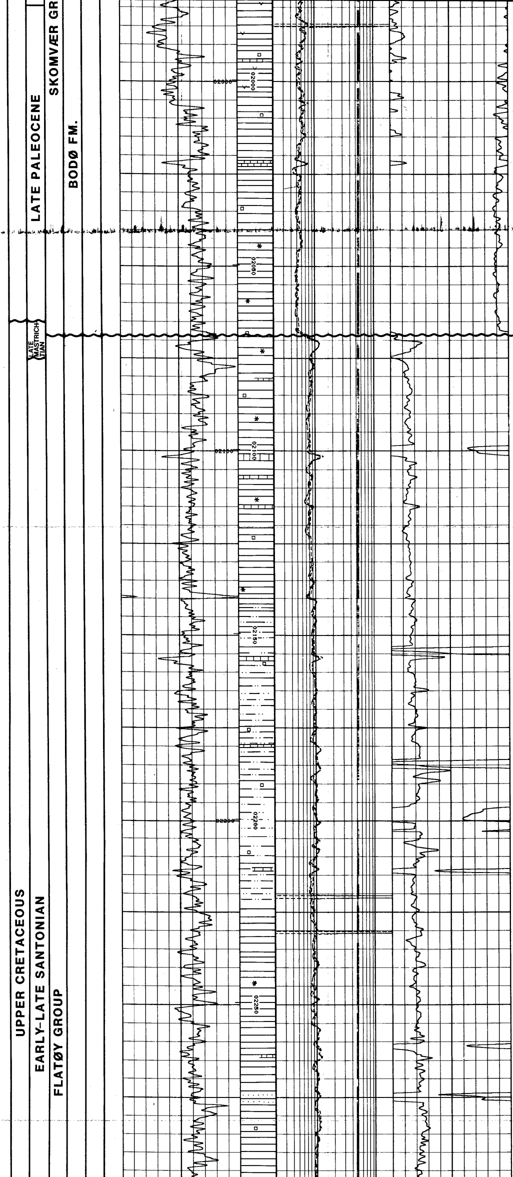
CLYST: pred lt-med gn,gry gn-med gry,multicol,waxy,tuff

CLYST: pred lt-med gn gry,med gry, sft-frm,blky-subfiss, tuff w/blk spks,slty I/P mod-v calc. I/P rd brn-med brn,frm, subfiss-blky,micromic, non-mod calc

LST: off wh,hd,mass,occ microxln

TR: glau and lse qtz grns

Top Bodø Fm. 1977.5 (-1948.5)



1.897sec.

CLYST: pred med-lt gn,occ brn gry, sft-frm,blky-subfiss, non-sl calc,micromic,sl tuff down to 2000 m
LST: off wh,lt yel gry,lt brn, hd, blky,pred micr,occ microxln
TR: glau,lse qtz grns

Top Flatøy Group 2069 (-2040)

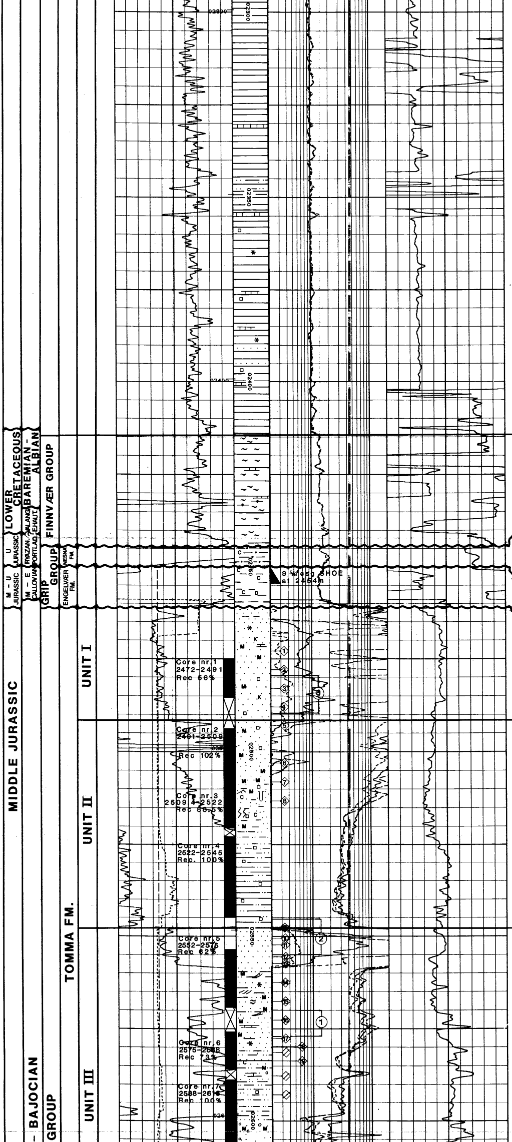
1.986sec.

CLYST: pred lt-med gn gry,med gry, sft-frm,blky-subfiss, sl slty, mod- v calc,hydr easy,also rd brn,sft-frm, blky-subfiss, micromic,cl calc
DOL/LST: lt gry,yel gry,off wh,hd, occ frm,blky,occ microxln, occ arg
TR: pyr,glau,lse qtz grns

CLYST: med-dk gry,gn gry,frm-sft, blky v slty,grdng to sltst,micromic, sl-non calc
SLTST: lt gry,fri,sl silic cmt, glau I/P,grdng to vf sst
LST: lt gry-off wh,blky,frm-hd, microxln-micr

CLYST: pred med-dk gry,brn-gry,sft, blky,occ subfiss,micromic, hydr easy,occ calc
LST: off wh,lt gry,mass,occ microxln,prtly glau

SST: qtz,clr-off wh,fn-fn, subrnd, frm,calc cmt, v arg,glau,also as lse qtz grns



CLYST: A/A,but bec more subfiss

CLYST: A/A, also sl tr of sst A/A

Top Finnvær Group 2414 (-2385)

2.263sec.

CLYST: grdng to marl,med-dk gry,brn gry,sft,blky,occ subfiss, micromic,also rd brn, sft-frm, blky

LST: off wh,lt gry,frm,blky,micr,sl slty

Top Grip Group 2444.5 (-2415.5)

Nesna Fm. **2.284sec.**

CLYST: pred dsky yel brn,sft-frm,blky, occ sl subfiss,non calc, also spks of carb matr,occ rd brn, sft-frm, blky,calc LST: A/A

Top Engelvør Fm 2451 (-2422)

2.290sec.

CLYST: lt-med gry,sft-frm,blky,sl calc

Top Halten Group 2461 (-2432)

Tomma Fm Unit I **2.297sec.**

SST: clr-lt gry,tr rose qtz, med-crs tr v crs, w srtd,subang-subrnd, v sl tr kao mtx, pr silic cmt, lse-frm,fri, tr mic lam,tr pyr, tr mafic min,sl tr feldspar,v sl tr glau,v gd vis por

Top Tomma Unit II 2492 (-2463)

2.317sec.

SST: med gry,fn-occ med bec fn-v fn, w srtd,subang-ang due to sec qtz overgrowth,v sl tr kao mtx, fair-w silic cmt,mod hd-hd,sl fri,mic-v mic I/P,sl carb,tr pyr,tr mafic min,tr feldspar,sl tr glau,mod-occ fair vis por, bec pr

SST: lt gry-dk brn,v fn,w srtd, subang,arg/sl kao mtx,mod silic cmt,mod hd,mic,sl carb,pr vis por,bec incr silty f/2527m

CLYST: dk gry-gry blk,blky,occ subfiss,mod hd,sl-mod silty, mic,pyr,carb I/P,non-sl calc,

Top Tomma Unit III 2547.5 (-2518.5)

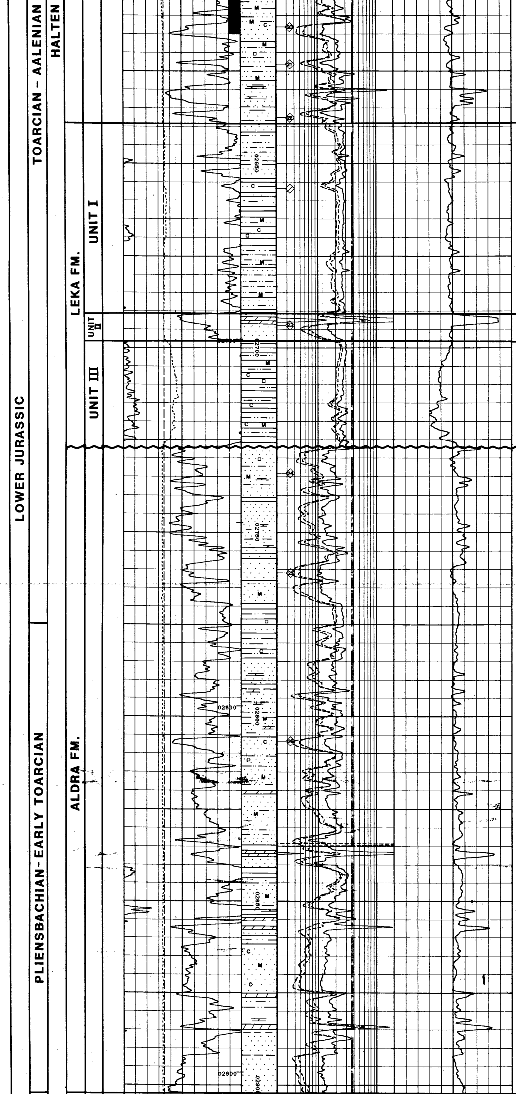
2.354sec.

SST: lt gry-yel gry,fn-crs,v crs in first meter only,pr srtd, subang-subrnd,bec pred subang,v pr-pr silic cmt,fri-uncons, bec mod hd

SST: yel gry-olv gry,v fn-fn, w srtd, subang-ang,mod silic cmt, mod hd, sl mic,carb spks, pr-fair vis por

SLTST: med dk gry,blky-subfiss,arg mtx, sl silic cmt,moc hd-hd,v fn sdy,grdg sst, v mic carb,non calc

SST: olv gry-yel brn-med dk gry,pred fn-med,locally crs,fair srtd, ang-subang, sl kao mtx,I/P dk gry arg mtx,silic/calc cmt,mod hd-hd,sl fri when silic cmt,tr



glauc,pr vis por, locally gd in crs & silic cmt ssts

Top Leka Fm. Unit I 2638.5 (-2609.5)

2.409sec.

SLTST: med dk gry,bec pred olv gry, blky-subfiss,I/P grdg clyst, fri-frm,occ mod hd, mic,non calc

SST: lt gry-yel gry-olv gry, fn-v crs,pred fn,pr srtd ang-subang,tr kao mtx, silic/calc cmt,bec pred calc cmt f/2698m, fri-mod hd,sl mic,tr glau,

CLYST: olv gry-olv blk,I/P slty, blky-subfiss,frm-mod hd, micmic, non calc,locally sft,stky,amor

TR: DOL:yel brn,blky,hd,I/P slty, I/P micsucr

TR: PYR

Top Leka Fm. Unit II 2691 (-2662)

2.441sec.

Top Leka Fm. Unit III 2698 (-2669)

2.445sec.

Top Aldra Fm. 2727 (-2698)

2.464sec.

SST/SD: v lt gry,clr-transl qtz,pred med-crs,I/P fn-v crs, fair srtd,pred subang,occ seq qtz overgrowths,tr kao mtx (f/2890m,gd wh-lt gry kao/arg mtx),pred lse,I/P pr-mod silic/calc cmt & fri-mod hd,tr mic, tr glau,tr pyr,occ coal spks f/2812m,gd vis por, pr-fair when cmt

CLYST: olv gry-brn gry-med dk gry,I/P slty,blky-subfiss, mod hd, micromic,tr pyr, non calc

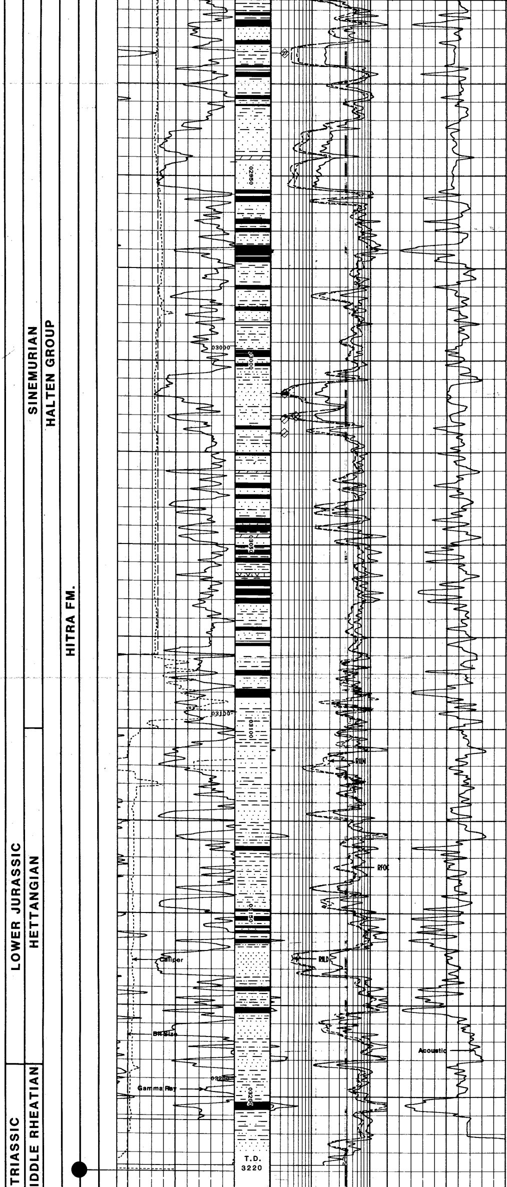
SLTST: olv gry,v fn sdy-arg, subfiss, mod hd,micromic, non calc

DOL: pl-dk yel brn,blky,hd,microxln, I/P dol lst

COAL: blk,hd,brit,I/P sdy,arg pyr

Top Hitra Fm. 2902 (-2873)

2.565 sec.



SD/SST:	v lt gry,clr-transl qtz, pred med-crs,I/P v fn-v crs,locally v fn-fn,mod-w srtd,subang-subrnd, locally gd wh-lt gry kao-arg mtx in finer sst,pred lse, I/P pr-mod silic/calc cmt & fri-mod hd,tr mic,tr glau,tr pyr,gd vis por, locally pr vis por in finer,cmt sst
COAL:	blk,shny,irreg-conc frac, mod hd,brit,flky I/P,occ pyr
CLYST:	olv gry-dk gry-dk brn blk, blky,I/P plty-fis,mod hd,v micromic I/P, v carb I/P grdg coal, non calc
SLTST:	olv gry-dk brn gry,amor-blky, fri-frm,arg,v mic, occ carb,I/P v fn sdy,non calc
DOL:	dk yel brn,blky,hd, microxln
CLYST:	olv gry-dk gry-brn blk,bec pred pl-dsky yel brn & brn blk,mas-blky,occ subfiss,hd, occ waxy,I/P slty,I/P v carb, occ micromic,non calc,occ calc
COAL:	blk,shny,irreg-conc frac,blky, mod hd-hd,I/P flky,occ pyr;
SST:	yel gry,pl yel brn,med-crs,occ fn,mod srtd,ang-subang,occ lt gry arg mtx,fri-mod hd,locally lse,calc-v calc cmt,I/P grdg sdy lst,pr vis por
LST:	pl yel brn,blky,mod hd, sdy,med xln,I/P dol
DOL:	pl brn,blky,hd,brit microxln
COAL:	blk,shny,blky,mod hd-hd, brit, irreg-conc frac,I/P v arg,grdg carb clyst,occ pyr,plant frag & spores
SST/SD:	SST:lt gry,fn,mod-w srtd, subang,abun silic/calc cmt,mod hd-hd,I/P v hd,tr glau,none-pr vis por, SD:transl qtz,pred med-crs, occ fn & v crs,pr srtd, subang,seq qtz overgrowts, lse,gd vis por
CLYST:	gry brn-brn blk,occ dk gry,blky,waxy I/P,mod hd-hd,sl micromic I/P carb srtks,I/P v carb,grdg coal,non calc
SLTST:	gry brn,arg,mas,fri-frm, mic,carb,non calc

LATE M

FMT PRESSURE LISTING 6407/6-3
RUN 3A AND 3B

DEPTH M RKB	HYDROSTATIC PRESSURE HP (KPAA)	FORMATION PRESSURE HP (KPAA)	SG (corr)
RUN 3A			
2470.0	29657	25564	25597
2475.0	29716	25577	25624
2480.0	29774	25589	25631
2485.0	29831	25602	25652
2490.0	29889	25615	25666
2500.0	30005	25639	25686
2505.0	30062	25653	25707
2510.0	30120	25664	25721
2546.0	30542	25756	25804
2548.0	30570	25764	25811
2550.0	30596	25771	25817
2553.0	30629	25778	25831
2555.0	30651	25782	25831
2560.0	30708	25794	25845
2565.0	30766	25808	25859
2570.0	30824	25821	25873
2575.0	30884	25851	25900
2578.0	30918		-
2577.0	30906	25859	25900
2581.0	30953	26214	26252
2585.0	30997		-
2590.0	31054		-
2611.0	31299	26168	26231
2621.0	31424	26279	26335
2635.0	31584	26428	26472
2654.0	31806		-
2692.0	32937	26990	27045
2732.0	32721	27371	27410
2758.0	33033	27611	27645
2805.0	33580	28081	28113
2915.0	34862	29188	29210
3008.0	35970	30153	30127
3018.0	36102	-	-
3014.0	36050	-	-
3015.0	36048	-	-
2570	-		
RUN 3B			
2570.0	30732	25784	-
2505.0	29998	25647	-

WELL 6407/6-3
PRODUCTION TEST SUMMARY

Test Nr/ Flow Nr	For- mation	Perf. Int. (MRKB)	Duration (Hrs.)	Choke (1/64")	Gas rate (SM3/D)	Cond. rate (SM3/D)	Water rate (BSW) (%)	GOR (SM3/ SM3)	Cond. dens. (kg/m3)	Gas. grav. (AIR=1)	WHP (bar)	BHP (bar)	WHT (Deg. C)	BHT (Deg. C)	Res. press (bar)
1.1	Tomma III	2570-2577	5.3	64	332400	211.6	Tr	1571	0.812	0.765	54.0	97.5	32	83	
1.2			12.0	32	227600	115.3	15	1974	0.818	0.770	118	177	24	93	259.7
1.3			8.3	72	338600	151.6	20-45	2233	0.810	0.760	40.2	83.6	32	93	
2.1	Tomma II	2546-2555	9.0	64	1031000	453.7	1	2265	0.747	0.723	132	253	43	98	
2.2			9.3	48	753300	260.4	Tr	2893	0.752	0.755	166	255	47	98	258.0
2.3			4.0	96	1249000	512.7	1	2437	0.737	0.723	96.4	252	48	98	
3.1	Tomma I	2479-2489	4.5	64	1073000	462.8	Tr	2319	0.744	0.722	134.0	251	50	94	
3.2			10.4	48	745800	325.5	0	2291	0.741	0.720	169	254	51	96	256.4
3.3			3.5	96	1298000	517.7	0	2507	0.752	0.742	96.9	251	55	96	

Water data from test number 1; Density: 1.03 g/cc PH: 7.4 CL: 26100 mg/l