

Report

Title

GEOLOGICAL SUMMARY

WELL 15/9-F-15 C
PL 046
VOLVE FIELD

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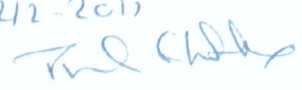
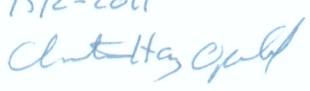

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Subjects:

Geological Summary comprising Completion Log, Structural Maps and Stratigraphic Tops.

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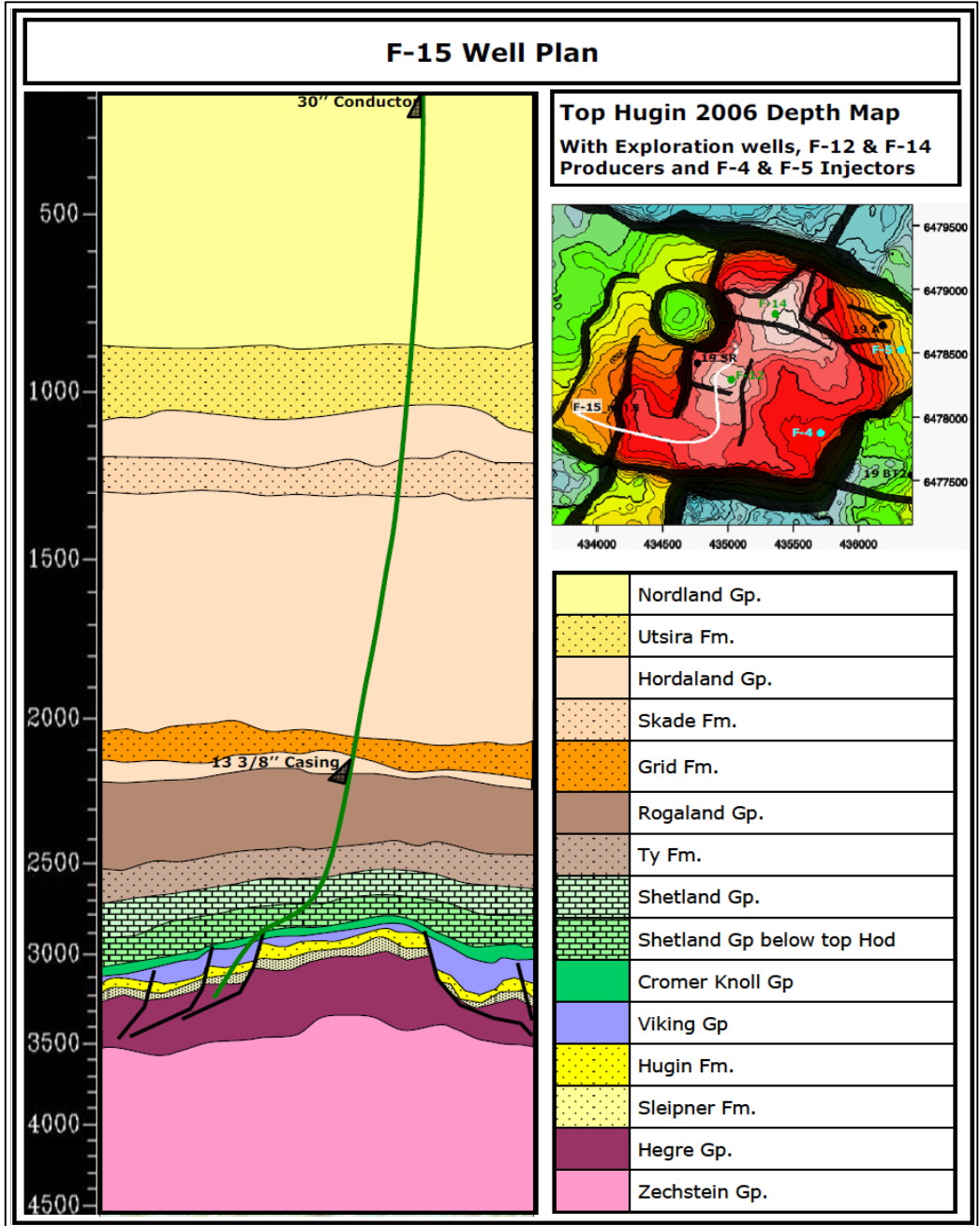


GEOLOGICAL SUMMARY

Volve

Scale: 1 / 500

Well: 15/9-F-15 C



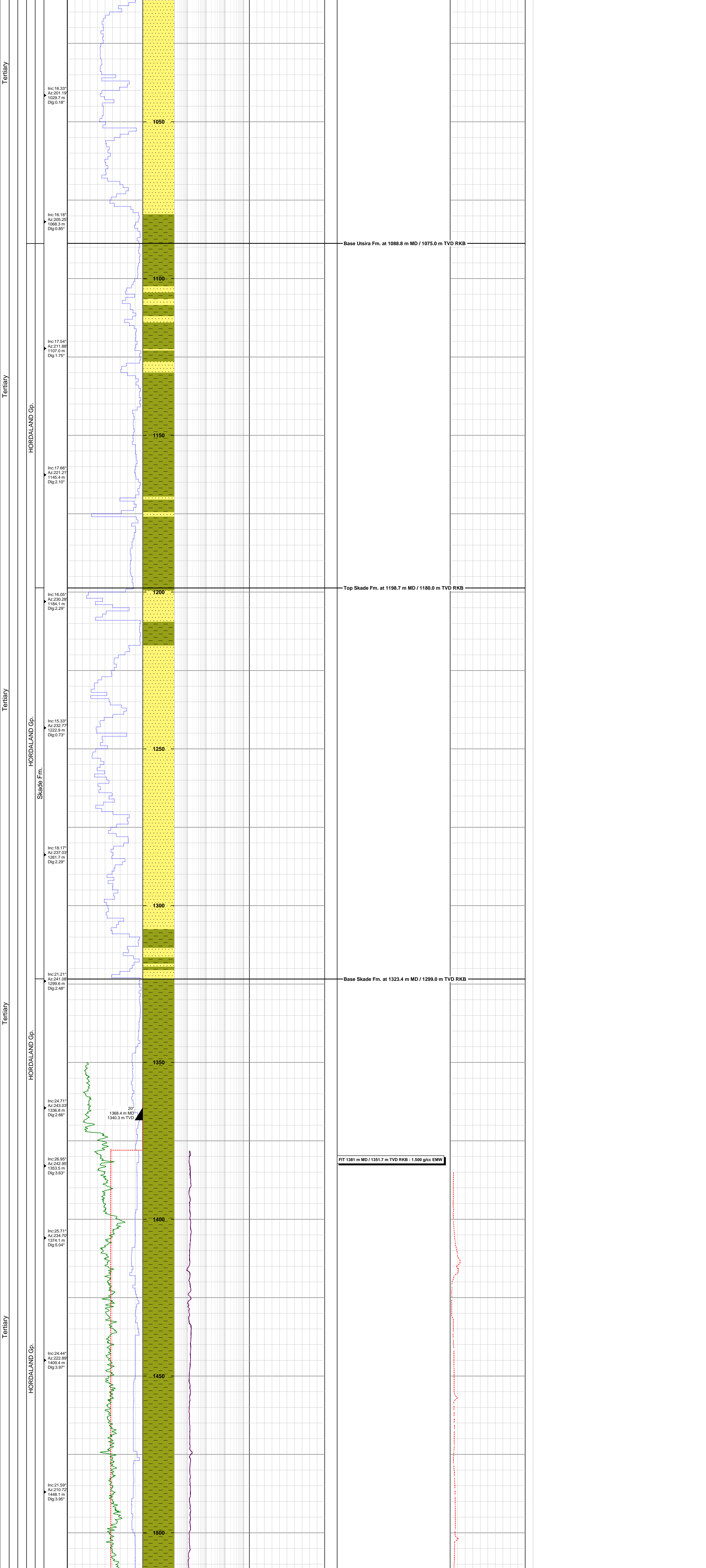
KB Elevation	54.9 m	Country	Norway
Water Depth	91.0 m	Licence	PL 046BS
Depth Reference	RKB	Owners	Statoil, Exxon Mobile, Bayern Gas
Total Depth (Driller)	3232m MD RKB 3044.1m TVD RKB		
Formation at TD	Sleipner Fm.	Field	Volve
Date Sidetracked	19.01.2009	Rig	MÆRSK INSPIRER
Date Reached TD	14.02.2009		
Date Completed	07.03.2009	Drilling Contractor	Mærsk
Well Status	Producer	Mudlogging Company	Geoservices
		Logging Company	Schlumberger
		MWD Company	Schlumberger
Well Classification	Production	Geologists	Malcolm Hamer
Prepared by	R. Gower		
Controlled by	T. Flatebø		
Date	11.08.2010		
Revision	0		
Well Coordinates	Geographic : 58° 26' 29.657" 1° 53' 14.990"		
	UTM : 6478560.36m N 435053.55m E		

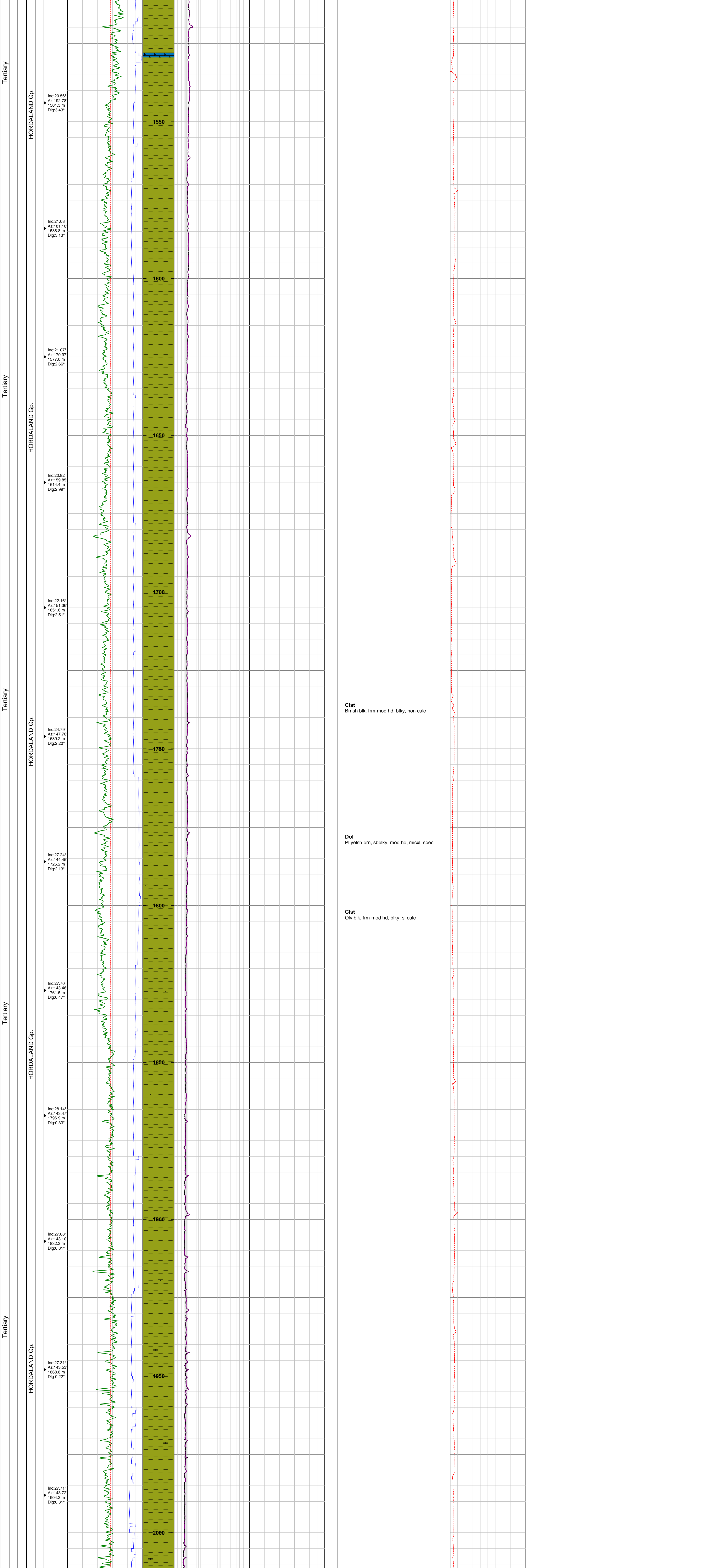
Casing Records			LOT / FIT				Comments			
Diameter	Shoe depth m MD RKB	Shoe depth m TVD RKB	Type	Result g/cc	Depth m MD RKB	Depth m TVD RKB	Well F-15C is the third and last oil producer in the Volve Field. The main objectives of the well were to establish oil production well draining in the south/south-western area of the Volve Field and this well was going to assist in maintaining the plateau production of Volve. The reservoir thickness was 34 m TVD. The south western part of the Filed is represented by a high degree of erosion and non deposition but in full communication with the rest of the Main Field. The well was shut down after a short period of production due to a high water-cut.			
30" Casing shoe	220.6	220.6	FIT	1.500	1381	1351.7				
20" Casing shoe	1368.4	1340.3	FIT	1.560	2562	2417.2				
9 5/8" Casing shoe	2534	2393.5	FIT	1.500	2923	2752.0				

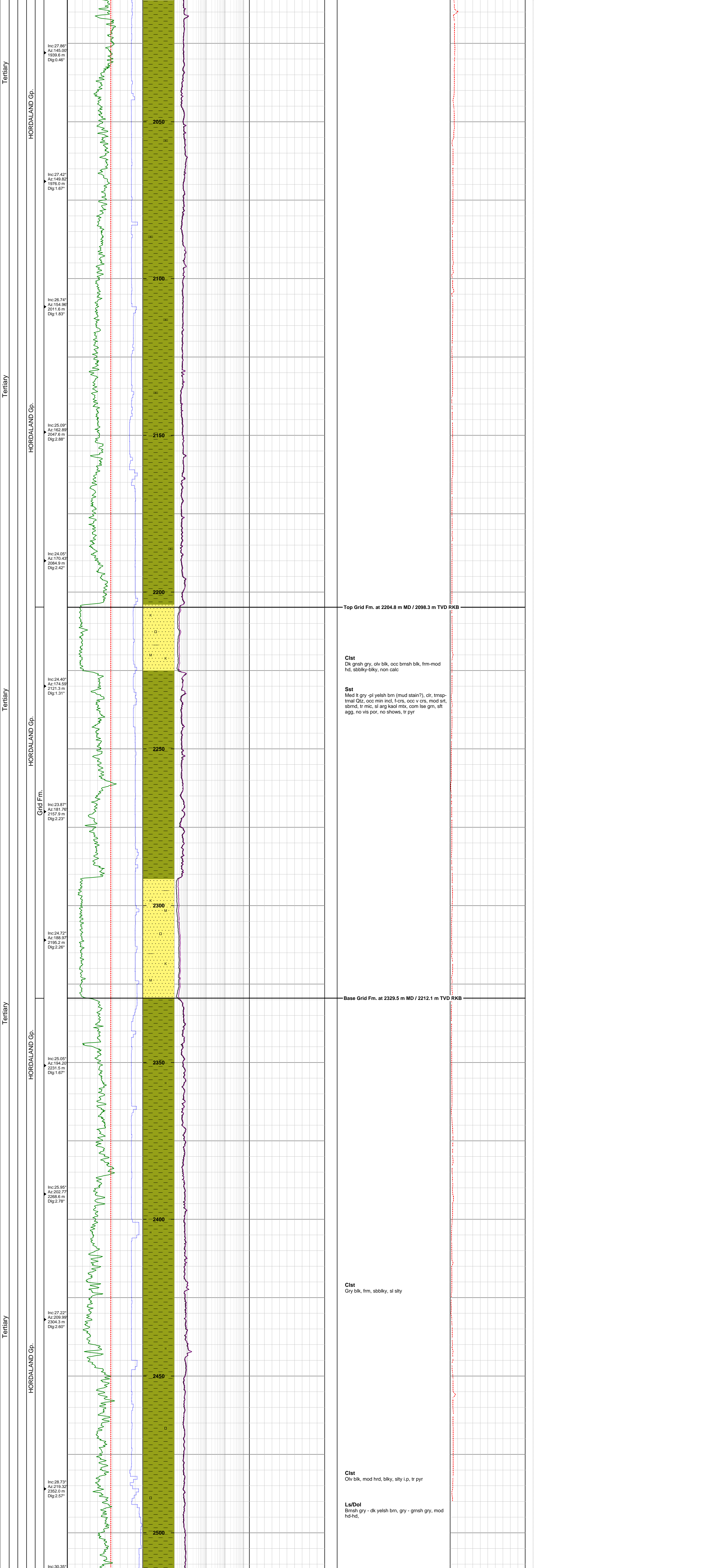
Logs			Screen Intervals			Pressure points (Stethoscope)							
Run no.	Log type	Logged interval	Interval no.	Screen top m MD RKB	Screen bottom m MD RKB	Test no.	Depth m MD RKB	Depth m TVD RKB	Pressure bar	Test no.	Depth m MD RKB	Depth m TVD RKB	Pressure bar
1	MED, ARC	2575 - 2665m	No screen intervals			1	3127	2946.50	312.04				
2	MWD, ARC	2665 - 2920m				2	3129	2948.36	312.17				
3	MWD, Ecoscope, Sonic, Stethoscope	2920 - 3232m				3	3134	2952.99	312.62				
						4	3141	2959.48	313.18				
						5	3149	2966.88	313.80				
						6	3152	2969.66	314.06				
						7	3156	2973.36	314.60				
						8	3160	2977.06	315.53				

Lithology Legend					Symbol legend	
CONGLOMERATE	MARL	... SANDY, VERY	* GLAUCONITE	● BITUMINOUS	Casing shoe Liner hanger Liner shoe Milled window Inc: (deg) Az: (deg) Depth (m TVD) Dip: (deg/30m) - MWD Inc: (deg) Az: (deg) Depth (m TVD) Dip: (deg/30m) - Other Core interval	
SEDIMENTARY BRECCIA	CHALK	.. SANDY	□ PYRITE	▨ TUFFACEOUS		
SAND / SANDSTONE	LIMESTONE	. SANDY, SLIGHTLY	□ SIDERITE	▨ CHALKY		
SILT / SILTSTONE	DOLOMITIC LIMESTONE	SILTY, VERY	M MICA	▨ COAL FRAGMENTS		
FISSILE SILTSTONE	CALCAREOUS DOLOMITE	SILTY	S KAOLINITE	▨ CHERT	DST 2 Open hole 2 Open hole (rerun) II Through casing II Through casing (rerun) Perforation interval Mud gain Mud loss SHOWS Oil stain Fluorescence Visible cut Fluorescence cut Gas shows	
MUDSTONE	DOLOMITE	SILTY, SLIGHTLY	K KAOLINITE	▨ CHLORITE		
FISSILE MUDSTONE	GENERAL VOLCANICS	— ARGILLACEOUS	C CARBONACEOUS	▨ MARLY		
CLAY / CLAYSTONE	TUFF	— CALCITE	⊕ CHAMOSITE	▨ ANHYDRITIC		
SHALE	GENERAL INTRUSIVE	— DOLOMITE	P PHOSPHORITE			
COAL	SILICIC INTRUSIVE	δ MACROFOSSILS, GEN.	∞ FISH REMAINS	⊙ SPOROMORPHS	Sidewall core (No recovery) Formation pressure test Dipmeter	
BROWN COAL	MAFIC INTRUSIVE	δ MACROFOSSIL FRAGS	∞ FISH SCALES	⊙ STROMAPOROIDS		
ANHYDRITE	DYKES & SILLS	δ MICROFOSSILS, GEN.	δ FORAMINIFERA	⊙ STEMS / TWIGS		
SALT	GENERAL METAMORPHIC	δ SHELL BED	δ GASTROPODS	⊙ LEAF BLADES		
GYPSUM		δ ALGAE	δ GRAPTOLITES	⊙ TRILOBITES		
		δ AMMONITES	⊙ CONODONTS	⊙ VERTEBRATES		
		δ BELEMNITES	⊙ CORALS	⊙ MAR. MICROPLANKTON		
		δ BRACHIOPODS	⊙ CRINOIDS	⊙ OOZE		
		δ BRYOZOA	⊙ BIVALVES	⊙ PLANT REMAINS		
		δ CHAROPHYTES	⊙ SPICULES			
		⊕ ECHINOIDS	⊕ OSTRACODS			
		— CALCITE CEMENTED	Q QUARTZ CEMENTED	Sm SMECTITE CEMENTED		
		— DOLOMITE CEMENTED	K KAOLIN CEMENTED	Chi CHLORITE CEMENTED		
		— SIDERITE CEMENTED	III ILLITE CEMENTED	= CARBONATE CEMENTED		
		○ CONCRETIONS, GEN.	○ PISOLITHS	φ PELLETS		
		○ OOIDS	◇ CLASTS	⊙ PSEUDO OOLITHS		

STRATIGRAPH				GAMMA RAY		Depths m MD RKB	RESISTIVITY	NEUTRON/DENSITY	LITHOLOGICAL DESCRIPTION	SONIC						
SYSTEM	SERIES	STAGE	GROUP	DIRECTIONAL SURVEYS			LITHOLOGY	HYDROCARBON SHOWS								
				6	CAL in	26	0.2	Resistivity Deep ohmm	2000	1.95	DENC g/cc	0.5				
				200	ROP m/hr	0										
				6	BS in	26	0.2	Resistivity Med. (shallow) ohmm	2000	0.45	DEN g/cc	2.95		140	AC µs/ft	40
				0	GR api	150								0	TGAS %	5







Tertiary		Tertiary		Tertiary		Cretaceous		Cretaceous	
HORDALAND Gp.		ROGALAND Gp.		SHETLAND Gp.		SHETLAND Gp.		SHETLAND Gp.	
Inc:223.67° Az:2375.5 m Dip:2.98°		Inc:33.26° Az:229.77° Dip:2.58°		Inc:32.08° Az:231.01° Dip:1.01°		Inc:27.57° Az:2487.4 m Dip:3.51°		Inc:25.99° Az:233.83° Dip:1.18°	
9 5/8"		2534 m MD 2393.5 m TVD		2550		2600		2650	
Inc:33.26° Az:229.77° Dip:2.58°		Inc:32.08° Az:231.01° Dip:1.01°		Inc:27.57° Az:2487.4 m Dip:3.51°		Inc:25.99° Az:233.83° Dip:1.18°		Inc:22.08° Az:234.57° Dip:2.92°	
2550		2600		2650		2700		2750	
Inc:27.57° Az:2487.4 m Dip:3.51°		Inc:25.99° Az:233.83° Dip:1.18°		Inc:22.08° Az:234.57° Dip:2.92°		Inc:16.67° Az:243.57° Dip:4.58°		Inc:13.75° Az:248.58° Dip:2.52°	
2600		2650		2700		2750		2800	
Inc:16.67° Az:243.57° Dip:4.58°		Inc:13.75° Az:248.58° Dip:2.52°		Inc:11.88° Az:248.05° Dip:1.27°		Inc:12.47° Az:247.23° Dip:0.58°		Inc:12.77° Az:250.95° Dip:0.58°	
2750		2800		2850		2900		2950	
Inc:12.47° Az:247.23° Dip:0.58°		Inc:12.77° Az:250.95° Dip:0.58°		Inc:13.62° Az:261.50° Dip:2.55°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
2850		2900		2950		3000		3050	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3000		3050		3100		3150		3200	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3050		3100		3150		3200		3250	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3100		3150		3200		3250		3300	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3150		3200		3250		3300		3350	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3200		3250		3300		3350		3400	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3250		3300		3350		3400		3450	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3300		3350		3400		3450		3500	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3350		3400		3450		3500		3550	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3400		3450		3500		3550		3600	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3450		3500		3550		3600		3650	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3500		3550		3600		3650		3700	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3550		3600		3650		3700		3750	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3600		3650		3700		3750		3800	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3650		3700		3750		3800		3850	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3700		3750		3800		3850		3900	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3750		3800		3850		3900		3950	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3800		3850		3900		3950		4000	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3850		3900		3950		4000		4050	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3900		3950		4000		4050		4100	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
3950		4000		4050		4100		4150	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4000		4050		4100		4150		4200	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4050		4100		4150		4200		4250	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4100		4150		4200		4250		4300	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4150		4200		4250		4300		4350	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4200		4250		4300		4350		4400	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4250		4300		4350		4400		4450	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4300		4350		4400		4450		4500	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4350		4400		4450		4500		4550	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4400		4450		4500		4550		4600	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4450		4500		4550		4600		4650	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4500		4550		4600		4650		4700	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4550		4600		4650		4700		4750	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4600		4650		4700		4750		4800	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4650		4700		4750		4800		4850	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4700		4750		4800		4850		4900	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4750		4800		4850		4900		4950	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4800		4850		4900		4950		5000	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4850		4900		4950		5000		5050	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4900		4950		5000		5050		5100	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
4950		5000		5050		5100		5150	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°	
5000		5050		5100		5150		5200	
Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20° Dip:1.97°		Inc:15.39° Az:260.20°			

Output log file created : 14/02/2011 14:56:52
Winlog well ID : 15_9_F_15C
StatoilHydro well ID : 99999
Template version : v4.0 [20080515] - A-JC
Project file version : v4.00
Designed for Winlog Version 4