

34

NSH-LOG/ 31/2 - 9

Denne rapport
tilhører

 STATOIL

LTEK DOK.SENTER

L. NR. 99594# 401

KODE WELL 31/2-9 NR-18

RETURNERES ETTER BRUK

NORSKE SHELL

WELL : 31/2 - 9

MUDLOGGING AND CUTTINGS DESCRIPTION

 Geoservices

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NSH/LOG/ 330 - 37

NORSKE SHELL

WELL : 31/2 - 9

MUDLOGGING AND CUTTINGS DESCRIPTION

NORSKE SHELL

WELL : 31/2 - 9

MUDLOGGING AND CUTTINGS DESCRIPTION

DEPTH	LITHOLOGY		2	3	4	5	6	7	8	9	10	POROSITY FLUORESCENCE GAINING	DESCRIPTION/REMARKS
	1												
470	30		x		70			0.7					1 S wh-clr occ brn (srt) fsal-msl occ crs su (ang)-rmd (elong) unconsl lse
480	30		xx		70			5.0					
490	30		xxx		70			2.5					3 LST wh I copt Wkst cons-cmt mod hd glauc (py) foss
500	40		xx		60			4.0					
510	40		xxx		60			4.5					5 CLST gy cmb brk hygrotergid cons fri slt glauc py lig
520	30		xxx		70			3.6					
530	10		x		90			2.5					
540	10				90			2.7					
550	10				90			3.6					
560	10				90			2.6					
570	10				90			1.7					
580	10				90			2.1					
590	10				90			2.0					5 CLST: bec pa gy sndy
600	xxx				100			1.6					
610	10				90			xx					
620	xxx				100			0.7					
630	xxx				100			0.6					
640	xxx				100			0.8					
650	xxx				100			0.6					5 CLST: bec pa gy /gy less sndy shell frags.
660	10				90			0.5					
670	10				90			0.6					
680	xx				100			0.6					
690	xx				100			0.5					
700	xx				100			0.5					
710	20			xx	80			0.9					6 SLTST dk gy ang brk cmt,qz hd glauc
720	30			xx	70			0.4					
730	20			x	80			0.7					
740	10				90			0.5					

REMARKS

REMARKS

DEPTH	LITHOLOGY						POROSITY FLUORESCENCE GAINING	DESCRIPTION/REMARKS
	1	2	3	4	5	6		
820	20	80					x	1)CLST:pa brn, hygrotergid, splin brk, cons,
830	90	10					x	sft, occ((plas)),slt, glauc, py.
840	100	xx					0.2	2)SST:vgt clr/wh/mott blk/purp/yell, (gran)-
850	100	x					0.3	crs, ang brk, cmt, qz, hd, glauc, py,-poss cong.
860	100						0.6	
870	100						0.3	
880	100						0.7	
890	100						0.6	
900	100						0.6	1)CLST: bec pa brn/gy
910	100						0.4	
920	100						0.3	
930	100						0.2	
940	100						0.3	
950	100						0.2	
960	100						0.3	1)CLST: tr shell frags, bec (calc).
970	100						0.2	
980	100						0.2	
990	100						0.3	
1000	100						0.4	
1010	100		x				0.2	3)SST: pa brn/red, fSL-fSU, srt, (ang)-ang,
1020	100						0.1	cmt (calc).
1030	100						x	
1040	100						x	
1050	100						x	
1060	100						0.5	
1070	100						0.4	
1080	100						0.5	
1090	100						0.6	

REMARKS

DEPTH	LITHOLOGY						POROSITY	FLUORESCENCE	GRAINES	DESCRIPTION/REMARKS
	1	2	3	4	5	6				
1100	100							0.6	(1)CLST:pa brn/gy, earthy-occ cmb brk, hygro-	
1110	100							0.4	turgid, cons sft, occglauc, calc-occ non calc,	
1120	20	40	40					1.0	py, bec (slt)	
1130	xx	90	10					1.2	(2)CLST:pa gn/pa gy, cmb brk, hydroclastic,	
1140	x	100	xx					1.4	cons, sft, glc, (calc).	
1150		100						1.3	(3)CLST:red/brn, non swell-(hygro-turgid), cons	
1160		100		xx				1.3	sft, slt.	
1170		100		x				1.1	(4)LST:II chk Mdst, wh-yel, ang brk,cmt, sft-	
1180		100						0.9	mod hd.	
1190		100		x				1.1		
1200		100		xxx				1.1		
1210		100		x				0.8		
1220		100		xxx				1.4		
1230		100		x				2.0		
1240		100		x				2.3		
1250		100						1.2		
1260		100		x				1.5		
1270		100		xx				1.8		
1273		100						1.9	Ditch cuttings were collected every 3m from	
1276		100		x				2.1	1270m.	
1279		100		x				2.2		
1282		100						2.0		
1285		100		xx				1.9		
1288		100						2.2		
1291		100						2.0		
1294		100						1.8		
1297		100						1.2		
1300		100		x				2.5		

REMARKS

DEPTH SIDE WALL SAMPLE DESCRIPTIONS

816 CLST: brn-(gy), cmb brk, cryptofissile, cons, sft, slt, mic, ((calc)).

876 CLST: (gy), hkl brk, hygroturgid, cons, sft, (slt), ((mic)).

923.5 CLST: brn-gy, earthy brk, hygroturgid, cons, sft, (st), glauc.

950 CLST: pa brn, cmb brk, hygroturgid, cons, sft, slt, glauc, mic.

976.5 CLST: gy, earthy brk, cons, sft, slt, glauc.

994.5 CLST: dk gy, hkl brk, hydroclastic, cons, sft, slt.

1034 CLST: pa gy pa gn, earthy brk, hygroturgid, cons, sft, slt-fsl, glauc.

1077 MISFIRE

1091 CLST: dk brn dk gy, earthy brk, hygroturgid, cons, plas, (slt), glauc.

DEPTH	LITHOLOGY		POROSITY						FLUORESCENCE	CAVINGS	DESCRIPTION/REMARKS
	1	2	3	4	5	6	7	8			
1303		80		20				1.9		(2)CLST:pa gn/pa gy, earthy-cmb brk, hydroclastic cons, sft, glauc, (calc).bec occ mod hd.	
1306		90		10				1.5			
1309		100		xxx				1.4		(4)LST:wh/yel, II chk Mdst, ang brk, cmt, sft-mod hd.	
1312		100		xxx				1.6			
1315		90		10				1.3		(5)CLST:(brn)/gy, hygrotergid, earthy brk, sft, (calc), (slt).	
1318		60		40				1.8			
1321		60		40				1.7			
1324		50		50				1.7			
1327		40		60				1.6			
1330		40		60				1.8			
1333		40		60				1.8			
1336		30		70				1.5			
1339		30		70				1.5			
1342		20		80				1.2			
1345		10		90				1.3		(5)CLST: bec pa gy/gy, mod hd.	
1348		xxx		100				1.3			
1351		xxx		100				1.6			
1354		x		100				1.6			
1357				100				1.8			
1360											
1363										These samples not circulated out due to wiper trip before bottoms up.	
1366				100			x	4.0		(5)CLST: fluorescence in the silty claystones was noted from this depth, in limited areas of the cuttings. Fluorescence is indicated as trace in normal way, and as a percentage of the total cuttings.	
1369				100			x	3.8			
1372				100			x	2.0			
1375				100			x	2.2			
1378				100			x	2.3		FLUOR; 23.3, 31.2, 41.2, 60-61, 70	
1381				100			xx	2.4			
1384				100			xx	2.4			

REMARKS

DEPTH SIDE WALL SAMPLE DESCRIPTIONS

1103 CLST: brn, earthy brk, non swell, cons, sft, slt.
1119 CLST: mtl gn-brn, cmb brk, hydroclastic, cons, sft, slt, glauc, (mic).
1131.5 CLST: vgt pa gn-gy, splin brk, hygrotergid, cons, sft-mod, hd, glauc.
1140 CLST: vgt gn-gy, earthy brk, hygrofissile, cons, sft, glauc, (slt), (mic).
1184 CLST: dk gn-gy, ang-earthly brk, hygrotergid, cons, sft, glauc.
1223.5 CLST: dk gy, splin brk (hygrotergid), cons, sft, tf.
1244 MISFIRE
1271 CLST: vgt dk gn-dk gy, splin brk (hydroclastic), cons, sft, (slt), glauc.
1296 EMPTY

DEPTH	LITHOLOGY		POROSIY			FLUORESCENCE			DESCRIPTION/REMARKS
	1	2	3	4	5	6	7	8	
1387					100		xx	2.7	(5)CLST:brn/pa gy, hygroturgid, cons, mod hd-
1390					100		xxx	2.5	sft, slt, ((calc)), (py), glauc
1393					100		10	5.5	fluor; 23.3, 31.2, 41.2,
1396					100		10	5.8	
1399					100		10	4.2	(5)CLST:bec occ gy/gn
1402					100		15	4.4	
1405					100	x	10	4.6	(6)SST:orng/yel, fSL, cmb brk, cons-cmt, calc,
1408					100	x	10	4.2	fri, mic, lim, glauc.
1411					100		xx	4.1	Fluor; 23.3, 32.4, 43.3,
1414				xx	100		xx	4.2	(4) LST; wh/lt gy, (cmt), sft, occ mod hd.
1417				x	100		xxx	4.2	II chk Mdst.
1420				x	100		x	4.2	Fluor: 23.3, 33.4, 42.2,
1423				x	100		x	4.1	
1426				x	100		xx	2.3	
1429				x	100		x	3.3	
1432				x	100		x	3.7	
1435					100			2.25	
1438				x	100			3.0	
1441				x	100			4.2	
1444					100			2.75	
1447					100			3.2	
1450				x	100			2.0	(5)CLST:bec occ calc
1453					100			3.2	
1456				x	100			3.0	
1459				x	100			2.6	
1462					100			2.0	
1465					100			2.8	
1468					100			3.1	

REMARKS

DEPTH SIDE WALL SAMPLE DESCRIPTIONS

1314 LOST

1334 CLST: mtl dk brn-dk gy, cmb brk, non swell, (lig), ((glauc)).

1353 CLST: mtl pa gn-pa brn-gy, cmb brk, hygroturgid, cons, sft, glauc, slt, calc.

1357 CLST: dk gy, occ mtl pa gn, splin brk, hygroclastic-hygrofissile, cons, sft, glauc.
1364.5 LOST1374.4 SLTY CLST: pa gy-gy, splin brk, hygroturgid-hygrofissile, cons, sft, slt, mic,
fluor; 23.2, 31.4, 42.2

REMARKS

DEPTH SIDE WALL SAMPLE DESCRIPTIONS

1395.5 CLST: dk gy, splin brk, hygroclastic.

1410 CLST: pa gn-pa gy, ang-splin brk, non swell, cons, mod hd, glauc.
1426 LOST1444 CLST: pa gn-pa gy, ang-splin brk, non swell, cons, mod hd, glauc.
1475 EMPTY

1496.5 CLST: gy-(brn), fis brk, hygroclastic.

DEPTH	LITHOLOGY							POROSITY							DESCRIPTION/REMARKS		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		15	
1510					100												(5)CLST:lt gy-med gy occ pa brn, crmb-earthy brk
1513					100												hygrotaurid-hydroclastic, sft, glauc, (py).
1516					100												
1519					100												
1522					100												
1525					100												
1528					100												
1531					100												
1534					100												
1537				x	100												(4)LST:wh-lt gy, II chk Mdst, sft-occ mod hd, occ
1540	30			10	60												arg, occ bec mrl.
1543				40	60												(1)CLST:pa gy-gn, earthy, hydroclastic, sft, (glauc)
1546				30	70												non calc.
1549				40	60												
1552				x	10	90											(6)S:wh-lt gy, ml-crsu, (srt), ang-(ang)occ (rnd)
1555				x	10	90											(elong)-(sph), unconcs.

DEPTH	LITHOLOGY				5	6	FOROSITY	FLUORESCENCE	GAIN	G3	G2	G1	DESCRIPTION/REMARKS
	I	2	3	4									
I630	40	30	20	10				1.0	0.06				(1)SLTST/SST lt gy-pa brn-med gy slt-ssl occ fsu srt mic occ(py) occ calc cmt hd
I633	90	10	X	X				1.6	0.06				
I636	90	10	X	X				0.8	0.04				(2)CLST med-dk gy mod hd occ(calc)(slt)grading to sh dk gy hd
I639	100	XXX	X					0.2					
I642	100	XXX						0.6	X				(3)LST wh-dk gy fri arg
I645	100	X	X					1.25	0.03				(4)S clr-milky wh msu-crssl lse qz
I648	100	X	XXX					1.95	X				
I651	100		X					1.8	0.03				
I654	100		X					1.7	0.03				
I657	100		X					1.85	0.04				
I660	100		X					1.95	0.04				
I663	100							1.8	X				
I666	100		X					1.7	X				
I669	100		X					1.25	X				(3)LST lt yel-ornng sft dol
I672	100		X					0.95	X				
I675	100							1.0	X				
I678	100		X					1.3	X				
I681	90		10					0.75	X				
I684	100		X					0.5					(5)MRL ltgy-pa brn-occ wh sft-sft(hygroburgid) earthy(mic)
I687	100		X					0.4					
I690	80	X	X	20				0.5					(4)S clr-milky wh msu-crsgm lse qz
I693	90			XXX	10			0.5					
I696	100			XXX	XXX			0.5					
I699	100							0.5					
I702	100							0.6					
I705	100							0.6					
I708	90							0.6					10
I711	60		10	30				0.6					

REMARKS

MASTER LOG



MLMB 1

OPERATOR NORVIG STONE

WELL 17/22S

STATE NORWAY
 FIELD or DISTRICT NORVIG SEA
 LOCATION Lat 60°52'54" Long 03°20'03.1"
 ELEVATION KB 25 m
 SPUDED on 12/15/2010
 DEPTH from 450 to 550
 SCALE 1:500 UNIT N° 101-0202
 ENGINEERS TIG

LEGEND

Each horizontal division equal 1 Meter

MUD DATA

- W. Weight in lb/Gal
- V Viscosity
- WL Filtrate in cc
- FC Filter Cake
- Cl Chloride Cont. in ppm
- Rm. Mud Resistivity in Ω m/m²
- Rmf. Mud Filtrate Resistiv. in Ω m/m²

DRILLING LEGEND

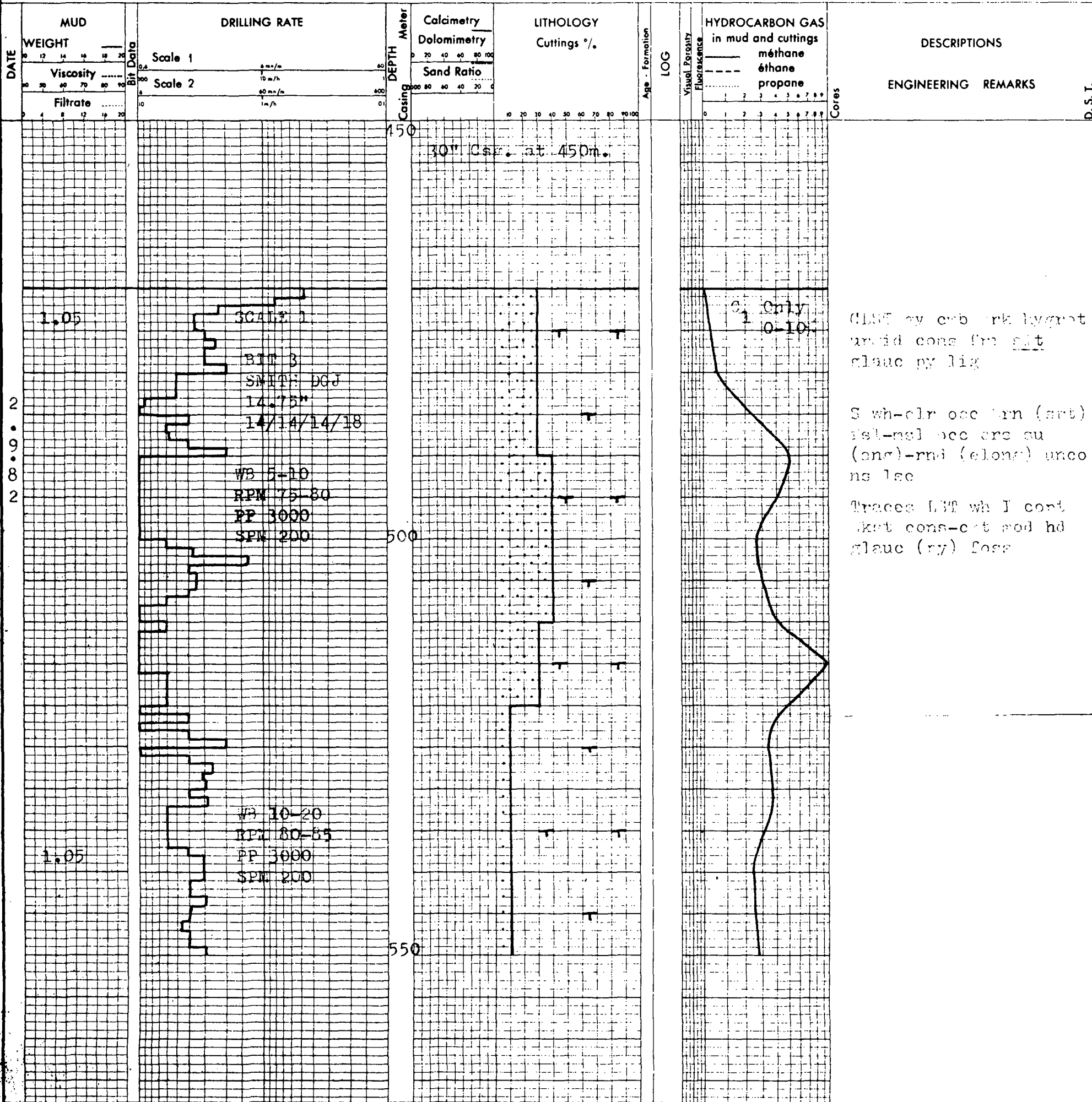
- NB New Bit
- RRB Rerun Bit
- DB Diamond Bit
- TB Turbo Drill
- CB Core Bit
- DCB Diamond Core Bit
- DS Deviation Survey
- W/B Weight on bit
- RPM Rotation (Revol/min)
- LC Lost Circulation
- NR No Returns
- TG Trip Gas

LITHOLOGY LEGEND

- | | | | | | |
|--|-----------------|--|---------------|--|------------------------------|
| | Sand. Sandstone | | Limestone | | Metamorphic rock (Gneiss...) |
| | Silt | | Ool limestone | | Extrusive rock (Basalt...) |
| | Quartzite | | Dolomite | | Intrusive rock (Granite...) |
| | Conglomerate | | Salt | | |
| | Shale. Clay | | Gypsum | | |
| | Silty shale | | Anhydrite | | |
| | | | Coal. Lignite | | |
| | | | Chert | | |

ENGINEERING LEGEND

- C1 Core N°1 rec. 95% recovery 95%.
- DST1 Drill Stem Test N°1
- Dry
- Water
- Oil
- Gas



MASTER LOG



MLMB

OPERATOR

NOVA 1101

WELL

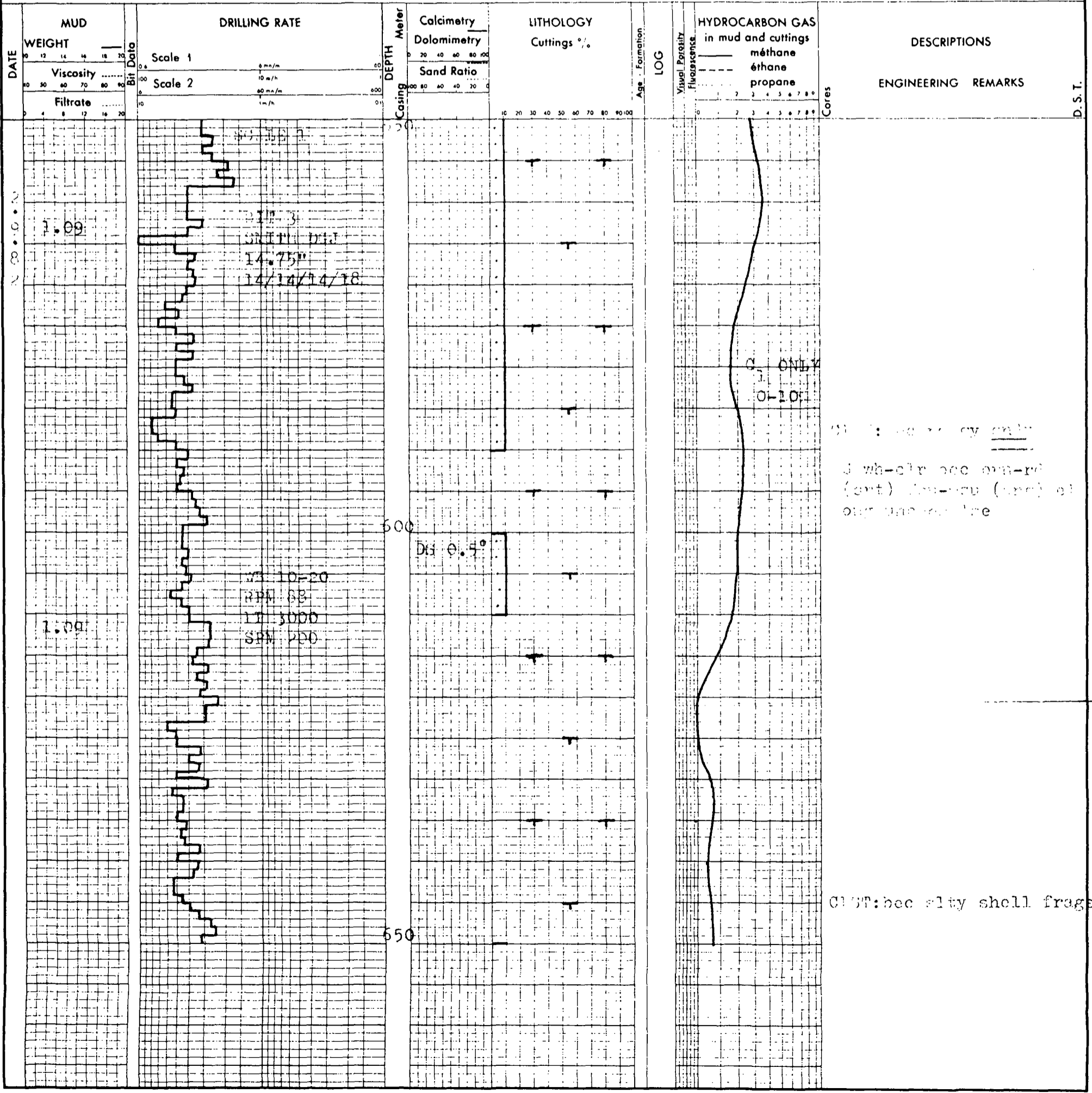
31/2-9

STATE: NOVA SCOTIA
 FIELD or DISTRICT: NORTH SEA
 LOCATION lat 43° 55' 5.64" N; long 03° 26' 01.18" W
 ELEVATION KB: 257.0017 MSL
 SPUDDED on: 28/07/81 TD
 DEPTH from: 350m to: 650m
 SCALE: 1:500 UNIT N°: 101080
 ENGINEERS: J. J. ROY, M. J. DOLAN

Each horizontal division equal 1 Meter

LEGEND

MUD DATA	DRILLING LEGEND	LITHOLOGY LEGEND	ENGINEERING LEGEND
W. Weight in lb/Gal	NB New Bit	Sand. Sandstone	C1 Core N°1
V Viscosity	RRB Rerun Bit	Silt	rec. 95% recovery 95%
WL Filtrate in cc	DB Diamond Bit	Quartzite	DST1 Drill Stem Test N°1
FC Filter Cake	TB Turbo Drill	Conglomerate	○ Dry
Cl Chloride Cont. in ppm	CB Core Bit	Shale. Clay	⊕ Water
Rm. Mud Resistivity in Ω m/m²	DCB Diamond Core Bit	Silty shale	● Oil
Rmf. Mud Filtrate Resistiv. in Ω m/m²	DS Deviation Survey		☀ Gas
	W/B Weight on bit		
	RPM Rotation (Revol/min)		
	LC Lost Circulation		
	NR No Returns		
	TG Trip Gas		



MASTER LOG



MLMB

OPERATOR NORSE WELLS

WELL 31/2-9

STATE NORWAY

FIELD or DISTRICT NORTH SEA

LOCATION lat 0°52'54" N long 03°28'03.1 E

ELEVATION KB 25m ABOVE MSL

SPUDED on 28/8/82

DEPTH from 550m to 750m

SCALE 1:500 UNIT N° TCIO202

ENGINEERS RTG: BORGNY DOLEHIN

Each horizontal division equal 1 Meter

MUD DATA

- W. Weight in lb./Gal
- V. Viscosity
- WL. Filtrate in cc
- FC. Filter Cake
- Cl. Chloride Cont. in ppm
- Rm. Mud Resistivity in $\Omega \cdot m/m^2$
- Rmf. Mud Filtrate Resistiv. in $\Omega \cdot m/m^2$

DRILLING LEGEND

- NB New Bit
- RRB Rerun Bit
- DB Diamond Bit
- TB Turbo Drill
- CB Core Bit
- DCB Diamond Core Bit
- DS Deviation Survey
- W/B Weight on bit
- RPM Rotation (Revol./min)
- LC Lost Circulation
- NR No Returns
- TG Trip Gas

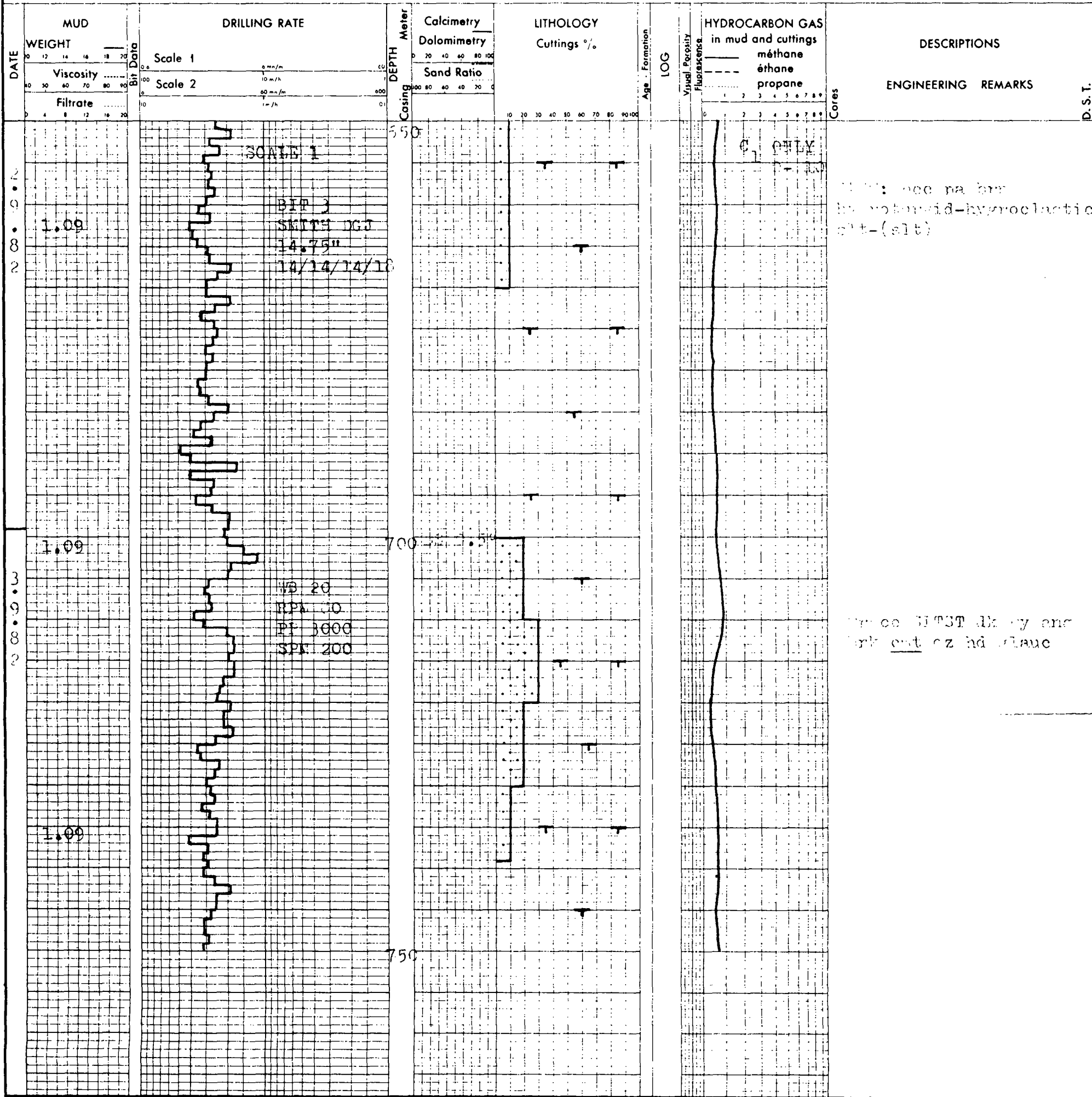
LEGEND

LITHOLOGY LEGEND

- Sand. Sandstone
- Silt
- Quartzite
- Conglomerate
- Shale. Clay
- Silty shale
- Limestone
- Ool limestone
- Dolomite
- Salt
- Gypsum
- Anhydrite
- Coal. Lignite
- Chert
- Métamorphic rock (Gneiss....)
- Extrusive rock (Basalt....)
- Intrusive rock (Granite....)

ENGINEERING LEGEND

- C1 rec. 95% recovery 95%
- DST1 Drill Stem Test N°1
- Dry
- Water
- Oil
- Gas



MASTER LOG



MLMB 6

OPERATOR Norfolk Shell

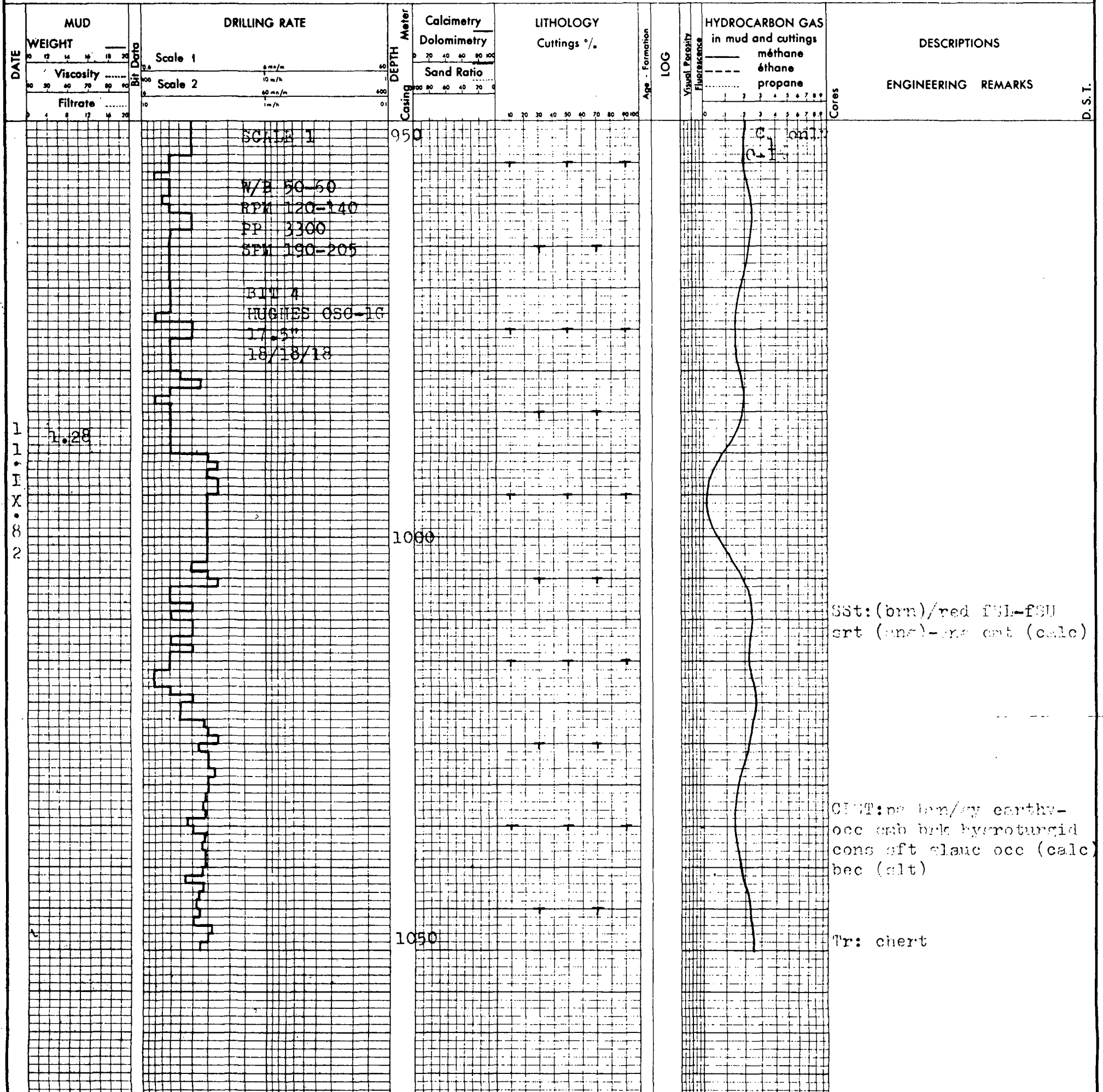
WELL 31/2-0

STATE _____
 FIELD or DISTRIC _____
 LOCATION lat _____ Longi _____
 ELEVATION KB _____
 SPUDDED on _____ TD _____
 DEPTH from _____ to _____
 SCALE 1: 500' UNIT N° _____
 ENGINEERS _____

LEGEND

Each horizontal division equal 1 Meter

MUD DATA	DRILLING LEGEND	LITHOLOGY LEGEND	ENGINEERING LEGEND
W. Weight in lb/Gal	NB New Bit	Sand. Sandstone	C1 Core N°1
V Viscosity	RRB Rerun Bit	Silt	rec. 95% recovery 95%
WL Filtrate in cc	DB Diamond Bit	Quartzite	DST1 Drill Stem Test N°1
FC Filter Cake	TB Turbo Drill	Conglomerate	○ Dry
Cl Chloride Cont. in ppm	CB Core Bit	Shale. Clay	⊕ Water
Rm. Mud Resistivity in Ω m/m²	DCB Diamond Core Bit	Silty shale	● Oil
Rmf. Mud Filtrate Resistiv. in Ω m/m²	DS Deviation Survey		☼ Gas
	W/B Weight on bit		
	RPM Rotation (Revol/min)		
	LC Lost Circulation		
	NR No Returns		
	TG Trip Gas		



MASTER LOG



MLMB 7

OPERATOR Norako Shell

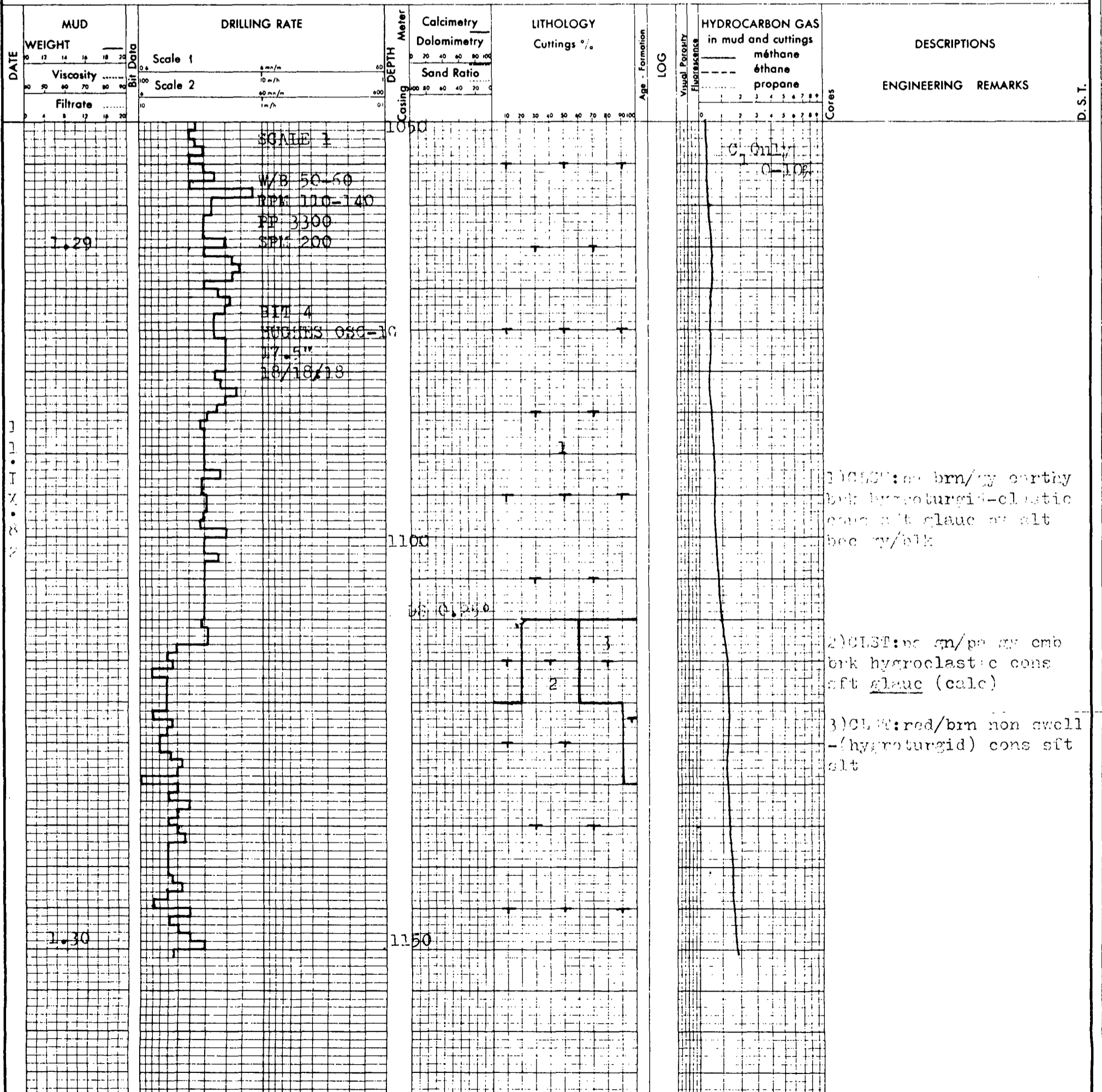
WELL 31/2-3

STATE _____
 FIELD or DISTRIC _____
 LOCATION lat _____ Longi _____
 ELEVATION KB _____
 SPUDED on _____ TD _____
 DEPTH from _____ to _____
 SCALE 1: 500' UNIT N° _____
 ENGINEERS _____

LEGEND

Each horizontal division equal 1 Meter

MUD DATA	DRILLING LEGEND	LITHOLOGY LEGEND	ENGINEERING LEGEND
W. Weight in lb/Gal	NB New Bit	Sand. Sandstone	C1 Core N°1
V Viscosity	RRB Rerun Bit	Silt	rec. 95% recovery 95%
WL Filtrate in cc	DB Diamond Bit	Quartzite	DST1 Drill Stem Test N°1
FC Filter Cake	TB Turbo Drill	Conglomerate	○ Dry
Cl Chloride Cont. in ppm	CB Core Bit	Shale. Clay	⊕ Water
Rm. Mud Resistivity in Ω m/m²	DCB Diamond Core Bit	Silty shale	● Oil
Rmf. Mud Filtrate Resistiv. in Ω m/m²	DS Deviation Survey		☉ Gas
	W/B Weight on bit		
	RPM Rotation (Revol/min)		
	LC Lost Circulation		
	NR No Returns		
	TG Trip Gas		



MASTER LOG



MLMB 9

OPERATOR Norake Shell

WELL 31/2-9

STATE _____
 FIELD or DISTRICT _____
 LOCATION lat _____ Longi _____
 ELEVATION KB _____
 SPUDED on _____ TD _____
 DEPTH from _____ to _____
 SCALE 1: 500' UNIT N° _____
 ENGINEERS _____

Each horizontal division equal 1 Meter

MUD DATA

W. Weight in lb/Gal
 V Viscosity
 WL Filtrate in cc
 FC Filter Cake
 Cl Chloride Cont. in ppm
 Rm. Mud Resistivity in Ω m/m²
 Rmf. Mud Filtrate Resist. in Ω m/m²

DRILLING LEGEND

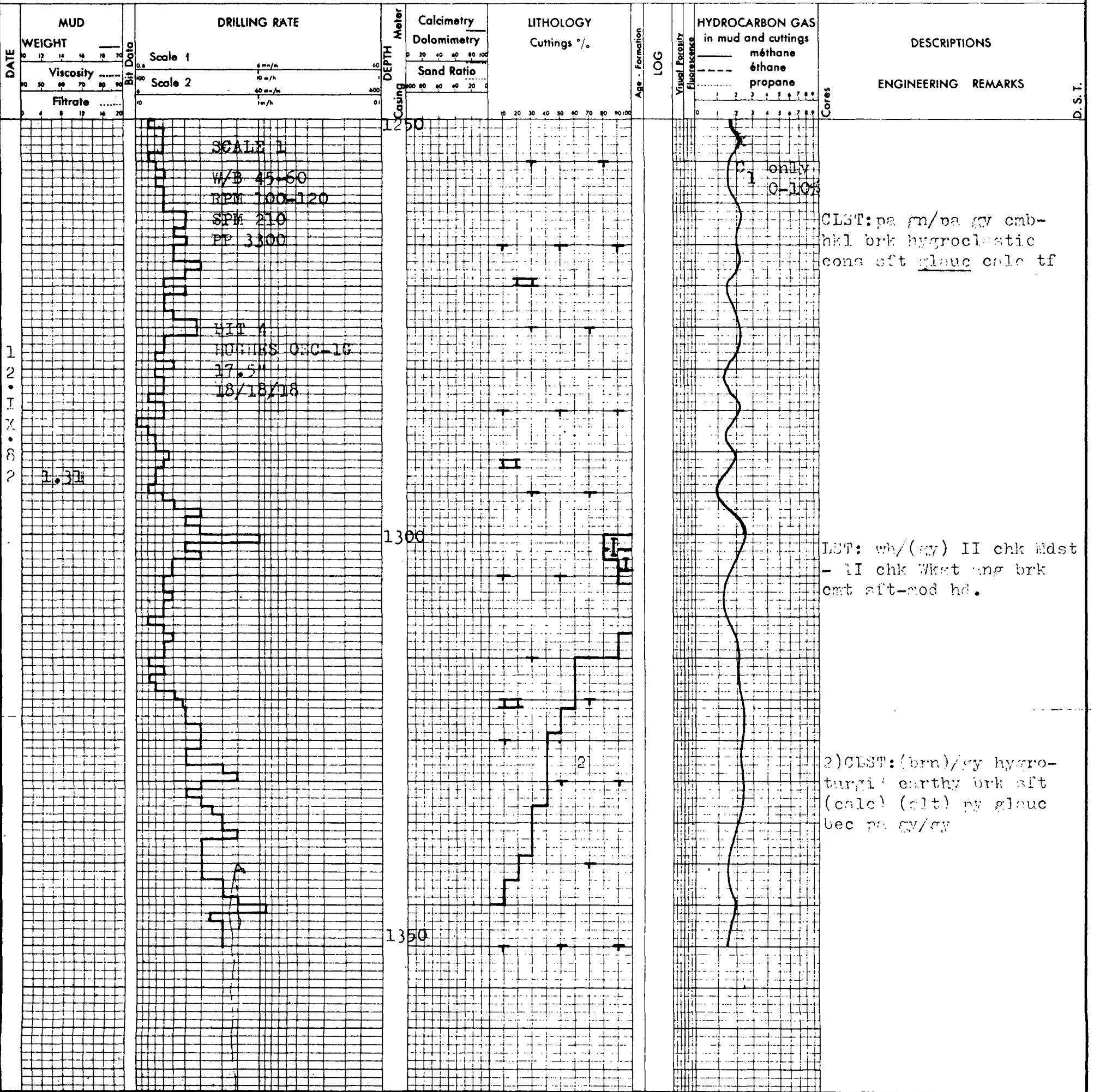
NB New Bit
 RRB Rerun Bit
 DB Diamond Bit
 TB Turbo Drill
 CB Core Bit
 DCB Diamond Core Bit
 DS Deviation Survey
 W/B Weight on bit
 RPM Rotation (Revol/min)
 LC Lost Circulation
 NR No Returns
 TG Trip Gas

LEGEND LITHOLOGY LEGEND

	Sand. Sandstone		Limestone		Metamorphic rock (Gneiss....)
	Silt		Ool limestone		Extrusive rock (Basalt....)
	Quartzite		Dolomite		Intrusive rock (Granite....)
	Conglomerate		Salt		
	Shale. Clay		Gypsum		
	Silty shale		Anhydrite		
			Coal. Lignite		
			Chert		

ENGINEERING LEGEND

C1 Core N°1
 rec. 95% recovery 95%
 DST1 Drill Stem Test N°1
 ○ Dry
 ⊕ Water
 ● Oil
 ☼ Gas



MASTER LOG



MLMB 10

OPERATOR Norme Shell

WELL 32/2-9

STATE _____
 FIELD or DISTRICT _____
 LOCATION lat _____ Longi _____
 ELEVATION KB _____
 SPUDED on _____ TD _____
 DEPTH from _____ to _____
 SCALE 1: 500' UNIT N° _____
 ENGINEERS _____

LEGEND

Each horizontal division equal 1 Meter

MUD DATA

- W. Weight in lb/Gal
- V Viscosity
- WL Filtrate in cc
- FC Filter Cake
- Cl Chloride Cont. in ppm
- Rm. Mud Resistivity in Ω m/m²
- Rmf. Mud Filtrate Resistiv. in Ω m/m²

DRILLING LEGEND

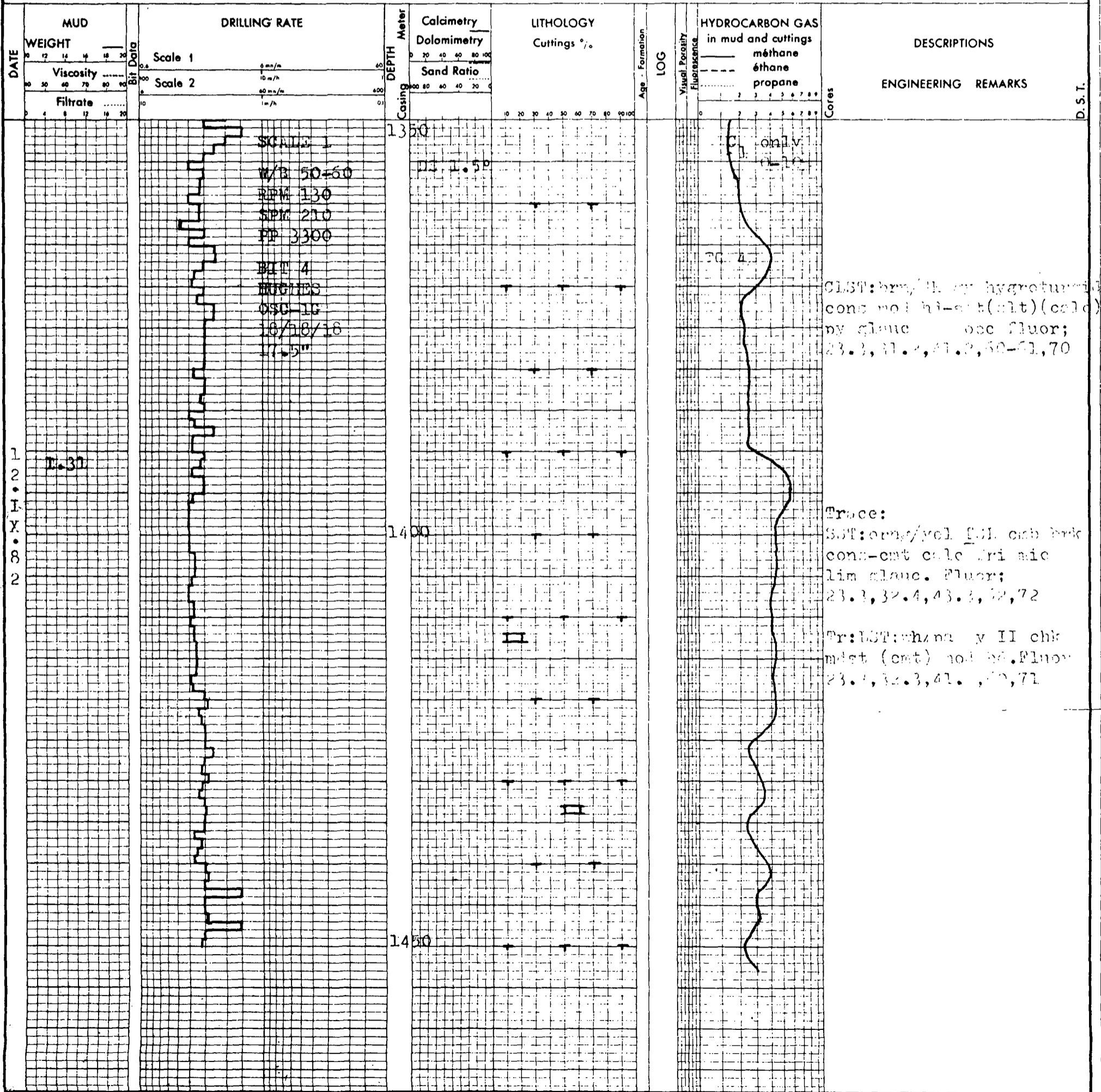
- NB New Bit
- RRB Rerun Bit
- DB Diamond Bit
- TB Turbo Drill
- CB Core Bit
- DCB Diamond Core Bit
- DS Deviation Survey
- W/B Weight on bit
- RPM Rotation (Revol/min)
- LC Lost Circulation
- NR No Returns
- TG Trip Gas

LITHOLOGY LEGEND

- Sand. Sandstone
- Silt
- Quartzite
- Conglomerate
- Shale. Clay
- Silty shale
- Limestone
- Ool limestone
- Dolomite
- Salt
- Gypsum
- Anhydrite
- Coal. Lignite
- Chert
- Métamorphic rock (Gneiss....)
- Extrusive rock (Basalt....)
- Intrusive rock (Granite....)

ENGINEERING LEGEND

- C1 Core N°1 rec. 95%
- DS T1 Drill Stem Test N°1
- Dry
- Water
- Oil
- Gas



Tr: 1ST: brn/blk by hydraturat
 cons mol hi-act (alt) (calc)
 by glauc. Fluor;
 23.2, 31.2, 41.2, 50-51, 70

Trace:
 2ST: orn/yel fsl. calc brk
 cons-cmt calc tri mic
 lim glauc. Fluor;
 23.2, 32.4, 43.2, 52, 72

Tr: 3ST: whana y II chr
 mst (cmt) mol by Fluor
 23.2, 32.3, 41.2, 50, 71

MASTER LOG



MLMB 11

OPERATOR Norske Shell

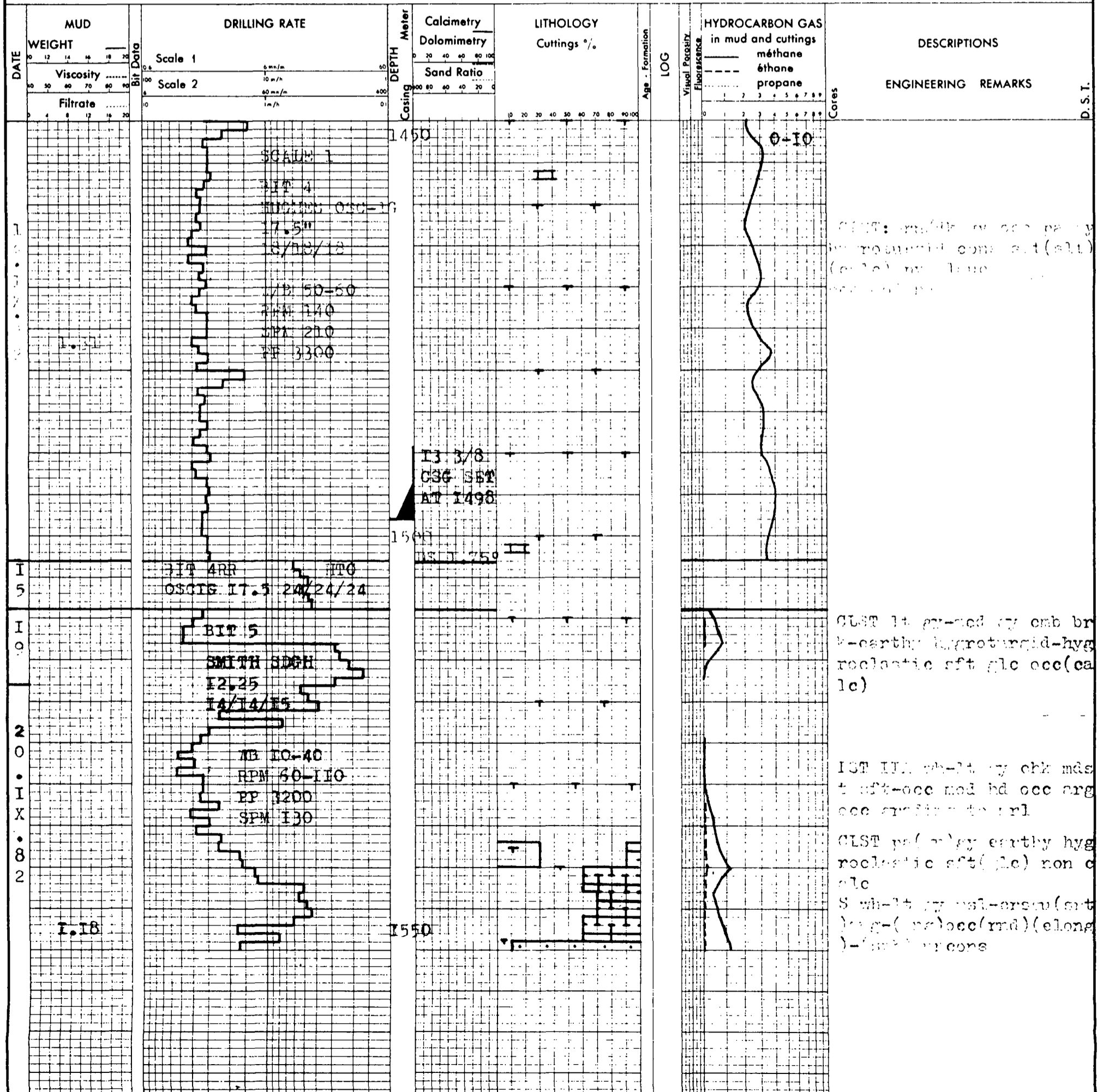
WELL 11/2-9

STATE _____
 FIELD or DISTRICT _____
 LOCATION lat _____ Longi _____
 ELEVATION KB _____
 SPUNDED on _____ TD _____
 DEPTH from _____ to _____
 SCALE 1: 500' UNIT N° _____
 ENGINEERS _____

LEGEND

Each horizontal division equal 1 Meter

MUD DATA	DRILLING LEGEND	LITHOLOGY LEGEND	ENGINEERING LEGEND
W. Weight in lb/Gal	NB New Bit	Sand. Sandstone	C1 Core N°1
V Viscosity	RRB Rerun Bit	Silt	rec. 95% recovery 95%
WL Filtrate in cc	DB Diamond Bit	Quartzite	DST1 Drill Stem Test N°1
FC Filter Cake	TB Turbo Drill	Conglomerate	○ Dry
CI Chloride Cont. in ppm	CB Core Bit	Shale. Clay	⊕ Water
Rm. Mud Resistivity in Ω m/m²	DCB Diamond Core Bit	Silty shale	● Oil
Rmf. Mud Filtrate Resistiv. in Ω m/m²	DS Deviation Survey	W. Sandstone	☼ Gas
	W/B Weight on bit	Limestone	
	RPM Rotation (Revol/min)	Ool limestone	
	LC Lost Circulation	Dolomite	
	NR No Returns	Salt	
	TG Trip Gas	Gypsum	
		Anhydrite	
		Coal. Lignite	
		Chert	
		Métamorphic rock (Gneiss....)	
		Extrusive rock (Basalt....)	
		Intrusive rock (Granite....)	



MASTER LOG



MLMB I2

OPERATOR NORSEMI STEEL

WELL 31/1-C

STATE _____
 FIELD or DISTRIC _____
 LOCATION lat _____ Longi _____
 ELEVATION KB _____
 SPUDED on _____ TD _____
 DEPTH from _____ to _____
 SCALE 1: 500' UNIT N° _____
 ENGINEERS _____

LEGEND

Each horizontal division equal 1 Meter

MUD DATA	DRILLING LEGEND	LITHOLOGY LEGEND	ENGINEERING LEGEND
W. Weight in lb/Gal	NB New Bit	Sand. Sandstone	C1 Core N°1
V Viscosity	RRB Rerun Bit	Silt	rec. 95% recovery 95%
WL Filtrate in cc	TB Turbo Drill	Quartzite	DST1 Drill Stem Test N°1
FC Filter Cake	CB Core Bit	Conglomerate	○ Dry
Cl Chloride Cont. in ppm	DCB Diamond Core Bit	Shale. Clay	⊕ Water
Rm. Mud Resistivity in Ω m/m²	DS Deviation Survey	Silty shale	● Oil
Rmf. Mud Filtrate Resistiv. in Ω m/m²	W/B Weight on bit	Calcimetry	☼ Gas
	RPM Rotation (Revol/min)	Dolomimetry	
	LC Lost Circulation	Sand Ratio	
	NR No Returns		
	TG Trip Gas		

DATE	MUD WEIGHT	DRILLING RATE	Calimetry Dolomimetry Sand Ratio	LITHOLOGY Cuttings %	HYDROCARBON GAS in mud and cuttings méthane éthane propane	DESCRIPTIONS	ENGINEERING REMARKS	D.S.T.
2010	1.19	SCALE I TRG			0-10%			
2011	1.18	DB CB303 8.5 WB 15-18 RPM 80-90 PP 900		100% RECOVERY	NOT CIRCULATED OUT	CORE 1		
2012	1.18	NB CB303 8.5 WB 20-25 RPM 90 PP 900 SPM 50		83% RECOVERY	NOT CIRCULATED OUT	CORE 2		
2013	1.19	DB IRR DB CB303 8.5 WB 15-20 RPM 80-100 PP 700 SPM 48		100% RECOVERY		CORE 3	FIBERGLASS SLEEVED CORES	
2018	1.18	DB IRR DB CB303 8.5 WB 20-25 RPM 90-105 PP 900-1150 SPM 48	1600	88% RECOVERY		CORE 4		
2013	1.18	DB IRR DB CB303 8.5 WB 22 RPM 100-110 PP 800-1150 SPM 48		98% RECOVERY	NOT CIRCULATED OUT	CORE 5		
2014	1.20	WB 20-25 BIT 5HR RPM 100-140 SMITH SDGH 12.25 PP 3000 IA/IA/IA SPM 110-120	1650				LST wh-dk gy fri arg S clr-milky wh msu-crssl lse qz CLST med-dk gy mod hd oc c(calc)slt SLTST/SST lt gy-pa brn-med gy slt-fsl-occ fsu srt sft mic occ(py) occ calc cmt hd	

MASTER LOG



MLMB I4

OPERATOR NORSKE SHELL

WELL 3I/2-9

STATE _____
 FIELD or DISTRIC _____
 LOCATION lat _____ Longi _____
 ELEVATION KB _____
 SPUDED on _____ TD _____
 DEPTH from _____ to _____
 SCALE 1: 500° UNIT N° _____
 ENGINEERS _____

LEGEND

Each horizontal division equal 1 Meter

MUD DATA	DRILLING LEGEND	LITHOLOGY LEGEND	ENGINEERING LEGEND
W. Weight in lb/Gal	NB New Bit	Sand. Sandstone	Metamorphic rock (Gneiss....)
V Viscosity	RRB Rerun Bit	Silt	Extrusive rock (Basalt....)
WL Filtrate in cc	DB Diamond Bit	Quartzite	Intrusive rock (Granite....)
FC Filter Cake	TB Turbo Drill	Conglomerate	
Cl Chloride Cont. in ppm	CB Core Bit	Shale. Clay	
Rm. Mud Resistivity in Ω m/m ²	DCB Diamond Core Bit	Silty shale	
Rmf. Mud Filtrate Resistiv. in Ω m/m ²	DS Deviation Survey		
	W/B Weight on bit		
	RPM Rotation (Revol/min)		
	LC Lost Circulation		
	NR No Returns		
	TG Trip Gas		

