Box 00 1861

N.E.B. COPY

Well Information

Operator:	CHEVRON CANADA RESOURCES
Well Name:	LIARDK29
Location:	
UWI:	300K296030123300
Pool:	NFW
Field:	NFW
Province / State:	NWT
Country:	CANADA

Elevations

Reference:		Ground:	409.6m
Cut(-) / Fill(+):		Kelly Bushing:	418.8m
K.B. to Ground:	m	Casing Flange:	m

Total Depth

Measurement Type	Measured Depth	True Vertical Depth
Drillers TD (Tally)	3000m	2916.19m
Drillers TD (Strap or SLM)	m	m
Loggers TD	m	m

Well Node - Surface Node

Well Type:	Deviated		
Longitude:	123.5	N / S Co - Ordinates:	
Latitude:	60.5	E / W Co - Ordinates:	

Well Node - Bottom Hole Node

Longitude:		N / S Co - Ordinates:	27.63 meters South
Latitude:		E / W Co - Ordinates:	347.75 meters East

Well Summary

Spud Date:	Feb 3, 1999 @ 08:00hrs
TD Date:	Mar 27, 1999 @ 07:15hrs
Rig Release Date:	
Contractor:	AKITA DRILLING LTD

Drilling Fluid Summary

Fluid Type	From	To
Gel Chem Spud Mud	0m	711m
Oil based Invert	771m	2500m
Gel Chem	2500m	3000m

Casing Summary

Type	Hole Size	Casing Size	Landed At
Surface	444mm	340mm	701.3m
Intermediate	311mm	244mm	2500m

Work Schedule

Contractor	Geologist	Log Interval	Dates Logged
Lillico Petroleum Consultants	Brock Lillico	700m - 3000m	Feb 16, 1999 - Mar 28, 1999
Lillico Petroleum Consultants	Cathy Lillico	2427m - 3000m	Mar 12, 1999 - Mar 28, 1999

Remarks

Legend

Rock Types and Thin Beds

Whole Bed	Stringer	Nodule	Breccia	Clast	Pebble	Grain	Rock Type
							Anhydrite - primary
							Anhydrite - secondary
							Argillite
							Barite
							Bentonite
							Breccia
							Calcareous
							Cement
							Conglomerate - mixed
							Conglomerate - dark chert
							Conglomerate - light chert
							Conglomerate - varicolored chert
							Chert - dark
							Chert - fossiliferous
							Chert - light
							Chert - tripolitic
							Chert - varicolored
							Claystone - colored
							Claystone - gray
							Coal
							Dolomite
							Ferruginous
							Feldspar
							Gypsum
							Igneous - acidic

Whole Bed	Stringer	Nodule	Breccia	Clast	Pebble	Grain	Rock Type
							Igneous - basic
							Igneous - metamorphic
							Limestone - grain supported
							Limestone - mud supported
							Manganese
							Marlstone - calcareous
							Marlstone - dolomitic
							Phosphate
							Pyrite
							Quartz
							Salt
							Shale - black
							Shale - medium gray
	Shale - light gray						Shale - dark gray
	Shale - light to medium gray						Shale - medium to dark gray
	Shale - light to dark gray						Shale - dark colored
	Shale - light colored						Shale - light to medium colored
	Shale - light to dark colored						Shale - medium to dark colored
							Shale - medium colored
							Siderite
							Sandstone
							Siltstone
							Till - glacial
							Volcanic (Tuff)
							Welded Volcanic (Tuff)

Accessories

//	Anhydritic		Cherty - tripolitic	I	Illitic		Sandy
—	Argillaceous		Cherty - varicolored	K	Kaolinitic		Sideritic
	Baritic	C	Chloritic	π	Marly - calcareous		Siliceous
	Bentonitic		Clayey		Marly - dolomitic	••	Silty
	Bituminous		Dolomitic		Micromicaceous		Stylolitic
⊥	Calcareous	Fe	Ferruginous staining	ML	Mixed layer clayey	V	Tuffaceous
	Carbonaceous		Fractures	M	Montmorillonitic	Z	Zeolitic
	Cherty - dark	~	Glauconitic		Phosphate pellets		
	Cherty - fossiliferous	\\	Gypsiferous	P	Pyritic		
	Cherty - light	G	Gibbsitic		Salt casts		

Matrix

	Argillaceous		Marl - dolomitic
B	Bentonite		Micrite
	Bituminous	M	Mixed Clay
	Clay	M	Montmorillonite
C	Chlorite		Sand
G	Gibbsite		Silt
I	Illite		Sparry Calcite
K	Kaolinite	Z	Zeolite
π	Marl - calcareous		

Cement

	Anhydritic		Gypsiferous
	Baritic	H	Hematitic
	Bituminous	L	Limonitic
	Calcareous	P	Pyritic
	Chert - dark		Salt
	Chert - light		Sideritic
	Dolomitic		Siliceous
Fe	Ferruginous		

Miscellaneous Grains

B	Biotite	*	Mineral crystal		Orthoclase
	Glauconite		Mineral - dark		Plagioclase
m	Mica flakes	M	Muscovite	o	Sand grain

Textures

c	Chalky	L	Lithographic
CX	Cryptocrystalline	mx	Microcrystalline
e	Earthy		

Core Track

Indicates Cored Interval

Indicates Lost Core

Test Track

Indicates Tested Interval

Fossils (Rock Builders)

	Aggregate grains		Coral - head		Oncolite
	Algae - laminations		Coral - colonial		Oolite
	Algae - non descript		Coral - solitary		Ostracod
	Algae - ootoid		Crinoid		Pelecypod
	Algae - skeletal		Diatom		Pellet
	Amphipora		Echnoid		Pisolite
	Belemnite		Echnoid - spine		Plant Remains
	Bioclastic		Fish Remains		Scaphopod
	Brachiopod		Euryamphipora		Spicule
	Bryozoa		Foraminifera		Sponge
	Calciphaera	F	Fossil		Stromatoporoid
	Cephalopod		Fragmental	B	Stromatoporoid - bulbous
	Chaetetes		Gastropod	M	Stromatoporoid - massive
	Coated grain		Graptolite		Stromatoporoid - tabular
	Conodont	H	Hydrozoa		Tentaculites
	Coral		Intraclast		Trilobite
	Coral - branching		Mollusc		

Wentworth Grain / Cyrstal Size Scale Chart

Clastic Rocks Common Name	Crystalline Rocks Common Name	Lower Size Limit (mm)	Upper Size Limit (mm)	Size Grades Phi (Ø)
Clay	Cryptocrystalline	0.00098	0.004	+10 to +9
Very Fine Silt	Very Finely Microcrystalline	0.004	0.008	+8
Fine Silt	Finely Microcrystalline	0.008	0.016	+7
Medium Silt	Medium Microcrystalline	0.016	0.031	+6
Coarse Silt	Coarsely Microcrystalline	0.031	0.0625	+5
Very Fine Sand	Very Finely Crystalline	0.0625	0.125	+4
Fine Sand	Finely Crystalline	0.125	0.25	+3
Medium Sand	Medium Crystalline	0.25	0.5	+2
Coarse Sand	Coarsely Crystalline	0.5	1.0	+1
Very Coarse Sand	Finely Megacrystalline	1.0	2.0	0
Granules	Coarsely Megacrystalline	2.0	4.0	-1
Fine Pebbles		4.0	8.0	-2
Medium pebbles		8.0	16.0	-3
Coarse Pebbles		16.0	32.0	-4
Very Coarse pebbles		32.0	64.0	-5
Cobbles		64.0	256.0	-6 to -7
Boulders		256.0	infinity	-8 to -9

The size measure Phi is equal to the negative logarithm to the base 2 of the size in millimeters.

Thus 1 mm = 0 Phi and 1/2 mm = +1 Phi and 1/4 mm = +2 Phi etc.

Porosity Type Track

e	Earthy - low permeability - crystals / grains less than 1 / 16 mm
⊡	Fenestral - voids from gas bubbles - shrinkage cracks - birdseye texture
F	Fracture
X	Intercrystalline - Interfragmental - Intergranular
	Interoolitic - Interpelletoidal
	Moldic
O	Organic - Bridged - Intrafossil
P	Pinpoint - voids less than 1/ 16 mm
V	Vuggy - voids greater than 1 / 16 mm

Diagenesis Track

⊥	Calcification - Calichified
	Dolomitization
	Diagenetically mottled
	Fracturing
	Leaching
	Metasomatism - Replacement - Allotropic recrystallization - Inversion - Transformation
Pd	Pressure Deformation
Rx	Recrystallization - Strain recrystallization - Grain growth
	Silicification
	Solution cavity filled - Geopetal structure
	Stylolitic
W	Weathering

Degree of Diagenesis is in (%) percent. ? Indicates questionable interpretation.

Oil Show Track

●	Even staining (75 - 100% of the rock is stained) - fluoresces in solvent
◕	Spotted staining (50 - 75% of the rock is stained) - fluoresces in solvent
◉	Spotted staining (25 - 50% of the rock is stained) - fluoresces in solvent
⊙	Spotted staining (1 - 25% of the rock is stained) - fluoresces in solvent
○	Questionable oil staining - No fluorescents in solvent
D	Dead oil staining - asphaltic - bitumen - pyrobitumen etc.

Sorting Track

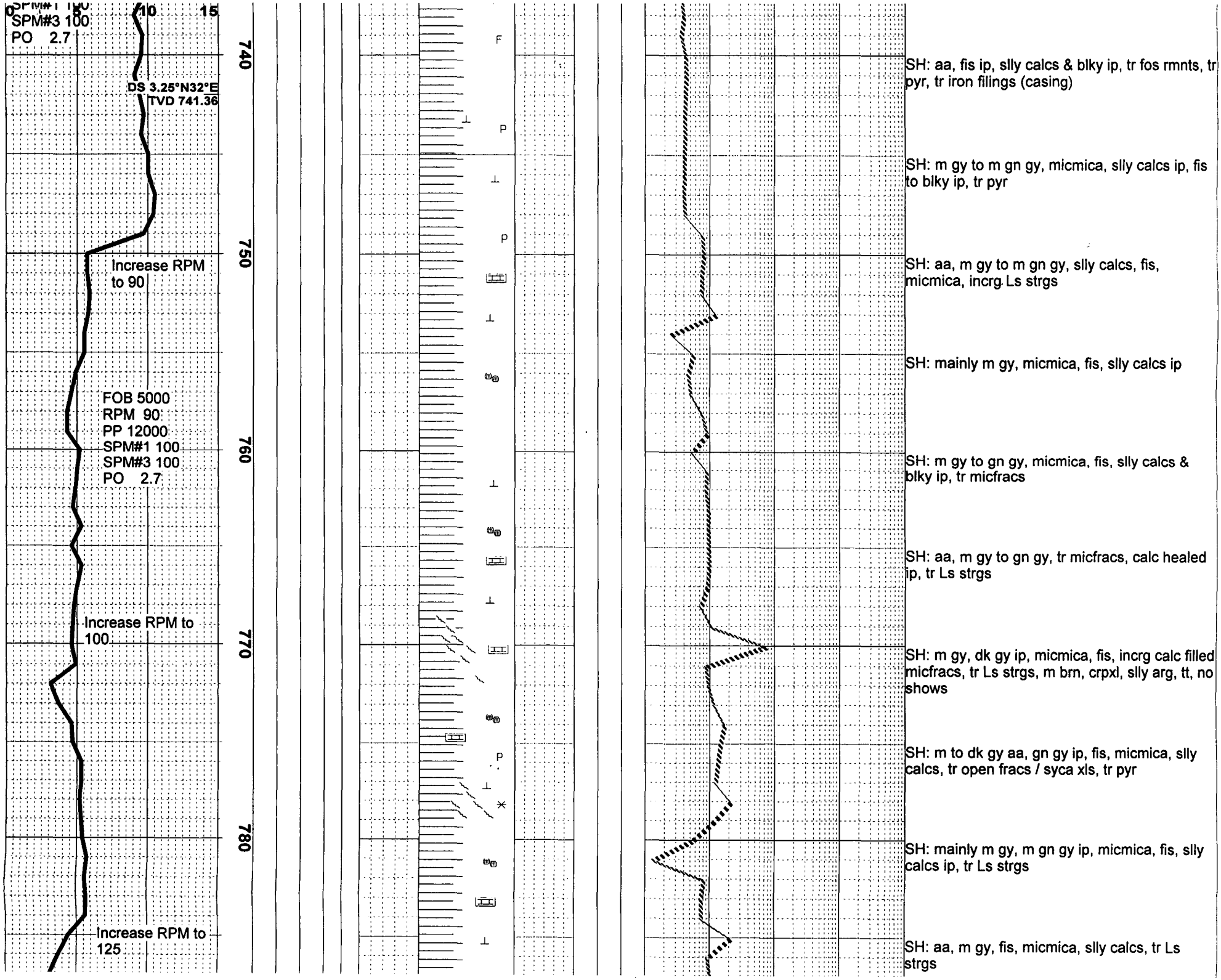
vP	Very poorly sorted - > 10 phi size grade classes
P	Poorly sorted - 6-10 phi size grade classes
M	Moderately sorted - 3-6 phi size grade classes
mW	Moderately well sorted - 2-3 phi size grade class
W	Well sorted - < 2 phi size grade classes

Rounding Track

vA	Very Angular	r	Subrounded
A	Angular	R	Rounded
a	Subangular	wR	Well Rounded

Framework Track

Framework is a ratio between clastic material greater than 1/16 mm and primary void filler less th 1/16 mm. ? indicates questionable interpretation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SPM#3 100
PO 2.7
DS 3.25°N32°E
TVD 741.36
740
750
760
770
780
Increase RPM to 90
FOB 5000
RPM 90
PP 12000
SPM#1 100
SPM#3 100
PO 2.7
Increase RPM to 100
Increase RPM to 125
SH: aa, fis ip, slly calcs & blky ip, tr fos rmnts, tr pyr, tr iron filings (casing)
SH: m gy to m gn gy, micmica, slly calcs ip, fis to blky ip, tr pyr
SH: aa, m gy to m gn gy, slly calcs, fis, micmica, incrg Ls strgs
SH: mainly m gy, micmica, fis, slly calcs ip
SH: m gy to gn gy, micmica, fis, slly calcs & blky ip, tr micfracs
SH: aa, m gy to gn gy, tr micfracs, calc healed ip, tr Ls strgs
SH: m gy, dk gy ip, micmica, fis, incrg calc filled micfracs, tr Ls strgs, m brn, crpxl, slly arg, tt, no shows
SH: m to dk gy aa, gn gy ip, fis, micmica, slly calcs, tr open fracs / syca xls, tr pyr
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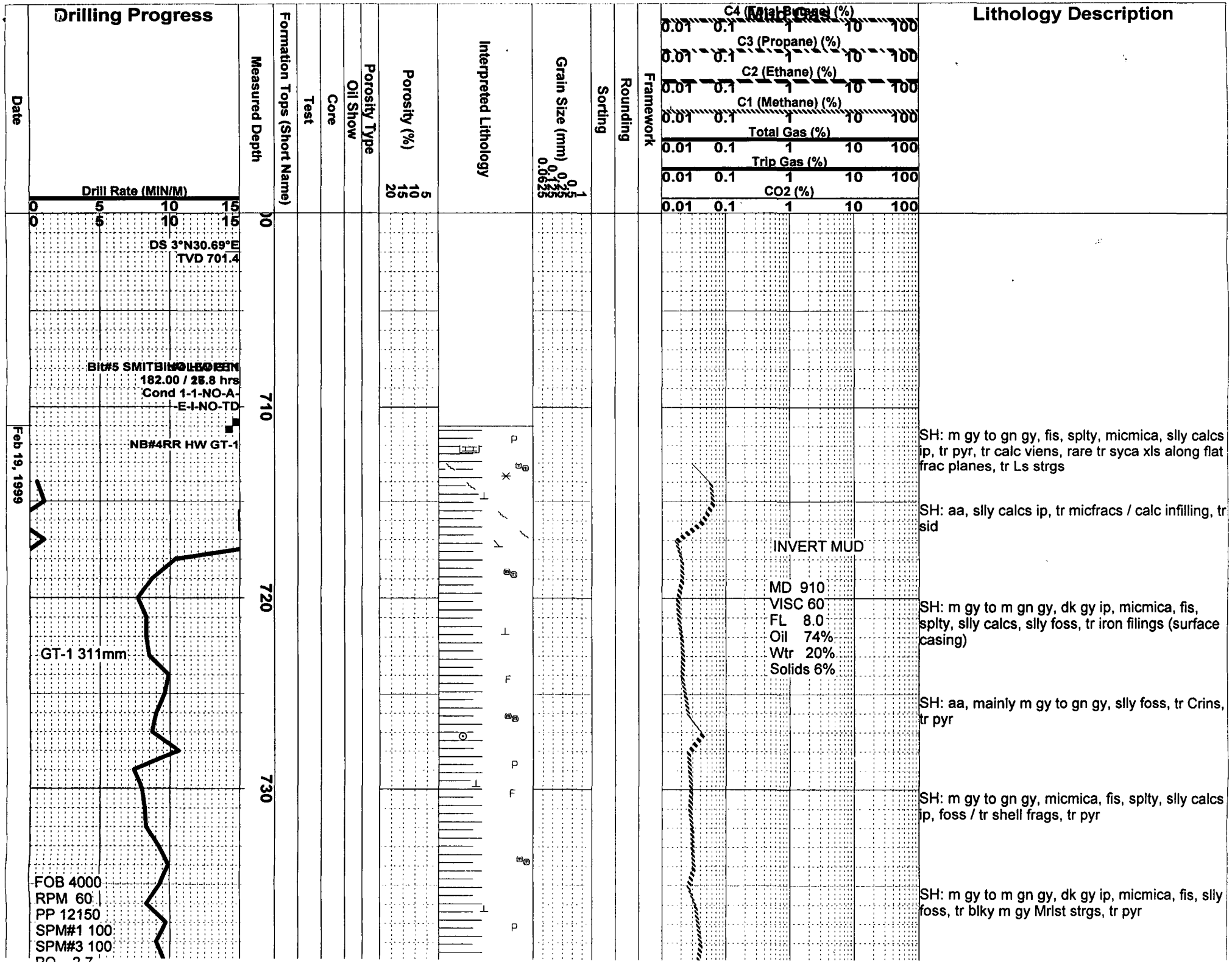
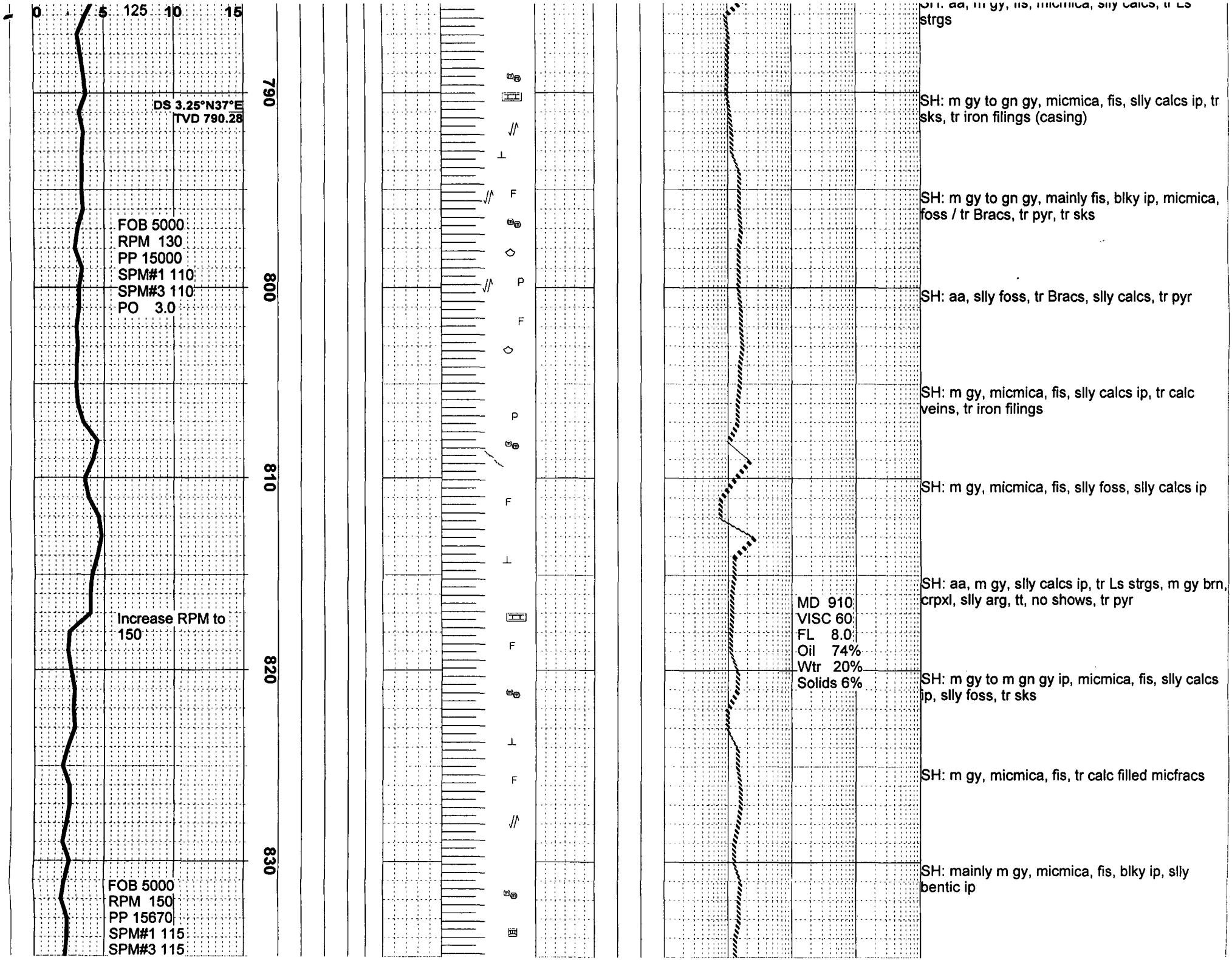
SH: aa, m gy, fis, micmica, slly calcs, tr Ls strgs


Drilling Progress
Date
Drill Rate (MIN/M)
0 5 10 15
Measured Depth
Formation Tops (Short Name)
Test
Core
Oil Show
Porosity Type
Porosity (%)
5 10 15 20
Interpreted Lithology
Grain Size (mm)
0.5 0.25 0.125 0.0625
Sorting
Rounding
Framework
Mud Gas
C4 (Butane) (%)
C3 (Propane) (%)
C2 (Ethane) (%)
C1 (Methane) (%)
Total Gas (%)
Trip Gas (%)
CO2 (%)
0.01 0.1 1 10 100
Lithology Description
DS 3°N30.69°E
TVD 701.4
Bit#5 SMITH
182.00 / 26.8 hrs
Cond 1-1-NO-A-
-E-I-NO-TD-
NB#4RR HW GT-1
Feb 19, 1999
GT-1 311mm
FOB 4000
RPM 60
PP 12150
SPM#1 100
SPM#3 100
INVERT MUD
MD 910
VISC 60
FL 8.0
Oil 74%
Wtr 20%
Solids 6%
SH: m gy to gn gy, fis, splty, micmica, slly calcs ip, tr pyr, tr calc viens, rare tr syca xls along flat frac planes, tr Ls strgs
SH: aa, slly calcs ip, tr micfracs / calc infilling, tr sid
SH: m gy to m gn gy, dk gy ip, micmica, fis, splty, slly calcs, slly foss, tr iron filings (surface casing)
SH: aa, mainly m gy to gn gy, slly foss, tr Crins, tr pyr
SH: m gy to gn gy, micmica, fis, splty, slly calcs ip, foss / tr shell frags, tr pyr
SH: m gy to m gn gy, dk gy ip, micmica, fis, slly foss, tr blky m gy Mrlst strgs, tr pyr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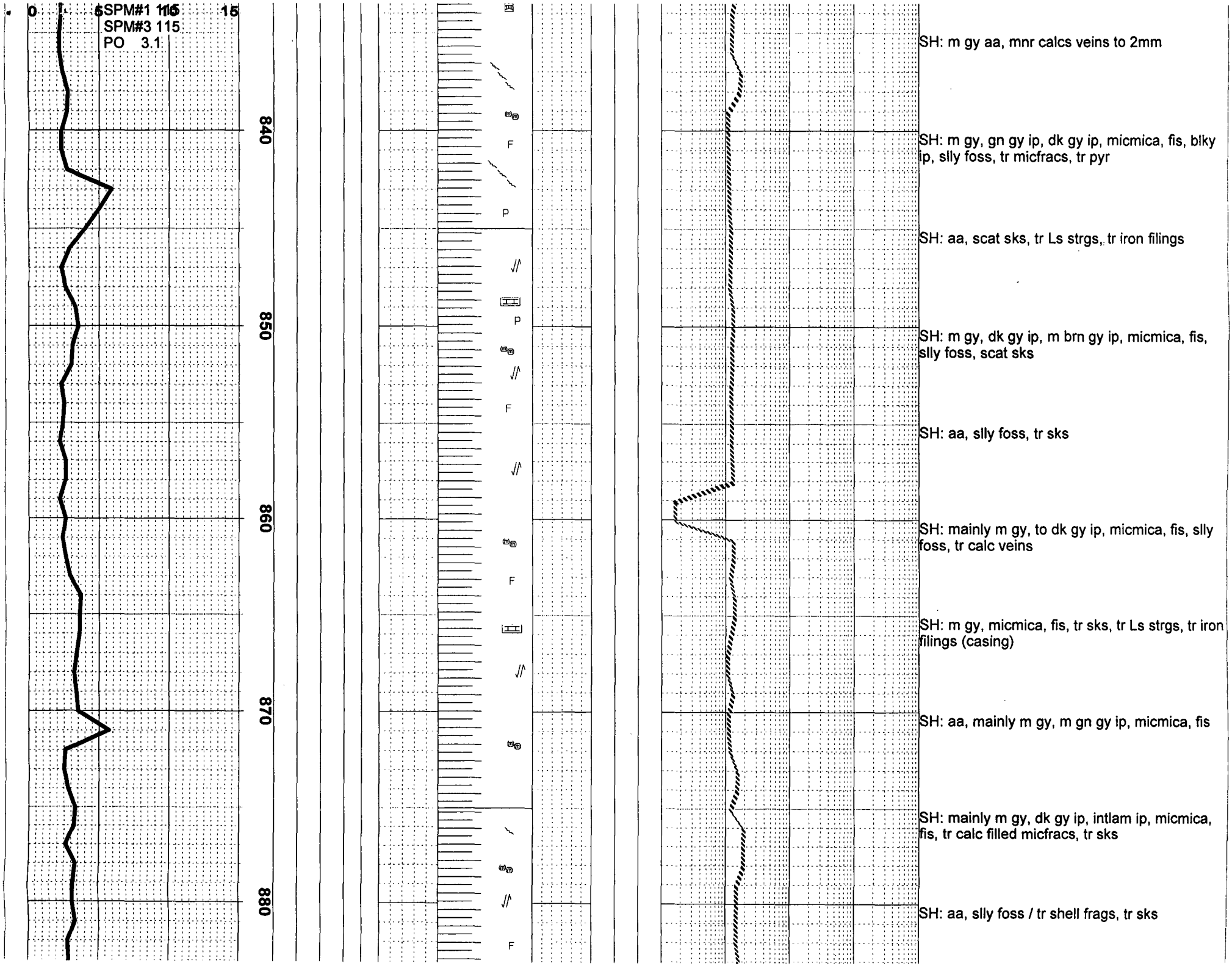
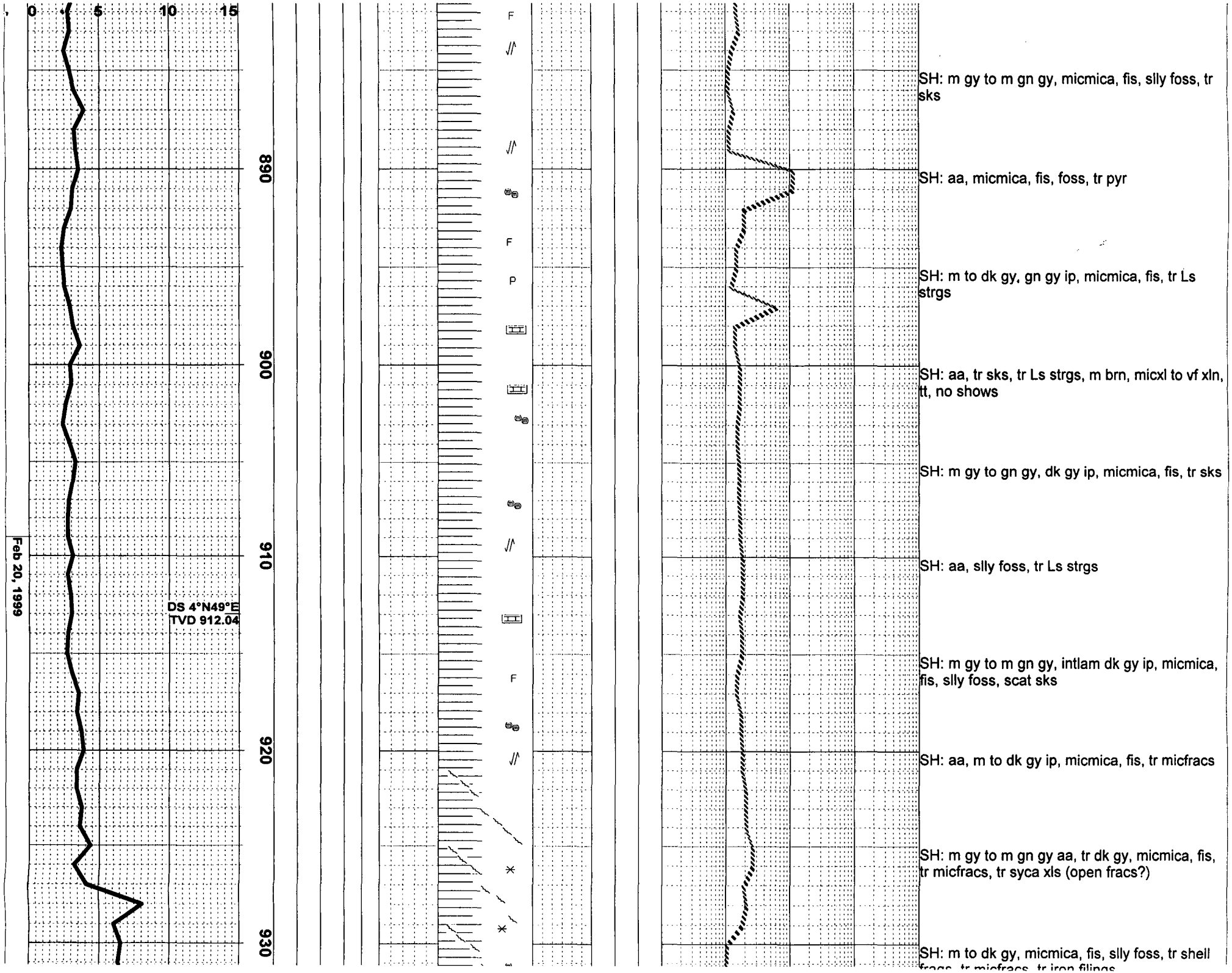
5
125
10
15
790
800
810
820
830
DS 3.25°N37°E
TVD 790.28
FOB 5000
RPM 130
PP 15000
SPM#1 110
SPM#3 110
PO 3.0
Increase RPM to 150
FOB 5000
RPM 150
PP 15670
SPM#1 115
SPM#3 115
MD 910
VISC 60
FL 8.0
Oil 74%
Wtr 20%
Solids 6%
SH: aa, m gy, fis, micmica, slly calcs, tr Ls strgs
SH: m gy to gn gy, micmica, fis, slly calcs ip, tr sks, tr iron filings (casing)
SH: m gy to gn gy, mainly fis, blky ip, micmica, foss / tr Bracs, tr pyr, tr sks
SH: aa, slly foss, tr Bracs, slly calcs, tr pyr
SH: m gy, micmica, fis, slly calcs ip, tr calc veins, tr iron filings
SH: m gy, micmica, fis, slly foss, slly calcs ip
SH: aa, m gy, slly calcs ip, tr Ls strgs, m gy brn, crpxl, slly arg, tt, no shows, tr pyr
SH: m gy to m gn gy ip, micmica, fis, slly calcs ip, slly foss, tr sks
SH: m gy, micmica, fis, tr calc filled micfracs
SH: mainly m gy, micmica, fis, blky ip, slly bentic ip


0
6
15
SPM#1 116
SPM#3 115
PO 3.1
840
850
860
870
880
P
F
SH: m gy aa, mnr calcs veins to 2mm
SH: m gy, gn gy ip, dk gy ip, micmica, fis, blky ip, slly foss, tr micfracs, tr pyr
SH: aa, scat sks, tr Ls strgs, tr iron filings
SH: m gy, dk gy ip, m brn gy ip, micmica, fis, slly foss, scat sks
SH: aa, slly foss, tr sks
SH: mainly m gy, to dk gy ip, micmica, fis, slly foss, tr calc veins
SH: m gy, micmica, fis, tr sks, tr Ls strgs, tr iron filings (casing)
SH: aa, mainly m gy, m gn gy ip, micmica, fis
SH: mainly m gy, dk gy ip, intlam ip, micmica, fis, tr calc filled micfracs, tr sks
SH: aa, slly foss / tr shell frags, tr sks


0
5
10
15
890
900
910
920
930
Feb 20, 1999
DS 4°N49°E
TVD 912.04
F
P
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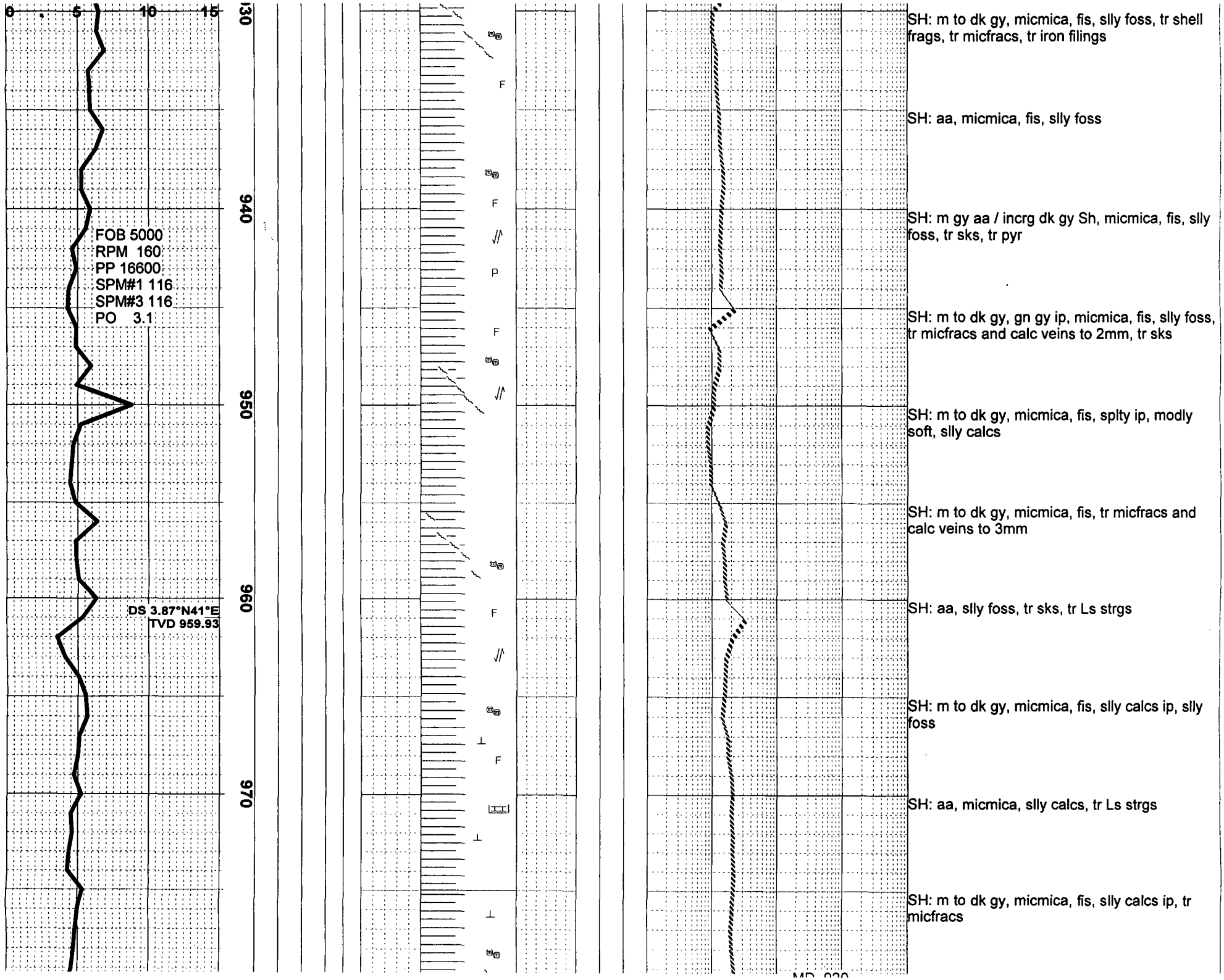
SH: aa, micmica, fis, foss, tr pyr
SH: m to dk gy, gn gy ip, micmica, fis, tr Ls strgs
SH: aa, tr sks, tr Ls strgs, m brn, micxl to vf xln, tt, no shows
SH: m gy to gn gy, dk gy ip, micmica, fis, tr sks
SH: aa, slly foss, tr Ls strgs
SH: m gy to m gn gy, intlam dk gy ip, micmica, fis, slly foss, scat sks
SH: aa, m to dk gy ip, micmica, fis, tr micfracs
SH: m gy to m gn gy aa, tr dk gy, micmica, fis, tr micfracs, tr syca xls (open fracs?)
SH: m to dk gy, micmica, fis, slly foss, tr shell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5
10
15
930
940
950
960
970
FOB 5000
RPM 160
PP 16600
SPM#1 116
SPM#3 116
PO 3.1
DS 3.87°N41°E
TVD 959.93
F
P
F
F
F
F
F
SH: m to dk gy, micmica, fis, slly foss, tr shell frags, tr micfracs, tr iron filings
SH: aa, micmica, fis, slly foss
SH: m gy aa / incrg dk gy Sh, micmica, fis, slly foss, tr sks, tr pyr
SH: m to dk gy, gn gy ip, micmica, fis, slly foss, tr micfracs and calc veins to 2mm, tr sks
SH: m to dk gy, micmica, fis, splty ip, modly soft, slly calcs
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SH: aa, slly foss, tr sks, tr Ls strgs
SH: m to dk gy, micmica, fis, slly calcs ip, slly foss
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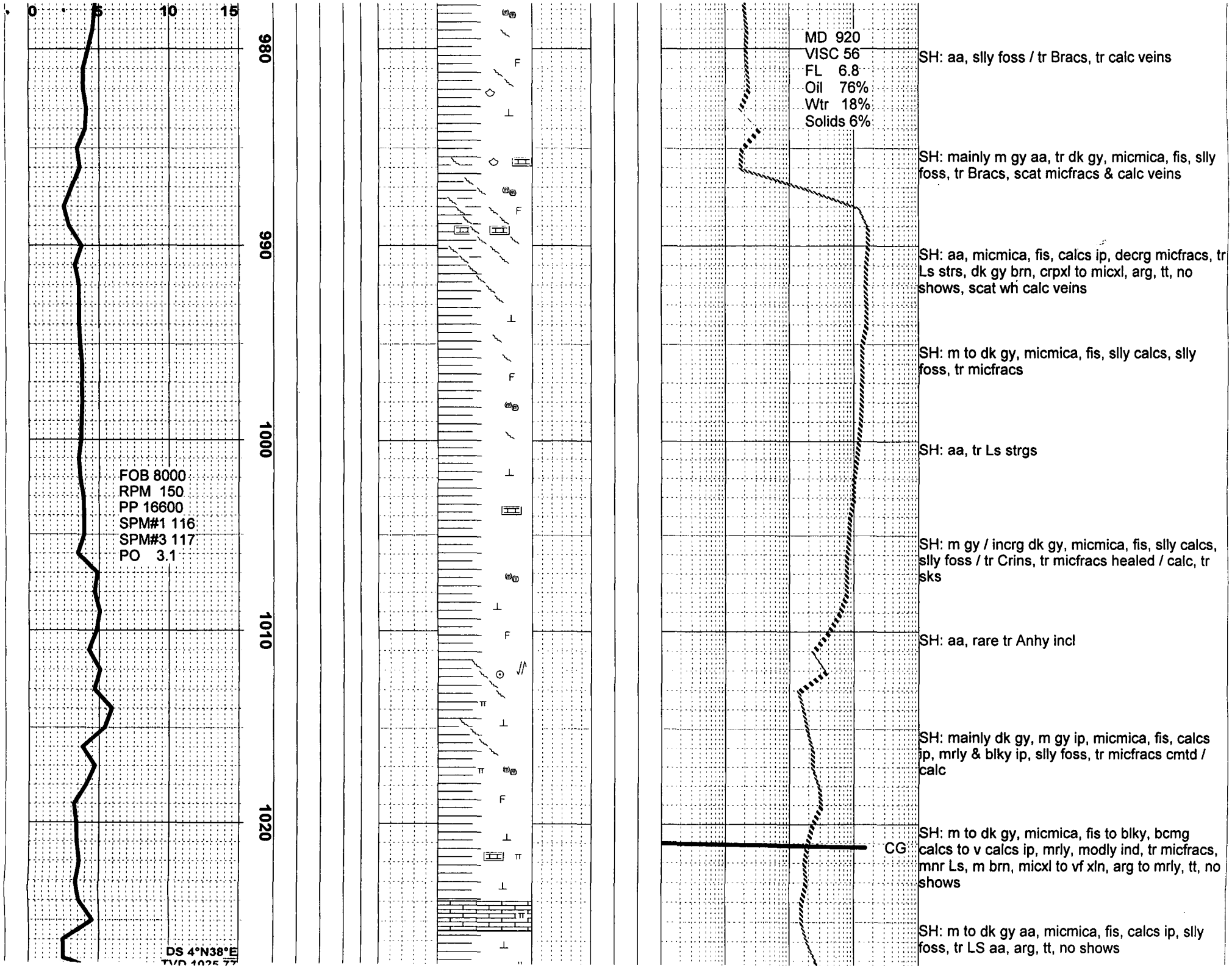
MD 920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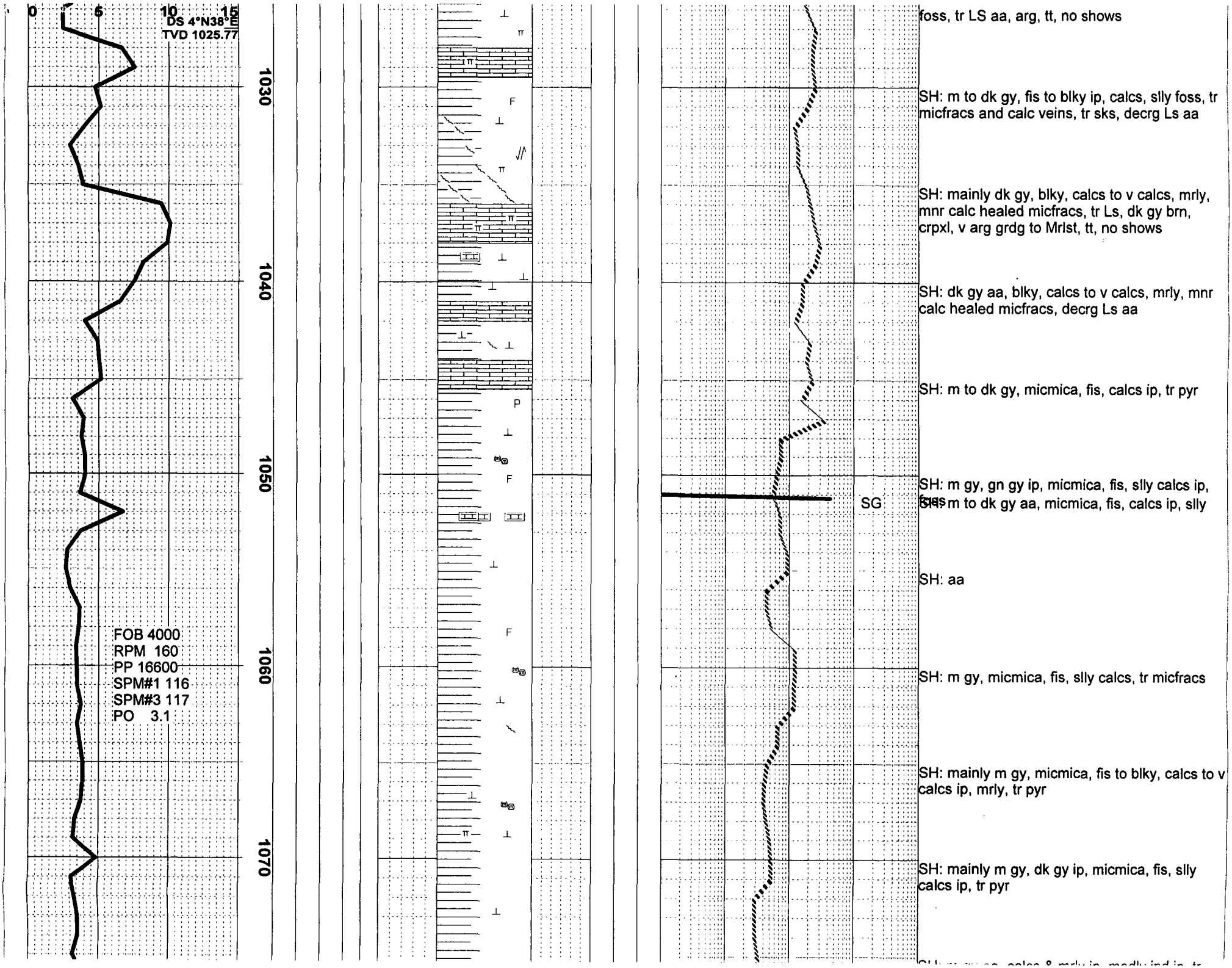
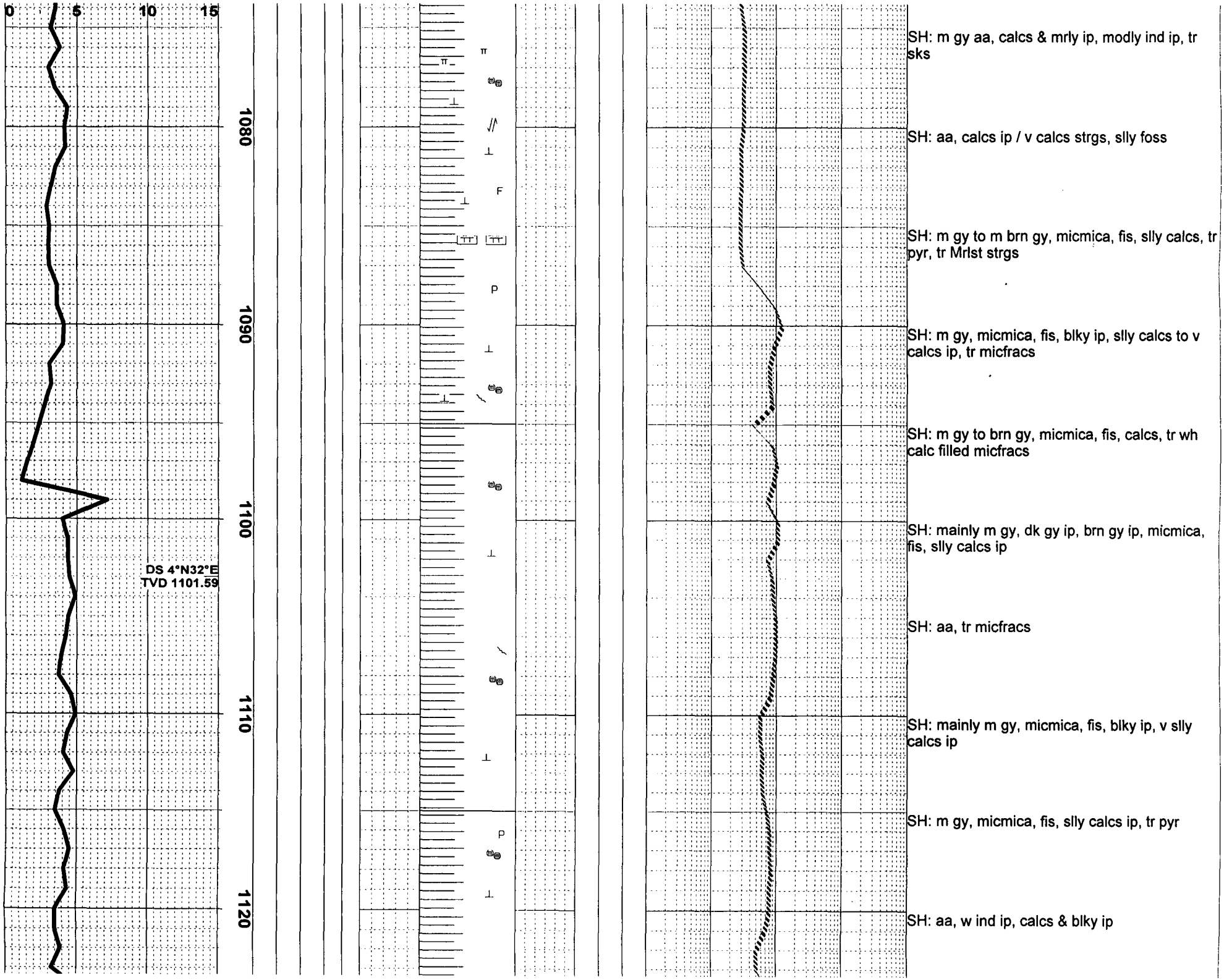
5
10
15
980
990
1000
1010
1020
FOB 8000
RPM 150
PP 16600
SPM#1 116
SPM#3 117
PO 3.1
DS 4°N38°E
MD 920
VISC 56
FL 6.8
Oil 76%
Wtr 18%
Solids 6%
SH: aa, slly foss / tr Bracs, tr calc veins
SH: mainly m gy aa, tr dk gy, micmica, fis, slly foss, tr Bracs, scat micfracs & calc veins
SH: aa, micmica, fis, calcs ip, decrg micfracs, tr Ls strs, dk gy brn, crpxl to micxl, arg, tt, no shows, scat wh calc veins
SH: m to dk gy, micmica, fis, slly calcs, slly foss, tr micfracs
SH: aa, tr Ls strgs
SH: m gy / incrg dk gy, micmica, fis, slly calcs, slly foss / tr Crins, tr micfracs healed / calc, tr sks
SH: aa, rare tr Anhy incl
SH: mainly dk gy, m gy ip, micmica, fis, calcs ip, mrly & blky ip, slly foss, tr micfracs cmtd / calc
CG
SH: m to dk gy, micmica, fis to blky, bcmg calcs to v calcs ip, mrly, modly ind, tr micfracs, mnr Ls, m brn, micxl to vf xln, arg to mrly, tt, no shows
SH: m to dk gy aa, micmica, fis, calcs ip, slly foss, tr LS aa, arg, tt, no shows


0
5
10
15
DS 4°N38°E
TVD 1025.77
1030
1040
1050
1060
1070
FOB 4000
RPM 160
PP 16600
SPM#1 116
SPM#3 117
PO 3.1
F
P
SG
foss, tr LS aa, arg, tt, no shows
SH: m to dk gy, fis to blky ip, calcs, slly foss, tr micfracs and calc veins, tr sks, decrg Ls aa
SH: mainly dk gy, blky, calcs to v calcs, mrly, mnr calc healed micfracs, tr Ls, dk gy brn, crpxl, v arg grdg to Mrlst, tt, no shows
SH: dk gy aa, blky, calcs to v calcs, mrly, mnr calc healed micfracs, decrg Ls aa
SH: m to dk gy, micmica, fis, calcs ip, tr pyr
SH: m gy, gn gy ip, micmica, fis, slly calcs ip, tr sks
SH: m to dk gy aa, micmica, fis, calcs ip, slly
SH: aa
SH: m gy, micmica, fis, slly calcs, tr micfracs
SH: mainly m gy, micmica, fis to blky, calcs to v calcs ip, mrly, tr pyr
SH: mainly m gy, dk gy ip, micmica, fis, slly calcs ip, tr pyr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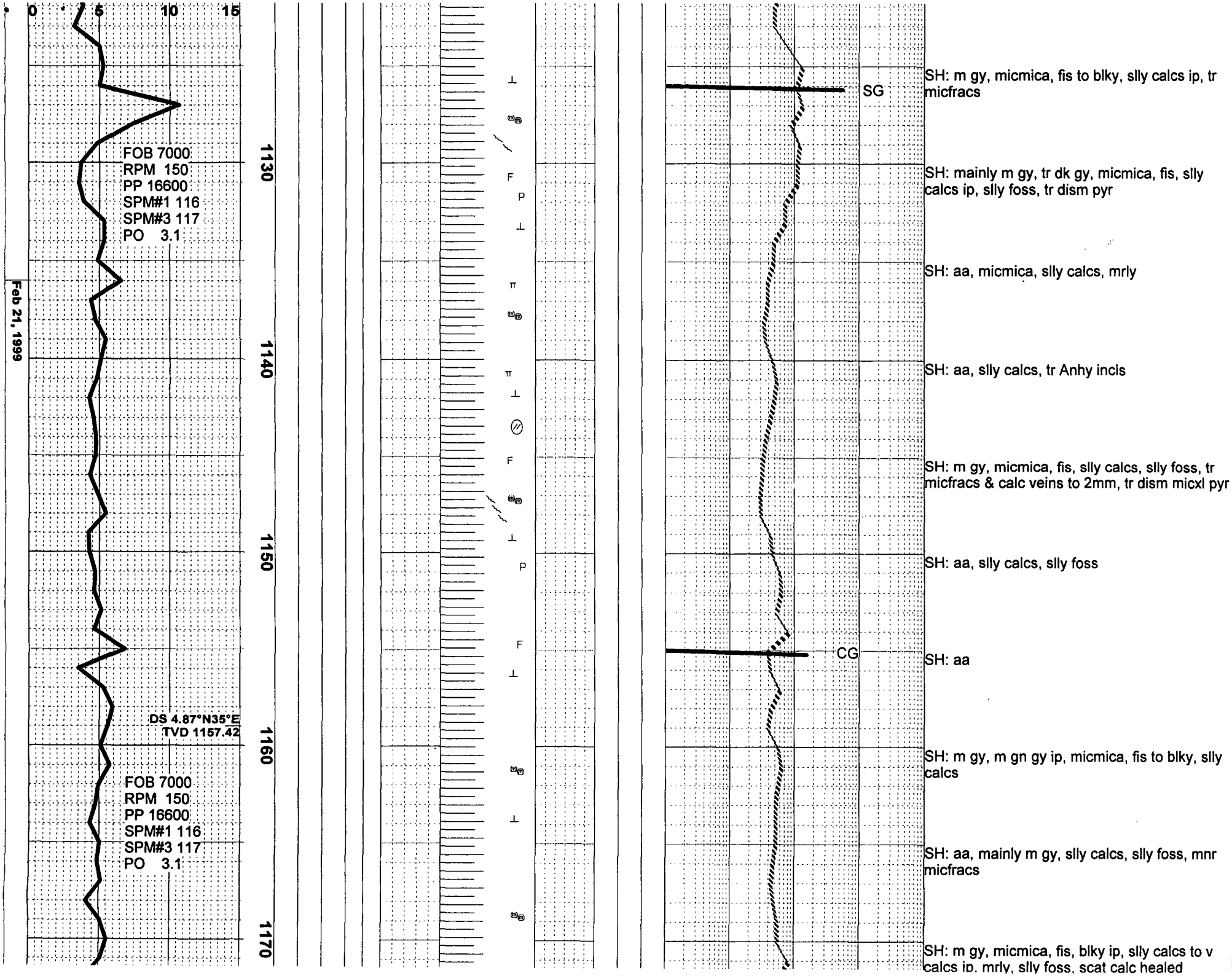
10
15
1080
1090
1100
1110
1120
DS 4°N32°E
TVD 1101.59
SH: m gy aa, calcs & mrly ip, modly ind ip, tr sks
SH: aa, calcs ip / v calcs strgs, slly foss
SH: m gy to m brn gy, micmica, fis, slly calcs, tr pyr, tr Mrlst strgs
SH: m gy, micmica, fis, blky ip, slly calcs to v calcs ip, tr micfracs
SH: m gy to brn gy, micmica, fis, calcs, tr wh calc filled micfracs
SH: mainly m gy, dk gy ip, brn gy ip, micmica, fis, slly calcs ip
SH: aa, tr micfracs
SH: mainly m gy, micmica, fis, blky ip, v slly calcs ip
SH: m gy, micmica, fis, slly calcs ip, tr pyr
SH: aa, w ind ip, calcs & blky ip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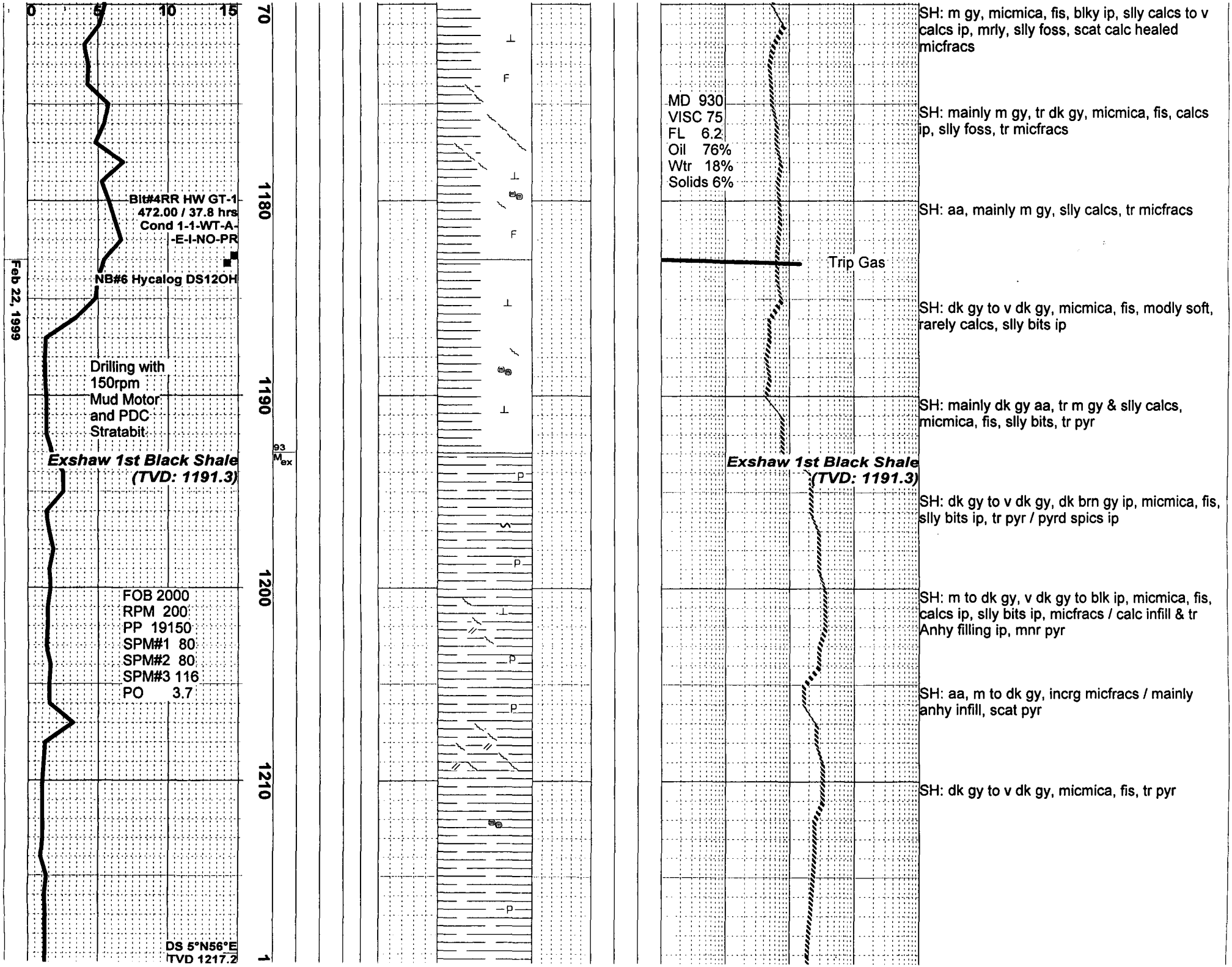
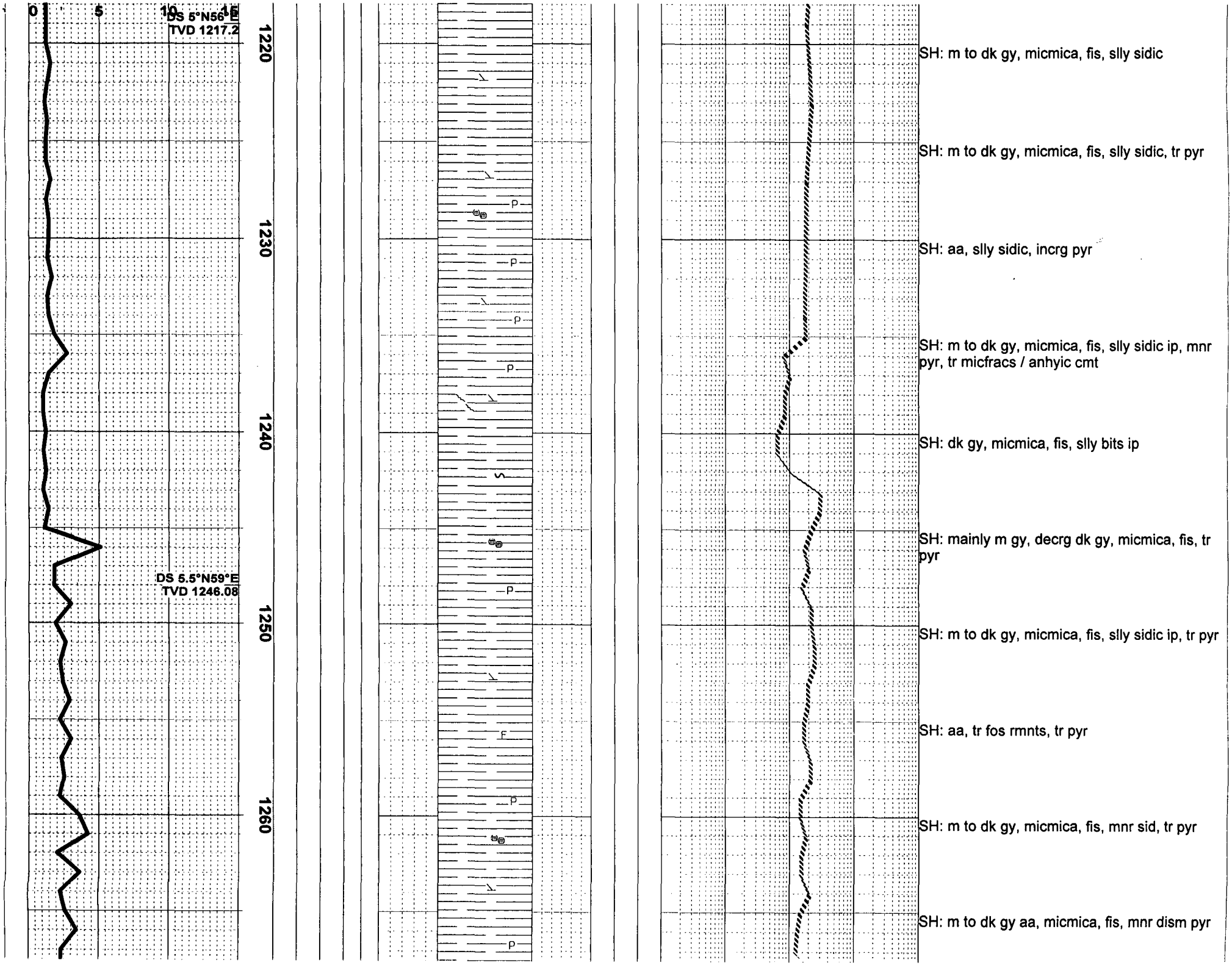
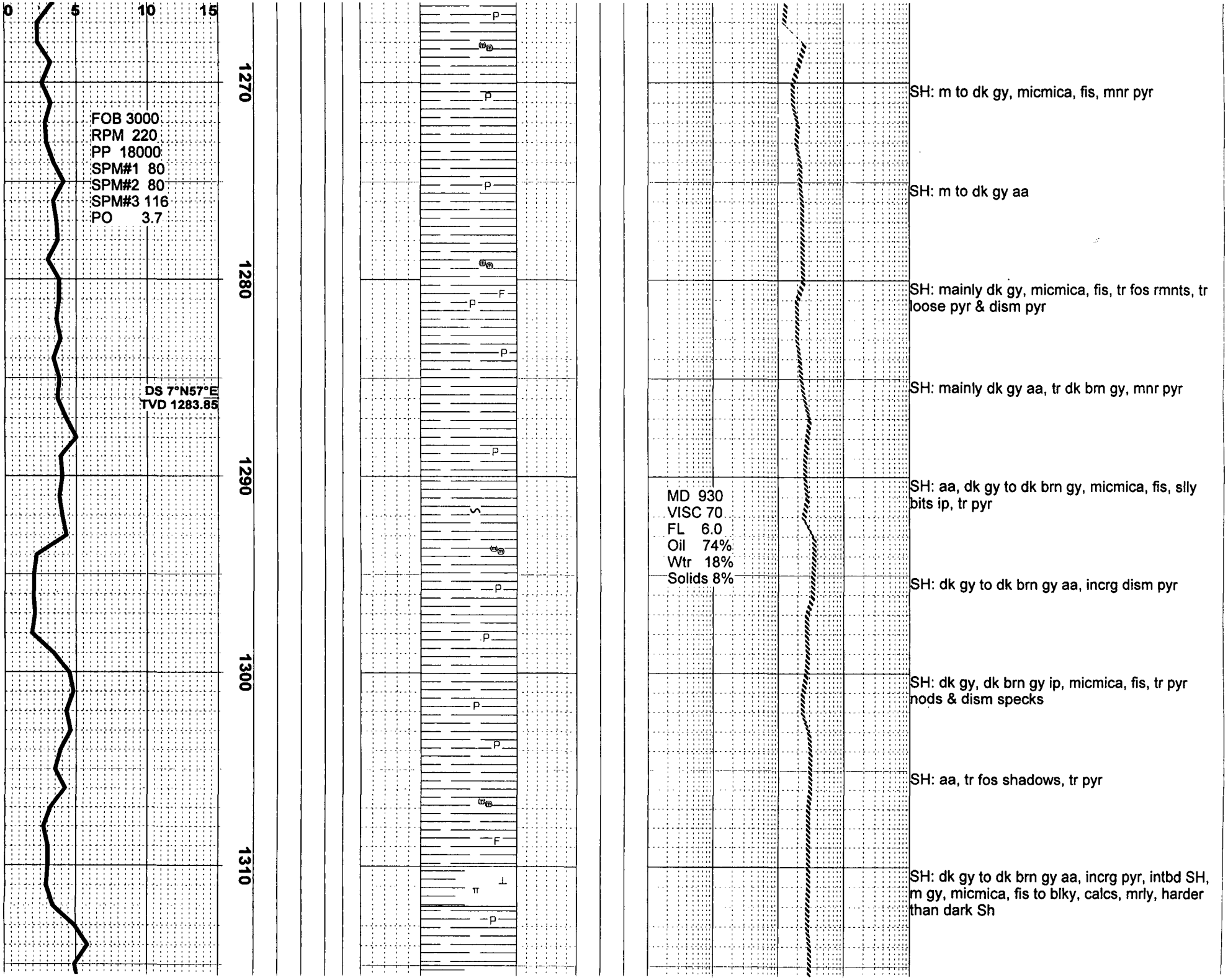
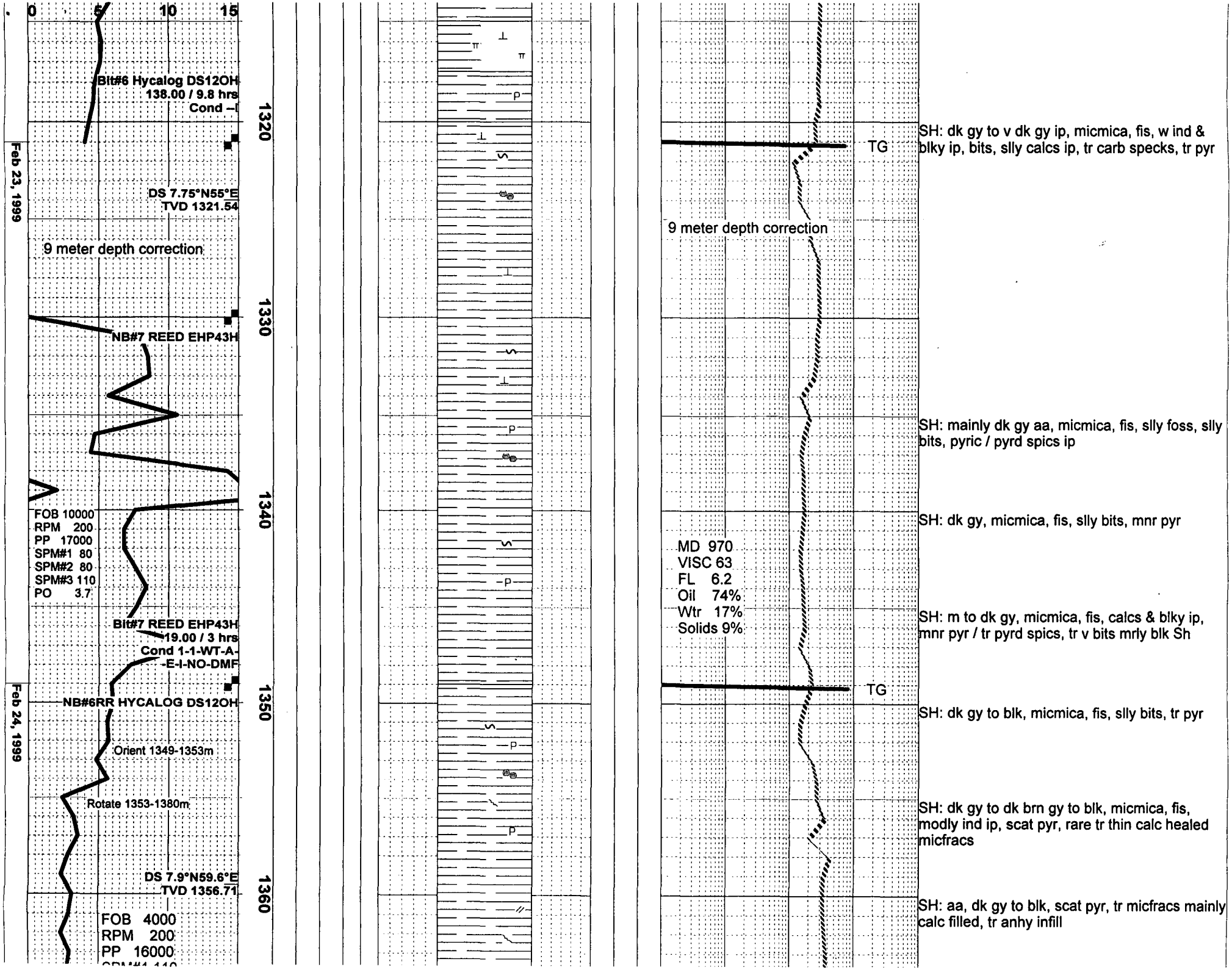
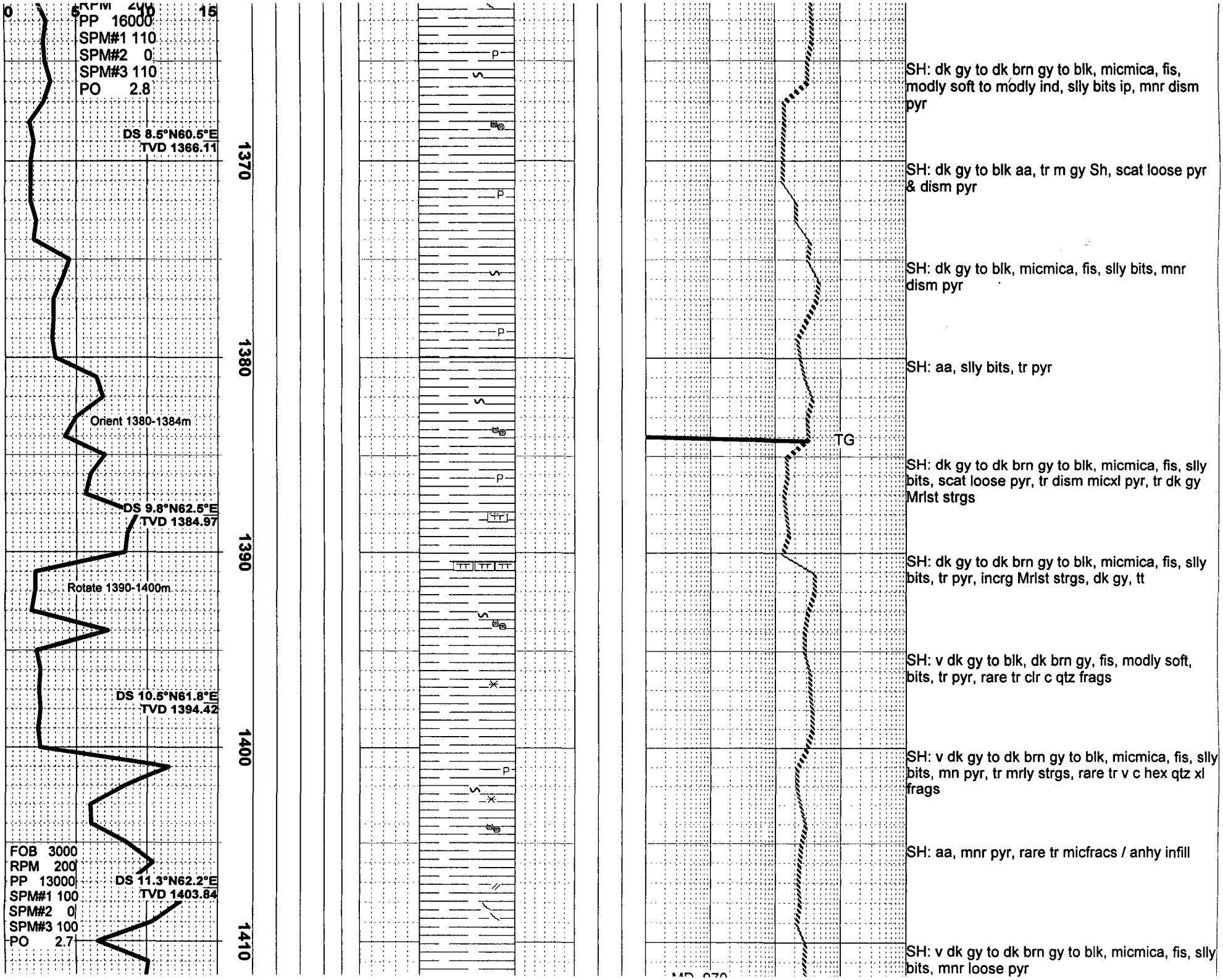
5
10
15
1130
1140
1150
1160
1170
Feb 21, 1999
FOB 7000
RPM 150
PP 16600
SPM#1 116
SPM#3 117
PO 3.1
DS 4.87°N35°E
TVD 1157.42
FOB 7000
RPM 150
PP 16600
SPM#1 116
SPM#3 117
PO 3.1
SG
CG
SH: m gy, micmica, fis to blky, slly calcs ip, tr micfracs
SH: mainly m gy, tr dk gy, micmica, fis, slly calcs ip, slly foss, tr dism pyr
SH: aa, micmica, slly calcs, mrly
SH: aa, slly calcs, tr Anhy incls
SH: m gy, micmica, fis, slly calcs, slly foss, tr micfracs & calc veins to 2mm, tr dism micxl pyr
SH: aa, slly calcs, slly foss
SH: aa
SH: m gy, m gn gy ip, micmica, fis to blky, slly calcs
SH: aa, mainly m gy, slly calcs, slly foss, mnr micfracs
SH: m gy, micmica, fis, blky ip, slly calcs to v

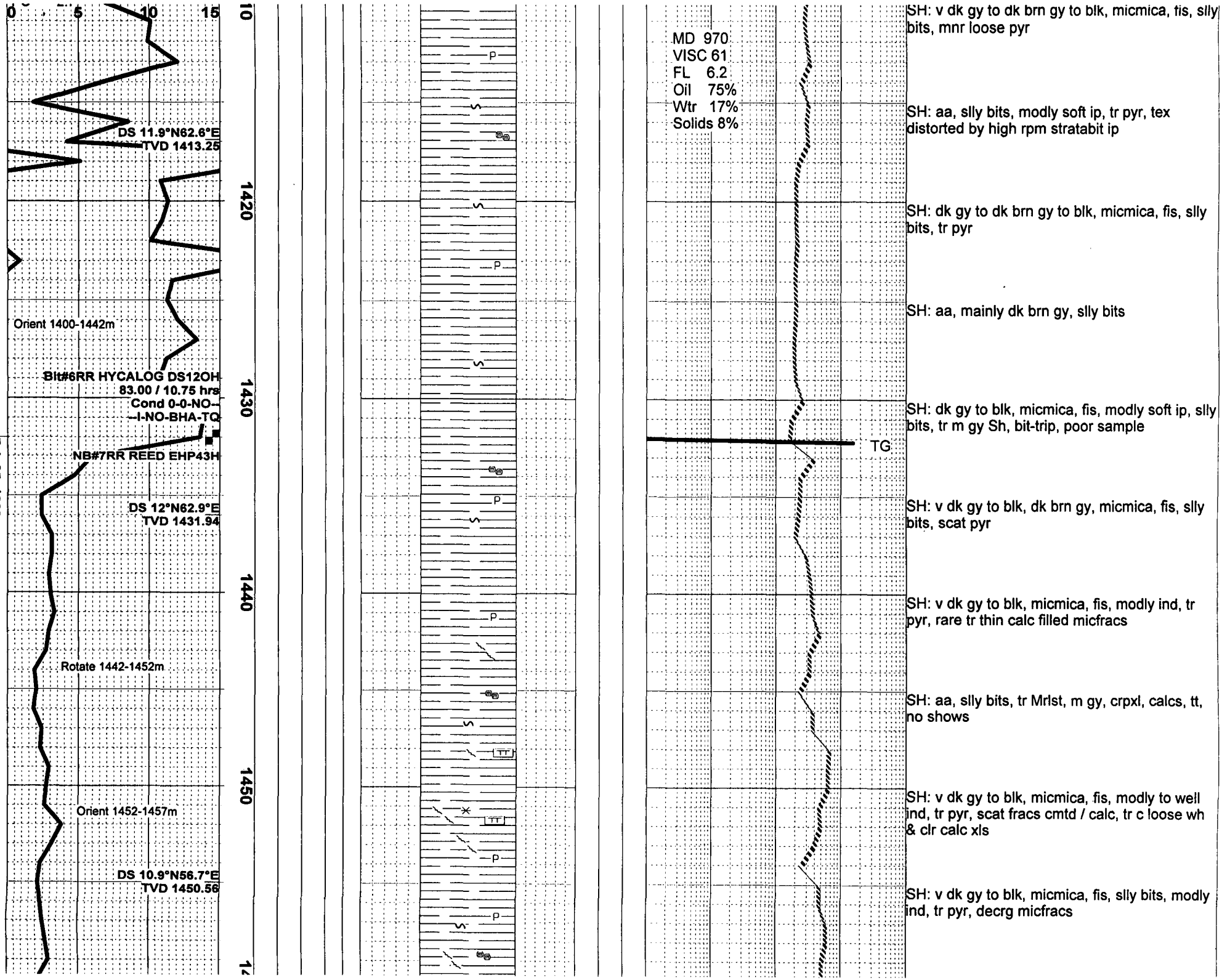

0
5
10
15
70
1180
1190
1200
1210
1
Feb 22, 1999
Bit#4RR HW GT-1
472.00 / 37.8 hrs
Cond 1-1-WT-A-
-E-I-NO-PR
NB#6 Hycalog DS12OH
Drilling with
150rpm
Mud Motor
and PDC
Stratabit
Exshaw 1st Black Shale
(TVD: 1191.3)
FOB 2000
RPM 200
PP 19150
SPM#1 80
SPM#2 80
SPM#3 116
PO 3.7
DS 5°N56°E
TVD 1217.2
93
Mex
MD 930
VISC 75
FL 6.2
Oil 76%
Wtr 18%
Solids 6%
Trip Gas
Exshaw 1st Black Shale
(TVD: 1191.3)
SH: m gy, micmica, fis, blky ip, slly calcs to v calcs ip, mrly, slly foss, scat calc healed micfracs
SH: mainly m gy, tr dk gy, micmica, fis, calcs ip, slly foss, tr micfracs
SH: aa, mainly m gy, slly calcs, tr micfracs
SH: dk gy to v dk gy, micmica, fis, modly soft, rarely calcs, slly bits ip
SH: mainly dk gy aa, tr m gy & slly calcs, micmica, fis, slly bits, tr pyr
SH: dk gy to v dk gy, dk brn gy ip, micmica, fis, slly bits ip, tr pyr / pyrd spics ip
SH: m to dk gy, v dk gy to blk ip, micmica, fis, calcs ip, slly bits ip, micfracs / calc infill & tr Anhy filling ip, mnr pyr
SH: aa, m to dk gy, incrg micfracs / mainly anhy infill, scat pyr
SH: dk gy to v dk gy, micmica, fis, tr pyr

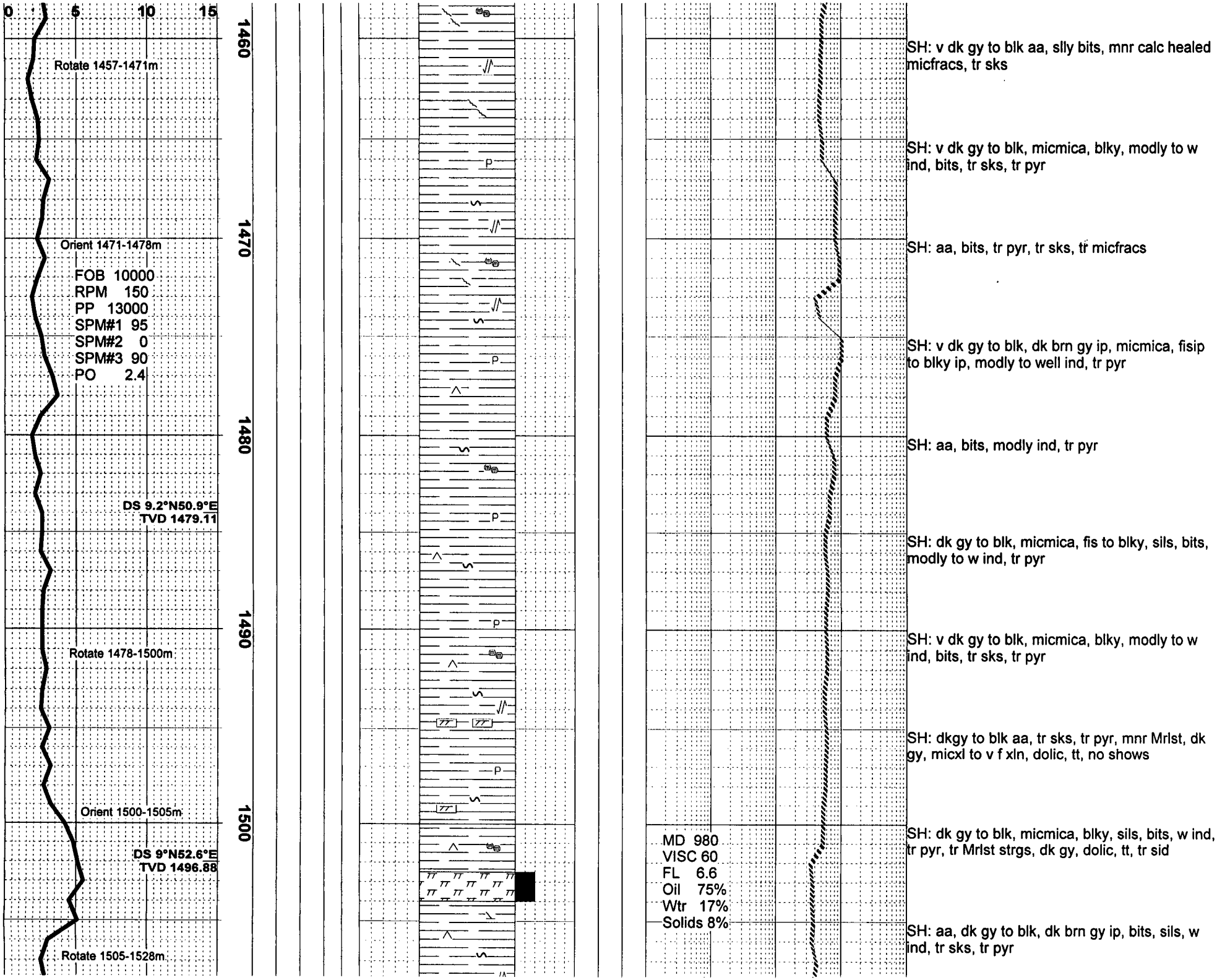

0
5
10
15
DS 5°N56°E
TVD 1217.2
1220
1230
1240
DS 5.5°N59°E
TVD 1246.08
1250
1260
SH: m to dk gy, micmica, fis, slly sidic
SH: m to dk gy, micmica, fis, slly sidic, tr pyr
SH: aa, slly sidic, incrg pyr
SH: m to dk gy, micmica, fis, slly sidic ip, mnr pyr, tr micfracs / anhyic cmt
SH: dk gy, micmica, fis, slly bits ip
SH: mainly m gy, decrg dk gy, micmica, fis, tr pyr
SH: m to dk gy, micmica, fis, slly sidic ip, tr pyr
SH: aa, tr fos rmnts, tr pyr
SH: m to dk gy, micmica, fis, mnr sid, tr pyr
SH: m to dk gy aa, micmica, fis, mnr dism pyr

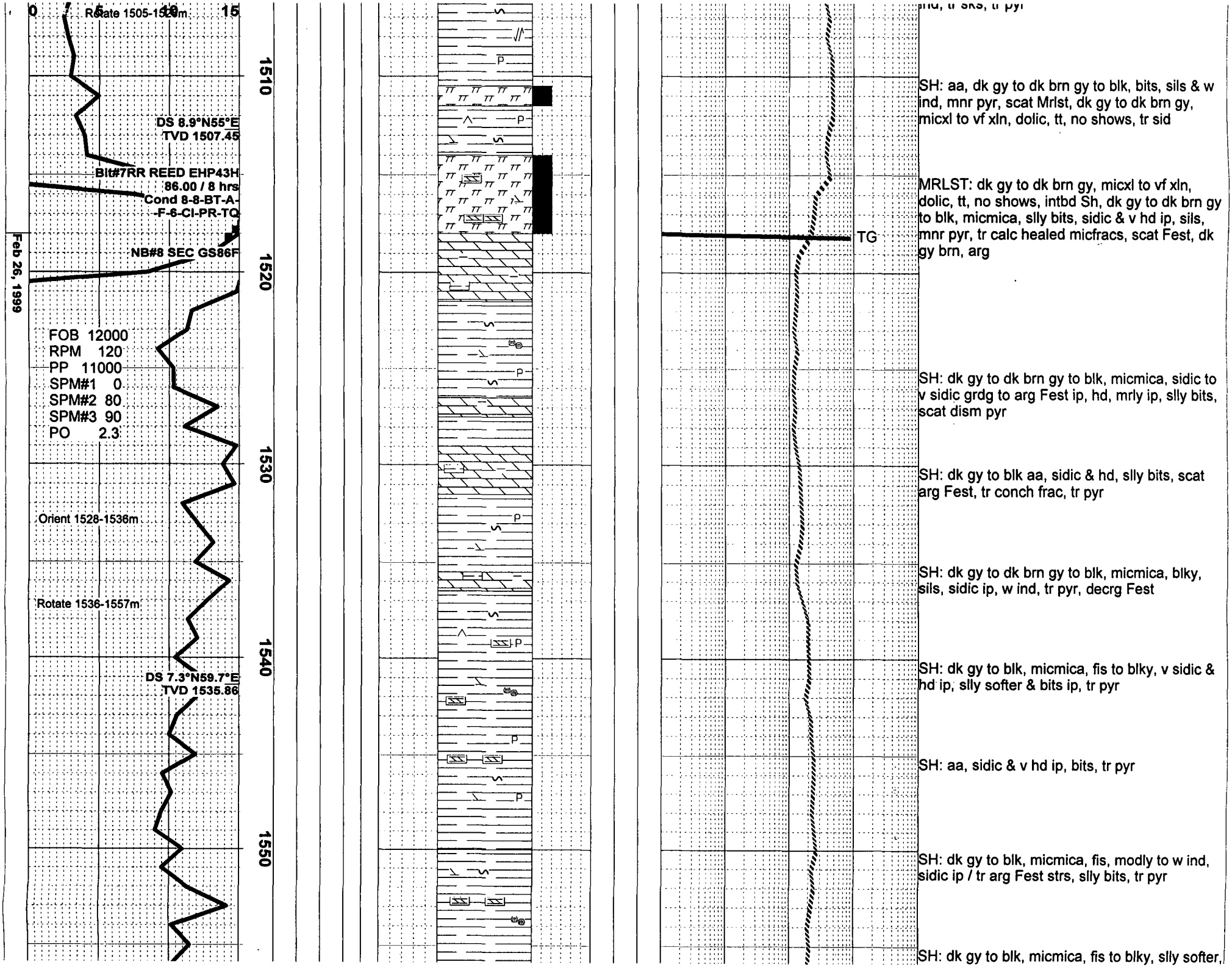

0
5
10
15
1270
1280
1290
1300
1310
FOB 3000
RPM 220
PP 18000
SPM#1 80
SPM#2 80
SPM#3 116
PO 3.7
DS 7°N57°E
TVD 1283.85
MD 930
VISC 70
FL 6.0
Oil 74%
Wtr 18%
Solids 8%
SH: m to dk gy, micmica, fis, mnr pyr
SH: m to dk gy aa
SH: mainly dk gy, micmica, fis, tr fos rmnts, tr loose pyr & dism pyr
SH: mainly dk gy aa, tr dk brn gy, mnr pyr
SH: aa, dk gy to dk brn gy, micmica, fis, slly bits ip, tr pyr
SH: dk gy to dk brn gy aa, incrg dism pyr
SH: dk gy, dk brn gy ip, micmica, fis, tr pyr nods & dism specks
SH: aa, tr fos shadows, tr pyr
SH: dk gy to dk brn gy aa, incrg pyr, intbd SH, m gy, micmica, fis to blky, calcs, mrly, harder than dark Sh

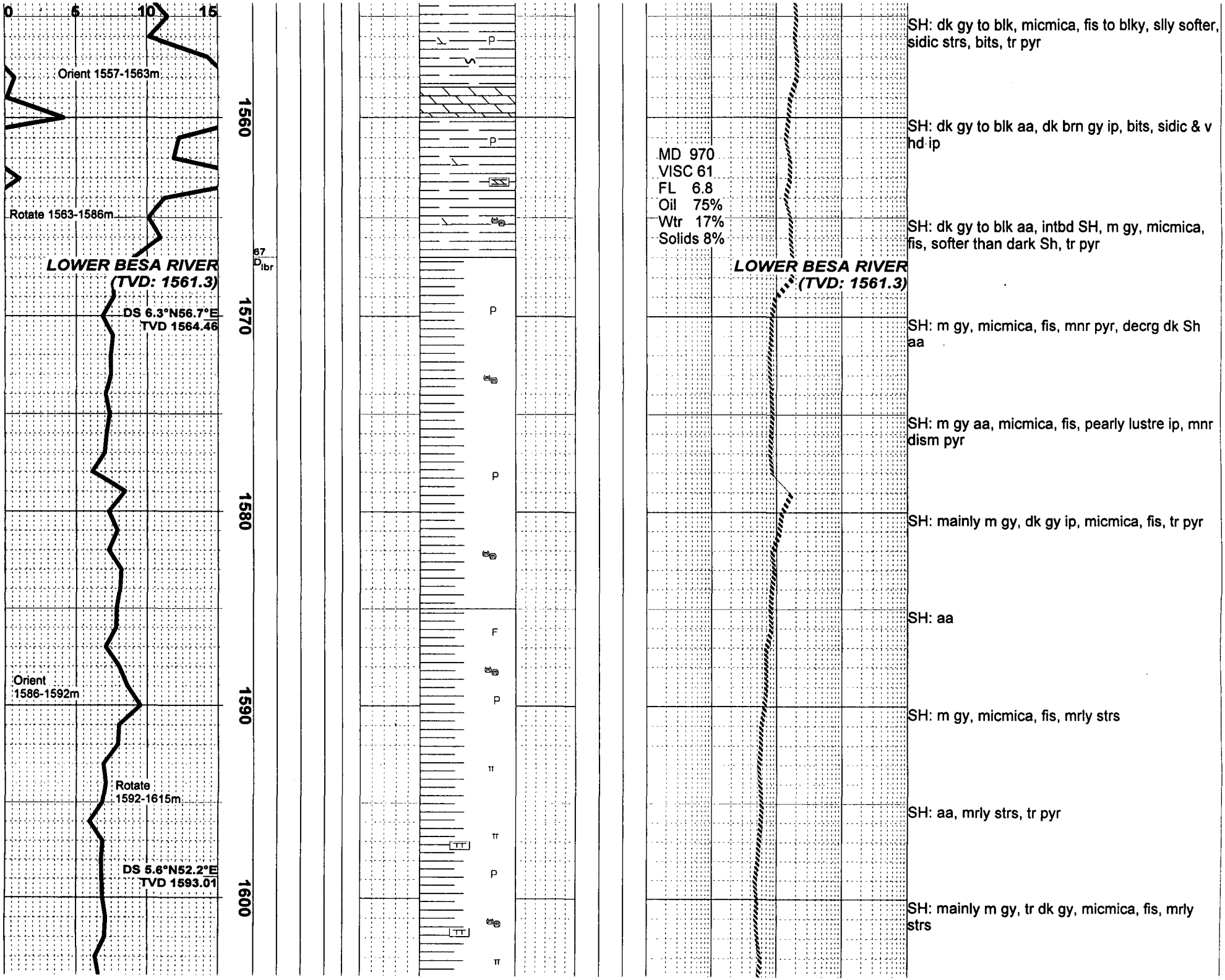

0
5
10
15
Bit#6 Hycalog DS12OH
138.00 / 9.8 hrs
Cond –I
DS 7.75°N55°E
TVD 1321.54
9 meter depth correction
NB#7 REED EHP43H
FOB 10000
RPM 200
PP 17000
SPM#1 80
SPM#2 80
SPM#3 110
PO 3.7
Bit#7 REED EHP43H
19.00 / 3 hrs
Cond 1-1-WT-A-
-E-I-NO-DMF
NB#6RR HYCALOG DS12OH
Orient 1349-1353m
Rotate 1353-1380m
DS 7.9°N59.6°E
TVD 1356.71
FOB 4000
RPM 200
PP 16000
Feb 23, 1999
Feb 24, 1999
1320
1330
1340
1350
1360
TG
9 meter depth correction
MD 970
VISC 63
FL 6.2
Oil 74%
Wtr 17%
Solids 9%
TG
SH: dk gy to v dk gy ip, micmica, fis, w ind & blky ip, bits, slly calcs ip, tr carb specks, tr pyr
SH: mainly dk gy aa, micmica, fis, slly foss, slly bits, pyric / pyrd spics ip
SH: dk gy, micmica, fis, slly bits, mnr pyr
SH: m to dk gy, micmica, fis, calcs & blky ip, mnr pyr / tr pyrd spics, tr v bits mrly blk Sh
SH: dk gy to blk, micmica, fis, slly bits, tr pyr
SH: dk gy to dk brn gy to blk, micmica, fis, modly ind ip, scat pyr, rare tr thin calc healed micfracs
SH: aa, dk gy to blk, scat pyr, tr micfracs mainly calc filled, tr anhy infill

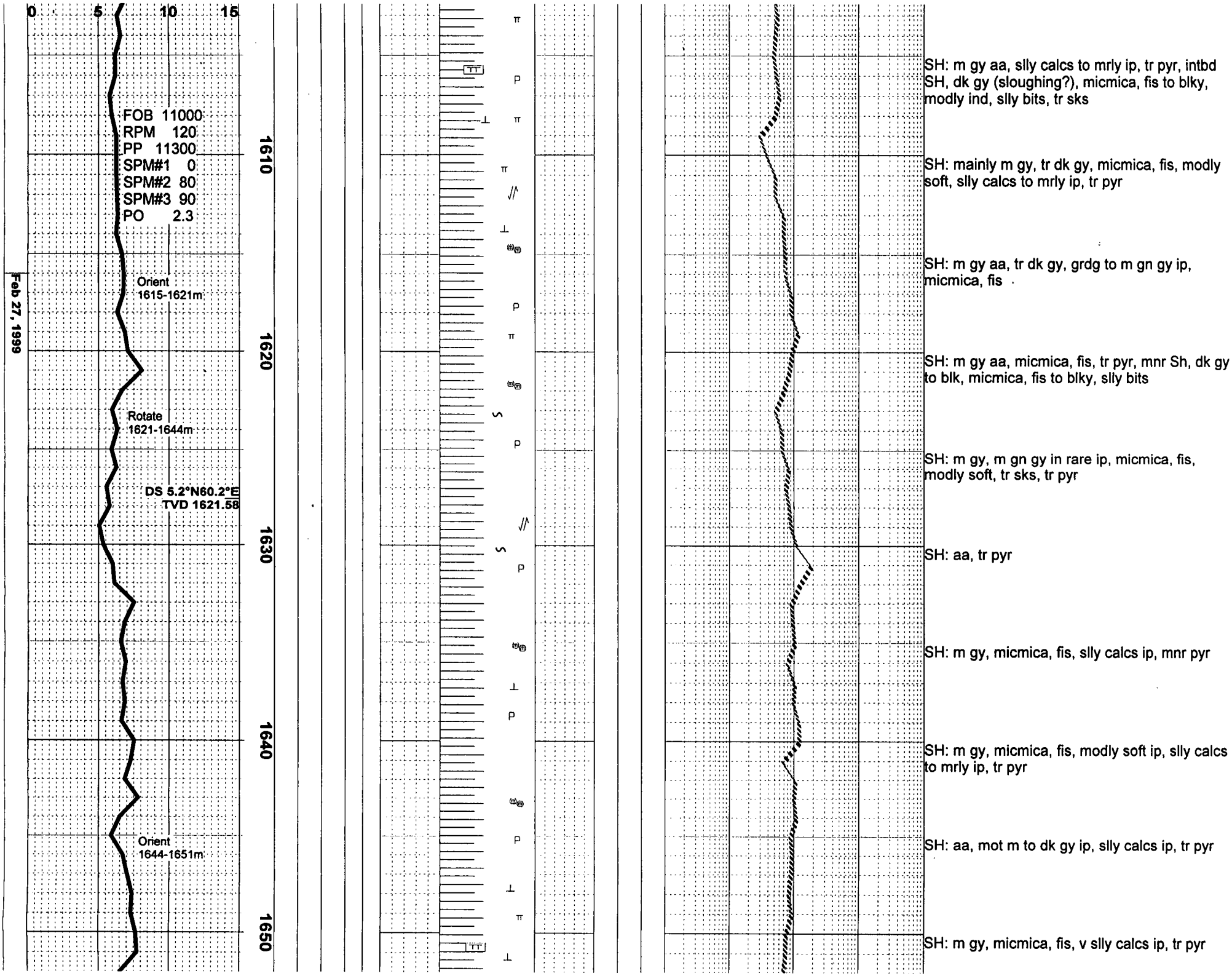

0
5
10
15
PP 16000
SPM#1 110
SPM#2 0
SPM#3 110
PO 2.8
DS 8.5°N60.5°E
TVD 1366.11
1370
1380
Orient 1380-1384m
DS 9.8°N62.5°E
TVD 1384.97
1390
Rotate 1390-1400m
DS 10.5°N61.8°E
TVD 1394.42
1400
FOB 3000
RPM 200
PP 13000
SPM#1 100
SPM#2 0
SPM#3 100
PO 2.7
DS 11.3°N62.2°E
TVD 1403.84
1410
P
TG
SH: dk gy to dk brn gy to blk, micmica, fis, modly soft to modly ind, slly bits ip, mnr dism pyr
SH: dk gy to blk aa, tr m gy Sh, scat loose pyr & dism pyr
SH: dk gy to blk, micmica, fis, slly bits, mnr dism pyr
SH: aa, slly bits, tr pyr
SH: dk gy to dk brn gy to blk, micmica, fis, slly bits, scat loose pyr, tr dism micxl pyr, tr dk gy Mrlst strgs
SH: dk gy to dk brn gy to blk, micmica, fis, slly bits, tr pyr, incrg Mrlst strgs, dk gy, tt
SH: v dk gy to blk, dk brn gy, fis, modly soft, bits, tr pyr, rare tr clr c qtz frags
SH: v dk gy to dk brn gy to blk, micmica, fis, slly bits, mn pyr, tr mrly strgs, rare tr v c hex qtz xl frags
SH: aa, mnr pyr, rare tr micfracs / anhy infill
SH: v dk gy to dk brn gy to blk, micmica, fis, slly bits, mnr loose pyr

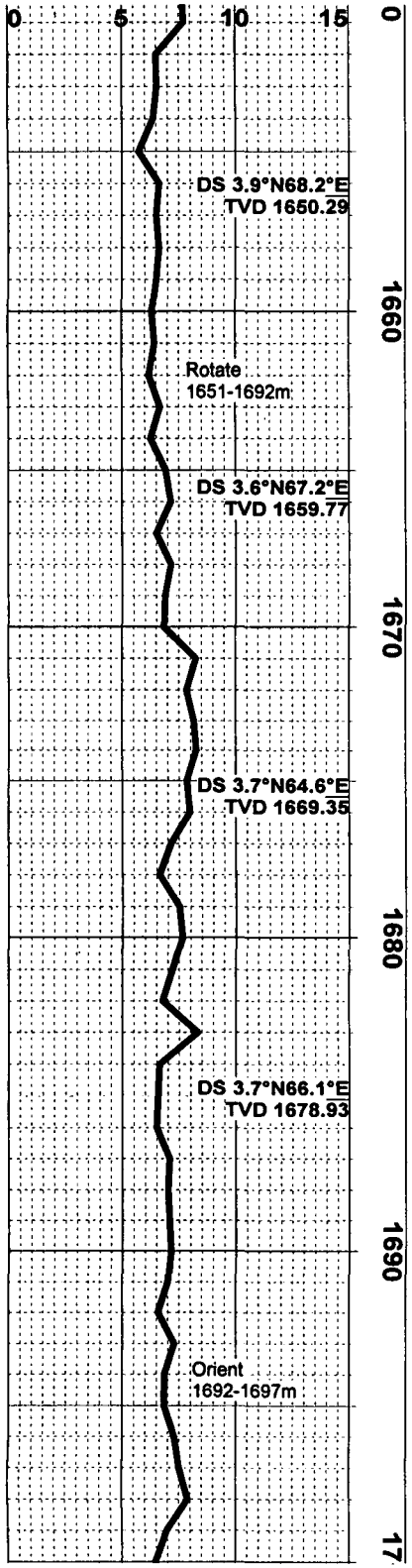

0
5
10
15
1410
1420
1430
1440
1450
DS 11.9°N62.6°E
TVD 1413.25
Orient 1400-1442m
Bit#6RR HYCALOG DS12OH
83.00 / 10.75 hrs
Cond 0-0-NO--
--I-NO-BHA-TQ
NB#7RR REED EHP43H
DS 12°N62.9°E
TVD 1431.94
Rotate 1442-1452m
Orient 1452-1457m
DS 10.9°N56.7°E
TVD 1450.56
Feb 25, 1999
MD 970
VISC 61
FL 6.2
Oil 75%
Wtr 17%
Solids 8%
TG
SH: v dk gy to dk brn gy to blk, micmica, fis, slly bits, mnr loose pyr
SH: aa, slly bits, modly soft ip, tr pyr, tex distorted by high rpm stratabit ip
SH: dk gy to dk brn gy to blk, micmica, fis, slly bits, tr pyr
SH: aa, mainly dk brn gy, slly bits
SH: dk gy to blk, micmica, fis, modly soft ip, slly bits, tr m gy Sh, bit-trip, poor sample
SH: v dk gy to blk, dk brn gy, micmica, fis, slly bits, scat pyr
SH: v dk gy to blk, micmica, fis, modly ind, tr pyr, rare tr thin calc filled micfracs
SH: aa, slly bits, tr Mrlst, m gy, crpxl, calcs, tt, no shows
SH: v dk gy to blk, micmica, fis, modly to well ind, tr pyr, scat fracs cmtd / calc, tr c loose wh & clr calc xls
SH: v dk gy to blk, micmica, fis, slly bits, modly ind, tr pyr, decrg micfracs

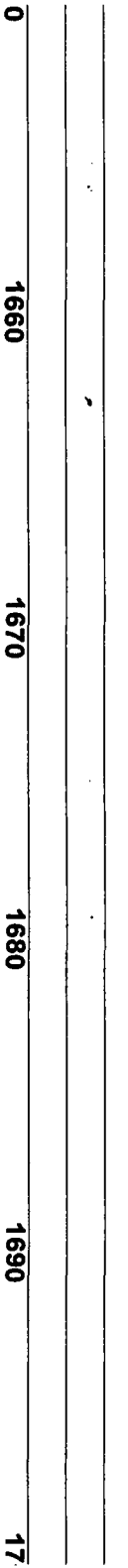

0
5
10
15
1460
1470
1480
1490
1500
Rotate 1457-1471m
Orient 1471-1478m
FOB 10000
RPM 150
PP 13000
SPM#1 95
SPM#2 0
SPM#3 90
PO 2.4
DS 9.2°N50.9°E
TVD 1479.11
Rotate 1478-1500m
Orient 1500-1505m
DS 9°N52.6°E
TVD 1496.88
Rotate 1505-1528m
MD 980
VISC 60
FL 6.6
Oil 75%
Wtr 17%
Solids 8%
SH: v dk gy to blk aa, slly bits, mnr calc healed micfracs, tr sks
SH: v dk gy to blk, micmica, blky, modly to w ind, bits, tr sks, tr pyr
SH: aa, bits, tr pyr, tr sks, tr micfracs
SH: v dk gy to blk, dk brn gy ip, micmica, fisip to blky ip, modly to well ind, tr pyr
SH: aa, bits, modly ind, tr pyr
SH: dk gy to blk, micmica, fis to blky, sils, bits, modly to w ind, tr pyr
SH: v dk gy to blk, micmica, blky, modly to w ind, bits, tr sks, tr pyr
SH: dkgy to blk aa, tr sks, tr pyr, mnr Mrlst, dk gy, micxl to v f xln, dolic, tt, no shows
SH: dk gy to blk, micmica, blky, sils, bits, w ind, tr pyr, tr Mrlst strgs, dk gy, dolic, tt, tr sid
SH: aa, dk gy to blk, dk brn gy ip, bits, sils, w ind, tr sks, tr pyr

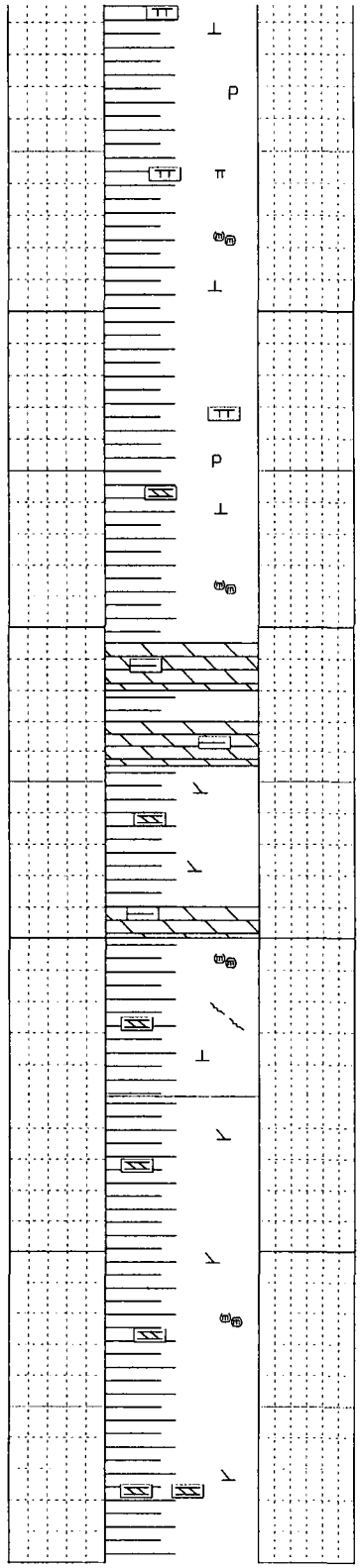

0
5
10
15
Rotate 1505-1528m
1510
1520
1530
1540
1550
DS 8.9°N55°E
TVD 1507.45
Bit#7RR REED EHP43H
86.00 / 8 hrs
Cond 8-8-BT-A-
-F-6-CI-PR-TQ
NB#8 SEC GS86F
Feb 26, 1999
FOB 12000
RPM 120
PP 11000
SPM#1 0
SPM#2 80
SPM#3 90
PO 2.3
Orient 1528-1536m
Rotate 1536-1557m
DS 7.3°N59.7°E
TVD 1535.86
TG
ind, tr SKS, tr pyr
SH: aa, dk gy to dk brn gy to blk, bits, sils & w ind, mnr pyr, scat Mrlst, dk gy to dk brn gy, micxl to vf xln, dolic, tt, no shows, tr sid
MRLST: dk gy to dk brn gy, micxl to vf xln, dolic, tt, no shows, intbd Sh, dk gy to dk brn gy to blk, micmica, slly bits, sidic & v hd ip, sils, mnr pyr, tr calc healed micfracs, scat Fest, dk gy brn, arg
SH: dk gy to dk brn gy to blk, micmica, sidic to v sidic grdg to arg Fest ip, hd, mrly ip, slly bits, scat dism pyr
SH: dk gy to blk aa, sidic & hd, slly bits, scat arg Fest, tr conch frac, tr pyr
SH: dk gy to dk brn gy to blk, micmica, blky, sils, sidic ip, w ind, tr pyr, decrg Fest
SH: dk gy to blk, micmica, fis to blky, v sidic & hd ip, slly softer & bits ip, tr pyr
SH: aa, sidic & v hd ip, bits, tr pyr
SH: dk gy to blk, micmica, fis, modly to w ind, sidic ip / tr arg Fest strs, slly bits, tr pyr
SH: dk gy to blk, micmica, fis to blky, slly softer,


0
5
10
15
Orient 1557-1563m
Rotate 1563-1586m
LOWER BESA RIVER
(TVD: 1561.3)
DS 6.3°N56.7°E
TVD 1564.46
Orient
1586-1592m
Rotate
1592-1615m
DS 5.6°N52.2°E
TVD 1593.01
1560
1570
1580
1590
1600
67
Dibr
MD 970
VISC 61
FL 6.8
Oil 75%
Wtr 17%
Solids 8%
LOWER BESA RIVER
(TVD: 1561.3)
SH: dk gy to blk, micmica, fis to blky, slly softer, sidic strs, bits, tr pyr
SH: dk gy to blk aa, dk brn gy ip, bits, sidic & v hd ip
SH: dk gy to blk aa, intbd SH, m gy, micmica, fis, softer than dark Sh, tr pyr
SH: m gy, micmica, fis, mnr pyr, decrg dk Sh aa
SH: m gy aa, micmica, fis, pearly lustre ip, mnr dism pyr
SH: mainly m gy, dk gy ip, micmica, fis, tr pyr
SH: aa
SH: m gy, micmica, fis, mrly strs
SH: aa, mrly strs, tr pyr
SH: mainly m gy, tr dk gy, micmica, fis, mrly strs


0
5
10
15
FOB 11000
RPM 120
PP 11300
SPM#1 0
SPM#2 80
SPM#3 90
PO 2.3
Orient
1615-1621m
Rotate
1621-1644m
DS 5.2°N60.2°E
TVD 1621.58
Orient
1644-1651m
Feb 27, 1999
1610
1620
1630
1640
1650
SH: m gy aa, slly calcs to mrly ip, tr pyr, intbd SH, dk gy (sloughing?), micmica, fis to blky, modly ind, slly bits, tr sks
SH: mainly m gy, tr dk gy, micmica, fis, modly soft, slly calcs to mrly ip, tr pyr
SH: m gy aa, tr dk gy, grdg to m gn gy ip, micmica, fis
SH: m gy aa, micmica, fis, tr pyr, mnr Sh, dk gy to blk, micmica, fis to blky, slly bits
SH: m gy, m gn gy in rare ip, micmica, fis, modly soft, tr sks, tr pyr
SH: aa, tr pyr
SH: m gy, micmica, fis, slly calcs ip, mnr pyr
SH: m gy, micmica, fis, modly soft ip, slly calcs to mrly ip, tr pyr
SH: aa, mot m to dk gy ip, slly calcs ip, tr pyr
SH: m gy, micmica, fis, v slly calcs ip, tr pyr







SH: m gy, micmica, fis, v slly calcs ip, tr pyr

SH: m gy, m gn gy ip, micmica, fis, mrly strgs

SH: m gy aa, micmica, fis ip, slly calcs & modly ind ip

SH: m to dk gy, micmica, fis, slly calcs ip, tr sidic strs, tr pyr

SH: m gy aa, intbd SH, dk gy brn, sidic to v sidic, mrly, w ind

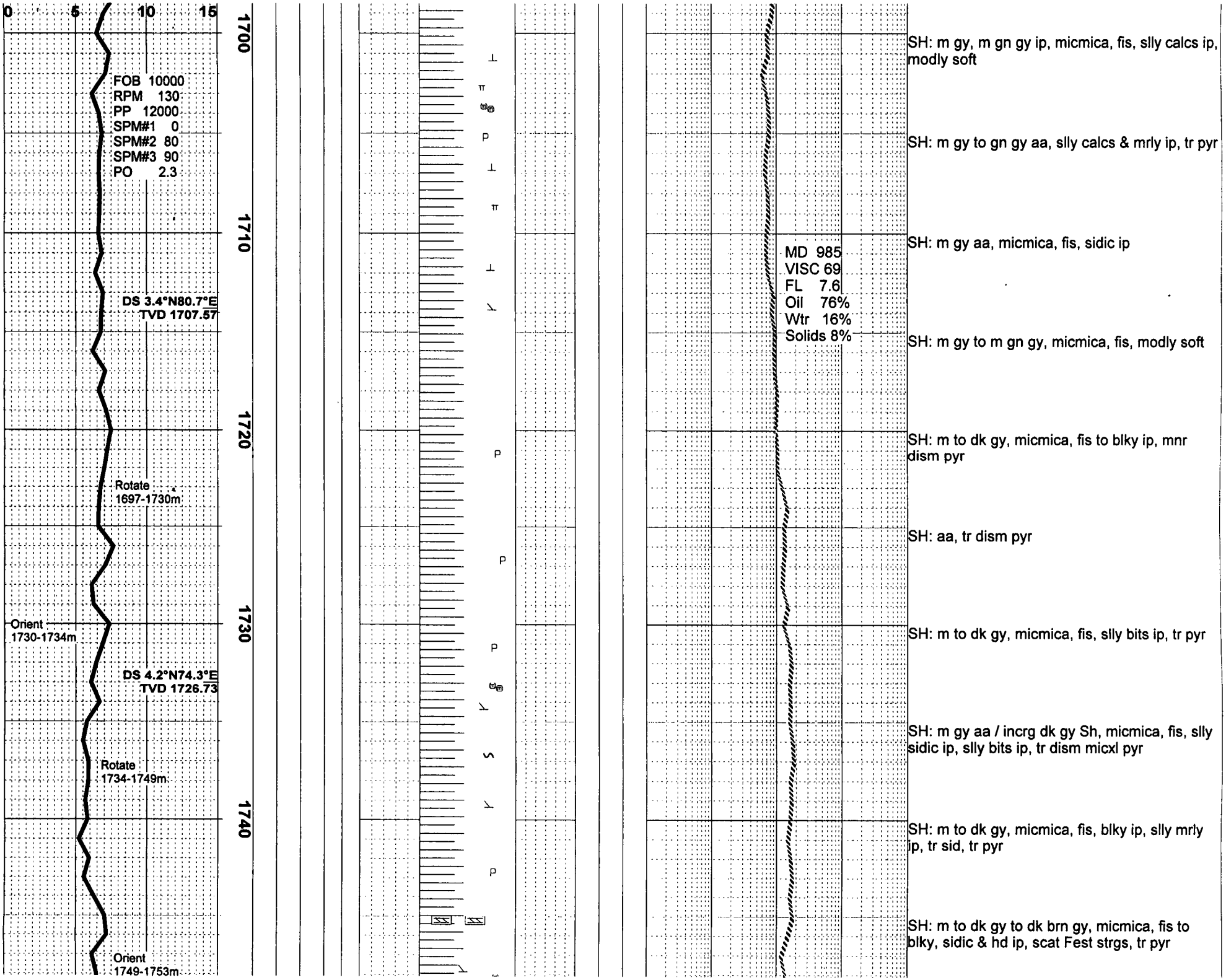
SH: m gy, micmica, fis, intbd Fest, dk gy brn, arg, mrly, hd, mnr Sh, dk gy to blk, micmica, blk, modly ind, slly bits

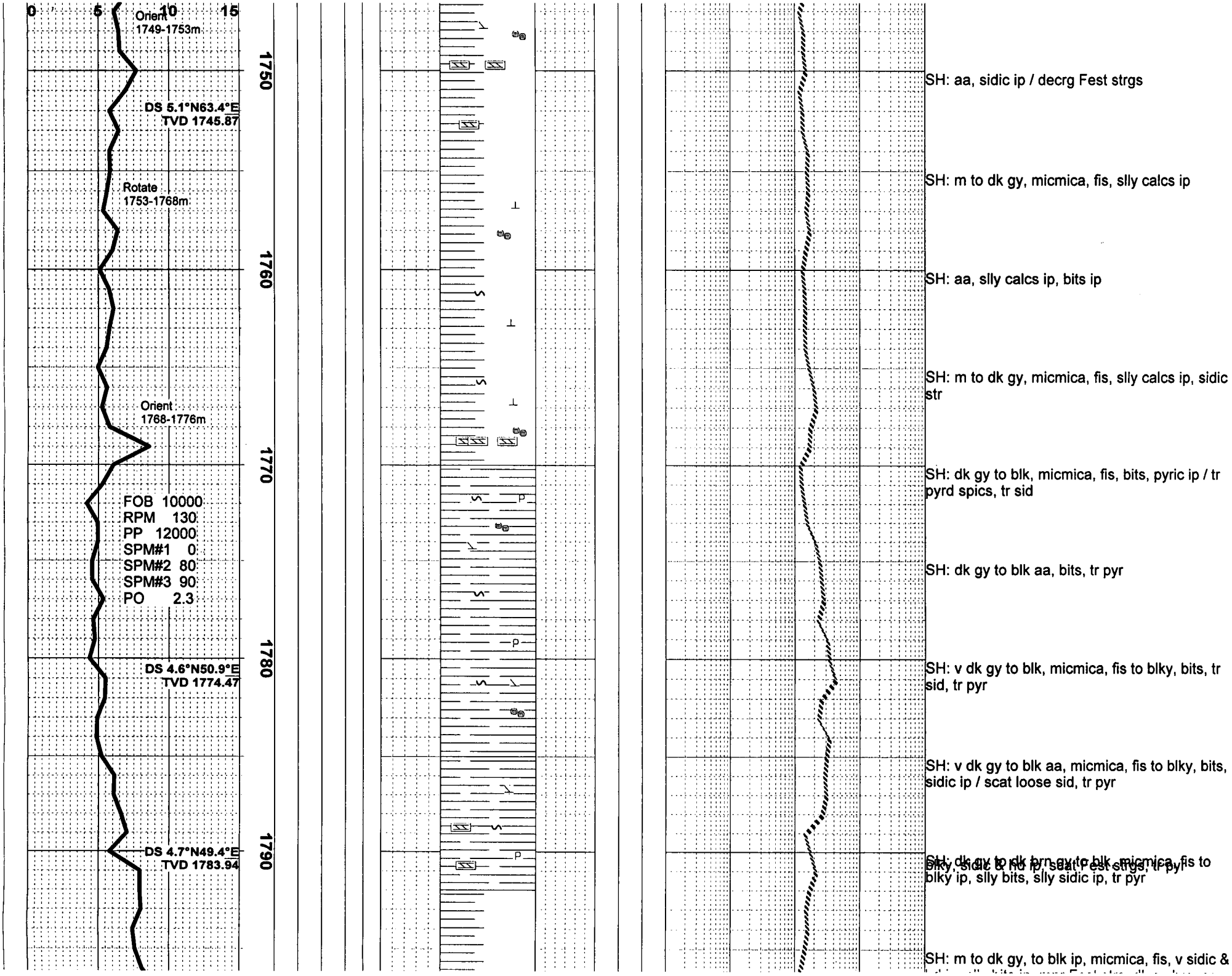
SH: m gy, m gn gy ip, micmica, fis, slly calcs ip, tr calc healed micfracs, tr sid

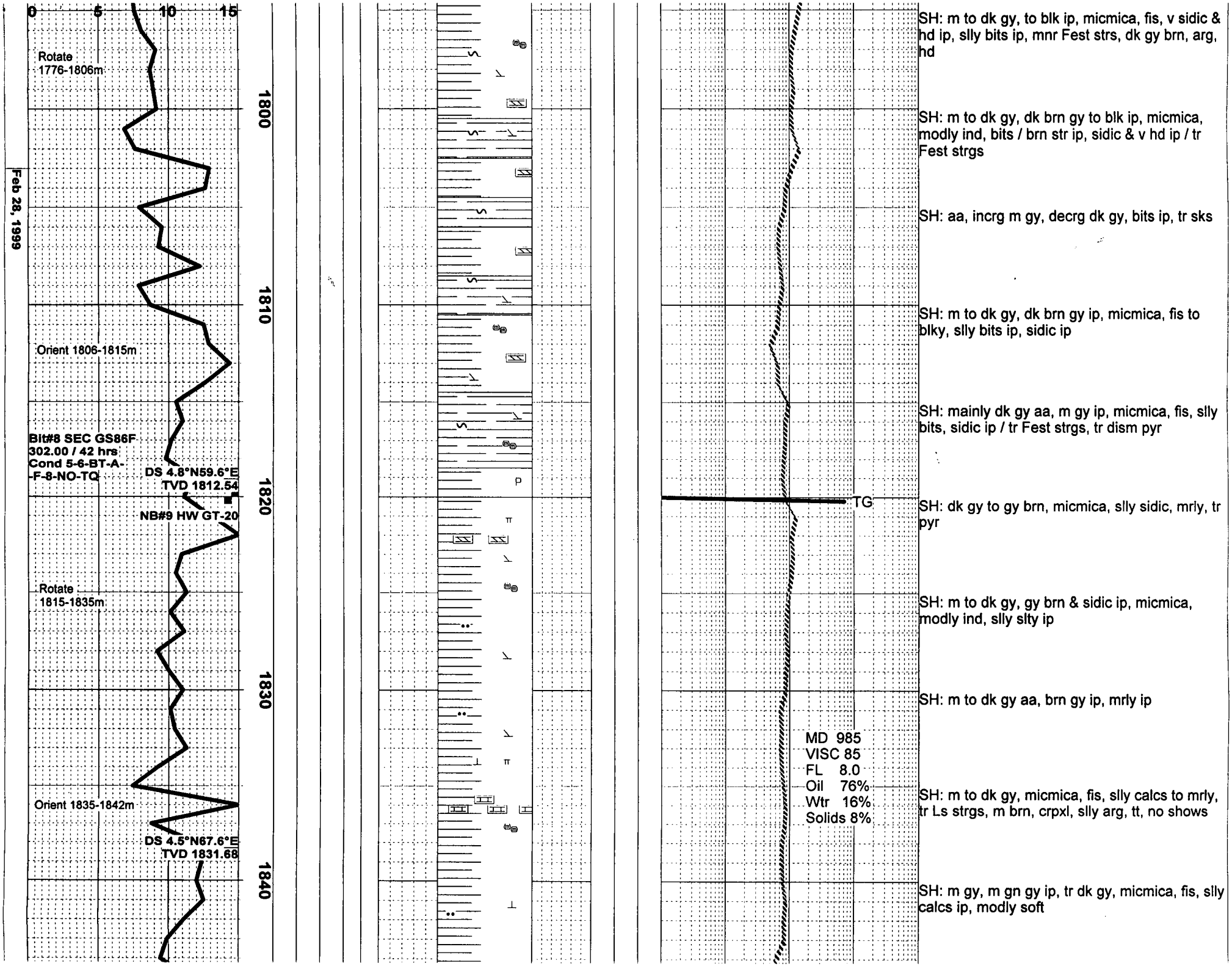
SH: m to dk gy, micmica, fis, sidic & w ind ip, scat Fest strgs

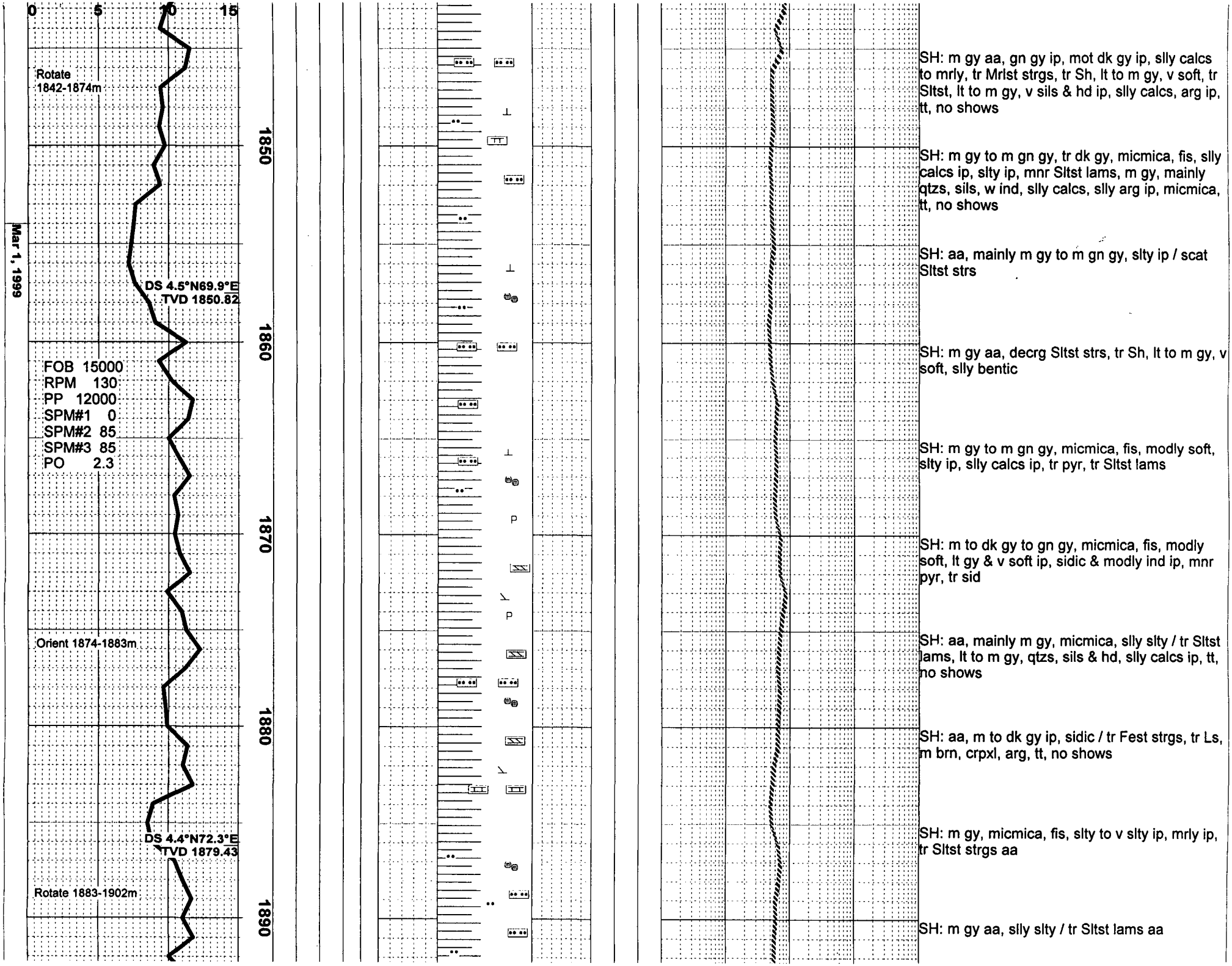
sh: m to dk gy, brn gy ip, micmica, fis to blky ip, mainly soft / harder sidic strs

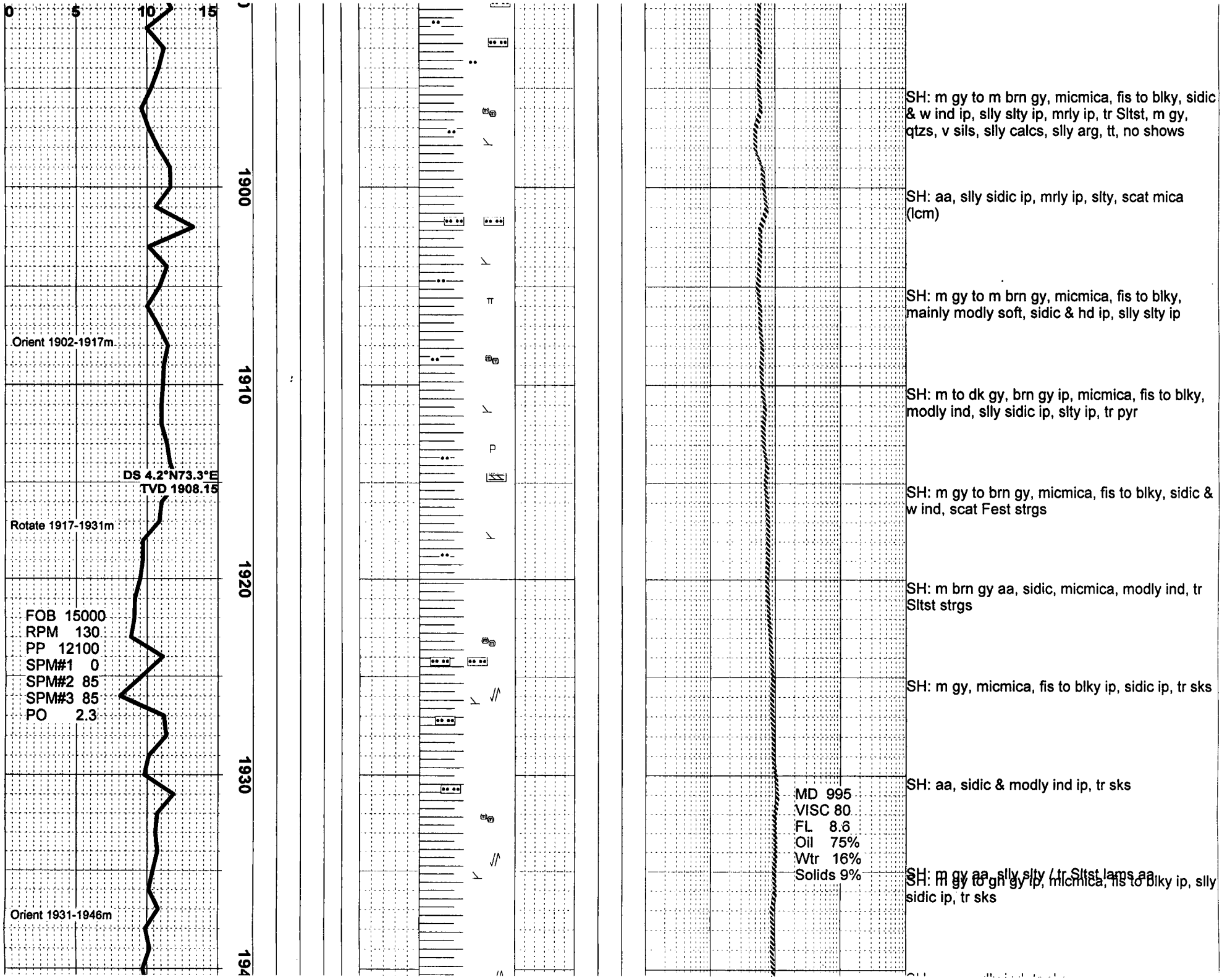
SH: m to dk gy aa, micmica, decrg sidic strgs

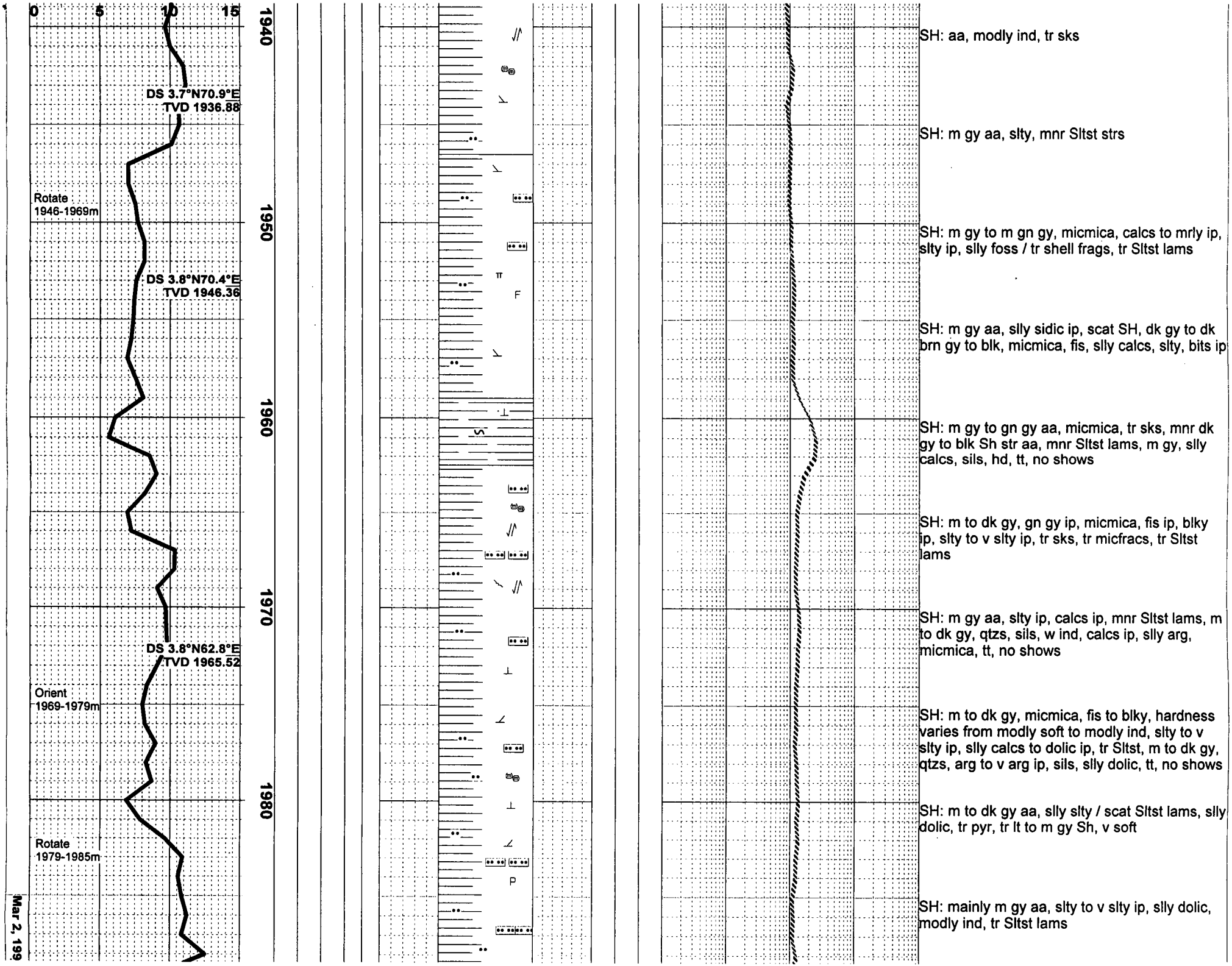

0
6
10
15
1700
1710
1720
1730
1740
FOB 10000
RPM 130
PP 12000
SPM#1 0
SPM#2 80
SPM#3 90
PO 2.3
DS 3.4°N80.7°E
TVD 1707.57
Rotate
1697-1730m
Orient
1730-1734m
DS 4.2°N74.3°E
TVD 1726.73
Rotate
1734-1749m
Orient
1749-1753m
MD 985
VISC 69
FL 7.6
Oil 76%
Wtr 16%
Solids 8%
SH: m gy, m gn gy ip, micmica, fis, slly calcs ip, modly soft
SH: m gy to gn gy aa, slly calcs & mrly ip, tr pyr
SH: m gy aa, micmica, fis, sidic ip
SH: m gy to m gn gy, micmica, fis, modly soft
SH: m to dk gy, micmica, fis to blky ip, mnr dism pyr
SH: aa, tr dism pyr
SH: m to dk gy, micmica, fis, slly bits ip, tr pyr
SH: m gy aa / incrg dk gy Sh, micmica, fis, slly sidic ip, slly bits ip, tr dism micxl pyr
SH: m to dk gy, micmica, fis, blky ip, slly mrly ip, tr sid, tr pyr
SH: m to dk gy to dk brn gy, micmica, fis to blky, sidic & hd ip, scat Fest strgs, tr pyr

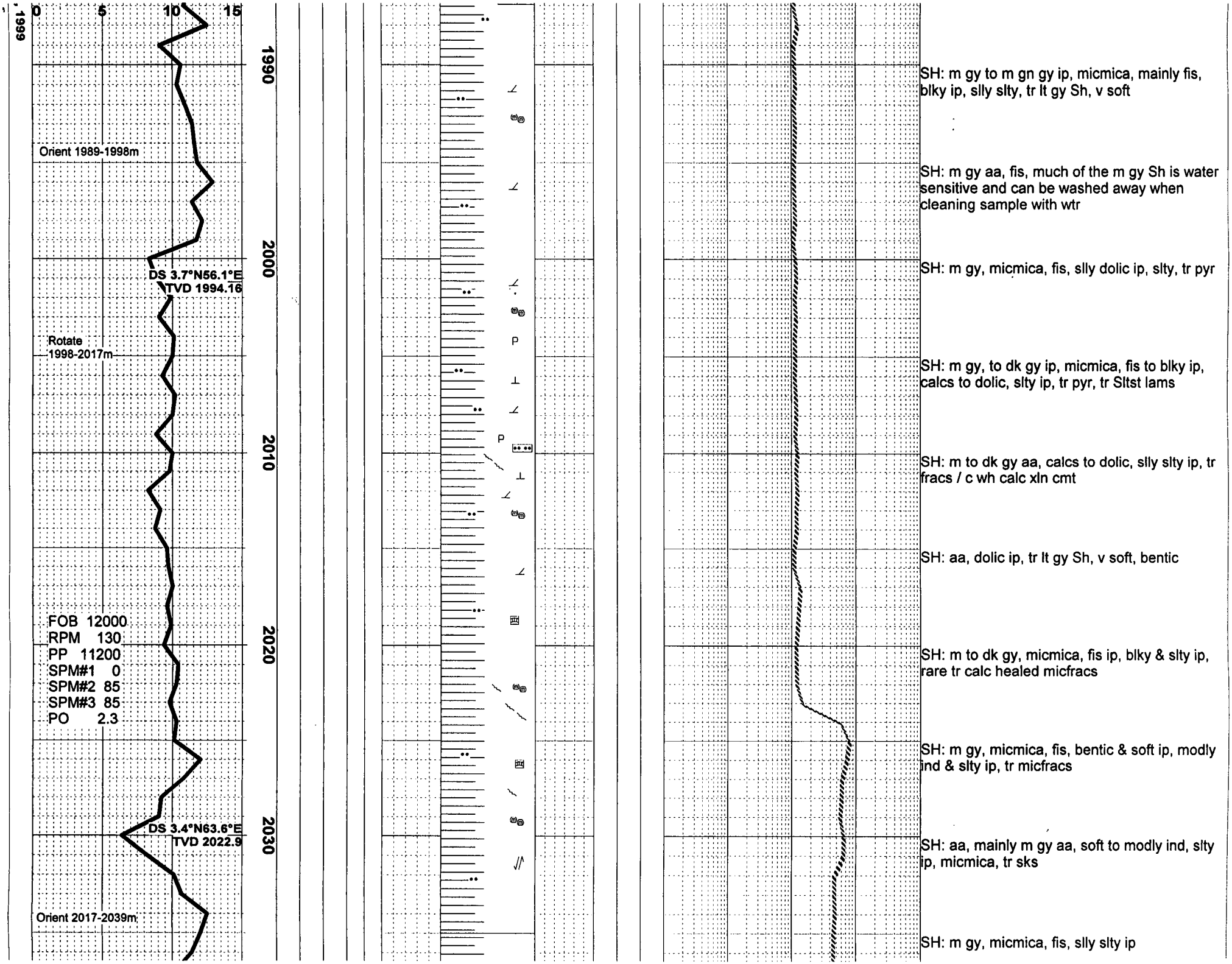

0
5
10
15
Orient
1749-1753m
DS 5.1°N63.4°E
TVD 1745.87
Rotate
1753-1768m
Orient
1768-1776m
FOB 10000
RPM 130
PP 12000
SPM#1 0
SPM#2 80
SPM#3 90
PO 2.3
DS 4.6°N50.9°E
TVD 1774.47
DS 4.7°N49.4°E
TVD 1783.94
1750
1760
1770
1780
1790
SH: aa, sidic ip / decrg Fest strgs
SH: m to dk gy, micmica, fis, slly calcs ip
SH: aa, slly calcs ip, bits ip
SH: m to dk gy, micmica, fis, slly calcs ip, sidic str
SH: dk gy to blk, micmica, fis, bits, pyric ip / tr pyrd spics, tr sid
SH: dk gy to blk aa, bits, tr pyr
SH: v dk gy to blk, micmica, fis to blky, bits, tr sid, tr pyr
SH: v dk gy to blk aa, micmica, fis to blky, bits, sidic ip / scat loose sid, tr pyr
SH: dk gy to dk brn gy to blk, micmica, fis to blky, sidic & ho ip, scat Fest strgs, tr pyr
blky ip, slly bits, slly sidic ip, tr pyr
SH: m to dk gy, to blk ip, micmica, fis, v sidic &

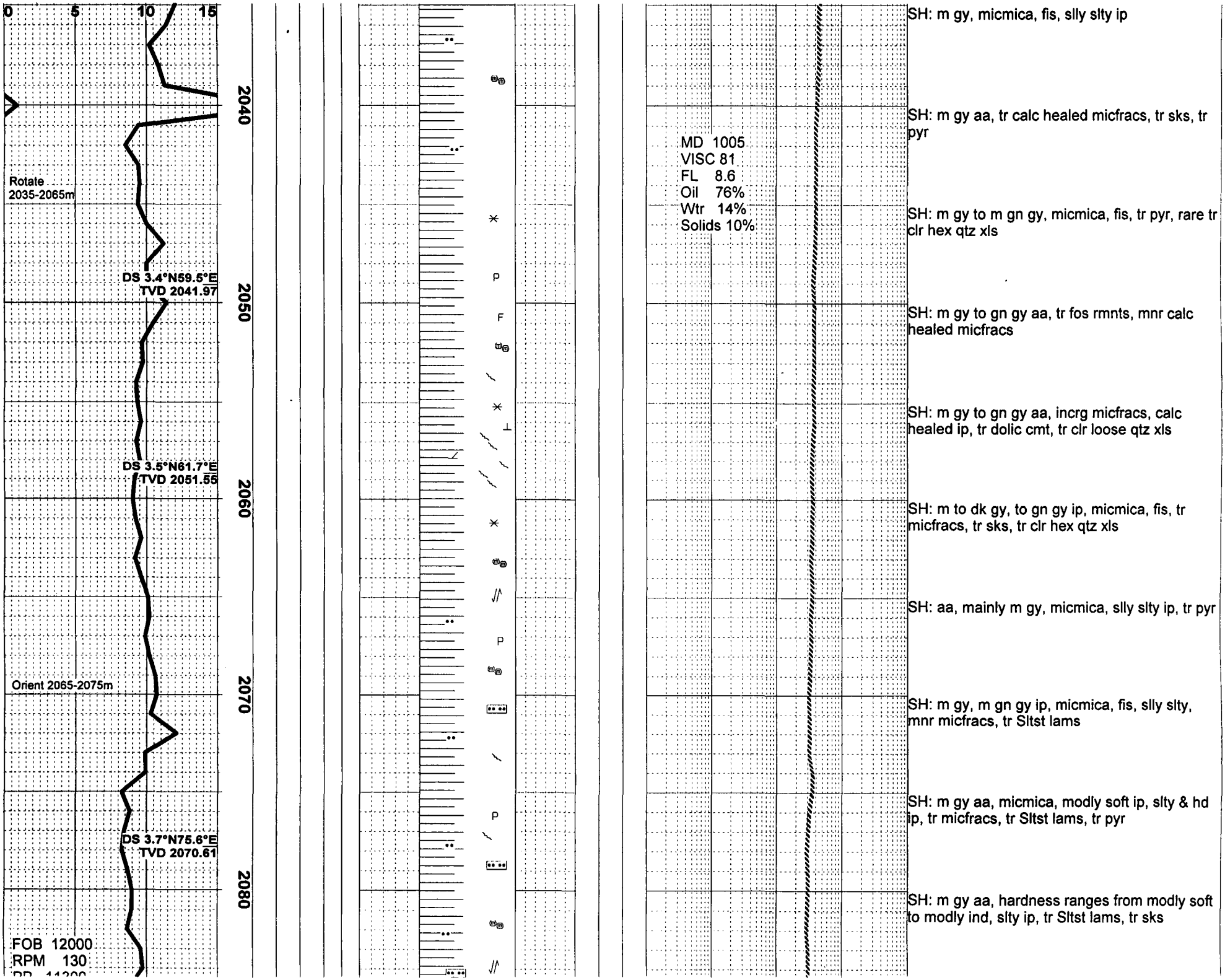

0
5
10
15
Rotate
1776-1806m
1800
1810
1820
1830
1840
Feb 28, 1999
Orient 1806-1815m
Bit#8 SEC GS86F
302.00 / 42 hrs
Cond 5-6-BT-A-
-F-8-NO-TQ
DS 4.8°N59.6°E
TVD 1812.54
NB#9 HW GT-20
Rotate
1815-1835m
Orient 1835-1842m
DS 4.5°N67.6°E
TVD 1831.68
TG
MD 985
VISC 85
FL 8.0
Oil 76%
Wtr 16%
Solids 8%
SH: m to dk gy, to blk ip, micmica, fis, v sidic & hd ip, slly bits ip, mnr Fest strs, dk gy brn, arg, hd
SH: m to dk gy, dk brn gy to blk ip, micmica, modly ind, bits / brn str ip, sidic & v hd ip / tr Fest strgs
SH: aa, incrg m gy, decrg dk gy, bits ip, tr sks
SH: m to dk gy, dk brn gy ip, micmica, fis to blky, slly bits ip, sidic ip
SH: mainly dk gy aa, m gy ip, micmica, fis, slly bits, sidic ip / tr Fest strgs, tr dism pyr
SH: dk gy to gy brn, micmica, slly sidic, mrly, tr pyr
SH: m to dk gy, gy brn & sidic ip, micmica, modly ind, slly slty ip
SH: m to dk gy aa, brn gy ip, mrly ip
SH: m to dk gy, micmica, fis, slly calcs to mrly, tr Ls strgs, m brn, crpxl, slly arg, tt, no shows
SH: m gy, m gn gy ip, tr dk gy, micmica, fis, slly calcs ip, modly soft

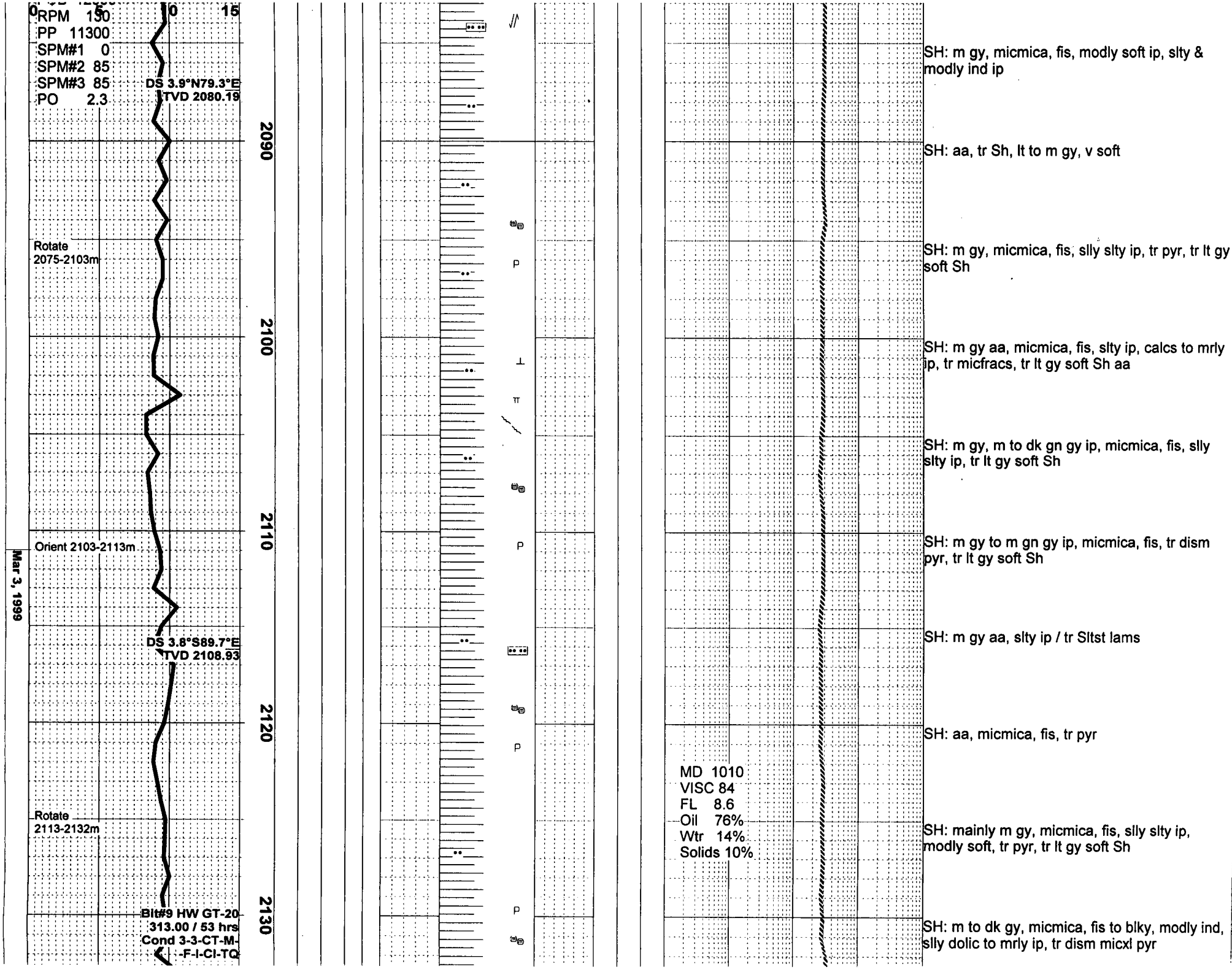

0
5
10
15
Rotate
1842-1874m
DS 4.5°N69.9°E
TVD 1850.82
FOB 15000
RPM 130
PP 12000
SPM#1 0
SPM#2 85
SPM#3 85
PO 2.3
Orient 1874-1883m
DS 4.4°N72.3°E
TVD 1879.43
Rotate 1883-1902m
1850
1860
1870
1880
1890
Mar 1, 1999
SH: m gy aa, gn gy ip, mot dk gy ip, slly calcs to mrly, tr Mrlst strgs, tr Sh, lt to m gy, v soft, tr Sltst, lt to m gy, v sils & hd ip, slly calcs, arg ip, tt, no shows
SH: m gy to m gn gy, tr dk gy, micmica, fis, slly calcs ip, slty ip, mnr Sltst lams, m gy, mainly qtzs, sils, w ind, slly calcs, slly arg ip, micmica, tt, no shows
SH: aa, mainly m gy to m gn gy, slty ip / scat Sltst strs
SH: m gy aa, decrg Sltst strs, tr Sh, lt to m gy, v soft, slly bentic
SH: m gy to m gn gy, micmica, fis, modly soft, slty ip, slly calcs ip, tr pyr, tr Sltst lams
SH: m to dk gy to gn gy, micmica, fis, modly soft, lt gy & v soft ip, sidic & modly ind ip, mnr pyr, tr sid
SH: aa, mainly m gy, micmica, slly slty / tr Sltst lams, lt to m gy, qtzs, sils & hd, slly calcs ip, tt, no shows
SH: aa, m to dk gy ip, sidic / tr Fest strgs, tr Ls, m brn, crpxl, arg, tt, no shows
SH: m gy, micmica, fis, slty to v slty ip, mrly ip, tr Sltst strgs aa
SH: m gy aa, slly slty / tr Sltst lams aa

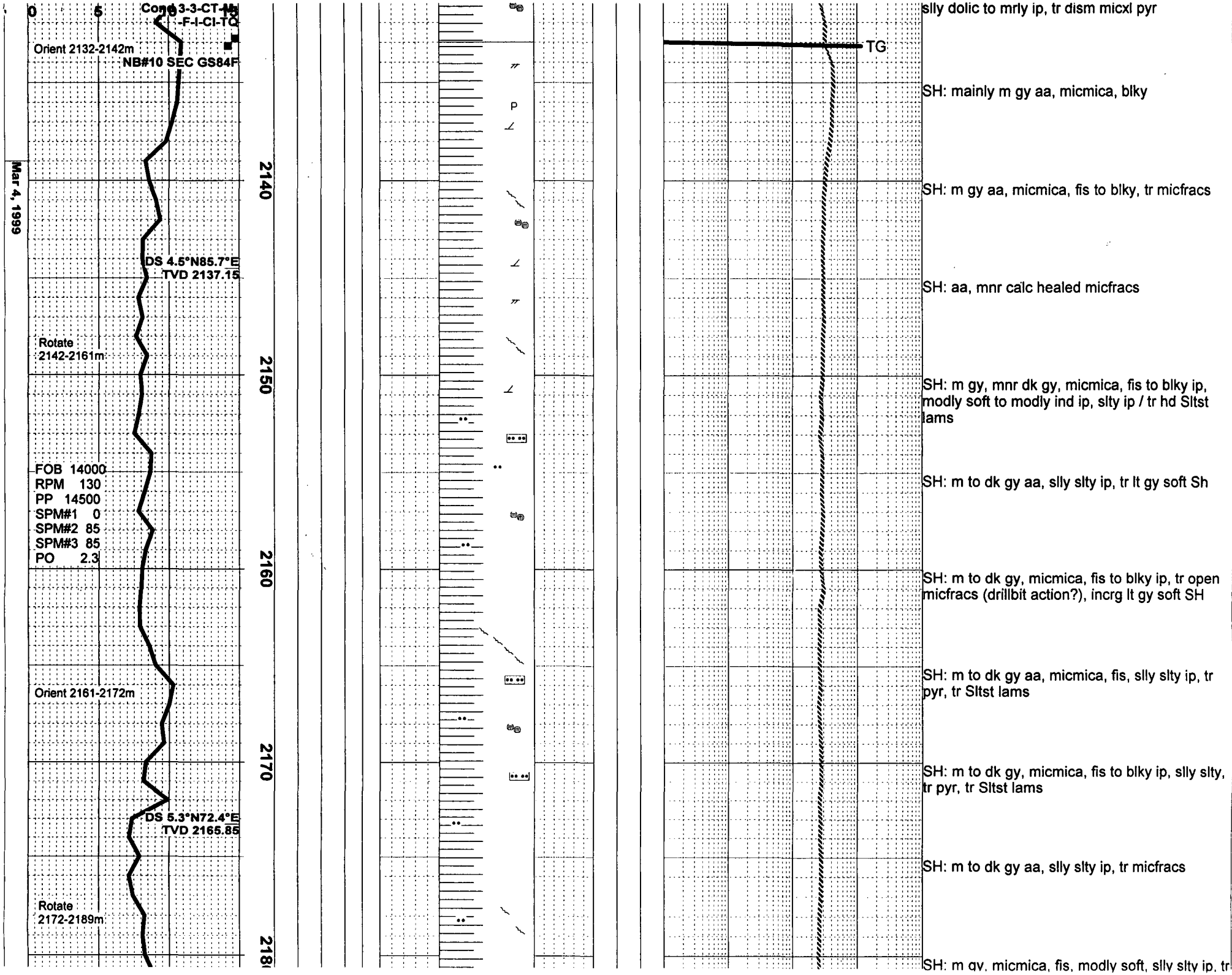

0
5
10
15
1900
1910
1920
1930
Orient 1902-1917m
DS 4.2°N73.3°E
TVD 1908.15
Rotate 1917-1931m
FOB 15000
RPM 130
PP 12100
SPM#1 0
SPM#2 85
SPM#3 85
PO 2.3
Orient 1931-1946m
MD 995
VISC 80
FL 8.6
Oil 75%
Wtr 16%
Solids 9%
SH: m gy to m brn gy, micmica, fis to blky, sidic & w ind ip, slly slty ip, mrly ip, tr Sltst, m gy, qtzs, v sils, slly calcs, slly arg, tt, no shows
SH: aa, slly sidic ip, mrly ip, slty, scat mica (lcm)
SH: m gy to m brn gy, micmica, fis to blky, mainly modly soft, sidic & hd ip, slly slty ip
SH: m to dk gy, brn gy ip, micmica, fis to blky, modly ind, slly sidic ip, slty ip, tr pyr
SH: m gy to brn gy, micmica, fis to blky, sidic & w ind, scat Fest strgs
SH: m brn gy aa, sidic, micmica, modly ind, tr Sltst strgs
SH: m gy, micmica, fis to blky ip, sidic ip, tr sks
SH: aa, sidic & modly ind ip, tr sks
SH: m gy aa, slly slty / tr Sltst lams aa
SH: m gy to gn gy ip, micmica, fis to blky ip, slly sidic ip, tr sks

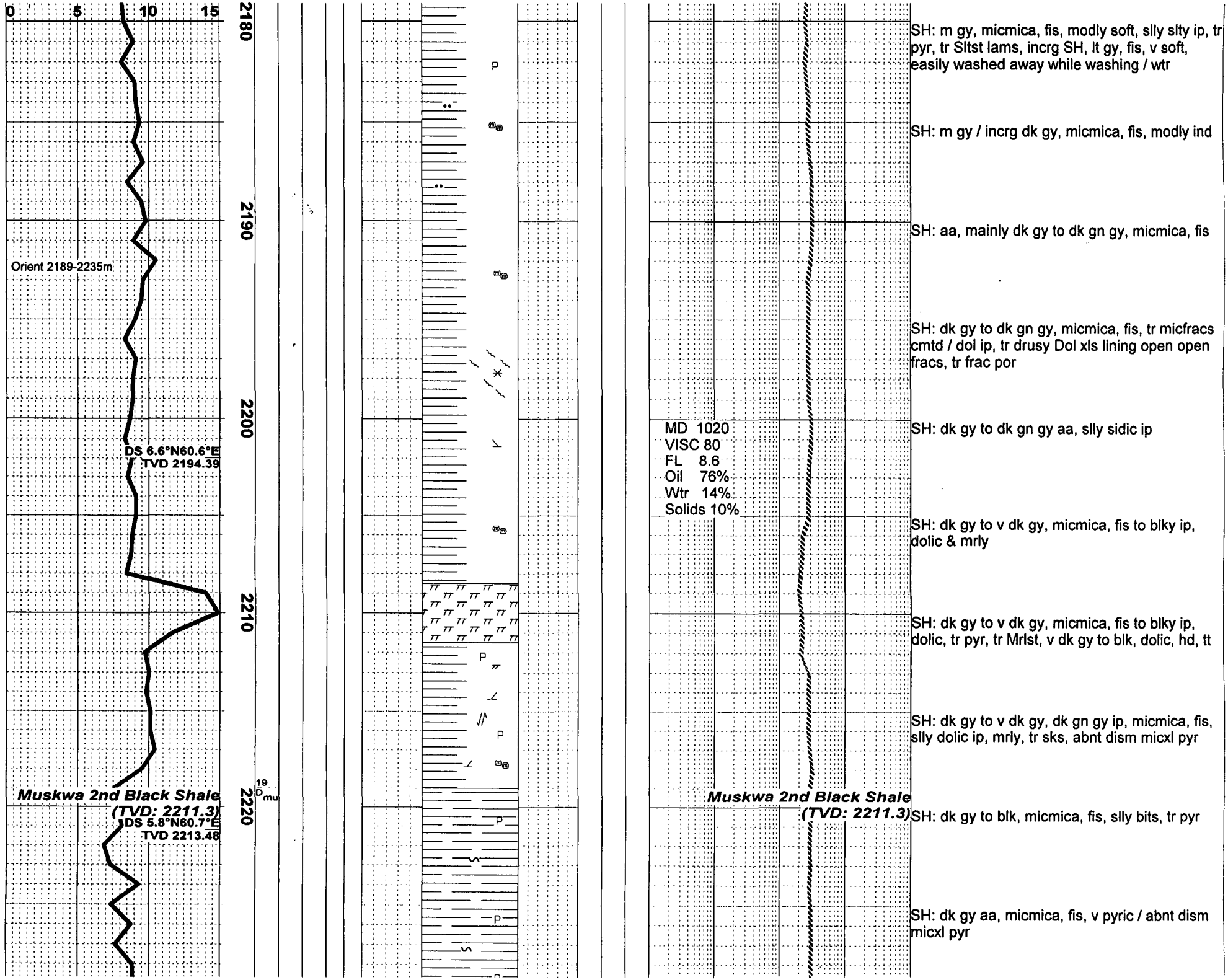

0
5
10
15
1940
1950
1960
1970
1980
DS 3.7°N70.9°E
TVD 1936.88
Rotate
1946-1969m
DS 3.8°N70.4°E
TVD 1946.36
DS 3.8°N62.8°E
TVD 1965.52
Orient
1969-1979m
Rotate
1979-1985m
Mar 2, 199
SH: aa, modly ind, tr sks
SH: m gy aa, slty, mnr Sltst strs
SH: m gy to m gn gy, micmica, calcs to mrly ip, slty ip, slly foss / tr shell frags, tr Sltst lams
SH: m gy aa, slly sidic ip, scat SH, dk gy to dk brn gy to blk, micmica, fis, slly calcs, slty, bits ip
SH: m gy to gn gy aa, micmica, tr sks, mnr dk gy to blk Sh str aa, mnr Sltst lams, m gy, slly calcs, sils, hd, tt, no shows
SH: m to dk gy, gn gy ip, micmica, fis ip, blky ip, slty to v slty ip, tr sks, tr micfracs, tr Sltst lams
SH: m gy aa, slty ip, calcs ip, mnr Sltst lams, m to dk gy, qtzs, sils, w ind, calcs ip, slly arg, micmica, tt, no shows
SH: m to dk gy, micmica, fis to blky, hardness varies from modly soft to modly ind, slty to v slty ip, slly calcs to dolic ip, tr Sltst, m to dk gy, qtzs, arg to v arg ip, sils, slly dolic, tt, no shows
SH: m to dk gy aa, slly slty / scat Sltst lams, slly dolic, tr pyr, tr lt to m gy Sh, v soft
SH: mainly m gy aa, slty to v slty ip, slly dolic, modly ind, tr Sltst lams

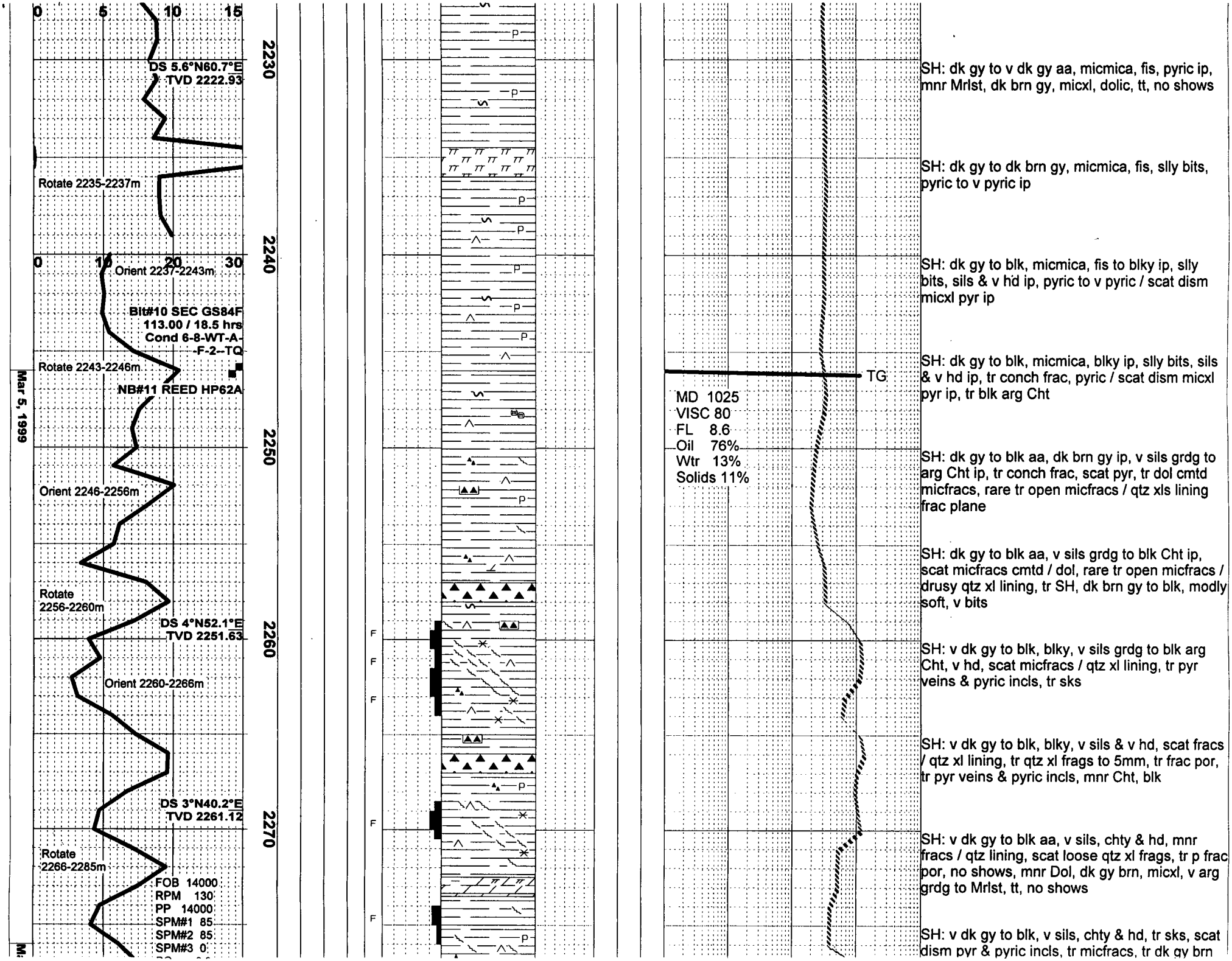

1999
0
5
10
15
1990
2000
2010
2020
2030
Orient 1989-1998m
DS 3.7°N56.1°E
TVD 1994.16
Rotate
1998-2017m
FOB 12000
RPM 130
PP 11200
SPM#1 0
SPM#2 85
SPM#3 85
PO 2.3
DS 3.4°N63.6°E
TVD 2022.9
Orient 2017-2039m
SH: m gy to m gn gy ip, micmica, mainly fis, blky ip, slly slty, tr lt gy Sh, v soft
SH: m gy aa, fis, much of the m gy Sh is water sensitive and can be washed away when cleaning sample with wtr
SH: m gy, micmica, fis, slly dolic ip, slty, tr pyr
SH: m gy, to dk gy ip, micmica, fis to blky ip, calcs to dolic, slty ip, tr pyr, tr Sltst lams
SH: m to dk gy aa, calcs to dolic, slly slty ip, tr fracs / c wh calc xln cmt
SH: aa, dolic ip, tr lt gy Sh, v soft, bentic
SH: m to dk gy, micmica, fis ip, blky & slty ip, rare tr calc healed micfracs
SH: m gy, micmica, fis, bentic & soft ip, modly ind & slty ip, tr micfracs
SH: aa, mainly m gy aa, soft to modly ind, slty ip, micmica, tr sks
SH: m gy, micmica, fis, slly slty ip

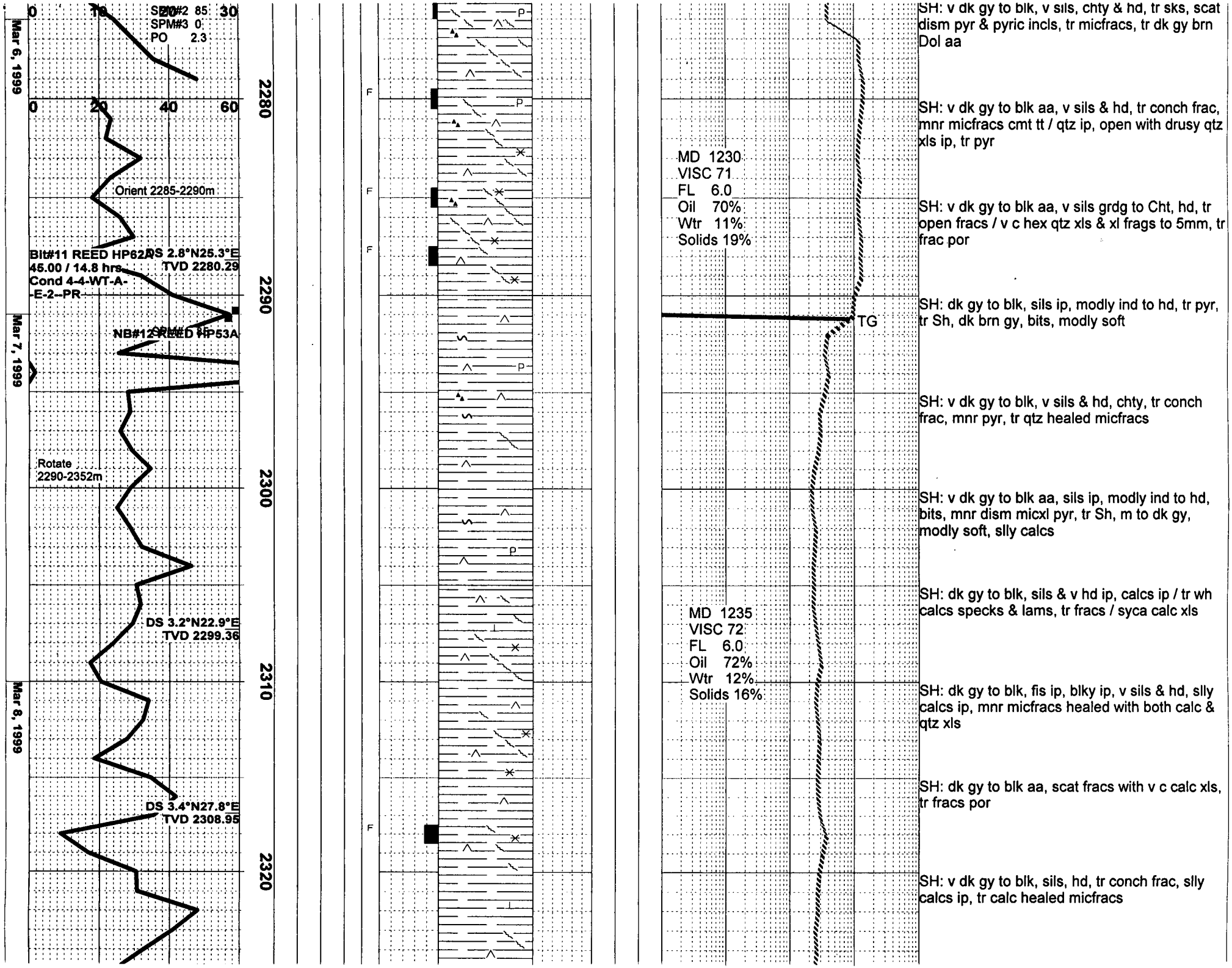

0
5
10
15
2040
2050
2060
2070
2080
Rotate
2035-2065m
DS 3.4°N59.5°E
TVD 2041.97
DS 3.5°N61.7°E
TVD 2051.55
Orient 2065-2075m
DS 3.7°N75.6°E
TVD 2070.61
FOB 12000
RPM 130
MD 1005
VISC 81
FL 8.6
Oil 76%
Wtr 14%
Solids 10%
SH: m gy, micmica, fis, slly slty ip
SH: m gy aa, tr calc healed micfracs, tr sks, tr pyr
SH: m gy to m gn gy, micmica, fis, tr pyr, rare tr clr hex qtz xls
SH: m gy to gn gy aa, tr fos rmnts, mnr calc healed micfracs
SH: m gy to gn gy aa, incrg micfracs, calc healed ip, tr dolic cmt, tr clr loose qtz xls
SH: m to dk gy, to gn gy ip, micmica, fis, tr micfracs, tr sks, tr clr hex qtz xls
SH: aa, mainly m gy, micmica, slly slty ip, tr pyr
SH: m gy, m gn gy ip, micmica, fis, slly slty, mnr micfracs, tr Sltst lams
SH: m gy aa, micmica, modly soft ip, slty & hd ip, tr micfracs, tr Sltst lams, tr pyr
SH: m gy aa, hardness ranges from modly soft to modly ind, slty ip, tr Sltst lams, tr sks

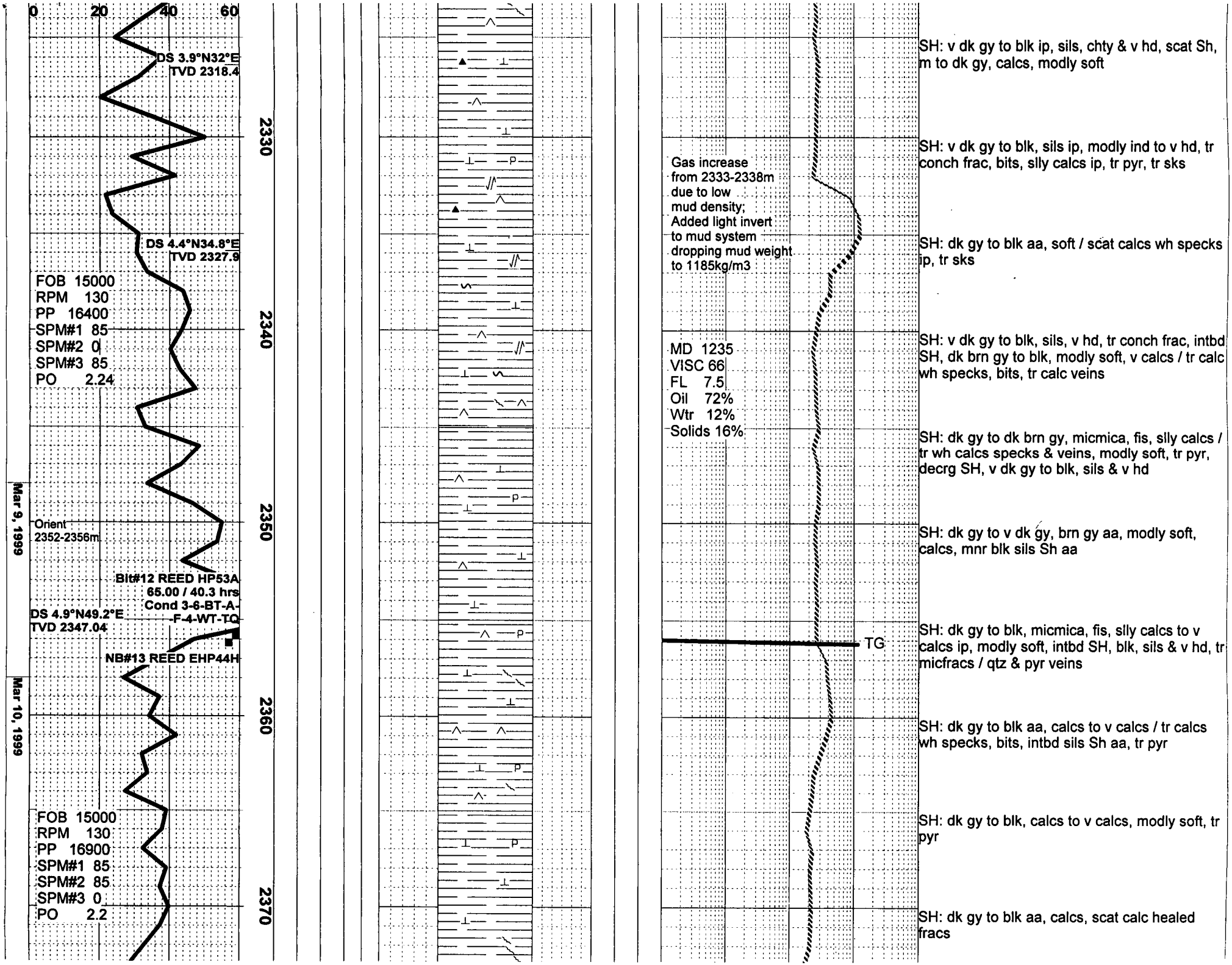

0 5 10 15
RPM 150
PP 11300
SPM#1 0
SPM#2 85
SPM#3 85
PO 2.3
DS 3.9°N79.3°E
TVD 2080.19
2090
2100
2110
2120
2130
Rotate
2075-2103m
Orient 2103-2113m
Mar 3, 1999
DS 3.8°S89.7°E
TVD 2108.93
Rotate
2113-2132m
Bit#9 HW GT-20
313.00 / 53 hrs
Cond 3-3-CT-M-
-F-I-CI-TQ
MD 1010
VISC 84
FL 8.6
Oil 76%
Wtr 14%
Solids 10%
SH: m gy, micmica, fis, modly soft ip, slty & modly ind ip
SH: aa, tr Sh, lt to m gy, v soft
SH: m gy, micmica, fis, slly slty ip, tr pyr, tr lt gy soft Sh
SH: m gy aa, micmica, fis, slty ip, calcs to mrly ip, tr micfracs, tr lt gy soft Sh aa
SH: m gy, m to dk gn gy ip, micmica, fis, slly slty ip, tr lt gy soft Sh
SH: m gy to m gn gy ip, micmica, fis, tr dism pyr, tr lt gy soft Sh
SH: m gy aa, slty ip / tr Sltst lams
SH: aa, micmica, fis, tr pyr
SH: mainly m gy, micmica, fis, slly slty ip, modly soft, tr pyr, tr lt gy soft Sh
SH: m to dk gy, micmica, fis to blky, modly ind, slly dolic to mrly ip, tr dism micxl pyr

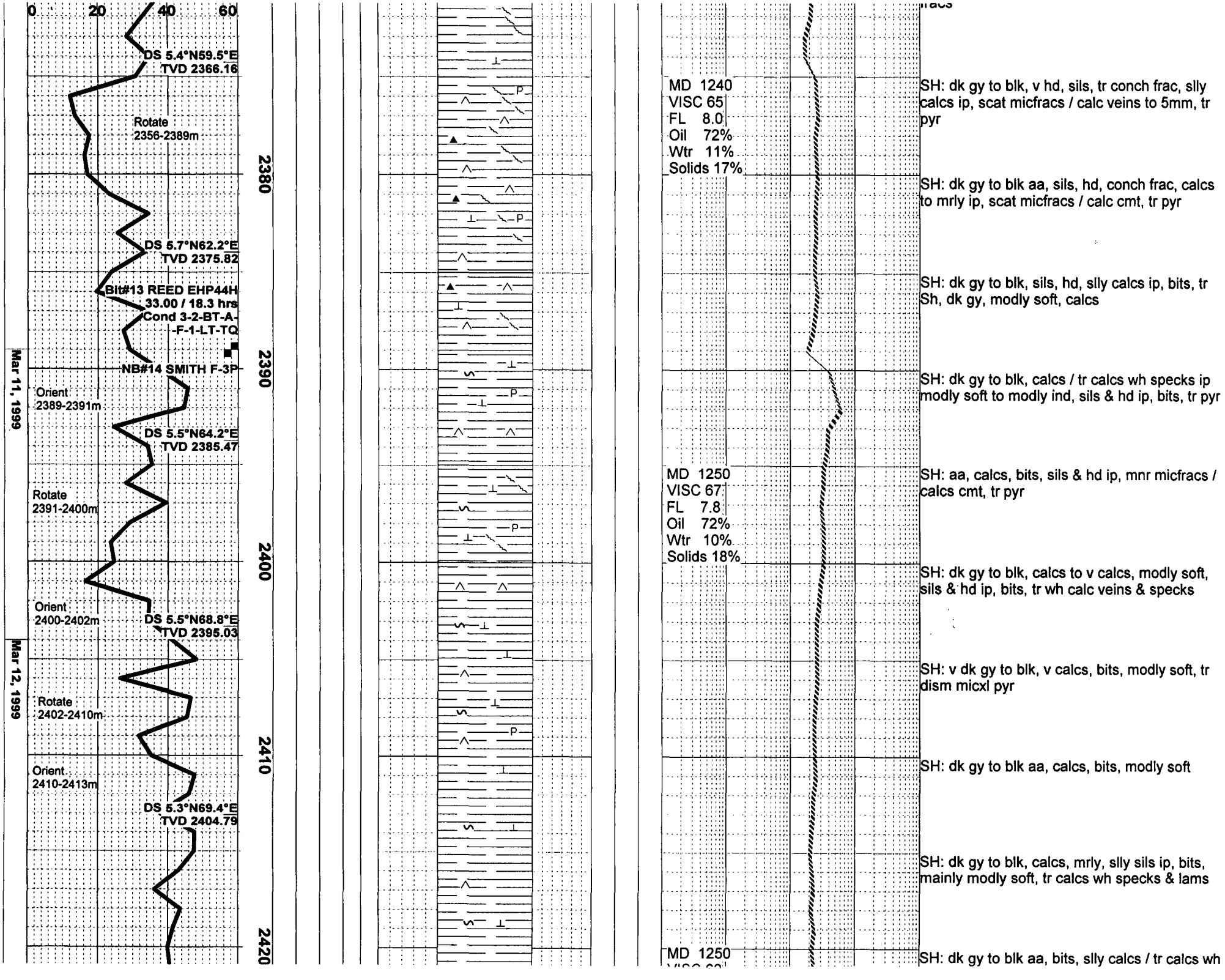

0
5
Orient 2132-2142m
NB#10 SEC GS84F
DS 4.5°N85.7°E
TVD 2137.15
Rotate
2142-2161m
FOB 14000
RPM 130
PP 14500
SPM#1 0
SPM#2 85
SPM#3 85
PO 2.3
Orient 2161-2172m
DS 5.3°N72.4°E
TVD 2165.85
Rotate
2172-2189m
Mar 4, 1999
2140
2150
2160
2170
TG
slly dolic to mrly ip, tr dism micxl pyr
SH: mainly m gy aa, micmica, blky
SH: m gy aa, micmica, fis to blky, tr micfracs
SH: aa, mnr calc healed micfracs
SH: m gy, mnr dk gy, micmica, fis to blky ip, modly soft to modly ind ip, slty ip / tr hd Sltst lams
SH: m to dk gy aa, slly slty ip, tr lt gy soft Sh
SH: m to dk gy, micmica, fis to blky ip, tr open micfracs (drillbit action?), incrg lt gy soft SH
SH: m to dk gy aa, micmica, fis, slly slty ip, tr pyr, tr Sltst lams
SH: m to dk gy, micmica, fis to blky ip, slly slty, tr pyr, tr Sltst lams
SH: m to dk gy aa, slly slty ip, tr micfracs
SH: m gy, micmica, fis, modly soft, slly slty ip, tr

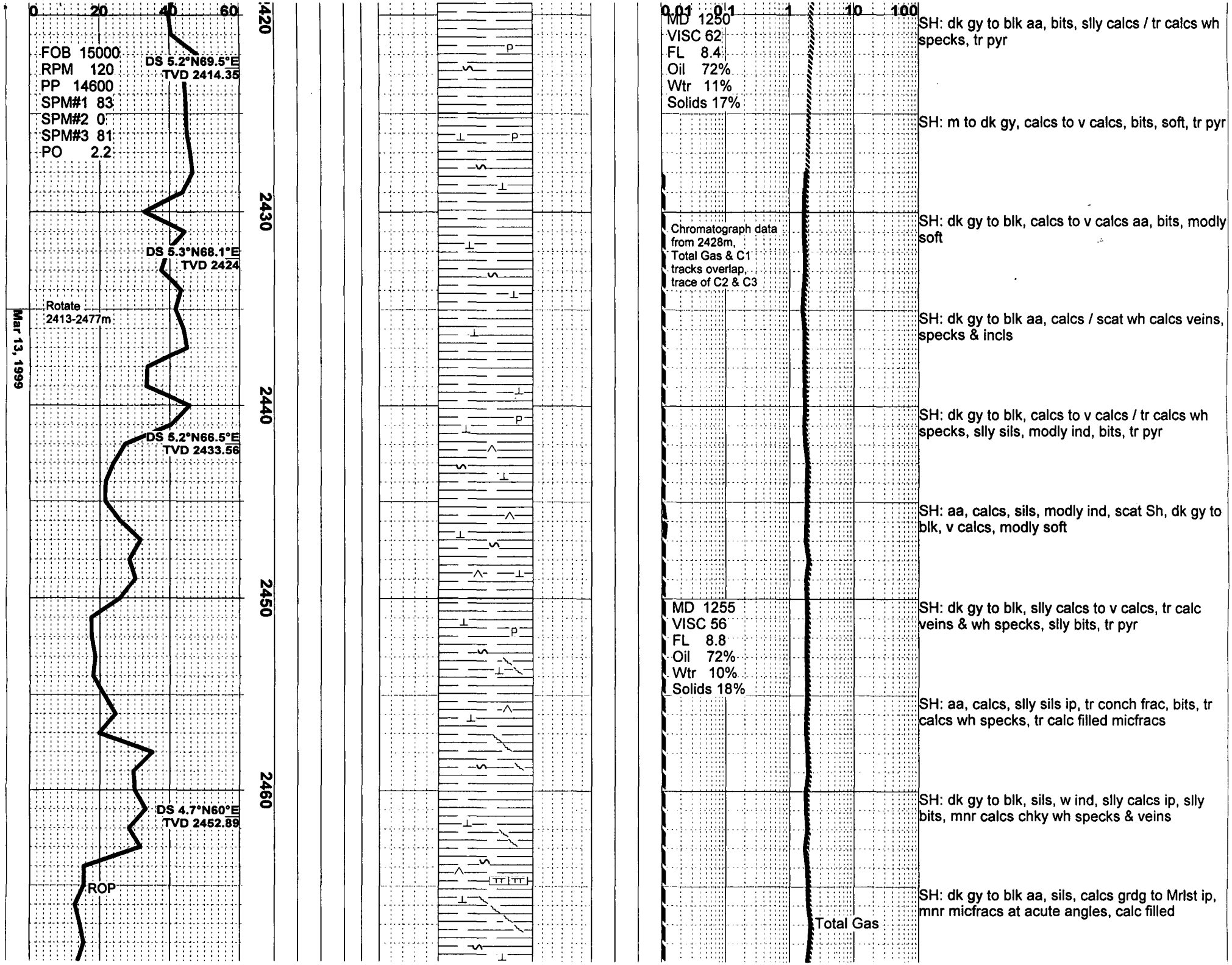

0
5
10
15
2180
2190
2200
2210
2220
Orient 2189-2235m
DS 6.6°N60.6°E
TVD 2194.39
Muskwa 2nd Black Shale
(TVD: 2211.3)
DS 5.8°N60.7°E
TVD 2213.48
19
Dmu
MD 1020
VISC 80
FL 8.6
Oil 76%
Wtr 14%
Solids 10%
Muskwa 2nd Black Shale
(TVD: 2211.3)
SH: m gy, micmica, fis, modly soft, slly slty ip, tr pyr, tr Sltst lams, incrg SH, lt gy, fis, v soft, easily washed away while washing / wtr
SH: m gy / incrg dk gy, micmica, fis, modly ind
SH: aa, mainly dk gy to dk gn gy, micmica, fis
SH: dk gy to dk gn gy, micmica, fis, tr micfracs cmtd / dol ip, tr drusy Dol xls lining open open fracs, tr frac por
SH: dk gy to dk gn gy aa, slly sidic ip
SH: dk gy to v dk gy, micmica, fis to blky ip, dolic & mrly
SH: dk gy to v dk gy, micmica, fis to blky ip, dolic, tr pyr, tr Mrlst, v dk gy to blk, dolic, hd, tt
SH: dk gy to v dk gy, dk gn gy ip, micmica, fis, slly dolic ip, mrly, tr sks, abnt dism micxl pyr
SH: dk gy to blk, micmica, fis, slly bits, tr pyr
SH: dk gy aa, micmica, fis, v pyric / abnt dism micxl pyr

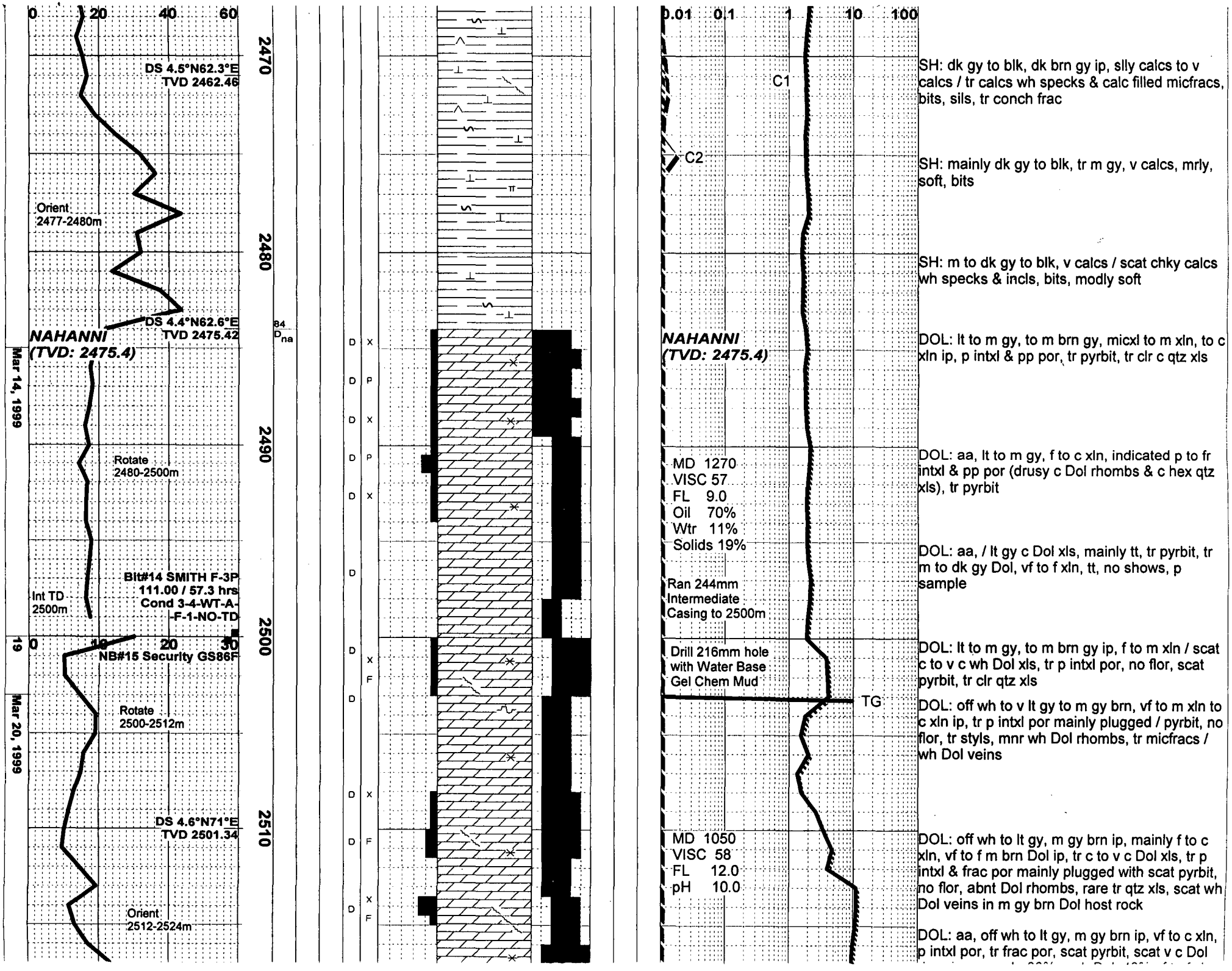

0 5 10 15
DS 5.6°N60.7°E
TVD 2222.93
Rotate 2235-2237m
0 10 20 30
Orient 2237-2243m
Bit#10 SEC GS84F
113.00 / 18.5 hrs
Cond 6-8-WT-A-
-F-2--TQ
Rotate 2243-2246m
NB#11 REED HP62A
Mar 5, 1999
Orient 2246-2256m
Rotate
2256-2260m
DS 4°N52.1°E
TVD 2251.63
Orient 2260-2266m
DS 3°N40.2°E
TVD 2261.12
Rotate
2266-2285m
FOB 14000
RPM 130
PP 14000
SPM#1 85
SPM#2 85
SPM#3 0
2230
2240
2250
2260
2270
TG
MD 1025
VISC 80
FL 8.6
Oil 76%
Wtr 13%
Solids 11%
SH: dk gy to v dk gy aa, micmica, fis, pyric ip, mnr Mrlst, dk brn gy, micxl, dolic, tt, no shows
SH: dk gy to dk brn gy, micmica, fis, slly bits, pyric to v pyric ip
SH: dk gy to blk, micmica, fis to blky ip, slly bits, sils & v hd ip, pyric to v pyric / scat dism micxl pyr ip
SH: dk gy to blk, micmica, blky ip, slly bits, sils & v hd ip, tr conch frac, pyric / scat dism micxl pyr ip, tr blk arg Cht
SH: dk gy to blk aa, dk brn gy ip, v sils grdg to arg Cht ip, tr conch frac, scat pyr, tr dol cmtd micfracs, rare tr open micfracs / qtz xls lining frac plane
SH: dk gy to blk aa, v sils grdg to blk Cht ip, scat micfracs cmtd / dol, rare tr open micfracs / drusy qtz xl lining, tr SH, dk brn gy to blk, modly soft, v bits
SH: v dk gy to blk, blky, v sils grdg to blk arg Cht, v hd, scat micfracs / qtz xl lining, tr pyr veins & pyric incls, tr sks
SH: v dk gy to blk, blky, v sils & v hd, scat fracs / qtz xl lining, tr qtz xl frags to 5mm, tr frac por, tr pyr veins & pyric incls, mnr Cht, blk
SH: v dk gy to blk aa, v sils, chty & hd, mnr fracs / qtz lining, scat loose qtz xl frags, tr p frac por, no shows, mnr Dol, dk gy brn, micxl, v arg grdg to Mrlst, tt, no shows
SH: v dk gy to blk, v sils, chty & hd, tr sks, scat dism pyr & pyric incls, tr micfracs, tr dk gy brn

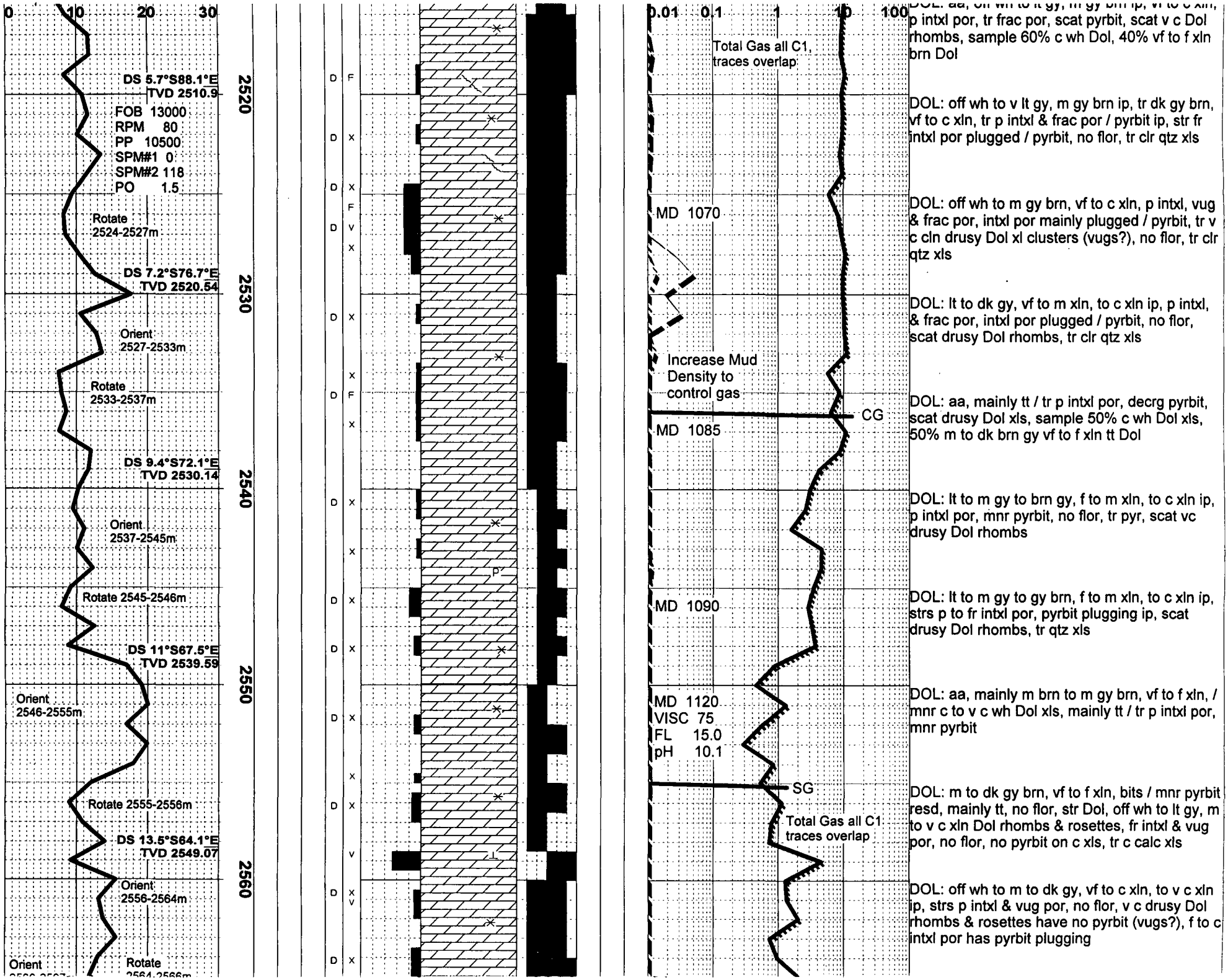

0
10
20
30
SPM#2 85
SPM#3 0
PO 2.3
0
20
40
60
Mar 6, 1999
Mar 7, 1999
Mar 8, 1999
2280
2290
2300
2310
2320
Orient 2285-2290m
Bit#11 REED HP62A
45.00 / 14.8 hrs
Cond 4-4-WT-A-E-2--PR
DS 2.8°N25.3°E
TVD 2280.29
NB#12 REED HP53A
Rotate
2290-2352m
DS 3.2°N22.9°E
TVD 2299.36
DS 3.4°N27.8°E
TVD 2308.95
MD 1230
VISC 71
FL 6.0
Oil 70%
Wtr 11%
Solids 19%
TG
MD 1235
VISC 72
FL 6.0
Oil 72%
Wtr 12%
Solids 16%
SH: v dk gy to blk, v sils, chty & hd, tr sks, scat dism pyr & pyric incls, tr micfracs, tr dk gy brn Dol aa
SH: v dk gy to blk aa, v sils & hd, tr conch frac, mnr micfracs cmt tt / qtz ip, open with drusy qtz xls ip, tr pyr
SH: v dk gy to blk aa, v sils grdg to Cht, hd, tr open fracs / v c hex qtz xls & xl frags to 5mm, tr frac por
SH: dk gy to blk, sils ip, modly ind to hd, tr pyr, tr Sh, dk brn gy, bits, modly soft
SH: v dk gy to blk, v sils & hd, chty, tr conch frac, mnr pyr, tr qtz healed micfracs
SH: v dk gy to blk aa, sils ip, modly ind to hd, bits, mnr dism micxl pyr, tr Sh, m to dk gy, modly soft, slly calcs
SH: dk gy to blk, sils & v hd ip, calcs ip / tr wh calcs specks & lams, tr fracs / syca calc xls
SH: dk gy to blk, fis ip, blky ip, v sils & hd, slly calcs ip, mnr micfracs healed with both calc & qtz xls
SH: dk gy to blk aa, scat fracs with v c calc xls, tr fracs por
SH: v dk gy to blk, sils, hd, tr conch frac, slly calcs ip, tr calc healed micfracs


0
20
40
60
DS 3.9°N32°E
TVD 2318.4
DS 4.4°N34.8°E
TVD 2327.9
FOB 15000
RPM 130
PP 16400
SPM#1 85
SPM#2 0
SPM#3 85
PO 2.24
Orient
2352-2356m
Bit#12 REED HP53A
65.00 / 40.3 hrs
Cond 3-6-BT-A-
-F-4-WT-TQ
DS 4.9°N49.2°E
TVD 2347.04
NB#13 REED EHP44H
FOB 15000
RPM 130
PP 16900
SPM#1 85
SPM#2 85
SPM#3 0
PO 2.2
2330
2340
2350
2360
2370
Mar 9, 1999
Mar 10, 1999
Gas increase
from 2333-2338m
due to low
mud density;
Added light invert
to mud system
dropping mud weight
to 1185kg/m3
MD 1235
VISC 66
FL 7.5
Oil 72%
Wtr 12%
Solids 16%
TG
SH: v dk gy to blk ip, sils, chty & v hd, scat Sh, m to dk gy, calcs, modly soft
SH: v dk gy to blk, sils ip, modly ind to v hd, tr conch frac, bits, slly calcs ip, tr pyr, tr sks
SH: dk gy to blk aa, soft / scat calcs wh specks ip, tr sks
SH: v dk gy to blk, sils, v hd, tr conch frac, intbd SH, dk brn gy to blk, modly soft, v calcs / tr calc wh specks, bits, tr calc veins
SH: dk gy to dk brn gy, micmica, fis, slly calcs / tr wh calcs specks & veins, modly soft, tr pyr, decrg SH, v dk gy to blk, sils & v hd
SH: dk gy to v dk gy, brn gy aa, modly soft, calcs, mnr blk sils Sh aa
SH: dk gy to blk, micmica, fis, slly calcs to v calcs ip, modly soft, intbd SH, blk, sils & v hd, tr micfracs / qtz & pyr veins
SH: dk gy to blk aa, calcs to v calcs / tr calcs wh specks, bits, intbd sils Sh aa, tr pyr
SH: dk gy to blk, calcs to v calcs, modly soft, tr pyr
SH: dk gy to blk aa, calcs, scat calc healed fracs


0
20
40
60
DS 5.4°N59.5°E
TVD 2366.16
Rotate
2356-2389m
DS 5.7°N62.2°E
TVD 2375.82
Bit#13 REED EHP44H
33.00 / 18.3 hrs
Cond 3-2-BT-A-
-F-1-LT-TQ
NB#14 SMITH F-3P
Orient
2389-2391m
DS 5.5°N64.2°E
TVD 2385.47
Rotate
2391-2400m
Orient
2400-2402m
DS 5.5°N68.8°E
TVD 2395.03
Rotate
2402-2410m
Orient
2410-2413m
DS 5.3°N69.4°E
TVD 2404.79
Mar 11, 1999
Mar 12, 1999
2380
2390
2400
2410
2420
MD 1240
VISC 65
FL 8.0
Oil 72%
Wtr 11%
Solids 17%
MD 1250
VISC 67
FL 7.8
Oil 72%
Wtr 10%
Solids 18%
MD 1250
SH: dk gy to blk, v hd, sils, tr conch frac, slly calcs ip, scat micfracs / calc veins to 5mm, tr pyr
SH: dk gy to blk aa, sils, hd, conch frac, calcs to mrly ip, scat micfracs / calc cmt, tr pyr
SH: dk gy to blk, sils, hd, slly calcs ip, bits, tr Sh, dk gy, modly soft, calcs
SH: dk gy to blk, calcs / tr calcs wh specks ip modly soft to modly ind, sils & hd ip, bits, tr pyr
SH: aa, calcs, bits, sils & hd ip, mnr micfracs / calcs cmt, tr pyr
SH: dk gy to blk, calcs to v calcs, modly soft, sils & hd ip, bits, tr wh calc veins & specks
SH: v dk gy to blk, v calcs, bits, modly soft, tr dism micxl pyr
SH: dk gy to blk aa, calcs, bits, modly soft
SH: dk gy to blk, calcs, mrly, slly sils ip, bits, mainly modly soft, tr calcs wh specks & lams
SH: dk gy to blk aa, bits, slly calcs / tr calcs wh


0
20
40
60
FOB 15000
RPM 120
PP 14600
SPM#1 83
SPM#2 0
SPM#3 81
PO 2.2
DS 5.2°N69.5°E
TVD 2414.35
DS 5.3°N68.1°E
TVD 2424
Rotate
2413-2477m
DS 5.2°N66.5°E
TVD 2433.56
DS 4.7°N60°E
TVD 2452.89
ROP
Mar 13, 1999
2420
2430
2440
2450
2460
0.01
0.1
1
10
100
MD 1250
VISC 62
FL 8.4
Oil 72%
Wtr 11%
Solids 17%
Chromatograph data
from 2428m,
Total Gas & C1
tracks overlap,
trace of C2 & C3
MD 1255
VISC 56
FL 8.8
Oil 72%
Wtr 10%
Solids 18%
Total Gas
SH: dk gy to blk aa, bits, slly calcs / tr calcs wh specks, tr pyr
SH: m to dk gy, calcs to v calcs, bits, soft, tr pyr
SH: dk gy to blk, calcs to v calcs aa, bits, modly soft
SH: dk gy to blk aa, calcs / scat wh calcs veins, specks & incls
SH: dk gy to blk, calcs to v calcs / tr calcs wh specks, slly sils, modly ind, bits, tr pyr
SH: aa, calcs, sils, modly ind, scat Sh, dk gy to blk, v calcs, modly soft
SH: dk gy to blk, slly calcs to v calcs, tr calc veins & wh specks, slly bits, tr pyr
SH: aa, calcs, slly sils ip, tr conch frac, bits, tr calcs wh specks, tr calc filled micfracs
SH: dk gy to blk, sils, w ind, slly calcs ip, slly bits, mnr calcs chky wh specks & veins
SH: dk gy to blk aa, sils, calcs grdg to Mrlst ip, mnr micfracs at acute angles, calc filled


0 20 40 60
DS 4.5°N62.3°E
TVD 2462.46
Orient
2477-2480m
DS 4.4°N62.6°E
TVD 2475.42
NAHANNI
(TVD: 2475.4)
Mar 14, 1999
Rotate
2480-2500m
Int TD
2500m
Bit#14 SMITH F-3P
111.00 / 57.3 hrs
Cond 3-4-WT-A-
-F-1-NO-TD
0 10 20 30
NB#15 Security GS86F
19
Mar 20, 1999
Rotate
2500-2512m
DS 4.6°N71°E
TVD 2501.34
Orient
2512-2524m
2470
2480
2490
2500
2510
84
Dna
D X
D P
D X
D P
D X
D
D X
D F
D
D X
D F
D X
F
0.01 0.1 1 10 100
C1
C2
NAHANNI
(TVD: 2475.4)
MD 1270
VISC 57
FL 9.0
Oil 70%
Wtr 11%
Solids 19%
Ran 244mm
Intermediate
Casing to 2500m
Drill 216mm hole
with Water Base
Gel Chem Mud
TG
MD 1050
VISC 58
FL 12.0
pH 10.0
SH: dk gy to blk, dk brn gy ip, slly calcs to v calcs / tr calcs wh specks & calc filled micfracs, bits, sils, tr conch frac
SH: mainly dk gy to blk, tr m gy, v calcs, mrly, soft, bits
SH: m to dk gy to blk, v calcs / scat chky calcs wh specks & incls, bits, modly soft
DOL: lt to m gy, to m brn gy, micxl to m xln, to c xln ip, p intxl & pp por, tr pyrbit, tr clr c qtz xls
DOL: aa, lt to m gy, f to c xln, indicated p to fr intxl & pp por (drusy c Dol rhombs & c hex qtz xls), tr pyrbit
DOL: aa, / lt gy c Dol xls, mainly tt, tr pyrbit, tr m to dk gy Dol, vf to f xln, tt, no shows, p sample
DOL: lt to m gy, to m brn gy ip, f to m xln / scat c to v c wh Dol xls, tr p intxl por, no flor, scat pyrbit, tr clr qtz xls
DOL: off wh to v lt gy to m gy brn, vf to m xln to c xln ip, tr p intxl por mainly plugged / pyrbit, no flor, tr styls, mnr wh Dol rhombs, tr micfracs / wh Dol veins
DOL: off wh to lt gy, m gy brn ip, mainly f to c xln, vf to f m brn Dol ip, tr c to v c Dol xls, tr p intxl & frac por mainly plugged with scat pyrbit, no flor, abnt Dol rhombs, rare tr qtz xls, scat wh Dol veins in m gy brn Dol host rock
DOL: aa, off wh to lt gy, m gy brn ip, vf to c xln, p intxl por, tr frac por, scat pyrbit, scat v c Dol



DOL: aa, off wh to lt gy, m gy brn ip, vf to c xln, p intxl por, tr frac por, scat pyrbit, scat v c Dol rhombs, sample 60% c wh Dol, 40% vf to f xln brn Dol

DOL: off wh to v lt gy, m gy brn ip, tr dk gy brn, vf to c xln, tr p intxl & frac por / pyrbit ip, str fr intxl por plugged / pyrbit, no flor, tr clr qtz xls

DOL: off wh to m gy brn, vf to c xln, p intxl, vug & frac por, intxl por mainly plugged / pyrbit, tr v c cln drusy Dol xl clusters (vugs?), no flor, tr clr qtz xls

DOL: lt to dk gy, vf to m xln, to c xln ip, p intxl, & frac por, intxl por plugged / pyrbit, no flor, scat drusy Dol rhombs, tr clr qtz xls

DOL: aa, mainly tt / tr p intxl por, decrg pyrbit, scat drusy Dol xls, sample 50% c wh Dol xls, 50% m to dk brn gy vf to f xln tt Dol

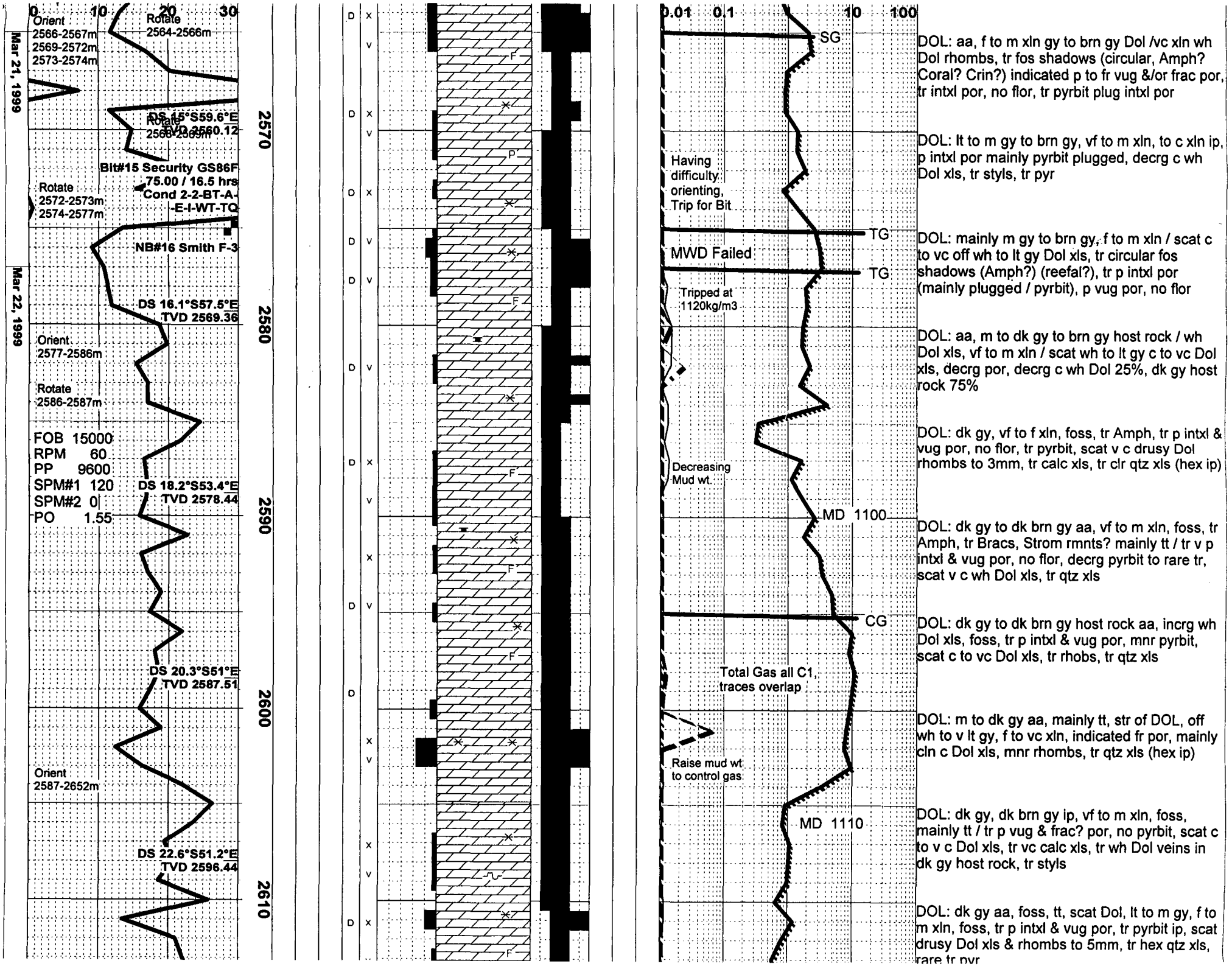
DOL: lt to m gy to brn gy, f to m xln, to c xln ip, p intxl por, mnr pyrbit, no flor, tr pyr, scat vc drusy Dol rhombs

DOL: lt to m gy to gy brn, f to m xln, to c xln ip, strs p to fr intxl por, pyrbit plugging ip, scat drusy Dol rhombs, tr qtz xls

DOL: aa, mainly m brn to m gy brn, vf to f xln, / mnr c to v c wh Dol xls, mainly tt / tr p intxl por, mnr pyrbit

DOL: m to dk gy brn, vf to f xln, bits / mnr pyrbit resd, mainly tt, no flor, str Dol, off wh to lt gy, m to v c xln Dol rhombs & rosettes, fr intxl & vug por, no flor, no pyrbit on c xls, tr c calc xls

DOL: off wh to m to dk gy, vf to c xln, to v c xln ip, strs p intxl & vug por, no flor, v c drusy Dol rhombs & rosettes have no pyrbit (vugs?), f to c intxl por has pyrbit plugging



DOL: aa, f to m xln gy to brn gy Dol /vc xln wh Dol rhombs, tr fos shadows (circular, Amph? Coral? Crin?) indicated p to fr vug &/or frac por, tr intxl por, no flor, tr pyrbit plug intxl por

DOL: lt to m gy to brn gy, vf to m xln, to c xln ip, p intxl por mainly pyrbit plugged, decrg c wh Dol xls, tr styls, tr pyr

DOL: mainly m gy to brn gy, f to m xln / scat c to vc off wh to lt gy Dol xls, tr circular fos shadows (Amph?) (reefal?), tr p intxl por (mainly plugged / pyrbit), p vug por, no flor

DOL: aa, m to dk gy to brn gy host rock / wh Dol xls, vf to m xln / scat wh to lt gy c to vc Dol xls, decrg por, decrg c wh Dol 25%, dk gy host rock 75%

DOL: dk gy, vf to f xln, foss, tr Amph, tr p intxl & vug por, no flor, tr pyrbit, scat v c drusy Dol rhombs to 3mm, tr calc xls, tr clr qtz xls (hex ip)

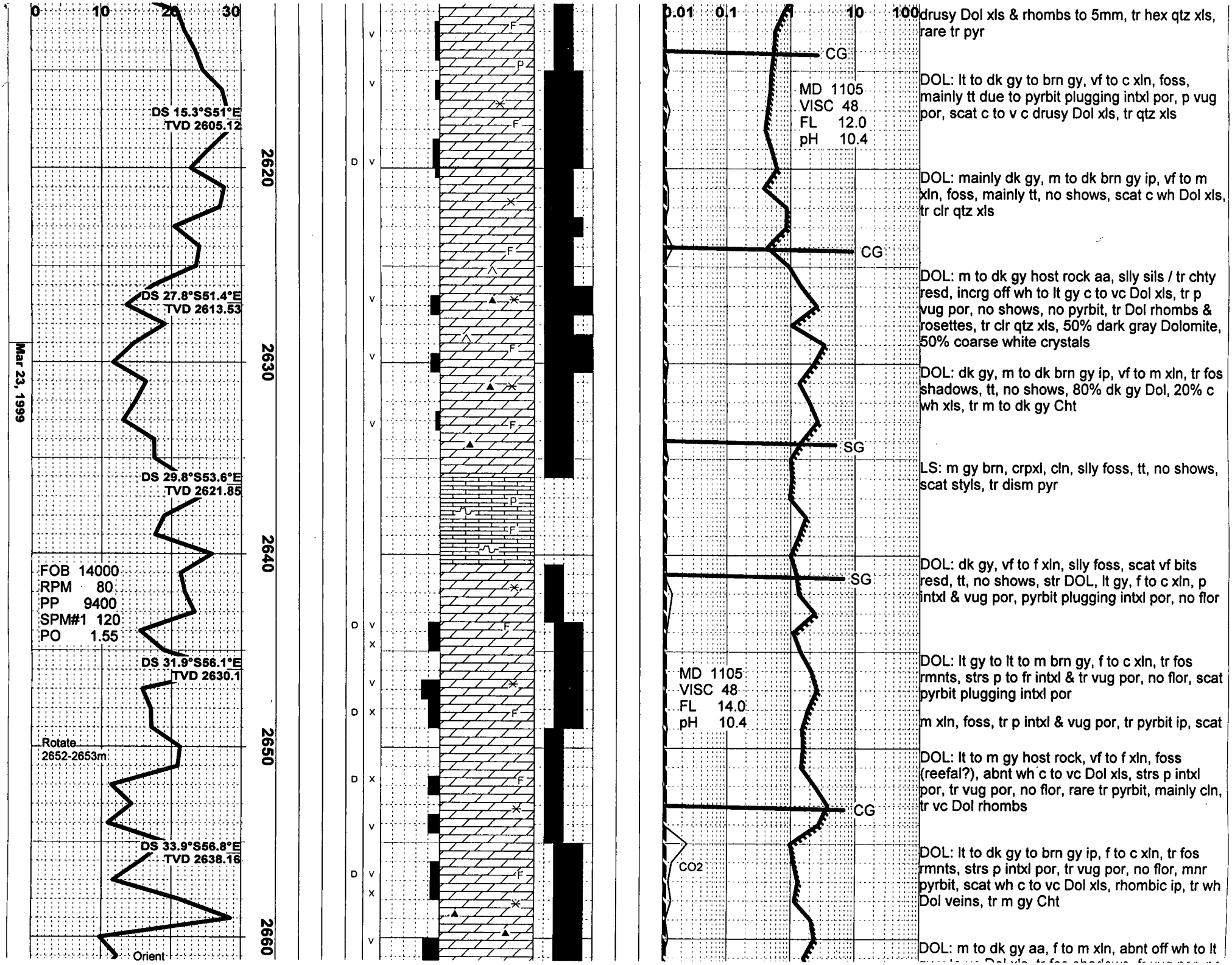
DOL: dk gy to dk brn gy aa, vf to m xln, foss, tr Amph, tr Bracs, Strom rmnts? mainly tt / tr v p intxl & vug por, no flor, decrg pyrbit to rare tr, scat v c wh Dol xls, tr qtz xls

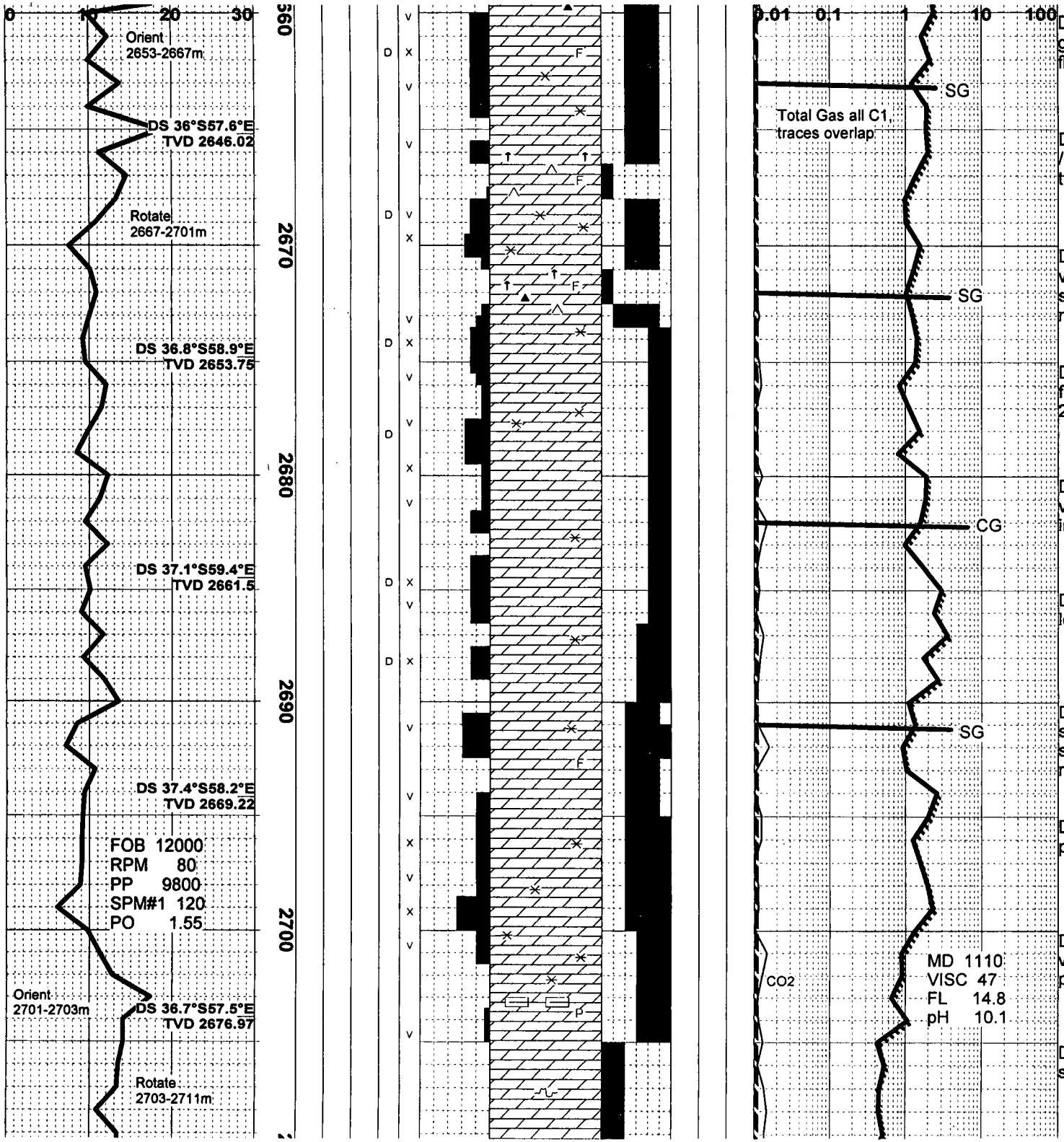
DOL: dk gy to dk brn gy host rock aa, incrg wh Dol xls, foss, tr p intxl & vug por, mnr pyrbit, scat c to vc Dol xls, tr rhobs, tr qtz xls

DOL: m to dk gy aa, mainly tt, str of DOL, off wh to v lt gy, f to vc xln, indicated fr por, mainly cln c Dol xls, mnr rhombs, tr qtz xls (hex ip)

DOL: dk gy, dk brn gy ip, vf to m xln, foss, mainly tt / tr p vug & frac? por, no pyrbit, scat c to v c Dol xls, tr vc calc xls, tr wh Dol veins in dk gy host rock, tr styls

DOL: dk gy aa, foss, tt, scat Dol, lt to m gy, f to m xln, foss, tr p intxl & vug por, tr pyrbit ip, scat drusy Dol xls & rhombs to 5mm, tr hex qtz xls, rare tr pyr


0
10
20
30
DS 15.3°S51°E
TVD 2605.12
DS 27.8°S51.4°E
TVD 2613.53
DS 29.8°S53.6°E
TVD 2621.85
FOB 14000
RPM 80
PP 9400
SPM#1 120
PO 1.55
DS 31.9°S56.1°E
TVD 2630.1
Rotate
2652-2653m
DS 33.9°S56.8°E
TVD 2638.16
Orient
Mar 23, 1999
2620
2630
2640
2650
2660
0.01
0.1
1
10
100
MD 1105
VISC 48
FL 12.0
pH 10.4
MD 1105
VISC 48
FL 14.0
pH 10.4
CG
CG
SG
SG
CG
CO2
drusy Dol xls & rhombs to 5mm, tr hex qtz xls, rare tr pyr
DOL: lt to dk gy to brn gy, vf to c xln, foss, mainly tt due to pyrbit plugging intxl por, p vug por, scat c to v c drusy Dol xls, tr qtz xls
DOL: mainly dk gy, m to dk brn gy ip, vf to m xln, foss, mainly tt, no shows, scat c wh Dol xls, tr clr qtz xls
DOL: m to dk gy host rock aa, slly sils / tr chty resd, incrg off wh to lt gy c to vc Dol xls, tr p vug por, no shows, no pyrbit, tr Dol rhombs & rosettes, tr clr qtz xls, 50% dark gray Dolomite, 50% coarse white crystals
DOL: dk gy, m to dk brn gy ip, vf to m xln, tr fos shadows, tt, no shows, 80% dk gy Dol, 20% c wh xls, tr m to dk gy Cht
LS: m gy brn, crpxl, cln, slly foss, tt, no shows, scat styls, tr dism pyr
DOL: dk gy, vf to f xln, slly foss, scat vf bits resd, tt, no shows, str DOL, lt gy, f to c xln, p intxl & vug por, pyrbit plugging intxl por, no flor
DOL: lt gy to lt to m brn gy, f to c xln, tr fos rmnts, strs p to fr intxl & tr vug por, no flor, scat pyrbit plugging intxl por
m xln, foss, tr p intxl & vug por, tr pyrbit ip, scat
DOL: lt to m gy host rock, vf to f xln, foss (reefal?), abnt wh c to vc Dol xls, strs p intxl por, tr vug por, no flor, rare tr pyrbit, mainly cln, tr vc Dol rhombs
DOL: lt to dk gy to brn gy ip, f to c xln, tr fos rmnts, strs p intxl por, tr vug por, no flor, mnr pyrbit, scat wh c to vc Dol xls, rhombic ip, tr wh Dol veins, tr m gy Cht
DOL: m to dk gy aa, f to m xln, abnt off wh to lt



DOL: m to dk gy aa, f to m xln, abnt off wh to lt gy v to vc Dol xls, tr fos shadows, fr vug por, no flor, tr pyrbit, tr clr qtz xls

DOL: aa, indicated fr vug por, no flor, tr intxl por / some pyrbit plugging, tr Dol, m brn, micxl, cln, tt, no shows

DOL: lt to dk gy, vf to c xln, slly foss, strs p to fr vug por, tr intxl por pyrbit plugging ip, no flor, scat m brn micxl Dol aa, sils / abnt sild spics, tt, no shows

DOL: off wh to lt gy, sample is 90% c to vc xln, fr intxl & vug por, mnr pyrbit, Dol rhombs to 2mm, tr clr hex qtz xls

DOL: off wh to lt gy aa, c to v c xln, fr intxl & vug por, mnr pyrbit, scat drusy Dol rhombs, incrg qtz xls

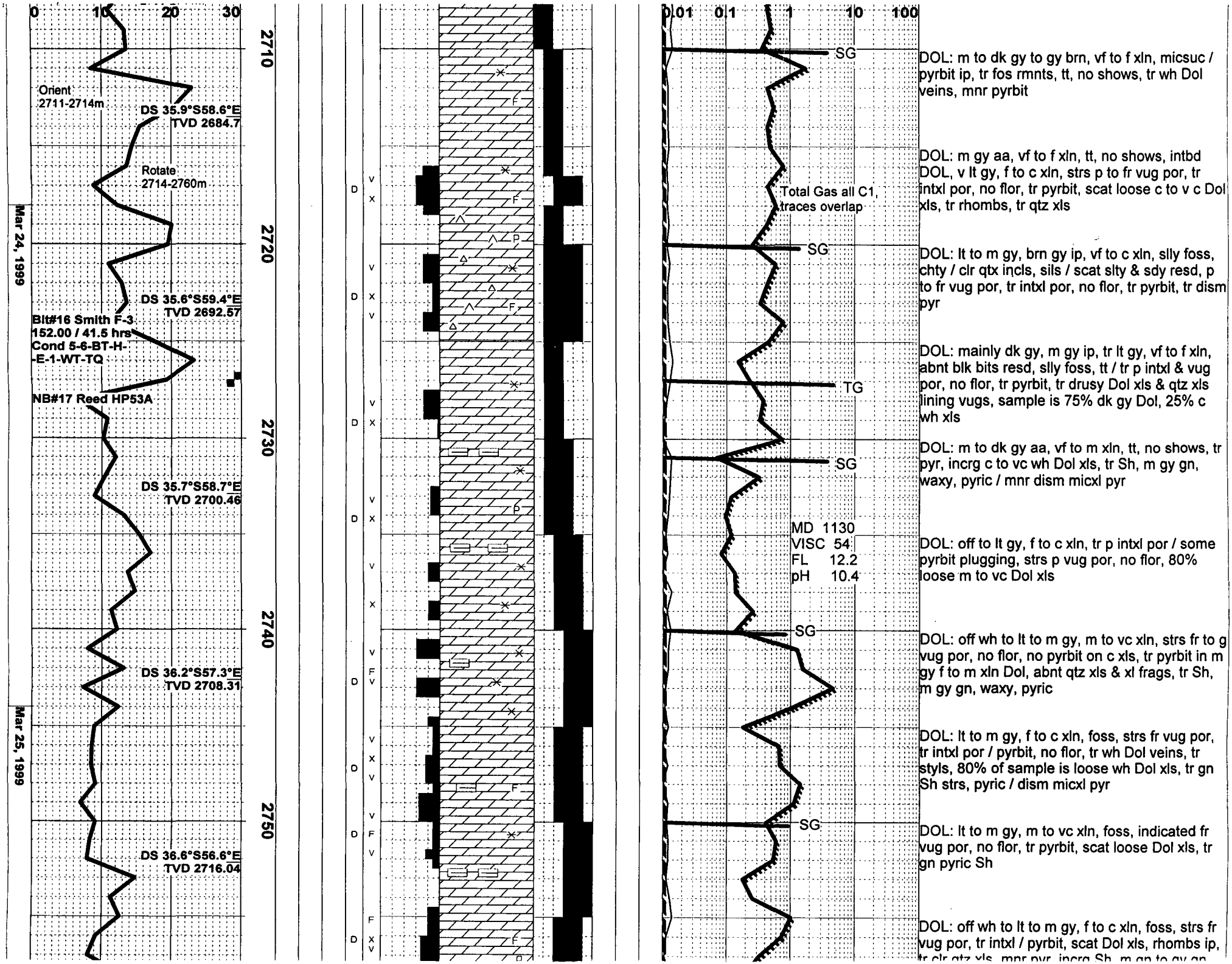
DOL: off wh to lt gy, m to vc xln, sample mainly loose wh c Dol xls, fr vug & intxl por, tr pyrbit

DOL: dk gy / off wh to lt gy c Dol xls, f to c xln, slly foss, fr intxl & vug por, tr pyrbit plugging, scat drusy Dol rhombs to 2mm, rare tr twinned rhombohedral Dol xls, tr qtz xls

DOL: aa, incrg c to vc wh Dol xls, fr vug & intxl por, no flor, mnr pyrbit

DOL: off wh to lt gy, sample predly loose m to vc Dol xls, indicated fr vug por, tr intxl por, mrn pyrbit, tr pyr, rare tr gn Sh, waxy, pyric

DOL: m gy, micxl to vf xln, cln, tt, no shows, tr styls



DOL: m to dk gy to gy brn, vf to f xln, micsuc / pyrbit ip, tr fos rmnts, tt, no shows, tr wh Dol veins, mnr pyrbit

DOL: m gy aa, vf to f xln, tt, no shows, intbd DOL, v lt gy, f to c xln, strs p to fr vug por, tr intxl por, no flor, tr pyrbit, scat loose c to v c Dol xls, tr rhombs, tr qtz xls

DOL: lt to m gy, brn gy ip, vf to c xln, slly foss, chty / clr qtx incls, sils / scat slty & sdy resd, p to fr vug por, tr intxl por, no flor, tr pyrbit, tr dism pyr

DOL: mainly dk gy, m gy ip, tr lt gy, vf to f xln, abnt blk bits resd, slly foss, tt / tr p intxl & vug por, no flor, tr pyrbit, tr drusy Dol xls & qtz xls lining vugs, sample is 75% dk gy Dol, 25% c wh xls

DOL: m to dk gy aa, vf to m xln, tt, no shows, tr pyr, incrg c to vc wh Dol xls, tr Sh, m gy gn, waxy, pyric / mnr dism micxl pyr

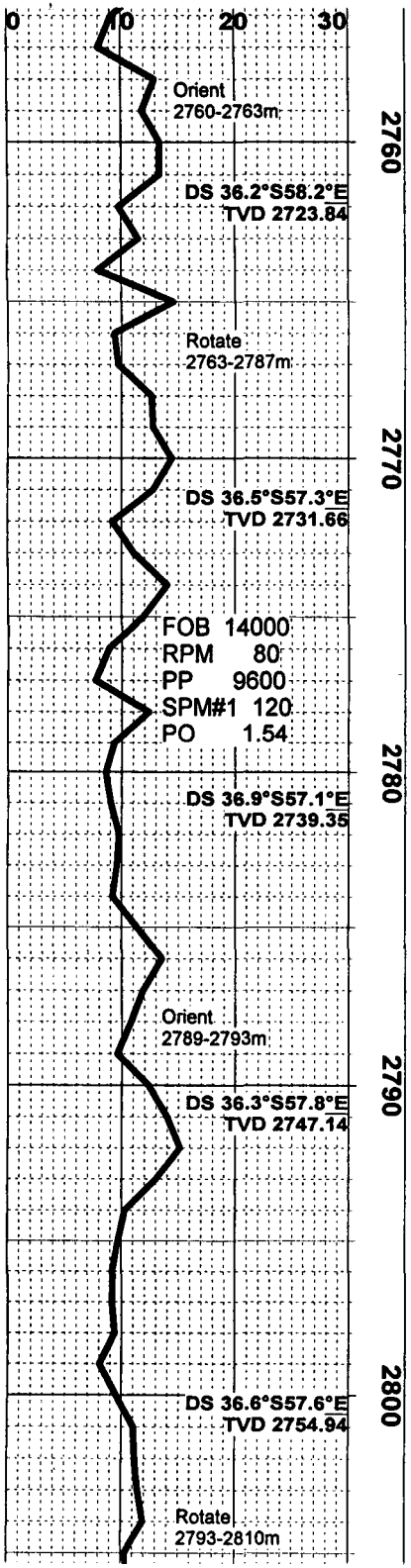
DOL: off to lt gy, f to c xln, tr p intxl por / some pyrbit plugging, strs p vug por, no flor, 80% loose m to vc Dol xls

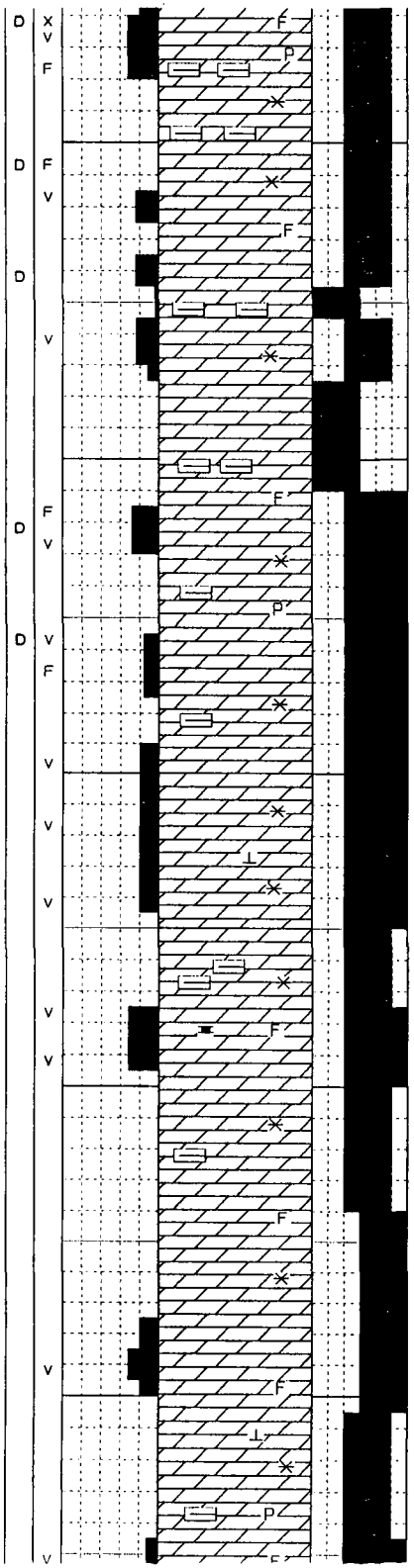
DOL: off wh to lt to m gy, m to vc xln, strs fr to g vug por, no flor, no pyrbit on c xls, tr pyrbit in m gy f to m xln Dol, abnt qtz xls & xl frags, tr Sh, m gy gn, waxy, pyric

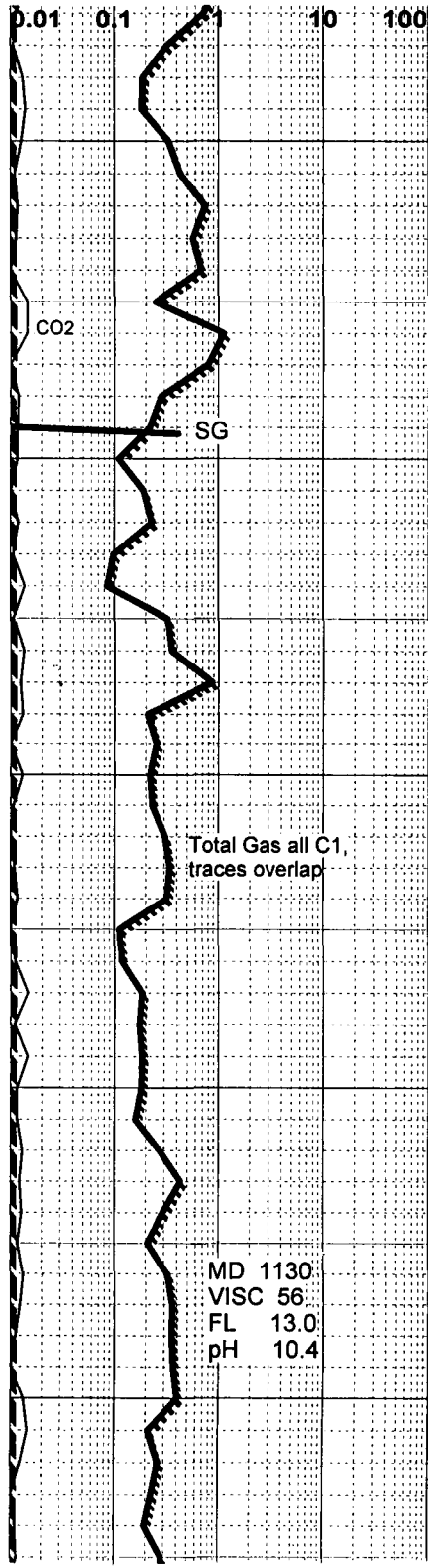
DOL: lt to m gy, f to c xln, foss, strs fr vug por, tr intxl por / pyrbit, no flor, tr wh Dol veins, tr styls, 80% of sample is loose wh Dol xls, tr gn Sh strs, pyric / dism micxl pyr

DOL: lt to m gy, m to vc xln, foss, indicated fr vug por, no flor, tr pyrbit, scat loose Dol xls, tr gn pyric Sh

DOL: off wh to lt to m gy, f to c xln, foss, strs fr vug por, tr intxl / pyrbit, scat Dol xls, rhombs ip, tr clr qtz xls, mnr pyr, incrg Sh, m gn to gy gn







vug por, tr intxl / pyrbit, scat Dol xls, rhombs ip, tr clr qtz xls, mnr pyr, incrg Sh, m gn to gy gn, waxy ip, pyric / dism micxl pyr

DOL: off wh to lt to m gy aa, f to c xln, foss, strs p to fr vug por, scat pyrbit, no flor, tr pyr, scat Dol, dk gy, vf to f xln, foss, tt, no shows

DOL: mainly m gy, micxl to f xln, tt, no shows, scat wh to lt gy c Dol aa, strs p vug por, tr gn Sh strs

DOL: lt to m gy, f to vc xln, slly foss, mainly tt / strs p to fr vug por, tr intxl por / pyrbit, no flor, scat drusy Dol xls, mnr Sh, mot gn to dk gy, pyric, fis, waxy ip

DOL: off wh to v lt gy, sample is 80% c wh Dol, 20% m gy f to c xln, mainly tt / tr p vug por, scat c to v c Dol xls, mainly cln, pyrbit ip, tr clr qtz xls

DOL: aa, mainly off wh c to vc xls, indicated p to fr vug por, no flor, tr Dol rhombs, tr calc xls, tr qtz xls, tr gn Sh lams

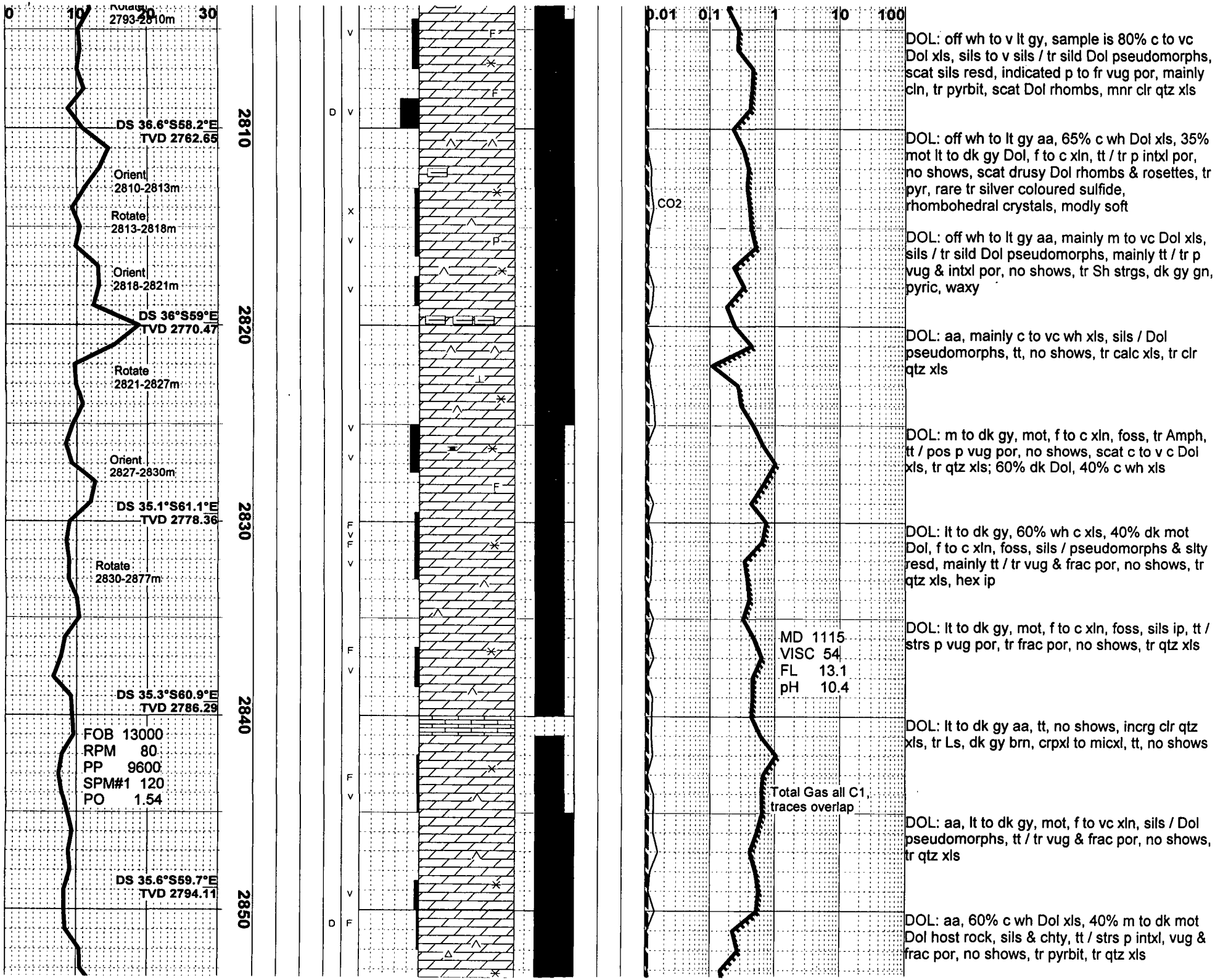
DOL: m to dk gy, f to c xln, v foss, tr Amph? tt, no shows, intbd DOL, off wh to lt gy, f ot vc xln, mainly loose Dol xls, indicated fr vug por, no flor, tr gn Sh lams

DOL: m to dk gy aa, tt, no shows, decrg wh Dol xls

DOL: off wh to v lt gy, m to vc xln, strs fr vug por / Dol rhombs & qtz xls lining vugs, mnr m to dk gy foss Dol aa

DOL: off wh to lt to m gy, f to c xln, foss, strs fr

DOL: m to dk gy, f to c xln, foss, tt, no shows, scat c to vc Dol xls, cln, tr calc xls, tr qtz xls, tr pyr, tr gn Sh strs



DOL: off wh to v lt gy, sample is 80% c to vc Dol xls, sils to v sils / tr sild Dol pseudomorphs, scat sils resd, indicated p to fr vug por, mainly cln, tr pyrbit, scat Dol rhombs, mnr clr qtz xls

DOL: off wh to lt gy aa, 65% c wh Dol xls, 35% mot lt to dk gy Dol, f to c xln, tt / tr p intxl por, no shows, scat drusy Dol rhombs & rosettes, tr pyr, rare tr silver coloured sulfide, rhombohedral crystals, modly soft

DOL: off wh to lt gy aa, mainly m to vc Dol xls, sils / tr sild Dol pseudomorphs, mainly tt / tr p vug & intxl por, no shows, tr Sh strgs, dk gy gn, pyric, waxy

DOL: aa, mainly c to vc wh xls, sils / Dol pseudomorphs, tt, no shows, tr calc xls, tr clr qtz xls

DOL: m to dk gy, mot, f to c xln, foss, tr Amph, tt / pos p vug por, no shows, scat c to v c Dol xls, tr qtz xls; 60% dk Dol, 40% c wh xls

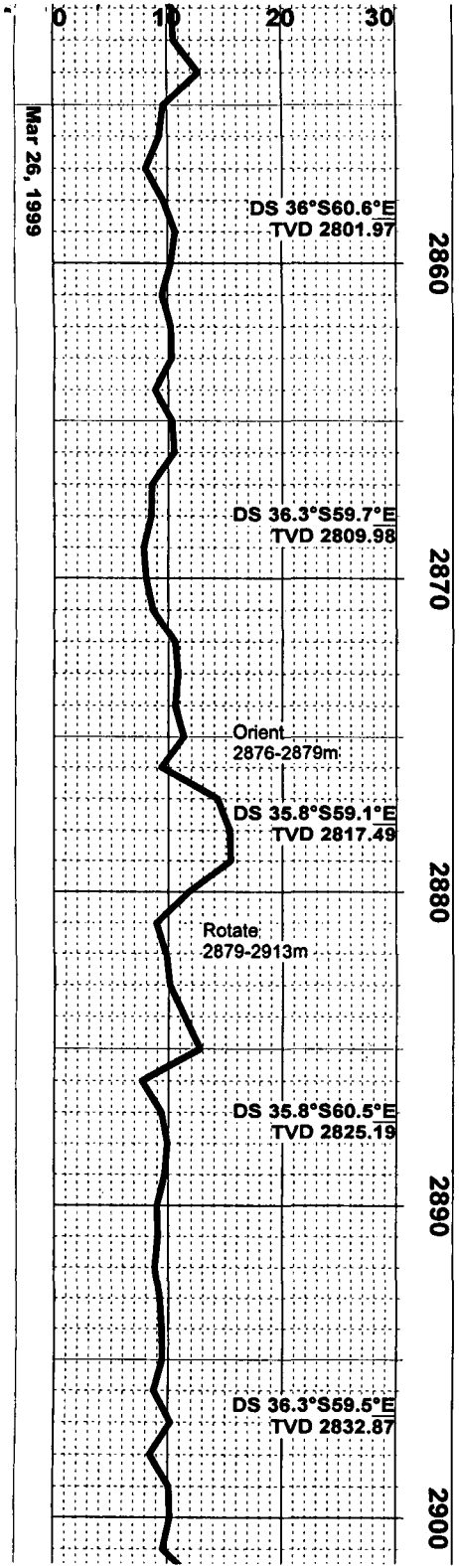
DOL: lt to dk gy, 60% wh c xls, 40% dk mot Dol, f to c xln, foss, sils / pseudomorphs & slty resd, mainly tt / tr vug & frac por, no shows, tr qtz xls, hex ip

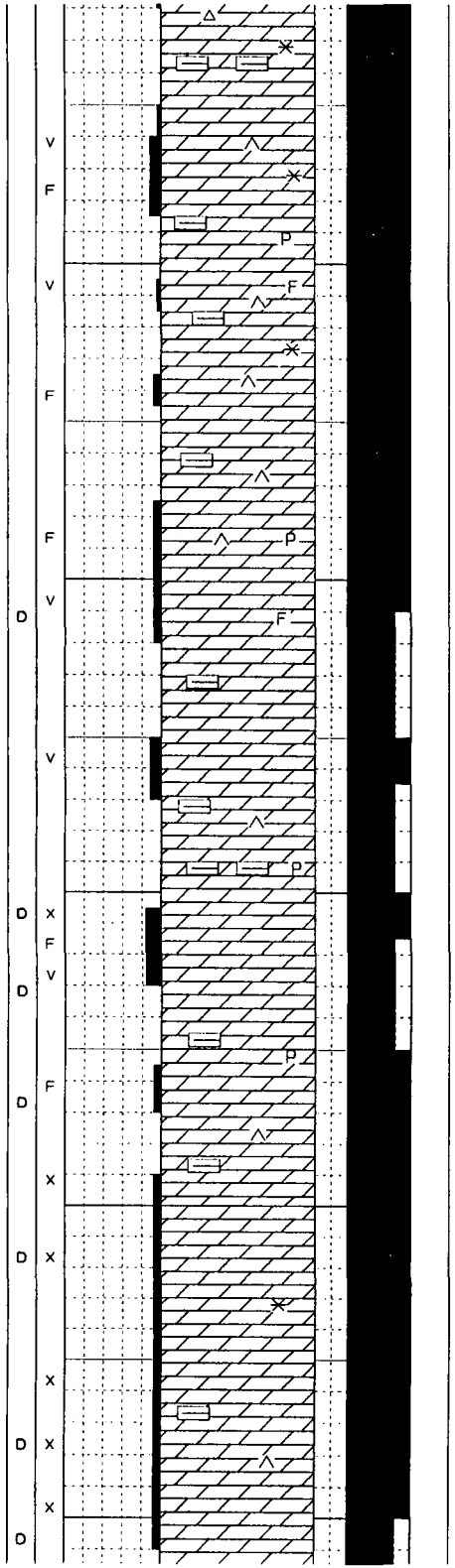
DOL: lt to dk gy, mot, f to c xln, foss, sils ip, tt / strs p vug por, tr frac por, no shows, tr qtz xls

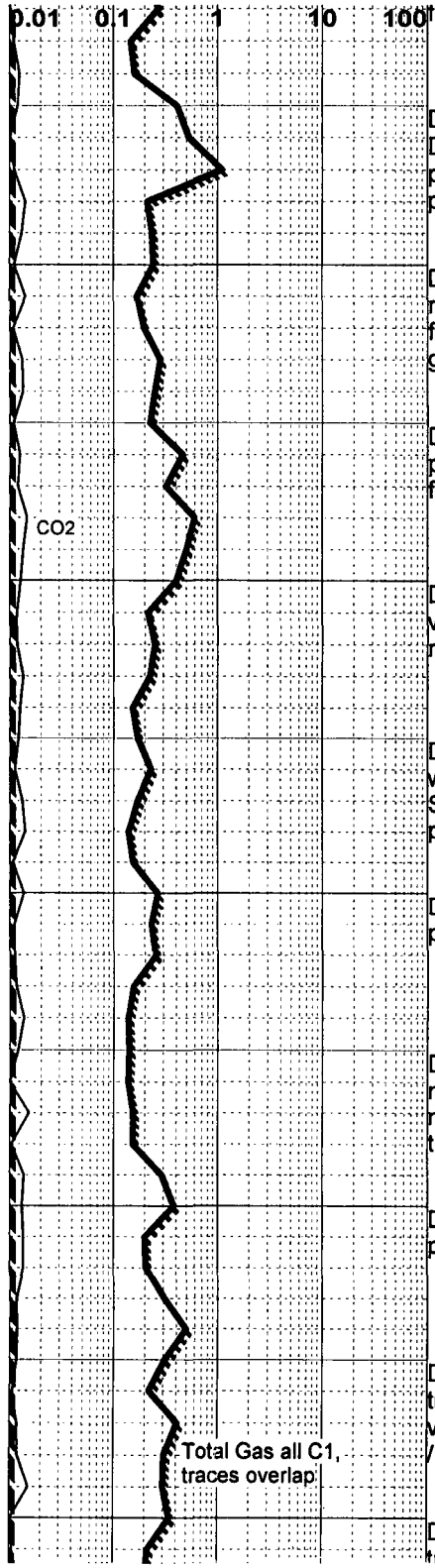
DOL: lt to dk gy aa, tt, no shows, incrg clr qtz xls, tr Ls, dk gy brn, crpxl to micxl, tt, no shows

DOL: aa, lt to dk gy, mot, f to vc xln, sils / Dol pseudomorphs, tt / tr vug & frac por, no shows, tr qtz xls

DOL: aa, 60% c wh Dol xls, 40% m to dk mot Dol host rock, sils & chty, tt / strs p intxl, vug & frac por, no shows, tr pyrbit, tr qtz xls







frac por, no shows, tr pyrbit, tr qtz xls

DOL: aa, wh to lt to dk gy, mot, f to vc xln, sils / Dol pseudomorphs & clr qtz xls, tr p vug & frac por, no shows, tr Sh strs, m to dk gn, waxy, pyric

DOL: off wh to lt to dk gy, f to vc xln, tr fos rmnts, sils / scat pseudomorphs, mainly tt / tr p frac & vug por, no shows, tr Sh strgs, m to dk gy gn, tr dk gy, waxy, pyric / dism micxl pyr

DOL: aa, incrg c wh Dol xls to 70%, sils / pseudomorphs & qtz incls, mainly tt / p vug & frac por, no shows, tr Sh strs, gn, waxy, pyric

DOL: lt to dk gy aa, f to c xln / abnt off wh c to vc xls, foss, mainly tt / tr frac por, no shows, rare tr pyrbit, tr Dol rhombs & hex qtz

DOL: off wh to lt to m gy, f to c xln / abnt c to vc wh xls, sils, mainly tt / tr frac por, no shows, tr Sh strs, m to dk gy gn, waxy, pyric / dism micxl pyr ip, sample is 80% c wh Dol xls

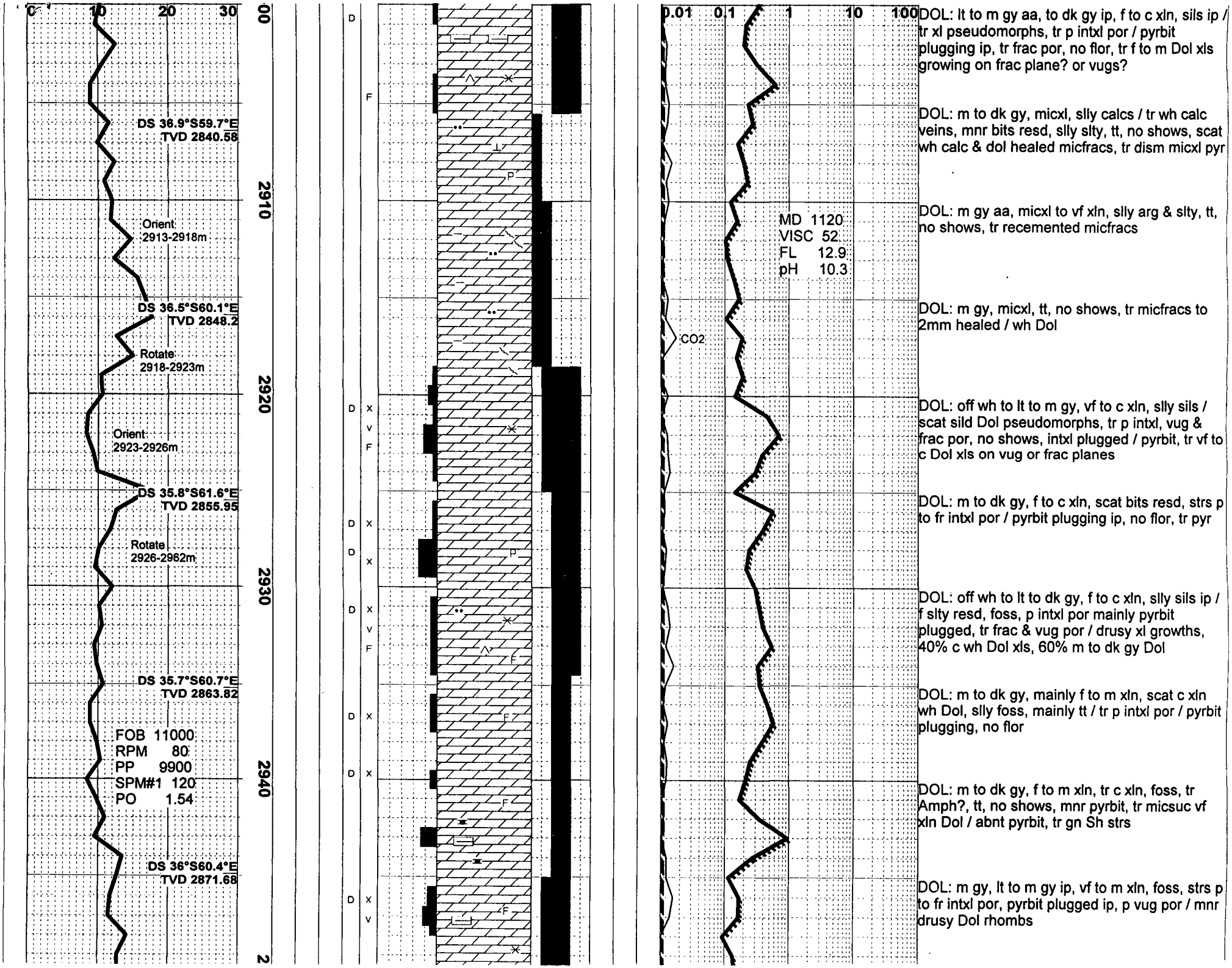
DOL: aa, mainly c wh xls, tr intxl por / pyrbit plugging, decrg gn Sh strs

DOL: off wh to lt to m gy, f to vc xln, sils ip, mainly tt / tr frac & vug por, tr intxl por / pyrbit, no shows, tr Sh strs, m to dk gn to gy gn, waxy, tr pyr

DOL: aa, mainly off wh to lt gy, incrg intxl por plugged / pyrbit, no flor

DOL: off wh to lt to m gy, f to vc xln, slly sils ip / tr chty resd, p intxl por / pyrbit plugging ip, tr vug por, no shows, tr Sh strs, m gn, waxy, pyric / scat dism micxl pyr

DOL: lt to m gy aa, to dk gy ip, f to c xln, sils ip / tr xl pseudomorphs, tr p intxl por / pyrbit



DOL: lt to m gy aa, to dk gy ip, f to c xln, sils ip / tr xl pseudomorphs, tr p intxl por / pyrbit plugging ip, tr frac por, no flor, tr f to m Dol xls growing on frac plane? or vugs?

DOL: m to dk gy, micxl, slly calcs / tr wh calc veins, mnr bits resd, slly slty, tt, no shows, scat wh calc & dol healed micfracs, tr dism micxl pyr

DOL: m gy aa, micxl to vf xln, slly arg & slty, tt, no shows, tr recemented micfracs

DOL: m gy, micxl, tt, no shows, tr micfracs to 2mm healed / wh Dol

DOL: off wh to lt to m gy, vf to c xln, slly sils / scat sild Dol pseudomorphs, tr p intxl, vug & frac por, no shows, intxl plugged / pyrbit, tr vf to c Dol xls on vug or frac planes

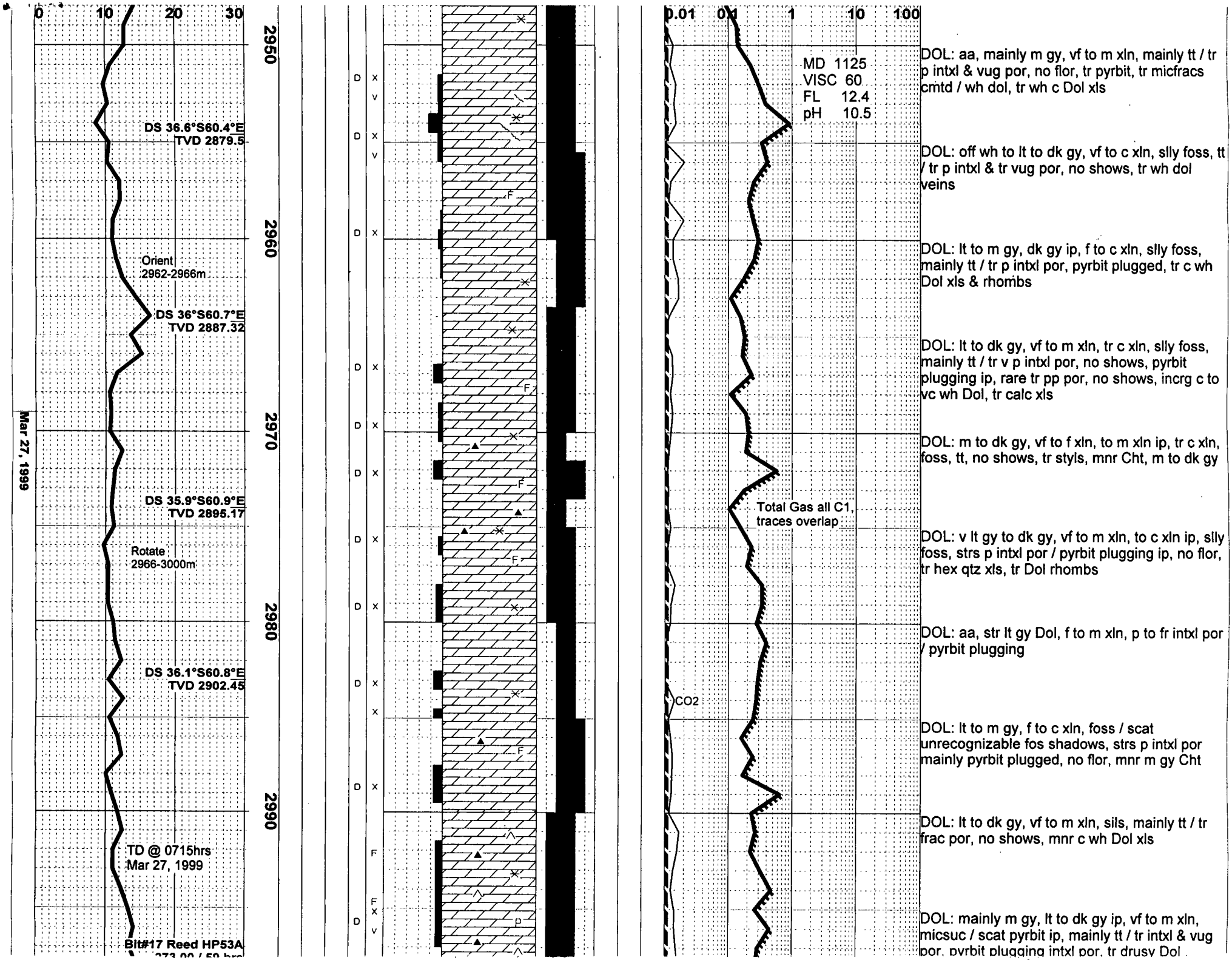
DOL: m to dk gy, f to c xln, scat bits resd, strs p to fr intxl por / pyrbit plugging ip, no flor, tr pyr

DOL: off wh to lt to dk gy, f to c xln, slly sils ip / f slty resd, foss, p intxl por mainly pyrbit plugged, tr frac & vug por / drusy xl growths, 40% c wh Dol xls, 60% m to dk gy Dol

DOL: m to dk gy, mainly f to m xln, scat c xln wh Dol, slly foss, mainly tt / tr p intxl por / pyrbit plugging, no flor

DOL: m to dk gy, f to m xln, tr c xln, foss, tr Amph?, tt, no shows, mnr pyrbit, tr micsuc vf xln Dol / abnt pyrbit, tr gn Sh strs

DOL: m gy, lt to m gy ip, vf to m xln, foss, strs p to fr intxl por, pyrbit plugged ip, p vug por / mnr drusy Dol rhombs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10
20
30
2950
2960
2970
2980
2990
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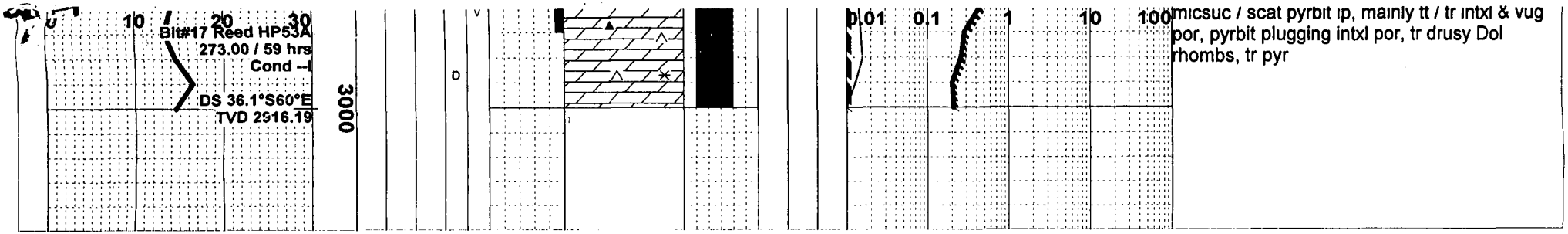
TVD 2879.5
Orient
2962-2966m
DS 36°S60.7°E
TVD 2887.32
DS 35.9°S60.9°E
TVD 2895.17
Rotate
2966-3000m
DS 36.1°S60.8°E
TVD 2902.45
TD @ 0715hrs
Mar 27, 1999
Bit#17 Reed HP53A
Mar 27, 1999
0.01
0.1
1
10
100
MD 1125
VISC 60
FL 12.4
pH 10.5
Total Gas all C1,
traces overlap
CO2
DOL: aa, mainly m gy, vf to m xln, mainly tt / tr p intxl & vug por, no flor, tr pyrbit, tr micfracs cmtd / wh dol, tr wh c Dol xls
DOL: off wh to lt to dk gy, vf to c xln, slly foss, tt / tr p intxl & tr vug por, no shows, tr wh dol veins
DOL: lt to m gy, dk gy ip, f to c xln, slly foss, mainly tt / tr p intxl por, pyrbit plugged, tr c wh Dol xls & rhombs
DOL: lt to dk gy, vf to m xln, tr c xln, slly foss, mainly tt / tr v p intxl por, no shows, pyrbit plugging ip, rare tr pp por, no shows, incrg c to vc wh Dol, tr calc xls
DOL: m to dk gy, vf to f xln, to m xln ip, tr c xln, foss, tt, no shows, tr styls, mnr Cht, m to dk gy
DOL: v lt gy to dk gy, vf to m xln, to c xln ip, slly foss, strs p intxl por / pyrbit plugging ip, no flor, tr hex qtz xls, tr Dol rhombs
DOL: aa, str lt gy Dol, f to m xln, p to fr intxl por / pyrbit plugging
DOL: lt to m gy, f to c xln, foss / scat unrecognizable fos shadows, strs p intxl por mainly pyrbit plugged, no flor, mnr m gy Cht
DOL: lt to dk gy, vf to m xln, sils, mainly tt / tr frac por, no shows, mnr c wh Dol xls
DOL: mainly m gy, lt to dk gy ip, vf to m xln, micsuc / scat pyrbit ip, mainly tt / tr intxl & vug por, pyrbit plugging intxl por, tr drusy Dol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10
20
30
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273.00 / 59 hrs
Cond --I
DS 36.1°S60°E
TVD 2916.19
3000
D
V
0.01
0.1
1
10
100
micsuc / scat pyrbit ip, mainly tt / tr intxl & vug por, pyrbit plugging intxl por, tr drusy Dol rhombs, tr pyr