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## MUDLOG TVD

<b>COMPANY</b>	ExxonMobil Production
<b>WELL</b>	PCU 197-34B8 ST1
<b>FIELD</b>	PICEANCE CREEK
<b>REGION</b>	ROCKY MOUNTAINS
<b>COORDINATES</b>	39.915659000 108.261198000
<b>ELEVATION</b>	6649.1'
<b>COUNTY, STATE</b>	RIO BLANCO, CO
<b>API INDEX</b>	05-103-11082-01
<b>SPUD DATE</b>	12/13/2008
<b>CONTRACTOR</b>	H_P
<b>CO. REP.</b>	M. MARTINEZ/W. GARNER
<b>RIG/TYPE</b>	# 320/FLEX 4S+
<b>LOGGING UNIT</b>	MLU # 032
<b>GEOLOGISTS</b>	J. KEEVAN, C. RECORD C. PIERCE
<b>ADD. PERSONS</b>	M. PIPER, B.HICKS T. WALKER
<b>CO. GEOLOGIST</b>	CHRIS ALBA

### LOG INTERVAL

**DEPTHS:** 4,000' **TO** 8,889'  
**DATES:** 9/30/2009 **TO** 3/4/2010  
**SCALE:** 5" = 100'

### CASING DATA

16" **AT** 132'  
10.75" **AT** 3,976'  
7" **AT** 8,675'

**AT**

### HOLE SIZE

14.75" **TO** 4,000'  
9.875" **TO** 8,675'  
6.125" **TO** 8,889'  
**TO**

### MUD TYPES

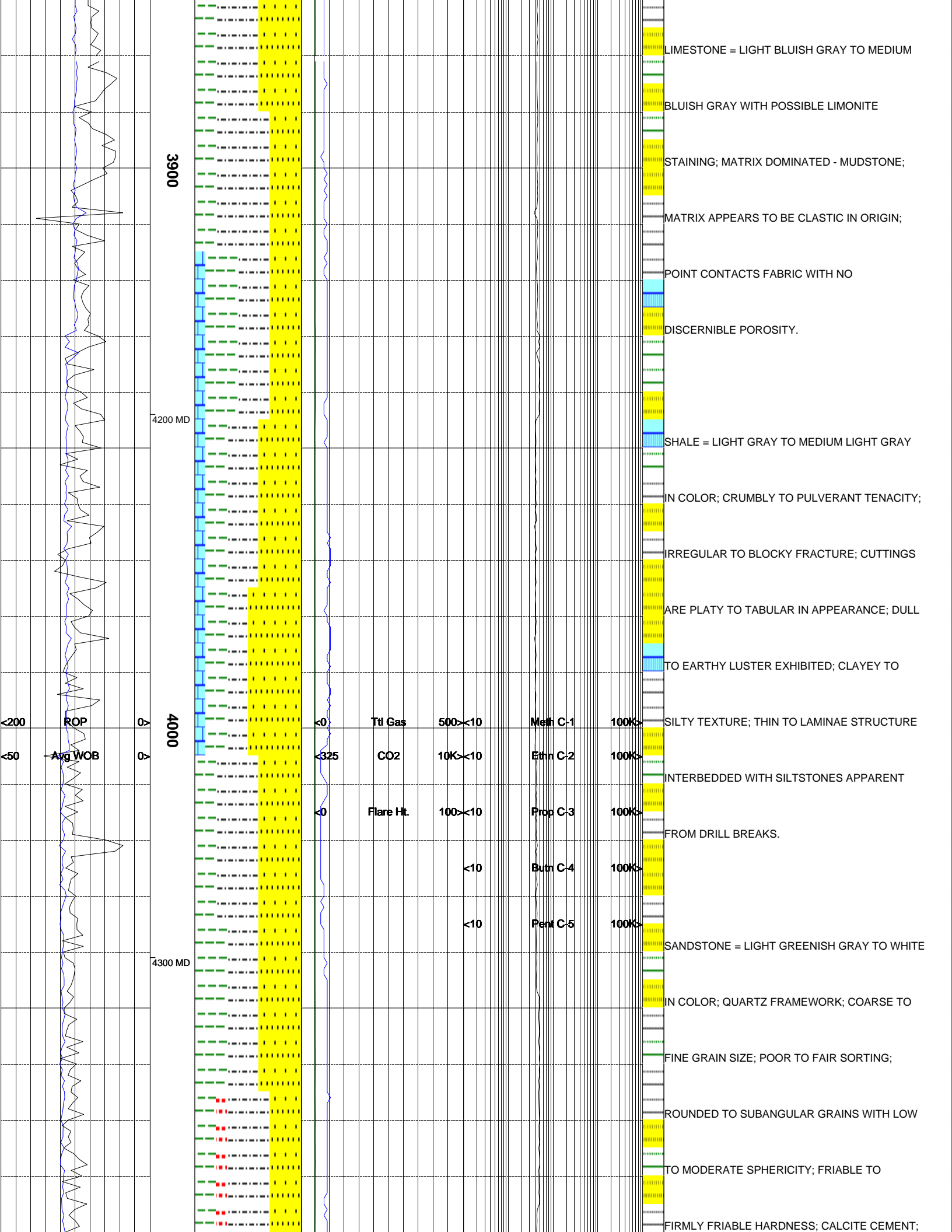
LSND **TO** 8,889'  
**TO**  
**TO**  
**TO**

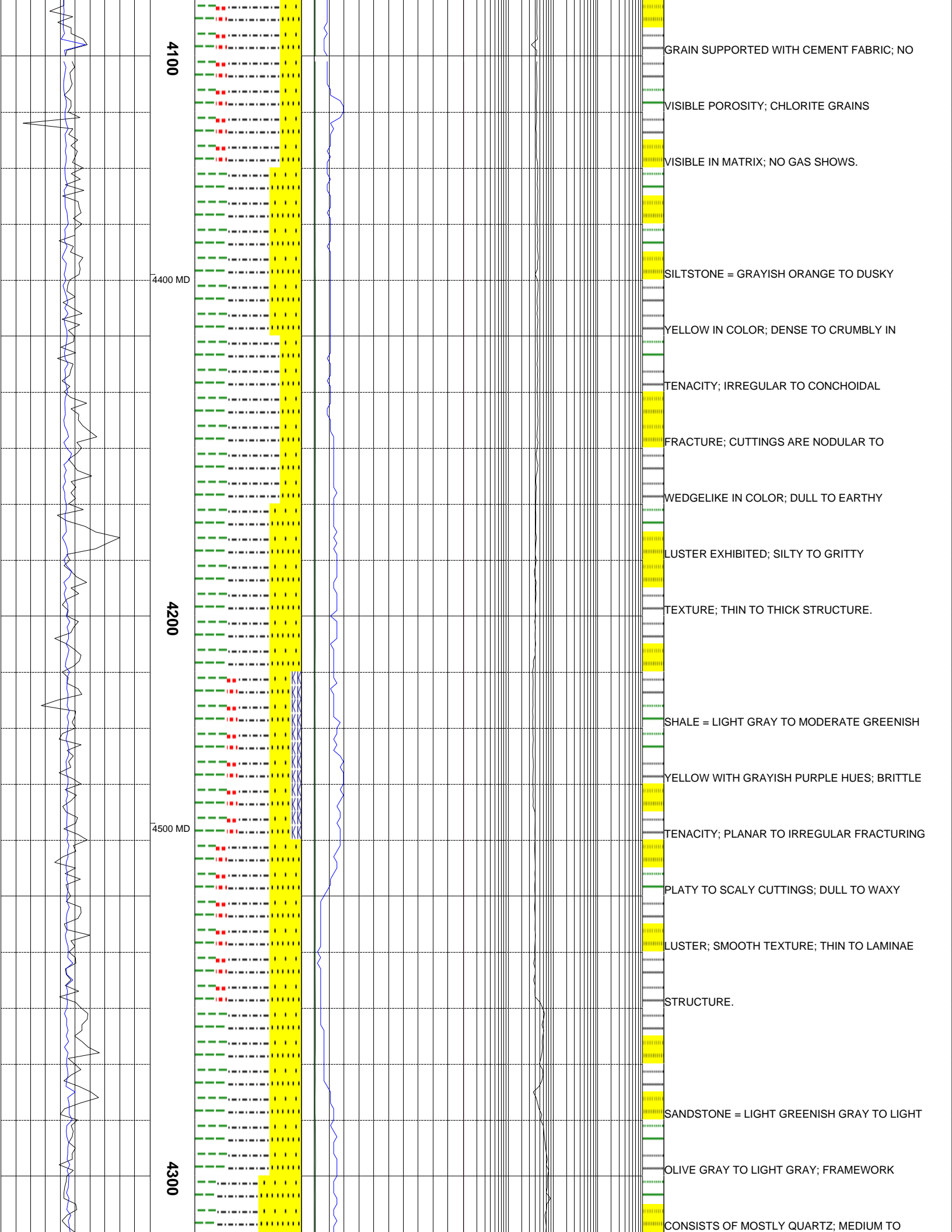
### ABBREVIATIONS

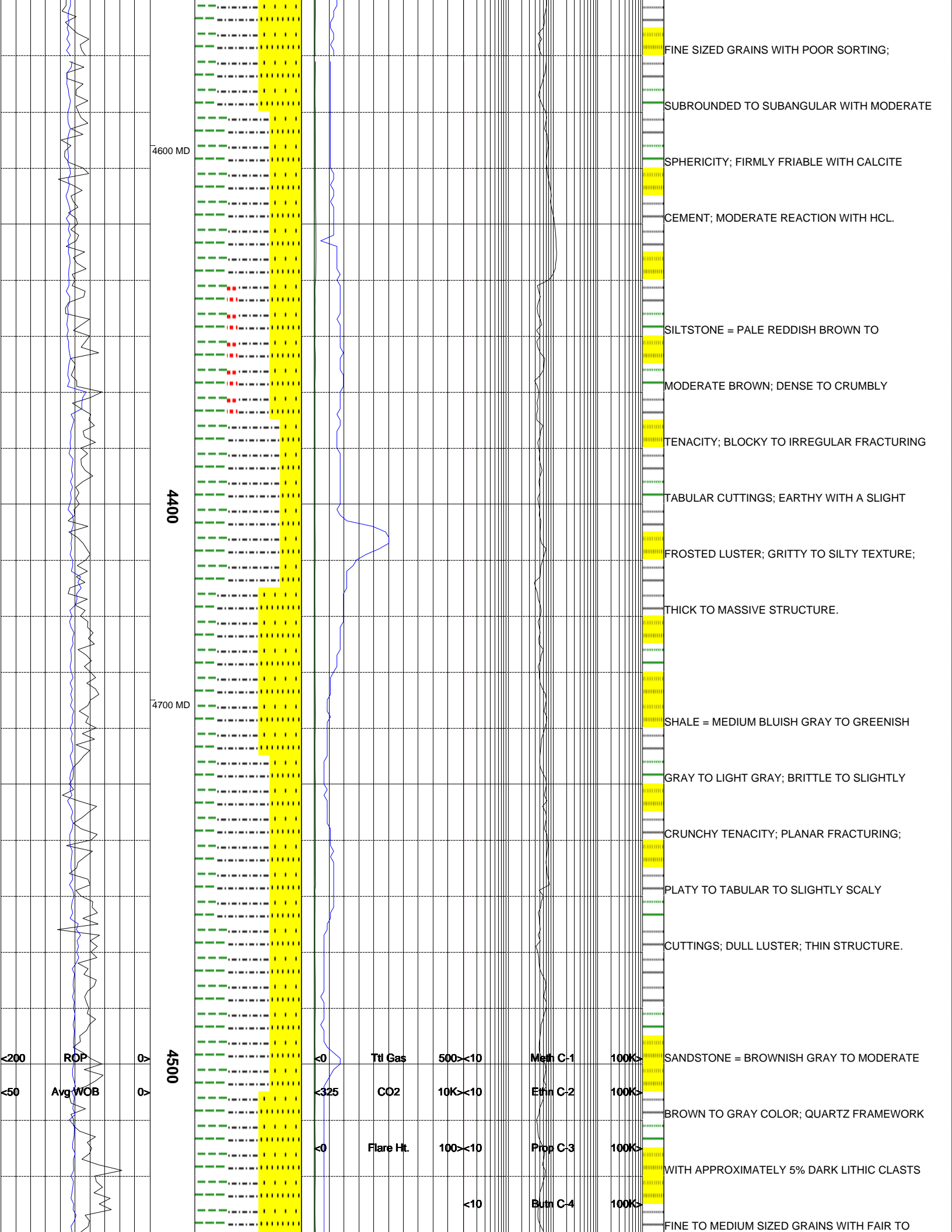
<i>NB</i> NEWBIT	<i>PV</i> PLASTIC VISCOSITY	<i>LC</i> LOST CIRCULATION
<i>RRB</i> RERUN BIT	<i>YP</i> YIELD POINT	<i>CO</i> CIRCULATE OUT
<i>CB</i> CORE BIT	<i>FL</i> FLUID LOSS	<i>NR</i> NO RETURNS
<i>WOB</i> WEIGHT ON BIT	<i>CL</i> PPM CLORIDE ION	<i>TG</i> TRIP GAS
<i>RPM</i> ROTARY REV/MIN	<i>Rm</i> MUD RESISTIVITY	<i>SG</i> SURVEY GAS
<i>PP</i> PUMP PRESSURE	<i>Rmf</i> FILTRATE RESISTIVITY	<i>WG</i> WIPER GAS
<i>SPM</i> STROKES/MIN	<i>PR</i> POOR RETURNS	<i>CG</i> CONNECTION GAS
<i>MW</i> MUD WEIGHT	<i>LAT</i> LOGGED AFTER TRIP	
<i>VIS</i> FUNNEL VISCOSITY	<i>LAS</i> LOGGED AFTER SURVEY	

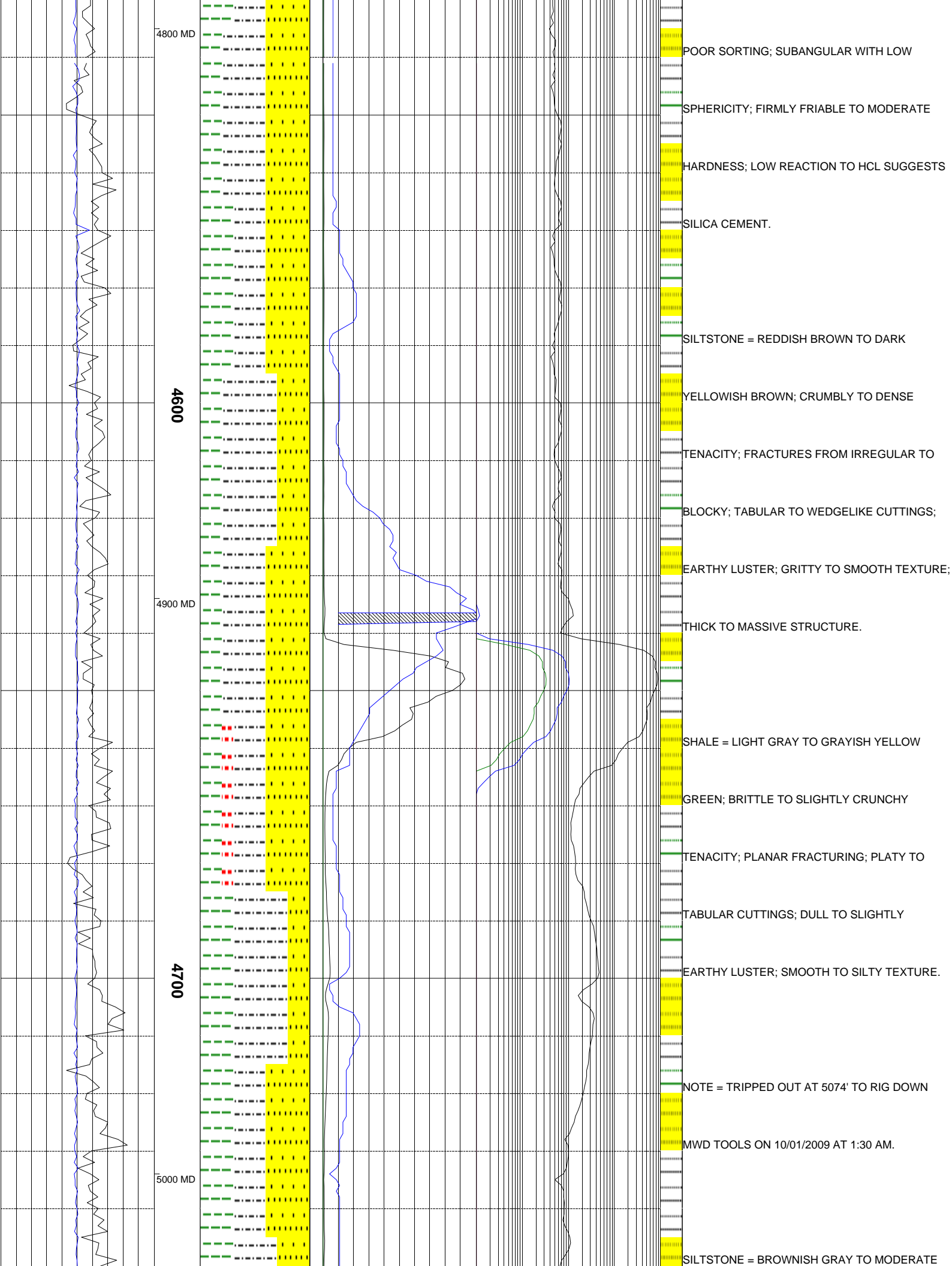
ALTERED ZONE	CHERT - GLASSY	FELSIC SILIC DIKE	MARL - CALC	SANDSTONE
ANDESITE	CHERT - PORCEL	FOSSIL	METAMORPHICS	SANDSTONE-TUFFACEOUS
ANHYDRITE	CHERT - TIGER STRIPE	GABBRO	MUDSTONE	SERICITIZATION
BASALT	CHERT - UNDIFF	GLASSY TUFF	OBSIDIAN	SERPENTINE
BENTONITE	CLAY	GRANITE	PALEOSOL	SHALE
BIOTITIZATION	CLAY-MUDSTONE	GRANITE WASH	PHOSPHATE	SHALE TUFFACEOUS
BRECCIA	CLYST-TUFFACEOUS	GRANODIORITE	PORCELANITE	SHELL FRAGMENTS
CALCARENITE	CHLORITIZATION	GYPSUM	PORCELANEOUS CLYST	SIDERITE
CALCAREOUS TUFF	COAL	HALITE	PYRITE	SILICIFICATION
CALCILUTITE	CONGLOMERATE	HORNBL-QTZ-DIO	PYROCLASTICS	SILTSTONE
CARBONATES	CONGL. SAND	IGNEOUS (ACIDIC)	QUARTZ DIORITE	SILTST-TUFFACEOUS
CARBONACEOUS MAT	CONGL. SANDSTONE	IGNEOUS (BASIC)	QUARTZ LATITE	TUFF
CARBONACEOUS SH	COQUINA	INTRUSIVES	QUARTZ MONZONITE	VOLCANICLASTICS SEDS
CEMENT CONTAM.	DACITE	KAOLINITIC	RECRYSTALLIZED CALCITE	VOLCANICS
CHALK	DIATOMITE	LIMESTONE	RHYOLITE	
CRYSTALLINE TUFF	DIORITE	LITHIC TUFF	SALT	
CHERT - ARGILL	DOLOSTONE	MARL - DOLO	SAND	

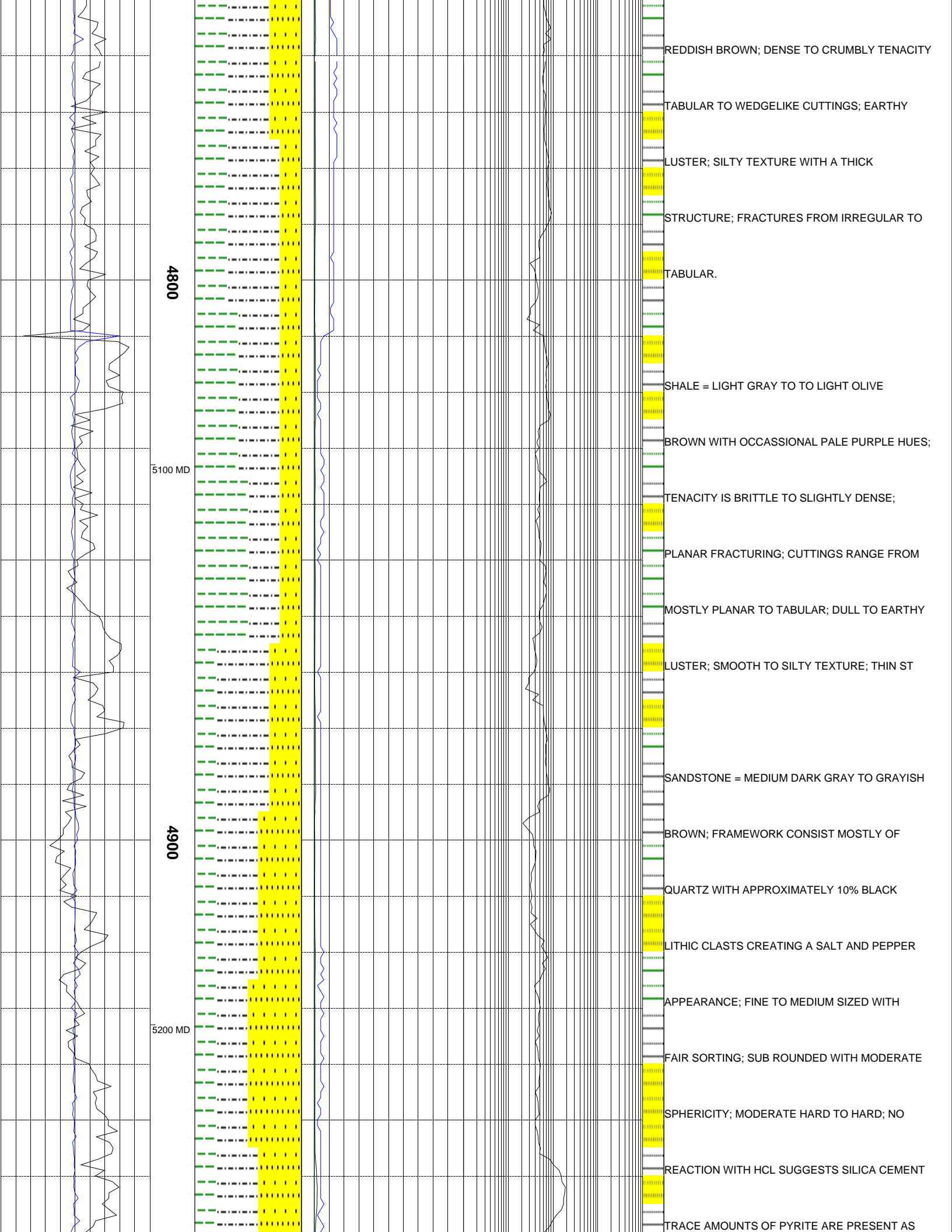
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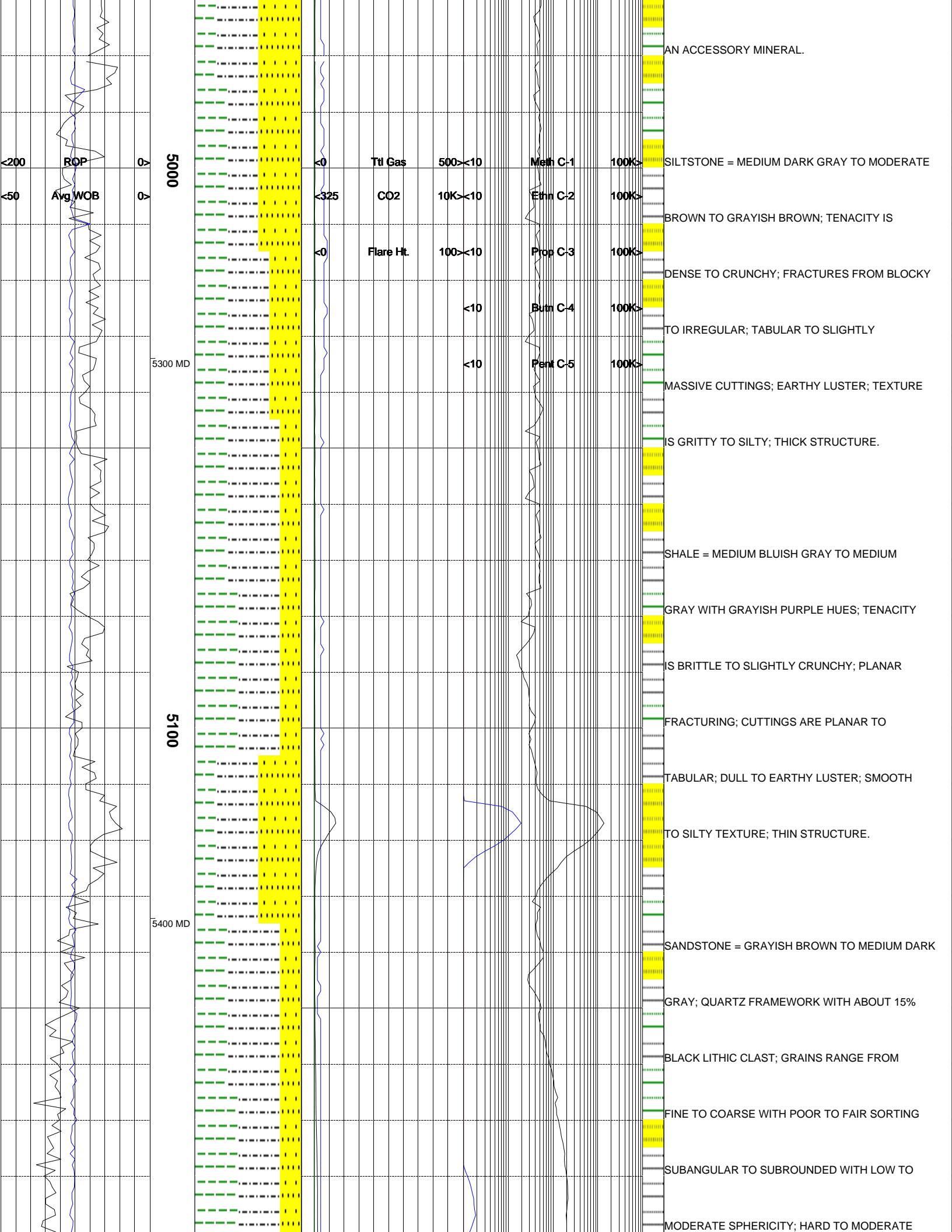


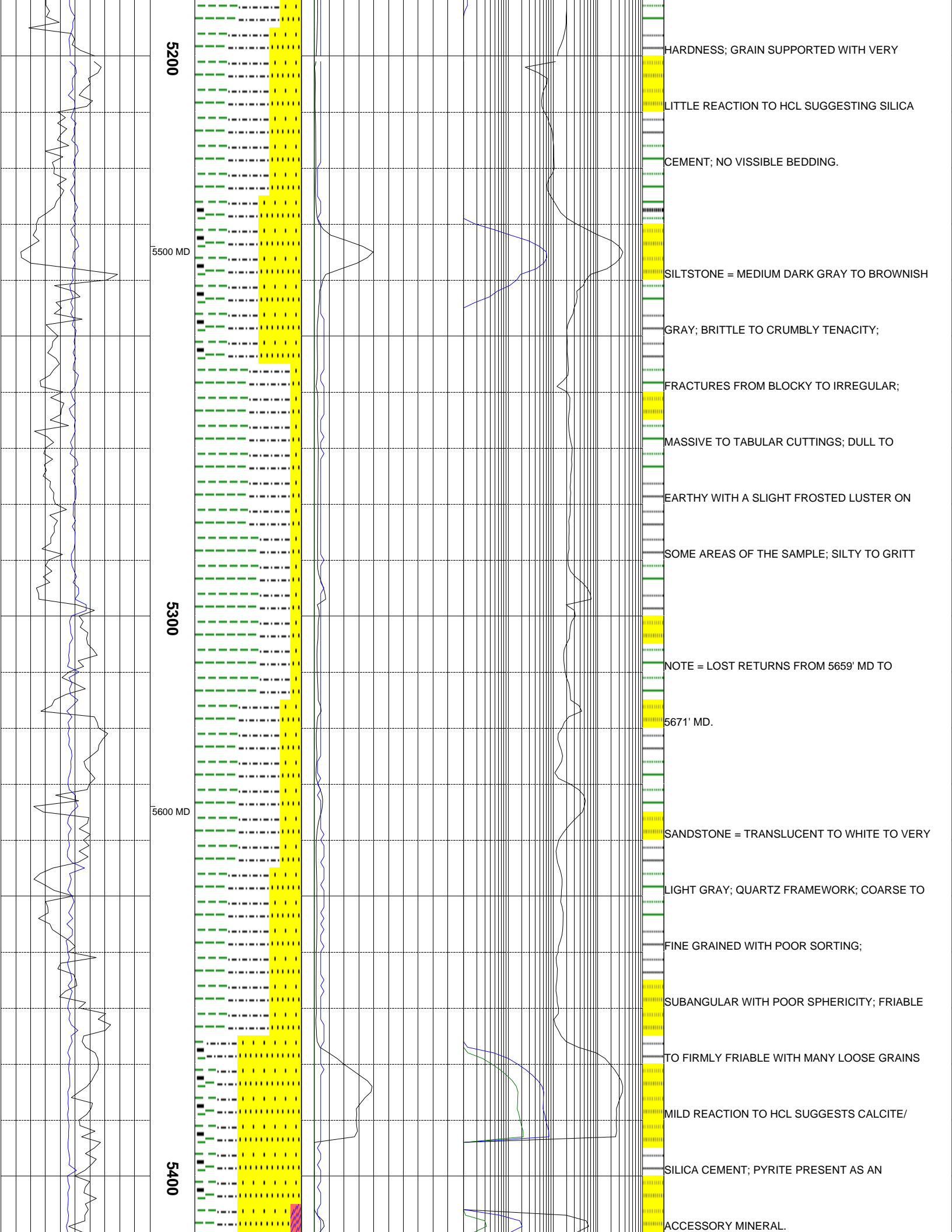


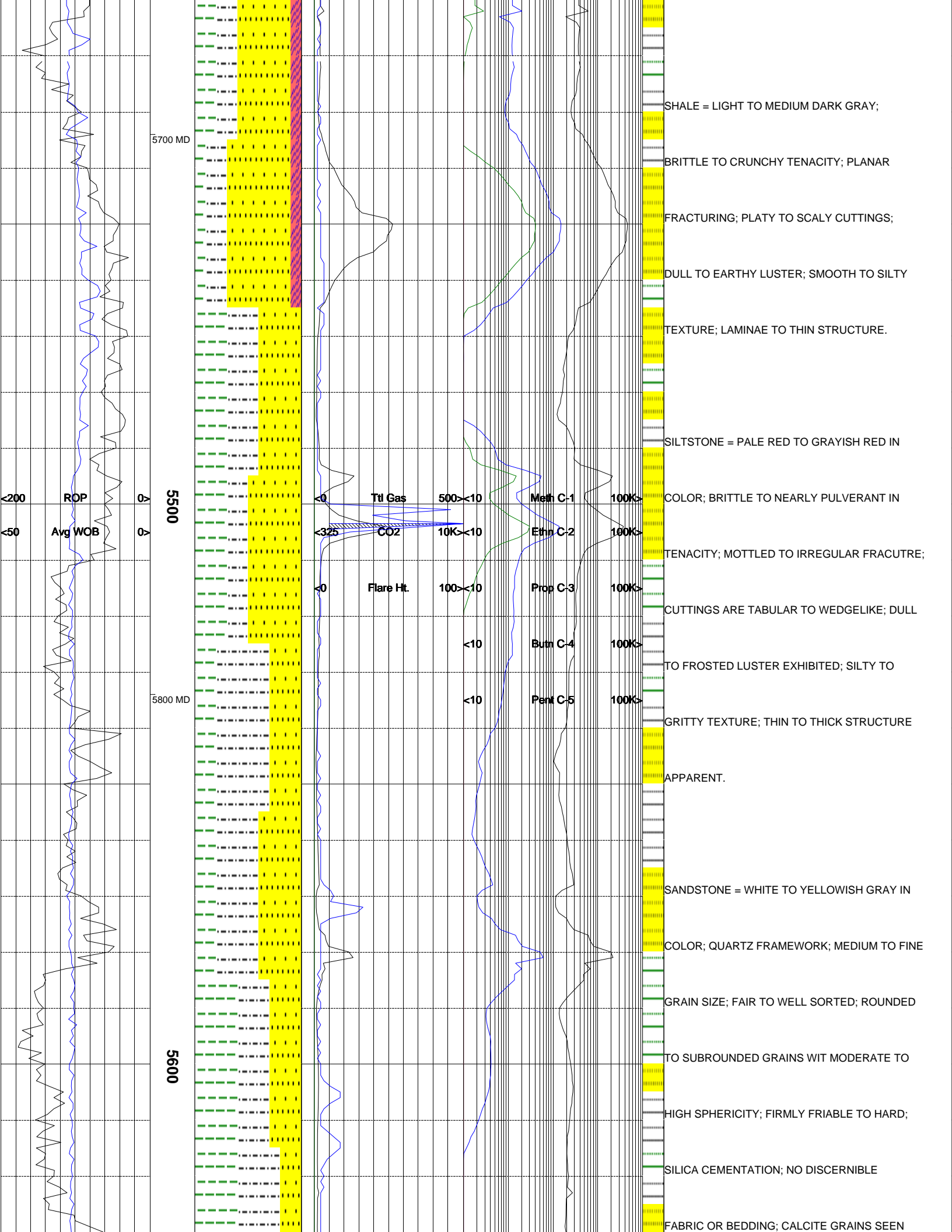


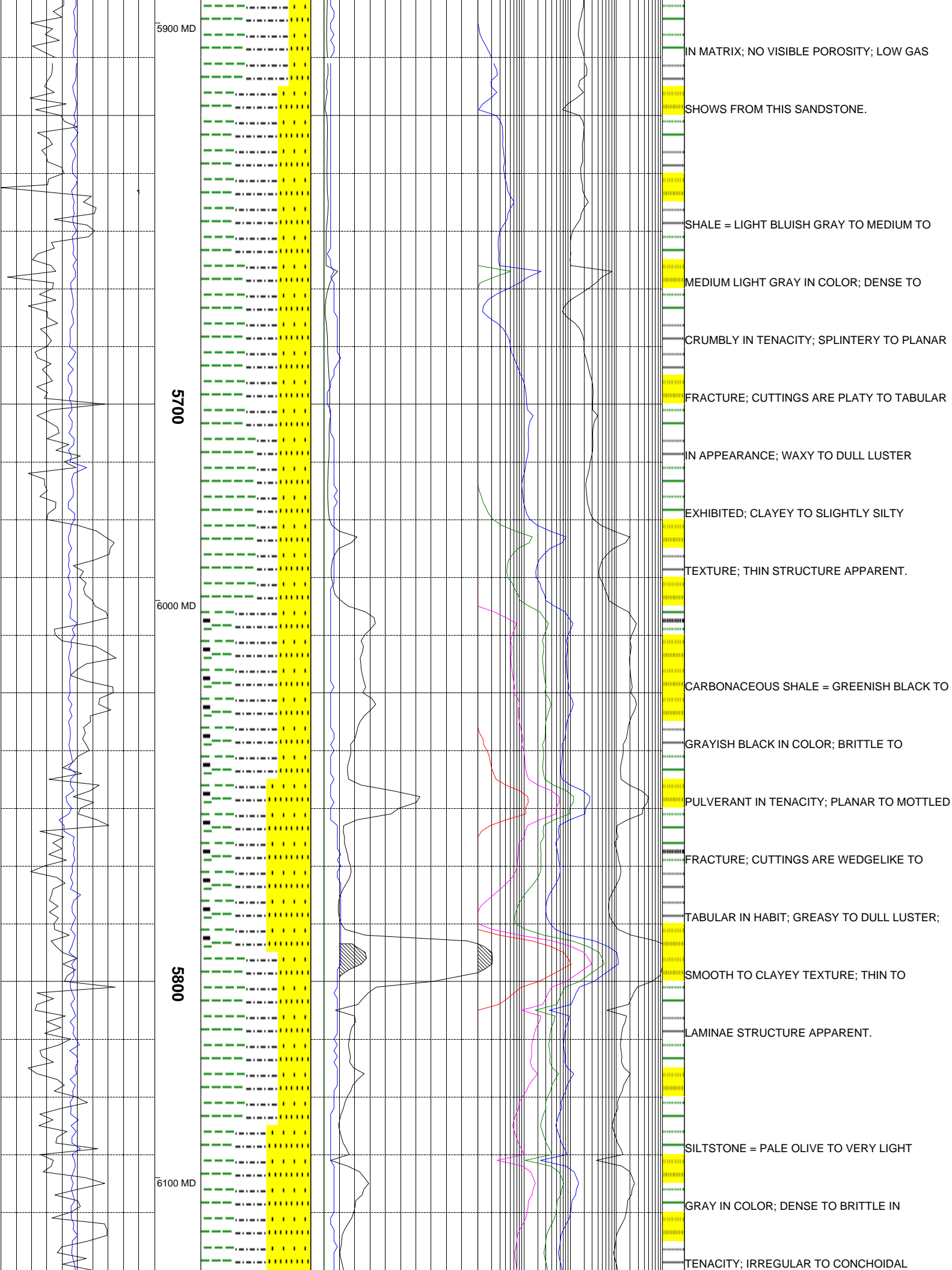


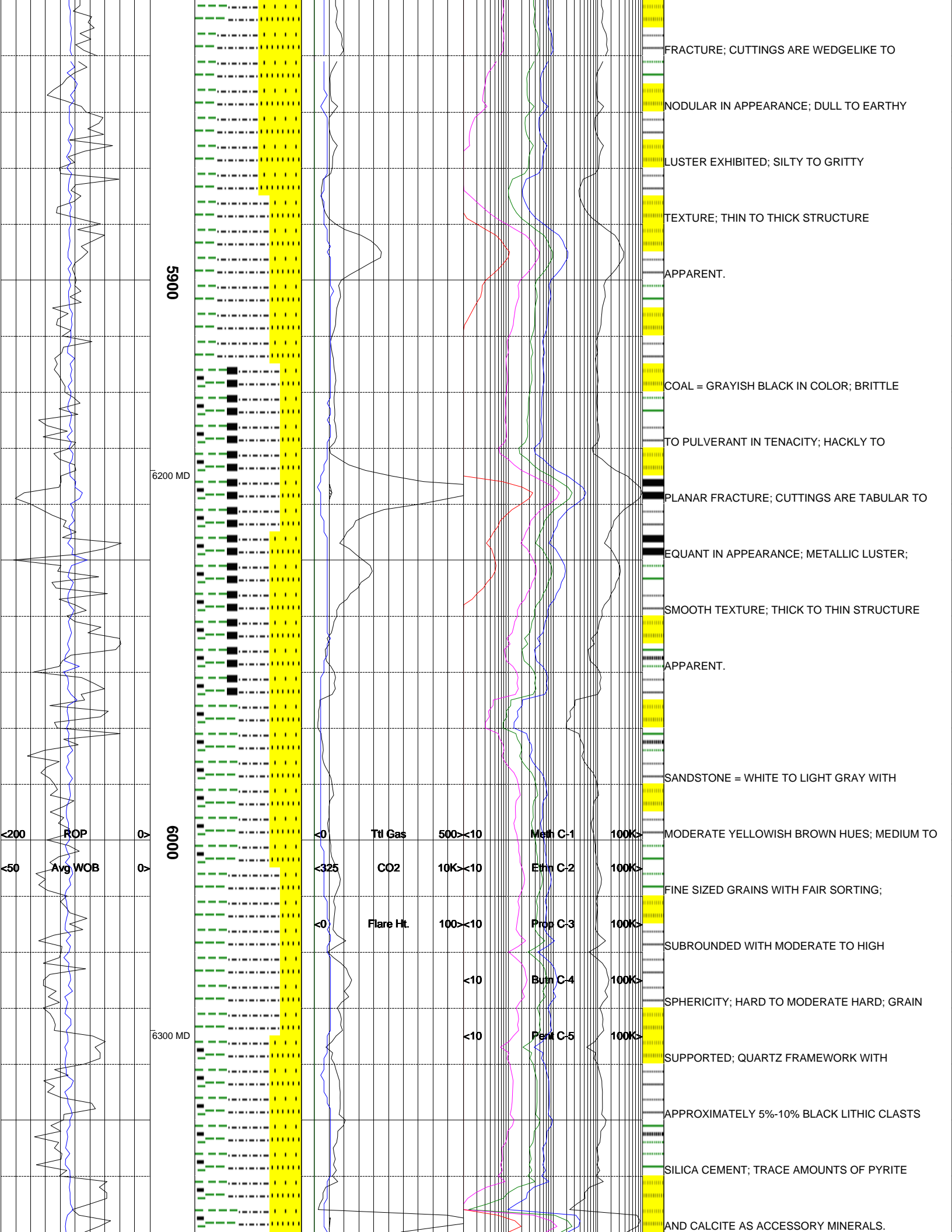


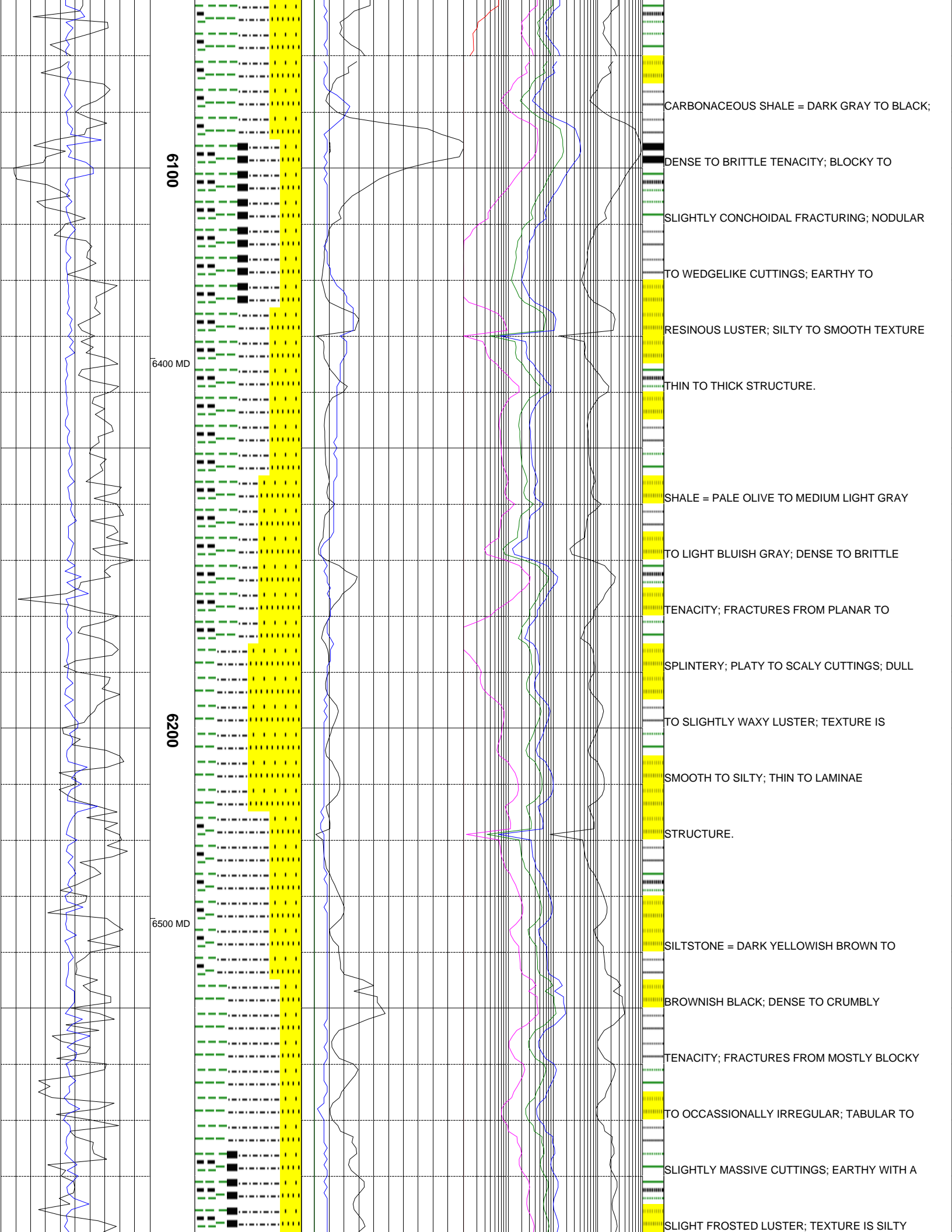


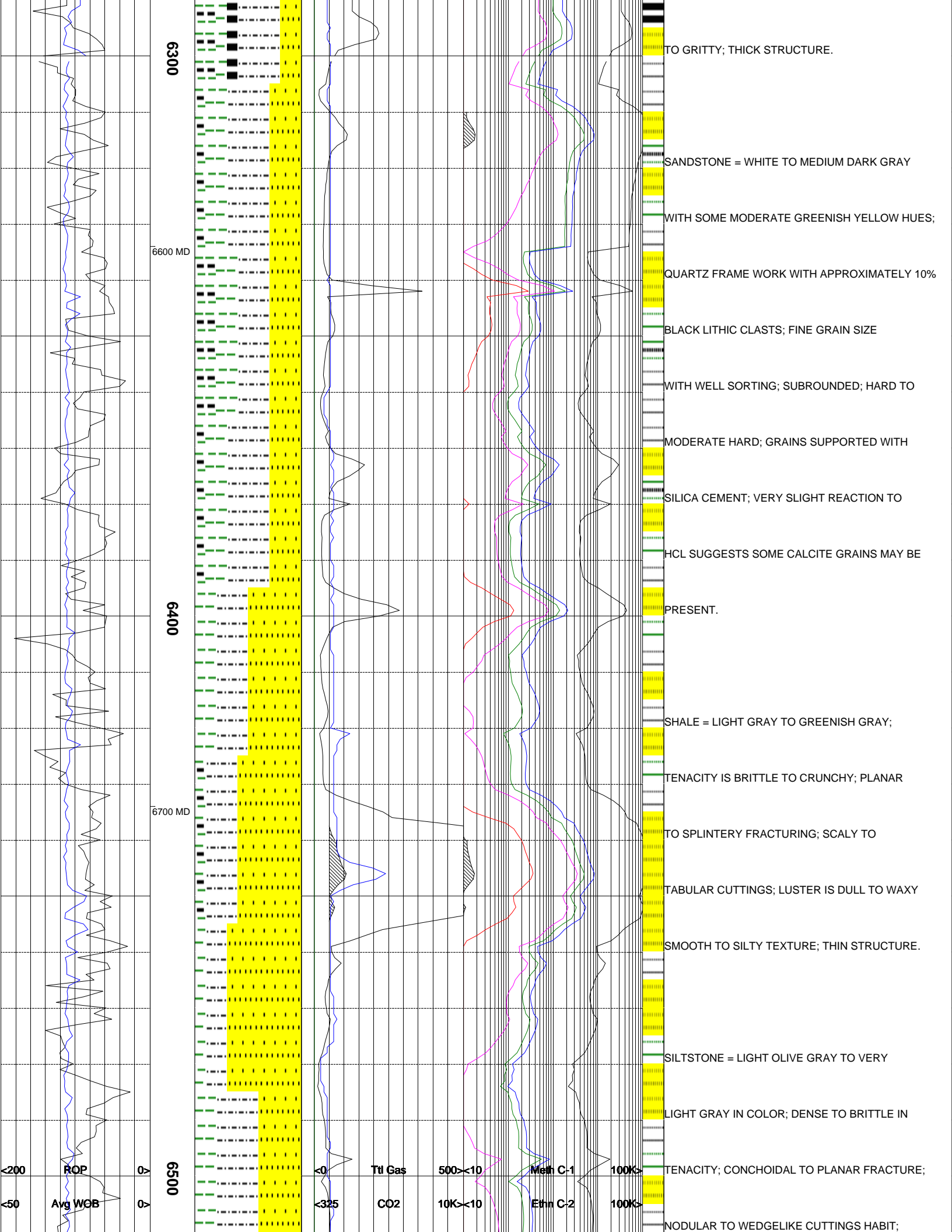


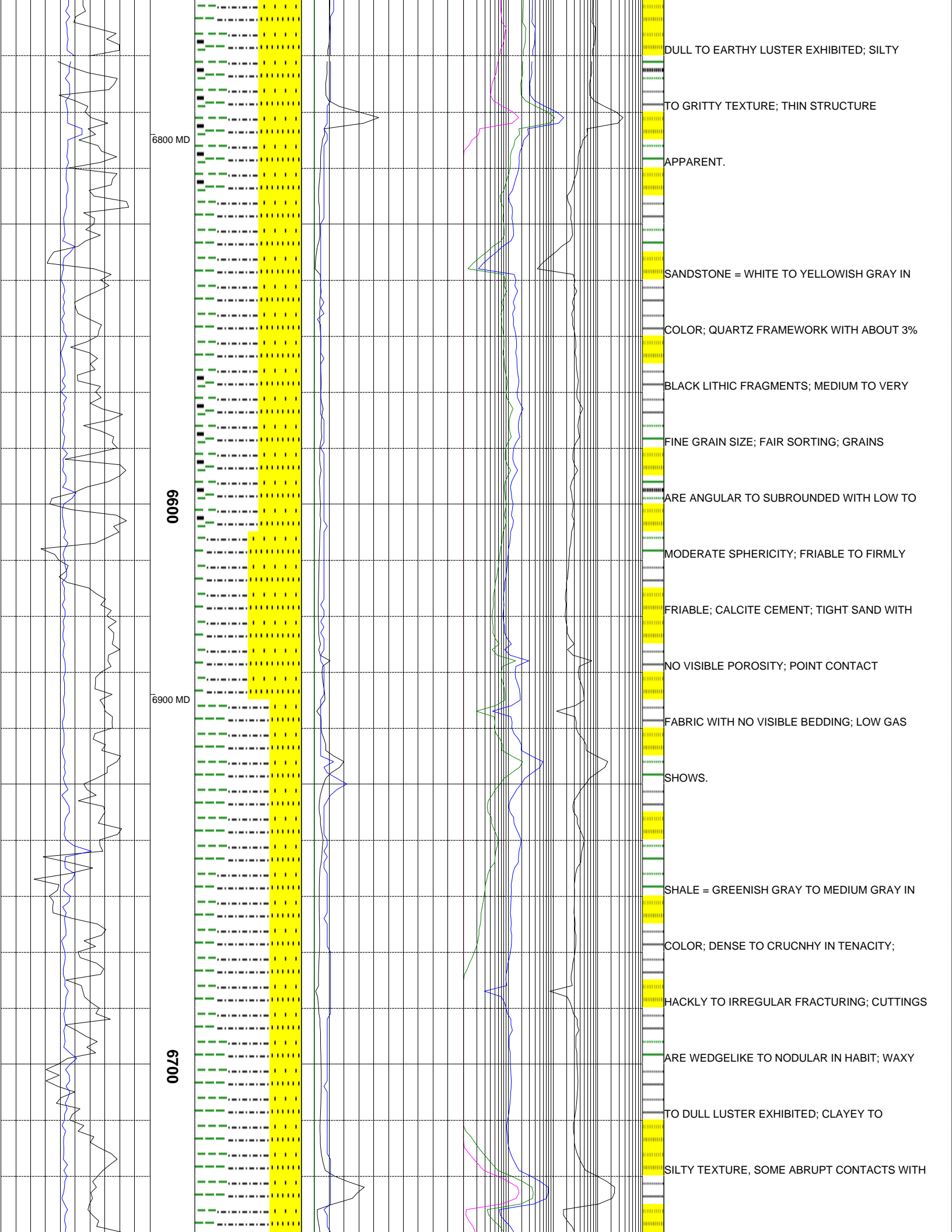


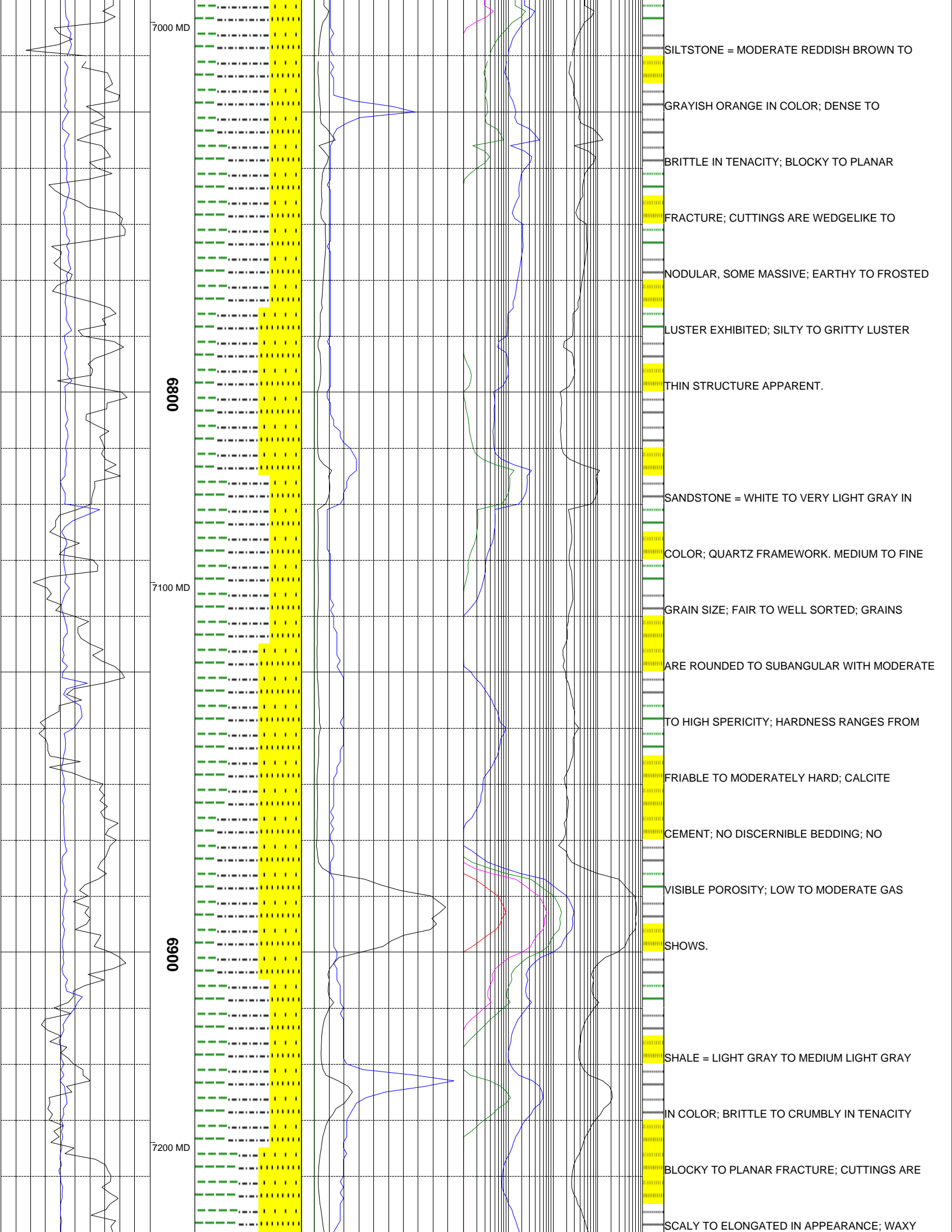


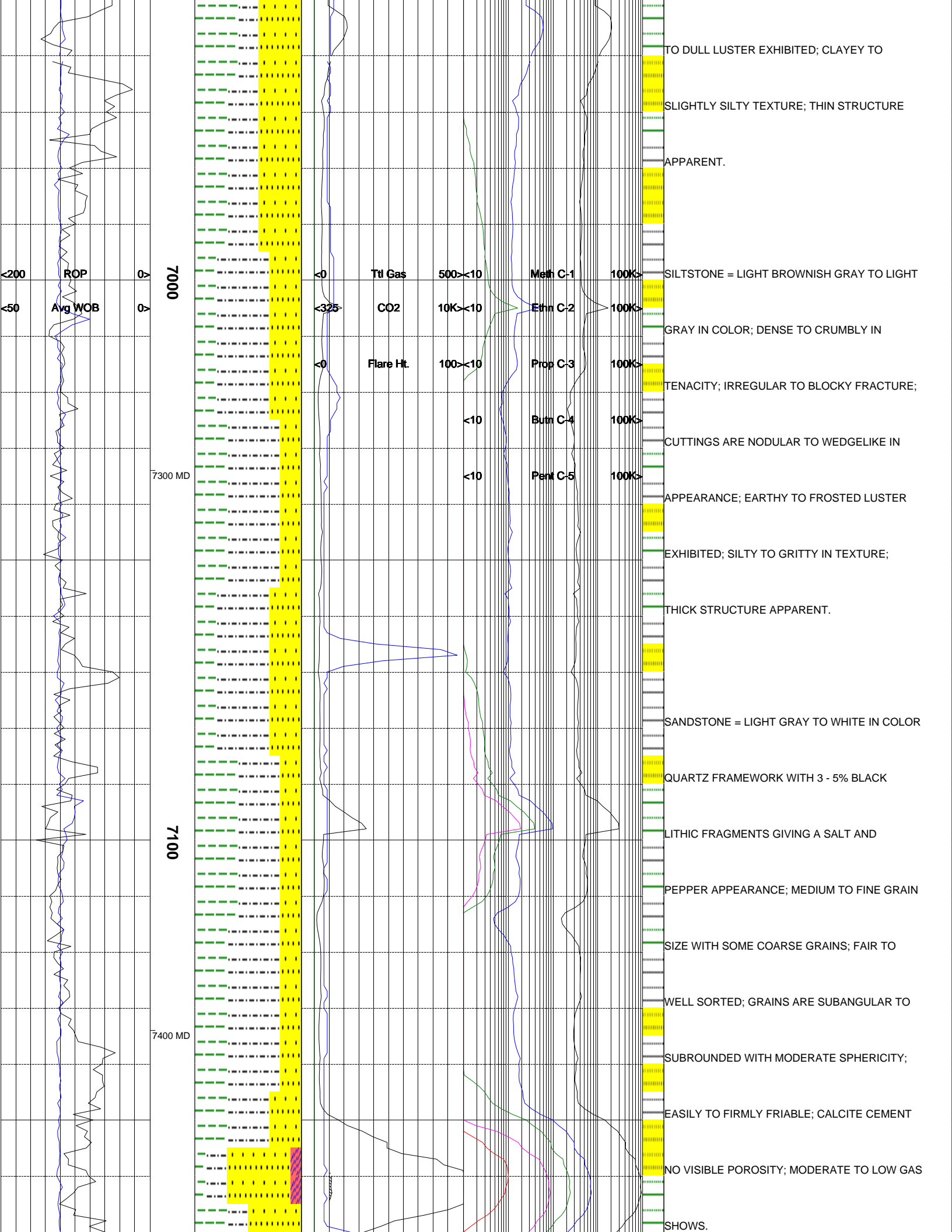


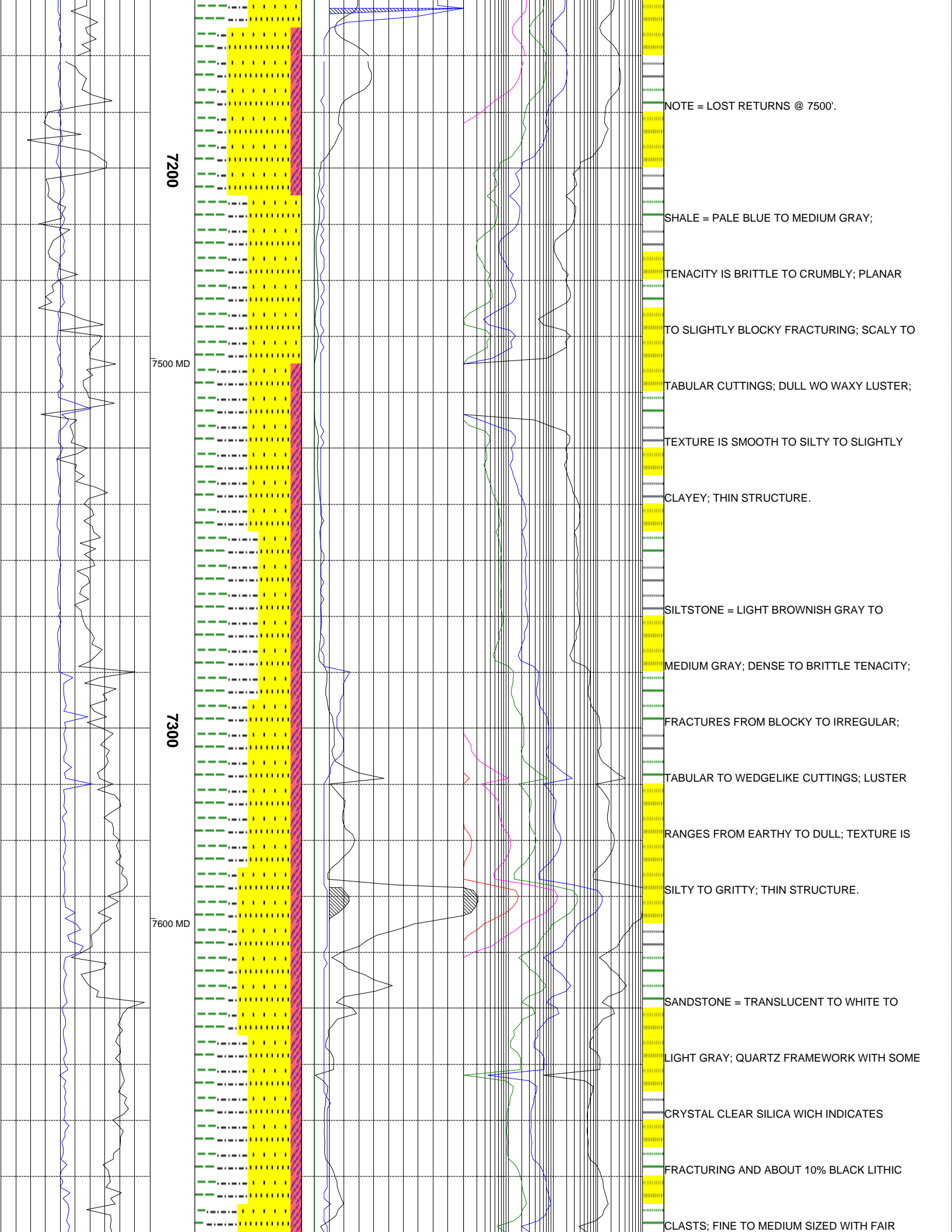


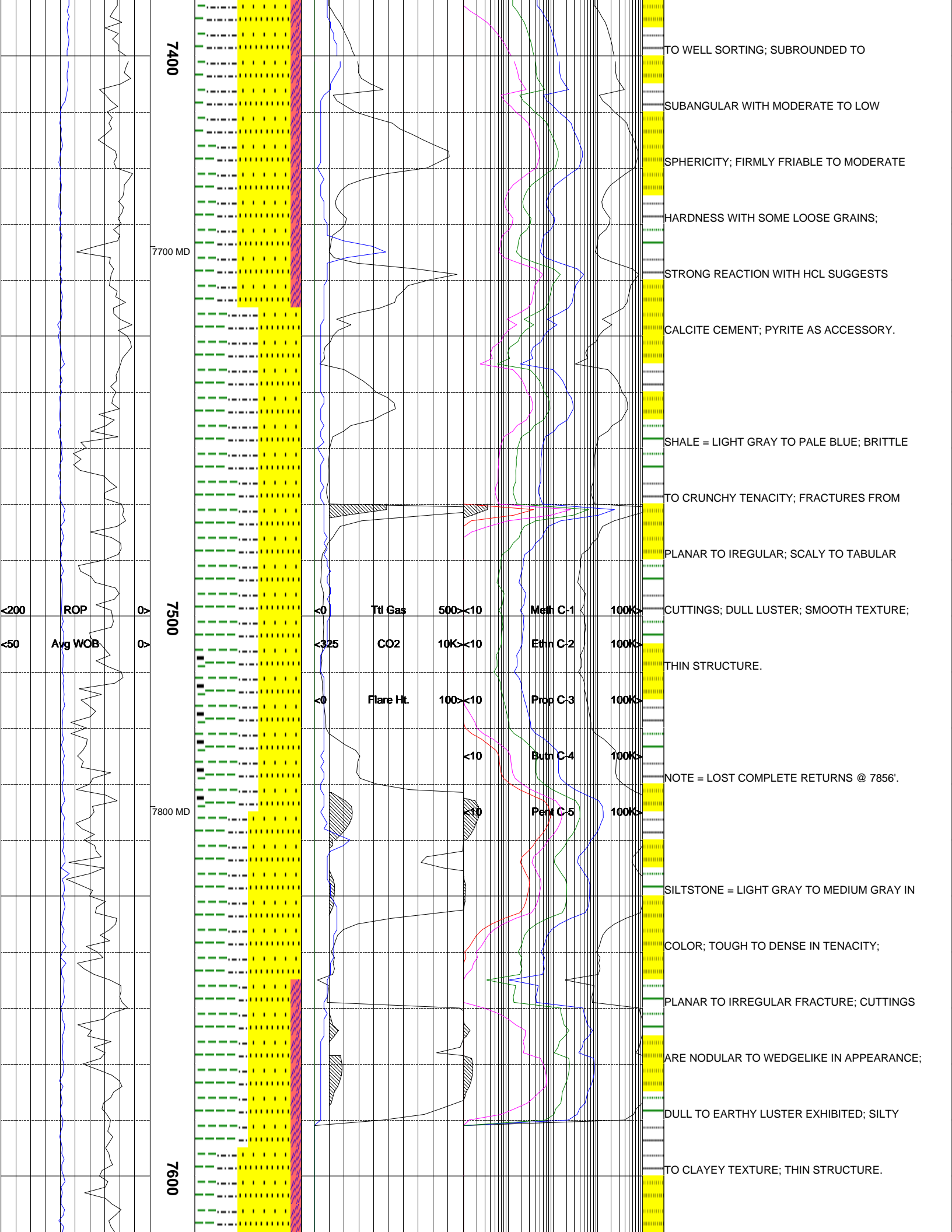


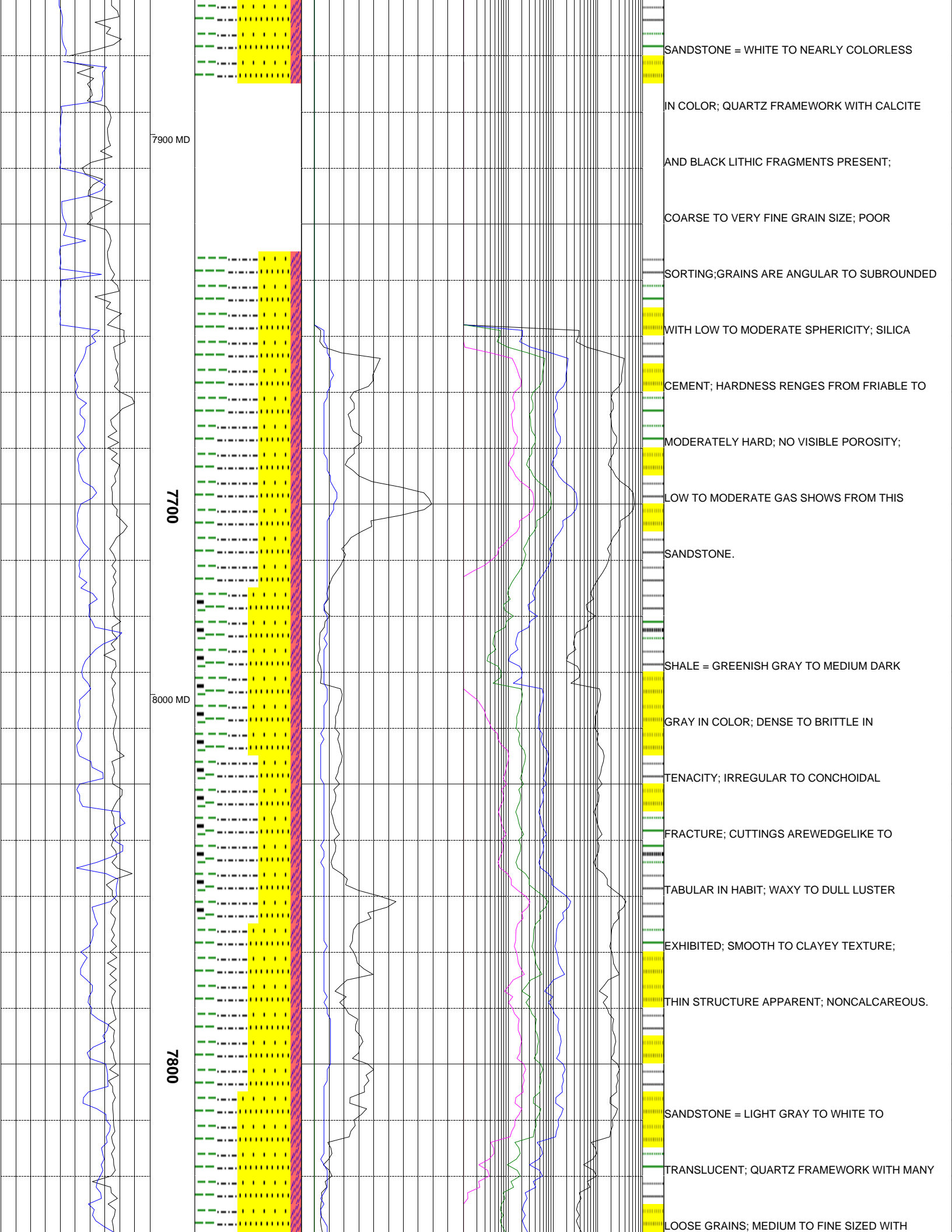


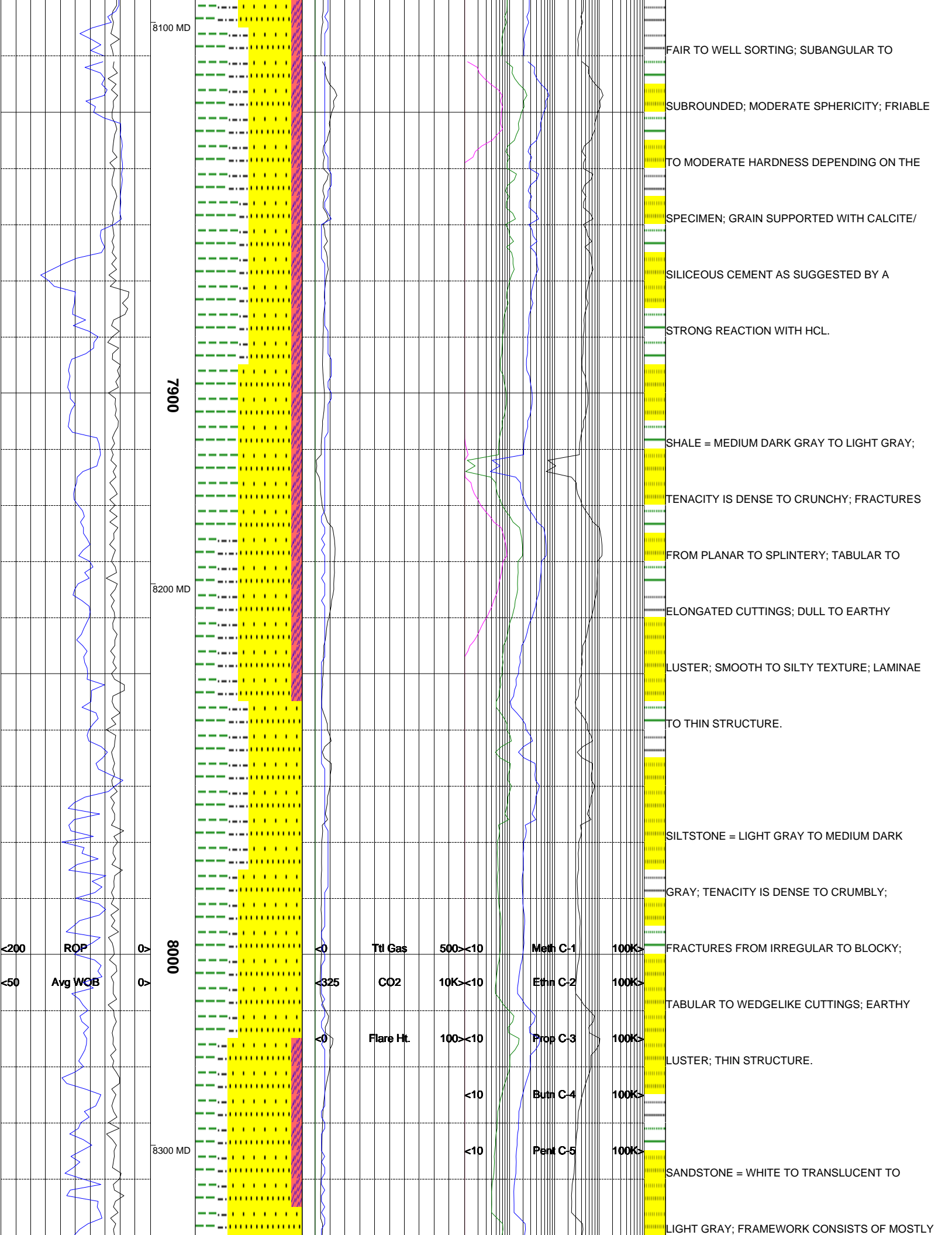


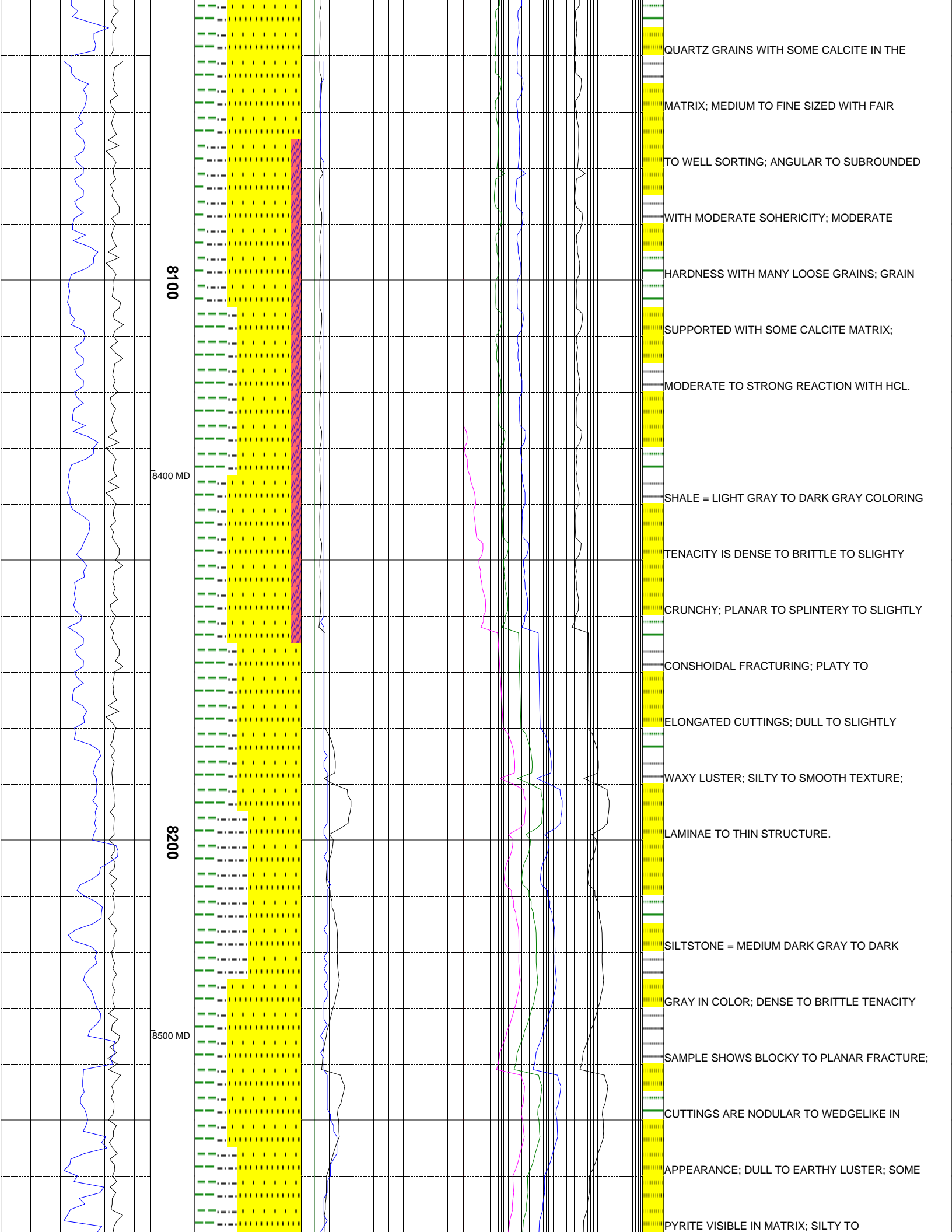


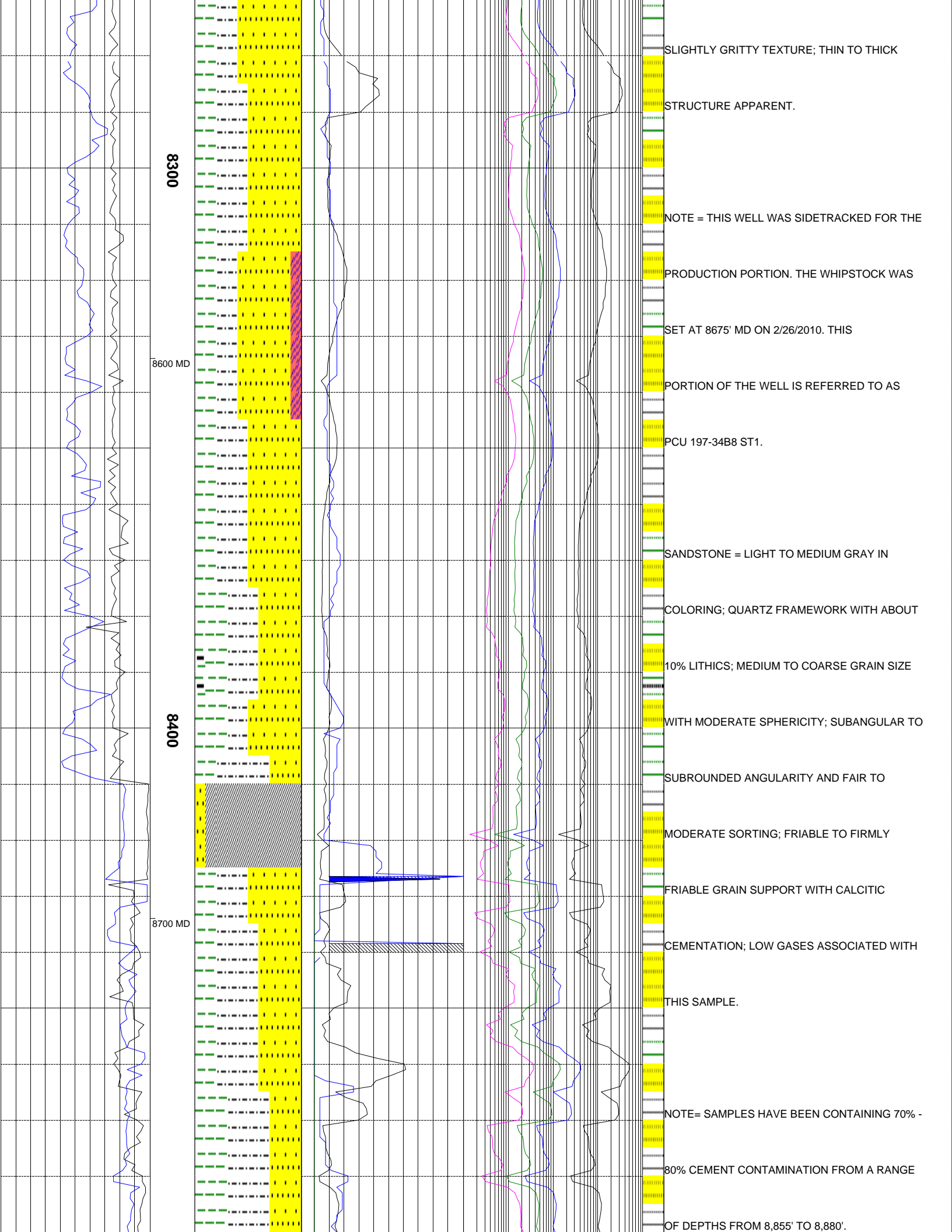












8300

8600 MD

8400

8700 MD

SLIGHTLY GRITTY TEXTURE; THIN TO THICK

STRUCTURE APPARENT.

NOTE = THIS WELL WAS SIDETRACKED FOR THE

PRODUCTION PORTION. THE WHIPSTOCK WAS

SET AT 8675' MD ON 2/26/2010. THIS

PORTION OF THE WELL IS REFERRED TO AS

PCU 197-34B8 ST1.

SANDSTONE = LIGHT TO MEDIUM GRAY IN

COLORING; QUARTZ FRAMEWORK WITH ABOUT

10% LITHICS; MEDIUM TO COARSE GRAIN SIZE

WITH MODERATE SPHERICITY; SUBANGULAR TO

SUBROUNDED ANGULARITY AND FAIR TO

MODERATE SORTING; FRIABLE TO FIRMLY

FRIABLE GRAIN SUPPORT WITH CALCITIC

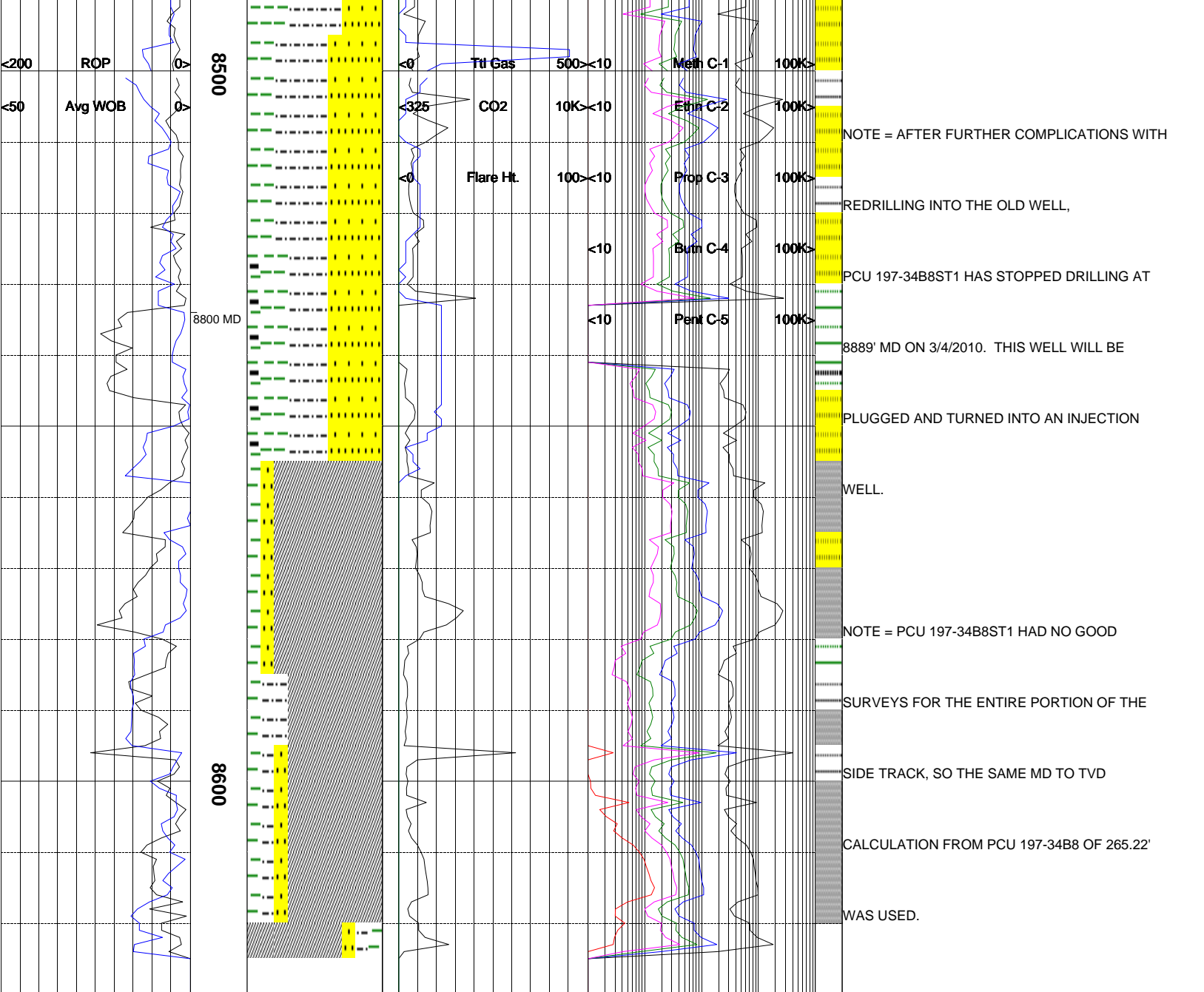
CEMENTATION; LOW GASES ASSOCIATED WITH

THIS SAMPLE.

NOTE= SAMPLES HAVE BEEN CONTAINING 70% -

80% CEMENT CONTAMINATION FROM A RANGE

OF DEPTHS FROM 8,855' TO 8,880'.



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