

DAFTAR PUSTAKA

- Serra, Oberto. 1984. *Fundamental of Well Log Interpretation*. Elsevier Science Publishers. Oxford University.
- Harsono, Adi. 1997. *Evaluasi Formasi dan Aplikasi Log. Schlumberger Oilfield Services*. Edisi Ke-8. Jakarta.
- Darling, Toby. 2005. *Well Logging and Formation Evaluation*. Elsevier Science & Technology Books. USA.
- Tiab, Djebbar, and Donaldson, Erle C. 2004. *Petrophysics, Theory and Practice of Measuring Reservoir Rock and Fluid Transport Properties*. GP Publishing. USA.
- Keehm, Y. 2016. *Petrophysics*. Kongju National University. Seoul.
- Rider, M. 2002. *The Geological Interpretation of Well Logs*. Whitetles Publishing. Scotland.
- Paul, G., 2000. *Economics Show CO2 EOR Potential in Central Kansas*. Jurnal Minyak dan Gas, halaman 31 - 47.
- Bateman, Richard M. 1985. *Open-Hole Log Analysis and Formation Evaluation*. Internal Human Resource Development Corporation. Houston.
- Archie, G. E. 1942. *The Electrical Resistivity Log as an Aid in Determining Some Reservoir Characteristics*. Journal Of Petroleum Technology.
- Schlumberger. 2002. *CMR-Plus*.
- Schlumberger. 2006. *ECS Elemental Capture Spectroscopy Sonde*. Schlumberger Marketing Communication. Houston.
- Schlumberger. 2013. *Dielectric Scanner*.
- Schlumberger. 2013. *FMI-HD High Definition Formation Microimager*.
- Schlumberger. 2001. *Platform Express*.

- Herron, Michael M., Herron, Susan L., Grau, James A., Seleznev, Nikita V., Philips, John. Sherif, Ahmed El. Farag, Sherif. Horkowitz, John O., Neville, Thomas J., Hsu, Kai. 2002. *Real Time Petrophysical Analysis in Siliciclastic From The Integration of Spectroscopy and Triple-Combo Logging*. SPE 77631.
- James, Egbe Samuel. Omole, O., Diedjomahor, Jacob. Crowe, John. Philips, John. 2007. *Calibration of the Elemental Capture Spectroscopy Tool Using the Niger Delta formation*. SPE 111910.
- Palabiran, Merandy. 2016. *Persamaan Archie Untuk Penentuan Water Saturation Pada Kasus Low-Resistivity Sandstone* [Tugas Akhir]. Kota Deltamas: Program Studi Teknik Perminyakan, Institut Teknologi dan Sains Bandung.
- Hardytanputra, Frankly. 2017. *Penentuan Matrix Velocity Berdasarkan Kelakuan Dari Sonic Velocity Pada Media Berpori* [Tugas Akhir]. Kota Deltamas: Program Studi Teknik Perminyakan, Institut Teknologi dan Sains Bandung.

LAMPIRAN A

Tabel A.1 Data Routine Core Analysis (RCA) Sumur M-64

No. ID	Depth feet	Permeability to Air [Ka]		Klinkenberg Permeability [K]		Slip factor		Helium Porosity		Fluid Porosity %	Saturation by Retort		Grain Density g/cc	Description
		Ambient md	NOB+ md	Ambient md	NOB+ md	Ambient	NOB+	Ambient %	NOB+ %		Oil %pv	Water %pv		
CORE 1														
101	2247.70	135	121	132	118	1.29	1.36	21.9	21.6	21.0	0.0	38.0	2.65	Sst, lt gy, ind, f-m, well srt, ang, qtz cmt
102	2248.60	-	-	-	-	-	-	-	-	-	-	-	-	No analysis rubble
103	2249.50	61.4	53.4	59.3	51.5	1.83	1.94	17.6	17.2	17.8	5.2	48.2	2.64	Sst, lt gy, ind, f-m, well srt, ang, qtz cmt
104	2250.10	219	199	215	195	1.03	1.07	23.2	22.6	21.6	6.9	37.0	2.64	Sst, lt gy, ind, f-m, well srt, ang, qtz cmt
105	2251.10	588	535	560	510	2.58	2.68	26.1	25.4	27.2	6.6	31.6	2.64	Sst, lt gy, ind, f-m, well srt, ang, qtz cmt
CORE 2														
201	2252.80	-	-	-	-	-	-	-	-	-	-	-	-	No analysis rubble
202	2253.20	11.0	7.16	10.3	6.58	3.91	4.71	18.9	18.1	18.4	5.0	46.2	2.63	Sst, lt gy, ind, vf-f, well srt, ang, coal lam, qtz cmt, frac
CORE 3														
301	2348.40	72.5	63.9	70.3	61.8	1.71	1.81	21.2	20.6	22.7	4.1	36.6	2.64	Sst, lt ol gy, ind, f-m, well srt, subang, qtz, calc cmt
302	2349.00	51.8	47.0	49.9	45.2	2.01	2.10	20.7	20.4	19.2	2.9	45.3	2.66	Sst, lt ol gy, ind, f-m, well srt, subang, qtz, calc cmt
303	2350.00	146	125	143	122	1.25	1.34	23.6	22.9	20.7	3.9	39.6	2.66	Sst, yel gy, ind, f-m, well srt, ang, qtz, calc cmt
304	2351.30	170	143	167	139	1.14	1.25	22.5	21.7	24.5	3.7	34.6	2.65	Sst, lt ol gy, ind, f-m, well srt, ang, qtz, calc cmt
305	2352.00	-	-	-	-	-	-	-	-	-	-	-	-	No analysis rubble
306	2353.50	30.5	22.6	29.1	21.5	2.52	2.85	17.1	16.5	20.4	2.7	39.1	2.65	Sst, m lt gy, ind, f-m, well srt, ang, qtz, cly lam, calc cmt

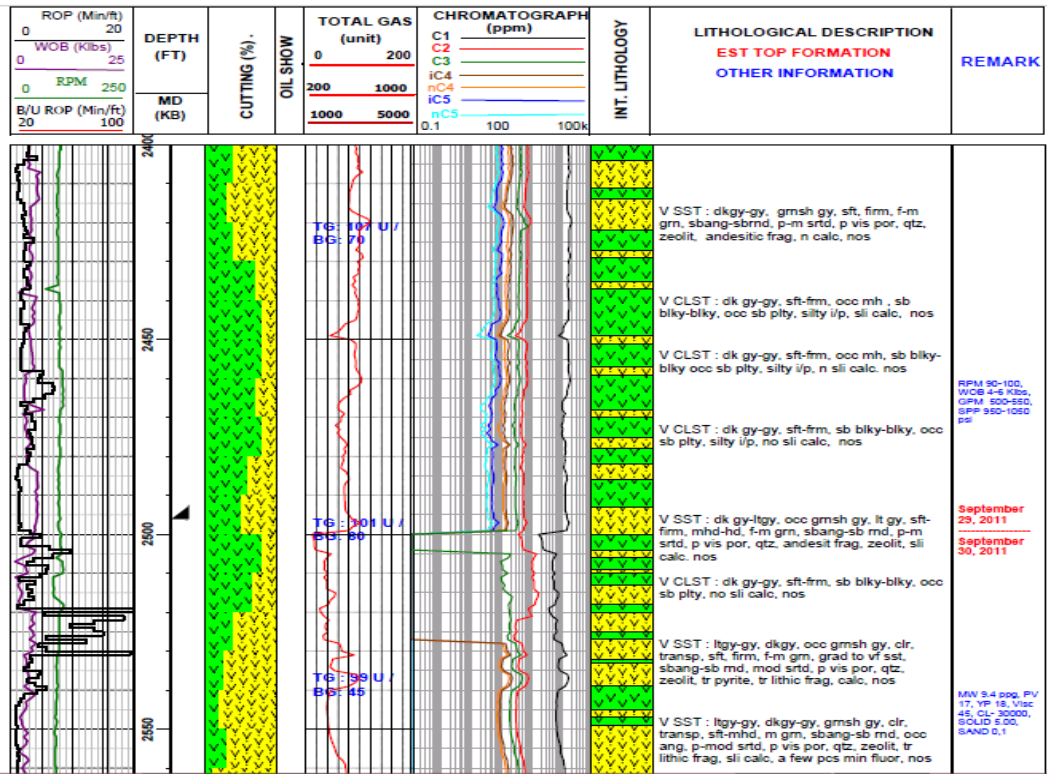
Tabel A.2 Data Routine Core Analysis (RCA) Sumur M-64 (con't)

No. ID	Depth feet	Permeability to Air [Ka]		Klinkenberg Permeability [K]		Slip factor		Helium Porosity		Fluid Porosity %	Saturation by Retort		Grain Density g/cc	Description
		Ambient md	NOB+ md	Ambient md	NOB+ md	Ambient	NOB+	Ambient %	NOB+ %		Oil %pv	Water %pv		
CORE 3														
307	2354.20	193	161	189	157	1.09	1.18	23.7	22.3	23.9	2.8	34.3	2.64	Sst, v lt gy, ind, f-m, well srt, ang, qtz, calc cmt
308	2355.40	512	457	487	433	2.78	2.92	22.3	21.5	23.2	2.4	35.3	2.66	Sst, yel gy, ind, f-m, well srt, ang, qtz, calc cmt
309	2356.00	5.23	3.61	4.74	3.21	5.45	6.45	9.7	9.2	10.0	5.5	69.9	2.67	Sst, yel gy, ind, f-m, well srt, ang, qtz, calc cmt
310	2357.40	258	175	254	172	0.910	1.09	26.4	24.4	26.3	2.1	31.2	2.66	Sst, v lt gy, ind, f-m, well srt, ang, qtz, calc cmt
311	2358.10	459	423	445	410	1.62	1.71	26.3	25.4	26.2	2.6	30.5	2.66	Sst, yel gy, ind, f-m, well srt, ang, qtz, calc cmt
312	2359.00	252	210	247	206	0.955	1.04	24.6	23.4	26.1	2.6	31.4	2.65	Sst, v lt gy, ind, f-m, well srt, ang, qtz, calc cmt
313	2360.10	36.1	31.4	34.5	30.0	2.38	2.52	19.8	19.4	22.5	3.0	36.1	2.64	Sst, yel gy, ind, f-m, well srt, ang, qtz, calc cmt
314	2361.30	82.6	73.7	80.1	71.4	1.64	1.70	21.4	20.9	21.1	2.6	41.3	2.64	Sst, yel gy, ind, f-m, well srt, ang, qtz, calc cmt
315	2362.10	19.8	14.7	18.8	13.7	3.04	3.50	17.5	16.8	20.0	3.4	42.5	2.67	Sst, v lt gy, ind, f-m, well srt, ang, qtz, cly lam, calc
316	2363.10	90.3	81.8	87.8	79.4	1.54	1.60	20.8	20.2	21.8	3.1	38.5	2.64	Sst, v lt gy, ind, f-m, well srt, ang, qtz, cly lam, calc cmt
CORE 4														
401	2860.10	322	313	302	294	3.38	3.43	21.0	19.9	21.8	1.4	40.4	2.64	Sst, v lt gy, ind, f-m, well srt, ang, qtz, cly lam, calc
402	2861.10	0.272	0.217	0.186	0.144	24.5	26.6	12.8	12.1	13.4	1.6	65.4	2.66	Sst, m gy, ind, vf-f, well srt, ang, qtz, calc cmt
403	2862.30	37.0	34.6	35.50	33.1	2.32	2.41	17.9	17.2	19.6	4.1	43.4	2.63	Sst, m gy, ind, vf-f, well srt, ang, qtz, cly lam, calc
404	2863.20	145	143	142	139	1.26	1.27	20.6	20.1	22.7	2.4	35.3	2.64	Sst, lt gy, ind, vf-f, well srt, ang, qtz, cly lam, calc

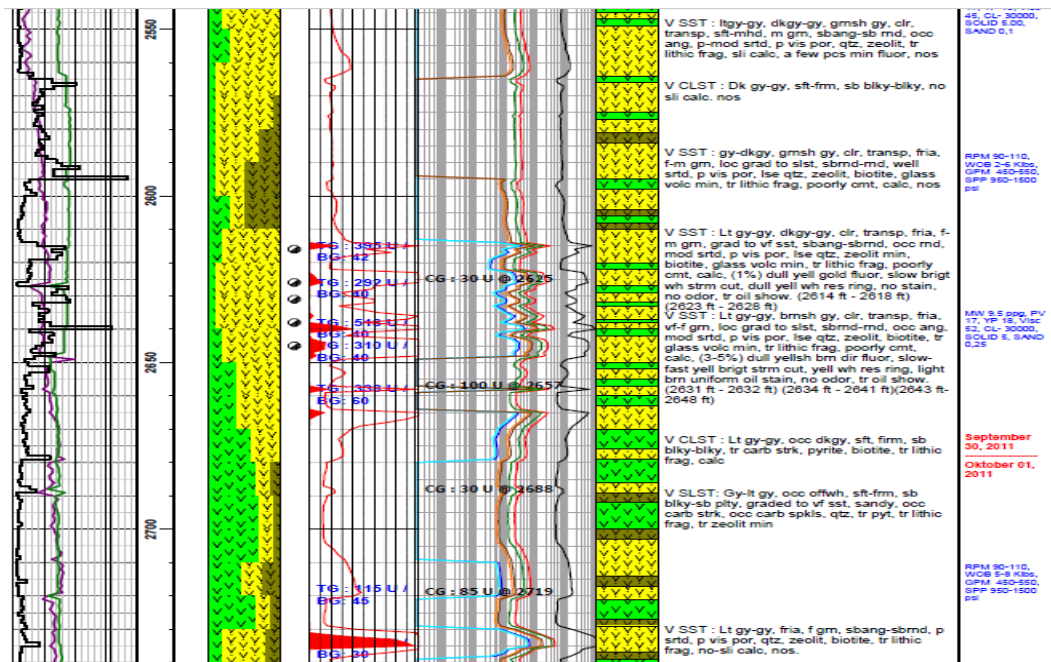
Tabel A.3 Data Mineralogi Analisa XRD Sumur M-64

No.	Depth <i>feet</i>	Clay Minerals %				Carbonate Minerals %			Other Minerals %					Total %		
		Smectite	Illite	Kaolinite	Chlorite	Calcite	Dolomite	Siderite	Quartz	K-Feldspar	Plagioclase	Pyrite	Gypsum	Jarosite	Clay	Carbonate
Core 1																
1	2248.60	7	-	10	-	-	-	65	-	10	-	2	6	17	-	83
Core 2																
2	2253.20	8	3	20	-	-	-	40	-	16	3	3	7	31	-	69
Core 3																
3	2348.70	7	4	20	-	-	-	53	-	10	3	3	-	31	-	69
4	2352.60	8	6	32	-	-	-	33	-	16	5	-	-	46	-	54
5	2356.00	-	2	5	-	35	-	40	-	18	-	-	-	7	35	58
Core 4																
6	2860.70	-	-	-	30	-	-	16	-	52	2	-	-	30	-	70
7	2864.45	-	-	4	3	30	-	30	-	31	1	1	-	7	30	63
8	2868.55	-	-	-	6	24	-	26	-	40	1	3	-	6	24	70
9	2873.40	-	5	-	-	-	-	35	-	56	4	-	-	5	-	95
10	2879.20	14	5	-	10	-	-	66	-	5	-	-	-	29	-	71

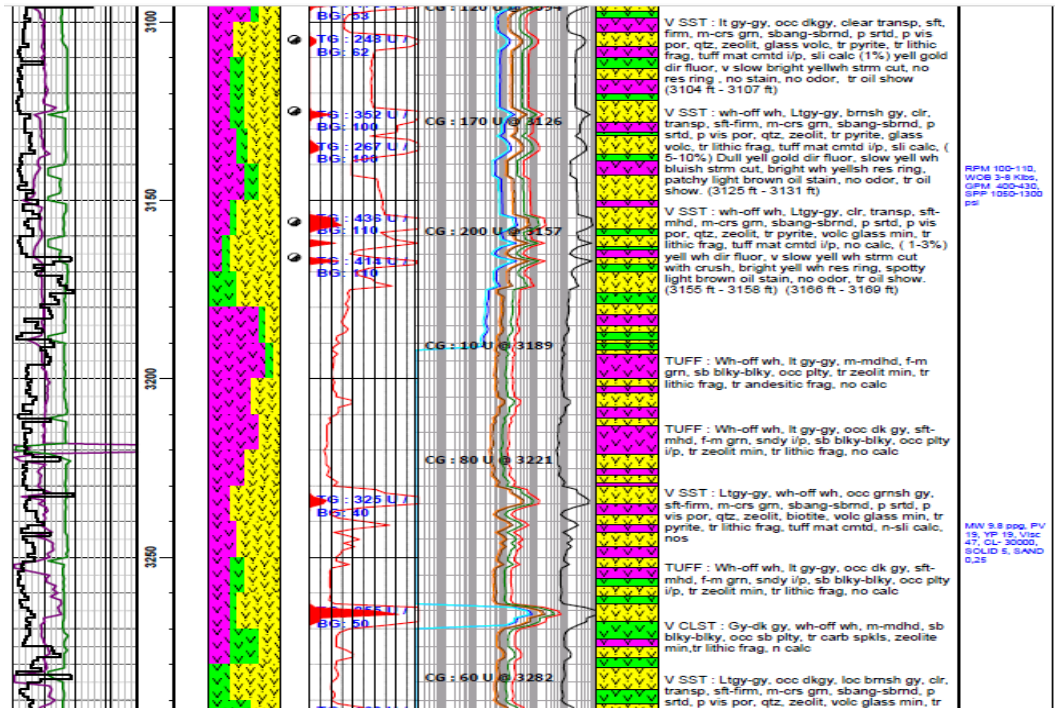
LAMPIRAN B



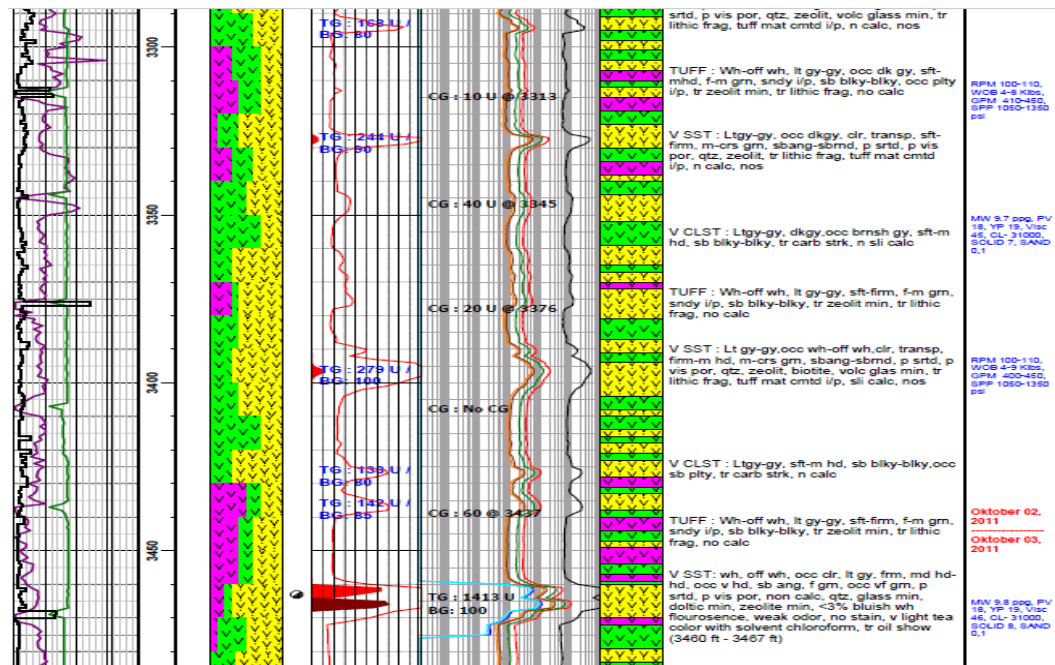
Gambar B.1 Data Mudlog Sumur M-47 Pada Kedalaman 2500 ft – 2550 ft



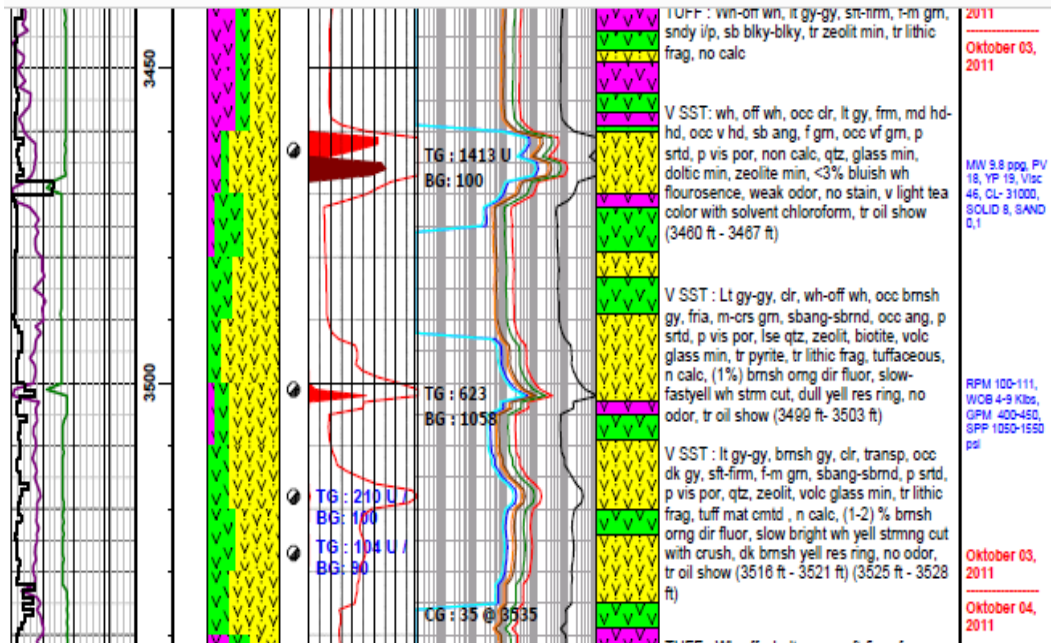
Gambar B.2 Data Mudlog Sumur M-47 Pada Kedalaman 2550 ft – 2750 ft



Gambar B.5 Data Mudlog Sumur M-47 Pada Kedalaman 3100 ft – 3150 ft



Gambar B.6 Data Mudlog Sumur M-47 Pada Kedalaman 3150 ft – 3450 ft

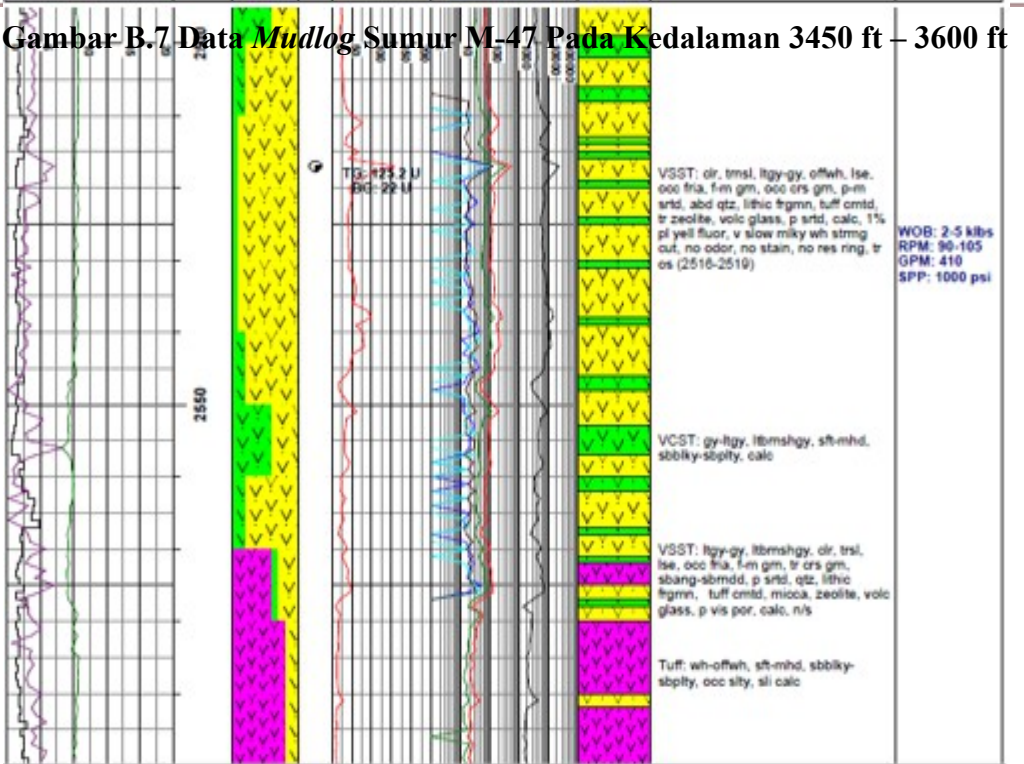


2011
 Oktober 03, 2011
 MW 3.8 ppg, PV 18, YP 19, Visc 46, CL- 31000, SOLID 8, SAND 0,1
 RPM 100-111, WOB 4-9 klbs, GPM 400-450, SPP 1050-1550 psi
 Oktober 03, 2011
 Oktober 04, 2011

ABBREVIATIONS					
TG	Total Gas	MW	Mud Weight	RPM	Rotary Per Minute
WTG	Wiper Trip Gas	VIS	Viscosity	SPP	Stand Pipe Pressure
CG	Connection Gas	PV	Plastic Viscosity	SPM	Stroke Per Minute
SWG	Swab Gas	YP	Yield Point	WOB	Weight On Bit

ENGINEERING SYMBOL					
	Gas Show - Good		Oil Show - Good		SWC (Recovery)
	Gas Show - Fair		Oil Show - Fair		MDT
	Gas Show - Poor		Oil Show - Poor		RFT/XPT
	Dead Oil - Trace		Oil Show - Trace		Casing Shoe

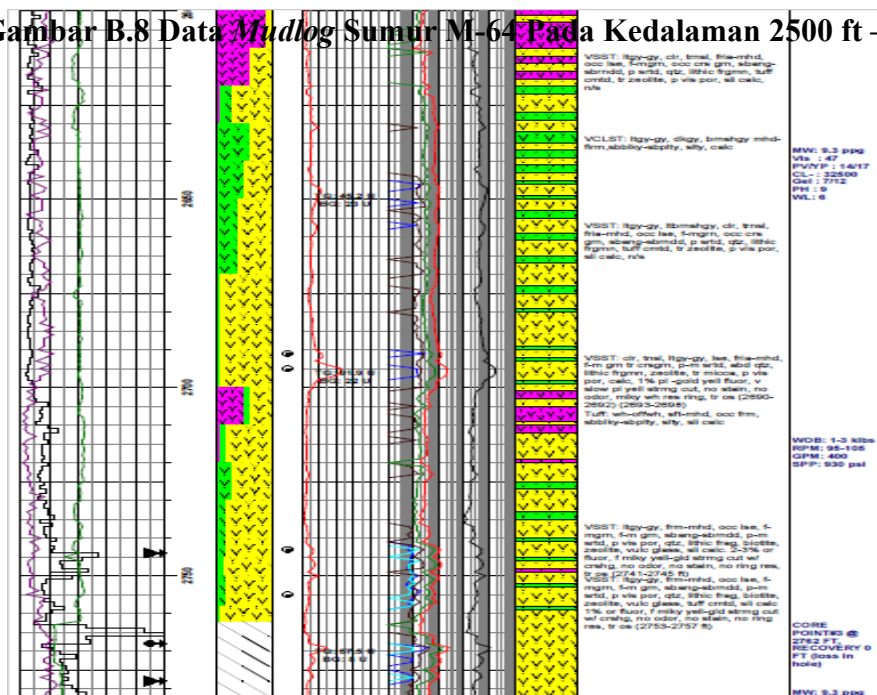
ROP (min/feet)	DEPTH (FEET)	CUTTING %	TOT. GAS (unit)	CHROMATOGRAPH (ppm)	LITHOLOGICAL DESCRIPTION	REMARKS
<0	20		<0	C1	EST. TOP OF FORMATION	
<20	100		200	C2	OTHER INFORMATION	
WOB (klbs)	MD (RKB)		<200	iC4		
25	250		1000	iC5		
RPMS			<1000	<1		
250			5000			



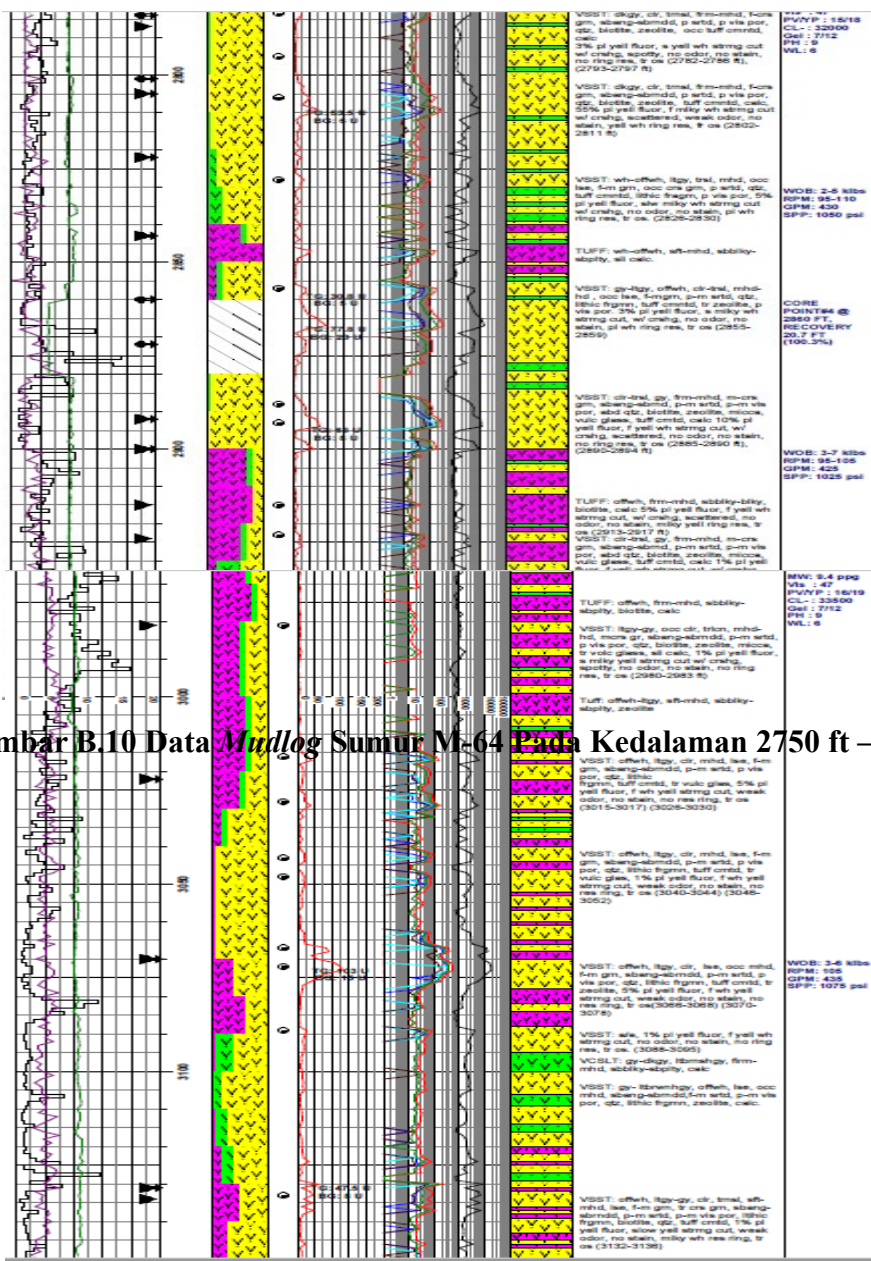
WOB: 2-5 klbs
 RPM: 90-105
 GPM: 410
 SPP: 1000 psi

Gambar B.7 Data Mudlog Sumur M-47 Pada Kedalaman 3450 ft – 3600 ft

Gambar B.8 Data Mudlog Sumur M-64 Pada Kedalaman 2500 ft – 2600 ft

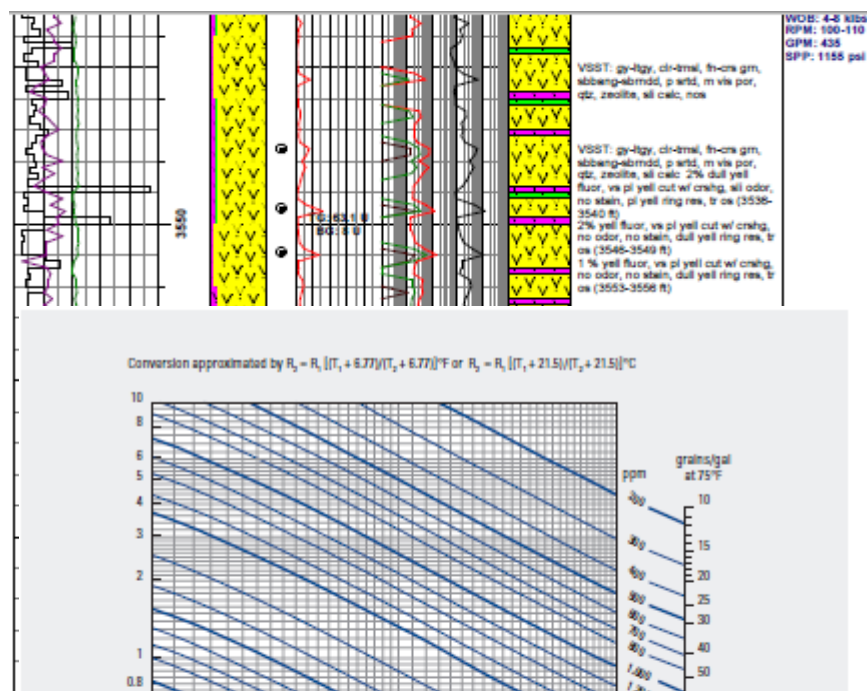


Gambar B.9 Data Mudlog Sumur M-64 Pada Kedalaman 2600 ft – 2750 ft

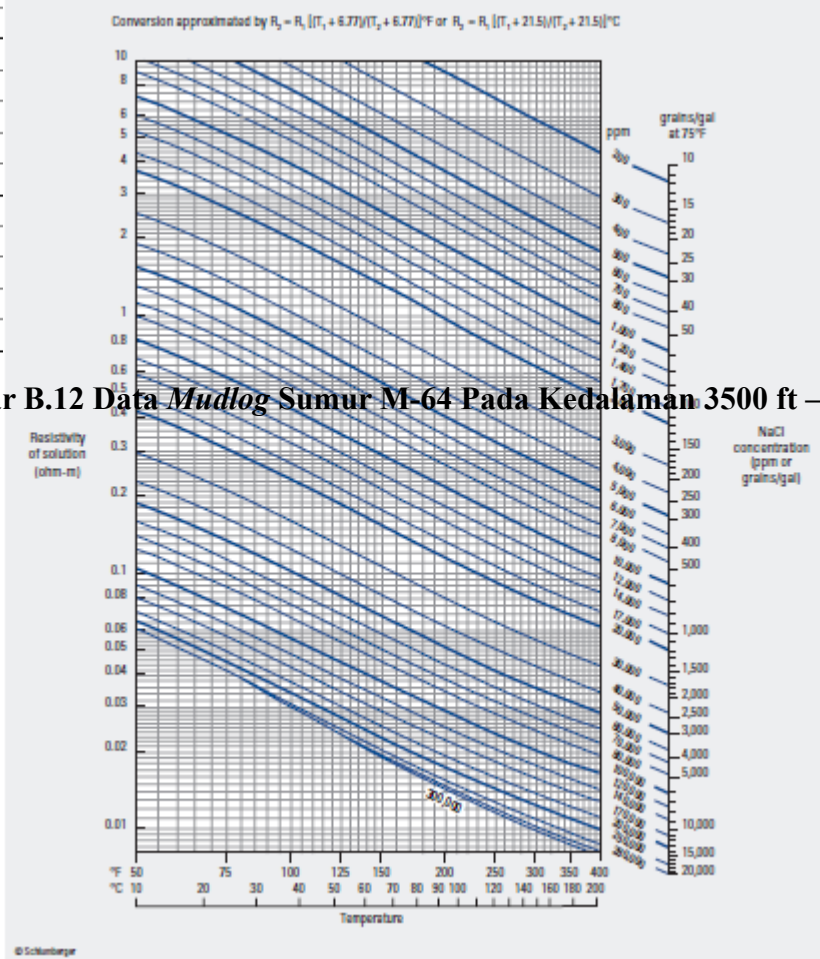


Gambar B.10 Data Mudlog Sumur M-64 Pada Kedalaman 2750 ft – 2950 ft

Gambar B.13 Data *Mudlog* Sumur M-64 Pada Kedalaman 3350ft – 3500 ft



Gambar B.12 Data *Mudlog* Sumur M-64 Pada Kedalaman 3500 ft – 3600 ft



Gambar B.12 *Schlumberger Chart* Gen-6