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LAMPIRAN

Lampiran 1

1. **Uji Sampel *Crude Oil***

 Mengambil Sampel sebelum CST	 Mengambil Sampel *undeflow* CST	 Memasukan sampel ke Spintest
 Melakukan putaran di *Centrifuge* mini	 Mengukur volume lapisan sampel *Crude oil*	 Sampel volume lapisan *Crude oil*

Lampiran 2

Tabel 1. Kadar Air Pada Umpan CST

Kadar air (%)	Emulsi (%)
22.00%	8.00%
27.00%	8.00%
22.00%	8.00%
26.00%	9.00%
26.00%	8.00%
25.00%	9.00%
26.00%	8.00%
25.00%	8.00%
26.00%	9.00%
23.00%	6.00%
25.00%	7.00%
27.00%	8.00%
25.00%	8.00%
24.00%	9.00%
24.00%	8.00%
25.00%	9.00%
26.00%	8.00%
27.00%	9.00%
29.00%	9.00%
26.00%	7.00%
26.00%	8.00%
23.00%	8.00%
24.00%	9.00%
25.00%	8.00%
26.00%	9.00%
31.00%	6.00%
25.00%	8.00%
23.00%	8.00%
23.00%	9.00%
23.00%	8.00%

Tabel 2. Kadar Air Pada Underflow CST

Kadar air (%)	Emulsi (%)
49.00%	15.00%
48.00%	14.00%
50.00%	14.00%
50.00%	14.00%
50.00%	13.00%
49.00%	14.00%
50.00%	15.00%
50.00%	12.00%
49.00%	14.00%
50.00%	15.00%
50.00%	15.00%
50.00%	15.00%
50.00%	15.00%
50.00%	14.00%
50.00%	15.00%
49.00%	15.00%
53.00%	21.00%
52.00%	19.00%
53.00%	18.00%
51.00%	17.00%
51.00%	15.00%
49.00%	16.00%
49.00%	15.00%
50.00%	16.00%
50.00%	15.00%
52.00%	14.00%
50.00%	16.00%
52.00%	15.00%
48.00%	15.00%
49.00%	14.00%

Lampiran 3

Tabel 3. Kadar NOS Pada Umpan CST

NOS (%)	Emulsi (%)
25.00%	8.00%
21.00%	8.00%
24.00%	8.00%
20.00%	9.00%
19.00%	8.00%
20.00%	9.00%
23.00%	8.00%
22.00%	8.00%
23.00%	9.00%
20.00%	6.00%
22.00%	7.00%
25.00%	8.00%
23.00%	8.00%
23.00%	9.00%
23.00%	8.00%
23.00%	9.00%
21.00%	8.00%
21.00%	9.00%
18.00%	9.00%
22.00%	7.00%
22.00%	8.00%
24.00%	8.00%
24.00%	9.00%
22.00%	8.00%
23.00%	9.00%
23.00%	6.00%
22.00%	8.00%
23.00%	8.00%
23.00%	9.00%
26.00%	8.00%

Tabel 4. Kadar NOS Pada Underflow CST

NOS (%)	Emulsi (%)
29.00%	15.00%
31.00%	14.00%
30.00%	14.00%
30.00%	14.00%
30.00%	13.00%
30.00%	14.00%
28.00%	15.00%
32.00%	12.00%
31.00%	14.00%
29.00%	15.00%
29.00%	15.00%
28.00%	15.00%
28.00%	15.00%
30.00%	14.00%
29.00%	15.00%
30.00%	15.00%
22.00%	21.00%
24.00%	19.00%
24.00%	18.00%
27.00%	17.00%
28.00%	15.00%
29.00%	16.00%
30.00%	15.00%
28.00%	16.00%
29.00%	15.00%
29.00%	14.00%
28.00%	16.00%
27.00%	15.00%
31.00%	15.00%
30.00%	14.00%

Lampiran 4

Tabel 5. Oil Pada Umpan CST

Oil	Emulsi
(%)	(%)
45.00%	8.00%
44.00%	8.00%
46.00%	8.00%
45.00%	9.00%
47.00%	8.00%
46.00%	9.00%
43.00%	8.00%
45.00%	8.00%
42.00%	9.00%
51.00%	6.00%
46.00%	7.00%
40.00%	8.00%
44.00%	8.00%
44.00%	9.00%
45.00%	8.00%
43.00%	9.00%
45.00%	8.00%
43.00%	9.00%
44.00%	9.00%
45.00%	7.00%
44.00%	8.00%
45.00%	8.00%
43.00%	9.00%
45.00%	8.00%
42.00%	9.00%
40.00%	6.00%
45.00%	8.00%
46.00%	8.00%
45.00%	9.00%
43.00%	8.00%

Tabel 6. Oil Pada Underflow CST

Oil	Emulsi
(%)	(%)
7.00%	15.00%
7.00%	14.00%
6.00%	14.00%
6.00%	14.00%
7.00%	13.00%
7.00%	14.00%
7.00%	15.00%
6.00%	12.00%
6.00%	14.00%
6.00%	15.00%
6.00%	15.00%
7.00%	15.00%
7.00%	15.00%
6.00%	14.00%
6.00%	15.00%
6.00%	15.00%
4.00%	21.00%
5.00%	19.00%
5.00%	18.00%
5.00%	17.00%
6.00%	15.00%
6.00%	16.00%
6.00%	15.00%
6.00%	16.00%
6.00%	15.00%
5.00%	14.00%
6.00%	16.00%
6.00%	15.00%
6.00%	15.00%
7.00%	14.00%

Lampiran 5

Tabel 7. Hubungan kadar air dengan emulsi umpan CST

Emulsi	Kadar Air	Cl	UCL	LCL
8	22	16	30	3
8	27	16	30	3
8	22	16	30	3
9	26	16	30	3
8	26	16	30	3
9	25	16	30	3
8	26	16	30	3
8	25	16	30	3
9	26	16	30	3
6	23	16	30	3
7	25	16	30	3
8	27	16	30	3
8	25	16	30	3
9	24	16	30	3
8	24	16	30	3
9	25	16	30	3
8	26	16	30	3
9	27	16	30	3
9	29	16	30	3
7	26	16	30	3
8	26	16	30	3
8	23	16	30	3
9	24	16	30	3
8	25	16	30	3
9	26	16	30	3
6	31	16	30	3
8	25	16	30	3
8	23	16	30	3
9	23	16	30	3
8	23	16	30	3

Tabel 8.hubungan kadar air dengan emulsi underflow CST

Emulsi	Kadar Air	Cl	UCL	LCL
15	49	30	90	29
14	48	30	90	29
14	50	30	90	29
14	50	30	90	29
13	50	30	90	29
14	49	30	90	29
15	50	30	90	29
12	50	30	90	29
14	49	30	90	29
15	50	30	90	29
15	50	30	90	29
15	50	30	90	29
15	50	30	90	29
14	50	30	90	29
15	50	30	90	29
15	49	30	90	29
21	53	30	90	29
19	52	30	90	29
18	53	30	90	29
17	51	30	90	29
15	51	30	90	29
16	49	30	90	29
15	49	30	90	29
16	50	30	90	29
15	50	30	90	29
14	52	30	90	29
16	50	30	90	29
15	52	30	90	29
15	48	30	90	29
14	49	30	90	29

Lampiran 6

Tabel 9. Hubungan kadar Nos dengan emulsi umpan CST

Emulsi	**NOS**	Cl	UCL	LCL
8	25	15	40	9
8	21	15	40	9
8	24	15	40	9
9	20	15	40	9
8	19	15	40	9
9	20	15	40	9
8	23	15	40	9
8	22	15	40	9
9	23	15	40	9
6	20	15	40	9
7	22	15	40	9
8	25	15	40	9
8	23	15	40	9
9	23	15	40	9
8	23	15	40	9
9	23	15	40	9
8	21	15	40	9
9	21	15	40	9
9	18	15	40	9
7	22	15	40	9
8	22	15	40	9
8	24	15	40	9
9	24	15	40	9
8	22	15	40	9
9	23	15	40	9
6	23	15	40	9
8	22	15	40	9
8	23	15	40	9
9	23	15	40	9
8	26	15	40	9

Tabel 10. Hubungan kadar Nos dengan emulsi underflow CST

Emulsi	**NOS**	UCL	CL	LCL
15	29	47.30	21.92	3.46
14	31	47.30	21.92	3.46
14	30	47.30	21.92	3.46
14	30	47.30	21.92	3.46
13	30	47.30	21.92	3.46
14	30	47.30	21.92	3.46
15	28	47.30	21.92	3.46
12	32	47.30	21.92	3.46
14	31	47.30	21.92	3.46
15	29	47.30	21.92	3.46
15	29	47.30	21.92	3.46
15	28	47.30	21.92	3.46
15	28	47.30	21.92	3.46
14	30	47.30	21.92	3.46
15	29	47.30	21.92	3.46
15	30	47.30	21.92	3.46
21	22	47.30	21.92	3.46
19	24	47.30	21.92	3.46
18	24	47.30	21.92	3.46
17	27	47.30	21.92	3.46
15	28	47.30	21.92	3.46
16	29	47.30	21.92	3.46
15	30	47.30	21.92	3.46
16	28	47.30	21.92	3.46
15	29	47.30	21.92	3.46
14	29	47.30	21.92	3.46
16	28	47.30	21.92	3.46
15	27	47.30	21.92	3.46
15	31	47.30	21.92	3.46
14	30	47.30	21.92	3.46

Lampiran 7

Tabel 11. Hubungan Oil dengan emulsi umpan CST

Emulsi	**Oil**	Cl	UCL	LCL
8	45	26	55	3
8	44	26	55	3
8	46	26	55	3
9	45	26	55	3
8	47	26	55	3
9	46	26	55	3
8	43	26	55	3
8	45	26	55	3
9	42	26	55	3
6	51	26	55	3
7	46	26	55	3
8	40	26	55	3
8	44	26	55	3
9	44	26	55	3
8	45	26	55	3
9	43	26	55	3
8	45	26	55	3
9	43	26	55	3
9	44	26	55	3
7	45	26	55	3
8	44	26	55	3
8	45	26	55	3
9	43	26	55	3
8	45	26	55	3
9	42	26	55	3
6	40	26	55	3
8	45	26	55	3
8	46	26	55	3
9	45	26	55	3
8	43	26	55	3

Tabel 12. Hubungan Oil dengan emulsi underflow CST

Emulsi	**Oil**	UCL	CL	LCL
15	7	27.72	10.62	6.49
14	7	27.72	10.62	6.49
14	6	27.72	10.62	6.49
14	6	27.72	10.62	6.49
13	7	27.72	10.62	6.49
14	7	27.72	10.62	6.49
15	7	27.72	10.62	6.49
12	6	27.72	10.62	6.49
14	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
15	7	27.72	10.62	6.49
15	7	27.72	10.62	6.49
14	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
21	4	27.72	10.62	6.49
19	5	27.72	10.62	6.49
18	5	27.72	10.62	6.49
17	5	27.72	10.62	6.49
15	6	27.72	10.62	6.49
16	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
16	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
14	5	27.72	10.62	6.49
16	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
15	6	27.72	10.62	6.49
14	7	27.72	10.62	6.49

Lampiran 8. Nilai faktor A2, D3 dan D4

n	A_2	D_3	D_4
2	1.88	0.00	3.27
3	1.02	0.00	2.57
4	0.73	0.00	2.28
5	0.58	0.00	2.11
6	0.48	0.00	2.00
7	0.42	0.08	1.92
8	0.37	0.14	1.86
9	0.34	0.18	1.82
10	0.31	0.22	1.76
11	0.29	0.26	1.74
12	0.27	0.28	1.72
13	0.25	0.31	1.69
14	0.24	0.33	1.67
15	0.22	0.35	1.65
16	0.21	0.36	1.64
17	0.20	0.38	1.62
18	0.19	0.39	1.61
19	0.19	0.40	1.60
20	0.18	0.41	1.59