



Denne rapport
tilhører

 **STATOIL**

01.505.179-8
L&U DOK. SENTER

L. NR. 20084360014

KODE Well 31/6-5 nr.23

Returneres etter bruk

Pressure Survey Report

for

Statoil

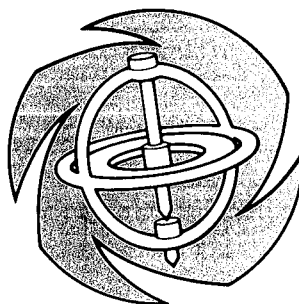
Well No. 31/6-5

1st May 1984

Bottom Hole Pressures

Gravel-Pack Operation

(Gauge No's. 0052)



Pressure Survey Report

for

Statoil

Well No. 31/6-5

1st May 1984

Bottom Hole Pressures

Gravel-Pack Operation

(Gauge No's. 0052)

SPERRY-SUN INTERNATIONAL INC.
MAGNETIC RECORDING PRESSURE GAUGE REPORT

STATOIL
TROLL
31/6 -5

OFFSHORE NORWAY
1st MAY 1984
NR-MS-40074

GAUGE NO:	0052/2227	0241/1975
TIME MODE	1 min	1 min
ELEMENT SIZE	10000 Psi	10000 Psi
DEPTH	1510.0 Meter	1505.7 Meter
MAX. TEMP.	48.1 C	N/A

ENGINEER: E. OSTVIK

SPERRY-SUN INTERNATIONAL INC.
MAGNETIC RECORDING PRESSURE GAUGE REPORT

STATOIL
TROLL
31/6 -5

OFFSHORE NORWAY
1st MAY 1984
NR-MS-40074

SEQUENCE OF EVENTS

DATE	TIME	OPERATION
2/5/84	03:15	LOCATED AND LANDED F-1 PACKER AT 1572.5 M
	04:25	PUMPING 14.3 M3 OF 1.13sg BRINE DOWN DRILL PIPE.
	05:00	COMPLETED PUMPING - DROPPED 1-11/16" BALL
	05:25	INCREASED PRESSURE IN 34 BAR INCREMENTS. PACKER SEAT SHEAR SUB SHEARED AT 231 BARS
	05:55	PULLED 12000 DAN TO CHECK PACKER SETTING.
	06:00	TESTED PACKER FROM ABOVE TO 34 BARS/10 MINS.
	06:20	ROTATED 14 TURNS TO THE RIGHT USING ROTARY PICKED UP 6M AND LOCATED THE 4 POS. WHEN GOING DOWN.
	06:40	RELOCATED POS.2, CLOSED UPPER ANNULAR PREVENTER TAKING RETURN THROUGH CHOKE LINE AND "POOR BOY". ESTABLISHED CIRC. THROUGH LOWER TELL TALE SCREEN. TOTAL VOLUME PUMPED: 1.6 M3
	06:50	OPENED UPPER ANN. PREV. AND LOCATED POS.4. PUMPED 9.5 M3 7.5 % HCL. RELOC. POS.2, CLOSED UPPER ANN. PREV. AND PUMPED THE REMAINING 4.8 M3 PUMPED 1.6 M3 PREPAD PUMPED 3.5 M3 1.63sg GRAVEL SLURRY
	08:00	PUMPING POSTPAD
	08:03	DISPLACED WITH 1.13sg BRINE
	08:20	LOCATED POS.1 FINAL SQUEEZE LOCATED POS.4 REVERSING OUT
	12:39	COMMENCED P.O.O.H.

MRPG Gauge No. 0052/2227
Sensing depth: 1510.0 Meter

5/19/84

SPERRY-SUN INTERNATIONAL
MAGNETIC RECORDING PRESSURE GAUGE REPORT

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STATOIL
TROLL
31/6-5NORTH SEA
1 MAY 1984
NR-MS-40074

GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
0.000	3211.81	6.2	0:33	2/ 5/84
0.017	3279.99	6.3	0:34	
0.033	3332.67	6.5	0:35	
0.050	3334.53	6.4	0:36	
0.083	3353.41	6.4	0:38	
0.100	3411.01	6.4	0:39	
0.133	3465.52	6.4	0:41	
0.150	3498.35	6.3	0:42	
0.167	3549.46	6.3	0:43	
0.183	3602.42	6.3	0:44	
0.200	3647.64	6.3	0:45	
0.217	3660.34	6.3	0:46	
0.233	3652.90	6.2	0:47	
0.250	3650.11	6.2	0:48	
0.267	3747.71	6.3	0:49	
0.283	3868.53	6.5	0:50	
0.300	3924.29	6.6	0:51	
0.317	3975.41	6.7	0:52	
0.333	3981.61	7.0	0:53	
0.350	4031.17	7.4	0:54	
0.367	4195.28	7.7	0:55	
0.383	4300.54	7.9	0:56	
0.400	4303.59	8.4	0:57	
0.417	4353.09	8.7	0:58	
0.433	4510.87	9.2	0:59	
0.450	4622.24	9.4	1: 0	
0.467	4622.12	9.9	1: 1	
0.483	4739.64	10.2	1: 2	
0.500	4906.56	10.7	1: 3	
0.517	4954.42	10.9	1: 4	
0.533	5048.58	11.4	1: 5	
0.550	5196.93	11.7	1: 6	
0.567	5271.04	11.9	1: 7	
0.583	5320.27	12.4	1: 8	
0.600	5459.27	12.6	1: 9	
0.617	5598.26	12.9	1:10	
0.633	5597.95	13.4	1:11	
0.650	5905.35	13.6	1:12	
0.667	5915.99	13.9	1:13	
0.717	6236.60	14.9	1:16	
0.733	6468.12	15.1	1:17	
0.750	6554.15	15.6	1:18	
0.767	6597.15	15.9	1:19	
0.783	6850.20	16.1	1:20	
0.800	6877.73	16.4	1:21	
0.817	7081.01	16.9	1:22	
0.833	7185.72	17.1	1:23	
0.850	7197.46	17.6	1:24	
0.867	7536.79	17.8	1:25	
0.883	7521.01	18.1	1:26	

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SPERRY-SUN INTERNATIONAL
MAGNETIC RECORDING PRESSURE GAUGE REPORT

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STATOIL
TROLL
31/6-5NORTH SEA
1 MAY 1984
NR-MS-40074

GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
0.900	7656.16	18.6	1:27	2/ 5/84
0.917	7830.21	18.8	1:28	
0.933	7840.65	19.1	1:29	
0.950	8126.92	19.6	1:30	
0.967	8166.65	19.8	1:31	
0.983	8423.92	20.1	1:32	
1.050	8828.52	21.6	1:36	
1.067	9104.12	21.8	1:37	
1.083	9118.57	22.3	1:38	
1.100	9394.09	22.6	1:39	
1.117	9435.20	22.8	1:40	
1.133	9713.21	23.3	1:41	
1.150	9754.28	23.5	1:42	
1.167	9829.27	23.8	1:43	
1.183	10123.12	24.0	1:44	
1.200	10091.13	24.5	1:45	
1.217	10247.74	24.8	1:46	
1.233	10351.94	25.0	1:47	
1.250	10381.54	25.5	1:48	
1.267	10730.67	25.8	1:49	
1.283	10728.49	26.0	1:50	
1.300	11088.35	26.3	1:51	
1.317	11016.15	26.8	1:52	
1.333	11212.63	27.0	1:53	
1.350	11380.67	27.5	1:54	
1.367	11367.65	27.8	1:55	
1.383	11677.28	28.2	1:56	
1.400	11711.97	28.5	1:57	
1.417	11786.68	28.7	1:58	
1.433	12000.72	29.2	1:59	
1.450	12003.04	29.5	2: 0	
1.467	12198.53	30.0	2: 1	
1.483	12330.10	30.2	2: 2	
1.500	12336.23	30.7	2: 3	
1.517	12498.54	31.0	2: 4	
1.533	12688.52	31.2	2: 5	
1.550	12608.44	31.7	2: 6	
1.567	12952.19	32.0	2: 7	
1.583	12985.19	32.2	2: 8	
1.600	13100.40	32.7	2: 9	
1.617	13304.08	33.0	2:10	
1.633	13290.06	33.4	2:11	
1.650	13484.45	33.7	2:12	
1.667	13621.06	34.2	2:13	
1.683	13598.65	34.4	2:14	
1.717	13983.29	35.2	2:16	
1.733	13928.59	35.4	2:17	
1.750	14134.21	35.9	2:18	
1.767	14222.40	36.2	2:19	
1.783	14302.91	36.4	2:20	

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MAGNETIC RECORDING PRESSURE GAUGE REPORT

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STATOIL
TROLL
31/6-5NORTH SEA
1 MAY 1984
NR-MS-40074

GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
1.800	14383.40	36.7	2:21	2/ 5/84
1.817	14664.17	37.2	2:22	
1.833	14589.50	37.4	2:23	
1.850	14580.88	37.7	2:24	
1.867	14712.02	37.9	2:25	
1.883	14783.26	38.2	2:26	
1.900	14889.81	38.4	2:27	
1.917	14904.23	38.6	2:28	
1.933	14894.10	38.9	2:29	
1.950	14907.02	39.1	2:30	
1.967	14858.60	39.4	2:31	
1.983	14930.34	39.5	2:32	
2.000	15032.75	39.6	2:33	
2.017	15277.42	39.9	2:34	
2.033	15242.70	40.1	2:35	
2.067	15554.81	40.4	2:37	
2.083	15538.45	40.6	2:38	
2.100	15824.40	40.9	2:39	
2.117	15883.19	41.1	2:40	
2.133	15899.54	41.2	2:41	
2.150	15891.33	41.4	2:42	
2.167	15874.92	41.6	2:43	
2.183	16111.64	41.9	2:44	
2.200	16253.77	42.0	2:45	
2.217	16216.39	42.1	2:46	
2.233	16311.91	42.4	2:47	
2.250	16542.41	42.6	2:48	
2.267	16516.71	42.9	2:49	
2.283	16532.42	43.1	2:50	
2.300	16603.70	43.6	2:51	
2.317	16545.79	43.8	2:52	
2.333	16636.60	44.1	2:53	
2.350	16692.14	44.3	2:54	
2.367	16753.80	44.6	2:55	
2.383	16783.25	44.8	2:56	
2.400	16783.57	45.1	2:57	
2.417	16779.30	45.3	2:58	
2.433	16798.00	45.6	2:59	
2.450	16865.74	45.8	3: 0	
2.467	16843.67	46.0	3: 1	
2.483	16853.79	46.1	3: 2	
2.500	16833.25	46.2	3: 3	
2.517	16887.79	46.3	3: 4	
2.533	16873.39	46.4	3: 5	
2.550	16851.32	46.6	3: 6	
2.567	16859.23	46.6	3: 7	
2.583	16859.04	46.7	3: 8	
2.600	16859.28	46.8	3: 9	
2.617	16846.17	46.9	3:10	
2.633	16863.69	46.9	3:11	

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MAGNETIC RECORDING PRESSURE GAUGE REPORT

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STATOIL
TROLL
31/6-5

NORTH SEA
1 MAY 1984
NR-MS-40074

GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
2.650	16868.95	47.0	3:12	2/ 5/84
2.667	16869.63	47.0	3:13	
2.683	16789.12	47.1	3:14	
2.700	16799.41	47.1	3:15	
2.717	16855.22	47.1	3:16	
2.733	16854.79	47.2	3:17	
2.750	17030.06	47.2	3:18	
2.767	16885.66	47.2	3:19	
2.783	16890.93	47.3	3:20	
2.800	16913.47	47.3	3:21	
2.817	16831.87	47.3	3:22	
2.833	16852.88	47.4	3:23	
2.850	16860.54	47.4	3:24	
2.867	16863.17	47.4	3:25	
2.883	16848.96	47.4	3:26	
2.900	16851.59	47.4	3:27	
2.917	16848.53	47.4	3:28	
2.933	16857.29	47.5	3:29	
2.950	16849.20	47.5	3:30	
2.967	16856.43	47.5	3:31	
2.983	16861.02	47.5	3:32	
3.000	16855.99	47.5	3:33	
3.017	16855.56	47.6	3:34	
3.033	16852.50	47.6	3:35	
3.050	16852.50	47.6	3:36	
3.067	16839.82	47.6	3:37	
3.083	16858.20	47.6	3:38	
3.100	16833.70	47.6	3:39	
3.117	16888.82	47.6	3:40	
3.133	16880.74	47.6	3:41	
3.150	16882.27	47.6	3:42	
3.167	16877.67	47.6	3:43	
3.183	16886.86	47.6	3:44	
3.200	16881.84	47.6	3:45	
3.217	16877.24	47.6	3:46	
3.233	16877.24	47.6	3:47	
3.250	16877.24	47.6	3:48	
3.300	16873.75	47.7	3:51	
3.317	16878.34	47.7	3:52	
3.333	16879.87	47.7	3:53	
3.350	16884.47	47.7	3:54	
3.367	16880.97	47.7	3:55	
3.383	16888.63	47.7	3:56	
3.400	16876.38	47.7	3:57	
3.417	16879.44	47.7	3:58	
3.433	16879.01	47.7	3:59	
3.450	16877.48	47.7	4: 0	
3.467	16880.54	47.7	4: 1	
3.483	16877.48	47.7	4: 2	
3.500	16877.05	47.7	4: 3	

LOCATED AND LANDED
F-1 PACKER AT 1572.5 M

5/19/84

SPERRY-SUN INTERNATIONAL
MAGNETIC RECORDING PRESSURE GAUGE REPORT

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STATOIL
TROLL
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NORTH SEA
1 MAY 1984
NR-MS-40074

GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
3.517	16878.58	47.7	4: 4	2/ 5/84
3.533	16881.64	47.7	4: 5	
3.550	16877.05	47.7	4: 6	
3.567	16878.15	47.8	4: 7	
3.583	16873.56	47.8	4: 8	
3.600	16876.62	47.8	4: 9	
3.617	16876.62	47.8	4:10	
3.633	16877.72	47.8	4:11	
3.650	16877.72	47.8	4:12	
3.667	16876.19	47.8	4:13	
3.683	16877.72	47.8	4:14	
3.700	16877.29	47.8	4:15	
3.717	16872.70	47.8	4:16	
3.733	16875.76	47.8	4:17	
3.750	16876.43	47.9	4:18	
3.767	16874.46	47.9	4:19	
3.783	16890.45	47.9	4:20	
3.800	16915.61	48.0	4:21	
3.817	16976.43	48.0	4:22	
3.833	16984.75	48.1	4:23	
3.850	16980.78	47.9	4:24	
3.867	16989.07	47.8	4:25	
3.883	16994.92	47.6	4:26	
3.900	16994.64	47.3	4:27	
3.917	16992.83	47.1	4:28	
3.933	16994.08	46.8	4:29	
3.950	16992.26	46.6	4:30	
3.967	16993.51	46.3	4:31	
3.983	17003.94	46.1	4:32	
4.000	16989.86	45.8	4:33	
4.017	16997.23	45.6	4:34	
4.033	16995.40	45.3	4:35	
4.050	16996.63	45.1	4:36	
4.067	16987.13	44.8	4:37	
4.083	16999.08	44.6	4:38	
4.100	17000.31	44.3	4:39	
4.117	17003.98	44.2	4:40	
4.133	17007.66	44.1	4:41	
4.150	16995.08	43.8	4:42	
4.167	17000.89	43.6	4:43	
4.183	16990.76	43.5	4:44	
4.200	16989.83	43.4	4:45	
4.217	16995.64	43.1	4:46	
4.233	17005.44	43.0	4:47	
4.250	16998.37	42.9	4:48	
4.267	17000.50	42.7	4:49	
4.283	16994.97	42.6	4:50	
4.300	16904.10	42.4	4:51	
4.317	16993.69	42.2	4:52	
4.333	17008.09	42.1	4:53	

PUMPING 14.3 M3 OF 1.13sg
BRINE DOWN DRILL PIPE

STATOIL
TROLL
31/6-5NORTH SEA
1 MAY 1984
NR-MS-40074

GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME
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4.350	17006.30	42.0	4:54
4.367	17004.93	41.9	4:55
4.383	17016.95	41.9	4:56
4.400	17009.86	41.7	4:57
4.417	17018.13	41.6	4:58
4.433	17017.86	41.5	4:59
4.450	16821.57	41.4	5: 0
4.467	16885.76	41.4	5: 1
4.483	16872.53	41.2	5: 2
4.500	16883.85	41.1	5: 3
4.517	16878.55	41.1	5: 4
4.533	16876.75	41.0	5: 5
4.550	16877.59	40.9	5: 6
4.567	16891.14	40.9	5: 7
4.583	16876.21	40.8	5: 8
4.600	16875.09	40.8	5: 9
4.617	16876.63	40.8	5:10
4.633	16877.05	40.8	5:11
4.650	16877.47	40.8	5:12
4.667	16879.42	40.8	5:13
4.683	16876.35	40.8	5:14
4.700	16878.31	40.7	5:15
4.717	16881.80	40.7	5:16
4.733	16879.15	40.7	5:17
4.750	16876.08	40.7	5:18
4.767	16882.64	40.7	5:19
4.783	16881.53	40.6	5:20
4.817	16885.71	40.7	5:22
4.833	16886.41	40.7	5:23
4.850	16887.52	40.7	5:24
4.867	16886.68	40.8	5:25
4.883	16883.19	40.8	5:26
4.900	16882.35	40.8	5:27
4.917	16891.14	40.9	5:28
4.933	16885.69	40.9	5:29
4.950	16886.80	40.9	5:30
4.967	16885.96	41.0	5:31
4.983	16888.18	41.0	5:32
5.000	16881.62	41.1	5:33
5.017	16880.78	41.1	5:34
5.033	16883.00	41.2	5:35
5.050	16985.42	41.2	5:36
5.067	18501.47	41.2	5:37
5.083	21597.92	41.3	5:38
5.100	23557.83	41.3	5:39
5.117	26997.57	41.4	5:40
5.133	27446.12	41.4	5:41
5.150	30143.80	41.5	5:42
5.167	30298.36	41.5	5:43
5.183	30596.24	41.6	5:44

2/ 5/84

COMPLETED PUMPING
DROPPED 1-11/16" BALLINCREASED PRESSURE IN 34 BAR
INCREMENTS. PACKER SEAT SHEAR
SUB SHEARED AT 231 BARS

5/19/84

SPERRY-SUN INTERNATIONAL
MAGNETIC RECORDING PRESSURE GAUGE REPORT

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STATOIL
TROLL
31/6-5

NORTH SEA
1 MAY 1984
NR-MS-40074

GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
5.200	30353.19	41.6	5:45	2/ 5/84
5.217	31787.63	41.6	5:46	
5.233	38006.71	41.7	5:47	
5.250	21030.63	41.7	5:48	
5.267	17165.98	41.8	5:49	
5.283	17053.52	41.8	5:50	
5.300	17018.91	41.8	5:51	
5.317	16989.32	41.9	5:52	
5.333	16965.45	41.9	5:53	
5.350	16937.41	41.9	5:54	
5.367	16933.49	42.0	5:55	
5.383	16914.23	42.0	5:56	
5.400	16896.92	42.1	5:57	
5.417	16894.54	42.1	5:58	
5.433	16879.88	42.2	5:59	
5.450	16861.04	42.2	6: 0	
5.467	16864.80	42.2	6: 1	
5.500	16842.47	42.3	6: 3	
5.517	16842.04	42.3	6: 4	
5.533	16839.66	42.4	6: 5	
5.550	16831.56	42.4	6: 6	
5.567	16826.11	42.4	6: 7	
5.583	16821.09	42.5	6: 8	
5.600	16815.63	42.5	6: 9	
5.617	16859.70	42.5	6:10	
5.633	16846.58	42.6	6:11	
5.650	16810.87	42.6	6:12	
5.667	16838.06	42.6	6:13	
5.683	16835.67	42.7	6:14	
5.700	16832.18	42.7	6:15	
5.717	16820.59	42.8	6:16	
5.733	16809.43	42.8	6:17	
5.750	16814.71	42.8	6:18	
5.767	16826.56	42.9	6:19	
5.783	16813.44	42.9	6:20	
5.800	16805.34	42.9	6:21	
5.817	16861.25	43.0	6:22	
5.833	16806.71	43.0	6:23	
5.850	16836.96	43.1	6:24	
5.867	16837.64	43.1	6:25	
5.883	16782.07	42.9	6:26	
5.900	16805.34	42.9	6:27	
5.917	16808.24	43.0	6:28	
5.933	16800.83	43.1	6:29	
5.950	16739.74	43.2	6:30	
5.967	16759.51	43.3	6:31	
5.983	16745.97	43.4	6:32	
6.000	16731.74	43.4	6:33	
6.017	16732.85	43.4	6:34	
6.033	16726.29	43.4	6:35	

PULLED 12000 DAN TO CHECK
PACKER SETTING. OK.

TESTED PACKER FROM ABOVE
TO 34 BARS/10 MINS. OK.

ROT. 14 TURNS TO THE RIGHT
USING ROTARY. PICKED UP 6M
AND LOCATED THE 4 POS.
WHEN GOING DOWN.

STATOIL
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GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME
6.050	16715.13	43.4	6:36
6.067	16702.01	43.5	6:37
6.083	16695.45	43.5	6:38
6.100	16688.89	43.5	6:39
6.117	16680.80	43.6	6:40
6.133	16675.77	43.6	6:41
6.150	16834.41	43.6	6:42
6.167	17085.06	43.7	6:43
6.183	17105.67	43.7	6:44
6.200	17666.16	43.8	6:45
6.217	18116.26	43.8	6:46
6.233	16901.86	44.1	6:47
6.250	16905.25	44.3	6:48
6.267	16902.50	44.6	6:49
6.283	16902.81	44.8	6:50
6.300	16893.93	45.1	6:51
6.317	16843.66	45.3	6:52
6.333	16842.44	45.6	6:53
6.350	16829.57	45.7	6:54
6.367	16830.50	45.8	6:55
6.383	16829.27	46.1	6:56
6.400	16830.19	46.2	6:57
6.417	16828.04	46.3	6:58
6.433	16829.82	46.4	6:59
6.450	16828.10	46.5	7: 0
6.467	16829.88	46.6	7: 1
6.483	16829.02	46.6	7: 2
6.500	16849.61	46.7	7: 3
6.517	16854.87	46.7	7: 4
6.533	16878.52	46.8	7: 5
6.550	16889.92	46.8	7: 6
6.567	16900.35	46.6	7: 7
6.583	16901.58	46.3	7: 8
6.600	16896.69	46.1	7: 9
6.617	16891.79	45.8	7:10
6.633	16901.90	45.3	7:11
6.650	16898.53	45.1	7:12
6.667	16890.55	44.8	7:13
6.683	16888.38	44.3	7:14
6.700	16817.53	44.1	7:15
6.717	16823.33	43.8	7:16
6.733	16833.39	43.4	7:17
6.750	16880.59	43.1	7:18
6.767	16892.52	42.9	7:19
6.783	16884.51	42.6	7:20
6.800	16884.15	42.4	7:21
6.817	16793.27	42.1	7:22
6.833	16849.09	42.0	7:23
6.850	16888.04	41.9	7:24
6.867	16859.73	41.8	7:25

2/ 5/84

RELOCATED POS.2, CLOSED UPP.
ANN. PREV. TAKING RETURN
THROUGH CHOKE LINE AND
"POOR BOY".
ESTABLISHED CIRC. THROUGH
LOWER T.T.SCREEN. TOTAL
VOLUME PUMPED: 1.6 M3

OPENED UPPER ANN. PREV..
LOCATED POS. 4 AND PUMPED
9.5 M3 7.5 % HCL.

RELOC. POS.2, CLOSED
UPPER ANN. PREV. AND
PUMPED THE REMAINING 4.8 M3
PUMPED 1.6 M3 PREPAD
PUMPED 3.5 M3 1.63sg
GRAVEL SLURRY

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GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
6.883	17274.95	41.8	7:26	2/ 5/84
6.900	17644.19	41.7	7:27	
6.917	17674.21	41.7	7:28	
6.933	17642.84	41.6	7:29	
6.950	17638.53	41.9	7:30	
6.967	17649.57	42.1	7:31	
6.983	17639.11	42.4	7:32	
7.000	17643.29	42.4	7:33	
7.017	17612.16	42.4	7:34	
7.033	17648.56	42.4	7:35	
7.050	17387.26	42.5	7:36	
7.067	17286.66	42.5	7:37	
7.083	17033.07	42.5	7:38	
7.100	17021.90	42.6	7:39	
7.117	17015.34	42.6	7:40	
7.133	16990.36	42.6	7:41	
7.150	16980.48	42.6	7:42	
7.167	16974.08	42.5	7:43	
7.183	16962.66	42.4	7:44	
7.200	16957.80	42.4	7:45	
7.217	16946.80	42.3	7:46	
7.233	16893.26	42.2	7:47	
7.250	16876.13	42.1	7:48	
7.267	16896.92	42.1	7:49	
7.283	16884.38	42.0	7:50	
7.300	16872.96	41.9	7:51	
7.317	16860.42	41.9	7:52	
7.333	16858.62	41.8	7:53	
7.350	16860.31	41.7	7:54	
7.367	16866.19	41.6	7:55	
7.383	16853.64	41.5	7:56	
7.400	16858.40	41.4	7:57	
7.417	16858.14	41.4	7:58	
7.433	16862.47	41.3	7:59	
7.450	16876.44	41.2	8: 0	
7.467	16936.04	41.1	8: 1	
7.483	16962.98	41.1	8: 2	
7.500	17028.72	41.0	8: 3	
7.517	17310.51	40.9	8: 4	
7.533	17419.26	40.9	8: 5	
7.550	17434.36	40.8	8: 6	
7.567	17416.10	40.7	8: 7	
7.583	17400.49	40.6	8: 8	
7.600	17360.20	40.4	8: 9	
7.617	17721.68	40.3	8:10	
7.633	17946.53	40.1	8:11	
7.650	17916.62	39.6	8:12	
7.667	19688.15	39.4	8:13	
7.683	20262.71	38.9	8:14	
7.700	19745.70	38.4	8:15	

PUMPING POSTPAD

DISPLACED WITH 1.13sq
BRINE

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GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
7.717	21847.08	37.9	8:16	2/ 5/84
7.733	23873.57	37.4	8:17	
7.750	20600.44	36.9	8:18	
7.767	20021.72	36.7	8:19	
7.783	21910.66	36.2	8:20	
7.800	23234.25	35.7	8:21	LOCATED POS. 1
7.817	22605.75	35.4	8:22	FINAL SQUEEZE
7.833	22921.82	35.2	8:23	
7.850	20821.98	34.9	8:24	
7.867	18790.64	34.4	8:25	LOCATED POS. 4
7.883	18769.77	34.3	8:26	REVERSING OUT
7.900	18750.43	34.2	8:27	
7.917	18708.67	33.9	8:28	
7.933	18707.81	33.8	8:29	
7.950	20687.94	33.7	8:30	
7.967	20257.27	33.6	8:31	
7.983	19761.91	33.4	8:32	
8.000	19638.48	33.4	8:33	
8.017	19435.39	33.3	8:34	
8.033	19298.09	33.2	8:35	
8.050	20071.58	33.4	8:36	
8.067	20016.18	33.7	8:37	
8.083	19928.44	33.9	8:38	
8.100	19885.39	34.2	8:39	
8.117	19863.91	34.4	8:40	
8.133	19911.73	34.7	8:41	
8.150	19996.51	34.9	8:42	
8.167	20032.00	35.2	8:43	
8.183	20053.63	35.4	8:44	
8.200	20119.90	35.7	8:45	
8.217	20183.82	35.8	8:46	
8.233	19982.97	35.9	8:47	
8.250	19349.04	36.0	8:48	
8.267	19286.59	36.0	8:49	
8.283	19015.96	36.1	8:50	
8.300	18895.05	36.2	8:51	
8.317	18399.87	36.2	8:52	
8.333	18832.83	36.3	8:53	
8.350	18977.67	36.4	8:54	
8.367	19064.48	36.4	8:55	
8.383	19109.99	36.4	8:56	
8.400	19087.80	36.3	8:57	
8.417	19159.47	36.3	8:58	
8.433	19191.13	36.2	8:59	
8.450	19199.72	36.2	9: 0	
8.467	19344.17	36.1	9: 1	
8.483	19338.26	36.0	9: 2	
8.500	19356.54	35.9	9: 3	
8.517	19377.89	35.8	9: 4	
8.533	19436.62	35.7	9: 5	

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DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
8.550	19441.05	35.7	9: 6	2/ 5/84
8.567	19285.40	35.6	9: 7	
8.583	19367.22	35.5	9: 8	
8.600	19457.85	35.4	9: 9	
8.617	19493.06	35.4	9:10	
8.633	19627.26	35.3	9:11	
8.650	19533.16	35.2	9:12	
8.667	19545.28	35.1	9:13	
8.683	19557.86	35.0	9:14	
8.700	19543.82	34.9	9:15	
8.717	19534.39	34.9	9:16	
8.733	19537.73	34.8	9:17	
8.750	19548.32	34.7	9:18	
8.767	19569.05	34.6	9:19	
8.783	19585.17	34.4	9:20	
8.800	19460.24	34.4	9:21	
8.817	19528.26	34.3	9:22	
8.833	19589.68	34.2	9:23	
8.850	19620.30	34.1	9:24	
8.867	19622.10	34.0	9:25	
8.883	19623.46	33.9	9:26	
8.900	19633.60	33.9	9:27	
8.917	19638.04	33.8	9:28	
8.933	19645.11	33.8	9:29	
8.950	19646.46	33.7	9:30	
8.967	19661.68	33.6	9:31	
8.983	19665.04	33.5	9:32	
9.000	19681.80	33.4	9:33	
9.017	19681.16	33.4	9:34	
9.033	19696.39	33.3	9:35	
9.050	19701.92	33.3	9:36	
9.067	19718.68	33.2	9:37	
9.083	19724.67	33.1	9:38	
9.100	19738.81	33.0	9:39	
9.117	19737.09	33.0	9:40	
9.133	19741.08	32.9	9:41	
9.150	19754.31	32.9	9:42	
9.167	19767.55	32.8	9:43	
9.183	19770.00	32.8	9:44	
9.200	19775.53	32.7	9:45	
9.217	19788.76	32.7	9:46	
9.233	19792.75	32.6	9:47	
9.250	19807.53	32.6	9:48	
9.267	19817.69	32.5	9:49	
9.283	19823.22	32.5	9:50	
9.300	19819.51	32.4	9:51	
9.317	19817.79	32.3	9:52	
9.350	19804.83	32.3	9:54	
9.367	19812.36	32.2	9:55	
9.383	19813.27	32.2	9:56	

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GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
9.400	19809.55	32.1	9:57	2/ 5/84
9.417	19816.63	32.1	9:58	
9.433	19822.16	32.0	9:59	
9.450	19823.07	32.0	10: 0	
9.467	19832.78	31.9	10: 1	
9.483	19829.06	31.9	10: 2	
9.500	19826.44	31.9	10: 3	
9.517	19835.05	31.8	10: 4	
9.533	19826.26	31.8	10: 5	
9.550	19817.92	31.7	10: 6	
9.567	19816.83	31.7	10: 7	
9.583	19821.91	31.7	10: 8	
9.600	19819.74	31.6	10: 9	
9.617	19826.36	31.6	10:10	
9.633	19821.11	31.6	10:11	
9.650	19820.02	31.5	10:12	
9.667	19825.56	31.5	10:13	
9.683	19819.85	31.5	10:14	
9.700	19825.38	31.4	10:15	
9.717	19825.84	31.4	10:16	
9.733	19822.12	31.3	10:17	
9.750	19818.41	31.3	10:18	
9.767	19814.24	31.3	10:19	
9.783	19798.19	31.2	10:20	
9.800	19797.10	31.2	10:21	
9.817	19793.39	31.1	10:22	
9.833	19790.76	31.1	10:23	
9.850	19791.67	31.1	10:24	
9.867	19796.75	31.0	10:25	
9.883	19788.41	31.0	10:26	
9.900	19785.78	31.0	10:27	
9.917	19782.06	30.9	10:28	
9.933	19770.18	30.9	10:29	
9.950	19766.47	30.8	10:30	
9.967	19759.67	30.8	10:31	
9.983	19750.87	30.8	10:32	
10.000	19744.07	30.7	10:33	
10.017	19742.98	30.7	10:34	
10.033	19728.47	30.6	10:35	
10.050	19718.13	30.6	10:36	
10.067	19719.04	30.6	10:37	
10.083	19283.07	30.5	10:38	
10.100	18664.13	30.5	10:39	
10.117	18639.90	30.5	10:40	
10.133	18626.47	30.5	10:41	
10.150	18626.92	30.4	10:42	
10.167	18622.73	30.4	10:43	
10.183	18624.72	30.4	10:44	
10.200	18625.61	30.3	10:45	
10.217	18624.51	30.3	10:46	

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DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
10.233	18620.33	30.3	10:47	2/ 5/84
10.250	18617.69	30.3	10:48	
10.267	18611.97	30.2	10:49	
10.283	18615.05	30.2	10:50	
10.300	18612.42	30.2	10:51	
10.317	18609.33	30.2	10:52	
10.333	18580.48	30.2	10:53	
10.350	18552.73	30.2	10:54	
10.367	18577.84	30.2	10:55	
10.383	18614.85	30.2	10:56	
10.400	18608.68	30.2	10:57	
10.417	18595.25	30.1	10:58	
10.433	18616.83	30.1	10:59	
10.450	18620.36	30.1	11: 0	
10.467	18615.74	30.1	11: 1	
10.483	18640.41	30.1	11: 2	
10.500	18650.10	30.1	11: 3	
10.517	18645.48	30.1	11: 4	
10.533	18639.76	30.1	11: 5	
10.550	18635.13	30.1	11: 6	
10.567	18630.95	30.0	11: 7	
10.583	18627.86	30.0	11: 8	
10.600	18629.41	30.0	11: 9	
10.617	18619.06	30.0	11:10	
10.633	18623.68	30.0	11:11	
10.650	18530.06	30.0	11:12	
10.667	16849.71	30.0	11:13	
10.683	16844.40	29.9	11:14	
10.700	16863.76	29.9	11:15	
10.717	16849.20	29.8	11:16	
10.733	16927.12	29.8	11:17	
10.750	18842.95	29.7	11:18	
10.767	21571.91	29.8	11:19	
10.783	20278.21	29.8	11:20	
10.800	19548.03	29.8	11:21	
10.817	17009.50	29.8	11:22	
10.833	16979.35	29.9	11:23	
10.850	16998.96	29.9	11:24	
10.867	16983.12	29.9	11:25	
10.883	16978.07	30.0	11:26	
10.900	17011.54	30.0	11:27	
10.917	17021.47	30.0	11:28	
10.933	17019.50	30.1	11:29	
10.950	16932.34	30.1	11:30	
10.967	16940.72	30.2	11:31	
10.983	16892.52	30.2	11:32	
11.000	16705.20	30.2	11:33	
11.017	16574.90	30.3	11:34	
11.033	16554.45	30.3	11:35	
11.050	16572.08	30.4	11:36	

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DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
11.067	16571.23	30.4	11:37	2/ 5/84
11.083	16572.35	30.4	11:38	
11.100	16559.17	30.5	11:39	
11.117	16561.40	30.5	11:40	
11.133	16571.76	30.5	11:41	
11.150	16564.75	30.6	11:42	
11.167	16560.82	30.6	11:43	
11.183	16569.63	30.7	11:44	
11.200	16571.86	30.7	11:45	
11.217	16572.98	30.7	11:46	
11.233	16576.75	30.8	11:47	
11.250	16564.00	30.8	11:48	
11.267	16584.72	30.9	11:49	
11.283	16575.05	30.9	11:50	
11.300	16577.28	30.9	11:51	
11.317	16573.77	31.0	11:52	
11.333	16571.38	31.0	11:53	
11.350	16576.69	31.1	11:54	
11.367	16555.82	31.1	11:55	
11.383	16595.02	31.2	11:56	
11.400	16578.76	31.2	11:57	
11.417	16578.34	31.2	11:58	
11.433	16587.15	31.3	11:59	
11.450	16591.78	31.3	12: 0	
11.467	16597.51	31.3	12: 1	
11.483	16589.38	31.3	12: 2	
11.500	16601.28	31.3	12: 3	
11.517	16632.09	31.3	12: 4	
11.533	16625.50	31.4	12: 5	
11.550	16603.51	31.4	12: 6	
11.567	16629.27	31.4	12: 7	
11.583	16615.41	31.4	12: 8	
11.600	16608.82	31.4	12: 9	
11.617	16605.32	31.5	12:10	
11.633	16646.21	31.4	12:11	
11.650	16670.60	31.3	12:12	
11.667	16636.02	31.3	12:13	
11.683	16652.70	31.2	12:14	
11.700	16638.58	31.1	12:15	
11.717	16649.52	31.0	12:16	
11.733	16647.72	31.0	12:17	
11.750	16673.65	30.9	12:18	
11.767	16649.16	30.8	12:19	
11.783	16651.98	30.7	12:20	
11.800	16654.11	30.6	12:21	
11.817	16676.27	30.5	12:22	
11.833	16653.75	30.4	12:23	
11.850	16671.29	30.2	12:24	
11.867	16712.19	29.7	12:25	
11.883	16734.96	29.5	12:26	

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GRAVEL PACK OPERATION, MK 3 GAUGE 0052, SENSING DEPTH 1510 M.

DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
11.900	16770.07	29.2	12:27	2/ 5/84
11.917	16572.02	28.7	12:28	
11.933	16713.52	28.5	12:29	
11.950	16553.97	28.0	12:30	
11.967	16607.59	27.8	12:31	
11.983	16596.43	27.5	12:32	
12.000	16592.98	27.3	12:33	
12.017	16571.02	27.0	12:34	
12.033	16581.46	26.8	12:35	
12.050	16599.62	26.5	12:36	
12.067	16575.52	26.4	12:37	
12.083	16593.09	26.3	12:38	
12.100	16603.53	26.0	12:39	
12.117	16573.94	25.9	12:40	
12.133	16571.02	25.8	12:41	
12.150	16573.85	25.8	12:42	
12.167	16478.58	25.7	12:43	
12.183	16327.74	25.7	12:44	
12.200	16241.31	25.7	12:45	
12.217	16257.17	25.7	12:46	
12.233	16004.48	25.7	12:47	
12.250	16054.29	25.6	12:48	
12.267	15838.23	25.6	12:49	
12.283	15675.07	25.6	12:50	
12.300	15641.54	25.6	12:51	
12.317	15484.56	25.6	12:52	
12.333	15290.13	25.6	12:53	
12.350	15290.55	25.5	12:54	
12.367	15088.83	25.5	12:55	
12.383	14981.13	25.6	12:56	
12.400	14951.71	25.7	12:57	
12.417	14950.48	25.8	12:58	
12.433	14930.73	25.8	12:59	
12.450	14867.38	25.9	13: 0	
12.467	14662.53	26.0	13: 1	
12.483	14641.98	26.1	13: 2	
12.500	14490.34	26.3	13: 3	
12.517	14290.18	26.3	13: 4	
12.533	14294.72	26.4	13: 5	
12.550	14066.84	26.5	13: 6	
12.567	13937.93	26.8	13: 7	
12.583	13789.46	26.9	13: 8	
12.600	13711.93	27.0	13: 9	
12.617	13539.93	27.3	13:10	
12.633	13401.88	27.5	13:11	
12.650	13341.34	27.6	13:12	
12.667	13021.96	27.8	13:13	
12.683	13020.78	27.8	13:14	
12.700	12705.72	27.9	13:15	
12.717	12701.47	27.9	13:16	

COMMENCE P.O.O.H.

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DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
12.733	12358.73	28.0	13:17	2/ 5/84
12.750	12394.54	28.1	13:18	
12.767	12162.74	28.1	13:19	
12.783	12087.66	28.2	13:20	
12.800	12040.70	28.2	13:21	
12.817	11756.21	28.3	13:22	
12.833	11740.05	28.4	13:23	
12.850	11461.77	28.4	13:24	
12.867	11402.51	28.5	13:25	
12.883	11206.59	28.4	13:26	
12.900	11047.98	28.3	13:27	
12.917	10922.87	28.2	13:28	
12.933	10853.92	28.1	13:29	
12.950	10624.86	28.0	13:30	
12.967	10509.72	27.9	13:31	
12.983	10252.93	27.8	13:32	
13.000	10038.00	27.5	13:33	
13.017	10137.11	27.3	13:34	
13.033	9812.53	27.1	13:35	
13.050	9791.26	27.0	13:36	
13.067	9593.18	26.8	13:37	
13.083	9448.98	26.5	13:38	
13.100	9278.57	26.3	13:39	
13.117	9123.55	26.0	13:40	
13.133	8954.64	25.8	13:41	
13.150	8860.93	25.6	13:42	
13.167	8570.11	25.5	13:43	
13.183	8512.03	25.3	13:44	
13.200	8201.36	25.0	13:45	
13.217	8169.42	24.8	13:46	
13.233	7969.59	24.5	13:47	
13.250	7879.47	24.0	13:48	
13.267	7611.79	23.8	13:49	
13.283	7527.41	23.5	13:50	
13.300	7273.54	23.3	13:51	
13.317	7236.88	23.0	13:52	
13.333	6913.63	22.8	13:53	
13.350	6852.28	22.6	13:54	
13.367	6633.75	22.3	13:55	
13.383	6492.24	22.1	13:56	
13.400	6283.13	21.6	13:57	
13.417	6178.54	21.3	13:58	
13.433	5953.73	21.1	13:59	
13.450	5858.35	20.8	14: 0	
13.467	5614.99	20.6	14: 1	
13.483	5473.48	20.1	14: 2	
13.500	5288.62	19.8	14: 3	
13.517	5083.69	19.6	14: 4	
13.533	4971.25	19.3	14: 5	
13.550	4690.80	18.8	14: 6	

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DELTA TIME HOURS	ABS PRESSURE (KPA)	TEMP. DEG C	TIME	
13.567	4641.53	18.6	14: 7	2/ 5/84
13.583	4492.00	18.3	14: 8	
13.600	4330.16	17.8	14: 9	
13.617	4216.05	17.6	14:10	
13.633	3997.03	17.4	14:11	
13.650	3882.88	16.9	14:12	
13.667	3682.28	16.4	14:13	
13.683	3669.92	16.1	14:14	
13.700	3355.03	15.6	14:15	
13.717	3299.36	15.1	14:16	
13.733	3039.89	14.6	14:17	
13.767	2709.22	13.9	14:19	
13.783	2471.04	13.1	14:20	
13.800	2390.44	12.6	14:21	
13.817	2133.72	12.2	14:22	
13.833	2063.85	11.7	14:23	
13.850	2062.12	11.4	14:24	
13.867	2061.76	10.9	14:25	
13.883	2058.48	10.7	14:26	
13.900	2002.66	10.4	14:27	
13.917	1739.70	10.2	14:28	
13.933	1739.48	9.9	14:29	
13.950	1740.82	9.7	14:30	
13.967	1740.60	9.4	14:31	
13.983	1726.47	9.2	14:32	
14.000	1418.66	9.1	14:33	
14.017	1420.09	8.9	14:34	
14.033	1422.94	8.7	14:35	
14.050	1422.69	8.4	14:36	

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