



Test Monitoring Center

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MEMORANDUM: 04-010

DATE: March 24, 2004

TO: Sequence III Surveillance Panel

FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*

SUBJECT: Sequence IIIG/IIIGA Reference Oil 438 Test Target Update

On March 23, 2004, the Sequence III Surveillance Panel approved several changes to the Sequence IIIG/IIIGA LTMS. These changes included the removal of several data points from the IIIG/IIIGA LTMS Data Set, reinstatement of the natural log transformation on ACLW results on reference oil 438, and finally a revision to the Sequence IIIG and IIIGA test targets for reference oil 438. The original test targets for ACLW on reference oil 438 have been reinstated and are shown in the table below:

Reference Oil 438 ACLW Test Targets, in Transformed Units (N=13)	
Mean	Standard Deviation
2.8697	0.1649

These targets are in effect for all tests completed on or before January 31, 2004. After February 1, 2004, the following revised targets, based upon the 22 data points available at that time, are in effect:

Parameter	Mean	Standard Deviation
PVIS	4.5707	0.1953
WPD	3.22	0.36
ACLW	2.8902	0.1946
MRV	9.8351	0.17518

Any applicable severity adjustments were applied to the data prior to target generation. The data used to generate these targets is shown in Tables 1 & 2. Table 1 shows unadjusted data. Table 2 shows severity-adjusted data, with the adjusted parameters shown in red. The above test targets; as well as the severity-adjusted data used to generate them; the raw test targets, the initial test targets, and the preliminary targets from the matrix (which were never used in the IIIG LTMS) for reference oil 438 are shown in the following figures. Figure 1 shows the PVIS data in transformed units. Figure 2 shows the PVIS data in original units. Figure 3 shows the WPD data in original units. Figures 4 and 5 show the ACLW data in transformed and original units, respectively. Figures 6 and 7 show the Sequence IIIGA MRV data in transformed and original units, respectively.

MTK/mtk

Attachments

c: John L. Zalar, TMC
<ftp://www.astmtmc.cmu.edu/docs/gas/sequenceiii/memos/mem04-010.pdf>

Distribution: Electronic Mail

Table 1 – Unadjusted Data

Testkey	LTMS Lab	LTMS App	Ind	Val	LTMS Date	LTMS Time	PVIS	PVISTI	ACLW	ACLWTI	WPD	MRV	MRVTI	OilCon
47950	E	1	438	AC	10/14/2003	1:06	106.1	4.664382	17.4	2.8565	2.84	18147	9.8063	3.66
47910	G	2	438	AO	8/12/2003	0:16	132.6	4.887337	16.8	2.8214	3.68	23700	10.0732	4.27
47911	G	2	438	AO	8/12/2003	0:21	143.2	4.964242	15.3	2.7279	2.85	30400	10.3222	4.33
47913	G	3	438	OO	8/12/2003	0:26	91.7	4.518522	15.6	2.7473	4.17	19000	9.8522	3.41
47914	G	5	438	AO	8/12/2003	0:36	120.6	4.792479	20.8	3.035	3	20500	9.9282	3.87
48577	G	3	438	AC	8/12/2003	5:13	138.5	4.93087	22.1	3.0956	3.01	26800	10.1962	4.19
48578	G	4	438	AC	11/28/2003	3:53	101.1	4.61611	18.3	2.9069	3.46	19900	9.8985	3.74
47941	D	1	438	AC	8/12/2003	0:52	70.7	4.258446	14.7	2.6878	3.04	15435	9.6444	3.23
47921	B	1	438	AC	8/12/2003	0:29	81.9	4.405499	19.3	2.9601	2.62	16300	9.6989	2.97
47922	B	3	438	AC	8/12/2003	0:46	74.5	4.310799	19	2.9444	3.1	14800	9.6024	2.63
47923	B	2	438	OC	11/19/2003	6:36	77.7	4.352855	30.8	3.4275	3.18	16100	9.6866	2.78
49069	B	2	438	AC	11/26/2003	7:03	92.9	4.531524	17.1	2.8391	3.24	16400	9.705	3.12
47930	F	1	438	AC	8/12/2003	0:41	96.6	4.570579	17.6	2.8679	3.72	18620	9.832	3.66
47932	F	1	438	AC	1/13/2004	5:55	77	4.343805	19.7	2.9806	3.85	16449	9.708	.
47893	A	1	438	AO	8/12/2003	0:13	102.3	4.62791	14.4	2.6672	3.04	19300	9.8679	3.62
47894	A	3	438	AO	8/12/2003	0:18	111.7	4.715817	21.2	3.054	3.14	20500	9.9282	3.47
47895	A	2	438	AO	8/12/2003	0:32	88.6	4.484132	22	3.091	3.08	16700	9.7232	3.32
47896	A	1	438	AO	8/12/2003	0:34	90.5	4.50535	21.4	3.0634	3.26	18000	9.7981	3.28
47897	A	5	438	AC	8/12/2003	0:49	98.1	4.585987	14	2.6391	2.88	18100	9.8037	3.61
48585	A	6	438	AC	8/14/2003	1:42	86.8	4.463607	17.2	2.8449	3.25	16900	9.7351	3.06
48586	A	1	438	AC	11/1/2003	16:42	96.2	4.566429	17.6	2.8679	3.17	18200	9.8092	3.55
49075	A	4	438	AC	12/30/2003	10:18	86.4	4.458988	13.5	2.6027	3.26	17200	9.7527	2.98

Table 2 – Severity Adjusted Data

Testkey	LTMS Lab	LTMS App	Ind	Val	LTMS Date	LTMS Time	PVIS	PVISTI	ACLW	ACLWTI	WPD	MRV	MRVTI	OilCon
47950	E	1	438 AC	10/14/2003	1:06	106.1	4.664382	17.4	2.8565	2.84	18147	9.8063	3.66	
47910	G	2	438 AO	8/12/2003	0:16	132.6	4.887337	16.8	2.8214	3.68	23700	10.0732	4.27	
47911	G	2	438 AO	8/12/2003	0:21	143.2	4.964242	15.3	2.7279	2.85	30400	10.3222	4.33	
47913	G	3	438 OO	8/12/2003	0:26	91.7	4.518522	15.6	2.7473	4.17	19000	9.8522	3.41	
47914	G	5	438 AO	8/12/2003	0:36	120.6	4.792479	20.8	3.035	3	20500	9.9282	3.87	
48577	G	3	438 AC	8/12/2003	5:13	138.5	4.93087	22.1	3.0956	3.01	26800	10.1962	4.19	
48578	G	4	438 AC	11/28/2003	3:53	101.1	4.61611	18.3	2.9069	3.46	19900	9.8985	3.74	
47941	D	1	438 AC	8/12/2003	0:52	70.7	4.258446	14.7	2.6878	3.04	15435	9.6444	3.23	
47921	B	1	438 AC	8/12/2003	0:29	81.9	4.405499	19.3	2.9601	2.62	16300	9.6989	2.97	
47922	B	3	438 AC	8/12/2003	0:46	74.5	4.310799	19	2.9444	3.1	14800	9.6024	2.63	
47923	B	2	438 OC	11/19/2003	6:36	77.7	4.352855	30.8	3.4275	3.18	16100	9.6866	2.78	
49069	B	2	438 AC	11/26/2003	7:03	92.9	4.531524	14.8	2.6947	3.24	16400	9.705	3.12	
47930	F	1	438 AC	8/12/2003	0:41	96.6	4.570579	17.6	2.8679	3.72	18620	9.832	3.66	
47932	F	1	438 AC	1/13/2004	5:55	77	4.343805	19.7	2.9806	3.85	16449	9.708	.	
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47897	A	5	438 AC	8/12/2003	0:49	98.1	4.585987	14	2.6391	2.88	18100	9.8037	3.61	
48585	A	6	438 AC	8/14/2003	1:42	86.8	4.463607	17.2	2.8449	3.25	16900	9.7351	3.06	
48586	A	1	438 AC	11/1/2003	16:42	96.2	4.566429	17.6	2.8679	3.17	18200	9.8092	3.55	
49075	A	4	438 AC	12/30/2003	10:18	86.4	4.458988	13.5	2.6027	3.26	17200	9.7527	2.98	

Figure 1

Sequence IIIG Reference Oil 438 Test Target Data Set and Shewhart Bands

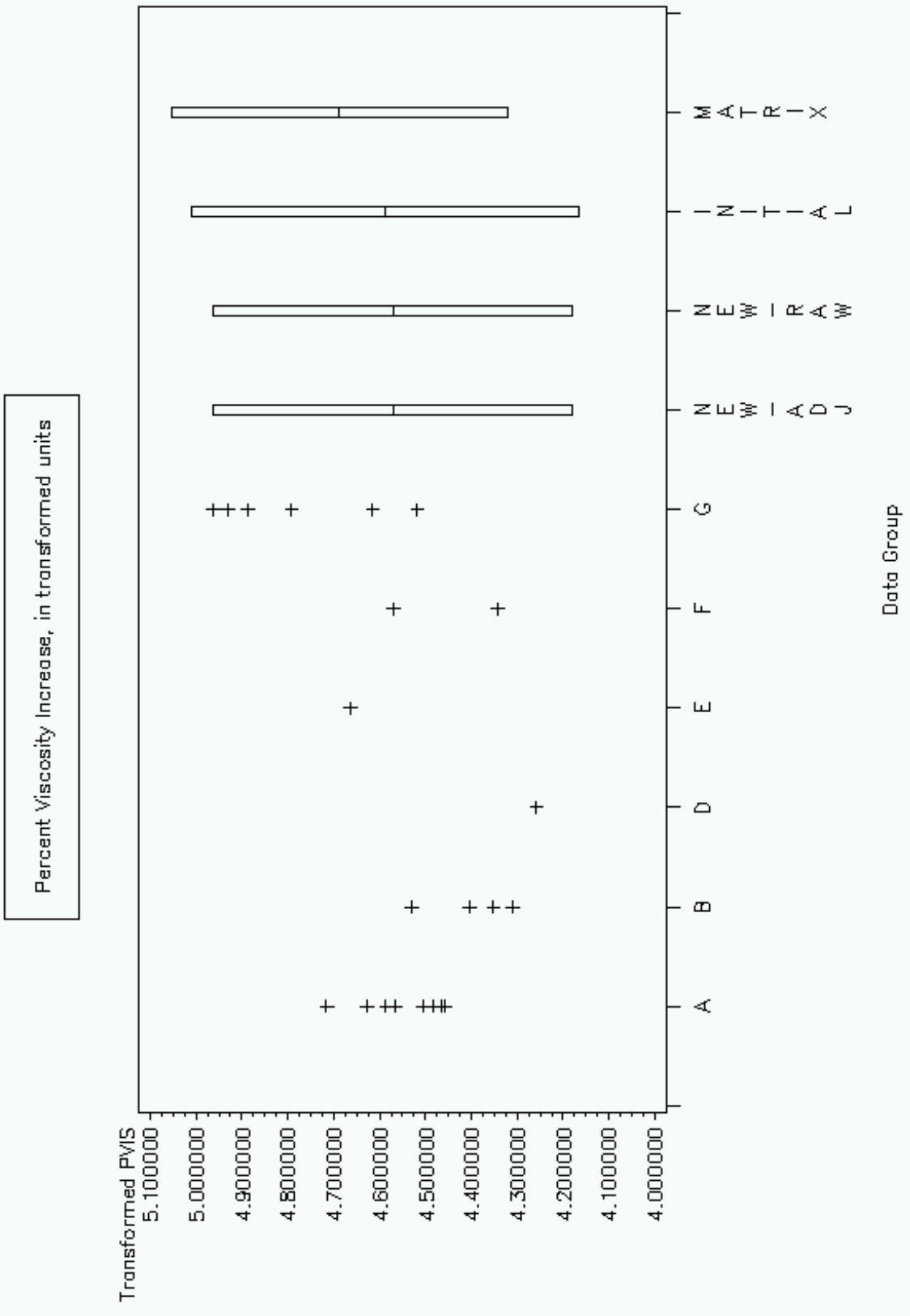


Figure 3

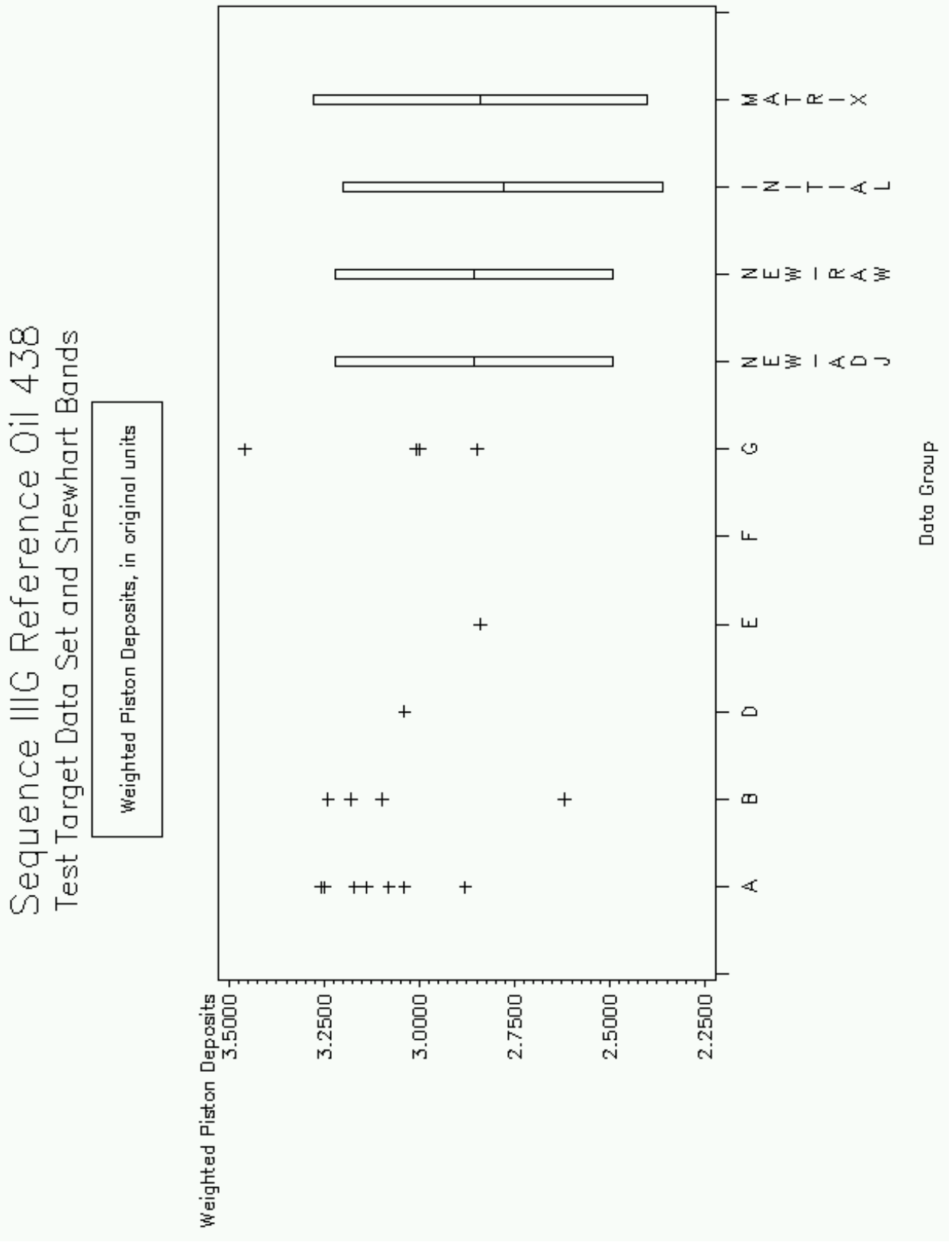


Figure 4

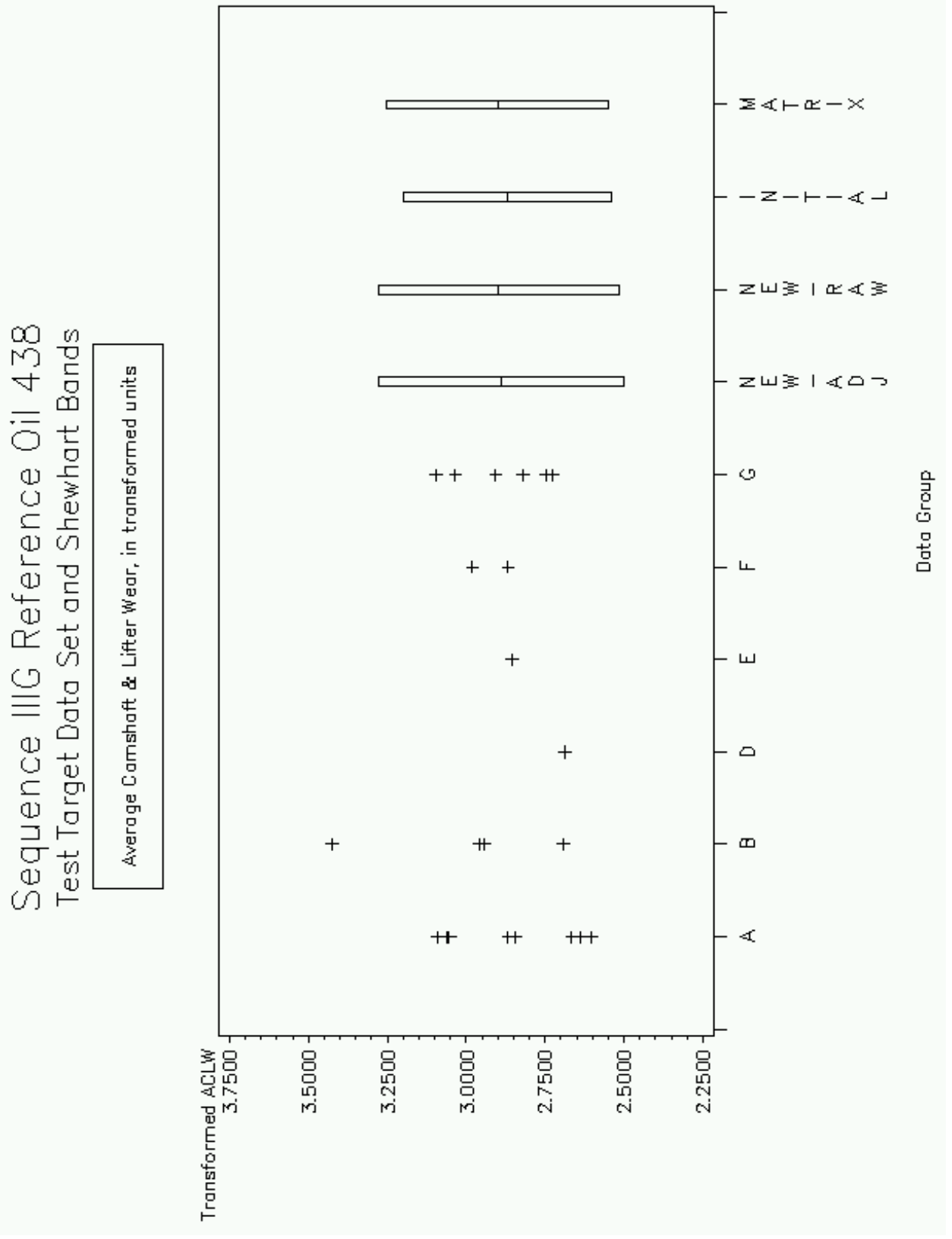


Figure 5

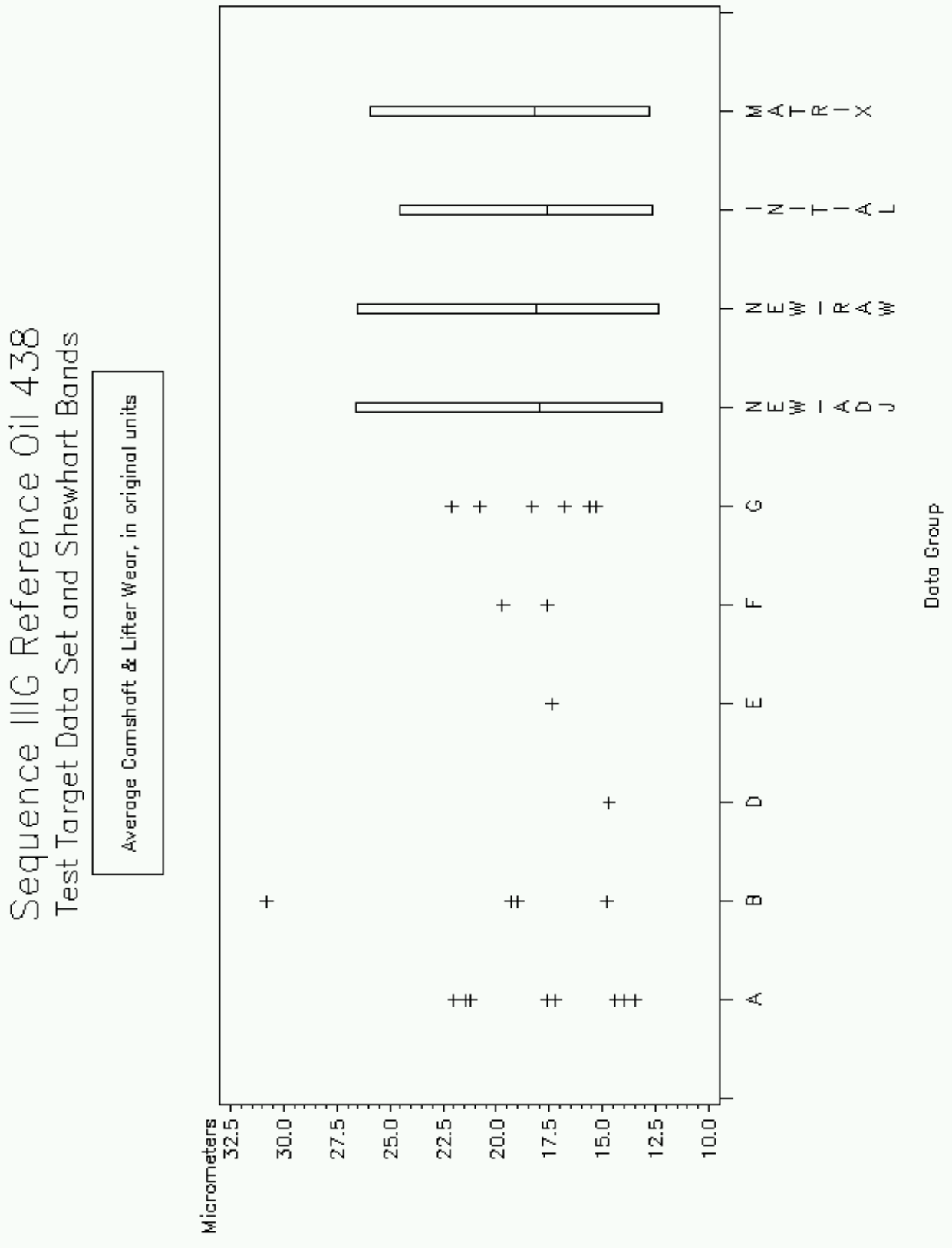


Figure 6

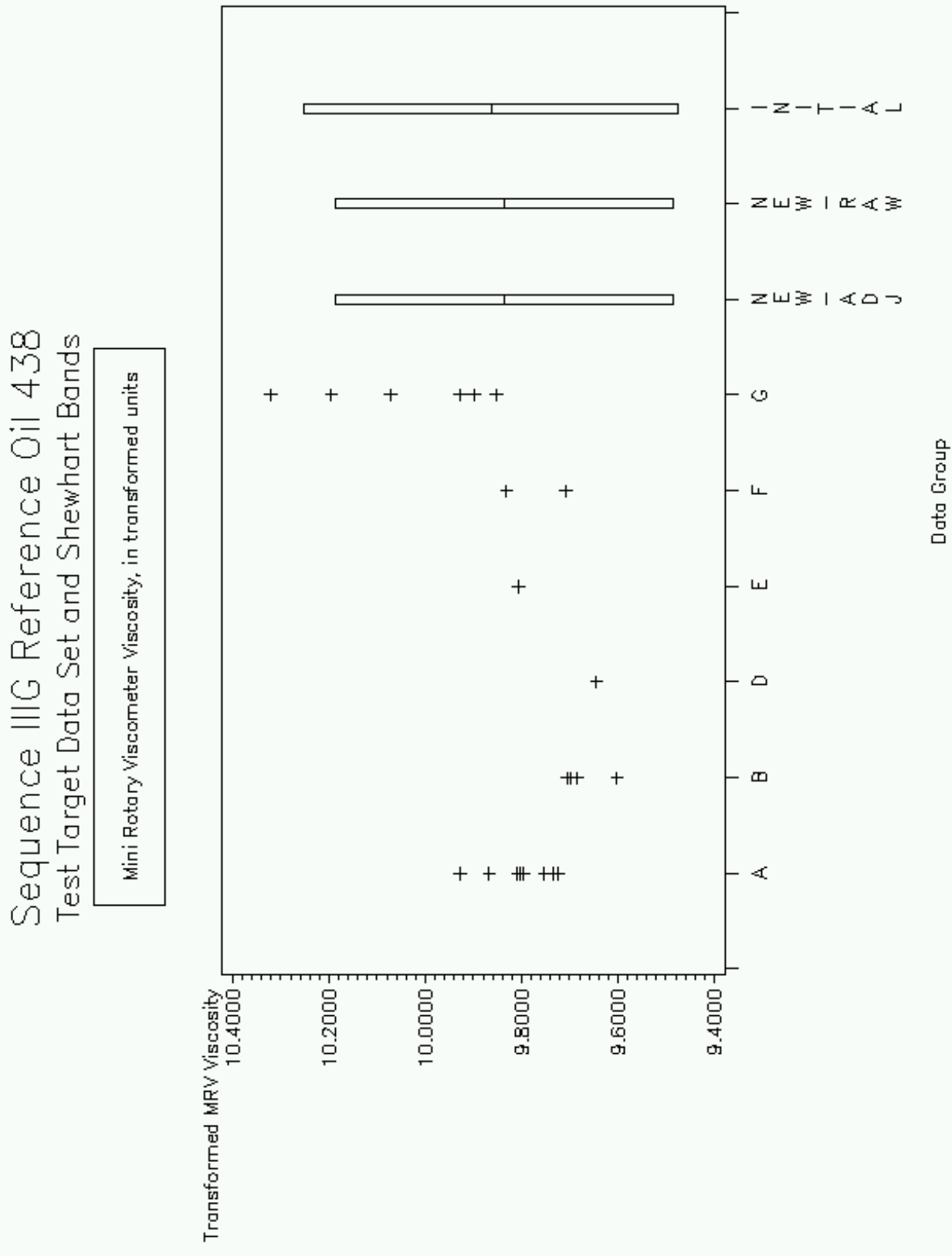


Figure 7

