

C13 Deposit Test: New liner

Elisa Santos

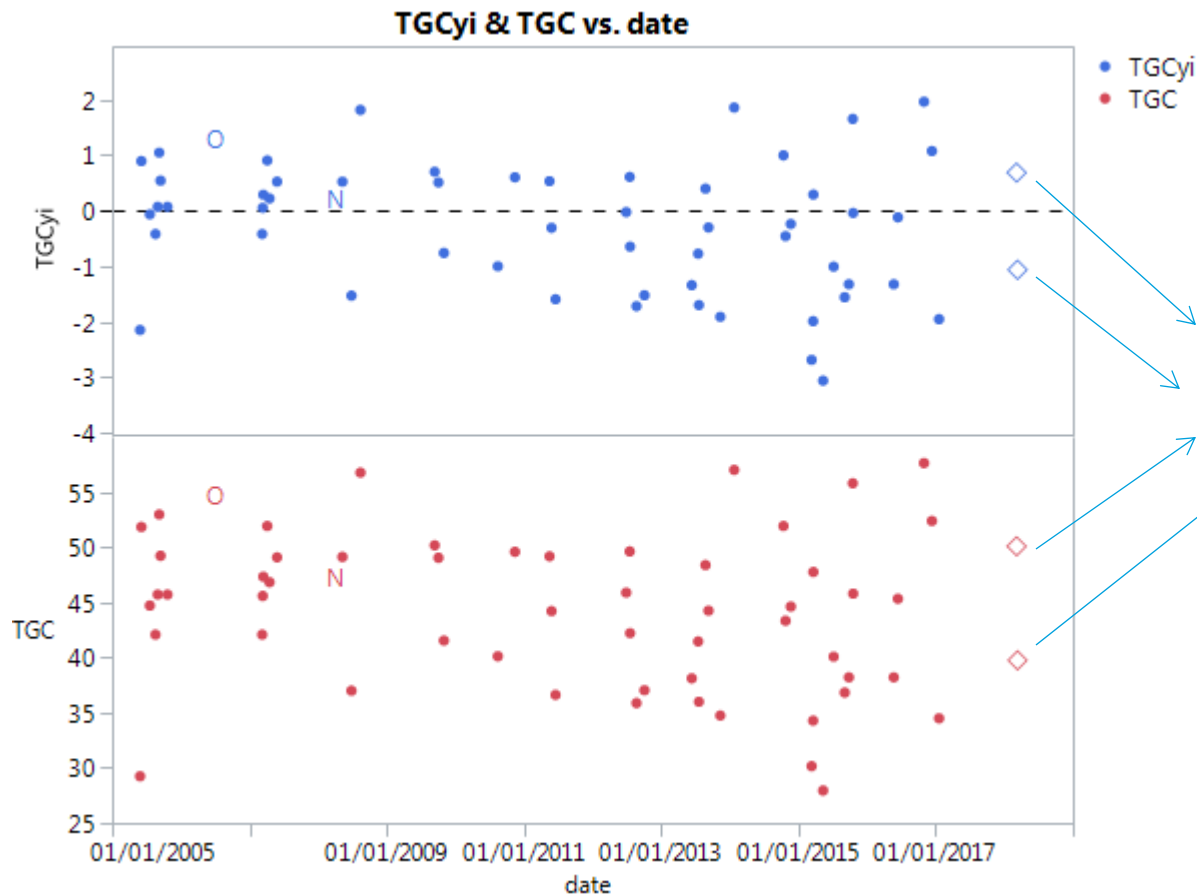
3/15/2018

Performance you can rely on.



- C13
 - Includes only Operationally valid tests
 - Total number of tests: 58
 - Three tests have validity OC, NN and PC
 - 58970– Lab H
 - 66302– Lab G
 - 121680 – Lab D
 - Tests with new liners: 121680 (Lab D) and 122521 (Lab G) are represented by “diamonds” in the following slides

TGC yi & TGC vs. date: Operationally valid tests - Oil 831

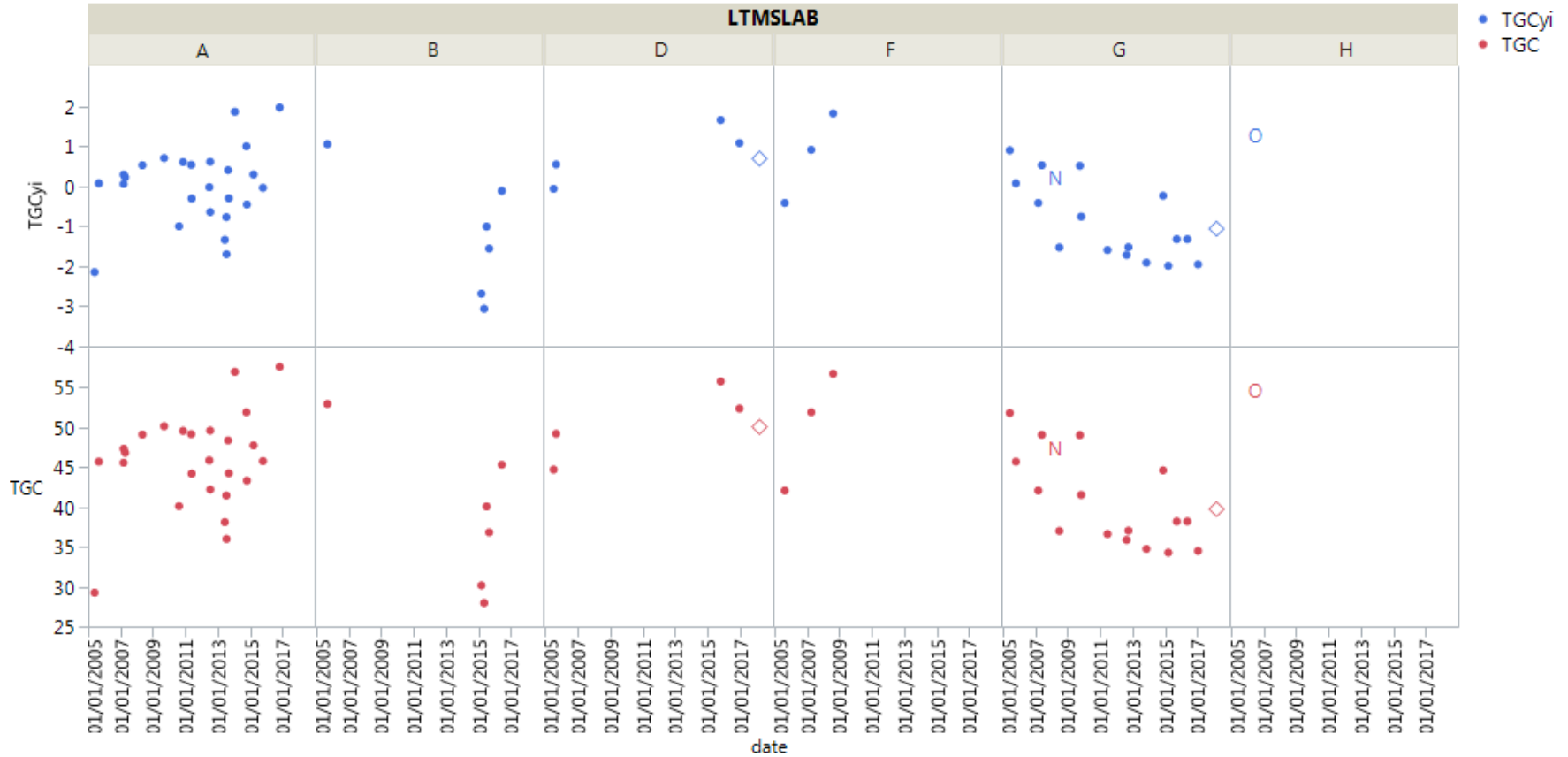


Tests with new liners:
121680 (Lab D) and
122521 (Lab G)

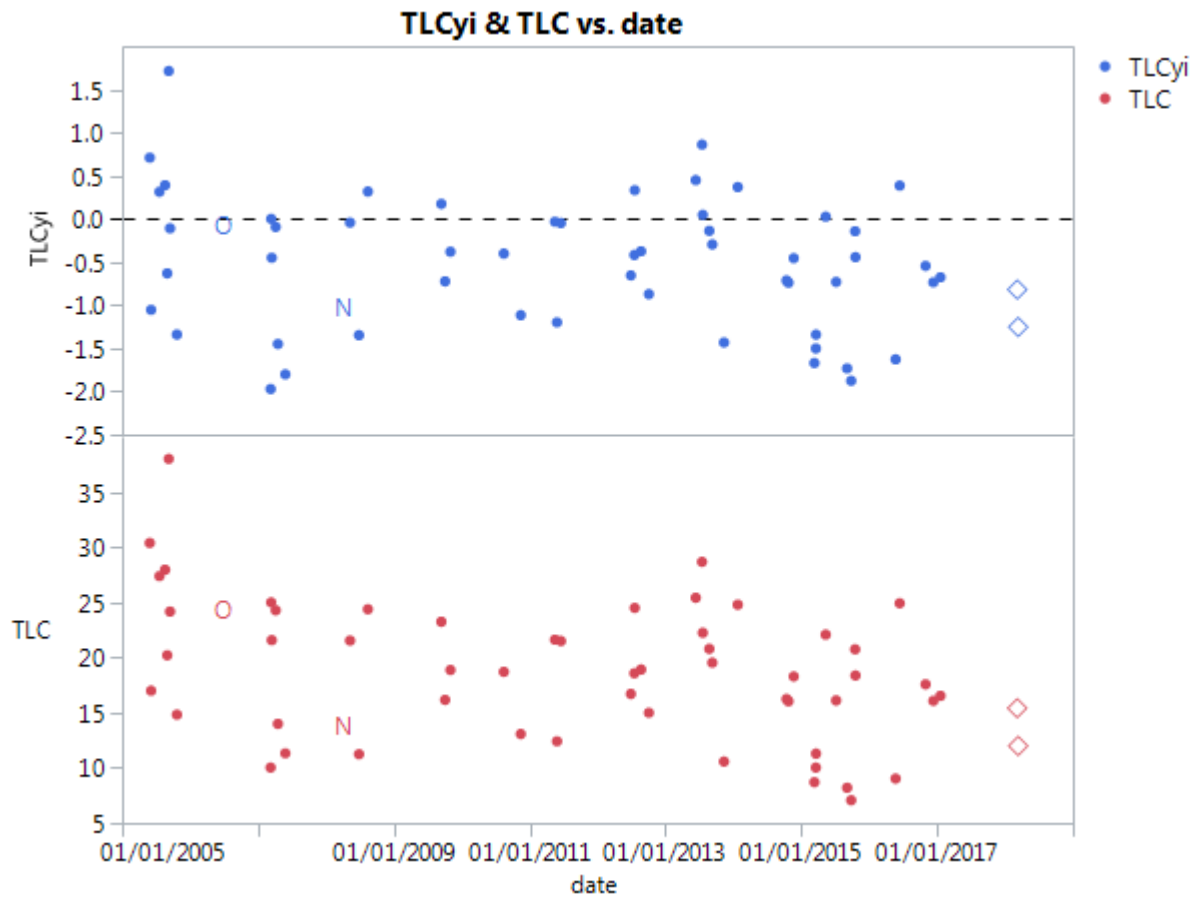
TGC yi & TGC vs. date by Lab: Operationally valid tests - Oil 831



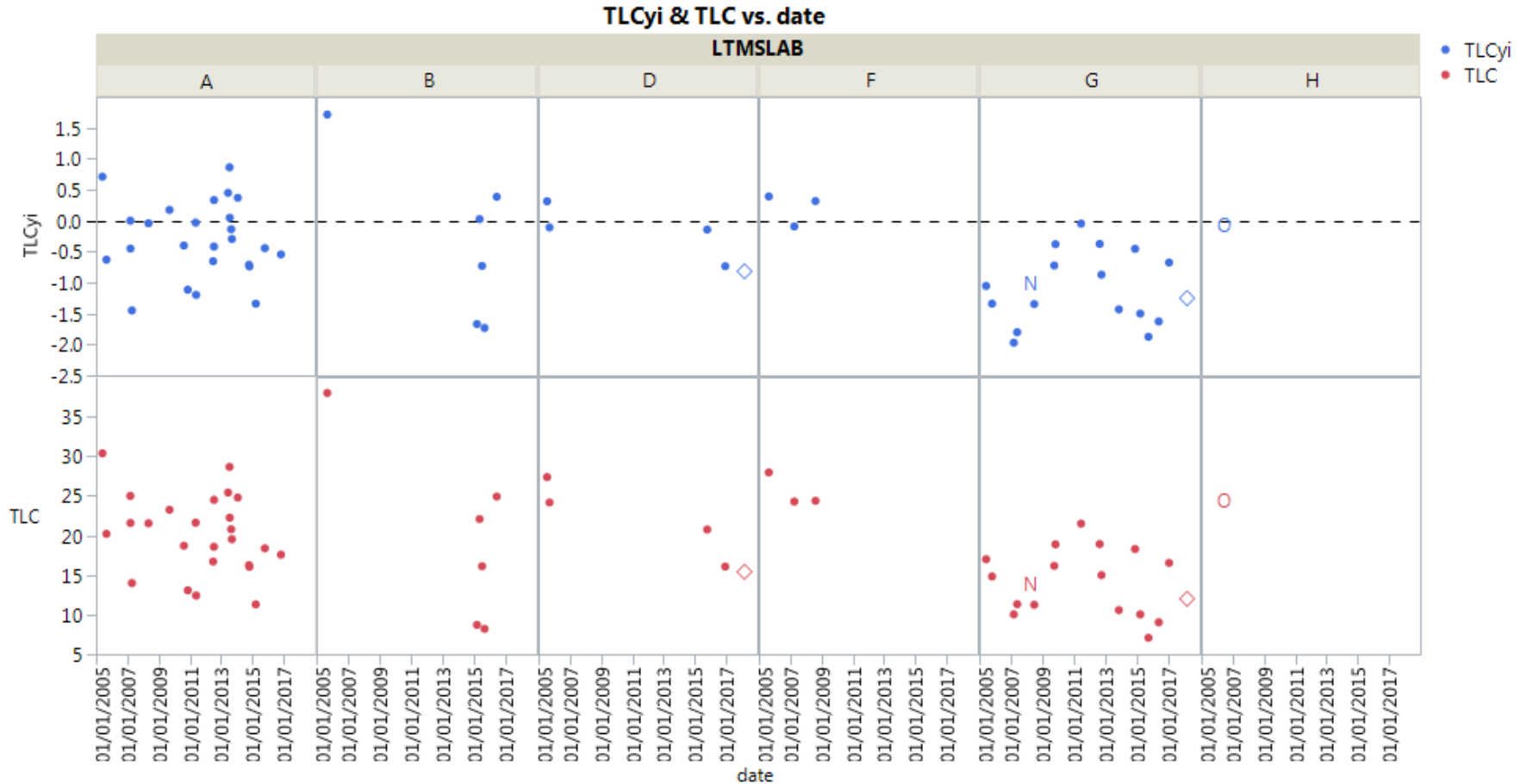
TGCyi & TGC vs. date



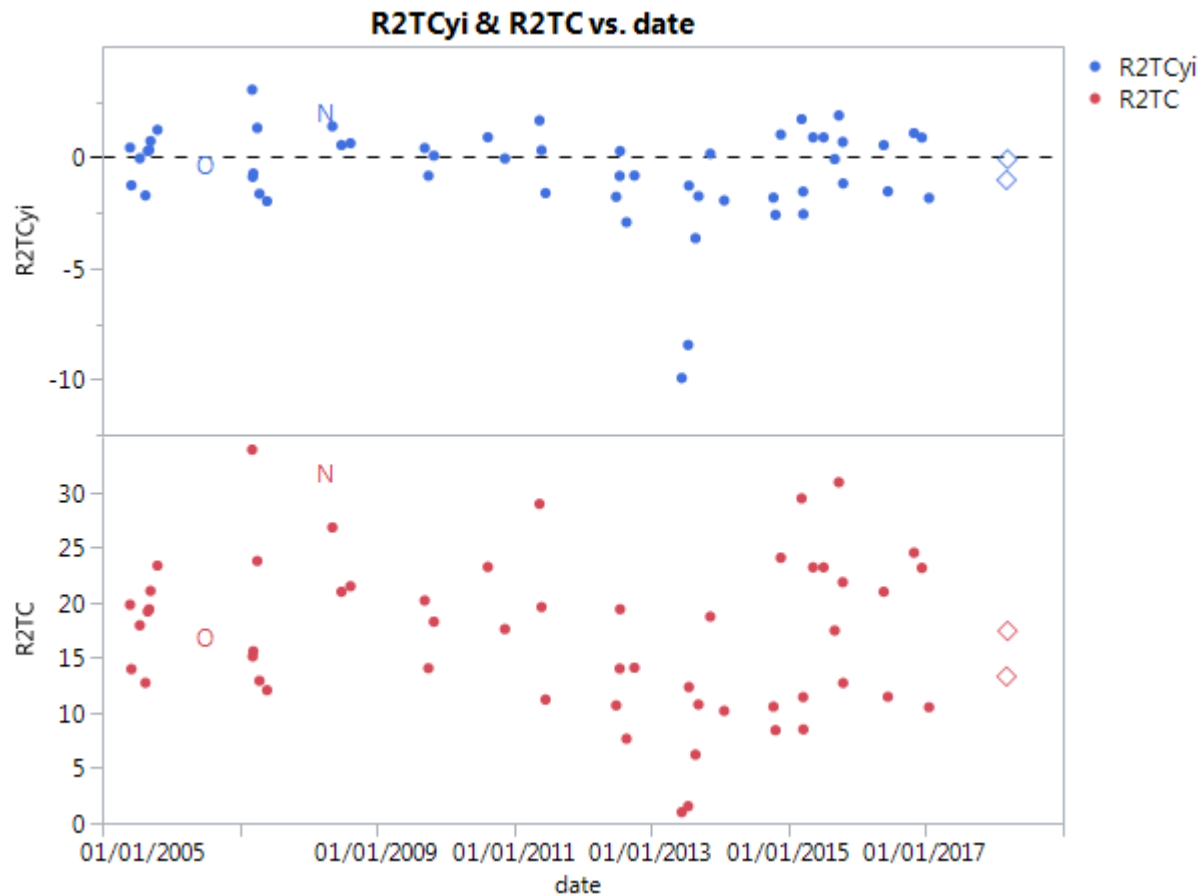
TLC yi & TLC vs. date: Operationally valid tests - Oil 831



TLC yi & TLC vs. date by Lab: Operationally valid tests - Oil 831



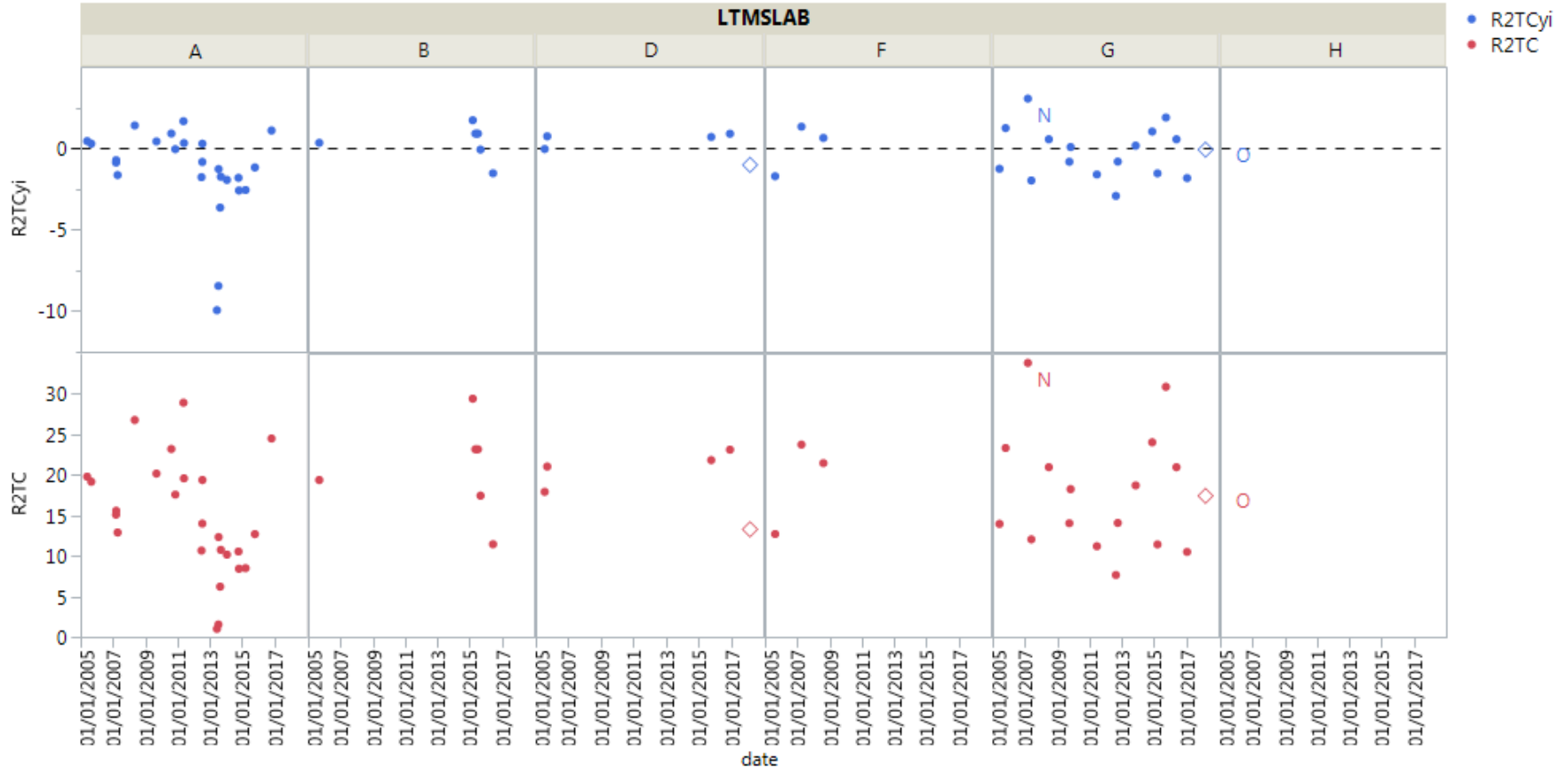
R2TC yi & R2TC vs. date: Operationally valid tests - Oil 831



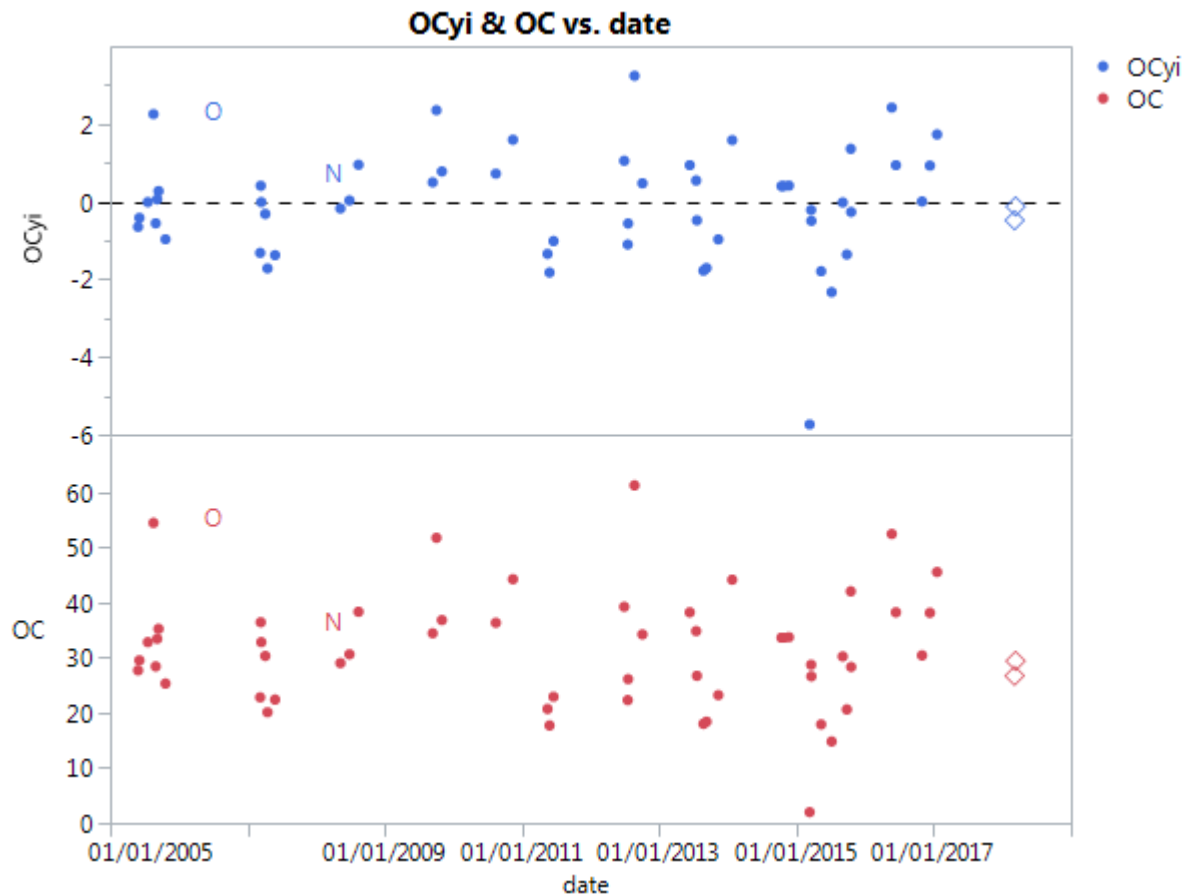
R2TC yi & R2TC vs. date by Lab: Operationally valid tests - Oil 831



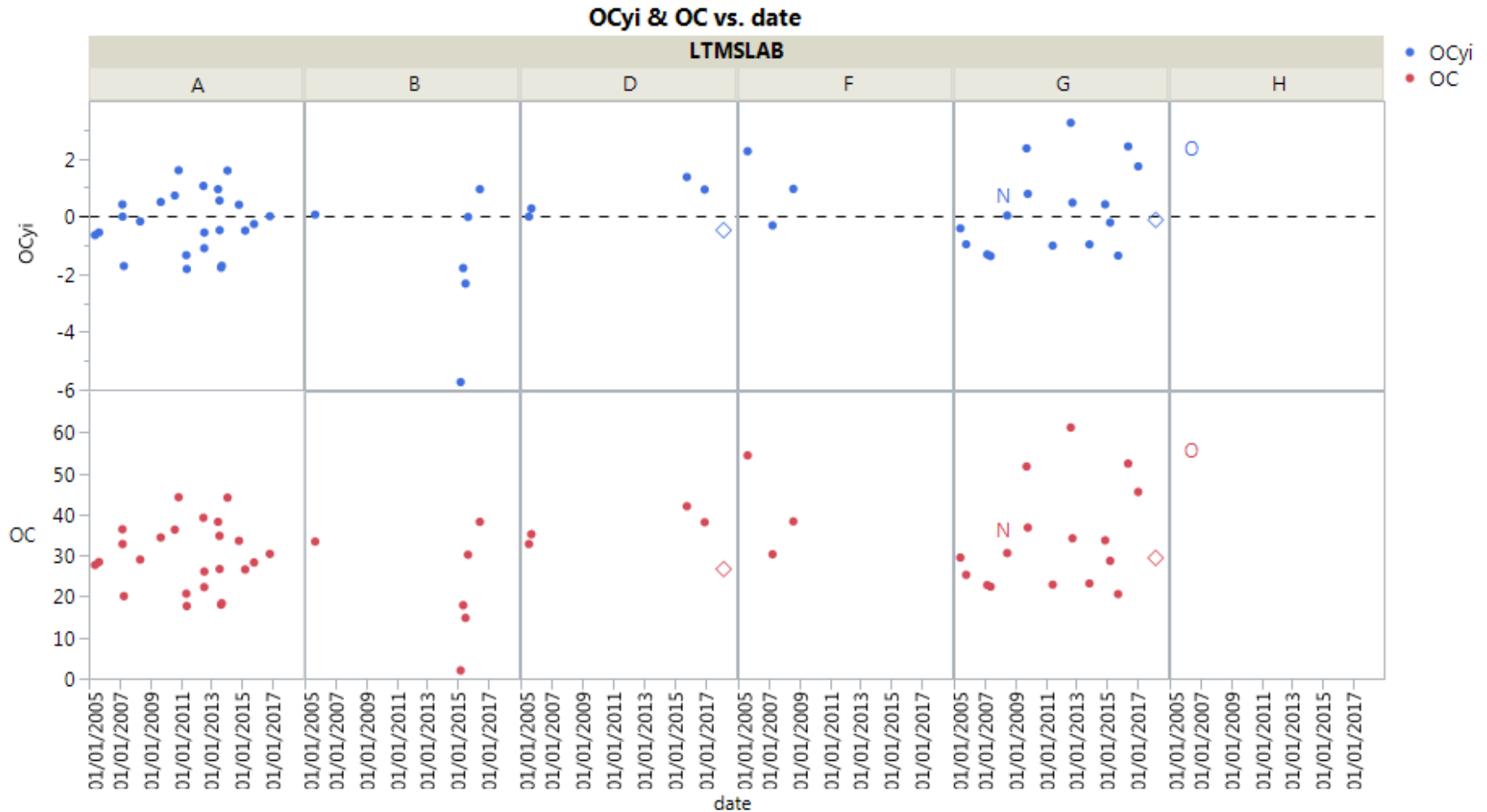
R2TCyi & R2TC vs. date



OC yi & OC vs. date: Operationally valid tests - Oil 831



OC yi & OC vs. date by Lab: Operationally valid tests - Oil 831



APPENDIX

C13 Reference Oil Targets



C13 Reference Oil Targets											
Oil	n	Effective Dates		Top Groove Carbon		Top Land Carbon		Oil Consumption Δ^2		2 nd Ring Top Carbon ³	
		From	To ¹	\bar{X}	s	\bar{X}	s	\bar{X}	s	\bar{X}	s
PC10A	3	5-28-05	2-20-06	45.55	6.44	23.18	5.57	6.2676	0.8226	2.3301	0.3430
PC10C	2	5-28-05	2-20-06	54.57	2.92	26.98	0.21	5.7229	1.8966	3.2447	0.3966
PC10D	3	5-28-05	2-20-06	39.18	5.85	23.58	2.33	3.8405	1.8509	2.4426	0.3400
PC10E	7	5-28-05	2-20-06	45.52	8.02	23.52	7.02	4.8593	1.4265	2.8197	0.4024
PC10F	3	5-28-05	2-20-06	54.08	11.09	36.32	2.82	6.5929	0.9750	3.8424	0.2573
PC10G	3	5-28-05	2-20-06	35.85	2.83	29.05	0.84	3.8066	0.8456	2.7134	0.1936
831 (PC10B)	8	5-28-05	3-12-08	45.18	7.42	24.99	7.59	5.7336	0.7280	2.8945	0.2055
	14	3-13-08	***	46.02	5.90	21.87	7.89	5.5089	0.7141	2.8828	0.2900
831-1 ⁴	--	05-10-08	***	46.02	5.90	21.87	7.89	5.5089	0.7141	2.8828	0.2900
831-2 ⁴	--	08-06-13	***	46.02	5.90	21.87	7.89	5.5089	0.7141	2.8828	0.2900
831-3 ⁴	--	06-16-15	***	46.02	5.90	21.87	7.89	5.5089	0.7141	2.8828	0.2900

- 1 *** = Currently in effect
- 2 Transformation for Oil Consumption Delta is $\sqrt{\text{OC } \Delta}$
- 3 Transformation for 2nd Ring Top Carbon is $\ln(\text{R2TC})$
- 4 Targets based on oil 831

Test validity

The following are the TMC validity/test designations:

Validity Designation	Definition	Test Designation	Definition
A	acceptable for intended purpose	C	calibration test
O	operationally valid, does not meet statistical criteria	D	double blind, for calibration
R	operationally invalid, reported as valid by lab, not in stats	E	fuel run also for calibration
X	aborted, not in stats	F	fuel run for fuel approval only
L	operationally invalid as determined by lab, not in stats	G	industry donated test, not for calibration
N	acceptable for intended purpose, and not in stats	H	hardware run also for calibration
M	not acceptable for intended purpose, and not in stats	I	hardware run for hardware approval only
P	pending (not resolved), not in stats	N	non-blind, information
T	Temporary	O	calibration approval by sources other than TMC
		S	discrimination test, not for calibration