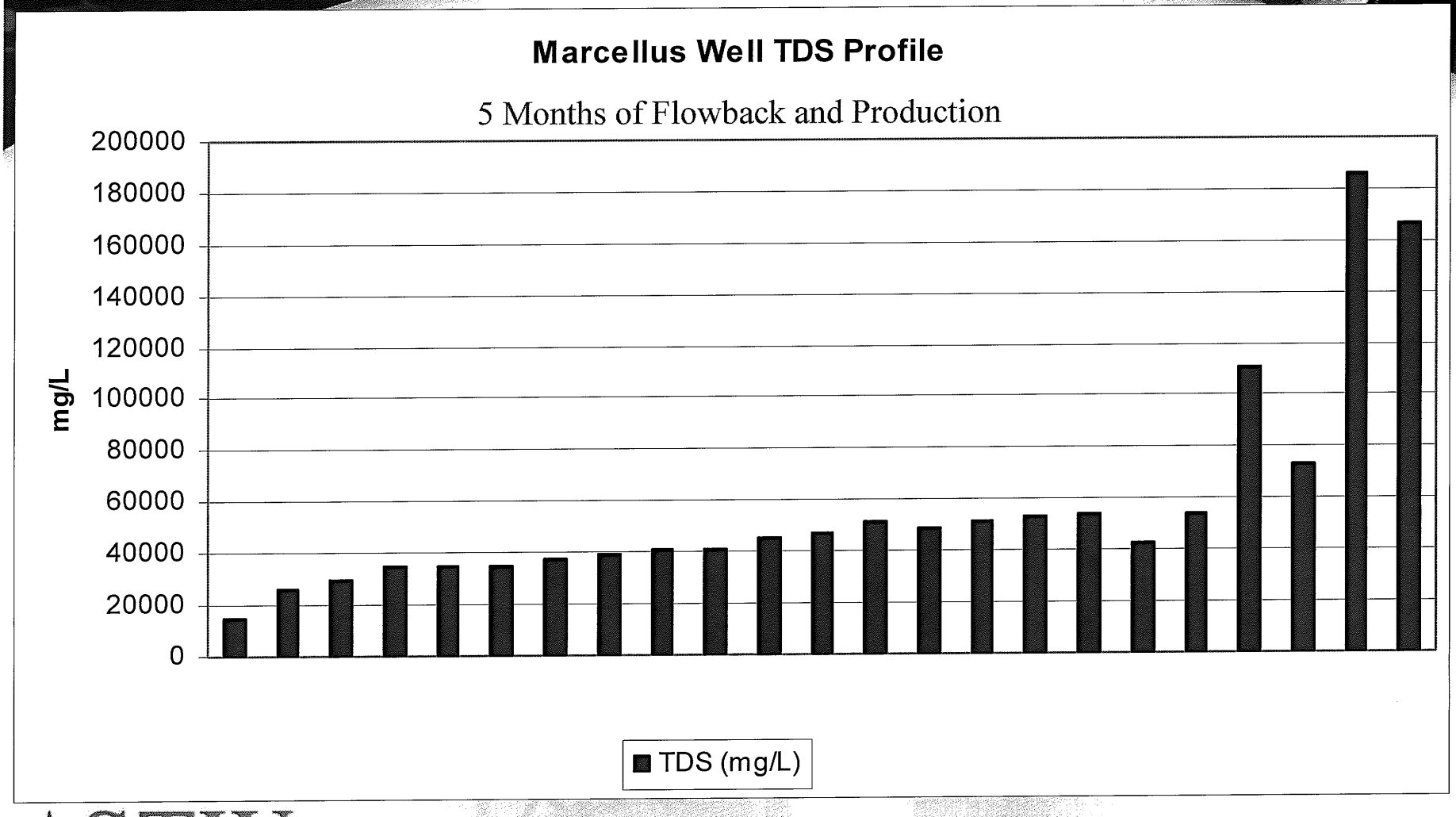
Water in the Oil & Gas Industry: Hydraulic Fracturing Shales



STW Resources, Inc.

Marcellus Shale Water Analysis
Flowback Well A – Day 1

21,823 mg/l TDS

pH	6.97
Calcium	1180
Magnesium	129
Sodium	6270
Iron	7.98
Potassium	36.1
Barium	276
Stontium	204
Manganese	0.686
Sulfate	0
Chloride	13600
Bicarbonate	120
Carbonate	0
Hydroxide	0
Carbon Dioxide	NA
Hydrogen Sulfide	0
TDS	21823.8

STW Resources, Inc.

Marcellus Shale Water Analysis
Flowback Well B – Day 5

65,976 mg/l TDS

pH	6.42
Calcium	4670
Magnesium	492
Sodium	17700
Iron	21.4
Potassium	139
Barium	1340
Stontium	890
Manganese	3.72
Sulfate	0
Chloride	40600
Bicarbonate	120
Carbonate	0
Hydroxide	0
Carbon Dioxide	NA
Hydrogen Sulfide	0
TDS	65976.12

STW Resources, Inc.

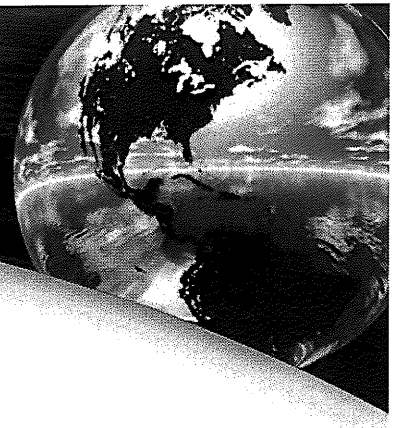
Marcellus Shale Water Analysis Produced Well C – 14 days after

164,541 mg/l TDS

pH	6.2
Calcium	23997.37
Magnesium	2377.61
Sodium	40618.00
Iron	364.66
Potassium	277.16
Barium	225.11
Stontium	2494.20
Manganese	15.65
Sulfate	0.00
Chloride	94400.00
Bicarbonate	48.80
Carbonate	0.00
Hydroxide	0.00
Carbon Dioxide	620.00
Hydrogen Sulfide	6.80
TDS	164541.40

STW Resources, Inc.

Marcellus Shale Water Analysis
Produced Well D – 12 days after

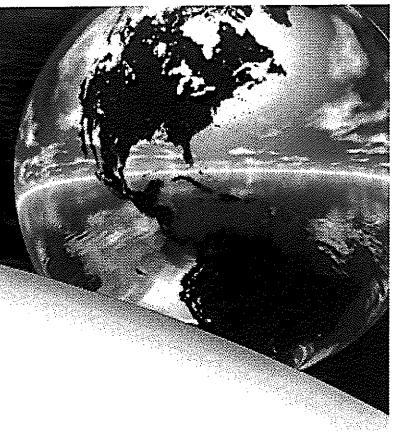


pH	6.1
Calcium	23321.28
Magnesium	2335.68
Sodium	47813.00
Iron	277.48
Potassium	89.54
Barium	248.17
Stontium	2396.28
Manganese	15.31
Sulfate	2.00
Chloride	125300.00
Bicarbonate	61
Carbonate	0.00
Hydroxide	0.00
Carbon Dioxide	430.00
Hydrogen Sulfide	0.30
TDS	201859.74

201,859 mg/l TDS

STW Resources, Inc.

Marcellus Shale Water Analysis
Flowback Well E – 3 days after



pH	5.58
Calcium	18024.00
Magnesium	2379.56
Sodium	147447.00
Iron	166.47
Potassium	592.16
Barium	10134.10
Stontium	8220.09
Manganese	16.17
Sulfate	55.00
Chloride	241200.00
Bicarbonate	54.40
Carbonate	0
Hydroxide	0.00
Carbon Dioxide	NA
Hydrogen Sulfide	NA
TDS	428258.95

428,258 mg/l TDS

Water Chemistry Varies
High TDS After Initial Flowback
Flowback Volume is High
Production Water is High
All Can be Reclaimed

STW Resources, Inc.