

American Warrior  
Microbial Enhanced Oil Recovery  
Project Results

DATA COLLECTION AND ANALYSIS

Historical Data:

Daily Gauge reports and pumper notes were used to establish pre- and post-treatment production averages. Zero production days; typically noted as down or pumping in the gun barrel were excluded. Multiple well leases pumping into a common tank battery were assumed to be pumping all wells on those days counted as production days. The statistical analysis excluded production gauge inches one deviation above or below the mean so that days when one or more wells are not pumping are not counted as production days. Cold weather, mechanical problems, and workovers are external factors that can skew production data. These factors were considered in the data analysis.

Analysis Methodology:

A mean averages are calculated for given date ranges using gauge inches for all days in the range except for days showing zero gauge inches which are typically noted as down days or pumping in gun barrel. Variance and standard deviations are calculated excluding zero gauge inch days. Daily production inches are then reviewed and days showing more than two standard deviations above or below the mean average are excluded and not counted in the total 'production days' reported. The result establishes total gauge inches and number of production days for a given date range. Total gauge inches for each date range are then divided by the number of production days to arrive at average inches per day. This figure is then multiplied by the BBLS per inch for the given stock tanks to yield the average BOPD production.

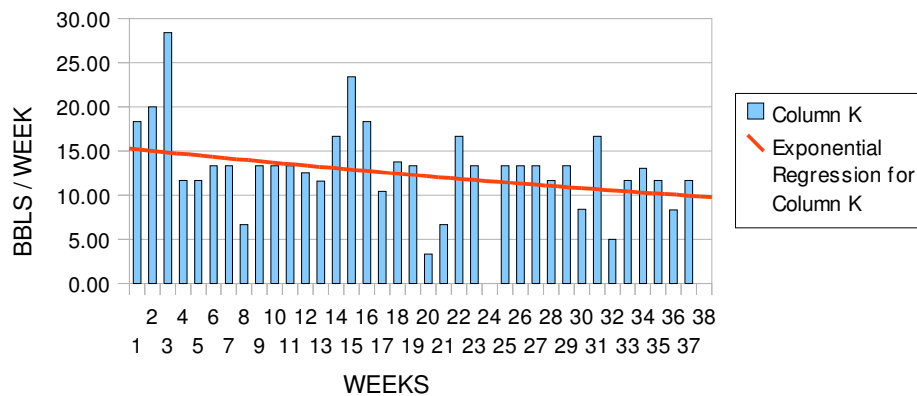
## PRELIMINARY RESULTS

	Marcellus E-1	106410
	Pre MEOR	Post MEOR
Production Days	276	5
Total BBLS	460.53	10.02
Avg BOPD	1.67	2.00

NOTE: Post-treatment raw production data from 1 December, 2009 through 30 April, 2010 contains numerous inconsistencies. Production data for these months will be included after verification. Charted post-production data runs through 30 November, 2009

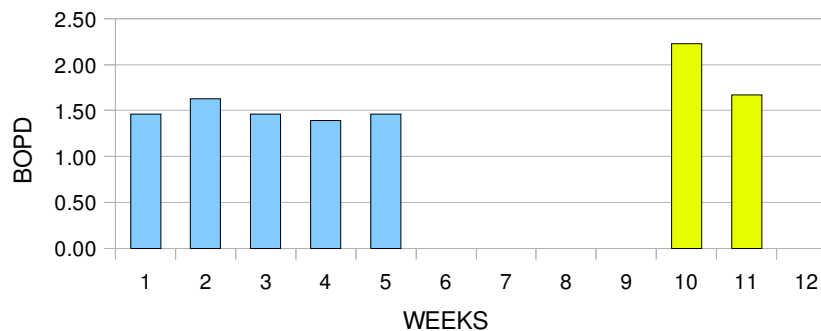
Oil production was trending downward from 1/01/2009 to 10/16/2009

**Marcellus E-1 Production Trend**  
1 January to 16 October 2009



The Marcellus E-1 produced an average of 1.49 BOPD for the 6 weeks before the MEOR treatment date and 2.00 BOPD for 6 weeks thereafter. However, only five (5) days of production data are available from 10/17/ to 11/30/2009, a 0.51 BOPD increase. This is too few data points to establish a production trend.

**Marcellus E-1 EOR Project**  
Daily Production Pre-treatment vs. Post-treatment  
6 Week Pre = 1.49 BOPD - 6 Week Post = 2.00 BOPD



If the weekly production data through January 2010 is valid, the Marcellus E-1 has held the 0.50 BOPD post-treatment increase for 57 days.

