Correlation of Field Barometer to KGS Petrophysics Lab Barometer

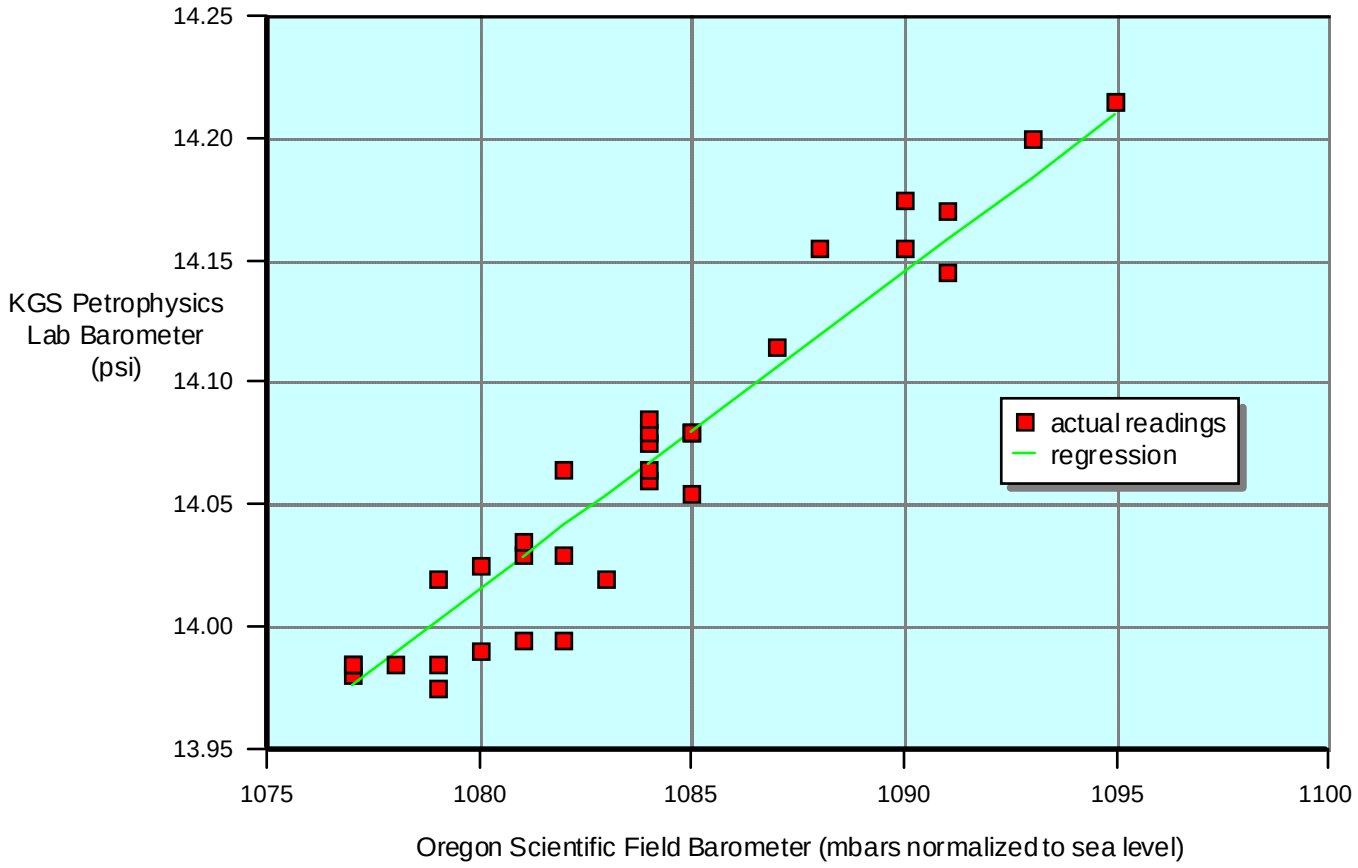


FIGURE 1.

1098'-1099' (Bevier coal) cuttings in canister W1

KLM Exploration #7 Dunn, NW SE SE 33-T.8S.-R.20E., Jefferson Co., KS

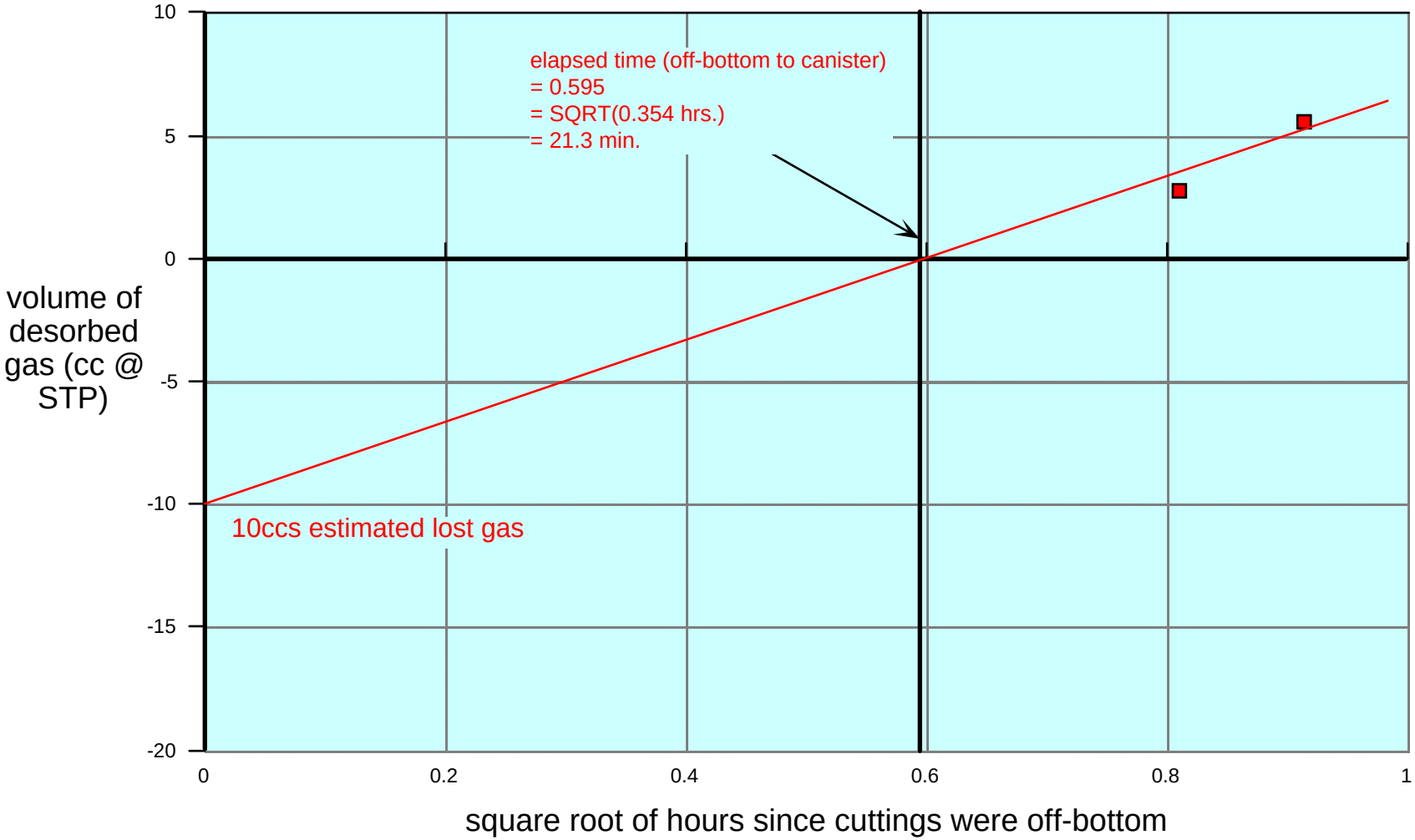


FIGURE 2.

1425'-1426' (Rowe coal) cuttings in canister W2

KLM Exploration #7 Dunn, NW SE SE 33-T.8S.-R.20E., Jefferson Co., KS

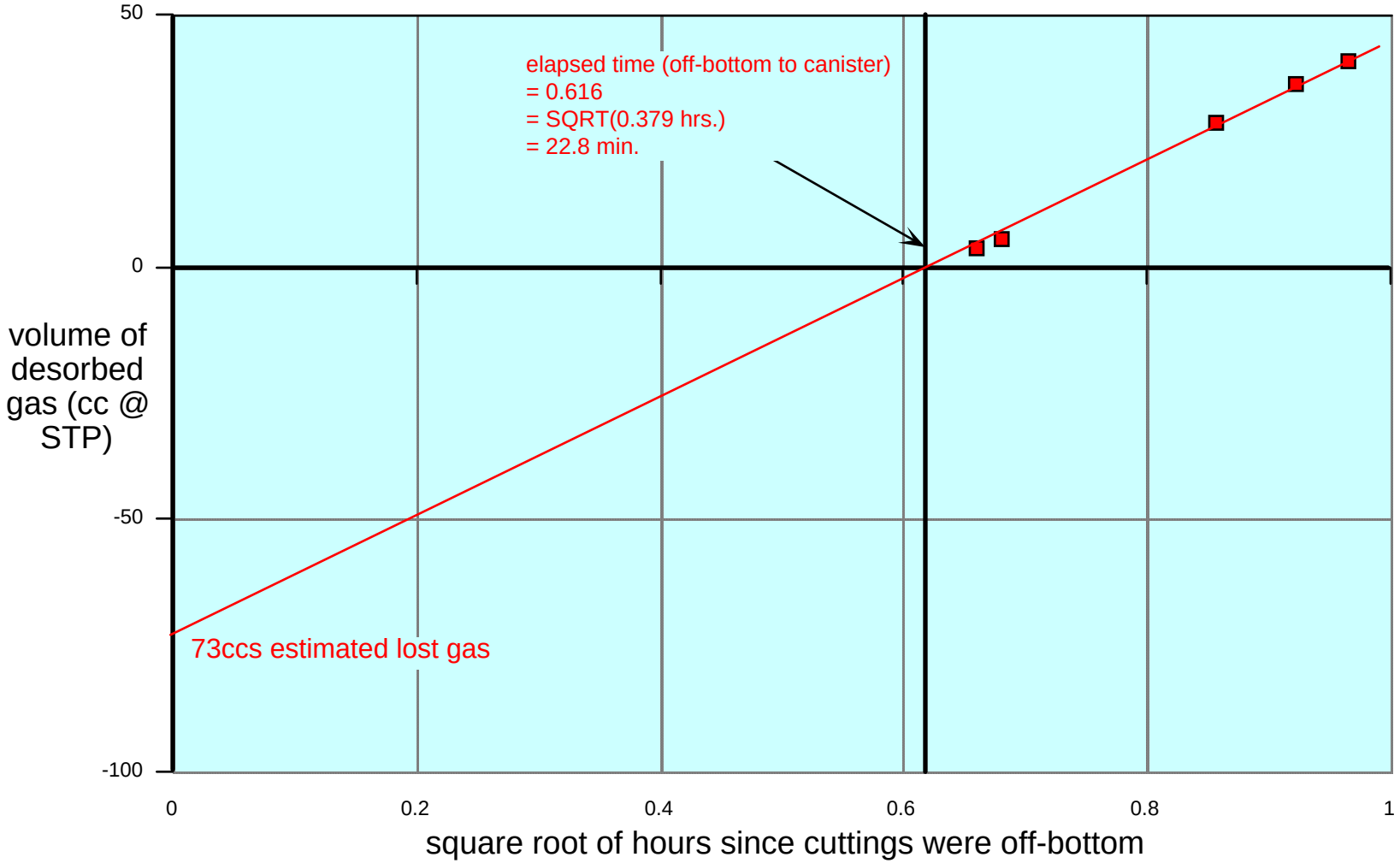


FIGURE 3.

1449'-1450' (? coal) cuttings in canister W4

KLM Exploration #7 Dunn, NW SE SE 33-T.8S.-R.20E., Jefferson Co., KS

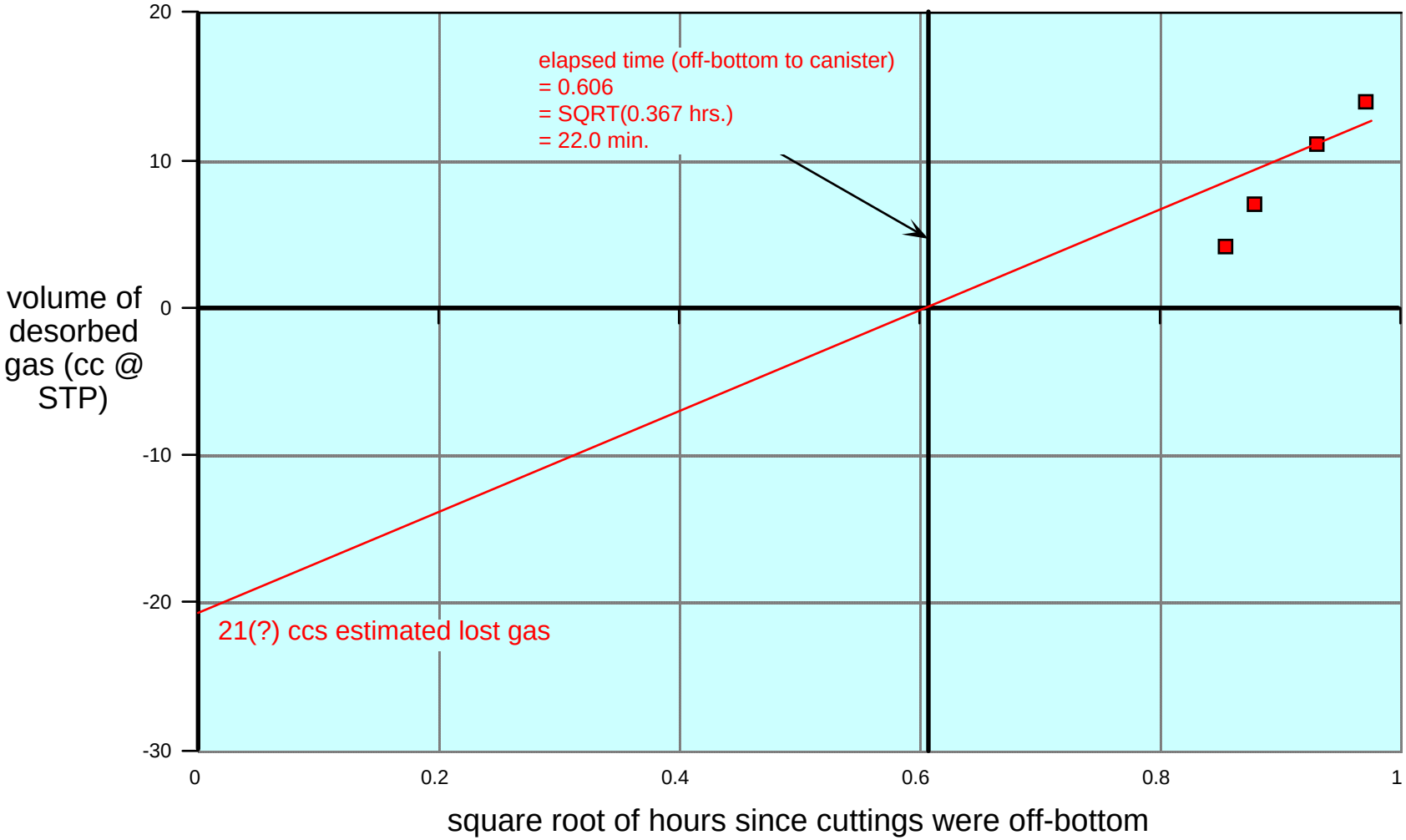


FIGURE 4.

Desorption Characteristics of Cuttings Samples

KLM Exploration #7 Dunn, NW SE SE 33-T.8S.-R.20E., Jefferson Co., KS

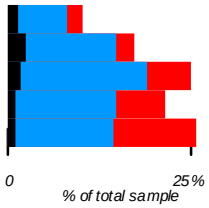
LITHOLOGIC COMPONENT SENSITIVITY ANALYSIS for calculation of gas content of shale associated with Bevier coal from 1098' to 1099'

$$\text{GAS CONTENT}_{coal} = \frac{\text{total gas desorbed} - ((\text{gas content}_{dark\ shale}) * (\text{weight}_{dark\ shale}))}{\text{weight}_{coal}}$$

total gas desorbed
(including estimated lost gas) = 43.1 ccs

TOTAL DRY WEIGHT OF SAMPLE = 276.43 grams
$\text{weight}_{light\text{-}colored\ lithologies}$ = 78.88 grams (28.5%)
$\text{weight}_{dark\ shale}$ = 175.27 grams (63.4%)
weight_{coal} = 22.2 grams (8.1%)

sieve size	*grams*	*% coal / % dark shale / % light-colored liths*
>0.0930"	28.46	15.85% / 64.21% / 19.95%
>0.0661"	47.67	14.24% / 71.69% / 14.08%
>0.0460"	69.52	7.14% / 68.71% / 24.15%
>0.0331"	59.41	5.78% / 62.67% / 31.56%
<0.0331"	71.38	3.61% / 53.01% / 43.37%
	276.43 TOTAL	



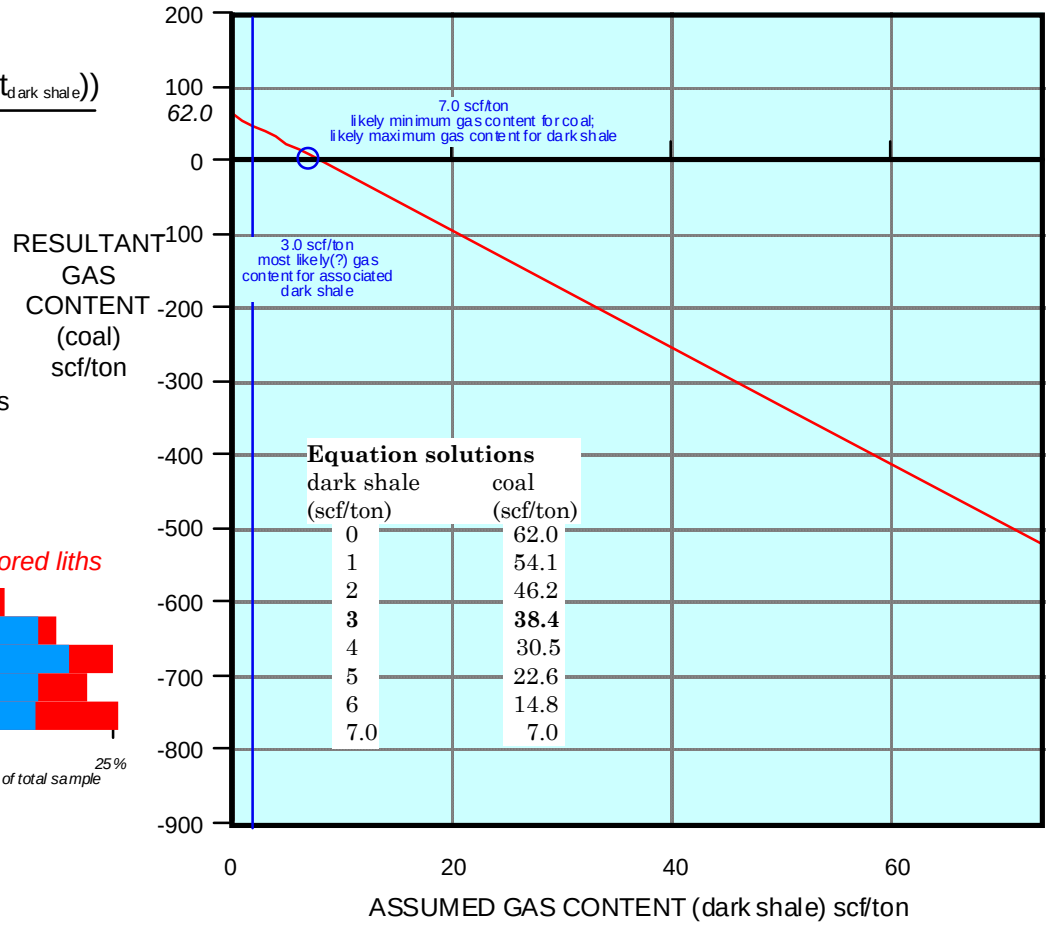


FIGURE 5.

Desorption Characteristics of Cuttings Samples

KLM Exploration #7 Dunn, NW SE SE 33-T.8S.-R.20E., Jefferson Co., KS

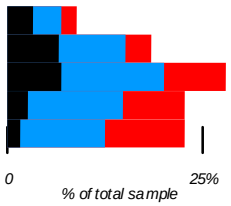
LITHOLOGIC COMPONENT SENSITIVITY ANALYSIS for calculation of gas content of shale associated with Rowe coal from 1425' to 1426'

$$\text{GAS CONTENT}_{coal} = \frac{\text{total gas desorbed} - ((\text{gas content}_{dark\ shale}) * (\text{weight}_{dark\ shale}))}{\text{weight}_{coal}}$$

total gas desorbed
(including estimated lost gas) = 265.5 ccs

TOTAL DRY WEIGHT OF SAMPLE = 252.79 grams
$\text{weight}_{light\text{-}colored\ lithologies}$ = 76.90 grams (30.4%)
$\text{weight}_{dark\ shale}$ = 122.42 grams (48.4%)
weight_{coal} = 53.44 grams (21.1%)

sieve size	*grams*	*% coal / % dark shale / % light-colored liths*
>0.0930"	22.47	36.86% / 41.97% / 21.17%
>0.0661"	45.98	35.85% / 46.79% / 17.36%
>0.0460"	70.38	24.91% / 47.25% / 27.84%
>0.0331"	57.18	12.21% / 53.44% / 34.35%
<0.0331"	56.78	7.32% / 48.78% / 43.90%
	252.79 TOTAL	



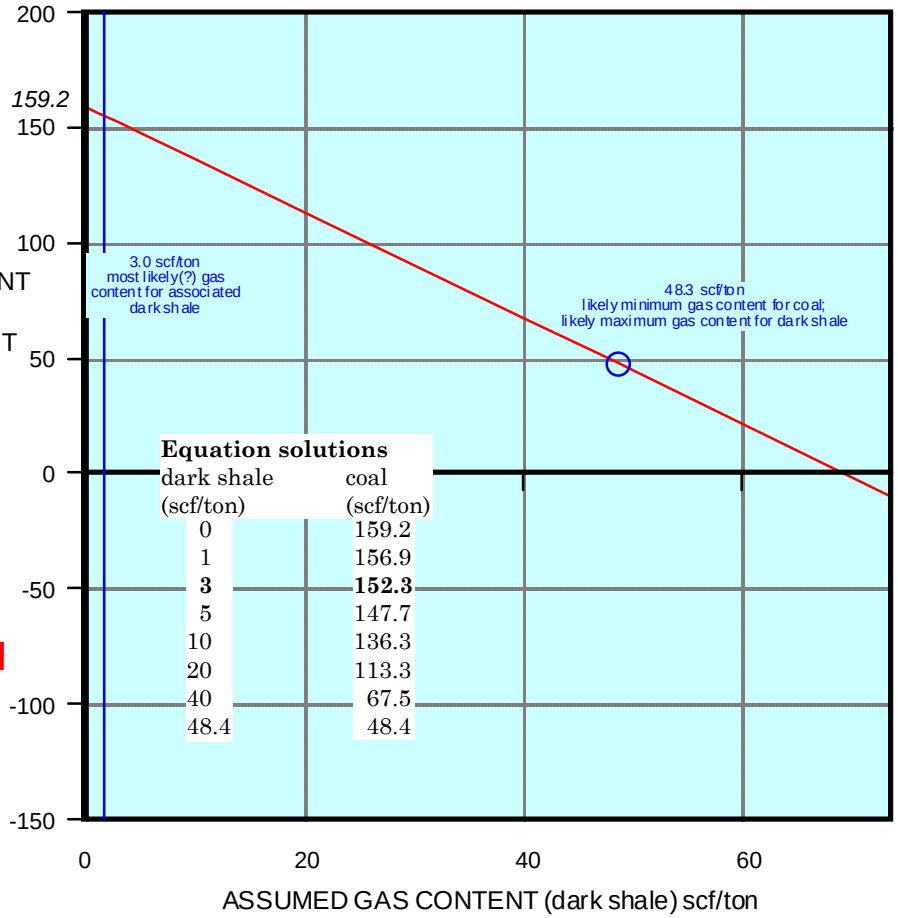


FIGURE 6.

Desorption Characteristics of Cuttings Samples

KLM Exploration #7 Dunn, NW SE SE 33-T.8S.-R.20E., Jefferson Co., KS

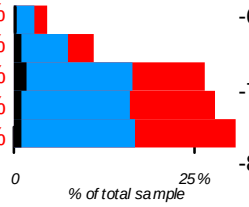
LITHOLOGIC COMPONENT SENSITIVITY ANALYSIS for calculation of gas content of shale associated with ? coal from 1449' to 1450'

$$\text{GAS CONTENT}_{coal} = \frac{\text{total gas desorbed} - ((\text{gas content}_{dark\ shale}) * (\text{weight}_{dark\ shale}))}{\text{weight}_{coal}}$$

total gas desorbed
(including estimated lost gas) = 37.3 ccs

TOTAL DRY WEIGHT OF SAMPLE = 187.94 grams
$\text{weight}_{light\text{-}colored\ lithologies}$ = 76.61 grams (40.8%)
$\text{weight}_{dark\ shale}$ = 99.26 grams (52.8%)
weight_{coal} = 12.06 grams (6.4%)

sieve size	*grams*	*% coal / % dark shale / % light-colored liths*
>0.0930"	8.66	13.64% / 46.36% / 40.00%
>0.0661"	20.52	11.69% / 56.51% / 31.80%
>0.0460"	49.15	7.84% / 54.90% / 37.25%
>0.0331"	52.18	4.29% / 53.57% / 42.14%
<0.0331"	57.42	4.17% / 50.00% / 45.83%
	187.94 TOTAL	



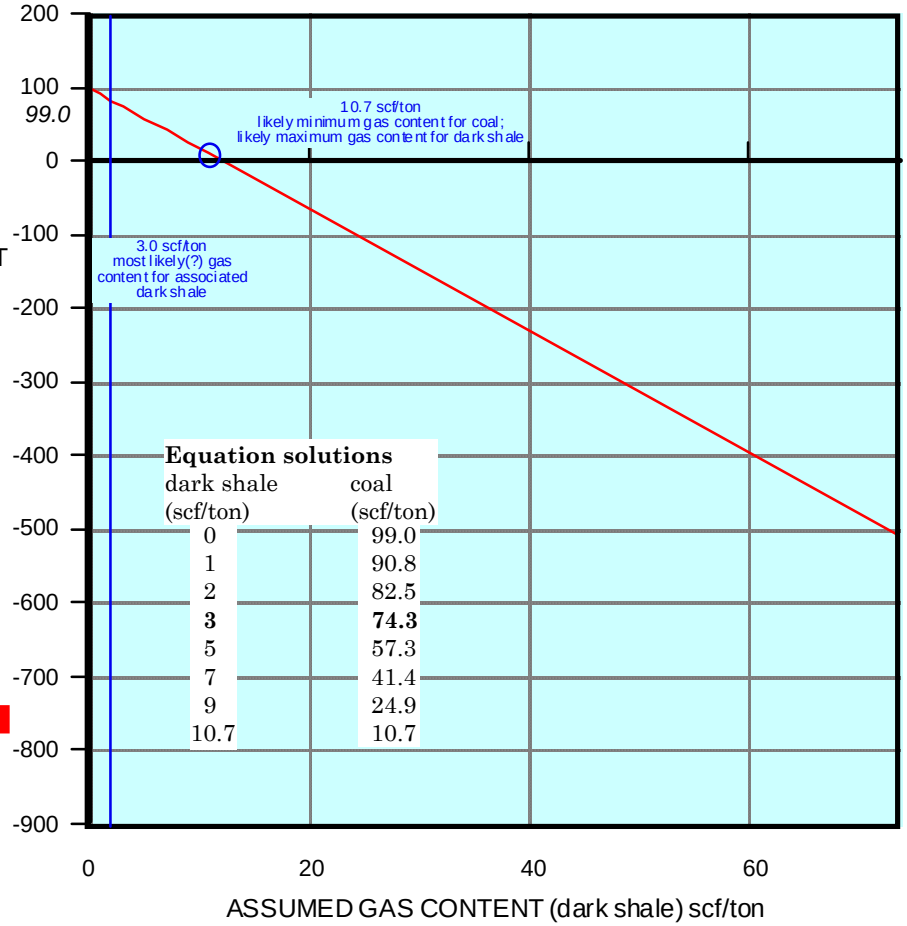


FIGURE 7.

Desorption Characteristics of Cuttings Samples

KLM Exploration #7 Dunn, NW SE SE sec. 33-T.8S.-R.20E., Jefferson County, KS

LITHOLOGIC COMPONENT SENSITIVITY ANALYSIS for all samples

surface
100'
200'
300'
400'
500'
600'
700'
800'
900'
1000'
1098'-1099' Bevier
1200'
1300'
1400'
1425'-1426' Rowe
1449'-1450' ? coal
1500'

UNIT	coal in sample	scf/ton w/ shale @ 3 scf/ton	maximum scf/ton	minimum scf/ton
Bevier	8%	38.4	62.0	7.0
Rowe	21%	152.3	159.2	48.4
? coal	6%	74.3	99.0	10.7

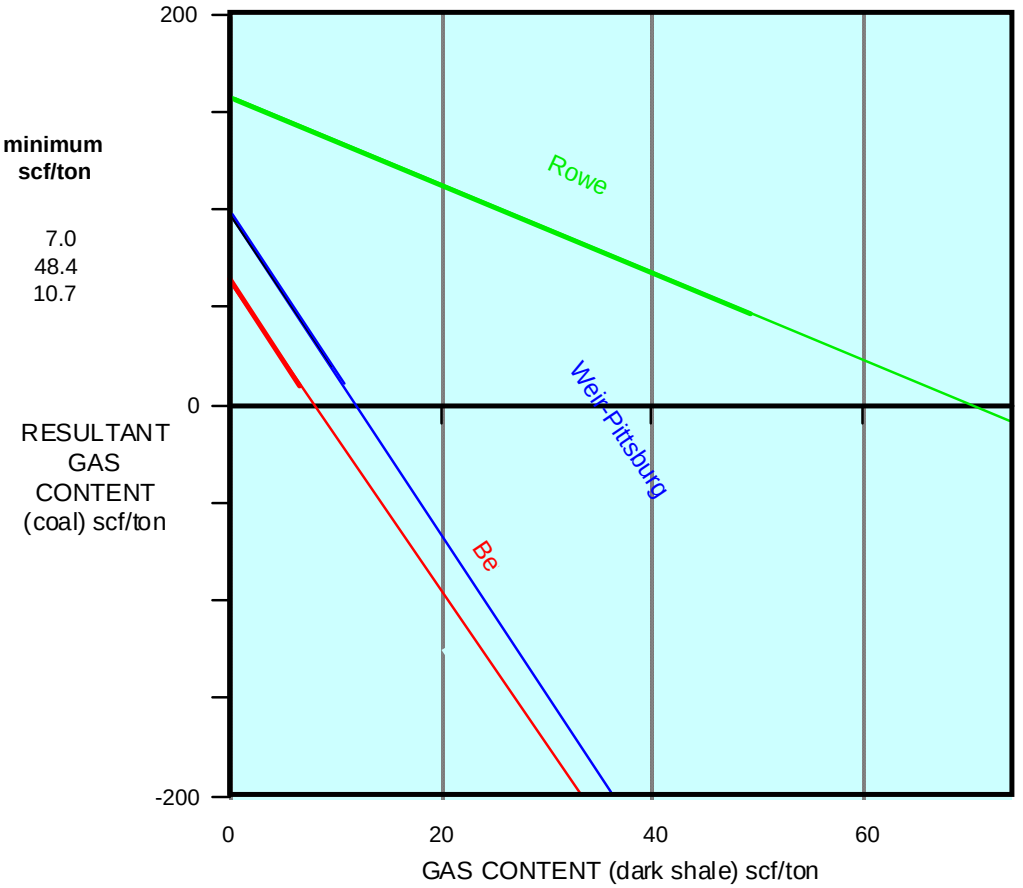


FIGURE 8.

Desorption Characteristics of Cuttings Samples

based on total weight of gas-generating lithologies (i.e., coal and dark shale) in sample
KLM Exploration #7 Dunn, NW SE SE sec. 33-T.8S.-R.20E., Jefferson County, KS

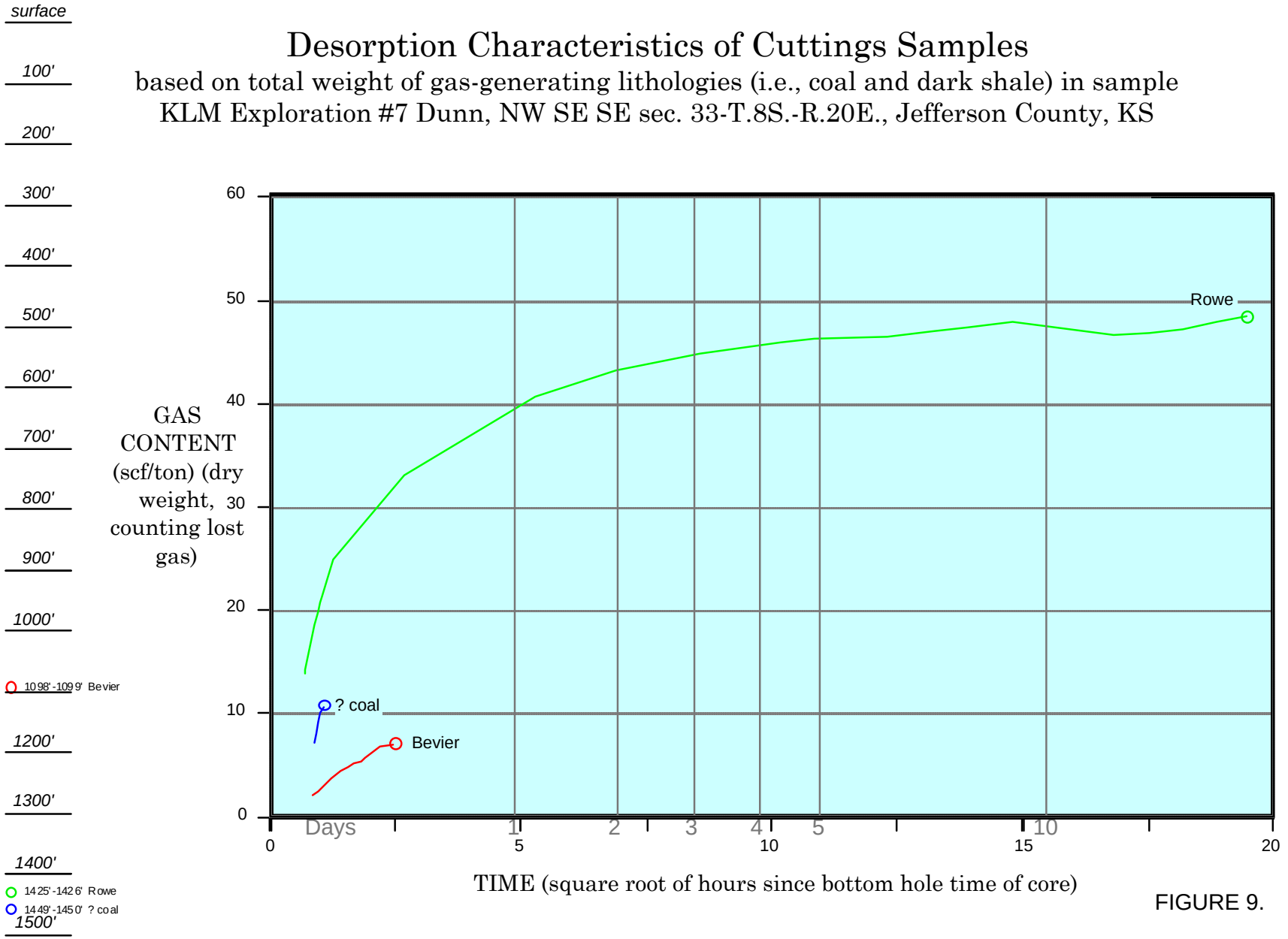


FIGURE 9.