Ferox Fuel Efficency Test

FEROXINTERNATIONAL

Bill Barrett Corporation

Frontier Drilling Company

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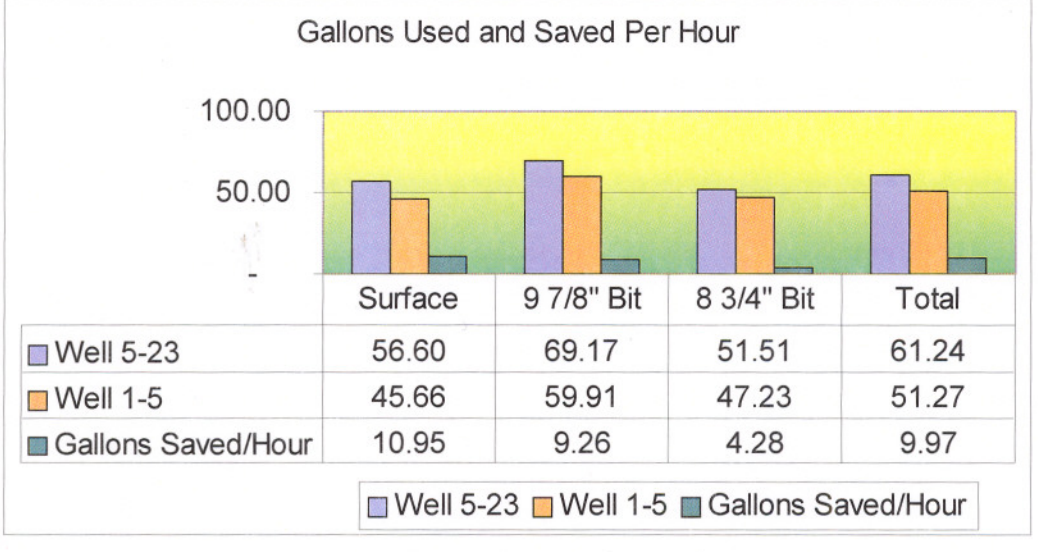
Ferox International, in conjunction with Bill Barrett Corporation and Frontier Drilling Company, conducted a Ferox fuel efficiency test on Frontier Drilling Rig #7 from May 23, 2008 thru July 30, 2008.

Measuring fuel efficiency on a drilling rig is extremely difficult given the daily variations in drilling oil wells. Areas of comparison were created by dividing the drilling of an oil well into three phases: surface, drilling under surface with an 9 $^{7}/_{8}$ inch bit, and drilling a reduced size hole with an 8 ¾ inch bit from around 7,500 feet to bottom. Actual drilling time was separated from all other activities. Only actual drilling time was used for comparison. This provided a reasonable basis for comparison.

Three wells were actually monitored due to the constantly changing oil field. While Well 14-7 was a shallower well drilled with a 8 ¾ bit, it does provide interesting comparative information which is included in Annex D. Ferox was used in this well.

Well 5-23 is the base well and provides the comparative data for Well 1-5, which had Ferox used in the fuel. It is important to note that Well 1-5 was a particularly difficult well to drill because a high pressure gas zone was hit early. Drilling was topped at 8,732 feet instead of the planned 10,500. Still sufficient data is available to demonstrate that Ferox does improve fuel economy.

The following chart provides a comparative analysis of the fuel used on each well by phase and the fuel saved by using Ferox:



	Surface	9 7/8" Bit	8 3/4" Bit	Total
Well 5-23	56.60	69.17	51.51	61.24
Well 1-5	45.66	59.91	47.23	51.27
Gallons Saved/Hour	10.95	9.26	4.28	9.97

Ferox saved an average of 9.97 gallons per hour. This is a 16.3 percent savings in the cost of fuel. At an average fuel cost of $4.30 per gallon, this

is a $0.70 savings per gallon. Ferox cost is $0.077 per gallon. The net savings is $0.623 per gallon.

Implemented on a corporate level, the financial benefit is substantial as the following scenario demonstrates:

Activity	Gallons used	Savings @ $0.623/Gal
Single well per month	20,000	$12,460
9 wells per month	180,000	$112,140
9 wells per month for 12 months	2,160,000	$1,345,680

While not a measured part of this test, Ferox has other significant benefits. Ferox lowers emissions. Not only will the rig lower emissions by lowering the gallons used by 16.3 percent, but it will reduce particulates up to 90 percent. Additionally, sulfur trioxides and nitric oxides will be substantially reduced. An example of Ferox emission control is included in Annex E.

1. Introduction

Ferox International, in conjunction with Bill Barrett Corporation and Frontier Drilling Company, conducted a Ferox fuel efficiency test on Frontier Drilling Rig #7 from May 23, 2008 thru July 30, 2008.

Ferox is a fuel additive that does one simple thing; it modifies the burning rate of all carbon fuels: gasoline, kerosene, diesel, etc. Ferox lowers the activation temperature from 600 degrees centigrade, to 200 degrees centigrade. Lowering the activation temperature of carbon fuel ensures a more complete, efficient burn. The benefits of more complete combustion are significant:

- ✓ Increased power
- ✓ Increased fuel economy
- ✓ Cleaner engines
- ✓ Longer engine life
- ✓ Longer oil life
- ✓ Lower emissions

2. Purpose

The purpose of this test was to demonstrate the effect of Ferox on fuel economy on a diesel powered drilling rig. While Ferox provides many benefits when introduced in an engine, the only benefit measured in this test was fuel economy. Engine exhausts were monitored visually for smoke but gas analyzers were not used to accurately measure emissions.

Relief is needed to ameliorate the high price of fuel that is significantly impacting both corporate profits and operating costs. Additionally, while not directly evaluated in this test, the growing social and political concern on carbon fuel toxins begs a proactive corporate approach to improve current emissions.

3. Methodology

Conducting a fuel efficiency test on a drilling rig is a very ambitious and difficult undertaking. Drilling oil wells, while systematic, is fraught with constant surprises, and endless variations. The only true constant is variation. The reality is that no two wells are drilled exactly alike. Measuring fuel efficiency in all situations requires a baseline against which to compare performance. Therefore, it was necessary to isolate similar drilling phases to provide meaningful areas of comparison.

The drilling of the oil well was divided into three distinctive phases: drilling surface, drilling out from under surface with a $9\ ^{7}/_{8}$ inch bit, and final drilling using an $8\ ^{3}/_{4}$ inch bit. This format was applied to the drilling of two wells. The first well provided data for a baseline, while the second well became the test well. This

provided areas of meaningful comparison between the baseline well and the test well.

It must also be noted that the only way to measure fuel consumption on Frontier Rig 7(and on most rigs) is by measuring inches consumed by a fuel inch indicator on the fuel tank. This measures all fuel used by the rig, including fuel used for rig cleaning, fuel used in drilling mud, and miscellaneous uses. While this measurement is very crude and a bit inaccurate, it is constant between both the baseline well and the test well. The ultimate baseline is the recorded fuel used in the rig report.

The major fuel consumption occurs during drilling, as the mud pumps consume the majority of the fuel consumed. As the rig drills deeper, the work load on the pumps increase with both the volume and weight of the drilling mud pumped. Drilling surface was similar for both wells. A 9 $^{7}/_{8}$ inch bit was use to drill out from under surface. At around 7,500 feet, the hole was downsized and an 8 ¾ inch bit to improve economy. It was possible to isolate and measure the fuel used at comparative depths for both the baseline well and the test well.

The test methodology was to measure all fuel consumption, separating the drilling time from trip time, circulating time, etc. Given the variation between activities and their associated workload, only fuel consumed during drilling was used to compare fuel economy. All other activities were factored out of the comparisons. Each time there was a function change, drilling, trip, circulation, etc., the fuel was measured to isolate the fuel used in each phase. These measurements are noted in Annex B and Annex C. A summation of the results is included in Annex A.

4. Conduct of the Test

a. Rig Engines

Frontier Rig 7 has the following engines:

Draw-works	2 ea	60 Series Detroit Diesels	685 HP @1,800 RPM	2005 Year
Pumps	2 ea	2000 Series, Detroit Diesels	1,000 HP	2006 Year
Light-plant	2 ea*	60 Series Detroit Diesels	685 HP @1,800 RPM	2006 Year

* Only one light-plant engine is run at a time

b. Execution

There were actually three parts to the test. Part one was measuring of baseline, Bill Barrett Corporation Well 5-23 (5-23). Part two was measuring of Bill Barrett Corporation Well 14-7 (14-7). Part three was measuring of Bill Barrett Corporation Well 1-5.

c. Part 1

Part 1 is the baseline for the test. It began on May 23, 2008 with the rigging up on Well 5-23. Actual measuring of drilling began on May 31 with the drilling out from under surface. From that point, measurements were taken as frequently as necessary to establish consistency in fuel usage. These measurements are included in Annex B. It should be noted that from 8,945 feet to 9,356 feet, the Well was cored. Therefore there were no daily/hourly measurements made. However, this became a moot point since Well 1-5 (the test well) was completed at 8,732 feet. Well 5-23 was completed on June 19, 2008

d. Part 2

Well 14-7 was begun on June 22, 2008 with the introduction of Ferox into the fuel on June 23, 2008. With the first refueling, two bags of Ferox were added to the fuel. One bag of Ferox is sufficient to treat 5,000 gallons. The initial infusion had a little overkill, but it is better to over treat the fuel than to under treat it. It is important to note that over treating fuel will not harm anything, nor does it provide any additional benefit. However, on the first treatment, additional Ferox will ensure that all of the carbon build up in each engine was treated and cleaned more efficiently.

The day after Ferox was added to the fuel, all of the engine control modules (ECMs) were reset. This is a procedure like rebooting a computer. By cutting all electricity to the ECM for 10 minutes, the ECM will run a complete set of diagnostics and reset all combustion settings to recognize Ferox treated fuel. In this manner, the ECM will recognize the improved burning of Ferox and improve engine combustion settings.

Ferox was added to Well 14-7 even though the drilling parameters were different from Well 5-23. Well 14-7 was a shallower well and only a 8 ¾ inch bit was used. At the time, the next well was targeted to be similar and Well 14-7 would be compared to it. In the end, the next well, Well 1-5 was the same as Well 5-23 so Well 1-5 then became the test well. The Well was completed on July 4, 2008. The data from Well 14-7 is located in Annex D.

d. Part 3

Well 1-5 was begun on July 7, 2008. Since the engines had been treated with Ferox, there was no need to reset the ECMs. Ferox was added with each refueling. Periodic measurements were taken to document each change of activity: drilling, trips, circulation, etc. The documentation for Well 1-5 is located in Annex C.

It is important to note that Well 1-5 was not a typical well. A major gas zone was hit after drilling out under surface which caused continual circulation problems until drilling was stopped at 8,732 feet and the well completed. There were problems controlling the gas while drilling the 9 $^{7}/_{8}$ part of the hole (from 2,500 feet to 7,300 feet). The bit size was reduced to 8 ¾ but problems controlling the gas increased until it became necessary to complete the well at 8,732 feet.

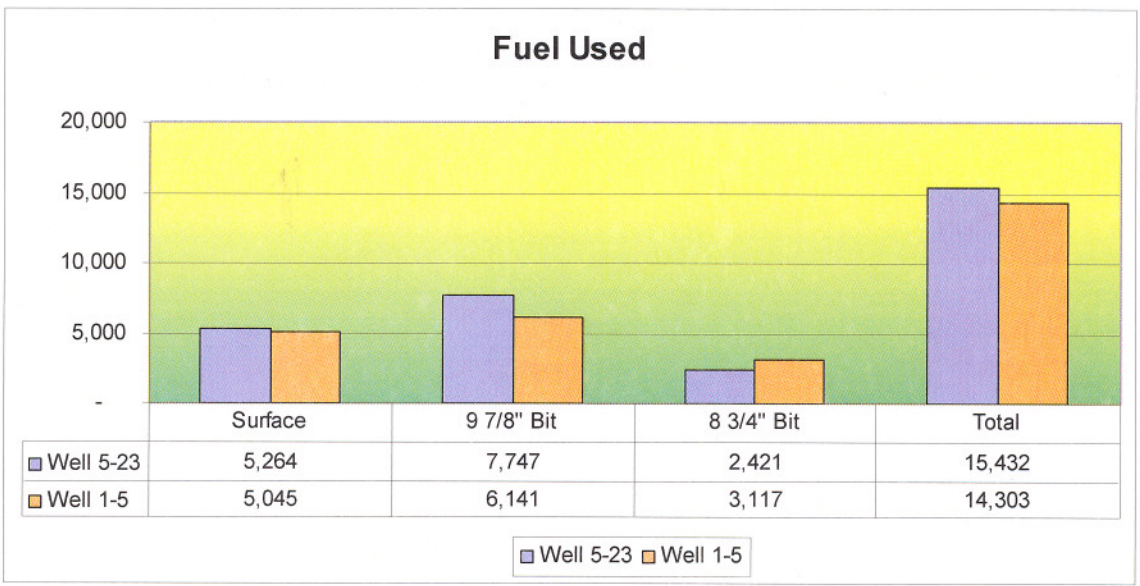
5. Results

Ferox fuel additive proved to be effective in increasing the fuel economy during the measured drilling phases. It is important to note that as the drilling progressed and more problems occurred in controlling the gas in the well, the ability to capture fuel efficiency became more difficult. The inability to complete the well at the planned depth of 10,500 feet for total comparison measurablely affected the test results. However, there is still sufficient data to validate the test results.

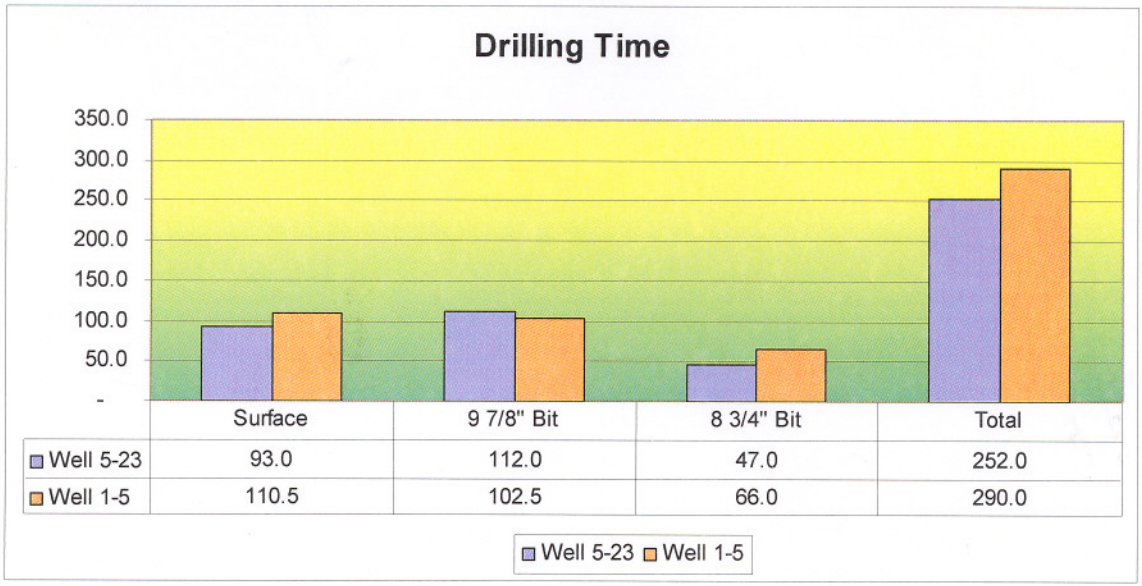
The test divides both the baseline well (Well 5-23) and the test Well (Well 14-7) into three phases: Surface, 9 7/8 inch bit, and 8 ¾ inch bit. The feet drilled on each phase are as follows:

Phase	Well 5-23 Depth	Well 14-7 Depth
Surface	1,000 – 3,000	60 – 2,500
9 $^{7}/_{8}$" Bit	3,000 – 7,730	2,500 – 7,357
8 ¾" Bit	7,730 – 8,945	7,357 – 8,945

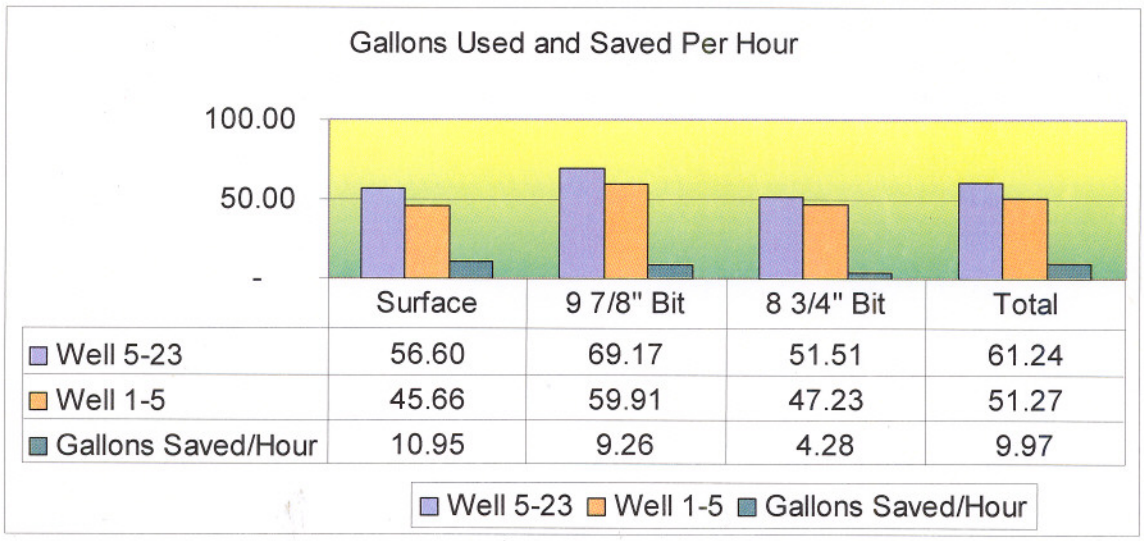
The fuel used for each well, by phase was:



The drilling time for each phase was:



Gallons used and saved per hour:



Ferox saved, during drilling, 9.37 gallons per hour average. When factored as a percentage the results per phase are:

Phase	Gallons/Hr Saved	Percent Saved
Surface	10.95	**19.3** %
9 $^{7}/_{8}$" Bit	9.26	**13.4 %**
8 $^{3}/_{4}$" Bit	4.28	**8.3 %**
Average Percent Savings	9.97	**16.3 %**

This represents a substantial financial savings by using Ferox. For this example, the cost of diesel is set at $4.30 per gallon. 16.3 % of $4.30 is $0.70 per gallon. Ferox cost per gallon is $0.077. This leaves a net savings of $0.623 per gallon. The following estimate demonstrates the type of savings that Ferox can have when implemented on a corporate level:

Activity	Gallons used	Savings @ $0.623/Gal
Singe well per month	20,000	$12,460
9 wells per month	180,000	$112,140
9 Wells per month for 12 months	2,160,000	**$1,345,680**

These savings will appear directly on the bottom line.

Although not directly part of the test, an additional benefit of using Ferox was a noticeable improvement in engine emissions. All of the engines stopped smoking while under mission load by the end of the test. Although the usual black puff of unburned diesel was and will continue to be visible during the brief periods of acceleration, all smoke disappeared once each engine was operating under load at peak rpm. Given the social/political climate, lowering engine emissions is becoming increasingly important. Ferox has proven to effectively lower emissions. Not only will 16.3% less emissions be generated due to fuel savings, but Ferox will reduce particulates up to 90 percent but sulfur trioxides and nitric oxides are also significantly reduced. The emission test of a 1995 Toyota Camry with 128,214 miles on the odometer exhibits the point.

Annex A

Consolidated Test Results

Ferox Fuel Test
Consoldated Results

Activity	Well: 5-23 (Base) Depth	Fuel	Hrs	GPH	Well: 1-5 (Ferox)	Fuel	Hrs	GPH	Delta	Percent	PPG Ferox Cost Savings/G	$ 4.30 $ 0.077 AFT Ferox
Surface	1,000 - 3,000	5,264	93.0	56.60	1,000 - 2,500	5,045	110.5	45.66	10.95	19.3%	$ 0.83	$ 0.75
Bit 9 7/8"	3,000 - 7,730	7,747	112.00	69.17	2,500 - 7,357	6,141	102.5	59.91	9.26	13.4%	$ 0.58	$ 0.50
Bit 8 3/4"	7,730 - 8,945	2,421	47.00	51.51	7,357 - 8,717	3,117	66.0	47.23	4.28	8.3%	$ 0.36	$ 0.28
Total		15,432	252.00	61.24		14,303	279	51.27	9.97	16.3%	$ 0.70	$ 0.623

Annex B

Well 5-23 Data

Date	Time	Activity	Depth	Inches	Gallons	Gallons Consumed	Rig Report	[illegible] Drilled	Hrs Drilled	Feet/Hr	Gallons/foot	Gallons/HR	Pressure	Pu[illegible]s Pump #1	Pump #2
23-May		Rigup													
24-May		Rigup	880	68.000	6,426		361								
25-May	18.00	Drill	1,080					200	5.5	36.36	-	-	1020	110	110
	6.00	Drill	1,285	59.000	5,576	850	850	205	12	17.08	4.15	48.57	1450	105	105
26-May	18.00	Drill	1,485		-			200	11.5	17.39	-	-	1450	105	105
	6.00	Drill	1,544	47.500	4,489	1,090	1,090	59	5	11.80	18.47	66.06	1195	90	90
27-May	18.00	Drill	1,761					217	11.5	18.87	-	-	1750	110	110
	6.00	Drill	2,039	34.000	3,213	1,280	1,280	278	12	23.17	4.60	54.47	1675	101	101
28-May	18.00	Drill	2,349					310	8.5	36.47	-	-	1600	105	105
	6.00	Drill	2,719	64.000	6,048	1,134	1,134	370	12	30.83	3.06	55.32	1875	95	95
29-May	18.00	Drill	3,030			1,000	1,000	311	6	51.83	3.22	55.56	1870	95	
						5,354	5,354		84			63.74			
							90		9						
							5,264		93			56.60			
	6.00	Set Surface		52.000	4,914		1,126		12			169.10			
30-May	18.00	Set Surface							12			56.37			
	6.00	Set Surface		47.000	4,442				12				1050		95
31-May	3:30	Drilling	3,050	48.000	4,536	95									
	7:00	Drilling	3,250	45.625	4,312	224	473	200	3.50	57.14	1.12	64.13	1850	100	100
	9:00	Drilling	3,357	44.875	4,241	71		107	2.00	53.50	0.66	35.44	1850	100	100
	11:00	Drilling	3,493	44.000	4,158	83		136	2.00	68.00	0.61	41.34	1850	100	100
	13:00	Drilling	3,604	43.000	4,064	95		111	2.00	55.50	0.85	47.25	1900	100	100
	19:30	Drilling	3,980	39.500	3,733	331		376	6.50	57.85	0.88	50.88	1900	100	100
	22:00	Drilling	4,180	37.000	3,497	236		200	2.50	80.00	1.18	94.50	1900	100	100
1-Jun	5:00	Drilling	4,429	32.000	3,024	473	1,275	249	7.00	35.57	1.90	67.50	1850	100	100
	8:00	Drilling	4,577	76.625	7,241	162		148	3.00	49.33	1.09	54.00	1422	100	100
	10:00	Drilling	4,638	75.875	7,170	71		61	2.00	30.50	1.16	35.44	1369	100	100
	14:00	Drilling	4,777	73.625	6,958	213		139	4.00	34.75	1.53	53.16	1778	100	100
	20:00	Drilling	5,078	69.500	6,568	390		301	6.00	50.17	1.30	64.97	1903	100	100
2-Jun	7:00	Drilling	5,610	61.000	5,765	803	1,275	532	11.00	48.36	1.51	73.02	1903	98	98
	14:00	Drilling	5,947	56.250	5,316	449		337	7.00	48.14	1.33	64.13	2008	100	100
	20:00	Drilling	6,181	51.750	4,890	425		234	6.00	39.00	1.82	70.88	2018	100	100
3-Jun	7:00	Drilling	6,615	42.500	4,016	874	1,701	434	11.00	39.45	2.01	79.47	2301	125	125
	14:00	Drilling	6,886	38.000	3,591	425		271	7.00	38.71	1.57	60.75	1230	125	125
	17:00	Drilling	6,952	85.000	8,033	184		66	3.00	22.00	2.79	61.33	1146	125	125
	18:00	Drilling	6,969	84.250	7,962	71		17	1.00	17.00	4.17	70.88	1150	100	100
	21:00	Drilling	7,036	82.000	7,749	213		67	3.00	22.33	3.17	70.88	2170	100	100
4-Jun	7:00	Drilling	7,418	73.875	6,981	768	1,701	382	10.00	38.20	2.01	76.78	2058	90	90
	13.00	Drilling	7,633	68.500	6,473	508		215	6.00	35.83	2.36	84.66	2008	85	85
	18.00	Drilling	7,728	64.000	6,048	425		95	5.00	19.00	4.48	85.05	1947	85	85
	19.30	Drilling	7,730	62.500	5,906	142		2	1.50	1.33	70.88	94.50	1947	85	85
							1,322								
						7,729	7,747		112.00			69.17			
5-Jun	5.30	Trip	7,748	61.000	5,765	142	1,322	18	10.00	1.80	7.88	14.18			
	13.00	Drilling	7,996	57.375	5,422	343		248	7.50	33.07	1.38	45.68	1068	107	
	17.00	Drilling	8,086	54.250	5,127	295		90	4.00	22.50	3.28	73.83	1050	104	
	19.00	Drilling	8,114	52.125	4,926	201		28	4.00	7.00	7.17	50.20	1332	126	
	21.00	Drilling	8,146	48.500	4,583	154		32	2.00	16.00	4.81	77.00	1254	119	
6-Jun	6.00	Drilling	8,301	43.750	4,134	449	1,606	155	9.00	17.22	2.90	49.88	1174	121	
	21.30	Trip	8,349	39.000	3,686	449		48	15.50	3.10	9.35	28.96			
7-Jun	7.30	Drilling	8,646	33.000	3,119	567	851	297	9.50	31.26	1.91	59.68	1174	124	

Date	Time	Activity	Depth	Inches	Gallons	Gallons Consumed	Rig Report	Feet Drilled	Hrs Drilled	Feet/Hr	Gallons/foot	Gallons/HR	Pressure	Pumps Pump #1	Pump #2
	15.30	Drilling	8,945	28.625	2,705	413		299	11.00	27.18	1.38	37.59	1817	125	
							413								
						2,871	2,870		62.50						
						449	449		15.50						
						2,422	2,421		47.00			51.51			
	20.45	Trip			-				11.00			-			
8-Jun	6.00	Coring	9,005				1,084		11.00			-			
	18.00	Coring	9,007					2	11.00			-			
9-Jun	18.00	Coring	9,020				756	13	11.00			-	880	80	
	24.00	Drilling	9,193					173					1880	125	
10-Jun	13.00	Coring	9,225	53.125			758	32					1850	125	
		Coring											860	80	
11-Jun	6.00	Coring					850								
	18.00	Coring													
12-Jun	15.00	Trip	9356	36.500	3,449		890	131							
	18.00	Drilling	9356	35.125	3,319	130		-	3.00	0.00	#DIV/0!	43.31	1414		114
13-Jun	8.00	Drilling	9684	26.375	2,492	827	999	328	14.00	23.43	2.52	59.06	1916	125	
	20.00	Drilling	10029	66.875	6,320	709		345	12.00	28.75	2.06	59.08	2000	125	
14-Jun	8.00	Drilling	10367	58.125	5,493	827	662	338	12.00	28.17	2.45	68.91	1917	125	
	14.00	Drilling	10480	54.625	5,162	331		113	6.00	18.83	2.93	55.13	1920	125	
	22.00	Drilling	10645	50.625	4,784	378		165	8.00	20.63	2.29	47.25	1922	124	
15-Jun	6.00	Drilling	10840	44.875	4,241	543	1,512	195	8.00	24.38	2.79	67.92	1840	125	
						3,745	4,063		63.00			59.44			
							248								
						3,745	3,815		63.00			60.56			
		Log		33.5	4,536	248									
16-Jun		Log					661								
17-Jun		Complete Well					379								
18-Jun		RigDown					850								
19-Jun		RigDown					648								

Annex C

Well 1-5 Data

Date	Time	Activity	Depth	Inches	Gallons	Gallons Consumed	Rig Report	Feet Drilled	Hrs	Feet/Hr	Gallons/ft	Gallons/HR	Pressure	Pumps #1	#2
8-Jul		Move		47.000	4,442	1,890		-		0.0	-				
9-Jul		Rigup			-	-		-		0.0	-				
10-Jul	7.00	Rigup		43.000	4,064	378	378	-		0.0	-				
	12.00	Rigup		88.000	8,316	71		-		0.0	-				
	17.00	Drill			-	-		-		0.0	-	-	329	120	
	20.00	Drill	162	87.000	8,222	95		162	3.0	54.0	0.58	31.5	329	120	
11-Jul	8.00	Drill	583	83.000	7,844	378	604	421	12.0	35.1	0.90	31.5	848	103	102
	14.30	Drill	751	81.000	7,655	189		168	6.5	25.8	1.13	29.1	848	102	103
	20.00	Trip	751	80.000	7,560	95		-	5.5	0.0	-	17.2			
12-Jul	8.00	Drill	1,077	74.000	6,993	567	661	326	12.0	27.2	1.74	47.3	1,227	110	111
	20.00	Drill	1,345	68.500	6,473	520		268	12.0	22.3	1.94	43.3	1,200	110	111
13-Jul	8.00	Drill	1,595	61.500	5,812	662	1229	250	12.0	20.8	2.65	55.1	1,280	107	104
	14.30	Drill	1,736	59.000	5,576	236		141	6.5	21.7	1.68	36.3	1,280	107	104
14-Jul	3.00	Trip	1,736	56.000	5,292	284	756	-	12.5	0.0	-	22.7			
	8.00	Drill	1,796	53.500	5,056	236		60	5.0	12.0	3.94	47.3	1,140	99	102
15-Jul	6.00	Drill			-	-	661	-		0.0	-	-			
16-Jul	3.30	Drill	2,520	31.000	2,930	2,126	1512	2,520	43.5	57.9	0.84	48.9	1,200	107	107
						5,387	5,423		130.5						
						378	378		18.0						
						5,009	5,045		110.5			45.7			
17-Jul	6.00	Set Surface	2,520	28.000	2,646	284	567	-	26.5	0.0	-	10.7			
	6.30	Rec Fuel	2,520	74.500	7,040			-	0.5	0.0	-	-			
	18.00	Set Surface	2,520	73.000	6,899	142		-	11.5	0.0	-	12.3			
18-Jul	8.00	Drill	3,287	69.000	6,521	378	337	767	14.0	54.8	0.49	27.0	1,551	102	100
	20.00	Drill	4,071	62.000	5,859	662		784	12.0	65.3	0.84	55.1	1,600	100	100
19-Jul	6.00	Drill	4,659	56.000	5,292	567	1,417	588	10.0	58.8	0.96	56.7	1,768	103	101
	18.00	Drill	5,356	49.000	4,631	662			12.0	0.0	-	55.1	1,850	99	97
20-Jul	6.00	Drill	5,871	38.000	3,591	1,040	1,606	1,212	12.0	101.0	0.86	86.6	2,013	102	103
	10.00	Drill	5,901	36.000	3,402	189		30	4.0	7.5	6.30	47.3	2,010	102	103
	11.00	Drill	5,930	35.000	3,308	95		29	1.0	29.0	3.26	94.5	2,010	102	103
	11.30	Drill	5,990	76.000	7,182	-		60	-	#DIV/0!	-	-	2,010	102	103
	14.00	Drill	6,115	74.000	6,993	189		125	3.0	41.7	1.51	63.0	2,010	102	103
	15.30	Drill	6,150	72.500	6,851	142		35	1.5	23.3	4.05	94.5	2,050	101	102
21-Jul	2.30	Trip	6,150	68.000	6,426	425		-	11.0	0.0	-	38.7			
	6.00	Drill	6,280	65.000	6,143	284	1,750	130	3.5	37.1	2.18	81.0	2,050	201	100
	7.30	Pack Swive	6,280	63.500	6,001	142		-	1.5	0.0	-	94.5			
	12.00	Drill	6,446	54.000	5,103	898		166	4.5	36.9	5.41	199.5	2,100	101	99
	15.00	Drill	6,554	51.000	4,820	284		108	3.0	36.0	2.63	94.5	2,140	101	99
	18.00	Drill	6,668	49.000	4,631	189		114	3.0	38.0	1.66	63.0	2,140	101	99
	20.00	Drill	6,828	46.000	4,347	284		160	4.0	40.0	1.77	70.9	2,140	101	99
22-Jul	1.00	Drill	6,949	43.500	4,111	236		121	3.0	40.3	1.95	78.8	2,100	98	98
	6.00	Drill	7,143	40.000	3,780	331	2,360	194	5.0	38.8	1.70	66.2	2,030	93	90
	12.00	Drill	7,344	36.000	3,402	378		201	6.0	33.5	1.88	63.0	2,093	91	89
	13.00	Drill	7,357	81.500	7,702	47		13	1.0	13.0	3.63	47.3	2,093	91	89

Date	Time	Activity	Depth	Inches	Gallons	Gallons Consumed	Rig Report	Feet Drilled	Hrs	Feet/Hr	Gallons/ft	Gallons/HR	Pressure	Pumps #1	#2
						7,418	7,133		115.0						
							425								
				Trip and Circulation		567	567		12.5						
				Diesel used in mud		850	850								
						6,001	6,141		102.5			59.9			
	20.30	Trip Out	7,357	78.000	7,371	331	614.25	-	7.5	0.0	-	44.1			
23-Jul	4.00	Trip In	7,357	76.000	7,182	189		-	7.5	0.0	-	25.2			
	6.00	Drill	7,434	75.000	7,088	95	1,021	77	2.0	38.5	1.23	47.3	1,500	126	
	14.00	Drill	7,579	71.750	6,780	307		145	8.0	18.1	2.12	38.4	1,240	118	
	20.00	Drill	7,744	68.500	6,473	307		165	6.0	27.5	1.86	51.2	1,381	118	
24-Jul	8.00	Drill	7,962	62.500	5,906	567	1,230	218	12.0	18.2	2.60	47.3	1,528	119	
	20.00	Drill	8,237	56.000	5,292	614		275	12.0	22.9	2.23	51.2	1,465	120	
25-Jul	8.00	Drill	8,449	49.500	4,678	614	1,320	212	12.0	17.7	2.90	51.2	1,528	119	
						2,504	2,550		52.0			48.2			
	12.00	Circulate	8,449	48.000	4,536	142		-	4.0	0.0	-	35.4			
	20.00	Circulate	8,449	46.000	4,347	189		-	8.0	0.0	-	23.6			
26-Jul	8.00	Circulate	8,449	42.750	4,040	307	661	-	12.0	0.0	-	25.6			
	11.00	Circulate	8,449	42.000	3,969	71		-	3.0	0.0	-	23.6			
	11.00	Rec Fuel	8,449	88.000	8,316	-		-	-	0.0	-				
	12.00	Drill	8,449	87.750	8,292	24		-	1.0	0.0	-	23.6			
	20.00	Drill	8,673	84.000	7,938	354		224	8.0	28.0	1.58	44.3	1,729	121	
27-Jul	1.00	Drill	8,717	82.000	7,749	189	1,004	44	5.0	8.8	4.30	37.8	1,700	120	
						567	567		14.0			40.5			
						3,071	3,117		66.0			47.2			
	8.00	Trip Out	8,717	78.750	7,442	307		-	7.0	0.0	-	43.9			
	20.00	Circulate	8,717	76.250	7,206	236		-	12.0	0.0	-	19.7			
28-Jul	6.00	Circulate	8,717	72.000	6,804	402	661	-	10.0	0.0	-	40.2			
	18.00	Circulate	8,717	70.000	6,615	189		-	12.0	0.0	-	15.8			
	20.00	Trip In	8,717	69.500	6,568	47		-	2.0	0.0	-	23.6			
29-Jul	5.00	Drill	8,732	66.250	6,261	307	378	15	7.0	2.1	20.48	43.9			
	6.00	Complete													
		Well	8,732		-	-					-	-			
30-Jul	6.00	Complete			-	-	861				-	-			
		Well	8,732		-	-					-	-			
					-	-					-	-			
					-	-					-	-			
					-	-					-	-			
	Ferox: 7 Bags Used				-	-					-	-			
					-	-					-	-			

Annex D

Well 14-7 Data

Bill Barrett Well 14-7

Date	Time	Activity	Depth	Inches	Gallons	Gallons Consumed	Rig Report	Feet Drilled	Hrs	Feet/Hr	Gallons/ft	Gallons/HR		Pressure	Pumps #1	Pumps #2
22-Jun	13.30	Rig Up	116	32.000	3,024											
	15.15	Rig Up		31.500	2,977	47			1.8			27.0		1,300	81	84
23-Jun		Drill	116	75.500	7,135											
24-Jun	13.30	Drill	1,745	54.750	5,174	1,961		1,629	48.0	36.4	1.20	40.9		1,707	114	113
	19.00	Drill	1,866	51.250	4,843	331		121	5.5	22.0	2.73	60.1		1,866	120	120
25-Jun	7.00	Drill	2,127	44.500	4,205	638		261	12.0	21.8	2.44	53.2		1,760	114	114
	13.10	Drill	2,323	40.500	3,827	378		196	6.2	31.8	1.93	61.3	215	1,760	114	114
						3,308			71.7				46.1			
	13.30	Set Surface	2,323	87.500	8,269			-	0.5	0.0	-	-	54			
26-Jun	13.30	Set Surface	2,323	84.200	7,957	312		-	24.0	0.0	-	13.0				
27-Jun		Set Surface			7,957	(0)		-		0.0	-	-				
28-Jun	14.00	Set Surface		77.500	7,324	633		-	24.5	0.0	-	25.8				
	21.00	Drill Surface		75.500	7,135	189		-	7.0	0.0	-	27.0		623	118	
29-Jun	9.00	Drill	2,858	71.500	6,757	378	567	535	12.0	44.6	0.71	31.5	37	846	120	
	14.00	Drill	3,076	69.375	6,556	201		218	5.0	43.6	0.92	40.2		719		122
	20.00	Drill	3,322	66.875	6,320	236		246	6.0	41.0	0.96	39.4		787		120
30-Jun	9.00	Drill	3,923	61.250	5,788	532	984	601	13.0	46.2	0.88	40.9		701	119	
	14.30	Drill	4,167	59.500	5,623	165		244	5.5	44.4	0.68	30.1	35	567		120
	20.00	Drill	4,355	57.500	5,434	189		188	5.5	34.2	1.01	34.4		821		119
1-Jul	8.00	Drill	4,873	52.125	4,926	508	984	518	12.0	43.2	0.98	42.3	39	962	120	
	20.00	Drill	5,250	47.625	4,501	425		377	12.0	31.4	1.13	35.4		1,152		120
2-Jul	8.00	Drill	5,603	41.625	3,934	567	945	353	12.0	29.4	1.61	47.3		1,282		120
	20.00	Drill	6,016	36.500	3,449	484		413	12.0	34.4	1.17	40.4	44	1,410	121	
3-Jul	8.00	Drill	6,427	29.500	2,788	662	1,133	411	12.0	34.3	1.61	55.1		1,419	114	
	8.30	Received Fuel		76.500	7,229								45			
	20.00	Drill	6,763	72.000	6,804	425		336	12.0	28.0	1.27	35.4		1,512		120
4-Jul	8.00	Drill	7,093	67.000	6,332	473	898	330	12.0	27.5	1.43	39.4	37	1,221		120
					-	-		-			-	-				
					-	5,245	5,511	-	131.0		-		42.1			
					-	-		-			-	-				
		Ferox: 3 Bags			-	-		-			-	-				
					-	-		-			-	-				
					-	-		-			-	-				
					-	-		-			-	-				
					-	-		-			-	-				
					-	-		-			-	-				

Annex E

Ferox Emissions Test

VEHICLE INSPECTION REPORT

Print Date: 07/25/2007 ** PASS I/M ** ** PASS VISUAL **

Test Date: 07/25/2007 *This document must remain in the vehicle. It may not be used to register the vehicle.* Initial Inspection

CANTRELL M 387 S 200 W OREM UT 84058
TOYOTA CAMRY 1995 Lic. #: 188VEL VIN: 4T1GK13E8SU107679 Odom: 90938 GVW: N/A

Emissions Test PASS Certificate # TSI2952171 Station # U100

High Speed Test					Idle Test				
	HC(ppm)	CO %	CO_2 %	RPM		HC(ppm)	CO %	CO_2 %	RPM
Standard	220	1.20	14.1	2419	Standard	220	1.20	14.6	709
Reading	38	0.21			Reading	96	0.04		
Deviation	182	0.99			Deviation	124	1.16		
Result	PASS	PASS			Result	PASS	PASS		

Visual / Gas Cap	
Air Injection	N/A
Catalytic Converter	PASS
EGR	PASS
Evaporative System	PASS
PCV	PASS
Gas Cap	PASS

Thank you! IF YOU HAVE ANY QUESTIONS REGARDING THE I/M TEST, CALL 801-851-7600.
I certify that I have performed the I/M test according to UTAH County I/M rules.

Inspector's Signature and Permit # X UET001894

This is the 2007 emissions test of a 1995 Toyota Camry that had been driven with Ferox for three months. The odometer registered 90,938 miles at the time of the test.

VEHICLE INSPECTION REPORT

Print Date: 08/01/2008 ** PASS I/M ** ** PASS VISUAL **

Test Date: 08/01/2008 *This document must remain in the vehicle. It may not be used to register the vehicle.* Initial Inspection

CANTRELL M 387 S 200 W OREM UT 84058
TOYOTA CAMRY 1995 Lic. #: 188VEL VIN: 4T1GK13E8SU107679 Odom: 128214 GVW: N/A

Emissions Test PASS Certificate # TSI3198937 Station # U100

High Speed Test					Idle Test				
	HC(ppm)	CO %	CO_2 %	RPM		HC(ppm)	CO %	CO_2 %	RPM
Standard	220	1.20	14.0	2416	Standard	220	1.20	14.2	764
Reading	2	0.01			Reading	0	0.00		
Deviation	218	1.19			Deviation	220	1.20		
Result	PASS	PASS			Result	PASS	PASS		

Visual / Gas Cap	
Air Injection	N/A
Catalytic Converter	PASS
EGR	PASS
Evaporative System	PASS
PCV	PASS
Gas Cap	PASS

Thank you! IF YOU HAVE ANY QUESTIONS REGARDING THE I/M TEST, CALL 801-851-7600.
I certify that I have performed the I/M test according to UTAH County I/M rules.

Inspector's Signature and Permit # X UET000164

This is the same car after one year more with Ferox. The odometer registered 128,214 at the time of the test. Nothing except oil changes was done to the car.

Ferox ensures a clean burning engine!