WELL FLUID COMPOSITION:

	Jurassic wells			Cretecious wells	
	Well-1	**Well-2**	**Well-3**	**Well-4**	**Well-5**
H2S	1.10E-01	3.52E-01	1.82E-01	0	0
CO2	1.63E-02	1.54E-02	1.24E-02	6.19E-03	6.65E-03
Nitrogen	5.01E-04	1.12E-03	6.65E-04	7.99E-04	1.06E-03
Methane	3.09E-01	1.96E-01	2.08E-01	4.07E-01	2.22E-01
Ethane	1.16E-01	6.79E-02	7.00E-02	1.43E-01	8.92E-02
Propane	7.38E-02	5.09E-02	5.03E-02	8.46E-02	7.67E-02
i-Butane	1.11E-02	7.51E-03	0.009031967	1.24E-02	1.34E-02
n-Butane	3.73E-02	2.71E-02	3.16E-02	4.04E-02	4.17E-02
i-Pentane	1.54E-02	1.06E-02	1.43E-02	1.81E-02	1.85E-02
n-Pentane	2.32E-02	1.71E-02	2.23E-02	2.62E-02	2.82E-02
n-Hexane	3.85E-02	2.51E-02	3.52E-02	4.69E-02	4.63E-02
n-Heptane	2.66E-02	2.57E-02	3.58E-02	3.00E-02	4.16E-02
n-Octane	2.41E-02	2.89E-02	3.68E-02	2.45E-02	3.91E-02
n-Nonane	2.45E-02	2.45E-02	3.34E-02	2.15E-02	3.46E-02
n-Decane	2.20E-02	2.28E-02	2.75E-02	1.82E-02	3.32E-02
n-C11	2.03E-02	1.85E-02	2.38E-02	1.68E-02	2.75E-02
n-C12	1.60E-02	1.50E-02	2.03E-02	1.34E-02	2.33E-02
n-C13	1.27E-02	1.29E-02	1.79E-02	1.05E-02	2.07E-02
n-C14	1.03E-02	1.06E-02	1.57E-02	8.49E-03	1.79E-02
n-C15	9.23E-03	9.49E-03	1.46E-02	7.49E-03	1.63E-02
n-C16	7.62E-03	7.85E-03	1.28E-02	6.39E-03	1.46E-02
n-C17	6.12E-03	6.64E-03	1.12E-02	5.19E-03	1.29E-02
n-C18	5.31E-03	5.78E-03	1.03E-02	4.39E-03	1.14E-02
n-C19	5.11E-03	5.69E-03	1.03E-02	4.19E-03	1.10E-02
n-C20	4.61E-03	5.00E-03	9.42E-03	3.60E-03	9.69E-03
n-C21	3.71E-03	4.23E-03	8.13E-03	3.00E-03	8.54E-03
n-C22	3.31E-03	3.80E-03	7.25E-03	2.90E-03	7.95E-03
n-C23	2.81E-03	3.02E-03	6.24E-03	2.40E-03	7.07E-03
n-C24	2.41E-03	2.67E-03	5.35E-03	2.00E-03	6.26E-03
n-C25	2.11E-03	2.33E-03	5.03E-03	1.80E-03	5.66E-03
n-C26	1.91E-03	1.98E-03	4.31E-03	1.50E-03	5.18E-03
n-C27	1.60E-03	1.98E-03	4.15E-03	1.40E-03	4.83E-03
n-C28	1.50E-03	1.55E-03	3.70E-03	1.30E-03	4.47E-03
n-C29	1.40E-03	1.47E-03	3.22E-03	1.20E-03	4.25E-03
n-C30	1.98E-02	7.25E-03	3.72E-02	1.29E-02	8.86E-02
Benzene	4.01E-04	0	0	4.00E-04	
Toluene	3.21E-03	0	0	2.60E-03	
m-Xylene	6.92E-03	0	0	4.79E-03	
o-Xylene	2.41E-03	0	0	2.20E-03	

Sulfur Species Analysis (in ppm mole) for Recombined Sample in 15670IB (RSS-01)

Table 29: Sulfur Species Analysis (in ppm mole) for recombined sample in 15670IB (RSS-01)

Components - Sulfur Species	Mole Weight (g/mole)	Flashed Liquid from RSS (ppm mole)	Flashed gas from RSS (ppm mole)	Mono-phasic RSS (ppm mole)
		as Component	as Component	as Component
Hydrogen Sulfide	34.06	23308.4	352000.0	253554.5
Carbonyl Sulfide	60.08	343.0	47.6	136.1
Methyl mercaptan	48.11	343.8	360.2	355.3
Ethyl mercaptan	62.13	282.4	74.8	137.0
Di methyl sulfide	62.13	0.0	0.9	0.6
Carbon Disulfide	76.17	48.1	21.8	29.7
i-Propyl mercaptan	76.17	190.9	22.1	72.6
Tert.butyl mercaptan	90.19	33.1	1.2	10.8
Ethyl methyl Sulfide	76.16	0.0	0.0	0.0
n-propyl mercaptan	76.17	105.4	4.4	34.6
Thiophene	84.14	0.0	0.0	0.0
Sec-butyl mercaptan	90.19	299.2	4.3	92.7
i-butyl mercaptan	90.19	20.5	0.3	6.3
Diethyl sulfide	89.09	9.1	0.0	2.7
n-butyl mercaptan	90.19	61.3	0.4	18.6
2-methyl-2-Butanethiol	104.22	33.8	0.0	10.1
Thiophene-2-ethyl	112.21	0.0	0.0	0.0
Di methyl disulfide	92.21	0.0	0.0	0.0
Thiophene-2-methyl	98.17	56.9	0.0	17.0
i-pentyl mercaptan	104.22	10.1	0.0	3.0
1-butanethiol_2-methyl (Amyl)	104.22	19.1	0.0	5.7
n-pentyl mercaptan	104.22	38.0	0.0	11.4
Thiophene-2,5-Dimethyl	112.21	0.0	0.0	0.0
Di propyl Sulfide	118.24	13.1	0.0	3.9
Ditert.Butyl Sulfide	146.10	0.0	0.0	0.0
n-Hexyl mercaptan	118.24	48.1	0.0	14.4
Di-Sec.butyl Sulfide	146.12	0.0	0.0	0.0
n-Heptyl mercaptan	132.27	9.8	0.0	2.9
Di Butyl Sulfide	120.25	0.0	0.0	0.0
n-Octyl mercaptan	146.30	24.0	0.0	7.2
n-Nonyl mercaptan	160.33	0.0	0.0	0.0
Unidentified Sulfur Components	-	27811.7	19.6	8343.5
Total sulfur (ppm Mole)		53109.8	352557.5	262870.8
STL Density @ 60°F		0.812		
Molecular weight		172.0	32.8	74.5
Gas gravity (Air=1)			1.133	
Molar ratio		0.2995	0.7005	1.0000
GLR (Scf/stb)				1469

Kuwait Oil Company (K.S.C)
MU-001C

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RFLK 20140079

Sulfur Species data for Separator Gas Sample (Cylinder Number:A03489)

Component Name [*Synonym*]	Boiling Point (°C)	Molar ppm	Sulfur compound as sulfur, $mg.kg^{-1}$
Sulfides			
hydrogen sulfide	-60	325300	348750
carbonyl sulfide [*sulfanylidenemethanone*]	-50	<0.10	<0.11
dimethyl sulfide [*methylsulfanylmethane*]	38	1.06	1.14
carbon disulfide [*methanedithione*]	46	0.18	0.38
ethyl methyl sulfide [*methylsulfanylethane*]	67	<0.10	<0.11
diethyl sulfide *[ethylsulfanylethane]*	92	<0.10	<0.11
tert butyl methyl sulfide [*2-methyl-2-methylsulfanyl-propane*]	100	0.51	0.55
dimethyl disulfide [*methyldisulfanylmethane*]	110	<0.05	<0.11
dipropyl sulfide [*1-propylsulfanylpropane*]	142	<0.10	<0.11
diethyl disulfide [*ethyldisulfanylethane*]	154	0.32	0.69
di-sec butyl sulfide [*2-butan-2-ylsulfanylbutane*]	165	<0.10	<0.11
dibutyl sulfide [*1-butylsulfanylbutane*]	189	<0.10	<0.11
		325300	348750
Thiols (Mercaptans)			
methanethiol	6	56.7	60.8
ethanethiol	36	42.1	45.2
propane-2-thiol	55	18.4	19.7
2-methylpropane-2-thiol	64	11.5	12.4
propane-1-thiol	68	5.21	5.59
butane-2-thiol [*1-methyl-1-propanethiol*]	85	<0.10	<0.11
2-methylpropane-1-thiol	88	1.7	1.82
butane-1-thiol	98	0.86	0.93
3-methylbutane-1-thiol	118	<0.10	<0.11
2-methylbutane-1-thiol	119	<0.10	<0.11
pentane-1-thiol / tetrahydrothiophene*	126	<0.10	<0.11
hexane-1-thiol	153	<0.10	<0.11
heptane-1-thiol	177	<0.10	<0.11
octane-1-thiol	199	<0.10	<0.11
nonane-1-thiol	220	<0.10	<0.11
		136	146
Thiophenes			
thiophene	84	6.06	6.5
2-methylthiophene	113	<0.10	<0.11
3-methylthiophene	115	<0.10	<0.11
tetrahydrothiophene / pentane-1-thiol* [*thiolane*]	120	<0.10	<0.11
2-ethylthiophene	134	0.62	0.67
2,5-dimethylthiophene	137	<0.10	<0.11
2-propylthiophene	158	<0.10	<0.11
2-butylthiophene	182	<0.10	<0.11
3-butylthiophene	182	<0.10	<0.11
1-benzothiophene	221	<0.10	<0.11
		6.68	7.17
Other unidentified sulfur compounds by approximate boiling range bounded by n-thiol compounds			
propane-1-thiol to butane-1-thiol	68 to 98	0.69	0.74
butane-1-thiol to pentane-1-thiol	98 to 126	2.31	2.48
pentane-1-thiol to hexane-1-thiol	126 to 153	1.03	1.1
hexane-1-thiol to heptane-1-thiol	153 to 177	<0.10	<0.11
heptane-1-thiol to octane-1-thiol	177 to 199	<0.10	<0.11
octane-1-thiol to nonane-1-thiol	199 to 220	<0.10	<0.11
		4.03	4.32

* - Compounds co-elute hence cannot be distinguished from each other. Composite amount reported twice.
Amounts calculated for the unidentified compounds assumes the compounds have -thiol properties

Sulfur Species data for Separator Gas Sample (Cylinder Number:A03484)

Component Name [*Synonym*]	Boiling Point (°C)	Molar ppm	Sulfur compound as sulfur, $mg.kg^{-1}$
Sulfides			
hydrogen sulfide	-60	306000	337890
carbonyl sulfide [*sulfanylidenemethanone*]	-50	<0.10	<0.11
dimethyl sulfide [*methylsulfanylmethane*]	38	0.98	1.08
carbon disulfide [*methanedithione*]	46	<0.05	<0.11
ethyl methyl sulfide [*methylsulfanylethane*]	67	<0.10	<0.11
diethyl sulfide *[ethylsulfanylethane]*	92	<0.10	<0.11
tert butyl methyl sulfide [*2-methyl-2-methylsulfanyl-propane*]	100	0.5	0.55
dimethyl disulfide [*methyldisulfanylmethane*]	110	<0.05	<0.11
dipropyl sulfide [*1-propylsulfanylpropane*]	142	<0.10	<0.11
diethyl disulfide [*ethyldisulfanylethane*]	154	<0.05	<0.11
di-sec butyl sulfide [*2-butan-2-ylsulfanylbutane*]	165	<0.10	<0.11
dibutyl sulfide [*1-butylsulfanylbutane*]	189	<0.10	<0.11
		306000	337890
Thiols (Mercaptans)			
methanethiol	6	51.9	57.3
ethanethiol	36	36.5	40.3
propane-2-thiol	55	15.8	17.5
2-methylpropane-2-thiol	64	9.46	10.4
propane-1-thiol	68	4.37	4.82
butane-2-thiol [*1-methyl-1-propanethiol*]	85	<0.10	<0.11
2-methylpropane-1-thiol	88	1.71	1.88
butane-1-thiol	98	0.76	0.84
3-methylbutane-1-thiol	118	<0.10	<0.11
2-methylbutane-1-thiol	119	<0.10	<0.11
pentane-1-thiol / tetrahydrothiophene*	126	0.14	0.15
hexane-1-thiol	153	<0.10	<0.11
heptane-1-thiol	177	<0.10	<0.11
octane-1-thiol	199	<0.10	<0.11
nonane-1-thiol	220	<0.10	<0.11
		121	133
Thiophenes			
thiophene	84	5.13	5.66
2-methylthiophene	113	<0.10	<0.11
3-methylthiophene	115	<0.10	<0.11
tetrahydrothiophene / pentane-1-thiol* [*thiolane*]	120	0.14	0.15
2-ethylthiophene	134	0.27	0.3
2,5-dimethylthiophene	137	<0.10	<0.11
2-propylthiophene	158	<0.10	<0.11
2-butylthiophene	182	<0.10	<0.11
3-butylthiophene	182	<0.10	<0.11
1-benzothiophene	221	<0.10	<0.11
		5.54	6.11
Other unidentified sulfur compounds by approximate boiling range bounded by n-thiol compounds			
propane-1-thiol to butane-1-thiol	68 to 98	0.44	0.49
butane-1-thiol to pentane-1-thiol	98 to 126	1.59	1.76
pentane-1-thiol to hexane-1-thiol	126 to 153	1.04	1.14
hexane-1-thiol to heptane-1-thiol	153 to 177	<0.10	<0.11
heptane-1-thiol to octane-1-thiol	177 to 199	<0.10	<0.11
octane-1-thiol to nonane-1-thiol	199 to 220	<0.10	<0.11
		3.07	3.39

* - Compounds co-elute hence cannot be distinguished from each other. Composite amount reported twice.
Amounts calculated for the unidentified compounds assumes the compounds have -thiol properties