

5.4 Well Test

5.4.1 Operations

Perforation :

The interval 5304.4 - 5334 mMD RKB (4691.3 - 4717.2 mTVD RKB) was perforated on January 27, 1998 against a closed choke manifold. The well was perforated with 80 bar underbalance with a mixture of seawater and glycol in the tubing and 1.24 SG brine in the perforation interval. The perforation was performed with Schlumberger 3 ½" TCP guns with HNS DP charges, four shots per foot.

Clean-up period :

The well was opened on a 8/64" adjustable choke and gradually increased up to 20/64" choke during the clean-up period. Gas to surface was observed approximately one and a half hour after the well was opened. The choke was increased to 24/64" fixed choke for a 2 hrs period of time before start multirate flow period # 1. The clean-up period is shown in Figure 5.2.

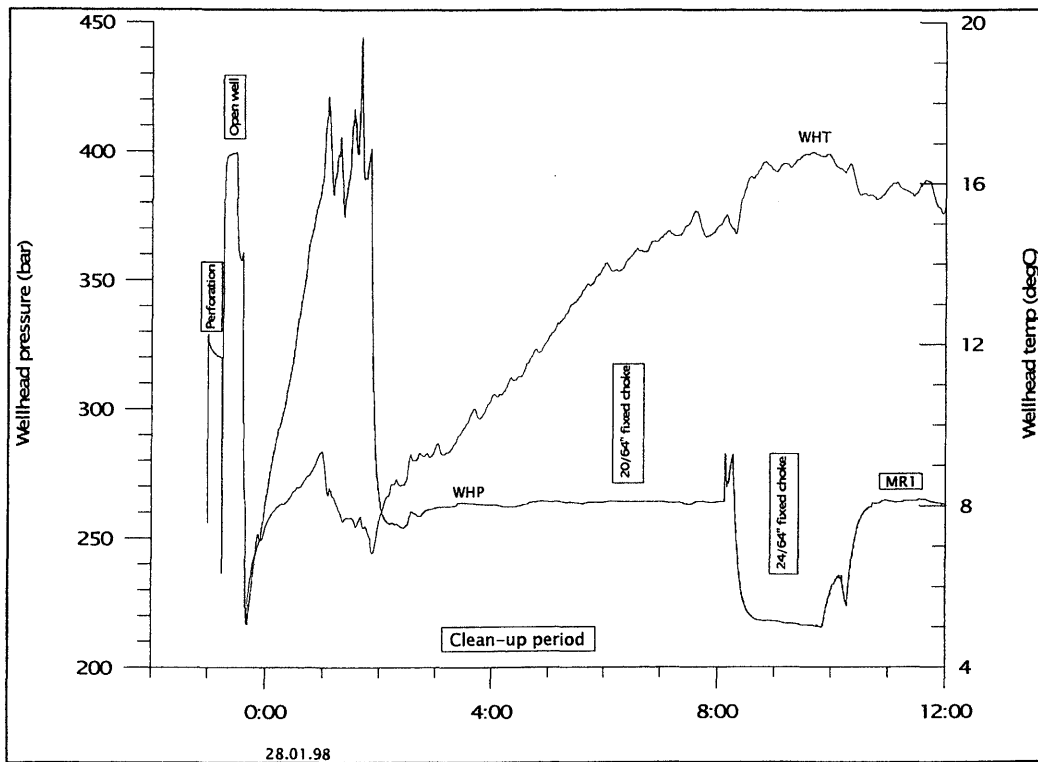


Figure 5.2 Clean-up flow, 6406/2-5AT2

Multirate periods :

Three steps multirate was performed from January 28 to January 30. First, 11.4 hrs on a 20/64" fixed choke, then 9.3 hrs on a 24/64" fixed choke and 19.8 hrs on the third flowrate on 28/64" fixed choke. The duration of the third flowrate was planned to be 24 hrs. Due to a leaking oil line to the burner, the flow was stopped after approximately 20 hrs. The well was killed after the final 24 hours build-up period.

A summary of the flow and build-up periods are shown in Table 5.6. Main results are shown graphically in Figure 5.3. A summary of the production results from the end of each flow period is shown in Table 5.7.

Table 5.6 Flow- and build-up periods, 6406/2-5AT2

Period	Event	Duration (hr)
CF1	Clean-up flow (up to 20/64")	8.68
CF2	Continue clean-up on 24/64"	2.18
MR1	1 st multi rate flow (20/64")	11.40
MR2	2 nd multi rate flow (24/64")	9.32
MR3	3 rd multi rate flow (28/64")	19.77
BU1	Main build-up	24.83

Table 5.7 Summary of production results, 6406/2-5AT2

Period	Final flowing WHP (bar)	Final flowing WHT (degC)	Final flowing BHP ¹⁾ (bar)	Final flowing BHT ¹⁾ (degC)	Q _{GAS} (Sm ³ /d)	Q _{COND} (Sm ³ /d)	GOR ²⁾ (Sm ³ /Sm ³)	PI (Sm ³ /d/bar)
MR1	263.9	18.4	496.8	169.7	192500	227	847	485
MR2	214.9	19.2	443.0	169.8	209000	251	833	464
MR3	169.1	14.0	388.5	169.6	221500	274	821	438

¹⁾ Schlumberger WTQR # 773 @ 5252.9 mMD RKB.
²⁾ Refers to 17 bar and 38 degC separator conditions.

5.4.2 Fluid Sampling and Analysis

The test production yielded a rich and undersaturated gas-condensate. There are no measurements of the saturation point, but multiphase conditions were present at well head during all flow periods. All planned PVT samples were collected, but PVT samples from this well were later lost.

6406/2-5AT2 5304.4 - 5334 mMD RKB

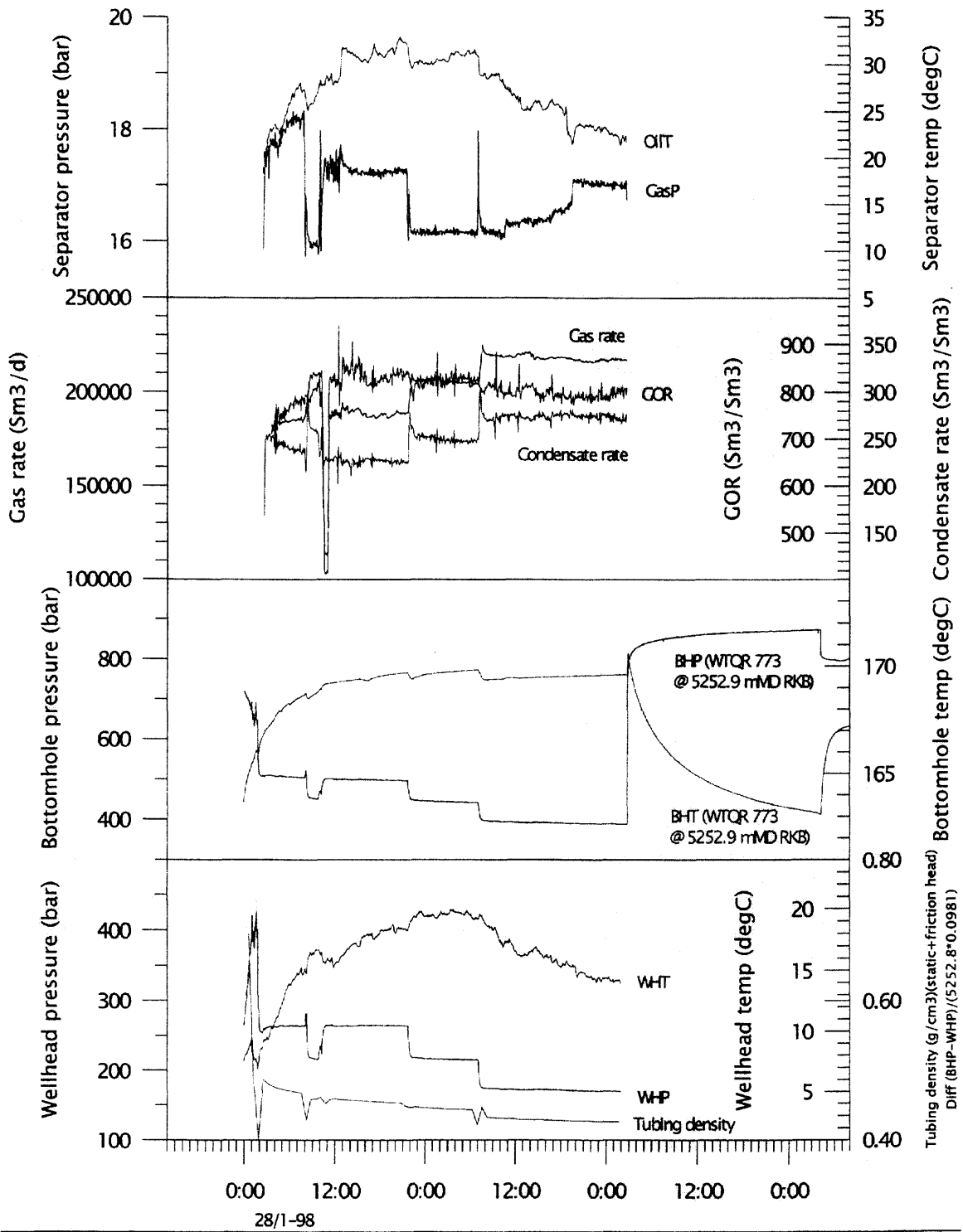


Figure 5.3 Production results, 6406/2-5AT2

6.2 Mud Data

6.2.1 Mud Properties, Daily Report

Table 6.2.1 lists the daily reported mud properties (7 pages)

6.2.2 Mud Materials Used

The mud material consumption is shown in Table 6.2.2 (1 page)

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
970929	17 1/2"		1.64	40.0	30.0	8/14	8.0	/2.0	440	86000	.3	24.0	WATER BASED
970930	17 1/2"		1.64	35.0	25.0	7/12	8.0	/1.7	440	85000	.3	24.0	WATER BASED
971001	17 1/2"		1.64	35.0	25.0	7/12	8.2	/1.0	440	85000	.3	24.0	WATER BASED
971002	17 1/2"	1433.0	1.45	27.0	21.0	5/11	10.8	.6/2.8	360	84000	.3	18.5	WATER BASED
971004	17 1/2"	2274.0	1.65	30.0	38.0	9/16	10.0	.3/2.6	480	86000	1.0	24.0	WATER BASED
971005	17 1/2"	2643.0	1.69	35.0	33.0	7/16	8.2	.1/.8	560	89000	1.7	22.3	WATER BASED
971006	17 1/2"	2643.0	1.69	35.0	33.0	7/16	8.2	.1/.8	560	89000	1.7	22.3	WATER BASED
971007	17 1/2"	2643.0	1.68	30.0	33.0	8/19	9.0	.2/.6	640	90000	2.0	22.2	WATER BASED
971008	17 1/2"	2643.0	1.69	36.0	32.0	11/24	11.0	.2/1.0	760	90000	2.0	28.0	WATER BASED
971009	17 1/2"	2643.0	1.69	37.0	29.0	9/22	11.4	.3/1.2	720	89000	2.0	26.0	WATER BASED
971010	17 1/2"	2643.0	1.68	34.0	32.0	9/21	10.9	.2/1.3	400	89000	2.0	27.5	WATER BASED
971011	17 1/2"	1731.0	1.68	44.0	41.0	10/28	10.4	.2/1.2	400	91000	1.5	26.5	WATER BASED
971012	17 1/2"	2022.0	1.66	41.0	41.0	10/26	8.9	.2/.0	400	95000	1.0	27.0	WATER BASED
971015	17 1/2"	2825.0	1.68	48.0	42.0	10/28	7.9	/1.4	580	110000	1.0	28.6	WATER BASED

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
971008	17 1/2"	2643.0	1.69	36.0	32.0	11/24	11.0	/	760	90000	2.0	28.0	KCl MUD
971009	17 1/2"	2643.0	1.69	36.0	32.0	11/24	11.0	/	760	90000	2.0	28.0	KCl MUD
971010	17 1/2"	2643.0	1.68	36.0	32.0	11/24	11.0	/	760	90000	2.0	28.0	KCl MUD
971011	17 1/2"	1731.0	1.68	36.0	32.0	11/24	11.0	/	760	90000	2.0	28.0	KCl MUD
971012	17 1/2"	2022.0	1.66	36.0	32.0	11/24	11.0	/	760	90000	2.0	28.0	KCl MUD
971013	17 1/2"	2181.0	1.65	40.0	39.0	11/32	9.0	/	480	99000	1.0	27.0	KCl MUD
971014	17 1/2"	2560.0	1.68	43.0	43.0	10/29	8.0	/1.1	500	107000	.8	28.0	KCl MUD
971015	17 1/2"	2825.0	1.68	48.0	42.0	10/28	7.9	/1.4	580	110000	1.0	28.6	KCl MUD
971016	17 1/2"	2825.0	1.68	45.0	35.0	7/19	8.3	/1.3	560	106000	1.2	28.5	KCl MUD
971017	17 1/2"	2825.0	1.69	46.0	34.0	7/20	8.2	/1.3	560	106000	1.2	28.5	KCl MUD
971018	17 1/2"	2825.0	1.69	46.0	35.0	7/20	8.2	/1.3	560	106000	1.2	28.5	KCl MUD
971019	17 1/2"	2825.0	1.69	46.0	35.0	7/20	8.2	/1.3	560	106000	1.2	28.5	KCl MUD
971020	12 1/4"	2825.0	1.69	46.0	36.0	7/20	8.2	/1.3	520	106000	1.2	28.5	KCl MUD
971021	12 1/4"	2825.0	1.66	50.0	18.0	9/14	/	/	/	82823	1.0	26.0	OIL BASED
971022	12 1/4"	3510.0	1.70	58.0	21.0	10/16	/	/	/	72078	1.0	27.5	OIL BASED
971023	12 1/4"	3510.0	1.71	53.0	19.0	10/16	/	/	/	75994	1.0	28.0	OIL BASED
971024	12 1/4"	3802.0	1.73	52.0	18.0	11/17	/	/	/	75994	1.0	28.5	OIL BASED
971025	12 1/4"	4003.0	1.74	53.0	19.0	11/17	/	/	/	74026	1.0	29.5	OIL BASED
971026	12 1/4"	4098.0	1.74	55.0	18.0	11/17	/	/	/	79813	1.2	29.0	OIL BASED
971027	12 1/4"	4200.0	1.74	54.0	21.0	11/18	/	/	/	79264	1.2	29.5	OIL BASED
971028	12 1/4"	4379.0	1.74	56.0	22.0	12/20	/	/	/	81238	1.2	29.5	OIL BASED
971029	12 1/4"	4404.0	1.74	58.0	23.0	12/20	/	/	/	78740	1.2	29.5	OIL BASED
971030	12 1/4"	4533.0	1.75	56.0	21.0	11/19	/	/	/	87566	1.2	30.0	OIL BASED
971031	12 1/4"	4690.0	1.78	53.0	19.0	9/18	/	/	/	87566	1.2	30.5	OIL BASED
971101	12 1/4"	4763.0	1.81	56.0	21.0	11/19	/	/	/	90237	1.0	31.5	OIL BASED
971102	12 1/4"	4763.0	1.81	55.0	20.0	10/18	/	/	/	90237	1.0	31.5	OIL BASED
971103	12 1/4"	4763.0	1.81	55.0	20.0	10/18	/	/	/	90237	1.0	31.5	OIL BASED

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
971104	12 1/4"	4763.0	1.81	55.0	20.0	10/18		/		90237	1.0	31.5	OIL BASED
971105	12 1/4"	4860.0	1.82	57.0	22.0	11/20		/		93476	1.0	32.0	OIL BASED
971106	12 1/4"	4949.0	1.82	63.0	22.0	10/20		/		86878	.7	32.0	OIL BASED
971107	12 1/4"	4952.0	1.82	63.0	20.0	10/20		/		86878	.7	32.0	OIL BASED
971108	12 1/4"	5104.0	1.82	55.0	18.0	8/17		/		93226	.6	32.5	OIL BASED
971109	12 1/4"	5143.0	1.82	53.0	18.0	9/17		/		89770	.7	31.5	OIL BASED
971110	12 1/4"	5143.0	1.82	54.0	18.0	8/17		/		89770	.7	31.5	OIL BASED
971111	12 1/4"	5143.0	1.82	55.0	17.0	8/18		/		89770	.7	31.5	OIL BASED
971112	12 1/4"	5143.0	1.82	58.0	22.0	9/18		/		89428	.7	31.5	OIL BASED
971113	12 1/4"	5143.0	1.82	55.0	21.0	9/19		/		86096	.7	31.5	OIL BASED
971114	12 1/4"	5143.0	1.82	54.0	24.0	9/19		/		86096	.7	31.5	OIL BASED
971115	12 1/4"	5143.0	1.82	56.0	21.0	9/19		/		86539	.7	31.5	OIL BASED
971116	12 1/4"	5143.0	1.82	55.0	23.0	9/19		/		86539	.7	31.5	OIL BASED
971117	12 1/4"	5143.0	1.82	55.0	23.0	9/19		/		86539	.7	31.5	OIL BASED
971118	8 1/2"	5143.0	1.82	55.0	23.0	9/20		/		86539	.7	31.5	OIL BASED
971119	8 1/2"	5143.0	1.82	55.0	23.0	9/20		/		86539	.7	31.5	OIL BASED
971120	8 1/2"	5143.0	1.82	54.0	22.0	9/20		/		86539	.7	31.5	OIL BASED
971121	8 1/2"	5143.0	1.82	54.0	22.0	9/20		/		86539	.7	31.5	OIL BASED
971122	8 1/2"	5143.0	1.82	54.0	22.0	9/20		/		87000	.7	31.5	OIL BASED
971123	8 1/2"	5143.0	1.82	54.0	22.0	9/20		/		87000	.7	31.5	OIL BASED
971124	8 1/2"	5143.0	1.82	55.0	23.0	9/19		/		87000	.7	31.5	OIL BASED
971125	8 1/2"	5149.0	2.00	74.0	24.0	11/18		/		87000	.5	37.0	OIL BASED
971126	8 1/2"	5157.0	2.00	62.0	21.0	9/14		/		87000	.5	37.0	OIL BASED
971127	8 1/2"	5184.0	2.00	57.0	18.0	9/15		/		90000	.5	36.5	OIL BASED
971128	8 1/2"	5218.0	2.03	60.0	16.0	9/16		/		100000	.5	36.5	OIL BASED
971129	8 1/2"	5277.0	2.03	61.0	18.0	9/15		/		97000	.7	36.5	OIL BASED
971130	8 1/2"	5302.0	2.04	64.0	17.0	10/17		/		101000	.7	37.0	OIL BASED

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
971201	8 1/2"	5302.0	2.04	64.0	18.0	10/16	/	/	97000	.7	37.0	OIL BASED	
971202	8 1/2"	5302.0	2.04	60.0	17.0	9/15	/	/	97000	.8	36.5	OIL BASED	
971203	8 1/2"	5302.0	2.04	63.0	18.0	9/16	/	/	96790	.8	36.5	OIL BASED	
971204	8 1/2"	5325.0	2.04	67.0	23.0	12/18	/	/	96930	1.0	36.5	OIL BASED	
971205	8 1/2"	5326.0	2.04	65.0	21.0	11/16	/	/	96930	1.0	36.5	OIL BASED	
971206	8 1/2"	5326.0	2.04	65.0	21.0	9/15	/	/	96930	1.0	36.5	OIL BASED	
971207	8 1/2"	5354.0	2.04	68.0	22.0	12/19	/	/	96930	1.0	36.5	OIL BASED	
971208	8 1/2"	5354.0	2.04	65.0	25.0	12/19	/	/	96930	.8	37.5	OIL BASED	
971209	8 1/2"	5354.0	2.04	67.0	26.0	13/19	/	/	96930	.8	37.5	OIL BASED	
971210	8 1/2"	5391.0	2.04	65.0	23.0	12/18	/	/	105389	.8	37.5	OIL BASED	
971211	8 1/2"	5390.5	2.04	68.0	27.0	13/20	/	/	101166	.8	37.5	OIL BASED	
971212	8 1/2"	5429.0	2.04	67.0	25.0	13/20	/	/	101166	.8	37.5	OIL BASED	
971213	8 1/2"	5429.0	2.04	****	25.0	12/17	/	/	96930	.8	37.5	OIL BASED	
971214	8 1/2"	5491.0	2.05	71.0	25.0	13/22	/	/	109114	1.5	37.5	OIL BASED	
971215	8 1/2"	5505.0	2.04	71.0	25.0	13/21	/	/	105063	1.4	37.5	OIL BASED	
971216	8 1/2"	5528.0	2.04	70.0	24.0	12/20	/	/	101002	1.3	37.5	OIL BASED	
971217	8 1/2"	5528.0	2.04	70.0	28.0	13/23	/	/	101002	1.2	37.5	OIL BASED	
971218	8 1/2"	5554.5	2.04	75.0	26.0	13/23	/	/	101002	1.2	37.5	OIL BASED	
971219	8 1/2"	5554.5	2.04	74.0	30.0	14/23	/	/	101002	1.5	38.0	OIL BASED	
971220	8 1/2"	5554.5	2.04	74.0	30.0	14/23	/	/	101002	1.5	38.0	OIL BASED	
971221	8 1/2"	5554.5	2.04	74.0	30.0	14/23	/	/	101002	1.5	38.0	OIL BASED	
971222	8 1/2"	5554.5	2.04	74.0	30.0	14/23	/	/	101002	1.5	38.0	OIL BASED	
971223	8 1/2"	5554.5	2.04	80.0	31.0	15/25	/	/	105000	1.5	37.5	OIL BASED	
971224	8 1/2"	5554.5	2.04	82.0	30.0	15/25	/	/	105000	1.6	37.5	OIL BASED	
971225	8 1/2"	5554.5	2.04	87.0	31.0	16/27	/	/	97000	1.5	38.5	OIL BASED	
971226	8 1/2"	5554.5	2.04	84.0	31.0	16/26	/	/	97000	1.5	38.5	OIL BASED	
971227	8 1/2"	5600.0	2.04	87.0	31.0	17/27	/	/	97000	1.5	38.5	OIL BASED	

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
971228	8 1/2"	5600.0	2.04	86.0	31.0	17/27		/		97000	1.5	38.5	OIL BASED
971229	8 1/2"	5600.0	2.04	85.0	30.0	17/26		/		112000	1.5	38.0	OIL BASED
971230	8 1/2"	5600.0	2.04	82.0	27.0	15/26		/		117000	1.5	38.5	OIL BASED
971231	8 1/2"	5600.0	2.04	83.0	32.0	15/26		/		117000	1.5	38.5	OIL BASED
980101	8 1/2"	5600.0	2.04	78.0	28.0	14/24		/		117000	1.5	38.5	OIL BASED
980102	8 1/2"	5600.0	2.04	84.0	30.0	14/24		/		117000	1.5	38.5	OIL BASED
980103	8 1/2"	5600.0	2.04	71.0	21.0	12/23		/		118000	1.3	39.0	OIL BASED
980104	8 1/2"	5600.0	2.04	71.0	21.0	12/23		/		118000	1.3	39.0	OIL BASED
980105	8 1/2"	5600.0	2.04	69.0	21.0	12/23		/		118000	1.3	38.5	OIL BASED
980106	8 1/2"	5600.0	2.04	76.0	25.0	11/21		/		123000	1.3	39.0	OIL BASED
980107	PT#1	5600.0	2.04	76.0	24.0	11/22		/		123411	1.3	39.0	OIL BASED
980108	PT#1	5600.0	2.04	84.0	29.0	15/27		/		118087	1.3	38.0	OIL BASED
980109	PT#1	5600.0	2.04	80.0	28.0	13/22		/		118087	1.3	38.0	OIL BASED
980110	PT#1	5600.0	2.04	80.0	29.0	13/22		/		118087	1.3	38.0	OIL BASED
980111	PT#1	5600.0	2.04	80.0	29.0	13/22		/		118087	1.3	38.0	OIL BASED
980112	PT#1	5600.0	2.04	80.0	29.0	13/22		/		118087	1.3	38.0	OIL BASED
980113	PT#1	5600.0	2.04	80.0	29.0	13/22		/		118087	1.3	38.0	OIL BASED
980114	PT#1	5600.0	1.24			/		/					BRINE
980115	PT#1	5600.0	1.24			/		/					BRINE
980116	PT#1	5600.0	1.24			/		/					BRINE
980117	PT#1	5600.0	1.24			/		/					BRINE
980118	PT#1	5600.0	1.24			/		/					BRINE
980119	PT#1	5600.0	1.24			/		/					BRINE
980120	PT#1	5600.0	1.24			/		/					BRINE
980121	PT#1	5600.0	1.24			/		/					BRINE
980122	PT#1	5600.0	1.24			/		/					BRINE
980123	PT#1	5600.0	1.24			/		/					BRINE

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
980124	PT#1	5600.0	1.24			/		/					BRINE
980125	PT#1	5600.0	1.24			/		/					BRINE
980126	PT#1	5600.0	1.24			/		/					BRINE
980127	PT#1	5600.0	1.24			/		/					BRINE
980128	PT#1	5600.0	1.24			/		/					BRINE
980129	PT#1	5600.0	1.24			/		/					BRINE
980130	PT#1	5600.0	1.24			/		/					BRINE
980131	PT#1	5600.0	1.24			/		/					BRINE
980201	PT#1	5600.0	1.24			/		/					BRINE
980202	PT#1	5600.0	1.24			/		/					BRINE
980203	PT#1	5600.0	1.24			/		/					BRINE
980204	PT#1	5600.0	2.04	86.0	24.0	10/18		/		147000	1.0	35.5	OIL BASED
980205	PT#1	5600.0	2.04	86.0	24.0	10/18		/		147000	1.0	35.5	OIL BASED
980206	PT#1	5600.0	2.04	86.0	24.0	10/18		/		147000	1.0	35.5	OIL BASED
980207	P&A	5600.0	2.04	86.0	24.0	10/17		/		138000	1.0	35.5	OIL BASED
980208	P&A		2.04	86.0	28.0	10/17		/		138000	1.0	35.5	OIL BASED
980209	P&A		2.04	75.0	18.0	9/13		/		138000	1.0	35.5	OIL BASED
980210	P&A		1.90	42.0	12.0	6/8		/		138000	1.0	35.5	OIL BASED
980211	P&A		1.90	42.0	12.0	6/8		/		138000	1.0	35.5	OIL BASED
980212	P&A		1.82	8.0	26.0	18/28		/					WATER BASED
980213	P&A		1.82	15.0	17.0	14/27		/					WATER BASED
980214	P&A		1.82	15.0	17.0	14/27		/					WATER BASED
980215	P&A		1.69	15.0	17.0	14/27		/					WATER BASED
980216	P&A		1.65	8.0	11.0	7/14		/					WATER BASED
980217	P&A					/		/					WATER BASED
980218	P&A					/		/					WATER BASED
980219	P&A					/		/					WATER BASED

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
980220						/		/					WATER BASED
980221						/		/					WATER BASED
980222						/		/					WATER BASED
980223						/		/					WATER BASED

Mud Materials Used

6.2.2

WELL 6406/2-5AT2

Material	Unit	17 ½"	17 ½"	12 ¼"	8 ½"	Test & P&A	Total
Anco 208 in brine	LT	33400	25500				58900
Anco 208 bulk	LT		7900				7900
Borewell	KG		950				950
Anco Vert P	KG			15200	950		16150
Anco Vert S	KG			6100			6100
Anco Vert Vis	KG			6325	2825	1025	10175
Anco Vert F	KG			3175			3175
Anco Vert M	KG			620			620
Anco Tec B	LT				8000		8000
CaCl ₂	KG			3000	6000		9000
Anco Vert mud	M3			607	658	451	1716
Anco Vert Transfer	M3			658	881	235	1774
Barite	MT	422	499	433	583	804	2741
Base oil EDC 95/11	M3			264	171	215	650
Bentonite	MT					17	17
Defoamer	KG		25				25
Citric Acid	KG	2225	5650			925	8800
Glydrill	M3	346					346
KCL Brine	M3	431	552.5				984
KCL Powder	KG	12000	12000				24000
Versapro p/s	KG				15200	7600	22800
Versatrol	KG				7500		7500
Lime	KG			7800	8875	25	16700
Bicarb of Soda	KG	3750	4450			1150	9350
Soda Ash	KG		375			75	450
Flowzan	KG	1875	1725	100		1100	4800
Renax	KG			200			200
Lampac LV	KG	7475	9900				17374

SUMMARY & INTRODUCTION

Client name	Saga Petroleum A.S.A.
Well names	6406/2-5T2
Location	Haltenbanken
Dates of receipt	19/5/98
Dates of analysis	15/6/98 - 2/9/98
Sample types	Cuttings
RL job no	98019
Client ref. nos.	K-FK-94-052 9 000 000 546

Wet ditch cuttings were received in geochemical cans from well 6406/2-5T2. 102 samples were submitted for analysis in the interval 2660 - 5595m.

The objective of this report is to present analytical data produced from the samples documented above. All selection of analysis was carried out by Saga's personnel. The isotope analysis presented in this report was performed, at Saga's request, by IFE.

The tables on pages 4 to 6 of this report fully document the analysis carried out on each sample. No advanced geochemistry was performed on this well. Contamination problems caused by the mud system meant that analysis was halted after Rock Eval pyrolysis analysis.

EXPERIMENTAL PROCEDURES

Unless otherwise stated, analysis was carried out following 'the Norwegian Industry Guide to Organic Geochemical Analysis, November 1992'. A detailed table documenting the methodologies adopted can be found overleaf.

EXPERIMENTAL PROCEDURES (Table 1)

ANALYSIS	INSTRUMENT	METHOD	TEMPERATURE PROGRAM	COLUMNS
Headspace gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
Occluded gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
TOC	Leco CS 125	OLS 1 *		
Rock Eval Pyrolysis	Rock Eval II	OLS 5 *	Cycle 1	
Qualitative Extraction	Soxhtec Tecator 1043	NPD method	Boil 1 hr, rinse 2hrs (DCM:MeOH, 7:1)	
Isotope analysis	sub contracted and run at Saga's request by IFE			

* - TOC and Rock Eval methods are comparable with NPD method. However we do not have Black Ven Marl. Consequently, the Rock calibrated with a standard related to Delsi IFP standard. In house check standards are run at greater frequency than prescribed in the guidelines. Furthermore, both these methods are UKAS accredited. Robertson Laboratories has been UKAS accredited for the majority of its geochemical services since 1991. UKAS, an organisation established by the UK government, has reciprocal agreements with Norske UKAS accreditation is specifically designed for laboratory testing and is broadly based on ISO 9001. Robertson Laboratories were audited by Saga (Audit no. SAGA-93-110) and its geochemical methods which are accredited by UKAS were found to be satisfactory.

Analytical Program (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	RockEvalPyrolysis	Solvent Clean Up Extn
6406/2-5A T2	98019-1	2660.0	2660.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-2	2690.0	2690.0	Cuttings	X	X		X	X	X	X
6406/2-5A T2	98019-2X	2690.0	2690.0	SE Ctgs						X	
6406/2-5A T2	98019-3	2720.0	2720.0	Cuttings	X	X	X	X	X		
6406/2-5A T2	98019-4	2750.0	2750.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-5	2780.0	2780.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-6	2810.0	2810.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-7	2840.0	2840.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-8	2870.0	2870.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-9	2900.0	2900.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-10	2930.0	2930.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-11	2960.0	2960.0	Cuttings	X	X		X	X	X	X
6406/2-5A T2	98019-11X	2960.0	2960.0	SE Ctgs						X	
6406/2-5A T2	98019-12	2990.0	2990.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-13	3020.0	3020.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-14	3050.0	3050.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-15	3080.0	3080.0	Cuttings	X	X	X	X	X		
6406/2-5A T2	98019-16	3110.0	3110.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-17	3140.0	3140.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-18	3170.0	3170.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-19	3220.0	3220.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-20	3250.0	3250.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-21	3280.0	3280.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-22	3310.0	3310.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-23	3340.0	3340.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-24	3370.0	3370.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-25	3410.0	3410.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-26	3440.0	3440.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-27	3470.0	3470.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-28	3500.0	3500.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-29	3530.0	3530.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-30	3560.0	3560.0	Cuttings	X	X		X	X	X	X
6406/2-5A T2	98019-30X	3560.0	3560.0	SE Ctgs						X	
6406/2-5A T2	98019-31	3590.0	3590.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-32	3620.0	3620.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-33	3690.0	3690.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-34	3720.0	3720.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-35	3750.0	3750.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-36	3800.0	3800.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-37	3830.0	3830.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-38	3860.0	3860.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-39	3890.0	3890.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-40	3920.0	3920.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-41	3950.0	3950.0	Cuttings	X	X		X	X		

Analytical Program (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	RockEvalPyrolysis	Solvent Clean Up Extn
6406/2-5A T2	98019-42	3980.0	3980.0	Cuttings	X	X		X	X	X	X
6406/2-5A T2	98019-42X	3980.0	3980.0	SE Ctgs						X	
6406/2-5A T2	98019-43	4010.0	4010.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-44	4040.0	4040.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-45	4070.0	4070.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-46	4100.0	4100.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-47	4130.0	4130.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-48	4160.0	4160.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-49	4190.0	4190.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-50	4220.0	4220.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-51	4250.0	4250.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-52	4280.0	4280.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-53	4310.0	4310.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-54	4340.0	4340.0	Cuttings	X	X		X	X	X	X
6406/2-5A T2	98019-54X	4340.0	4340.0	SE Ctgs						X	
6406/2-5A T2	98019-55	4380.0	4380.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-56	4420.0	4420.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-57	4450.0	4450.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-58	4480.0	4480.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-59	4510.0	4510.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-60	4540.0	4540.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-61	4570.0	4570.0	Cuttings	X	X		X	X	X	X
6406/2-5A T2	98019-61X	4570.0	4570.0	SE Ctgs						X	
6406/2-5A T2	98019-62	4600.0	4600.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-63	4630.0	4630.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-64	4660.0	4660.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-65	4690.0	4690.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-66	4720.0	4720.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-67	4750.0	4750.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-68	4780.0	4780.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-69	4810.0	4810.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-70	4840.0	4840.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-71	4870.0	4870.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-72	4900.0	4900.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-73	4930.0	4930.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-74	4960.0	4960.0	Cuttings	X	X	X	X	X	X	X
6406/2-5A T2	98019-74X	4960.0	4960.0	SE Ctgs						X	
6406/2-5A T2	98019-75	4990.0	4990.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-76	5020.0	5020.0	Cuttings	X	X	X	X	X		
6406/2-5A T2	98019-77	5050.0	5050.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-78	5080.0	5080.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-79	5110.0	5110.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-80	5140.0	5140.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-81	5172.0	5172.0	Cuttings	X	X		X	X	X	

Analytical Program (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	RockEvalPyrolysis	Solvent Clean Up Extn
6406/2-5A T2	98019-82	5190.0	5190.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-83	5208.0	5208.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-84	5226.0	5226.0	Cuttings	X	X	X	X	X		
6406/2-5A T2	98019-85	5244.0	5244.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-86	5262.0	5262.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-87	5271.0	5271.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-88	5289.0	5289.0	Cuttings	X	X	X	X	X	X	X
6406/2-5A T2	98019-88X	5289.0	5289.0	SE Ctgs						X	
6406/2-5A T2	98019-89	5298.0	5298.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-90	5397.0	5397.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-91	5415.0	5415.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-92	5433.0	5433.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-93	5451.0	5451.0	Cuttings	X	X		X	X	X	X
6406/2-5A T2	98019-93X	5451.0	5451.0	SE Ctgs						X	
6406/2-5A T2	98019-94	5469.0	5469.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-95	5487.0	5487.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-96	5505.0	5505.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-97	5514.0	5514.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-98	5532.0	5532.0	Cuttings	X	X	X	X	X	X	
6406/2-5A T2	98019-99	5541.0	5541.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-100	5559.0	5559.0	Cuttings	X	X		X	X		
6406/2-5A T2	98019-101	5568.0	5568.0	Cuttings	X	X		X	X	X	
6406/2-5A T2	98019-102	5595.0	5595.0	Cuttings	X	X	X	X	X	X	X
6406/2-5A T2	98019-102X	5595.0	5595.0	SE Ctgs						X	

102 102 18 102 102 77 10

Headspace Gas Analysis (Table 3)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
6406/2-5A T2	98019-1	2660.0	2660.0	Cuttings	20389	471	415			124	21275	886	4.16	
6406/2-5A T2	98019-2	2690.0	2690.0	Cuttings	9805	493	839	279	257	76	11484	1838	16.00	1.09
6406/2-5A T2	98019-3	2720.0	2720.0	Cuttings	7104	593	1298	402	348	48	12880	3491	27.10	1.16
6406/2-5A T2	98019-4	2750.0	2750.0	Cuttings	5037	347	825	264	302	185	11880	3048	25.65	0.87
6406/2-5A T2	98019-5	2780.0	2780.0	Cuttings	4086	207	547	271	321	295	9449	2341	24.77	0.84
6406/2-5A T2	98019-6	2810.0	2810.0	Cuttings	3128	220	443	232	267	376	18441	4994	27.08	0.87
6406/2-5A T2	98019-7	2840.0	2840.0	Cuttings	1546	178	296	107	91	86	3783	1146	30.29	1.18
6406/2-5A T2	98019-8	2870.0	2870.0	Cuttings	8516	754	881	230	190	122	12624	2454	19.44	1.21
6406/2-5A T2	98019-9	2900.0	2900.0	Cuttings	298	25	142	62	63	43	616	304	49.44	0.98
6406/2-5A T2	98019-10	2930.0	2930.0	Cuttings	5712	525	627	122	101	47	5652	1096	19.39	1.21
6406/2-5A T2	98019-11	2960.0	2960.0	Cuttings	362	231	169	25	20	13	1361	750	55.11	1.25
6406/2-5A T2	98019-12	2990.0	2990.0	Cuttings	2180	154	112	17	13	10	3924	470	11.97	1.27
6406/2-5A T2	98019-13	3020.0	3020.0	Cuttings	4123	350	239	39	28	28	4377	600	13.71	1.36
6406/2-5A T2	98019-14	3050.0	3050.0	Cuttings	Leaking Can									
6406/2-5A T2	98019-15	3080.0	3080.0	Cuttings	1535	140	84	16	10	13	1499	210	14.01	1.66
6406/2-5A T2	98019-16	3110.0	3110.0	Cuttings	Leaking Can									
6406/2-5A T2	98019-17	3140.0	3140.0	Cuttings	99	27	45	22	19	30	97	52	53.37	1.16
6406/2-5A T2	98019-18	3170.0	3170.0	Cuttings	Leaking Can									
6406/2-5A T2	98019-19	3220.0	3220.0	Cuttings	2834	265	113	36	19	25	1696	225	13.25	1.93
6406/2-5A T2	98019-20	3250.0	3250.0	Cuttings	4588	420	167	60	23	28	2205	281	12.74	2.55
6406/2-5A T2	98019-21	3280.0	3280.0	Cuttings	3694	386	130	43	17	19	2696	364	13.49	2.55
6406/2-5A T2	98019-22	3310.0	3310.0	Cuttings	Leaking Can									
6406/2-5A T2	98019-23	3340.0	3340.0	Cuttings	3440	276	96	36	16	18	2612	286	10.97	2.27
6406/2-5A T2	98019-24	3370.0	3370.0	Cuttings	12	8	27	21	12	21	52	44	85.15	1.77
6406/2-5A T2	98019-25	3410.0	3410.0	Cuttings	5938	691	194	59	22	18	5661	792	13.99	2.74
6406/2-5A T2	98019-26	3440.0	3440.0	Cuttings	6613	858	283	89	34	26	4657	747	16.05	2.61
6406/2-5A T2	98019-27	3470.0	3470.0	Cuttings	3792	466	142	37	13	12	4384	649	14.80	2.72
6406/2-5A T2	98019-28	3500.0	3500.0	Cuttings	5640	974	381	103	43	34	4049	852	21.03	2.39
6406/2-5A T2	98019-29	3530.0	3530.0	Cuttings	718	185	131	34	15	18	837	282	33.74	2.23
6406/2-5A T2	98019-30	3560.0	3560.0	Cuttings	1528	337	185	43	21	21	1382	383	27.71	2.09
6406/2-5A T2	98019-31	3590.0	3590.0	Cuttings	600	183	166	38	24	21	840	342	40.71	1.57
6406/2-5A T2	98019-32	3620.0	3620.0	Cuttings	Leaking Can									
6406/2-5A T2	98019-33	3690.0	3690.0	Cuttings	Leaking Can									
6406/2-5A T2	98019-34	3720.0	3720.0	Cuttings	1549	291	244	43	34	18	2524	715	28.34	1.26

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Headspace Gas Analysis (Table 3)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
6406/2-5A T2	98019-35	3750.0	3750.0	Cuttings	1091	251	250	45	43	18	2030	712	35.08	1.05
6406/2-5A T2	98019-36	3800.0	3800.0	Cuttings	1264	375	442	85	101	45	2054	909	44.25	0.84
6406/2-5A T2	98019-37	3830.0	3830.0	Cuttings	752	165	202	44	52	37	1414	539	38.10	0.84
6406/2-5A T2	98019-38	3860.0	3860.0	Cuttings	827	232	348	74	96	64	1302	619	47.55	0.78
6406/2-5A T2	98019-39	3890.0	3890.0	Cuttings	236	35	58	14	18	14	340	117	34.56	0.79
6406/2-5A T2	98019-40	3920.0	3920.0	Cuttings	578	118	155	33	42	37	947	356	37.56	0.80
6406/2-5A T2	98019-41	3950.0	3950.0	Cuttings	378	97	127	27	37	28	461	199	43.25	0.72
6406/2-5A T2	98019-42	3980.0	3980.0	Cuttings	307	89	86	16	25	53	410	169	41.30	0.64
6406/2-5A T2	98019-43	4010.0	4010.0	Cuttings	529	121	114	20	32	23	609	214	35.23	0.64
6406/2-5A T2	98019-44	4040.0	4040.0	Cuttings	69	26	47	15	22	28	109	67	61.23	0.69
6406/2-5A T2	98019-45	4070.0	4070.0	Cuttings	494	100	82	16	26	22	561	175	31.11	0.59
6406/2-5A T2	98019-46	4100.0	4100.0	Cuttings	143	24	12	1	4	12	127	28	21.90	0.24
6406/2-5A T2	98019-47	4130.0	4130.0	Cuttings	263	28	49	30	17	22	241	77	32.17	1.80
6406/2-5A T2	98019-48	4160.0	4160.0	Cuttings	282	28	41	25	15	17	328	91	27.76	1.66
6406/2-5A T2	98019-49	4190.0	4190.0	Cuttings	449	36	53	29	15	18	492	113	22.86	1.89
6406/2-5A T2	98019-50	4220.0	4220.0	Cuttings	291	26	37	22	11	16	302	75	24.75	1.93
6406/2-5A T2	98019-51	4250.0	4250.0	Cuttings	254	23	28	14	8	10	304	67	22.09	1.77
6406/2-5A T2	98019-52	4280.0	4280.0	Cuttings	199	22	30	14	8	11	265	71	26.88	1.75
6406/2-5A T2	98019-53	4310.0	4310.0	Cuttings	275	26	37	17	10	11	310	76	24.48	1.65
6406/2-5A T2	98019-54	4340.0	4340.0	Cuttings	397	38	35	11	8	14	409	77	18.72	1.48
6406/2-5A T2	98019-55	4380.0	4380.0	Cuttings	285	33	35	12	9	13	258	62	23.97	1.37
6406/2-5A T2	98019-56	4420.0	4420.0	Cuttings	392	78	36	7	9	9	579	144	24.88	0.82
6406/2-5A T2	98019-57	4450.0	4450.0	Cuttings	401	70	59	15	12	18	328	92	28.07	1.22
6406/2-5A T2	98019-58	4480.0	4480.0	Cuttings	384	61	84	20	17	14	609	195	32.01	1.17
6406/2-5A T2	98019-59	4510.0	4510.0	Cuttings	281	40	41	13	11	15	257	70	27.12	1.21
6406/2-5A T2	98019-60	4540.0	4540.0	Cuttings	318	67	47	10	9	13	411	121	29.46	1.08
6406/2-5A T2	98019-61	4570.0	4570.0	Cuttings	158	40	40	10	10	16	192	74	38.71	0.91
6406/2-5A T2	98019-62	4600.0	4600.0	Cuttings	400	91	59	11	15	17	446	136	30.47	0.72
6406/2-5A T2	98019-63	4630.0	4630.0	Cuttings	96	51	58	13	20	18	200	119	59.72	0.62
6406/2-5A T2	98019-64	4660.0	4660.0	Cuttings	410	100	82	14	18	21	548	188	34.38	0.82
6406/2-5A T2	98019-65	4690.0	4690.0	Cuttings	193	61	40	7	13	12	328	126	38.34	0.52
6406/2-5A T2	98019-66	4720.0	4720.0	Cuttings	6	2	9	4	8	16	28	22	79.75	0.48
6406/2-5A T2	98019-67	4750.0	4750.0	Cuttings	57	28	31	7	12	15	130	75	57.56	0.55
6406/2-5A T2	98019-68	4780.0	4780.0	Cuttings	490	90	52	8	13	14	739	184	24.91	0.60

Headspace Gas Analysis (Table 3)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
6406/2-5A T2	98019-69	4810.0	4810.0	Cuttings	438	112	61	7	17	19	610	189	30.99	0.44
6406/2-5A T2	98019-70	4840.0	4840.0	Cuttings	333	143	104	12	28	23	588	272	46.26	0.43
6406/2-5A T2	98019-71	4870.0	4870.0	Cuttings	906	225	98	6	15	16	1643	452	27.53	0.42
6406/2-5A T2	98019-72	4900.0	4900.0	Cuttings	976	259	107	12	24	17	1397	407	29.16	0.52
6406/2-5A T2	98019-73	4930.0	4930.0	Cuttings	967	185	84	9	17	16	1463	341	23.32	0.50
6406/2-5A T2	98019-74	4960.0	4960.0	Cuttings	349	74	46	9	12	18	407	117	28.84	0.75
6406/2-5A T2	98019-75	4990.0	4990.0	Cuttings	979	277	263	68	82	82	1310	541	41.33	0.83
6406/2-5A T2	98019-76	5020.0	5020.0	Cuttings	570	104	81	15	24	31	737	208	28.22	0.59
6406/2-5A T2	98019-77	5050.0	5050.0	Cuttings	10	1	7	2	6	18	26	16	61.20	0.28
6406/2-5A T2	98019-78	5080.0	5080.0	Cuttings	123	31	26	5	9	16	171	63	36.74	0.54
6406/2-5A T2	98019-79	5110.0	5110.0	Cuttings	230	21	8		3	17	260	31	12.05	
6406/2-5A T2	98019-80	5140.0	5140.0	Cuttings	168	14	5	1	3	12	195	23	11.85	0.27
6406/2-5A T2	98019-81	5172.0	5172.0	Cuttings	712	47	1			3	1971	125	6.36	
6406/2-5A T2	98019-82	5190.0	5190.0	Cuttings	296	68	9			11	300	62	20.82	
6406/2-5A T2	98019-83	5208.0	5208.0	Cuttings	2031	396	29	3	5	12	2441	429	17.59	0.52
6406/2-5A T2	98019-84	5226.0	5226.0	Cuttings	1898	386	32		2	8	3004	544	18.10	0.28
6406/2-5A T2	98019-85	5244.0	5244.0	Cuttings	635	153	52	6	10	17	789	204	25.87	0.62
6406/2-5A T2	98019-86	5262.0	5262.0	Cuttings	2753	957	396	55	66	67	2379	830	34.88	0.83
6406/2-5A T2	98019-87	5271.0	5271.0	Cuttings	2448	786	281	42	42	45	6262	2002	31.97	1.01
6406/2-5A T2	98019-88	5289.0	5289.0	Cuttings	2470	583	203	20	29	17	5201	1315	25.28	0.70
6406/2-5A T2	98019-89	5298.0	5298.0	Cuttings	2056	775	317	32	45	28	3227	1169	36.24	0.71
6406/2-5A T2	98019-90	5397.0	5397.0	Cuttings	2979	536	150	6	27	15	5198	1010	19.43	0.21
6406/2-5A T2	98019-91	5415.0	5415.0	Cuttings	655	102	25	1	4	4	2534	422	16.65	0.16
6406/2-5A T2	98019-92	5433.0	5433.0	Cuttings	423	108	61	4	14	16	424	130	30.63	0.26
6406/2-5A T2	98019-93	5451.0	5451.0	Cuttings	344	102	77	12	18	17	554	209	37.68	0.65
6406/2-5A T2	98019-94	5469.0	5469.0	Cuttings	79	45	63	12	19	33	140	89	63.66	0.67
6406/2-5A T2	98019-95	5487.0	5487.0	Cuttings	6013	1178	420	37	68	46	4416	974	22.07	0.55
6406/2-5A T2	98019-96	5505.0	5505.0	Cuttings	2575	817	460	92	102	91	2707	984	36.35	0.90
6406/2-5A T2	98019-97	5514.0	5514.0	Cuttings	4551	854	241	10	43	31	4257	857	20.13	0.23
6406/2-5A T2	98019-98	5532.0	5532.0	Cuttings	2846	459	139	10	24	37	2788	507	18.19	0.42
6406/2-5A T2	98019-99	5541.0	5541.0	Cuttings	4336	937	288	18	44	30	5496	1258	22.89	0.42
6406/2-5A T2	98019-100	5559.0	5559.0	Cuttings	930	127	59	5	12	18	944	169	17.93	0.38
6406/2-5A T2	98019-101	5568.0	5568.0	Cuttings	416	78	33	3	7	11	823	186	22.55	0.37
6406/2-5A T2	98019-102	5595.0	5595.0	Cuttings	48	17	18	3	6	10	135	64	47.30	0.48