

Field Measurements

699789
V8

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
1	2013/02/18	00:00	0.00	0	0	0	0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0		0.00		0.00				0	0.0	
2		08:00	Arrive on location demobilize equipment.																									
3		17:00	Standby for drilling completion.																									
4	2013/02/19	08:00	Arrive on location, continue maintenance and cleanup of equipment.																									
5		17:00	Unable to spot and rig in, standing by for drilling rig completion.																									
6	2013/02/20	08:00	Arrive on location, stand by for drilling rig completion.																									
7	2013/02/23	07:00	Begin perfing operations with drilling rig and run in tubing.																									
8	2013/02/28	09:00	Spot and rig in test equipment.																									
9	2013/03/01	07:00	Continue rigging in, stand by to purge vessels and pressure test flowline.																									
10	2013/03/04	13:50	E-line run in hole to punch tubing.																									
11		15:35	E-line @ surface.																									
12		15:50	N ₂ online, to confirm run was successful.																									
13		16:20	Run successful, bleed off well to 5 mPa.																									
14		17:00	Drop 1st ball and begin to rig on frac head.																									
15		20:05	Pump 3m ³ of frac oil through frac iron to vessel.																									
16		20:10	Shut in wing valve and pressure test frac iron.																									
17		21:01	Begin mini frac.																									
18		21:13	Mini frac complete, 14m ³ pumped.																									
19		21:30	Monitor and record casing pressures. Data van to record tubing pressures.																									
20		21:30	0.00	0	0	2228	0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00		0.0		0	0.0	
21		22:00				2410																						
22		23:00				2638																						
23	2013/03/05	00:00				2802																						
24		01:00				2864																						
25		02:00				2884																						
26		03:00				2993																						
27		04:00				3097																						
28		05:00				3195																						

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Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
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[illegible]

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			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																									
58		20:45		4	16449	4793			33	0.01	0		0.395	0.000	0.395	0.334	0.000											
59		21:00	5.56	4	16359	4931		44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	47.0	50.0	48.0	0	0.1
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																									
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																									
62		21:30	7.94	12	14738	6674		44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000											
63		21:35	Fluid samples are showing gel and 20% sand.																									
64		22:00	7.94	10	14228	7443		44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	47.0	50.0	48.0	0	1.0
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																									
66		22:00	Fluid samples showing no gel and 1% sand.																									
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																									
68		22:30		12	13833	8349		44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000											
69		22:31	Install 1" (25.4mm) orifice plate.																									
70		23:00	7.94	11	13542	8754		25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	47.0	53.6	47.6	0	1.0
71		23:00	Two stock oil samples taken.																									
72		23:30		14	13334	9276			275	18.90	6		9.162	0.000	9.162	1.786	0.000											
73		23:30	Bleed down casing pressure.																									
74	2013/03/06	00:00	7.94	13	12860	5440		25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	47.0	53.6	47.6	0	0.1
75		00:00	Checked ball catcher, no balls found.																									
76		00:30		14	12629	5090			410	18.23	7		10.476	0.000	10.476	2.214	0.000											
77		01:00	7.94	12	12149	5419		25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	46.0	55.4	46.4	0	0.1
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																									
79		01:30		14	10085	5966			379	22.88	8		11.373	0.000	11.373	2.645	0.000											
80		02:00	8.73	15	9590	6370		25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	46.0	53.6	46.6	0	0.1
81		02:00	Two stock oil samples taken.																									
82		02:30		14	9425	6712			337	20.89	8		10.371	0.000	10.371	3.102	0.000											
83		03:00	8.73	12	9404	6782		25.40	382	18.41	8	100	10.216	0.000	10.216	3.317	0.000	10.62	0	0.00	0.00	10.62	84.20	47.0	57.2	47.3	0	0.1
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																									

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	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
85	2013/03/06	03:30	8.73	14	8213	7979		25.40	317	20.15	8	100	9.947	0.000	9.947	3.527	0.000		0							47.3	0.1		
86		04:00	9.53	13	8071	9845		25.40	275	17.91	8	100	8.883	0.000	8.883	3.723	0.000	10.05	0	0.00	0.00	10.05	94.25	46.0	53.6	46.6	0	0.1	
87		04:00	Bleed down casing pressure.																										
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																										
89		04:30		14	6722	4170			396	23.38	10		11.659	0.000	11.659	3.937	0.000												
90		05:00	10.32	15	5969	4383		25.40	358	17.91	9	100	9.803	0.000	9.803	4.161	0.000	15.65	0	0.00	0.00	15.65	109.90	47.0	55.4	47.4	0	0.1	
91		05:30		18	5427	4432			310	21.89	8		10.288	0.000	10.288	4.370	0.000												
92		06:00	10.32	16	4999	4430		25.40	303	29.39	8	100	11.859	0.000	11.859	4.601	0.000	14.01	0	0.00	0.00	14.01	123.91	47.0	53.6	47.6	0	0.1	
93		06:00	Checked ball catcher, no balls found.																										
94			***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																										
95			Daily Hours Flowed = 10Hrs, 00mins											Cum. Hours Flowed = 10Hrs, 00mins															
96			Daily load fluid Recovered = 123.91 m³											Cum. load fluid Recovered = 123.91 m³															
97			Daily Oil produced = 0.00 m³											Cum. Oil produced = 0.00 m³															
98			Daily Burnable Gas Produced to Flare = 0.000 10³m³											Cum. Burnable Gas to Flare = 0.000 10³m³															
99			Daily N₂ recovered = 4.601 10³m³											Cum. N₂ recovered = 4.601 10³m³															
100			Daily frac balls recovered = 0											Cum. frac balls recovered = 0															
101			Initial load fluid to recover = 388.80 m³											Load fluid left to recover = 264.89 m³															
102	2013/03/06	06:30		16	4555	4759			265	15.17	7		8.069	0.000	8.069	4.808	0.000												
103		07:00	10.32	9	4129	4201		25.40	255	17.41	7	100	8.534	0.000	8.534	4.981	0.000	12.46	0	0.00	0.00	12.46	136.37	46.0	43.0	47.6	0	0.1	
104		07:30		10	3758	4058			220	14.43	7		7.363	0.000	7.363	5.147	0.000												
105		08:00	10.32	9	3604	3924		25.40	227	16.91	7	100	8.069	0.000	8.069	5.307	0.000	10.14	0	0.00	0.00	10.14	146.51	47.0	54.0	47.6	0	0.1	
106		08:30		5	3429	3745			210	16.23	8		7.680	0.000	7.680	5.471	0.000												
107		09:00	10.32	5	3319	3601		25.40	152	23.13	3	100	8.378	0.000	8.378	5.639	0.000	8.64	0	0.00	0.00	8.64	155.15	46.0	50.0	47.0	0	0.1	
108		09:01	Increase to 32/64 (12.70mm) adjustable choke.																										
109		09:05	Increase orifice plate to 1.25" (31.75mm).																										
110		09:30		8	2339	3403		31.75	90	7.77	6		6.492	0.000	6.492	5.794	0.000												
111		10:00	12.70	5	2509	3219		31.75	103	9.45	9	100	7.377	0.000	7.377	5.938	0.000	6.72	0	0.00	0.00	6.72	161.87	46.0	50.0	47.0	0	0.1	
112		10:30		9	2306	3074			83	9.40	4		7.040	0.000	7.040	6.088	0.000												

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	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	H:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
113	2013/03/06	11:00	12.70	7	2255	2935		31.75	82	9.20	6	100	6.920	0.000	6.920	6.234	0.000	6.04	0	0.00	0.00	6.04	167.91	46.0	50.0	47.0	0	0.1	
114		11:00	Increase to 48/64 (19.05mm) adjustable choke.																										
115		11:05	Increase orifice plate to 1.5" (38.10mm).																										
116		11:30		12	599	2820			165	6.96	2		7.327	0.000	7.327	6.382	0.000												
117		12:00	19.05	10	248	2646		38.10	28	10.69	4	100	9.086	0.000	9.086	6.553	0.000	4.95	0	0.00	0.00	4.95	172.86	47.0	52.0	47.8	0	0.1	
118		12:15	Increase to 128/64 (50.80mm).																										
119		12:16	Increase orifice plate to 2" (50.80mm).																										
120		12:30		5	117	2323			21	15.70	5		10.762	0.000	10.762	6.760	0.000												
121		13:00	50.80	4	3	2145		50.80	4	4.97	4	100	10.083	0.000	10.083	6.977	0.000	5.66	0	0.00	0.00	5.66	178.52	46.0	50.0	47.0	0	0.1	
122		13:15	Gas too small to measure. Meter out of service.																										
123		13:30		3	10	2130																							
124		14:00	50.80	2	6	1926		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	5.86	0	0.00	0.00	5.86	184.38	46.0	50.0	47.0	0	0.1	
125		14:00	Checked ball catcher, no balls found.																										
126		14:30		1	98	1619																							
127		15:00	50.80	1	15	1425		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	3.18	0	0.00	0.00	3.18	187.56	46.0	50.0	47.0	0	0.1	
128		15:00	Two stock oil samples taken.																										
129		15:30		2	5	1209																							
130		16:00	50.80	2	8	1034		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	4.71	0	0.00	0.00	4.71	192.27	46.0	50.0	47.0	0	0.1	
131		16:30		2	8	990		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000												
132		16:45	Well starting to surge. Meter in service with a 2" (50.80mm) orifice plate.																										
133		17:00	50.80	20	268	989		50.80	34	4.53	28	100	10.546	0.000	10.546	7.197	0.000	4.70	0	0.00	0.00	4.70	196.97	45.0	40.0	46.9	0	0.1	
134		17:30		4	7	697			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
135		18:00	50.80	3	6	609		50.80	0	0.00	0	0	0.000	0.000	0.000	7.197	0.000	1.17	0	0.00	0.00	1.17	198.14	45.0	40.0	46.9	0	0.1	
136		18:30		1	3	394			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
137		19:00	50.80	1	5	544		50.80	17	9.95	7	100	15.199	0.000	15.199	7.513	0.000	2.34	0	0.00	0.00	2.34	200.48	45.0	46.0	46.3	0	0.1	
138		19:30		-4	3	284			14	3.48	0		8.900	0.000	8.900	7.764	0.000												
139		20:00	50.80	-4	4	35		50.80	14	0.49	3	100	3.319	0.000	3.319	7.892	0.000	2.64	0	0.00	0.00	2.64	203.12	45.0	45.0	46.4	0	0.0	
140		20:30		-1	3	30			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
141		21:00	50.80	-16	59	145		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.09	0	0.00	0.00	2.09	205.21	46.0	48.0	47.1	0	0.0	

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		mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
142	2013/03/06 21:30	50.80	-10	3	33		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000		0							47.1	0.0			
143	22:00	50.80	-7	4	79		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.29	0	0.00	0.00	2.29	207.50	45.0	48.0	46.1	0	0.0		
144	22:30		-10	2	7			0	0.00	0		0.000	0.000	0.000	7.892	0.000													
145	23:00	50.80	-7	1	11		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	1.44	0	0.00	0.00	1.44	208.94	46.0	41.0	47.8	0	0.0		
146	23:30		-9	15	16			0	0.00	0		0.000	0.000	0.000	7.892	0.000													
147	2013/03/07 00:00	50.80	-9	6	35		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	0.17	0	0.00	0.00	0.17	209.11	46.0	44.0	47.5	0	0.0		
148	00:30		-14	6	15			22	3.33	0	100	9.020	0.000	9.020	8.080	0.000													
149	01:00	50.80	-1	89	68		50.80	17	2.11	0	100	7.016	0.000	7.016	8.247	0.000	3.21	0	0.00	0.00	3.21	212.32	47.0	60.0	47.0	0	0.0		
150	01:30		-13	4	12			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
151	02:00	50.80	-16	12	5		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.58	0	0.00	0.00	0.58	212.90	46.0	44.0	47.5	0	0.0		
152	02:30		-11	1	3			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
153	03:00	50.80	-11	2	3		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.00	0	0.00	0.00	0.00	212.90	0.0			0	0.0		
154	03:30		-12	1	5			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
155	04:00	50.80	-11	2	22		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.59	0	0.00	0.00	0.59	213.49	47.0	59.0	47.1	0	0.0		
156	04:30		-10	2	21			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
157	05:00	50.80	-10	3	18		50.80	3	2.13	-3	100	6.626	0.000	6.626	8.385	0.000	3.81	0	0.00	0.00	3.81	217.30	45.0	40.0	46.9	0	0.0		
158	05:30		-17	3	5			0	0.00	0		0.000	0.000	0.000	8.385	0.000													
159	06:00	50.80	-18	1	7		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.93	0	0.00	0.00	0.93	218.23	45.0	42.0	46.7	0	0.0		
160		***Daily production summary*** ((March 6th @ 20:00hrs to March 7th @ 06:00hrs))																											
161		Daily Hours Flowed = 24Hrs, 00mins													Cum. Hours Flowed = 34Hrs, 00mins														
162		Daily load fluid Recovered = 94.32 m ³													Cum. load fluid Recovered = 218.23 m ³														
163		Daily Oil produced = 0.00 m ³													Cum. Oil produced = 0.00 m ³														
164		Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cum. Burnable Gas to Flare = 0.000 10 ³ m ³														
165		Daily N ₂ recovered = 3.784 10 ³ m ³													Cum. N ₂ recovered = 8.385 10 ³ m ³														
166		Daily frac balls recovered = 0													Cum. frac balls recovered = 0														
167		Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 170.57 m ³														
168	2013/03/07 06:30		-15	3	5																								
169	07:00	50.80	-15	2	9		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	218.23				0	0.0		
170	07:30		-10	1	8																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
171	2013/03/07	08:00	50.80	-13	3	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.07	0	0.00	0.00	1.07	219.30	45.0	41.0	46.8	0	0.0	
172		08:30		-8	2	7																							
173		08:30	Begin to rig in coil.																										
174		09:00	50.80	-10	1	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	3.00	0	0.00	0.00	3.00	222.30	45.0	40.0	46.9	0	0.0	
175		09:30			3	8																							
176		10:00	50.80		2	8		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
177		10:30			2	8			0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
178		10:30	Shut in well, continue to rig in coil.																										
179			***Daily production summary*** ((March 7th @ 0600hrs to March 7th @ 10:30hrs))																										
180			Daily Hours Flowed = 4Hrs, 30mins												Cumm. Hours Flowed = 38Hrs, 30mins														
181			Daily load fluid Recovered = 4.07 m ³												Cumm. load fluid Recovered = 222.30 m ³														
182			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
183			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³														
184			Daily N ₂ recovered = 0.000 10 ³ m ³												Cumm. N ₂ recovered = 8.385 10 ³ m ³														
185			Daily frac balls recovered = 0												Cum. frac balls recovered = 0														
186			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 165.5 m ³														
187	2013/03/07	10:35	0.00		75	11		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30				0	0.0	
188		10:40			152	10																							
189		10:45			225	7																							
190		11:00			301	5																							
191		11:15			396	3																							
192		11:30			499	3																							
193		12:00			1023	3																							
194		12:30			1320	5																							
195		13:00			1661	4		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		0.0		0	0.0	
196		21:45	Coil stab lubricator onto well and break circulation back to test vessel.																										
197	2013/03/08	01:35	Pressure test to 35 mPa.																										
198		01:45	Bleed down pressure test to 7 mPa.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

[illegible]

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
227	2013/03/08	14:00	0.00		2238	0		0.00				0							0						44.5	28.0	47.5	0	0.0
228		14:30	Open @ manifold and resume operations.																										
229		15:00			110	0																							
230		15:30	Tagged seat #2.																										
231		16:00			468	0																		45.0	34.0	47.4	0	0.0	
232		16:40	Tagged seat #3																										
233		17:00			377	0																							
234		17:15	Through seat #3.																										
235		18:00			548	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	35.0	47.3	0	0.0	
236		18:30	Begin to pull to surface.																										
237		19:00			387	0																		45.0	36.0	47.2	0	0.0	
238		19:20	Fluid pump off line.																										
239		19:30			120	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	2.80	0	0.00	0.00	2.80	225.10						
240		19:45	Coil @ surface shut in master valve, bleed off through test vessel.																										
241		20:00	****Total gained during milling operations = 2.80 m³.																										
242		20:00	**** NEW LOAD LEFT TO RECOVER = 163.70 m³ ****																										
243		20:30	Unable to monitor pressures.																										
244	2013/03/09	00:30	Coil stab lubricator onto well and break circulation back to test vessel.																										
245		00:45	Pressure test to 35 mPa.																										
246		01:06	Bleed down pressure test to 3 mPa.																										
247		01:10	ISIP = 324 kPa																										
248		01:15	Open master valve, run in hole with jetting nozzle.																										
249		01:25	Open up @ manifold to maintain 1 mPa.																										
250		01:30			519	13																							
251		01:30	N₂ online @ 10scm/min																										
252		01:35	N₂ @ surface.																										
253		02:00			2019	27												11.62	0	0.00	0.00	11.62	236.72	46.0	42.0	47.7	0	0.0	
254		02:22	Increase N₂ rate to 20scm/min.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
255	2013/03/09	02:30	0.00		1700	89		0.00				0							0							47.7		0.0	
256		03:00			1850	107												7.65	0	0.00	0.00	7.65	244.37	46.0	50.0	47.0	0	0.0	
257		03:06	Coil tagged @ 1941.7 mKB																										
258		03:08	Coil pull up and park @ 1937.0 mKB and continue to pump N ₂ .																										
259		03:30			2019	136																							
260		04:00			1083	111												2.03	0	0.00	0.00	2.03	246.40	44.0	30.0	46.8	0	0.0	
261		04:00	One stock oil samples taken.																										
262		04:15	Decrease N ₂ rate to 15scm/min																										
263		04:30			738	86																							
264		05:00			903	79												1.17	0	0.00	0.00	1.17	247.57	48.0	66.0	47.4	0	0.0	
265		05:30			885	76																							
266		06:00			875	72		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.45	0	0.00	0.00	1.45	249.02	48.0	64.0	47.6	0	0.0	
267			***Daily production summary*** ((March 8th @ 0600hrs to March 9th @ 0600hrs))																										
268			Daily load fluid Recovered = 26.72 m ³												Cum. load fluid Recovered = 249.02 m ³														
269			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³														
270			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 139.78 m ³														
271	2013/03/09	06:30			944	70																							
272		06:35	Decrease N ₂ rate to 10scm/min																										
273		07:00			822	55												1.23	0	0.00	0.00	1.23	250.25	47.0	60.0	47.0	0	0.0	
274		07:00	Increase N ₂ rate to 15scm/min																										
275		07:30			599	50																							
276		08:00	50.80	-6	147	59												1.70	0	0.00	0.00	1.70	251.95	44.0	28.0	46.9	0	0.0	
277		08:30		-10	123	55																							
278		09:00	50.80	-8	117	49												1.20	0	0.00	0.00	1.20	253.15	44.0	28.0	46.9	0	0.0	
279		09:30		-6	112	50																							
280		10:00	50.80	-6	110	49	2000											1.20	0	0.00	0.00	1.20	254.35	44.0	28.0	46.9	0	0.0	
281		10:30		-6	110	48																							
282		10:30	N ₂ offline, begin to rig out pump truck.																										
283		11:00	50.80	-10	2	43	1200											0.40	0	0.00	0.00	0.40	254.75	44.0	30.0	46.8	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /d	10 ³ m ³ /d	10 ³ m ³ /d	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
284	2013/03/09	11:30	50.80	-10	0	38		0.00				0						0							46.8	0.0		
285		12:00	50.80	-11	1	26	300											0.00	0	0.00	0.00	0.00	254.75			0	0.0	
286		12:20	N ₂ online @ 15scm																									
287		12:30		-12	1	26																						
288		12:40	Fluid to surface.																									
289		12:45	Two stock oil samples taken.																									
290		13:00	50.80	-4	166	53	2700											1.70	0	0.00	0.00	1.70	256.45	45.0	36.0	47.2	0	0.0
291		13:30		-5	110	56																						
292		14:00	50.80	-4	101	47	3000											1.50	0	0.00	0.00	1.50	257.95	45.0	30.0	47.8	0	0.0
293		14:30		-3	103	43																						
294		15:00	50.80	-6	87	32	1800											0.60	0	0.00	0.00	0.60	258.55					
295		15:30		-4	81	30																						
296		15:30	Increase N ₂ rate to 20 scm.																									
297		16:00	50.80	-3	138	28	2600											0.60	0	0.00	0.00	0.60	259.15					
298		16:30		-3	175	37																						
299		17:00	50.80	-6	136	34	2560											1.10	0	0.00	0.00	1.10	260.25	45.0	32.0	47.6	0	0.0
300		17:00	Decrease N ₂ rate to 15 scm.																									
301		17:30		-4	85	33																						
302		17:30	Increase N ₂ rate to 20 scm.																									
303		18:00	50.80	-4	114	35	2600											0.80	0	0.00	0.00	0.80	261.05					
304		18:00	Stock oil sample taken.																									
305		18:30		-6	134	31																						
306		19:00	50.80	-6	131	33	2600											0.70	0	0.00	0.00	0.70	261.75	44.0	30.0	46.8	0	0.0
307		19:30		-7	334	30																						
308		20:00	50.80	-5	134	28	2950											0.30	0	0.00	0.00	0.30	262.05	46.0	58.0	46.2	0	0.0
309		20:30		-9	93	28																						
310		21:00	50.80	-7	90	28	2580											0.88	0	0.00	0.00	0.88	262.93	45.0	45.0	46.4	0	0.0
311		21:01	Decrease N ₂ rate to 15 scm.																									
312		21:30		-8	70	25																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
313	2013/03/09	22:00	50.80	-10	86	25	1960	0.00					0					1.11	0	0.00	0.00	1.11	264.04	46.0	54.0	46.6	0	0.0	
314		22:30		-7	68	26																							
315		23:00	50.80	-5	67	24	1980											0.59	0	0.00	0.00	0.59	264.63	46.0	52.0	46.8	0	0.0	
316		23:01	Increase N ₂ rate to 17 scm.																										
317		23:30		-4	110	26																							
318	2013/03/10	00:00	50.80	-4	110	23	2230											0.58	0	0.00	0.00	0.58	265.21	46.0	56.0	46.4	0	0.0	
319		00:00	Two stock oil samples taken.																										
320		00:01	Increase N ₂ rate to 17 scm.																										
321		00:30		-4	133	24																							
322		01:00	50.80	-6	134	23	2660											0.45	0	0.00	0.00	0.45	265.66	45.0	56.0	45.4	0	0.0	
323		01:30		-5	133	24																							
324		01:59	Due to daylight saving we will be skipping ahead one hour.																										
325		03:00	50.80	-5	132	22	2610											0.49	0	0.00	0.00	0.49	266.15	45.0	48.0	46.1	0	0.0	
326		03:30		-5	168	23																							
327		04:00	50.80	-4	132	22	2650											0.52	0	0.00	0.00	0.52	266.67	45.0	50.0	45.9	0	0.0	
328		04:30		-5	144	23																							
329		05:00	50.80	-5	138	23	2660											0.41	0	0.00	0.00	0.41	267.08	45.0	44.0	46.5	0	0.0	
330		05:21	Decrease N ₂ rate to 15 scm.																										
331		05:30		-7	89	20																							
332		06:00	50.80	-6	81	20	1950	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.47	0	0.00	0.00	0.47	267.55	45.0	44.0	46.5	0	0.0	
333		06:00	Stock oil samples taken.																										
334			***Daily production summary***												((March 9th @ 0600hrs to March 10th @ 0600hrs))														
335			Daily load fluid Recovered = 18.53 m ³												Cumm. load fluid Recovered = 267.55 m ³														
336			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
337			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 121.25 m ³														
338			ODOR PRESENT IN FLUID SAMPLES, MAYBE HYDROCARBONS.																										
339	2013/03/10	06:30		-6	85	23																							
340		07:00	50.80	-6	90	22	1950											0.41	0	0.00	0.00	0.41	267.96	45.0	46.0	46.3	0	0.0	
341		07:30		-6	90	22																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API
342	2013/03/10	08:00	50.80	-6	91	22	1950	0.00				0						0.47	0	0.00	0.00	0.47	268.43			46.3	0	0.0
343		08:30		-7	90	23																						
344		09:00	50.80	-6	90	22	1950											0.42	0	0.00	0.00	0.42	268.85	46.0	46.0	47.3	0	0.0
345		09:30		-6	88	24																						
346		09:40	Coil pull up to 1885 m																									
347		10:00	50.80	-5	88	23	1920											0.28	0	0.00	0.00	0.28	269.13					
348		10:30		-5	85	22																						
349		11:00	50.80	-5	85	21	1940											0.29	0	0.00	0.00	0.29	269.42	46.0	45.0	47.4	0	0.0
350		11:30		-6	86	21																						
351		12:00	50.80	-6	85	21	1960											0.29	0	0.00	0.00	0.29	269.71	46.0	44.0	47.5	0	0.0
352		12:00	Two stock oil samples taken.																									
353		12:00	Decrease N ₂ rate to 8 scm.																									
354		12:30		-6	21	20																						
355		13:00	50.80	-5	22	18	1000											0.14	0	0.00	0.00	0.14	269.85					
356		13:00	Increase N ₂ rate to 15 scm. Coil pull up to 1000m.																									
357		13:30		-6	108	38																						
358		13:50	Decrease N ₂ rate to 8 scm. Coil run in hole to 1875m.																									
359		14:00	50.80	-6	46	31	850											0.57	0	0.00	0.00	0.57	270.42	46.0	44.0	47.5	0	0.0
360		14:30		-6	16	13																						
361		15:00	50.80	-6	18	12	1070											0.00	0	0.00	0.00	0.00	270.42					
362		15:30		-8	17	12																						
363		16:00	50.80	-8	17	17	1270											0.00	0	0.00	0.00	0.00	270.42					
364		16:00	N ₂ offline, coil pull up above perfs.																									
365		16:30		-12	5	16																						
366		17:00	50.80	-12	2	16	0											0.00		0.00	0.00	0.00	270.42					
367		17:30		-12	2	16																						
368		17:30	N ₂ online @ 15 scm. Coil run in below perfs.																									
369		18:00	50.80	-11	56	28	2540											0.58	0	0.00	0.00	0.58	271.00	44.0	30.0	46.8	0	0.0
370		18:30		-3	106	26																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
371	2013/03/10	19:00	50.80	-3	85	31	2010	0.00				0						1.31	0	0.00	0.00	1.31	272.31	44.0	32.0	46.6	0	0.0
372		19:30		-6	84	28																						
373		20:00	50.80	-5	75	27	1900											0.29	0	0.00	0.00	0.29	272.60	45.0	30.0	47.8	0	0.0
374		20:01	Decrease N ₂ 10 scm, coil pull up above perfs.																									
375		20:11	N ₂ offline.																									
376		20:30		-7	5	24																						
377		21:00	50.80	-8	5	21	0											0.00	0	0.00	0.00	0.00	272.60				0	0.0
378		21:30		-8	5	20																						
379		22:00	50.80	-7	6	20												0.00	0	0.00	0.00	0.00	272.60				0	0.0
380		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
381		22:30		-7	136	25																						
382		23:00	50.80	-9	19	28	1260											0.87	0	0.00	0.00	0.87	273.47	44.0	42.0	45.7	0	0.0
383		23:00	Decrease N ₂ rate to 10 scm.																									
384		23:00	Two stock oil samples taken.																									
385		23:30		-8	33	25																						
386	2013/03/11	00:00	50.80	-8	26	23	1300											0.24	0	0.00	0.00	0.24	273.71				0	0.0
387		00:01	Increase N ₂ rate to 15 scm.																									
388		00:30		-9	90	27																						
389		01:00	50.80	-8	87	27	1930											0.34	0	0.00	0.00	0.34	274.05	45.0	44.0	46.5	0	0.0
390		01:30		-9	73	26																						
391		02:00	50.80	-9	78	27	1860											0.30	0	0.00	0.00	0.30	274.35				0	0.0
392		02:01	N ₂ offline, coil pull up above perfs.																									
393		02:30		-10	6	25																						
394		03:00	50.80	-11	4	23	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0
395		03:30		-12	4	20																						
396		04:00	50.80	-12	5	21	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0
397		04:00	N ₂ online @ 15 scm. Coil run in below perfs.																									
398		04:30		-11	132	28																						
399		04:48	N ₂ offline.																									

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
400	2013/03/11	05:00	50.80	-12	8	27	300	0.00				0						0.87	0	0.00	0.00	0.87	275.22	43.0	36.0	45.2	0	0.0
401		05:00	Stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																									
402		05:10	N ₂ back online @ 15 scm.																									
403		05:30		-11	26	34																						
404		06:00	50.80	-12	61	27	1720	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.19	0	0.00	0.00	0.19	275.41				0	0.0
405			***Daily production summary*** ((March 10th @ 0600hrs to March 11th @ 0600hrs))																									
406			Daily Hours Flowed = 24Hrs, 00mins												Cumm. Hours Flowed = 109Hrs, 00mins													
407			Daily load fluid Recovered = 7.86 m ³												Cumm. load fluid Recovered = 275.41 m ³													
408			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³													
409			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 113.39 m ³													
410	2013/03/11	06:30		-13	56	27																						
411		07:00	50.80	-12	62	25	1860											0.37	0	0.00	0.00	0.37	275.78				0	0.0
412		07:10	N ₂ offline, coil pull up above perms.																									
413		07:30		-13	6	26																						
414		08:00	50.80	-12	5	23	240											0.14	0	0.00	0.00	0.14	275.92				0	0.0
415		08:30		-15	5	21																						
416		09:00	50.80	-15	6	22	270											0.00		0.00	0.00	0.00	275.92					
417		09:30		-15	7	24																						
418		09:30	N ₂ online @ 15 scm. Coil run in below perms.																									
419		10:00	50.80	-14	74	26	2600											0.15	0	0.00	0.00	0.15	276.07	43.0	20.0	46.6	0	0.0
420		10:30		-12	90	28																						
421		11:00	50.80	-12	42	28	470											1.01	0	0.00	0.00	1.01	277.08	45.0	54.0	45.6	0	0.0
422		11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																									
423		11:00	Fluid sample also showing trace of hydrates.																									
424		11:00	N ₂ offline, coil pull up above perms.																									
425		11:30		-12	8	22																						
426		12:00	50.80	-12	7	25	250											0.00	0	0.00	0.00	0.00	277.08				0	0.0
427		12:30		-14	6	23																						
428		13:00	50.80	-15	5	23	440											0.00	0	0.00	0.00	0.00	277.08				0	0.0

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
429	2013/03/11	13:30	50.80	-17	5	21		0.00				0							0							45.6	0	0.0	
430		14:00	50.80	-19	3	20	520											0.00	0	0.00	0.00	0.00	277.08				0	0.0	
431		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
432		14:30		-18	93	28																							
433		15:00	50.80	-16	78	31	1910											1.02	0	0.00	0.00	1.02	278.10	44.0	32.0	46.6	0	0.0	
434		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
435		15:00	Fluid sample also showing trace of hydrates.																										
436		15:30		-16	26	31																							
437		15:30	N ₂ offline, coil pull up above perfs.																										
438		16:00	50.80	-15	4	26	250											0.11	0	0.00	0.00	0.11	278.21				0	0.0	
439		16:30		-16	5	28																							
440		17:00	50.80	-16	5	21	250											0.00	0	0.00	0.00	0.00	278.21						
441		17:30		-16	5	20																							
442		18:00	50.80	-16	4	19	250											0.00	0	0.00	0.00	0.00	278.21				0	0.0	
443		18:30		-16	4	19																							
444		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
445		19:00	50.80	-16	54	33	330											0.11	0	0.00	0.00	0.11	278.32	44.0	30.0	46.8	0	0.0	
446		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 11% LELs from meter run when making fluid.																										
447		19:00	Fluid sample also showing trace of hydrates.																										
448		19:30		-16	86	36																							
449		20:00	50.80	-16	69	27	1700											1.00	0	0.00	0.00	1.00	279.32	44.0	32.0	46.6	0	0.0	
450		20:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																										
451		20:00	Fluid sample also showing trace of hydrates.																										
452		20:01	N ₂ offline, coil pull up above perfs.																										
453		20:30		-15	6	30																							
454		21:00	50.80	-16	4	27	150											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
455		21:30		-25	4	26																							
456		22:00	50.80	-26	3	25	230											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
457		22:30		-31	3	25																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
458	2013/03/11	23:00	50.80	-30	3	27	2360	0.00				0						0.00	0	0.00	0.00	0.00	279.32			46.6	0	0.0	
459		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
460		23:30		-25	160	27																							
461		23:45	Two stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
462	2013/03/12	00:00	50.80	-24	97	35	2070											0.89	0	0.00	0.00	0.89	280.21	44.0	36.0	46.2	0	0.0	
463		00:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
464		00:00	Fluid sample also showing trace of hydrates.																										
465		00:30		-23	10	32	2080																						
466		00:30	N ₂ offline, coil pull up above perfs.																										
467		01:00	50.80	-27	6	36	210											0.22	0	0.00	0.00	0.22	280.43	44.0	38.0	46.0	0	0.0	
468		01:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
469		01:00	Fluid sample also showing trace of hydrates.																										
470		01:30		-28	5	29																							
471		02:00	50.80	-30	5	27	200											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
472		02:30		-30	6	24																							
473		03:00	50.80	-34	4	25	180											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
474		03:30		-28	3	27																							
475		04:00	50.80	-33	4	24	260											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
476		04:30		-32	3	24																							
477		05:00	50.80	-30	3	24	290											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
478		05:30		-30	2	25																							
479		06:00	50.80	-28	3	22	310	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	280.43				0	0.0	
480			***Daily production summary*** ((March 11th @ 0600hrs to March 12th @ 0600hrs))																										
481			Daily Hours Flowed = 24Hrs, 00mins											Cumm. Hours Flowed = 133Hrs, 00mins															
482			Daily load fluid Recovered = 5.02 m ³											Cumm. load fluid Recovered = 280.43 m ³															
483			Daily Oil produced = 0.00 m ³											Cumm. Oil produced = 0.00 m ³															
484			Initial load fluid to recover = 388.80 m ³											Load fluid left to recover = 108.37 m ³															
485	2013/03/12	06:30		-36	3	22																							
486		07:00	50.80	-35	3	25	230											0.00	0	0.00	0.00	0.00	280.43				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

Date	Time	Wellhead						ST - 27 Orifice Meter										Oil Produced Volume Meter									
		Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
		mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
487	2013/03/12	07:30	50.80	-35	3	24		0.00				0						0							46.0	0.0	
488		08:00	50.80	-35	4	22	300																				
489		08:30		-35	3	25											0.00		0.00	0.00	0.00	280.43				0 0.0	
490		08:50	Shut in @ manafold, monitor pressure.																								
491		09:00	0.00		60	25		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43				0 0.0
492		09:15			80	24																					
493		09:29	0.00		102	25																				0 0.0	
494		09:30	Gas sample taken from manafold, cylinder # 05005398.																								
495		09:30	N ₂ online @ 30 scm. Coil run in below perfs.																								
496		09:30			115	25	2100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43				
497		09:30	Open well to flow on 50.80mm.																								
498		09:31	Burnable gas to surface. Showing at flare, meter in service to catch a rate.																								
499		09:35	50.80	-30	96	24	3100	50.80	34	1.99	-25	0	9.390	9.390	0.000	8.385	0.033										
500		09:40	Fluid to surface.																								
501		09:45		-27	88	28			20	0.99	-25	0	6.237	6.237	0.000	8.385	0.087										
502		10:00	50.80	-11	282	49	2820	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	1.17	0	0.00	0.00	1.17	281.60	43.0	20.0	46.6	0 0.0
503		10:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing hydrates.																								
504		10:00	Monitor showing 8% LEL's from meter run. Too small to measure.																								
505		10:30		-13	89	42																					
506		11:00	50.80	-13	79	42	1920	0.00	0	0.00	0		0.000	0.000	0.000	8.385	0.087	0.89	0	0.00	0.00	0.89	282.49	46.0	60.0	46.0	0 0.0
507		11:00	N ₂ offline, coil pull up above perfs.																								
508		11:30		-14	100	40																					
509		12:00	50.80	-16	60	35	100											0.00		0.00	0.00	0.00	282.49				0 0.0
510		12:30		-16	4	33																					
511		13:00	50.80	-16	2	33	100											0.00		0.00	0.00	0.00	282.49				0 0.0
512		13:30		-15	4	31																					
513		14:00	50.80	-15	4	30	200											0.00		0.00	0.00	0.00	282.49				0 0.0
514		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																								
515		14:30		-15	63	36																					

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API
516	2013/03/12	15:00	50.80	-12	117	40	2120	0.00				0						0.58	0	0.00	0.00	0.58	283.07	43.0	22.0	46.4	0	0.0
517		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
518		15:00	Monitor showing 5% LEL's from meter run. Too small to measure.																									
519		15:30		-12	86	38																						
520		15:30	N ₂ offline, coil pull up above perfs.																									
521		16:00	50.80	-14	4	35	80											0.30	0	0.00	0.00	0.30	283.37	43.0	23.0	46.3	0	0.0
522		16:30		-14	6	33																						
523		17:00	50.80	-15	8	31	90											0.00	0	0.00	0.00	0.00	283.37				0	0.0
524		17:30		-16	5	30																						
525		18:00	50.80	-16	5	30	90											0.00	0	0.00	0.00	0.00	283.37				0	0.0
526		18:30		-17	30	30																						
527		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																									
528		19:00	50.80	-20	120	31	2520											0.21	0	0.00	0.00	0.21	283.58	43.0	22.0	46.4	0	0.0
529		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
530		19:00	Monitor showing 5% LEL's from meter run. Too small to measure.																									
531		19:30		-20		30																						
532		20:00	50.80	-25	93	36	2090											0.70	0	0.00	0.00	0.70	284.28	46.0	56.0	46.4	0	0.0
533		20:00	Fluid sample lighter in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
534		20:00	Monitor showing 7% LEL's from meter run. Too small to measure.																									
535		20:01	N ₂ offline, coil pull up above perfs.																									
536		20:30		-18	25	36																						
537		21:00	50.80	-18	12	36	120											0.00	0	0.00	0.00	0.00	284.28				0	0.0
538		21:30		-18	14	33																						
539		22:00	50.80	-23	7	35	340											0.00	0	0.00	0.00	0.00	284.28				0	0.0
540		22:30		-25	7	35																						
541		23:00	50.80	-26	7	34	310											0.00	0	0.00	0.00	0.00	284.28				0	0.0
542		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
543		23:30		-16	152	34																						
544	2013/03/13	00:00	50.80	-14	91	34	2000											0.76	0	0.00	0.00	0.76	285.04	45.0	56.0	45.4	0	0.0

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%		
545	2013/03/13	00:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																											
546		00:00	Monitor showing 5% LEL's from meter run. Too small to measure.																											
547		00:00	Two stock oil samples taken.																											
548		00:30		-19	97	34																								
549		00:31	N₂ offline, coil pull up above perfs.																											
550		01:00	50.80	-18	3	33	130											0.15	0	0.00	0.00	0.15	285.19	46.0	54.0	46.6	0	0.0		
551		01:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																											
552		01:00	Monitor showing 5% LEL's from meter run. Too small to measure.																											
553		01:30		-20	5	33																								
554		02:00	50.80	-23	3	33	160											0.00	0	0.00	0.00	0.00	285.19				0	0.0		
555		02:30		-27	4	32																								
556		03:00	50.80	-28	3	31	210											0.00	0	0.00	0.00	0.00	285.19				0	0.0		
557		03:30		-26	3	30																								
558		03:31	N₂ online @ 15 scm. Coil run in below perfs.																											
559		04:00	50.80	-17	116	31	2300											0.14	0	0.00	0.00	0.14	285.33	43.0	24.0	46.2	0	0.0		
560		04:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																											
561		04:00	Monitor showing 7% LEL's from meter run. Too small to measure.																											
562		04:30		-23	90	30																								
563		05:00	50.80	-19	91	31	560											0.51	0	0.00	0.00	0.51	285.84	44.0	28.0	46.9	0	0.0		
564		05:00	Stock oil sample taken.																											
565		05:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																											
566		05:00	Monitor showing 5% LEL's from meter run. Too small to measure.																											
567		05:01	N₂ offline, coil pull up above perfs.																											
568		05:30		-23	4	28																								
569		06:00	50.80	-26	1	31	100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00	0	0.00	0.00	0.00	285.84				0	0.0		
570			***Daily production summary*** ((March 12th @ 0600hrs to March 13th @ 0600hrs))																											
571			Daily Hours Flowed = 23Hrs, 20mins													Cum. Hours Flowed = 156Hrs, 20mins														
572			Daily load fluid Recovered = 5.41 m³													Cum. load fluid Recovered = 285.84 m³														

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	H:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
573			Daily Oil produced = 0.00 m ³														Cumm. Oil produced = 0.00 m ³												
574			Daily Burnable Gas Produced to Flare = 0.087 10 ³ m ³														Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³												
575			Initial load fluid to recover = 388.80 m ³														Load fluid left to recover = 102.96 m ³												
576	2013/03/13	06:30		-20	3	28																							
577		07:00	50.80	-28	1	27	190											0.00	0	0.00	0.00	0.00	285.84					0 0.0	
578		07:30		-26	1	28																							
579		08:00	50.80	-24	34	26	1600											0.00	0	0.00	0.00	0.00	285.84					0 0.0	
580		08:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
581		08:30		-18	84	31																							
582		09:00	50.80	-18	109	45	1360											0.73	0	0.00	0.00	0.73	286.57	44.0	42.0	45.7	0	0.0	
583		09:00	N ₂ offline, coil pull up above perfs.																										
584		09:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
585		09:00	Monitor showing 3% LEL's from meter run. Too small to measure.																										
586		09:30		-18	7	40																							
587		10:00	50.80	-20	2	36	1710											0.00	0	0.00	0.00	0.00	286.57					0 0.0	
588		10:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
589		10:30		-18	49	38																							
590		11:00	50.80	-17	102	39	2060											0.43	0	0.00	0.00	0.43	287.00	43.0	30.0	45.7	0	0.0	
591		11:00	N ₂ offline, coil pull up above perfs.																										
592		11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
593		11:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
594		11:30		-22	5	35																							
595		12:00	50.80	-18	5	31	840											0.00	0	0.00	0.00	0.00	287.00						
596		12:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
597		12:30		-14	107	40																							
598		13:00	50.80	-14	87	45	2020											0.47	0	0.00	0.00	0.47	287.47	45.0	40.0	46.9	0	0.0	
599		13:00	N ₂ offline, coil pull up above perfs.																										
600		13:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%		
501	2013/03/13	13:00	Monitor showing 5% LEL's from meter run. Too small to measure.																											
502		13:00	Water extracted from hydrate: salinity = 18000 and ph = 7																											
503		13:30		-15	2	40																								
504		14:00	50.80	-15	7	41	1670											0.00	0	0.00	0.00	0.00	287.47							
505		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
506		14:30		-15	62	40																								
507		15:00	50.80	-14	76	42	1600											0.25	0	0.00	0.00	0.25	287.72	45.0	42.0	46.7	0	0.0		
508		15:00	Unable to catch fluid sample.																											
509		15:00	N ₂ offline, coil pull up above perfs.																											
510		15:30		-14	3	40																								
511		16:00	50.80	-12	46	40	1860											0.00	0	0.00	0.00	0.00	287.72							
512		16:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
513		16:30		-8	101	45																								
514		17:00	50.80	-8	81	47	1700											0.40	0	0.00	0.00	0.40	288.12	43.0	20.0	46.6	0	0.0		
515		17:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons.																											
516		17:00	Monitor showing 3% LEL's from meter run. Too small to measure.																											
517		17:00	N ₂ offline, coil pull up above perfs.																											
518		17:30		-14	10	40																								
519		18:00	50.80	-14	1	45	1230											0.00	0	0.00	0.00	0.00	288.12					0 0.0		
520		18:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
521		18:30		-12	54	48																								
522		19:00	50.80	-10	95	48	1520											0.38	0	0.00	0.00	0.38	288.50	41.0	20.0	44.5	0	0.0		
523		19:00	N ₂ offline, coil pull up above perfs.																											
524		19:00	Samples showing two distinct properties, 70% clean dark brown oil and 30% creamy light brown emulsion.																											
525		19:00	Seperation of emulsion from sample results in an API = 36.2 @ 60F, specific gravity of 0.844																											
526		19:00	Monitor showing 3% LEL's from meter run. Too small to measure.																											
527		19:30		-17	7	40																								
528		20:00	50.80	-16	7	41	480											0.00	0	0.00	0.00	0.00	288.50					0 0.0		

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
629	2013/03/13	20:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
630		20:30		-14	91	41																						
631		21:00	50.80	-12	83	47	2070											0.24	0	0.00	0.00	0.24	288.74				0	0.0
632		21:00	Unable to catch fluid sample.																									
633		21:00	N ₂ offline, coil pull up above perfs.																									
634		21:30		-15	7	38																						
635		22:00	50.80	-15	1	37	230																					
636		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
637		22:30		-17	82	37																						
638		23:00	50.80	-17	81	35	2070											0.18	0	0.00	0.00	0.18	288.92	43.0	30.0	45.7	0	0.0
639		23:00	Two stock oil samples taken.																									
640		23:00	Samples showing 80% clean dark brown oil and 20% creamy light brown emulsion and a trace of hydrates.																									
641		23:00	Monitor showing 3% LEL's from meter run. Too small to measure.																									
642		23:01	N ₂ offline, coil pull up above perfs.																									
643		23:30		-18	0	33																						
644	2013/03/14	00:00	50.80	-18	3	32	430											0.00	0	0.00	0.00	0.00	288.92				0	0.0
645		00:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
646		00:15	N ₂ offline due to mechanical problems.																									
647		00:30		-21	1	32																						
648		01:00	50.80	-22	1	31	690											0.00	0	0.00	0.00	0.00	288.92				0	0.0
649		01:30		-20	4	37																						
650		02:00	50.80	-23	4	36	750											0.00	0	0.00	0.00	0.00	288.92				0	0.0
651		02:30		-34	4	36																						
652		02:31	N ₂ online @ 15 scm. Coil run in below perfs.																									
653		03:00	50.80	-31	176	41	2440											0.05	0	0.00	0.00	0.05	288.97				0	0.0
654		03:00	Unable to catch fluid sample.																									
655		03:30		-32	97	42																						
656		04:00	50.80	-25	57	41	1830											0.56	0	0.00	0.00	0.56	289.53	44.0	38.0	46.0	0	0.0

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
557	2013/03/14	04:00	Samples showing 80% clean dark brown oil and 20% creamy light brown emulsion and a trace of hydrates.																										
558		04:00	Monitor showing 2% LEL's from meter run. Too small to measure.																										
559		04:01	N ₂ offline, coil pull up above perfs.																										
560		04:30		-29	4	31																							
561		05:00	50.80	-28	2	29	500											0.00	0	0.00	0.00	0.00	289.53				0	0.0	
562		05:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
563		05:30		-20	134	38																							
564		06:00	50.80	-16	91	37	1910	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.44	0	0.00	0.00	0.44	289.97	42.0	20.0	45.5	0	0.0	
565			Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																										
566			Monitor showing 5% LEL's from meter run. Too small to measure.																										
567			N ₂ offline, coil pull up above perfs.																										
568			***Daily production summary*** ((March 13th @ 0600hrs to March 14th @ 0600hrs))																										
569			Daily Hours Flowed = 24Hrs, 00mins													Cumm. Hours Flowed = 180Hrs, 20mins													
570			Daily load fluid Recovered = 4.13 m ³													Cumm. load fluid Recovered = 289.97 m ³													
571			Daily Oil produced = 0.00 m ³													Cumm. Oil produced = 0.00 m ³													
572			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³													
573			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 98.83 m ³													
574	2013/03/14	06:30		-21	4	34																							
575		07:00	50.80	-27	3	36	480											0.00	0	0.00	0.00	0.00	289.98				0	0.0	
576		07:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
577		07:30		-25	91	35																							
578		08:00	50.80	-23	36	36	1580											0.23	0	0.00	0.00	0.23	290.21				0	0.0	
579		08:30		-21	110	39																							
580		09:00	50.80	-19	98	40	1790											0.30	0	0.00	0.00	0.30	290.51	40.0	4.0	44.8	0	0.0	
581		09:00	Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																										
582		09:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
583		09:00	N ₂ offline, coil pull up above perfs.																										
584		09:30		-20	2	36																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

Date	Time	Wellhead						ST - 27 Orifice Meter										Oil Produced Volume Meter											
		Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
		mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%		
685	2013/03/14 09:30	N ₂ online @ 15 scm. Coil run in below perfs.																											
686	10:00	50.80	-20	42	38	1650											0.00		0.00	0.00	0.00	290.51							
687	10:00	N ₂ offline.																											
688	10:30		-21	4	35																								
689	11:00	50.80	-21	5	38	680											0.00		0.00	0.00	0.00	290.51							
690	11:00	N ₂ online.																											
691	11:30		-18	110	41																								
692	11:45	N ₂ offline.																											
693	12:00	50.80	-18	12	45	170											0.28	0	0.00	0.00	0.28	290.79	40.0	5.0	44.7	0	0.0		
694	12:00	Coil start to pull out of hole.																											
695	12:30		-20	8	41																								
696	13:00	50.80	-20	3	40																								
697	13:30		-22	5	38												0.00		0.00	0.00	0.00	290.79							
698	13:30	Coil at surface, shut in master valve and bleed off coil.																											
699	14:00	Rig lubricator off wellhead, install logging tool.																											
700	15:50	Purge and pressure test lubricator and flowline to 24 mPa.																											
701	16:30	0.00		430			0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00		0.00	0.00	0.00	290.79							
702	16:30	Open master and run in hole with logging tool.																											
703	17:00			510																									
704	17:30			350																									
705	18:00	0.00		270	30	270	0.00																						
706	18:30			330	22																								
707	19:00	0.00		423	19	240	0.00																						
708	19:30			160	13																								
709	20:00	0.00		69	17	230	0.00																						
710	20:30			57	18																								
711	21:00	0.00		44	18	400	0.00																						
712	21:07	N ₂ online @ 15 scm.																											
713	21:09	0.00		510			0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00		0.00	0.00	0.00	290.79							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
714	2013/03/14	21:10	Open well to flow on 2" (50.80mm).																									
715		21:11	N ₂ @ surface. No burnable gas showing at flare.																									
716		21:15	Two gas sample taken from meter run, cylinder #'s 11001069 - 05004966																									
717		21:30		-15	96	30																						
718		21:30	Three stock samples taken.																									
719		21:40	N ₂ offline , coil continue logging.																									
720		22:00	50.80	-16	11	28	420										0.64	0	0.00	0.00	0.64	291.43	43.0	26.0	46.1	0	0.0	
721		22:00	Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																									
722		22:00	Monitor showing 3% LEL's from meter run. Too small to measure.																									
723		22:30		-18	3	21																						
724		22:33	N ₂ online.																									
725		23:00	50.80	-18	14	28	1690										0.00	0	0.00	0.00	0.00	291.43				0	0.0	
726		23:30		-28	49	29																						
727	2013/03/15	00:00	50.80	-20	43	21	1760										0.00	0	0.00	0.00	0.00	291.43				0	0.0	
728		00:10	N ₂ offline.																									
729		00:30		-18	7	28																						
730		01:00	50.80	-20	0	31	0										0.00	0	0.00	0.00	0.00	291.43				0	0.0	
731		01:30		-28	2	30																						
732		02:00	50.80	-34	1	28	0	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00	0	0.00	0.00	0.00	291.43				0	0.0
733		02:00	Coil at surface, shut in master valve and bleed off coil.																									
734		02:15	Coil begin to rig out, unable to monitor pressures.																									
735		06:00	***Daily production summary*** ((March 14th @ 0600hrs to March 15th @ 0600hrs))																									
736			Daily Hours Flowed = 13Hrs, 20mins												Cum. Hours Flowed = 193Hrs, 40mins													
737			Daily load fluid Recovered = 1.46 m ³												Cum. load fluid Recovered = 291.43 m ³													
738			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³													
739			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cum. Burnable Gas to Flare = 0.087 10 ³ m ³													
740			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 97.37 m ³													
741			Rig in slickline.																									

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
742	2013/03/15	11:30	0.00		570		0	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00	0	0.00	0.00	0.00	291.43			46.1	0	0.0
743		12:00	Begin Slickline work, gauge ring, static gradient, recorders, plug and pressure tests.																									
744		17:00	Gas samples taken from wellhead, cylinder #'s 04002158, 05005432.																									
745			***Daily & END OF JOB production summary*** ((March 15th @ 0600hrs to March 16th @ 0000hrs))																									
746			Daily Hours Flowed = 00Hrs, 00mins												Cumm. Hours Flowed = 193Hrs, 40mins													
747			Daily load fluid Recovered = 0.00 m ³												Cumm. load fluid Recovered = 291.43 m ³													
748			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³													
749			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³													
750			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 97.37 m ³													
751			-TIN CONTAINER FLUID SAMPLES TO WEATHERFORD, GAS AND PLASTIC FLUID SAMPLES TO AGAT-																									
752			Gas cylinder #'s 11001069, 05004966, 05005398, 04002158, 05005432																									
753	2013/03/16	09:00	0.00		0	20	0	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00		0.00	0.00	0.00	291.43				0	0.0
754		09:00	Continue slickline operations. Tubing on vacuum.																									

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Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

[illegible]

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter									
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH Sand
	YYY/MM/DD	H:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%
29	2013/03/05	06:00	0.00			3265		0.00				0							0								0.0
30		07:00				3401																					
31		08:00				3525																					
32		08:00	Remove deadweight from casing, stand by to frac Canol formation.																								
33		11:20	Begin pressure tests on frac iron.																								
34		12:20	Begin frac on Canol formation.																								
35		13:13	Frac complete.																								
36		13:13			19800																						
37		13:35	Drop 2nd ball.																								
38		14:10	Continue frac.																								
39		15:11	Frac complete.																								
40		15:11			21300																						
41		15:15	Drop 3rd ball.																								
42		16:10	Continue frac.																								
43		16:50	Frac complete, ISIP = 23.0 mPa, Fluid pumped = 374.8m ³ , LOAD TO RECOVER = 388.8m ³ .																								
44		17:00			23000	700																					
45		17:00	Remain shut in for 3 hrs, unable to monitor buildups untill frac head is rigged off well.																								
46		18:00			19856	1383																					
47		18:30			19474	1825																					
48		19:00			19034	2229																					
49		19:30			18663	2660																					
50		20:00	0.00	0	18468	2842		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00	0.0		0	0.0
51		20:00	Open well to flow on adjustable 18/64 (7.14mm) choke, establish rate of 5.0m ³ /hr as per program before switching to bean choke.																								
52		20:05		-1	16949	2919																					
53		20:10	7.14	1	16848	3034			0	0.00	0	0	0.000	0.000	0.000	0.000	0.000										
54		20:11	N ₂ to surface, install 1.75" (44.45mm) orifice plate, meter in service.																								
55		20:15		3	16623	3186		44.45	68	33.83	1	100	26.342	0.000	26.342	0.091	0.000										
56		20:30	7.14	8	16296	4195			21	6.96	-4		9.893	0.000	9.893	0.280	0.000										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																										
58		20:45		4	16449	4793			33	0.01	0		0.395	0.000	0.395	0.334	0.000												
59		21:00	5.56	4	16359	4931		44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	47.0	50.0	48.0	0	0.1	
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																										
62		21:30	7.94	12	14738	6674		44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000												
63		21:35	Fluid samples are showing gel and 20% sand.																										
64		22:00	7.94	10	14228	7443		44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	47.0	50.0	48.0	0	1.0	
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
66		22:00	Fluid samples showing no gel and 1% sand.																										
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																										
68		22:30		12	13833	8349		44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000												
69		22:31	Install 1" (25.4mm) orifice plate.																										
70		23:00	7.94	11	13542	8754		25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	47.0	53.6	47.6	0	1.0	
71		23:00	Two stock oil samples taken.																										
72		23:30		14	13334	9276			275	18.90	6		9.162	0.000	9.162	1.786	0.000												
73		23:30	Bleed down casing pressure.																										
74	2013/03/06	00:00	7.94	13	12860	5440		25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	47.0	53.6	47.6	0	0.1	
75		00:00	Checked ball catcher, no balls found.																										
76		00:30		14	12629	5090			410	18.23	7		10.476	0.000	10.476	2.214	0.000												
77		01:00	7.94	12	12149	5419		25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	46.0	55.4	46.4	0	0.1	
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																										
79		01:30		14	10085	5966			379	22.88	8		11.373	0.000	11.373	2.645	0.000												
80		02:00	8.73	15	9590	6370		25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	46.0	53.6	46.6	0	0.1	
81		02:00	Two stock oil samples taken.																										
82		02:30		14	9425	6712			337	20.89	8		10.371	0.000	10.371	3.102	0.000												
83		03:00	8.73	12	9404	6782		25.40	382	18.41	8	100	10.216	0.000	10.216	3.317	0.000	10.62	0	0.00	0.00	10.62	84.20	47.0	57.2	47.3	0	0.1	
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
85	2013/03/06	03:30	8.73	14	8213	7979		25.40	317	20.15	8	100	9.947	0.000	9.947	3.527	0.000		0							47.3	0.1			
86		04:00	9.53	13	8071	9845		25.40	275	17.91	8	100	8.883	0.000	8.883	3.723	0.000	10.05	0	0.00	0.00	10.05	94.25	46.0	53.6	46.6	0	0.1		
87		04:00	Bleed down casing pressure.																											
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																											
89		04:30		14	6722	4170			396	23.38	10		11.659	0.000	11.659	3.937	0.000													
90		05:00	10.32	15	5969	4383		25.40	358	17.91	9	100	9.803	0.000	9.803	4.161	0.000	15.65	0	0.00	0.00	15.65	109.90	47.0	55.4	47.4	0	0.1		
91		05:30		18	5427	4432			310	21.89	8		10.288	0.000	10.288	4.370	0.000													
92		06:00	10.32	16	4999	4430		25.40	303	29.39	8	100	11.859	0.000	11.859	4.601	0.000	14.01	0	0.00	0.00	14.01	123.91	47.0	53.6	47.6	0	0.1		
93		06:00	Checked ball catcher, no balls found.																											
94			***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																											
95			Daily Hours Flowed = 10Hrs, 00mins													Cumm. Hours Flowed = 10Hrs, 00mins														
96			Daily load fluid Recovered = 123.91 m ³													Cumm. load fluid Recovered = 123.91 m ³														
97			Daily Oil produced = 0.00 m ³													Cumm. Oil produced = 0.00 m ³														
98			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³														
99			Daily N ₂ recovered = 4.601 10 ³ m ³													Cumm. N ₂ recovered = 4.601 10 ³ m ³														
100			Daily frac balls recovered = 0													Cum. frac balls recovered = 0														
101			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 264.89 m ³														
102	2013/03/06	06:30		16	4555	4759			265	15.17	7		8.069	0.000	8.069	4.808	0.000													
103		07:00	10.32	9	4129	4201		25.40	255	17.41	7	100	8.534	0.000	8.534	4.981	0.000	12.46	0	0.00	0.00	12.46	136.37	46.0	43.0	47.6	0	0.1		
104		07:30		10	3758	4058			220	14.43	7		7.363	0.000	7.363	5.147	0.000													
105		08:00	10.32	9	3604	3924		25.40	227	16.91	7	100	8.069	0.000	8.069	5.307	0.000	10.14	0	0.00	0.00	10.14	146.51	47.0	54.0	47.6	0	0.1		
106		08:30		5	3429	3745			210	16.23	8		7.680	0.000	7.680	5.471	0.000													
107		09:00	10.32	5	3319	3601		25.40	152	23.13	3	100	8.378	0.000	8.378	5.639	0.000	8.64	0	0.00	0.00	8.64	155.15	46.0	50.0	47.0	0	0.1		
108		09:01	Increase to 32/64 (12.70mm) adjustable choke.																											
109		09:05	Increase orifice plate to 1.25" (31.75mm).																											
110		09:30		8	2339	3403		31.75	90	7.77	6		6.492	0.000	6.492	5.794	0.000													
111		10:00	12.70	5	2509	3219		31.75	103	9.45	9	100	7.377	0.000	7.377	5.938	0.000	6.72	0	0.00	0.00	6.72	161.87	46.0	50.0	47.0	0	0.1		
112		10:30		9	2306	3074			83	9.40	4		7.040	0.000	7.040	6.088	0.000													

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
113	2013/03/06	11:00	12.70	7	2255	2935		31.75	82	9.20	6	100	6.920	0.000	6.920	6.234	0.000	6.04	0	0.00	0.00	6.04	167.91	46.0	50.0	47.0	0	0.1	
114		11:00	Increase to 48/64 (19.05mm) adjustable choke.																										
115		11:05	Increase orifice plate to 1.5" (38.10mm).																										
116		11:30		12	599	2820			165	6.96	2		7.327	0.000	7.327	6.382	0.000												
117		12:00	19.05	10	248	2646		38.10	28	10.69	4	100	9.086	0.000	9.086	6.553	0.000	4.95	0	0.00	0.00	4.95	172.86	47.0	52.0	47.8	0	0.1	
118		12:15	Increase to 128/64 (50.80mm).																										
119		12:16	Increase orifice plate to 2" (50.80mm).																										
120		12:30		5	117	2323			21	15.70	5		10.762	0.000	10.762	6.760	0.000												
121		13:00	50.80	4	3	2145		50.80	4	4.97	4	100	10.083	0.000	10.083	6.977	0.000	5.66	0	0.00	0.00	5.66	178.52	46.0	50.0	47.0	0	0.1	
122		13:15	Gas too small to measure. Meter out of service.																										
123		13:30		3	10	2130																							
124		14:00	50.80	2	6	1926		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	5.86	0	0.00	0.00	5.86	184.38	46.0	50.0	47.0	0	0.1	
125		14:00	Checked ball catcher, no balls found.																										
126		14:30		1	98	1619																							
127		15:00	50.80	1	15	1425		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	3.18	0	0.00	0.00	3.18	187.56	46.0	50.0	47.0	0	0.1	
128		15:00	Two stock oil samples taken.																										
129		15:30		2	5	1209																							
130		16:00	50.80	2	8	1034		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	4.71	0	0.00	0.00	4.71	192.27	46.0	50.0	47.0	0	0.1	
131		16:30		2	8	990		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000												
132		16:45	Well starting to surge. Meter in service with a 2" (50.80mm) orifice plate.																										
133		17:00	50.80	20	268	989		50.80	34	4.53	28	100	10.546	0.000	10.546	7.197	0.000	4.70	0	0.00	0.00	4.70	196.97	45.0	40.0	46.9	0	0.1	
134		17:30		4	7	697			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
135		18:00	50.80	3	6	609		50.80	0	0.00	0	0	0.000	0.000	0.000	7.197	0.000	1.17	0	0.00	0.00	1.17	198.14	45.0	40.0	46.9	0	0.1	
136		18:30		1	3	394			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
137		19:00	50.80	1	5	544		50.80	17	9.95	7	100	15.199	0.000	15.199	7.513	0.000	2.34	0	0.00	0.00	2.34	200.48	45.0	46.0	46.3	0	0.1	
138		19:30		-4	3	284			14	3.48	0		8.900	0.000	8.900	7.764	0.000												
139		20:00	50.80	-4	4	35		50.80	14	0.49	3	100	3.319	0.000	3.319	7.892	0.000	2.64	0	0.00	0.00	2.64	203.12	45.0	45.0	46.4	0	0.0	
140		20:30		-1	3	30			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
141		21:00	50.80	-16	59	145		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.09	0	0.00	0.00	2.09	205.21	46.0	48.0	47.1	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
142	2013/03/06	21:30	50.80	-10	3	33		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000		0							47.1	0.0			
143		22:00	50.80	-7	4	79		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.29	0	0.00	0.00	2.29	207.50	45.0	48.0	46.1	0	0.0		
144		22:30		-10	2	7			0	0.00	0		0.000	0.000	0.000	7.892	0.000													
145		23:00	50.80	-7	1	11		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	1.44	0	0.00	0.00	1.44	208.94	46.0	41.0	47.8	0	0.0		
146		23:30		-9	15	16			0	0.00	0		0.000	0.000	0.000	7.892	0.000													
147	2013/03/07	00:00	50.80	-9	6	35		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	0.17	0	0.00	0.00	0.17	209.11	46.0	44.0	47.5	0	0.0		
148		00:30		-14	6	15			22	3.33	0	100	9.020	0.000	9.020	8.080	0.000													
149		01:00	50.80	-1	89	68		50.80	17	2.11	0	100	7.016	0.000	7.016	8.247	0.000	3.21	0	0.00	0.00	3.21	212.32	47.0	60.0	47.0	0	0.0		
150		01:30		-13	4	12			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
151		02:00	50.80	-16	12	5		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.58	0	0.00	0.00	0.58	212.90	46.0	44.0	47.5	0	0.0		
152		02:30		-11	1	3			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
153		03:00	50.80	-11	2	3		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.00	0	0.00	0.00	0.00	212.90	0.0			0	0.0		
154		03:30		-12	1	5			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
155		04:00	50.80	-11	2	22		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.59	0	0.00	0.00	0.59	213.49	47.0	59.0	47.1	0	0.0		
156		04:30		-10	2	21			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
157		05:00	50.80	-10	3	18		50.80	3	2.13	-3	100	6.626	0.000	6.626	8.385	0.000	3.81	0	0.00	0.00	3.81	217.30	45.0	40.0	46.9	0	0.0		
158		05:30		-17	3	5			0	0.00	0		0.000	0.000	0.000	8.385	0.000													
159		06:00	50.80	-18	1	7		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.93	0	0.00	0.00	0.93	218.23	45.0	42.0	46.7	0	0.0		
160			***Daily production summary*** ((March 6th @ 20:00hrs to March 7th @ 06:00hrs))																											
161			Daily Hours Flowed = 24Hrs, 00mins												Cumm. Hours Flowed = 34Hrs, 00mins															
162			Daily load fluid Recovered = 94.32 m ³												Cumm. load fluid Recovered = 218.23 m ³															
163			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³															
164			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³															
165			Daily N ₂ recovered = 3.784 10 ³ m ³												Cumm. N ₂ recovered = 8.385 10 ³ m ³															
166			Daily frac balls recovered = 0												Cum. frac balls recovered = 0															
167			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 170.57 m ³															
168	2013/03/07	06:30		-15	3	5																								
169		07:00	50.80	-15	2	9		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	218.23				0	0.0		
170		07:30		-10	1	8																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API	
171	2013/03/07	08:00	50.80	-13	3	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.07	0	0.00	0.00	1.07	219.30	45.0	41.0	46.8	0	0.0	
172		08:30		-8	2	7																							
173		08:30	Begin to rig in coil.																										
174		09:00	50.80	-10	1	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	3.00	0	0.00	0.00	3.00	222.30	45.0	40.0	46.9	0	0.0	
175		09:30			3	8																							
176		10:00	50.80		2	8		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
177		10:30			2	8			0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
178		10:30	Shut in well, continue to rig in coil.																										
179			***Daily production summary*** ((March 7th @ 0600hrs to March 7th @ 10:30hrs))																										
180			Daily Hours Flowed = 4Hrs, 30mins												Cum. Hours Flowed = 38Hrs, 30mins														
181			Daily load fluid Recovered = 4.07 m³												Cum. load fluid Recovered = 222.30 m³														
182			Daily Oil produced = 0.00 m³												Cum. Oil produced = 0.00 m³														
183			Daily Burnable Gas Produced to Flare = 0.000 10³m³												Cum. Burnable Gas to Flare = 0.000 10³m³														
184			Daily N₂ recovered = 0.000 10³m³												Cum. N₂ recovered = 8.385 10³m³														
185			Daily frac balls recovered = 0												Cum. frac balls recovered = 0														
186			Initial load fluid to recover = 388.80 m³												Load fluid left to recover = 165.5 m³														
187	2013/03/07	10:35	0.00		75	11		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30				0	0.0	
188		10:40			152	10																							
189		10:45			225	7																							
190		11:00			301	5																							
191		11:15			396	3																							
192		11:30			499	3																							
193		12:00			1023	3																							
194		12:30			1320	5																							
195		13:00			1661	4		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		0.0		0	0.0	
196		21:45	Coil stab lubricator onto well and break circulation back to test vessel.																										
197	2013/03/08	01:35	Pressure test to 35 mPa.																										
198		01:45	Bleed down pressure test to 7 mPa.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%		
199	2013/03/08	01:49	ISIP = 3824 kPa																											
200		01:50	Open master valve, run in hole with milling tools.																											
201		02:00	Open up @ manifold to maintain 1 mPa.																											
202		02:30		-23	698	-1																								
203		03:00		-20	1200	-1																								
204		03:30		-20	800	-1																								
205		03:45	Tagged seat #1.																											
206		04:00		-8	1250	-1																		48.0	54.0	48.6		0.1		
207		04:00	Samples showing trace of sand. Pump rate 350ltrs/min Return rate is 340 ltrs/min.																											
208		04:30		-13	1131	-1		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	44.0	46.5		0.0		
209		04:45	Baker TP pumper is having mechanical issues, coil begin to pull up.																											
210		04:50	Coil parked 1800 mKB, shut in at manifold.																											
211		05:00	Open back up at manifold and pump remainder of fluid off TP pumper.																											
212		05:20	Shut in at manifold, record pressures and wait further instruction.																											
213		05:30			695	-1																								
214		06:00			772	-1																								
215		06:30			783	-1																								
216		06:45	Open @ manifold and resume operations																											
217		07:00	Shut in at manifold, record pressures and wait further instruction.																											
218		08:00			791	-1																								
219		09:00			861	-1																								
220		10:00			865	-1																								
221		10:30	Pressure test N ₂ lines.																											
222		10:45	Open @ manifold and resume operations.																											
223		11:00			850	-1																								
224		12:00			795	-1																		45.0	44.0	46.5	0	0.0		
225		12:00	Shut in at manifold, stand by to fix pump.																											
226		13:00			1258	0																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

Date	Time	Wellhead															ST - 27 Orifice Meter															Oil Produced Volume Meter									
		Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand														
		YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%												
227	2013/03/08	14:00	0.00		2238	0		0.00				0							0					44.5	28.0	47.5	0	0.0													
228		14:30	Open @ manifold and resume operations.																																						
229		15:00			110	0																																			
230		15:30	Tagged seat #2.																																						
231		16:00			468	0																	45.0	34.0	47.4	0	0.0														
232		16:40	Tagged seat #3																																						
233		17:00			377	0																																			
234		17:15	Through seat #3.																																						
235		18:00			548	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	35.0	47.3	0	0.0													
236		18:30	Begin to pull to surface.																																						
237		19:00			387	0																	45.0	36.0	47.2	0	0.0														
238		19:20	Fluid pump off line.																																						
239		19:30			120	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	2.80	0	0.00	0.00	2.80	225.10																		
240		19:45	Coil @ surface shut in master valve, bleed off through test vessel.																																						
241		20:00	****Total gained during milling operations = 2.80 m ³ .																																						
242		20:00	**** NEW LOAD LEFT TO RECOVER = 163.70 m ³ ****																																						
243		20:30	Unable to monitor pressures.																																						
244	2013/03/09	00:30	Coil stab lubricator onto well and break circulation back to test vessel.																																						
245		00:45	Pressure test to 35 mPa.																																						
246		01:06	Bleed down pressure test to 3 mPa.																																						
247		01:10	ISIP = 324 kPa																																						
248		01:15	Open master valve, run in hole with jetting nozzle.																																						
249		01:25	Open up @ manifold to maintain 1 mPa.																																						
250		01:30			519	13																																			
251		01:30	N ₂ online @ 10scm/min																																						
252		01:35	N ₂ @ surface.																																						
253		02:00			2019	27												11.62	0	0.00	0.00	11.62	236.72	46.0	42.0	47.7	0	0.0													
254		02:22	Increase N ₂ rate to 20scm/min.																																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
255	2013/03/09	02:30	0.00		1700	89		0.00				0						0							47.7	0.0			
256		03:00			1850	107												7.65	0	0.00	0.00	7.65	244.37	46.0	50.0	47.0	0	0.0	
257		03:06	Coil tagged @ 1941.7 mKB																										
258		03:08	Coil pull up and park @ 1937.0 mKB and continue to pump N ₂ .																										
259		03:30			2019	136																							
260		04:00			1083	111												2.03	0	0.00	0.00	2.03	246.40	44.0	30.0	46.8	0	0.0	
261		04:00	One stock oil samples taken.																										
262		04:15	Decrease N ₂ rate to 15scm/min																										
263		04:30			738	86																							
264		05:00			903	79												1.17	0	0.00	0.00	1.17	247.57	48.0	66.0	47.4	0	0.0	
265		05:30			885	76																							
266		06:00			875	72		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.45	0	0.00	0.00	1.45	249.02	48.0	64.0	47.6	0	0.0	
267			***Daily production summary*** ((March 8th @ 0600hrs to March 9th @ 0600hrs))																										
268			Daily load fluid Recovered = 26.72 m ³												Cumm. load fluid Recovered = 249.02 m ³														
269			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
270			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 139.78 m ³														
271	2013/03/09	06:30			944	70																							
272		06:35	Decrease N ₂ rate to 10scm/min																										
273		07:00			822	55												1.23	0	0.00	0.00	1.23	250.25	47.0	60.0	47.0	0	0.0	
274		07:00	Increase N ₂ rate to 15scm/min																										
275		07:30			599	50																							
276		08:00	50.80	-6	147	59												1.70	0	0.00	0.00	1.70	251.95	44.0	28.0	46.9	0	0.0	
277		08:30		-10	123	55																							
278		09:00	50.80	-8	117	49												1.20	0	0.00	0.00	1.20	253.15	44.0	28.0	46.9	0	0.0	
279		09:30		-6	112	50																							
280		10:00	50.80	-6	110	49	2000											1.20	0	0.00	0.00	1.20	254.35	44.0	28.0	46.9	0	0.0	
281		10:30		-6	110	48																							
282		10:30	N ₂ offline, begin to rig out pump truck.																										
283		11:00	50.80	-10	2	43	1200											0.40	0	0.00	0.00	0.40	254.75	44.0	30.0	46.8	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	
284	2013/03/09	11:30	50.80	-10	0	38	0.00					0						0						46.8		0.0			
285		12:00	50.80	-11	1	26	300											0.00	0	0.00	0.00	0.00	254.75				0	0.0	
286		12:20	N ₂ online @ 15scm																										
287		12:30		-12	1	26																							
288		12:40	Fluid to surface.																										
289		12:45	Two stock oil samples taken.																										
290		13:00	50.80	-4	166	53	2700											1.70	0	0.00	0.00	1.70	256.45	45.0	36.0	47.2	0	0.0	
291		13:30		-5	110	56																							
292		14:00	50.80	-4	101	47	3000											1.50	0	0.00	0.00	1.50	257.95	45.0	30.0	47.8	0	0.0	
293		14:30		-3	103	43																							
294		15:00	50.80	-6	87	32	1800											0.60	0	0.00	0.00	0.60	258.55						
295		15:30		-4	81	30																							
296		15:30	Increase N ₂ rate to 20 scm.																										
297		16:00	50.80	-3	138	28	2600											0.60	0	0.00	0.00	0.60	259.15						
298		16:30		-3	175	37																							
299		17:00	50.80	-6	136	34	2560											1.10	0	0.00	0.00	1.10	260.25	45.0	32.0	47.6	0	0.0	
300		17:00	Decrease N ₂ rate to 15 scm.																										
301		17:30		-4	85	33																							
302		17:30	Increase N ₂ rate to 20 scm.																										
303		18:00	50.80	-4	114	35	2600											0.80	0	0.00	0.00	0.80	261.05						
304		18:00	Stock oil sample taken.																										
305		18:30		-6	134	31																							
306		19:00	50.80	-6	131	33	2600											0.70	0	0.00	0.00	0.70	261.75	44.0	30.0	46.8	0	0.0	
307		19:30		-7	334	30																							
308		20:00	50.80	-5	134	28	2950											0.30	0	0.00	0.00	0.30	262.05	46.0	58.0	46.2	0	0.0	
309		20:30		-9	93	28																							
310		21:00	50.80	-7	90	28	2580											0.88	0	0.00	0.00	0.88	262.93	45.0	45.0	46.4	0	0.0	
311		21:01	Decrease N ₂ rate to 15 scm.																										
312		21:30		-8	70	25																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter													
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand			
	YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%			
313	2013/03/09	22:00	50.80	-10	86	25	1960	0.00				0						1.11	0	0.00	0.00	1.11	264.04	46.0	54.0	46.6	0	0.0			
314		22:30		-7	68	26																									
315		23:00	50.80	-5	67	24	1980											0.59	0	0.00	0.00	0.59	264.63	46.0	52.0	46.8	0	0.0			
316		23:01	Increase N ₂ rate to 17 scm.																												
317		23:30		-4	110	26																									
318	2013/03/10	00:00	50.80	-4	110	23	2230											0.58	0	0.00	0.00	0.58	265.21	46.0	56.0	46.4	0	0.0			
319		00:00	Two stock oil samples taken.																												
320		00:01	Increase N ₂ rate to 17 scm.																												
321		00:30		-4	133	24																									
322		01:00	50.80	-6	134	23	2660											0.45	0	0.00	0.00	0.45	265.66	45.0	56.0	45.4	0	0.0			
323		01:30		-5	133	24																									
324		01:59	Due to daylight saving we will be skipping ahead one hour.																												
325		03:00	50.80	-5	132	22	2610											0.49	0	0.00	0.00	0.49	266.15	45.0	48.0	46.1	0	0.0			
326		03:30		-5	168	23																									
327		04:00	50.80	-4	132	22	2650											0.52	0	0.00	0.00	0.52	266.67	45.0	50.0	45.9	0	0.0			
328		04:30		-5	144	23																									
329		05:00	50.80	-5	138	23	2660											0.41	0	0.00	0.00	0.41	267.08	45.0	44.0	46.5	0	0.0			
330		05:21	Decrease N ₂ rate to 15 scm.																												
331		05:30		-7	89	20																									
332		06:00	50.80	-6	81	20	1950	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.47	0	0.00	0.00	0.47	267.55	45.0	44.0	46.5	0	0.0			
333		06:00	Stock oil samples taken.																												
334			***Daily production summary*** ((March 9th @ 0600hrs to March 10th @ 0600hrs))																												
335			Daily load fluid Recovered = 18.53 m³													Cumm. load fluid Recovered = 267.55 m³															
336			Daily Oil produced = 0.00 m³													Cumm. Oil produced = 0.00 m³															
337			Initial load fluid to recover = 388.80 m³													Load fluid left to recover = 121.25 m³															
338			ODOR PRESENT IN FLUID SAMPLES, MAYBE HYDROCARBONS.																												
339	2013/03/10	06:30		-6	85	23																									
340		07:00	50.80	-6	90	22	1950											0.41	0	0.00	0.00	0.41	267.96	45.0	46.0	46.3	0	0.0			
341		07:30		-6	90	22																									

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
342	2013/03/10	08:00	50.80	-6	91	22	1950	0.00				0						0.47	0	0.00	0.00	0.47	268.43			46.3		0.0	
343		08:30		-7	90	23																							
344		09:00	50.80	-6	90	22	1950											0.42	0	0.00	0.00	0.42	268.85	46.0	46.0	47.3	0	0.0	
345		09:30		-6	88	24																							
346		09:40	Coil pull up to 1885 m																										
347		10:00	50.80	-5	88	23	1920											0.28	0	0.00	0.00	0.28	269.13						
348		10:30		-5	85	22																							
349		11:00	50.80	-5	85	21	1940											0.29	0	0.00	0.00	0.29	269.42	46.0	45.0	47.4	0	0.0	
350		11:30		-6	86	21																							
351		12:00	50.80	-6	85	21	1960											0.29	0	0.00	0.00	0.29	269.71	46.0	44.0	47.5	0	0.0	
352		12:00	Two stock oil samples taken.																										
353		12:00	Decrease N ₂ rate to 8 scm.																										
354		12:30		-6	21	20																							
355		13:00	50.80	-5	22	18	1000											0.14	0	0.00	0.00	0.14	269.85						
356		13:00	Increase N ₂ rate to 15 scm. Coil pull up to 1000m.																										
357		13:30		-6	108	38																							
358		13:50	Decrease N ₂ rate to 8 scm. Coil run in hole to 1875m.																										
359		14:00	50.80	-6	46	31	850											0.57	0	0.00	0.00	0.57	270.42	46.0	44.0	47.5	0	0.0	
360		14:30		-6	16	13																							
361		15:00	50.80	-6	18	12	1070											0.00	0	0.00	0.00	0.00	270.42						
362		15:30		-8	17	12																							
363		16:00	50.80	-8	17	17	1270											0.00	0	0.00	0.00	0.00	270.42						
364		16:00	N ₂ offline, coil pull up above perms.																										
365		16:30		-12	5	16																							
366		17:00	50.80	-12	2	16	0											0.00		0.00	0.00	0.00	270.42						
367		17:30		-12	2	16																							
368		17:30	N ₂ online @ 15 scm. Coil run in below perms.																										
369		18:00	50.80	-11	56	28	2540											0.58	0	0.00	0.00	0.58	271.00	44.0	30.0	46.8	0	0.0	
370		18:30		-3	106	26																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter													
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand			
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%			
371	2013/03/10	19:00	50.80	-3	85	31	2010	0.00				0							1.31	0	0.00	0.00	1.31	272.31	44.0	32.0	46.6	0	0.0		
372		19:30		-6	84	28																									
373		20:00	50.80	-5	75	27	1900												0.29	0	0.00	0.00	0.29	272.60	45.0	30.0	47.8	0	0.0		
374		20:01	Decrease N ₂ 10 scm, coil pull up above perfs.																												
375		20:11	N ₂ offline.																												
376		20:30		-7	5	24																									
377		21:00	50.80	-8	5	21	0												0.00	0	0.00	0.00	0.00	272.60				0	0.0		
378		21:30		-8	5	20																									
379		22:00	50.80	-7	6	20													0.00	0	0.00	0.00	0.00	272.60				0	0.0		
380		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																												
381		22:30		-7	136	25																									
382		23:00	50.80	-9	19	28	1260												0.87	0	0.00	0.00	0.87	273.47	44.0	42.0	45.7	0	0.0		
383		23:00	Decrease N ₂ rate to 10 scm.																												
384		23:00	Two stock oil samples taken.																												
385		23:30		-8	33	25																									
386	2013/03/11	00:00	50.80	-8	26	23	1300												0.24	0	0.00	0.00	0.24	273.71				0	0.0		
387		00:01	Increase N ₂ rate to 15 scm.																												
388		00:30		-9	90	27																									
389		01:00	50.80	-8	87	27	1930												0.34	0	0.00	0.00	0.34	274.05	45.0	44.0	46.5	0	0.0		
390		01:30		-9	73	26																									
391		02:00	50.80	-9	78	27	1860												0.30	0	0.00	0.00	0.30	274.35				0	0.0		
392		02:01	N ₂ offline, coil pull up above perfs.																												
393		02:30		-10	6	25																									
394		03:00	50.80	-11	4	23	0												0.00	0	0.00	0.00	0.00	274.35				0	0.0		
395		03:30		-12	4	20																									
396		04:00	50.80	-12	5	21	0												0.00	0	0.00	0.00	0.00	274.35				0	0.0		
397		04:00	N ₂ online @ 15 scm. Coil run in below perfs.																												
398		04:30		-11	132	28																									
399		04:48	N ₂ offline.																												

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
400	2013/03/11	05:00	50.80	-12	8	27	300	0.00				0						0.87	0	0.00	0.00	0.87	275.22	43.0	36.0	45.2	0	0.0	
401		05:00	Stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
402		05:10	N ₂ back online @ 15 scm.																										
403		05:30		-11	26	34																							
404		06:00	50.80	-12	61	27	1720	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.19	0	0.00	0.00	0.19	275.41				0	0.0	
405			***Daily production summary*** ((March 10th @ 0600hrs to March 11th @ 0600hrs))																										
406			Daily Hours Flowed = 24Hrs, 00mins												Cum. Hours Flowed = 109Hrs, 00mins														
407			Daily load fluid Recovered = 7.86 m ³												Cum. load fluid Recovered = 275.41 m ³														
408			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³														
409			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 113.39 m ³														
410	2013/03/11	06:30		-13	56	27																							
411		07:00	50.80	-12	62	25	1860											0.37	0	0.00	0.00	0.37	275.78				0	0.0	
412		07:10	N ₂ offline, coil pull up above perfs.																										
413		07:30		-13	6	26																							
414		08:00	50.80	-12	5	23	240											0.14	0	0.00	0.00	0.14	275.92				0	0.0	
415		08:30		-15	5	21																							
416		09:00	50.80	-15	6	22	270											0.00		0.00	0.00	0.00	275.92						
417		09:30		-15	7	24																							
418		09:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
419		10:00	50.80	-14	74	26	2600											0.15	0	0.00	0.00	0.15	276.07	43.0	20.0	46.6	0	0.0	
420		10:30		-12	90	28																							
421		11:00	50.80	-12	42	28	470											1.01	0	0.00	0.00	1.01	277.08	45.0	54.0	45.6	0	0.0	
422		11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																										
423		11:00	Fluid sample also showing trace of hydrates.																										
424		11:00	N ₂ offline, coil pull up above perfs.																										
425		11:30		-12	8	22																							
426		12:00	50.80	-12	7	25	250											0.00	0	0.00	0.00	0.00	277.08				0	0.0	
427		12:30		-14	6	23																							
428		13:00	50.80	-15	5	23	440											0.00	0	0.00	0.00	0.00	277.08				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%		
429	2013/03/11	13:30	50.80	-17	5	21		0.00				0						0							45.6		0.0			
430		14:00	50.80	-19	3	20	520											0.00	0	0.00	0.00	0.00	277.08				0	0.0		
431		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
432		14:30		-18	93	28																								
433		15:00	50.80	-16	78	31	1910											1.02	0	0.00	0.00	1.02	278.10	44.0	32.0	46.6	0	0.0		
434		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																											
435		15:00	Fluid sample also showing trace of hydrates.																											
436		15:30		-16	26	31																								
437		15:30	N ₂ offline, coil pull up above perfs.																											
438		16:00	50.80	-15	4	26	250											0.11	0	0.00	0.00	0.11	278.21				0	0.0		
439		16:30		-16	5	28																								
440		17:00	50.80	-16	5	21	250											0.00	0	0.00	0.00	0.00	278.21							
441		17:30		-16	5	20																								
442		18:00	50.80	-16	4	19	250											0.00	0	0.00	0.00	0.00	278.21				0	0.0		
443		18:30		-16	4	19																								
444		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																											
445		19:00	50.80	-16	54	33	330											0.11	0	0.00	0.00	0.11	278.32	44.0	30.0	46.8	0	0.0		
446		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 11% LELs from meter run when making fluid.																											
447		19:00	Fluid sample also showing trace of hydrates.																											
448		19:30		-16	86	36																								
449		20:00	50.80	-16	69	27	1700											1.00	0	0.00	0.00	1.00	279.32	44.0	32.0	46.6	0	0.0		
450		20:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																											
451		20:00	Fluid sample also showing trace of hydrates.																											
452		20:01	N ₂ offline, coil pull up above perfs.																											
453		20:30		-15	6	30																								
454		21:00	50.80	-16	4	27	150											0.00	0	0.00	0.00	0.00	279.32				0	0.0		
455		21:30		-25	4	26																								
456		22:00	50.80	-26	3	25	230											0.00	0	0.00	0.00	0.00	279.32				0	0.0		
457		22:30		-31	3	25																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%
458	2013/03/11	23:00	50.80	-30	3	27	2360	0.00				0						0.00	0	0.00	0.00	0.00	279.32			46.6	0	0.0	
459		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
460		23:30		-25	160	27																							
461		23:45	Two stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
462	2013/03/12	00:00	50.80	-24	97	35	2070											0.89	0	0.00	0.00	0.89	280.21	44.0	36.0	46.2	0	0.0	
463		00:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
464		00:00	Fluid sample also showing trace of hydrates.																										
465		00:30		-23	10	32	2080																						
466		00:30	N ₂ offline, coil pull up above perfs.																										
467		01:00	50.80	-27	6	36	210											0.22	0	0.00	0.00	0.22	280.43	44.0	38.0	46.0	0	0.0	
468		01:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
469		01:00	Fluid sample also showing trace of hydrates.																										
470		01:30		-28	5	29																							
471		02:00	50.80	-30	5	27	200											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
472		02:30		-30	6	24																							
473		03:00	50.80	-34	4	25	180											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
474		03:30		-28	3	27																							
475		04:00	50.80	-33	4	24	260											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
476		04:30		-32	3	24																							
477		05:00	50.80	-30	3	24	290											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
478		05:30		-30	2	25																							
479		06:00	50.80	-28	3	22	310	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	280.43				0	0.0	
480			***Daily production summary*** ((March 11th @ 0600hrs to March 12th @ 0600hrs))																										
481			Daily Hours Flowed = 24Hrs, 00mins												Cum. Hours Flowed = 133Hrs, 00mins														
482			Daily load fluid Recovered = 5.02 m ³												Cum. load fluid Recovered = 280.43 m ³														
483			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³														
484			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 108.37 m ³														
485	2013/03/12	06:30		-36	3	22																							
486		07:00	50.80	-35	3	25	230											0.00	0	0.00	0.00	0.00	280.43				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
487	2013/03/12	07:30	50.80	-35	3	24		0.00				0						0							46.0	0.0		
488		08:00	50.80	-35	4	22	300																					
489		08:30		-35	3	25												0.00	0.00	0.00	0.00	280.43				0	0.0	
490		08:50	Shut in @ manafold, monitor pressure.																									
491		09:00	0.00		60	25		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43				0	0.0
492		09:15			80	24																						
493		09:29	0.00		102	25																					0	0.0
494		09:30	Gas sample taken from manafold, cylinder # 05005398.																									
495		09:30	N ₂ online @ 30 scm. Coil run in below perfs.																									
496		09:30			115	25	2100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43					
497		09:30	Open well to flow on 50.80mm.																									
498		09:31	Burnable gas to surface. Showing at flare, meter in service to catch a rate.																									
499		09:35	50.80	-30	96	24	3100	50.80	34	1.99	-25	0	9.390	9.390	0.000	8.385	0.033											
500		09:40	Fluid to surface.																									
501		09:45		-27	88	28			20	0.99	-25	0	6.237	6.237	0.000	8.385	0.087											
502		10:00	50.80	-11	282	49	2820	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	1.17	0	0.00	0.00	1.17	281.60	43.0	20.0	46.6	0	0.0
503		10:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing hydrates.																									
504		10:00	Monitor showing 8% LEL's from meter run. Too small to measure.																									
505		10:30		-13	89	42																						
506		11:00	50.80	-13	79	42	1920	0.00	0	0.00	0		0.000	0.000	0.000	8.385	0.087	0.89	0	0.00	0.00	0.89	282.49	46.0	60.0	46.0	0	0.0
507		11:00	N ₂ offline, coil pull up above perfs.																									
508		11:30		-14	100	40																						
509		12:00	50.80	-16	60	35	100											0.00		0.00	0.00	0.00	282.49				0	0.0
510		12:30		-16	4	33																						
511		13:00	50.80	-16	2	33	100											0.00		0.00	0.00	0.00	282.49				0	0.0
512		13:30		-15	4	31																						
513		14:00	50.80	-15	4	30	200											0.00		0.00	0.00	0.00	282.49				0	0.0
514		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																									
515		14:30		-15	63	36																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
516	2013/03/12	15:00	50.80	-12	117	40	2120	0.00				0						0.58	0	0.00	0.00	0.58	283.07	43.0	22.0	46.4	0	0.0		
517		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																											
518		15:00	Monitor showing 5% LEL's from meter run. Too small to measure.																											
519		15:30		-12	86	38																								
520		15:30	N ₂ offline, coil pull up above perfs.																											
521		16:00	50.80	-14	4	35	80											0.30	0	0.00	0.00	0.30	283.37	43.0	23.0	46.3	0	0.0		
522		16:30		-14	6	33																								
523		17:00	50.80	-15	8	31	90											0.00	0	0.00	0.00	0.00	283.37				0	0.0		
524		17:30		-16	5	30																								
525		18:00	50.80	-16	5	30	90											0.00	0	0.00	0.00	0.00	283.37				0	0.0		
526		18:30		-17	30	30																								
527		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																											
528		19:00	50.80	-20	120	31	2520											0.21	0	0.00	0.00	0.21	283.58	43.0	22.0	46.4	0	0.0		
529		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																											
530		19:00	Monitor showing 5% LEL's from meter run. Too small to measure.																											
531		19:30		-20		30																								
532		20:00	50.80	-25	93	36	2090											0.70	0	0.00	0.00	0.70	284.28	46.0	56.0	46.4	0	0.0		
533		20:00	Fluid sample lighter in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																											
534		20:00	Monitor showing 7% LEL's from meter run. Too small to measure.																											
535		20:01	N ₂ offline, coil pull up above perfs.																											
536		20:30		-18	25	36																								
537		21:00	50.80	-18	12	36	120											0.00	0	0.00	0.00	0.00	284.28				0	0.0		
538		21:30		-18	14	33																								
539		22:00	50.80	-23	7	35	340											0.00	0	0.00	0.00	0.00	284.28				0	0.0		
540		22:30		-25	7	35																								
541		23:00	50.80	-26	7	34	310											0.00	0	0.00	0.00	0.00	284.28				0	0.0		
542		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																											
543		23:30		-16	152	34																								
544	2013/03/13	00:00	50.80	-14	91	34	2000											0.76	0	0.00	0.00	0.76	285.04	45.0	56.0	45.4	0	0.0		

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	
545	2013/03/13	00:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																										
546		00:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
547		00:00	Two stock oil samples taken.																										
548		00:30		-19	97	34																							
549		00:31	N ₂ offline, coil pull up above perfs.																										
550		01:00	50.80	-18	3	33	130											0.15	0	0.00	0.00	0.15	285.19	46.0	54.0	46.6	0	0.0	
551		01:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																										
552		01:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
553		01:30		-20	5	33																							
554		02:00	50.80	-23	3	33	160											0.00	0	0.00	0.00	0.00	285.19				0	0.0	
555		02:30		-27	4	32																							
556		03:00	50.80	-28	3	31	210											0.00	0	0.00	0.00	0.00	285.19				0	0.0	
557		03:30		-26	3	30																							
558		03:31	N ₂ online @ 15 scm. Coil run in below perfs.																										
559		04:00	50.80	-17	116	31	2300											0.14	0	0.00	0.00	0.14	285.33	43.0	24.0	46.2	0	0.0	
560		04:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
561		04:00	Monitor showing 7% LEL's from meter run. Too small to measure.																										
562		04:30		-23	90	30																							
563		05:00	50.80	-19	91	31	560											0.51	0	0.00	0.00	0.51	285.84	44.0	28.0	46.9	0	0.0	
564		05:00	Stock oil sample taken.																										
565		05:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
566		05:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
567		05:01	N ₂ offline, coil pull up above perfs.																										
568		05:30		-23	4	28																							
569		06:00	50.80	-26	1	31	100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00	0	0.00	0.00	0.00	285.84				0	0.0	
570			***Daily production summary*** ((March 12th @ 0600hrs to March 13th @ 0600hrs))																										
571			Daily Hours Flowed = 23Hrs, 20mins													Cum. Hours Flowed = 156Hrs, 20mins													
572			Daily load fluid Recovered = 5.41 m ³													Cum. load fluid Recovered = 285.84 m ³													

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

Date	Time	Wellhead						ST - 27 Orifice Meter										Oil Produced Volume Meter											
		Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
		mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
573		Daily Oil produced = 0.00 m ³														Cumm. Oil produced = 0.00 m ³													
574		Daily Burnable Gas Produced to Flare = 0.087 10 ³ m ³														Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³													
575		Initial load fluid to recover = 388.80 m ³														Load fluid left to recover = 102.96 m ³													
576	2013/03/13 06:30		-20	3	28																								
577	07:00	50.80	-28	1	27	190											0.00	0	0.00	0.00	0.00	285.84				0	0.0		
578	07:30		-26	1	28																								
579	08:00	50.80	-24	34	26	1600											0.00	0	0.00	0.00	0.00	285.84				0	0.0		
580	08:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
581	08:30		-18	84	31																								
582	09:00	50.80	-18	109	45	1360											0.73	0	0.00	0.00	0.73	286.57	44.0	42.0	45.7	0	0.0		
583	09:00	N ₂ offline, coil pull up above perfs.																											
584	09:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																											
585	09:00	Monitor showing 3% LEL's from meter run. Too small to measure.																											
586	09:30		-18	7	40																								
587	10:00	50.80	-20	2	36	1710											0.00	0	0.00	0.00	0.00	286.57				0	0.0		
588	10:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
589	10:30		-18	49	38																								
590	11:00	50.80	-17	102	39	2060											0.43	0	0.00	0.00	0.43	287.00	43.0	30.0	45.7	0	0.0		
591	11:00	N ₂ offline, coil pull up above perfs.																											
592	11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																											
593	11:00	Monitor showing 5% LEL's from meter run. Too small to measure.																											
594	11:30		-22	5	35																								
595	12:00	50.80	-18	5	31	840											0.00	0	0.00	0.00	0.00	287.00							
596	12:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
597	12:30		-14	107	40																								
598	13:00	50.80	-14	87	45	2020											0.47	0	0.00	0.00	0.47	287.47	45.0	40.0	46.9	0	0.0		
599	13:00	N ₂ offline, coil pull up above perfs.																											
600	13:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
601	2013/03/13	13:00	Monitor showing 5% LEL's from meter run. Too small to measure.																									
602		13:00	Water extracted from hydrate: salinity = 18000 and ph = 7																									
603		13:30		-15	2	40																						
604		14:00	50.80	-15	7	41	1670										0.00	0	0.00	0.00	0.00	287.47						
605		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																									
606		14:30		-15	62	40																						
607		15:00	50.80	-14	76	42	1600										0.25	0	0.00	0.00	0.25	287.72	45.0	42.0	46.7	0	0.0	
608		15:00	Unable to catch fluid sample.																									
609		15:00	N ₂ offline, coil pull up above perfs.																									
610		15:30		-14	3	40																						
611		16:00	50.80	-12	46	40	1860										0.00	0	0.00	0.00	0.00	287.72						
612		16:00	N ₂ online @ 15 scm. Coil run in below perfs.																									
613		16:30		-8	101	45																						
614		17:00	50.80	-8	81	47	1700										0.40	0	0.00	0.00	0.40	288.12	43.0	20.0	46.6	0	0.0	
615		17:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons.																									
616		17:00	Monitor showing 3% LEL's from meter run. Too small to measure.																									
617		17:00	N ₂ offline, coil pull up above perfs.																									
618		17:30		-14	10	40																						
619		18:00	50.80	-14	1	45	1230										0.00	0	0.00	0.00	0.00	288.12				0	0.0	
620		18:00	N ₂ online @ 15 scm. Coil run in below perfs.																									
621		18:30		-12	54	48																						
622		19:00	50.80	-10	95	48	1520										0.38	0	0.00	0.00	0.38	288.50	41.0	20.0	44.5	0	0.0	
623		19:00	N ₂ offline, coil pull up above perfs.																									
624		19:00	Samples showing two distinct properties, 70% clean dark brown oil and 30% creamy light brown emulsion.																									
625		19:00	Seperation of emulsion from sample results in an API = 36.2 @ 60F, specific gravity of 0.844																									
626		19:00	Monitor showing 3% LEL's from meter run. Too small to measure.																									
627		19:30		-17	7	40																						
628		20:00	50.80	-16	7	41	480										0.00	0	0.00	0.00	0.00	288.50				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
629	2013/03/13	20:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
630		20:30		-14	91	41																							
631		21:00	50.80	-12	83	47	2070										0.24	0	0.00	0.00	0.24	288.74					0	0.0	
632		21:00	Unable to catch fluid sample.																										
633		21:00	N ₂ offline, coil pull up above perfs.																										
634		21:30		-15	7	38																							
635		22:00	50.80	-15	1	37	230																						
636		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
637		22:30		-17	82	37																							
638		23:00	50.80	-17	81	35	2070										0.18	0	0.00	0.00	0.18	288.92	43.0	30.0	45.7	0	0.0		
639		23:00	Two stock oil samples taken.																										
640		23:00	Samples showing 80% clean dark brown oil and 20% creamy light brown emulsion and a trace of hydrates.																										
641		23:00	Monitor showing 3% LEL's from meter run. Too small to measure.																										
642		23:01	N ₂ offline, coil pull up above perfs.																										
643		23:30		-18	0	33																							
644	2013/03/14	00:00	50.80	-18	3	32	430										0.00	0	0.00	0.00	0.00	288.92					0	0.0	
645		00:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
646		00:15	N ₂ offline due to mechanical problems.																										
647		00:30		-21	1	32																							
648		01:00	50.80	-22	1	31	690										0.00	0	0.00	0.00	0.00	288.92					0	0.0	
649		01:30		-20	4	37																							
650		02:00	50.80	-23	4	36	750										0.00	0	0.00	0.00	0.00	288.92					0	0.0	
651		02:30		-34	4	36																							
652		02:31	N ₂ online @ 15 scm. Coil run in below perfs.																										
653		03:00	50.80	-31	176	41	2440										0.05	0	0.00	0.00	0.05	288.97					0	0.0	
654		03:00	Unable to catch fluid sample.																										
655		03:30		-32	97	42																							
656		04:00	50.80	-25	57	41	1830										0.56	0	0.00	0.00	0.56	289.53	44.0	38.0	46.0	0	0.0		

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
557	2013/03/14	04:00	Samples showing 80% clean dark brown oil and 20% creamy light brown emulsion and a trace of hydrates.																										
558		04:00	Monitor showing 2% LEL's from meter run. Too small to measure.																										
559		04:01	N ₂ offline, coil pull up above perfs.																										
560		04:30		-29	4	31																							
561		05:00	50.80	-28	2	29	500											0.00	0	0.00	0.00	0.00	289.53				0	0.0	
562		05:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
563		05:30		-20	134	38																							
564		06:00	50.80	-16	91	37	1910	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.44	0	0.00	0.00	0.44	289.97	42.0	20.0	45.5	0	0.0	
565			Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																										
566			Monitor showing 5% LEL's from meter run. Too small to measure.																										
567			N ₂ offline, coil pull up above perfs.																										
568			***Daily production summary***													((March 13th @ 0600hrs to March 14th @ 0600hrs))													
569			Daily Hours Flowed = 24Hrs, 00mins													Cumm. Hours Flowed = 180Hrs, 20mins													
570			Daily load fluid Recovered = 4.13 m ³													Cumm. load fluid Recovered = 289.97 m ³													
571			Daily Oil produced = 0.00 m ³													Cumm. Oil produced = 0.00 m ³													
572			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³													
573			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 98.83 m ³													
574	2013/03/14	06:30		-21	4	34																							
575		07:00	50.80	-27	3	36	480											0.00	0	0.00	0.00	0.00	289.98				0	0.0	
576		07:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
577		07:30		-25	91	35																							
578		08:00	50.80	-23	36	36	1580											0.23	0	0.00	0.00	0.23	290.21				0	0.0	
579		08:30		-21	110	39																							
580		09:00	50.80	-19	98	40	1790											0.30	0	0.00	0.00	0.30	290.51	40.0	4.0	44.8	0	0.0	
581		09:00	Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																										
582		09:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
583		09:00	N ₂ offline, coil pull up above perfs.																										
584		09:30		-20	2	36																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
585	2013/03/14	09:30	N₂ online @ 15 scm. Coil run in below perms.																										
586		10:00	50.80	-20	42	38	1650										0.00		0.00	0.00	0.00	290.51							
587		10:00	N₂ offline.																										
588		10:30		-21	4	35																							
589		11:00	50.80	-21	5	38	680										0.00		0.00	0.00	0.00	290.51							
590		11:00	N₂ online.																										
591		11:30		-18	110	41																							
592		11:45	N₂ offline.																										
593		12:00	50.80	-18	12	45	170										0.28	0	0.00	0.00	0.28	290.79	40.0	5.0	44.7	0	0.0		
594		12:00	Coil start to pull out of hole.																										
595		12:30		-20	8	41																							
596		13:00	50.80	-20	3	40																							
597		13:30		-22	5	38											0.00		0.00	0.00	0.00	290.79							
598		13:30	Coil at surface, shut in master valve and bleed off coil.																										
599		14:00	Rig lubricator off wellhead, install logging tool.																										
700		15:50	Purge and pressure test lubricator and flowline to 24 mPa.																										
701		16:30	0.00		430			0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00		0.00	0.00	0.00	290.79						
702		16:30	Open master and run in hole with logging tool.																										
703		17:00			510																								
704		17:30			350																								
705		18:00	0.00		270	30	270	0.00																					
706		18:30			330	22																							
707		19:00	0.00		423	19	240	0.00																					
708		19:30			160	13																							
709		20:00	0.00		69	17	230	0.00																					
710		20:30			57	18																							
711		21:00	0.00		44	18	400	0.00																					
712		21:07	N₂ online @ 15 scm.																										
713		21:09	0.00		510			0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00		0.00	0.00	0.00	290.79						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
714	2013/03/14	21:10	Open well to flow on 2" (50.80mm).																										
715		21:11	N₂ @ surface. No burnable gas showing at flare.																										
716		21:15	Two gas sample taken from meter run, cylinder #'s 11001069 - 05004966																										
717		21:30		-15	96	30																							
718		21:30	Three stock samples taken.																										
719		21:40	N₂ offline , coil continue logging.																										
720		22:00	50.80	-16	11	28	420											0.64	0	0.00	0.00	0.64	291.43	43.0	26.0	46.1	0	0.0	
721		22:00	Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																										
722		22:00	Monitor showing 3% LEL's from meter run. Too small to measure.																										
723		22:30		-18	3	21																							
724		22:33	N₂ online.																										
725		23:00	50.80	-18	14	28	1690											0.00	0	0.00	0.00	0.00	291.43				0	0.0	
726		23:30		-28	49	29																							
727	2013/03/15	00:00	50.80	-20	43	21	1760											0.00	0	0.00	0.00	0.00	291.43				0	0.0	
728		00:10	N₂ offline.																										
729		00:30		-18	7	28																							
730		01:00	50.80	-20	0	31	0											0.00	0	0.00	0.00	0.00	291.43				0	0.0	
731		01:30		-28	2	30																							
732		02:00	50.80	-34	1	28	0	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00	0	0.00	0.00	0.00	291.43				0	0.0	
733		02:00	Coil at surface, shut in master valve and bleed off coil.																										
734		02:15	Coil begin to rig out, unable to monitor pressures.																										
735		06:00	***Daily production summary*** ((March 14th @ 0600hrs to March 15th @ 0600hrs))																										
736			Daily Hours Flowed = 13Hrs, 20mins											Cum. Hours Flowed = 193Hrs, 40mins															
737			Daily load fluid Recovered = 1.46 m³											Cum. load fluid Recovered = 291.43 m³															
738			Daily Oil produced = 0.00 m³											Cum. Oil produced = 0.00 m³															
739			Daily Burnable Gas Produced to Flare = 0.000 10³m³											Cum. Burnable Gas to Flare = 0.087 10³m³															
740			Initial load fluid to recover = 388.80 m³											Load fluid left to recover = 97.37 m³															

Field Measurements

699289
v6

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
1	2013/02/18	00:00	0.00	0	0	0		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0		0.00		0.00					0	0.0
2		08:00	Arrive on location demobilize equipment.																										
3		17:00	Standby for drilling completion.																										
4	2013/02/19	08:00	Arrive on location, continue maintenance and cleanup of equipment.																										
5		17:00	Unable to spot and rig in, standing by for drilling rig completion.																										
6	2013/02/20	08:00	Arrive on location, stand by for drilling rig completion.																										
7	2013/02/23	07:00	Begin perfing operations with drilling rig and run in tubing.																										
8	2013/02/28	09:00	Spot and rig in test equipment.																										
9	2013/03/01	07:00	Continue rigging in, stand by to purge vessels and pressure test flowline.																										
10	2013/03/04	13:50	E-line run in hole to punch tubing.																										
11		15:35	E-line @ surface.																										
12		15:50	N ₂ online, to confirm run was successful.																										
13		16:20	Run successful, bleed off well to 5 mPa.																										
14		17:00	Drop 1st ball and begin to rig on frac head.																										
15		20:05	Pump 3m ³ of frac oil through frac iron to vessel.																										
16		20:10	Shut in wing valve and pressure test frac iron.																										
17		21:01	Begin mini frac.																										
18		21:13	Mini frac complete, 14m ³ pumped.																										
19		21:30	Monitor and record casing pressures. Data van to record tubing pressures.																										
20		21:30	0.00	0	0	2228		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00		0.0		0	0.0	
21		22:00				2410																							
22		23:00				2638																							
23	2013/03/05	00:00				2802																							
24		01:00				2864																							
25		02:00				2884																							
26		03:00				2993																							
27		04:00				3097																							
28		05:00				3195																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
29	2013/03/05	06:00	0.00			3265		0.00				0							0									0.0		
30		07:00				3401																								
31		08:00				3525																								
32		08:00	Remove deadweight from caasing, stand by to frac Canol formation.																											
33		11:20	Begin pressure tests on frac iron.																											
34		12:20	Begin frac on Canol formation.																											
35		13:13	Frac complete.																											
36		13:13			19800																									
37		13:35	Drop 2nd ball.																											
38		14:10	Continue frac.																											
39		15:11	Frac complete.																											
40		15:11			21300																									
41		15:15	Drop 3rd ball.																											
42		16:10	Continue frac.																											
43		16:50	Frac complete, ISIP = 23.0 mPa, Fluid pumped = 374.8m ³ , LOAD TO RECOVER = 388.8m ³ .																											
44		17:00			23000	700																								
45		17:00	Remain shut in for 3 hrs, unable to monitor buildups untill frac head is rigged off well.																											
46		18:00			19856	1383																								
47		18:30			19474	1825																								
48		19:00			19034	2229																								
49		19:30			18663	2660																								
50		20:00	0.00	0	18468	2842		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00	0.0			0	0.0		
51		20:00	Open well to flow on adjustable 18/64 (7.14mm) choke, establish rate of 5.0m ³ /hr as per program before switching to bean choke.																											
52		20:05		-1	16949	2919																								
53		20:10	7.14	1	16848	3034			0	0.00	0	0	0.000	0.000	0.000	0.000	0.000													
54		20:11	N ₂ to surface, install 1.75" (44.45mm) orifice plate, meter in service.																											
55		20:15		3	16623	3186		44.45	68	33.83	1	100	26.342	0.000	26.342	0.091	0.000													
56		20:30	7.14	8	16296	4195			21	6.96	-4		9.893	0.000	9.893	0.280	0.000													

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																										
58		20:45		4	16449	4793			33	0.01	0		0.395	0.000	0.395	0.334	0.000												
59		21:00	5.56	4	16359	4931		44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	47.0	50.0	48.0	0	0.1	
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																										
62		21:30	7.94	12	14738	6674		44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000												
63		21:35	Fluid samples are showing gel and 20% sand.																										
64		22:00	7.94	10	14228	7443		44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	47.0	50.0	48.0	0	1.0	
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
66		22:00	Fluid samples showing no gel and 1% sand.																										
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																										
68		22:30		12	13833	8349		44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000												
69		22:31	Install 1" (25.4mm) orifice plate.																										
70		23:00	7.94	11	13542	8754		25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	47.0	53.6	47.6	0	1.0	
71		23:00	Two stock oil samples taken.																										
72		23:30		14	13334	9276			275	18.90	6		9.162	0.000	9.162	1.786	0.000												
73		23:30	Bleed down casing pressure.																										
74	2013/03/06	00:00	7.94	13	12860	5440		25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	47.0	53.6	47.6	0	0.1	
75		00:00	Checked ball catcher, no balls found.																										
76		00:30		14	12629	5090			410	18.23	7		10.476	0.000	10.476	2.214	0.000												
77		01:00	7.94	12	12149	5419		25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	46.0	55.4	46.4	0	0.1	
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																										
79		01:30		14	10085	5966			379	22.88	8		11.373	0.000	11.373	2.645	0.000												
80		02:00	8.73	15	9590	6370		25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	46.0	53.6	46.6	0	0.1	
81		02:00	Two stock oil samples taken.																										
82		02:30		14	9425	6712			337	20.89	8		10.371	0.000	10.371	3.102	0.000												
83		03:00	8.73	12	9404	6782		25.40	382	18.41	8	100	10.216	0.000	10.216	3.317	0.000	10.62	0	0.00	0.00	10.62	84.20	47.0	57.2	47.3	0	0.1	
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
85	2013/03/06	03:30	8.73	14	8213	7979		25.40	317	20.15	8	100	9.947	0.000	9.947	3.527	0.000		0							47.3	0.1			
86		04:00	9.53	13	8071	9845		25.40	275	17.91	8	100	8.883	0.000	8.883	3.723	0.000	10.05	0	0.00	0.00	10.05	94.25	46.0	53.6	46.6	0	0.1		
87		04:00	Bleed down casing pressure.																											
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																											
89		04:30		14	6722	4170			396	23.38	10		11.659	0.000	11.659	3.937	0.000													
90		05:00	10.32	15	5969	4383		25.40	358	17.91	9	100	9.803	0.000	9.803	4.161	0.000	15.65	0	0.00	0.00	15.65	109.90	47.0	55.4	47.4	0	0.1		
91		05:30		18	5427	4432			310	21.89	8		10.288	0.000	10.288	4.370	0.000													
92		06:00	10.32	16	4999	4430		25.40	303	29.39	8	100	11.859	0.000	11.859	4.601	0.000	14.01	0	0.00	0.00	14.01	123.91	47.0	53.6	47.6	0	0.1		
93		06:00	Checked ball catcher, no balls found.																											
94			***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																											
95			Daily Hours Flowed = 10Hrs, 00mins												Cumm. Hours Flowed = 10Hrs, 00mins															
96			Daily load fluid Recovered = 123.91 m ³												Cumm. load fluid Recovered = 123.91 m ³															
97			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³															
98			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³															
99			Daily N ₂ recovered = 4.601 10 ³ m ³												Cumm. N ₂ recovered = 4.601 10 ³ m ³															
100			Daily frac balls recovered = 0												Cum. frac balls recovered = 0															
101			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 264.89 m ³															
102	2013/03/06	06:30		16	4555	4759			265	15.17	7		8.069	0.000	8.069	4.808	0.000													
103		07:00	10.32	9	4129	4201		25.40	255	17.41	7	100	8.534	0.000	8.534	4.981	0.000	12.46	0	0.00	0.00	12.46	136.37	46.0	43.0	47.6	0	0.1		
104		07:30		10	3758	4058			220	14.43	7		7.363	0.000	7.363	5.147	0.000													
105		08:00	10.32	9	3604	3924		25.40	227	16.91	7	100	8.069	0.000	8.069	5.307	0.000	10.14	0	0.00	0.00	10.14	146.51	47.0	54.0	47.6	0	0.1		
106		08:30		5	3429	3745			210	16.23	8		7.680	0.000	7.680	5.471	0.000													
107		09:00	10.32	5	3319	3601		25.40	152	23.13	3	100	8.378	0.000	8.378	5.639	0.000	8.64	0	0.00	0.00	8.64	155.15	46.0	50.0	47.0	0	0.1		
108		09:01	Increase to 32/64 (12.70mm) adjustable choke.																											
109		09:05	Increase orifice plate to 1.25" (31.75mm).																											
110		09:30		8	2339	3403		31.75	90	7.77	6		6.492	0.000	6.492	5.794	0.000													
111		10:00	12.70	5	2509	3219		31.75	103	9.45	9	100	7.377	0.000	7.377	5.938	0.000	6.72	0	0.00	0.00	6.72	161.87	46.0	50.0	47.0	0	0.1		
112		10:30		9	2306	3074			83	9.40	4		7.040	0.000	7.040	6.088	0.000													

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
113	2013/03/06	11:00	12.70	7	2255	2935		31.75	82	9.20	6	100	6.920	0.000	6.920	6.234	0.000	6.04	0	0.00	0.00	6.04	167.91	46.0	50.0	47.0	0	0.1
114		11:00	Increase to 48/64 (19.05mm) adjustable choke.																									
115		11:05	Increase orifice plate to 1.5" (38.10mm).																									
116		11:30		12	599	2820			165	6.96	2		7.327	0.000	7.327	6.382	0.000											
117		12:00	19.05	10	248	2646		38.10	28	10.69	4	100	9.086	0.000	9.086	6.553	0.000	4.95	0	0.00	0.00	4.95	172.86	47.0	52.0	47.8	0	0.1
118		12:15	Increase to 128/64 (50.80mm).																									
119		12:16	Increase orifice plate to 2" (50.80mm).																									
120		12:30		5	117	2323			21	15.70	5		10.762	0.000	10.762	6.760	0.000											
121		13:00	50.80	4	3	2145		50.80	4	4.97	4	100	10.083	0.000	10.083	6.977	0.000	5.66	0	0.00	0.00	5.66	178.52	46.0	50.0	47.0	0	0.1
122		13:15	Gas too small to measure. Meter out of service.																									
123		13:30		3	10	2130																						
124		14:00	50.80	2	6	1926		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	5.86	0	0.00	0.00	5.86	184.38	46.0	50.0	47.0	0	0.1
125		14:00	Checked ball catcher, no balls found.																									
126		14:30		1	98	1619																						
127		15:00	50.80	1	15	1425		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	3.18	0	0.00	0.00	3.18	187.56	46.0	50.0	47.0	0	0.1
128		15:00	Two stock oil samples taken.																									
129		15:30		2	5	1209																						
130		16:00	50.80	2	8	1034		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	4.71	0	0.00	0.00	4.71	192.27	46.0	50.0	47.0	0	0.1
131		16:30		2	8	990		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000											
132		16:45	Well starting to surge. Meter in service with a 2" (50.80mm) orifice plate.																									
133		17:00	50.80	20	268	989		50.80	34	4.53	28	100	10.546	0.000	10.546	7.197	0.000	4.70	0	0.00	0.00	4.70	196.97	45.0	40.0	46.9	0	0.1
134		17:30		4	7	697			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000											
135		18:00	50.80	3	6	609		50.80	0	0.00	0	0	0.000	0.000	0.000	7.197	0.000	1.17	0	0.00	0.00	1.17	198.14	45.0	40.0	46.9	0	0.1
136		18:30		1	3	394			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000											
137		19:00	50.80	1	5	544		50.80	17	9.95	7	100	15.199	0.000	15.199	7.513	0.000	2.34	0	0.00	0.00	2.34	200.48	45.0	46.0	46.3	0	0.1
138		19:30		-4	3	284			14	3.48	0		8.900	0.000	8.900	7.764	0.000											
139		20:00	50.80	-4	4	35		50.80	14	0.49	3	100	3.319	0.000	3.319	7.892	0.000	2.64	0	0.00	0.00	2.64	203.12	45.0	45.0	46.4	0	0.0
140		20:30		-1	3	30			0	0.00	0		0.000	0.000	0.000	7.892	0.000											
141		21:00	50.80	-16	59	145		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.09	0	0.00	0.00	2.09	205.21	46.0	48.0	47.1	0	0.0

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
142	2013/03/06	21:30	50.80	-10	3	33		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000		0							47.1	0.0			
143		22:00	50.80	-7	4	79		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.29	0	0.00	0.00	2.29	207.50	45.0	48.0	46.1	0	0.0		
144		22:30		-10	2	7			0	0.00	0		0.000	0.000	0.000	7.892	0.000													
145		23:00	50.80	-7	1	11		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	1.44	0	0.00	0.00	1.44	208.94	46.0	41.0	47.8	0	0.0		
146		23:30		-9	15	16			0	0.00	0		0.000	0.000	0.000	7.892	0.000													
147	2013/03/07	00:00	50.80	-9	6	35		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	0.17	0	0.00	0.00	0.17	209.11	46.0	44.0	47.5	0	0.0		
148		00:30		-14	6	15			22	3.33	0	100	9.020	0.000	9.020	8.080	0.000													
149		01:00	50.80	-1	89	68		50.80	17	2.11	0	100	7.016	0.000	7.016	8.247	0.000	3.21	0	0.00	0.00	3.21	212.32	47.0	60.0	47.0	0	0.0		
150		01:30		-13	4	12			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
151		02:00	50.80	-16	12	5		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.58	0	0.00	0.00	0.58	212.90	46.0	44.0	47.5	0	0.0		
152		02:30		-11	1	3			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
153		03:00	50.80	-11	2	3		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.00	0	0.00	0.00	0.00	212.90	0.0			0	0.0		
154		03:30		-12	1	5			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
155		04:00	50.80	-11	2	22		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.59	0	0.00	0.00	0.59	213.49	47.0	59.0	47.1	0	0.0		
156		04:30		-10	2	21			0	0.00	0		0.000	0.000	0.000	8.247	0.000													
157		05:00	50.80	-10	3	18		50.80	3	2.13	-3	100	6.626	0.000	6.626	8.385	0.000	3.81	0	0.00	0.00	3.81	217.30	45.0	40.0	46.9	0	0.0		
158		05:30		-17	3	5			0	0.00	0		0.000	0.000	0.000	8.385	0.000													
159		06:00	50.80	-18	1	7		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.93	0	0.00	0.00	0.93	218.23	45.0	42.0	46.7	0	0.0		
160			***Daily production summary*** ((March 6th @ 20:00hrs to March 7th @ 06:00hrs))																											
161			Daily Hours Flowed = 24Hrs, 00mins													Cumm. Hours Flowed = 34Hrs, 00mins														
162			Daily load fluid Recovered = 94.32 m ³													Cumm. load fluid Recovered = 218.23 m ³														
163			Daily Oil produced = 0.00 m ³													Cumm. Oil produced = 0.00 m ³														
164			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³														
165			Daily N ₂ recovered = 3.784 10 ³ m ³													Cumm. N ₂ recovered = 8.385 10 ³ m ³														
166			Daily frac balls recovered = 0													Cum. frac balls recovered = 0														
167			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 170.57 m ³														
168	2013/03/07	06:30		-15	3	5																								
169		07:00	50.80	-15	2	9		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	218.23				0	0.0		
170		07:30		-10	1	8																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
171	2013/03/07	08:00	50.80	-13	3	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.07	0	0.00	0.00	1.07	219.30	45.0	41.0	46.8	0	0.0	
172		08:30		-8	2	7																							
173		08:30	Begin to rig in coil.																										
174		09:00	50.80	-10	1	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	3.00	0	0.00	0.00	3.00	222.30	45.0	40.0	46.9	0	0.0	
175		09:30			3	8																							
176		10:00	50.80		2	8		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
177		10:30			2	8			0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
178		10:30	Shut in well, continue to rig in coil.																										
179			***Daily production summary*** ((March 7th @ 0600hrs to March 7th @ 10:30hrs))																										
180			Daily Hours Flowed = 4Hrs, 30mins										Cumm. Hours Flowed = 38Hrs, 30mins																
181			Daily load fluid Recovered = 4.07 m ³										Cumm. load fluid Recovered = 222.30 m ³																
182			Daily Oil produced = 0.00 m ³										Cumm. Oil produced = 0.00 m ³																
183			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³										Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³																
184			Daily N ₂ recovered = 0.000 10 ³ m ³										Cumm. N ₂ recovered = 8.385 10 ³ m ³																
185			Daily frac balls recovered = 0										Cum. frac balls recovered = 0																
186			Initial load fluid to recover = 388.80 m ³										Load fluid left to recover = 165.5 m ³																
187	2013/03/07	10:35	0.00		75	11		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30				0	0.0	
188		10:40			152	10																							
189		10:45			225	7																							
190		11:00			301	5																							
191		11:15			396	3																							
192		11:30			499	3																							
193		12:00			1023	3																							
194		12:30			1320	5																							
195		13:00			1661	4		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		0.0		0	0.0	
196		21:45	Coil stab lubricator onto well and break circulation back to test vessel.																										
197	2013/03/08	01:35	Pressure test to 35 mPa.																										
198		01:45	Bleed down pressure test to 7 mPa.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
199	2013/03/08	01:49	ISIP = 3824 kPa																										
200		01:50	Open master valve, run in hole with milling tools.																										
201		02:00	Open up @ manifold to maintain 1 mPa.																										
202		02:30		-23	698	-1																							
203		03:00		-20	1200	-1																							
204		03:30		-20	800	-1																							
205		03:45	Tagged seat #1.																										
206		04:00		-8	1250	-1																		48.0	54.0	48.6		0.1	
207		04:00	Samples showing trace of sand. Pump rate 350ltrs/min Return rate is 340 ltrs/min.																										
208		04:30		-13	1131	-1		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	44.0	46.5		0.0	
209		04:45	Baker TP pumper is having mechanical issues, coil begin to pull up.																										
210		04:50	Coil parked 1800 mKB, shut in at manifold.																										
211		05:00	Open back up at manifold and pump remainder of fluid off TP pumper.																										
212		05:20	Shut in at manifold, record pressures and wait further instruction.																										
213		05:30			695	-1																							
214		06:00			772	-1																							
215		06:30			783	-1																							
216		06:45	Open @ manifold and resume operations																										
217		07:00	Shut in at manifold, record pressures and wait further instruction.																										
218		08:00			791	-1																							
219		09:00			861	-1																							
220		10:00			865	-1																							
221		10:30	Pressure test N ₂ lines.																										
222		10:45	Open @ manifold and resume operations.																										
223		11:00			850	-1																							
224		12:00			795	-1																		45.0	44.0	46.5	0	0.0	
225		12:00	Shut in at manifold, stand by to fix pump.																										
226		13:00			1258	0																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead							ST - 27 Orifice Meter								Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
227	2013/03/08	14:00	0.00		2238	0		0.00				0							0						44.5	28.0	47.5	0	0.0
228		14:30	Open @ manifold and resume operations.																										
229		15:00			110	0																							
230		15:30	Tagged seat #2.																										
231		16:00			468	0																		45.0	34.0	47.4	0	0.0	
232		16:40	Tagged seat #3																										
233		17:00			377	0																							
234		17:15	Through seat #3.																										
235		18:00			548	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	35.0	47.3	0	0.0	
236		18:30	Begin to pull to surface.																										
237		19:00			387	0																		45.0	36.0	47.2	0	0.0	
238		19:20	Fluid pump off line.																										
239		19:30			120	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	2.80	0	0.00	0.00	2.80	225.10						
240		19:45	Coil @ surface shut in master valve, bleed off through test vessel.																										
241		20:00	****Total gained during milling operations = 2.80 m ³ .																										
242		20:00	**** NEW LOAD LEFT TO RECOVER = 163.70 m ³ ****																										
243		20:30	Unable to monitor pressures.																										
244	2013/03/09	00:30	Coil stab lubricator onto well and break circulation back to test vessel.																										
245		00:45	Pressure test to 35 mPa.																										
246		01:06	Bleed down pressure test to 3 mPa.																										
247		01:10	ISIP = 324 kPa																										
248		01:15	Open master valve, run in hole with jetting nozzle.																										
249		01:25	Open up @ manifold to maintain 1 mPa.																										
250		01:30			519	13																							
251		01:30	N ₂ online @ 10scm/min																										
252		01:35	N ₂ @ surface.																										
253		02:00			2019	27												11.62	0	0.00	0.00	11.62	236.72	46.0	42.0	47.7	0	0.0	
254		02:22	Increase N ₂ rate to 20scm/min.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
255	2013/03/09	02:30	0.00		1700	89		0.00				0							0							47.7	0.0			
256		03:00			1850	107												7.65	0	0.00	0.00	7.65	244.37	46.0	50.0	47.0	0	0.0		
257		03:06	Coil tagged @ 1941.7 mKB																											
258		03:08	Coil pull up and park @ 1937.0 mKB and continue to pump N ₂ .																											
259		03:30			2019	136																								
260		04:00			1083	111												2.03	0	0.00	0.00	2.03	246.40	44.0	30.0	46.8	0	0.0		
261		04:00	One stock oil samples taken.																											
262		04:15	Decrease N ₂ rate to 15scm/min																											
263		04:30			738	86																								
264		05:00			903	79												1.17	0	0.00	0.00	1.17	247.57	48.0	66.0	47.4	0	0.0		
265		05:30			885	76																								
266		06:00			875	72		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.45	0	0.00	0.00	1.45	249.02	48.0	64.0	47.6	0	0.0		
267			***Daily production summary*** ((March 8th @ 0600hrs to March 9th @ 0600hrs))																											
268			Daily load fluid Recovered = 26.72 m ³													Cumm. load fluid Recovered = 249.02 m ³														
269			Daily Oil produced = 0.00 m ³													Cumm. Oil produced = 0.00 m ³														
270			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 139.78 m ³														
271	2013/03/09	06:30			944	70																								
272		06:35	Decrease N ₂ rate to 10scm/min																											
273		07:00			822	55												1.23	0	0.00	0.00	1.23	250.25	47.0	60.0	47.0	0	0.0		
274		07:00	Increase N ₂ rate to 15scm/min																											
275		07:30			599	50																								
276		08:00	50.80	-6	147	59												1.70	0	0.00	0.00	1.70	251.95	44.0	28.0	46.9	0	0.0		
277		08:30		-10	123	55																								
278		09:00	50.80	-8	117	49												1.20	0	0.00	0.00	1.20	253.15	44.0	28.0	46.9	0	0.0		
279		09:30		-6	112	50																								
280		10:00	50.80	-6	110	49	2000											1.20	0	0.00	0.00	1.20	254.35	44.0	28.0	46.9	0	0.0		
281		10:30		-6	110	48																								
282		10:30	N ₂ offline, begin to rig out pump truck.																											
283		11:00	50.80	-10	2	43	1200											0.40	0	0.00	0.00	0.40	254.75	44.0	30.0	46.8	0	0.0		

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
284	2013/03/09	11:30	50.80	-10	0	38		0.00				0							0							46.8		0.0	
285		12:00	50.80	-11	1	26	300											0.00	0	0.00	0.00	0.00	254.75				0	0.0	
286		12:20	N ₂ online @ 15scm																										
287		12:30		-12	1	26																							
288		12:40	Fluid to surface.																										
289		12:45	Two stock oil samples taken.																										
290		13:00	50.80	-4	166	53	2700											1.70	0	0.00	0.00	1.70	256.45	45.0	36.0	47.2	0	0.0	
291		13:30		-5	110	56																							
292		14:00	50.80	-4	101	47	3000											1.50	0	0.00	0.00	1.50	257.95	45.0	30.0	47.8	0	0.0	
293		14:30		-3	103	43																							
294		15:00	50.80	-6	87	32	1800											0.60	0	0.00	0.00	0.60	258.55						
295		15:30		-4	81	30																							
296		15:30	Increase N ₂ rate to 20 scm.																										
297		16:00	50.80	-3	138	28	2600											0.60	0	0.00	0.00	0.60	259.15						
298		16:30		-3	175	37																							
299		17:00	50.80	-6	136	34	2560											1.10	0	0.00	0.00	1.10	260.25	45.0	32.0	47.6	0	0.0	
300		17:00	Decrease N ₂ rate to 15 scm.																										
301		17:30		-4	85	33																							
302		17:30	Increase N ₂ rate to 20 scm.																										
303		18:00	50.80	-4	114	35	2600											0.80	0	0.00	0.00	0.80	261.05						
304		18:00	Stock oil sample taken.																										
305		18:30		-6	134	31																							
306		19:00	50.80	-6	131	33	2600											0.70	0	0.00	0.00	0.70	261.75	44.0	30.0	46.8	0	0.0	
307		19:30		-7	334	30																							
308		20:00	50.80	-5	134	28	2950											0.30	0	0.00	0.00	0.30	262.05	46.0	58.0	46.2	0	0.0	
309		20:30		-9	93	28																							
310		21:00	50.80	-7	90	28	2580											0.88	0	0.00	0.00	0.88	262.93	45.0	45.0	46.4	0	0.0	
311		21:01	Decrease N ₂ rate to 15 scm.																										
312		21:30		-8	70	25																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
313	2013/03/09	22:00	50.80	-10	86	25	1960	0.00				0						1.11	0	0.00	0.00	1.11	264.04	46.0	54.0	46.6	0	0.0	
314		22:30		-7	68	26																							
315		23:00	50.80	-5	67	24	1980											0.59	0	0.00	0.00	0.59	264.63	46.0	52.0	46.8	0	0.0	
316		23:01	Increase N ₂ rate to 17 scm.																										
317		23:30		-4	110	26																							
318	2013/03/10	00:00	50.80	-4	110	23	2230											0.58	0	0.00	0.00	0.58	265.21	46.0	56.0	46.4	0	0.0	
319		00:00	Two stock oil samples taken.																										
320		00:01	Increase N ₂ rate to 17 scm.																										
321		00:30		-4	133	24																							
322		01:00	50.80	-6	134	23	2660											0.45	0	0.00	0.00	0.45	265.66	45.0	56.0	45.4	0	0.0	
323		01:30		-5	133	24																							
324		01:59	Due to daylight saving we will be skipping ahead one hour.																										
325		03:00	50.80	-5	132	22	2610											0.49	0	0.00	0.00	0.49	266.15	45.0	48.0	46.1	0	0.0	
326		03:30		-5	168	23																							
327		04:00	50.80	-4	132	22	2650											0.52	0	0.00	0.00	0.52	266.67	45.0	50.0	45.9	0	0.0	
328		04:30		-5	144	23																							
329		05:00	50.80	-5	138	23	2660											0.41	0	0.00	0.00	0.41	267.08	45.0	44.0	46.5	0	0.0	
330		05:21	Decrease N ₂ rate to 15 scm.																										
331		05:30		-7	89	20																							
332		06:00	50.80	-6	81	20	1950	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.47	0	0.00	0.00	0.47	267.55	45.0	44.0	46.5	0	0.0	
333		06:00	Stock oil samples taken.																										
334			***Daily production summary*** ((March 9th @ 0600hrs to March 10th @ 0600hrs))																										
335			Daily load fluid Recovered = 18.53 m ³															Cumm. load fluid Recovered = 267.55 m ³											
336			Daily Oil produced = 0.00 m ³															Cumm. Oil produced = 0.00 m ³											
337			Initial load fluid to recover = 388.80 m ³															Load fluid left to recover = 121.25 m ³											
338			ODOR PRESENT IN FLUID SAMPLES, MAYBE HYDROCARBONS.																										
339	2013/03/10	06:30		-6	85	23																							
340		07:00	50.80	-6	90	22	1950											0.41	0	0.00	0.00	0.41	267.96	45.0	46.0	46.3	0	0.0	
341		07:30		-6	90	22																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
342	2013/03/10	08:00	50.80	-6	91	22	1950	0.00				0						0.47	0	0.00	0.00	0.47	268.43			46.3		0.0
343		08:30		-7	90	23																						
344		09:00	50.80	-6	90	22	1950											0.42	0	0.00	0.00	0.42	268.85	46.0	46.0	47.3	0	0.0
345		09:30		-6	88	24																						
346		09:40	Coil pull up to 1885 m																									
347		10:00	50.80	-5	88	23	1920											0.28	0	0.00	0.00	0.28	269.13					
348		10:30		-5	85	22																						
349		11:00	50.80	-5	85	21	1940											0.29	0	0.00	0.00	0.29	269.42	46.0	45.0	47.4	0	0.0
350		11:30		-6	86	21																						
351		12:00	50.80	-6	85	21	1960											0.29	0	0.00	0.00	0.29	269.71	46.0	44.0	47.5	0	0.0
352		12:00	Two stock oil samples taken.																									
353		12:00	Decrease N ₂ rate to 8 scm.																									
354		12:30		-6	21	20																						
355		13:00	50.80	-5	22	18	1000											0.14	0	0.00	0.00	0.14	269.85					
356		13:00	Increase N ₂ rate to 15 scm. Coil pull up to 1000m.																									
357		13:30		-6	108	38																						
358		13:50	Decrease N ₂ rate to 8 scm. Coil run in hole to 1875m.																									
359		14:00	50.80	-6	46	31	850											0.57	0	0.00	0.00	0.57	270.42	46.0	44.0	47.5	0	0.0
360		14:30		-6	16	13																						
361		15:00	50.80	-6	18	12	1070											0.00	0	0.00	0.00	0.00	270.42					
362		15:30		-8	17	12																						
363		16:00	50.80	-8	17	17	1270											0.00	0	0.00	0.00	0.00	270.42					
364		16:00	N ₂ offline, coil pull up above perms.																									
365		16:30		-12	5	16																						
366		17:00	50.80	-12	2	16	0											0.00		0.00	0.00	0.00	270.42					
367		17:30		-12	2	16																						
368		17:30	N ₂ online @ 15 scm. Coil run in below perms.																									
369		18:00	50.80	-11	56	28	2540											0.58	0	0.00	0.00	0.58	271.00	44.0	30.0	46.8	0	0.0
370		18:30		-3	106	26																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /d	10 ³ m ³ /d	10 ³ m ³ /d	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
371	2013/03/10	19:00	50.80	-3	85	31	2010	0.00				0						1.31	0	0.00	0.00	1.31	272.31	44.0	32.0	46.6	0	0.0		
372		19:30		-6	84	28																								
373		20:00	50.80	-5	75	27	1900											0.29	0	0.00	0.00	0.29	272.60	45.0	30.0	47.8	0	0.0		
374		20:01	Decrease N ₂ 10 scm, coil pull up above perfs.																											
375		20:11	N ₂ offline.																											
376		20:30		-7	5	24																								
377		21:00	50.80	-8	5	21	0											0.00	0	0.00	0.00	0.00	272.60				0	0.0		
378		21:30		-8	5	20																								
379		22:00	50.80	-7	6	20												0.00	0	0.00	0.00	0.00	272.60				0	0.0		
380		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																											
381		22:30		-7	136	25																								
382		23:00	50.80	-9	19	28	1260											0.87	0	0.00	0.00	0.87	273.47	44.0	42.0	45.7	0	0.0		
383		23:00	Decrease N ₂ rate to 10 scm.																											
384		23:00	Two stock oil samples taken.																											
385		23:30		-8	33	25																								
386	2013/03/11	00:00	50.80	-8	26	23	1300											0.24	0	0.00	0.00	0.24	273.71				0	0.0		
387		00:01	Increase N ₂ rate to 15 scm.																											
388		00:30		-9	90	27																								
389		01:00	50.80	-8	87	27	1930											0.34	0	0.00	0.00	0.34	274.05	45.0	44.0	46.5	0	0.0		
390		01:30		-9	73	26																								
391		02:00	50.80	-9	78	27	1860											0.30	0	0.00	0.00	0.30	274.35				0	0.0		
392		02:01	N ₂ offline, coil pull up above perfs.																											
393		02:30		-10	6	25																								
394		03:00	50.80	-11	4	23	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0		
395		03:30		-12	4	20																								
396		04:00	50.80	-12	5	21	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0		
397		04:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
398		04:30		-11	132	28																								
399		04:48	N ₂ offline.																											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter									
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%
400	2013/03/11	05:00	50.80	-12	8	27	300	0.00				0						0.87	0	0.00	0.00	0.87	275.22	43.0	36.0	45.2	0 0.0
401		05:00	Stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																								
402		05:10	N ₂ back online @ 15 scm.																								
403		05:30		-11	26	34																					
404		06:00	50.80	-12	61	27	1720	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.19	0	0.00	0.00	0.19	275.41				0 0.0
405			***Daily production summary*** ((March 10th @ 0600hrs to March 11th @ 0600hrs))																								
406			Daily Hours Flowed = 24Hrs, 00mins												Cum. Hours Flowed = 109Hrs, 00mins												
407			Daily load fluid Recovered = 7.86 m ³												Cum. load fluid Recovered = 275.41 m ³												
408			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³												
409			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 113.39 m ³												
410	2013/03/11	06:30		-13	56	27																					
411		07:00	50.80	-12	62	25	1860											0.37	0	0.00	0.00	0.37	275.78				0 0.0
412		07:10	N ₂ offline, coil pull up above perms.																								
413		07:30		-13	6	26																					
414		08:00	50.80	-12	5	23	240											0.14	0	0.00	0.00	0.14	275.92				0 0.0
415		08:30		-15	5	21																					
416		09:00	50.80	-15	6	22	270											0.00		0.00	0.00	0.00	275.92				
417		09:30		-15	7	24																					
418		09:30	N ₂ online @ 15 scm. Coil run in below perms.																								
419		10:00	50.80	-14	74	26	2600											0.15	0	0.00	0.00	0.15	276.07	43.0	20.0	46.6	0 0.0
420		10:30		-12	90	28																					
421		11:00	50.80	-12	42	28	470											1.01	0	0.00	0.00	1.01	277.08	45.0	54.0	45.6	0 0.0
422		11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																								
423		11:00	Fluid sample also showing trace of hydrates.																								
424		11:00	N ₂ offline, coil pull up above perms.																								
425		11:30		-12	8	22																					
426		12:00	50.80	-12	7	25	250											0.00	0	0.00	0.00	0.00	277.08				0 0.0
427		12:30		-14	6	23																					
428		13:00	50.80	-15	5	23	440											0.00	0	0.00	0.00	0.00	277.08				0 0.0

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
429	2013/03/11	13:30	50.80	-17	5	21		0.00				0							0							45.6		0.0	
430		14:00	50.80	-19	3	20	520											0.00	0	0.00	0.00	0.00	277.08				0	0.0	
431		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
432		14:30		-18	93	28																							
433		15:00	50.80	-16	78	31	1910											1.02	0	0.00	0.00	1.02	278.10	44.0	32.0	46.6	0	0.0	
434		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
435		15:00	Fluid sample also showing trace of hydrates.																										
436		15:30		-16	26	31																							
437		15:30	N ₂ offline, coil pull up above perfs.																										
438		16:00	50.80	-15	4	26	250											0.11	0	0.00	0.00	0.11	278.21				0	0.0	
439		16:30		-16	5	28																							
440		17:00	50.80	-16	5	21	250											0.00	0	0.00	0.00	0.00	278.21						
441		17:30		-16	5	20																							
442		18:00	50.80	-16	4	19	250											0.00	0	0.00	0.00	0.00	278.21				0	0.0	
443		18:30		-16	4	19																							
444		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
445		19:00	50.80	-16	54	33	330											0.11	0	0.00	0.00	0.11	278.32	44.0	30.0	46.8	0	0.0	
446		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 11% LELs from meter run when making fluid.																										
447		19:00	Fluid sample also showing trace of hydrates.																										
448		19:30		-16	86	36																							
449		20:00	50.80	-16	69	27	1700											1.00	0	0.00	0.00	1.00	279.32	44.0	32.0	46.6	0	0.0	
450		20:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																										
451		20:00	Fluid sample also showing trace of hydrates.																										
452		20:01	N ₂ offline, coil pull up above perfs.																										
453		20:30		-15	6	30																							
454		21:00	50.80	-16	4	27	150											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
455		21:30		-25	4	26																							
456		22:00	50.80	-26	3	25	230											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
457		22:30		-31	3	25																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead						ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	
458	2013/03/11	23:00	50.80	-30	3	27	2360	0.00				0						0.00	0	0.00	0.00	0.00	279.32			46.6	0	0.0	
459		23:01	N ₂ online @ 15 scm. Coil run in below perms.																										
460		23:30		-25	160	27																							
461		23:45	Two stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
462	2013/03/12	00:00	50.80	-24	97	35	2070											0.89	0	0.00	0.00	0.89	280.21	44.0	36.0	46.2	0	0.0	
463		00:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
464		00:00	Fluid sample also showing trace of hydrates.																										
465		00:30		-23	10	32	2080																						
466		00:30	N ₂ offline, coil pull up above perms.																										
467		01:00	50.80	-27	6	36	210											0.22	0	0.00	0.00	0.22	280.43	44.0	38.0	46.0	0	0.0	
468		01:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
469		01:00	Fluid sample also showing trace of hydrates.																										
470		01:30		-28	5	29																							
471		02:00	50.80	-30	5	27	200											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
472		02:30		-30	6	24																							
473		03:00	50.80	-34	4	25	180											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
474		03:30		-28	3	27																							
475		04:00	50.80	-33	4	24	260											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
476		04:30		-32	3	24																							
477		05:00	50.80	-30	3	24	290											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
478		05:30		-30	2	25																							
479		06:00	50.80	-28	3	22	310	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	280.43				0	0.0	
480			***Daily production summary*** ((March 11th @ 0600hrs to March 12th @ 0600hrs))																										
481			Daily Hours Flowed = 24Hrs, 00mins												Cumm. Hours Flowed = 133Hrs, 00mins														
482			Daily load fluid Recovered = 5.02 m ³												Cumm. load fluid Recovered = 280.43 m ³														
483			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
484			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 108.37 m ³														
485	2013/03/12	06:30		-36	3	22																							
486		07:00	50.80	-35	3	25	230											0.00	0	0.00	0.00	0.00	280.43				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
487	2013/03/12	07:30	50.80	-35	3	24		0.00				0							0							46.0	0.0		
488		08:00	50.80	-35	4	22	300																						
489		08:30		-35	3	25												0.00		0.00	0.00	0.00	280.43				0	0.0	
490		08:50	Shut in @ manafold, monitor pressure.																										
491		09:00	0.00		60	25		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43				0	0.0	
492		09:15			80	24																							
493		09:29	0.00		102	25																					0	0.0	
494		09:30	Gas sample taken from manafold, cylinder # 05005398.																										
495		09:30	N₂ online @ 30 scm. Coil run in below perms.																										
496		09:30			115	25	2100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43						
497		09:30	Open well to flow on 50.80mm.																										
498		09:31	Burnable gas to surface. Showing at flare, meter in service to catch a rate.																										
499		09:35	50.80	-30	96	24	3100	50.80	34	1.99	-25	0	9.390	9.390	0.000	8.385	0.033												
500		09:40	Fluid to surface.																										
501		09:45		-27	88	28			20	0.99	-25	0	6.237	6.237	0.000	8.385	0.087												
502		10:00	50.80	-11	282	49	2820	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	1.17	0	0.00	0.00	1.17	281.60	43.0	20.0	46.6	0	0.0	
503		10:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing hydrates.																										
504		10:00	Monitor showing 8% LEL's from meter run. Too small to measure.																										
505		10:30		-13	89	42																							
506		11:00	50.80	-13	79	42	1920	0.00	0	0.00	0		0.000	0.000	0.000	8.385	0.087	0.89	0	0.00	0.00	0.89	282.49	46.0	60.0	46.0	0	0.0	
507		11:00	N₂ offline, coil pull up above perms.																										
508		11:30		-14	100	40																							
509		12:00	50.80	-16	60	35	100											0.00		0.00	0.00	0.00	282.49				0	0.0	
510		12:30		-16	4	33																							
511		13:00	50.80	-16	2	33	100											0.00		0.00	0.00	0.00	282.49				0	0.0	
512		13:30		-15	4	31																							
513		14:00	50.80	-15	4	30	200											0.00		0.00	0.00	0.00	282.49				0	0.0	
514		14:00	N₂ online @ 15 scm. Coil run in below perms.																										
515		14:30		-15	63	36																							

Field Measurements

Company:	Shell/MGM
Well / Lease Name:	MGM Shell East MacKay I-78
Unique Well ID:	I-78-64-50-125-30
Test Type:	Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead							ST - 27 Orifice Meter							Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
516	2013/03/12	15:00	50.80	-12	117	40	2120	0.00				0					0.58	0	0.00	0.00	0.58	283.07	43.0	22.0	46.4	0	0.0	
517		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
518		15:00	Monitor showing 5% LEL's from meter run. Too small to measure.																									
519		15:30		-12	86	38																						
520		15:30	N ₂ offline, coil pull up above perfs.																									
521		16:00	50.80	-14	4	35	80										0.30	0	0.00	0.00	0.30	283.37	43.0	23.0	46.3	0	0.0	
522		16:30		-14	6	33																						
523		17:00	50.80	-15	8	31	90										0.00	0	0.00	0.00	0.00	283.37				0	0.0	
524		17:30		-16	5	30																						
525		18:00	50.80	-16	5	30	90										0.00	0	0.00	0.00	0.00	283.37				0	0.0	
526		18:30		-17	30	30																						
527		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																									
528		19:00	50.80	-20	120	31	2520										0.21	0	0.00	0.00	0.21	283.58	43.0	22.0	46.4	0	0.0	
529		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
530		19:00	Monitor showing 5% LEL's from meter run. Too small to measure.																									
531		19:30		-20		30																						
532		20:00	50.80	-25	93	36	2090										0.70	0	0.00	0.00	0.70	284.28	46.0	56.0	46.4	0	0.0	
533		20:00	Fluid sample lighter in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
534		20:00	Monitor showing 7% LEL's from meter run. Too small to measure.																									
535		20:01	N ₂ offline, coil pull up above perfs.																									
536		20:30		-18	25	36																						
537		21:00	50.80	-18	12	36	120										0.00	0	0.00	0.00	0.00	284.28				0	0.0	
538		21:30		-18	14	33																						
539		22:00	50.80	-23	7	35	340										0.00	0	0.00	0.00	0.00	284.28				0	0.0	
540		22:30		-25	7	35																						
541		23:00	50.80	-26	7	34	310										0.00	0	0.00	0.00	0.00	284.28				0	0.0	
542		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
543		23:30		-16	152	34																						
544	2013/03/13	00:00	50.80	-14	91	34	2000										0.76	0	0.00	0.00	0.76	285.04	45.0	56.0	45.4	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
545	2013/03/13	00:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																										
546		00:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
547		00:00	Two stock oil samples taken.																										
548		00:30		-19	97	34																							
549		00:31	N ₂ offline, coil pull up above perfs.																										
550		01:00	50.80	-18	3	33	130										0.15	0	0.00	0.00	0.15	285.19	46.0	54.0	46.6	0	0.0		
551		01:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																										
552		01:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
553		01:30		-20	5	33																							
554		02:00	50.80	-23	3	33	160										0.00	0	0.00	0.00	0.00	285.19				0	0.0		
555		02:30		-27	4	32																							
556		03:00	50.80	-28	3	31	210										0.00	0	0.00	0.00	0.00	285.19				0	0.0		
557		03:30		-26	3	30																							
558		03:31	N ₂ online @ 15 scm. Coil run in below perfs.																										
559		04:00	50.80	-17	116	31	2300										0.14	0	0.00	0.00	0.14	285.33	43.0	24.0	46.2	0	0.0		
560		04:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
561		04:00	Monitor showing 7% LEL's from meter run. Too small to measure.																										
562		04:30		-23	90	30																							
563		05:00	50.80	-19	91	31	560										0.51	0	0.00	0.00	0.51	285.84	44.0	28.0	46.9	0	0.0		
564		05:00	Stock oil sample taken.																										
565		05:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
566		05:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
567		05:01	N ₂ offline, coil pull up above perfs.																										
568		05:30		-23	4	28																							
569		06:00	50.80	-26	1	31	100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00	0	0.00	0.00	0.00	285.84				0	0.0	
570			***Daily production summary*** ((March 12th @ 0600hrs to March 13th @ 0600hrs))																										
571			Daily Hours Flowed = 23Hrs, 20mins													Cum. Hours Flowed = 156Hrs, 20mins													
572			Daily load fluid Recovered = 5.41 m ³													Cum. load fluid Recovered = 285.84 m ³													

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
573			Daily Oil produced = 0.00 m ³										Cumm. Oil produced = 0.00 m ³																
574			Daily Burnable Gas Produced to Flare = 0.087 10 ³ m ³										Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³																
575			Initial load fluid to recover = 388.80 m ³										Load fluid left to recover = 102.96 m ³																
576	2013/03/13	06:30		-20	3	28																							
577		07:00	50.80	-28	1	27	190										0.00	0	0.00	0.00	0.00	285.84				0	0.0		
578		07:30		-26	1	28																							
579		08:00	50.80	-24	34	26	1600										0.00	0	0.00	0.00	0.00	285.84				0	0.0		
580		08:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
581		08:30		-18	84	31																							
582		09:00	50.80	-18	109	45	1360										0.73	0	0.00	0.00	0.73	286.57	44.0	42.0	45.7	0	0.0		
583		09:00	N ₂ offline, coil pull up above perfs.																										
584		09:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
585		09:00	Monitor showing 3% LEL's from meter run. Too small to measure.																										
586		09:30		-18	7	40																							
587		10:00	50.80	-20	2	36	1710										0.00	0	0.00	0.00	0.00	286.57				0	0.0		
588		10:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
589		10:30		-18	49	38																							
590		11:00	50.80	-17	102	39	2060										0.43	0	0.00	0.00	0.43	287.00	43.0	30.0	45.7	0	0.0		
591		11:00	N ₂ offline, coil pull up above perfs.																										
592		11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
593		11:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
594		11:30		-22	5	35																							
595		12:00	50.80	-18	5	31	840										0.00	0	0.00	0.00	0.00	287.00							
596		12:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
597		12:30		-14	107	40																							
598		13:00	50.80	-14	87	45	2020										0.47	0	0.00	0.00	0.47	287.47	45.0	40.0	46.9	0	0.0		
599		13:00	N ₂ offline, coil pull up above perfs.																										
600		13:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
601	2013/03/13	13:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
602		13:00	Water extracted from hydrate: salinity = 18000 and ph = 7																										
603		13:30		-15	2	40																							
604		14:00	50.80	-15	7	41	1670										0.00	0	0.00	0.00	0.00	287.47							
605		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
606		14:30		-15	62	40																							
607		15:00	50.80	-14	76	42	1600										0.25	0	0.00	0.00	0.25	287.72	45.0	42.0	46.7	0	0.0		
608		15:00	Unable to catch fluid sample.																										
609		15:00	N ₂ offline, coil pull up above perfs.																										
610		15:30		-14	3	40																							
611		16:00	50.80	-12	46	40	1860										0.00	0	0.00	0.00	0.00	287.72							
612		16:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
613		16:30		-8	101	45																							
614		17:00	50.80	-8	81	47	1700										0.40	0	0.00	0.00	0.40	288.12	43.0	20.0	46.6	0	0.0		
615		17:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons.																										
616		17:00	Monitor showing 3% LEL's from meter run. Too small to measure.																										
617		17:00	N ₂ offline, coil pull up above perfs.																										
618		17:30		-14	10	40																							
619		18:00	50.80	-14	1	45	1230										0.00	0	0.00	0.00	0.00	288.12				0	0.0		
620		18:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
621		18:30		-12	54	48																							
622		19:00	50.80	-10	95	48	1520										0.38	0	0.00	0.00	0.38	288.50	41.0	20.0	44.5	0	0.0		
623		19:00	N ₂ offline, coil pull up above perfs.																										
624		19:00	Samples showing two distinct properties, 70% clean dark brown oil and 30% creamy light brown emulsion.																										
625		19:00	Seperation of emulsion from sample results in an API = 36.2 @ 60F, specific gravity of 0.844																										
626		19:00	Monitor showing 3% LEL's from meter run. Too small to measure.																										
627		19:30		-17	7	40																							
628		20:00	50.80	-16	7	41	480										0.00	0	0.00	0.00	0.00	288.50				0	0.0		

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
629	2013/03/13	20:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
630		20:30		-14	91	41																							
631		21:00	50.80	-12	83	47	2070											0.24	0	0.00	0.00	0.24	288.74					0 0.0	
632		21:00	Unable to catch fluid sample.																										
633		21:00	N ₂ offline, coil pull up above perfs.																										
634		21:30		-15	7	38																							
635		22:00	50.80	-15	1	37	230																						
636		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
637		22:30		-17	82	37																							
638		23:00	50.80	-17	81	35	2070											0.18	0	0.00	0.00	0.18	288.92	43.0	30.0	45.7	0	0.0	
639		23:00	Two stock oil samples taken.																										
640		23:00	Samples showing 80% clean dark brown oil and 20% creamy light brown emulsion and a trace of hydrates.																										
641		23:00	Monitor showing 3% LEL's from meter run. Too small to measure.																										
642		23:01	N ₂ offline, coil pull up above perfs.																										
643		23:30		-18	0	33																							
644	2013/03/14	00:00	50.80	-18	3	32	430											0.00	0	0.00	0.00	0.00	288.92					0 0.0	
645		00:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
646		00:15	N ₂ offline due to mechanical problems.																										
647		00:30		-21	1	32																							
648		01:00	50.80	-22	1	31	690											0.00	0	0.00	0.00	0.00	288.92					0 0.0	
649		01:30		-20	4	37																							
650		02:00	50.80	-23	4	36	750											0.00	0	0.00	0.00	0.00	288.92					0 0.0	
651		02:30		-34	4	36																							
652		02:31	N ₂ online @ 15 scm. Coil run in below perfs.																										
653		03:00	50.80	-31	176	41	2440											0.05	0	0.00	0.00	0.05	288.97					0 0.0	
654		03:00	Unable to catch fluid sample.																										
655		03:30		-32	97	42																							
656		04:00	50.80	-25	57	41	1830											0.56	0	0.00	0.00	0.56	289.53	44.0	38.0	46.0	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
557	2013/03/14	04:00	Samples showing 80% clean dark brown oil and 20% creamy light brown emulsion and a trace of hydrates.																										
558		04:00	Monitor showing 2% LEL's from meter run. Too small to measure.																										
559		04:01	N ₂ offline, coil pull up above perfs.																										
560		04:30		-29	4	31																							
561		05:00	50.80	-28	2	29	500											0.00	0	0.00	0.00	0.00	289.53				0	0.0	
562		05:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
563		05:30		-20	134	38																							
564		06:00	50.80	-16	91	37	1910	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.44	0	0.00	0.00	0.44	289.97	42.0	20.0	45.5	0	0.0	
565			Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																										
566			Monitor showing 5% LEL's from meter run. Too small to measure.																										
567			N ₂ offline, coil pull up above perfs.																										
568			***Daily production summary***													((March 13th @ 0600hrs to March 14th @ 0600hrs))													
569			Daily Hours Flowed = 24Hrs, 00mins													Cumm. Hours Flowed = 180Hrs, 20mins													
570			Daily load fluid Recovered = 4.13 m ³													Cumm. load fluid Recovered = 289.97 m ³													
571			Daily Oil produced = 0.00 m ³													Cumm. Oil produced = 0.00 m ³													
572			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³													
573			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 98.83 m ³													
574	2013/03/14	06:30		-21	4	34																							
575		07:00	50.80	-27	3	36	480											0.00	0	0.00	0.00	0.00	289.98				0	0.0	
576		07:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
577		07:30		-25	91	35																							
578		08:00	50.80	-23	36	36	1580											0.23	0	0.00	0.00	0.23	290.21				0	0.0	
579		08:30		-21	110	39																							
580		09:00	50.80	-19	98	40	1790											0.30	0	0.00	0.00	0.30	290.51	40.0	4.0	44.8	0	0.0	
581		09:00	Samples showing 90% clean dark brown oil and 10% creamy light brown emulsion and a trace of hydrates.																										
582		09:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
583		09:00	N ₂ offline, coil pull up above perfs.																										
584		09:30		-20	2	36																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
685	2013/03/14	09:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
686		10:00	50.80	-20	42	38	1650											0.00		0.00	0.00	0.00	290.51						
687		10:00	N ₂ offline, coil pull up above perfs.																										

Field Measurements

699289
VS

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
1	2013/02/18	00:00	0.00	0	0	0		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0		0.00		0.00				0	0.0
2		08:00	Arrive on location demobilize equipment.																									
3		17:00	Standby for drilling completion.																									
4	2013/02/19	08:00	Arrive on location, continue maintenance and cleanup of equipment.																									
5		17:00	Unable to spot and rig in, standing by for drilling rig completion.																									
6	2013/02/20	08:00	Arrive on location, stand by for drilling rig completion.																									
7	2013/02/23	07:00	Begin perfing operations with drilling rig and run in tubing.																									
8	2013/02/28	09:00	Spot and rig in test equipment.																									
9	2013/03/01	07:00	Continue rigging in, stand by to purge vessels and pressure test flowline.																									
10	2013/03/04	13:50	E-line run in hole to punch tubing.																									
11		15:35	E-line @ surface.																									
12		15:50	N ₂ online, to confirm run was successful.																									
13		16:20	Run successful, bleed off well to 5 mPa.																									
14		17:00	Drop 1st ball and begin to rig on frac head.																									
15		20:05	Pump 3m ³ of frac oil through frac iron to vessel.																									
16		20:10	Shut in wing valve and pressure test frac iron.																									
17		21:01	Begin mini frac.																									
18		21:13	Mini frac complete, 14m ³ pumped.																									
19		21:30	Monitor and record casing pressures. Data van to record tubing pressures.																									
20		21:30	0.00	0	0	2228		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00		0.0		0	0.0
21		22:00				2410																						
22		23:00				2638																						
23	2013/03/05	00:00				2802																						
24		01:00				2864																						
25		02:00				2884																						
26		03:00				2993																						
27		04:00				3097																						
28		05:00				3195																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
29	2013/03/05	06:00	0.00			3265		0.00				0						0									0.0		
30		07:00				3401																							
31		08:00				3525																							
32		08:00	Remove deadweight from caasing, stand by to frac Canol formation.																										
33		11:20	Begin pressure tests on frac iron.																										
34		12:20	Begin frac on Canol formation.																										
35		13:13	Frac complete.																										
36		13:13			19800																								
37		13:35	Drop 2nd ball.																										
38		14:10	Continue frac.																										
39		15:11	Frac complete.																										
40		15:11			21300																								
41		15:15	Drop 3rd ball.																										
42		16:10	Continue frac.																										
43		16:50	Frac complete, ISIP = 23.0 mPa, Fluid pumped = 374.8m ³ , LOAD TO RECOVER = 388.8m ³ .																										
44		17:00			23000	700																							
45		17:00	Remain shut in for 3 hrs, unable to monitor buildups untill frac head is rigged off well.																										
46		18:00			19856	1383																							
47		18:30			19474	1825																							
48		19:00			19034	2229																							
49		19:30			18663	2660																							
50		20:00	0.00	0	18468	2842		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00	0.0			0	0.0	
51		20:00	Open well to flow on adjustable 18/64 (7.14mm) choke, establish rate of 5.0m ³ /hr as per program before switching to bean choke.																										
52		20:05		-1	16949	2919																							
53		20:10	7.14	1	16848	3034			0	0.00	0	0	0.000	0.000	0.000	0.000	0.000												
54		20:11	N ₂ to surface, install 1.75" (44.45mm) orifice plate, meter in service.																										
55		20:15		3	16623	3186		44.45	68	33.83	1	100	26.342	0.000	26.342	0.091	0.000												
56		20:30	7.14	8	16296	4195			21	6.96	-4		9.893	0.000	9.893	0.280	0.000												

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																											
58		20:45		4	16449	4793			33	0.01	0		0.395	0.000	0.395	0.334	0.000													
59		21:00	5.56	4	16359	4931		44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	47.0	50.0	48.0	0	0.1		
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																											
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																											
62		21:30	7.94	12	14738	6674		44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000													
63		21:35	Fluid samples are showing gel and 20% sand.																											
64		22:00	7.94	10	14228	7443		44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	47.0	50.0	48.0	0	1.0		
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																											
66		22:00	Fluid samples showing no gel and 1% sand.																											
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																											
68		22:30		12	13833	8349		44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000													
69		22:31	Install 1" (25.4mm) orifice plate.																											
70		23:00	7.94	11	13542	8754		25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	47.0	53.6	47.6	0	1.0		
71		23:00	Two stock oil samples taken.																											
72		23:30		14	13334	9276			275	18.90	6		9.162	0.000	9.162	1.786	0.000													
73		23:30	Bleed down casing pressure.																											
74	2013/03/06	00:00	7.94	13	12860	5440		25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	47.0	53.6	47.6	0	0.1		
75		00:00	Checked ball catcher, no balls found.																											
76		00:30		14	12629	5090			410	18.23	7		10.476	0.000	10.476	2.214	0.000													
77		01:00	7.94	12	12149	5419		25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	46.0	55.4	46.4	0	0.1		
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																											
79		01:30		14	10085	5966			379	22.88	8		11.373	0.000	11.373	2.645	0.000													
80		02:00	8.73	15	9590	6370		25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	46.0	53.6	46.6	0	0.1		
81		02:00	Two stock oil samples taken.																											
82		02:30		14	9425	6712			337	20.89	8		10.371	0.000	10.371	3.102	0.000													
83		03:00	8.73	12	9404	6782		25.40	382	18.41	8	100	10.216	0.000	10.216	3.317	0.000	10.62	0	0.00	0.00	10.62	84.20	47.0	57.2	47.3	0	0.1		
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
85	2013/03/06	03:30	8.73	14	8213	7979		25.40	317	20.15	8	100	9.947	0.000	9.947	3.527	0.000		0							47.3	0	0.1		
86		04:00	9.53	13	8071	9845		25.40	275	17.91	8	100	8.883	0.000	8.883	3.723	0.000	10.05	0	0.00	0.00	10.05	94.25	46.0	53.6	46.6	0	0.1		
87		04:00	Bleed down casing pressure.																											
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																											
89		04:30		14	6722	4170			396	23.38	10		11.659	0.000	11.659	3.937	0.000													
90		05:00	10.32	15	5969	4383		25.40	358	17.91	9	100	9.803	0.000	9.803	4.161	0.000	15.65	0	0.00	0.00	15.65	109.90	47.0	55.4	47.4	0	0.1		
91		05:30		18	5427	4432			310	21.89	8		10.288	0.000	10.288	4.370	0.000													
92		06:00	10.32	16	4999	4430		25.40	303	29.39	8	100	11.859	0.000	11.859	4.601	0.000	14.01	0	0.00	0.00	14.01	123.91	47.0	53.6	47.6	0	0.1		
93		06:00	Checked ball catcher, no balls found.																											
94			***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																											
95			Daily Hours Flowed = 10Hrs, 00mins												Cumm. Hours Flowed = 10Hrs, 00mins															
96			Daily load fluid Recovered = 123.91 m ³												Cumm. load fluid Recovered = 123.91 m ³															
97			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³															
98			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³															
99			Daily N ₂ recovered = 4.601 10 ³ m ³												Cumm. N ₂ recovered = 4.601 10 ³ m ³															
100			Daily frac balls recovered = 0												Cum. frac balls recovered = 0															
101			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 264.89 m ³															
102	2013/03/06	06:30		16	4555	4759			265	15.17	7		8.069	0.000	8.069	4.808	0.000													
103		07:00	10.32	9	4129	4201		25.40	255	17.41	7	100	8.534	0.000	8.534	4.981	0.000	12.46	0	0.00	0.00	12.46	136.37	46.0	43.0	47.6	0	0.1		
104		07:30		10	3758	4058			220	14.43	7		7.363	0.000	7.363	5.147	0.000													
105		08:00	10.32	9	3604	3924		25.40	227	16.91	7	100	8.069	0.000	8.069	5.307	0.000	10.14	0	0.00	0.00	10.14	146.51	47.0	54.0	47.6	0	0.1		
106		08:30		5	3429	3745			210	16.23	8		7.680	0.000	7.680	5.471	0.000													
107		09:00	10.32	5	3319	3601		25.40	152	23.13	3	100	8.378	0.000	8.378	5.639	0.000	8.64	0	0.00	0.00	8.64	155.15	46.0	50.0	47.0	0	0.1		
108		09:01	Increase to 32/64 (12.70mm) adjustable choke.																											
109		09:05	Increase orifice plate to 1.25" (31.75mm).																											
110		09:30		8	2339	3403		31.75	90	7.77	6		6.492	0.000	6.492	5.794	0.000													
111		10:00	12.70	5	2509	3219		31.75	103	9.45	9	100	7.377	0.000	7.377	5.938	0.000	6.72	0	0.00	0.00	6.72	161.87	46.0	50.0	47.0	0	0.1		
112		10:30		9	2306	3074			83	9.40	4		7.040	0.000	7.040	6.088	0.000													

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
113	2013/03/06	11:00	12.70	7	2255	2935		31.75	82	9.20	6	100	6.920	0.000	6.920	6.234	0.000	6.04	0	0.00	0.00	6.04	167.91	46.0	50.0	47.0	0	0.1	
114		11:00	Increase to 48/64 (19.05mm) adjustable choke.																										
115		11:05	Increase orifice plate to 1.5" (38.10mm).																										
116		11:30		12	599	2820			165	6.96	2		7.327	0.000	7.327	6.382	0.000												
117		12:00	19.05	10	248	2646		38.10	28	10.69	4	100	9.086	0.000	9.086	6.553	0.000	4.95	0	0.00	0.00	4.95	172.86	47.0	52.0	47.8	0	0.1	
118		12:15	Increase to 128/64 (50.80mm).																										
119		12:16	Increase orifice plate to 2" (50.80mm).																										
120		12:30		5	117	2323			21	15.70	5		10.762	0.000	10.762	6.760	0.000												
121		13:00	50.80	4	3	2145		50.80	4	4.97	4	100	10.083	0.000	10.083	6.977	0.000	5.66	0	0.00	0.00	5.66	178.52	46.0	50.0	47.0	0	0.1	
122		13:15	Gas too small to measure. Meter out of service.																										
123		13:30		3	10	2130																							
124		14:00	50.80	2	6	1926		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	5.86	0	0.00	0.00	5.86	184.38	46.0	50.0	47.0	0	0.1	
125		14:00	Checked ball catcher, no balls found.																										
126		14:30		1	98	1619																							
127		15:00	50.80	1	15	1425		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	3.18	0	0.00	0.00	3.18	187.56	46.0	50.0	47.0	0	0.1	
128		15:00	Two stock oil samples taken.																										
129		15:30		2	5	1209																							
130		16:00	50.80	2	8	1034		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	4.71	0	0.00	0.00	4.71	192.27	46.0	50.0	47.0	0	0.1	
131		16:30		2	8	990		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000												
132		16:45	Well starting to surge. Meter in service with a 2" (50.80mm) orifice plate.																										
133		17:00	50.80	20	268	989		50.80	34	4.53	28	100	10.546	0.000	10.546	7.197	0.000	4.70	0	0.00	0.00	4.70	196.97	45.0	40.0	46.9	0	0.1	
134		17:30		4	7	697			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
135		18:00	50.80	3	6	609		50.80	0	0.00	0	0	0.000	0.000	0.000	7.197	0.000	1.17	0	0.00	0.00	1.17	198.14	45.0	40.0	46.9	0	0.1	
136		18:30		1	3	394			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
137		19:00	50.80	1	5	544		50.80	17	9.95	7	100	15.199	0.000	15.199	7.513	0.000	2.34	0	0.00	0.00	2.34	200.48	45.0	46.0	46.3	0	0.1	
138		19:30		-4	3	284			14	3.48	0		8.900	0.000	8.900	7.764	0.000												
139		20:00	50.80	-4	4	35		50.80	14	0.49	3	100	3.319	0.000	3.319	7.892	0.000	2.64	0	0.00	0.00	2.64	203.12	45.0	45.0	46.4	0	0.0	
140		20:30		-1	3	30			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
141		21:00	50.80	-16	59	145		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.09	0	0.00	0.00	2.09	205.21	46.0	48.0	47.1	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%
142	2013/03/06	21:30	50.80	-10	3	33		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000		0							47.1	0.0		
143		22:00	50.80	-7	4	79		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.29	0	0.00	0.00	2.29	207.50	45.0	48.0	46.1	0	0.0	
144		22:30		-10	2	7			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
145		23:00	50.80	-7	1	11		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	1.44	0	0.00	0.00	1.44	208.94	46.0	41.0	47.8	0	0.0	
146		23:30		-9	15	16			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
147	2013/03/07	00:00	50.80	-9	6	35		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	0.17	0	0.00	0.00	0.17	209.11	46.0	44.0	47.5	0	0.0	
148		00:30		-14	6	15			22	3.33	0	100	9.020	0.000	9.020	8.080	0.000												
149		01:00	50.80	-1	89	68		50.80	17	2.11	0	100	7.016	0.000	7.016	8.247	0.000	3.21	0	0.00	0.00	3.21	212.32	47.0	60.0	47.0	0	0.0	
150		01:30		-13	4	12			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
151		02:00	50.80	-16	12	5		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.58	0	0.00	0.00	0.58	212.90	46.0	44.0	47.5	0	0.0	
152		02:30		-11	1	3			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
153		03:00	50.80	-11	2	3		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.00	0	0.00	0.00	0.00	212.90	0.0			0	0.0	
154		03:30		-12	1	5			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
155		04:00	50.80	-11	2	22		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.59	0	0.00	0.00	0.59	213.49	47.0	59.0	47.1	0	0.0	
156		04:30		-10	2	21			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
157		05:00	50.80	-10	3	18		50.80	3	2.13	-3	100	6.626	0.000	6.626	8.385	0.000	3.81	0	0.00	0.00	3.81	217.30	45.0	40.0	46.9	0	0.0	
158		05:30		-17	3	5			0	0.00	0		0.000	0.000	0.000	8.385	0.000												
159		06:00	50.80	-18	1	7		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.93	0	0.00	0.00	0.93	218.23	45.0	42.0	46.7	0	0.0	
160			***Daily production summary*** ((March 6th @ 20:00hrs to March 7th @ 06:00hrs))																										
161			Daily Hours Flowed = 24Hrs, 00mins													Cum. Hours Flowed = 34Hrs, 00mins													
162			Daily load fluid Recovered = 94.32 m ³													Cum. load fluid Recovered = 218.23 m ³													
163			Daily Oil produced = 0.00 m ³													Cum. Oil produced = 0.00 m ³													
164			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cum. Burnable Gas to Flare = 0.000 10 ³ m ³													
165			Daily N ₂ recovered = 3.784 10 ³ m ³													Cum. N ₂ recovered = 8.385 10 ³ m ³													
166			Daily frac balls recovered = 0													Cum. frac balls recovered = 0													
167			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 170.57 m ³													
168	2013/03/07	06:30		-15	3	5																							
169		07:00	50.80	-15	2	9		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	218.23				0	0.0	
170		07:30		-10	1	8																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
171	2013/03/07	08:00	50.80	-13	3	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.07	0	0.00	0.00	1.07	219.30	45.0	41.0	46.8	0	0.0	
172		08:30		-8	2	7																							
173		08:30	Begin to rig in coil.																										
174		09:00	50.80	-10	1	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	3.00	0	0.00	0.00	3.00	222.30	45.0	40.0	46.9	0	0.0	
175		09:30			3	8																							
176		10:00	50.80		2	8		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
177		10:30			2	8			0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
178		10:30	Shut in well, continue to rig in coil.																										
179			***Daily production summary*** ((March 7th @ 0600hrs to March 7th @ 10:30hrs))																										
180			Daily Hours Flowed = 4Hrs, 30mins												Cumm. Hours Flowed = 38Hrs, 30mins														
181			Daily load fluid Recovered = 4.07 m ³												Cumm. load fluid Recovered = 222.30 m ³														
182			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
183			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³														
184			Daily N ₂ recovered = 0.000 10 ³ m ³												Cumm. N ₂ recovered = 8.385 10 ³ m ³														
185			Daily frac balls recovered = 0												Cum. frac balls recovered = 0														
186			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 165.5 m ³														
187	2013/03/07	10:35	0.00		75	11		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30				0	0.0	
188		10:40			152	10																							
189		10:45			225	7																							
190		11:00			301	5																							
191		11:15			396	3																							
192		11:30			499	3																							
193		12:00			1023	3																							
194		12:30			1320	5																							
195		13:00			1661	4		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		0.0		0	0.0	
196		21:45	Coil stab lubricator onto well and break circulation back to test vessel.																										
197	2013/03/08	01:35	Pressure test to 35 mPa.																										
198		01:45	Bleed down pressure test to 7 mPa.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%
199	2013/03/08	01:49	ISIP = 3824 kPa																									
200		01:50	Open master valve, run in hole with milling tools.																									
201		02:00	Open up @ manifold to maintain 1 mPa.																									
202		02:30		-23	698	-1																						
203		03:00		-20	1200	-1																						
204		03:30		-20	800	-1																						
205		03:45	Tagged seat #1.																									
206		04:00		-8	1250	-1																		48.0	54.0	48.6	0.1	
207		04:00	Samples showing trace of sand. Pump rate 350ltrs/min Return rate is 340 ltrs/min.																									
208		04:30		-13	1131	-1		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	44.0	46.5	0.0	
209		04:45	Baker TP pumper is having mechanical issues, coil begin to pull up.																									
210		04:50	Coil parked 1800 mKB, shut in at manifold.																									
211		05:00	Open back up at manifold and pump remainder of fluid off TP pumper.																									
212		05:20	Shut in at manifold, record pressures and wait further instruction.																									
213		05:30			695	-1																						
214		06:00			772	-1																						
215		06:30			783	-1																						
216		06:45	Open @ manifold and resume operations																									
217		07:00	Shut in at manifold, record pressures and wait further instruction.																									
218		08:00			791	-1																						
219		09:00			861	-1																						
220		10:00			865	-1																						
221		10:30	Pressure test N₂ lines.																									
222		10:45	Open @ manifold and resume operations.																									
223		11:00			850	-1																						
224		12:00			795	-1																		45.0	44.0	46.5	0	0.0
225		12:00	Shut in at manifold, stand by to fix pump.																									
226		13:00			1258	0																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%		
227	2013/03/08	14:00	0.00		2238	0		0.00				0						0					44.5	28.0	47.5	0	0.0			
228		14:30	Open @ manifold and resume operations.																											
229		15:00			110	0																								
230		15:30	Tagged seat #2.																											
231		16:00			468	0																45.0	34.0	47.4	0	0.0				
232		16:40	Tagged seat #3																											
233		17:00			377	0																								
234		17:15	Through seat #3.																											
235		18:00			548	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	35.0	47.3	0	0.0		
236		18:30	Begin to pull to surface.																											
237		19:00			387	0																45.0	36.0	47.2	0	0.0				
238		19:20	Fluid pump off line.																											
239		19:30			120	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	2.80	0	0.00	0.00	2.80	225.10							
240		19:45	Coil @ surface shut in master valve, bleed off through test vessel.																											
241		20:00	****Total gained during milling operations = 2.80 m ³ .																											
242		20:00	**** NEW LOAD LEFT TO RECOVER = 163.70 m ³ ****																											
243		20:30	Unable to monitor pressures.																											
244	2013/03/09	00:30	Coil stab lubricator onto well and break circulation back to test vessel.																											
245		00:45	Pressure test to 35 mPa.																											
246		01:06	Bleed down pressure test to 3 mPa.																											
247		01:10	ISIP = 324 kPa																											
248		01:15	Open master valve, run in hole with jetting nozzle.																											
249		01:25	Open up @ manifold to maintain 1 mPa.																											
250		01:30			519	13																								
251		01:30	N ₂ online @ 10scm/min																											
252		01:35	N ₂ @ surface.																											
253		02:00			2019	27												11.62	0	0.00	0.00	11.62	236.72	46.0	42.0	47.7	0	0.0		
254		02:22	Increase N ₂ rate to 20scm/min.																											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
255	2013/03/09	02:30	0.00		1700	89		0.00				0						0							47.7	0.0			
256		03:00			1850	107												7.65	0	0.00	0.00	7.65	244.37	46.0	50.0	47.0	0	0.0	
257		03:06	Coil tagged @ 1941.7 mKB																										
258		03:08	Coil pull up and park @ 1937.0 mKB and continue to pump N ₂ .																										
259		03:30			2019	136																							
260		04:00			1083	111												2.03	0	0.00	0.00	2.03	246.40	44.0	30.0	46.8	0	0.0	
261		04:00	One stock oil samples taken.																										
262		04:15	Decrease N ₂ rate to 15scm/min																										
263		04:30			738	86																							
264		05:00			903	79												1.17	0	0.00	0.00	1.17	247.57	48.0	66.0	47.4	0	0.0	
265		05:30			885	76																							
266		06:00			875	72		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.45	0	0.00	0.00	1.45	249.02	48.0	64.0	47.6	0	0.0	
267			***Daily production summary*** ((March 8th @ 0600hrs to March 9th @ 0600hrs))																										
268			Daily load fluid Recovered = 26.72 m ³												Cumm. load fluid Recovered = 249.02 m ³														
269			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
270			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 139.78 m ³														
271	2013/03/09	06:30			944	70																							
272		06:35	Decrease N ₂ rate to 10scm/min																										
273		07:00			822	55												1.23	0	0.00	0.00	1.23	250.25	47.0	60.0	47.0	0	0.0	
274		07:00	Increase N ₂ rate to 15scm/min																										
275		07:30			599	50																							
276		08:00	50.80	-6	147	59												1.70	0	0.00	0.00	1.70	251.95	44.0	28.0	46.9	0	0.0	
277		08:30		-10	123	55																							
278		09:00	50.80	-8	117	49												1.20	0	0.00	0.00	1.20	253.15	44.0	28.0	46.9	0	0.0	
279		09:30		-6	112	50																							
280		10:00	50.80	-6	110	49	2000											1.20	0	0.00	0.00	1.20	254.35	44.0	28.0	46.9	0	0.0	
281		10:30		-6	110	48																							
282		10:30	N ₂ offline, begin to rig out pump truck.																										
283		11:00	50.80	-10	2	43	1200											0.40	0	0.00	0.00	0.40	254.75	44.0	30.0	46.8	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
284	2013/03/09	11:30	50.80	-10	0	38		0.00				0							0						46.8		0.0		
285		12:00	50.80	-11	1	26	300											0.00	0	0.00	0.00	0.00	254.75				0	0.0	
286		12:20	N ₂ online @ 15scm																										
287		12:30		-12	1	26																							
288		12:40	Fluid to surface.																										
289		12:45	Two stock oil samples taken.																										
290		13:00	50.80	-4	166	53	2700											1.70	0	0.00	0.00	1.70	256.45	45.0	36.0	47.2	0	0.0	
291		13:30		-5	110	56																							
292		14:00	50.80	-4	101	47	3000											1.50	0	0.00	0.00	1.50	257.95	45.0	30.0	47.8	0	0.0	
293		14:30		-3	103	43																							
294		15:00	50.80	-6	87	32	1800											0.60	0	0.00	0.00	0.60	258.55						
295		15:30		-4	81	30																							
296		15:30	Increase N ₂ rate to 20 scm.																										
297		16:00	50.80	-3	138	28	2600											0.60	0	0.00	0.00	0.60	259.15						
298		16:30		-3	175	37																							
299		17:00	50.80	-6	136	34	2560											1.10	0	0.00	0.00	1.10	260.25	45.0	32.0	47.6	0	0.0	
300		17:00	Decrease N ₂ rate to 15 scm.																										
301		17:30		-4	85	33																							
302		17:30	Increase N ₂ rate to 20 scm.																										
303		18:00	50.80	-4	114	35	2600											0.80	0	0.00	0.00	0.80	261.05						
304		18:00	Stock oil sample taken.																										
305		18:30		-6	134	31																							
306		19:00	50.80	-6	131	33	2600											0.70	0	0.00	0.00	0.70	261.75	44.0	30.0	46.8	0	0.0	
307		19:30		-7	334	30																							
308		20:00	50.80	-5	134	28	2950											0.30	0	0.00	0.00	0.30	262.05	46.0	58.0	46.2	0	0.0	
309		20:30		-9	93	28																							
310		21:00	50.80	-7	90	28	2580											0.88	0	0.00	0.00	0.88	262.93	45.0	45.0	46.4	0	0.0	
311		21:01	Decrease N ₂ rate to 15 scm.																										
312		21:30		-8	70	25																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%
313	2013/03/09	22:00	50.80	-10	86	25	1960	0.00				0						1.11	0	0.00	0.00	1.11	264.04	46.0	54.0	46.6	0	0.0	
314		22:30		-7	68	26																							
315		23:00	50.80	-5	67	24	1980											0.59	0	0.00	0.00	0.59	264.63	46.0	52.0	46.8	0	0.0	
316		23:01	Increase N ₂ rate to 17 scm.																										
317		23:30		-4	110	26																							
318	2013/03/10	00:00	50.80	-4	110	23	2230											0.58	0	0.00	0.00	0.58	265.21	46.0	56.0	46.4	0	0.0	
319		00:00	Two stock oil samples taken.																										
320		00:01	Increase N ₂ rate to 17 scm.																										
321		00:30		-4	133	24																							
322		01:00	50.80	-6	134	23	2660											0.45	0	0.00	0.00	0.45	265.66	45.0	56.0	45.4	0	0.0	
323		01:30		-5	133	24																							
324		01:59	Due to daylight saving we will be skipping ahead one hour.																										
325		03:00	50.80	-5	132	22	2610											0.49	0	0.00	0.00	0.49	266.15	45.0	48.0	46.1	0	0.0	
326		03:30		-5	168	23																							
327		04:00	50.80	-4	132	22	2650											0.52	0	0.00	0.00	0.52	266.67	45.0	50.0	45.9	0	0.0	
328		04:30		-5	144	23																							
329		05:00	50.80	-5	138	23	2660											0.41	0	0.00	0.00	0.41	267.08	45.0	44.0	46.5	0	0.0	
330		05:21	Decrease N ₂ rate to 15 scm.																										
331		05:30		-7	89	20																							
332		06:00	50.80	-6	81	20	1950	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.47	0	0.00	0.00	0.47	267.55	45.0	44.0	46.5	0	0.0	
333		06:00	Stock oil samples taken.																										
334			***Daily production summary*** ((March 9th @ 0600hrs to March 10th @ 0600hrs))																										
335			Daily load fluid Recovered = 18.53 m ³												Cum. load fluid Recovered = 267.55 m ³														
336			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³														
337			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 121.25 m ³														
338			ODOR PRESENT IN FLUID SAMPLES, MAYBE HYDROCARBONS.																										
339	2013/03/10	06:30		-6	85	23																							
340		07:00	50.80	-6	90	22	1950											0.41	0	0.00	0.00	0.41	267.96	45.0	46.0	46.3	0	0.0	
341		07:30		-6	90	22																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%		
342	2013/03/10	08:00	50.80	-6	91	22	1950	0.00				0						0.47	0	0.00	0.00	0.47	268.43			46.3	0	0.0		
343		08:30		-7	90	23																								
344		09:00	50.80	-6	90	22	1950											0.42	0	0.00	0.00	0.42	268.85	46.0	46.0	47.3	0	0.0		
345		09:30		-6	88	24																								
346		09:40	Coil pull up to 1885 m																											
347		10:00	50.80	-5	88	23	1920											0.28	0	0.00	0.00	0.28	269.13							
348		10:30		-5	85	22																								
349		11:00	50.80	-5	85	21	1940											0.29	0	0.00	0.00	0.29	269.42	46.0	45.0	47.4	0	0.0		
350		11:30		-6	86	21																								
351		12:00	50.80	-6	85	21	1960											0.29	0	0.00	0.00	0.29	269.71	46.0	44.0	47.5	0	0.0		
352		12:00	Two stock oil samples taken.																											
353		12:00	Decrease N ₂ rate to 8 scm.																											
354		12:30		-6	21	20																								
355		13:00	50.80	-5	22	18	1000											0.14	0	0.00	0.00	0.14	269.85							
356		13:00	Increase N ₂ rate to 15 scm. Coil pull up to 1000m.																											
357		13:30		-6	108	38																								
358		13:50	Decrease N ₂ rate to 8 scm. Coil run in hole to 1875m.																											
359		14:00	50.80	-6	46	31	850											0.57	0	0.00	0.00	0.57	270.42	46.0	44.0	47.5	0	0.0		
360		14:30		-6	16	13																								
361		15:00	50.80	-6	18	12	1070											0.00	0	0.00	0.00	0.00	270.42							
362		15:30		-8	17	12																								
363		16:00	50.80	-8	17	17	1270											0.00	0	0.00	0.00	0.00	270.42							
364		16:00	N ₂ offline, coil pull up above perfs.																											
365		16:30		-12	5	16																								
366		17:00	50.80	-12	2	16	0											0.00		0.00	0.00	0.00	270.42							
367		17:30		-12	2	16																								
368		17:30	N ₂ online @ 15 scm. Coil run in below perfs.																											
369		18:00	50.80	-11	56	28	2540											0.58	0	0.00	0.00	0.58	271.00	44.0	30.0	46.8	0	0.0		
370		18:30		-3	106	26																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead							ST - 27 Orifice Meter								Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
371	2013/03/10	19:00	50.80	-3	85	31	2010	0.00				0						1.31	0	0.00	0.00	1.31	272.31	44.0	32.0	46.6	0	0.0
372		19:30		-6	84	28																						
373		20:00	50.80	-5	75	27	1900											0.29	0	0.00	0.00	0.29	272.60	45.0	30.0	47.8	0	0.0
374		20:01	Decrease N ₂ 10 scm, coil pull up above perfs.																									
375		20:11	N ₂ offline.																									
376		20:30		-7	5	24																						
377		21:00	50.80	-8	5	21	0											0.00	0	0.00	0.00	0.00	272.60				0	0.0
378		21:30		-8	5	20																						
379		22:00	50.80	-7	6	20												0.00	0	0.00	0.00	0.00	272.60				0	0.0
380		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
381		22:30		-7	136	25																						
382		23:00	50.80	-9	19	28	1260											0.87	0	0.00	0.00	0.87	273.47	44.0	42.0	45.7	0	0.0
383		23:00	Decrease N ₂ rate to 10 scm.																									
384		23:00	Two stock oil samples taken.																									
385		23:30		-8	33	25																						
386	2013/03/11	00:00	50.80	-8	26	23	1300											0.24	0	0.00	0.00	0.24	273.71				0	0.0
387		00:01	Increase N ₂ rate to 15 scm.																									
388		00:30		-9	90	27																						
389		01:00	50.80	-8	87	27	1930											0.34	0	0.00	0.00	0.34	274.05	45.0	44.0	46.5	0	0.0
390		01:30		-9	73	26																						
391		02:00	50.80	-9	78	27	1860											0.30	0	0.00	0.00	0.30	274.35				0	0.0
392		02:01	N ₂ offline, coil pull up above perfs.																									
393		02:30		-10	6	25																						
394		03:00	50.80	-11	4	23	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0
395		03:30		-12	4	20																						
396		04:00	50.80	-12	5	21	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0
397		04:00	N ₂ online @ 15 scm. Coil run in below perfs.																									
398		04:30		-11	132	28																						
399		04:48	N ₂ offline.																									

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
400	2013/03/11	05:00	50.80	-12	8	27	300	0.00				0						0.87	0	0.00	0.00	0.87	275.22	43.0	36.0	45.2	0	0.0	
401		05:00	Stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
402		05:10	N ₂ back online @ 15 scm.																										
403		05:30		-11	26	34																							
404		06:00	50.80	-12	61	27	1720	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.19	0	0.00	0.00	0.19	275.41				0	0.0	
405			***Daily production summary*** ((March 10th @ 0600hrs to March 11th @ 0600hrs))																										
406			Daily Hours Flowed = 24Hrs, 00mins												Cumm. Hours Flowed = 109Hrs, 00mins														
407			Daily load fluid Recovered = 7.86 m ³												Cumm. load fluid Recovered = 275.41 m ³														
408			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
409			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 113.39 m ³														
410	2013/03/11	06:30		-13	56	27																							
411		07:00	50.80	-12	62	25	1860											0.37	0	0.00	0.00	0.37	275.78				0	0.0	
412		07:10	N ₂ offline, coil pull up above perfs.																										
413		07:30		-13	6	26																							
414		08:00	50.80	-12	5	23	240											0.14	0	0.00	0.00	0.14	275.92				0	0.0	
415		08:30		-15	5	21																							
416		09:00	50.80	-15	6	22	270											0.00		0.00	0.00	0.00	275.92						
417		09:30		-15	7	24																							
418		09:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
419		10:00	50.80	-14	74	26	2600											0.15	0	0.00	0.00	0.15	276.07	43.0	20.0	46.6	0	0.0	
420		10:30		-12	90	28																							
421		11:00	50.80	-12	42	28	470											1.01	0	0.00	0.00	1.01	277.08	45.0	54.0	45.6	0	0.0	
422		11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																										
423		11:00	Fluid sample also showing trace of hydrates.																										
424		11:00	N ₂ offline, coil pull up above perfs.																										
425		11:30		-12	8	22																							
426		12:00	50.80	-12	7	25	250											0.00	0	0.00	0.00	0.00	277.08				0	0.0	
427		12:30		-14	6	23																							
428		13:00	50.80	-15	5	23	440											0.00	0	0.00	0.00	0.00	277.08				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
429	2013/03/11	13:30	50.80	-17	5	21		0.00				0						0							45.6	0.0			
430		14:00	50.80	-19	3	20	520											0.00	0	0.00	0.00	0.00	277.08				0	0.0	
431		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
432		14:30		-18	93	28																							
433		15:00	50.80	-16	78	31	1910											1.02	0	0.00	0.00	1.02	278.10	44.0	32.0	46.6	0	0.0	
434		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
435		15:00	Fluid sample also showing trace of hydrates.																										
436		15:30		-16	26	31																							
437		15:30	N ₂ offline, coil pull up above perfs.																										
438		16:00	50.80	-15	4	26	250											0.11	0	0.00	0.00	0.11	278.21				0	0.0	
439		16:30		-16	5	28																							
440		17:00	50.80	-16	5	21	250											0.00	0	0.00	0.00	0.00	278.21						
441		17:30		-16	5	20																							
442		18:00	50.80	-16	4	19	250											0.00	0	0.00	0.00	0.00	278.21				0	0.0	
443		18:30		-16	4	19																							
444		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
445		19:00	50.80	-16	54	33	330											0.11	0	0.00	0.00	0.11	278.32	44.0	30.0	46.8	0	0.0	
446		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 11% LELs from meter run when making fluid.																										
447		19:00	Fluid sample also showing trace of hydrates.																										
448		19:30		-16	86	36																							
449		20:00	50.80	-16	69	27	1700											1.00	0	0.00	0.00	1.00	279.32	44.0	32.0	46.6	0	0.0	
450		20:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																										
451		20:00	Fluid sample also showing trace of hydrates.																										
452		20:01	N ₂ offline, coil pull up above perfs.																										
453		20:30		-15	6	30																							
454		21:00	50.80	-16	4	27	150											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
455		21:30		-25	4	26																							
456		22:00	50.80	-26	3	25	230											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
457		22:30		-31	3	25																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
458	2013/03/11	23:00	50.80	-30	3	27	2360	0.00				0						0.00	0	0.00	0.00	0.00	279.32			46.6	0	0.0	
459		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
460		23:30		-25	160	27																							
461		23:45	Two stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
462	2013/03/12	00:00	50.80	-24	97	35	2070											0.89	0	0.00	0.00	0.89	280.21	44.0	36.0	46.2	0	0.0	
463		00:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
464		00:00	Fluid sample also showing trace of hydrates.																										
465		00:30		-23	10	32	2080																						
466		00:30	N ₂ offline, coil pull up above perfs.																										
467		01:00	50.80	-27	6	36	210											0.22	0	0.00	0.00	0.22	280.43	44.0	38.0	46.0	0	0.0	
468		01:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
469		01:00	Fluid sample also showing trace of hydrates.																										
470		01:30		-28	5	29																							
471		02:00	50.80	-30	5	27	200											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
472		02:30		-30	6	24																							
473		03:00	50.80	-34	4	25	180											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
474		03:30		-28	3	27																							
475		04:00	50.80	-33	4	24	260											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
476		04:30		-32	3	24																							
477		05:00	50.80	-30	3	24	290											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
478		05:30		-30	2	25																							
479		06:00	50.80	-28	3	22	310	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	280.43				0	0.0	
480			***Daily production summary*** ((March 11th @ 0600hrs to March 12th @ 0600hrs))																										
481			Daily Hours Flowed = 24Hrs, 00mins												Cum. Hours Flowed = 133Hrs, 00mins														
482			Daily load fluid Recovered = 5.02 m ³												Cum. load fluid Recovered = 280.43 m ³														
483			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³														
484			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 108.37 m ³														
485	2013/03/12	06:30		-36	3	22																							
486		07:00	50.80	-35	3	25	230											0.00	0	0.00	0.00	0.00	280.43				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
487	2013/03/12	07:30	50.80	-35	3	24		0.00				0						0							46.0	0.0			
488		08:00	50.80	-35	4	22	300																						
489		08:30		-35	3	25												0.00		0.00	0.00	0.00	280.43			0	0.0		
490		08:50	Shut in @ manafold, monitor pressure.																										
491		09:00	0.00		60	25		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43				0	0.0	
492		09:15			80	24																							
493		09:29	0.00		102	25																				0	0.0		
494		09:30	Gas sample taken from manafold, cylinder # 05005398.																										
495		09:30	N ₂ online @ 30 scm. Coil run in below perfs.																										
496		09:30			115	25	2100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	280.43						
497		09:30	Open well to flow on 50.80mm.																										
498		09:31	Burnable gas to surface. Showing at flare, meter in service to catch a rate.																										
499		09:35	50.80	-30	96	24	3100	50.80	34	1.99	-25	0	9.390	9.390	0.000	8.385	0.033												
500		09:40	Fluid to surface.																										
501		09:45		-27	88	28			20	0.99	-25	0	6.237	6.237	0.000	8.385	0.087												
502		10:00	50.80	-11	282	49	2820	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	1.17	0	0.00	0.00	1.17	281.60	43.0	20.0	46.6	0	0.0	
503		10:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing hydrates.																										
504		10:00	Monitor showing 8% LEL's from meter run. Too small to measure.																										
505		10:30		-13	89	42																							
506		11:00	50.80	-13	79	42	1920	0.00	0	0.00	0		0.000	0.000	0.000	8.385	0.087	0.89	0	0.00	0.00	0.89	282.49	46.0	60.0	46.0	0	0.0	
507		11:00	N ₂ offline, coil pull up above perfs.																										
508		11:30		-14	100	40																							
509		12:00	50.80	-16	60	35	100											0.00		0.00	0.00	0.00	282.49				0	0.0	
510		12:30		-16	4	33																							
511		13:00	50.80	-16	2	33	100											0.00		0.00	0.00	0.00	282.49				0	0.0	
512		13:30		-15	4	31																							
513		14:00	50.80	-15	4	30	200											0.00		0.00	0.00	0.00	282.49				0	0.0	
514		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
515		14:30		-15	63	36																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

Date	Time	Wellhead						ST - 27 Orifice Meter									Oil Produced Volume Meter											
		Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
		mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
516	2013/03/12	15:00	50.80	-12	117	40	2120	0.00				0						0.58	0	0.00	0.00	0.58	283.07	43.0	22.0	46.4	0	0.0
517		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
518		15:00	Monitor showing 5% LEL's from meter run. Too small to measure.																									
519		15:30		-12	86	38																						
520		15:30	N ₂ offline, coil pull up above perfs.																									
521		16:00	50.80	-14	4	35	80											0.30	0	0.00	0.00	0.30	283.37	43.0	23.0	46.3	0	0.0
522		16:30		-14	6	33																						
523		17:00	50.80	-15	8	31	90											0.00	0	0.00	0.00	0.00	283.37				0	0.0
524		17:30		-16	5	30																						
525		18:00	50.80	-16	5	30	90											0.00	0	0.00	0.00	0.00	283.37				0	0.0
526		18:30		-17	30	30																						
527		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																									
528		19:00	50.80	-20	120	31	2520											0.21	0	0.00	0.00	0.21	283.58	43.0	22.0	46.4	0	0.0
529		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
530		19:00	Monitor showing 5% LEL's from meter run. Too small to measure.																									
531		19:30		-20		30																						
532		20:00	50.80	-25	93	36	2090											0.70	0	0.00	0.00	0.70	284.28	46.0	56.0	46.4	0	0.0
533		20:00	Fluid sample lighter in colour, emulsion present, odour present, smells like hydrocarbons. Also showing trace of hydrates.																									
534		20:00	Monitor showing 7% LEL's from meter run. Too small to measure.																									
535		20:01	N ₂ offline, coil pull up above perfs.																									
536		20:30		-18	25	36																						
537		21:00	50.80	-18	12	36	120											0.00	0	0.00	0.00	0.00	284.28				0	0.0
538		21:30		-18	14	33																						
539		22:00	50.80	-23	7	35	340											0.00	0	0.00	0.00	0.00	284.28				0	0.0
540		22:30		-25	7	35																						
541		23:00	50.80	-26	7	34	310											0.00	0	0.00	0.00	0.00	284.28				0	0.0
542		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
543		23:30		-16	152	34																						
544	2013/03/13	00:00	50.80	-14	91	34	2000											0.76	0	0.00	0.00	0.76	285.04	45.0	56.0	45.4	0	0.0

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
545	2013/03/13	00:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																										
546		00:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
547		00:00	Two stock oil samples taken.																										
548		00:30		-19	97	34																							
549		00:31	N ₂ offline, coil pull up above perfs.																										
550		01:00	50.80	-18	3	33	130										0.15	0	0.00	0.00	0.15	285.19	46.0	54.0	46.6	0	0.0		
551		01:00	Fluid sample dark in colour, no emulsion present, odour present, smells like hydrocarbons. Also no trace of hydrates.																										
552		01:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
553		01:30		-20	5	33																							
554		02:00	50.80	-23	3	33	160										0.00	0	0.00	0.00	0.00	285.19				0	0.0		
555		02:30		-27	4	32																							
556		03:00	50.80	-28	3	31	210										0.00	0	0.00	0.00	0.00	285.19				0	0.0		
557		03:30		-26	3	30																							
558		03:31	N ₂ online @ 15 scm. Coil run in below perfs.																										
559		04:00	50.80	-17	116	31	2300										0.14	0	0.00	0.00	0.14	285.33	43.0	24.0	46.2	0	0.0		
560		04:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
561		04:00	Monitor showing 7% LEL's from meter run. Too small to measure.																										
562		04:30		-23	90	30																							
563		05:00	50.80	-19	91	31	560										0.51	0	0.00	0.00	0.51	285.84	44.0	28.0	46.9	0	0.0		
564		05:00	Stock oil sample taken.																										
565		05:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Also trace of hydrates.																										
566		05:00	Monitor showing 5% LEL's from meter run. Too small to measure.																										
567		05:01	N ₂ offline, coil pull up above perfs.																										
568		05:30		-23	4	28																							
569		06:00	50.80	-26	1	31	100	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.087	0.00	0	0.00	0.00	0.00	285.84				0	0.0	
570			***Daily production summary*** ((March 12th @ 0600hrs to March 13th @ 0600hrs))																										
571			Daily Hours Flowed = 23Hrs, 20mins												Cum. Hours Flowed = 156Hrs, 20mins														
572			Daily load fluid Recovered = 5.41 m ³												Cum. load fluid Recovered = 285.84 m ³														

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

		Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
573		Daily Oil produced = 0.00 m ³										Cumm. Oil produced = 0.00 m ³															
574		Daily Burnable Gas Produced to Flare = 0.087 10 ³ m ³										Cumm. Burnable Gas to Flare = 0.087 10 ³ m ³															
575		Initial load fluid to recover = 388.80 m ³										Load fluid left to recover = 102.96 m ³															

Field Measurements

699289
v4

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
1	2013/02/18	00:00	0.00	0	0	0		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0		0.00		0.00				0	0.0	
2		08:00	Arrive on location demobilize equipment.																										
3		17:00	Standby for drilling completion.																										
4	2013/02/19	08:00	Arrive on location, continue maintenance and cleanup of equipment.																										
5		17:00	Unable to spot and rig in, standing by for drilling rig completion.																										
6	2013/02/20	08:00	Arrive on location, stand by for drilling rig completion.																										
7	2013/02/23	07:00	Begin perfing operations with drilling rig and run in tubing.																										
8	2013/02/28	09:00	Spot and rig in test equipment.																										
9	2013/03/01	07:00	Continue rigging in, stand by to purge vessels and pressure test flowline.																										
10	2013/03/04	13:50	E-line run in hole to punch tubing.																										
11		15:35	E-line @ surface.																										
12		15:50	N₂ online, to confirm run was successful.																										
13		16:20	Run successful, bleed off well to 5 mPa.																										
14		17:00	Drop 1st ball and begin to rig on frac head.																										
15		20:05	Pump 3m³ of frac oil through frac iron to vessel.																										
16		20:10	Shut in wing valve and pressure test frac iron.																										
17		21:01	Begin mini frac.																										
18		21:13	Mini frac complete, 14m³ pumped.																										
19		21:30	Monitor and record casing pressures. Data van to record tubing pressures.																										
20		21:30	0.00	0	0	2228		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00		0.0		0	0.0	
21		22:00				2410																							
22		23:00				2638																							
23	2013/03/05	00:00				2802																							
24		01:00				2864																							
25		02:00				2884																							
26		03:00				2993																							
27		04:00				3097																							
28		05:00				3195																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
29	2013/03/05	06:00	0.00			3265		0.00				0							0									0.0
30		07:00				3401																						
31		08:00				3525																						
32		08:00	Remove deadweight from caasing, stand by to frac Canol formation.																									
33		11:20	Begin pressure tests on frac iron.																									
34		12:20	Begin frac on Canol formation.																									
35		13:13	Frac complete.																									
36		13:13			19800																							
37		13:35	Drop 2nd ball.																									
38		14:10	Continue frac.																									
39		15:11	Frac complete.																									
40		15:11			21300																							
41		15:15	Drop 3rd ball.																									
42		16:10	Continue frac.																									
43		16:50	Frac complete, ISIP = 23.0 mPa, Fluid pumped = 374.8m ³ , LOAD TO RECOVER = 388.8m ³ .																									
44		17:00			23000	700																						
45		17:00	Remain shut in for 3 hrs, unable to monitor buildups untill frac head is rigged off well.																									
46		18:00			19856	1383																						
47		18:30			19474	1825																						
48		19:00			19034	2229																						
49		19:30			18663	2660																						
50		20:00	0.00	0	18468	2842		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00	0.0			0	0.0
51		20:00	Open well to flow on adjustable 18/64 (7.14mm) choke, establish rate of 5.0m ³ /hr as per program before switching to bean choke.																									
52		20:05		-1	16949	2919																						
53		20:10	7.14	1	16848	3034			0	0.00	0	0	0.000	0.000	0.000	0.000	0.000											
54		20:11	N ₂ to surface, install 1.75" (44.45mm) orifice plate, meter in service.																									
55		20:15		3	16623	3186		44.45	68	33.83	1	100	26.342	0.000	26.342	0.091	0.000											
56		20:30	7.14	8	16296	4195			21	6.96	-4		9.893	0.000	9.893	0.280	0.000											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																											
58		20:45		4	16449	4793			33	0.01	0		0.395	0.000	0.395	0.334	0.000													
59		21:00	5.56	4	16359	4931		44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	47.0	50.0	48.0	0	0.1		
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																											
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																											
62		21:30	7.94	12	14738	6674		44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000													
63		21:35	Fluid samples are showing gel and 20% sand.																											
64		22:00	7.94	10	14228	7443		44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	47.0	50.0	48.0	0	1.0		
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																											
66		22:00	Fluid samples showing no gel and 1% sand.																											
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																											
68		22:30		12	13833	8349		44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000													
69		22:31	Install 1" (25.4mm) orifice plate.																											
70		23:00	7.94	11	13542	8754		25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	47.0	53.6	47.6	0	1.0		
71		23:00	Two stock oil samples taken.																											
72		23:30		14	13334	9276			275	18.90	6		9.162	0.000	9.162	1.786	0.000													
73		23:30	Bleed down casing pressure.																											
74	2013/03/06	00:00	7.94	13	12860	5440		25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	47.0	53.6	47.6	0	0.1		
75		00:00	Checked ball catcher, no balls found.																											
76		00:30		14	12629	5090			410	18.23	7		10.476	0.000	10.476	2.214	0.000													
77		01:00	7.94	12	12149	5419		25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	46.0	55.4	46.4	0	0.1		
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																											
79		01:30		14	10085	5966			379	22.88	8		11.373	0.000	11.373	2.645	0.000													
80		02:00	8.73	15	9590	6370		25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	46.0	53.6	46.6	0	0.1		
81		02:00	Two stock oil samples taken.																											
82		02:30		14	9425	6712			337	20.89	8		10.371	0.000	10.371	3.102	0.000													
83		03:00	8.73	12	9404	6782		25.40	382	18.41	8	100	10.216	0.000	10.216	3.317	0.000	10.62	0	0.00	0.00	10.62	84.20	47.0	57.2	47.3	0	0.1		
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
85	2013/03/06	03:30	8.73	14	8213	7979		25.40	317	20.15	8	100	9.947	0.000	9.947	3.527	0.000		0							47.3	0.1			
86		04:00	9.53	13	8071	9845		25.40	275	17.91	8	100	8.883	0.000	8.883	3.723	0.000	10.05	0	0.00	0.00	10.05	94.25	46.0	53.6	46.6	0	0.1		
87		04:00	Bleed down casing pressure.																											
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																											
89		04:30		14	6722	4170			396	23.38	10		11.659	0.000	11.659	3.937	0.000													
90		05:00	10.32	15	5969	4383		25.40	358	17.91	9	100	9.803	0.000	9.803	4.161	0.000	15.65	0	0.00	0.00	15.65	109.90	47.0	55.4	47.4	0	0.1		
91		05:30		18	5427	4432			310	21.89	8		10.288	0.000	10.288	4.370	0.000													
92		06:00	10.32	16	4999	4430		25.40	303	29.39	8	100	11.859	0.000	11.859	4.601	0.000	14.01	0	0.00	0.00	14.01	123.91	47.0	53.6	47.6	0	0.1		
93		06:00	Checked ball catcher, no balls found.																											
94			***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																											
95			Daily Hours Flowed = 10Hrs, 00mins												Cumm. Hours Flowed = 10Hrs, 00mins															
96			Daily load fluid Recovered = 123.91 m ³												Cumm. load fluid Recovered = 123.91 m ³															
97			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³															
98			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³															
99			Daily N ₂ recovered = 4.601 10 ³ m ³												Cumm. N ₂ recovered = 4.601 10 ³ m ³															
100			Daily frac balls recovered = 0												Cum. frac balls recovered = 0															
101			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 264.89 m ³															
102	2013/03/06	06:30		16	4555	4759			265	15.17	7		8.069	0.000	8.069	4.808	0.000													
103		07:00	10.32	9	4129	4201		25.40	255	17.41	7	100	8.534	0.000	8.534	4.981	0.000	12.46	0	0.00	0.00	12.46	136.37	46.0	43.0	47.6	0	0.1		
104		07:30		10	3758	4058			220	14.43	7		7.363	0.000	7.363	5.147	0.000													
105		08:00	10.32	9	3604	3924		25.40	227	16.91	7	100	8.069	0.000	8.069	5.307	0.000	10.14	0	0.00	0.00	10.14	146.51	47.0	54.0	47.6	0	0.1		
106		08:30		5	3429	3745			210	16.23	8		7.680	0.000	7.680	5.471	0.000													
107		09:00	10.32	5	3319	3601		25.40	152	23.13	3	100	8.378	0.000	8.378	5.639	0.000	8.64	0	0.00	0.00	8.64	155.15	46.0	50.0	47.0	0	0.1		
108		09:01	Increase to 32/64 (12.70mm) adjustable choke.																											
109		09:05	Increase orifice plate to 1.25" (31.75mm).																											
110		09:30		8	2339	3403		31.75	90	7.77	6		6.492	0.000	6.492	5.794	0.000													
111		10:00	12.70	5	2509	3219		31.75	103	9.45	9	100	7.377	0.000	7.377	5.938	0.000	6.72	0	0.00	0.00	6.72	161.87	46.0	50.0	47.0	0	0.1		
112		10:30		9	2306	3074			83	9.40	4		7.040	0.000	7.040	6.088	0.000													

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
113	2013/03/06	11:00	12.70	7	2255	2935		31.75	82	9.20	6	100	6.920	0.000	6.920	6.234	0.000	6.04	0	0.00	0.00	6.04	167.91	46.0	50.0	47.0	0	0.1
114		11:00	Increase to 48/64 (19.05mm) adjustable choke.																									
115		11:05	Increase orifice plate to 1.5" (38.10mm).																									
116		11:30		12	599	2820			165	6.96	2		7.327	0.000	7.327	6.382	0.000											
117		12:00	19.05	10	248	2646		38.10	28	10.69	4	100	9.086	0.000	9.086	6.553	0.000	4.95	0	0.00	0.00	4.95	172.86	47.0	52.0	47.8	0	0.1
118		12:15	Increase to 128/64 (50.80mm).																									
119		12:16	Increase orifice plate to 2" (50.80mm).																									
120		12:30		5	117	2323			21	15.70	5		10.762	0.000	10.762	6.760	0.000											
121		13:00	50.80	4	3	2145		50.80	4	4.97	4	100	10.083	0.000	10.083	6.977	0.000	5.66	0	0.00	0.00	5.66	178.52	46.0	50.0	47.0	0	0.1
122		13:15	Gas too small to measure. Meter out of service.																									
123		13:30		3	10	2130																						
124		14:00	50.80	2	6	1926		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	5.86	0	0.00	0.00	5.86	184.38	46.0	50.0	47.0	0	0.1
125		14:00	Checked ball catcher, no balls found.																									
126		14:30		1	98	1619																						
127		15:00	50.80	1	15	1425		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	3.18	0	0.00	0.00	3.18	187.56	46.0	50.0	47.0	0	0.1
128		15:00	Two stock oil samples taken.																									
129		15:30		2	5	1209																						
130		16:00	50.80	2	8	1034		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	4.71	0	0.00	0.00	4.71	192.27	46.0	50.0	47.0	0	0.1
131		16:30		2	8	990		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000											
132		16:45	Well starting to surge. Meter in service with a 2" (50.80mm) orifice plate.																									
133		17:00	50.80	20	268	989		50.80	34	4.53	28	100	10.546	0.000	10.546	7.197	0.000	4.70	0	0.00	0.00	4.70	196.97	45.0	40.0	46.9	0	0.1
134		17:30		4	7	697			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000											
135		18:00	50.80	3	6	609		50.80	0	0.00	0	0	0.000	0.000	0.000	7.197	0.000	1.17	0	0.00	0.00	1.17	198.14	45.0	40.0	46.9	0	0.1
136		18:30		1	3	394			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000											
137		19:00	50.80	1	5	544		50.80	17	9.95	7	100	15.199	0.000	15.199	7.513	0.000	2.34	0	0.00	0.00	2.34	200.48	45.0	46.0	46.3	0	0.1
138		19:30		-4	3	284			14	3.48	0		8.900	0.000	8.900	7.764	0.000											
139		20:00	50.80	-4	4	35		50.80	14	0.49	3	100	3.319	0.000	3.319	7.892	0.000	2.64	0	0.00	0.00	2.64	203.12	45.0	45.0	46.4	0	0.0
140		20:30		-1	3	30			0	0.00	0		0.000	0.000	0.000	7.892	0.000											
141		21:00	50.80	-16	59	145		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.09	0	0.00	0.00	2.09	205.21	46.0	48.0	47.1	0	0.0

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
142	2013/03/06	21:30	50.80	-10	3	33		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000		0							47.1	0.0		
143		22:00	50.80	-7	4	79		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.29	0	0.00	0.00	2.29	207.50	45.0	48.0	46.1	0	0.0	
144		22:30		-10	2	7			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
145		23:00	50.80	-7	1	11		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	1.44	0	0.00	0.00	1.44	208.94	46.0	41.0	47.8	0	0.0	
146		23:30		-9	15	16			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
147	2013/03/07	00:00	50.80	-9	6	35		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	0.17	0	0.00	0.00	0.17	209.11	46.0	44.0	47.5	0	0.0	
148		00:30		-14	6	15			22	3.33	0	100	9.020	0.000	9.020	8.080	0.000												
149		01:00	50.80	-1	89	68		50.80	17	2.11	0	100	7.016	0.000	7.016	8.247	0.000	3.21	0	0.00	0.00	3.21	212.32	47.0	60.0	47.0	0	0.0	
150		01:30		-13	4	12			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
151		02:00	50.80	-16	12	5		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.58	0	0.00	0.00	0.58	212.90	46.0	44.0	47.5	0	0.0	
152		02:30		-11	1	3			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
153		03:00	50.80	-11	2	3		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.00	0	0.00	0.00	0.00	212.90	0.0			0	0.0	
154		03:30		-12	1	5			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
155		04:00	50.80	-11	2	22		50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.59	0	0.00	0.00	0.59	213.49	47.0	59.0	47.1	0	0.0	
156		04:30		-10	2	21			0	0.00	0		0.000	0.000	0.000	8.247	0.000												
157		05:00	50.80	-10	3	18		50.80	3	2.13	-3	100	6.626	0.000	6.626	8.385	0.000	3.81	0	0.00	0.00	3.81	217.30	45.0	40.0	46.9	0	0.0	
158		05:30		-17	3	5			0	0.00	0		0.000	0.000	0.000	8.385	0.000												
159		06:00	50.80	-18	1	7		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.93	0	0.00	0.00	0.93	218.23	45.0	42.0	46.7	0	0.0	
160			***Daily production summary*** ((March 6th @ 20:00hrs to March 7th @ 06:00hrs))																										
161			Daily Hours Flowed = 24Hrs, 00mins													Cumm. Hours Flowed = 34Hrs, 00mins													
162			Daily load fluid Recovered = 94.32 m³													Cumm. load fluid Recovered = 218.23 m³													
163			Daily Oil produced = 0.00 m³													Cumm. Oil produced = 0.00 m³													
164			Daily Burnable Gas Produced to Flare = 0.000 10³m³													Cumm. Burnable Gas to Flare = 0.000 10³m³													
165			Daily N₂ recovered = 3.784 10³m³													Cumm. N₂ recovered = 8.385 10³m³													
166			Daily frac balls recovered = 0													Cum. frac balls recovered = 0													
167			Initial load fluid to recover = 388.80 m³													Load fluid left to recover = 170.57 m³													
168	2013/03/07	06:30		-15	3	5																							
169		07:00	50.80	-15	2	9		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	218.23				0	0.0	
170		07:30		-10	1	8																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
171	2013/03/07	08:00	50.80	-13	3	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.07	0	0.00	0.00	1.07	219.30	45.0	41.0	46.8	0	0.0	
172		08:30		-8	2	7																							
173		08:30	Begin to rig in coil.																										
174		09:00	50.80	-10	1	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	3.00	0	0.00	0.00	3.00	222.30	45.0	40.0	46.9	0	0.0	
175		09:30			3	8																							
176		10:00	50.80		2	8		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
177		10:30			2	8			0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0	
178		10:30	Shut in well, continue to rig in coil.																										
179			***Daily production summary*** ((March 7th @ 0600hrs to March 7th @ 10:30hrs))																										
180			Daily Hours Flowed = 4Hrs, 30mins												Cum. Hours Flowed = 38Hrs, 30mins														
181			Daily load fluid Recovered = 4.07 m³												Cum. load fluid Recovered = 222.30 m³														
182			Daily Oil produced = 0.00 m³												Cum. Oil produced = 0.00 m³														
183			Daily Burnable Gas Produced to Flare = 0.000 10³m³												Cum. Burnable Gas to Flare = 0.000 10³m³														
184			Daily N₂ recovered = 0.000 10³m³												Cum. N₂ recovered = 8.385 10³m³														
185			Daily frac balls recovered = 0												Cum. frac balls recovered = 0														
186			Initial load fluid to recover = 388.80 m³												Load fluid left to recover = 165.5 m³														
187	2013/03/07	10:35	0.00		75	11		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30				0	0.0	
188		10:40			152	10																							
189		10:45			225	7																							
190		11:00			301	5																							
191		11:15			396	3																							
192		11:30			499	3																							
193		12:00			1023	3																							
194		12:30			1320	5																							
195		13:00			1661	4		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		0.0		0	0.0	
196		21:45	Coil stab lubricator onto well and break circulation back to test vessel.																										
197	2013/03/08	01:35	Pressure test to 35 mPa.																										
198		01:45	Bleed down pressure test to 7 mPa.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
1992013/03/08	01:49	ISIP = 3824 kPa																										
200	01:50	Open master valve, run in hole with milling tools.																										
201	02:00	Open up @ manifold to maintain 1 mPa.																										
202	02:30		-23	698	-1																							
203	03:00		-20	1200	-1																							
204	03:30		-20	800	-1																							
205	03:45	Tagged seat #1.																										
206	04:00		-8	1250	-1																		48.0	54.0	48.6		0.1	
207	04:00	Samples showing trace of sand. Pump rate 350ltrs/min Return rate is 340 ltrs/min.																										
208	04:30		-13	1131	-1		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	44.0	46.5		0.0	
209	04:45	Baker TP pumper is having mechanical issues, coil begin to pull up.																										
210	04:50	Coil parked 1800 mKB, shut in at manifold.																										
211	05:00	Open back up at manifold and pump remainder of fluid off TP pumper.																										
212	05:20	Shut in at manifold, record pressures and wait further instruction.																										
213	05:30			695	-1																							
214	06:00			772	-1																							
215	06:30			783	-1																							
216	06:45	Open @ manifold and resume operations																										
217	07:00	Shut in at manifold, record pressures and wait further instruction.																										
218	08:00			791	-1																							
219	09:00			861	-1																							
220	10:00			865	-1																							
221	10:30	Pressure test N ₂ lines.																										
222	10:45	Open @ manifold and resume operations.																										
223	11:00			850	-1																							
224	12:00			795	-1																		45.0	44.0	46.5	0	0.0	
225	12:00	Shut in at manifold, stand by to fix pump.																										
226	13:00			1258	0																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
227	2013/03/08	14:00	0.00		2238	0		0.00				0							0					44.5	28.0	47.5	0	0.0		
228		14:30	Open @ manifold and resume operations.																											
229		15:00			110	0																								
230		15:30	Tagged seat #2.																											
231		16:00			468	0																	45.0	34.0	47.4	0	0.0			
232		16:40	Tagged seat #3																											
233		17:00			377	0																								
234		17:15	Through seat #3.																											
235		18:00			548	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	35.0	47.3	0	0.0		
236		18:30	Begin to pull to surface.																											
237		19:00			387	0																	45.0	36.0	47.2	0	0.0			
238		19:20	Fluid pump off line.																											
239		19:30			120	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	2.80	0	0.00	0.00	2.80	225.10							
240		19:45	Coil @ surface shut in master valve, bleed off through test vessel.																											
241		20:00	****Total gained during milling operations = 2.80 m ³ .																											
242		20:00	**** NEW LOAD LEFT TO RECOVER = 163.70 m ³ ****																											
243		20:30	Unable to monitor pressures.																											
244	2013/03/09	00:30	Coil stab lubricator onto well and break circulation back to test vessel.																											
245		00:45	Pressure test to 35 mPa.																											
246		01:06	Bleed down pressure test to 3 mPa.																											
247		01:10	ISIP = 324 kPa																											
248		01:15	Open master valve, run in hole with jetting nozzle.																											
249		01:25	Open up @ manifold to maintain 1 mPa.																											
250		01:30			519	13																								
251		01:30	N ₂ online @ 10scm/min																											
252		01:35	N ₂ @ surface.																											
253		02:00			2019	27												11.62	0	0.00	0.00	11.62	236.72	46.0	42.0	47.7	0	0.0		
254		02:22	Increase N ₂ rate to 20scm/min.																											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
255	2013/03/09	02:30	0.00		1700	89		0.00				0						0							47.7		0.0		
256		03:00			1850	107												7.65	0	0.00	0.00	7.65	244.37	46.0	50.0	47.0	0	0.0	
257		03:06	Coil tagged @ 1941.7 mKB																										
258		03:08	Coil pull up and park @ 1937.0 mKB and continue to pump N ₂ .																										
259		03:30			2019	136																							
260		04:00			1083	111												2.03	0	0.00	0.00	2.03	246.40	44.0	30.0	46.8	0	0.0	
261		04:00	One stock oil samples taken.																										
262		04:15	Decrease N ₂ rate to 15scm/min																										
263		04:30			738	86																							
264		05:00			903	79												1.17	0	0.00	0.00	1.17	247.57	48.0	66.0	47.4	0	0.0	
265		05:30			885	76																							
266		06:00			875	72		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.45	0	0.00	0.00	1.45	249.02	48.0	64.0	47.6	0	0.0	
267			***Daily production summary*** ((March 8th @ 0600hrs to March 9th @ 0600hrs))																										
268			Daily load fluid Recovered = 26.72 m ³												Cum. load fluid Recovered = 249.02 m ³														
269			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³														
270			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 139.78 m ³														
271	2013/03/09	06:30			944	70																							
272		06:35	Decrease N ₂ rate to 10scm/min																										
273		07:00			822	55												1.23	0	0.00	0.00	1.23	250.25	47.0	60.0	47.0	0	0.0	
274		07:00	Increase N ₂ rate to 15scm/min																										
275		07:30			599	50																							
276		08:00	50.80	-6	147	59												1.70	0	0.00	0.00	1.70	251.95	44.0	28.0	46.9	0	0.0	
277		08:30		-10	123	55																							
278		09:00	50.80	-8	117	49												1.20	0	0.00	0.00	1.20	253.15	44.0	28.0	46.9	0	0.0	
279		09:30		-6	112	50																							
280		10:00	50.80	-6	110	49	2000											1.20	0	0.00	0.00	1.20	254.35	44.0	28.0	46.9	0	0.0	
281		10:30		-6	110	48																							
282		10:30	N ₂ offline, begin to rig out pump truck.																										
283		11:00	50.80	-10	2	43	1200											0.40	0	0.00	0.00	0.40	254.75	44.0	30.0	46.8	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
284	2013/03/09	11:30	50.80	-10	0	38		0.00				0						0							46.8	0.0				
285		12:00	50.80	-11	1	26	300											0.00	0	0.00	0.00	0.00	254.75			0	0.0			
286		12:20	N ₂ online @ 15scm																											
287		12:30		-12	1	26																								
288		12:40	Fluid to surface.																											
289		12:45	Two stock oil samples taken.																											
290		13:00	50.80	-4	166	53	2700											1.70	0	0.00	0.00	1.70	256.45	45.0	36.0	47.2	0	0.0		
291		13:30		-5	110	56																								
292		14:00	50.80	-4	101	47	3000											1.50	0	0.00	0.00	1.50	257.95	45.0	30.0	47.8	0	0.0		
293		14:30		-3	103	43																								
294		15:00	50.80	-6	87	32	1800											0.60	0	0.00	0.00	0.60	258.55							
295		15:30		-4	81	30																								
296		15:30	Increase N ₂ rate to 20 scm.																											
297		16:00	50.80	-3	138	28	2600											0.60	0	0.00	0.00	0.60	259.15							
298		16:30		-3	175	37																								
299		17:00	50.80	-6	136	34	2560											1.10	0	0.00	0.00	1.10	260.25	45.0	32.0	47.6	0	0.0		
300		17:00	Decrease N ₂ rate to 15 scm.																											
301		17:30		-4	85	33																								
302		17:30	Increase N ₂ rate to 20 scm.																											
303		18:00	50.80	-4	114	35	2600											0.80	0	0.00	0.00	0.80	261.05							
304		18:00	Stock oil sample taken.																											
305		18:30		-6	134	31																								
306		19:00	50.80	-6	131	33	2600											0.70	0	0.00	0.00	0.70	261.75	44.0	30.0	46.8	0	0.0		
307		19:30		-7	334	30																								
308		20:00	50.80	-5	134	28	2950											0.30	0	0.00	0.00	0.30	262.05	46.0	58.0	46.2	0	0.0		
309		20:30		-9	93	28																								
310		21:00	50.80	-7	90	28	2580											0.88	0	0.00	0.00	0.88	262.93	45.0	45.0	46.4	0	0.0		
311		21:01	Decrease N ₂ rate to 15 scm.																											
312		21:30		-8	70	25																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

		Wellhead						ST - 27 Orifice Meter										Oil Produced Volume Meter													
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand			
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%			
313	2013/03/09	22:00	50.80	-10	86	25	1960	0.00				0						1.11	0	0.00	0.00	1.11	264.04	46.0	54.0	46.6	0	0.0			
314		22:30		-7	68	26																									
315		23:00	50.80	-5	67	24	1980											0.59	0	0.00	0.00	0.59	264.63	46.0	52.0	46.8	0	0.0			
316		23:01	Increase N ₂ rate to 17 scm.																												
317		23:30		-4	110	26																									
318	2013/03/10	00:00	50.80	-4	110	23	2230											0.58	0	0.00	0.00	0.58	265.21	46.0	56.0	46.4	0	0.0			
319		00:00	Two stock oil samples taken.																												
320		00:01	Increase N ₂ rate to 17 scm.																												
321		00:30		-4	133	24																									
322		01:00	50.80	-6	134	23	2660											0.45	0	0.00	0.00	0.45	265.66	45.0	56.0	45.4	0	0.0			
323		01:30		-5	133	24																									
324		01:59	Due to daylight saving we will be skipping ahead one hour.																												
325		03:00	50.80	-5	132	22	2610											0.49	0	0.00	0.00	0.49	266.15	45.0	48.0	46.1	0	0.0			
326		03:30		-5	168	23																									
327		04:00	50.80	-4	132	22	2650											0.52	0	0.00	0.00	0.52	266.67	45.0	50.0	45.9	0	0.0			
328		04:30		-5	144	23																									
329		05:00	50.80	-5	138	23	2660											0.41	0	0.00	0.00	0.41	267.08	45.0	44.0	46.5	0	0.0			
330		05:21	Decrease N ₂ rate to 15 scm.																												
331		05:30		-7	89	20																									
332		06:00	50.80	-6	81	20	1950	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.47	0	0.00	0.00	0.47	267.55	45.0	44.0	46.5	0	0.0			
333		06:00	Stock oil samples taken.																												
334			***Daily production summary*** ((March 9th @ 0600hrs to March 10th @ 0600hrs))																												
335			Daily load fluid Recovered = 18.53 m ³												Cumm. load fluid Recovered = 267.55 m ³																
336			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³																
337			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 121.25 m ³																
338			ODOR PRESENT IN FLUID SAMPLES, MAYBE HYDROCARBONS.																												
339	2013/03/10	06:30		-6	85	23																									
340		07:00	50.80	-6	90	22	1950											0.41	0	0.00	0.00	0.41	267.96	45.0	46.0	46.3	0	0.0			
341		07:30		-6	90	22																									

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%	
342	2013/03/10	08:00	50.80	-6	91	22	1950	0.00				0						0.47	0	0.00	0.00	0.47	268.43			46.3		0.0	
343		08:30		-7	90	23																							
344		09:00	50.80	-6	90	22	1950											0.42	0	0.00	0.00	0.42	268.85	46.0	46.0	47.3	0	0.0	
345		09:30		-6	88	24																							
346		09:40	Coil pull up to 1885 m																										
347		10:00	50.80	-5	88	23	1920											0.28	0	0.00	0.00	0.28	269.13						
348		10:30		-5	85	22																							
349		11:00	50.80	-5	85	21	1940											0.29	0	0.00	0.00	0.29	269.42	46.0	45.0	47.4	0	0.0	
350		11:30		-6	86	21																							
351		12:00	50.80	-6	85	21	1960											0.29	0	0.00	0.00	0.29	269.71	46.0	44.0	47.5	0	0.0	
352		12:00	Two stock oil samples taken.																										
353		12:00	Decrease N₂ rate to 8 scm.																										
354		12:30		-6	21	20																							
355		13:00	50.80	-5	22	18	1000											0.14	0	0.00	0.00	0.14	269.85						
356		13:00	Increase N₂ rate to 15 scm. Coil pull up to 1000m.																										
357		13:30		-6	108	38																							
358		13:50	Decrease N₂ rate to 8 scm. Coil run in hole to 1875m.																										
359		14:00	50.80	-6	46	31	850											0.57	0	0.00	0.00	0.57	270.42	46.0	44.0	47.5	0	0.0	
360		14:30		-6	16	13																							
361		15:00	50.80	-6	18	12	1070											0.00	0	0.00	0.00	0.00	270.42						
362		15:30		-8	17	12																							
363		16:00	50.80	-8	17	17	1270											0.00	0	0.00	0.00	0.00	270.42						
364		16:00	N₂ offline, coil pull up above perfs.																										
365		16:30		-12	5	16																							
366		17:00	50.80	-12	2	16	0											0.00		0.00	0.00	0.00	270.42						
367		17:30		-12	2	16																							
368		17:30	N₂ online @ 15 scm. Coil run in below perfs.																										
369		18:00	50.80	-11	56	28	2540											0.58	0	0.00	0.00	0.58	271.00	44.0	30.0	46.8	0	0.0	
370		18:30		-3	106	26																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead						ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	°API	°F	°API		%		
371	2013/03/10	19:00	50.80	-3	85	31	2010	0.00				0						1.31	0	0.00	0.00	1.31	272.31	44.0	32.0	46.6	0	0.0		
372		19:30		-6	84	28																								
373		20:00	50.80	-5	75	27	1900											0.29	0	0.00	0.00	0.29	272.60	45.0	30.0	47.8	0	0.0		
374		20:01	Decrease N ₂ 10 scm, coil pull up above perfs.																											
375		20:11	N ₂ offline.																											
376		20:30		-7	5	24																								
377		21:00	50.80	-8	5	21	0											0.00	0	0.00	0.00	0.00	272.60				0	0.0		
378		21:30		-8	5	20																								
379		22:00	50.80	-7	6	20												0.00	0	0.00	0.00	0.00	272.60				0	0.0		
380		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																											
381		22:30		-7	136	25																								
382		23:00	50.80	-9	19	28	1260											0.87	0	0.00	0.00	0.87	273.47	44.0	42.0	45.7	0	0.0		
383		23:00	Decrease N ₂ rate to 10 scm.																											
384		23:00	Two stock oil samples taken.																											
385		23:30		-8	33	25																								
386	2013/03/11	00:00	50.80	-8	26	23	1300											0.24	0	0.00	0.00	0.24	273.71				0	0.0		
387		00:01	Increase N ₂ rate to 15 scm.																											
388		00:30		-9	90	27																								
389		01:00	50.80	-8	87	27	1930											0.34	0	0.00	0.00	0.34	274.05	45.0	44.0	46.5	0	0.0		
390		01:30		-9	73	26																								
391		02:00	50.80	-9	78	27	1860											0.30	0	0.00	0.00	0.30	274.35				0	0.0		
392		02:01	N ₂ offline, coil pull up above perfs.																											
393		02:30		-10	6	25																								
394		03:00	50.80	-11	4	23	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0		
395		03:30		-12	4	20																								
396		04:00	50.80	-12	5	21	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0		
397		04:00	N ₂ online @ 15 scm. Coil run in below perfs.																											
398		04:30		-11	132	28																								
399		04:48	N ₂ offline.																											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
400	2013/03/11	05:00	50.80	-12	8	27	300	0.00				0						0.87	0	0.00	0.00	0.87	275.22	43.0	36.0	45.2	0	0.0	
401		05:00	Stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
402		05:10	N ₂ back online @ 15 scm.																										
403		05:30		-11	26	34																							
404		06:00	50.80	-12	61	27	1720	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.19	0	0.00	0.00	0.19	275.41				0	0.0	
405			***Daily production summary*** ((March 10th @ 0600hrs to March 11th @ 0600hrs))																										
406			Daily Hours Flowed = 24Hrs, 00mins												Cum. Hours Flowed = 109Hrs, 00mins														
407			Daily load fluid Recovered = 7.86 m ³												Cum. load fluid Recovered = 275.41 m ³														
408			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³														
409			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 113.39 m ³														
410	2013/03/11	06:30		-13	56	27																							
411		07:00	50.80	-12	62	25	1860											0.37	0	0.00	0.00	0.37	275.78				0	0.0	
412		07:10	N ₂ offline, coil pull up above perfs.																										
413		07:30		-13	6	26																							
414		08:00	50.80	-12	5	23	240											0.14	0	0.00	0.00	0.14	275.92				0	0.0	
415		08:30		-15	5	21																							
416		09:00	50.80	-15	6	22	270											0.00		0.00	0.00	0.00	275.92						
417		09:30		-15	7	24																							
418		09:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
419		10:00	50.80	-14	74	26	2600											0.15	0	0.00	0.00	0.15	276.07	43.0	20.0	46.6	0	0.0	
420		10:30		-12	90	28																							
421		11:00	50.80	-12	42	28	470											1.01	0	0.00	0.00	1.01	277.08	45.0	54.0	45.6	0	0.0	
422		11:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																										
423		11:00	Fluid sample also showing trace of hydrates.																										
424		11:00	N ₂ offline, coil pull up above perfs.																										
425		11:30		-12	8	22																							
426		12:00	50.80	-12	7	25	250											0.00	0	0.00	0.00	0.00	277.08				0	0.0	
427		12:30		-14	6	23																							
428		13:00	50.80	-15	5	23	440											0.00	0	0.00	0.00	0.00	277.08				0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
429	2013/03/11	13:30	50.80	-17	5	21		0.00				0							0							45.6		0.0	
430		14:00	50.80	-19	3	20	520											0.00	0	0.00	0.00	0.00	277.08				0	0.0	
431		14:00	N ₂ online @ 15 scm. Coil run in below perfs.																										
432		14:30		-18	93	28																							
433		15:00	50.80	-16	78	31	1910											1.02	0	0.00	0.00	1.02	278.10	44.0	32.0	46.6	0	0.0	
434		15:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
435		15:00	Fluid sample also showing trace of hydrates.																										
436		15:30		-16	26	31																							
437		15:30	N ₂ offline, coil pull up above perfs.																										
438		16:00	50.80	-15	4	26	250											0.11	0	0.00	0.00	0.11	278.21				0	0.0	
439		16:30		-16	5	28																							
440		17:00	50.80	-16	5	21	250											0.00	0	0.00	0.00	0.00	278.21						
441		17:30		-16	5	20																							
442		18:00	50.80	-16	4	19	250											0.00	0	0.00	0.00	0.00	278.21				0	0.0	
443		18:30		-16	4	19																							
444		18:30	N ₂ online @ 15 scm. Coil run in below perfs.																										
445		19:00	50.80	-16	54	33	330											0.11	0	0.00	0.00	0.11	278.32	44.0	30.0	46.8	0	0.0	
446		19:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 11% LELs from meter run when making fluid.																										
447		19:00	Fluid sample also showing trace of hydrates.																										
448		19:30		-16	86	36																							
449		20:00	50.80	-16	69	27	1700											1.00	0	0.00	0.00	1.00	279.32	44.0	32.0	46.6	0	0.0	
450		20:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 8% LELs from meter run when making fluid.																										
451		20:00	Fluid sample also showing trace of hydrates.																										
452		20:01	N ₂ offline, coil pull up above perfs.																										
453		20:30		-15	6	30																							
454		21:00	50.80	-16	4	27	150											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
455		21:30		-25	4	26																							
456		22:00	50.80	-26	3	25	230											0.00	0	0.00	0.00	0.00	279.32				0	0.0	
457		22:30		-31	3	25																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
458	2013/03/11	23:00	50.80	-30	3	27	2360	0.00				0						0.00	0	0.00	0.00	0.00	279.32			46.6	0	0.0	
459		23:01	N ₂ online @ 15 scm. Coil run in below perfs.																										
460		23:30		-25	160	27																							
461		23:45	Two stock oil sample taken. Sample dark in colour, odour present, smells like hydrocarbons.																										
462	2013/03/12	00:00	50.80	-24	97	35	2070											0.89	0	0.00	0.00	0.89	280.21	44.0	36.0	46.2	0	0.0	
463		00:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
464		00:00	Fluid sample also showing trace of hydrates.																										
465		00:30		-23	10	32	2080																						
466		00:30	N ₂ offline, coil pull up above perfs.																										
467		01:00	50.80	-27	6	36	210											0.22	0	0.00	0.00	0.22	280.43	44.0	38.0	46.0	0	0.0	
468		01:00	Fluid sample dark in colour, emulsion present, odour present, smells like hydrocarbons. Monitor showing 5% LELs from meter run when making fluid.																										
469		01:00	Fluid sample also showing trace of hydrates.																										
470		01:30		-28	5	29																							
471		02:00	50.80	-30	5	27	200											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
472		02:30		-30	6	24																							
473		03:00	50.80	-34	4	25	180											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
474		03:30		-28	3	27																							
475		04:00	50.80	-33	4	24	260											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
476		04:30		-32	3	24																							
477		05:00	50.80	-30	3	24	290											0.00	0	0.00	0.00	0.00	280.43				0	0.0	
478		05:30		-30	2	25																							
479		06:00	50.80	-28	3	22	310	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	280.43				0	0.0	
480			***Daily production summary*** ((March 11th @ 0600hrs to March 12th @ 0600hrs))																										
481			Daily Hours Flowed = 24Hrs, 00mins												Cumm. Hours Flowed = 133Hrs, 00mins														
482			Daily load fluid Recovered = 5.02 m ³												Cumm. load fluid Recovered = 280.43 m ³														
483			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
484			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 108.37 m ³														

Field Measurements

699789
V3

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
1	2013/02/18	00:00	0.00	0	0	0		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0		0.00		0.00				0	0.0	
2		08:00	Arrive on location demobilize equipment.																										
3		17:00	Standby for drilling completion.																										
4	2013/02/19	08:00	Arrive on location, continue maintenance and cleanup of equipment.																										
5		17:00	Unable to spot and rig in, standing by for drilling rig completion.																										
6	2013/02/20	08:00	Arrive on location, stand by for drilling rig completion.																										
7	2013/02/23	07:00	Begin perfing operations with drilling rig and run in tubing.																										
8	2013/02/28	09:00	Spot and rig in test equipment.																										
9	2013/03/01	07:00	Continue rigging in, stand by to purge vessels and pressure test flowline.																										
10	2013/03/04	13:50	E-line run in hole to punch tubing.																										
11		15:35	E-line @ surface.																										
12		15:50	N ₂ online, to confirm run was successful.																										
13		16:20	Run successful, bleed off well to 5 mPa.																										
14		17:00	Drop 1st ball and begin to rig on frac head.																										
15		20:05	Pump 3m ³ of frac oil through frac iron to vessel.																										
16		20:10	Shut in wing valve and pressure test frac iron.																										
17		21:01	Begin mini frac.																										
18		21:13	Mini frac complete, 14m ³ pumped.																										
19		21:30	Monitor and record casing pressures. Data van to record tubing pressures.																										
20		21:30	0.00	0	0	2228		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00		0.0		0	0.0	
21		22:00				2410																							
22		23:00				2638																							
23	2013/03/05	00:00				2802																							
24		01:00				2864																							
25		02:00				2884																							
26		03:00				2993																							
27		04:00				3097																							
28		05:00				3195																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
29	2013/03/05	06:00	0.00			3265		0.00				0						0									0.0		
30		07:00				3401																							
31		08:00				3525																							
32		08:00	Remove deadweight from caasing, stand by to frac Canol formation.																										
33		11:20	Begin pressure tests on frac iron.																										
34		12:20	Begin frac on Canol formation.																										
35		13:13	Frac complete.																										
36		13:13			19800																								
37		13:35	Drop 2nd ball.																										
38		14:10	Continue frac.																										
39		15:11	Frac complete.																										
40		15:11			21300																								
41		15:15	Drop 3rd ball.																										
42		16:10	Continue frac.																										
43		16:50	Frac complete, ISIP = 23.0 mPa, Fluid pumped = 374.8m ³ , LOAD TO RECOVER = 388.8m ³ .																										
44		17:00			23000	700																							
45		17:00	Remain shut in for 3 hrs, unable to monitor buildups untill frac head is rigged off well.																										
46		18:00			19856	1383																							
47		18:30			19474	1825																							
48		19:00			19034	2229																							
49		19:30			18663	2660																							
50		20:00	0.00	0	18468	2842		0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00	0.0		0	0.0		
51		20:00	Open well to flow on adjustable 18/64 (7.14mm) choke, establish rate of 5.0m ³ /hr as per program before switching to bean choke.																										
52		20:05		-1	16949	2919																							
53		20:10	7.14	1	16848	3034			0	0.00	0	0	0.000	0.000	0.000	0.000	0.000												
54		20:11	N ₂ to surface, install 1.75" (44.45mm) orifice plate, meter in service.																										
55		20:15		3	16623	3186		44.45	68	33.83	1	100	26.342	0.000	26.342	0.091	0.000												
56		20:30	7.14	8	16296	4195			21	6.96	-4		9.893	0.000	9.893	0.280	0.000												

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																										
58		20:45		4	16449	4793			33	0.01	0		0.395	0.000	0.395	0.334	0.000												
59		21:00	5.56	4	16359	4931		44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	47.0	50.0	48.0	0	0.1	
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																										
62		21:30	7.94	12	14738	6674		44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000												
63		21:35	Fluid samples are showing gel and 20% sand.																										
64		22:00	7.94	10	14228	7443		44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	47.0	50.0	48.0	0	1.0	
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
66		22:00	Fluid samples showing no gel and 1% sand.																										
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																										
68		22:30		12	13833	8349		44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000												
69		22:31	Install 1" (25.4mm) orifice plate.																										
70		23:00	7.94	11	13542	8754		25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	47.0	53.6	47.6	0	1.0	
71		23:00	Two stock oil samples taken.																										
72		23:30		14	13334	9276			275	18.90	6		9.162	0.000	9.162	1.786	0.000												
73		23:30	Bleed down casing pressure.																										
74	2013/03/06	00:00	7.94	13	12860	5440		25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	47.0	53.6	47.6	0	0.1	
75		00:00	Checked ball catcher, no balls found.																										
76		00:30		14	12629	5090			410	18.23	7		10.476	0.000	10.476	2.214	0.000												
77		01:00	7.94	12	12149	5419		25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	46.0	55.4	46.4	0	0.1	
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																										
79		01:30		14	10085	5966			379	22.88	8		11.373	0.000	11.373	2.645	0.000												
80		02:00	8.73	15	9590	6370		25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	46.0	53.6	46.6	0	0.1	
81		02:00	Two stock oil samples taken.																										
82		02:30		14	9425	6712			337	20.89	8		10.371	0.000	10.371	3.102	0.000												
83		03:00	8.73	12	9404	6782		25.40	382	18.41	8	100	10.216	0.000	10.216	3.317	0.000	10.62	0	0.00	0.00	10.62	84.20	47.0	57.2	47.3	0	0.1	
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%	
85	2013/03/06	03:30	8.73	14	8213	7979		25.40	317	20.15	8	100	9.947	0.000	9.947	3.527	0.000		0						47.3		0.1	
86		04:00	9.53	13	8071	9845		25.40	275	17.91	8	100	8.883	0.000	8.883	3.723	0.000	10.05	0	0.00	0.00	10.05	94.25	46.0	53.6	46.6	0	0.1
87		04:00	Bleed down casing pressure.																									
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																									
89		04:30		14	6722	4170			396	23.38	10		11.659	0.000	11.659	3.937	0.000											
90		05:00	10.32	15	5969	4383		25.40	358	17.91	9	100	9.803	0.000	9.803	4.161	0.000	15.65	0	0.00	0.00	15.65	109.90	47.0	55.4	47.4	0	0.1
91		05:30		18	5427	4432			310	21.89	8		10.288	0.000	10.288	4.370	0.000											
92		06:00	10.32	16	4999	4430		25.40	303	29.39	8	100	11.859	0.000	11.859	4.601	0.000	14.01	0	0.00	0.00	14.01	123.91	47.0	53.6	47.6	0	0.1
93		06:00	Checked ball catcher, no balls found.																									
94			***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																									
95			Daily Hours Flowed = 10Hrs, 00mins												Cumm. Hours Flowed = 10Hrs, 00mins													
96			Daily load fluid Recovered = 123.91 m ³												Cumm. load fluid Recovered = 123.91 m ³													
97			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³													
98			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³													
99			Daily N ₂ recovered = 4.601 10 ³ m ³												Cumm. N ₂ recovered = 4.601 10 ³ m ³													
100			Daily frac balls recovered = 0												Cum. frac balls recovered = 0													
101			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 264.89 m ³													
102	2013/03/06	06:30		16	4555	4759			265	15.17	7		8.069	0.000	8.069	4.808	0.000											
103		07:00	10.32	9	4129	4201		25.40	255	17.41	7	100	8.534	0.000	8.534	4.981	0.000	12.46	0	0.00	0.00	12.46	136.37	46.0	43.0	47.6	0	0.1
104		07:30		10	3758	4058			220	14.43	7		7.363	0.000	7.363	5.147	0.000											
105		08:00	10.32	9	3604	3924		25.40	227	16.91	7	100	8.069	0.000	8.069	5.307	0.000	10.14	0	0.00	0.00	10.14	146.51	47.0	54.0	47.6	0	0.1
106		08:30		5	3429	3745			210	16.23	8		7.680	0.000	7.680	5.471	0.000											
107		09:00	10.32	5	3319	3601		25.40	152	23.13	3	100	8.378	0.000	8.378	5.639	0.000	8.64	0	0.00	0.00	8.64	155.15	46.0	50.0	47.0	0	0.1
108		09:01	Increase to 32/64 (12.70mm) adjustable choke.																									
109		09:05	Increase orifice plate to 1.25" (31.75mm).																									
110		09:30		8	2339	3403		31.75	90	7.77	6		6.492	0.000	6.492	5.794	0.000											
111		10:00	12.70	5	2509	3219		31.75	103	9.45	9	100	7.377	0.000	7.377	5.938	0.000	6.72	0	0.00	0.00	6.72	161.87	46.0	50.0	47.0	0	0.1
112		10:30		9	2306	3074			83	9.40	4		7.040	0.000	7.040	6.088	0.000											

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
113	2013/03/06	11:00	12.70	7	2255	2935		31.75	82	9.20	6	100	6.920	0.000	6.920	6.234	0.000	6.04	0	0.00	0.00	6.04	167.91	46.0	50.0	47.0	0	0.1	
114		11:00	Increase to 48/64 (19.05mm) adjustable choke.																										
115		11:05	Increase orifice plate to 1.5" (38.10mm).																										
116		11:30		12	599	2820			165	6.96	2		7.327	0.000	7.327	6.382	0.000												
117		12:00	19.05	10	248	2646		38.10	28	10.69	4	100	9.086	0.000	9.086	6.553	0.000	4.95	0	0.00	0.00	4.95	172.86	47.0	52.0	47.8	0	0.1	
118		12:15	Increase to 128/64 (50.80mm).																										
119		12:16	Increase orifice plate to 2" (50.80mm).																										
120		12:30		5	117	2323			21	15.70	5		10.762	0.000	10.762	6.760	0.000												
121		13:00	50.80	4	3	2145		50.80	4	4.97	4	100	10.083	0.000	10.083	6.977	0.000	5.66	0	0.00	0.00	5.66	178.52	46.0	50.0	47.0	0	0.1	
122		13:15	Gas too small to measure. Meter out of service.																										
123		13:30		3	10	2130																							
124		14:00	50.80	2	6	1926		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	5.86	0	0.00	0.00	5.86	184.38	46.0	50.0	47.0	0	0.1	
125		14:00	Checked ball catcher, no balls found.																										
126		14:30		1	98	1619																							
127		15:00	50.80	1	15	1425		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	3.18	0	0.00	0.00	3.18	187.56	46.0	50.0	47.0	0	0.1	
128		15:00	Two stock oil samples taken.																										
129		15:30		2	5	1209																							
130		16:00	50.80	2	8	1034		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	4.71	0	0.00	0.00	4.71	192.27	46.0	50.0	47.0	0	0.1	
131		16:30		2	8	990		0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000												
132		16:45	Well starting to surge. Meter in service with a 2" (50.80mm) orifice plate.																										
133		17:00	50.80	20	268	989		50.80	34	4.53	28	100	10.546	0.000	10.546	7.197	0.000	4.70	0	0.00	0.00	4.70	196.97	45.0	40.0	46.9	0	0.1	
134		17:30		4	7	697			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
135		18:00	50.80	3	6	609		50.80	0	0.00	0	0	0.000	0.000	0.000	7.197	0.000	1.17	0	0.00	0.00	1.17	198.14	45.0	40.0	46.9	0	0.1	
136		18:30		1	3	394			0	0.00	0	0	0.000	0.000	0.000	7.197	0.000												
137		19:00	50.80	1	5	544		50.80	17	9.95	7	100	15.199	0.000	15.199	7.513	0.000	2.34	0	0.00	0.00	2.34	200.48	45.0	46.0	46.3	0	0.1	
138		19:30		-4	3	284			14	3.48	0		8.900	0.000	8.900	7.764	0.000												
139		20:00	50.80	-4	4	35		50.80	14	0.49	3	100	3.319	0.000	3.319	7.892	0.000	2.64	0	0.00	0.00	2.64	203.12	45.0	45.0	46.4	0	0.0	
140		20:30		-1	3	30			0	0.00	0		0.000	0.000	0.000	7.892	0.000												
141		21:00	50.80	-16	59	145		50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.09	0	0.00	0.00	2.09	205.21	46.0	48.0	47.1	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
142	2013/03/06	21:30	50.80	-10	3	33	50.80	0	0.00	0	0	0	0.000	0.000	0.000	7.892	0.000		0							47.1	0	0.0	
143		22:00	50.80	-7	4	79	50.80	0	0.00	0	0	0	0.000	0.000	0.000	7.892	0.000	2.29	0	0.00	0.00	2.29	207.50	45.0	48.0	46.1	0	0.0	
144		22:30		-10	2	7		0	0.00	0			0.000	0.000	0.000	7.892	0.000												
145		23:00	50.80	-7	1	11	50.80	0	0.00	0	0	0	0.000	0.000	0.000	7.892	0.000	1.44	0	0.00	0.00	1.44	208.94	46.0	41.0	47.8	0	0.0	
146		23:30		-9	15	16		0	0.00	0			0.000	0.000	0.000	7.892	0.000												
147	2013/03/07	00:00	50.80	-9	6	35	50.80	0	0.00	0	0	0	0.000	0.000	0.000	7.892	0.000	0.17	0	0.00	0.00	0.17	209.11	46.0	44.0	47.5	0	0.0	
148		00:30		-14	6	15		22	3.33	0	100		9.020	0.000	9.020	8.080	0.000												
149		01:00	50.80	-1	89	68	50.80	17	2.11	0	100		7.016	0.000	7.016	8.247	0.000	3.21	0	0.00	0.00	3.21	212.32	47.0	60.0	47.0	0	0.0	
150		01:30		-13	4	12		0	0.00	0			0.000	0.000	0.000	8.247	0.000												
151		02:00	50.80	-16	12	5	50.80	0	0.00	0	0	0	0.000	0.000	0.000	8.247	0.000	0.58	0	0.00	0.00	0.58	212.90	46.0	44.0	47.5	0	0.0	
152		02:30		-11	1	3		0	0.00	0			0.000	0.000	0.000	8.247	0.000												
153		03:00	50.80	-11	2	3	50.80	0	0.00	0	0	0	0.000	0.000	0.000	8.247	0.000	0.00	0	0.00	0.00	0.00	212.90	0.0			0	0.0	
154		03:30		-12	1	5		0	0.00	0			0.000	0.000	0.000	8.247	0.000												
155		04:00	50.80	-11	2	22	50.80	0	0.00	0	0	0	0.000	0.000	0.000	8.247	0.000	0.59	0	0.00	0.00	0.59	213.49	47.0	59.0	47.1	0	0.0	
156		04:30		-10	2	21		0	0.00	0			0.000	0.000	0.000	8.247	0.000												
157		05:00	50.80	-10	3	18	50.80	3	2.13	-3	100		6.626	0.000	6.626	8.385	0.000	3.81	0	0.00	0.00	3.81	217.30	45.0	40.0	46.9	0	0.0	
158		05:30		-17	3	5		0	0.00	0			0.000	0.000	0.000	8.385	0.000												
159		06:00	50.80	-18	1	7	50.80	0	0.00	0	0	0	0.000	0.000	0.000	8.385	0.000	0.93	0	0.00	0.00	0.93	218.23	45.0	42.0	46.7	0	0.0	
160			***Daily production summary*** ((March 6th @ 20:00hrs to March 7th @ 06:00hrs))																										
161			Daily Hours Flowed = 24Hrs, 00mins													Cum. Hours Flowed = 34Hrs, 00mins													
162			Daily load fluid Recovered = 94.32 m ³													Cum. load fluid Recovered = 218.23 m ³													
163			Daily Oil produced = 0.00 m ³													Cum. Oil produced = 0.00 m ³													
164			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³													Cum. Burnable Gas to Flare = 0.000 10 ³ m ³													
165			Daily N ₂ recovered = 3.784 10 ³ m ³													Cum. N ₂ recovered = 8.385 10 ³ m ³													
166			Daily frac balls recovered = 0													Cum. frac balls recovered = 0													
167			Initial load fluid to recover = 388.80 m ³													Load fluid left to recover = 170.57 m ³													
168	2013/03/07	06:30		-15	3	5																							
169		07:00	50.80	-15	2	9	50.80	0	0.00	0	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	218.23				0	0.0	
170		07:30		-10	1	8																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
171	2013/03/07	08:00	50.80	-13	3	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.07	0	0.00	0.00	1.07	219.30	45.0	41.0	46.8	0	0.0
172		08:30		-8	2	7																						
173		08:30	Begin to rig in coil.																									
174		09:00	50.80	-10	1	10		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	3.00	0	0.00	0.00	3.00	222.30	45.0	40.0	46.9	0	0.0
175		09:30			3	8																						
176		10:00	50.80		2	8		50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0
177		10:30			2	8			0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30				0	0.0
178		10:30	Shut in well, continue to rig in coil.																									
179			***Daily production summary*** ((March 7th @ 0600hrs to March 7th @ 10:30hrs))																									
180			Daily Hours Flowed = 4Hrs, 30mins										Cumm. Hours Flowed = 38Hrs, 30mins															
181			Daily load fluid Recovered = 4.07 m ³										Cumm. load fluid Recovered = 222.30 m ³															
182			Daily Oil produced = 0.00 m ³										Cumm. Oil produced = 0.00 m ³															
183			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³										Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³															
184			Daily N ₂ recovered = 0.000 10 ³ m ³										Cumm. N ₂ recovered = 8.385 10 ³ m ³															
185			Daily frac balls recovered = 0										Cum. frac balls recovered = 0															
186			Initial load fluid to recover = 388.80 m ³										Load fluid left to recover = 165.5 m ³															
187	2013/03/07	10:35	0.00		75	11		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30				0	0.0
188		10:40			152	10																						
189		10:45			225	7																						
190		11:00			301	5																						
191		11:15			396	3																						
192		11:30			499	3																						
193		12:00			1023	3																						
194		12:30			1320	5																						
195		13:00			1661	4		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		0.0		0	0.0
196		21:45	Coil stab lubricator onto well and break circulation back to test vessel.																									
197	2013/03/08	01:35	Pressure test to 35 mPa.																									
198		01:45	Bleed down pressure test to 7 mPa.																									

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
1992013/03/08	01:49	ISIP = 3824 kPa																											
200	01:50	Open master valve, run in hole with milling tools.																											
201	02:00	Open up @ manifold to maintain 1 mPa.																											
202	02:30		-23	698	-1																								
203	03:00		-20	1200	-1																								
204	03:30		-20	800	-1																								
205	03:45	Tagged seat #1.																											
206	04:00		-8	1250	-1																		48.0	54.0	48.6		0.1		
207	04:00	Samples showing trace of sand. Pump rate 350ltrs/min Return rate is 340 ltrs/min.																											
208	04:30		-13	1131	-1		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	44.0	46.5		0.0		
209	04:45	Baker TP pumper is having mechanical issues, coil begin to pull up.																											
210	04:50	Coil parked 1800 mKB, shut in at manifold.																											
211	05:00	Open back up at manifold and pump remainder of fluid off TP pumper.																											
212	05:20	Shut in at manifold, record pressures and wait further instruction.																											
213	05:30			695	-1																								
214	06:00			772	-1																								
215	06:30			783	-1																								
216	06:45	Open @ manifold and resume operations																											
217	07:00	Shut in at manifold, record pressures and wait further instruction.																											
218	08:00			791	-1																								
219	09:00			861	-1																								
220	10:00			865	-1																								
221	10:30	Pressure test N ₂ lines.																											
222	10:45	Open @ manifold and resume operations.																											
223	11:00			850	-1																								
224	12:00			795	-1																		45.0	44.0	46.5	0	0.0		
225	12:00	Shut in at manifold, stand by to fix pump.																											
226	13:00			1258	0																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%	
227	2013/03/08	14:00	0.00		2238	0		0.00				0						0					44.5	28.0	47.5	0	0.0		
228		14:30	Open @ manifold and resume operations.																										
229		15:00			110	0																							
230		15:30	Tagged seat #2.																										
231		16:00			468	0																	45.0	34.0	47.4	0	0.0		
232		16:40	Tagged seat #3																										
233		17:00			377	0																							
234		17:15	Through seat #3.																										
235		18:00			548	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	45.0	35.0	47.3	0	0.0	
236		18:30	Begin to pull to surface.																										
237		19:00			387	0																	45.0	36.0	47.2	0	0.0		
238		19:20	Fluid pump off line.																										
239		19:30			120	0		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	2.80	0	0.00	0.00	2.80	225.10						
240		19:45	Coil @ surface shut in master valve, bleed off through test vessel.																										
241		20:00	****Total gained during milling operations = 2.80 m ³ .																										
242		20:00	**** NEW LOAD LEFT TO RECOVER = 163.70 m ³ ****																										
243		20:30	Unable to monitor pressures.																										
244	2013/03/09	00:30	Coil stab lubricator onto well and break circulation back to test vessel.																										
245		00:45	Pressure test to 35 mPa.																										
246		01:06	Bleed down pressure test to 3 mPa.																										
247		01:10	ISIP = 324 kPa																										
248		01:15	Open master valve, run in hole with jetting nozzle.																										
249		01:25	Open up @ manifold to maintain 1 mPa.																										
250		01:30			519	13																							
251		01:30	N ₂ online @ 10scm/min																										
252		01:35	N ₂ @ surface.																										
253		02:00			2019	27												11.62	0	0.00	0.00	11.62	236.72	46.0	42.0	47.7	0	0.0	
254		02:22	Increase N ₂ rate to 20scm/min.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter									Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%		
255	2013/03/09	02:30	0.00		1700	89		0.00				0						0							47.7	0.0			
256		03:00			1850	107												7.65	0	0.00	0.00	7.65	244.37	46.0	50.0	47.0	0	0.0	
257		03:06	Coil tagged @ 1941.7 mKB																										
258		03:08	Coil pull up and park @ 1937.0 mKB and continue to pump N ₂ .																										
259		03:30			2019	136																							
260		04:00			1083	111												2.03	0	0.00	0.00	2.03	246.40	44.0	30.0	46.8	0	0.0	
261		04:00	One stock oil samples taken.																										
262		04:15	Decrease N ₂ rate to 15scm/min																										
263		04:30			738	86																							
264		05:00			903	79												1.17	0	0.00	0.00	1.17	247.57	48.0	66.0	47.4	0	0.0	
265		05:30			885	76																							
266		06:00			875	72		0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.45	0	0.00	0.00	1.45	249.02	48.0	64.0	47.6	0	0.0	
267			***Daily production summary*** ((March 8th @ 0600hrs to March 9th @ 0600hrs))																										
268			Daily load fluid Recovered = 26.72 m ³												Cumm. load fluid Recovered = 249.02 m ³														
269			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
270			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 139.78 m ³														
271	2013/03/09	06:30			944	70																							
272		06:35	Decrease N ₂ rate to 10scm/min																										
273		07:00			822	55												1.23	0	0.00	0.00	1.23	250.25	47.0	60.0	47.0	0	0.0	
274		07:00	Increase N ₂ rate to 15scm/min																										
275		07:30			599	50																							
276		08:00	50.80	-6	147	59												1.70	0	0.00	0.00	1.70	251.95	44.0	28.0	46.9	0	0.0	
277		08:30		-10	123	55																							
278		09:00	50.80	-8	117	49												1.20	0	0.00	0.00	1.20	253.15	44.0	28.0	46.9	0	0.0	
279		09:30		-6	112	50																							
280		10:00	50.80	-6	110	49	2000											1.20	0	0.00	0.00	1.20	254.35	44.0	28.0	46.9	0	0.0	
281		10:30		-6	110	48																							
282		10:30	N ₂ offline, begin to rig out pump truck.																										
283		11:00	50.80	-10	2	43	1200											0.40	0	0.00	0.00	0.40	254.75	44.0	30.0	46.8	0	0.0	

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand		
			mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%			
284	2013/03/09	11:30	50.80	-10	0	38		0.00				0						0							46.8	0	0.0			
285		12:00	50.80	-11	1	26	300											0.00	0	0.00	0.00	0.00	254.75				0	0.0		
286		12:20	N ₂ online @ 15scm																											
287		12:30		-12	1	26																								
288		12:40	Fluid to surface.																											
289		12:45	Two stock oil samples taken.																											
290		13:00	50.80	-4	166	53	2700											1.70	0	0.00	0.00	1.70	256.45	45.0	36.0	47.2	0	0.0		
291		13:30		-5	110	56																								
292		14:00	50.80	-4	101	47	3000											1.50	0	0.00	0.00	1.50	257.95	45.0	30.0	47.8	0	0.0		
293		14:30		-3	103	43																								
294		15:00	50.80	-6	87	32	1800											0.60	0	0.00	0.00	0.60	258.55							
295		15:30		-4	81	30																								
296		15:30	Increase N ₂ rate to 20 scm.																											
297		16:00	50.80	-3	138	28	2600											0.60	0	0.00	0.00	0.60	259.15							
298		16:30		-3	175	37																								
299		17:00	50.80	-6	136	34	2560											1.10	0	0.00	0.00	1.10	260.25	45.0	32.0	47.6	0	0.0		
300		17:00	Decrease N ₂ rate to 15 scm.																											
301		17:30		-4	85	33																								
302		17:30	Increase N ₂ rate to 20 scm.																											
303		18:00	50.80	-4	114	35	2600											0.80	0	0.00	0.00	0.80	261.05							
304		18:00	Stock oil sample taken.																											
305		18:30		-6	134	31																								
306		19:00	50.80	-6	131	33	2600											0.70	0	0.00	0.00	0.70	261.75	44.0	30.0	46.8	0	0.0		
307		19:30		-7	334	30																								
308		20:00	50.80	-5	134	28	2950											0.30	0	0.00	0.00	0.30	262.05	46.0	58.0	46.2	0	0.0		
309		20:30		-9	93	28																								
310		21:00	50.80	-7	90	28	2580											0.88	0	0.00	0.00	0.88	262.93	45.0	45.0	46.4	0	0.0		
311		21:01	Decrease N ₂ rate to 15 scm.																											
312		21:30		-8	70	25																								

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	
313	2013/03/09	22:00	50.80	-10	86	25	1960	0.00				0						1.11	0	0.00	0.00	1.11	264.04	46.0	54.0	46.6	0	0.0	
314		22:30		-7	68	26																							
315		23:00	50.80	-5	67	24	1980											0.59	0	0.00	0.00	0.59	264.63	46.0	52.0	46.8	0	0.0	
316		23:01	Increase N ₂ rate to 17 scm.																										
317		23:30		-4	110	26																							
318	2013/03/10	00:00	50.80	-4	110	23	2230											0.58	0	0.00	0.00	0.58	265.21	46.0	56.0	46.4	0	0.0	
319		00:00	Two stock oil samples taken.																										
320		00:01	Increase N ₂ rate to 17 scm.																										
321		00:30		-4	133	24																							
322		01:00	50.80	-6	134	23	2660											0.45	0	0.00	0.00	0.45	265.66	45.0	56.0	45.4	0	0.0	
323		01:30		-5	133	24																							
324		01:59	Due to daylight saving we will be skipping ahead one hour.																										
325		03:00	50.80	-5	132	22	2610											0.49	0	0.00	0.00	0.49	266.15	45.0	48.0	46.1	0	0.0	
326		03:30		-5	168	23																							
327		04:00	50.80	-4	132	22	2650											0.52	0	0.00	0.00	0.52	266.67	45.0	50.0	45.9	0	0.0	
328		04:30		-5	144	23																							
329		05:00	50.80	-5	138	23	2660											0.41	0	0.00	0.00	0.41	267.08	45.0	44.0	46.5	0	0.0	
330		05:21	Decrease N ₂ rate to 15 scm.																										
331		05:30		-7	89	20																							
332		06:00	50.80	-6	81	20	1950	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.47	0	0.00	0.00	0.47	267.55	45.0	44.0	46.5	0	0.0	
333		06:00	Stock oil samples taken.																										
334			***Daily production summary*** ((March 9th @ 0600hrs to March 10th @ 0600hrs))																										
335			Daily load fluid Recovered = 18.53 m ³												Cumm. load fluid Recovered = 267.55 m ³														
336			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
337			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 121.25 m ³														
338			ODOR PRESENT IN FLUID SAMPLES, MAYBE HYDROCARBONS.																										
339	2013/03/10	06:30		-6	85	23																							
340		07:00	50.80	-6	90	22	1950											0.41	0	0.00	0.00	0.41	267.96	45.0	46.0	46.3	0	0.0	
341		07:30		-6	90	22																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API	%
342	2013/03/10	08:00	50.80	-6	91	22	1950	0.00				0						0.47	0	0.00	0.00	0.47	268.43			46.3		0.0	
343		08:30		-7	90	23																							
344		09:00	50.80	-6	90	22	1950											0.42	0	0.00	0.00	0.42	268.85	46.0	46.0	47.3	0	0.0	
345		09:30		-6	88	24																							
346		09:40	Coil pull up to 1885 m																										
347		10:00	50.80	-5	88	23	1920											0.28	0	0.00	0.00	0.28	269.13						
348		10:30		-5	85	22																							
349		11:00	50.80	-5	85	21	1940											0.29	0	0.00	0.00	0.29	269.42	46.0	45.0	47.4	0	0.0	
350		11:30		-6	86	21																							
351		12:00	50.80	-6	85	21	1960											0.29	0	0.00	0.00	0.29	269.71	46.0	44.0	47.5	0	0.0	
352		12:00	Two stock oil samples taken.																										
353		12:00	Decrease N ₂ rate to 8 scm.																										
354		12:30		-6	21	20																							
355		13:00	50.80	-5	22	18	1000											0.14	0	0.00	0.00	0.14	269.85						
356		13:00	Increase N ₂ rate to 15 scm. Coil pull up to 1000m.																										
357		13:30		-6	108	38																							
358		13:50	Decrease N ₂ rate to 8 scm. Coil run in hole to 1875m.																										
359		14:00	50.80	-6	46	31	850											0.57	0	0.00	0.00	0.57	270.42	46.0	44.0	47.5	0	0.0	
360		14:30		-6	16	13																							
361		15:00	50.80	-6	18	12	1070											0.00	0	0.00	0.00	0.00	270.42						
362		15:30		-8	17	12																							
363		16:00	50.80	-8	17	17	1270											0.00	0	0.00	0.00	0.00	270.42						
364		16:00	N ₂ offline, coil pull up above perms.																										
365		16:30		-12	5	16																							
366		17:00	50.80	-12	2	16	0											0.00		0.00	0.00	0.00	270.42						
367		17:30		-12	2	16																							
368		17:30	N ₂ online @ 15 scm. Coil run in below perms.																										
369		18:00	50.80	-11	56	28	2540											0.58	0	0.00	0.00	0.58	271.00	44.0	30.0	46.8	0	0.0	
370		18:30		-3	106	26																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API		%
371	2013/03/10	19:00	50.80	-3	85	31	2010	0.00				0						1.31	0	0.00	0.00	1.31	272.31	44.0	32.0	46.6	0	0.0
372		19:30		-6	84	28																						
373		20:00	50.80	-5	75	27	1900											0.29	0	0.00	0.00	0.29	272.60	45.0	30.0	47.8	0	0.0
374		20:01	Decrease N ₂ 10 scm, coil pull up above perfs.																									
375		20:11	N ₂ offline.																									
376		20:30		-7	5	24																						
377		21:00	50.80	-8	5	21	0											0.00	0	0.00	0.00	0.00	272.60				0	0.0
378		21:30		-8	5	20																						
379		22:00	50.80	-7	6	20												0.00	0	0.00	0.00	0.00	272.60				0	0.0
380		22:01	N ₂ online @ 15 scm. Coil run in below perfs.																									
381		22:30		-7	136	25																						
382		23:00	50.80	-9	19	28	1260											0.87	0	0.00	0.00	0.87	273.47	44.0	42.0	45.7	0	0.0
383		23:00	Decrease N ₂ rate to 10 scm.																									
384		23:00	Two stock oil samples taken.																									
385		23:30		-8	33	25																						
386	2013/03/11	00:00	50.80	-8	26	23	1300											0.24	0	0.00	0.00	0.24	273.71				0	0.0
387		00:01	Increase N ₂ rate to 15 scm.																									
388		00:30		-9	90	27																						
389		01:00	50.80	-8	87	27	1930											0.34	0	0.00	0.00	0.34	274.05	45.0	44.0	46.5	0	0.0
390		01:30		-9	73	26																						
391		02:00	50.80	-9	78	27	1860											0.30	0	0.00	0.00	0.30	274.35				0	0.0
392		02:01	N ₂ offline, coil pull up above perfs.																									
393		02:30		-10	6	25																						
394		03:00	50.80	-11	4	23	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0
395		03:30		-12	4	20																						
396		04:00	50.80	-12	5	21	0											0.00	0	0.00	0.00	0.00	274.35				0	0.0
397		04:00	N ₂ online @ 15 scm. Coil run in below perfs.																									
398		04:30		-11	132	28																						
399		04:48	N ₂ offline.																									

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead					ST - 27 Orifice Meter										Oil Produced Volume Meter										
			Choke Size	Flow Temp	Tubing Press	Casing Press	Coil Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Meas. API	API Sample Temp	API @60F	pH	Sand
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	°API	°F	°API
400	2013/03/11	05:00	50.80	-12	8	27	300	0.00				0						0.87	0	0.00	0.00	0.87	275.22	43.0	36.0	45.2	0	0.0
401		05:00	Stock oil samples taken.																									
402		05:10	N ₂ back online @ 15 scm.																									
403		05:30		-11	26	34																						
404		06:00	50.80	-12	61	27	1720	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.19	0	0.00	0.00	0.19	275.41				0	0.0
405			***Daily production summary*** ((March 10th @ 0600hrs to March 11th @ 0600hrs))																									
406			Daily load fluid Recovered = 7.86 m ³												Cumm. load fluid Recovered = 275.41 m ³													
407			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³													
408			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 113.39 m ³													

Field Measurements

699289
v2

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	ppm	°API	°F	°API		%	
1	2013/02/18	00:00	0.00	0	0	0	0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0		0.00		0.00	0				0	0.0	
2		08:00	Arrive on location demobilize equipment.																										
3		17:00	Standby for drilling completion.																										
4	2013/02/19	08:00	Arrive on location, continue maintenance and cleanup of equipment.																										
5		17:00	Unable to spot and rig in, standing by for drilling rig completion.																										
6	2013/02/20	08:00	Arrive on location, stand by for drilling rig completion.																										
7	2013/02/23	07:00	Begin perfing operations with drilling rig and run in tubing.																										
8	2013/02/28	09:00	Spot and rig in test equipment.																										
9	2013/03/01	07:00	Continue rigging in, stand by to purge vessels and pressure test flowline.																										
10	2013/03/04	13:50	E-line run in hole to punch tubing.																										
11		15:35	E-line @ surface.																										
12		15:50	N₂ online, to confirm run was successful.																										
13		16:20	Run successful, bleed off well to 5 mPa.																										
14		17:00	Drop 1st ball and begin to rig on frac head.																										
15		20:05	Pump 3m³ of frac oil through frac iron to vessel.																										
16		20:10	Shut in wing valve and pressure test frac iron.																										
17		21:01	Begin mini frac.																										
18		21:13	Mini frac complete, 14m³ pumped.																										
19		21:30	Monitor and record casing pressures. Data van to record tubing pressures.																										
20		21:30	0.00	0	0	2228	0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00	0		0.0		0	0.0	
21		22:00				2410																							
22		23:00				2638																							
23	2013/03/05	00:00				2802																							
24		01:00				2864																							
25		02:00				2884																							
26		03:00				2993																							
27		04:00				3097																							
28		05:00				3195																							

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

[illegible]

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead				ST - 27 Orifice Meter									Oil Produced Volume Meter													
			Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																										
58		20:45		4	16449	4793		33	0.01	0		0.395	0.000	0.395	0.334	0.000													
59		21:00	5.56	4	16359	4931	44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	0	47.0	50.0	48.0	0	0.1	
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																										
62		21:30	7.94	12	14738	6674	44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000													
63		21:35	Fluid samples are showing gel and 20% sand.																										
64		22:00	7.94	10	14228	7443	44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	0	47.0	50.0	48.0	0	1.0	
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
66		22:00	Fluid samples showing no gel and 1% sand.																										
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																										
68		22:30		12	13833	8349	44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000													
69		22:31	Install 1" (25.4mm) orifice plate.																										
70		23:00	7.94	11	13542	8754	25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	0	47.0	53.6	47.6	0	1.0	
71		23:00	Two stock oil samples taken.																										
72		23:30		14	13334	9276		275	18.90	6		9.162	0.000	9.162	1.786	0.000													
73		23:30	Bleed down casing pressure.																										
74	2013/03/06	00:00	7.94	13	12860	5440	25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	0	47.0	53.6	47.6	0	0.1	
75		00:00	Checked ball catcher, no balls found.																										
76		00:30		14	12629	5090		410	18.23	7		10.476	0.000	10.476	2.214	0.000													
77		01:00	7.94	12	12149	5419	25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	0	46.0	55.4	46.4	0	0.1	
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																										
79		01:30		14	10085	5966		379	22.88	8		11.373	0.000	11.373	2.645	0.000													
80		02:00	8.73	15	9590	6370	25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	0	46.0	53.6	46.6	0	0.1	
81		02:00	Two stock oil samples taken.																										
82		02:30		14	9425	6712		337	20.89	8		10.371	0.000	10.371	3.102	0.000													
83		03:00	8.73	12	9404	6782	25.40	382	18.41	8	100	10.216	0.000	10.216	3.317	0.000	10.62	0	0.00	0.00	10.62	84.20	0	47.0	57.2	47.3	0	0.1	
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter											
			Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	%	
85	2013/03/06	03:30	8.73	14	8213	7979	25.40	317	20.15	8	100	9.947	0.000	9.947	3.527	0.000		0							47.3		0.1	
86		04:00	9.53	13	8071	9845	25.40	275	17.91	8	100	8.883	0.000	8.883	3.723	0.000	10.05	0	0.00	0.00	10.05	94.25	0	46.0	53.6	46.6	0	0.1
87		04:00	Bleed down casing pressure.																									
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																									
89		04:30		14	6722	4170		396	23.38	10		11.659	0.000	11.659	3.937	0.000												
90		05:00	10.32	15	5969	4383	25.40	358	17.91	9	100	9.803	0.000	9.803	4.161	0.000	15.65	0	0.00	0.00	15.65	109.90	0	47.0	55.4	47.4	0	0.1
91		05:30		18	5427	4432		310	21.89	8		10.288	0.000	10.288	4.370	0.000												
92		06:00	10.32	16	4999	4430	25.40	303	29.39	8	100	11.859	0.000	11.859	4.601	0.000	14.01	0	0.00	0.00	14.01	123.91	0	47.0	53.6	47.6	0	0.1
93		06:00	Checked ball catcher, no balls found.																									
94			***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																									
95			Daily Hours Flowed = 10Hrs, 00mins												Cum. Hours Flowed = 10Hrs, 00mins													
96			Daily load fluid Recovered = 123.91 m ³												Cum. load fluid Recovered = 123.91 m ³													
97			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³													
98			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cum. Burnable Gas to Flare = 0.000 10 ³ m ³													
99			Daily N ₂ recovered = 4.601 10 ³ m ³												Cum. N ₂ recovered = 4.601 10 ³ m ³													
100			Daily frac balls recovered = 0												Cum. frac balls recovered = 0													
101			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 264.89 m ³													
102	2013/03/06	06:30		16	4555	4759		265	15.17	7		8.069	0.000	8.069	4.808	0.000												
103		07:00	10.32	9	4129	4201	25.40	255	17.41	7	100	8.534	0.000	8.534	4.981	0.000	12.46	0	0.00	0.00	12.46	136.37	0	46.0	43.0	47.6	0	0.1
104		07:30		10	3758	4058		220	14.43	7		7.363	0.000	7.363	5.147	0.000												
105		08:00	10.32	9	3604	3924	25.40	227	16.91	7	100	8.069	0.000	8.069	5.307	0.000	10.14	0	0.00	0.00	10.14	146.51	0	47.0	54.0	47.6	0	0.1
106		08:30		5	3429	3745		210	16.23	8		7.680	0.000	7.680	5.471	0.000												
107		09:00	10.32	5	3319	3601	25.40	152	23.13	3	100	8.378	0.000	8.378	5.639	0.000	8.64	0	0.00	0.00	8.64	155.15	0	46.0	50.0	47.0	0	0.1
108		09:01	Increase to 32/64 (12.70mm) adjustable choke.																									
109		09:05	Increase orifice plate to 1.25" (31.75mm).																									
110		09:30		8	2339	3403	31.75	90	7.77	6		6.492	0.000	6.492	5.794	0.000												
111		10:00	12.70	5	2509	3219	31.75	103	9.45	9	100	7.377	0.000	7.377	5.938	0.000	6.72	0	0.00	0.00	6.72	161.87	0	46.0	50.0	47.0	0	0.1
112		10:30		9	2306	3074		83	9.40	4		7.040	0.000	7.040	6.088	0.000												

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	%		
113	2013/03/06	11:00	12.70	7	2255	2935	31.75	82	9.20	6	100	6.920	0.000	6.920	6.234	0.000	6.04	0	0.00	0.00	6.04	167.91	0	46.0	50.0	47.0	0	0.1	
114		11:00	Increase to 48/64 (19.05mm) adjustable choke.																										
115		11:05	Increase orifice plate to 1.5" (38.10mm).																										
116		11:30		12	599	2820		165	6.96	2		7.327	0.000	7.327	6.382	0.000													
117		12:00	19.05	10	248	2646	38.10	28	10.69	4	100	9.086	0.000	9.086	6.553	0.000	4.95	0	0.00	0.00	4.95	172.86	0	47.0	52.0	47.8	0	0.1	
118		12:15	Increase to 128/64 (50.80mm).																										
119		12:16	Increase orifice plate to 2" (50.80mm).																										
120		12:30		5	117	2323		21	15.70	5		10.762	0.000	10.762	6.760	0.000													
121		13:00	50.80	4	3	2145	50.80	4	4.97	4	100	10.083	0.000	10.083	6.977	0.000	5.66	0	0.00	0.00	5.66	178.52	0	46.0	50.0	47.0	0	0.1	
122		13:15	Gas too small to measure. Meter out of service.																										
123		13:30		3	10	2130																							
124		14:00	50.80	2	6	1926	0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	5.86	0	0.00	0.00	5.86	184.38	0	46.0	50.0	47.0	0	0.1	
125		14:00	Checked ball catcher, no balls found.																										
126		14:30		1	98	1619																							
127		15:00	50.80	1	15	1425	0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	3.18	0	0.00	0.00	3.18	187.56	0	46.0	50.0	47.0	0	0.1	
128		15:00	Two stock oil samples taken.																										
129		15:30		2	5	1209																							
130		16:00	50.80	2	8	1034	0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000	4.71	0	0.00	0.00	4.71	192.27	0	46.0	50.0	47.0	0	0.1	
131		16:30		2	8	990	0.00	0	0.00	0	0	0.000	0.000	0.000	6.977	0.000													
132		16:45	Well starting to surge. Meter in service with a 2" (50.80mm) orifice plate.																										
133		17:00	50.80	20	268	989	50.80	34	4.53	28	100	10.546	0.000	10.546	7.197	0.000	4.70	0	0.00	0.00	4.70	196.97	0	45.0	40.0	46.9	0	0.1	
134		17:30		4	7	697		0	0.00	0	0	0.000	0.000	0.000	7.197	0.000													
135		18:00	50.80	3	6	609	50.80	0	0.00	0	0	0.000	0.000	0.000	7.197	0.000	1.17	0	0.00	0.00	1.17	198.14	0	45.0	40.0	46.9	0	0.1	
136		18:30		1	3	394		0	0.00	0	0	0.000	0.000	0.000	7.197	0.000													
137		19:00	50.80	1	5	544	50.80	17	9.95	7	100	15.199	0.000	15.199	7.513	0.000	2.34	0	0.00	0.00	2.34	200.48	0	45.0	46.0	46.3	0	0.1	
138		19:30		-4	3	284		14	3.48	0		8.900	0.000	8.900	7.764	0.000													
139		20:00	50.80	-4	4	35	50.80	14	0.49	3	100	3.319	0.000	3.319	7.892	0.000	2.64	0	0.00	0.00	2.64	203.12	0	45.0	45.0	46.4	0	0.0	
140		20:30		-1	3	30		0	0.00	0		0.000	0.000	0.000	7.892	0.000													
141		21:00	50.80	-16	59	145	50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.09	0	0.00	0.00	2.09	205.21	0	46.0	48.0	47.1	0	0.0	

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			Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter													
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand		
	YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	%			
142	2013/03/06	21:30	50.80	-10	3	33	50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000		0								47.1	0.0			
143		22:00	50.80	-7	4	79	50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	2.29	0	0.00	0.00	2.29	207.50	0	45.0	48.0	46.1	0	0.0		
144		22:30		-10	2	7		0	0.00	0		0.000	0.000	0.000	7.892	0.000														
145		23:00	50.80	-7	1	11	50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	1.44	0	0.00	0.00	1.44	208.94	0	46.0	41.0	47.8	0	0.0		
146		23:30		-9	15	16		0	0.00	0		0.000	0.000	0.000	7.892	0.000														
147	2013/03/07	00:00	50.80	-9	6	35	50.80	0	0.00	0	0	0.000	0.000	0.000	7.892	0.000	0.17	0	0.00	0.00	0.17	209.11	0	46.0	44.0	47.5	0	0.0		
148		00:30		-14	6	15		22	3.33	0	100	9.020	0.000	9.020	8.080	0.000														
149		01:00	50.80	-1	89	68	50.80	17	2.11	0	100	7.016	0.000	7.016	8.247	0.000	3.21	0	0.00	0.00	3.21	212.32	0	47.0	60.0	47.0	0	0.0		
150		01:30		-13	4	12		0	0.00	0		0.000	0.000	0.000	8.247	0.000														
151		02:00	50.80	-16	12	5	50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.58	0	0.00	0.00	0.58	212.90	0	46.0	44.0	47.5	0	0.0		
152		02:30		-11	1	3		0	0.00	0		0.000	0.000	0.000	8.247	0.000														
153		03:00	50.80	-11	2	3	50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.00	0	0.00	0.00	0.00	212.90	0	0.0			0	0.0		
154		03:30		-12	1	5		0	0.00	0		0.000	0.000	0.000	8.247	0.000														
155		04:00	50.80	-11	2	22	50.80	0	0.00	0	0	0.000	0.000	0.000	8.247	0.000	0.59	0	0.00	0.00	0.59	213.49	0	47.0	59.0	47.1	0	0.0		
156		04:30		-10	2	21		0	0.00	0		0.000	0.000	0.000	8.247	0.000														
157		05:00	50.80	-10	3	18	50.80	3	2.13	-3	100	6.626	0.000	6.626	8.385	0.000	3.81	0	0.00	0.00	3.81	217.30	0	45.0	40.0	46.9	0	0.0		
158		05:30		-17	3	5		0	0.00	0		0.000	0.000	0.000	8.385	0.000														
159		06:00	50.80	-18	1	7	50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.93	0	0.00	0.00	0.93	218.23	0	45.0	42.0	46.7	0	0.0		
160			***Daily production summary*** ((March 6th @ 20:00hrs to March 7th @ 06:00hrs))																											
161			Daily Hours Flowed = 24Hrs, 00mins												Cum. Hours Flowed = 34Hrs, 00mins															
162			Daily load fluid Recovered = 94.32 m ³												Cum. load fluid Recovered = 218.23 m ³															
163			Daily Oil produced = 0.00 m ³												Cum. Oil produced = 0.00 m ³															
164			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cum. Burnable Gas to Flare = 0.000 10 ³ m ³															
165			Daily N ₂ recovered = 3.784 10 ³ m ³												Cum. N ₂ recovered = 8.385 10 ³ m ³															
166			Daily frac balls recovered = 0												Cum. frac balls recovered = 0															
167			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 170.57 m ³															
168	2013/03/07	06:30		-15	3	5																								
169		07:00	50.80	-15	2	9	50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	218.23	0				0	0.0		
170		07:30		-10	1	8																								

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			Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter												
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand	
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API		%	
171	2013/03/07	08:00	50.80	-13	3	10	50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.07	0	0.00	0.00	1.07	219.30	0	45.0	41.0	46.8	0	0.0	
172		08:30		-8	2	7																							
173		08:30	Begin to rig in coil.																										
174		09:00	50.80	-10	1	10	50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	3.00	0	0.00	0.00	3.00	222.30	0	45.0	40.0	46.9	0	0.0	
175		09:30			3	8																							
176		10:00	50.80		2	8	50.80	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30	0				0	0.0	
177		10:30			2	8		0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00	0	0.00	0.00	0.00	222.30	0				0	0.0	
178		10:30	Shut in well, continue to rig in coil.																										
179			***Daily production summary***												((March 7th @ 0600hrs to March 7th @ 10:30hrs))														
180			Daily Hours Flowed = 4Hrs, 30mins												Cumm. Hours Flowed = 38Hrs, 30mins														
181			Daily load fluid Recovered = 4.07 m ³												Cumm. load fluid Recovered = 222.30 m ³														
182			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³														
183			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³														
184			Daily N ₂ recovered = 0.000 10 ³ m ³												Cumm. N ₂ recovered = 8.385 10 ³ m ³														
185			Daily frac balls recovered = 0												Cum. frac balls recovered = 0														
186			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 165.5 m ³														
187	2013/03/07	10:35	0.00		75	11	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	0				0	0.0	
188		10:40			152	10																							
189		10:45			225	7																							
190		11:00			301	5																							
191		11:15			396	3																							
192		11:30			499	3																							
193		12:00			1023	3																							
194		12:30			1320	5																							
195		13:00			1661	4	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30	0		0.0		0	0.0	
196		21:45	Coil stab lubricator onto well and break circulation back to test vessel.																										
197	2013/03/08	01:35	Pressure test to 35 mPa.																										
198		01:45	Bleed down pressure test to 7 mPa.																										

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	Date	Time	Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand	
			mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	%		
199	2013/03/08	01:49	ISIP = 3824 kPa																										
200		01:50	Open master valve, run in hole with milling tools.																										
201		02:00	Open up @ manifold to maintain 1 mPa.																										
202		02:30		-23	698	-1																							
203		03:00		-20	1200	-1																							
204		03:30		-20	800	-1																							
205		03:45	Tagged seat #1.																										
206		04:00		-8	1250	-1																	48.0	54.0	48.6		0.1		
207		04:00	Samples showing trace of sand. Pump rate 350ltrs/min Return rate is 340 ltrs/min.																										
208		04:30		-13	1131	-1	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		45.0	44.0	46.5		0.0	
209		04:45	Baker TP pumper is having mechanical issues, coil begin to pull up.																										
210		04:50	Coil parked 1800 mKB, shut in at manifold.																										
211		05:00	Open back up at manifold and pump remainder of fluid off TP pumper.																										
212		05:20	Shut in at manifold, record pressures and wait further instruction.																										
213		05:30			695	-1																							
214		06:00			772	-1																							
215		06:30			783	-1																							
216		06:45	Open @ manifold and resume operations																										
217		07:00	Shut in at manifold, record pressures and wait further instruction.																										
218		08:00			791	-1																							
219		09:00			861	-1																							
220		10:00			865	-1																							
221		10:30	Pressure test N ₂ lines.																										
222		10:45	Open @ manifold and resume operations.																										
223		11:00			850	-1																							
224		12:00			795	-1																		45.0	44.0	46.5	0	0.0	
225		12:00	Shut in at manifold, stand by to fix pump.																										
226		13:00			1258	0																							

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	YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	%		
227	2013/03/08	14:00	0.00		2238	0	0.00				0							0						44.5	28.0	47.5	0	0.0	
228		14:30	Open @ manifold and resume operations.																										
229		15:00			110	0																							
230		15:30	Tagged seat #2.																										
231		16:00			468	0																		45.0	34.0	47.4	0	0.0	
232		16:40	Tagged seat #3																										
233		17:00			377	0																							
234		17:15	Through seat #3.																										
235		18:00			548	0	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	0.00		0.00	0.00	0.00	222.30		45.0	35.0	47.3	0	0.0	
236		18:30	Begin to pull to surface.																										
237		19:00			387	0																		45.0	36.0	47.2	0	0.0	
238		19:20	Fluid pump off line.																										
239		19:30			120	0	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	2.80	0	0.00	0.00	2.80	225.10							
240		19:45	Coil @ surface shut in master valve, bleed off through test vessel.																										
241		20:00	****Total gained during milling operations = 2.80 m ³ .																										
242		20:00	**** NEW LOAD LEFT TO RECOVER = 163.70 m ³ ****																										
243		20:30	Unable to monitor pressures.																										
244	2013/03/09	00:30	Coil stab lubricator onto well and break circulation back to test vessel.																										
245		00:45	Pressure test to 35 mPa.																										
246		01:06	Bleed down pressure test to 3 mPa.																										
247		01:10	ISIP = 324 kPa																										
248		01:15	Open master valve, run in hole with jetting nozzle.																										
249		01:25	Open up @ manifold to maintain 1 mPa.																										
250		01:30			519	13																							
251		01:30	N ₂ on line @ 10scm/min																										
252		01:35	N ₂ @ surface.																										
253		02:00			2019	27											11.62	0	0.00	0.00	11.62	236.72	0	46.0	42.0	47.7	0	0.0	
254		02:22	Increase N ₂ rate to 20scm/min.																										

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	YYY/MM/DD	HH:mm	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10³m³/c	10³m³/c	10³m³/c	10³m³	10³m³	m³	%	m³	m³	m³	m³	ppm	°API	°F	°API		%	
255	2013/03/09	02:30	0.00		1700	89	0.00				0							0								47.7		0.0	
256		03:00			1850	107											7.65	0	0.00	0.00	7.65	244.37	0	46.0	50.0	47.0	0	0.0	
257		03:06	Coil tagged @ 1941.7 mKB																										
258		03:08	Coil pull up and park @ 1937.0 mKB and continue to pump N₂.																										
259		03:30			2019	136																							
260		04:00			1083	111											2.03	0	0.00	0.00	2.03	246.40	0	44.0	30.0	46.8	0	0.0	
261		04:15	Decrease N₂ rate to 15scm/min																										
262		04:30			738	86																							
263		05:00			903	79											1.17	0	0.00	0.00	1.17	247.57	0	48.0	66.0	47.4	0	0.0	
264		05:30			885	76																							
265		06:00			8875	72	0.00	0	0.00	0	0	0.000	0.000	0.000	8.385	0.000	1.45	0	0.00	0.00	1.45	249.02	0	48.0	64.0	47.6	0	0.0	
266			***Daily production summary*** ((March 8th @ 0600hrs to March 9th @ 0600hrs))																										
267			Daily load fluid Recovered = 26.72 m³												Cumm. load fluid Recovered = 249.02 m³														
268			Daily Oil produced = 0.00 m³												Cumm. Oil produced = 0.00 m³														
269			Initial load fluid to recover = 388.80 m³												Load fluid left to recover = 139.78 m³														

Field Measurements

DM 699289

WID 2078

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead				ST - 27 Orifice Meter									Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand
			mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API		%
1	2013/02/18	00:00	0.00	0	0	0	0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0		0.00		0.00	0				0	0.0
2		08:00	Arrive on location demobilize equipment.																									
3		17:00	Standby for drilling completion.																									
4	2013/02/19	08:00	Arrive on location, continue maintenance and cleanup of equipment.																									
5		17:00	Unable to spot and rig in, standing by for drilling rig completion.																									
6	2013/02/20	08:00	Arrive on location, stand by for drilling rig completion.																									
7	2013/02/23	07:00	Begin perfing operations with drilling rig and run in tubing.																									
8	2013/02/28	09:00	Spot and rig in test equipment.																									
9	2013/03/01	07:00	Continue rigging in, stand by to purge vessels and pressure test flowline.																									
10	2013/03/04	13:50	E-line run in hole to punch tubing.																									
11		15:35	E-line @ surface.																									
12		15:50	N ₂ online, to confirm run was successful.																									
13		16:20	Run successful, bleed off well to 5 mPa.																									
14		17:00	Drop 1st ball and begin to rig on frac head.																									
15		20:05	Pump 3m ³ of frac oil through frac iron to vessel.																									
16		20:10	Shut in wing valve and pressure test frac iron.																									
17		21:01	Begin mini frac.																									
18		21:13	Mini frac complete, 14m ³ pumped.																									
19		21:30	Monitor and record casing pressures. Data van to record tubing pressures.																									
20		21:30	0.00	0	0	2228	0.00	0	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0	0.00	0.00	0.00	0.00	0		0.0		0	0.0
21		22:00				2410																						
22		23:00				2638																						
23	2013/03/05	00:00				2802																						
24		01:00				2864																						
25		02:00				2884																						
26		03:00				2993																						
27		04:00				3097																						
28		05:00				3195																						

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

[illegible]

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

	Date	Time	Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter												
			Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand	
			YYY/MM/DD	HH:MM	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	
57	2013/03/05	20:31	Decrease to 14/64 (5.56mm) adjustable choke.																										
58		20:45		4	16449	4793		33	0.01	0		0.395	0.000	0.395	0.334	0.000													
59		21:00	5.56	4	16359	4931	44.45	344	7.21	0	100	19.421	0.000	19.421	0.437	0.000	6.40	0	0.00	0.00	6.40	6.40	0	47.0	50.0	48.0	0	0.1	
60		21:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
61		21:01	Increase to 20/64 (7.94mm) adjustable choke, establish rate of 10m ³ /hr to 15m ³ /hr before switching to bean choke.																										
62		21:30	7.94	12	14738	6674	44.45	379	4.97	1		16.716	0.000	16.716	0.813	0.000													
63		21:35	Fluid samples are showing gel and 20% sand.																										
64		22:00	7.94	10	14228	7443	44.45	317	2.98	4	100	11.995	0.000	11.995	1.112	0.000	14.90	0	0.00	0.00	14.90	21.30	0	47.0	50.0	48.0	0	1.0	
65		22:00	API = 48.0 @ 60F, specific gravity of 0.788.																										
66		22:00	Fluid samples showing no gel and 1% sand.																										
67		22:01	Direct flow through a 20/64 (7.94mm) bean choke.																										
68		22:30		12	13833	8349	44.45	330	2.26	5		10.591	0.000	10.591	1.348	0.000													
69		22:31	Install 1" (25.4mm) orifice plate.																										
70		23:00	7.94	11	13542	8754	25.40	262	28.85	6	100	11.178	0.000	11.178	1.575	0.000	12.57	0	0.00	0.00	12.57	33.87	0	47.0	53.6	47.6	0	1.0	
71		23:00	Two stock oil samples taken.																										
72		23:30		14	13334	9276		275	18.90	6		9.162	0.000	9.162	1.786	0.000													
73		23:30	Bleed down casing pressure.																										
74	2013/03/06	00:00	7.94	13	12860	5440	25.40	248	27.60	6	100	10.714	0.000	10.714	1.993	0.000	14.62	0	0.00	0.00	14.62	48.49	0	47.0	53.6	47.6	0	0.1	
75		00:00	Checked ball catcher, no balls found.																										
76		00:30		14	12629	5090		410	18.23	7		10.476	0.000	10.476	2.214	0.000													
77		01:00	7.94	12	12149	5419	25.40	388	16.42	6	100	9.736	0.000	9.736	2.425	0.000	9.74	0	0.00	0.00	9.74	58.23	0	46.0	55.4	46.4	0	0.1	
78		01:01	Increase to 22/64 (8.73mm) adjustable choke.																										
79		01:30		14	10085	5966		379	22.88	8		11.373	0.000	11.373	2.645	0.000													
80		02:00	8.73	15	9590	6370	25.40	372	22.14	8	100	11.102	0.000	11.102	2.879	0.000	15.35	0	0.00	0.00	15.35	73.58	0	46.0	53.6	46.6	0	0.1	
81		02:00	Two stock oil samples taken.																										
82		02:30		14	9425	6712		337	20.89	8		10.371	0.000	10.371	3.102	0.000													
83		03:00	8.73	12	9404	6782	24.50	382	18.41	8	100	9.501	0.000	9.501	3.309	0.000	10.62	0	0.00	0.00	10.62	84.20	0	47.0	57.2	47.3	0	0.1	
84		03:01	Increase to 24/64 (9.53mm) adjustable choke.																										

Field Measurements

Company: Shell/MGM
Well / Lease Name: MGM Shell East MacKay I-78
Unique Well ID: I-78-64-50-125-30
Test Type: Completion

Job Number: GP13-040
Formation: Canol
Field: East MacKay
Pool:

			Wellhead				ST - 27 Orifice Meter										Oil Produced Volume Meter											
	Date	Time	Choke Size	Flow Temp	Tubing Press	Casing Press	Plate Size	Static Press	Diff Press	Meter Temp	N2	Gas Rate (Inst)	Burn Gas Rate	N2 Rate	N2 Cum	Burnable Gas Cum	Gain	BSW	H2O Gain	H2O Cum	Oil Gain	Cum Oil	Water Salinity	Meas. API	API Sample Temp	API @60F	pH	Sand
	YYY/MM/DD	HH:mn	mm	°C	kPa(g)	kPa(g)	mm	kPa(g)	kPa	°C	%	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³ /c	10 ³ m ³	10 ³ m ³	m ³	%	m ³	m ³	m ³	m ³	ppm	°API	°F	°API	%	
85	2013/03/06	03:30	8.73	14	8213	7979	24.50	317	20.15	8	100	9.251	0.000	9.251	3.505	0.000		0								47.3	0	0.1
86		04:00	9.53	13	8071	9845	24.50	275	17.91	8	100	8.262	0.000	8.262	3.687	0.000	10.05	0	0.00	0.00	10.05	94.25	0	46.0	53.6	46.6	0	0.1
87		04:00	Bleed down casing pressure.																									
88		04:01	Increase to 26/64 (10.32mm) adjustable choke.																									
89		04:30		14	6722	4170		396	23.38	10		10.843	0.000	10.843	3.886	0.000												
90		05:00	10.32	15	5969	4383	24.50	358	17.91	9	100	9.116	0.000	9.116	4.094	0.000	15.65	0	0.00	0.00	15.65	109.90	0	47.0	55.4	47.4	0	0.1
91		05:30		18	5427	4432		310	21.89	8		9.568	0.000	9.568	4.289	0.000												
92		06:00	10.32	16	4999	4430	24.50	303	29.39	8	100	11.029	0.000	11.029	4.503	0.000	14.01	0	0.00	0.00	14.01	123.91	0	47.0	53.6	47.6	0	0.1
93		06:00	Checked ball catcher, no balls found.																									
94	-		***Daily production summary*** ((March 5th @ 20:00hrs to March 6th @ 06:00hrs))																									
95			Daily Hours Flowed = 10Hrs, 00mins												Cumm. Hours Flowed = 10Hrs, 00mins													
96			Daily load fluid Recovered = 123.91 m ³												Cumm. load fluid Recovered = 123.91 m ³													
97			Daily Oil produced = 0.00 m ³												Cumm. Oil produced = 0.00 m ³													
98			Daily Burnable Gas Produced to Flare = 0.000 10 ³ m ³												Cumm. Burnable Gas to Flare = 0.000 10 ³ m ³													
99			Daily N ₂ recovered = 4.503 10 ³ m ³												Cumm. N ₂ recovered = 4.503 10 ³ m ³													
100			Daily frac balls recovered = 0												Cum. frac balls recovered = 0													
101			Initial load fluid to recover = 388.80 m ³												Load fluid left to recover = 264.90 m ³													