

opens to sample
@ 10:13 am

of rebound

Stage	Date	Time	Start P	End P	Grav V	Mo V	Gas sample
1	9/7/18	10:18	64.8	64.7	0	0	
2		10:25	64.8	63.0	0	2	
3		10:28	63.0	55.0	0	2	
4		10:31	62.0	57	0	1	
5		10:33	61.3	57.4	0	1	
6		10:35	60.7	56.9	0	1	
7		10:37	60.09	57.0	0	1	
8		10:40	59.60	54.7	0	1	
9		10:42	58.9	53.3	0	1	
10		10:44 ^{am}	58.1	53.8	0	1	
11		1:27 ^{pm}	57.13	52.8	0	1	
12		1:32	56.47	53.0	0	1	
13		1:35	55.96	52.23	0	1	

Fair.

Start Date:		Sample:				Start Date:		Sample:			
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)	Other Samples / Comments	
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)					
14	9/7/18				55.3	51.37					
15			55.3	51.37	0	1					
16			54.8	50.8	0	<1					
17			54.2	50.2	0	<1					
18			53.7	49.05	0	<1					
19			52.0	48.9	0	<1					
20			52.5	47.6	0	<1					
21			51.8	47.4	0	<1					
22			51.2	45.9	0	<1					
23			50.46	45.0	0	<1					
24			49.5	44.9	0	<1					
25			48.9	43.4	0	<1					
26			48.1	43.2	0	<1					
27			47.5	42.8	0	<1					
28			46.96	41.8	0	<1					
29			46.65	41.6	0	<1					

Start Date:				Sample:						
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)	Other Samples / Comments
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)				
30			48.0	45.0	0	<1				
31			49.1	44.9	0	<1				
32		4:09	48.8	45.	0	<1				
33		4:11	48.6	40.1	0	<1				
34		4:14	47.5	43.0	0	<1				
35		4:17	47.2	40.2	0	<1				
36		4:19	47.1	41	0	<1				
37		4:21	46.8	40.	0	<1				
38		4:23	46.32	40.3	0	<1				
39		4:25	46.5	39.8	0	<1				
40		4:27	45.8	39.40	0	<1				
41		4:29	44.9	38.7	0	<1				
42		4:32	44.7	38.1	0	<1				
43		4:34	43.9	36.8	0	<1				
44		4:37	43.5	32	0	<1				
45		4:40	42.5	32.5	0	<1				

Start Date:		Sample:								
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)	Other Samples / Comments
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)				
46		4:42	41.59	32.5	0	<1				
47		4:45	41.14	32	0	<1				
48		4:48	40.8	31.5	0	<1				
49		4:58	44	36	0	<1				
50		4:50	43.1	36	0	<1				
51		5:04	41.9	28	0	<1				
52		5:06	40.4	30.1	0	<1				
53		5:08	40.2	29.3	0	<1				
54		5:10	40.2	37.6	0	1				
55		5:12	39.7	36.9	0	1				
56		5:14	39.12	27	0	1				
57		5:16	38.5	27.8	0	1.2				
58		5:18	37.99	34	0	1.2				
59		5:21	37.2	31	0	2.3				
60		5:24	35.9	32	0	2				
61		5:27	35.5	29.8	0	2				

Start Date:			Sample:							
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)	Other Samples / Comments
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)				
62		5:30	34.6	31	0	2.5				
63		5:33	34.1	30.6	0	2.5				
64	9/8/2018	11:40	47.4	45.1	0	1.5~2.0				
65	9/8/2018	11:42	46.3	44	0	1.5~2.0				
66		11:44	45.4	43.2	0	1.5~2.0				
67		11:46	44.7	42.5	0	1.5				
68		11:49	44	41.5	0	1~1.5				
69		11:52	43.1	41.6	0	1~1.5				
70		11:56	42.8	40.6	0	1~1.5				
71		12:00	42.0	39.5	0	1.5				
72		12:04	41.3	39.2	0	1.5				
73		12:10	41.	38.9	0	2				
74		12:15	40.3	38	0	2.5~3				
75		12:18	39.6	37.5	0	2.5				
76		12:24	39.3	37.1	0	2.5~3				
77		12:27	38.8	36.5	0	2.5				

Start Date:			Sample:				Other Samples / Comments		
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)			
78		12:30	37.6	35	0	3~3.5			
79		12:33	36.63	34.4	0	4			
80		12:35	35.5	33.4	0	4.6			
81		12:37	34.59	32.3	0	4.1			
82		12:39	33.6	31.6	0	3.8			
83		12:44	33.6	31.4	0	6.2			
84		12:47	32.5	30.8	0	4.5			
85		12:49	31.76	29.0	98	30.3			Gas out
86		12:57	32.0	29.65	↓ 0	↓			
87		12:59	31.14	29.8	↓ 0	↓			
88		13:01	30.38	29.8	200	7			F
89		1:10	31.95	30.8	↓ 0	↓			
90		1:12	31.1	29.4	↓ 0	↓			
91		1:14	29.99	28.75	260	3.5			G
92		1:20	30.8	29.2	0	0			
93		1:22	29.75	28.4	220				

Start Date:				Sample:						
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)	Other Samples / Comments
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)				
94		1:24	29.33	28	102					
95		1:26	28.68	27	^{45.33} 108	3				
96		1:32	29.08	27.4	↓ 0					
97		1:34	28.22	26.7	240					
98		1:36	27.40	25.8	60					
99		1:38	26.61	25.1	152					
100		1:40	26.1	24.5	^{53.92} 103	1		H		
101		1:47	26.9	25.36	0					
102		1:49	25.89	24.3	240					
103		1:51	25.09	24.5 24.5	110	1				
104		1:53	24.5	22.7	↓ 0					
105		8:52pm	34.25	32.7	220					
106		8:54	33.0	31.78	84					
107		8:56	31.92	30.5	76	2		I		
108		8:58 8:59	31.15	29.76	110 ↓ 0					
109		9:04	29.99	28.4	220					

Start Date:				Sample:						
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)	Other Samples / Comments
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)				
110		9:08	29.03	28.38	120					
111		9:10	27.7	26.21	40-310 110	< 10				
112		9:14	26.83	25.23	↓ 0					
113		9:16	25.62	24.2	222					
114		9:18	24.64	23.12	535-222 117					
115		9:24	23.67	22.37	428-319 89					
116		9:23	22.79	21.4	92	1		k		
117		9:29	22.1	21.0	0					
118		9:31	21.24	19.9	0					
119		9:33	20.17	18.9	260					
120		9:37	19.46	18.4	332-260 72					
121		9:40	18.68	17.6	46 74					
122		9:44	17.99	16.86	47 72					
123		9:48	17.37	16.4	540 62	1		L		
124		9:56	16.60	15.74	0					
125		9:58	15.8	15.01	0					

Start Date:				Sample:						
Stage	Date	Time	Manifold		Bubble chamber		Cu tube Gas volume (mL)	Gas sample (Cu tube #)	Gas sample (bag #)	Other Samples / Comments
			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)				
126		10:00 pm	15.08	14.27	↓ 0					
127		10:02	14.36	13.55	225					
128		10:04	13.66	12.9	²⁸⁰⁻²⁸⁵ 55					
129		10:07	13.15	12.73	³¹⁰⁻³⁶⁰ 30	1		N		
130	9/9/2008	12:19 pm	14.3	13.59	↓ 0					
131		12:21 pm	13.65	12.8	↓ 0					
132		12:24	12.93	11.98	↓ 0					
133		12:26	12.01	11.06	210					
134		12:28	11.20	10.54	²⁸⁰⁻³¹⁰ 46					
135		12:32	10.65	9.89	³⁰⁰⁻³⁵⁰ 44					
136		12:35	9.97	9.29	³⁴⁰⁻³⁷⁰ 40	1.5		N		
137		12:39	9.5	8.98	0					
138		3:45	10.33	9.78	0					
139		3:47	9.82	9.2	0					
140		3:49	9.24	8.67	0					
141		3:51	8.71	8.4	0					

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			Start P (bar)	End P (bar)	Gas volume (ml)	Liquid volume (ml)				
142		3:53	8.44	7.47	212					
143		3:55	87.51	6.88	²⁵⁰⁻¹¹² 38					
144		3:57	6.93	6.80	⁵⁵² 2					
145		3:59	6.84	6.62	³⁶⁰ 8					
146		4:02	6.689	5.85	³⁰⁰ 40					
147		4:04	5.94	5.46	³⁴⁰⁻³⁰ 40	5		0		
148		4:08	5.68	5.51	0					
149		4:10	5.56	5.49	0					
150		4:13	5.54	5.04	0					
151		4:15	5.12	4.64	0					
152		4:17	4.64	4.63	0					
153		4:19	4.67	4.26	0					
154		4:54	5.05	4.78	0					
155		4:57	4.82	4.58	0					
156		4:57	4.61	3.56	246					
157		5:03	4.61	2.4	^{3.8-340} 72					

3:599

Gas Sample

Stage Date Time Stamp Temp Gas/Liq-V

Stage	Date	Time	Stamp	Temp	Gas/Liq-V	NO.
158	5:05	2.43	1.25	62	12	B.
1589	5:13	1.71	0.69	0	0	
160	5:15	0.74	0.0	270	6	
161				+58		Removal gas in the pipe line: = 58 ml.
162				0		in pipe.
163						no ml water in pipe.
164						= 68 ml. 71 ml water injected.
165						+ (105.0 ml) dissolved over night.
166						+ (105.1 ml) 9/10/2018 morning
167						
168						
169						
170						
171						