

Johnston Federal #22
API # 30-045-26940
BP

Pressure Test Report

COMPANY INFORMATION

Company Name	ConocoPhillips
Representative	Priscilla Shorty
Phone	
Fax	
Address	

E-Mail Address	
Service Company	Expert Downhole Services, Inc.

WELL INFORMATION

Well Name	Johnston Federal #22 POW
Well Location	T31N, R9W, Sec. 33
Field and Pool	Basin Fruitland Coal
Status (Oil, Gas, Water, Injection)	Observation
Perforated Intervals	2547-2980
Mid-point of Perforated Intervals (MPP)	
Drilling Rig Number	
Elevations	
Kelly Bushing (KB)	11.5
Casing Flange (CF)	
KB-CF	
Ground Level	6313
Plug Back Total Depth	3448
Total Depth	3450
Production Casing	4 1/2 to 2294
Production Tubing	2 3/8 to 2999

OIL CONS. DIV DIST. 3
MAY 18 2017

TEST INFORMATION

Type of Test	POOH Static Gradient
Date(s) of Test	5/12/2017
Dead-weight Gauge Tubing Pressure	60
Dead-weight Gauge Casing Pressure	0
Shut-in Date (Duration)	
Date / Time on Bottom	5/12/17 @1135
Date / Time off Bottom	5/12/17 @1235
Probe Serial Number	W1035
Probe Offset from End of Tool String	0-6000
Run Depth at Probe Pressure Port	3054

PRESSURE TEST RESULTS

Maximum Recorded Probe Pressure	56.8 psig
Maximum Recorded Probe Temperature	114.2 deg F
Final Buildup Pressure	
Gradient Survey Information	
Extrapolated Pressure to MPP	
Final Gradient at Depth	
Job Number	

NWCC TA Expires
3-19-2020

AV

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Company Name ConocoPhillips
Well Name Johnston Federal #22 POW
Type of Test POOH Static Gradient
Date(s) of Test 5/12/2017



PROBE INFORMATION

Probe Serial Number W1035
Model
Pressure
 Calibrated Pressure Range
 Accuracy
 Resolution
Temperature
 Calibrated Temperature Range
 Accuracy
 Resolution
Calibration File Used for Reports

PROGRAMMING DETAILS

<u>Step</u>	<u>Sample Mode</u>	<u>Period</u>	<u>Duration</u>	<u>Comment</u>
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Program Start Time
Program End Time
Total Samples Taken
Usage for this Test
Generic Data File Name

Company Name	ConocoPhillips
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Date(s) of Test	5/12/2017



COMMENTS

Reported By

Expert Downhole Services, Inc.

RIH with 1.50 IB and tagged fill @ 3058 WLM. RIH with memory gauge to 3054 for 1 hour, then POOH making 5 minute gradient stops.

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Pressure vs. Depth

Probe Serial Number W1035

		(ft)	(psig)	(psi/ft)	(deg F)	(deg F/ft)
		3054.000	56.839	-	86.121	-
1135	1235	3054.000	54.149	-	114.199	-
1235	1240	3000.000	54.118	0.0006	114.192	0.0001
1241	1246	2800.000	53.793	0.0016	113.248	0.0047
1247	1252	2600.000	53.463	0.0017	109.454	0.0190
1252	1257	2000.000	52.618	0.0014	103.946	0.0092
1258	1303	1500.000	51.961	0.0013	97.920	0.0121
1304	1309	1000.000	51.306	0.0013	90.975	0.0139
1310	1315	500.000	50.657	0.0013	83.223	0.0155
1316	1321	0.000	49.918	0.0015	75.270	0.0159

Extrapolated to MPP:

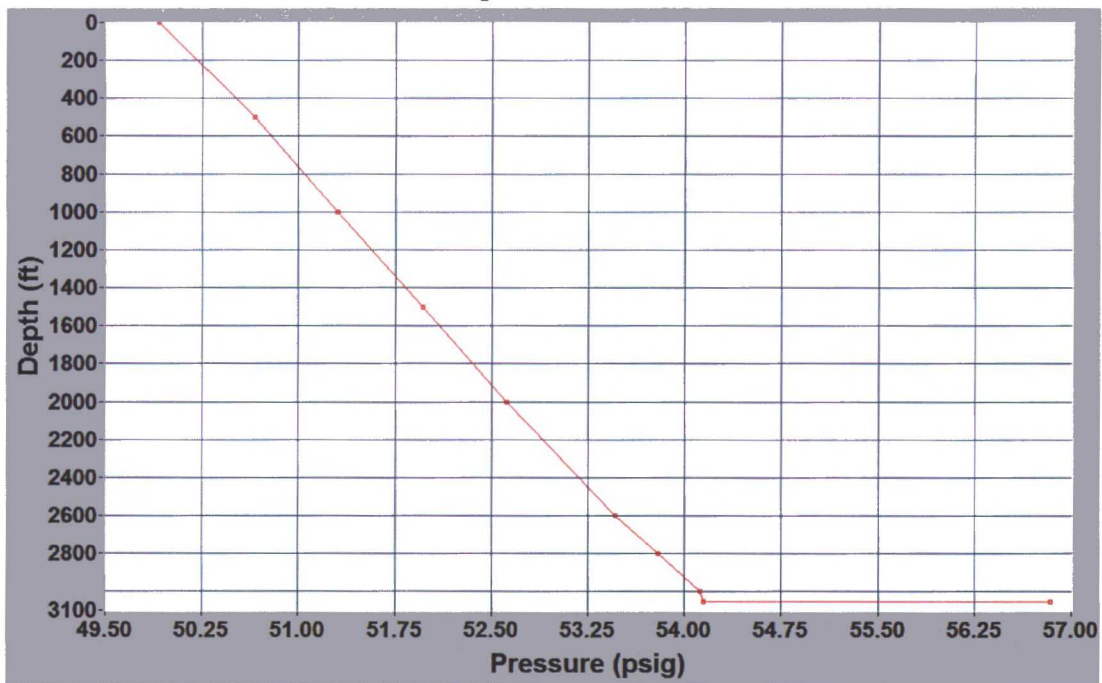
(ft)	(psig)	(deg F)
0.000		

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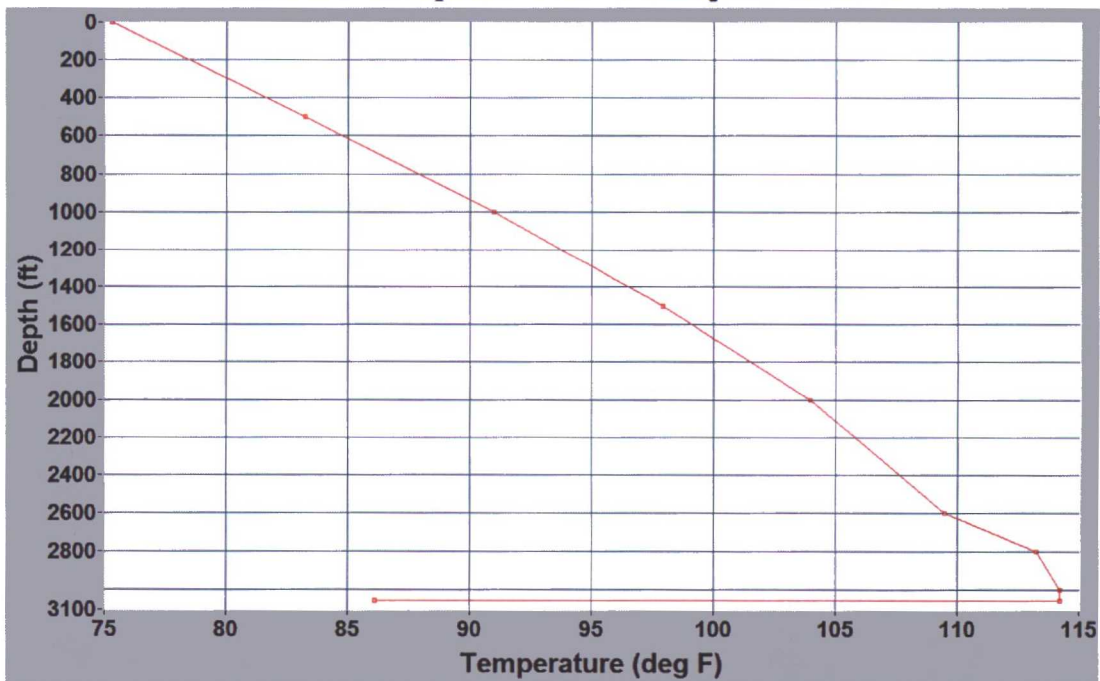


Probe Serial Number W1035

W1035 Depth vs. Pressure



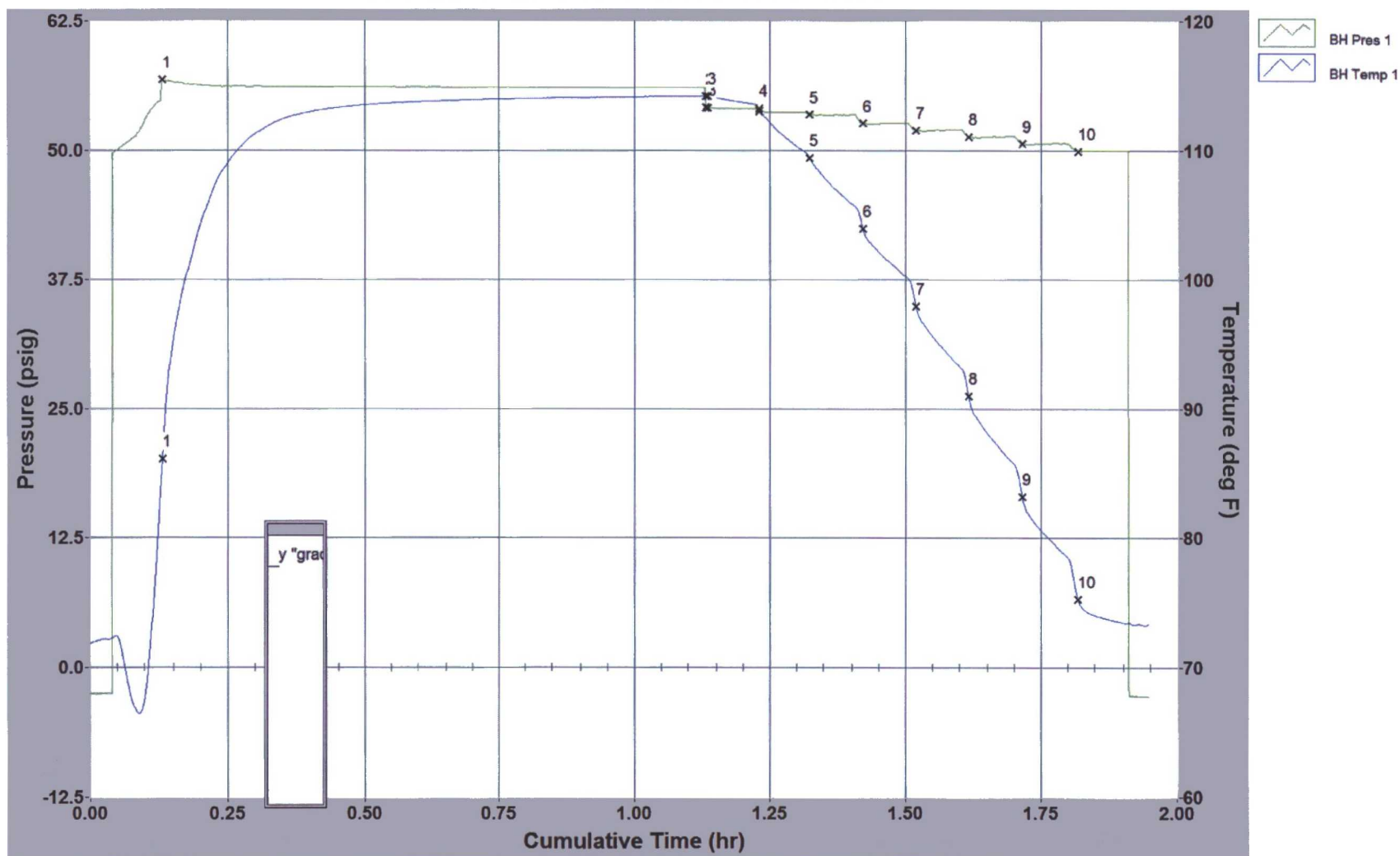
W1035 Depth vs. Temperature



Company Name ConocoPhillips
Well Name Johnston Federal #22 POW
Type of Test POOH Static Gradient
Date(s) of Test 5/12/2017



Johnston Federal #22 POW



Company Name ConocoPhillips
Well Name Johnston Federal #22 POW
Type of Test POOH Static Gradient
Date(s) of Test 5/12/2017



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2017/05/12	11:27:35	0.0000	-2.506	71.847
2017/05/12	11:28:05	0.0083	-2.539	71.987
2017/05/12	11:28:35	0.0167	-2.484	72.106
2017/05/12	11:29:05	0.0250	-2.506	72.176
2017/05/12	11:29:35	0.0333	-2.507	72.158
2017/05/12	11:30:05	0.0417	49.682	72.280
2017/05/12	11:30:35	0.0500	50.029	72.365
2017/05/12	11:31:05	0.0583	50.417	71.056
2017/05/12	11:31:35	0.0667	50.734	69.256
2017/05/12	11:32:05	0.0750	51.022	67.735
2017/05/12	11:32:35	0.0833	51.421	66.724
2017/05/12	11:33:05	0.0917	52.078	66.508
2017/05/12	11:33:35	0.1000	52.891	67.705
2017/05/12	11:34:05	0.1083	53.565	71.008
2017/05/12	11:34:35	0.1167	54.265	75.778
2017/05/12	11:35:05	0.1250	54.676	81.630
POOH Gradient: 3054.000 ft				
2017/05/12	11:35:30	0.1319	56.839	86.121
2017/05/12	11:35:35	0.1333	56.785	87.174
2017/05/12	11:36:05	0.1417	56.768	92.080
2017/05/12	11:36:35	0.1500	56.636	95.045
2017/05/12	11:37:05	0.1583	56.537	97.072
2017/05/12	11:37:35	0.1667	56.537	98.760
2017/05/12	11:38:05	0.1750	56.382	100.195
2017/05/12	11:38:35	0.1833	56.368	101.539
2017/05/12	11:39:05	0.1917	56.351	102.907
2017/05/12	11:39:35	0.2000	56.320	104.153
2017/05/12	11:40:05	0.2083	56.288	105.226
2017/05/12	11:40:35	0.2167	56.270	106.210
2017/05/12	11:41:05	0.2250	56.216	107.089
2017/05/12	11:41:35	0.2333	56.205	107.850
2017/05/12	11:42:05	0.2417	56.164	108.489
2017/05/12	11:42:35	0.2500	56.179	109.035
2017/05/12	11:43:05	0.2583	56.183	109.517
2017/05/12	11:43:35	0.2667	56.192	109.926
2017/05/12	11:44:05	0.2750	56.197	110.343
2017/05/12	11:44:35	0.2833	56.173	110.727
2017/05/12	11:45:05	0.2917	56.156	111.027
2017/05/12	11:45:35	0.3000	56.199	111.272
2017/05/12	11:46:05	0.3083	56.181	111.501
2017/05/12	11:46:35	0.3167	56.167	111.726
2017/05/12	11:47:05	0.3250	56.164	111.927
2017/05/12	11:47:35	0.3333	56.153	112.127
2017/05/12	11:48:05	0.3417	56.150	112.284
2017/05/12	11:48:35	0.3500	56.142	112.426
2017/05/12	11:49:05	0.3583	56.141	112.543
2017/05/12	11:49:35	0.3667	56.137	112.651
2017/05/12	11:50:05	0.3750	56.140	112.752
2017/05/12	11:50:35	0.3833	56.143	112.831
2017/05/12	11:51:05	0.3917	56.148	112.912
2017/05/12	11:51:35	0.4000	56.146	112.978
2017/05/12	11:52:05	0.4083	56.144	113.049
2017/05/12	11:52:35	0.4167	56.140	113.112
2017/05/12	11:53:05	0.4250	56.135	113.175

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2017/05/12	11:53:35	0.4333	56.142	113.218
2017/05/12	11:54:05	0.4417	56.137	113.261
2017/05/12	11:54:35	0.4500	56.140	113.308
2017/05/12	11:55:05	0.4583	56.137	113.338
2017/05/12	11:55:35	0.4667	56.127	113.378
2017/05/12	11:56:05	0.4750	56.129	113.409
2017/05/12	11:56:35	0.4833	56.125	113.446
2017/05/12	11:57:05	0.4917	56.129	113.486
2017/05/12	11:57:35	0.5000	56.129	113.517
2017/05/12	11:58:05	0.5083	56.123	113.545
2017/05/12	11:58:35	0.5167	56.126	113.567
2017/05/12	11:59:05	0.5250	56.117	113.594
2017/05/12	11:59:35	0.5333	56.121	113.616
2017/05/12	12:00:05	0.5417	56.113	113.637
2017/05/12	12:00:35	0.5500	56.119	113.653
2017/05/12	12:01:05	0.5583	56.106	113.673
2017/05/12	12:01:35	0.5667	56.096	113.686
2017/05/12	12:02:05	0.5750	56.102	113.713
2017/05/12	12:02:35	0.5833	56.103	113.722
2017/05/12	12:03:05	0.5917	56.113	113.734
2017/05/12	12:03:35	0.6000	56.108	113.758
2017/05/12	12:04:05	0.6083	56.104	113.772
2017/05/12	12:04:35	0.6167	56.102	113.787
2017/05/12	12:05:05	0.6250	56.106	113.801
2017/05/12	12:05:35	0.6333	56.113	113.810
2017/05/12	12:06:05	0.6417	56.100	113.828
2017/05/12	12:06:35	0.6500	56.102	113.835
2017/05/12	12:07:05	0.6583	56.098	113.850
2017/05/12	12:07:35	0.6667	56.100	113.855
2017/05/12	12:08:05	0.6750	56.096	113.871
2017/05/12	12:08:35	0.6833	56.099	113.889
2017/05/12	12:09:05	0.6917	56.090	113.895
2017/05/12	12:09:35	0.7000	56.091	113.911
2017/05/12	12:10:05	0.7083	56.087	113.920
2017/05/12	12:10:35	0.7167	56.089	113.927
2017/05/12	12:11:05	0.7250	56.083	113.938
2017/05/12	12:11:35	0.7333	56.082	113.943
2017/05/12	12:12:05	0.7417	56.080	113.961
2017/05/12	12:12:35	0.7500	56.086	113.961
2017/05/12	12:13:05	0.7583	56.085	113.970
2017/05/12	12:13:35	0.7667	56.089	113.983
2017/05/12	12:14:05	0.7750	56.091	113.985
2017/05/12	12:14:35	0.7833	56.087	114.001
2017/05/12	12:15:05	0.7917	56.080	114.015
2017/05/12	12:15:35	0.8000	56.082	114.021
2017/05/12	12:16:05	0.8083	56.079	114.021
2017/05/12	12:16:35	0.8167	56.078	114.028
2017/05/12	12:17:05	0.8250	56.083	114.039
2017/05/12	12:17:35	0.8333	56.087	114.048
2017/05/12	12:18:05	0.8417	56.084	114.049
2017/05/12	12:18:35	0.8500	56.081	114.053
2017/05/12	12:19:05	0.8583	56.074	114.062
2017/05/12	12:19:35	0.8667	56.074	114.064
2017/05/12	12:20:05	0.8750	56.074	114.071

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Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2017/05/12	12:20:35	0.8833	56.076	114.071
2017/05/12	12:21:05	0.8917	56.073	114.078
2017/05/12	12:21:35	0.9000	56.072	114.084
2017/05/12	12:22:05	0.9083	56.072	114.089
2017/05/12	12:22:35	0.9167	56.080	114.091
2017/05/12	12:23:05	0.9250	56.082	114.102
2017/05/12	12:23:35	0.9333	56.073	114.102
2017/05/12	12:24:05	0.9417	56.069	114.111
2017/05/12	12:24:35	0.9500	56.066	114.116
2017/05/12	12:25:05	0.9583	56.071	114.120
2017/05/12	12:25:35	0.9667	56.068	114.127
2017/05/12	12:26:05	0.9750	56.064	114.130
2017/05/12	12:26:35	0.9833	56.069	114.134
2017/05/12	12:27:05	0.9917	56.072	114.139
2017/05/12	12:27:35	1.0000	56.068	114.150
2017/05/12	12:28:05	1.0083	56.059	114.154
2017/05/12	12:28:35	1.0167	56.067	114.156
2017/05/12	12:29:05	1.0250	56.059	114.152
2017/05/12	12:29:35	1.0333	56.061	114.165
2017/05/12	12:30:05	1.0417	56.064	114.163
2017/05/12	12:30:35	1.0500	56.058	114.166
2017/05/12	12:31:05	1.0583	56.057	114.170
2017/05/12	12:31:35	1.0667	56.057	114.174
2017/05/12	12:32:05	1.0750	56.056	114.181
2017/05/12	12:32:35	1.0833	56.053	114.179
2017/05/12	12:33:05	1.0917	56.047	114.183
2017/05/12	12:33:35	1.1000	56.046	114.190
2017/05/12	12:34:05	1.1083	56.049	114.195
2017/05/12	12:34:35	1.1167	56.052	114.193
2017/05/12	12:35:05	1.1250	56.055	114.193
POOH Gradient: 3054.000 ft				
2017/05/12	12:35:30	1.1319	54.149	114.199
2017/05/12	12:35:35	1.1333	54.145	114.201
POOH Gradient: 3000.000 ft				
2017/05/12	12:35:45	1.1361	54.118	114.192
2017/05/12	12:36:05	1.1417	54.080	114.127
2017/05/12	12:36:35	1.1500	54.073	114.062
2017/05/12	12:37:05	1.1583	54.073	113.994
2017/05/12	12:37:35	1.1667	54.068	113.936
2017/05/12	12:38:05	1.1750	54.063	113.878
2017/05/12	12:38:35	1.1833	54.055	113.821
2017/05/12	12:39:05	1.1917	54.056	113.761
2017/05/12	12:39:35	1.2000	54.047	113.716
2017/05/12	12:40:05	1.2083	54.046	113.657
2017/05/12	12:40:35	1.2167	54.054	113.612
2017/05/12	12:41:05	1.2250	53.893	113.533
POOH Gradient: 2800.000 ft				
2017/05/12	12:41:25	1.2306	53.793	113.248
2017/05/12	12:41:35	1.2333	53.753	113.059
2017/05/12	12:42:05	1.2417	53.713	112.566
2017/05/12	12:42:35	1.2500	53.711	112.167
2017/05/12	12:43:05	1.2583	53.710	111.810
2017/05/12	12:43:35	1.2667	53.693	111.470
2017/05/12	12:44:05	1.2750	53.698	111.159

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2017/05/12	12:44:35	1.2833	53.684	110.869
2017/05/12	12:45:05	1.2917	53.680	110.592
2017/05/12	12:45:35	1.3000	53.696	110.331
2017/05/12	12:46:05	1.3083	53.708	110.086
2017/05/12	12:46:35	1.3167	53.629	109.850
POOH Gradient: 2600.000 ft				
2017/05/12	12:47:00	1.3236	53.463	109.454
2017/05/12	12:47:05	1.3250	53.473	109.346
2017/05/12	12:47:35	1.3333	53.433	108.831
2017/05/12	12:48:05	1.3417	53.447	108.365
2017/05/12	12:48:35	1.3500	53.406	107.958
2017/05/12	12:49:05	1.3583	53.413	107.573
2017/05/12	12:49:35	1.3667	53.437	107.213
2017/05/12	12:50:05	1.3750	53.462	106.875
2017/05/12	12:50:35	1.3833	53.437	106.549
2017/05/12	12:51:05	1.3917	53.428	106.236
2017/05/12	12:51:35	1.4000	53.448	105.933
2017/05/12	12:52:05	1.4083	53.417	105.645
2017/05/12	12:52:35	1.4167	52.720	104.925
POOH Gradient: 2000.000 ft				
2017/05/12	12:52:55	1.4222	52.618	103.946
2017/05/12	12:53:05	1.4250	52.607	103.590
2017/05/12	12:53:35	1.4333	52.604	102.983
2017/05/12	12:54:05	1.4417	52.588	102.562
2017/05/12	12:54:35	1.4500	52.600	102.187
2017/05/12	12:55:05	1.4583	52.628	101.840
2017/05/12	12:55:35	1.4667	52.655	101.503
2017/05/12	12:56:05	1.4750	52.645	101.179
2017/05/12	12:56:35	1.4833	52.634	100.859
2017/05/12	12:57:05	1.4917	52.630	100.546
2017/05/12	12:57:35	1.5000	52.656	100.243
2017/05/12	12:58:05	1.5083	52.456	99.891
2017/05/12	12:58:35	1.5167	52.040	98.460
POOH Gradient: 1500.000 ft				
2017/05/12	12:58:45	1.5194	51.961	97.920
2017/05/12	12:59:05	1.5250	51.913	97.173
2017/05/12	12:59:35	1.5333	51.908	96.546
2017/05/12	13:00:05	1.5417	51.921	96.049
2017/05/12	13:00:35	1.5500	51.956	95.594
2017/05/12	13:01:05	1.5583	51.982	95.169
2017/05/12	13:01:35	1.5667	51.952	94.764
2017/05/12	13:02:05	1.5750	51.994	94.363
2017/05/12	13:02:35	1.5833	52.004	93.981
2017/05/12	13:03:05	1.5917	52.007	93.603
2017/05/12	13:03:35	1.6000	51.999	93.232
2017/05/12	13:04:05	1.6083	51.711	92.646
POOH Gradient: 1000.000 ft				
2017/05/12	13:04:35	1.6167	51.306	90.975
2017/05/12	13:05:05	1.6250	51.248	89.775
2017/05/12	13:05:35	1.6333	51.244	89.143
2017/05/12	13:06:05	1.6417	51.308	88.639
2017/05/12	13:06:35	1.6500	51.322	88.169
2017/05/12	13:07:05	1.6583	51.347	87.726
2017/05/12	13:07:35	1.6667	51.336	87.301

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Date(s) of Test 5/12/2017



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2017/05/12	13:08:05	1.6750	51.338	86.887
2017/05/12	13:08:35	1.6833	51.354	86.490
2017/05/12	13:09:05	1.6917	51.403	86.092
2017/05/12	13:09:35	1.7000	51.392	85.712
2017/05/12	13:10:05	1.7083	50.900	84.758
POOH Gradient: 500.000 ft				
2017/05/12	13:10:30	1.7153	50.657	83.223
2017/05/12	13:10:35	1.7167	50.611	82.940
2017/05/12	13:11:05	1.7250	50.603	81.979
2017/05/12	13:11:35	1.7333	50.631	81.435
2017/05/12	13:12:05	1.7417	50.683	80.996
2017/05/12	13:12:35	1.7500	50.690	80.593
2017/05/12	13:13:05	1.7583	50.710	80.208
2017/05/12	13:13:35	1.7667	50.716	79.848
2017/05/12	13:14:05	1.7750	50.732	79.488
2017/05/12	13:14:35	1.7833	50.714	79.138
2017/05/12	13:15:05	1.7917	50.738	78.805
2017/05/12	13:15:35	1.8000	50.672	78.472
2017/05/12	13:16:05	1.8083	50.250	77.203
2017/05/12	13:16:35	1.8167	49.996	75.497
POOH Gradient: 0.000 ft				
2017/05/12	13:16:40	1.8181	49.918	75.270
2017/05/12	13:17:05	1.8250	49.963	74.620
2017/05/12	13:17:35	1.8333	49.981	74.311
2017/05/12	13:18:05	1.8417	49.977	74.140
2017/05/12	13:18:35	1.8500	49.982	74.010
2017/05/12	13:19:05	1.8583	49.984	73.904
2017/05/12	13:19:35	1.8667	49.986	73.809
2017/05/12	13:20:05	1.8750	49.990	73.720
2017/05/12	13:20:35	1.8833	49.997	73.630
2017/05/12	13:21:05	1.8917	49.997	73.546
2017/05/12	13:21:35	1.9000	50.000	73.465
2017/05/12	13:22:05	1.9083	49.990	73.441
2017/05/12	13:22:35	1.9167	-2.731	73.353
2017/05/12	13:23:05	1.9250	-2.744	73.335
2017/05/12	13:23:35	1.9333	-2.751	73.310
2017/05/12	13:24:05	1.9417	-2.758	73.236