

BP

Pressure Test Report

COMPANY INFORMATION

Company Name	Hilcorp
Representative	Priscilla Shorty
Phone	
Fax	
Address	

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

WELL INFORMATION

Well Name	San Juan 32-7 Unit #211
Well Location	T32N, R7W, Sec. 35
Field and Pool	Fruitland Coal
Status (Oil, Gas, Water, Injection)	Observation
Perforated Intervals	3213-3336
Mid-point of Perforated Intervals (MPP)	
Drilling Rig Number	
Elevations	
Kelly Bushing (KB)	11
Casing Flange (CF)	
KB-CF	
Ground Level	6547
Plug Back Total Depth	3330
Total Depth	3331
Production Casing	7 to 3185
Production Tubing	2 3/8 to 3075

TEST INFORMATION

Type of Test	POOH Static Gradient
Date(s) of Test	5/16/18
Dead-weight Gauge Tubing Pressure	0
Dead-weight Gauge Casing Pressure	
Shut-in Date (Duration)	
Date / Time on Bottom	5/16/18 @0925
Date / Time off Bottom	5/16/18 @1025
Probe Serial Number	W1035
Probe Offset from End of Tool String	0-6000
Run Depth at Probe Pressure Port	3100

PRESSURE TEST RESULTS

Maximum Recorded Probe Pressure	358.8 psig
Maximum Recorded Probe Temperature	110.3 deg F
Final Buildup Pressure	
Gradient Survey Information	
Extrapolated Pressure to MPP	
Final Gradient at Depth	
Job Number	

NMOC D _____
MAY 29 2018
DISTRICT III _____

Company Name Hilcorp
Well Name San Juan 32-7 Unit #211
Type of Test POOH Static Gradient
Date(s) of Test 5/16/18



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>
-------------	--------------------	---------------	-----------------	----------------

Program Start Time
Program End Time
Total Samples Taken
Usage for this Test
Generic Data File Name

Company Name	Hilcorp
Well Name	San Juan 32-7 Unit #211
Type of Test	POOH Static Gradient
Date(s) of Test	5/16/18



COMMENTS

Reported By Expert Downhole Services, Inc.

RIH with 1.5 IB and tagged fill @ 3145 WLM. RIH with BHP gauge to 3100 for 1 hour, then POOH making 5 minute stops per request.

Company Name Hilcorp
Well Name San Juan 32-7 Unit #211
Type of Test POOH Static Gradient
Date(s) of Test 5/16/18



Pressure vs. Depth

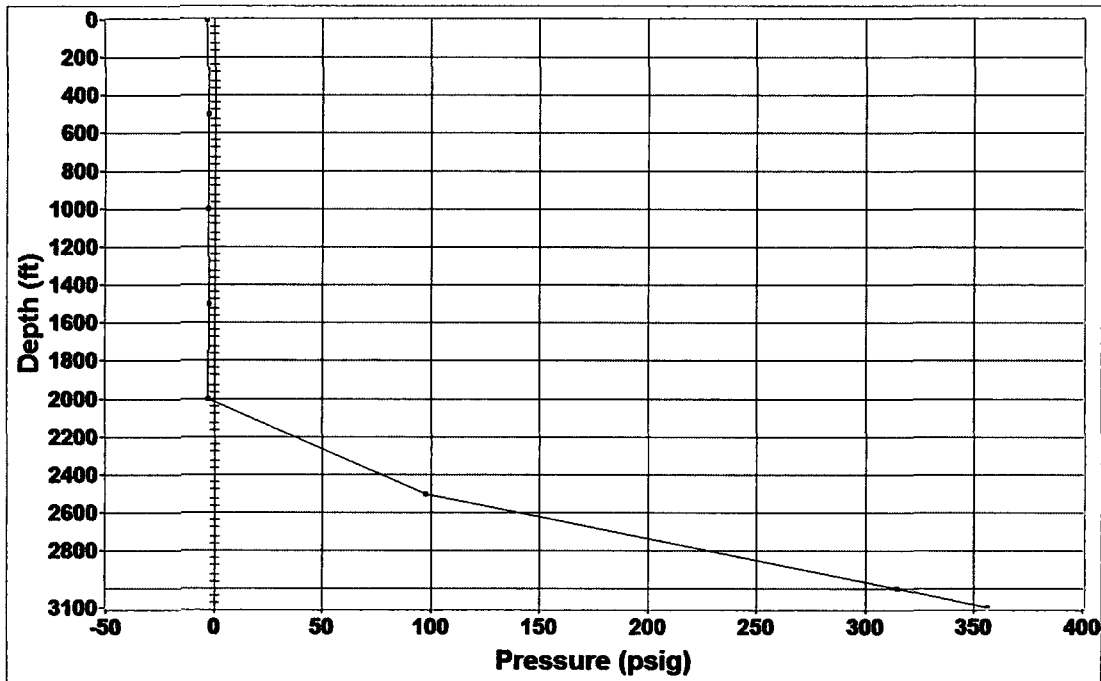
Probe Serial Number W1035

		(ft)	(psig)	(psi/ft)	(deg F)	(deg F/ft)
0925	1025	3100.000	356.216	-	101.788	-
1025	1030	3000.000	314.702	0.4151	109.747	-0.0796
1032	1037	2500.000	97.657	0.4341	100.974	0.0175
1038	1043	2000.000	-2.481	0.2003	94.672	0.0126
1044	1049	1500.000	-2.418	-0.0001	92.106	0.0051
1051	1056	1000.000	-2.682	0.0005	88.678	0.0069
1057	1102	500.000	-2.837	0.0003	85.134	0.0071
1103	1108	0.000	-2.962	0.0003	80.742	0.0088

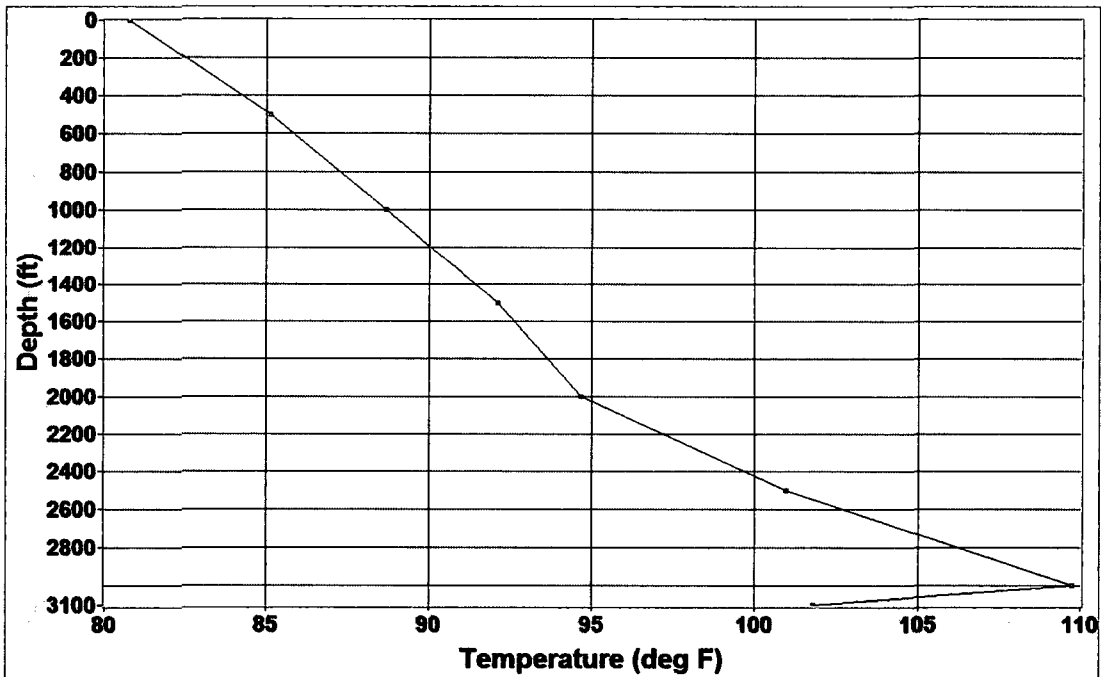
Extrapolated to MPP:

(ft)	(psig)	(deg F)
0.000		

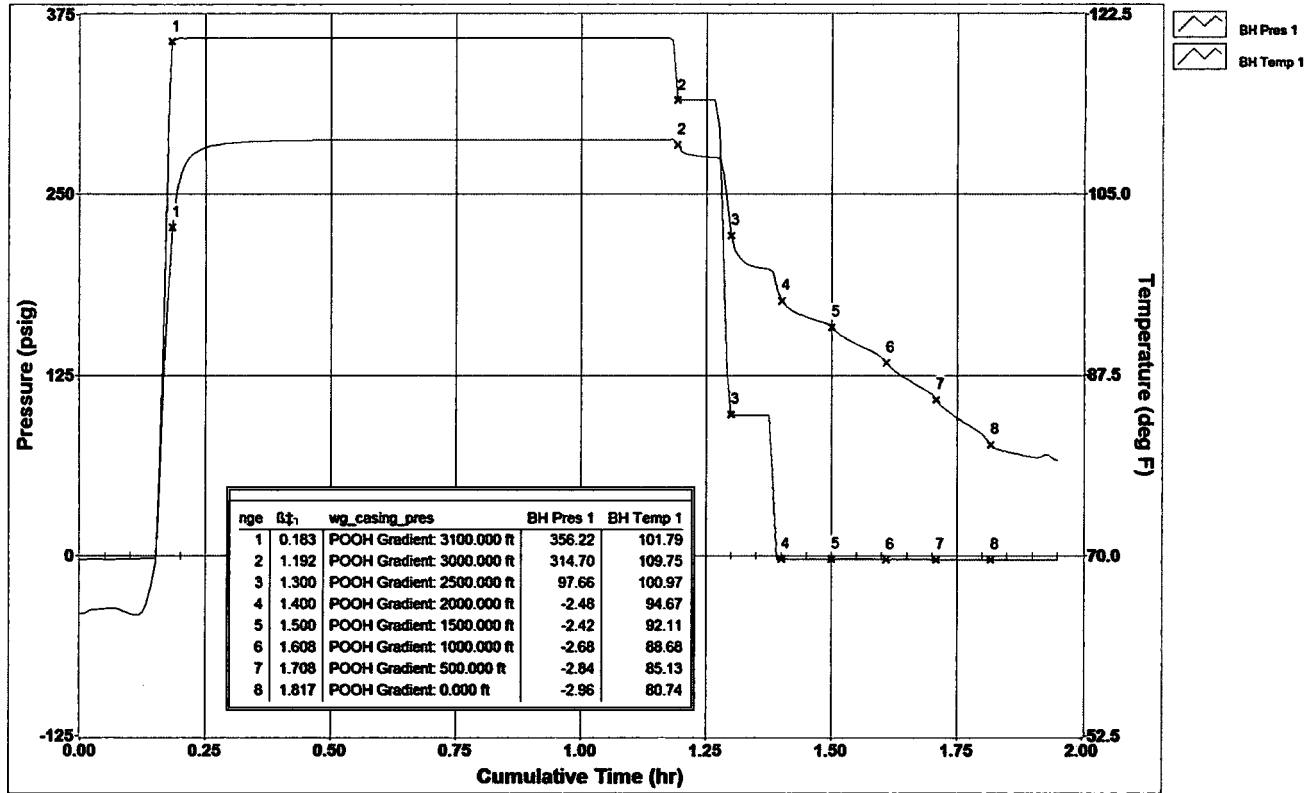
W1035 Depth vs. Pressure



W1035 Depth vs. Temperature



San Juan 32-7 Unit #211



Company Name Hilcorp
Well Name San Juan 32-7 Unit #211
Type of Test POOH Static Gradient
Date(s) of Test 5/16/18



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/16	09:14:32	0.0000	-3.000	64.368
2018/05/16	09:15:02	0.0083	-2.778	64.405
2018/05/16	09:15:32	0.0167	-2.637	64.632
2018/05/16	09:16:02	0.0250	-2.672	64.785
2018/05/16	09:16:32	0.0333	-2.671	64.783
2018/05/16	09:17:02	0.0417	-2.672	64.800
2018/05/16	09:17:32	0.0500	-2.681	64.846
2018/05/16	09:18:02	0.0583	-2.691	64.875
2018/05/16	09:18:32	0.0667	-2.699	64.918
2018/05/16	09:19:02	0.0750	-2.655	64.823
2018/05/16	09:19:32	0.0833	-2.614	64.663
2018/05/16	09:20:02	0.0917	-2.566	64.481
2018/05/16	09:20:32	0.1000	-2.525	64.326
2018/05/16	09:21:02	0.1083	-2.455	64.236
2018/05/16	09:21:32	0.1167	-2.306	64.267
2018/05/16	09:22:02	0.1250	-2.133	64.585
2018/05/16	09:22:32	0.1333	-2.018	65.458
2018/05/16	09:23:02	0.1417	-1.876	67.145
2018/05/16	09:23:32	0.1500	-1.694	69.422
2018/05/16	09:24:02	0.1583	66.451	78.366
2018/05/16	09:24:32	0.1667	168.573	88.315
2018/05/16	09:25:02	0.1750	287.386	95.398
POOH Gradient: 3100.000 ft				
2018/05/16	09:25:32	0.1833	356.216	101.788
2018/05/16	09:26:02	0.1917	358.190	105.363
2018/05/16	09:26:32	0.2000	358.573	106.970
2018/05/16	09:27:02	0.2083	358.413	107.883
2018/05/16	09:27:32	0.2167	358.547	108.448
2018/05/16	09:28:02	0.2250	358.581	108.842
2018/05/16	09:28:32	0.2333	358.649	109.134
2018/05/16	09:29:02	0.2417	358.681	109.353
2018/05/16	09:29:32	0.2500	358.694	109.508
2018/05/16	09:30:02	0.2583	358.719	109.620
2018/05/16	09:30:32	0.2667	358.736	109.706
2018/05/16	09:31:02	0.2750	358.744	109.762
2018/05/16	09:31:32	0.2833	358.758	109.832
2018/05/16	09:32:02	0.2917	358.755	109.886
2018/05/16	09:32:32	0.3000	358.760	109.927
2018/05/16	09:33:02	0.3083	358.689	109.962
2018/05/16	09:33:32	0.3167	358.696	110.003
2018/05/16	09:34:02	0.3250	358.668	110.035
2018/05/16	09:34:32	0.3333	358.669	110.053
2018/05/16	09:35:02	0.3417	358.674	110.084
2018/05/16	09:35:32	0.3500	358.673	110.095
2018/05/16	09:36:02	0.3583	358.673	110.107
2018/05/16	09:36:32	0.3667	358.674	110.124
2018/05/16	09:37:02	0.3750	358.674	110.134
2018/05/16	09:37:32	0.3833	358.674	110.147
2018/05/16	09:38:02	0.3917	358.671	110.149
2018/05/16	09:38:32	0.4000	358.673	110.158
2018/05/16	09:39:02	0.4083	358.672	110.165
2018/05/16	09:39:32	0.4167	358.679	110.179
2018/05/16	09:40:02	0.4250	358.677	110.172
2018/05/16	09:40:32	0.4333	358.676	110.179

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/16	09:41:02	0.4417	358.674	110.183
2018/05/16	09:41:32	0.4500	358.673	110.192
2018/05/16	09:42:02	0.4583	358.672	110.201
2018/05/16	09:42:32	0.4667	358.673	110.206
2018/05/16	09:43:02	0.4750	358.673	110.206
2018/05/16	09:43:32	0.4833	358.675	110.215
2018/05/16	09:44:02	0.4917	358.673	110.221
2018/05/16	09:44:32	0.5000	358.676	110.219
2018/05/16	09:45:02	0.5083	358.674	110.221
2018/05/16	09:45:32	0.5167	358.674	110.224
2018/05/16	09:46:02	0.5250	358.675	110.226
2018/05/16	09:46:32	0.5333	358.673	110.230
2018/05/16	09:47:02	0.5417	358.677	110.237
2018/05/16	09:47:32	0.5500	358.676	110.232
2018/05/16	09:48:02	0.5583	358.674	110.235
2018/05/16	09:48:32	0.5667	358.674	110.233
2018/05/16	09:49:02	0.5750	358.673	110.232
2018/05/16	09:49:32	0.5833	358.674	110.233
2018/05/16	09:50:02	0.5917	358.672	110.241
2018/05/16	09:50:32	0.6000	358.669	110.239
2018/05/16	09:51:02	0.6083	358.667	110.244
2018/05/16	09:51:32	0.6167	358.663	110.241
2018/05/16	09:52:02	0.6250	358.663	110.237
2018/05/16	09:52:32	0.6333	358.661	110.244
2018/05/16	09:53:02	0.6417	358.659	110.250
2018/05/16	09:53:32	0.6500	358.653	110.250
2018/05/16	09:54:02	0.6583	358.649	110.246
2018/05/16	09:54:32	0.6667	358.649	110.246
2018/05/16	09:55:02	0.6750	358.654	110.250
2018/05/16	09:55:32	0.6833	358.657	110.253
2018/05/16	09:56:02	0.6917	358.659	110.246
2018/05/16	09:56:32	0.7000	358.661	110.242
2018/05/16	09:57:02	0.7083	358.659	110.248
2018/05/16	09:57:32	0.7167	358.656	110.250
2018/05/16	09:58:02	0.7250	358.652	110.244
2018/05/16	09:58:32	0.7333	358.656	110.248
2018/05/16	09:59:02	0.7417	358.658	110.244
2018/05/16	09:59:32	0.7500	358.656	110.248
2018/05/16	10:00:02	0.7583	358.652	110.246
2018/05/16	10:00:32	0.7667	358.655	110.259
2018/05/16	10:01:02	0.7750	358.658	110.257
2018/05/16	10:01:32	0.7833	358.661	110.257
2018/05/16	10:02:02	0.7917	358.662	110.259
2018/05/16	10:02:32	0.8000	358.661	110.259
2018/05/16	10:03:02	0.8083	358.664	110.257
2018/05/16	10:03:32	0.8167	358.661	110.257
2018/05/16	10:04:02	0.8250	358.657	110.253
2018/05/16	10:04:32	0.8333	358.656	110.260
2018/05/16	10:05:02	0.8417	358.655	110.255
2018/05/16	10:05:32	0.8500	358.659	110.259
2018/05/16	10:06:02	0.8583	358.655	110.259
2018/05/16	10:06:32	0.8667	358.653	110.262
2018/05/16	10:07:02	0.8750	358.649	110.259
2018/05/16	10:07:32	0.8833	358.653	110.260

Company Name Hilcorp
Well Name San Juan 32-7 Unit #211
Type of Test POOH Static Gradient
Date(s) of Test 5/16/18



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/16	10:08:02	0.8917	358.650	110.260
2018/05/16	10:08:32	0.9000	358.649	110.257
2018/05/16	10:09:02	0.9083	358.651	110.266
2018/05/16	10:09:32	0.9167	358.648	110.266
2018/05/16	10:10:02	0.9250	358.652	110.268
2018/05/16	10:10:32	0.9333	358.648	110.266
2018/05/16	10:11:02	0.9417	358.645	110.266
2018/05/16	10:11:32	0.9500	358.642	110.264
2018/05/16	10:12:02	0.9583	358.639	110.266
2018/05/16	10:12:32	0.9667	358.636	110.264
2018/05/16	10:13:02	0.9750	358.632	110.262
2018/05/16	10:13:32	0.9833	358.629	110.262
2018/05/16	10:14:02	0.9917	358.627	110.264
2018/05/16	10:14:32	1.0000	358.626	110.262
2018/05/16	10:15:02	1.0083	358.626	110.262
2018/05/16	10:15:32	1.0167	358.629	110.260
2018/05/16	10:16:02	1.0250	358.633	110.266
2018/05/16	10:16:32	1.0333	358.628	110.259
2018/05/16	10:17:02	1.0417	358.632	110.262
2018/05/16	10:17:32	1.0500	358.635	110.262
2018/05/16	10:18:02	1.0583	358.637	110.257
2018/05/16	10:18:32	1.0667	358.639	110.264
2018/05/16	10:19:02	1.0750	358.639	110.264
2018/05/16	10:19:32	1.0833	358.638	110.262
2018/05/16	10:20:02	1.0917	358.641	110.262
2018/05/16	10:20:32	1.1000	358.641	110.262
2018/05/16	10:21:02	1.1083	358.639	110.266
2018/05/16	10:21:32	1.1167	358.635	110.262
2018/05/16	10:22:02	1.1250	358.638	110.262
2018/05/16	10:22:32	1.1333	358.640	110.259
2018/05/16	10:23:02	1.1417	358.639	110.266
2018/05/16	10:23:32	1.1500	358.636	110.266
2018/05/16	10:24:02	1.1583	358.634	110.268
2018/05/16	10:24:32	1.1667	358.636	110.266
2018/05/16	10:25:02	1.1750	358.635	110.262
2018/05/16	10:25:32	1.1833	356.814	110.271
POOH Gradient: 3000.000 ft				
2018/05/16	10:26:02	1.1917	314.702	109.747
2018/05/16	10:26:32	1.2000	314.749	109.112
2018/05/16	10:27:02	1.2083	314.740	108.889
2018/05/16	10:27:32	1.2167	314.721	108.786
2018/05/16	10:28:02	1.2250	314.707	108.712
2018/05/16	10:28:32	1.2333	314.700	108.658
2018/05/16	10:29:02	1.2417	314.695	108.619
2018/05/16	10:29:32	1.2500	314.691	108.583
2018/05/16	10:30:02	1.2583	314.689	108.554
2018/05/16	10:30:32	1.2667	314.685	108.532
2018/05/16	10:31:02	1.2750	294.946	108.498
2018/05/16	10:31:32	1.2833	211.808	107.173
2018/05/16	10:32:02	1.2917	126.269	104.196
POOH Gradient: 2500.000 ft				
2018/05/16	10:32:32	1.3000	97.657	100.974
2018/05/16	10:33:02	1.3083	97.250	99.475
2018/05/16	10:33:32	1.3167	97.313	98.791

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/16	10:34:02	1.3250	97.361	98.425
2018/05/16	10:34:32	1.3333	97.384	98.195
2018/05/16	10:35:02	1.3417	97.401	98.035
2018/05/16	10:35:32	1.3500	97.415	97.912
2018/05/16	10:36:02	1.3583	97.424	97.817
2018/05/16	10:36:32	1.3667	97.433	97.749
2018/05/16	10:37:02	1.3750	97.442	97.684
2018/05/16	10:37:32	1.3833	50.454	97.471
2018/05/16	10:38:02	1.3917	-2.346	95.783
POOH Gradient: 2000.000 ft				
2018/05/16	10:38:32	1.4000	-2.481	94.672
2018/05/16	10:39:02	1.4083	-2.388	94.161
2018/05/16	10:39:32	1.4167	-2.334	93.848
2018/05/16	10:40:02	1.4250	-2.425	93.616
2018/05/16	10:40:32	1.4333	-2.385	93.421
2018/05/16	10:41:02	1.4417	-2.371	93.249
2018/05/16	10:41:32	1.4500	-2.340	93.094
2018/05/16	10:42:02	1.4583	-2.313	92.946
2018/05/16	10:42:32	1.4667	-2.344	92.818
2018/05/16	10:43:02	1.4750	-2.374	92.685
2018/05/16	10:43:32	1.4833	-2.361	92.572
2018/05/16	10:44:02	1.4917	-2.413	92.419
POOH Gradient: 1500.000 ft				
2018/05/16	10:44:32	1.5000	-2.418	92.106
2018/05/16	10:45:02	1.5083	-2.527	91.692
2018/05/16	10:45:32	1.5167	-2.494	91.371
2018/05/16	10:46:02	1.5250	-2.510	91.112
2018/05/16	10:46:32	1.5333	-2.487	90.885
2018/05/16	10:47:02	1.5417	-2.496	90.660
2018/05/16	10:47:32	1.5500	-2.453	90.444
2018/05/16	10:48:02	1.5583	-2.426	90.243
2018/05/16	10:48:32	1.5667	-2.482	90.046
2018/05/16	10:49:02	1.5750	-2.439	89.852
2018/05/16	10:49:32	1.5833	-2.404	89.668
2018/05/16	10:50:02	1.5917	-2.486	89.483
2018/05/16	10:50:32	1.6000	-2.623	89.148
POOH Gradient: 1000.000 ft				
2018/05/16	10:51:02	1.6083	-2.682	88.678
2018/05/16	10:51:32	1.6167	-2.694	88.237
2018/05/16	10:52:02	1.6250	-2.640	87.919
2018/05/16	10:52:32	1.6333	-2.688	87.638
2018/05/16	10:53:02	1.6417	-2.627	87.368
2018/05/16	10:53:32	1.6500	-2.597	87.109
2018/05/16	10:54:02	1.6583	-2.659	86.862
2018/05/16	10:54:32	1.6667	-2.611	86.623
2018/05/16	10:55:02	1.6750	-2.562	86.385
2018/05/16	10:55:32	1.6833	-2.645	86.158
2018/05/16	10:56:02	1.6917	-2.596	85.926
2018/05/16	10:56:32	1.7000	-2.700	85.627
POOH Gradient: 500.000 ft				
2018/05/16	10:57:02	1.7083	-2.837	85.134
2018/05/16	10:57:32	1.7167	-2.839	84.610
2018/05/16	10:58:02	1.7250	-2.859	84.250
2018/05/16	10:58:32	1.7333	-2.791	83.941

Company Name I
Well Name San Juan 32-7 Unit #211
Type of Test POOH Static Gradient
Date(s) of Test 5/16/18



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/16	10:59:02	1.7417	-2.766	83.644
2018/05/16	10:59:32	1.7500	-2.759	83.361
2018/05/16	11:00:02	1.7583	-2.756	83.082
2018/05/16	11:00:32	1.7667	-2.700	82.816
2018/05/16	11:01:02	1.7750	-2.746	82.558
2018/05/16	11:01:32	1.7833	-2.753	82.301
2018/05/16	11:02:02	1.7917	-2.711	82.058
2018/05/16	11:02:32	1.8000	-2.842	81.790
2018/05/16	11:03:02	1.8083	-2.910	81.309
POOH Gradient: 0.000 ft				
2018/05/16	11:03:32	1.8167	-2.962	80.742
2018/05/16	11:04:02	1.8250	-2.966	80.415
2018/05/16	11:04:32	1.8333	-2.979	80.271
2018/05/16	11:05:02	1.8417	-2.957	80.161
2018/05/16	11:05:32	1.8500	-2.939	80.073
2018/05/16	11:06:02	1.8583	-2.937	79.977
2018/05/16	11:06:32	1.8667	-2.920	79.893
2018/05/16	11:07:02	1.8750	-2.902	79.806
2018/05/16	11:07:32	1.8833	-2.885	79.720
2018/05/16	11:08:02	1.8917	-2.938	79.635
2018/05/16	11:08:32	1.9000	-2.919	79.543
2018/05/16	11:09:02	1.9083	-2.910	79.491
2018/05/16	11:09:32	1.9167	-2.939	79.603
2018/05/16	11:10:02	1.9250	-2.976	79.772
2018/05/16	11:10:32	1.9333	-2.969	79.756
2018/05/16	11:11:02	1.9417	-2.880	79.363