

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	QUINN #1 POW
Well Location	T31N, R8W, SEC. 17
Field and Pool	BASIN FRUITLAND COAL
Status (Oil, Gas, Water, Injection)	OBSERVATION
Perforated Intervals	
Mid-point of Perforated Intervals (MPP)	
Drilling Rig Number	
Elevations	
Kelly Bushing (KB)	12
Casing Flange (CF)	
KB-CF	
Ground Level	6438
Plug Back Total Depth	3571
Total Depth	3617
Production Casing	4 1/2 TO 3615
Production Tubing	1 1/2 TO 3240

TEST INFORMATION

Type of Test	POOH STATIC GRADIENT
Date(s) of Test	5/9/19
Dead-weight Gauge Tubing Pressure	25
Dead-weight Gauge Casing Pressure	
Shut-in Date (Duration)	
Date / Time on Bottom	5/9/19 @1257
Date / Time off Bottom	5/9/19 @1357
Probe Serial Number	1032
Probe Offset from End of Tool String	0-6000
Run Depth at Probe Pressure Port	3500

PRESSURE TEST RESULTS

Maximum Recorded Probe Pressure	140.5 psig
Maximum Recorded Probe Temperature	130.8 deg F
Final Buildup Pressure	
Gradient Survey Information	
Extrapolated Pressure to MPP	
Final Gradient at Depth	
Job Number	

NMOCD

MAY 14 2019

DISTRICT III

Company Name HILCORP
Well Name QUINN #1 POW
Type of Test POOH STATIC GRADIENT
Date(s) of Test 5/9/19



PROBE INFORMATION

Probe Serial Number 1032
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	HILCORP
Well Name	QUINN #1 POW
Type of Test	POOH STATIC GRADIENT
Date(s) of Test	5/9/19



COMMENTS

Reported By

EXPERT DOWNHOLE SERVICES, INC.

RIH WITH 1.25 IMPRESSION BLOCK AND TAGGED FILL @3549 WLM. RIH WITH BHP GAUGE TO 3500 FOR 1 HOUR, THEN POOH MAKING 5 MINUTE STOPS PER REQUEST.

Company Name HILCORP
 Well Name QUINN #1 POW
 Type of Test POOH STATIC GRADIENT
 Date(s) of Test 5/9/19



Pressure vs. Depth

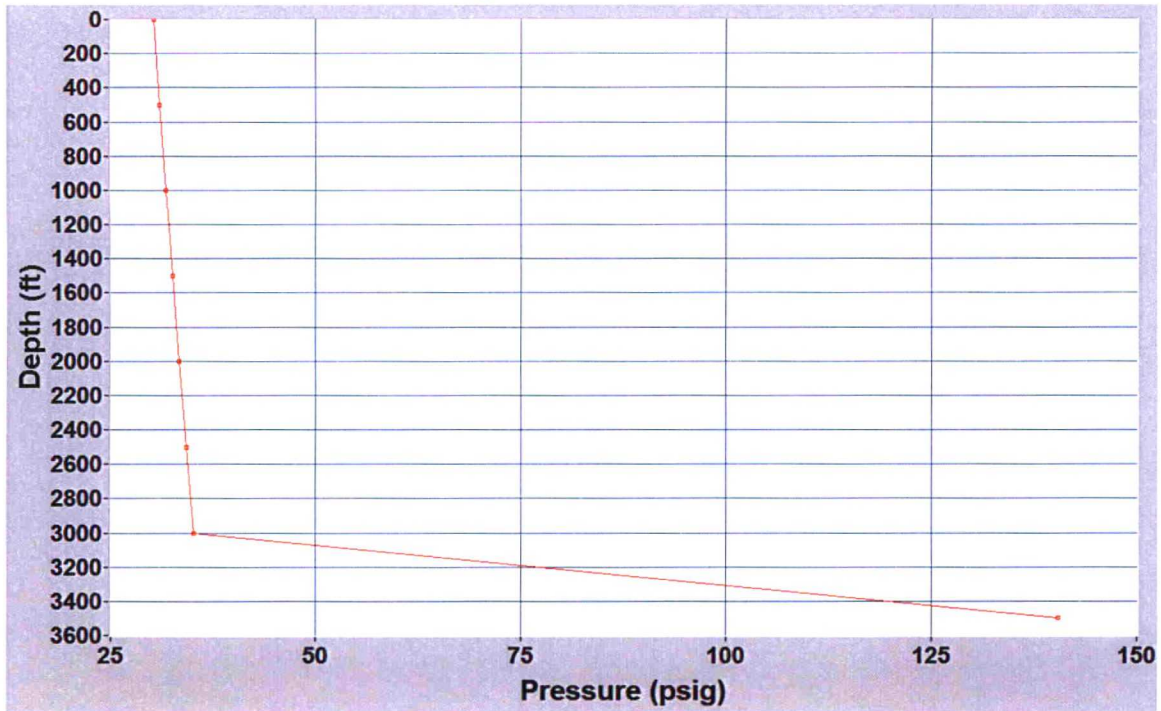
Probe Serial Number 1032

		(ft)	(psig)	(psi/ft)	(deg F)	(deg F/ft)
1257	1357	3500.000	140.418	-	122.396	-
1358	1403	3000.000	35.082	0.2107	123.476	-0.0022
1404	1409	2500.000	34.261	0.0016	115.592	0.0158
1410	1415	2000.000	33.305	0.0019	105.890	0.0194
1416	1421	1500.000	32.504	0.0016	96.926	0.0179
1423	1428	1000.000	31.731	0.0015	87.602	0.0186
1429	1434	500.000	30.999	0.0015	78.296	0.0186
1435	1440	0.000	30.330	0.0013	69.602	0.0174

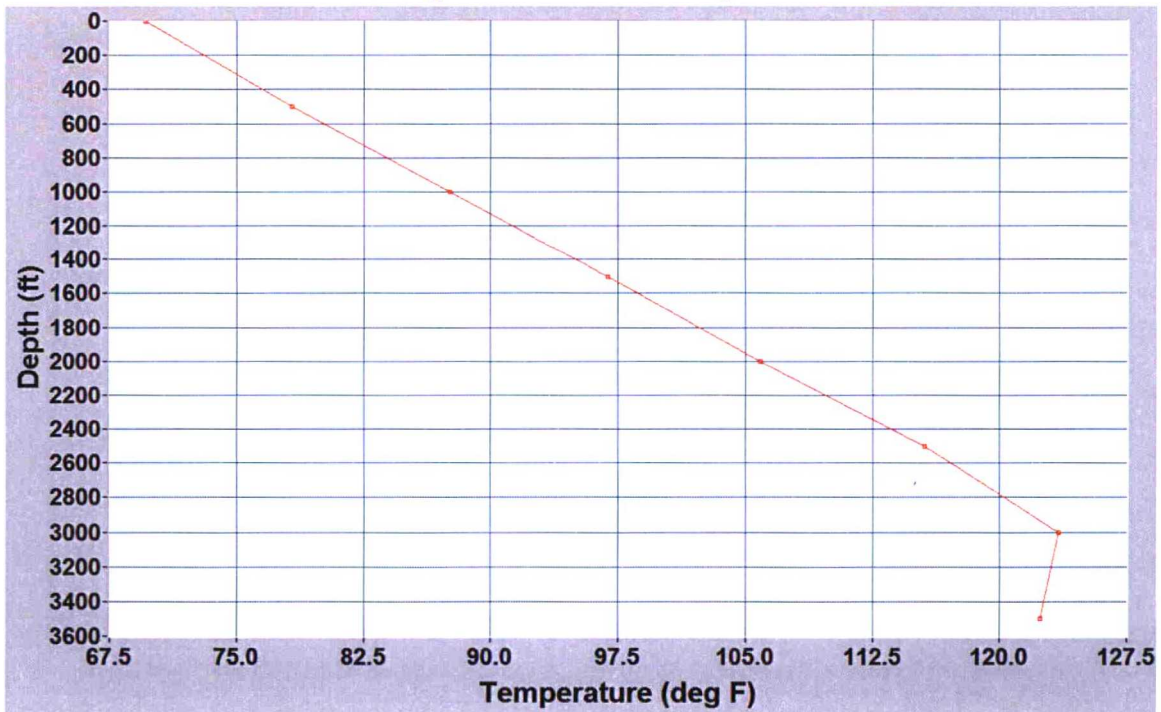
Extrapolated to MPP:

(ft)	(psig)	(deg F)
0.000		

1032 Depth vs. Pressure



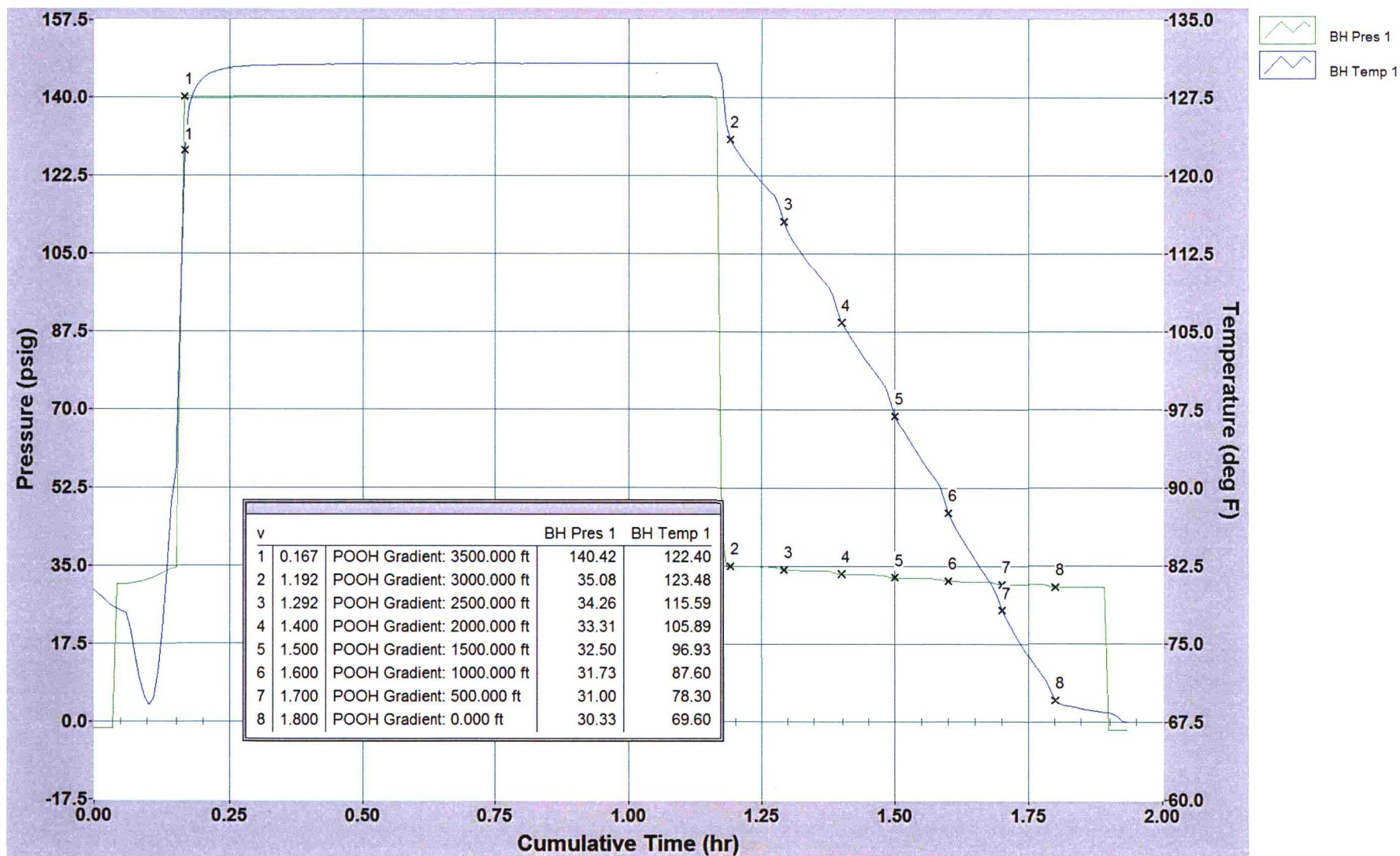
1032 Depth vs. Temperature



Company Name HILCORP
 Well Name QUINN #1 POW
 Type of Test POOH STATIC GRADIENT
 Date(s) of Test 5/9/19



QUINN #1 POW



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2019/05/09	12:47:04	0.0000	-1.530	80.168
2019/05/09	12:47:34	0.0083	-1.553	79.772
2019/05/09	12:48:04	0.0167	-1.571	79.412
2019/05/09	12:48:34	0.0250	-1.566	79.016
2019/05/09	12:49:04	0.0333	-1.595	78.566
2019/05/09	12:49:34	0.0417	31.009	78.386
2019/05/09	12:50:04	0.0500	30.893	78.206
2019/05/09	12:50:34	0.0583	30.922	78.026
2019/05/09	12:51:04	0.0667	31.096	76.478
2019/05/09	12:51:34	0.0750	31.257	74.030
2019/05/09	12:52:04	0.0833	31.470	71.708
2019/05/09	12:52:34	0.0917	31.734	69.962
2019/05/09	12:53:04	0.1000	32.059	69.152
2019/05/09	12:53:34	0.1083	32.449	69.764
2019/05/09	12:54:04	0.1167	32.900	72.212
2019/05/09	12:54:34	0.1250	33.393	76.406
2019/05/09	12:55:04	0.1333	33.920	82.166
2019/05/09	12:55:34	0.1417	34.328	88.556
2019/05/09	12:56:04	0.1500	34.615	91.994
2019/05/09	12:56:34	0.1583	89.894	107.780
POOH Gradient: 3500.000 ft				
2019/05/09	12:57:04	0.1667	140.418	122.396
2019/05/09	12:57:34	0.1750	140.475	126.698
2019/05/09	12:58:04	0.1833	140.443	128.066
2019/05/09	12:58:34	0.1917	140.443	128.840
2019/05/09	12:59:04	0.2000	140.412	129.380
2019/05/09	12:59:34	0.2083	140.411	129.740
2019/05/09	13:00:04	0.2167	140.408	129.974
2019/05/09	13:00:34	0.2250	140.395	130.118
2019/05/09	13:01:04	0.2333	140.415	130.226
2019/05/09	13:01:34	0.2417	140.399	130.334
2019/05/09	13:02:04	0.2500	140.389	130.388
2019/05/09	13:02:34	0.2583	140.386	130.424
2019/05/09	13:03:04	0.2667	140.389	130.478
2019/05/09	13:03:34	0.2750	140.378	130.496
2019/05/09	13:04:04	0.2833	140.386	130.532
2019/05/09	13:04:34	0.2917	140.376	130.568
2019/05/09	13:05:04	0.3000	140.391	130.586
2019/05/09	13:05:34	0.3083	140.391	130.604
2019/05/09	13:06:04	0.3167	140.354	130.604
2019/05/09	13:06:34	0.3250	140.375	130.622
2019/05/09	13:07:04	0.3333	140.368	130.622
2019/05/09	13:07:34	0.3417	140.354	130.640
2019/05/09	13:08:04	0.3500	140.375	130.658
2019/05/09	13:08:34	0.3583	140.368	130.658
2019/05/09	13:09:04	0.3667	140.369	130.676
2019/05/09	13:09:34	0.3750	140.363	130.676
2019/05/09	13:10:04	0.3833	140.366	130.658
2019/05/09	13:10:34	0.3917	140.359	130.676
2019/05/09	13:11:04	0.4000	140.356	130.676
2019/05/09	13:11:34	0.4083	140.366	130.694
2019/05/09	13:12:04	0.4167	140.337	130.694
2019/05/09	13:12:34	0.4250	140.362	130.694
2019/05/09	13:13:04	0.4333	140.360	130.712

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2019/05/09	13:13:34	0.4417	140.357	130.694
2019/05/09	13:14:04	0.4500	140.334	130.712
2019/05/09	13:14:34	0.4583	140.368	130.730
2019/05/09	13:15:04	0.4667	140.370	130.730
2019/05/09	13:15:34	0.4750	140.356	130.730
2019/05/09	13:16:04	0.4833	140.344	130.730
2019/05/09	13:16:34	0.4917	140.350	130.730
2019/05/09	13:17:04	0.5000	140.360	130.730
2019/05/09	13:17:34	0.5083	140.340	130.730
2019/05/09	13:18:04	0.5167	140.352	130.730
2019/05/09	13:18:34	0.5250	140.331	130.748
2019/05/09	13:19:04	0.5333	140.344	130.748
2019/05/09	13:19:34	0.5417	140.343	130.748
2019/05/09	13:20:04	0.5500	140.347	130.748
2019/05/09	13:20:34	0.5583	140.336	130.748
2019/05/09	13:21:04	0.5667	140.344	130.748
2019/05/09	13:21:34	0.5750	140.327	130.748
2019/05/09	13:22:04	0.5833	140.336	130.766
2019/05/09	13:22:34	0.5917	140.344	130.766
2019/05/09	13:23:04	0.6000	140.339	130.766
2019/05/09	13:23:34	0.6083	140.336	130.766
2019/05/09	13:24:04	0.6167	140.314	130.766
2019/05/09	13:24:34	0.6250	140.350	130.766
2019/05/09	13:25:04	0.6333	140.330	130.766
2019/05/09	13:25:34	0.6417	140.325	130.766
2019/05/09	13:26:04	0.6500	140.328	130.766
2019/05/09	13:26:34	0.6583	140.331	130.766
2019/05/09	13:27:04	0.6667	140.331	130.766
2019/05/09	13:27:34	0.6750	140.333	130.784
2019/05/09	13:28:04	0.6833	140.327	130.766
2019/05/09	13:28:34	0.6917	140.327	130.766
2019/05/09	13:29:04	0.7000	140.299	130.784
2019/05/09	13:29:34	0.7083	140.295	130.766
2019/05/09	13:30:04	0.7167	140.320	130.784
2019/05/09	13:30:34	0.7250	140.327	130.784
2019/05/09	13:31:04	0.7333	140.318	130.784
2019/05/09	13:31:34	0.7417	140.320	130.784
2019/05/09	13:32:04	0.7500	140.311	130.784
2019/05/09	13:32:34	0.7583	140.347	130.784
2019/05/09	13:33:04	0.7667	140.317	130.784
2019/05/09	13:33:34	0.7750	140.340	130.784
2019/05/09	13:34:04	0.7833	140.339	130.784
2019/05/09	13:34:34	0.7917	140.346	130.784
2019/05/09	13:35:04	0.8000	140.357	130.766
2019/05/09	13:35:34	0.8083	140.321	130.784
2019/05/09	13:36:04	0.8167	140.321	130.784
2019/05/09	13:36:34	0.8250	140.320	130.784
2019/05/09	13:37:04	0.8333	140.339	130.784
2019/05/09	13:37:34	0.8417	140.315	130.784
2019/05/09	13:38:04	0.8500	140.331	130.784
2019/05/09	13:38:34	0.8583	140.333	130.784
2019/05/09	13:39:04	0.8667	140.324	130.784
2019/05/09	13:39:34	0.8750	140.330	130.784
2019/05/09	13:40:04	0.8833	140.321	130.784

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2019/05/09	13:40:34	0.8917	140.321	130.784
2019/05/09	13:41:04	0.9000	140.307	130.802
2019/05/09	13:41:34	0.9083	140.305	130.784
2019/05/09	13:42:04	0.9167	140.310	130.802
2019/05/09	13:42:34	0.9250	140.302	130.802
2019/05/09	13:43:04	0.9333	140.311	130.802
2019/05/09	13:43:34	0.9417	140.317	130.802
2019/05/09	13:44:04	0.9500	140.323	130.802
2019/05/09	13:44:34	0.9583	140.320	130.784
2019/05/09	13:45:04	0.9667	140.311	130.802
2019/05/09	13:45:34	0.9750	140.341	130.802
2019/05/09	13:46:04	0.9833	140.318	130.802
2019/05/09	13:46:34	0.9917	140.305	130.802
2019/05/09	13:47:04	1.0000	140.307	130.802
2019/05/09	13:47:34	1.0083	140.296	130.802
2019/05/09	13:48:04	1.0167	140.323	130.802
2019/05/09	13:48:34	1.0250	140.315	130.802
2019/05/09	13:49:04	1.0333	140.320	130.802
2019/05/09	13:49:34	1.0417	140.301	130.802
2019/05/09	13:50:04	1.0500	140.311	130.802
2019/05/09	13:50:34	1.0583	140.321	130.802
2019/05/09	13:51:04	1.0667	140.291	130.802
2019/05/09	13:51:34	1.0750	140.320	130.802
2019/05/09	13:52:04	1.0833	140.296	130.802
2019/05/09	13:52:34	1.0917	140.295	130.802
2019/05/09	13:53:04	1.1000	140.304	130.802
2019/05/09	13:53:34	1.1083	140.299	130.820
2019/05/09	13:54:04	1.1167	140.318	130.802
2019/05/09	13:54:34	1.1250	140.308	130.802
2019/05/09	13:55:04	1.1333	140.320	130.802
2019/05/09	13:55:34	1.1417	140.296	130.802
2019/05/09	13:56:04	1.1500	140.302	130.820
2019/05/09	13:56:34	1.1583	140.289	130.820
2019/05/09	13:57:04	1.1667	139.510	130.802
2019/05/09	13:57:34	1.1750	43.668	129.380
2019/05/09	13:58:04	1.1833	35.253	125.024
POOH Gradient: 3000.000 ft				
2019/05/09	13:58:34	1.1917	35.082	123.476
2019/05/09	13:59:04	1.2000	35.069	122.684
2019/05/09	13:59:34	1.2083	35.072	122.036
2019/05/09	14:00:04	1.2167	35.027	121.460
2019/05/09	14:00:34	1.2250	35.031	120.884
2019/05/09	14:01:04	1.2333	34.950	120.344
2019/05/09	14:01:34	1.2417	34.937	119.840
2019/05/09	14:02:04	1.2500	34.924	119.354
2019/05/09	14:02:34	1.2583	34.964	118.904
2019/05/09	14:03:04	1.2667	34.893	118.454
2019/05/09	14:03:34	1.2750	34.822	118.058
2019/05/09	14:04:04	1.2833	34.529	117.104
POOH Gradient: 2500.000 ft				
2019/05/09	14:04:34	1.2917	34.261	115.592
2019/05/09	14:05:04	1.3000	34.217	114.440
2019/05/09	14:05:34	1.3083	34.175	113.756
2019/05/09	14:06:04	1.3167	34.130	113.126

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2019/05/09	14:06:34	1.3250	34.097	112.532
2019/05/09	14:07:04	1.3333	34.094	111.956
2019/05/09	14:07:34	1.3417	34.075	111.398
2019/05/09	14:08:04	1.3500	34.056	110.858
2019/05/09	14:08:34	1.3583	33.992	110.336
2019/05/09	14:09:04	1.3667	34.013	109.832
2019/05/09	14:09:34	1.3750	33.975	109.346
2019/05/09	14:10:04	1.3833	33.752	108.554
2019/05/09	14:10:34	1.3917	33.421	107.168
POOH Gradient: 2000.000 ft				
2019/05/09	14:11:04	1.4000	33.305	105.890
2019/05/09	14:11:34	1.4083	33.272	105.152
2019/05/09	14:12:04	1.4167	33.241	104.486
2019/05/09	14:12:34	1.4250	33.232	103.838
2019/05/09	14:13:04	1.4333	33.212	103.190
2019/05/09	14:13:34	1.4417	33.189	102.578
2019/05/09	14:14:04	1.4500	33.169	101.984
2019/05/09	14:14:34	1.4583	33.157	101.408
2019/05/09	14:15:04	1.4667	33.138	100.814
2019/05/09	14:15:34	1.4750	33.128	100.256
2019/05/09	14:16:04	1.4833	32.941	99.590
2019/05/09	14:16:34	1.4917	32.648	98.294
POOH Gradient: 1500.000 ft				
2019/05/09	14:17:04	1.5000	32.504	96.926
2019/05/09	14:17:34	1.5083	32.483	96.116
2019/05/09	14:18:04	1.5167	32.457	95.414
2019/05/09	14:18:34	1.5250	32.438	94.712
2019/05/09	14:19:04	1.5333	32.419	94.046
2019/05/09	14:19:34	1.5417	32.399	93.380
2019/05/09	14:20:04	1.5500	32.380	92.714
2019/05/09	14:20:34	1.5583	32.364	92.102
2019/05/09	14:21:04	1.5667	32.345	91.490
2019/05/09	14:21:34	1.5750	32.320	90.896
2019/05/09	14:22:04	1.5833	32.159	90.248
2019/05/09	14:22:34	1.5917	31.873	89.006
POOH Gradient: 1000.000 ft				
2019/05/09	14:23:04	1.6000	31.731	87.602
2019/05/09	14:23:34	1.6083	31.705	86.738
2019/05/09	14:24:04	1.6167	31.679	85.946
2019/05/09	14:24:34	1.6250	31.662	85.208
2019/05/09	14:25:04	1.6333	31.646	84.488
2019/05/09	14:25:34	1.6417	31.631	83.804
2019/05/09	14:26:04	1.6500	31.612	83.120
2019/05/09	14:26:34	1.6583	31.599	82.472
2019/05/09	14:27:04	1.6667	31.581	81.860
2019/05/09	14:27:34	1.6750	31.567	81.248
2019/05/09	14:28:04	1.6833	31.453	80.636
2019/05/09	14:28:34	1.6917	31.156	79.574
POOH Gradient: 500.000 ft				
2019/05/09	14:29:04	1.7000	30.999	78.296
2019/05/09	14:29:34	1.7083	30.980	77.450
2019/05/09	14:30:04	1.7167	30.964	76.694
2019/05/09	14:30:34	1.7250	30.953	75.920
2019/05/09	14:31:04	1.7333	30.939	75.218

Company Name HILCORP
Well Name QUINN #1 POW
Type of Test POOH STATIC GRADIENT
Date(s) of Test 5/9/19



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2019/05/09	14:31:34	1.7417	30.922	74.534
2019/05/09	14:32:04	1.7500	30.910	73.868
2019/05/09	14:32:34	1.7583	30.902	73.238
2019/05/09	14:33:04	1.7667	30.897	72.626
2019/05/09	14:33:34	1.7750	30.880	72.032
2019/05/09	14:34:04	1.7833	30.761	71.456
2019/05/09	14:34:34	1.7917	30.503	70.520
POOH Gradient: 0.000 ft				
2019/05/09	14:35:04	1.8000	30.330	69.602
2019/05/09	14:35:34	1.8083	30.336	69.224
2019/05/09	14:36:04	1.8167	30.340	69.116
2019/05/09	14:36:34	1.8250	30.338	69.026
2019/05/09	14:37:04	1.8333	30.339	68.918
2019/05/09	14:37:34	1.8417	30.338	68.846
2019/05/09	14:38:04	1.8500	30.333	68.738
2019/05/09	14:38:34	1.8583	30.338	68.666
2019/05/09	14:39:04	1.8667	30.333	68.576
2019/05/09	14:39:34	1.8750	30.335	68.504
2019/05/09	14:40:04	1.8833	30.332	68.432
2019/05/09	14:40:34	1.8917	30.319	68.396
2019/05/09	14:41:04	1.9000	-1.878	68.360
2019/05/09	14:41:34	1.9083	-1.851	68.234
2019/05/09	14:42:04	1.9167	-1.858	68.000
2019/05/09	14:42:34	1.9250	-1.861	67.532