

QUINN 1 POW
30-045-29003

MIC

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
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

NRDCD
MAY 30 2018
DISTRICT III

TEST INFORMATION

Type of Test POOH Static Gradient
Date(s) of Test 5/17/18
Dead-weight Gauge Tubing Pressure 25
Dead-weight Gauge Casing Pressure
Shut-in Date (Duration)
Date / Time on Bottom 5/17/18 @1302
Date / Time off Bottom 5/17/18 @1402

Probe Serial Number W1036
Probe Offset from End of Tool String 0-6000
Run Depth at Probe Pressure Port 3500

PRESSURE TEST RESULTS

Maximum Recorded Probe Pressure 141.3 psig
Maximum Recorded Probe Temperature 131.0 deg F
Final Buildup Pressure
Gradient Survey Information
 Extrapolated Pressure to MPP
 Final Gradient at Depth
Job Number

MIC
NRDCD TA Expires 7-3-2018

Company Name Hilcorp
Well Name Quinn #1
Type of Test POOH Static Gradient
Date(s) of Test 5/17/18



PROBE INFORMATION

Probe Serial Number W1036
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 Hilcorp
Well Name Quinn #1
Type of Test POOH Static Gradient
Date(s) of Test 5/17/18



COMMENTS

Reported By

Expert Downhole Services, Inc.

RIH with 1.50 IB and tagged fill @3549 WLM. RIH with BHP gauge to 3500 for 1 hour, then POOH making 5 second stops per request.

Pressure vs. Depth

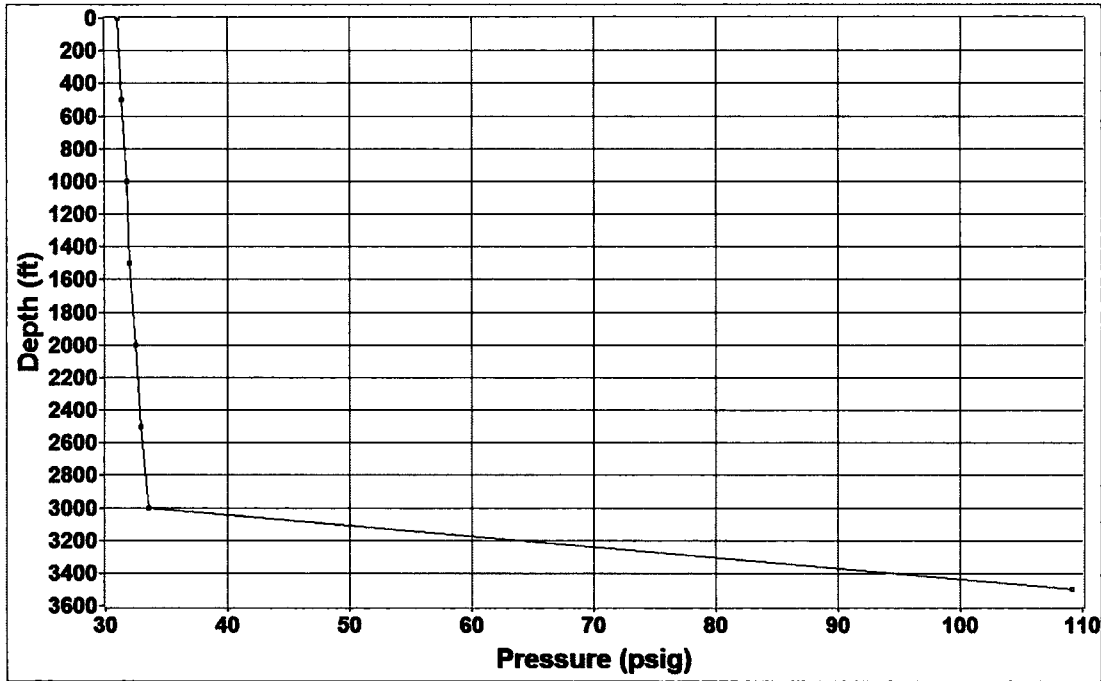
Probe Serial Number W1036

		(ft)	(psig)	(psi/ft)	(deg F)	(deg F/ft)
1302	1402	3500.000	109.164	-	96.667	-
1404	1409	3000.000	33.489	0.1513	124.662	-0.0560
1410	1415	2500.000	32.911	0.0012	115.471	0.0184
1416	1421	2000.000	32.473	0.0009	106.196	0.0186
1423	1428	1500.000	31.933	0.0011	98.152	0.0161
1429	1434	1000.000	31.738	0.0004	88.374	0.0196
1435	1440	500.000	31.281	0.0009	78.087	0.0206
1441	1446	0.000	30.989	0.0006	72.266	0.0116

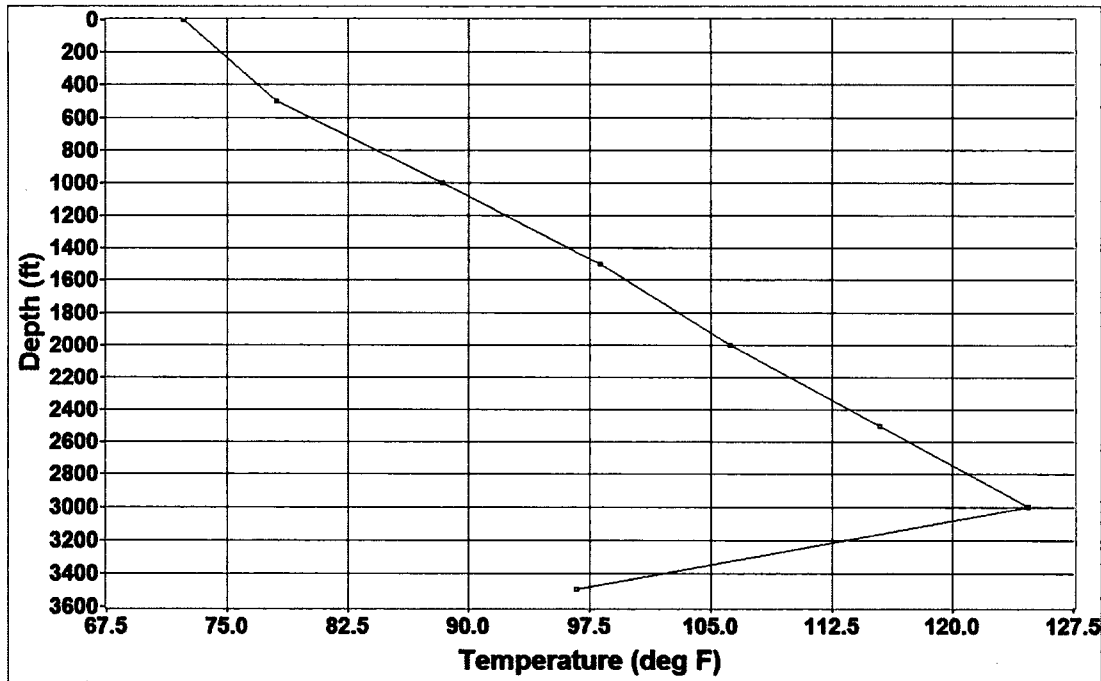
Extrapolated to MPP:

(ft)	(psig)	(deg F)
0.000		

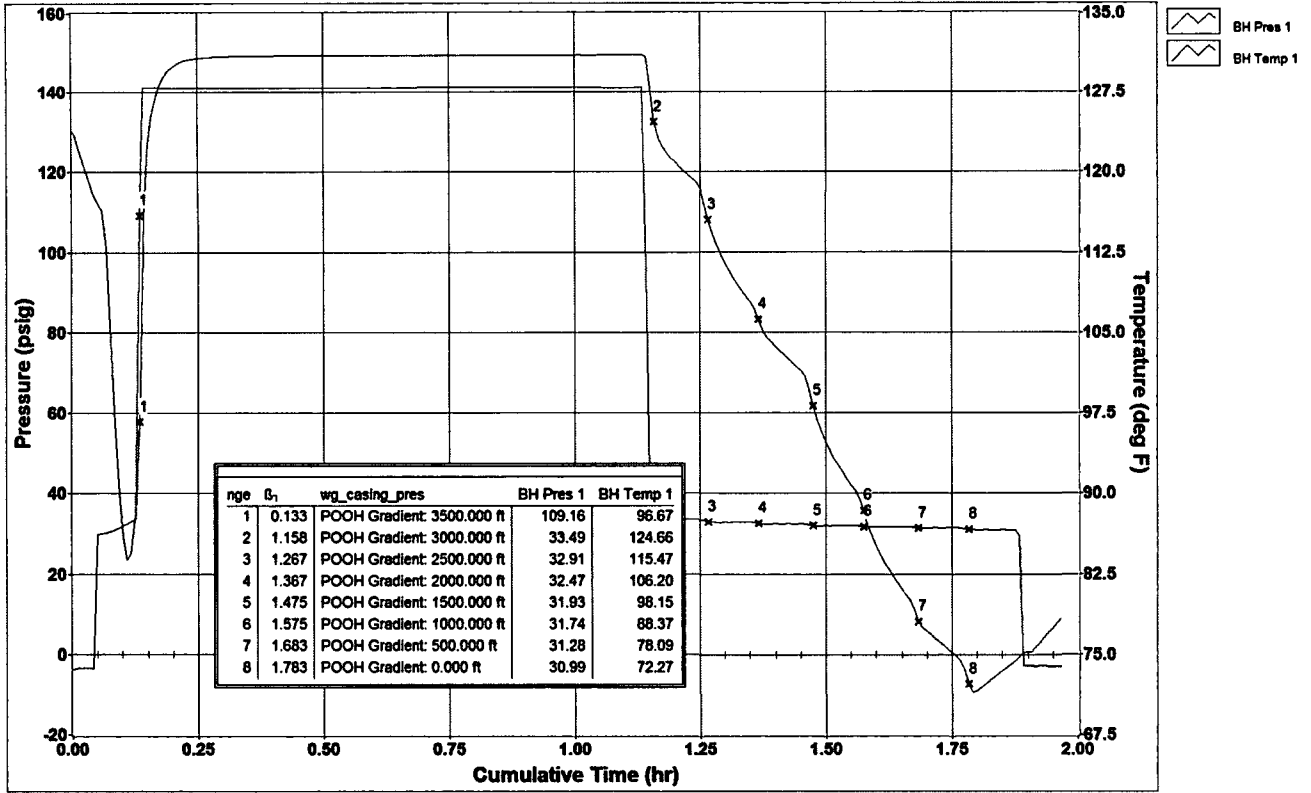
W1036 Depth vs. Pressure



W1036 Depth vs. Temperature



Quinn #1



Company Name Hilcorp
Well Name Quinn #1
Type of Test POOH Static Gradient
Date(s) of Test 5/17/18



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/17	12:54:31	0.0000	-3.803	123.768
2018/05/17	12:55:01	0.0083	-3.555	122.871
2018/05/17	12:55:31	0.0167	-3.512	121.577
2018/05/17	12:56:01	0.0250	-3.450	120.236
2018/05/17	12:56:31	0.0333	-3.476	119.057
2018/05/17	12:57:01	0.0417	-3.520	117.864
2018/05/17	12:57:31	0.0500	29.869	117.124
2018/05/17	12:58:01	0.0583	29.964	116.409
2018/05/17	12:58:31	0.0667	30.164	112.941
2018/05/17	12:59:01	0.0750	30.509	105.633
2018/05/17	12:59:31	0.0833	30.754	97.632
2018/05/17	13:00:01	0.0917	31.260	90.837
2018/05/17	13:00:31	0.1000	31.891	86.065
2018/05/17	13:01:01	0.1083	32.341	83.799
2018/05/17	13:01:31	0.1167	32.978	84.436
2018/05/17	13:02:01	0.1250	33.554	88.104
POOH Gradient: 3500.000 ft				
2018/05/17	13:02:31	0.1333	109.164	96.667
2018/05/17	13:03:01	0.1417	141.293	115.794
2018/05/17	13:03:31	0.1500	141.280	122.099
2018/05/17	13:04:01	0.1583	141.153	125.100
2018/05/17	13:04:31	0.1667	141.147	126.981
2018/05/17	13:05:01	0.1750	141.088	128.183
2018/05/17	13:05:31	0.1833	141.092	128.982
2018/05/17	13:06:01	0.1917	141.074	129.526
2018/05/17	13:06:31	0.2000	141.075	129.898
2018/05/17	13:07:01	0.2083	141.075	130.172
2018/05/17	13:07:31	0.2167	141.062	130.370
2018/05/17	13:08:01	0.2250	141.061	130.503
2018/05/17	13:08:31	0.2333	141.062	130.595
2018/05/17	13:09:01	0.2417	141.063	130.658
2018/05/17	13:09:31	0.2500	141.063	130.710
2018/05/17	13:10:01	0.2583	141.061	130.752
2018/05/17	13:10:31	0.2667	141.064	130.782
2018/05/17	13:11:01	0.2750	141.064	130.806
2018/05/17	13:11:31	0.2833	141.067	130.831
2018/05/17	13:12:01	0.2917	141.071	130.843
2018/05/17	13:12:31	0.3000	141.068	130.858
2018/05/17	13:13:01	0.3083	141.071	130.878
2018/05/17	13:13:31	0.3167	141.074	130.881
2018/05/17	13:14:01	0.3250	141.077	130.887
2018/05/17	13:14:31	0.3333	141.080	130.894
2018/05/17	13:15:01	0.3417	141.083	130.903
2018/05/17	13:15:31	0.3500	141.083	130.912
2018/05/17	13:16:01	0.3583	141.080	130.919
2018/05/17	13:16:31	0.3667	141.083	130.928
2018/05/17	13:17:01	0.3750	141.086	130.932
2018/05/17	13:17:31	0.3833	141.089	130.935
2018/05/17	13:18:01	0.3917	141.092	130.930
2018/05/17	13:18:31	0.4000	141.089	130.939
2018/05/17	13:19:01	0.4083	141.086	130.944
2018/05/17	13:19:31	0.4167	141.089	130.944
2018/05/17	13:20:01	0.4250	141.089	130.948
2018/05/17	13:20:31	0.4333	141.092	130.951

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/17	13:21:01	0.4417	141.092	130.951
2018/05/17	13:21:31	0.4500	141.095	130.951
2018/05/17	13:22:01	0.4583	141.092	130.953
2018/05/17	13:22:31	0.4667	141.095	130.957
2018/05/17	13:23:01	0.4750	141.095	130.957
2018/05/17	13:23:31	0.4833	141.098	130.955
2018/05/17	13:24:01	0.4917	141.101	130.960
2018/05/17	13:24:31	0.5000	141.101	130.966
2018/05/17	13:25:01	0.5083	141.101	130.966
2018/05/17	13:25:31	0.5167	141.098	130.975
2018/05/17	13:26:01	0.5250	141.101	130.971
2018/05/17	13:26:31	0.5333	141.103	130.969
2018/05/17	13:27:01	0.5417	141.106	130.971
2018/05/17	13:27:31	0.5500	141.104	130.973
2018/05/17	13:28:01	0.5583	141.106	130.977
2018/05/17	13:28:31	0.5667	141.106	130.980
2018/05/17	13:29:01	0.5750	141.104	130.980
2018/05/17	13:29:31	0.5833	141.106	130.982
2018/05/17	13:30:01	0.5917	141.109	130.982
2018/05/17	13:30:31	0.6000	141.109	130.977
2018/05/17	13:31:01	0.6083	141.109	130.977
2018/05/17	13:31:31	0.6167	141.112	130.982
2018/05/17	13:32:01	0.6250	141.115	130.986
2018/05/17	13:32:31	0.6333	141.118	130.980
2018/05/17	13:33:01	0.6417	141.118	130.986
2018/05/17	13:33:31	0.6500	141.121	130.982
2018/05/17	13:34:01	0.6583	141.124	130.989
2018/05/17	13:34:31	0.6667	141.127	130.984
2018/05/17	13:35:01	0.6750	141.127	130.978
2018/05/17	13:35:31	0.6833	141.127	130.980
2018/05/17	13:36:01	0.6917	141.130	130.984
2018/05/17	13:36:31	0.7000	141.132	130.984
2018/05/17	13:37:01	0.7083	141.135	130.982
2018/05/17	13:37:31	0.7167	141.135	130.987
2018/05/17	13:38:01	0.7250	141.138	130.987
2018/05/17	13:38:31	0.7333	141.141	130.989
2018/05/17	13:39:01	0.7417	141.138	130.993
2018/05/17	13:39:31	0.7500	141.135	130.993
2018/05/17	13:40:01	0.7583	141.135	130.989
2018/05/17	13:40:31	0.7667	141.138	130.991
2018/05/17	13:41:01	0.7750	141.135	130.986
2018/05/17	13:41:31	0.7833	141.135	130.993
2018/05/17	13:42:01	0.7917	141.135	130.989
2018/05/17	13:42:31	0.8000	141.135	130.991
2018/05/17	13:43:01	0.8083	141.135	130.995
2018/05/17	13:43:31	0.8167	141.132	130.993
2018/05/17	13:44:01	0.8250	141.133	130.996
2018/05/17	13:44:31	0.8333	141.130	130.993
2018/05/17	13:45:01	0.8417	141.133	131.000
2018/05/17	13:45:31	0.8500	141.135	131.002
2018/05/17	13:46:01	0.8583	141.138	131.000
2018/05/17	13:46:31	0.8667	141.141	131.004
2018/05/17	13:47:01	0.8750	141.144	131.002
2018/05/17	13:47:31	0.8833	141.141	130.996

Company Name Hilcorp
 Well Name Quinn #1
 Type of Test POOH Static Gradient
 Date(s) of Test 5/17/18



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/17	13:48:01	0.8917	141.141	131.000
2018/05/17	13:48:31	0.9000	141.141	131.000
2018/05/17	13:49:01	0.9083	141.144	130.996
2018/05/17	13:49:31	0.9167	141.147	131.002
2018/05/17	13:50:01	0.9250	141.144	131.000
2018/05/17	13:50:31	0.9333	141.141	130.996
2018/05/17	13:51:01	0.9417	141.144	130.998
2018/05/17	13:51:31	0.9500	141.144	130.996
2018/05/17	13:52:01	0.9583	141.144	130.996
2018/05/17	13:52:31	0.9667	141.144	130.995
2018/05/17	13:53:01	0.9750	141.141	130.989
2018/05/17	13:53:31	0.9833	141.144	130.998
2018/05/17	13:54:01	0.9917	141.147	131.004
2018/05/17	13:54:31	1.0000	141.144	131.000
2018/05/17	13:55:01	1.0083	141.147	131.005
2018/05/17	13:55:31	1.0167	141.147	130.995
2018/05/17	13:56:01	1.0250	141.144	131.002
2018/05/17	13:56:31	1.0333	141.141	131.002
2018/05/17	13:57:01	1.0417	141.144	131.004
2018/05/17	13:57:31	1.0500	141.141	131.011
2018/05/17	13:58:01	1.0583	141.118	131.009
2018/05/17	13:58:31	1.0667	141.121	131.014
2018/05/17	13:59:01	1.0750	141.121	131.007
2018/05/17	13:59:31	1.0833	141.124	131.007
2018/05/17	14:00:01	1.0917	141.124	131.011
2018/05/17	14:00:31	1.1000	141.124	131.014
2018/05/17	14:01:01	1.1083	141.127	131.009
2018/05/17	14:01:31	1.1167	141.127	131.007
2018/05/17	14:02:01	1.1250	141.130	131.005
2018/05/17	14:02:31	1.1333	141.130	131.011
2018/05/17	14:03:01	1.1417	95.552	130.825
2018/05/17	14:03:31	1.1500	33.730	127.911
POOH Gradient: 3000.000 ft				
2018/05/17	14:04:01	1.1583	33.489	124.662
2018/05/17	14:04:31	1.1667	33.413	123.085
2018/05/17	14:05:01	1.1750	33.424	122.342
2018/05/17	14:05:31	1.1833	33.459	121.791
2018/05/17	14:06:01	1.1917	33.401	121.309
2018/05/17	14:06:31	1.2000	33.452	120.884
2018/05/17	14:07:01	1.2083	33.500	120.484
2018/05/17	14:07:31	1.2167	33.519	120.112
2018/05/17	14:08:01	1.2250	33.483	119.755
2018/05/17	14:08:31	1.2333	33.495	119.401
2018/05/17	14:09:01	1.2417	33.437	119.077
2018/05/17	14:09:31	1.2500	33.304	118.486
2018/05/17	14:10:01	1.2583	33.128	117.097
POOH Gradient: 2500.000 ft				
2018/05/17	14:10:31	1.2667	32.911	115.471
2018/05/17	14:11:01	1.2750	32.814	114.152
2018/05/17	14:11:31	1.2833	32.754	113.178
2018/05/17	14:12:01	1.2917	32.755	112.296
2018/05/17	14:12:31	1.3000	32.762	111.486
2018/05/17	14:13:01	1.3083	32.740	110.732
2018/05/17	14:13:31	1.3167	32.777	110.052

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/17	14:14:01	1.3250	32.788	109.431
2018/05/17	14:14:31	1.3333	32.823	108.869
2018/05/17	14:15:01	1.3417	32.786	108.334
2018/05/17	14:15:31	1.3500	32.817	107.834
2018/05/17	14:16:01	1.3583	32.655	107.177
POOH Gradient: 2000.000 ft				
2018/05/17	14:16:31	1.3667	32.473	106.196
2018/05/17	14:17:01	1.3750	32.320	105.035
2018/05/17	14:17:31	1.3833	32.390	104.495
2018/05/17	14:18:01	1.3917	32.418	104.088
2018/05/17	14:18:31	1.4000	32.429	103.698
2018/05/17	14:19:01	1.4083	32.407	103.316
2018/05/17	14:19:31	1.4167	32.416	102.927
2018/05/17	14:20:01	1.4250	32.426	102.549
2018/05/17	14:20:31	1.4333	32.404	102.171
2018/05/17	14:21:01	1.4417	32.409	101.797
2018/05/17	14:21:31	1.4500	32.433	101.421
2018/05/17	14:22:01	1.4583	32.342	100.971
2018/05/17	14:22:31	1.4667	32.147	99.720
POOH Gradient: 1500.000 ft				
2018/05/17	14:23:01	1.4750	31.933	98.152
2018/05/17	14:23:31	1.4833	31.834	96.705
2018/05/17	14:24:01	1.4917	31.859	95.662
2018/05/17	14:24:31	1.5000	31.954	94.777
2018/05/17	14:25:01	1.5083	31.901	93.983
2018/05/17	14:25:31	1.5167	32.014	93.259
2018/05/17	14:26:01	1.5250	31.986	92.588
2018/05/17	14:26:31	1.5333	31.998	91.956
2018/05/17	14:27:01	1.5417	31.995	91.368
2018/05/17	14:27:31	1.5500	32.056	90.795
2018/05/17	14:28:01	1.5583	32.056	90.264
2018/05/17	14:28:31	1.5667	31.901	89.533
POOH Gradient: 1000.000 ft				
2018/05/17	14:29:01	1.5750	31.738	88.374
2018/05/17	14:29:31	1.5833	31.634	86.961
2018/05/17	14:30:01	1.5917	31.595	85.921
2018/05/17	14:30:31	1.6000	31.619	85.042
2018/05/17	14:31:01	1.6083	31.660	84.268
2018/05/17	14:31:31	1.6167	31.678	83.557
2018/05/17	14:32:01	1.6250	31.688	82.904
2018/05/17	14:32:31	1.6333	31.732	82.281
2018/05/17	14:33:01	1.6417	31.694	81.694
2018/05/17	14:33:31	1.6500	31.710	81.140
2018/05/17	14:34:01	1.6583	31.749	80.607
2018/05/17	14:34:31	1.6667	31.636	80.056
2018/05/17	14:35:01	1.6750	31.503	79.185
POOH Gradient: 500.000 ft				
2018/05/17	14:35:31	1.6833	31.281	78.087
2018/05/17	14:36:01	1.6917	31.375	77.535
2018/05/17	14:36:31	1.7000	31.339	77.193
2018/05/17	14:37:01	1.7083	31.390	76.854
2018/05/17	14:37:31	1.7167	31.453	76.516
2018/05/17	14:38:01	1.7250	31.399	76.186
2018/05/17	14:38:31	1.7333	31.400	75.846

Company Name Hilcorp
Well Name Quinn #1
Type of Test POOH Static Gradient
Date(s) of Test 5/17/18



Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2018/05/17	14:39:01	1.7417	31.457	75.513
2018/05/17	14:39:31	1.7500	31.439	75.178
2018/05/17	14:40:01	1.7583	31.450	74.845
2018/05/17	14:40:31	1.7667	31.404	74.509
2018/05/17	14:41:01	1.7750	31.173	73.557
POOH Gradient: 0.000 ft				
2018/05/17	14:41:31	1.7833	30.989	72.266
2018/05/17	14:42:01	1.7917	30.926	71.555
2018/05/17	14:42:31	1.8000	30.903	71.677
2018/05/17	14:43:01	1.8083	30.855	71.960
2018/05/17	14:43:31	1.8167	30.923	72.271
2018/05/17	14:44:01	1.8250	30.903	72.590
2018/05/17	14:44:31	1.8333	30.887	72.901
2018/05/17	14:45:01	1.8417	30.907	73.216
2018/05/17	14:45:31	1.8500	30.915	73.519
2018/05/17	14:46:01	1.8583	30.885	73.814
2018/05/17	14:46:31	1.8667	30.900	74.106
2018/05/17	14:47:01	1.8750	30.896	74.397
2018/05/17	14:47:31	1.8833	29.339	74.813
2018/05/17	14:48:01	1.8917	-2.736	75.144
2018/05/17	14:48:31	1.9000	-2.756	75.243
2018/05/17	14:49:01	1.9083	-2.755	75.229
2018/05/17	14:49:31	1.9167	-2.848	75.747
2018/05/17	14:50:01	1.9250	-2.789	76.145
2018/05/17	14:50:31	1.9333	-2.784	76.602
2018/05/17	14:51:01	1.9417	-2.883	77.061
2018/05/17	14:51:31	1.9500	-2.840	77.520
2018/05/17	14:52:01	1.9583	-2.835	77.947