

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	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

TEST INFORMATION

Type of Test	POOH STATIC GRADIENT
Date(s) of Test	5/9/19
Dead-weight Gauge Tubing Pressure	50
Dead-weight Gauge Casing Pressure	
Shut-in Date (Duration)	
Date / Time on Bottom	5/9/19 @0922
Date / Time off Bottom	5/9/19 @1022
Probe Serial Number	W1162
Probe Offset from End of Tool String	0-6000
Run Depth at Probe Pressure Port	3000

PRESSURE TEST RESULTS

Maximum Recorded Probe Pressure	52.3 psig
Maximum Recorded Probe Temperature	110.6 deg F
Final Buildup Pressure	
Gradient Survey Information	
Extrapolated Pressure to MPP	
Final Gradient at Depth	
Job Number	

NMOGD
MAY 14 2019
DISTRICT III

Company Name
Well Name
Type of Test
Date(s) of Test

HILCORP
JOHNSTON FEDERAL #22 POW
POOH STATIC GRADIENT
5/9/19



PROBE INFORMATION

Probe Serial Number W1162
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
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COMMENTS

Reported By

EXPERT DOWNHOLE SERVICES, INC

RIH WITH 1.50 IMPRESSION BLOCK AND TAGGED FILL @3058 WLM. RIH WITH BHP GAUGE TO 3000 FOR 1 HOUR, THEN POOH MAKING 5 MINUTE STOPS PER REQUEST.

Company Name HILCORP
 Well Name JOHNSTON FEDERAL #22 POW
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Pressure vs. Depth

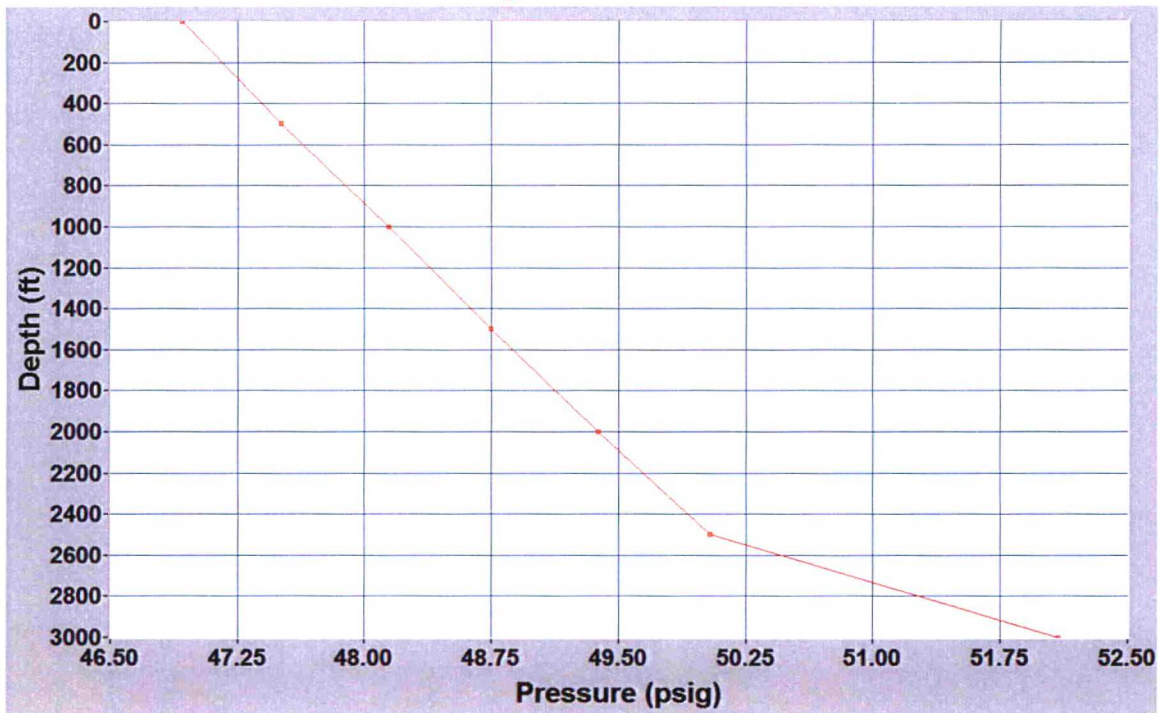
Probe Serial Number W1162

		(ft)	(psig)	(psi/ft)	(deg F)	(deg F/ft)
0922	1022	3000.000	52.090	-	84.524	-
1024	1029	2500.000	50.037	0.0041	108.572	-0.0481
1030	1035	2000.000	49.380	0.0013	102.740	0.0117
1036	1041	1500.000	48.747	0.0013	96.134	0.0132
1042	1047	1000.000	48.144	0.0012	89.222	0.0138
1048	1053	500.000	47.507	0.0013	82.058	0.0143
1055	1100	0.000	46.926	0.0012	73.292	0.0175

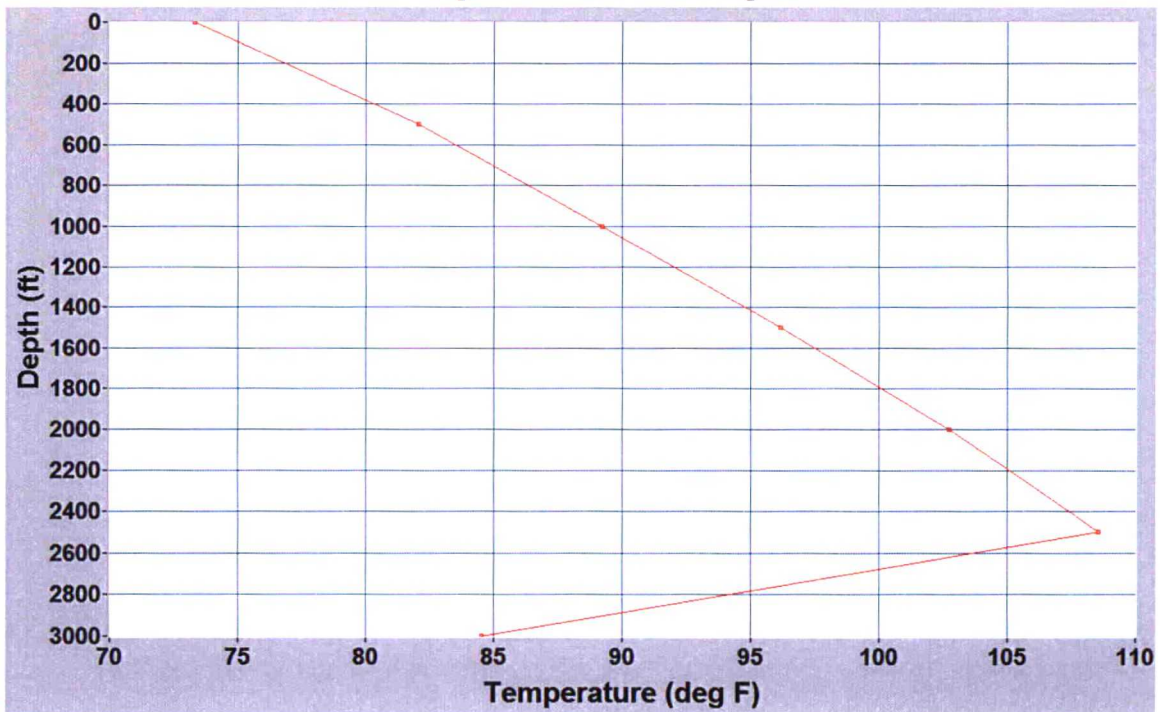
Extrapolated to MPP:

(ft)	(psig)	(deg F)
0.000		

W1162 Depth vs. Pressure



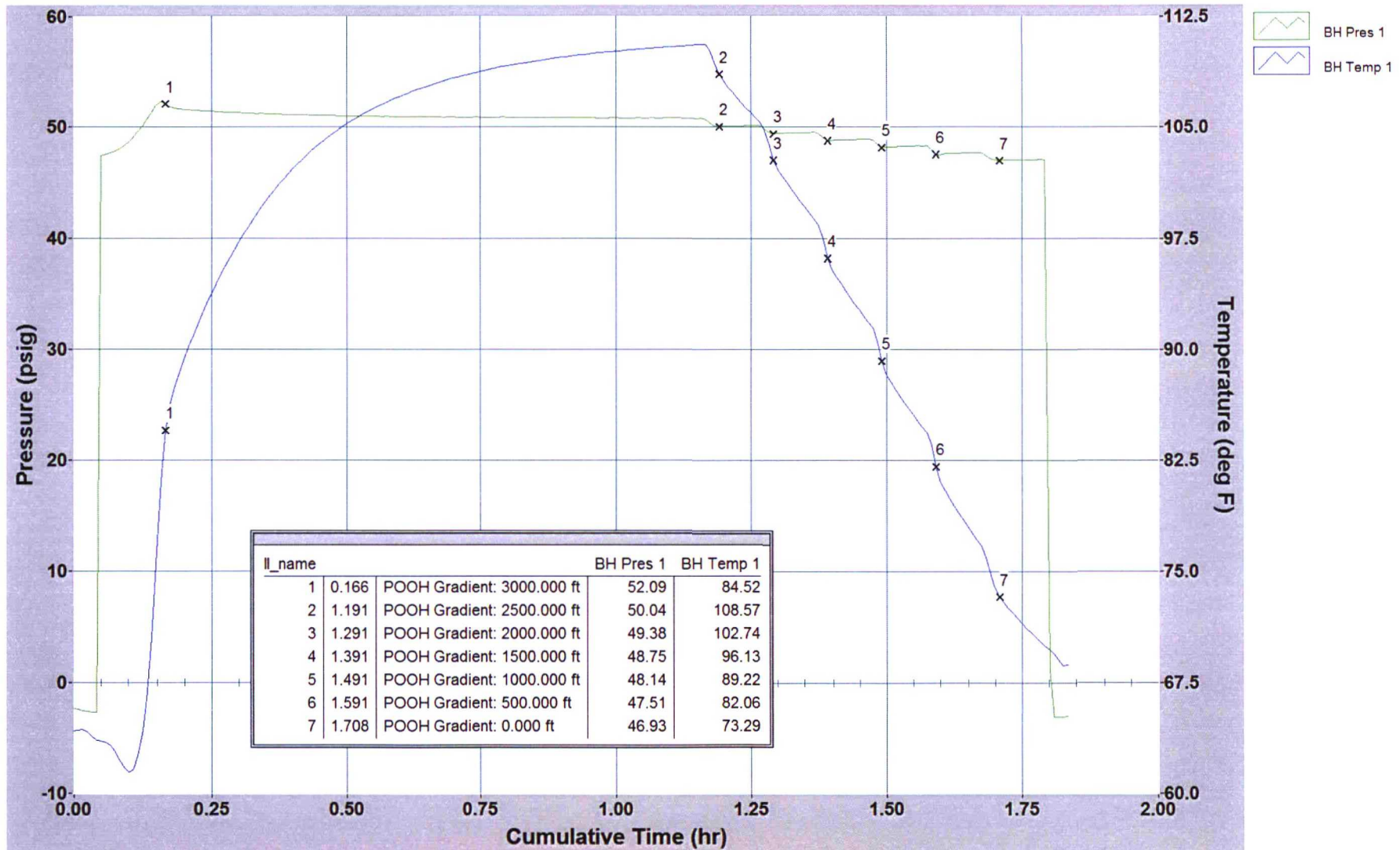
W1162 Depth vs. Temperature



Company Name HILCORP
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JOHNSTON FEDERAL #22 POW



Company Name HILCORP
Well Name JOHNSTON FEDERAL #22 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	09:13:06	0.0000	-2.390	64.184
2019/05/09	09:13:35	0.0081	-2.448	64.274
2019/05/09	09:14:35	0.0247	-2.619	64.112
2019/05/09	09:15:05	0.0331	-2.672	63.824
2019/05/09	09:16:05	0.0497	47.429	63.500
2019/05/09	09:16:35	0.0581	47.530	63.446
2019/05/09	09:17:35	0.0747	47.786	62.816
2019/05/09	09:18:35	0.0914	48.316	61.700
2019/05/09	09:19:35	0.1081	49.056	61.628
2019/05/09	09:20:05	0.1164	49.587	62.546
2019/05/09	09:21:05	0.1331	50.704	66.830
2019/05/09	09:22:05	0.1497	51.995	75.524
POOH Gradient: 3000.000 ft				
2019/05/09	09:23:05	0.1664	52.090	84.524
2019/05/09	09:23:35	0.1747	51.825	86.216
2019/05/09	09:24:35	0.1914	51.648	88.430
2019/05/09	09:25:35	0.2081	51.590	90.140
2019/05/09	09:26:35	0.2247	51.499	91.670
2019/05/09	09:27:05	0.2331	51.477	92.408
2019/05/09	09:28:05	0.2497	51.426	93.758
2019/05/09	09:29:05	0.2664	51.388	95.000
2019/05/09	09:30:05	0.2831	51.313	96.152
2019/05/09	09:30:35	0.2914	51.304	96.674
2019/05/09	09:31:35	0.3081	51.282	97.718
2019/05/09	09:32:35	0.3247	51.237	98.690
2019/05/09	09:33:35	0.3414	51.230	99.590
2019/05/09	09:34:05	0.3497	51.206	100.022
2019/05/09	09:35:05	0.3664	51.194	100.778
2019/05/09	09:36:05	0.3831	51.150	101.498
2019/05/09	09:37:05	0.3997	51.103	102.164
2019/05/09	09:37:35	0.4081	51.130	102.488
2019/05/09	09:38:35	0.4247	51.111	103.064
2019/05/09	09:39:35	0.4414	51.047	103.604
2019/05/09	09:40:35	0.4581	51.050	104.108
2019/05/09	09:41:05	0.4664	51.047	104.342
2019/05/09	09:42:05	0.4831	50.997	104.792
2019/05/09	09:43:05	0.4997	51.014	105.206
2019/05/09	09:44:05	0.5164	51.007	105.566
2019/05/09	09:44:35	0.5247	50.966	105.746
2019/05/09	09:45:35	0.5414	50.989	106.088
2019/05/09	09:46:35	0.5581	51.011	106.394
2019/05/09	09:47:35	0.5747	50.975	106.700
2019/05/09	09:48:05	0.5831	50.956	106.826
2019/05/09	09:49:05	0.5997	50.929	107.078
2019/05/09	09:50:05	0.6164	50.946	107.330
2019/05/09	09:51:05	0.6331	50.962	107.546
2019/05/09	09:51:35	0.6414	50.945	107.654
2019/05/09	09:52:35	0.6581	50.921	107.870
2019/05/09	09:53:35	0.6747	50.913	108.050
2019/05/09	09:54:35	0.6914	50.926	108.248
2019/05/09	09:55:05	0.6997	50.908	108.320
2019/05/09	09:56:05	0.7164	50.892	108.482
2019/05/09	09:57:05	0.7331	50.894	108.626
2019/05/09	09:58:05	0.7497	50.882	108.788

Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
2019/05/09	09:58:35	0.7581	50.885	108.842
2019/05/09	09:59:35	0.7747	50.876	108.986
2019/05/09	10:00:35	0.7914	50.917	109.112
2019/05/09	10:01:35	0.8081	50.886	109.220
2019/05/09	10:02:05	0.8164	50.888	109.274
2019/05/09	10:03:05	0.8331	50.860	109.382
2019/05/09	10:04:05	0.8497	50.842	109.472
2019/05/09	10:05:05	0.8664	50.863	109.580
2019/05/09	10:05:35	0.8747	50.871	109.616
2019/05/09	10:06:35	0.8914	50.836	109.706
2019/05/09	10:07:35	0.9081	50.871	109.778
2019/05/09	10:08:35	0.9247	50.856	109.850
2019/05/09	10:09:05	0.9331	50.856	109.886
2019/05/09	10:10:05	0.9497	50.856	109.976
2019/05/09	10:10:35	0.9581	50.856	110.012
2019/05/09	10:11:35	0.9747	50.833	110.066
2019/05/09	10:12:05	0.9831	50.824	110.084
2019/05/09	10:13:05	0.9997	50.842	110.156
2019/05/09	10:14:05	1.0164	50.814	110.210
2019/05/09	10:15:05	1.0331	50.821	110.264
2019/05/09	10:15:35	1.0414	50.855	110.282
2019/05/09	10:16:35	1.0581	50.821	110.336
2019/05/09	10:17:35	1.0747	50.826	110.390
2019/05/09	10:18:35	1.0914	50.853	110.426
2019/05/09	10:19:05	1.0997	50.834	110.444
2019/05/09	10:20:05	1.1164	50.840	110.480
2019/05/09	10:21:05	1.1331	50.782	110.534
2019/05/09	10:22:05	1.1497	50.763	110.570
2019/05/09	10:22:35	1.1581	50.785	110.588
2019/05/09	10:23:35	1.1747	50.335	110.156
POOH Gradient: 2500.000 ft				
2019/05/09	10:24:35	1.1914	50.037	108.572
2019/05/09	10:25:35	1.2081	50.080	107.726
2019/05/09	10:26:05	1.2164	50.116	107.348
2019/05/09	10:27:05	1.2331	50.105	106.646
2019/05/09	10:28:05	1.2497	50.126	105.980
2019/05/09	10:29:05	1.2664	50.148	105.368
2019/05/09	10:29:35	1.2747	49.860	104.882
POOH Gradient: 2000.000 ft				
2019/05/09	10:30:35	1.2914	49.380	102.740
2019/05/09	10:31:35	1.3081	49.419	101.696
2019/05/09	10:32:35	1.3247	49.488	100.814
2019/05/09	10:33:05	1.3331	49.484	100.400
2019/05/09	10:34:05	1.3497	49.509	99.590
2019/05/09	10:35:05	1.3664	49.535	98.816
2019/05/09	10:36:05	1.3831	49.045	97.448
POOH Gradient: 1500.000 ft				
2019/05/09	10:36:35	1.3914	48.747	96.134
2019/05/09	10:37:35	1.4081	48.844	94.874
2019/05/09	10:38:35	1.4247	48.859	93.956
2019/05/09	10:39:35	1.4414	48.870	93.092
2019/05/09	10:40:05	1.4497	48.889	92.660
2019/05/09	10:41:05	1.4664	48.913	91.850
2019/05/09	10:42:05	1.4831	48.482	90.554

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Date	Time	Cum.Time BH1	BH Pres 1	BH Temp 1
		hr	psig	deg F
POOH Gradient: 1000.000 ft				
2019/05/09	10:42:35	1.4914	48.144	89.222
2019/05/09	10:43:05	1.4997	48.179	88.322
2019/05/09	10:43:35	1.5081	48.205	87.800
2019/05/09	10:44:35	1.5247	48.267	86.864
2019/05/09	10:45:35	1.5414	48.282	86.000
2019/05/09	10:46:35	1.5581	48.308	85.154
2019/05/09	10:47:05	1.5664	48.283	84.758
2019/05/09	10:48:05	1.5831	47.926	83.516
POOH Gradient: 500.000 ft				
2019/05/09	10:48:35	1.5914	47.507	82.058
2019/05/09	10:49:05	1.5997	47.487	81.032
2019/05/09	10:50:05	1.6164	47.593	79.934
2019/05/09	10:50:35	1.6247	47.594	79.430
2019/05/09	10:51:35	1.6414	47.674	78.494
2019/05/09	10:52:35	1.6581	47.675	77.612
2019/05/09	10:53:35	1.6747	47.694	76.748
2019/05/09	10:54:05	1.6831	47.435	75.938
2019/05/09	10:55:05	1.6997	47.014	73.940
POOH Gradient: 0.000 ft				
2019/05/09	10:55:35	1.7081	46.926	73.292
2019/05/09	10:56:05	1.7164	47.001	72.896
2019/05/09	10:57:05	1.7331	47.044	72.176
2019/05/09	10:57:35	1.7414	47.030	71.834
2019/05/09	10:58:35	1.7581	47.021	71.168
2019/05/09	10:59:35	1.7747	46.989	70.556
2019/05/09	11:00:35	1.7914	46.994	69.962
2019/05/09	11:01:05	1.7997	1.243	69.746
2019/05/09	11:02:05	1.8164	-3.182	69.044