

## **Appendix E. Water Pressure Test Results**

## Appendix E. Water Pressure Test Results

## Hydraulic Conductivity Test Summary Table

Boring	Surface Elevation (ft)	Test	Upper Depth (ft)	Lower Depth (ft)	Center Elevation (ft)	Interpretation	Lugeon Value
CB-1	1788.4	1	92	112.5	1699.8	Washout	35
CB-1	1788.4	2	112.5	133.1	1682.1	Laminar	23
CB-1	1788.4	3	133.1	154.5	1663.9	Washout	12
CB-1	1788.4	4	154.5	174.5	1645.9	Turbulent	1
CB-1	1788.4	5	174.5	199.7	1626.4	Laminar	1
CB-2	1722.7	1-A	14	32	1700.5	1 data point	>100
CB-2	1722.7	1-B	24	32	1695.7	No Data	-
CB-2	1722.7	2	32	55	1680.7	Void Filling	1
CB-2	1722.7	3	55	83	1656.1	Laminar	2
CB-2	1722.7	4	85	113	1627.1	Void Filling-Laminar	1
CB-2	1722.7	5	113	143	1599.1	Dilation	1
CB-2	1722.7	6	143	178	1567.7	Void Filling - Laminar	1
CB-3	1833.5	1	34	54	1795.4	1 data point	28
CB-3	1833.5	1B	44	54	1791.1	Dilation	22
CB-3	1833.5	2	54	74	1778.1	Washout	19
CB-3	1833.5	3	74	104	1756.4	Washout	2
CB-3	1833.5	4	104	134	1730.4	Washout	3
CB-3	1833.5	5	134	154	1708.8	2 points	30
CB-3	1833.5	6	154	174	1691.5	Turbulent	2
CB-3	1833.5	7A	174	214	1665.5	2 points	12
CB-3	1833.5	8A	214	234	1639.5	1 point	37
CB-3	1833.5	9	234	254	1622.2	Turbulent	4
CB-4	1833.5	1	14.5	34.5	1812.3	Laminar	24
CB-4	1833.5	2	34.5	54.5	1795.0	Laminar	13
CB-4	1833.5	3	54.5	74.5	1777.6	1 point	>100
CB-4	1833.5	4	74.5	94.5	1761.6	Turbulent	3
CB-4	1833.5	5	94.5	124.5	1738.7	Washout	10
CB-4	1833.5	6	124.5	154.5	1712.7	Washout/Dilation	18
CB-10	1759	1	52	68	1707.3	Laminar	6
CB-10	1759	2	65	93	1690.5	Laminar	2
CB-10	1759	3	93	123	1665.5	Laminar	2
CB-10	1759	4	122	153	1640.1	Turbulent	2
CB-10	1759	5	152	173	1618.2	Laminar	3
CB-10	1759	6	173	203	1596.5	Laminar	2
CB-11	1773	1	26	46	1737.0	Laminar	8
CB-11	1773	2	46	66	1717.0	Washout	11
CB-11	1773	3	66	86	1697.0	Not enough water flow	0
CB-11	1773	4	86	108	1676.0	Laminar	5
CB-11	1773	5	106	126	1657.0	Laminar	4
CB-11	1773	6	126	150	1634.8	Turbulent?	2
CB-12	1897	1	32	52	1855.0	Laminar/Wash-out?	69
CB-12	1897	2	52	72	1835.0	Laminar	2
CB-13	1834	1	53	63	1783.8	1 data point	>100
CB-13	1834	2	63	83	1770.8	1 data point	>100
CB-13	1834	3	73	83	1766.5	3 data points; Laminar?	>100
CB-13	1834	4	93	103	1749.3	1 data point	>100
CB-13	1834	5	103	123	1736.1	1 data point	>100
CB-13	1834	6	113	123	1731.8	Washout	46
CB-13	1834	7	123	143	1718.8	1 data point	0
CB-13	1834	8	138	143	1712.5	Laminar/Washout	23

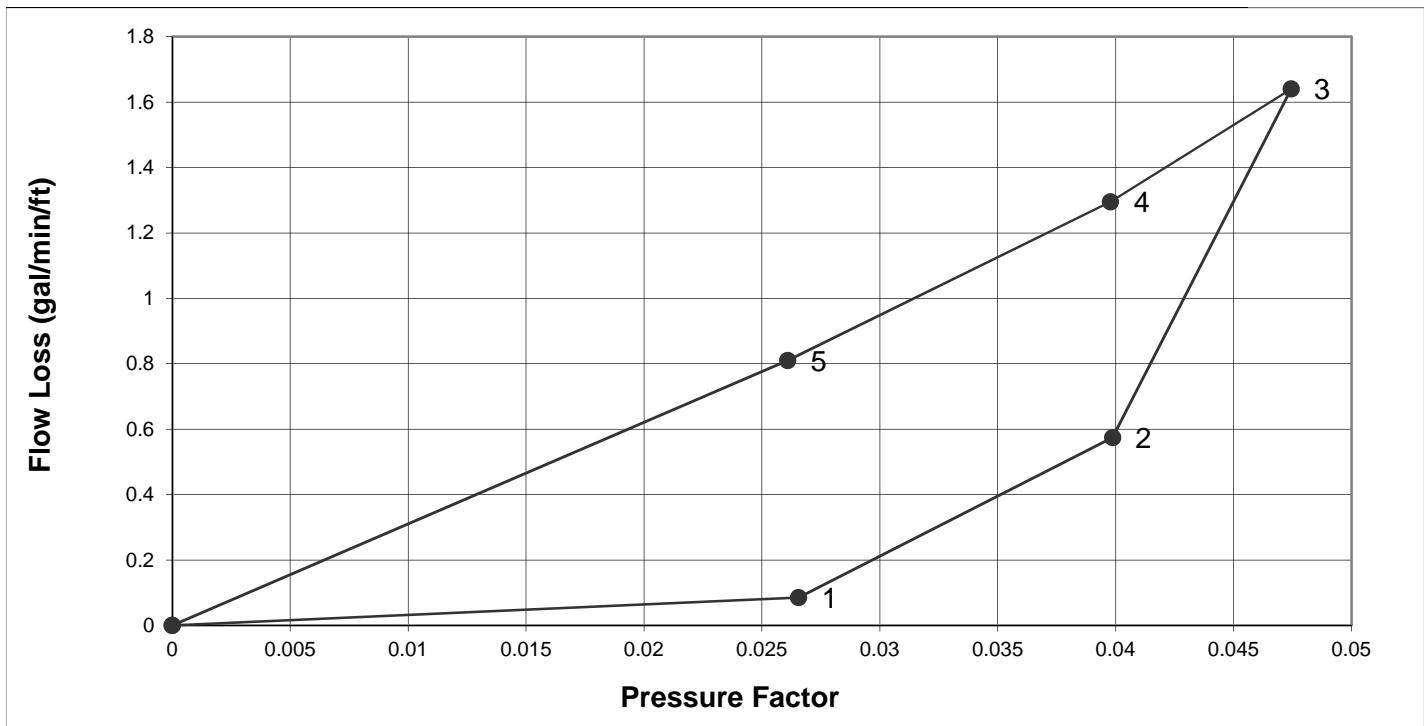
## Hydraulic Conductivity Test Summary Table

Boring	Surface Elevation (ft)	Test	Upper Depth (ft)	Lower Depth (ft)	Center Elevation (ft)	Interpretation	Lugeon Value
CB-13	1834	9	143	163	1701.5	Laminar	15
CB-13	1834	11	155	173	1692.0	Laminar	1
CB-13	1834	12	173	183	1679.8	3 data points; Laminar?	37
CB-13	1834	13	183	193	1671.2	Laminar	2
CB-13	1834	14	193	208	1660.4	Laminar	1
CB-14	1727	1	63	83	1663.8	Laminar	2
CB-14	1727	2	83	103	1646.5	Laminar	5
CB-14	1727	3	103	123	1629.1	Laminar	2
CB-14	1727	4	123	143	1612.0	Laminar	2
CB-14	1727	5	143	163	1594.5	Dilation	6
CB-14	1727	6	153	163	1590.2	Dilation	13
CB-14	1727	7	163	183	1577.2	Dilation	6
CB-14	1727	8	173	183	1572.8	Dilation	17
CB-14	1727	9	183	203	1559.9	Laminar	2
CB-15	1610	2	32	53	1579.9	Laminar?	23
CB-15	1610	3	52	70	1567.0	Turbulent	26
CB-15	1610	4	68	90	1554.1	Laminar/Turbulent	13
CB-15	1610	5	90	114	1537.9	Laminar	4
CB-15	1610	6	114	154	1515.2	Laminar	4
CB-15	1610	7	154	189	1488.8	Laminar/Turbulent	2
CB-16	1602.7	2	50	72	1556.0	Laminar/Turbulent	4
CB-16	1602.7	3	70	99	1538.0	Laminar/Turbulent	12
CB-16	1602.7	4	99	129	1515.4	Turbulent	3
CB-16	1602.7	5	130	174	1486.3	Laminar/Turbulent	2
CB-17	1718	1	13	33	1698.5	Laminar	45
CB-17	1718	2	33	53	1681.2	Laminar	8
CB-17	1718	3	53	73	1663.9	Laminar	4
CB-17	1718	4	73	93	1646.6	Laminar	4
CB-17	1718	5	93	123	1624.9	Laminar	1
CB-17	1718	6	123	153	1598.9	Laminar/Turbulent	2
CB-18	1874	3	54	74	1818.6	Not enough water flow	0
CB-18	1874	4	74	104	1796.9	Not enough water flow	0
CB-18	1874	5	104	143	1767.0	Not enough water flow	1
CB-18	1874	6	143	200	1725.5	Laminar/Washout	4
CB-18	1874	7	175	200	1711.6	Dilation	9
CB-19	1610	1	20	42	1582.6	Laminar	13
CB-19	1610	2	42	72	1559.6	Laminar	4
CB-19	1610	3	72	117	1526.4	Laminar	1
Notes:	Surface elevation data taken from LIDAR						
	GWT depths estimated from lowest water levels measured in boreholes during drilling.						

Boring	CB-1
Surface El. (ft)	1788.4
Groundwater El. (ft)	1678
Test No.	1
Test Interval Center Elevation (ft)	1699.8
Test Interval Length, L (ft)	20.5
Max. Test Pressure, $P_{MAX}$ (psi)	85.4
Reference Pressure, $P_0$ (psi)	145
Behavior	Washout
Representative Lugeon Value	34.6

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
92	112.5	30

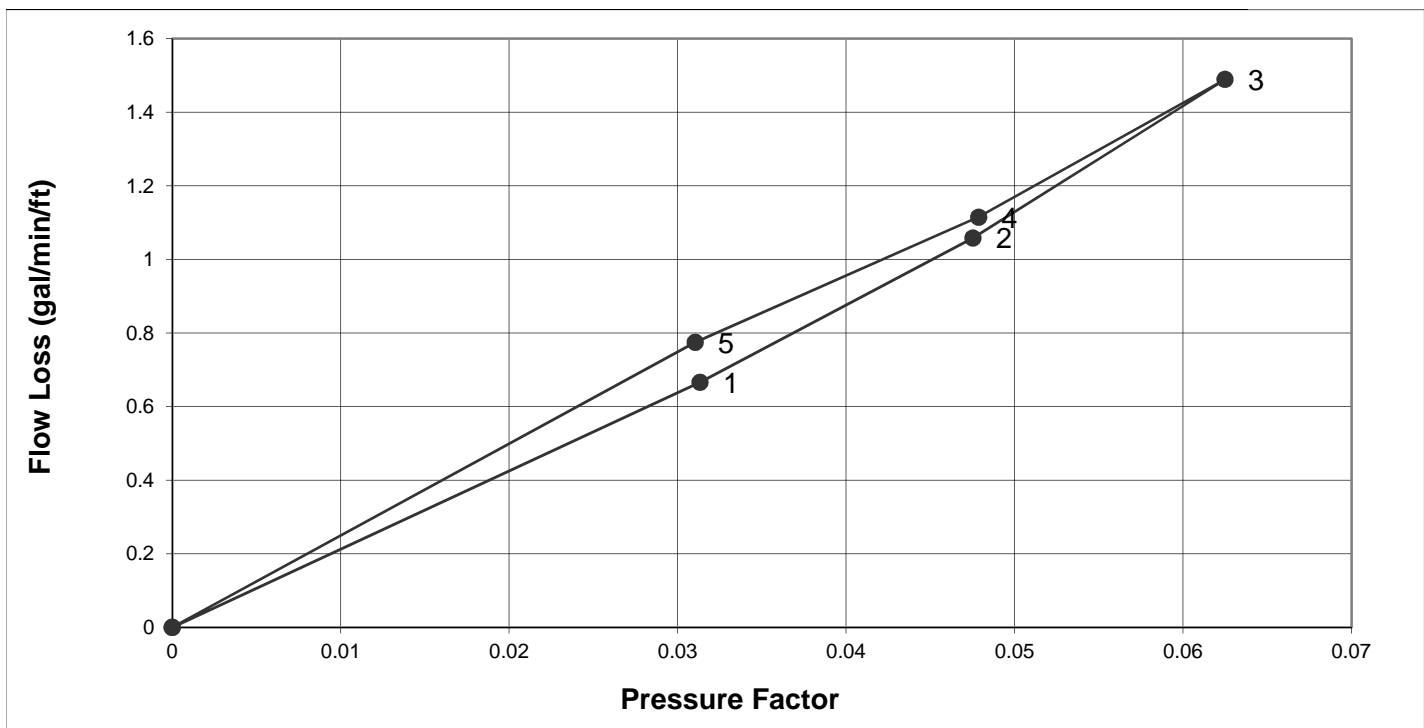
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	47.83	47.8	0.026560794	1.74	0.0849	3.20
2	75%	71.80	71.8	0.039868954	11.78	0.5746	14.41
3	100%	85.43	85.4	0.047439243	33.62	1.6400	34.57
4	75%	71.65	71.7	0.039785663	26.56	1.2956	32.56
5	50%	47.00	47.0	0.026098062	16.60	0.8098	31.03
0	0			0	0	0	



Boring	CB-1
Surface El. (ft)	1788.4
Groundwater El. (ft)	1678
Test No.	2
Test Interval Center Elevation (ft)	1682.1
Test Interval Length, L (ft)	20.6
Max. Test Pressure, $P_{MAX}$ (psi)	112.6
Reference Pressure, $P_0$ (psi)	145
Behavior	Laminar
Representative Lugeon Value	23.1

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
112.5	133.1	30

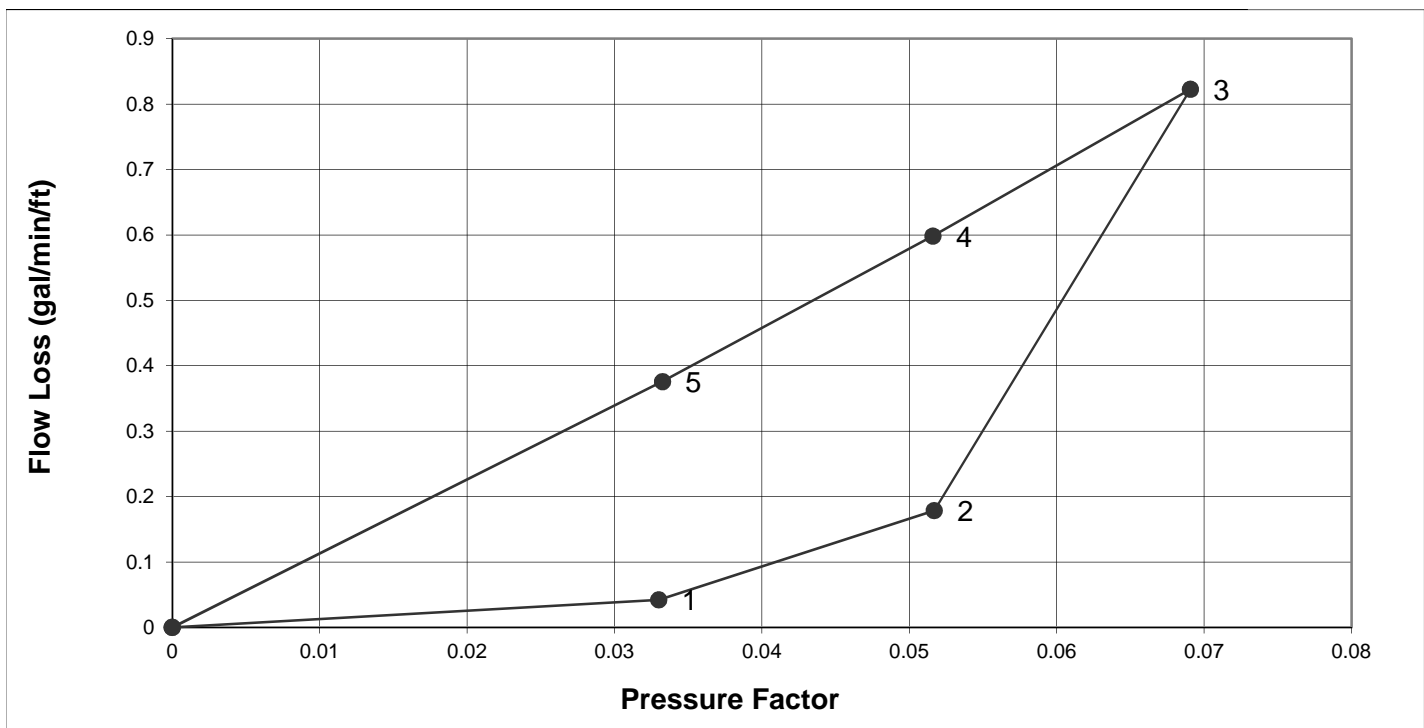
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	56.43	56.4	0.031336184	13.72	0.6659	21.25
2	75%	85.60	85.6	0.04753179	21.80	1.0583	22.26
3	100%	112.55	112.6	0.06249653	30.68	1.4893	23.83
4	75%	86.20	86.2	0.047864956	22.96	1.1146	23.29
5	50%	55.90	55.9	0.031040036	15.96	0.7748	24.96
0	0			0	0	0	



Boring	CB-1
Surface El. (ft)	1788.4
Groundwater El. (ft)	1678
Test No.	3
Test Interval Center Elevation (ft)	1663.9
Test Interval Length, L (ft)	21.4
Max. Test Pressure, $P_{MAX}$ (psi)	124.4
Reference Pressure, $P_0$ (psi)	145
Behavior	Washout
Representative Lugeon Value	11.9

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
133.1	154.5	30

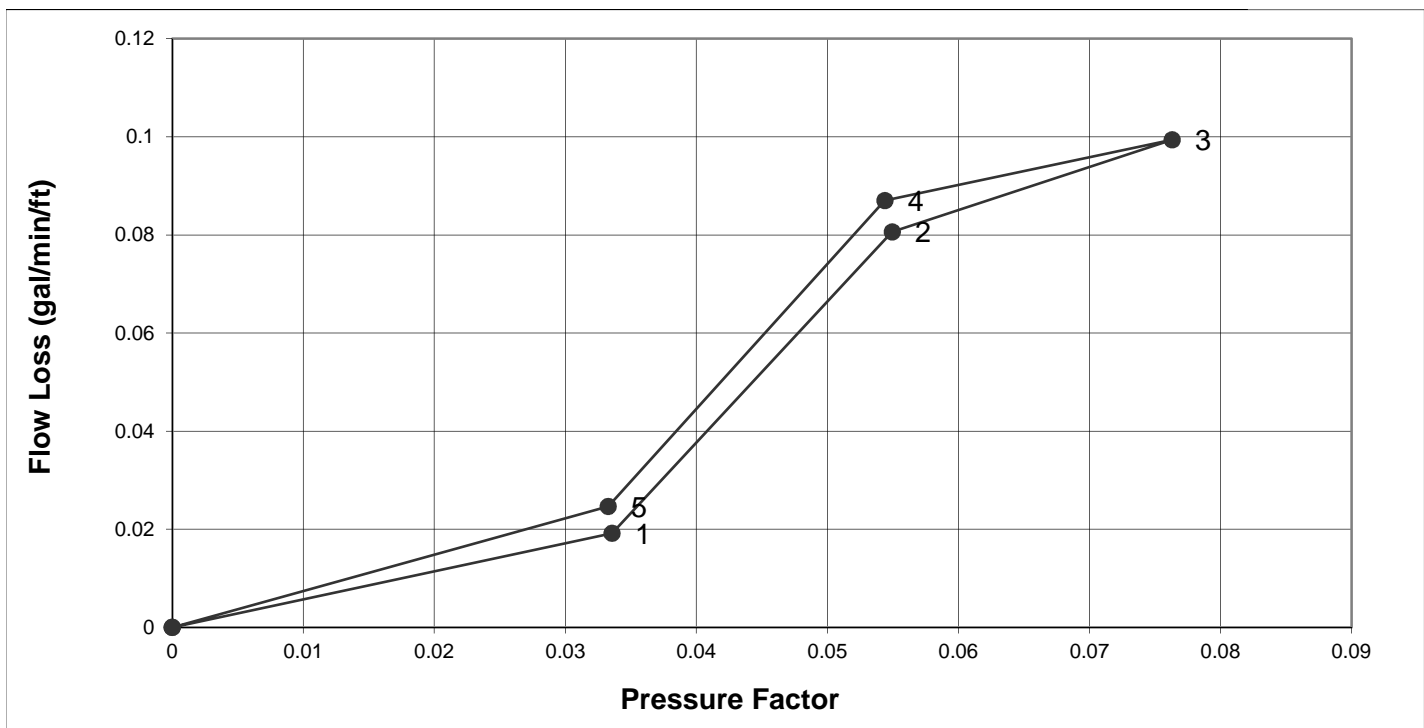
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	65.57	59.4	0.033007137	0.90	0.0421	1.27
2	75%	99.22	93.1	0.051692239	3.82	0.1785	3.45
3	100%	130.50	124.4	0.069063183	17.60	0.8224	11.91
4	75%	99.07	92.9	0.051608948	12.80	0.5981	11.59
5	50%	66.02	59.9	0.033257012	8.04	0.3757	11.30
0	0			0	0	0	



Boring	CB-1
Surface El. (ft)	1788.4
Groundwater El. (ft)	1678
Test No.	4
Test Interval Center Elevation (ft)	1645.9
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	137.4
Reference Pressure, $P_0$ (psi)	145
Behavior	Turbulent
Representative Lugeon Value	1.5

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
154.5	174.5	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	74.33	60.4	0.033562112	0.38	0.0192	0.57
2	75%	112.83	98.9	0.054940312	1.61	0.0806	1.47
3	100%	151.33	137.4	0.076318512	1.99	0.0994	1.30
4	75%	111.83	97.9	0.054385034	1.74	0.0870	1.60
5	50%	73.83	59.9	0.033281829	0.49	0.0247	0.74
0	0			0	0	0	

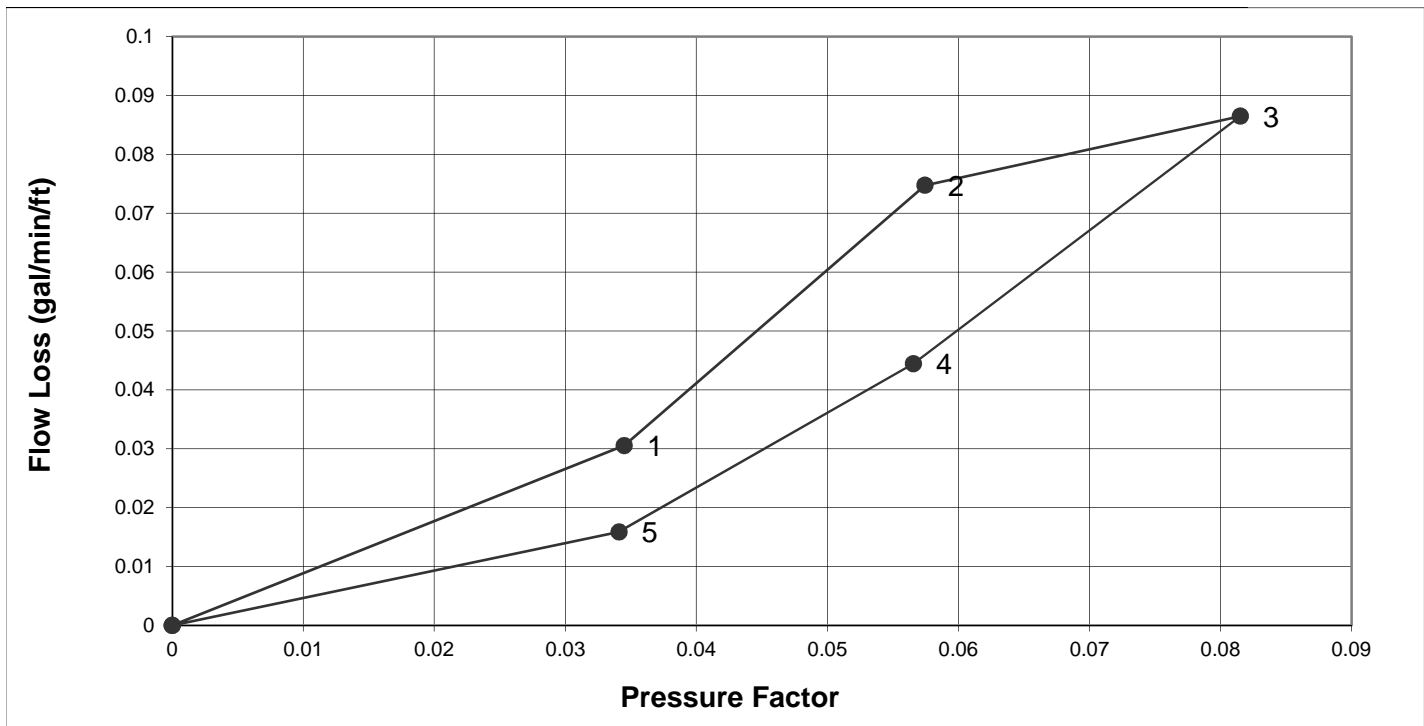




Boring	CB-1
Surface El. (ft)	1788.4
Groundwater El. (ft)	1678
Test No.	5
Test Interval Center Elevation (ft)	1626.4
Test Interval Length, L (ft)	25.2
Max. Test Pressure, $P_{MAX}$ (psi)	146.8
Reference Pressure, $P_0$ (psi)	145
Behavior	Laminar
Representative Lugeon Value	0.9

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
174.5	199.7	30

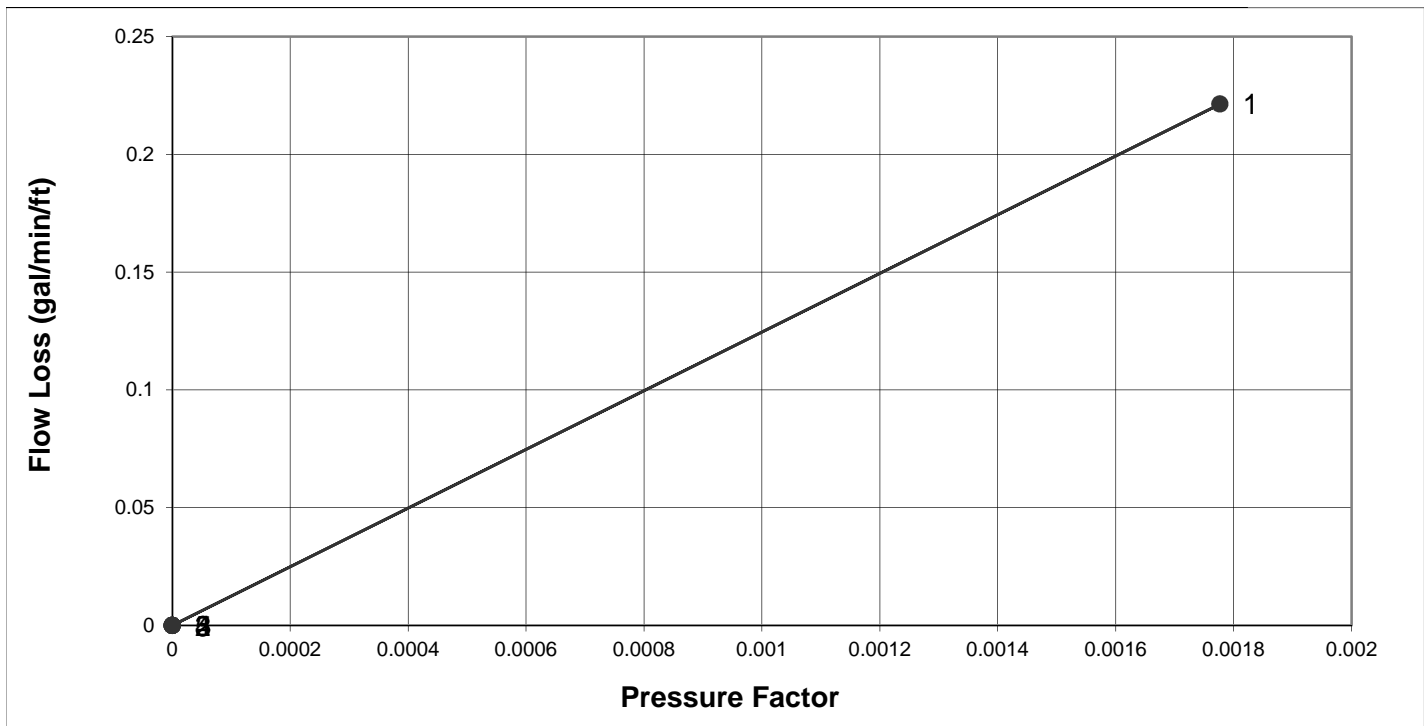
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	84.50	62.1	0.034498601	0.77	0.0306	0.89
2	75%	125.83	103.5	0.057450088	1.88	0.0748	1.30
3	100%	169.17	146.8	0.081512131	2.18	0.0865	1.06
4	75%	124.23	101.9	0.056561643	1.12	0.0444	0.79
5	50%	83.77	61.4	0.034091397	0.40	0.0159	0.47
0	0			0	0	0	



Boring	CB-2
Surface El. (ft)	1722.7
Groundwater El. (ft)	1697
Test No.	1A
Test Interval Center Elevation (ft)	1700.5
Test Interval Length, L (ft)	18.0
Max. Test Pressure, $P_{MAX}$ (psi)	3.2
Reference Pressure, $P_0$ (psi)	145
Behavior	1 point
Representative Lugeon Value	>100

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
14	32	15

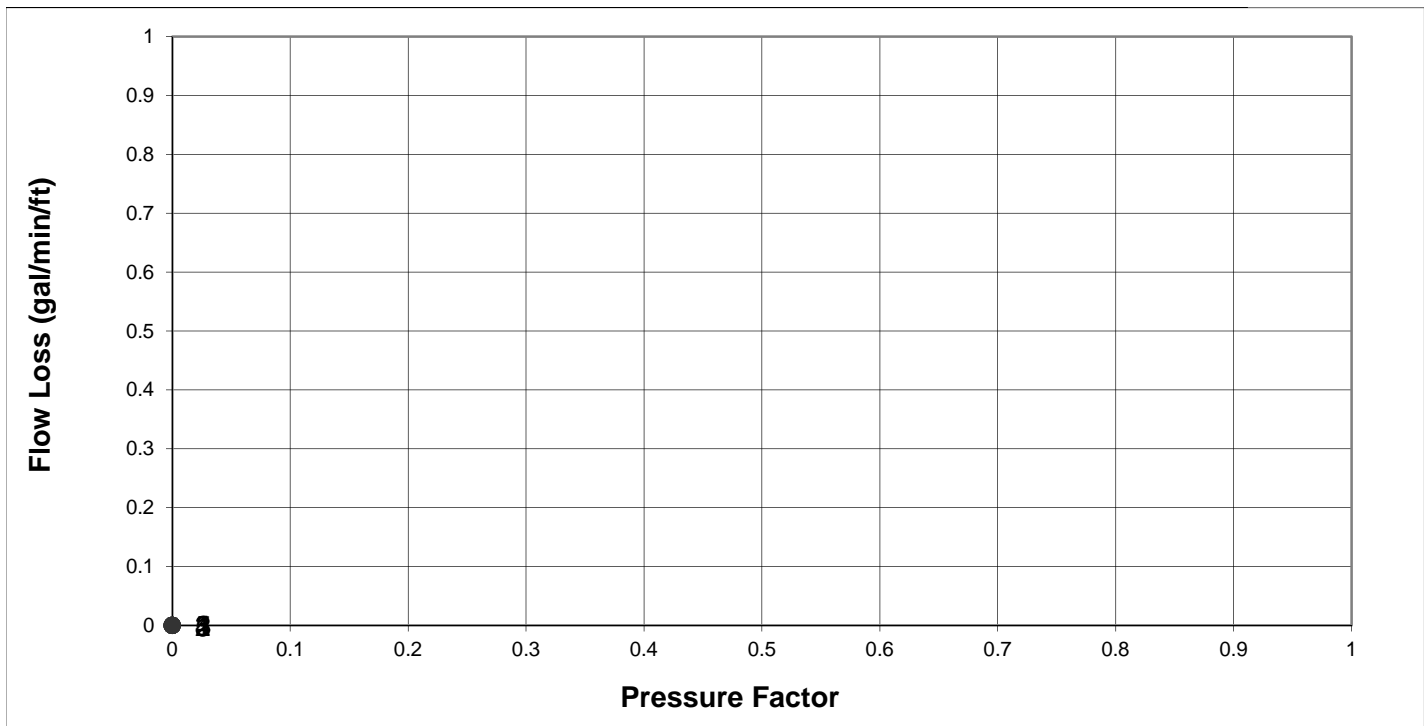
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	3.20	3.2	0.001776889	3.99	0.2214	124.59
2	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3	100%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5	50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0	0			0	0	0	



Boring	CB-2
Surface El. (ft)	1722.7
Groundwater El. (ft)	1697
Test No.	1
Test Interval Center Elevation (ft)	1695.7
Test Interval Length, L (ft)	8.0
Max. Test Pressure, $P_{MAX}$ (psi)	NA
Reference Pressure, $P_0$ (psi)	145
Behavior	
Representative Lugeon Value	

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
24	32	15

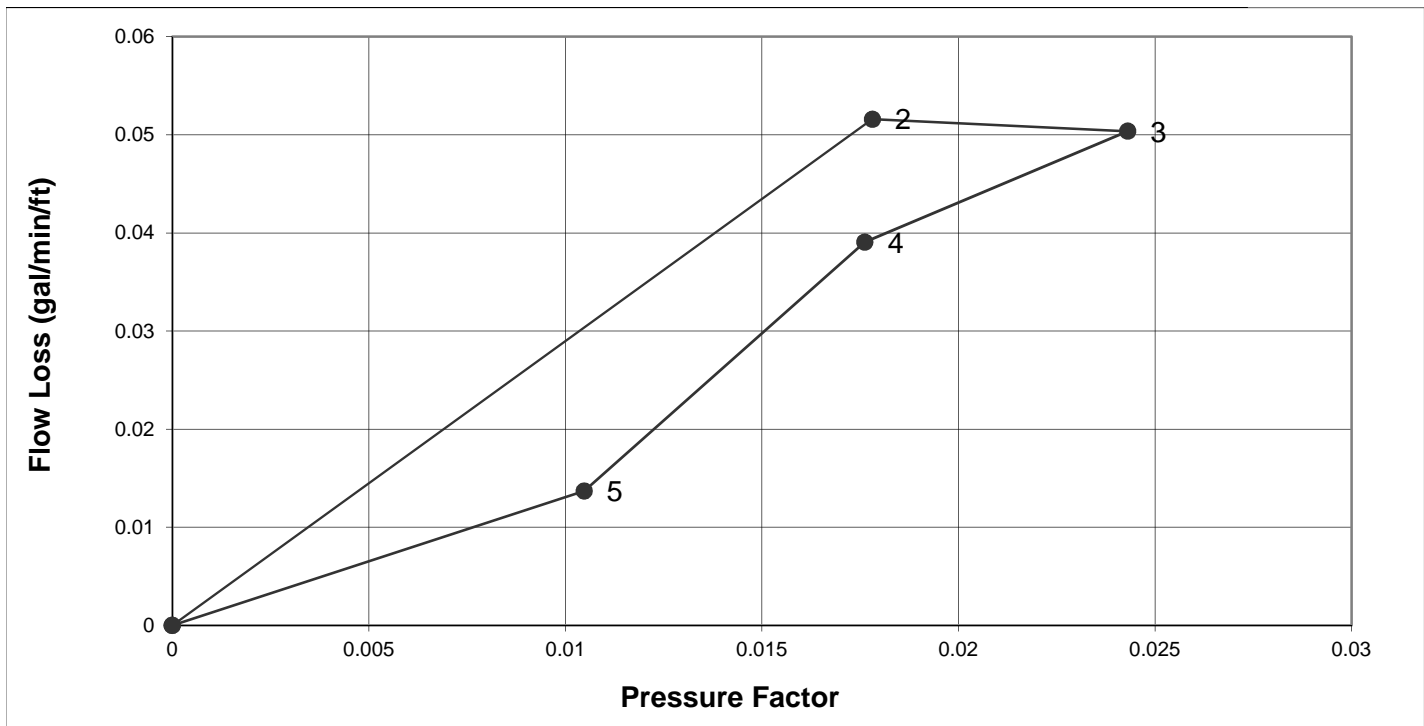
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	-	#VALUE!	#VALUE!	-	#VALUE!	#VALUE!
2	75%	-	#VALUE!	#VALUE!	-	#VALUE!	#VALUE!
3	100%	-	#VALUE!	#VALUE!	-	#VALUE!	#VALUE!
4	75%	-	#VALUE!	#VALUE!	-	#VALUE!	#VALUE!
5	50%	-	#VALUE!	#VALUE!	-	#VALUE!	#VALUE!
0	0			0	0	0	



Boring	CB-2
Surface El. (ft)	1722.7
Groundwater El. (ft)	1697
Test No.	2
Test Interval Center Elevation (ft)	1680.7
Test Interval Length, L (ft)	23.0
Max. Test Pressure, $P_{MAX}$ (psi)	43.8
Reference Pressure, $P_0$ (psi)	145
Behavior	Void Filling
Representative Lugeon Value	1.3

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
32	55	15

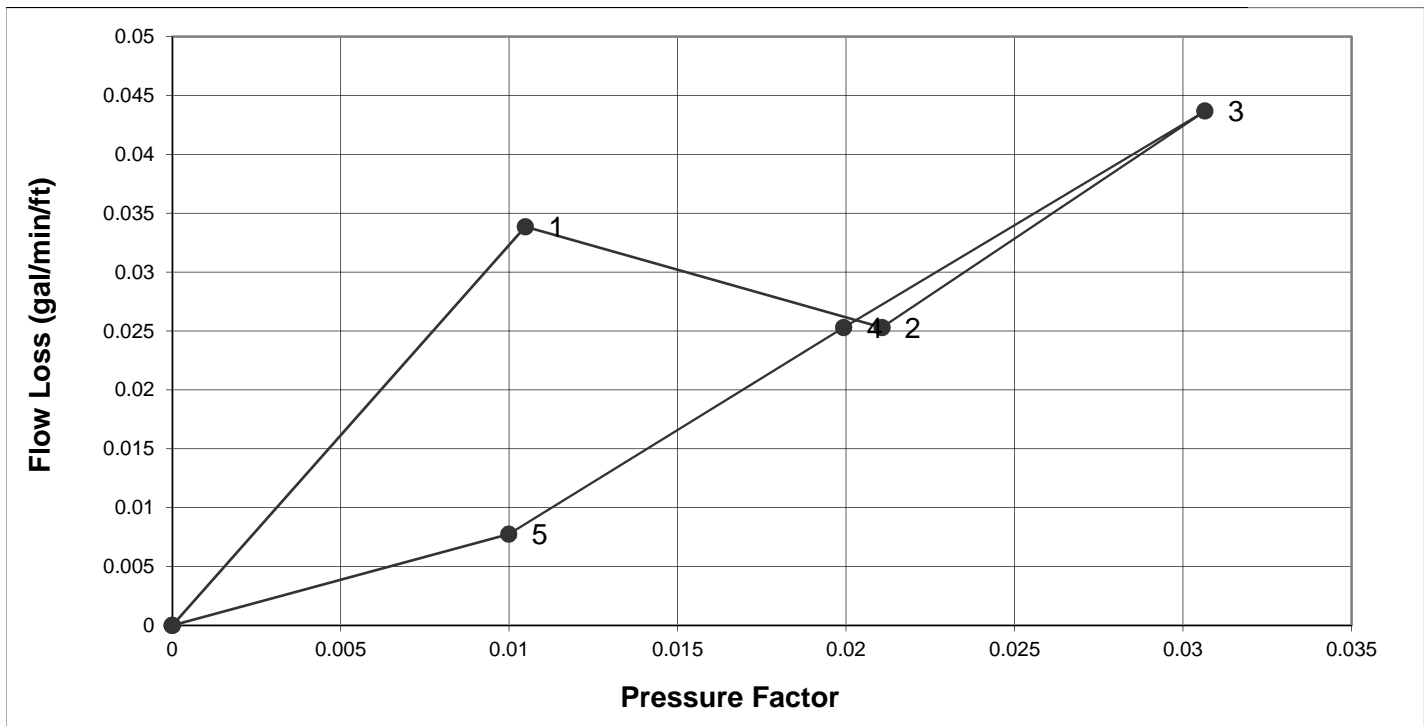
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2	75%	39.14	32.1	0.017809562	1.19	0.0516	2.90
3	100%	50.84	43.8	0.024305389	1.16	0.0504	2.07
4	75%	38.80	31.7	0.017619842	0.90	0.0391	2.22
5	50%	25.94	18.9	0.010477117	0.32	0.0137	1.31
0	0			0	0	0	



Boring	CB-2
Surface El. (ft)	1722.7
Groundwater El. (ft)	1697
Test No.	3
Test Interval Center Elevation (ft)	1656.1
Test Interval Length, L (ft)	28.0
Max. Test Pressure, $P_{MAX}$ (psi)	55.2
Reference Pressure, $P_0$ (psi)	145
Behavior	Laminar
Representative Lugeon Value	1.6

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
55	83	15

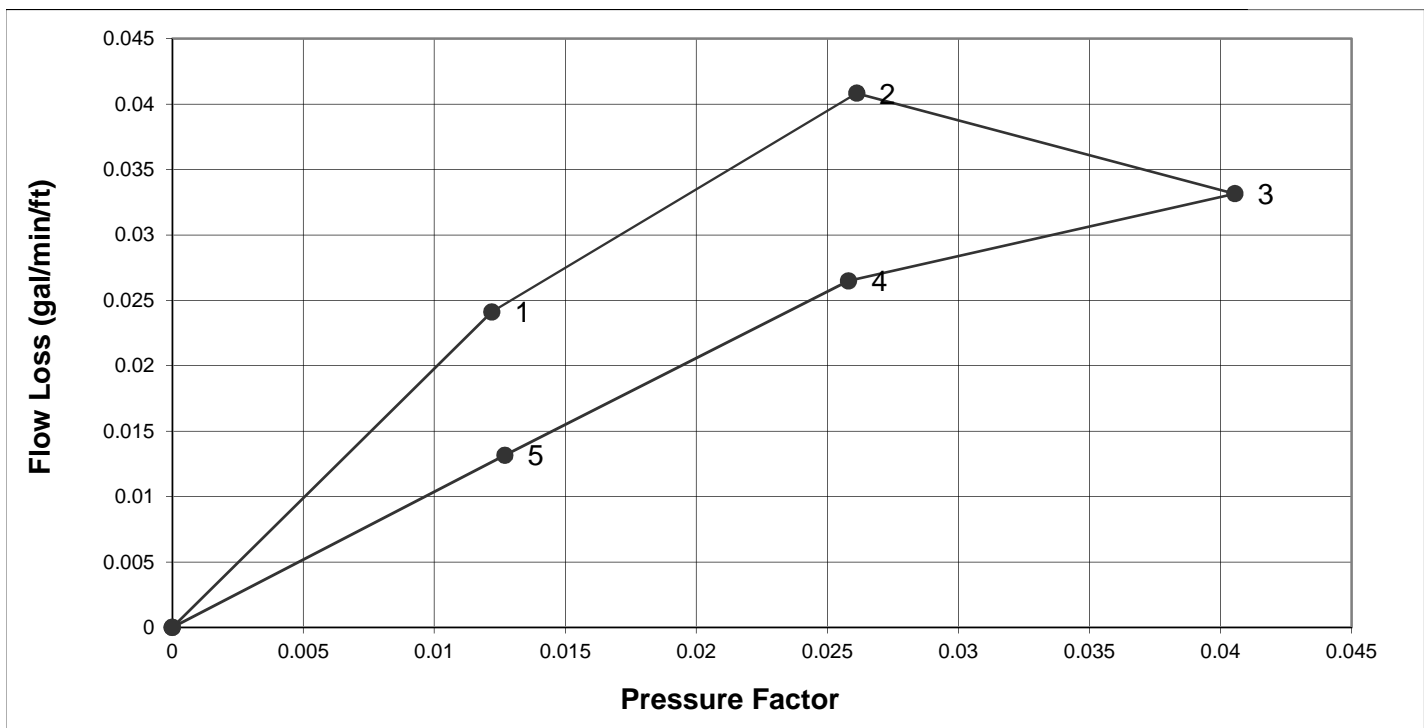
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	36.62	18.9	0.010480602	0.95	0.0339	3.23
2	75%	55.68	37.9	0.021063274	0.71	0.0253	1.20
3	100%	72.94	55.2	0.030651073	1.22	0.0437	1.43
4	75%	53.63	35.9	0.019929582	0.71	0.0253	1.27
5	50%	35.73	18.0	0.009988256	0.22	0.0077	0.77
0	0			0	0	0	



Boring	CB-2
Surface El. (ft)	1722.7
Groundwater El. (ft)	1697
Test No.	4
Test Interval Center Elevation (ft)	1627.1
Test Interval Length, L (ft)	28.0
Max. Test Pressure, $P_{MAX}$ (psi)	73.0
Reference Pressure, $P_0$ (psi)	145
Behavior	Void Filling-Laminar
Representative Lugeon Value	1.0

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
85	113	15

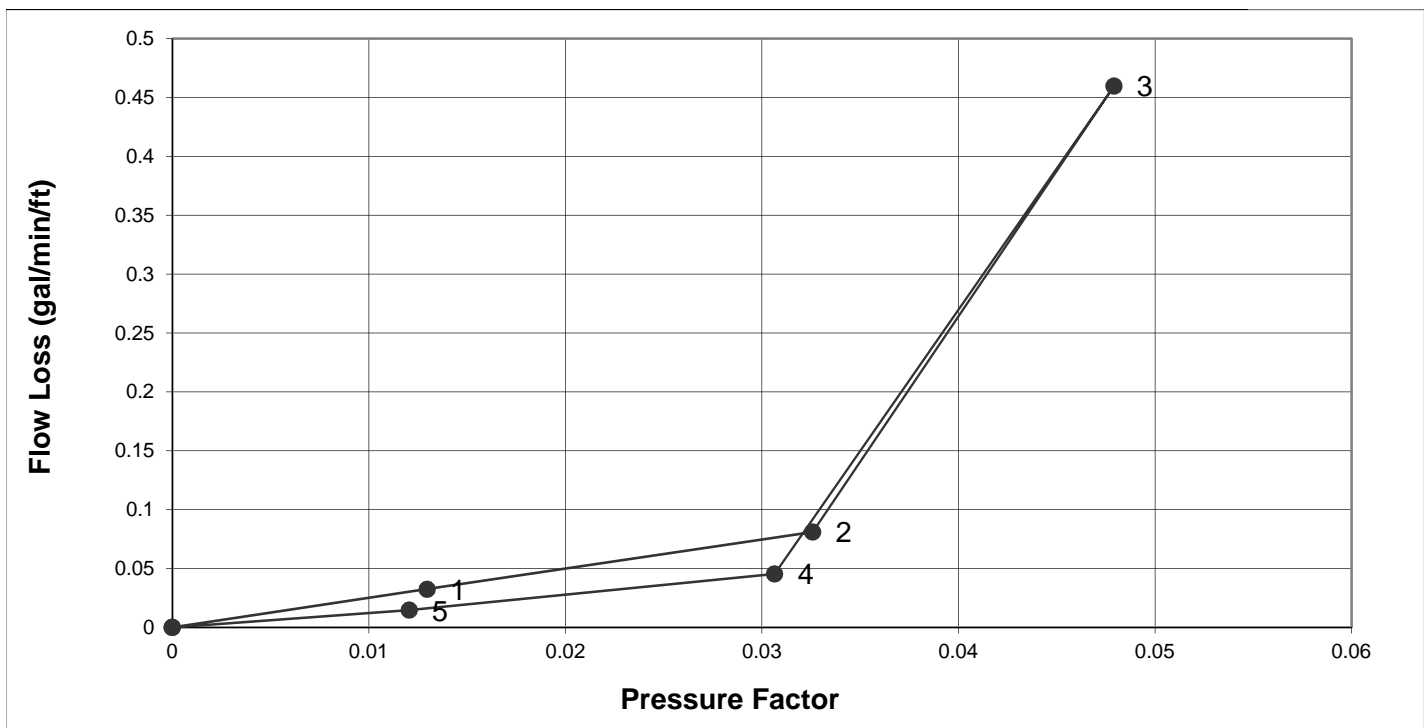
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	52.25	22.0	0.012191583	0.68	0.0241	1.98
2	75%	77.33	47.0	0.026115177	1.14	0.0408	1.56
3	100%	103.33	73.0	0.040552403	0.93	0.0332	0.82
4	75%	76.78	46.5	0.025809774	0.74	0.0265	1.03
5	50%	53.15	22.9	0.012690408	0.37	0.0132	1.04
0	0			0	0	0	



Boring	CB-2
Surface El. (ft)	1722.7
Groundwater El. (ft)	1697
Test No.	5
Test Interval Center Elevation (ft)	1599.1
Test Interval Length, L (ft)	30.0
Max. Test Pressure, $P_{MAX}$ (psi)	86.3
Reference Pressure, $P_0$ (psi)	145
Behavior	Dilation
Representative Lugeon Value	1.2

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
113	143	15

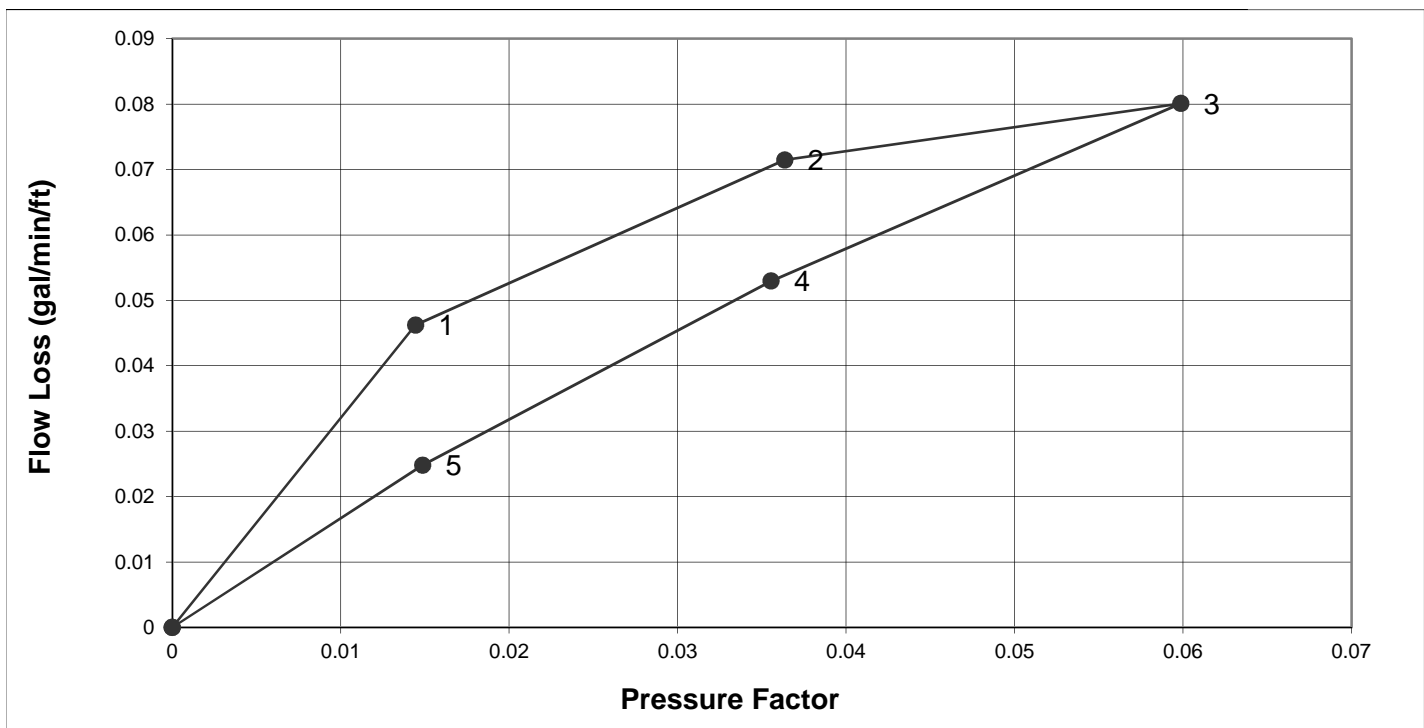
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	65.78	23.3	0.012964428	0.97	0.0325	2.50
2	75%	101.12	58.7	0.032584988	2.43	0.0810	2.49
3	100%	128.73	86.3	0.047915683	13.80	0.4599	9.60
4	75%	97.62	55.2	0.030643367	1.37	0.0455	1.48
5	50%	64.16	21.7	0.012061916	0.44	0.0146	1.21
0	0			0	0	0	



Boring	CB-2
Surface El. (ft)	1722.7
Groundwater El. (ft)	1697
Test No.	6
Test Interval Center Elevation (ft)	1567.7
Test Interval Length, L (ft)	35.0
Max. Test Pressure, $P_{MAX}$ (psi)	107.8
Reference Pressure, $P_0$ (psi)	145
Behavior	Void Filling-Laminar
Representative Lugeon Value	1.5

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
143	178	15

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	82.07	26.0	0.014454253	1.62	0.0462	3.20
2	75%	121.53	65.5	0.036368296	2.50	0.0715	1.97
3	100%	163.84	107.8	0.059862104	2.80	0.0801	1.34
4	75%	120.05	64.0	0.035545559	1.85	0.0530	1.49
5	50%	82.81	26.8	0.014865158	0.87	0.0248	1.67
0	0			0	0	0	

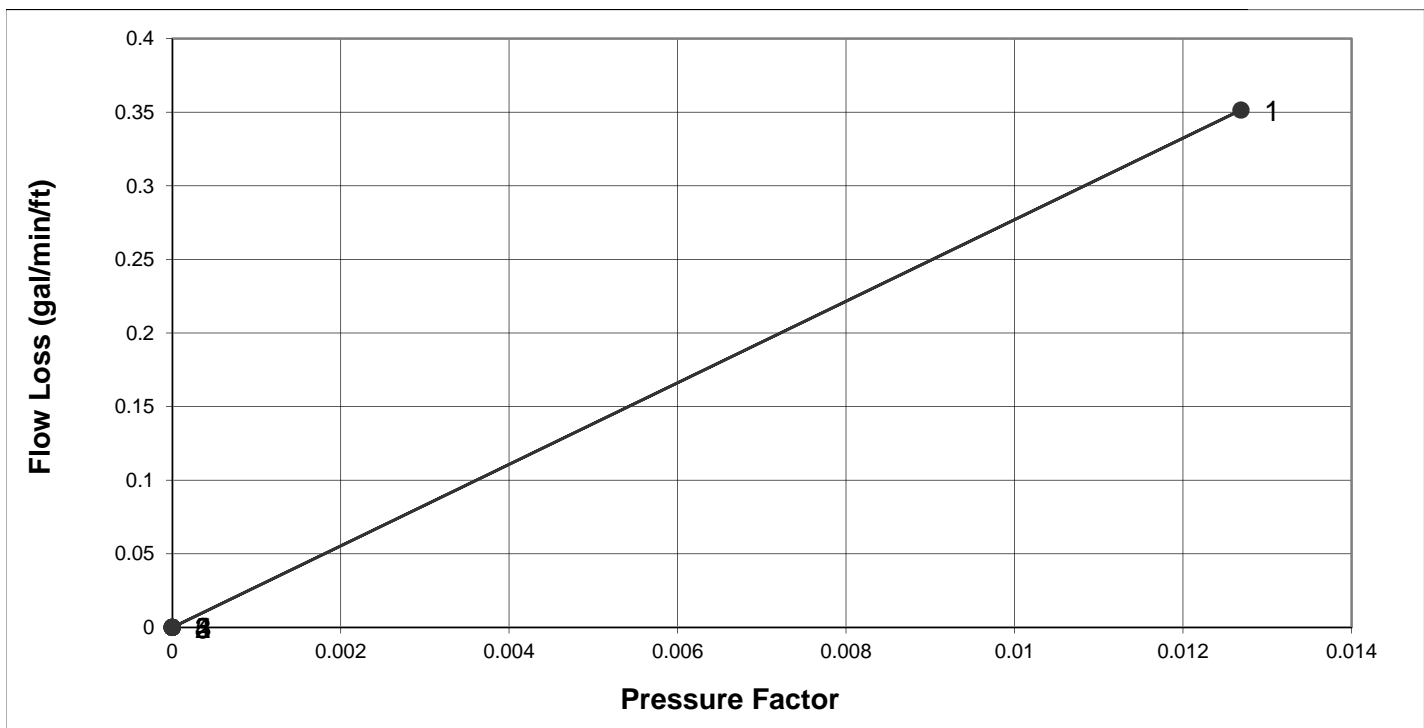




Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	1A
Test Interval Center Elevation (ft)	1795.4
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	22.9
Reference Pressure, $P_0$ (psi)	145
Behavior	1 point
Representative Lugeon Value	27.7

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
34	54	30

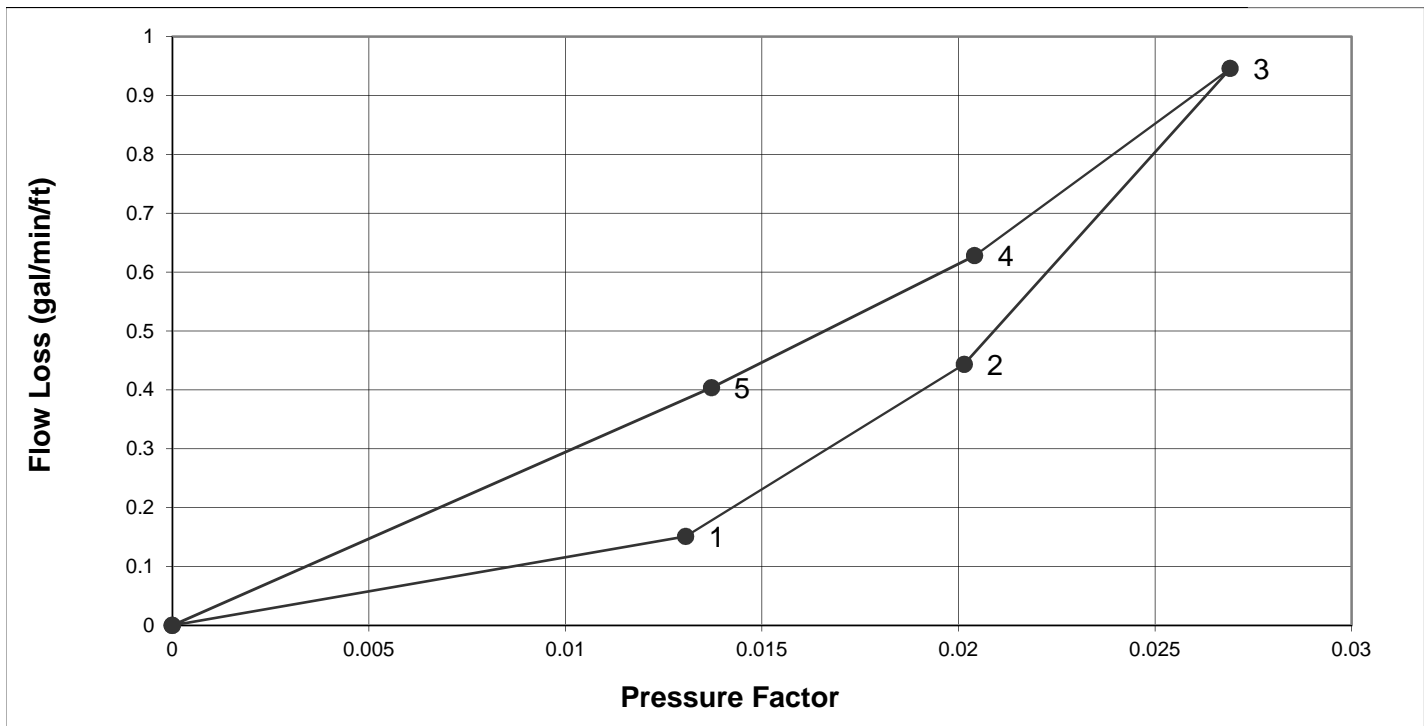
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	22.85	22.9	0.012689026	7.03	0.3515	27.70
2	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3	100%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5	50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	1B
Test Interval Center Elevation (ft)	1791.1
Test Interval Length, L (ft)	10.0
Max. Test Pressure, $P_{MAX}$ (psi)	48.5
Reference Pressure, $P_0$ (psi)	145
Behavior	Dilation
Representative Lugeon Value	22.0

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
44	54	30

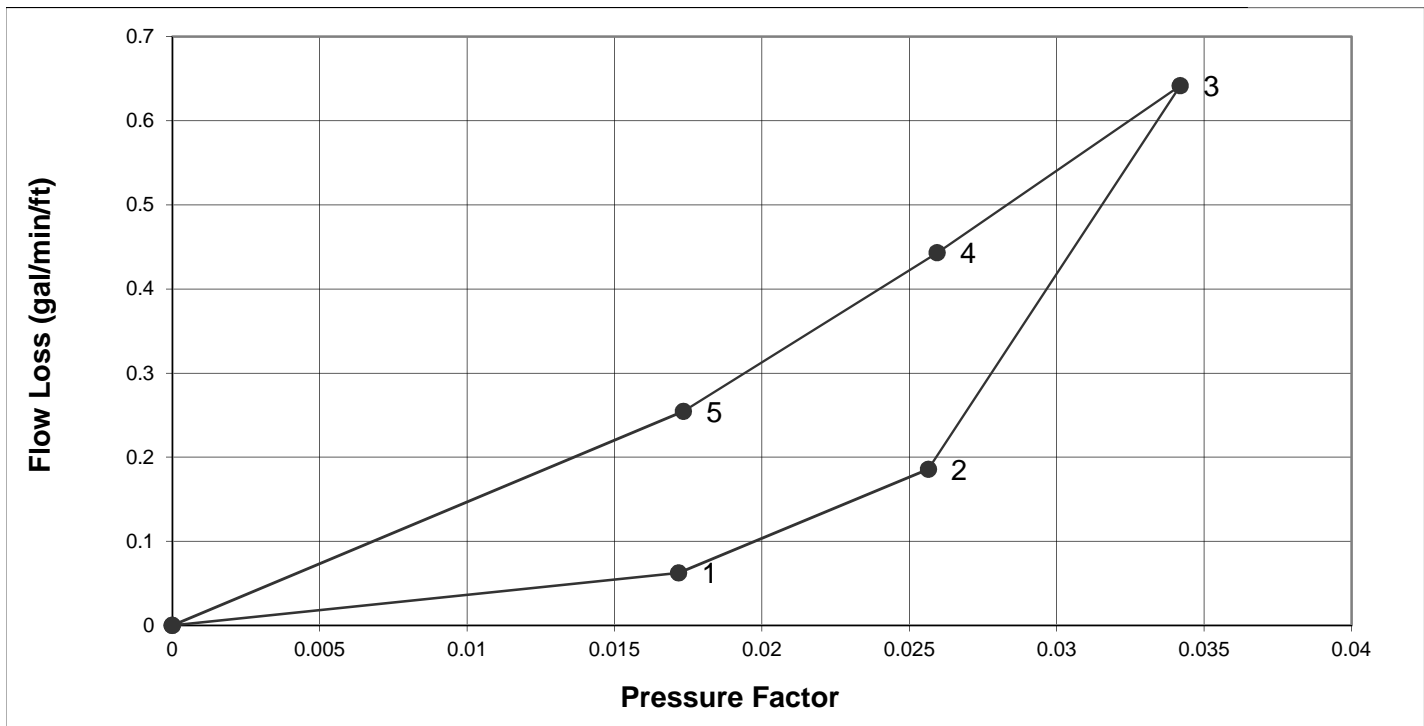
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	23.52	23.5	0.013061247	1.51	0.1510	11.56
2	75%	36.28	36.3	0.020147334	4.43	0.4434	22.01
3	100%	48.47	48.5	0.026914506	9.46	0.9460	35.15
4	75%	36.76	36.8	0.020409703	6.28	0.6280	30.77
5	50%	24.70	24.7	0.013717493	4.04	0.4040	29.45
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	2
Test Interval Center Elevation (ft)	1778.1
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	61.6
Reference Pressure, $P_0$ (psi)	145
Behavior	Washout
Representative Lugeon Value	18.8

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
54	74	30

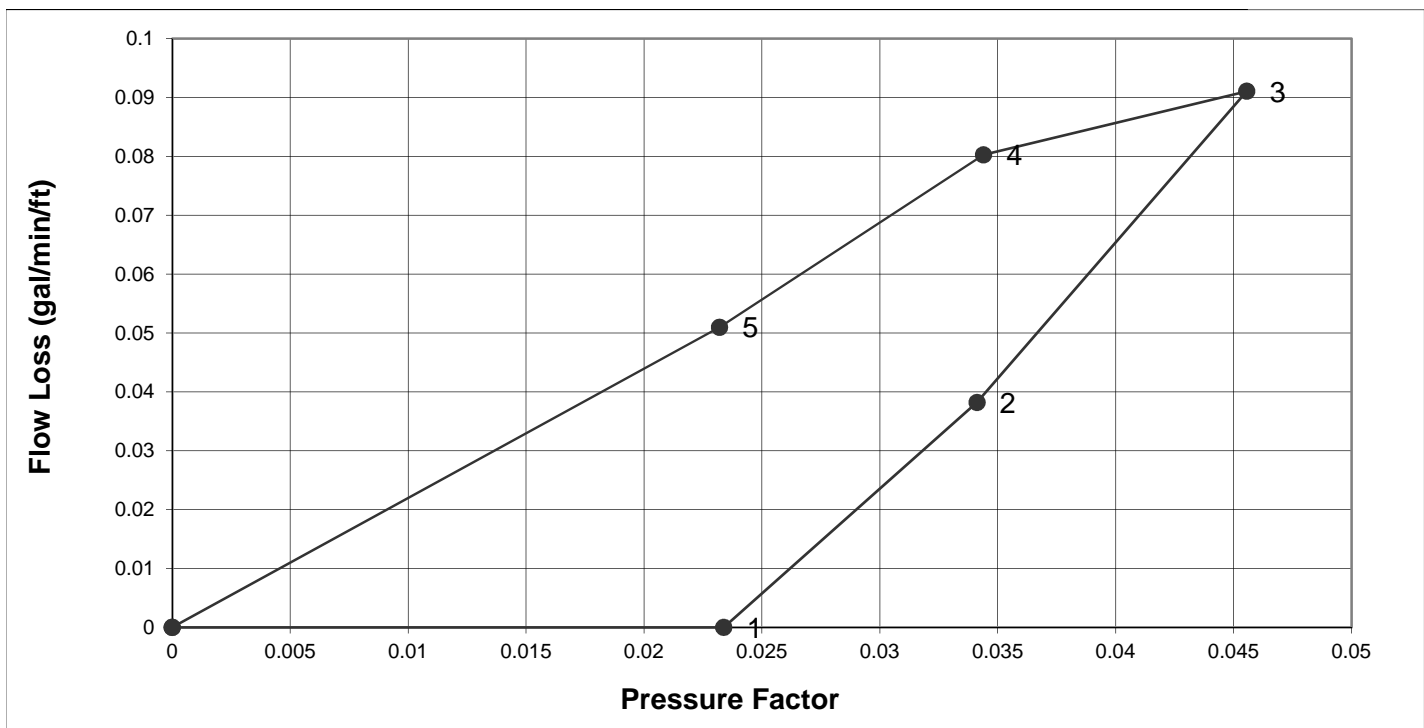
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	30.94	30.9	0.017180299	1.24	0.0622	3.62
2	75%	46.18	46.2	0.025644797	3.71	0.1855	7.23
3	100%	61.58	61.6	0.034194292	12.84	0.6419	18.77
4	75%	46.72	46.7	0.02594462	8.86	0.4430	17.07
5	50%	31.23	31.2	0.01734244	5.09	0.2544	14.67
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	3
Test Interval Center Elevation (ft)	1756.4
Test Interval Length, L (ft)	30.0
Max. Test Pressure, $P_{MAX}$ (psi)	82.0
Reference Pressure, $P_0$ (psi)	145
Behavior	Washout
Representative Lugeon Value	2.3

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
74	104	30

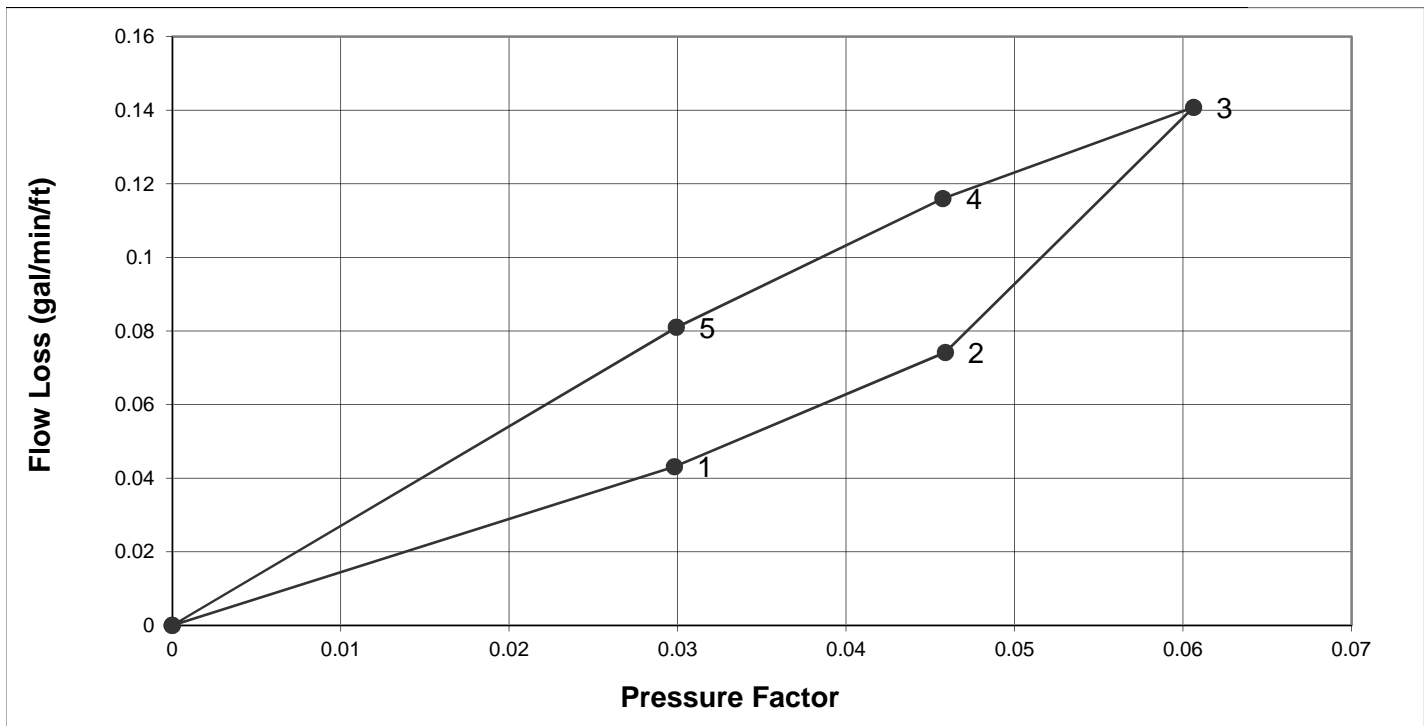
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	42.11	42.1	0.023379977	0.00	0.0000	0.00
2	75%	61.45	61.4	0.034120625	1.15	0.0382	1.12
3	100%	82.03	82.0	0.045550836	2.73	0.0911	2.00
4	75%	61.95	61.9	0.034399097	2.41	0.0803	2.33
5	50%	41.79	41.8	0.023204231	1.53	0.0510	2.20
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	4
Test Interval Center Elevation (ft)	1730.4
Test Interval Length, L (ft)	30.0
Max. Test Pressure, $P_{MAX}$ (psi)	109.2
Reference Pressure, $P_0$ (psi)	145
Behavior	Washout
Representative Lugeon Value	2.7

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
104	134	30

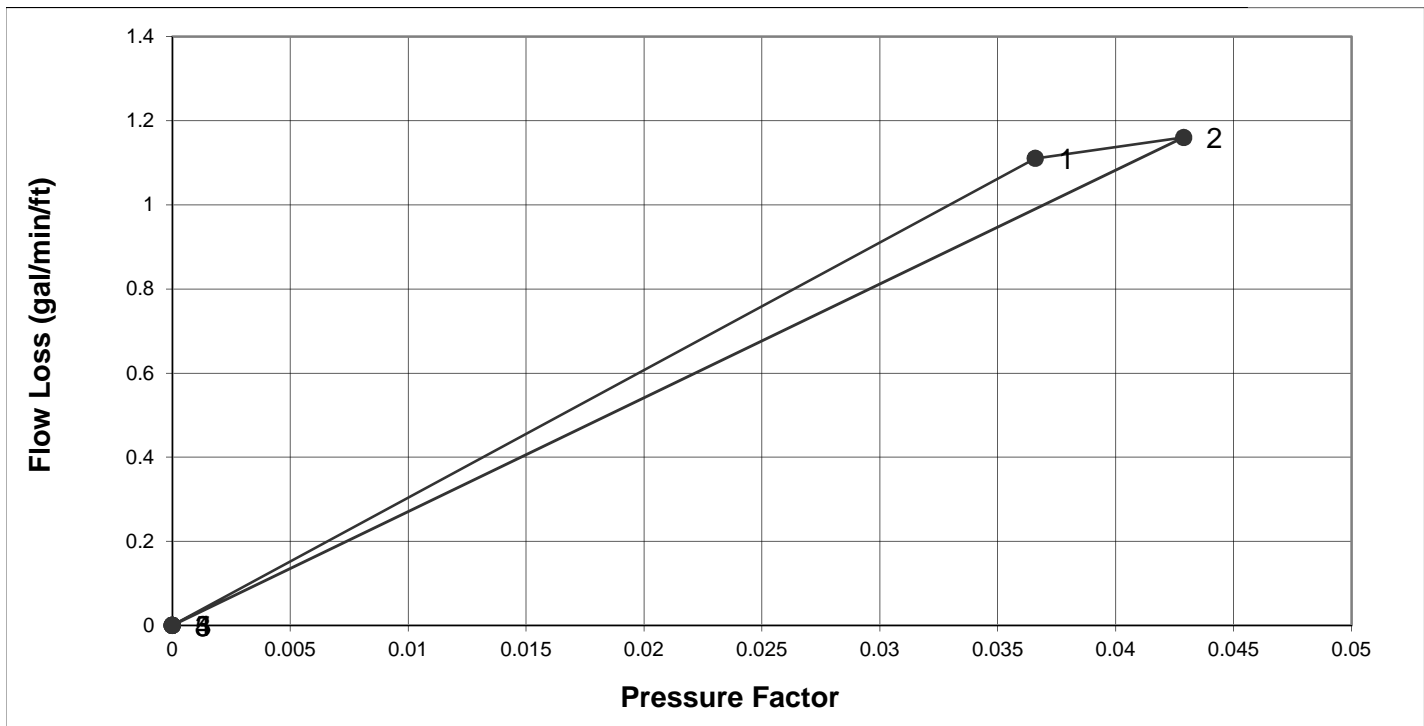
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	53.67	53.7	0.029803802	1.29	0.0431	1.45
2	75%	82.64	82.6	0.045890666	2.23	0.0742	1.62
3	100%	109.18	109.2	0.060626168	4.22	0.1408	2.32
4	75%	82.39	82.4	0.045749995	3.48	0.1160	2.54
5	50%	53.89	53.9	0.029924297	2.43	0.0810	2.71
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	5
Test Interval Center Elevation (ft)	1708.8
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	77.2
Reference Pressure, $P_0$ (psi)	145
Behavior	2 points
Representative Lugeon Value	30.3

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
134	154	30

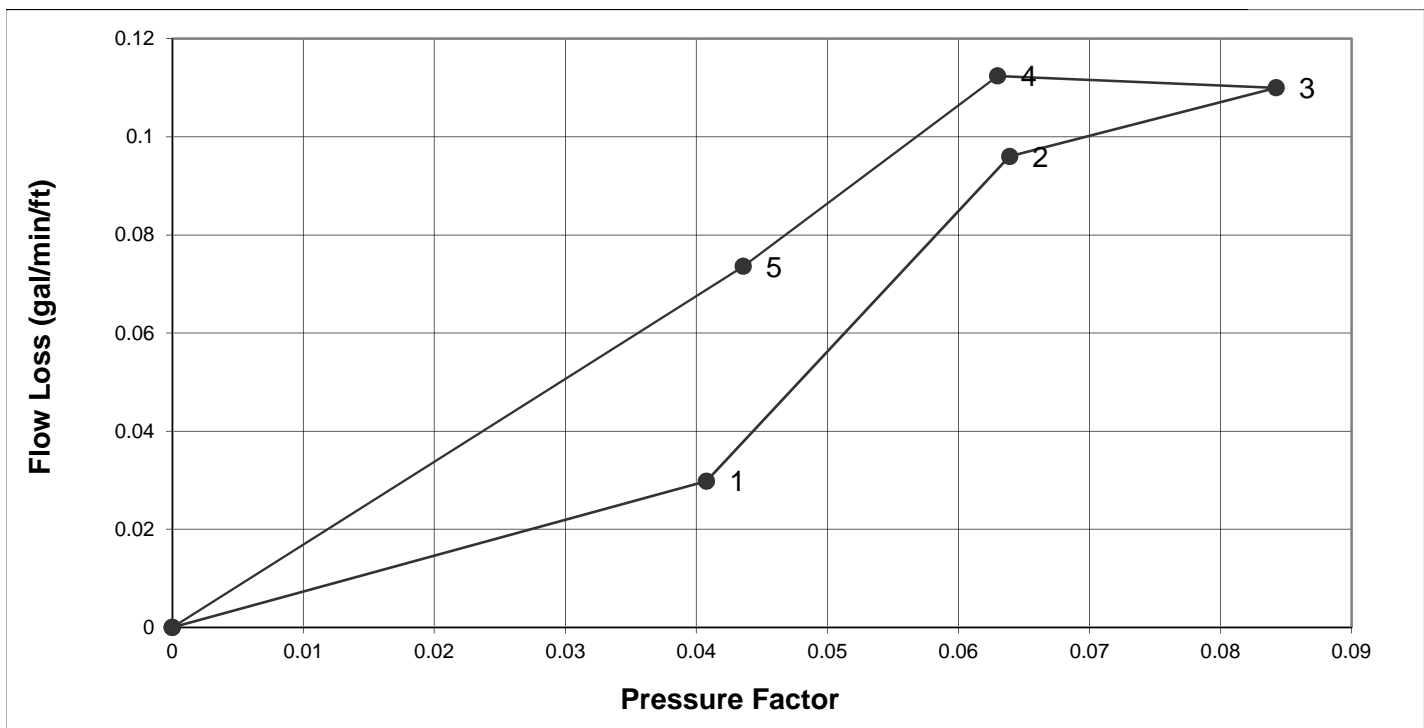
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	65.91	65.9	0.036596424	22.21	1.1106	30.35
2	75%	77.23	77.2	0.042884891	23.21	1.1605	27.06
3	100%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5	50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	6
Test Interval Center Elevation (ft)	1691.5
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	151.7
Reference Pressure, $P_0$ (psi)	145
Behavior	Turbulent
Representative Lugeon Value	1.5

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
154	174	30

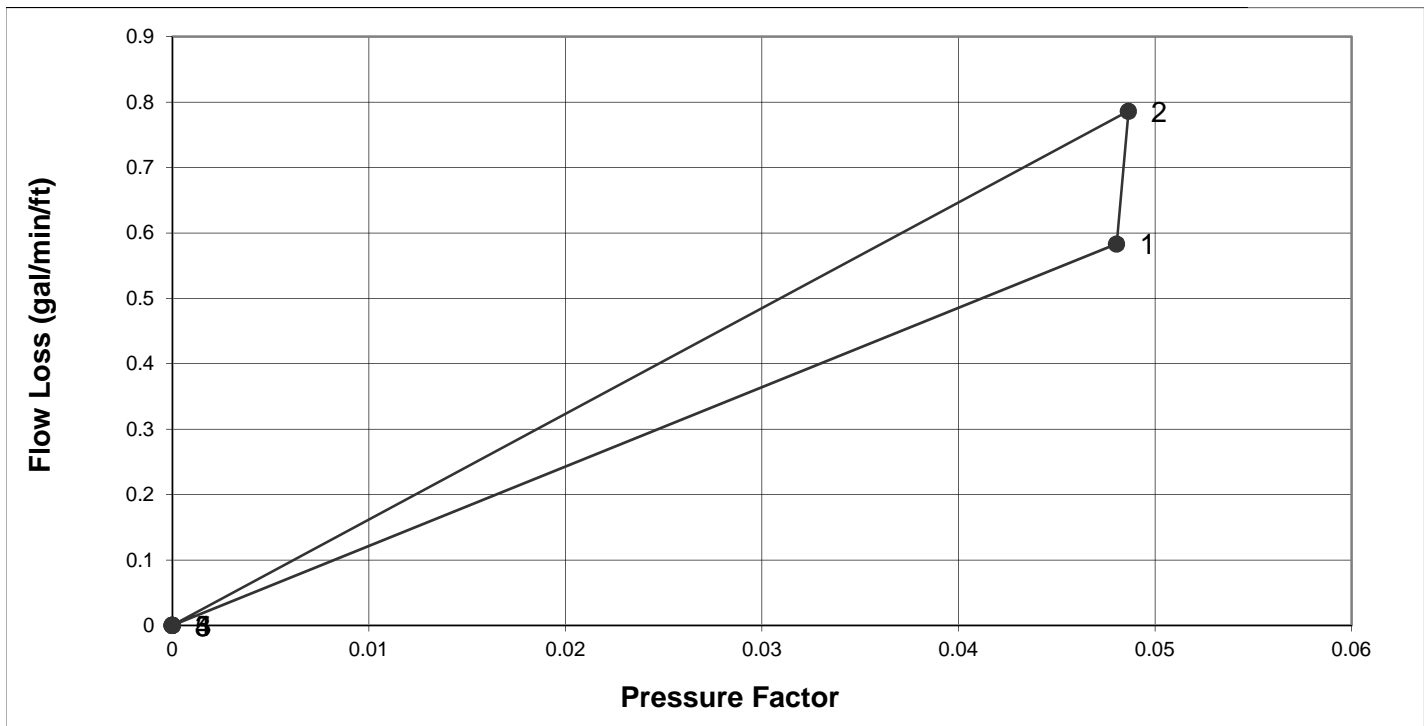
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	73.43	73.4	0.040774835	0.60	0.0298	0.73
2	75%	115.10	115.1	0.063909712	1.92	0.0960	1.50
3	100%	151.71	151.7	0.084243064	2.20	0.1100	1.31
4	75%	113.45	113.4	0.062994429	2.25	0.1124	1.78
5	50%	78.47	78.5	0.04357127	1.47	0.0736	1.69
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	7A
Test Interval Center Elevation (ft)	1665.5
Test Interval Length, L (ft)	40.0
Max. Test Pressure, $P_{MAX}$ (psi)	87.6
Reference Pressure, $P_0$ (psi)	145
Behavior	2 points
Representative Lugeon Value	12.1

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
174	214	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	86.53	86.5	0.048049957	23.33	0.5832	12.14
2	75%	87.61	87.6	0.048649009	31.44	0.7860	16.16
3	100%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5	50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0	0			0	0	0	

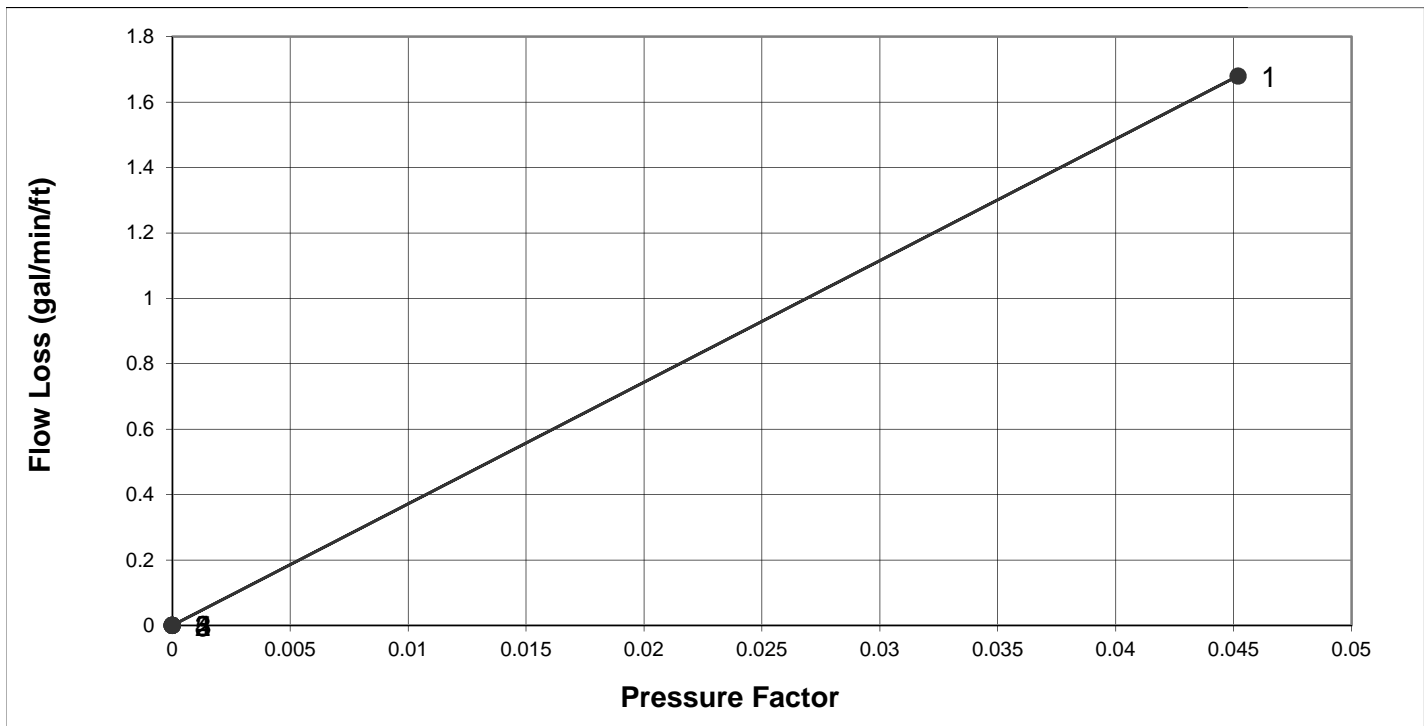




Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	8A
Test Interval Center Elevation (ft)	1639.5
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	81.4
Reference Pressure, $P_0$ (psi)	145
Behavior	1 point
Representative Lugeon Value	37.2

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
214	234	30

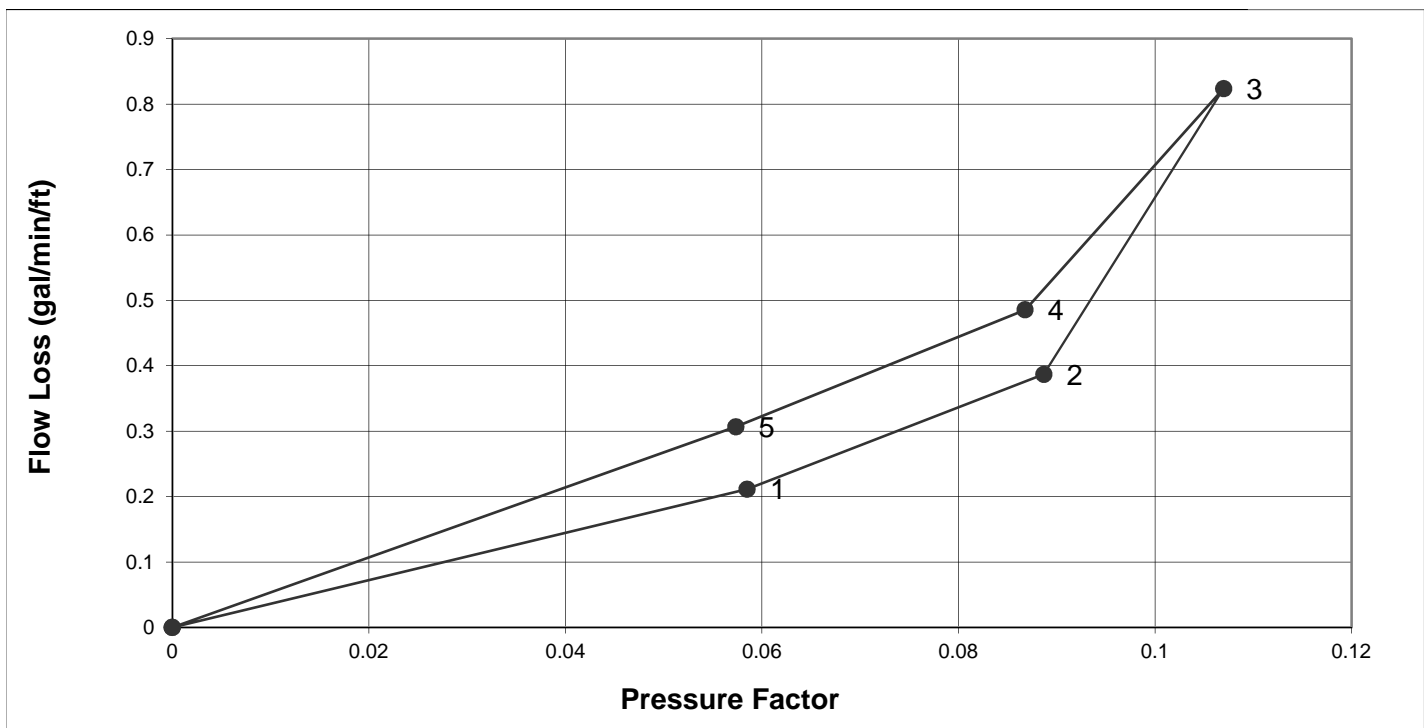
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	81.38	81.4	0.045187869	33.59	1.6796	37.17
2	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3	100%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5	50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0	0			0	0	0	



Boring	CB-3
Surface El. (ft)	1833.5
Groundwater El. (ft)	1636
Test No.	9
Test Interval Center Elevation (ft)	1622.2
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	192.7
Reference Pressure, $P_0$ (psi)	145
Behavior	Turbulent
Representative Lugeon Value	4.4

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
234	254	30

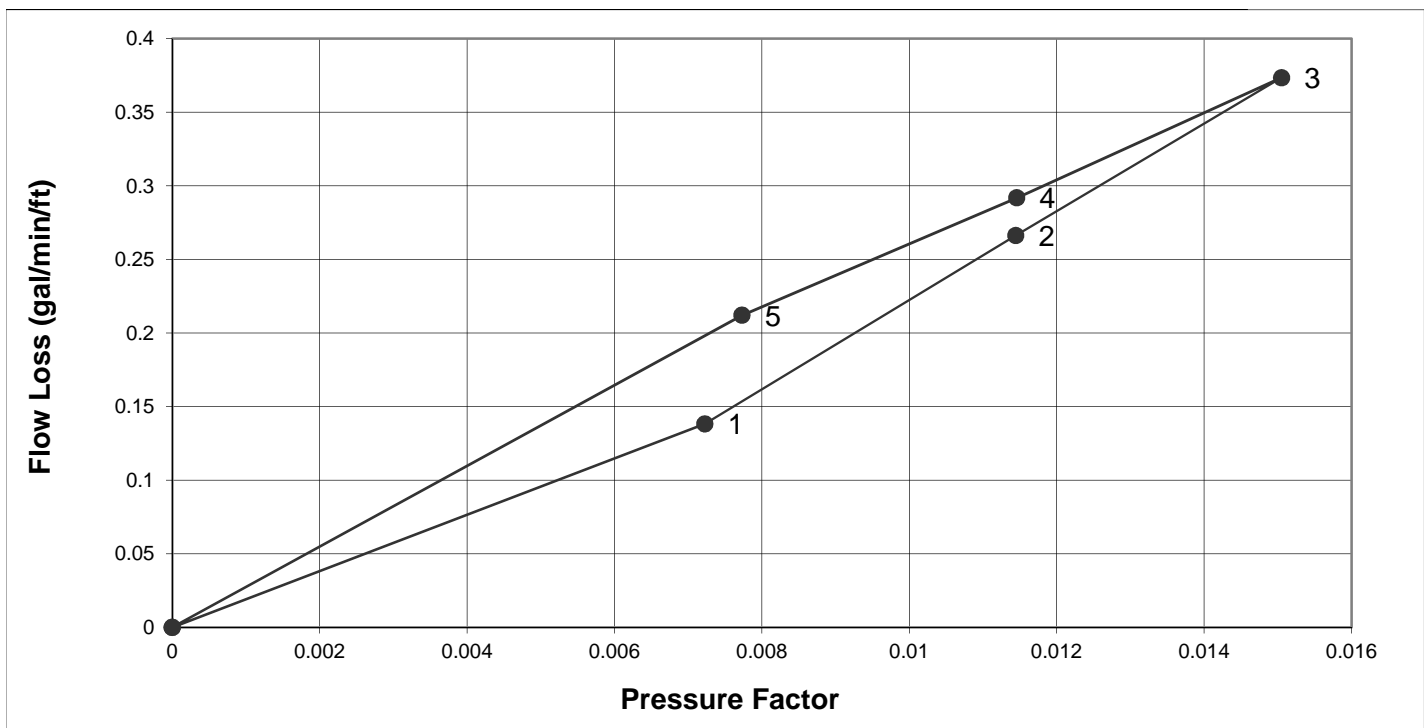
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	111.34	105.4	0.058499849	4.23	0.2113	3.61
2	75%	165.69	159.7	0.088683646	7.74	0.3869	4.36
3	100%	198.64	192.7	0.106980054	16.48	0.8238	7.70
4	75%	162.27	156.3	0.086780154	9.71	0.4855	5.59
5	50%	109.28	103.3	0.057359308	6.14	0.3069	5.35
0	0			0	0	0	



Boring	CB-4
Surface El. (ft)	1833.5
Groundwater El. (ft)	1777
Test No.	1
Test Interval Center Elevation (ft)	1812.3
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	27.1
Reference Pressure, $P_0$ (psi)	145
Behavior	Laminar
Representative Lugeon Value	24.0

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
14.5	34.5	30

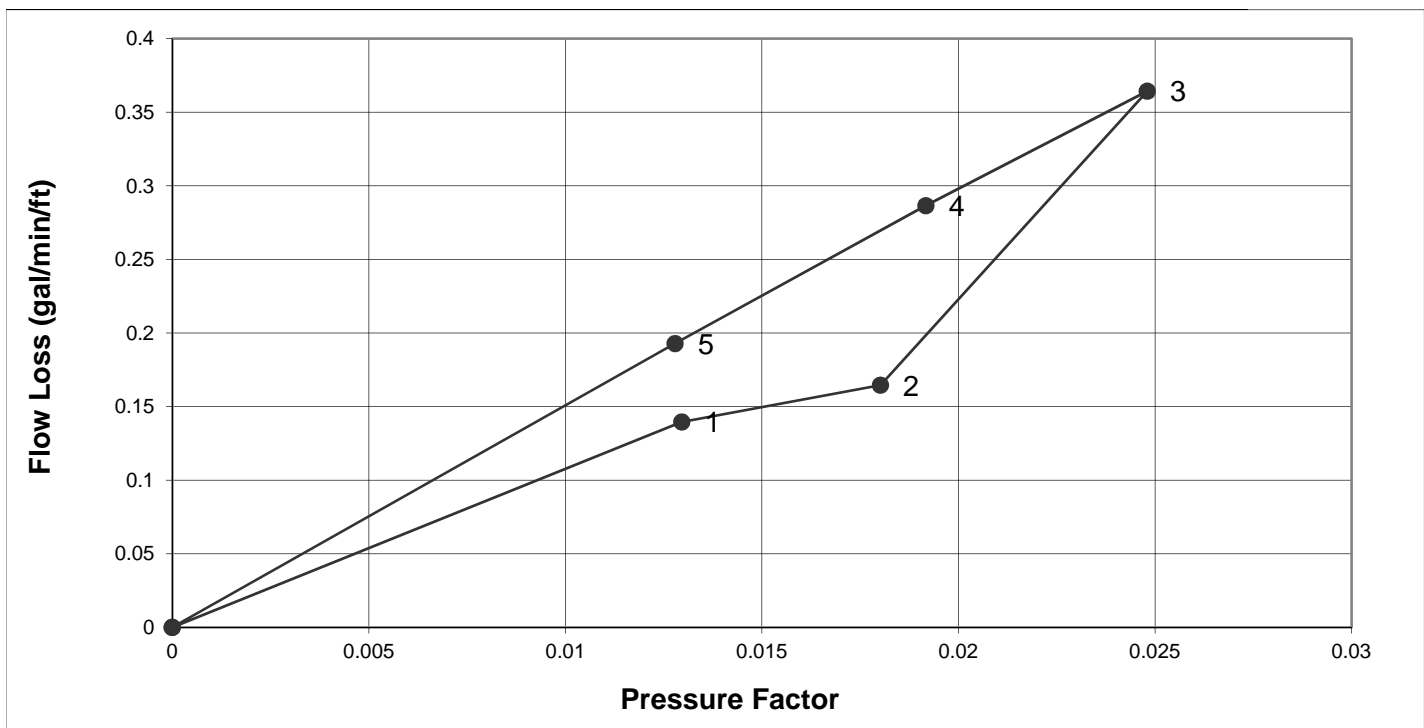
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	13.01	13.0	0.007226109	2.77	0.1383	19.14
2	75%	20.61	20.6	0.011446314	5.33	0.2663	23.27
3	100%	27.10	27.1	0.015049327	7.47	0.3735	24.82
4	75%	20.64	20.6	0.01145816	5.84	0.2919	25.48
5	50%	13.92	13.9	0.007729839	4.24	0.2121	27.44
0	0			0	0	0	



Boring	CB-4
Surface El. (ft)	1833.5
Groundwater El. (ft)	1777
Test No.	2
Test Interval Center Elevation (ft)	1795.0
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	44.7
Reference Pressure, $P_0$ (psi)	145
Behavior	Laminar
Representative Lugeon Value	12.9

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
34.5	54.5	30

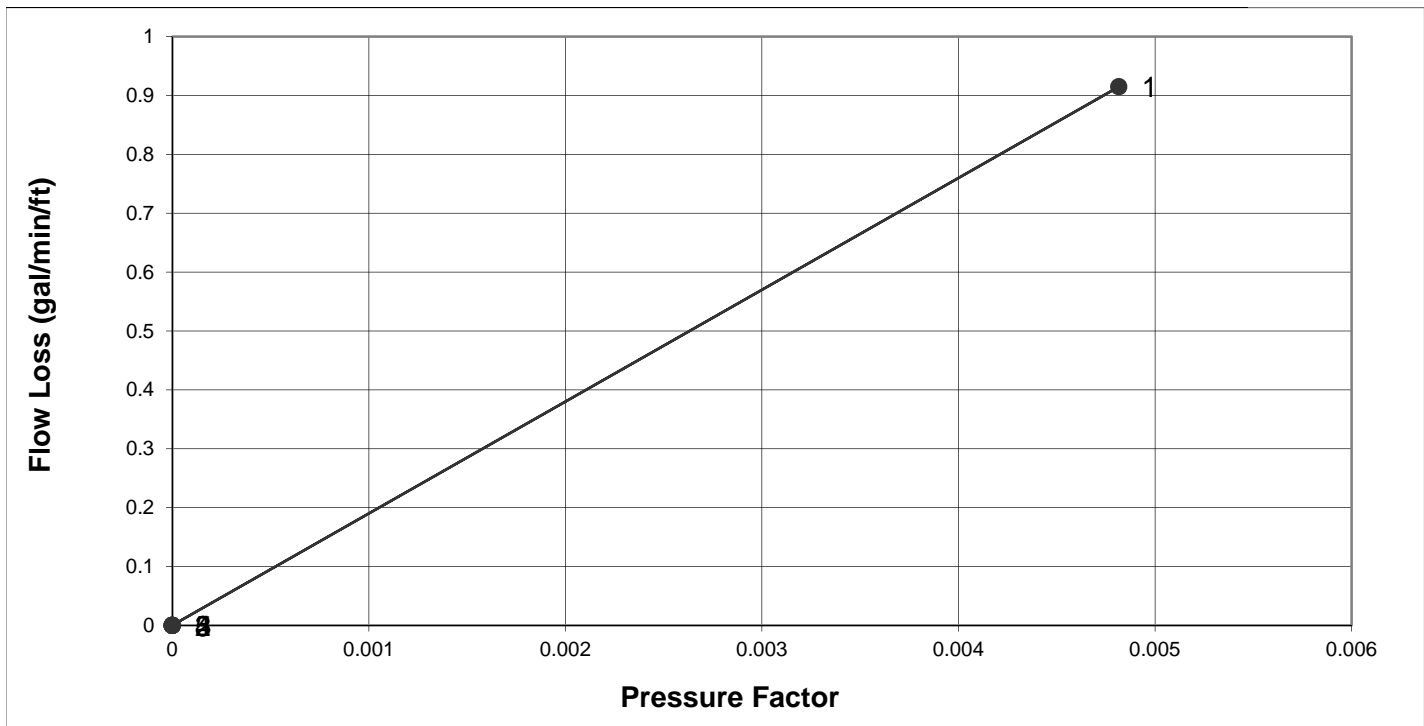
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	23.34	23.3	0.012961112	2.79	0.1396	10.77
2	75%	32.44	32.4	0.018015622	3.29	0.1645	9.13
3	100%	44.67	44.7	0.024804727	7.29	0.3644	14.69
4	75%	34.52	34.5	0.019168934	5.73	0.2866	14.95
5	50%	23.04	23.0	0.012793418	3.86	0.1928	15.07
0	0			0	0	0	



Boring	CB-4
Surface El. (ft)	1833.5
Groundwater El. (ft)	1777
Test No.	3
Test Interval Center Elevation (ft)	1777.6
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	8.7
Reference Pressure, $P_0$ (psi)	145
Behavior	1 point
Representative Lugeon Value	>100

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
54.5	74.5	30

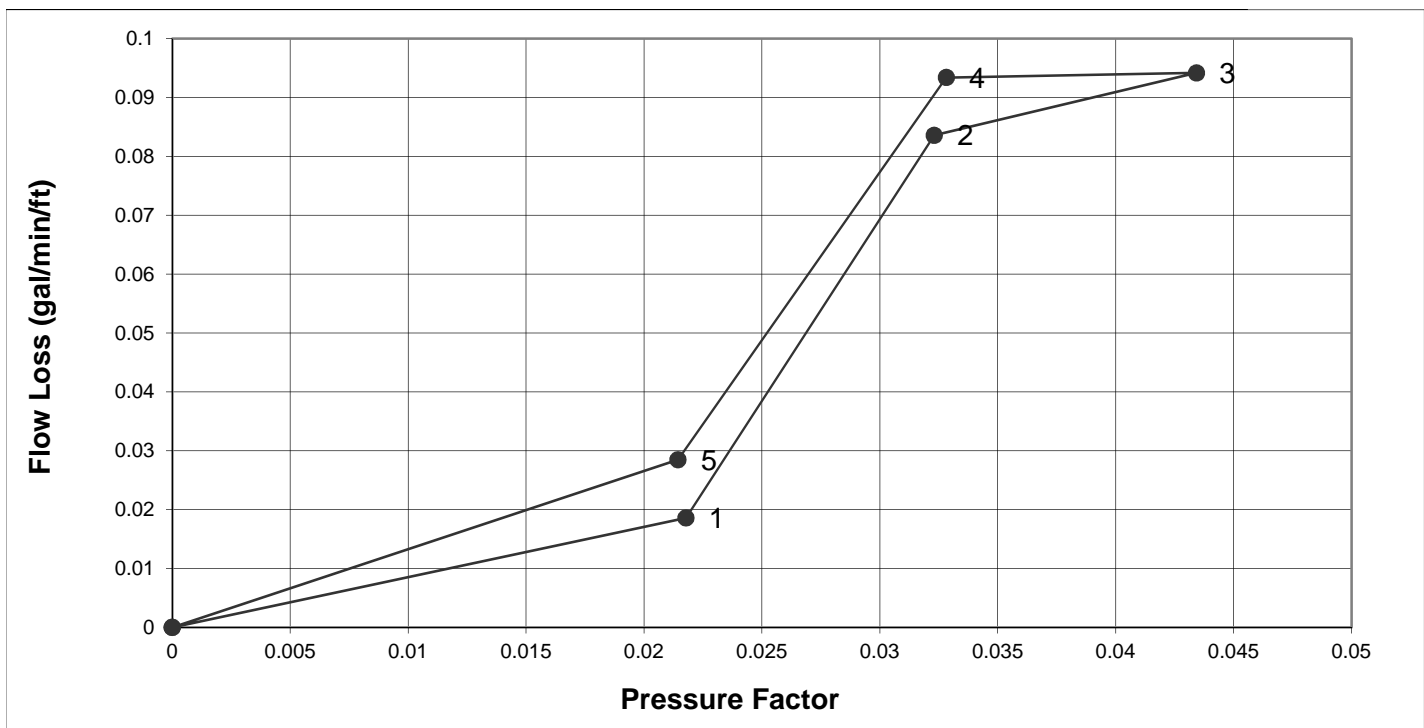
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	8.67	8.7	0.004816081	18.30	0.9151	190.01
2	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3	100%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	75%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5	50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0	0			0	0	0	



Boring	CB-4
Surface El. (ft)	1833.5
Groundwater El. (ft)	1777
Test No.	4
Test Interval Center Elevation (ft)	1760.3
Test Interval Length, L (ft)	20.0
Max. Test Pressure, $P_{MAX}$ (psi)	78.2
Reference Pressure, $P_0$ (psi)	145
Behavior	Turbulent
Representative Lugeon Value	3.0

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
74.5	94.5	30

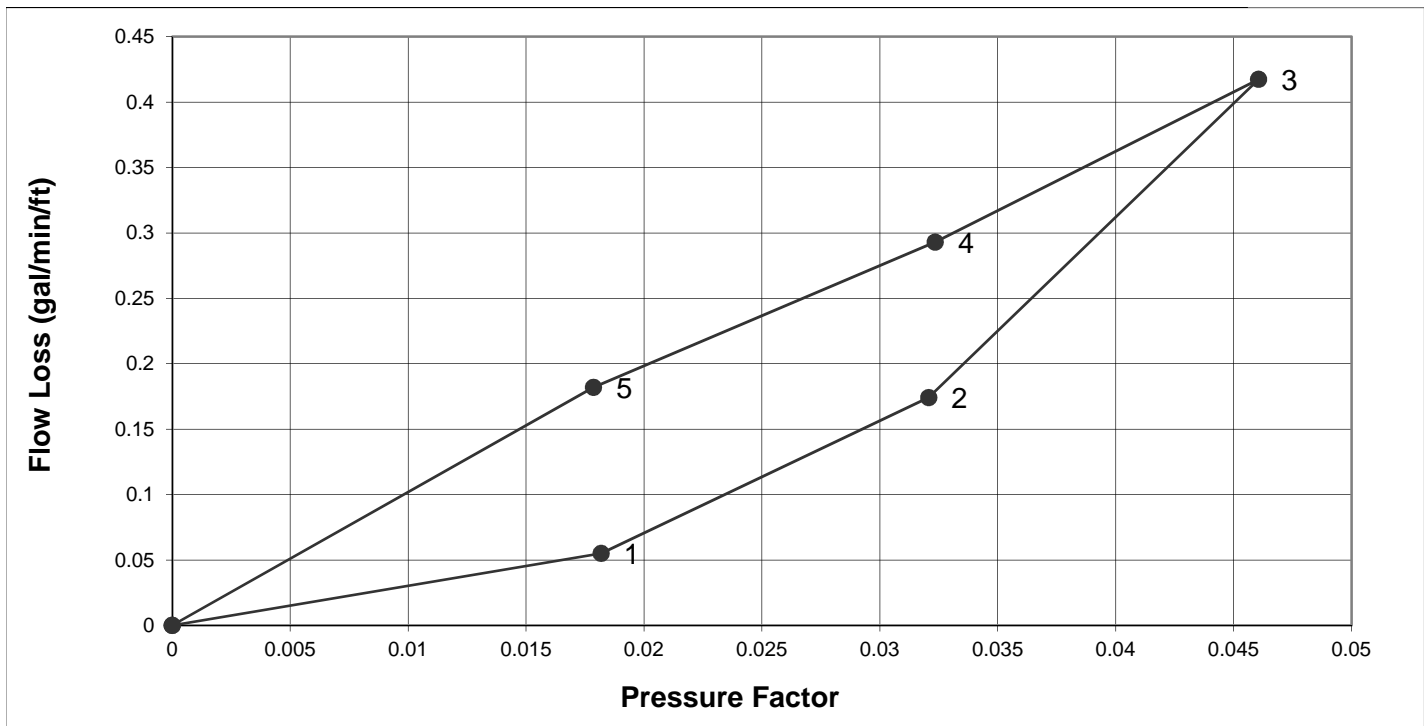
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	39.22	39.2	0.021776149	0.37	0.0186	0.85
2	75%	58.18	58.2	0.03230792	1.67	0.0836	2.59
3	100%	78.20	78.2	0.043422733	1.88	0.0942	2.17
4	75%	59.10	59.1	0.032816925	1.87	0.0934	2.85
5	50%	38.62	38.6	0.021442982	0.57	0.0285	1.33
0	0			0	0	0	



Boring	CB-4
Surface El. (ft)	1833.5
Groundwater El. (ft)	1777
Test No.	5
Test Interval Center Elevation (ft)	1738.7
Test Interval Length, L (ft)	30.0
Max. Test Pressure, $P_{MAX}$ (psi)	82.9
Reference Pressure, $P_0$ (psi)	145
Behavior	Washout
Representative Lugeon Value	10.2

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
94.5	124.5	30

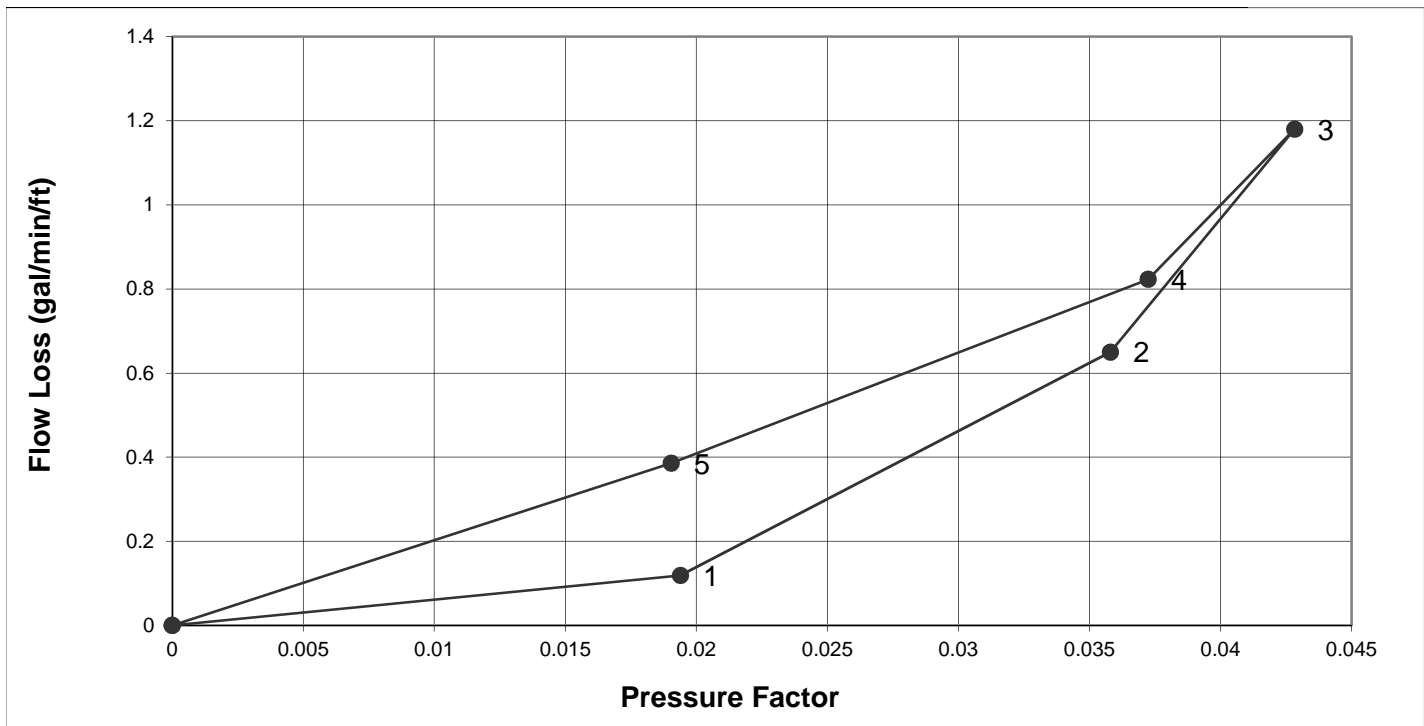
Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	49.35	32.7	0.018181266	1.65	0.0551	3.03
2	75%	74.37	57.8	0.032072469	5.22	0.1741	5.43
3	100%	99.55	82.9	0.046056218	12.52	0.4174	9.06
4	75%	74.86	58.3	0.032346406	8.79	0.2929	9.06
5	50%	48.78	32.2	0.017864758	5.46	0.1821	10.19
0	0			0	0	0	



Boring	CB-4
Surface El. (ft)	1833.5
Groundwater El. (ft)	1777
Test No.	1
Test Interval Center Elevation (ft)	1712.7
Test Interval Length, L (ft)	30.0
Max. Test Pressure, $P_{MAX}$ (psi)	77.1
Reference Pressure, $P_0$ (psi)	145
Behavior	Washout /Dilation
Representative Lugeon Value	18.2

Top of Test Depth (ft)	Bottom of Test Depth (ft)	Angle from Vertical (deg)
124.5	154.5	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	62.78	34.9	0.019389831	3.56	0.1186	6.12
2	75%	92.34	64.5	0.035801995	19.50	0.6499	18.15
3	100%	105.00	77.1	0.042831813	35.40	1.1800	27.55
4	75%	94.93	67.1	0.037237388	24.69	0.8230	22.10
5	50%	62.16	34.3	0.019043708	11.56	0.3854	20.24
0	0			0	0	0	

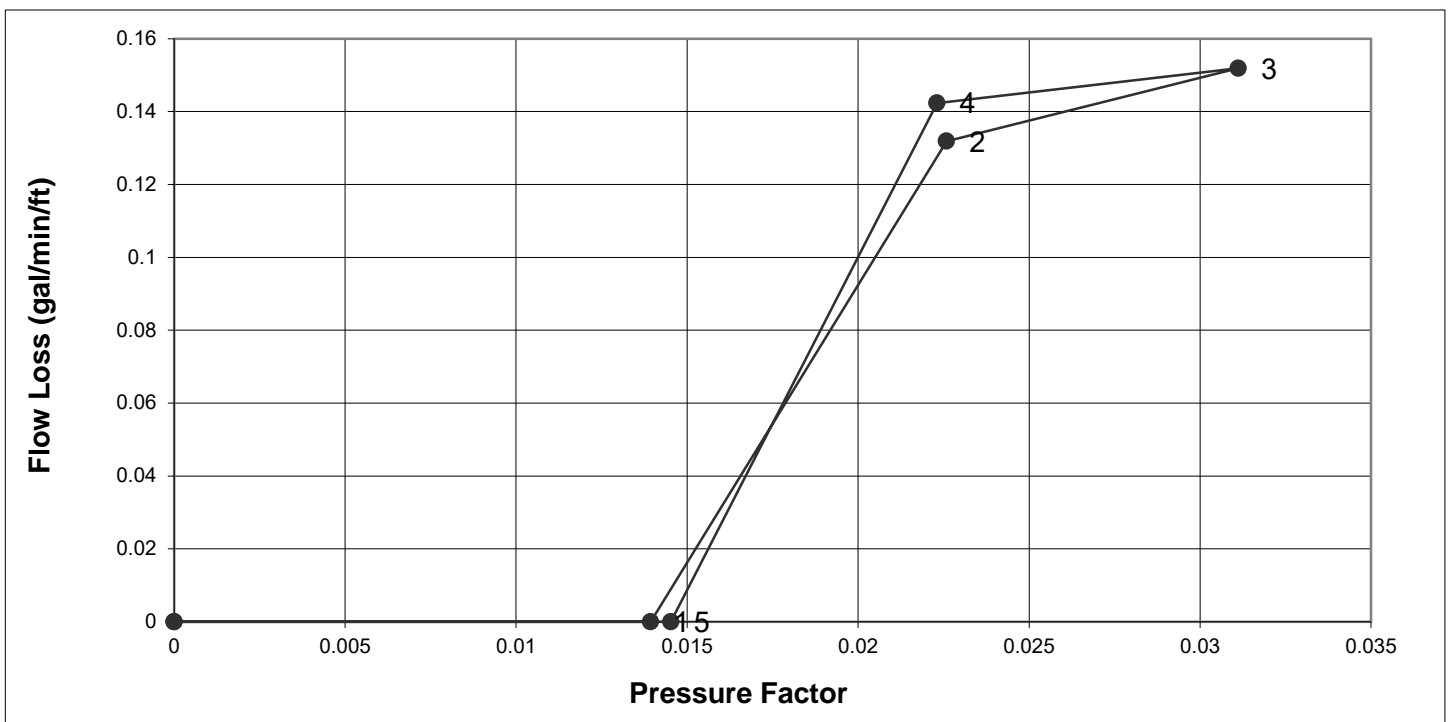




Boring	CB-10
Surface El. (ft)	1759
Groundwater El. (ft)	1723.6
Test No.	1
Test Interval Center Elevation (ft)	1707.3
Test Interval Length, L (ft)	16.3
Max. Measured Pressure, $P_{MAX}$ (psi)	60.9
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	6

Top of Test Elevation (ft)	1714.4
Bottom of Test Elevation (ft)	1700.3
Top of Test Depth (ft)	51.5
Bottom of Test Depth (ft)	67.8
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	29.93	25.1	0.013931573	0.00	0.0000	0
2	75%	45.52	40.7	0.022586504	2.15	0.1319	6
3	100%	60.88	56.0	0.031115573	2.48	0.1519	5
4	75%	45.02	40.2	0.022308865	2.32	0.1423	6
5	50%	31.00	26.2	0.014523869	0.00	0.0000	0
0	0		0	0	0	0	

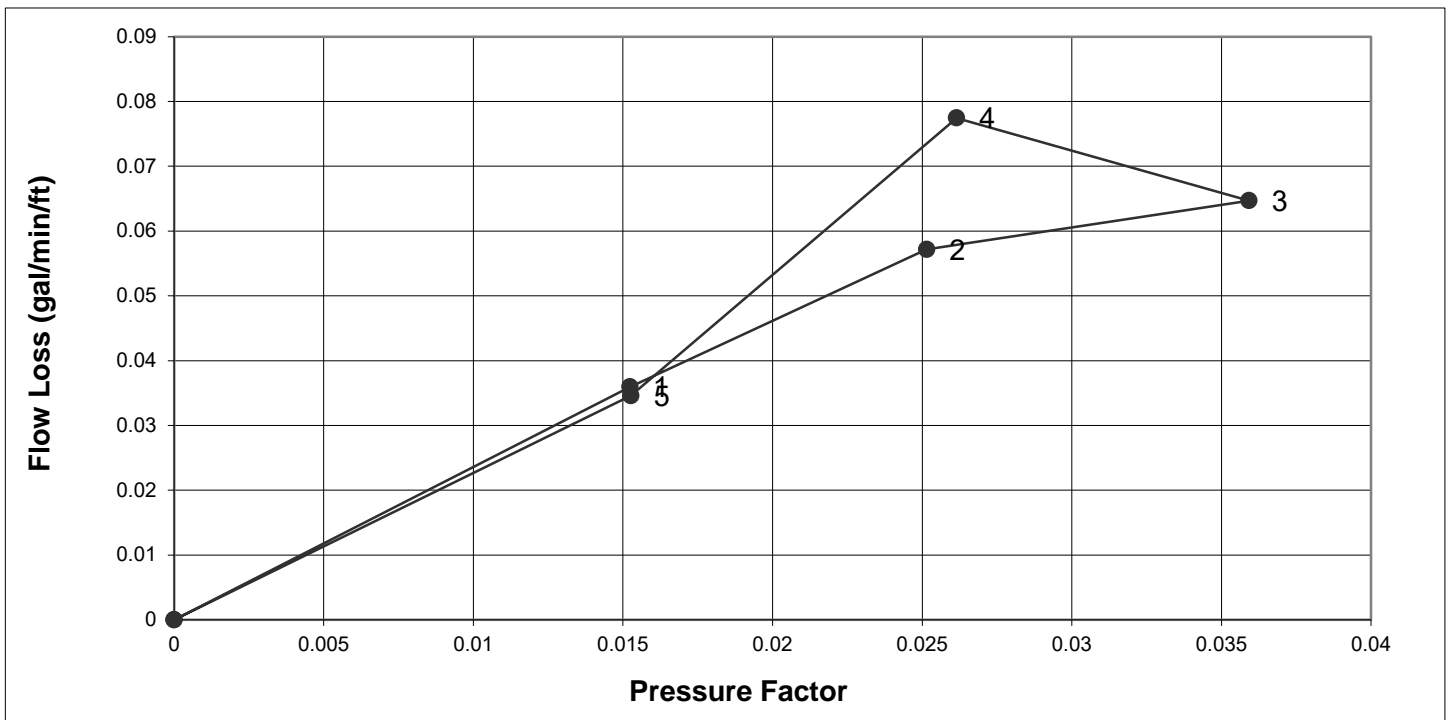


\*Assume transducer is 2 feet below top of test

Boring	CB-10
Surface El. (ft)	1759
Groundwater El. (ft)	1723.6
Test No.	2
Test Interval Center Elevation (ft)	1690.5
Test Interval Length, L (ft)	28.1
Max. Measured Pressure, $P_{MAX}$ (psi)	74.6
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1702.7
Bottom of Test Elevation (ft)	1678.4
Top of Test Depth (ft)	65
Bottom of Test Depth (ft)	93.1
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	37.34	27.4	0.01523153	1.01	0.0359	2
2	75%	55.20	45.3	0.025148794	1.61	0.0572	2
3	100%	74.60	64.7	0.035921185	1.82	0.0647	2
4	75%	57.00	47.1	0.026148294	2.18	0.0774	3
5	50%	37.40	27.5	0.015264847	0.97	0.0346	2
0	0		0	0	0	0	

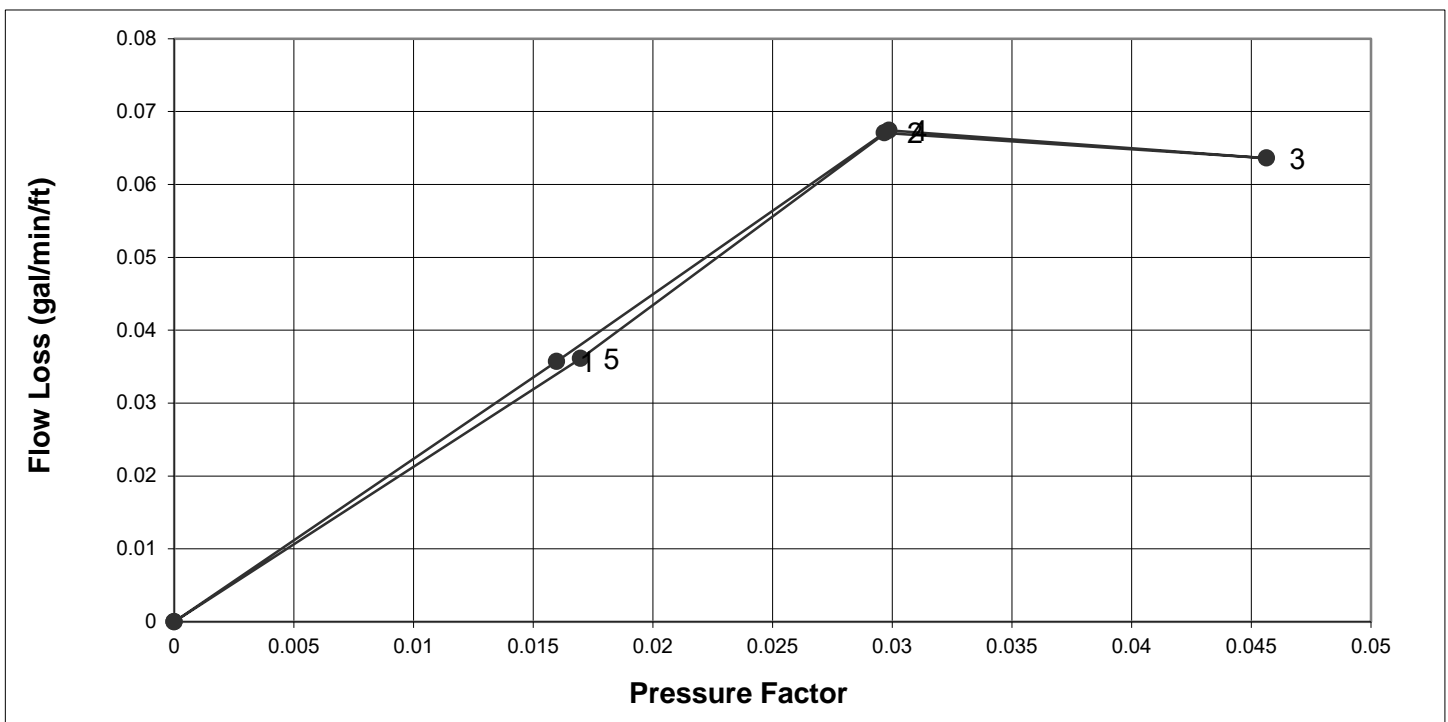


\*Assume transducer is 2 feet below top of test

Boring	CB-10
Surface El. (ft)	1759
Groundwater El. (ft)	1723.6
Test No.	3
Test Interval Center Elevation (ft)	1665.5
Test Interval Length, L (ft)	29.9
Max. Measured Pressure, $P_{MAX}$ (psi)	102.6
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1678.5
Bottom of Test Elevation (ft)	1652.6
Top of Test Depth (ft)	93
Bottom of Test Depth (ft)	122.9
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	49.18	28.8	0.015972063	1.07	0.0357	2
2	75%	73.84	53.4	0.029665217	2.01	0.0671	2
3	100%	102.60	82.2	0.045635009	1.90	0.0636	1
4	75%	74.20	53.8	0.029865117	2.02	0.0674	2
5	50%	51.00	30.6	0.016982669	1.08	0.0361	2
0	0		0	0	0	0	

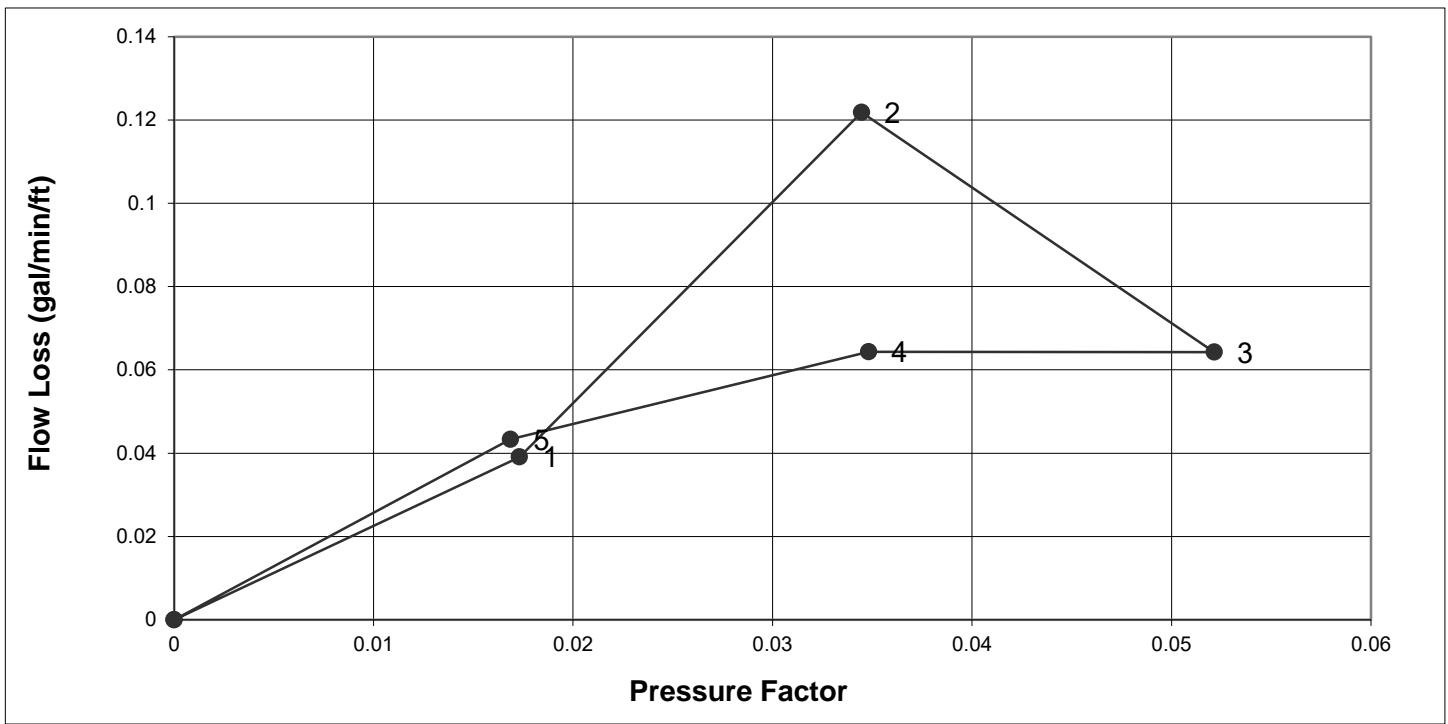


\*Assume transducer is 2 feet below top of test

Boring	CB-10
Surface El. (ft)	1759
Groundwater El. (ft)	1723.6
Test No.	4
Test Interval Center Elevation (ft)	1640.1
Test Interval Length, L (ft)	30.7
Max. Measured Pressure, $P_{MAX}$ (psi)	125.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1653.3
Bottom of Test Elevation (ft)	1626.8
Top of Test Depth (ft)	122
Bottom of Test Depth (ft)	152.7
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	62.48	31.2	0.017314946	1.20	0.0391	2
2	75%	93.37	62.1	0.03446563	3.74	0.1218	4
3	100%	125.20	93.9	0.052141977	1.97	0.0642	1
4	75%	94.00	62.7	0.034817306	1.98	0.0644	2
5	50%	61.67	30.4	0.01686332	1.33	0.0433	3
0	0		0	0	0	0	

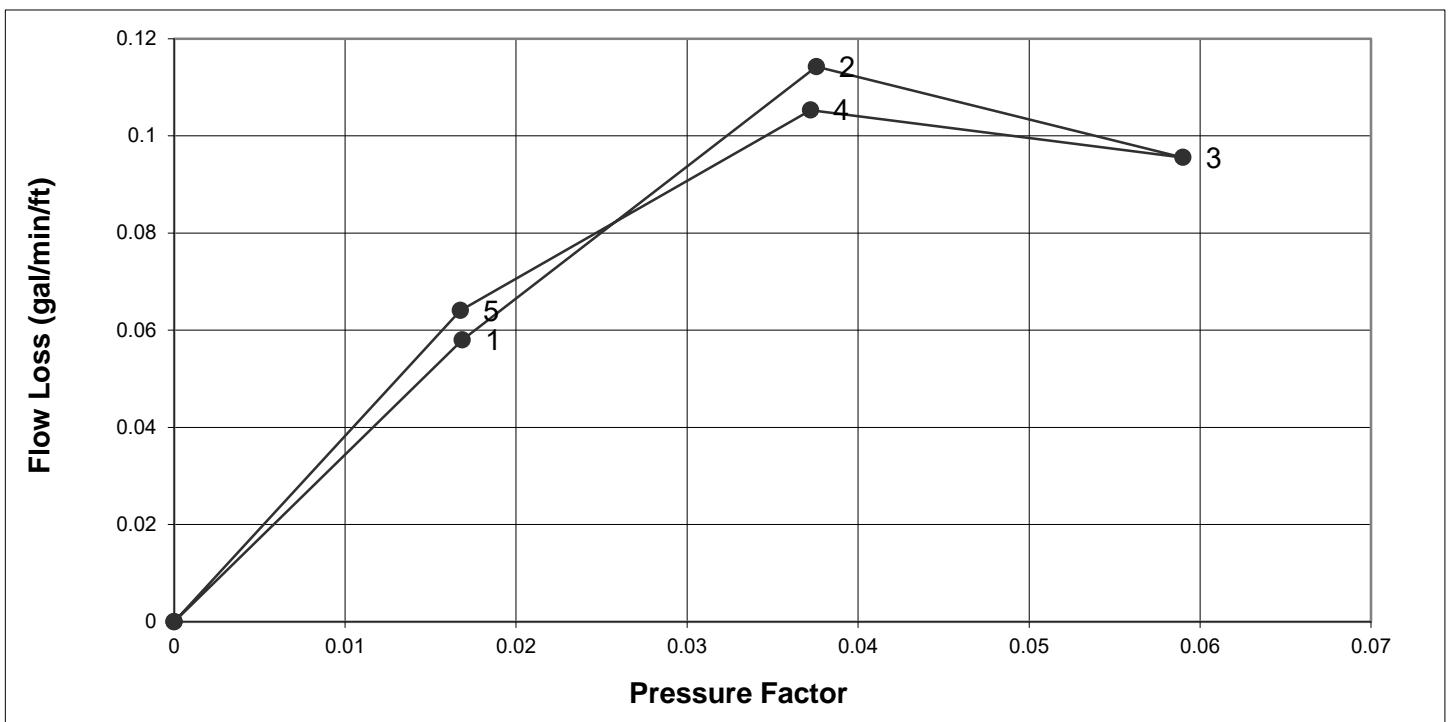


\*Assume transducer is 2 feet below top of test

Boring	CB-10
Surface El. (ft)	1759
Groundwater El. (ft)	1723.6
Test No.	5
Test Interval Center Elevation (ft)	1618.2
Test Interval Length, L (ft)	21.1
Max. Measured Pressure, $P_{MAX}$ (psi)	148.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	3

Top of Test Elevation (ft)	1627.4
Bottom of Test Elevation (ft)	1609.1
Top of Test Depth (ft)	152
Bottom of Test Depth (ft)	173.1
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	72.90	30.3	0.016850274	1.22	0.0580	3
2	75%	110.20	67.6	0.03756214	2.41	0.1142	3
3	100%	148.80	106.2	0.058995867	2.02	0.0955	2
4	75%	109.60	67.0	0.037228973	2.22	0.1053	3
5	50%	72.70	30.1	0.016739218	1.35	0.0641	4
0	0		0	0	0	0	

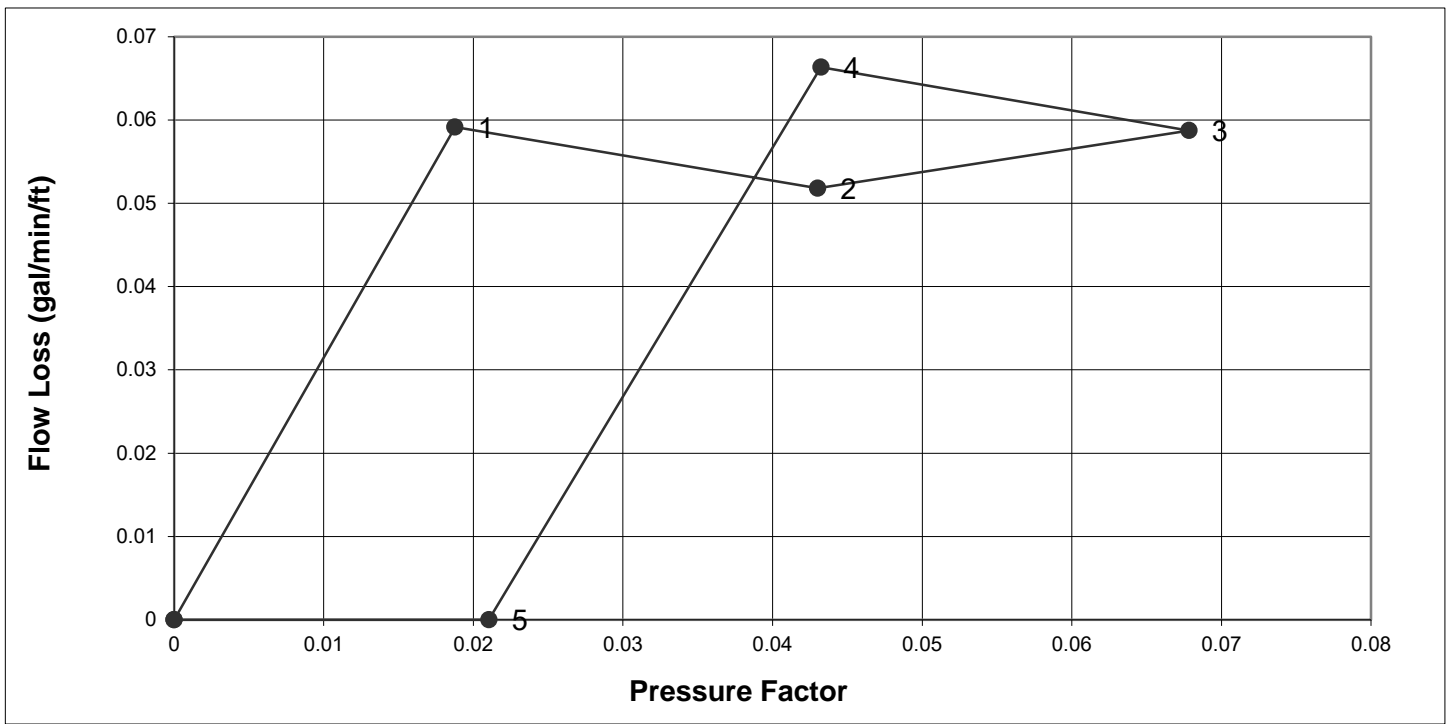


\*Assume transducer is 2 feet below top of test

Boring	CB-10
Surface El. (ft)	1759
Groundwater El. (ft)	1723.6
Test No.	6
Test Interval Center Elevation (ft)	1596.5
Test Interval Length, L (ft)	30.3
Max. Measured Pressure, $P_{MAX}$ (psi)	172.4
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1609.6
Bottom of Test Elevation (ft)	1583.4
Top of Test Depth (ft)	172.5
Bottom of Test Depth (ft)	202.8
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	84.06	33.8	0.018775885	1.79	0.0591	3
2	75%	127.70	77.5	0.043008213	1.57	0.0518	1
3	100%	172.40	122.2	0.067829136	1.78	0.0587	1
4	75%	128.12	77.9	0.04324143	2.01	0.0663	2
5	50%	88.14	37.9	0.021041419	0.00	0.0000	0
0	0		0	0	0	0	

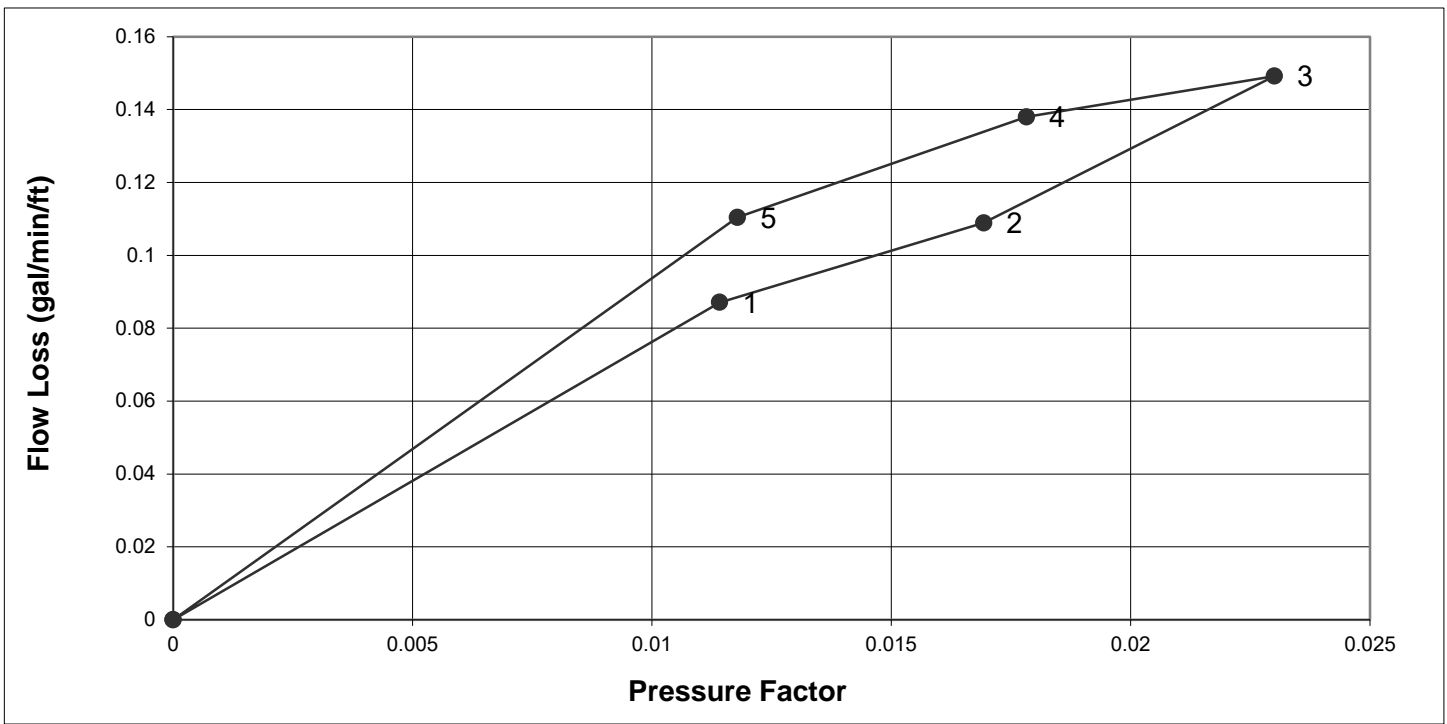


\*Assume transducer is 2 feet below top of test

Boring	CB-11
Surface El. (ft)	1773
Groundwater El. (ft)	1708.0
Test No.	1
Test Interval Center Elevation (ft)	1737.0
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	41.4
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	8

Top of Test Elevation (ft)	1747.0
Bottom of Test Elevation (ft)	1727.0
Top of Test Depth (ft)	26
Bottom of Test Depth (ft)	46
Angle from Vertical (deg)	0

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	20.56	20.6	0.01141607	1.74	0.0871	8
2	75%	30.49	30.5	0.016929979	2.18	0.1089	6
3	100%	41.42	41.4	0.0229995	2.98	0.1492	6
4	75%	32.10	32.1	0.017826531	2.76	0.1380	8
5	50%	21.23	21.2	0.011787995	2.21	0.1104	9
0	0		0	0	0	0	

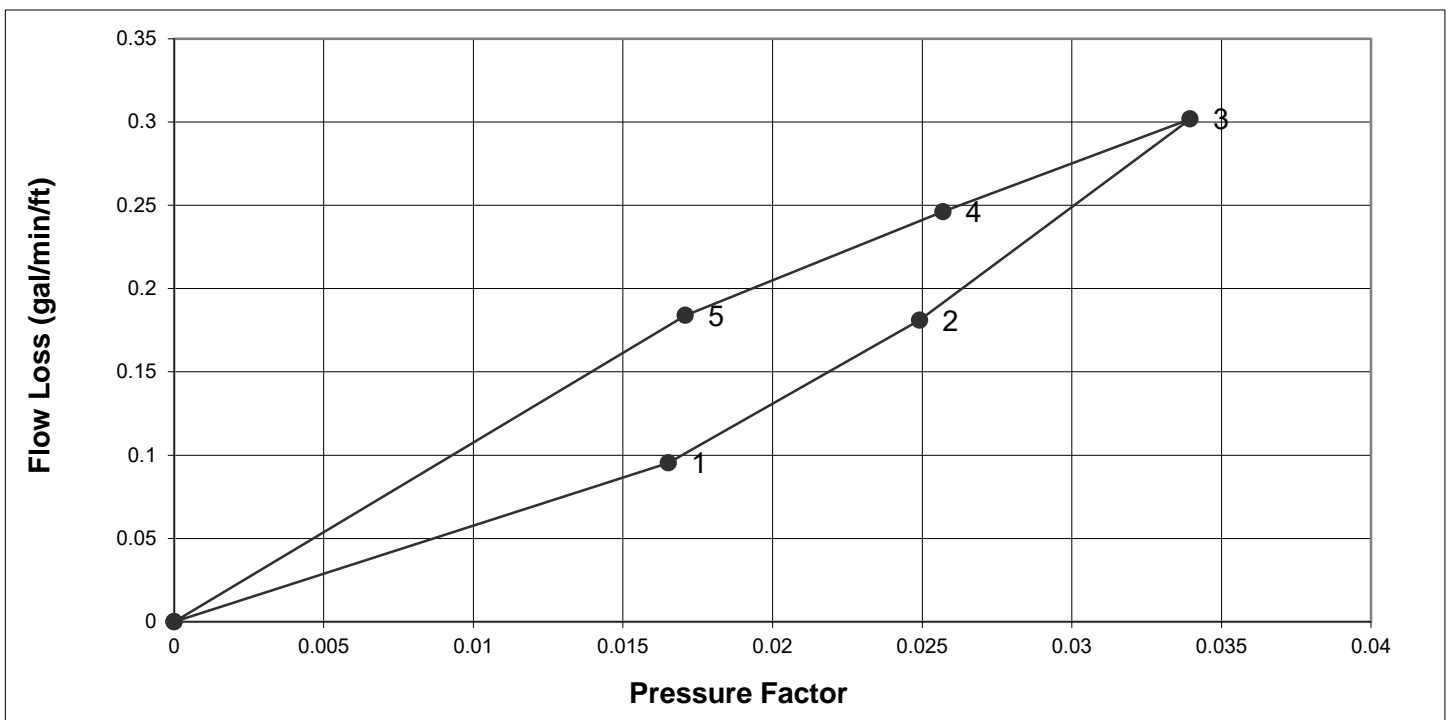


\*Assume transducer is 2 feet below top of test

Boring	CB-11
Surface El. (ft)	1773
Groundwater El. (ft)	1708.0
Test No.	2
Test Interval Center Elevation (ft)	1717.0
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	61.1
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	11

Top of Test Elevation (ft)	1727.0
Bottom of Test Elevation (ft)	1707.0
Top of Test Depth (ft)	46
Bottom of Test Depth (ft)	66
Angle from Vertical (deg)	0

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	29.75	29.7	0.016517297	1.91	0.0953	6
2	75%	44.87	44.9	0.024912655	3.62	0.1810	7
3	100%	61.15	61.1	0.033952912	6.04	0.3018	9
4	75%	46.27	46.3	0.025692709	4.92	0.2461	10
5	50%	30.77	30.8	0.017088567	3.68	0.1839	11
0	0		0	0	0	0	



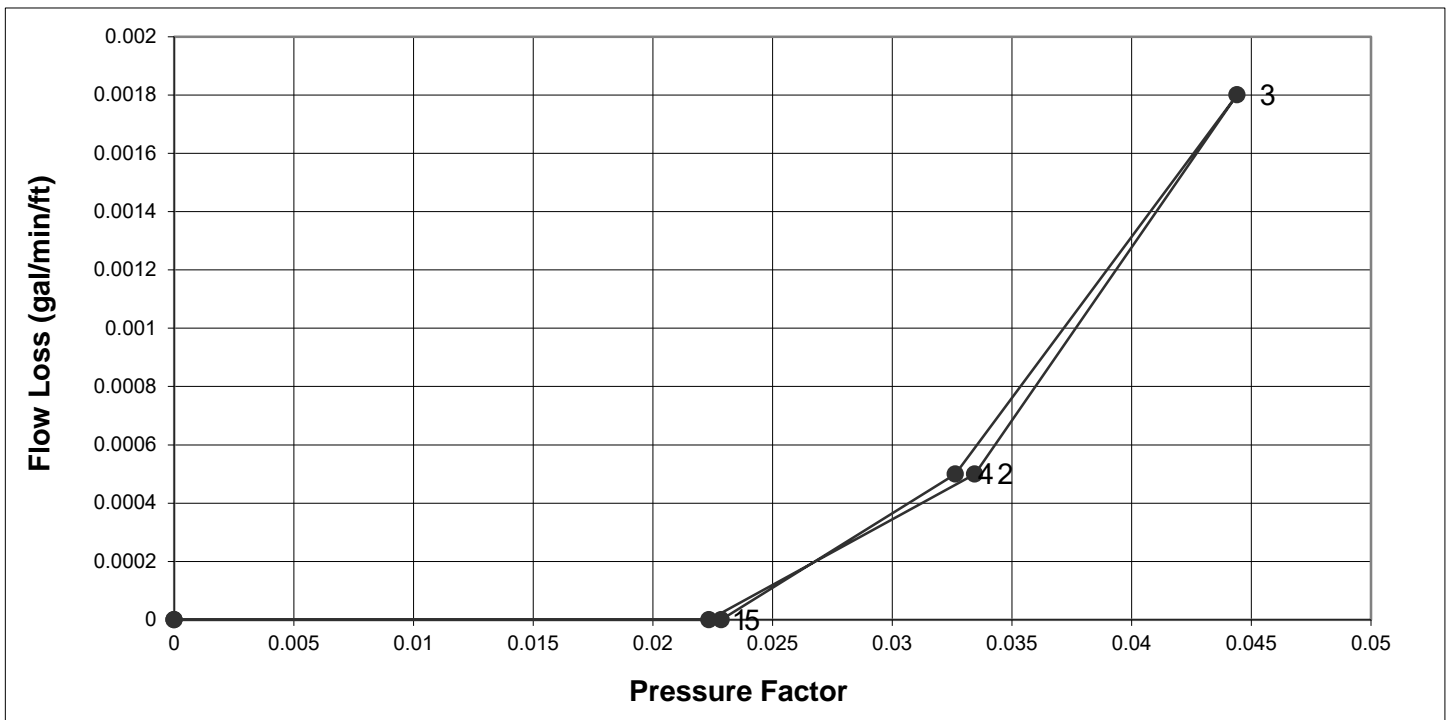
\*Assume transducer is 2 feet below top of test



Boring	CB-11
Surface El. (ft)	1773
Groundwater El. (ft)	1708.0
Test No.	3
Test Interval Center Elevation (ft)	1697.0
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	81.2
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	0

Top of Test Elevation (ft)	1707.0
Bottom of Test Elevation (ft)	1687.0
Top of Test Depth (ft)	66
Bottom of Test Depth (ft)	86
Angle from Vertical (deg)	0

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	41.52	40.2	0.022345774	0.00	0.0000	0
2	75%	61.51	60.2	0.033443743	0.01	0.0005	0
3	100%	81.23	80.0	0.044396267	0.04	0.0018	0
4	75%	60.05	58.8	0.032637295	0.01	0.0005	0
5	50%	42.44	41.2	0.022854408	0.00	0.0000	0
0	0		0	0	0	0	

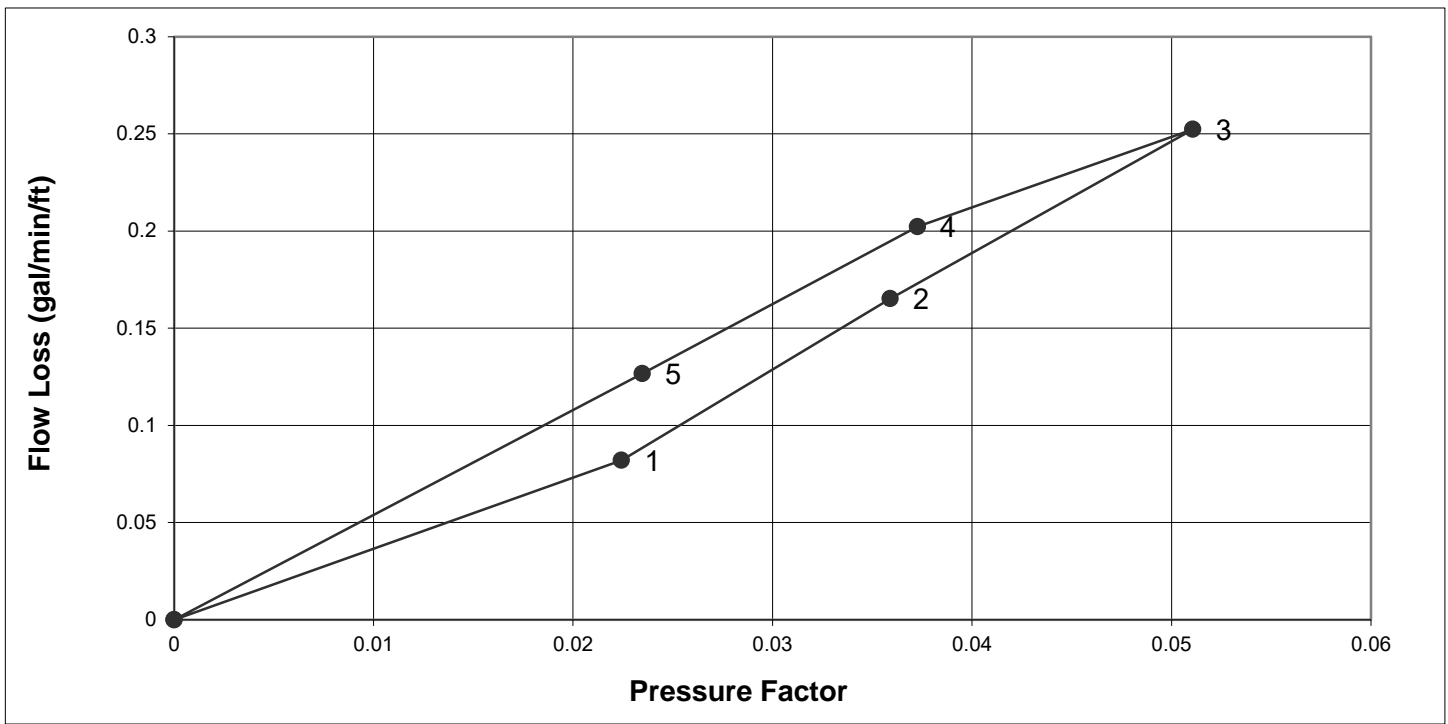


\*Assume transducer is 2 feet below top of test

Boring	CB-11
Surface El. (ft)	1773
Groundwater El. (ft)	1708.0
Test No.	4
Test Interval Center Elevation (ft)	1676.0
Test Interval Length, L (ft)	22.1
Max. Measured Pressure, $P_{MAX}$ (psi)	101.9
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	5

Top of Test Elevation (ft)	1687.0
Bottom of Test Elevation (ft)	1664.9
Top of Test Depth (ft)	86
Bottom of Test Depth (ft)	108.1
Angle from Vertical (deg)	0

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	50.33	40.4	0.022425302	1.81	0.0821	4
2	75%	74.59	64.6	0.0358959	3.65	0.1652	5
3	100%	101.92	92.0	0.051071423	5.58	0.2523	5
4	75%	77.04	67.1	0.037259773	4.47	0.2023	5
5	50%	52.21	42.3	0.023469224	2.80	0.1266	5
0	0		0	0	0	0	

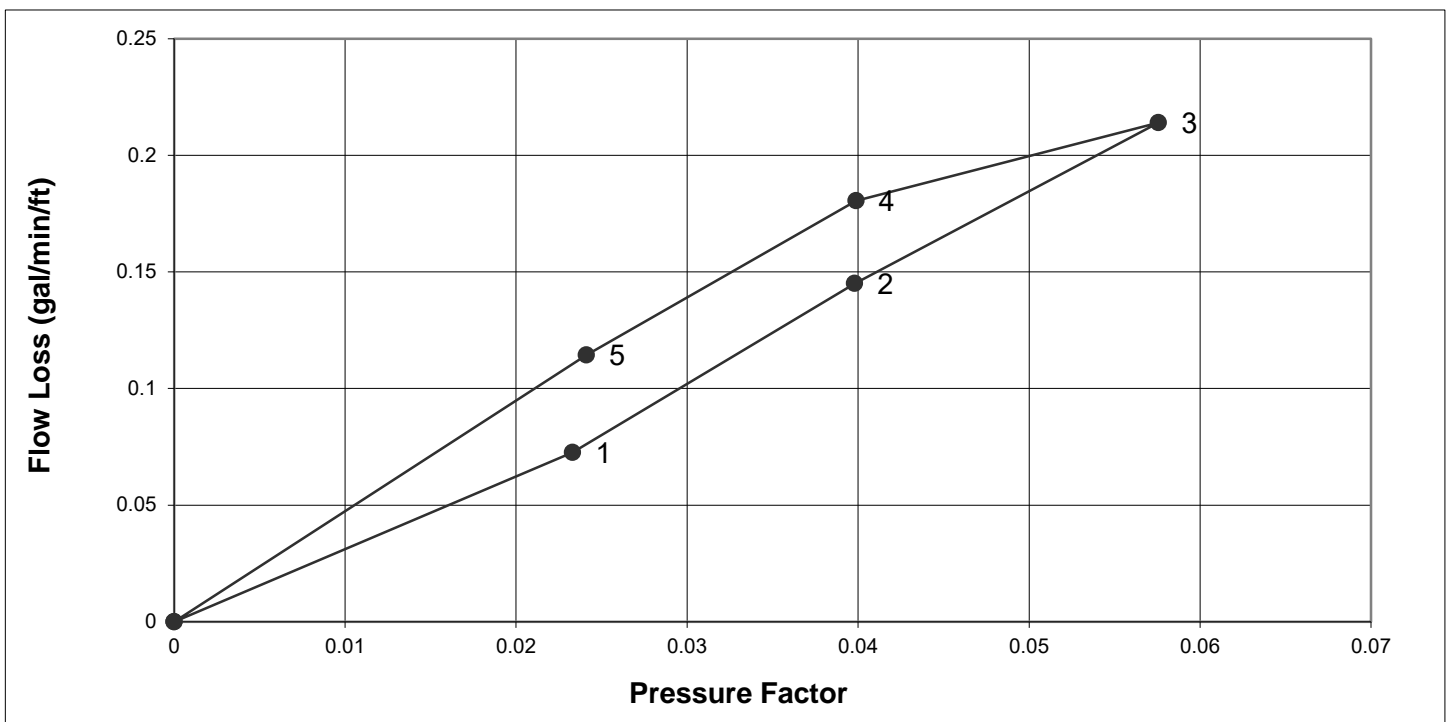


\*Assume transducer is 2 feet below top of test

Boring	CB-11
Surface El. (ft)	1773
Groundwater El. (ft)	1708.0
Test No.	5
Test Interval Center Elevation (ft)	1657.0
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	122.3
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1667.0
Bottom of Test Elevation (ft)	1647.0
Top of Test Depth (ft)	106
Bottom of Test Depth (ft)	126
Angle from Vertical (deg)	0

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	60.57	42.0	0.023298581	1.45	0.0726	3
2	75%	90.28	71.7	0.039795888	2.90	0.1450	4
3	100%	122.28	103.7	0.057567002	4.28	0.2140	4
4	75%	90.43	71.8	0.039882955	3.61	0.1805	5
5	50%	62.03	43.4	0.024108954	2.29	0.1144	5
0	0		0	0	0	0	

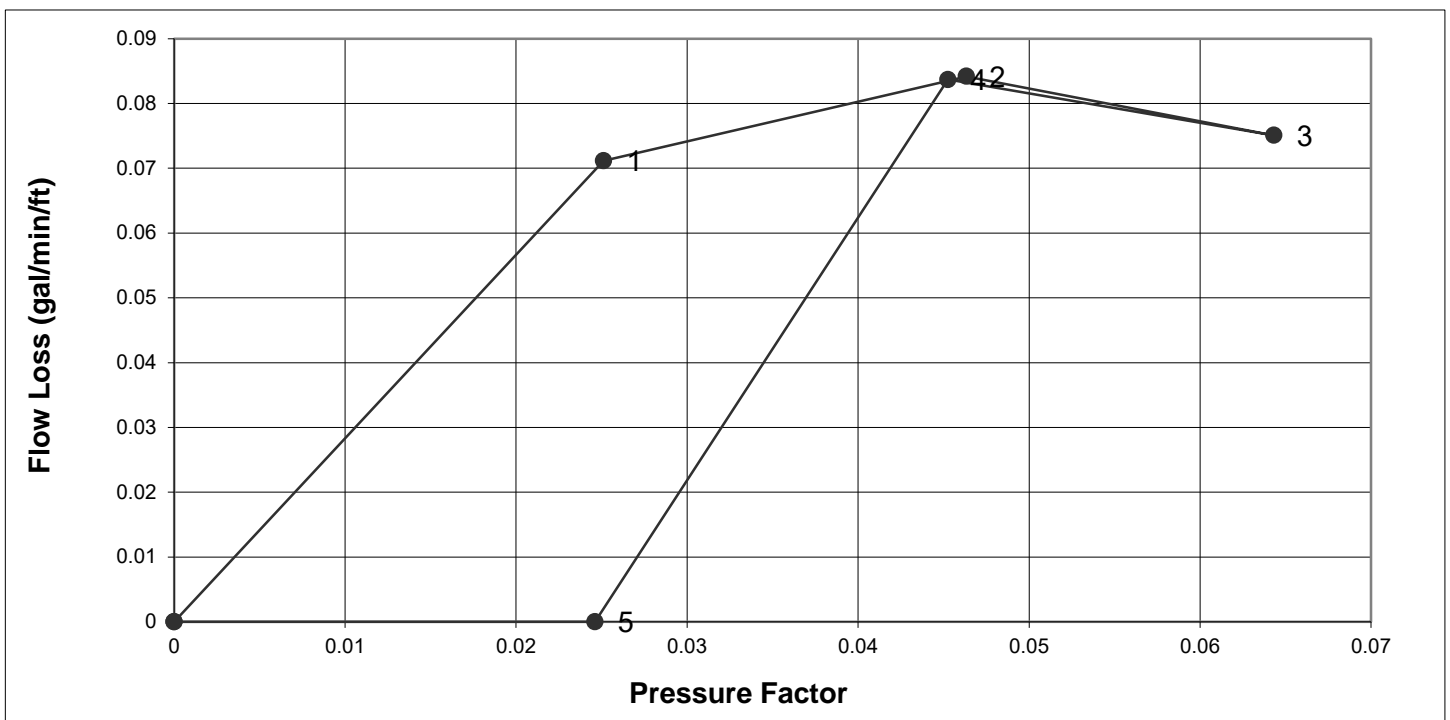


\*Assume transducer is 2 feet below top of test

Boring	CB-11
Surface El. (ft)	1773
Groundwater El. (ft)	1708.0
Test No.	6
Test Interval Center Elevation (ft)	1634.8
Test Interval Length, L (ft)	24.4
Max. Measured Pressure, $P_{MAX}$ (psi)	143.1
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1647.0
Bottom of Test Elevation (ft)	1622.6
Top of Test Depth (ft)	126
Bottom of Test Depth (ft)	150.4
Angle from Vertical (deg)	0

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	72.50	45.2	0.025111613	1.74	0.0711	3
2	75%	110.73	83.5	0.04634122	2.05	0.0842	2
3	100%	143.11	115.8	0.064322896	1.83	0.0751	1
4	75%	108.78	81.5	0.045258983	2.04	0.0837	2
5	50%	71.61	44.3	0.024618415	0.00	0.0000	0
0	0		0	0	0	0	

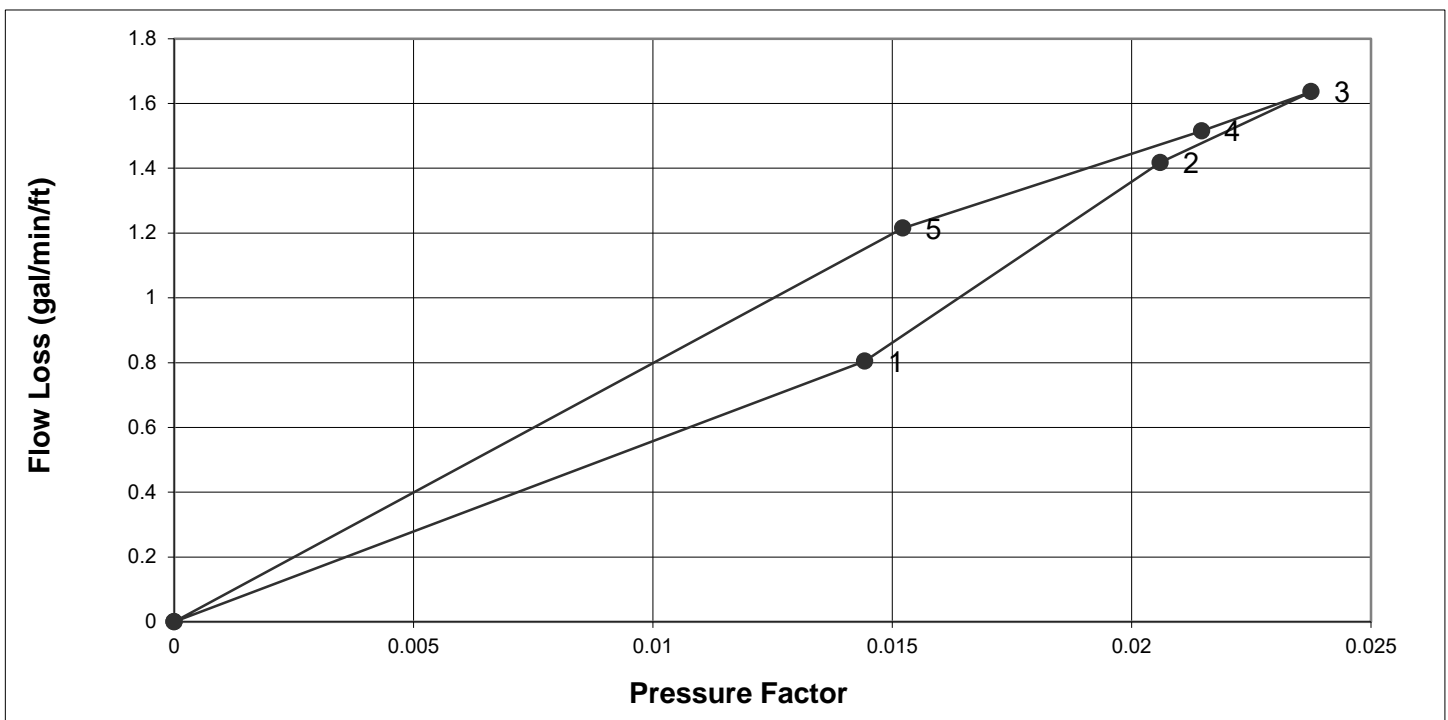


\*Assume transducer is 2 feet below top of test

Boring	CB-12
Surface El. (ft)	1897
Groundwater El. (ft)	1846.0
	1
Test Interval Center Elevation (ft)	1855.0
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	42.8
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	69

Top of Test Elevation (ft)	1865.0
Bottom of Test Elevation (ft)	1845.0
Top of Test Depth (ft)	32
Bottom of Test Depth (ft)	52
Angle from Vertical (deg)	0

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	25.98	26.0	0.014427009	16.09	0.8044	56
2	75%	37.10	37.1	0.020599367	28.36	1.4178	69
3	100%	42.77	42.8	0.023749792	32.72	1.6361	69
4	75%	38.65	38.7	0.021463602	30.30	1.5152	71
5	50%	27.40	27.4	0.015217169	24.30	1.2150	80
0	0		0	0	0	0	

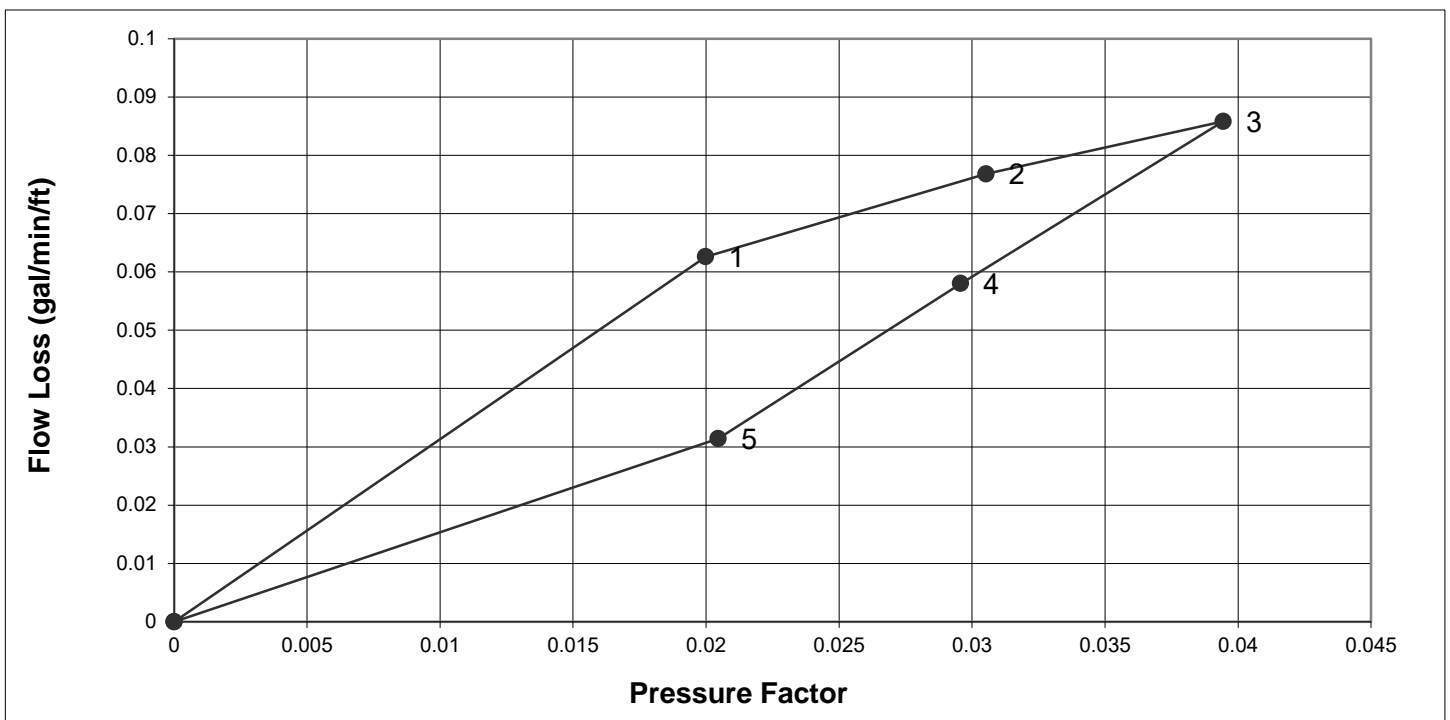


\*Assume transducer is 2 feet below top of test

Boring	CB-12
Surface El. (ft)	1897
Groundwater El. (ft)	1846.0
Test No.	2
Test Interval Center Elevation (ft)	1835.0
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	72.3
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1845.0
Bottom of Test Elevation (ft)	1825.0
Top of Test Depth (ft)	52
Bottom of Test Depth (ft)	72
Angle from Vertical (deg)	0

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	37.28	36.0	0.019981217	1.25	0.0626	3
2	75%	56.27	55.0	0.030521946	1.54	0.0768	3
3	100%	72.33	71.0	0.039440376	1.72	0.0858	2
4	75%	54.56	53.3	0.029572643	1.16	0.0580	2
5	50%	38.14	36.8	0.020458645	0.63	0.0314	2
0	0		0	0	0	0	

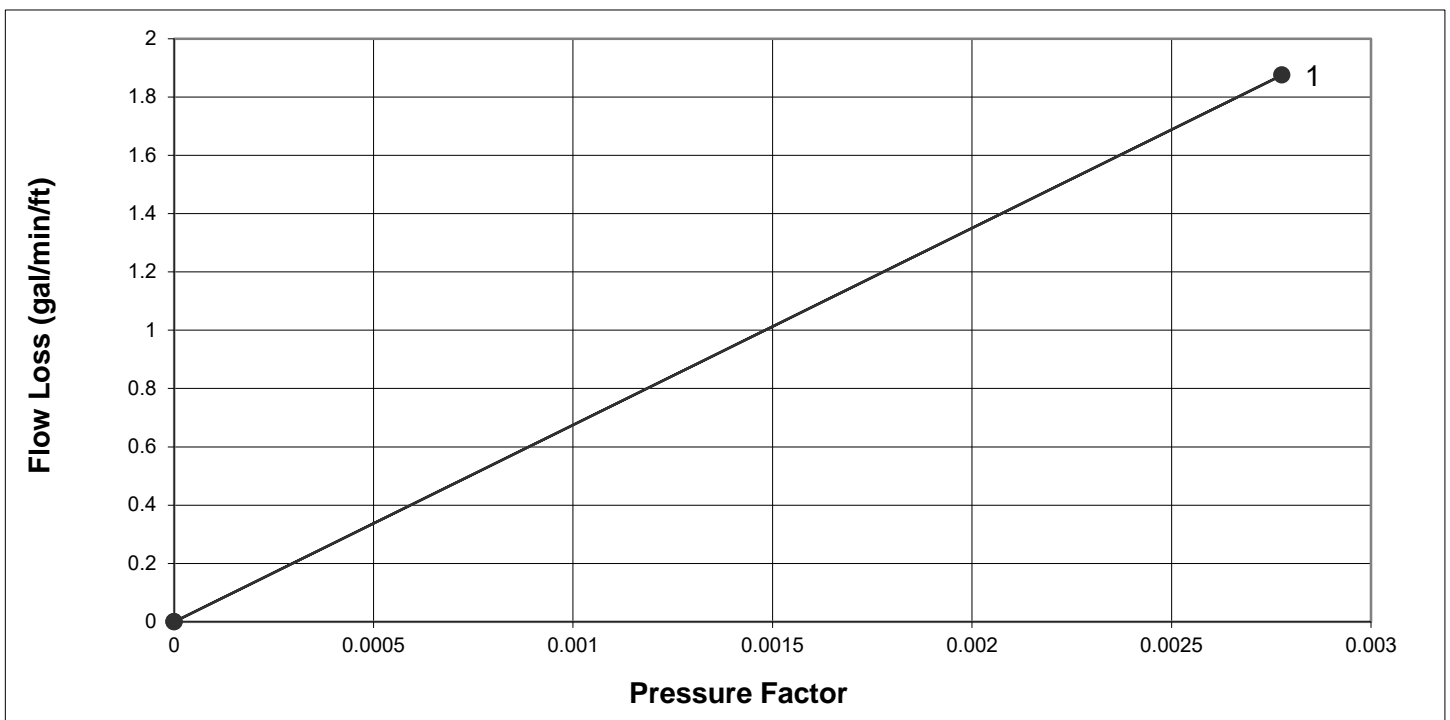


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	1
Test Interval Center Elevation (ft)	1783.8
Test Interval Length, L (ft)	10.0
Max. Measured Pressure, $P_{MAX}$ (psi)	5.0
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	675

Top of Test Elevation (ft)	1788.1
Bottom of Test Elevation (ft)	1779.4
Top of Test Depth (ft)	53
Bottom of Test Depth (ft)	63
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	5.00	5.0	0.00277639	18.75	1.8750	675
2	75%			#N/A			
3	100%			#N/A			
4	75%			#N/A			
5	50%			#N/A			
0	0		0	0	0	0	

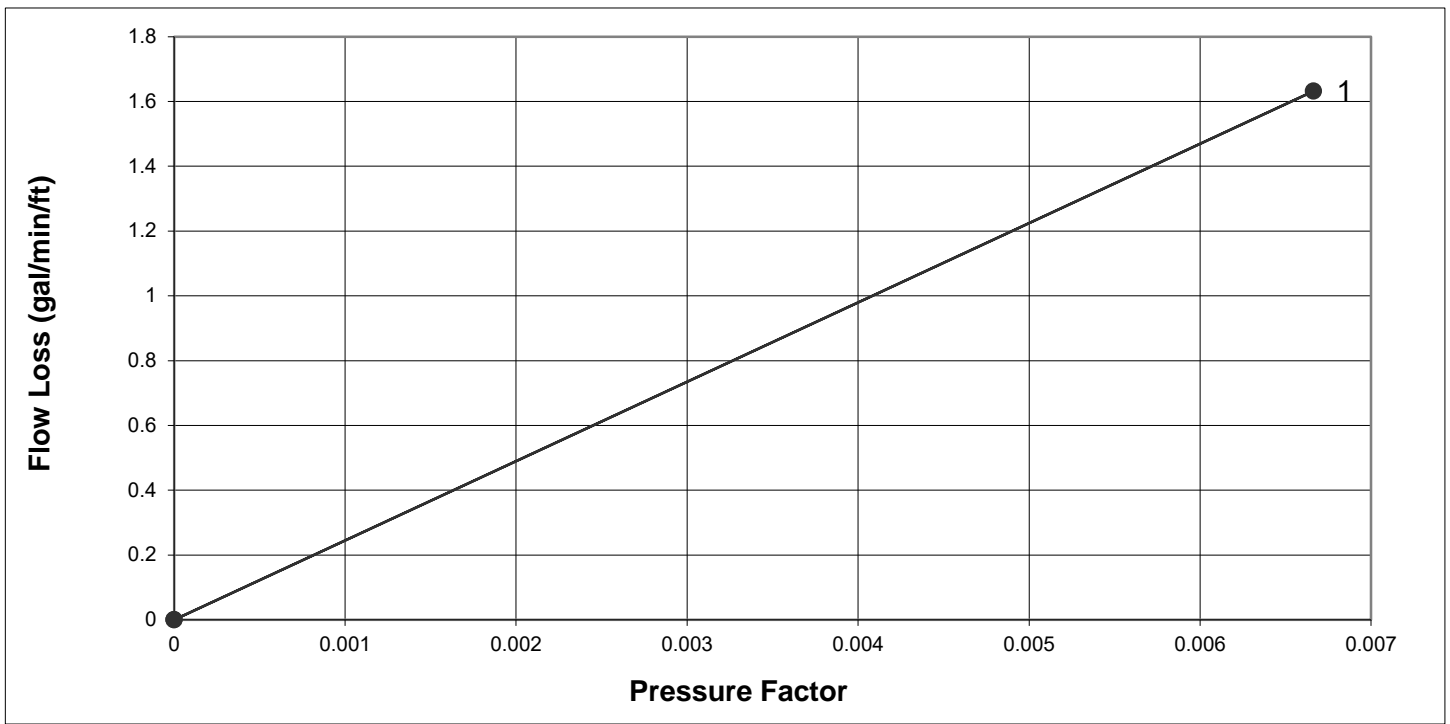


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	2
Test Interval Center Elevation (ft)	1770.8
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	12.0
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	245

Top of Test Elevation (ft)	1779.4
Bottom of Test Elevation (ft)	1762.1
Top of Test Depth (ft)	63
Bottom of Test Depth (ft)	83
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	12.00	12.0	0.006663335	32.64	1.6321	245
2	75%			#N/A			
3	100%			#N/A			
4	75%			#N/A			
5	50%			#N/A			
0	0		0	0	0	0	



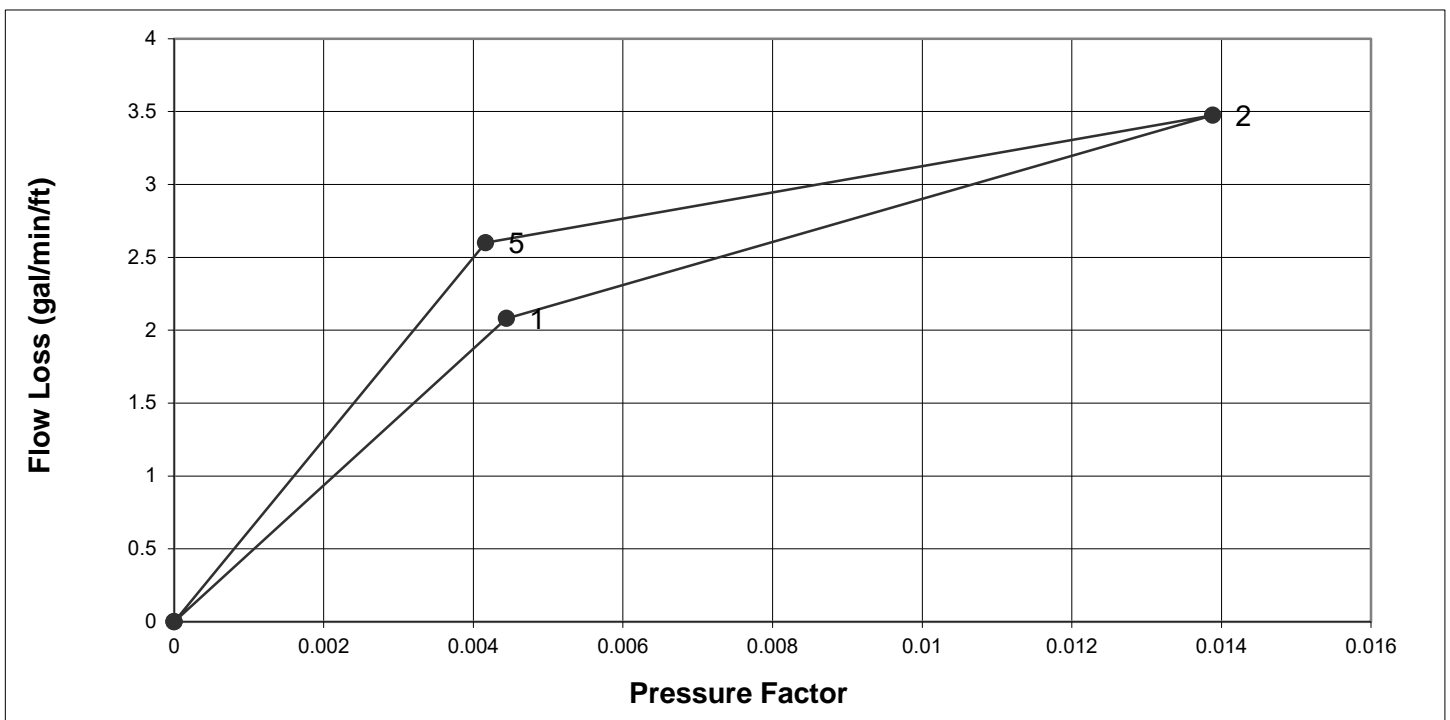
\*Assume transducer is 2 feet below top of test



Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	3
Test Interval Center Elevation (ft)	1766.5
Test Interval Length, L (ft)	10.0
Max. Measured Pressure, $P_{MAX}$ (psi)	25.0
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	448

Top of Test Elevation (ft)	1770.8
Bottom of Test Elevation (ft)	1762.1
Top of Test Depth (ft)	73
Bottom of Test Depth (ft)	83
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	8.00	8.0	0.004442223	20.80	2.0800	468
2	75%	25.00	25.0	0.013881948	34.75	3.4750	250
3	100%			#N/A			
4	75%			#N/A			
5	50%	7.50	7.5	0.004164584	26.00	2.6000	624
0	0		0	0	0	0	

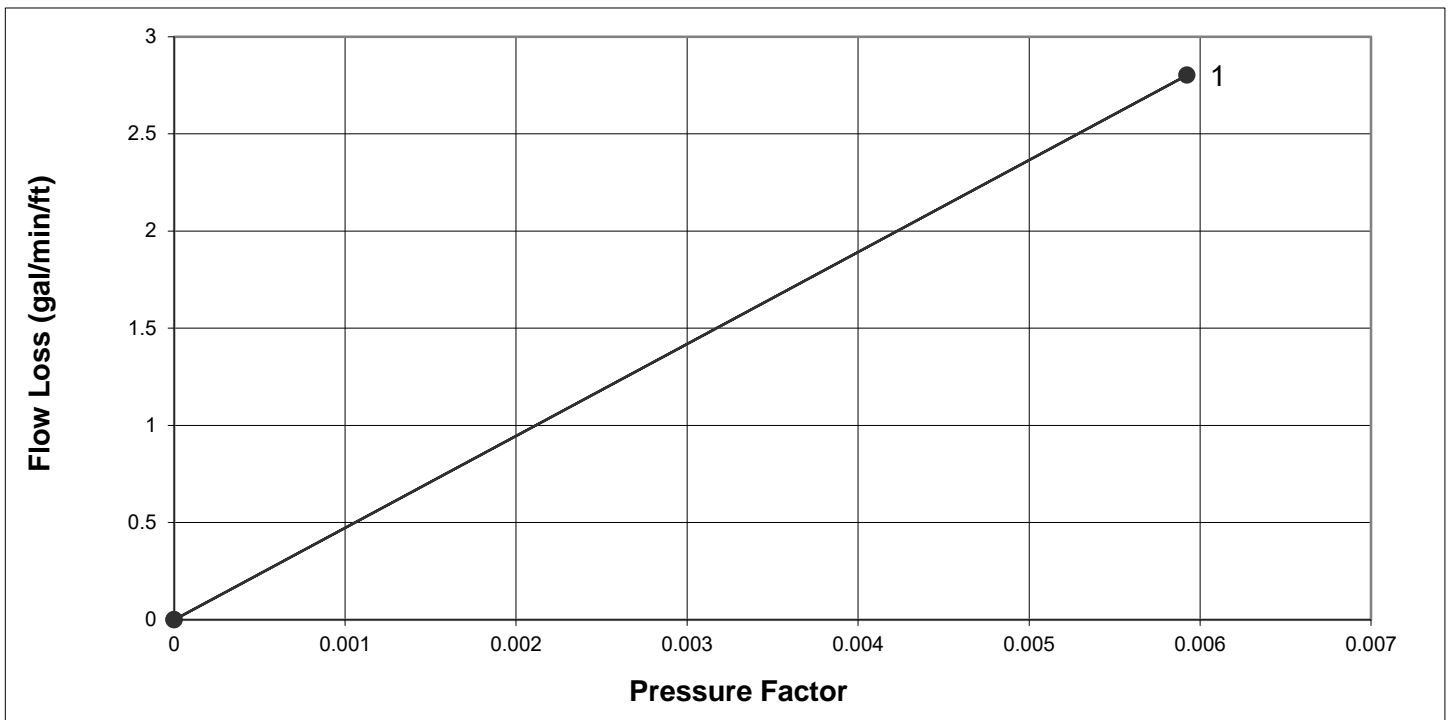


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	4
Test Interval Center Elevation (ft)	1749.3
Test Interval Length, L (ft)	9.5
Max. Measured Pressure, $P_{MAX}$ (psi)	10.7
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	473

Top of Test Elevation (ft)	1753.5
Bottom of Test Elevation (ft)	1745.2
Top of Test Depth (ft)	93
Bottom of Test Depth (ft)	102.5
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	10.67	10.7	0.005922964	26.62	2.8018	473
2	75%			#N/A			
3	100%			#N/A			
4	75%			#N/A			
5	50%			#N/A			
0	0		0	0	0	0	

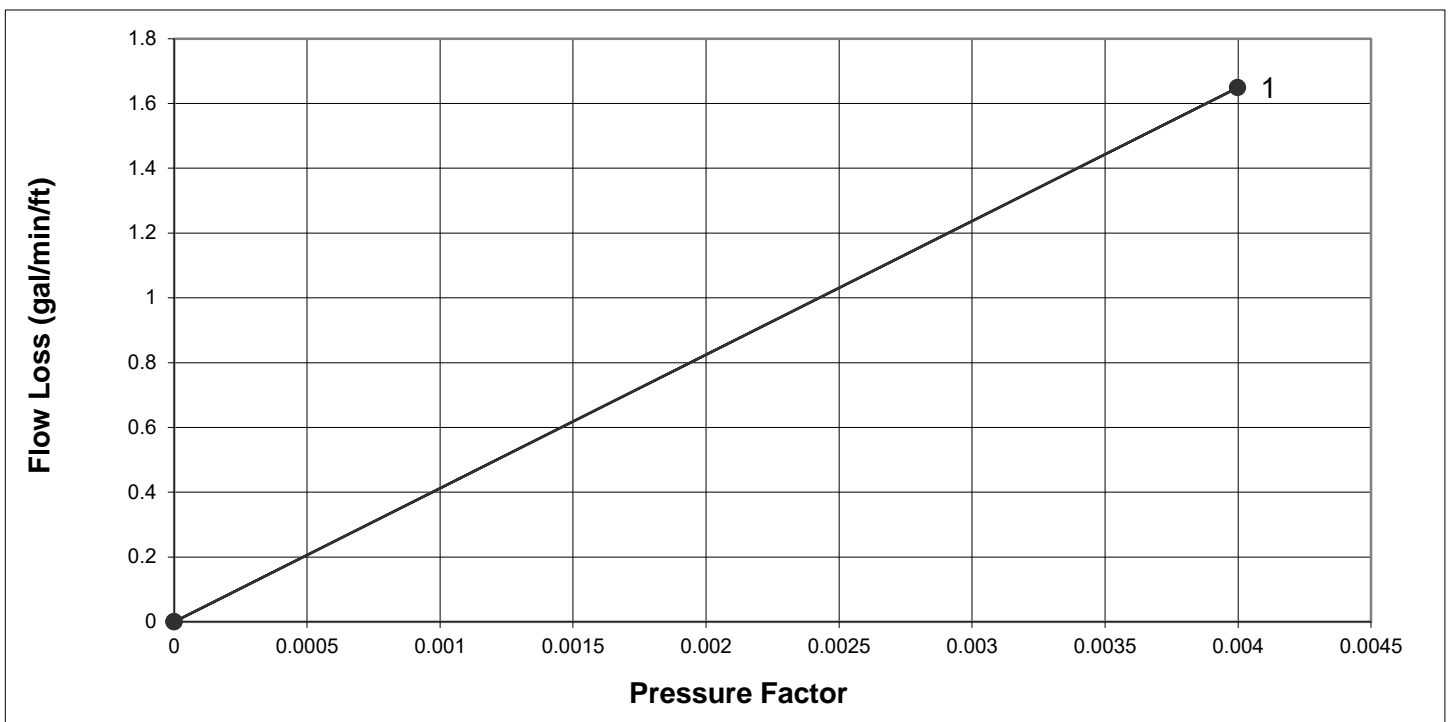


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	5
Test Interval Center Elevation (ft)	1736.1
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	7.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	412

Top of Test Elevation (ft)	1744.8
Bottom of Test Elevation (ft)	1727.5
Top of Test Depth (ft)	103
Bottom of Test Depth (ft)	123
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	7.20	7.2	0.003998001	32.98	1.6490	412
2	75%			#N/A			
3	100%			#N/A			
4	75%			#N/A			
5	50%			#N/A			
0	0		0	0	0	0	

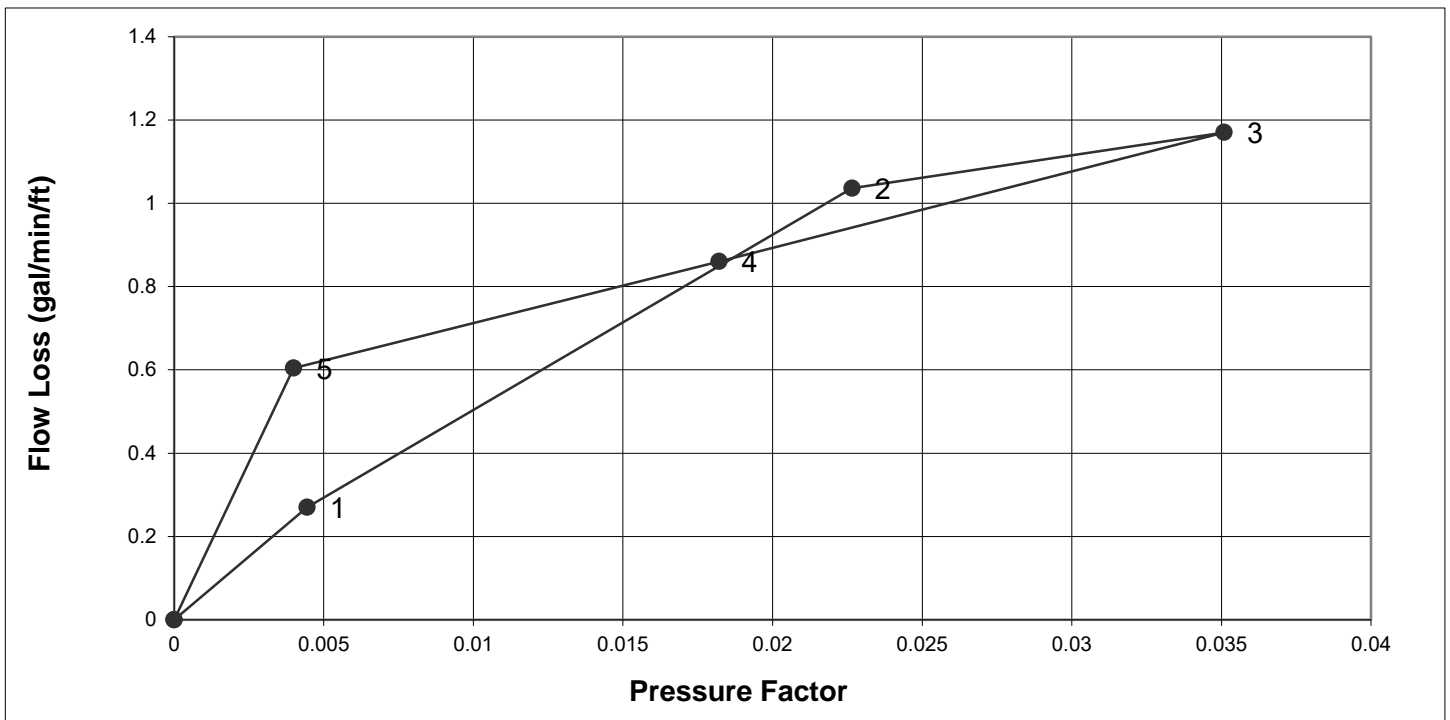


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	6
Test Interval Center Elevation (ft)	1731.8
Test Interval Length, L (ft)	10.0
Max. Measured Pressure, $P_{MAX}$ (psi)	63.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	46

Top of Test Elevation (ft)	1736.1
Bottom of Test Elevation (ft)	1727.5
Top of Test Depth (ft)	113
Bottom of Test Depth (ft)	123
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	8.00	8.0	0.004442223	2.70	0.2700	61
2	75%	40.80	40.8	0.022655339	10.36	1.0360	46
3	100%	63.20	63.2	0.035093564	11.70	1.1700	33
4	75%	32.80	32.8	0.018213116	8.60	0.8600	47
5	50%	7.20	7.2	0.003998001	6.04	0.6040	151
0	0		0	0	0	0	

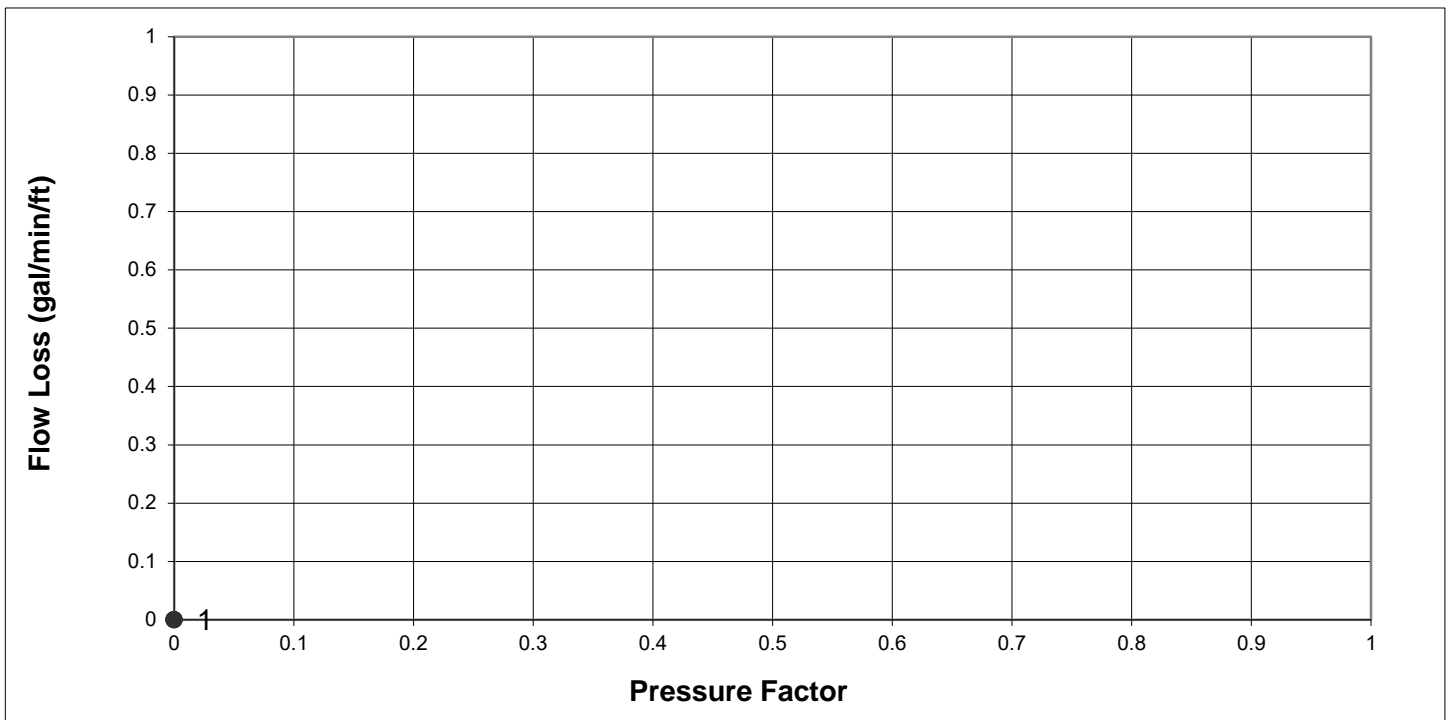


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	7
Test Interval Center Elevation (ft)	1718.8
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	#DIV/0!
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	0

Top of Test Elevation (ft)	1727.5
Bottom of Test Elevation (ft)	1710.2
Top of Test Depth (ft)	123
Bottom of Test Depth (ft)	143
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	#DIV/0!	#DIV/0!	#DIV/0!			
2	75%			#N/A			
3	100%			#N/A			
4	75%			#N/A			
5	50%			#N/A			
0	0		0	0	0	0	

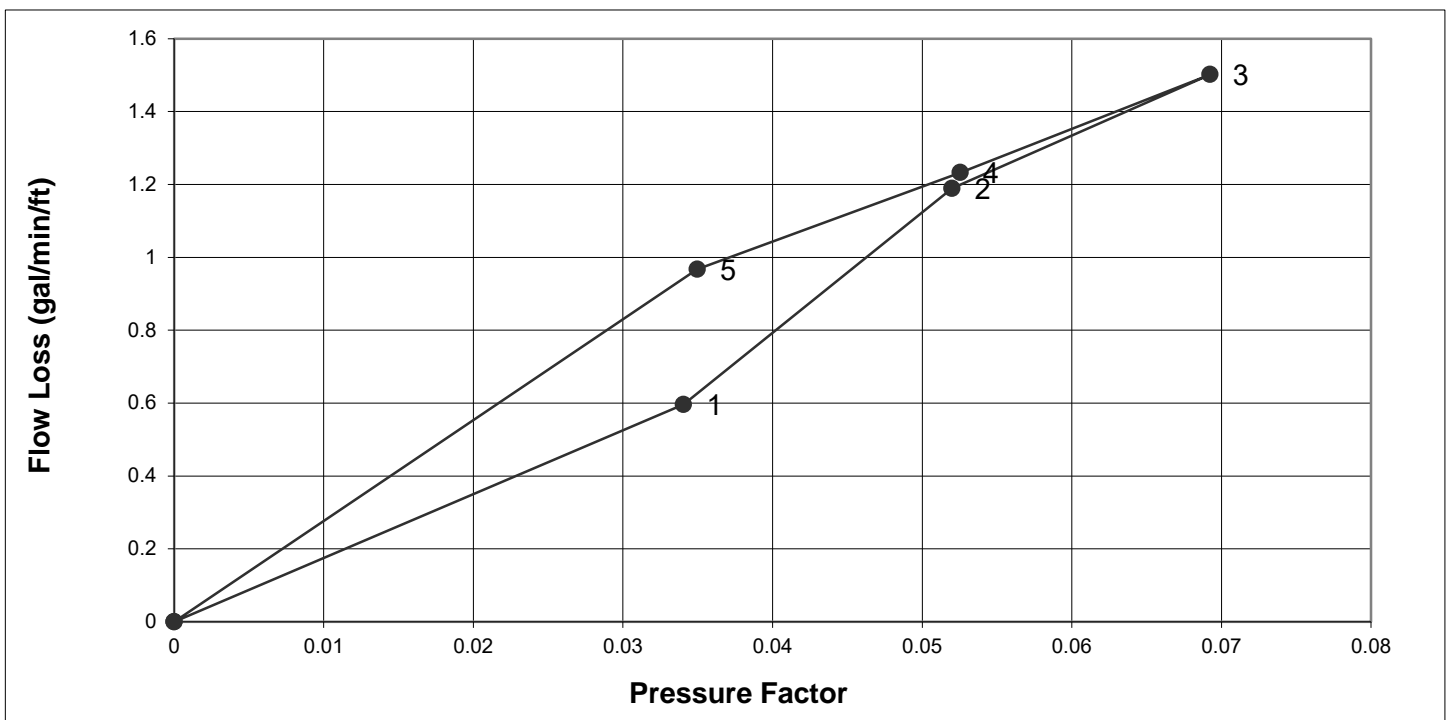


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	8
Test Interval Center Elevation (ft)	1712.5
Test Interval Length, L (ft)	5.5
Max. Measured Pressure, $P_{MAX}$ (psi)	124.7
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	23

Top of Test Elevation (ft)	1714.9
Bottom of Test Elevation (ft)	1710.2
Top of Test Depth (ft)	137.5
Bottom of Test Depth (ft)	143
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	61.32	61.3	0.034049642	3.28	0.5964	18
2	75%	93.64	93.6	0.051996224	6.54	1.1891	23
3	100%	124.68	124.7	0.069232051	8.26	1.5018	22
4	75%	94.64	94.6	0.052551502	6.78	1.2327	23
5	50%	62.96	63.0	0.034960298	5.32	0.9673	28
0	0		0	0	0	0	

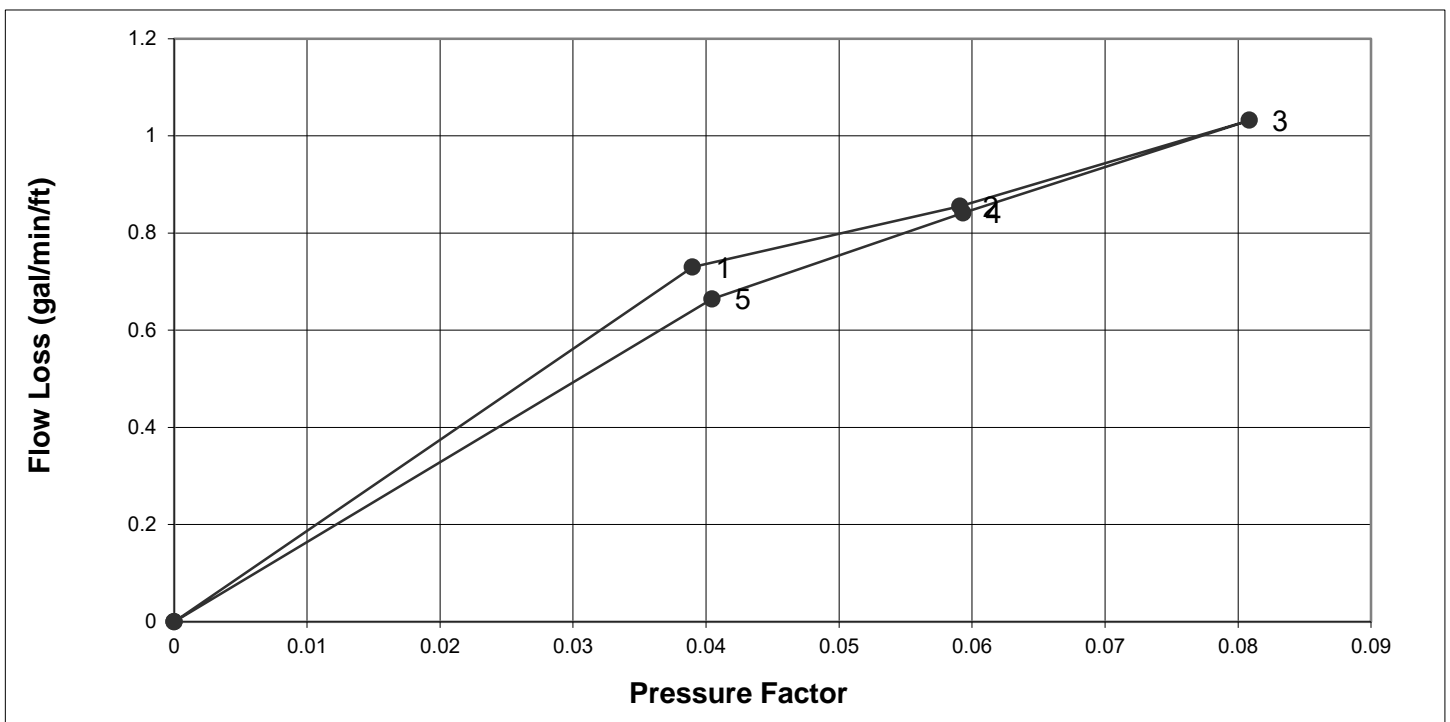


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	9
Test Interval Center Elevation (ft)	1701.5
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	145.6
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	15

Top of Test Elevation (ft)	1710.2
Bottom of Test Elevation (ft)	1692.8
Top of Test Depth (ft)	143
Bottom of Test Depth (ft)	163
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	70.20	70.2	0.038981176	14.60	0.7299	19
2	75%	106.41	106.4	0.059089344	17.10	0.8551	14
3	100%	145.61	145.6	0.080852629	20.64	1.0319	13
4	75%	106.83	106.8	0.059318119	16.83	0.8413	14
5	50%	72.83	72.8	0.040440669	13.28	0.6641	16
0	0		0	0	0	0	

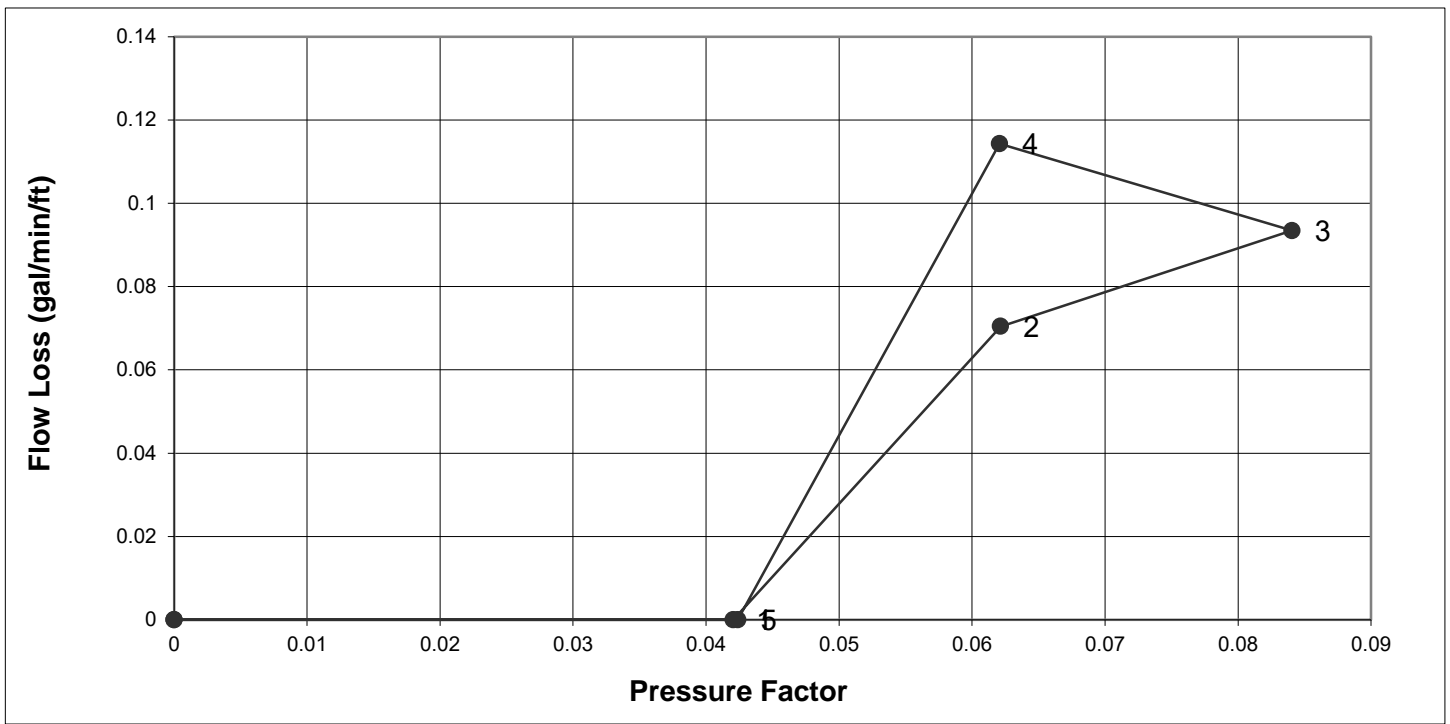


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	11
Test Interval Center Elevation (ft)	1692.0
Test Interval Length, L (ft)	18.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	151.4
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	1

Top of Test Elevation (ft)	1699.8
Bottom of Test Elevation (ft)	1684.2
Top of Test Depth (ft)	155
Bottom of Test Depth (ft)	173
Angle from Vertical (deg)	30

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	75.70	75.7	0.042035788	0.00	0.0000	0
2	75%	111.92	111.9	0.062145594	1.27	0.0704	1
3	100%	151.38	151.4	0.08405575	1.68	0.0934	1
4	75%	111.77	111.8	0.062064523	2.06	0.1143	2
5	50%	76.33	76.3	0.042386307	0.00	0.0000	0
0	0		0	0	0	0	



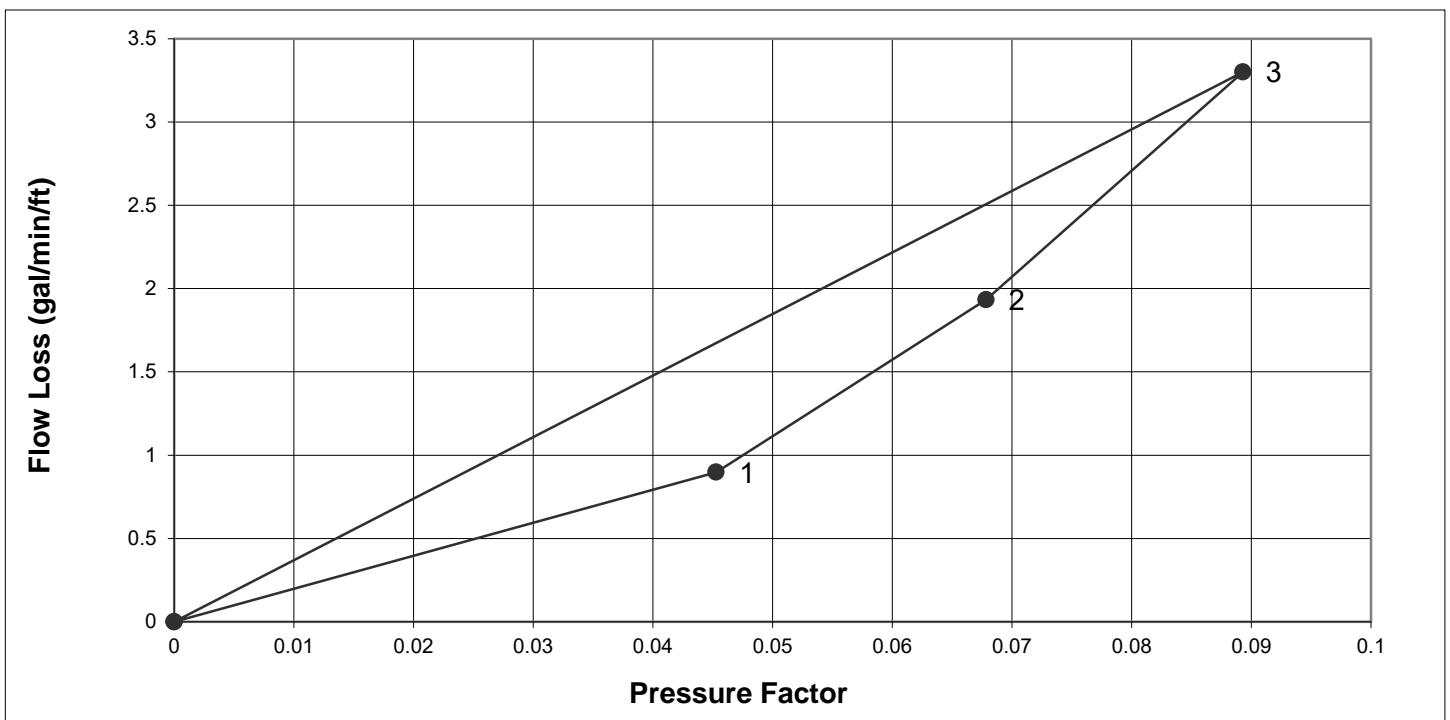
\*Assume transducer is 2 feet below top of test



Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	12
Test Interval Center Elevation (ft)	1679.8
Test Interval Length, L (ft)	10.0
Max. Measured Pressure, $P_{MAX}$ (psi)	160.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	37

Top of Test Elevation (ft)	1684.2
Bottom of Test Elevation (ft)	1675.5
Top of Test Depth (ft)	173
Bottom of Test Depth (ft)	183
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	81.56	81.6	0.045287467	8.98	0.8980	20
2	75%	122.16	122.2	0.067830529	19.34	1.9338	29
3	100%	160.81	160.8	0.089295352	33.01	3.3006	37
4	75%			#N/A			
5	50%			#N/A			
0	0		0	0	0	0	

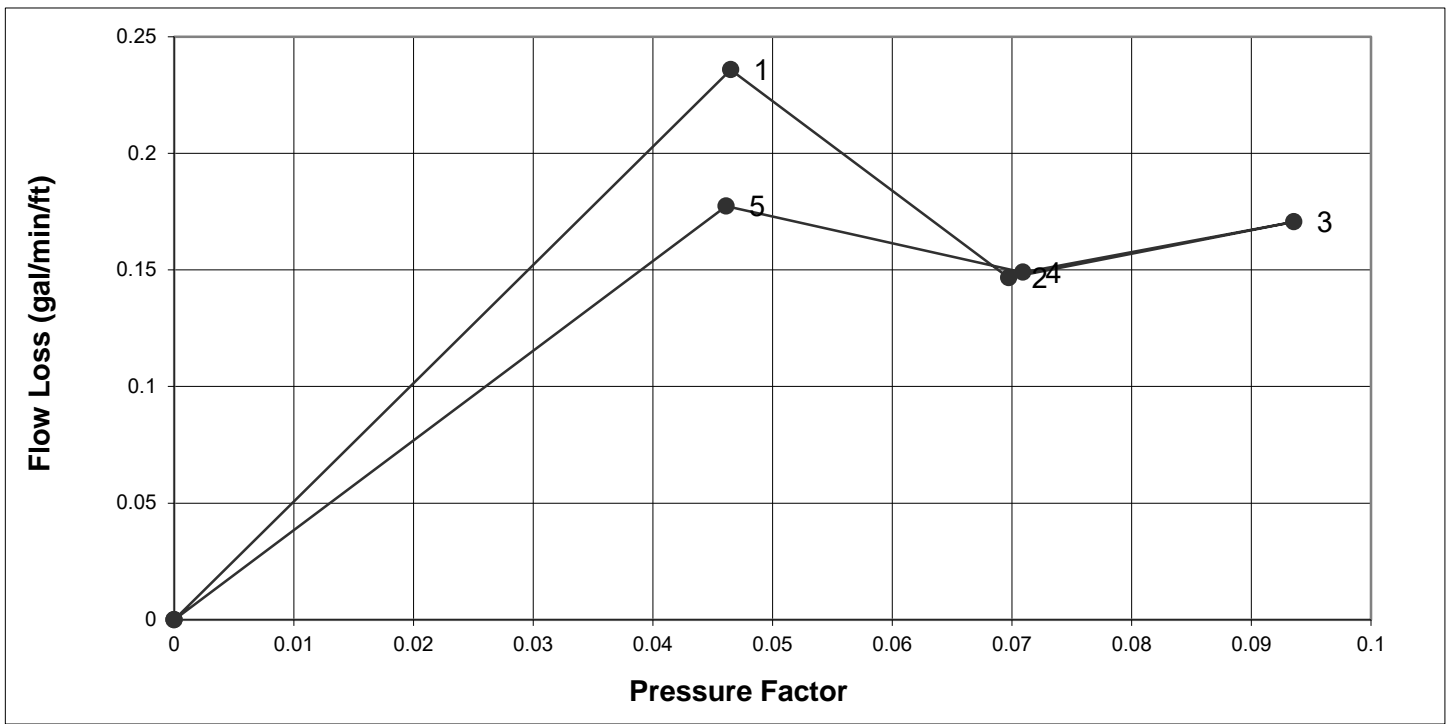


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	13
Test Interval Center Elevation (ft)	1671.2
Test Interval Length, L (ft)	10.0
Max. Measured Pressure, $P_{MAX}$ (psi)	171.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1675.5
Bottom of Test Elevation (ft)	1666.9
Top of Test Depth (ft)	183
Bottom of Test Depth (ft)	193
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	86.49	83.8	0.046505142	2.36	0.2358	5
2	75%	128.32	125.6	0.069731418	1.47	0.1466	2
3	100%	171.21	168.5	0.093545067	1.71	0.1706	2
4	75%	130.46	127.7	0.070918602	1.49	0.1490	2
5	50%	85.82	83.1	0.046129663	1.77	0.1774	4
0	0		0	0	0	0	

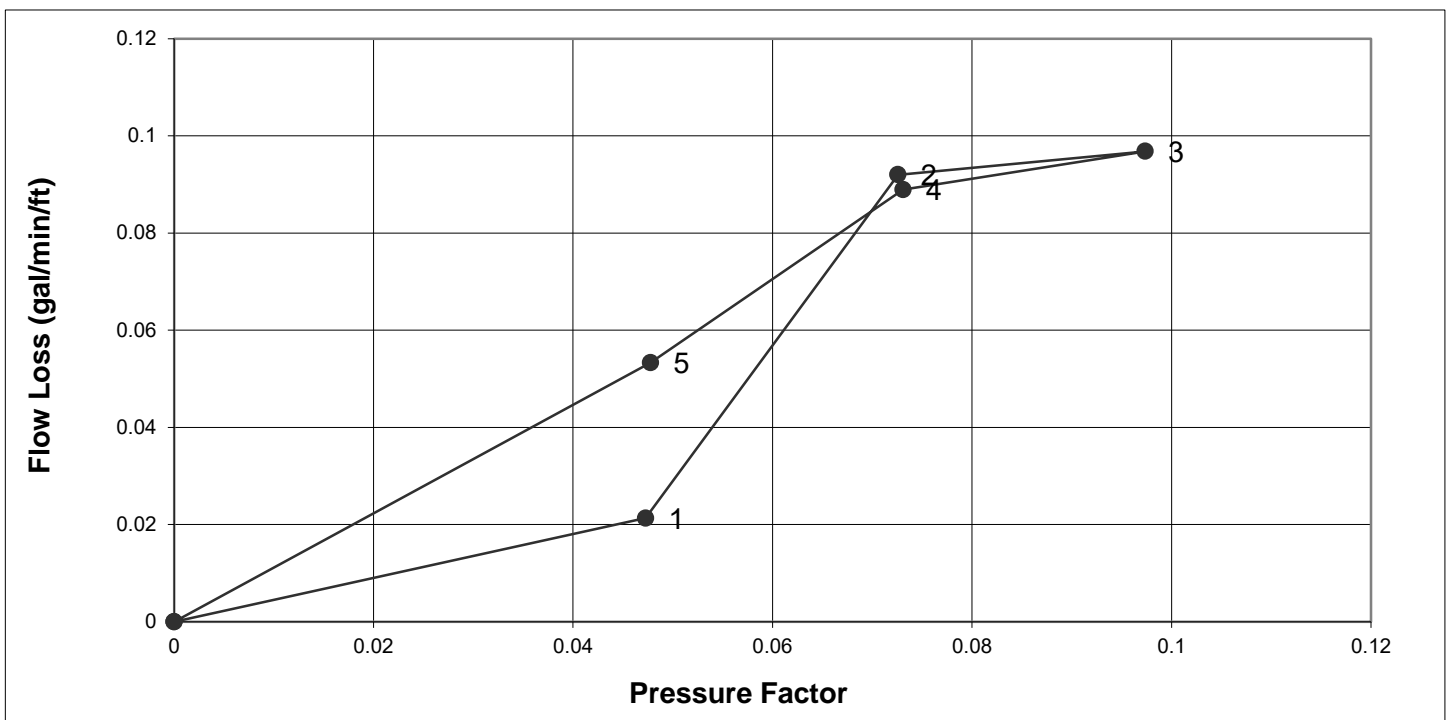


\*Assume transducer is 2 feet below top of test

Boring	CB-13
Surface El. (ft)	1834
Groundwater El. (ft)	1679.8
Test No.	14
Test Interval Center Elevation (ft)	1660.4
Test Interval Length, L (ft)	15.0
Max. Measured Pressure, $P_{MAX}$ (psi)	181.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	1

Top of Test Elevation (ft)	1666.9
Bottom of Test Elevation (ft)	1653.9
Top of Test Depth (ft)	193
Bottom of Test Depth (ft)	208
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	91.63	85.1	0.047274271	0.32	0.0213	0
2	75%	137.19	130.7	0.072573177	1.38	0.0920	1
3	100%	181.83	175.3	0.097357451	1.45	0.0968	1
4	75%	138.12	131.6	0.073090696	1.33	0.0889	1
5	50%	92.51	86.0	0.047759695	0.80	0.0533	1
0	0		0	0	0	0	

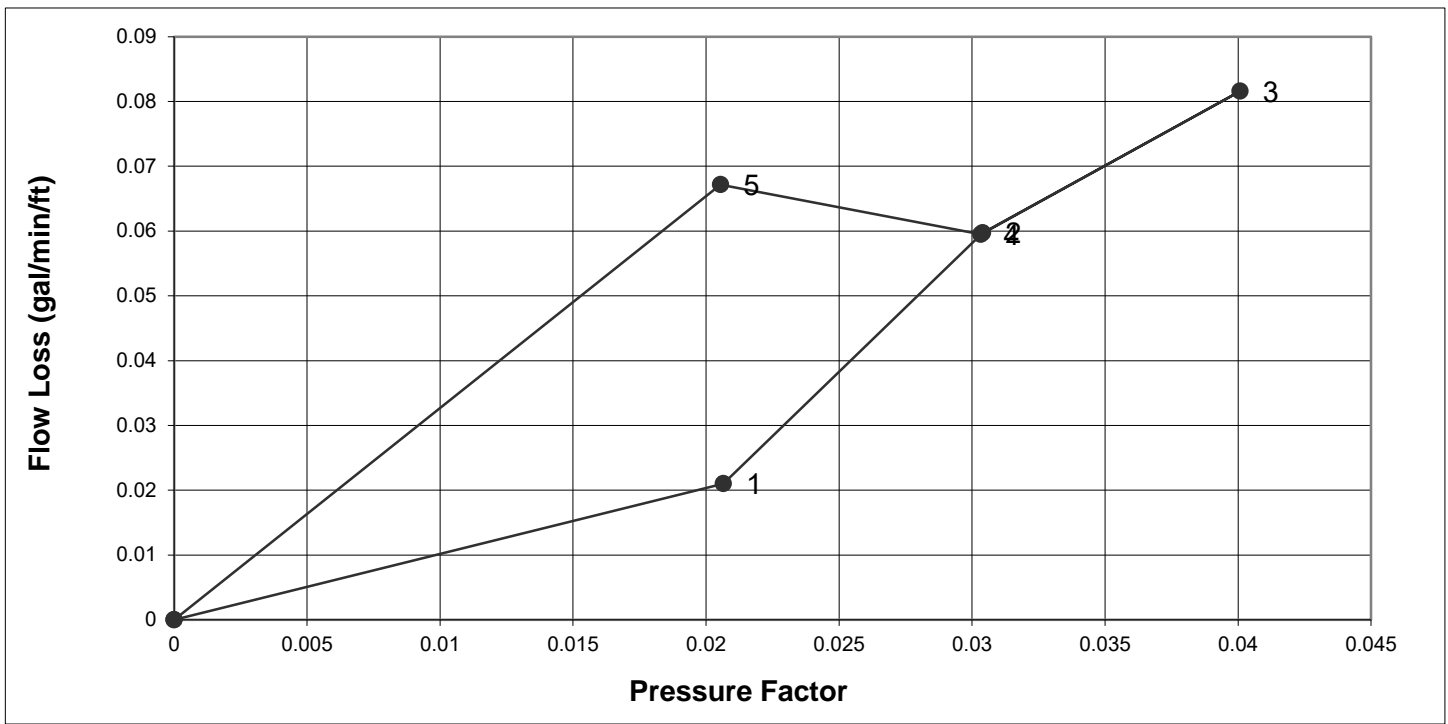


\*Assume transducer is 2 feet below top of test

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	1
Test Interval Center Elevation (ft)	1663.8
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	72.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1672.4
Bottom of Test Elevation (ft)	1655.1
Top of Test Depth (ft)	63
Bottom of Test Depth (ft)	83
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	37.18	37.2	0.020647917	0.42	0.0210	1
2	75%	54.74	54.7	0.030394469	1.19	0.0597	2
3	100%	72.17	72.2	0.040073186	1.63	0.0816	2
4	75%	54.63	54.6	0.030334833	1.19	0.0595	2
5	50%	37.00	37.0	0.020545746	1.34	0.0672	3
0	0		0	0	0	0	



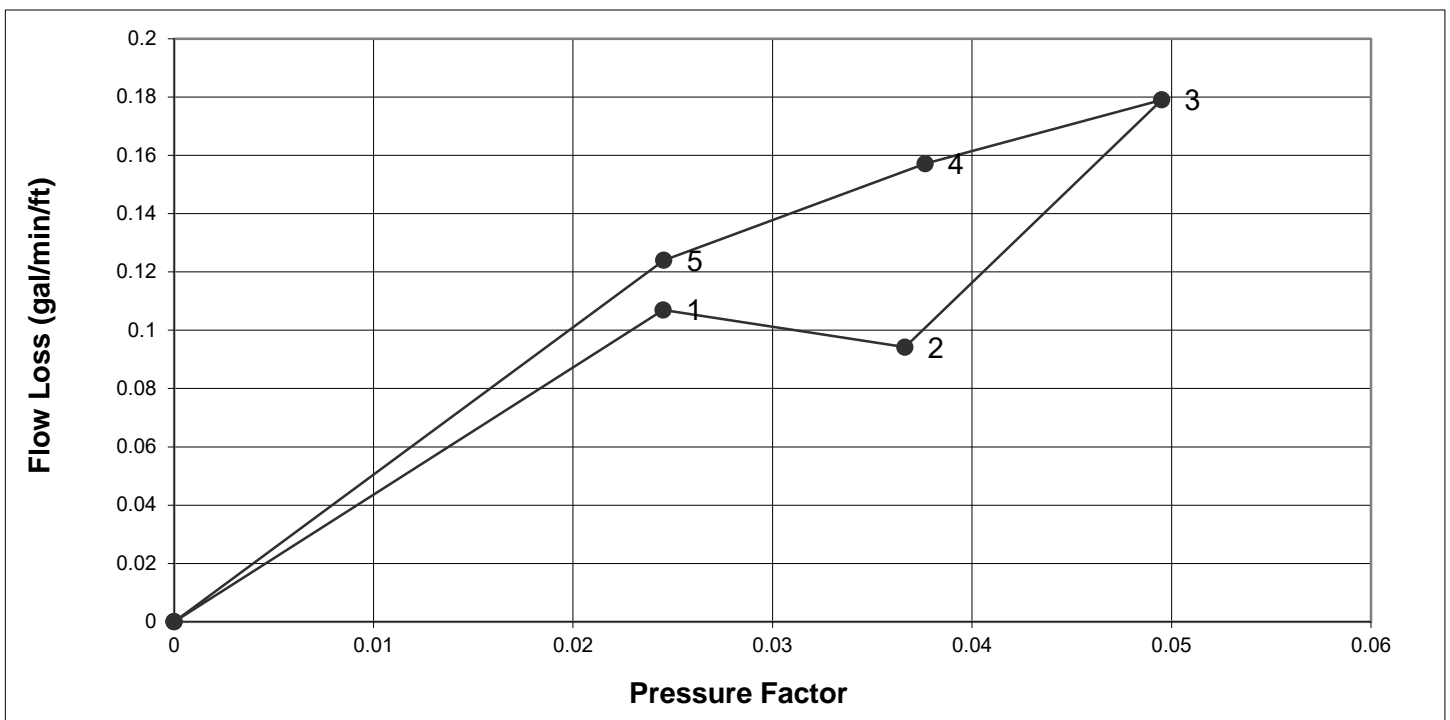
\*Assume transducer is 2 feet below top of test

Laminar ?

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	2
Test Interval Center Elevation (ft)	1646.5
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	89.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	5

Top of Test Elevation (ft)	1655.1
Bottom of Test Elevation (ft)	1637.8
Top of Test Depth (ft)	83
Bottom of Test Depth (ft)	103
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	44.16	44.2	0.024518481	2.14	0.1069	4
2	75%	65.98	66.0	0.036638255	1.88	0.0942	3
3	100%	89.15	89.2	0.049504877	3.58	0.1790	4
4	75%	67.82	67.8	0.037656172	3.14	0.1571	4
5	50%	44.21	44.2	0.024549836	2.48	0.1240	5
0	0		0	0	0	0	

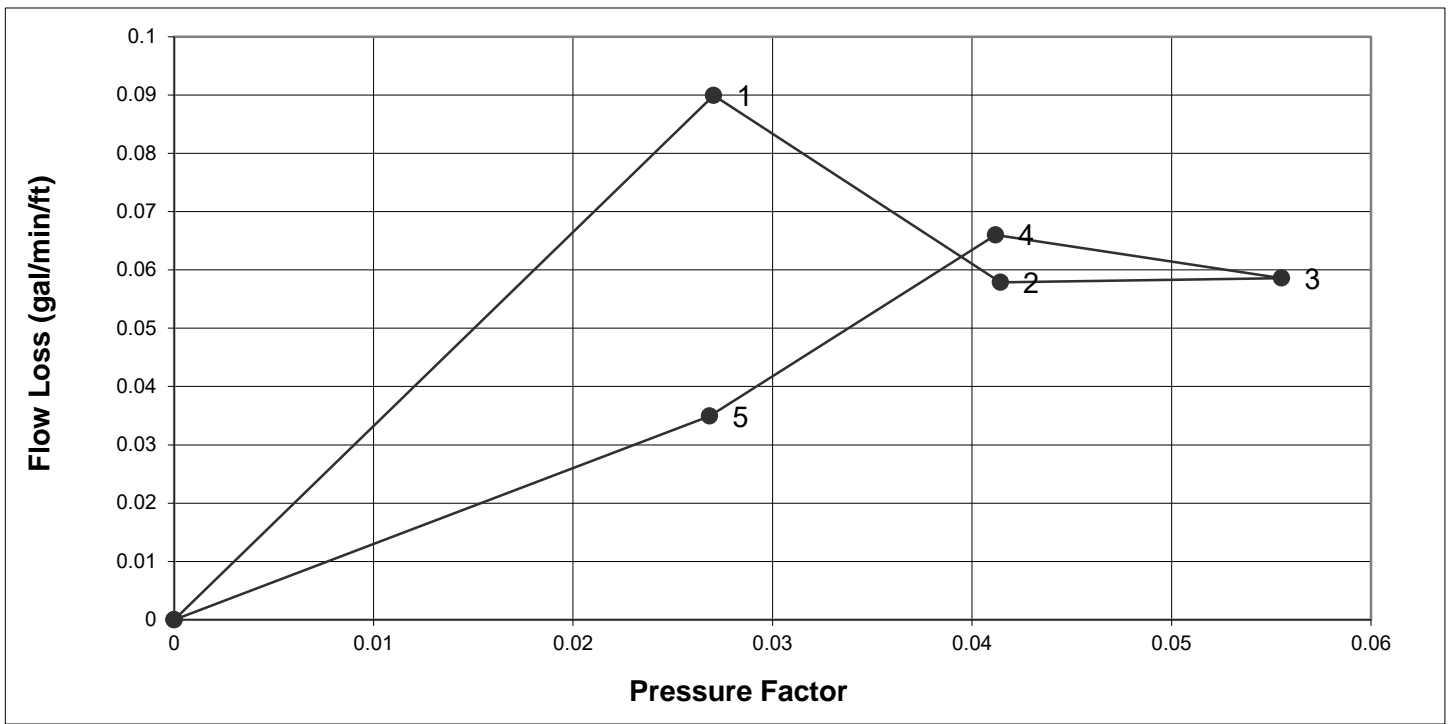


\*Assume transducer is 2 feet below top of test

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	3
Test Interval Center Elevation (ft)	1629.1
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	105.1
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1637.8
Bottom of Test Elevation (ft)	1620.5
Top of Test Depth (ft)	103
Bottom of Test Depth (ft)	123
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	53.81	48.7	0.027045298	1.80	0.0899	3
2	75%	79.70	74.6	0.041420055	1.16	0.0579	1
3	100%	105.07	100.0	0.055508566	1.17	0.0586	1
4	75%	79.26	74.2	0.041177398	1.32	0.0660	2
5	50%	53.45	48.3	0.026841418	0.70	0.0349	1
0	0		0	0	0	0	

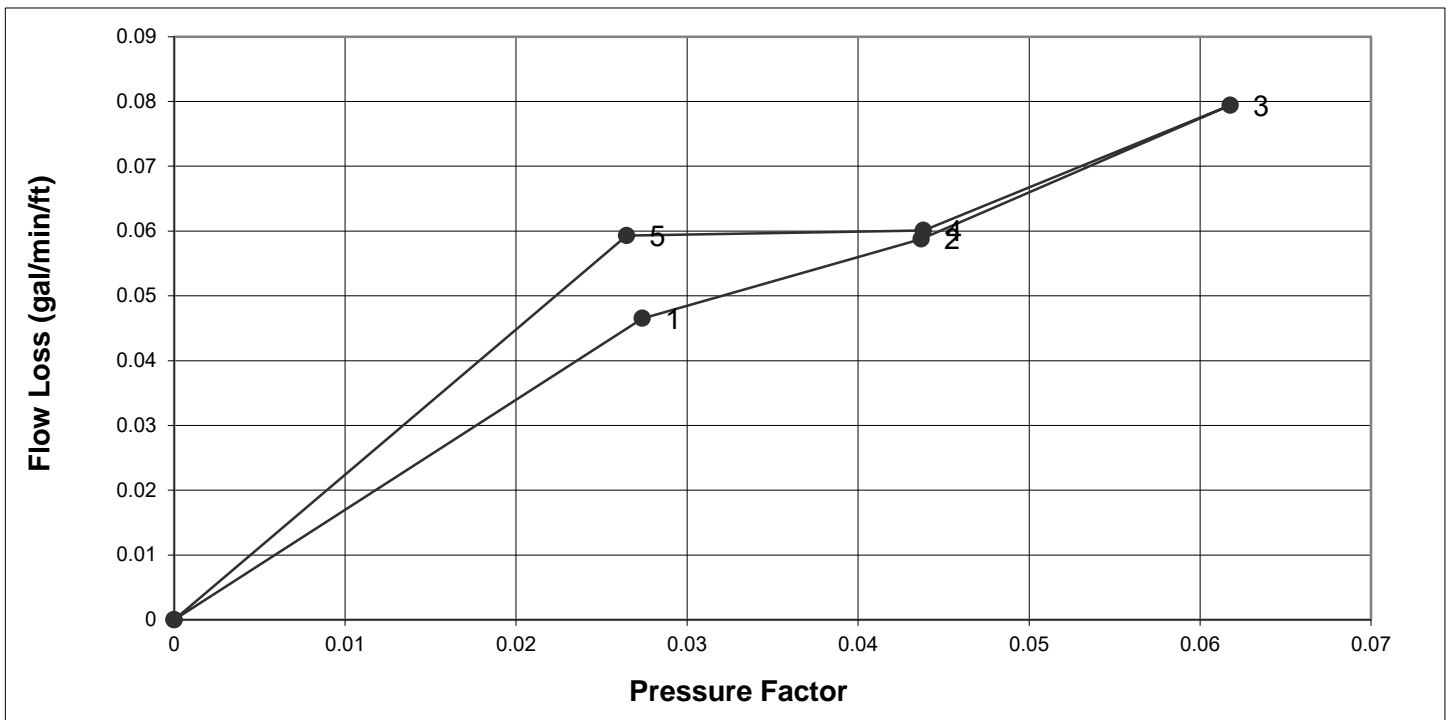


\*Assume transducer is 2 feet below top of test

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	4
Test Interval Center Elevation (ft)	1612.0
Test Interval Length, L (ft)	19.6
Max. Measured Pressure, $P_{MAX}$ (psi)	123.9
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1620.5
Bottom of Test Elevation (ft)	1603.5
Top of Test Depth (ft)	123
Bottom of Test Depth (ft)	142.6
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	61.93	49.3	0.027387505	0.91	0.0465	2
2	75%	91.29	78.7	0.043691279	1.15	0.0588	1
3	100%	123.85	111.2	0.061769573	1.56	0.0794	1
4	75%	91.54	78.9	0.043827433	1.18	0.0601	1
5	50%	60.28	47.7	0.02647211	1.16	0.0593	2
0	0		0	0	0	0	

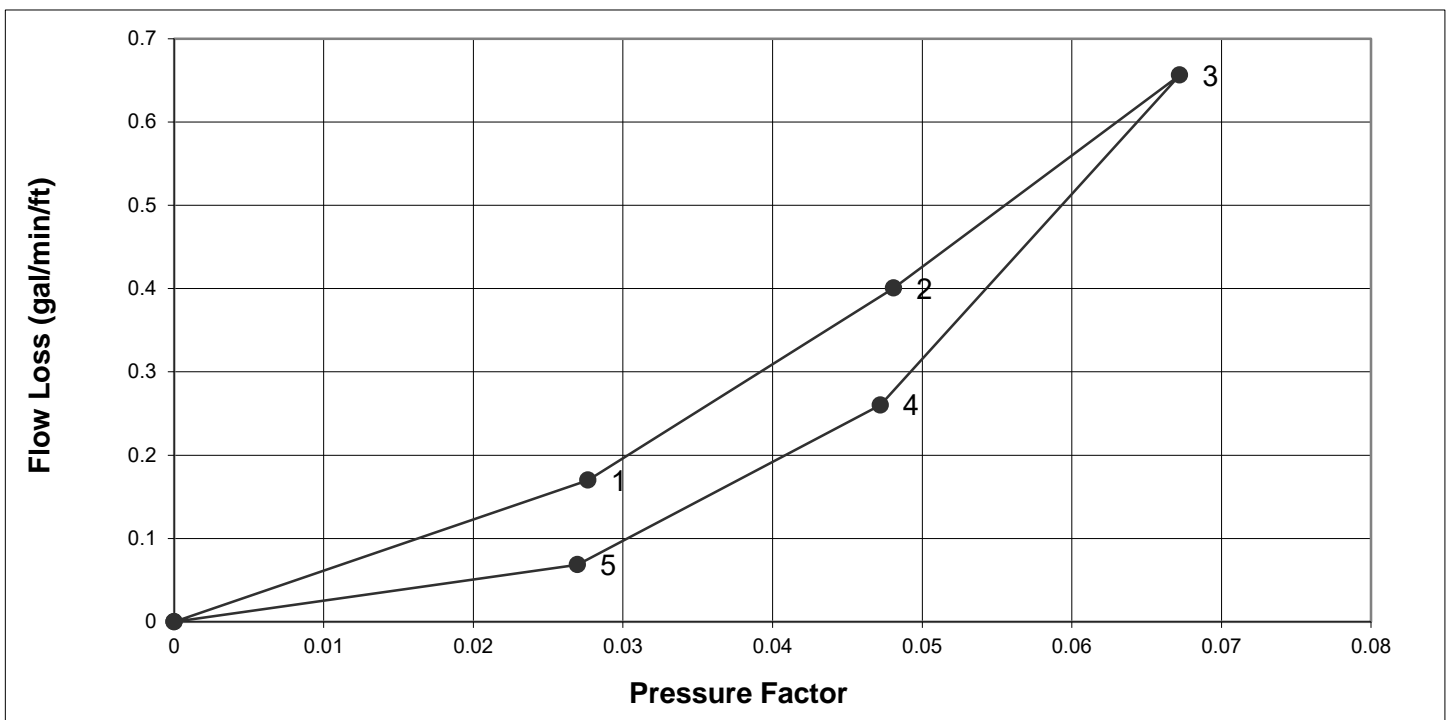


\*Assume transducer is 2 feet below top of test

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	5
Test Interval Center Elevation (ft)	1594.5
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	141.1
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	6

Top of Test Elevation (ft)	1603.2
Bottom of Test Elevation (ft)	1585.8
Top of Test Depth (ft)	143
Bottom of Test Depth (ft)	163
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	69.93	49.8	0.02765821	3.40	0.1699	6
2	75%	106.70	86.6	0.048079259	8.01	0.4006	8
3	100%	141.15	121.0	0.067206658	13.12	0.6562	10
4	75%	105.13	85.0	0.047204326	5.20	0.2602	6
5	50%	68.65	48.5	0.02695186	1.37	0.0686	3
0	0		0	0	0	0	



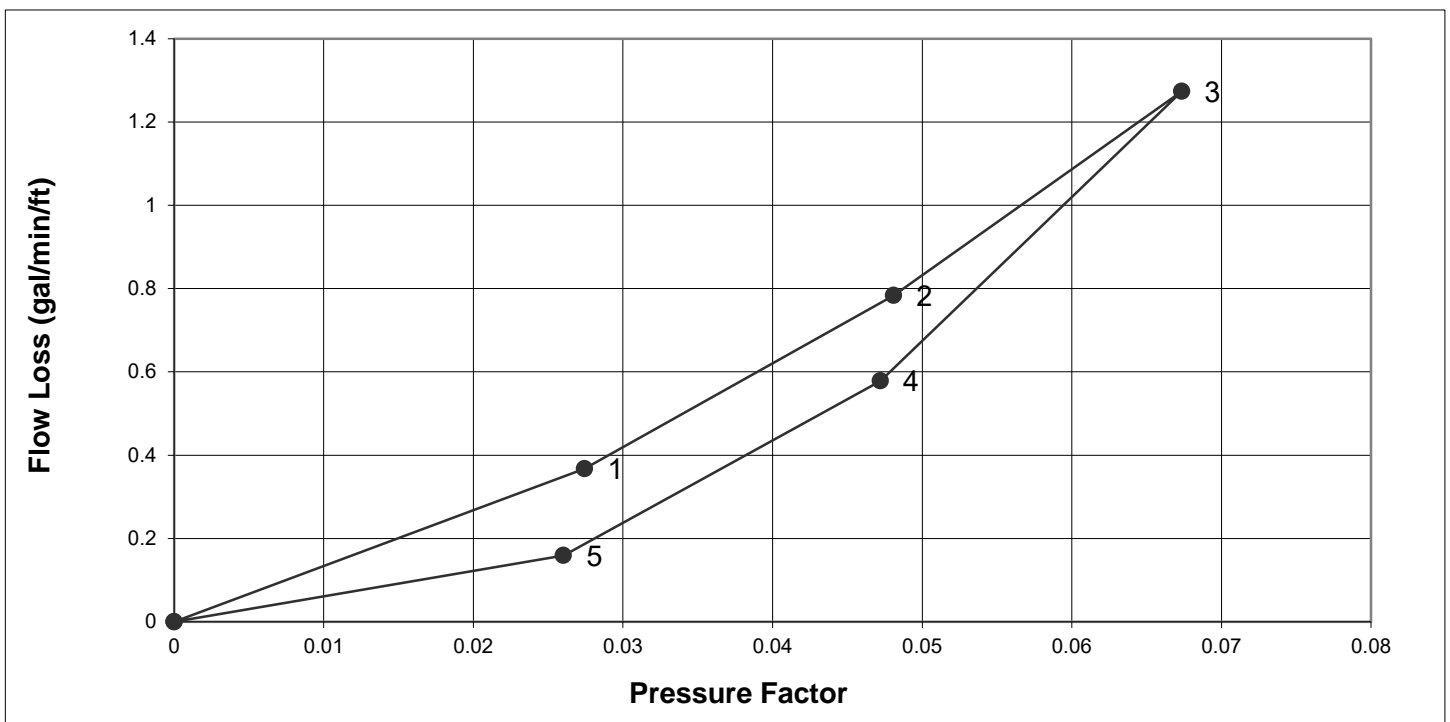
\*Assume transducer is 2 feet below top of test



Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	6
Test Interval Center Elevation (ft)	1590.2
Test Interval Length, L (ft)	10.0
Max. Measured Pressure, $P_{MAX}$ (psi)	145.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	13

Top of Test Elevation (ft)	1594.5
Bottom of Test Elevation (ft)	1585.8
Top of Test Depth (ft)	153
Bottom of Test Depth (ft)	163
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	73.26	49.4	0.027428172	3.67	0.3672	13
2	75%	110.47	86.6	0.048086324	7.84	0.7837	16
3	100%	145.15	121.3	0.067347064	12.74	1.2735	19
4	75%	108.88	85.0	0.047205283	5.78	0.5783	12
5	50%	70.74	46.9	0.026026335	1.59	0.1592	6
0	0		0	0	0	0	

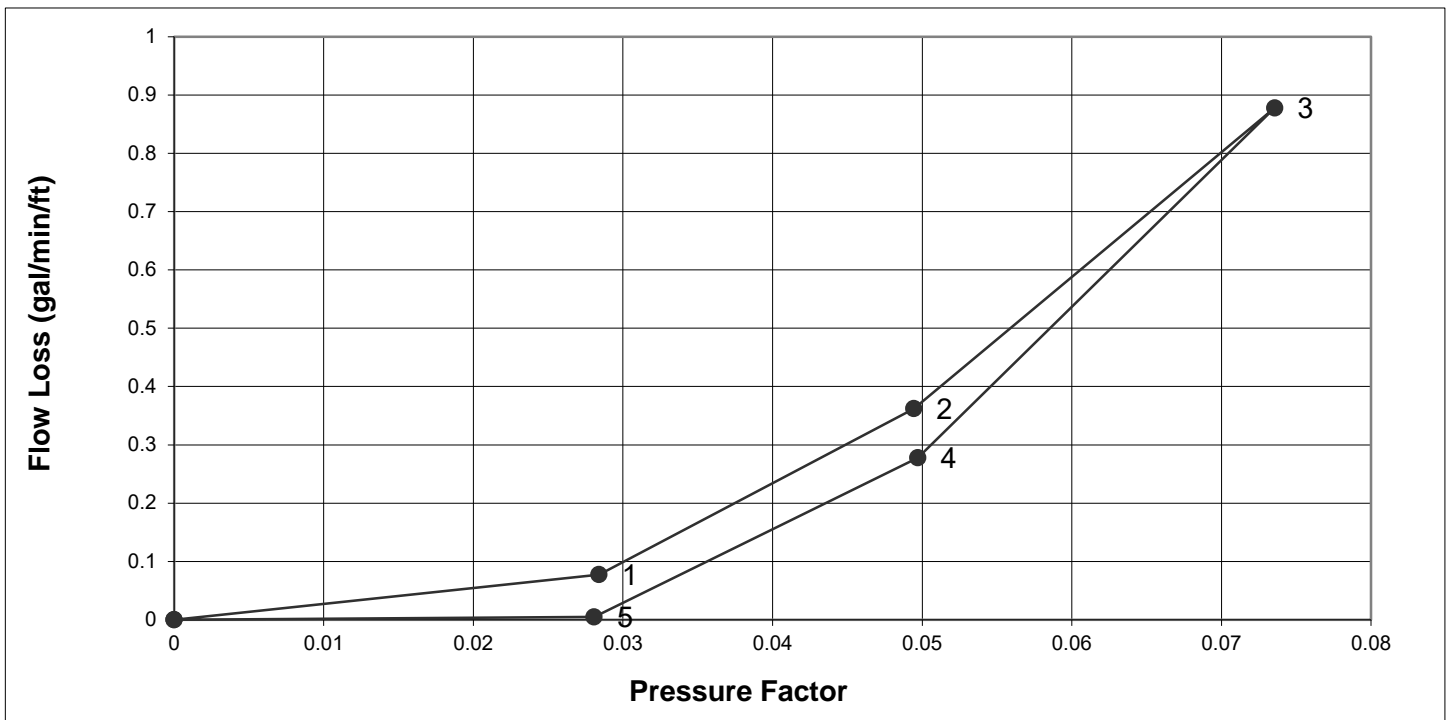


\*Assume transducer is 2 feet below top of test

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	7
Test Interval Center Elevation (ft)	1577.2
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	160.1
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	6

Top of Test Elevation (ft)	1585.8
Bottom of Test Elevation (ft)	1568.5
Top of Test Depth (ft)	163
Bottom of Test Depth (ft)	183
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	78.77	51.2	0.028402864	1.54	0.0772	3
2	75%	116.65	89.0	0.049435311	7.24	0.3621	7
3	100%	160.10	132.5	0.073561951	17.56	0.8778	12
4	75%	117.14	89.5	0.049709433	5.55	0.2776	6
5	50%	78.19	50.6	0.028078998	0.10	0.0048	0
0	0		0	0	0	0	

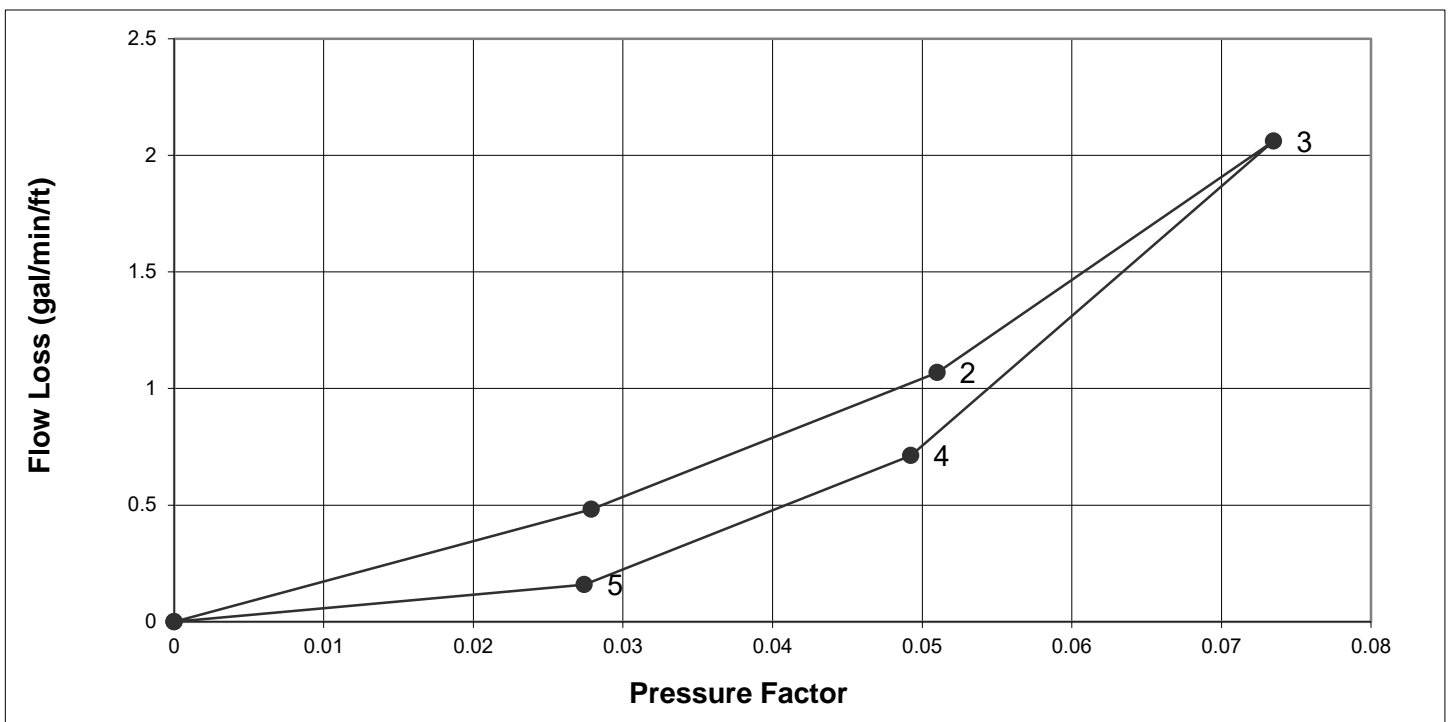


\*Assume transducer is 2 feet below top of test

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	8
Test Interval Center Elevation (ft)	1572.8
Test Interval Length, L (ft)	10.0
Max. Measured Pressure, $P_{MAX}$ (psi)	163.7
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	17

Top of Test Elevation (ft)	1577.2
Bottom of Test Elevation (ft)	1568.5
Top of Test Depth (ft)	173
Bottom of Test Depth (ft)	183
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	81.59	50.2	0.027883711	4.82	0.4820	17
2	75%	123.21	91.8	0.050993452	10.68	1.0682	21
3	100%	163.70	132.3	0.073480357	20.61	2.0608	28
4	75%	120.04	88.7	0.049237293	7.13	0.7130	14
5	50%	80.75	49.4	0.027419221	1.59	0.1592	6
0	0		0	0	0	0	

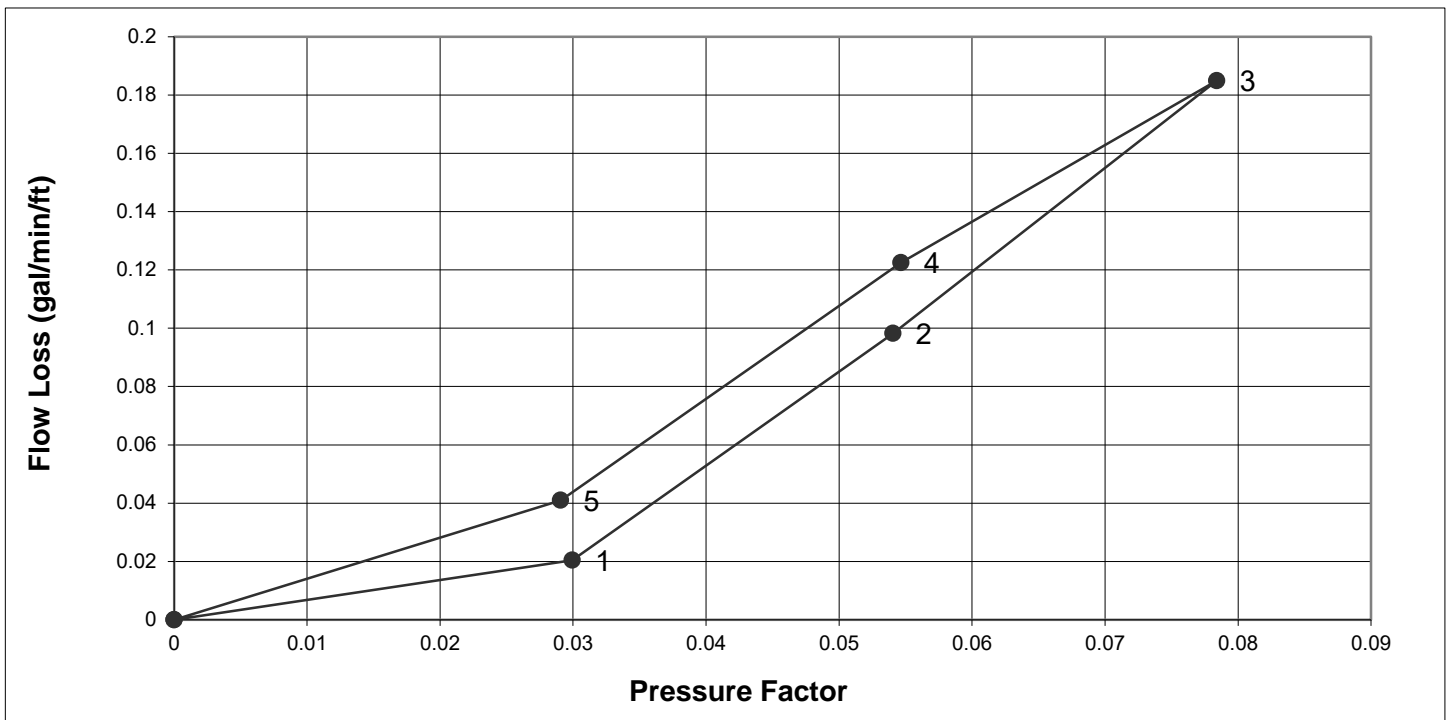


\*Assume transducer is 2 feet below top of test

Boring	CB-14
Surface El. (ft)	1727
Groundwater El. (ft)	1647.6
Test No.	9
Test Interval Center Elevation (ft)	1559.9
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	176.3
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1568.5
Bottom of Test Elevation (ft)	1551.2
Top of Test Depth (ft)	183
Bottom of Test Depth (ft)	203
Angle from Vertical (deg)	30

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	89.02	53.9	0.029928738	0.41	0.0204	1
2	75%	132.47	97.3	0.05405251	1.96	0.0982	2
3	100%	176.32	141.2	0.078404408	3.70	0.1849	2
4	75%	133.57	98.4	0.054664426	2.45	0.1225	2
5	50%	87.48	52.4	0.029069113	0.82	0.0410	1
0	0		0	0	0	0	

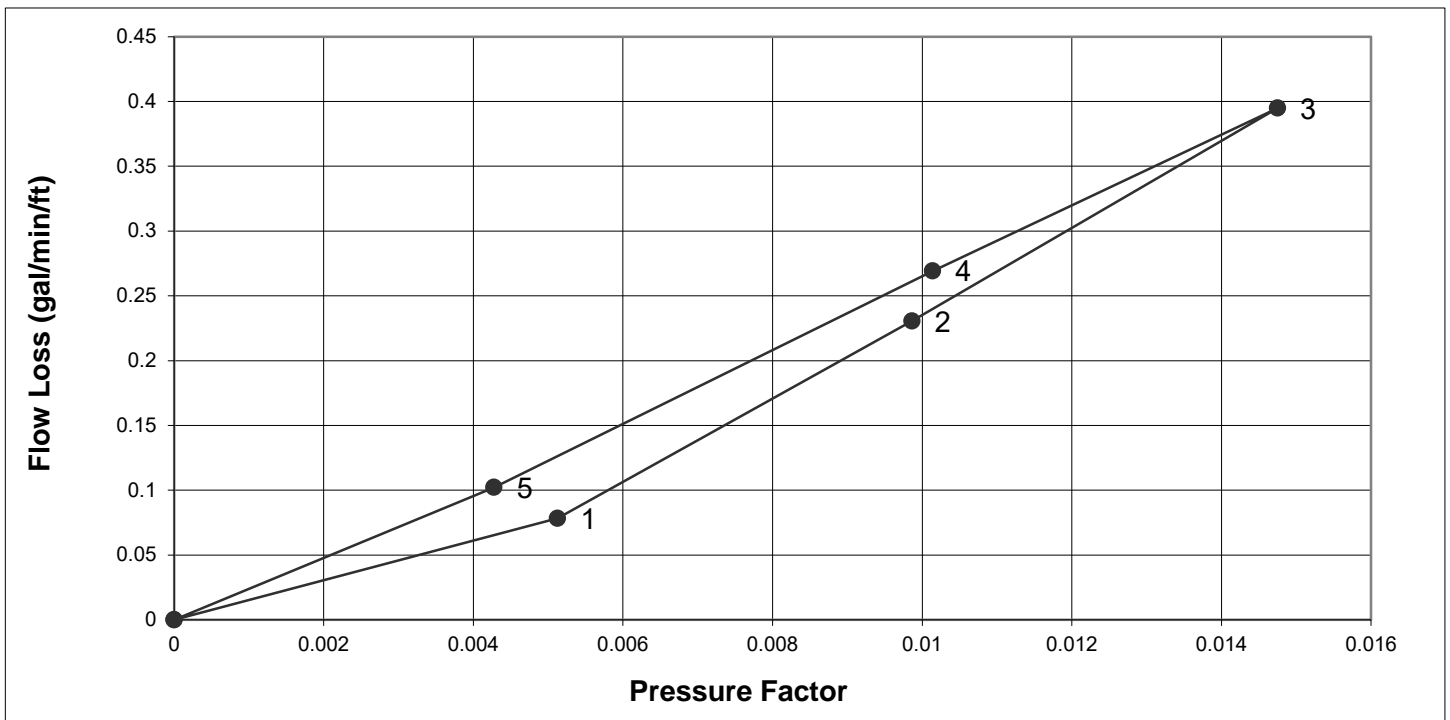


\*Assume transducer is 2 feet below top of test

Boring	CB-15
Surface El. (ft)	1610
Groundwater El. (ft)	1604.3
Test No.	2
Test Interval Center Elevation (ft)	1579.9
Test Interval Length, L (ft)	21.0
Max. Measured Pressure, $P_{MAX}$ (psi)	34.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	23

Top of Test Elevation (ft)	1587.4
Bottom of Test Elevation (ft)	1572.5
Top of Test Depth (ft)	32
Bottom of Test Depth (ft)	53
Angle from Vertical (deg)	45

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	17.45	9.2	0.005125503	1.64	0.0782	15
2	75%	25.98	17.8	0.009862024	4.84	0.2305	23
3	100%	34.78	26.6	0.01474847	8.29	0.3949	27
4	75%	26.48	18.3	0.010139663	5.65	0.2691	27
5	50%	15.92	7.7	0.004275928	2.14	0.1021	24
0	0		0	0	0	0	

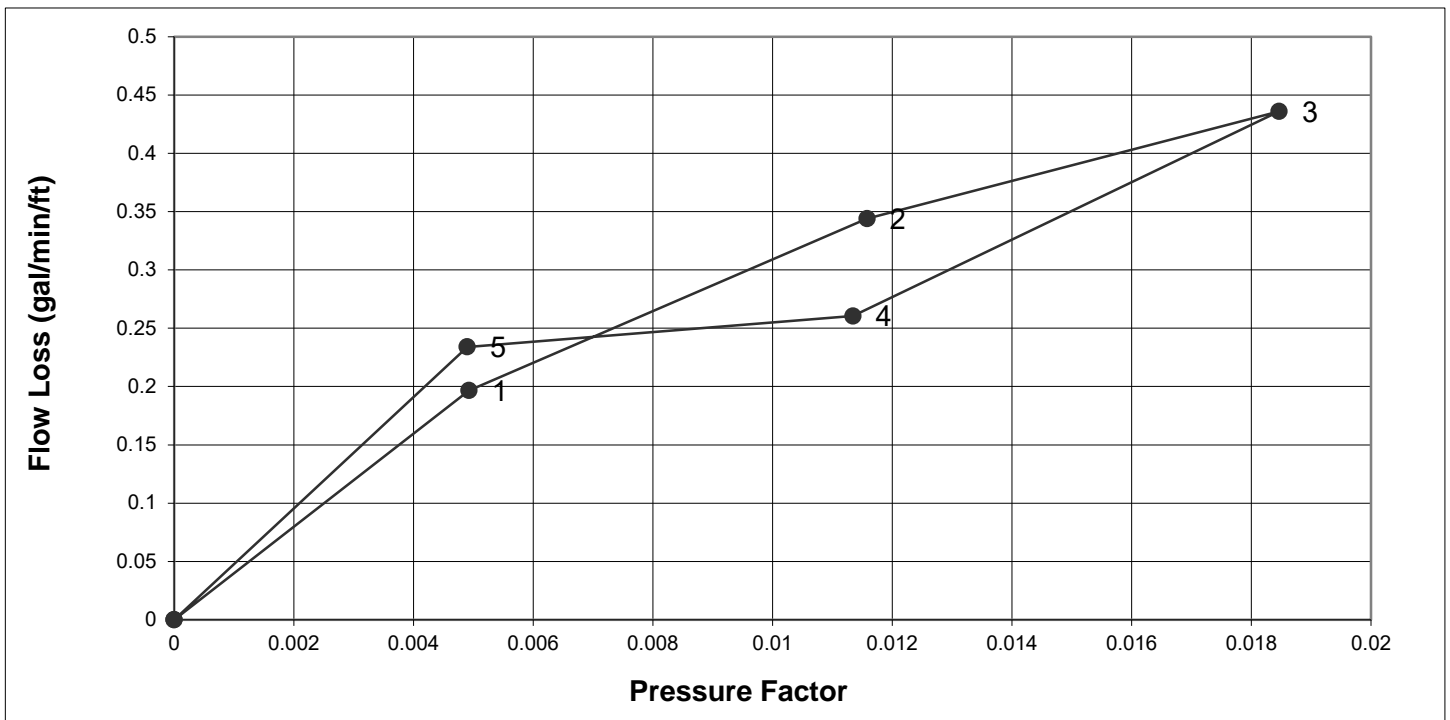


\*Assume transducer is 2 feet below top of test

Boring	CB-15
Surface El. (ft)	1610
Groundwater El. (ft)	1604.3
Test No.	3
Test Interval Center Elevation (ft)	1567.0
Test Interval Length, L (ft)	17.6
Max. Measured Pressure, $P_{MAX}$ (psi)	47.6
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	26

Top of Test Elevation (ft)	1573.2
Bottom of Test Elevation (ft)	1560.8
Top of Test Depth (ft)	52
Bottom of Test Depth (ft)	69.6
Angle from Vertical (deg)	45

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	23.22	8.9	0.004927024	3.46	0.1965	40
2	75%	35.20	20.9	0.011579253	6.05	0.3440	30
3	100%	47.60	33.3	0.018464699	7.67	0.4359	24
4	75%	34.78	20.4	0.01134326	4.58	0.2605	23
5	50%	23.17	8.8	0.004897409	4.12	0.2339	48
0	0		0	0	0	0	

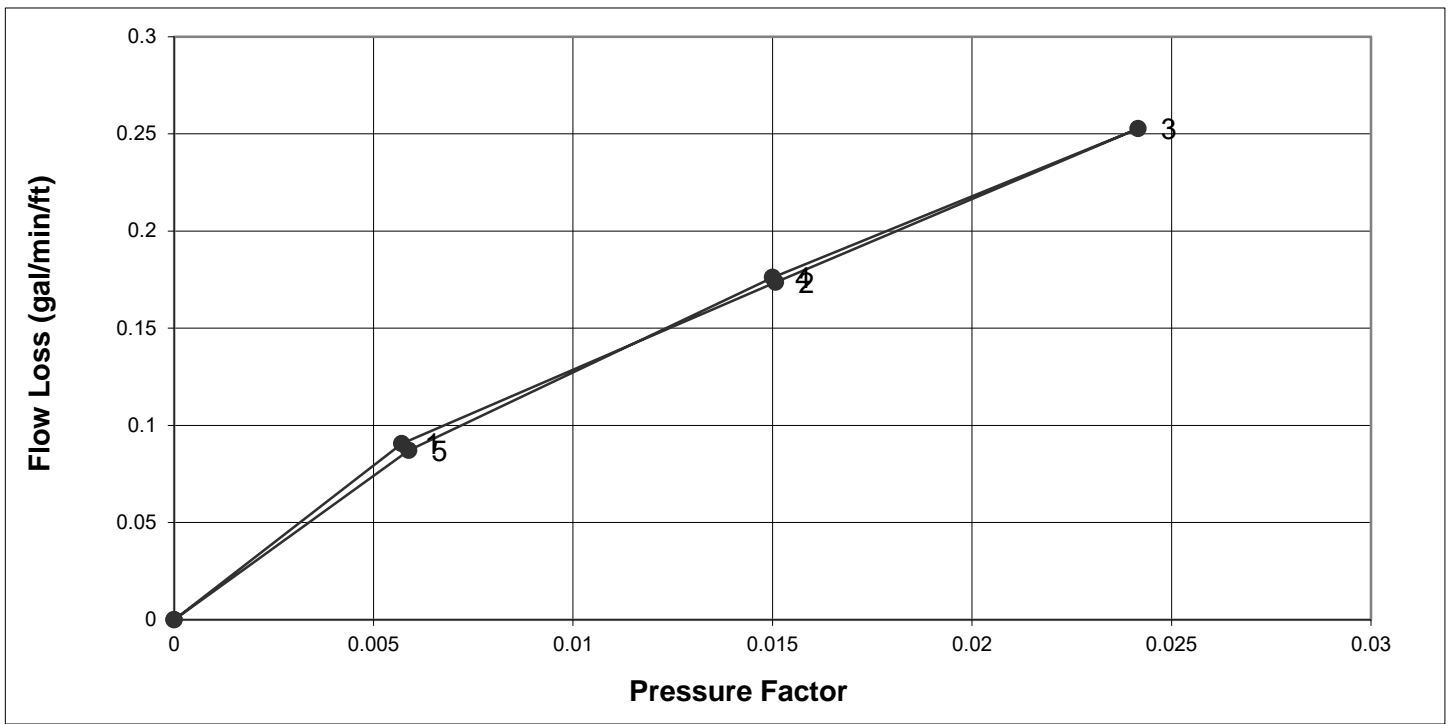


\*Assume transducer is 2 feet below top of test

Boring	CB-15
Surface El. (ft)	1610
Groundwater El. (ft)	1604.3
Test No.	4
Test Interval Center Elevation (ft)	1554.1
Test Interval Length, L (ft)	22.0
Max. Measured Pressure, $P_{MAX}$ (psi)	62.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	13

Top of Test Elevation (ft)	1561.9
Bottom of Test Elevation (ft)	1546.4
Top of Test Depth (ft)	68
Bottom of Test Depth (ft)	90
Angle from Vertical (deg)	45

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	29.52	10.3	0.005703328	1.99	0.0905	16
2	75%	46.40	27.2	0.015076419	3.82	0.1735	12
3	100%	62.76	43.5	0.024160766	5.56	0.2527	10
4	75%	46.26	27.0	0.01499868	3.87	0.1761	12
5	50%	29.84	10.6	0.005881017	1.92	0.0871	15
0	0		0	0	0	0	

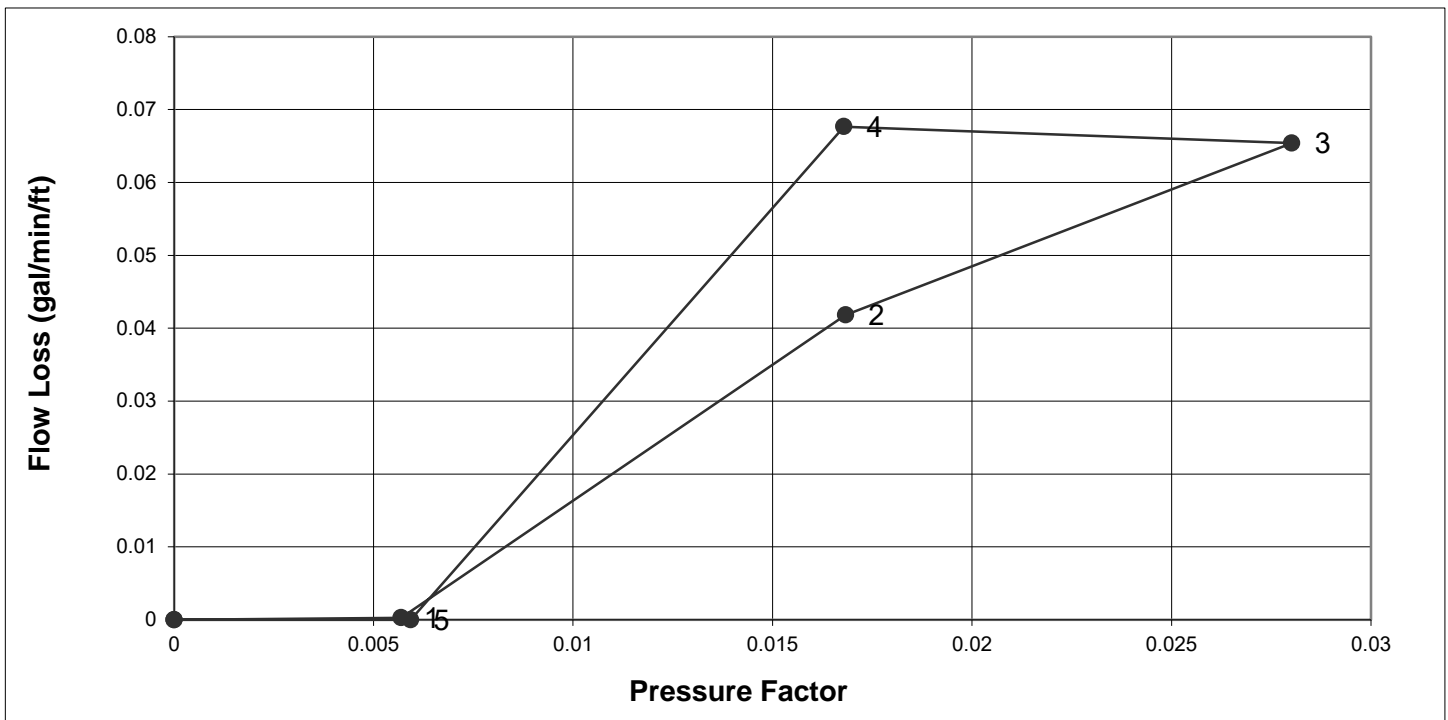


\*Assume transducer is 2 feet below top of test

Boring	CB-15
Surface El. (ft)	1610
Groundwater El. (ft)	1604.3
Test No.	5
Test Interval Center Elevation (ft)	1537.9
Test Interval Length, L (ft)	24.0
Max. Measured Pressure, $P_{MAX}$ (psi)	76.4
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1546.4
Bottom of Test Elevation (ft)	1529.4
Top of Test Depth (ft)	90
Bottom of Test Depth (ft)	114
Angle from Vertical (deg)	45

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	36.23	10.2	0.005688417	0.01	0.0003	0
2	75%	56.30	30.3	0.016830994	1.00	0.0418	2
3	100%	76.44	50.5	0.028014292	1.57	0.0654	2
4	75%	56.22	30.2	0.016786572	1.62	0.0677	4
5	50%	36.67	10.7	0.005929038	0.00	0.0000	0
0	0		0	0	0	0	



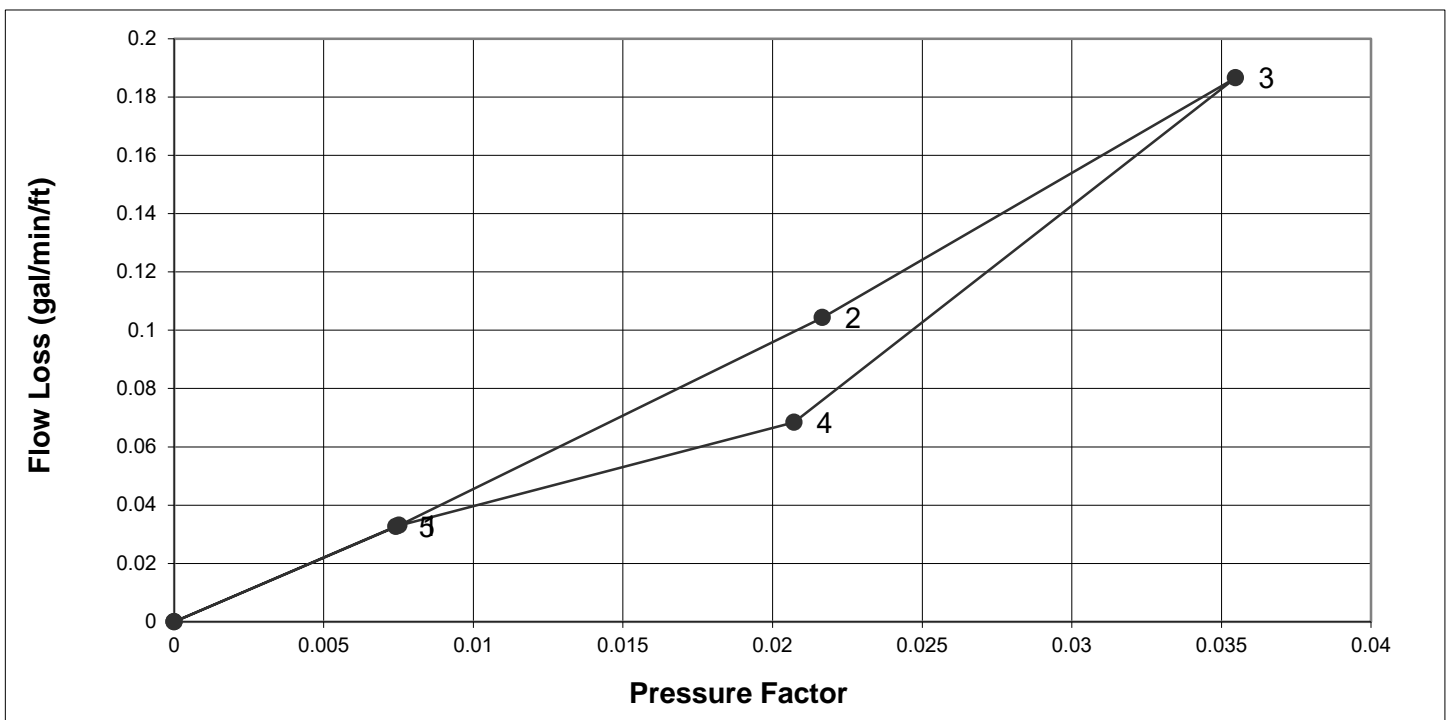
\*Assume transducer is 2 feet below top of test



Boring	CB-15
Surface El. (ft)	1610
Groundwater El. (ft)	1604.3
Test No.	6
Test Interval Center Elevation (ft)	1515.2
Test Interval Length, L (ft)	40.0
Max. Measured Pressure, $P_{MAX}$ (psi)	97.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1529.4
Bottom of Test Elevation (ft)	1501.1
Top of Test Depth (ft)	114
Bottom of Test Depth (ft)	154
Angle from Vertical (deg)	45

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	46.88	13.5	0.007519207	1.32	0.0331	4
2	75%	72.36	39.0	0.021665838	4.17	0.1043	5
3	100%	97.22	63.9	0.035470047	7.46	0.1866	5
4	75%	70.65	37.3	0.020716313	2.74	0.0684	3
5	50%	46.70	13.4	0.007417407	1.31	0.0327	4
0	0		0	0	0	0	

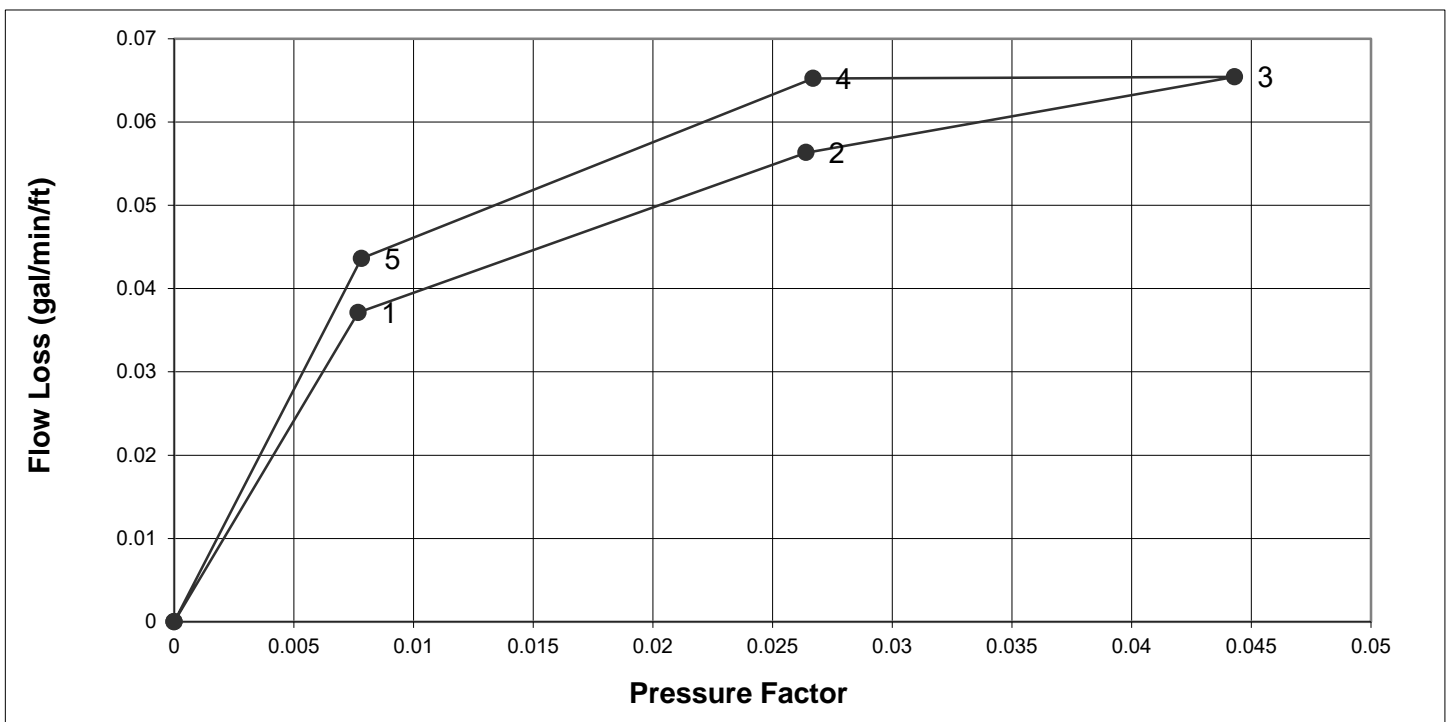


\*Assume transducer is 2 feet below top of test

Boring	CB-15
Surface El. (ft)	1610
Groundwater El. (ft)	1604.3
Test No.	7
Test Interval Center Elevation (ft)	1488.8
Test Interval Length, L (ft)	34.8
Max. Measured Pressure, $P_{MAX}$ (psi)	125.4
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1501.1
Bottom of Test Elevation (ft)	1476.5
Top of Test Depth (ft)	154
Bottom of Test Depth (ft)	188.8
Angle from Vertical (deg)	45

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	59.44	13.8	0.007686781	1.29	0.0371	5
2	75%	93.14	47.5	0.026399647	1.96	0.0563	2
3	100%	125.38	79.8	0.044301807	2.28	0.0654	1
4	75%	93.66	48.1	0.026688391	2.27	0.0652	2
5	50%	59.70	14.1	0.007831153	1.52	0.0436	6
0	0		0	0	0	0	

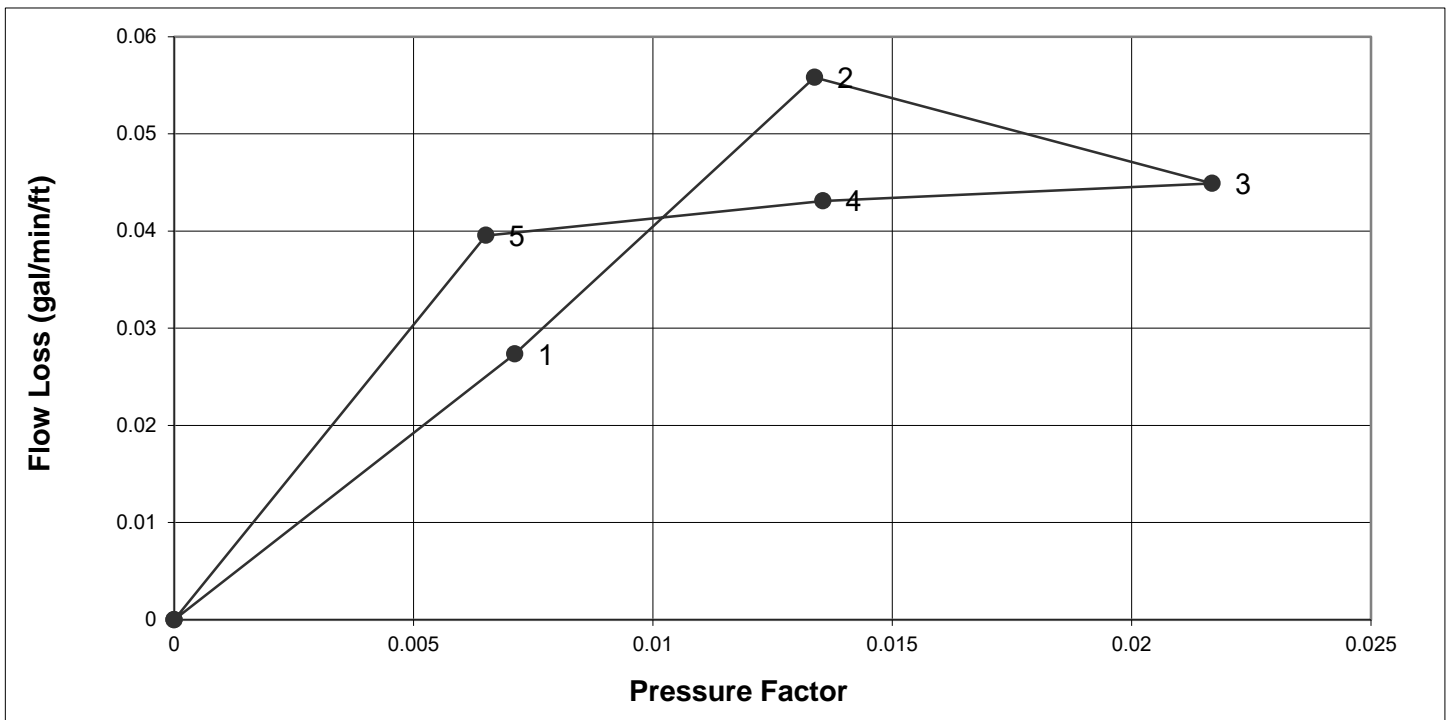


\*Assume transducer is 2 feet below top of test

Boring	CB-16
Surface El. (ft)	1602.7
Groundwater El. (ft)	1601.3
Test No.	2
Test Interval Center Elevation (ft)	1556.0
Test Interval Length, L (ft)	22.0
Max. Measured Pressure, $P_{MAX}$ (psi)	55.9
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1564.4
Bottom of Test Elevation (ft)	1547.5
Top of Test Depth (ft)	50
Bottom of Test Depth (ft)	72
Angle from Vertical (deg)	40

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	29.67	12.8	0.007116468	0.60	0.0273	4
2	75%	40.95	24.1	0.013379209	1.23	0.0558	4
3	100%	55.90	39.0	0.021680614	0.99	0.0449	2
4	75%	41.26	24.4	0.013551345	0.95	0.0431	3
5	50%	28.58	11.7	0.006510421	0.87	0.0395	6
0	0		0	0	0	0	

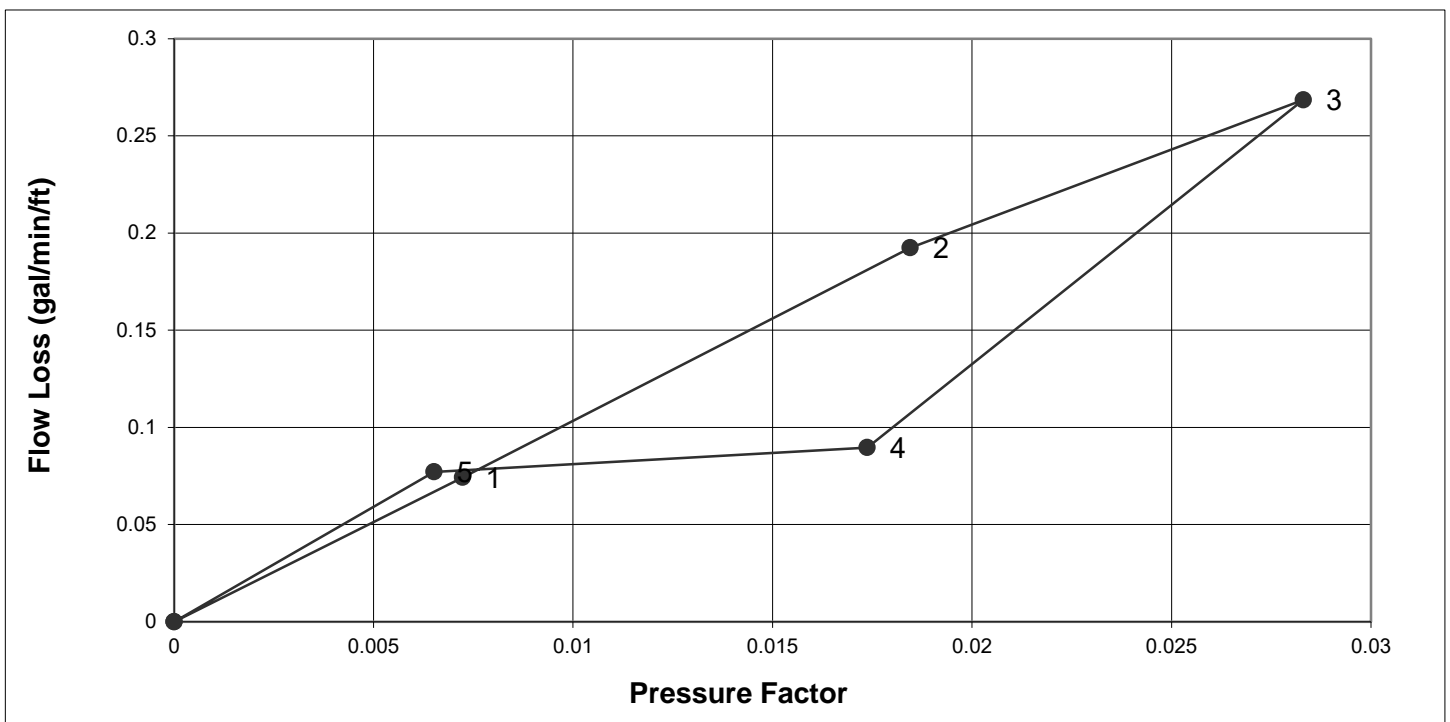


\*Assume transducer is 2 feet below top of test

Boring	CB-16
Surface El. (ft)	1602.7
Groundwater El. (ft)	1601.3
Test No.	3
Test Interval Center Elevation (ft)	1538.0
Test Interval Length, L (ft)	28.8
Max. Measured Pressure, $P_{MAX}$ (psi)	74.5
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	12

Top of Test Elevation (ft)	1549.1
Bottom of Test Elevation (ft)	1527.0
Top of Test Depth (ft)	70
Bottom of Test Depth (ft)	98.8
Angle from Vertical (deg)	40

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	36.52	13.0	0.007233301	2.14	0.0744	10
2	75%	56.72	33.2	0.018449915	5.54	0.1924	10
3	100%	74.46	51.0	0.028300545	7.73	0.2685	9
4	75%	54.78	31.3	0.017372675	2.58	0.0897	5
5	50%	35.22	11.7	0.006511439	2.22	0.0771	12
0	0		0	0	0	0	

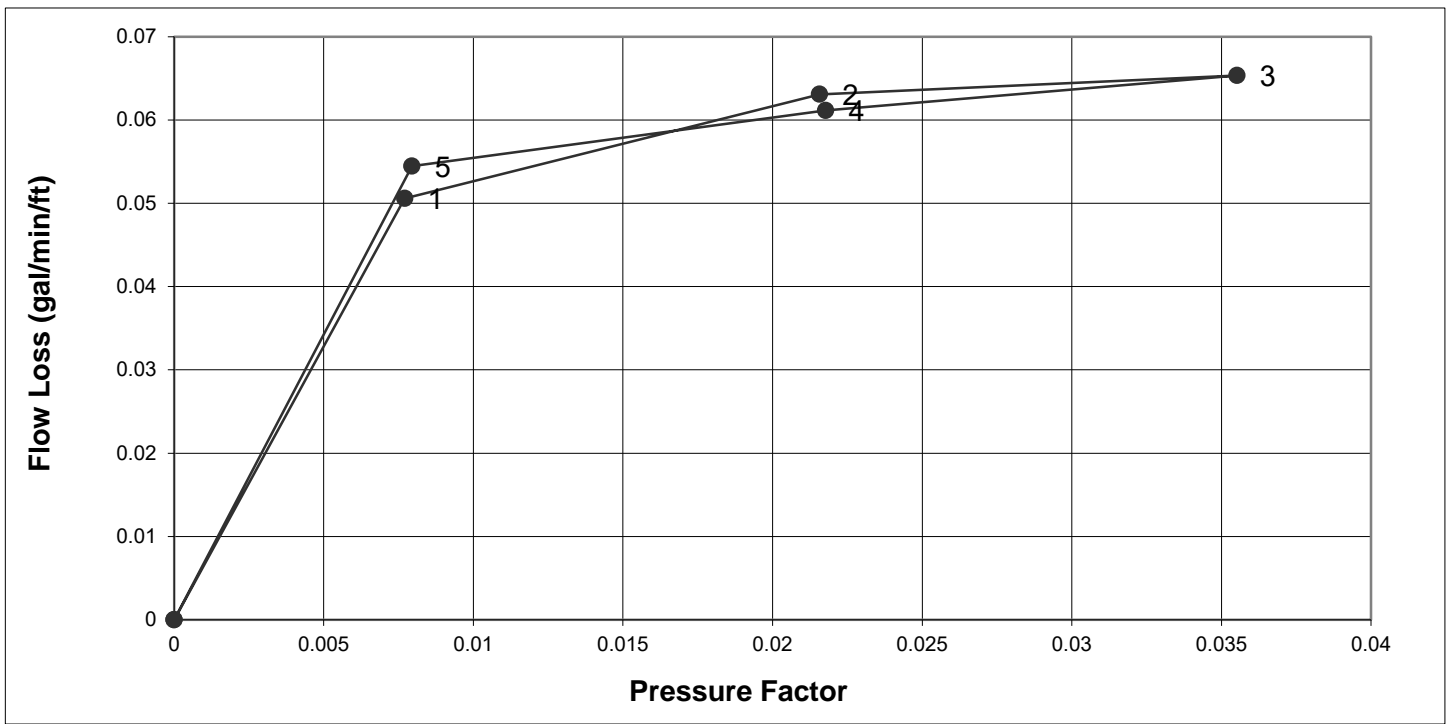


\*Assume transducer is 2 feet below top of test

Boring	CB-16
Surface El. (ft)	1602.7
Groundwater El. (ft)	1601.3
Test No.	4
Test Interval Center Elevation (ft)	1515.4
Test Interval Length, L (ft)	29.9
Max. Measured Pressure, $P_{MAX}$ (psi)	97.1
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	3

Top of Test Elevation (ft)	1526.9
Bottom of Test Elevation (ft)	1504.0
Top of Test Depth (ft)	99
Bottom of Test Depth (ft)	128.9
Angle from Vertical (deg)	40

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	47.00	13.9	0.007707873	1.51	0.0506	7
2	75%	71.96	38.8	0.02156761	1.89	0.0631	3
3	100%	97.08	64.0	0.035516191	1.95	0.0654	2
4	75%	72.34	39.2	0.021778616	1.83	0.0611	3
5	50%	47.44	14.3	0.007952196	1.63	0.0544	7
0	0		0	0	0	0	

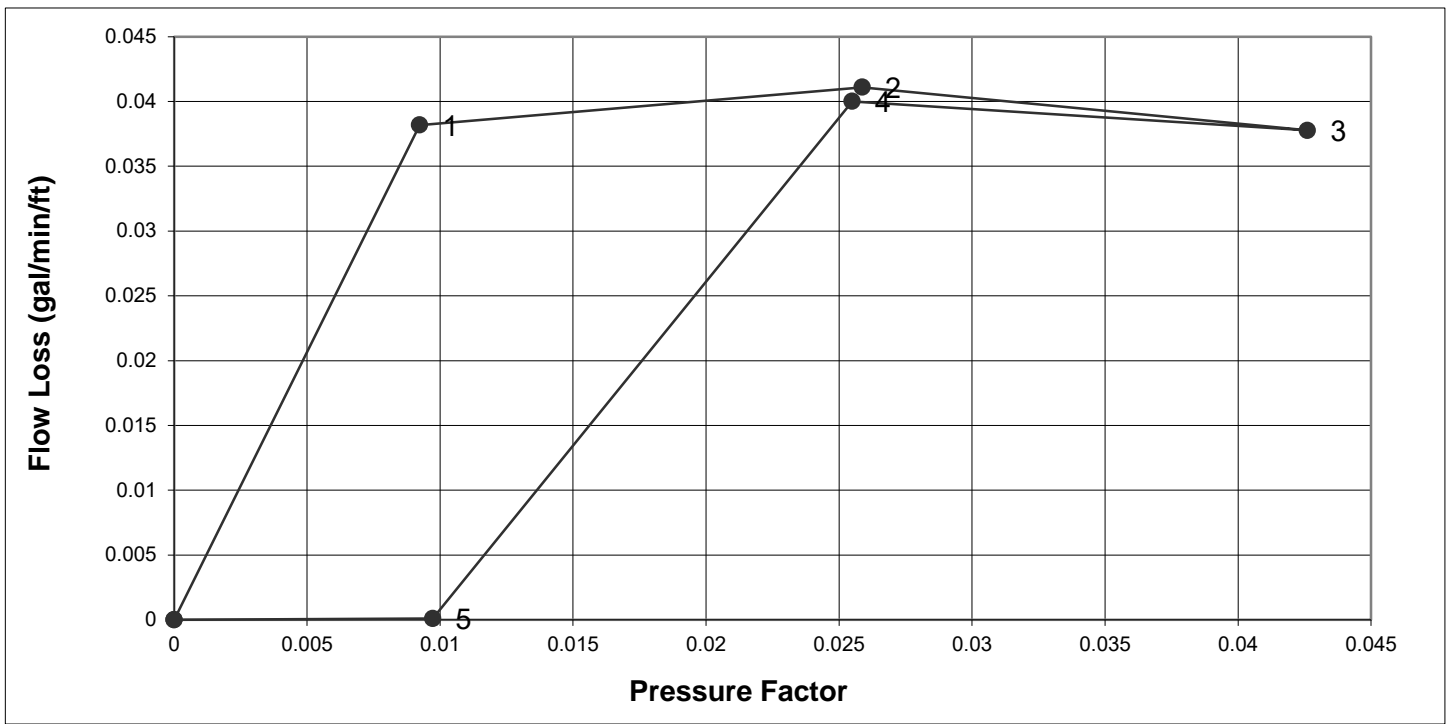


\*Assume transducer is 2 feet below top of test

Boring	CB-16
Surface El. (ft)	1602.7
Groundwater El. (ft)	1601.3
Test No.	5
Test Interval Center Elevation (ft)	1486.3
Test Interval Length, L (ft)	43.9
Max. Measured Pressure, $P_{MAX}$ (psi)	120.1
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1503.1
Bottom of Test Elevation (ft)	1469.5
Top of Test Depth (ft)	130
Bottom of Test Depth (ft)	173.9
Angle from Vertical (deg)	40

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	60.04	16.6	0.009235355	1.68	0.0382	4
2	75%	90.00	46.6	0.025871481	1.80	0.0411	2
3	100%	120.14	76.7	0.042607558	1.66	0.0378	1
4	75%	89.32	45.9	0.025493892	1.76	0.0400	2
5	50%	60.92	17.5	0.009724	0.00	0.0001	0
0	0		0	0	0	0	

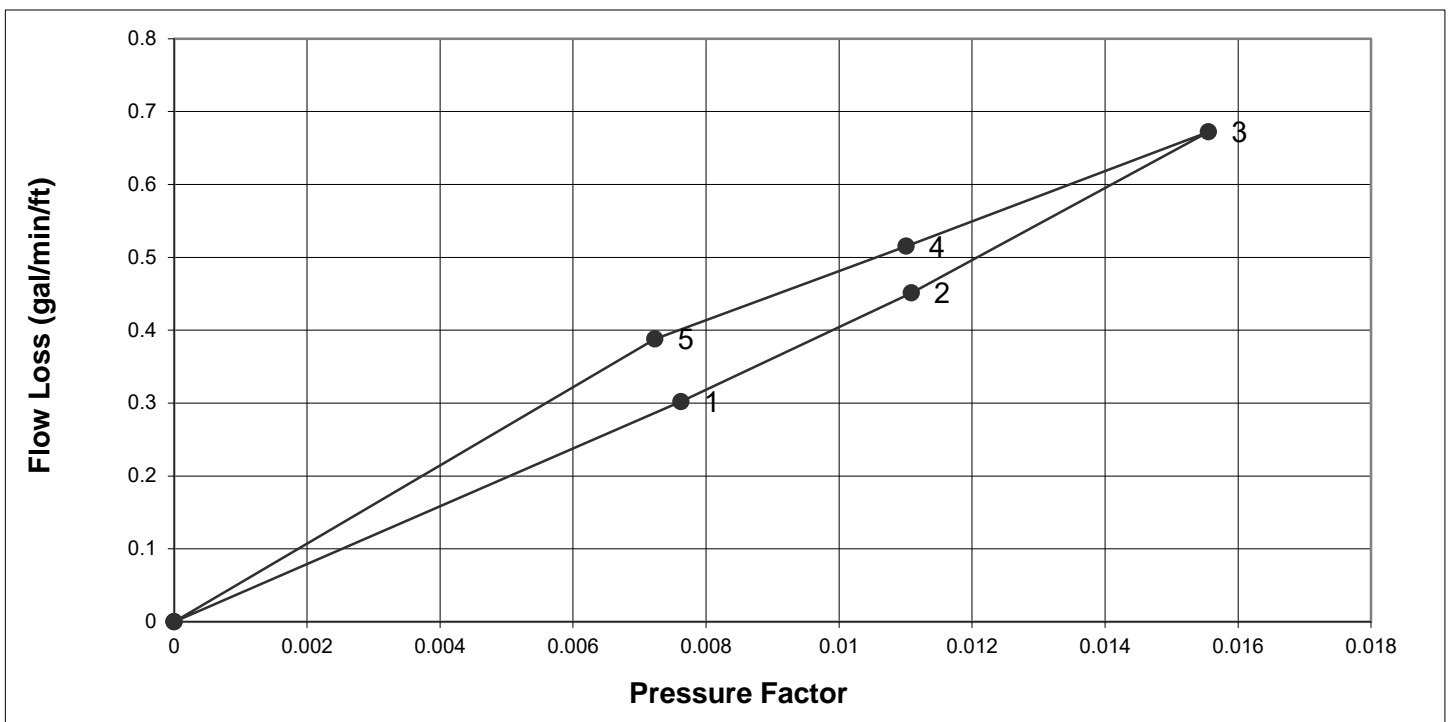


\*Assume transducer is 2 feet below top of test

Boring	CB-17
Surface El. (ft)	1718
Groundwater El. (ft)	1674.9
Test No.	1
Test Interval Center Elevation (ft)	1698.5
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	28.0
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	45

Top of Test Elevation (ft)	1707.2
Bottom of Test Elevation (ft)	1689.9
Top of Test Depth (ft)	12.5
Bottom of Test Depth (ft)	32.5
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	13.73	13.7	0.007623522	6.04	0.3020	40
2	75%	19.97	20.0	0.011086457	9.02	0.4511	41
3	100%	28.02	28.0	0.015556444	13.44	0.6719	43
4	75%	19.83	19.8	0.011010939	10.30	0.5152	47
5	50%	13.02	13.0	0.007228719	7.76	0.3880	54
0	0		0	0	0	0	

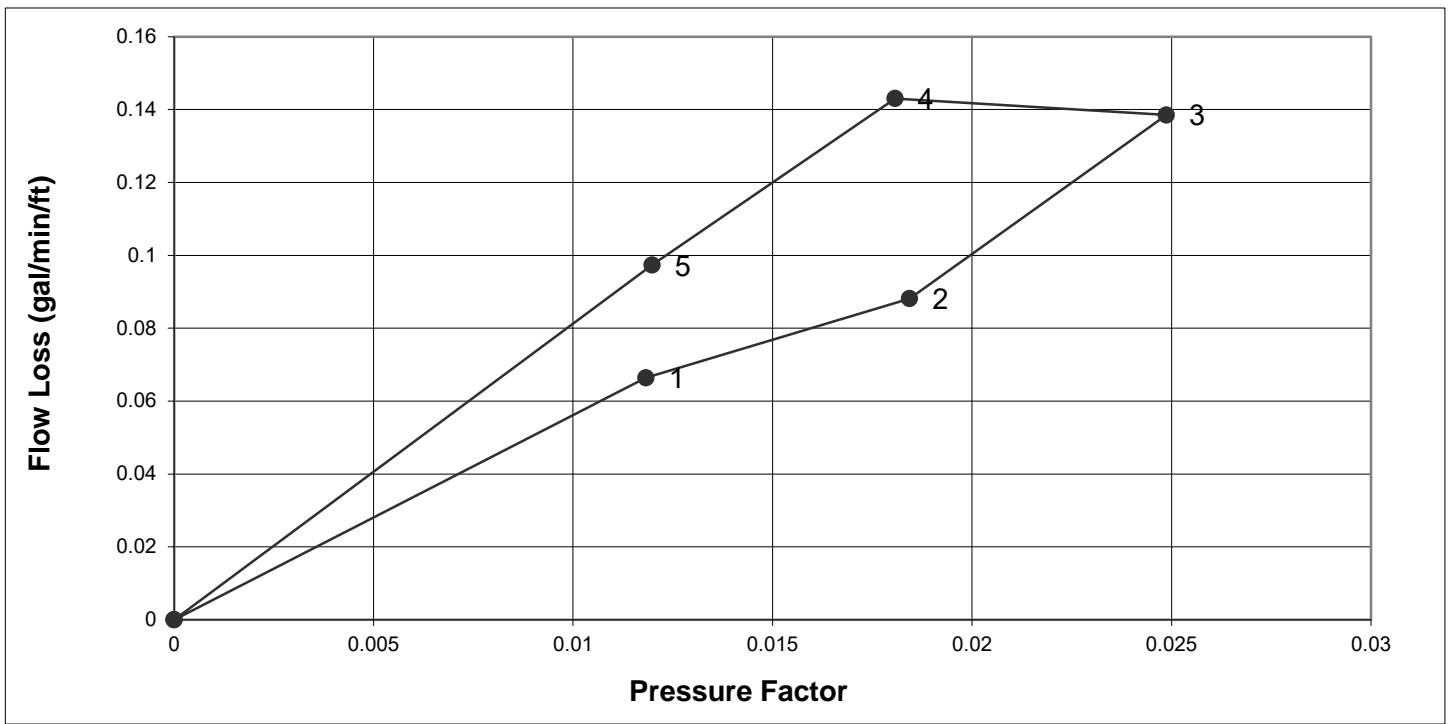


\*Assume transducer is 2 feet below top of test

Boring	CB-17
Surface El. (ft)	1718
Groundwater El. (ft)	1674.9
Test No.	2
Test Interval Center Elevation (ft)	1681.2
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	44.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	8

Top of Test Elevation (ft)	1689.9
Bottom of Test Elevation (ft)	1672.5
Top of Test Depth (ft)	32.5
Bottom of Test Depth (ft)	52.5
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	21.30	21.3	0.011826531	1.33	0.0664	6
2	75%	33.20	33.2	0.018433561	1.76	0.0881	5
3	100%	44.79	44.8	0.024869121	2.77	0.1385	6
4	75%	32.54	32.5	0.018070076	2.86	0.1430	8
5	50%	21.57	21.6	0.011977678	1.95	0.0973	8
0	0		0	0	0	0	



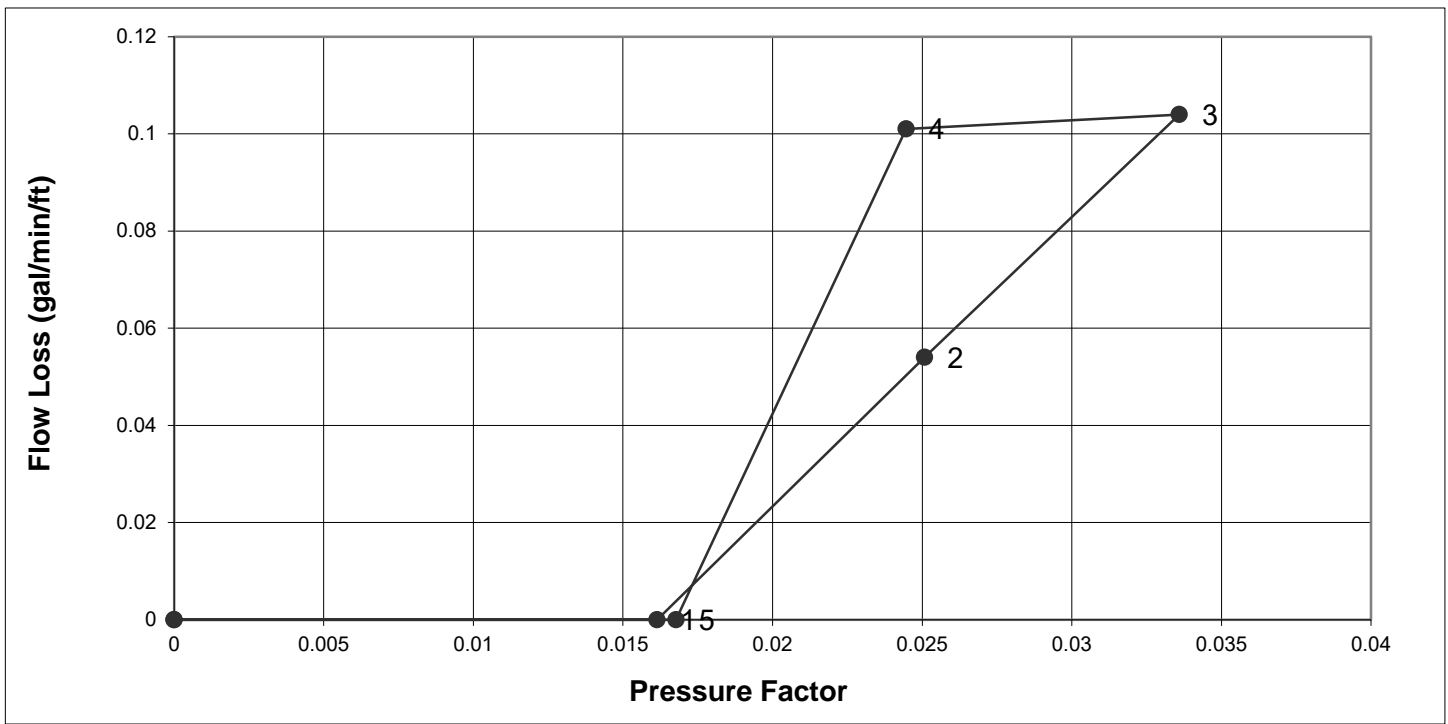
\*Assume transducer is 2 feet below top of test



Boring	CB-17
Surface El. (ft)	1718
Groundwater El. (ft)	1674.9
Test No.	3
Test Interval Center Elevation (ft)	1663.9
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	62.4
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1672.5
Bottom of Test Elevation (ft)	1655.2
Top of Test Depth (ft)	52.5
Bottom of Test Depth (ft)	72.5
Angle from Vertical (deg)	30

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	30.95	29.1	0.016143088	0.00	0.0000	0
2	75%	47.04	45.2	0.025079508	1.08	0.0540	2
3	100%	62.38	60.5	0.033594695	2.08	0.1040	3
4	75%	45.93	44.1	0.024460373	2.02	0.1010	4
5	50%	32.09	30.2	0.016775549	0.00	0.0000	0
0	0		0	0	0	0	

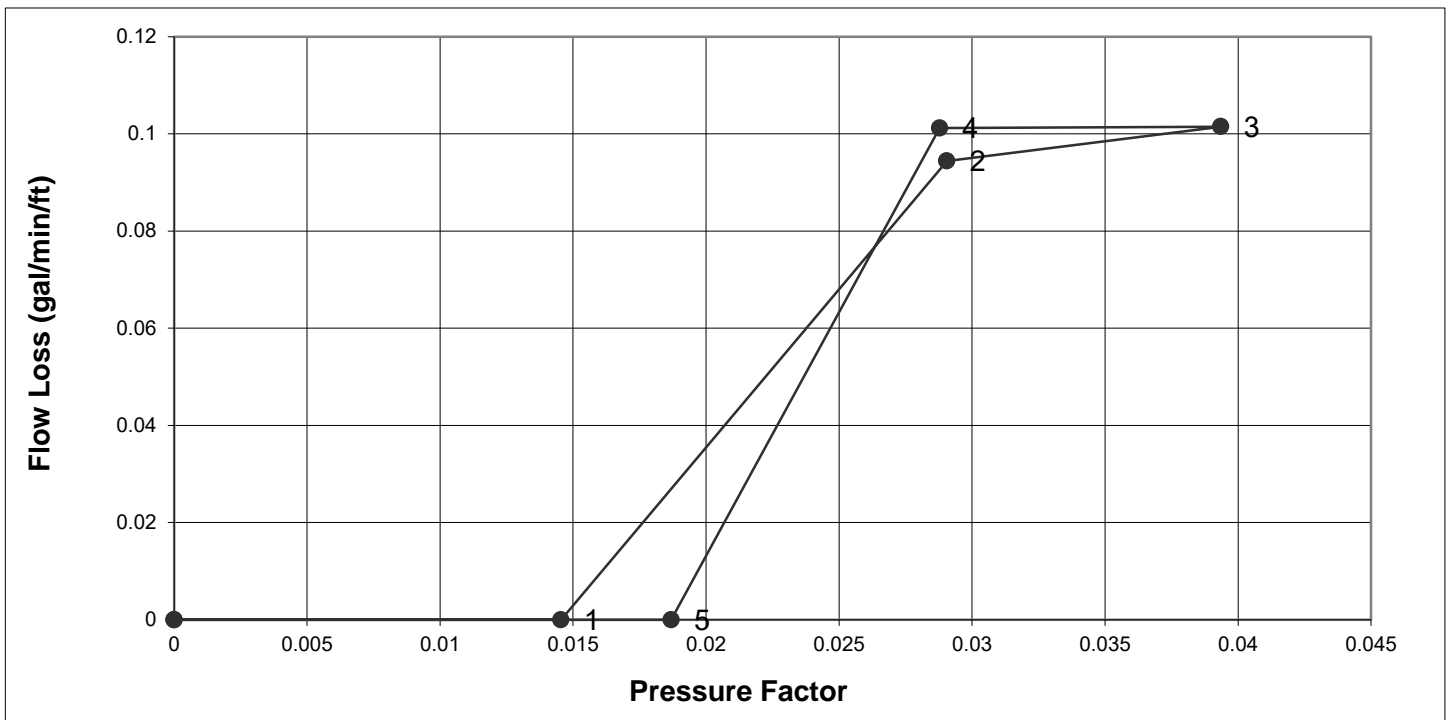


\*Assume transducer is 2 feet below top of test

Boring	CB-17
Surface El. (ft)	1718
Groundwater El. (ft)	1674.9
Test No.	4
Test Interval Center Elevation (ft)	1646.6
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	80.3
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1655.2
Bottom of Test Elevation (ft)	1637.9
Top of Test Depth (ft)	72.5
Bottom of Test Depth (ft)	92.5
Angle from Vertical (deg)	30

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	35.57	26.2	0.014544506	0.00	0.0000	0
2	75%	61.70	52.3	0.029051548	1.89	0.0944	3
3	100%	80.25	70.9	0.039352398	2.03	0.1015	3
4	75%	61.21	51.8	0.028778019	2.02	0.1012	4
5	50%	43.04	33.7	0.018687804	0.00	0.0000	0
0	0		0	0	0	0	

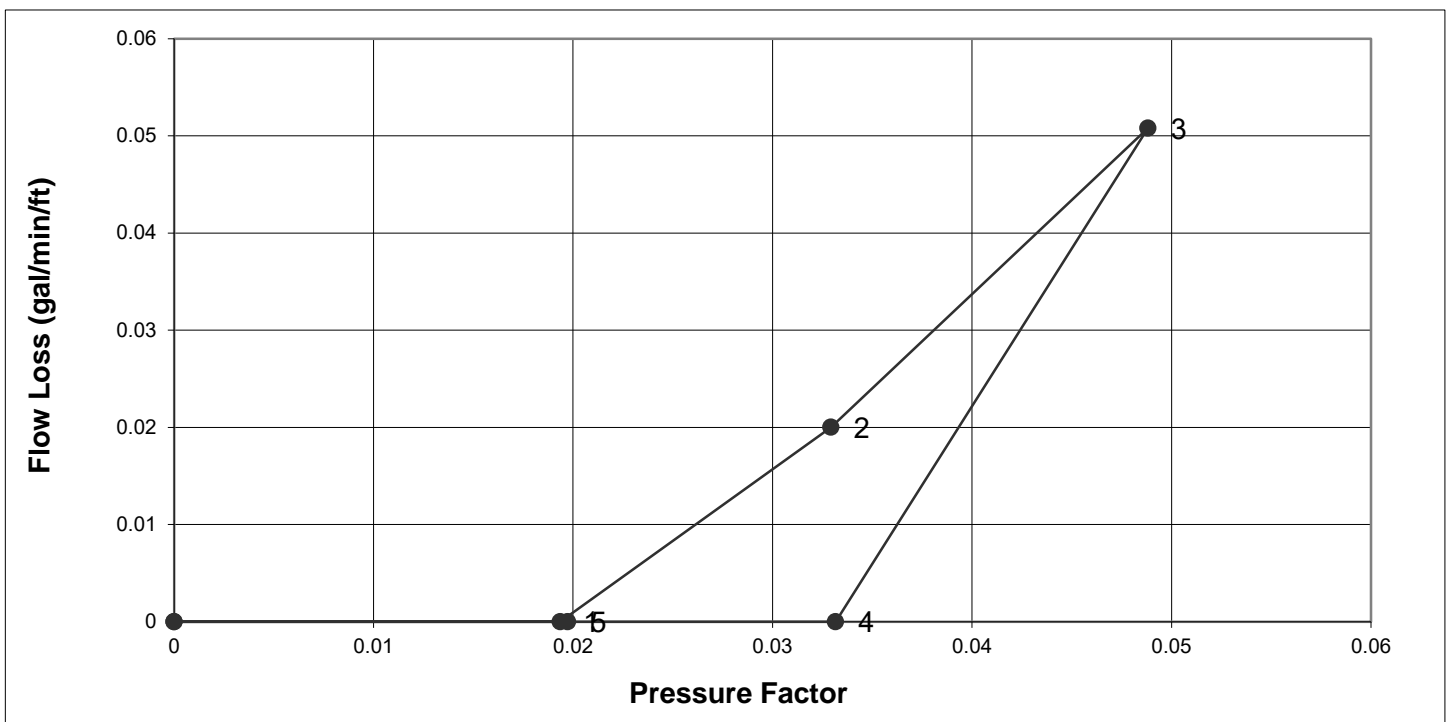


\*Assume transducer is 2 feet below top of test

Boring	CB-17
Surface El. (ft)	1718
Groundwater El. (ft)	1674.9
Test No.	5
Test Interval Center Elevation (ft)	1624.9
Test Interval Length, L (ft)	30.0
Max. Measured Pressure, $P_{MAX}$ (psi)	104.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	1

Top of Test Elevation (ft)	1637.9
Bottom of Test Elevation (ft)	1611.9
Top of Test Depth (ft)	92.5
Bottom of Test Depth (ft)	122.5
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	51.74	34.9	0.019352905	0.00	0.0000	0
2	75%	76.18	59.3	0.032924916	0.60	0.0200	1
3	100%	104.80	87.9	0.04881858	1.52	0.0508	1
4	75%	76.61	59.7	0.033161186	0.00	0.0000	0
5	50%	52.42	35.5	0.01973105	0.00	0.0000	0
0	0		0	0	0	0	

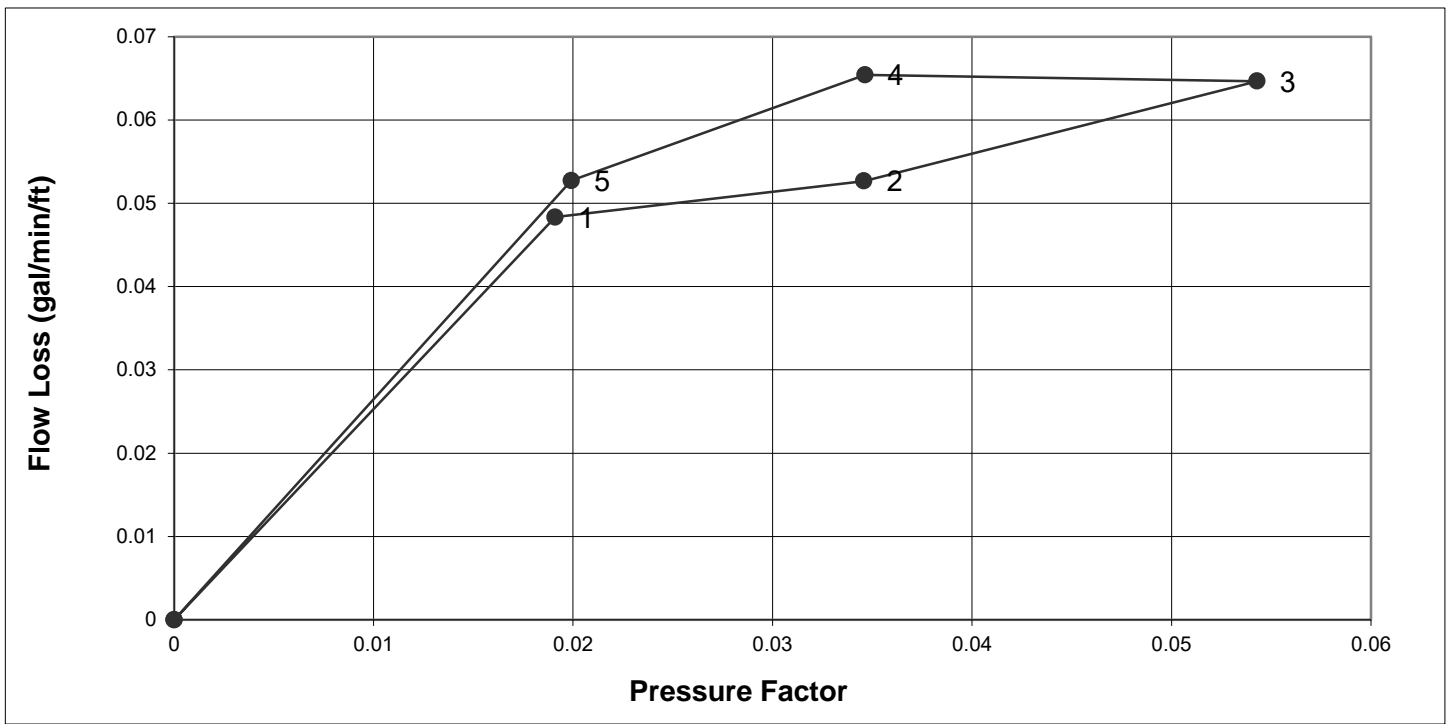


\*Assume transducer is 2 feet below top of test

Boring	CB-17
Surface El. (ft)	1718
Groundwater El. (ft)	1674.9
Test No.	6
Test Interval Center Elevation (ft)	1598.9
Test Interval Length, L (ft)	30.0
Max. Measured Pressure, $P_{MAX}$ (psi)	125.9
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	2

Top of Test Elevation (ft)	1611.9
Bottom of Test Elevation (ft)	1585.9
Top of Test Depth (ft)	122.5
Bottom of Test Depth (ft)	152.5
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	62.55	34.4	0.019104199	1.45	0.0483	3
2	75%	90.41	62.3	0.03457624	1.58	0.0527	2
3	100%	125.90	97.8	0.054280388	1.94	0.0647	1
4	75%	90.51	62.4	0.034633212	1.96	0.0654	2
5	50%	64.00	35.9	0.019913239	1.58	0.0527	3
0	0		0	0	0	0	

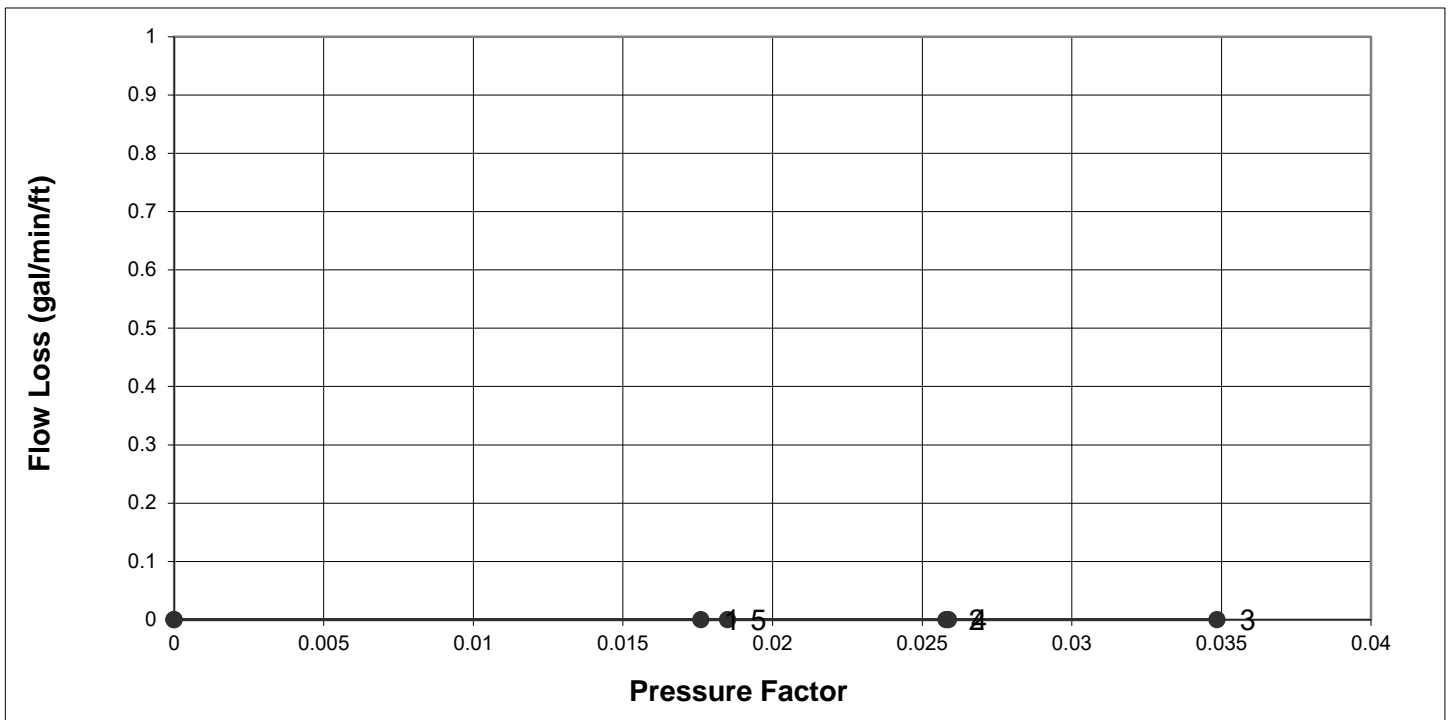


\*Assume transducer is 2 feet below top of test

Boring	CB-18
Surface El. (ft)	1874
Groundwater El. (ft)	1748.4
Test No.	3
Test Interval Center Elevation (ft)	1818.6
Test Interval Length, L (ft)	20.0
Max. Measured Pressure, $P_{MAX}$ (psi)	62.8
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	0

Top of Test Elevation (ft)	1827.2
Bottom of Test Elevation (ft)	1809.9
Top of Test Depth (ft)	54
Bottom of Test Depth (ft)	74
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	31.70	31.7	0.017604161	0.00	0.0000	0
2	75%	46.46	46.5	0.025796176	0.00	0.0000	0
3	100%	62.77	62.8	0.034854054	0.00	0.0000	0
4	75%	46.61	46.6	0.025880578	0.00	0.0000	0
5	50%	33.32	33.3	0.01850149	0.00	0.0000	0
0	0		0	0	0	0	

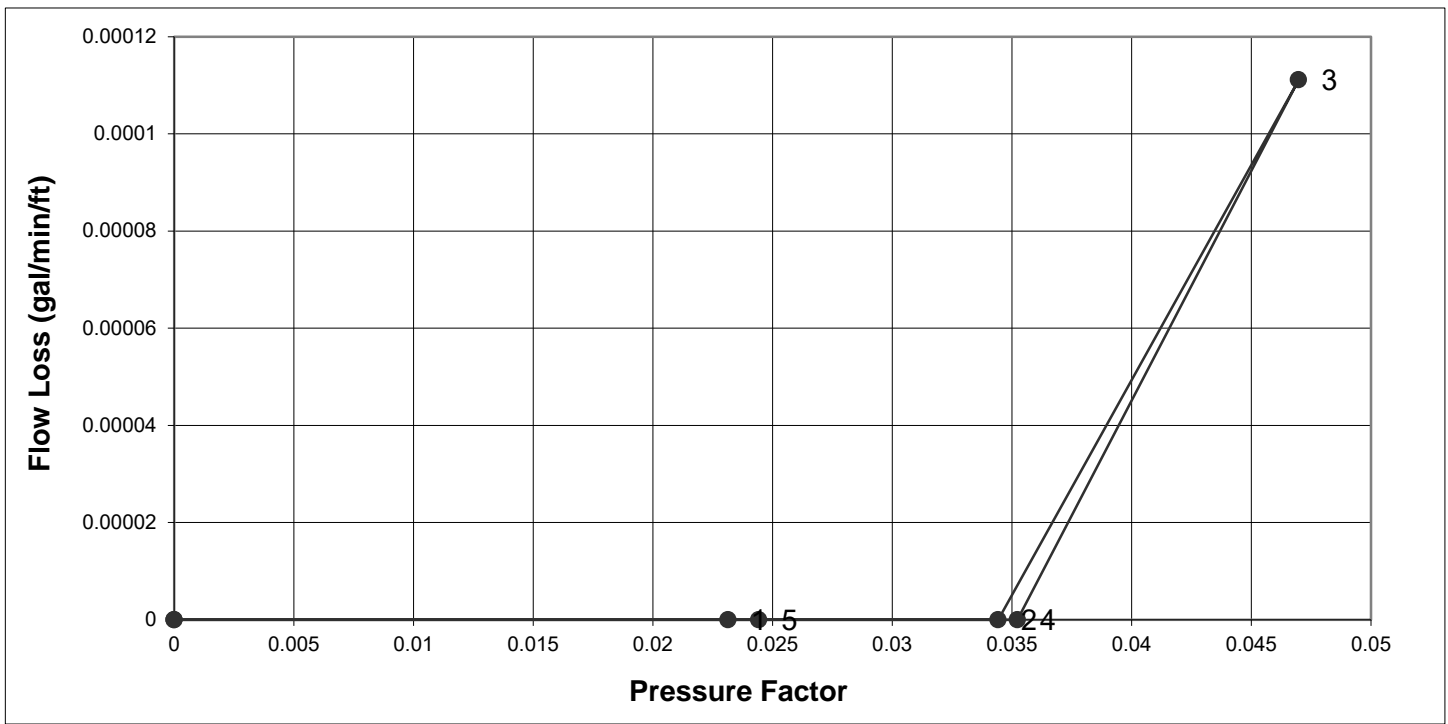


\*Assume transducer is 2 feet below top of test

Boring	CB-18
Surface El. (ft)	1874
Groundwater El. (ft)	1748.4
Test No.	4
Test Interval Center Elevation (ft)	1796.9
Test Interval Length, L (ft)	30.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	84.6
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	0

Top of Test Elevation (ft)	1809.9
Bottom of Test Elevation (ft)	1783.9
Top of Test Depth (ft)	74
Bottom of Test Depth (ft)	104
Angle from Vertical (deg)	30

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	41.67	41.7	0.023136765	0.00	0.0000	0
2	75%	61.99	62.0	0.034420753	0.00	0.0000	0
3	100%	84.60	84.6	0.046973735	0.00	0.0001	0
4	75%	63.43	63.4	0.035219983	0.00	0.0000	0
5	50%	43.97	44.0	0.024417421	0.00	0.0000	0
0	0		0	0	0	0	

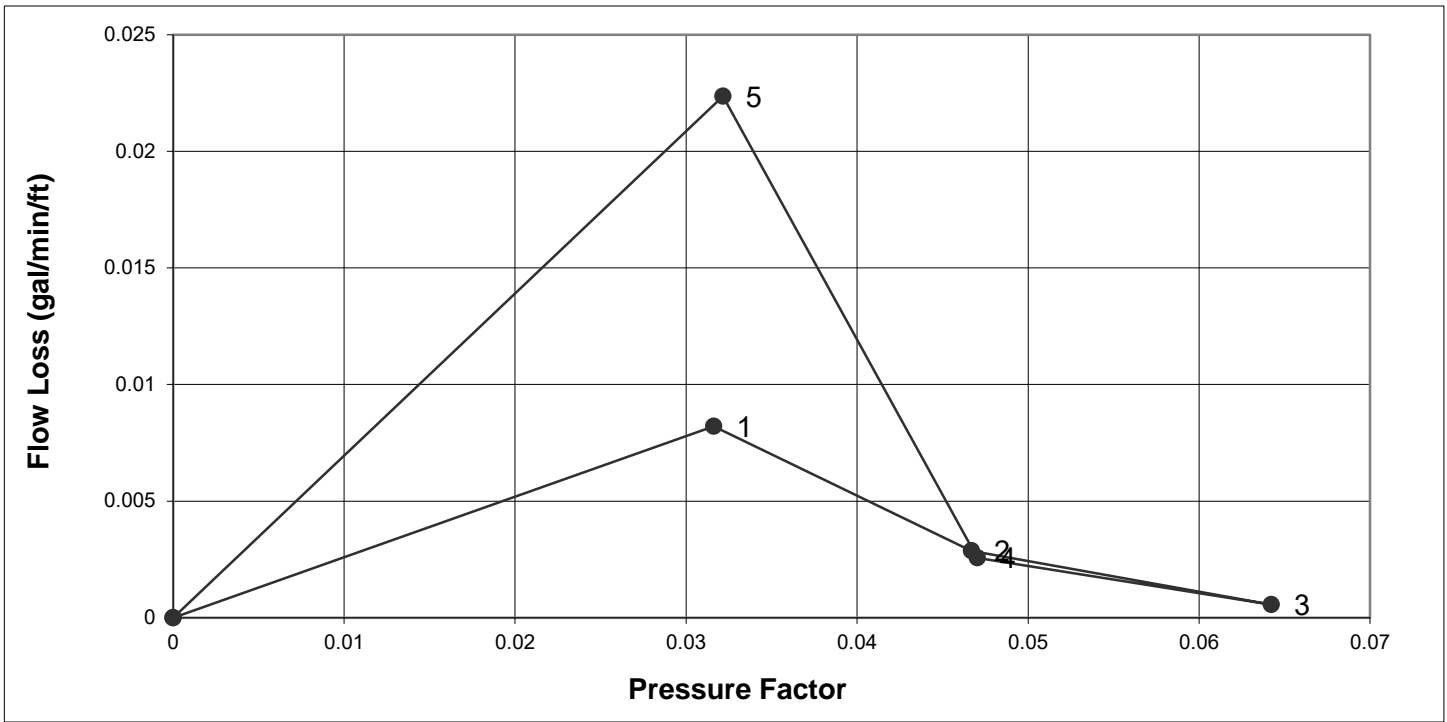


\*Assume transducer is 2 feet below top of test

Boring	CB-18
Surface El. (ft)	1874
Groundwater El. (ft)	1748.4
Test No.	5
Test Interval Center Elevation (ft)	1767.0
Test Interval Length, L (ft)	39.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	115.7
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	1

Top of Test Elevation (ft)	1783.9
Bottom of Test Elevation (ft)	1750.2
Top of Test Depth (ft)	104
Bottom of Test Depth (ft)	143
Angle from Vertical (deg)	30

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	56.94	56.9	0.031617414	0.32	0.0082	0
2	75%	84.08	84.1	0.046685213	0.11	0.0029	0
3	100%	115.67	115.7	0.064226887	0.02	0.0006	0
4	75%	84.70	84.7	0.047033261	0.10	0.0026	0
5	50%	57.91	57.9	0.032154256	0.87	0.0224	1
0	0		0	0	0	0	

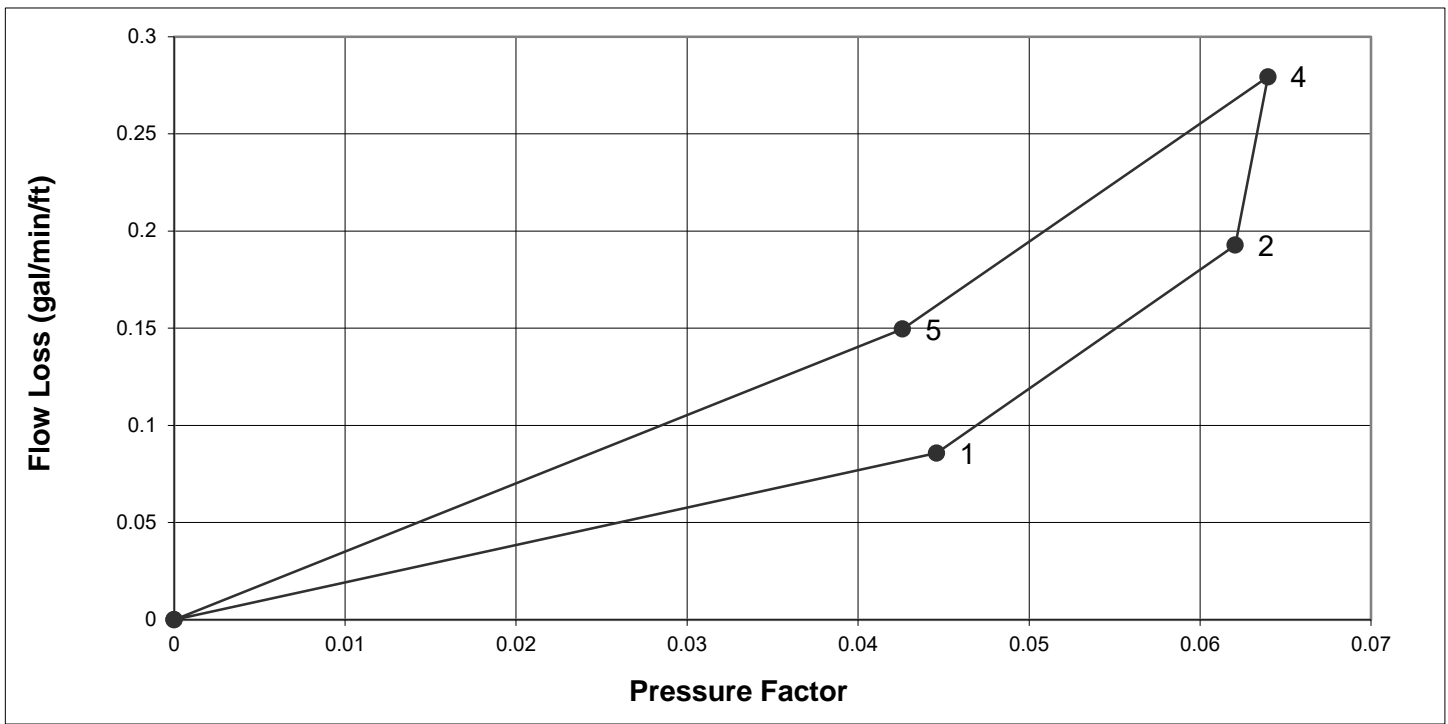


\*Assume transducer is 2 feet below top of test

Boring	CB-18
Surface El. (ft)	1874
Groundwater El. (ft)	1748.4
Test No.	6
Test Interval Center Elevation (ft)	1725.5
Test Interval Length, L (ft)	57.0
Max. Measured Pressure, $P_{MAX}$ (psi)	115.3
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1750.2
Bottom of Test Elevation (ft)	1700.8
Top of Test Depth (ft)	143
Bottom of Test Depth (ft)	200
Angle from Vertical (deg)	30

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	80.44	80.3	0.044599314	4.89	0.0858	2
2	75%	111.88	111.8	0.06205814	10.99	0.1927	3
3	100%			#N/A			
4	75%	115.33	115.2	0.063977069	15.92	0.2793	4
5	50%	76.84	76.7	0.042601868	8.52	0.1495	4
0	0		0	0	0	0	



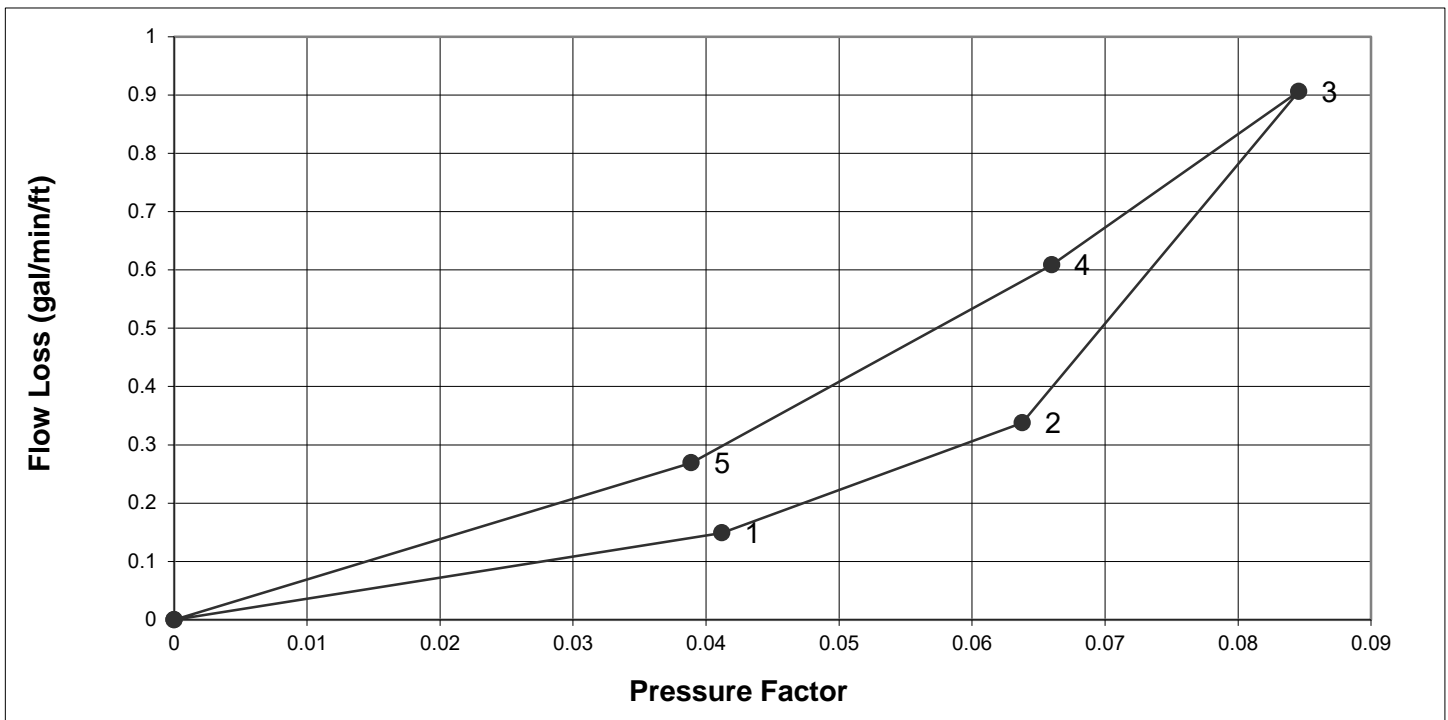
\*Assume transducer is 2 feet below top of test



Boring	CB-18
Surface El. (ft)	1874
Groundwater El. (ft)	1748.4
Test No.	7
Test Interval Center Elevation (ft)	1711.6
Test Interval Length, L (ft)	25.0
Max. Measured Pressure, P <sub>MAX</sub> (psi)	164.4
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	9

Top of Test Elevation (ft)	1722.4
Bottom of Test Elevation (ft)	1700.8
Top of Test Depth (ft)	175
Bottom of Test Depth (ft)	200
Angle from Vertical (deg)	30

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	86.28	74.2	0.041177977	3.73	0.1490	4
2	75%	126.98	114.9	0.063778677	8.45	0.3379	5
3	100%	164.41	152.3	0.084559398	22.65	0.9059	11
4	75%	130.97	118.8	0.065992903	15.22	0.6086	9
5	50%	82.14	70.0	0.038878683	6.73	0.2692	7
0	0		0	0	0	0	

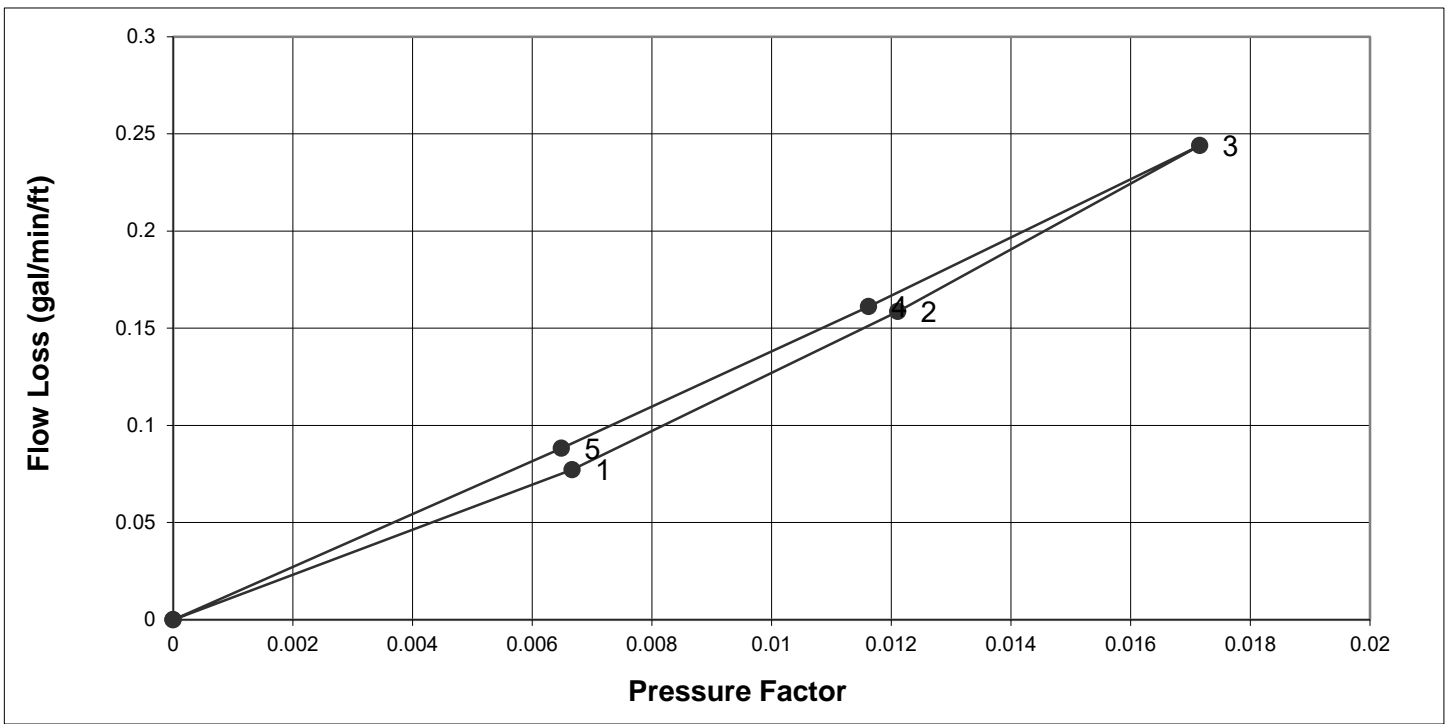


\*Assume transducer is 2 feet below top of test

Boring	CB-19
Surface El. (ft)	1610
Groundwater El. (ft)	1600.3
Test No.	1
Test Interval Center Elevation (ft)	1582.6
Test Interval Length, L (ft)	22.0
Max. Measured Pressure, $P_{MAX}$ (psi)	35.2
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	13

Top of Test Elevation (ft)	1592.3
Bottom of Test Elevation (ft)	1572.9
Top of Test Depth (ft)	20
Bottom of Test Depth (ft)	42
Angle from Vertical (deg)	28

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	16.32	12.0	0.006669117	1.70	0.0772	12
2	75%	26.12	21.8	0.01211084	3.49	0.1586	13
3	100%	35.20	30.9	0.017152764	5.37	0.2440	14
4	75%	25.24	20.9	0.011622196	3.54	0.1611	14
5	50%	16.00	11.7	0.006491428	1.94	0.0883	14
0	0		0	0	0	0	

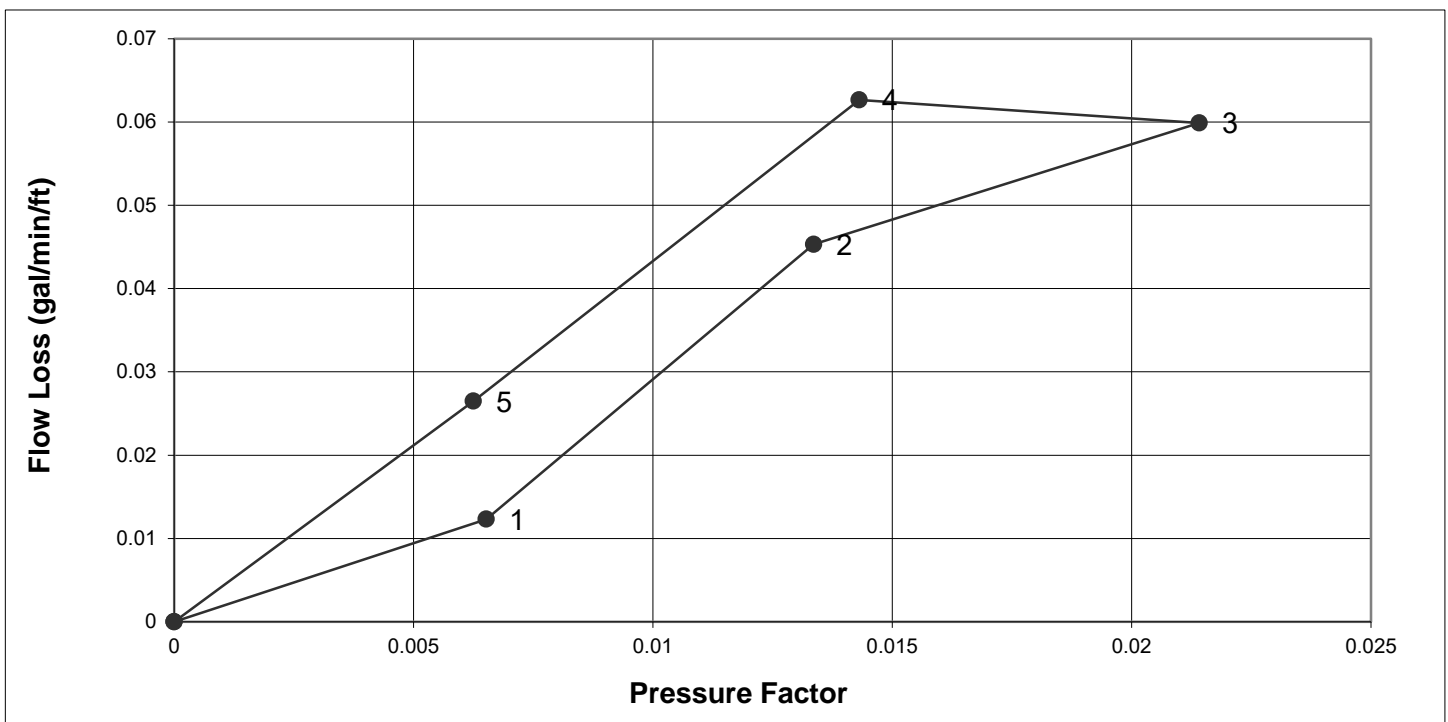


\*Assume transducer is 2 feet below top of test

Boring	CB-19
Surface El. (ft)	1610
Groundwater El. (ft)	1600.3
Test No.	2
Test Interval Center Elevation (ft)	1559.6
Test Interval Length, L (ft)	30.2
Max. Measured Pressure, $P_{MAX}$ (psi)	51.3
Reference Pressure, $P_0$ (psi)	145
Representative Lugeon Value	4

Top of Test Elevation (ft)	1572.9
Bottom of Test Elevation (ft)	1546.3
Top of Test Depth (ft)	42
Bottom of Test Depth (ft)	72.2
Angle from Vertical (deg)	28

Step No.	% $P_{MAX}$	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	24.47	11.7	0.006519389	0.37	0.0123	2
2	75%	36.78	24.1	0.013356711	1.37	0.0453	3
3	100%	51.28	38.6	0.021408241	1.81	0.0599	3
4	75%	38.50	25.8	0.014311789	1.89	0.0626	4
5	50%	23.98	11.3	0.006249154	0.80	0.0265	4
0	0		0	0	0	0	

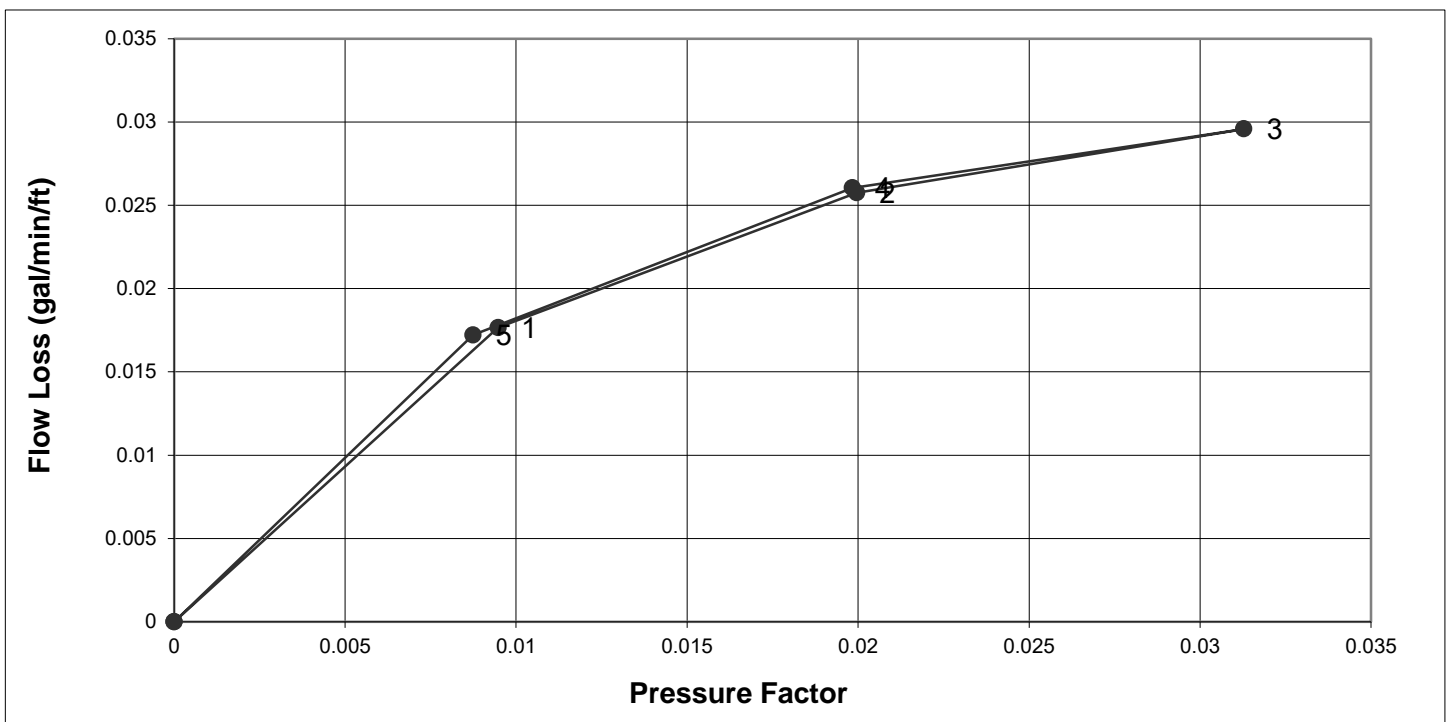


\*Assume transducer is 2 feet below top of test

Boring	CB-19
Surface El. (ft)	1610
Groundwater El. (ft)	1600.3
Test No.	3
Test Interval Center Elevation (ft)	1526.4
Test Interval Length, L (ft)	45.3
Max. Measured Pressure, P <sub>MAX</sub> (psi)	80.5
Reference Pressure, P <sub>0</sub> (psi)	145
Representative Lugeon Value	1

Top of Test Elevation (ft)	1546.4
Bottom of Test Elevation (ft)	1506.4
Top of Test Depth (ft)	72
Bottom of Test Depth (ft)	117.3
Angle from Vertical (deg)	28

Step No.	%P <sub>MAX</sub>	Measured Pressure (psi)	Differential Pressure, P (psi)	Pressure Factor, $\psi$	Flow, q (gal/min)	Flow loss (gal/min/ft)	Lugeon
0	0		0	0	0	0	-
1	50%	41.27	17.1	0.009475251	0.80	0.0177	2
2	75%	60.15	35.9	0.019960749	1.17	0.0258	1
3	100%	80.54	56.3	0.031282865	1.34	0.0296	1
4	75%	59.92	35.7	0.019833035	1.18	0.0260	1
5	50%	39.94	15.7	0.008738582	0.78	0.0172	2
0	0		0	0	0	0	



\*Assume transducer is 2 feet below top of test