

SMITH Trailer Court

August 6, 1971.

Mr. Roy Smith,
Smith Trailer Court,
9053 - 200th Street,
Langley, B.C.

Dear Sir,

I received from Mr. Nelson of Pacific Water Wells data from a pump test carried out on your new well by Aqua Flo Testing & Equipment Ltd. of Langley. I understand from Mr. Nelson that you wish to have me examine the pump test data with the idea of determining the capacity of the new well and also to plan the drilling of another well on the same property.

The data are satisfactory. I have analysed the pump test using the Theis recovery method which is one of the standard methods of analysis.

The test indicates that the aquifer is extensive but that it has a low transmissibility of about 570 US gpd/ft width. This means that water does not move through it easily toward the well. The well seems to be quite efficient and is producing about as much water as the aquifer can transmit. A larger diameter well would not produce much more water.

Drawdown continued to increase slowly to the end of the 24 hour test. This indicates that the cone of depression or cone of drawdown did not reach a source of recharge within the 24 hour time of the test. Under these conditions the capacity of the well is often based on continuous pumping for 100 days which is approximately the length of the summer season of maximum water use. From the pump test data I estimate that pumping at 23 Imp. gpm, the rate used for most of the pump test, for 100 days would cause drawdown within a few feet of the top of the screen. I think that the capacity of the well should be considered to be about 20 Imp. gpm. This does not mean that the well can not be pumped at a higher rate, say 25 Imp. gpm but it will not support steady pumping at that rate for 100 days. Obviously the pump

Cont'd ... 2

should be set just above the screen and it should be equipped with a low water shut-off.

Under these conditions interference between wells can be a serious problem. The pump test data show some variations which may be caused by interference from the old well which I understand is about 440 ft. away. Since the old well is much deeper and probably in another aquifer it is uncertain how much interference occurs. For the new well where transmissibility is about 570 US gal/day per foot width I estimate that after 100 days of pumping at 20 Imp. gpm drawdown 100 ft. away would be about 45 ft, 500 ft. away about 32 ft. and 1000 ft. away about 25 ft. Obviously any future well should be as far away from this well as possible.

The log of the first well shows that the sand from 161' to 174' in the new well is either missing or is so thin or dirty that it did not appear to be worth screening. Another well on this property located 500' or more from the new well may also not find any good water bearing material at the same depth. The sand is probably quite variable and the coarser zones in which a well can be constructed may vary in depth from place to place.

I think that the best procedure is to pick a site at least 500' from the present well if possible and drill a 6" hole being particularly careful to log and sample at the depth where the aquifer occurs in the new well.

Yours truly,



E. Livingston. P. Eng.

EL:jb

PACIFIC WATER WELLS (1969) LTD.

WIN 25131

22314 FRASER HIGHWAY, LANGLEY, B.C.

File Langley → ER Smith WELL LOG
EM.

Owner Small Trailer Parts Ltd

Address 1253 125th Street Langley

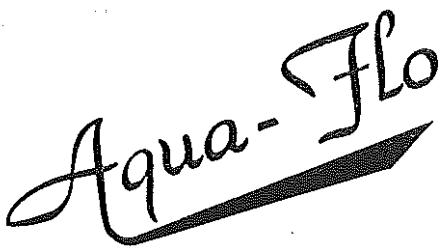
Location 1000 ft North of 401 - 20 ft west of road

1971

Date begun July 20 completed July 28
 Yield 20 gpm by Bail testing for 5 hours
 Static water level 201" feet from surface
 Pumping water level 80 feet from surface
 Casing used 1 1/2" of diam.
 Bottom of casing 165' feet from surface
 Sticking-up above ground 7'-7" feet
 Screen used 2 - 12 slot (below 11' into 36.1)
 Top of screen 162.7 feet from surface
 Bottom of screen 170 - 2nd pipe feet from surface
(or 200' at 172)
 Source of water gpm at feet
 REMARKS:

 Recommended pump setting 25 gpm at 150 feet
 Rig No. #18
 Driller: Charlie Stevenson
 Helper: Garry McKeough

Depth	Material
0 - 12	Crown clay
12 - 18	W.S. Sand
18 - 60	Grey silt & clay
60 - 85	fine sand water bearing
85 - 77	Silty sand
77 - 85	fine water bearing sand
85 - 125	grey clay
125 - 144	fine sand & silt
144 - 145	Silt
145 - 158	Cemented gravel
158 - 161	Silt & sand water bearing
161 - 163	course sand
163 - 165	Sand & some gravel
165 - 171	Sand & some gravel
171 - 174	Silt



TESTING & EQUIPMENT LTD.

- FLOW METERED TESTS
- PUMPS & METERING EQUIPMENT
- ENGINEERED INSTALLATIONS

MAILING ADDRESS:
20214 - 82nd Avenue,
P.O. Box 1737
Langley, B.C.

August 2/71.

Pacific Water Wells (1969) Ltd.,
22314 Fraser Highway,
Langley, B. C..

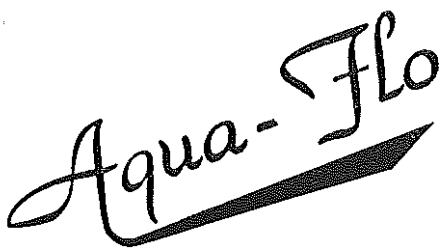
Dear Sirs:

Herewith log for well at Smith Trailer Court,
Langley, B. C.

Pump Setting -- 145'
Depth of Well -- 170'
Top of Screen -- 162'-7"
Test Pump -- 5 H.P.
Discharge Pipe -- 2"
Size of Screen -- 6" nominal .012" slot
Amount of Screen -- 8'
Well flowing at 2.2 G.P.M.

Date	Time	<i>Dist Shot</i> Water Pump Level	Imp. G.P.M.	Date	Time	<i>Dist Shot</i> Water Pump Level	Imp. G. P. M.
7/30/71	1100			7/30/71	1315	135	15
	1105	39.4	15		1330	150	15
	1110	46.7	15		1345	165	15
	1115	59.4	15		1400	180	15
	1120	60.0	15		1410	190	20
	1125	60.7	15		1415	195	20
	1130	61.3	15		1420	200	20
	1135	61.7	15		1425	205	20
	1140	62.25	15		1430	210	20
	1145	62.35	15		1435	215	20
	1150	62.75	15		1440	220	18
	1155	62.85	15		1445	225	10
	1200	63.0	15		1450	230	20
	1210	63.6	15		1455		20
	1220	63.85	15		1500	240	20
	1230	64.2	15		1505		20
	1240	64.45	15		1510		20
	1250	64.75	15		1515		20
	1300	64.95	15		1520	260	20

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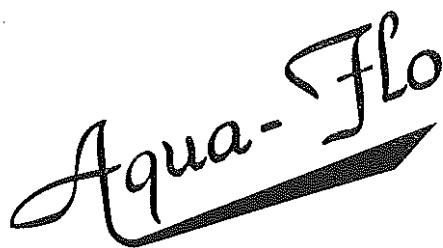
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Date	Time	<i>Min start</i> Water Pump Level	<i>Imp</i> G.P.M.
7/30/	1525	96.4	20
71	1530	270 96.5	20
	1535	96.65	20
	1540	96.8	20
	1545	96.9	20
	1550	97.1	20
	1555	97.15	20
	1600	300 97.25	20
	1605	305 97.3	20
	1615	311 115.25	25
	1620	117.6	25
	1625	119.5	25
	1630	127.2	25
	1635	129.25	25
	1640	129.4	25
	1645	129.5	25
	1650	129.7	25
	1655	129.9	25
	1700	360 130.1	25
	1705	130.3	25
	1710	130.5	25
	1715	130.6	25
	1720	130.7	25
	1725	130.9	25
	1730	131.1	25
	1735	131.25	25
	1740	131.45	25
	1745	131.6	25
	1750	131.75	25
	1755	131.85	25
	1800	420 132.0	25 decrease
	1810	123.7	23
	1820	121.7	23
	1830	460 121.4	23
	1840	121.4	23
	1850	121.5	23
	1900	480 121.6	23

Date	Time	<i>Min start</i> Water Pump Level	<i>Imp</i> G. P. M.
7/30/	1910	121.7	23
71	1920	121.9	23
	1930	122.0	23
	1940	122.1	23
	1950	122.1	23
	2000	590 122.3	23
	2010	122.5	23
	2020	122.5	23
	2030	122.6	23
	2040	122.8	23
	2050	122.9	23
	2100	600 123.0	23
	2110	123.1	23
	2120	123.2	23
	2130	123.3	23
	2140	123.4	23
	2150	123.5	23
	2200	660 123.6	23
	2210	123.7	23
	2220	123.8	23
	2230	123.7	23
	2240	123.8	23
	2250	123.9	23
	2300	720 124.0	23
	2310	124.1	23
	2320	124.3	23
	2330	124.4	23
	2340	124.5	23
	2400	780 124.6	23
7/31/	0010	124.6	23
71	0020	124.7	23
	0030	124.8	23
	0040	125.0	23
	0050	125.0	23
	0100	840 125.0	23
	0110	125.2	23
	0120	125.3	23



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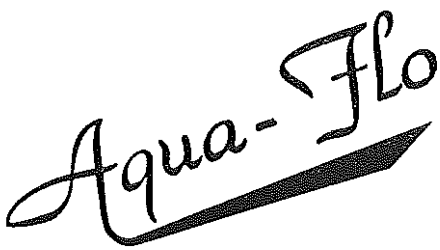
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Date	Time	Pump	Water Level	Imp G. P. M.
7/31/	0130		125.4	23
71	0140		125.4	23
	0150		125.4	23
	0200		125.4	23
	0210		125.4	23
	0220		125.5	23
	0230		125.6	23
	0240		125.7	23
	0250		125.8	23
	0300		125.9	23
	0310		126.0	23
	0320		126.1	23
	0330		126.1	23
	0340		126.1	23
	0350		126.2	23
	0400		126.3	23
	0410		126.3	23
	0420		126.4	23
	0430		126.5	23
	0440		126.6	23
	0450		126.5	23
	0500		126.4	23
	0510		126.2	23
	0520		125.9	23
	0530		126.0	23
	0540		126.2	23
	0550		126.3	23
	0600		126.8	23
	0610		126.7	23
	0620		127.0	23
	0630		126.8	23
	0640		126.7	23
	0650		126.7	23
	0700		126.4	23
	0710		126.8	23
	0720		127.0	23
	0730		127.0	23
	0740		126.8	23

Date	Time	Pump	Water Level	Imp G. P. M.
7/31/	0750		126.7	23
71	0800	1260	126.9	23
	0810		127.8	23
	0820		127.85	23
	0830		127.65	23
	0845		127.8	23
	0900	1320	127.85	23
	0915		127.95	23
	0930		128.0	23
	0945		128.05	23
	1000	1380	128.15	23
	1015		128.15	23
	1030		128.25	23
	1045		128.3	23
	1050		128.32	23
	1055		128.33	23
	1100	1440	128.33	23

Stop



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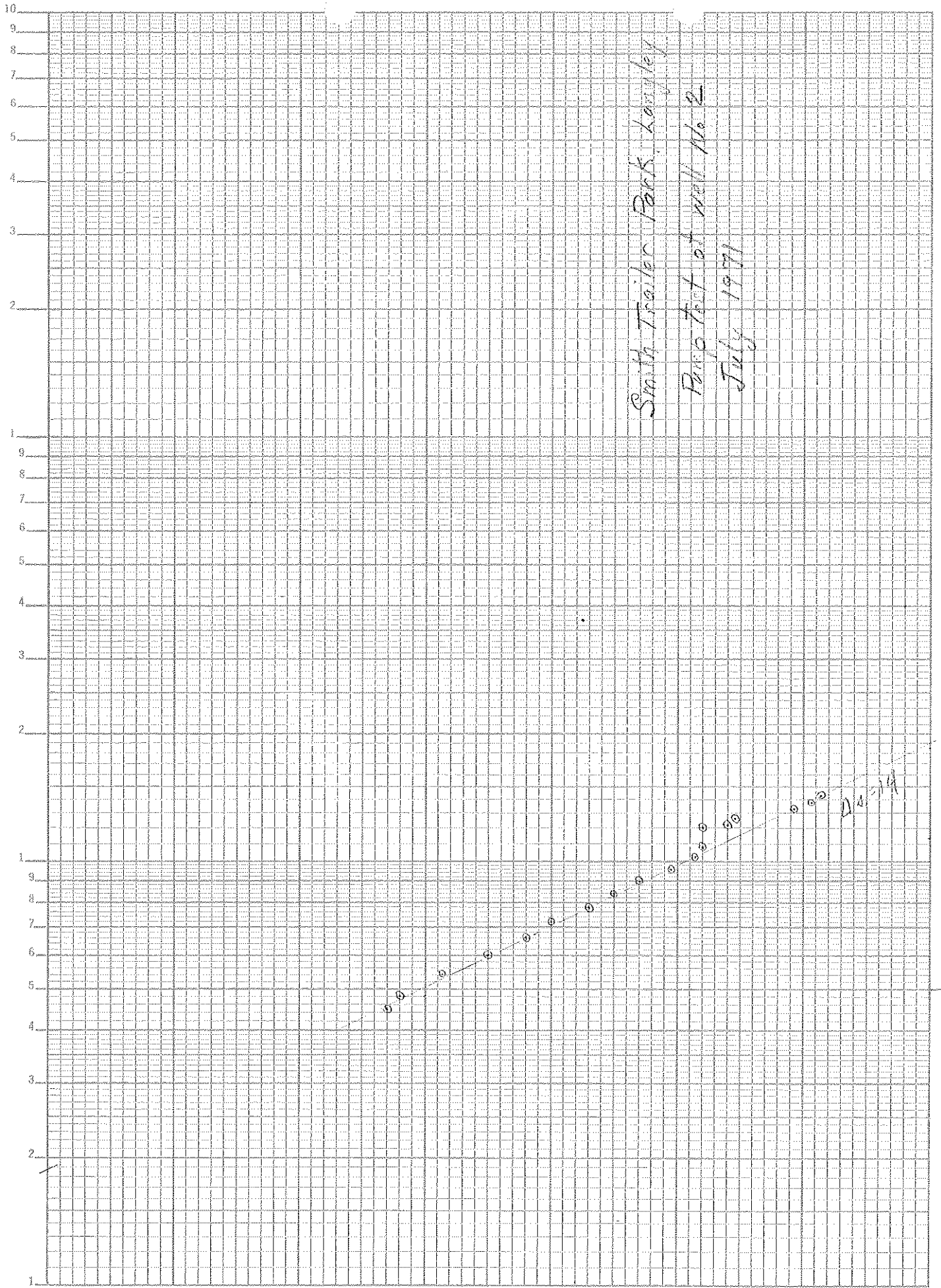
RECOVERY FOR WELL AT SMITH TRAILER COURT

Date	Time	Min Start	Water Level	Min stop	$\frac{t}{L}$
7/31/71	1100	1440	128.33		
	1100.5		116.6	.5	
	1101		97.45	1	1441
	1101.5		91.7	1.5	
	1102		80.8	2	721
	1102.5		76.0	2.5	
	1103		74.45	3	
	1103.5		70.0	3.5	
	1104		66.5	4	361
	1104.5		61.55	4.5	
	1105	1445	57.75	5	289
	1106		51.05	6	
	1107		45.5	7	
	1108	1448	40.65	8	181
	1109		36.5	9	
	1110	1450	32.05	10	145
	1111		29.05	11	
	1112	1452	26.3	12	121
	1113		24.0	13	
	1114		22.0	14	
	1115	1455	20.35	15	97
	1116		18.8	16	
	1117		17.45		
	1118		16.15		
	1119		15.2		
	1120	1460	14.3	20	13
	1121		13.5		
	1122		12.85		
	1123		12.15		
	1124		11.6		
	1125	1465	11.15	25	561
	1126		10.6		
	1127		10.25		
	1128		9.8		

Date	Time	Water Level	$\frac{t}{L}$
7/31/71	1129	9.5	
	1130	1470	9.2 30 49
	1135	1475	7.8 35 42
	1140	1480	6.9 40 37
	1145	1485	6.15 45 33
	1150	1490	5.5 50 30
	1155	1495	5.0 55 27
	1200	1500	5.0 60 25
	1205	1505	4.8 65 23
	1210	1510	4.55 70 21.2
	1300	1560	1.9 120 13
	1400	1620	0. 180 9

11/2/71

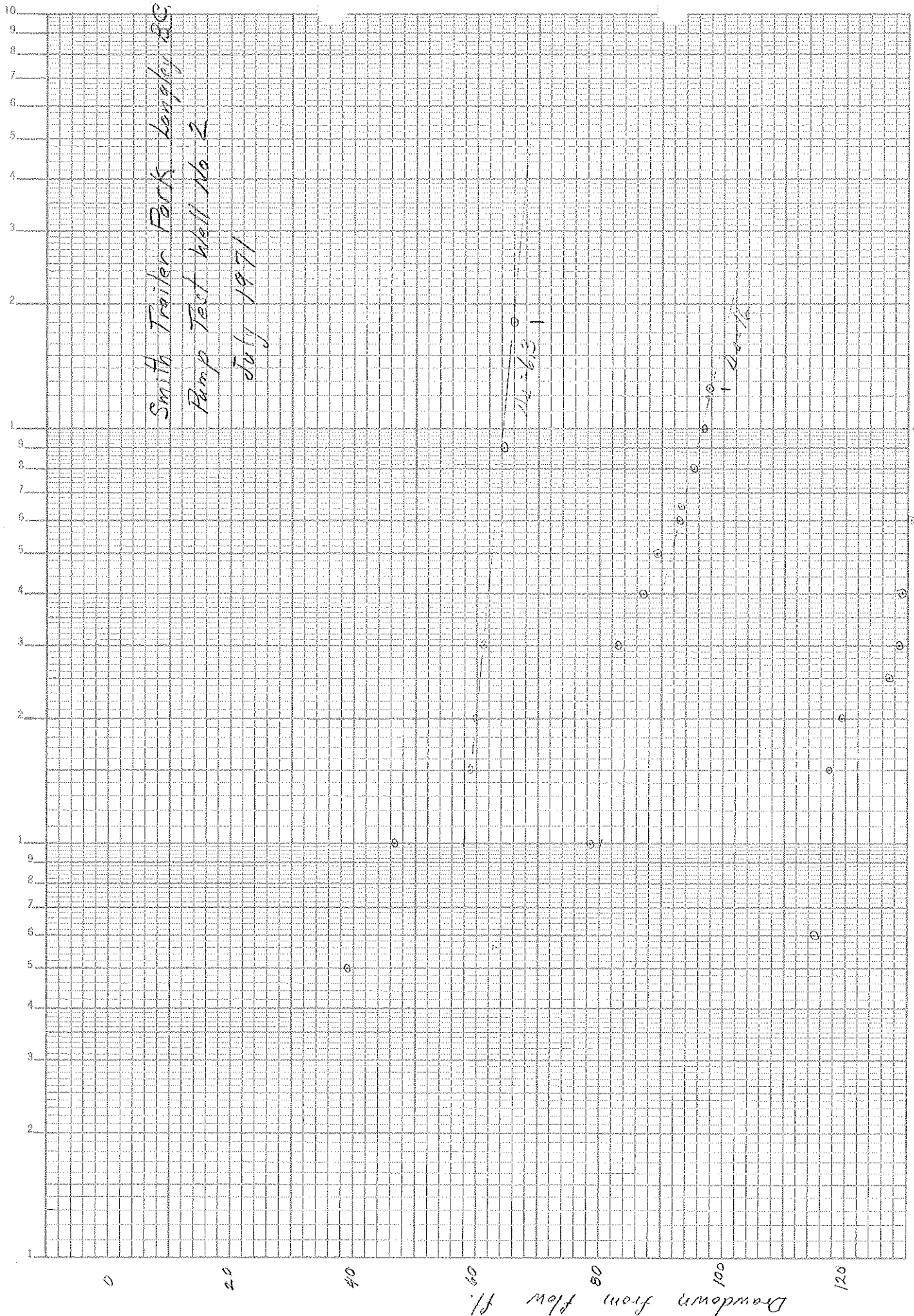

SEMI-LOGARITHMIC 46 5493
 5 CYCLES X 70 DIVISIONS
 MADE IN U.S.A.
 KEUFFEL & ESSER CO.



100
 Minutes since start
 1000

120
 122
 124
 126
 128
 130
 Flow ft
 Drawdown from flow ft

Smith Trailer Park Langley B.C.
Pump Test Well No 2
July 1971



Minutes since start of each step
150
1000

