NEW YORK STATE DEPARTMENT OF HEALTH
PUBLIC WATER SYSTEM ANNUAL INSPECTION

(PUSO) P1119 P1120 P1121

Vails Grove

1. WATER SYSTEM
Vails Grove Coop., Inc.
NAME

2. MAILING ADDRESS
RD #2 Brewster, New York 10509
STREET CITY STATE ZIP CODE

REACH LAKE

~~PO 2063~~ ~~PO 2064~~ ~~2065~~

3. PWS IN CHARGE OF
Agency: Vails Grove Coop., Inc.
Person: John W. Lohrfink
Title: Chairman
Telephone No. 914/669-5487; 965-8214

4. CHIEF OPERATOR
Name: George Horton
Cert. No. 6000
Telephone No. 914/669-5100
Emerg. Telephone No. 914/CR 7-3707

SEE WESTCHESTER WORK MAPS FOR LOCATION

010 [A] | 5. PROG. CODE 12 [100] | STATION NO. 19 [PUTNAM] County Source | TYPE 31 | 6. CO. 37 | 7. LAST INSP. DATE 43 [09] Month [07] Day [77] Year 48 | 8. INSPECTION DATE 53 [08] Month [31] Day [78] Year 58

9. OWNERSHIP 63 [1] 1= Public 2= Private

10. SEASONAL OR PART-TIME OPERATION 68 Month Day Year 73 TO 78 Month Day Year 83 88 Total Days 90

11. VARIANCE OR EXEMPTION 95 [2] 1= Yes 2= No

12. POPULATION SERVED 100 [.500] 106 (Exclude Service to other Purveyors)

13. NUMBER OF SERVICES 111 [.173] 116

14. NO. OF SUPPLIERS OF WATER SERVED 121 [0]

15. PERCENT OF CUSTOMERS METERED 127 Industrial Commercial [0] 135 Residential

16. AVERAGE DAILY PRODUCTION 140 [.25.600] GPD

17. AVERAGE DAILY CONSUMPTION 155 GPD

18. MAXIMUM DAY PRODUCTION 170 [.65.200] GPD

19. PRODUCTION CAPACITY 185 [.144.000] GPD

20. PRODUCTION CAPACITY ON AUXILIARY POW 200 [.0] GPD

21. DISTRIBUTION STORAGE 215 [.55.000] GAL.

22. PLANT TYPE 230 [B] (A, B or C)

23. OPERATOR GRADE 235 [IIIB] Required 241 [IIIB] Actual

24. INTERSTATE CARRIER 247 [2] 1=Yes 2=No

25. IS THIS MONITORED AS A CONSECUTIVE SYSTEM? 252 [2] 1=Yes 2=No

26. SOURCE OF SUPPLY (Enter, number of each) 257 [0] Surface 262 [03] Ground 268 [0] Purch.

27. WATER PURCHASED FROM
Name 273 PROG CODE 280 STATION NO.
Name 308 315
Name 344 351

28. SAFE YIELD 292 [.125.280] GPD

29. NUMBER OF TREATMENT FACILITIES 327 [001]

30. TREATMENT PROVIDED: 1=Yes, 2=No

PUTNAM COUNTY

NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF SANITARY ENGINEERING

INSPECTION OF GROUND WATER SUPPLY

Owner of Water Supply & P.O. Address: Vails Grove Coop., RFD#2 Brewster NY 10509

Tenant (if not owner):

City, Town, Village: North Salem or West. Southeast (?) Putnam | County | Zip 105

Name and Title of Person in Charge: George Horton

Latitude: | Longitude:

Use of Water: domestic

Gallons used per day: 26,000

Station Source No.:

1. WATER SOURCE

Geological Character of Surrounding Area: P1136 P1121 P1119 ~~P12003~~ ~~P12004~~ ~~P12005~~

☒ Well (3) #1 OLD/#2/#4

Depth of well: 343 280 ft.

Diameter of well: 6 6 in.

Depth of casing: 20 20 ft.

Top of well above ground: pitless adapter 2 3'6"

Height above flood level: adequate

Well yield/ft. draw down: 8/34/53 GPM

Pump Capacity: GPM

☐ Dug ☐ Drilled ☐ Driven ☐ Spring

Type of cover:

Type of curb:

Type of casing: steel

Well seal type: Sanitary

Type of pump: submersible

2 booster pumps 15HP 250 gpm each

Type of curb:

Slope	Yes	No	
☐ Level	☐	☐	Tight cover & sides
☐ Moderate	☐	☐	Curb seals out surface water
☐ Steep	☐	☐	Surface water diversion ditches
	☐	☐	Fenced

Remarks: Recently laid 3300 ft. of pvc transmission

2. STORAGE

Type: underground (three (3))

Capacity: 55,000 Gal.

Tight Cover: ☒ yes ☐ no

3. TREATMENT

☐ Softening ☐ Corrosion Control ☐ Other (describe)

☒ Chlorination

Yes	No	
☒	☐	Daily Report
☐	☐	Spare Chlorinator
☐	☐	Spare Parts
☒	☐	Test Kit

Type of Equipment: hypochlorite

Chlorinator capacity:

Volume of water treated:

Amount of chlorine used:

Strength of chlorine solution:

Free available residual chlorine (ppm): .8 mg/l

Stock chlorine solution available:

4. DISTRIBUTION SYSTEM

Length: 1 mi.

Main Sizes: 2"-6" in.

Pressure range: 63-69 psi

Type of pipe: PVC SAP

Describe A. Interconnection with potable water system (name)
B. Cross-connections with unacceptable water for supplies
C. Potential introduction of hazardous substances (parts, equipment, etc.)

None

5. [illegible]

Exceptions*

☒ ☐ Bacteriological quality
☒ ☐ Physical quality
☒ ☐ Chemical quality

Very busy shop

Inspected by: John Lewell Jr. PE Ass (DH)

The reverse side for sketches

In accordance with present New York State Department of Health and the Department of Environmental Conservation requirements, the following minimum standards are proposed:-

WATER SYSTEM REQUIREMENTS

A. Population To Be Served

At present, a maximum of 171 houses can be occupied. Allowing for a family size of 3.6 persons per household (1970 census family size in Putnam County), the system would be required to service 615 people.

PUTNAM CO

B. Water Consumption

Average daily water consumption in Putnam County (as indicated in the Comprehensive Water Study for Putnam County) is placed at 75 gal. per capita. Thus, to supply 171 cottages requires a supply of 46,100 gal. It is proposed to provide a minimum of one day's storage by pumping over a twelve hour period. This requires that the sources of supply be capable of delivering 71 gal. per minute over a 12 hour period.

C. Sources of Supply

During the summer of 1970, three wells were drilled by P.F. Beal & Sons on the westerly side of Route 124. These are indicated on the attached map. Well No. 3 is centrally located to the distribution system, but is located less than the

required separation distance from surrounding sewage disposal areas. For this reason, it has been abandoned. Wells No. 1 and No. 2 are located on the north end of the property in the area designated as "Spring Meadows." Well No. 1 is 343 ft. deep and consists of 20 ft. of 6 inch steel casing, while Well No. 2 is 280 ft. deep consisting of a 20 ft. 6 inch casing.

The estimated yield of Wells No. 1 and 2 was fifty gallons per minute. An additional test well (No. 4) has been driven to provide additional capacity.

To assure the adequacy of the wells, pumping tests were undertaken on May 17th and 18th, 1972. The pumping tests were undertaken simultaneously to assure that the total water supply availabl after prolonged pumping would satisfy the demands. The attached figures indicate the pumping rates of Well No. 1, No. 2 and No. 4 and a composite pumping rate of all the wells. Data has been summarized in the tabulation below:

PV. CO.

PU CO.

WELL	WATER LEVEL	YIELD
No. 1	65 ft.	13 gal. per min.
No. 2	240 ft.	34 gal. per min.
No. 4	165 ft.	53 gal. per min.

Total all wells ----- 100 gal. per min.

D. Storage Requirements

Under current operations storage tanks are located off site and will not be available for future use, thus new storage will be required. We have proposed to provide storage in the amount of a day's average demand of 50,000 gallons.

It is proposed to use Well No. 1, which has an existing pump house and a 1000 gallon storage facility as a stand-by unit. To satisfy daily demand, however, Wells No. 2 and 4 with a firm pumping capacity of 87 gallons per minute will be able to deliver required average daily flows in a ten hour pumping period. The system, however, will not provide for fire protection.

E. Proposed Improvements

It is proposed that the improvements contemplated for the Vails Grove Cooperative, Inc. water system would be undertaken in stages. Initially, the system would utilize the existing sources of supply on the easterly side of Route 13[illegible] until such time as new facilities developed in subsequent stages were placed in service.

VAILS GROVE COOPERATIVE, INC.
PROPOSED WATER SYSTEM

P.V

DESIGN SUMMARY

A. AVERAGE DAILY FLOW

46,100 gallons per day, 32.0 gallons per minute; 1,920.8 gallons per hour

B. PEAK DAY

2 x average = 92,200 per day; 64 gallons per minute; 3,841 gallons per hour

C. PEAK HOUR

6 x average = 11,524.8 gallons per hour; 192 gallons per minute

D. STORAGE

Storage tanks shall provide for a full day's storage. Use two (2) 25,000 gallon tanks, for a total of 50,000 gallons per day.

E. WELLS P 1120 ~~PV 2064~~ P 1121 ~~PV 2065~~

Wells No. 2 and No. 4 yield 87 gallons per minute; 125,280 gallons per day; 5,220 gallons per hour.

In addition, Well No. 1 has a yield of 13 gallons per minute; 780 gallons per hour; 1,820 gallons per day, which, along with a 1,000 gallon stand-by tank will be used for storage purposes. ~~PV 2063~~ P1119

F. DISTRIBUTION

Main size -- 6" a.c.p. water mains

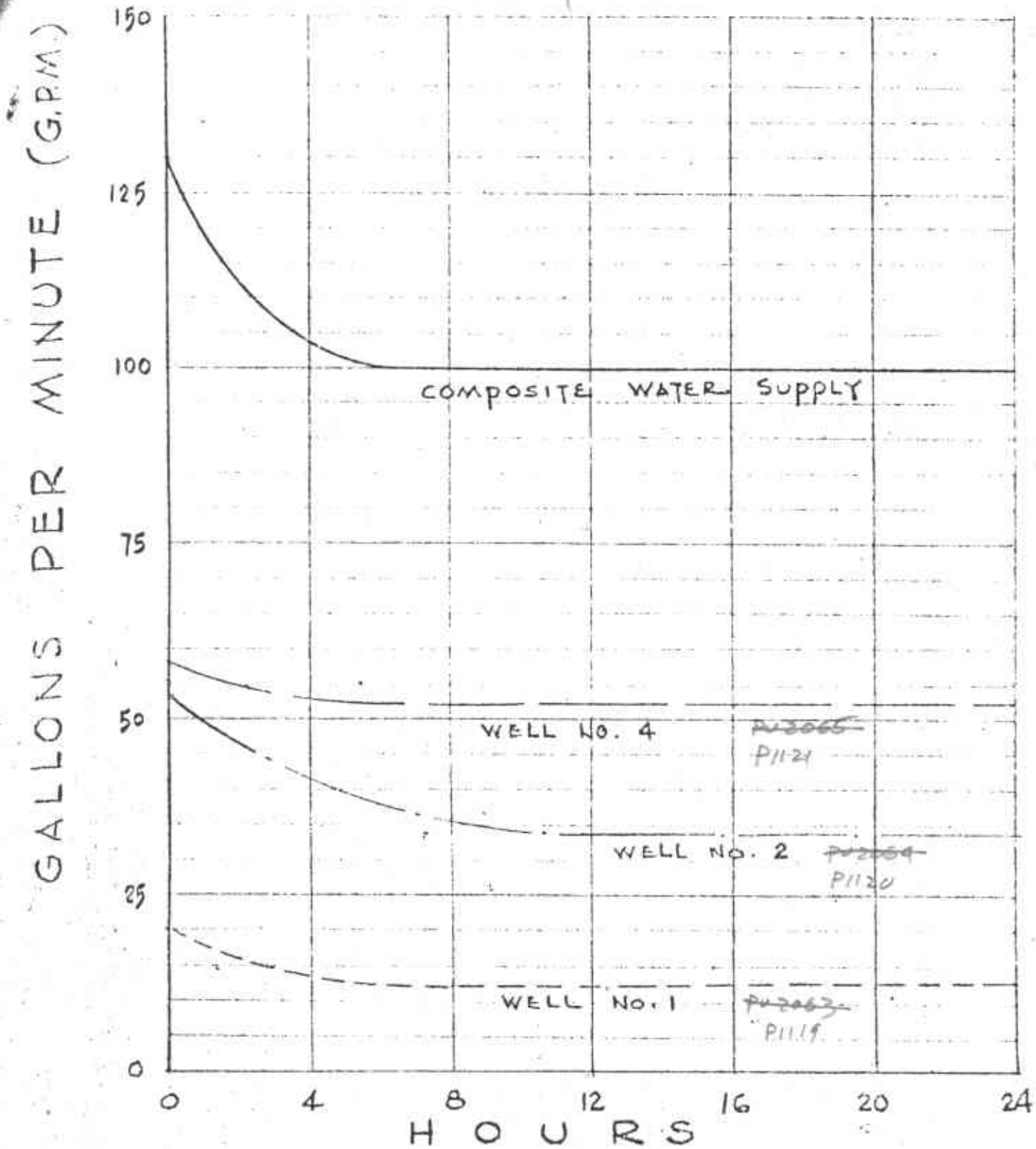
G. WATER PRESSURE

The system will be pressurized so that the minimum water pressure shall be 20 p.s.i.

Howard A. Kelly Jr. Associates

VAILS GROVE WATER SUPPLY

PU. CO.

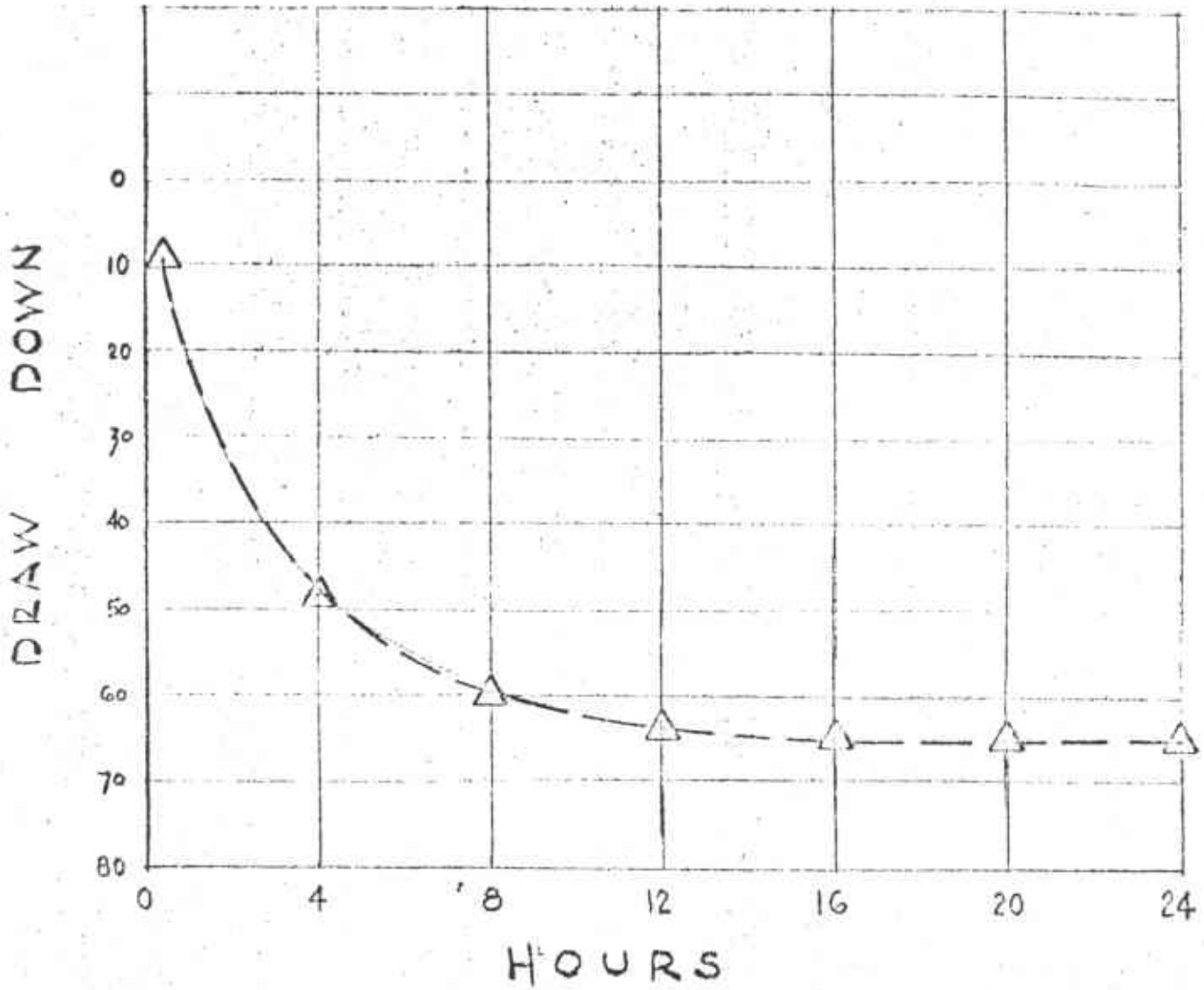


DATE	TIME	PUMP RATE
MAY 17 10 A.M.	0	130 G.P.M.
MAY 17 4 P.M.	6	100
MAY 17 10 P.M.	12	100
MAY 18 4 A.M.	18	100
MAY 18 10 A.M.	24	100

HOWARD A. KELLY, JR. ASSOCIATES

VAIL GROVE WATER SUPPLY

WELL NO. 1



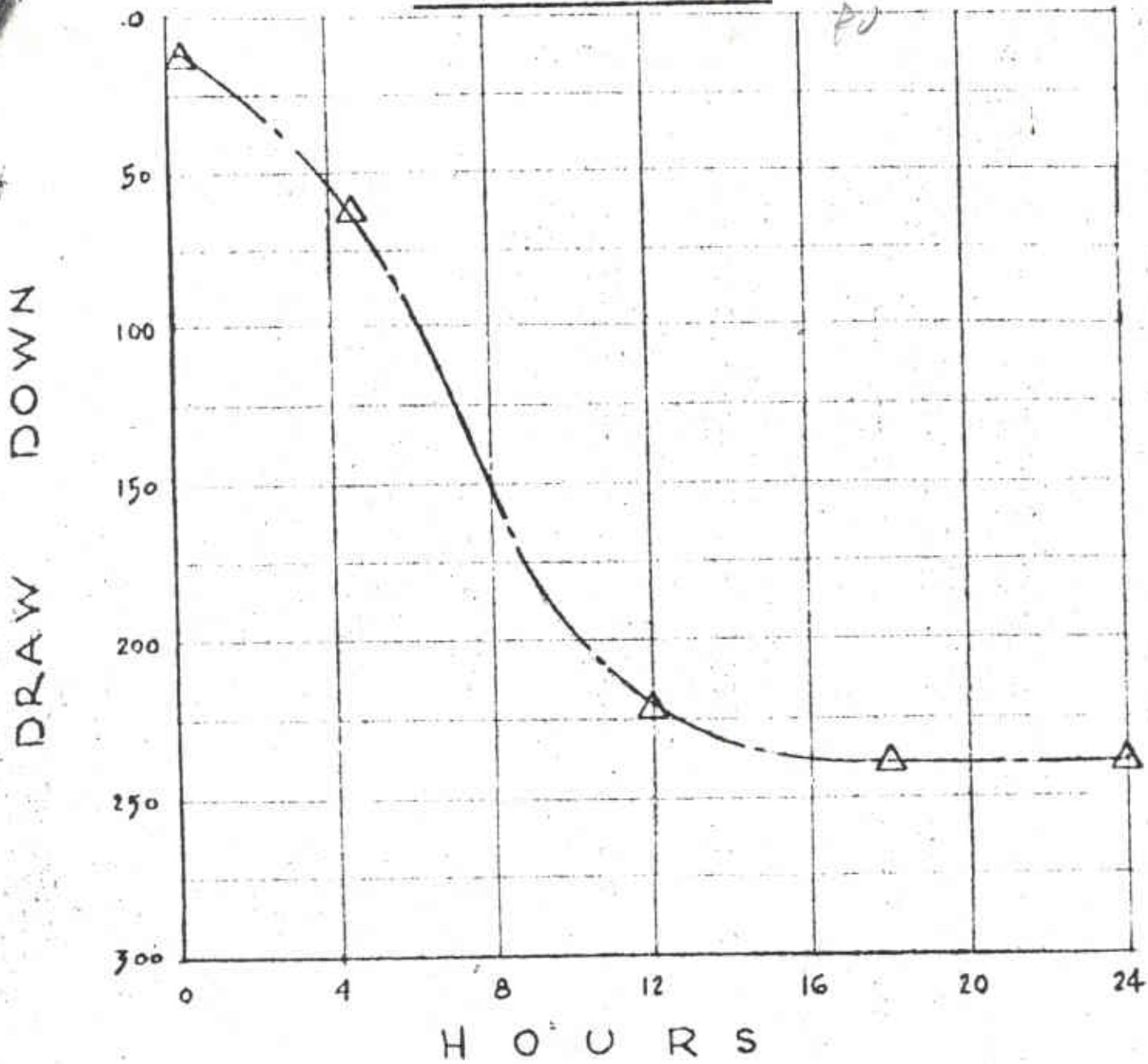
DATE.	TIME - HOURS	LEVEL	PUMP RATE
MAY 17 10 A.M.	0	10'	20 G.P.M.
MAY 17 4 P.M.	6	50'	12
MAY 17 10 P.M.	12	60'	12
MAY 18 4 A.M.	18	65'	13
MAY 18 10 A.M.	24	65'	13

HOWARD A. KELLY, JR. ASSOCIATES

VAILS GROVE WATER SUPPLY

WELL NO. 2

~~2064~~. P1120



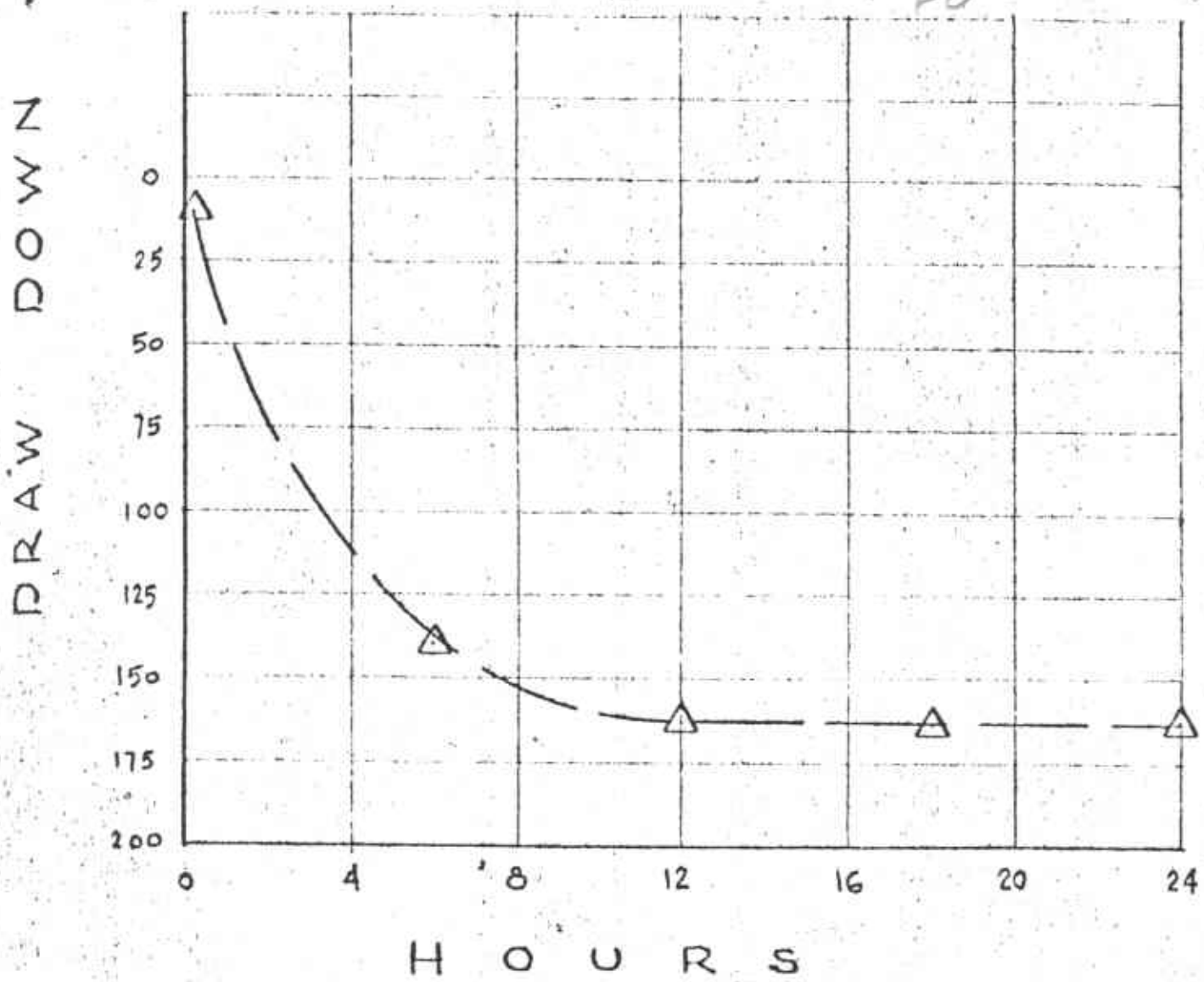
DATE	TIME - HOURS	LEVEL	PUMP RATE
MAY 17 10 AM.	0	14'	53 G.P.M.
MAY 17 4 P.M.	6	60'	34
MAY 17 10. P.M.	12	225'	34
MAY 18 4 A.M.	18	240'	34
MAY 18 10 A.M.	24	240'	34

HOWARD A. KELLY, JR.
ASSOCIATES

VAILS GROVE WATER SUPPLY

WELL NO. 4

~~2065~~ P1121



DATE	TIME - HOURS	LEVEL	PUMP RATE
MAY 17 10 A.M.	0	8'	57 G.P.M.
MAY 17 4 P.M.	6	140'	53
MAY 17 10 P.M.	12	165'	53
MAY 18 4 A.M.	18	165'	53
MAY 18 10 A.M.	24	165'	53

HOWARD A. KELLY, JR.
ASSOCIATES

P. F. BEAL & SONS, INC.

4 PUTNAM AVENUE
BREWSTER, NEW YORK 10509
Established 1891 -- Over 6900 Wells Completed
TEL. BR 9-2460 - 2461

ARTESIAN WELLS
DRIVEL SCREENED WELLS
WATER SYSTEMS
WATER SOFTNERS
WATER CONDITIONING EQUIPMENT

JET PUMPS
SUBMERSIBLE PUMPS
SUCTION PUMPS
CELLAR DRAINERS
MOTORS-TANKS-BELTS-ETC.

COMPLETE INSTALLATION, REPLACEMENT AND REPAIR SERVICE

March 11, 1981

Vails Grove Co-op
Route 121, RFD #2
Brewster, N.Y. 10509

Att: Mr. Myers:

To Whom It May Concern:

Please be advised that on March 6, 1981 we checked the static water level (the distance from the surface of the ground to the water level in the well) in each of the three wells for Vails Grove Co-op, Route 121, Brewster, N. Y.

The water levels were as follows:

Well # 1	22'	~~PU 2063~~	P1119
Well # 2	10'	~~PU 2064~~	P1120
Well # 3	5'	~~PU 2065~~	P1121

Very truly yours,

P. F. BEAL & SONS, INC.

Perry L. Beal

PLB:pr