

RECORD

OLAND + Son 

Brewing Record

1936-37

Apr 1, 1936 - Mar 31, 1937

No. 7 Tun.

Alc.

April 1, 1936.

Malt - 5000 lbs. C. M. Co + 40 lbs. surplus.
 Hops - 20 B.C., 10 B.C., + 30 B.C. Hops, 10 Bohs + 10 Kants = 80 #
 6 S; 5 M; 1.5 K. M. S.; 1 1/2 P.

7:24 ^{am}	Started to mash - $\frac{152\frac{1}{2}}{38}$	First runs - 20.74%
	Malt all in	Last - 1.15%
	Started to underlet $\frac{210}{8}$; Steam - 11'	Water - $\frac{38}{8}$
	Finished mashing	$65\frac{1}{2}$
	Set taps & Heat - $154\frac{1}{2}^{\circ}$	<u>2</u>
	Sparg - $\frac{170}{65\frac{1}{2}}$; Hop - $\frac{160}{2}$	<hr/> 113 $\frac{1}{2}$

Into Cyp.	Out of Cyp.	Balling.
98 $\frac{1}{2}$ bbls.	-10 $\frac{3}{4}$ - 87 $\frac{1}{4}$ bbls.	13.9%

Yeast - * 155 Brew (50 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$

Quantity before fermentation $\equiv 61\bar{8} = 2035.6$ gals. corrected
 after " $\equiv 58\frac{1}{2} = ~~1927~~ 1927.6$..
 recorded in cellar ----- 1937 gals..

Racked April 8, 1936. Balling - 2.1%

Alcohol: (13.9 - 2.1) . 42 = 4.91%

"Striking Heat" - $152\frac{1}{2}^{\circ}$
 "Initial " - 139-191 $^{\circ}$ for 1 $\frac{1}{2}$ 30 bbls.
 141-143 " next 8 "

No 8 Tun.

Sparkling Ale.

April 6, 36

Malt - 64500 lb. C. M.C. + 40 lbs surplus (New Car)
 Hops - 25 20 B.C.; 20 B.C. 9/10 Kents; 20 Bohemians = 70 #
 5 S; 6 M; 1.5 K.M.S;

7.21 am	Started to mash - $\frac{160}{39}$	First runs - 20.85%
7.42	Malt all in	Lost - 1.0%
7.57	Underlet - $\frac{210}{8}$; Steam - 10 ³	Water - $\frac{37}{8}$
8.10	Finished mashing	68
8.40	Set Hops, Heat - 156°	17
	Sparge - $\frac{170}{68}$; Hops - $\frac{160}{17}$	1117

Duto Cps.	Out of Cps.	Balling
97 hls. - 10¢ -	86 $\frac{3}{4}$ hls.	12.7%

Yeast - * 155 Brew (50 lb. + 1 $\frac{1}{2}$ lb. Flour) Air - 1 $\frac{1}{4}$

Quantity before fermentation = 61 $\frac{1}{8}$ " =
 " after " = 59 $\frac{1}{2}$ " =
 " recorded in ciller - - - 1936 gals.

Rached April 13/36. Balling - 1.97%

Alcohol : (12.7 - 1.97) .42 = 4.50%

"Stinking Heat" - 153°

Initial " - 139-141° to 25 hll. mark.
 142-144° " 37 " "

N.B. Black-head was removed at 5.15 am; was of good weight.

N.B. Examination has brought to light that the moss at present used has a decidedly musty odour and is very damp, also. The amount used in today's brew has been increased by one lb.

No. 9 Tunn.

Ale.

April 7/36.

Malt - 5000 lbs. C.M. Co.

Tops - 20 B.L.s; 10 B.L.s + 30 B.C. Hgs, 10 Kents + 10 Bhs. = 80 #
6S; 6M; 1.5-K.M.S; 19t.P.

7:20 ^{am}	Started to mash - $\frac{152}{38}$	First runs - 21.05%
7:42	Malt all in	Last - - 2.15%
7:57	Started to underlet - $\frac{0.14}{8}$; Steam - $10\frac{3}{4}$	Water - 38
8:12	Finished mashing	8
8:42	Set Tops; Heat - $15\frac{1}{2}$	65 $\frac{1}{2}$
	Spurge - $\frac{170}{65\frac{1}{2}}$; Hop - $\frac{160}{3}$	3
		<hr/> 119 $\frac{1}{2}$ <hr/>

Inb. Cyp.	Out of Cyp.	Balling.
97 $\frac{3}{4}$ lbs.	- 10 -	87 $\frac{1}{2}$ lbs.
		13.8%

Yeast - * 157 Brew + 2 gal. lb. of * 156 (50 lbs + 1.7) Oir - 1 $\frac{1}{4}$

Quantity before fermentation = 62 $\frac{1}{4}$ =
 " after " = 60 $\frac{1}{2}$ =
 " recorded in cellar = 1957 gals.

Alcohol: (13.8 - 2.2) . 42 = 4.87%

Racked April 14, 1936. Balling - 2.2%

"Striking Heat" - 152°

"Initial " - 139 → 141 $\frac{1}{3}$ ° for 1st 30 lbs; 141 $\frac{1}{3}$ → 149° for next 20 lbs

Some of the ^{and wet} musty moss was spread on
 top of the boiler to dry.

Wt. before drying - 15 $\frac{1}{2}$ lbs.

" after " - 9 "

Allowing $\frac{1}{4}$ lb. wastage, difference is 4 $\frac{1}{4}$ lbs = 31% H₂O

In the future, all moss before being used will be
 in a thoroughly dry condition, and, just before being put
 in the cyp, will be well washed in cold water.

No. 10 Turn.

Ale.

April 8/36.

Malt - 5000 lbs. C.M.C. + 100 lbs. "surplus".

Hops - 20 B.C.; 10 B.C.; 430 B.C. 4dgs; 10 B.C. + 10 Kents = 80^{wt}.

6 S; 6 M; 1.5 K.M.S; 19 lb P.

7.21 ^{am}	Started to mash - $\frac{153}{38}$	First runs - 21.0%
7.45	Malt all in.	Last - - - 1.35%
8.00	Undelet-on - $\frac{210}{8}$; Steam - 9 $\frac{1}{4}$	Water - $38\frac{1}{8}$
8.13	Finished mashing	67
8.43	Set Taps; Heat - 154°	4
	Sparge - $\frac{170}{67}$; Hops - $\frac{160}{4}$	<hr/> 117

Into Cyp.

99 hlls.

- 11 -

Out of Cyp.

88 hlls.

Balling.

13.8%

Least - * 1 Brew (50 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity before fermentation = 59 $\frac{1}{2}$ =" after " = 57 $\frac{3}{8}$ =

" recorded in cellar - - - 2002 gals.

Rachel April 15, 1936

Balling - 2.05%

Alcohol: (13.8 - 2.05) . 42 = 4.93%

"Striking Heat" - 153° F.

"Initial " - 139 - 141 $\frac{1}{4}$ ° F for 1 $\frac{1}{2}$ 30 hlls.141 $\frac{1}{2}$ - 144 $\frac{1}{2}$ - next 8.

No. 3 Tun.

Stout.

April 9, 1936.

Malt - 5000 lbs. C.M.C. + 250 lbs. B. Barley (Dominion Malt Co.)
 Hops - 20 B.C.; 10 B.C.; 4 30 B.C. Hops; 10 Bels & 10 Kents = 80#
 6 S; 6 M; 15 K.M.S.; 130 lb. P.; L. root - 3#; C. root - 3#
 T. root - 3 2#

Started to mash - $\frac{163}{58\frac{1}{2}}$	First runs - 21.8%
Malt all in, $\frac{180}{8}$	Last .. - 1.8%
Underlet on - $\frac{180}{8}$; Steam - 10"	Water - $38\frac{1}{8}$
Finished mashing	7 1/2
Set Tops; Heat - 45°	2
Sparge - $\frac{170}{77\frac{1}{2}}$; Hops - $\frac{160}{2}$	<u>120</u>

Into Cyp.	Out of Cyp.	Balling.
101 lbs.	- $8\frac{1}{2}$ -	92 $\frac{1}{2}$ lbs.
		14.5% %

Yeast - * 1 Brew (5 lbs. + $1\frac{1}{2}$ Flour) Air - $1\frac{1}{4}$ "

Quantity before fermentation = $61\frac{1}{8}$ " =
 " after " = $58\frac{1}{8}$ " =
 " recorded in cellar - - - - 2026 gals.

Reached April 16, 1936 Balling - 2.65%

"Striking Heat - 163° F.
 "Initial " - 146° F.

** Amount of P. has been increased - a sweeter Stout being desired. The "initial heat" has been raised to 146° F. in order to bring more maltose into the wort. solution.

* The Black Barley is that made by the Dominion Malting Co. - this being the first time that we have ever used it.

No. 4 Tun.

Ale.

April 13th

Malt - 5000 lbs C.M.C.

Hops - 20 B.C.; 10 B.C. & 30 B.C. 2 lbs; 10 Pils, & 10 Kent = 80^{FF}
 6 S; 6 M; 1.5 K. N.S.; 1 1/2 P.

7.16	Started to mash - $\frac{15.2 \pm}{38}$	First run - 21.2%
7.35	Malt all in	Last .. - 1.3%
7.50	Underlet on - $\frac{2.0}{8}$; steam - 10'	Water - $\frac{38}{8}$
8.02	Finished washing;	6.8
8.32	Set taps; heat - $15.9 \pm$	2.7
	Spray - $\frac{170}{68}$; Hops - $\frac{170}{27}$	<u>116.7</u>

Into Cyp.	Out of Cyp.	Balling.
100 lbs.	$9 \frac{1}{2}$	13.8%

Yeast - From Keith's (50 lbs + 1 1/2 lbs) Air - $1 \frac{1}{4}$

Quantity before fermentation = } $2 \frac{1}{4}$ = 75.5 gals.
 " after " = }
 recorded in cellar - 1998 gals.

Reached April 20, 1936 Balling - 2.12%

Alcohol: $(13.8 - 2.12) \cdot 42 = \cancel{500} 4.90\%$

"Stinking Heat" - ~~141~~ $14 \frac{1}{2}$ $15.2 \pm$
 Initial - " - 139 - 141 F for 1st 30 lbs.
 141 $\frac{1}{2}$ - 149 $\frac{1}{2}$ " next 8 "

No 5 Tun

Ale.

April 17th

Malt - 5000 lb. C. M. Co.

Hops - 20 B.C.; 10 B.C., & 30 B.C. ² lbs; 10 B.C. & 10 Heats = 80**
6 S; 6 M; 1.5 K.M.S; 1 qt. P.Started to mash - $\frac{153}{38}$

Melt all in

Underlet started - $\frac{20}{8}$; Steam - $9\frac{1}{2}$

Finished mashing

Set Taps; Heat - 153° Spray - $\frac{120}{69}$; Hops - $\frac{120}{20}$

First runs - 21.0%

Last " - 1.75%

Water - $\frac{38}{8}$

69

20

1170

In to Cyp.

101 lbs.

Out of Cyp.

90 lbs.

Balling.

13.8%

Yeast - * Keith's & * Brew (59 lbs + $1\frac{1}{2}$ Flour) Air - $1\frac{1}{4}$ Quantity before fermentation = } $2\frac{3}{8}$ = 79.5 gals." after " = }
" recorded in cellar --- 1977

Racked April 21/36

Balling - 20.5%

Alcohol: $(13.8 - 2.05) \cdot 42 = 4.93\%$

"Striking Heat" -

"Initial " -

No. 6 Turn.

Ale.

April 15, 1936.

Malt - 5000 lbs. C. M. Co.

Hops - (20 B.C.); (10 B.C. + 30 B.C. Polys); (10 B.C. + 10 Kants) = 80^{##}

6 S; 6 M; 15 K. U.S.; 1 pt. R.

Started to mash - $\frac{53}{38}$

Malt all in

Underlet m - $\frac{24}{8}$; Steam - 9 $\frac{1}{2}$

Finished mashing

Set Taps, heat - 15 $\frac{1}{2}$ Sponge - $\frac{26}{69}$ sly. $\frac{20}{1}$

First run - 20.8%

Last .. - 1.45%

Water - 38

8

69

1

116

Inb. Cyp.

101 lbs.

- 10 $\frac{1}{2}$ -

Out of Cyp.

90 $\frac{3}{4}$ lbs.

Balling

13.7%

Least - Keith's (50 lbs + 1 $\frac{1}{2}$ flour)Air - 1 $\frac{1}{4}$ Quantity before fermentation = } 2 $\frac{3}{4}$ = 92.3 gals." after " = }
" recorded in cellar - 1972 gals.

Racked April 22 / 36

Balling - 2.4%

Alcohol : (13.7 - 2.4) .42 = 4.74%

" Striking Heat " -

" Initial " -

No. 7 Tuns

Ale.

April 16, 1936.

Malt - 5000 lbs. C.M.C.

Hops - (20 B.C.); (10 B.C. + 30 B.C. 9 lbs); (10 Bobs + 10 Kauls) = 80 "

6 S; 6 M; 1.5 K.M.S.; 1 1/2 P.

7.25 ^{am}	Started to mash - $\frac{153}{37\frac{1}{2}}$	First runs - 20.8%
7.48	Malt all in	Last " - 1.5%
8.03	Underlet on - $\frac{310}{8}$; Steam - 9'	Water - $37\frac{1}{2}$
8.13	Finished mashing	8
8.47	Set Taps; Heat - 105°	68 1/2
	Sparge - $\frac{170}{68\frac{1}{2}}$; Hot - $\frac{170}{1}$	1
		<u>115</u>

Into Cyp.

100 lbs.

Out of Cyp.

90 1/2 lbs.

Belling.

13.7%

Least - Keith's (55 lbs + 1 1/2 Flour

Air - 1 1/4'

Quantity before fermentation =

" after " =

" recorded in fermenters - 1957 gals

Racked April 23 /36.

Belling - ~~18.4%~~ - 2.17%

Alcohol: (13.7 - 2.17) .42 = 4.84%

" Striking Heat " -

" Initial " -

No. 8 Turn.

Ale.

April 17/36.

Malt - 5000 lbs. C. H. Co.

* Hops - 20 B. C. (1911); ~~5~~ 5 B. C. & 30 B. C. Gals; 10 B. C. & 10 Kent = 75[#]
6 S; 6 M; 1.5 K. M. S.; 1 qt. P.

7.26 ^{am}	Started to mash - $\frac{15.3}{37\frac{1}{2}}$	First run - 21.0?
7.49	Malt all in	Last " - 1.5?
8.09	Underlet m - $\frac{9.0}{8}$; Steam - 8'	Water - 37 $\frac{1}{2}$
8.16	Finished mashing.	8
8.47	Set Taps; Heat - 154'	68
	Sparge - $\frac{7.0}{68}$; Hops - $\frac{1.60}{1}$	1
		<hr/> 114 $\frac{1}{2}$ <hr/>

Into Cys.	Out of Cys.	Balling
99 $\frac{1}{2}$ lbs.	- 10 $\frac{1}{2}$ -	89 $\frac{1}{2}$ lbs.
		13.7%

Least - ~~50~~ 50 lbs. Keith's + 5 lbs. Clark's (66 B. C.) + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ '

Quantity before fermentation \equiv } 2 $\frac{1}{4}$ ' = 75.5 gals.
 " after " \equiv }
 " recorded in cellar - 1977 gals.

Racked April 29/36 Balling - 2.17

Alcohol: (13.7 - 2.1) . 92 = 4.87%

"Sticking Heat" - 153°

"Initial " - 139-141° up to 1 $\frac{1}{2}$ 30 lbs. mash water.

14 $\frac{1}{2}$ - 144 " - next 8 $\frac{1}{2}$ "

* A reduction in the amount of hops was deemed advisable owing to the fact that it is necessary to use so great a proportion of "new" hops.

No. 9 Turn

Ale.

April 20/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 5 B.C. + 30 B.C. Gdgs; 10 Bobs + 10 Kaults = 75[#]
6 S; 6 M; 15 K.M.S.; 19 P.R.

7.17 ^{am}	Started to mash - $\frac{153}{38}$	First run - 20.85%
7.40	Malt all in	Last " - 17%
7.55	Underlet on - $\frac{210}{8}$; Steam - 7 $\frac{1}{4}$	Water - 38
8.08	Finished mashing	8
8.37	Set Taps; Heat - 15 $^{\circ}$	67
	Sponge - $\frac{120}{67}$; Hops - $\frac{170}{1}$	1
		<hr/> 114

Into Cys.

99 lbs.

- 10 $\frac{3}{4}$ -

Out of Cys.

88 $\frac{1}{4}$ lbs.

Balling

13.7%

Yeast - * 6 Braw (55 lbs + 1 $\frac{1}{2}$ flour) Air - 1 $\frac{1}{4}$

Quantity before fermentation = } 2 $\frac{5}{8}$ =
 " after " }
 " recorded in cellar -- 1935 gals.

Racked April 27; 1936 Balling - 2.0%

Alcohol: (13.7 - 2.0) . 92 = 4.91%

" Striking Heat" - 153 $^{\circ}$ " Initial Heat" - 190 - 192 $^{\circ}$ for 1 $\frac{1}{2}$ 30 lbs.192 $^{\circ}$ - 199 $^{\circ}$ " next 8 "

No. 10 Tun.

Ale.

April 21/36

Malt - 5000 lb. C. M. Co.

Hops - 20 B.C.^{30'}; 5 B.C.^{30'}; 430 B.C.^{30'} % dgs; 10 B.C.^{30'} & 110 Kant = 75[#]

6 S; 6 M; 1.5 K. M. S.; 1 qt R.

7.25^{am} - Started to mash - $\frac{152}{38}$

7.48 - Malt all in

8.04 - Underlet w - $\frac{810}{8}$; Steam - $7\frac{3}{4}$

8.15 - Finished mashing

8.46 - Set Taps; Heat - 157°
Spurge - $\frac{170}{66\frac{1}{2}}$; Hyg. - $\frac{180}{1}$

First run - 20.6%

Last - 1.6%

Water - $\frac{38}{8}$ 66 $\frac{1}{2}$

113 $\frac{1}{2}$

Into Cyp.

98 $\frac{1}{2}$ lbs.

Out of Cyp.

88 $\frac{1}{4}$ lbs.

Belling.

13.8%

Yeast - * 6 Brew (55 lbs. + $1\frac{1}{2}$ Flour)Air - $1\frac{1}{4}$ Quantity lost during fermentation = $57\frac{1}{2} - 54\frac{1}{2} = 3$ "
" recorded in cellar -- 1916 gal.

Reached April 28/36

Belling - 2.05%

Alcohol: $(13.8 - 2.05) \cdot 42 = 4.93\%$ "Sticking Hat" - 152° F."Initial" - - $190 - 192^{\circ}$ for $1\frac{1}{2}$ 50 lbs. $192\frac{1}{2} - 197^{\circ}$ next 8.

No. 4 Turn.

Ale.

April 22/36.

Malt - 5000 lbs. C.M.C.
 Hops - (20 B.C.) (5³⁰ B.C., 26 B.C. Polys, 4 B.C. Puffins) (10 B.C. x 10 Cents) = 75[#]
 6 S; 6 M; 1.5 K.M.S.; 1 qt R.

7.20 ^{am}	Started to mash - $\frac{167}{37\frac{1}{2}}$	First runs - 20.67
7.43	Malt all in	Lost .. - 1.87
7.55	Underlet w - $\frac{210}{8}$; Steam - $7\frac{1}{4}$	Water - $37\frac{1}{2}$
8.10	Finished mashing -	8
8.40	Set taps; Heat - 154°	66 $\frac{1}{2}$
	Spunge - $\frac{176}{66\frac{1}{2}}$; Hyg - $\frac{160}{2}$	<u>112 $\frac{1}{2}$</u>

Into Cys.		Out of Cys.	Balling.
98 lbs.	-10-	88 lbs.	13.77%

Yeast - * 8 Brew (55 lbs + 1 $\frac{1}{2}$ lb. Flour) Air - $1\frac{1}{4}$

Quantity lost during fermentation = $59\frac{1}{2} - 57\frac{3}{8} = 2\frac{1}{4}$
 recorded in cellar --- 1916 gals.

Racked April 29/36 Balling - 2.07

Alcohol: (3.7 - 2.0) .42 = 4.917

"Striking Heat" - 153°

"Initial" " - $141-143^{\circ}$ for $1\frac{1}{2}$ 33 lbs. } mash water.
 $143-145^{\circ}$ " next $4\frac{1}{2}$ " }

* Balance of 1934 hops.

No 5 Tun.

Ale.

April 23/36.

Malt - 5000 lbs. C.M.Co.

Hops - 20 B.C.^{35"}; 10 B.C. & 25 B.C. Tuggles; 10 B.S.^{35"} & 10 Kent[#] = 75[#]

6 S; 6 M; 1.5 K.M.S; 19 P.

7.25^{am} Started to mash - $\frac{153}{37\frac{1}{2}}$

7.5-1. Malt all in

8.06. Underlet on - $\frac{210}{8}$; Steam - $7\frac{1}{4}$

8.15. Finished mashing

8.50. Set Taps; Heat - $15\frac{1}{4}$
Spurge - $\frac{17\frac{1}{2}}{66}$; Hop - $\frac{160}{2}$ First runs - 20.55⁷

Last .. - 1.8%

Water - $37\frac{1}{2}$

8

66

2

113 $\frac{1}{2}$

Into Coy.

97 $\frac{1}{2}$ hbls.

-10 <-

Out of Coy.

87 $\frac{1}{2}$ hbls.Balling .
13.8%Yeast - * 8 & 9 Brews (55 lbs + $1\frac{1}{2}$ Flour)Ale - $1\frac{1}{4}$ Quantity lost during fermentation = $60\frac{1}{2} - 57\frac{1}{4} = 3\frac{1}{4}$ =
recorded in celler --- 1923 gals.

Racked April 30/36

Balling - 2.1%

Alcohol: (12.8 - 2.1) .42 = 4.91%

"Striking Heat" - 153 - 157 $\frac{1}{2}$ ""Initial " - 157 $\frac{1}{2}$ - 141 $\frac{1}{2}$ for 1st 30 hbls.141 $\frac{1}{2}$ - 144 $\frac{1}{2}$ " next 8 "

No 3 Tun.

Stout.

April 29.¹⁴

Malt - 5000 lbs. C. M. Co. + 250 lbs. B. Barley (C. M. Co.).

Hops - 20 B. C. ; 10 B. C. ; 25 B. C. Fuggles ; 10 B. C. & 10 Kent - 75⁺ (all 1935¹⁴)

6 S ; 6 M ; 15 K. M. S. ; 130 lbs. P. ; G. root - 3" ; C. root - 3" ; L. root - 2"

7.27 ^{am}	Started to mash $\frac{114}{37\frac{1}{2}}$	First runs - 22.0%
7.48	Malt all in	Lost - 2.8%
8.09	Started to underlet - $\frac{180}{5}$; Steam - 5'	Water - 37 $\frac{1}{2}$
8.15	Finished mashing	5
8.45	Set Taps ; Heat - 153°	68 $\frac{1}{2}$
	Sparge - $\frac{170}{68\frac{1}{2}}$; Hops - $\frac{160}{2}$	2
		<u>118</u>

Into Cys.

97 $\frac{1}{4}$ bbls.

Out of Cys.

89 bbls.

Balling

14.5%

Least - * 9 Brew (57 lbs. + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation = $58\frac{3}{4} - 56\frac{3}{8} = 2\frac{1}{4}$ "

recorded in cellar --- 1971 gals.

Racked

Of May 1, 1936.

Balling - 2.8%

Alcohol:

"Sticking Heat" - 164°

"Initial" - 150-151° (by therm. at mouth of mashing machine)

149°F. by dip stick thermometer.

NB.

It has been noted that the new Dem. Malt. Co. B. Barley, used for the first time in the last brew of Stout, has greater colouring power than has the C. M. Co. B. Barley, which is usually used.

No. 6 Truss.

Ale.

April 27/36.

5000 lbs. C. M. Co.

Hops - 20 B.C. ; 10 B.C. & 25 B.C. Puffles ; 10 Pils & 10 Kent = 75 # (all 1930's)
 6 S, 6 M ; 1.5 K. M. S. ; 19 P.

7.26^{am} Started to mash - $\frac{153}{37\frac{1}{2}}$

7.50 " Malt all in

8.05 " Started to underlet - $\frac{210}{8}$; Steam - $7\frac{1}{4}$

8.17 " Finished mashing

8.47 " Set Taps, Heat - 154° Sparge - $\frac{170}{66\frac{1}{2}}$; Stop - $\frac{16}{2}$

First runs - 20.7%

Last " - 1.85%

Water - $37\frac{1}{2}$ $66\frac{1}{2}$ 2119

Into Cys.

98 lbs.

-10 $\frac{1}{2}$ -

Out of Cys.

87 $\frac{1}{2}$ lbs.

Balling.

13.9%

Yeast - * 11 Brew (55 lbs + $1\frac{1}{2}$ Flour)Air - $1\frac{1}{4}$ Quantity lost during fermentation = $61 - 58\frac{1}{2} = 2\frac{1}{2}$

. recorded in cellar --- 1953 gals.

Reached May 4/36

Balling - 2.25%

Alcohol : $(13.9 - 2.25) \cdot 42 = 4.89\%$ "Striking Heat" - 153° "Initial " - $140 - 142^{\circ}F$ for $1\frac{1}{2}$ 30 lbs. $142 - 184^{\circ}F$. rest $7\frac{1}{2}$ "

No. 7 Tun.

Sparkling Ale.

April 25/36.

Malt - 9500 lb. C. M. Co. + 7000 surplus

Hops - 20 B. Co's; 20 B. C. Fuggles + 10 Kent's; 20 Bohemians = 70^{##} (all 1935's)

5 S; 6 M; 15 K. M. S.

7.26 ^{am}	Started to mash - $\frac{15^{\circ}}{34}$	First run - 20.3%
7.48	Malt all in	Last - - 1.5%
8.09	Started to undrill - $\frac{20}{8}$; Steam - $6\frac{1}{3}$	Water - 39
8.13	Finished mashing	69
8.38	Set Taps; Heat - 154°	2 >
	Gravy - $\frac{17^{\circ}}{69}$; 147 - $\frac{18^{\circ}}{2}$	<u>1137</u>

Into Cys.

97 lbs.

- 10 -

Out of Cys.

87 lbs.

Belling.

12.9%

Yeast - 2 12 Brew (55 lbs + $1\frac{1}{2}$ Flour) Qui - $1\frac{1}{4}$

Quantity lost during fermentation = $60\frac{1}{4} - 58\frac{3}{8} = 2\frac{1}{8}$
 recorded in cellar ---- 1948 gals.

Rashed May - 5/36.

Belling - 1.75%

Alcohol: $(12.9 - 1.75) \cdot 42 = 4.65\%$ "Striking Heat" - 153° "Initial" - - $140-142^{\circ}$ F. for 1st 26 lbs. $142-145^{\circ}$ - next 8 -

No 8 Tun

Ale.

April 29/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C., 10 B.C., 20 B.C. Truggles; 10 Bobs & 10 Kents = 75[#]

6 S; 6 M; 1.5 K. M. S.; 1 qt. P.

7.27^{am} Started to mash - $\frac{153}{37\frac{1}{2}}$

7.51 - Malt all in

8.06 - Whirlpool started - $\frac{210}{8}$; Steam - 8'

8.18 - Finished mashing

8.45 - Set Taps, Heat - 154'

Sparge - $\frac{130}{66\frac{1}{2}}$; Hot - $\frac{160}{32}$

First runs - 21.1%

Loat - - - 1.7%

Water - 37 $\frac{1}{2}$

8

66 $\frac{1}{2}$ 3 $\frac{1}{2}$

115 $\frac{1}{2}$

Into Cys.

98 hbls.

-10 $\frac{1}{2}$ -

Out of Cys.

87 $\frac{1}{2}$ hbls.

Balling.

14.0%

Yeast - * 13 Brew (55 lbs. + 1 $\frac{1}{2}$ Hour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation = 62 $\frac{1}{2}$ - 57 $\frac{1}{4}$ = 2 $\frac{1}{4}$ recovered in cellar -- ~~194~~ 194.6 gals.Racked May 6/36

Balling - 2.0%

Alcohol: (19.0 - 2.0) .42 = 5.04%

"Striking Heat" - 153'

"Initial" - - 140 - 142 $\frac{1}{2}$ for 1 $\frac{1}{2}$ - 30 hbls.142 $\frac{1}{2}$ - 141 " next 7 $\frac{1}{2}$ "

No. 9 Tun.

Ale.

April 30th

Malt - 5000 lb. C.M.C.

Hops - 20 B.C. ; 10 B.C. ; 25 B.C. Fuggles ; 10 Bohs + 10 Kents = 75[#] (all 1920⁺)G.S. ; 6 M ; 15 K.M.S. ; 1 $\frac{1}{2}$ L.Started to mash - $\frac{15\frac{1}{2}}{37\frac{1}{2}}$

Malt all in

Undealt in - $\frac{20}{8}$; Steam - $7\frac{1}{4}$

Finished mashing

Set Taps ; Heat - 154° George - $\frac{170}{67\frac{1}{2}}$; Hops - $\frac{160}{2}$

First run - 21.2?

Last - - - 1.6?

Water - 37 $\frac{1}{2}$

8

67 $\frac{1}{2}$

2

115

Into Cyp.

99 lbs.

Out of Cyp.

88 $\frac{1}{2}$

Belling.

13.8%

Yeast - * 13 Brew G.S. lbs. + 1 $\frac{1}{2}$ flour Air - 1 $\frac{1}{4}$ Quantity lost during fermentation = $63 - 60\frac{1}{2} = 2\frac{1}{2}$

recorded in cellar = -- 1981 gals.

Racked May 7/36

Belling - 2.15%

Alcohol : $(13.8 - 2.15) \cdot 92 = 4.89\%$

"Striking Heat" -

"Initial" - -

No. 10 Turn.

Alc.

May 1st

Malt - 5000 lbs. C.M.C.

Hops - 20 B.C., 10 B.C. + 25 B.C. Fuggles; 10 Bales + 10 Kents = 75[#] (all 1935's)68, 6M; 1.5 K.M.S., 19¹/₂ P.7.30^{am} - Started to mash - $\frac{152'}{38\frac{1}{2}}$

Malt all in

Underlet m - $\frac{210'}{8}$; Steam - $7\frac{1}{2}$

Finished mashing;

St Top; Heat - $16\frac{3}{4}$ George - $\frac{13\frac{1}{2}}{68}$; Htop - $\frac{16\frac{1}{2}}{3}$

First run - 21.1%

Last " - 1.75%

Water - 38 $\frac{1}{2}$

8

68

3

117 $\frac{1}{2}$

Into Cyp.

100 $\frac{1}{2}$ lbs.-10 $\frac{1}{2}$ -

Out of Cyp.

90 lbs.

Balling.

13.9%

Yeast - * 15 Brew (55 lbs. + $1\frac{1}{2}$ Flour)Air - $1\frac{1}{4}$

Quantity lost during fermentation -

" recorded in celler - - - 2013 gals.

Rashed May. 8/36

Balling - 2.25%

Alcohol: $(13.9 - 2.25) \cdot 42 = 4.88\%$ " Striking Heat - $16\frac{3}{4}$ " Initial " - $140 - (92\frac{1}{2})$ for $1\frac{1}{2}$ ^{22.25} ~~at~~ hll.143 - 144 $\frac{1}{2}$ " remainder.

No. 3 Truv.

Sparkling Ale

May 7th

Malt - 4500 lbs. C.M.C.

Hops - 20 B.C.; 20 B.C. Ryff. & 10 Keels; 20 Bohemians = 70^{##} (all 1955^{##})

5 S; 6 M; 1.5 K.M.S.

7:30^{am}Started to mash - $\frac{153}{33}$

Malt all in

Unclut m - $\frac{210}{8}$; Steam - $6\frac{1}{2}$

Finished mashing.

Set taps; Heat - 154° Sponge - $\frac{126}{69}$; Hops - $\frac{160}{22}$

First run - 20.9?

Last .. - 1.4?

Water - $\frac{33}{8}$

69

22112 $\frac{1}{2}$

Into Cys.

97 lbs.

Out of Cys.

87 lbs.

Balling

12.8%

Least - * 16 Brew (55 lbs. + $1\frac{1}{2}$ Flour)Air - $1\frac{1}{4}$ Quantity lost during fermentation - $57\frac{1}{2} - 55\frac{1}{2} = 2$

" recorded in cellar. - 1757 gals (some 150 gals were lost owing to the failure for mangle bar on the vat.)

Rashed May 11/36.

Balling - 1.8%

Alcohol: $(13.8 - 1.8) \cdot 92 = 4.627$ "Striking Heat" - 153°

"Initial" - " - 190 - (192) to 22 lbs.

193 - 199 $\frac{1}{2}$ " 33 "

No. 4 Tun.

Ale.

May. 5/36.

Malt - 5000 lbs. C. M. C.

Hops - 20 B.C.; 10 B.C. & 25 B.C. Fuggles; 10 Bales & 10 Kents = 75[#] (all 1925)
6 S; 6 M; 1.5 K. M. S.; 1 qt. P.7.27^{am} Started to mash - $\frac{103}{37}$

Malt all in

Underlet - $\frac{210}{8}$; Steam - $7\frac{1}{2}$

Finished mashing

Set Taps; Heat - 154° Sparge - $\frac{120}{68\frac{1}{2}}$; Hq. - $\frac{160}{2}$

First runs - 21.0%

Last " - 19%

Water - 37

8

68 $\frac{1}{2}$

2

115

Into Cys.

99 $\frac{1}{2}$ lbs.

-100-

Out of Cys.

89 $\frac{1}{2}$ lbs.Balling .
138%Yeast - *17 Barrow (55 lbs. + 1 $\frac{1}{2}$ Hour)Air - $1\frac{1}{4}$ Quantity ~~lost~~ ^{lost} during fermentation = $61\frac{1}{2} - 57\frac{1}{2} = 2\frac{1}{2}$
recorded in cellar - 1962 gals.

Racked May 12/36.

Balling - 1.85%

Alcohol: $(13.8 - 1.85) \cdot 42 = 5.02\%$

*Stirring Heat - 153

Initial " - 140 - (191) to 28 lbs. of mash water.

142 - 143 $\frac{1}{2}$ to 37 " " " "

No 6 Tun.

Ale.

May 7/36.

Malt = 5000 lbs. C. M. Co.

Hops - 20 B.C., 10 B.C., & 25 B.C. Fuggles; 10 Bohls & 10 Kents = 75 # (all 1930 crop)

G.S., 6 M., 1.5 K.H.S., 19 lb P.

7.32 am Started to mash - $\frac{163}{37\frac{1}{2}}$

7.45 " Malt all in

8.10 " Underlet on - $\frac{20}{8}$, Steam - $9\frac{1}{4}$

8.22 " Finished mashing

8.52 " Set Taps, Heat - 156°
Spargy - $\frac{170}{68}$; Hops - $\frac{160}{2\frac{1}{2}}$

First runs - 21.25%

Last " - 1.5%

Water - $37\frac{1}{2}$

68

2 $\frac{1}{2}$

116

Into Cop.

99 $\frac{1}{2}$ lbs.- 10 $\frac{1}{2}$ -

Out of Cop.

89 lbs.

Balling.

13.9%

Leak - * 19 Brew (55 lbs + $1\frac{1}{2}$ gal)Air - $1\frac{1}{4}$ Quantity lost during fermentation = $61\frac{1}{2}$ - $59\frac{1}{4}$ = $2\frac{3}{4}$
" recorded in cellar - - 1970 gal.

Racked May 14/36

Balling - 2.45%

Alcohol: $(13.9 - 2.45) \cdot 42 = 4.81\%$ "Striking Heat" - 153° "Initial " - $140 - 193^{\circ}$ up to 25 lbs. mark. $193 - 145\frac{1}{2} = 37\frac{1}{2}$

No 7 Tun.

Ale.

May 8/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C. + 25 B.C. Fuggles; 10 Bohol 10 Kent = 75[#] (all 1932)
6 S; 6 M; 1.5 K.M.S.; 1 qt R.7:30^{am} Started to mash - $\frac{153}{37\frac{1}{2}}$

Malt - all in

Underlet in - $\frac{80}{8}$; Steams - $7\frac{1}{4}$

Finished mashing

Set Taps; Heat - $11\frac{1}{4}$ Spray - $\frac{120}{68}$; Hops - $\frac{160}{7\frac{1}{2}}$

First run 20.5%

Last .. - 1.55%

Water - 37 $\frac{1}{2}$

8

68

1 $\frac{1}{2}$

115

Into Cys.

100 $\frac{1}{2}$ hlls.

Out of Cys.

- 10 $\frac{1}{2}$ - 90 hlls.

Balling

13.7%

Yeast - 20 Brew (55 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation = $62\frac{3}{4} - 59\frac{3}{4} = 2\frac{7}{8}$
recovered in cask - 1986 gals.

Recked May 15/36 Balling - 2.17

Alcohol: $(13.7 - 2.1) \cdot 42 = 4.87\%$

"Sticking Heat" - 153

Initial " " - 141 $\frac{1}{2}$ - 143 $\frac{3}{4}$ to 30 hlls.143 $\frac{1}{2}$ - 144 $\frac{1}{2}$ - 37 $\frac{1}{2}$

No. 8 Tun.

Ale.

May 11/36.

Malt - 5000 lb. C. M. Co.

Types - 20 B.C., 10 B.C., 25 B.C. Fuggles, 10 Bels & 10 Kent = 76th (all 1902)6 S; 6 M; 1.5 K. H.S.; 19th P.7.24^{am} Started to mash - $\frac{157}{36\frac{1}{2}}$

Malt all in

Underlet on - $\frac{20}{8}$, Steam 7'

Finished mashing

St 700; Heat - 152°

Spray - $\frac{12}{69}$; 47p - $\frac{16}{60}$

First runs - 21.0%

Last - 19%

Waters - $36\frac{1}{2}$

69

114114

Into Cys.

99 $\frac{1}{2}$ hbl.-10 $\frac{1}{2}$ -

Out of Cys.

89 hbl.

Balling.

13.5% *

Least - * 22 Brew (55 lb + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{2}$ Quantity lost during fermentation = $6\frac{1}{4} - 5\frac{3}{4} = 2\frac{1}{2}$ "

" recorded in cellar - 1909 gal

Racked May 18/36

Balling - 1.9%

Alcohol: (13.5 - 1.9) .42 = 4.79% - 3.

"Sticking Heat" - 152°

"Initial" - - (192) 199' for 1 $\frac{1}{2}$ 30 hbl.199 - 193 $\frac{1}{2}$ - net 6 $\frac{1}{2}$

* It is thought that some bags, not containing the usual amount of malt per bag, were included in this brew, accounting for the low balling final.

Instead of weighing out each brew of malt, it has been found more satisfactory to determine the number of bags per brew that each carload contains and to use accordingly. The carloads are kept separate in the bonded storeroom.

No 9 Tun.

Ale.

May 12/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C., 10 B. C., 25 B. C. Fuggles; 10 Bobs & 10 Keats = 75# (all 1900's)

6 S; 6 M; 1.5 K. M. S; 1 qt P.

7.25^{am} - Started to mash - $\frac{121}{38}$

7.48 - Malt all in

8.03 - Underlet on - $\frac{212}{8}$; Steam - $7\frac{1}{2}$

8.14 - Finished mashing

8.49 - Set taps; Heat = 154° Gauge - $67\frac{1}{2}$; H₂O - 27

First run - 20.7?

Lost - 2.0?

Water = $\frac{38}{8}$ 67 $\frac{1}{2}$

27

115 $\frac{1}{2}$

Into Cyp.

99 $\frac{1}{2}$ lbs.-10 $\frac{1}{2}$ -

Out of Cyp.

89 $\frac{1}{2}$ lbs.

Balling

13.8%

Least - 23 Brew (55 lbs + 1 $\frac{1}{2}$ Flour)Air - $1\frac{1}{4}$ Quantity lost during fermentation - $63\frac{1}{4} - 60\frac{1}{8} = 2\frac{3}{8}$

" recorded in cellar --- 1996 gals.

Racked May 19/36

Balling - 1.95%

Alcohol: $(13.8 - 1.95) \cdot 92 = 4.97\%$ "Striking Heat" - 153° "Initial" - $138 - 137 + 141$ ~~(142)~~ - 145° to 30 lbs. } mashing water $145^{\circ} - 144 - 145^{\circ}$ & 35 lbs.

No 10 Turn.

Ale.

May 13/36

Malt - 5000 lb. C. M. Co.

Hops - 20 B.C., 10 B.C., & 25 B.C. Fuggles ; 10 Bales & 10 Kegs = 75th (all 1935's)
6 S, 6 M; 10 K.M.S.; 10 P.R.7.29^{am} - Started to mash - $\frac{103}{38}$

Malt all in

Unsoluble m - $\frac{210}{8}$; Steam - 7'

Finished mashing

Set Taps, heat - 16.4'

Sponge - $\frac{170}{67\frac{1}{2}}$; Hop. $\frac{160}{1\frac{1}{2}}$

First runs - 20.75%

Last - - 1.8%

Water - 38

8

67 $\frac{1}{2}$ 1 $\frac{1}{2}$

115

Into Cyp.

99 $\frac{1}{2}$ hbl.

-10>-

Out of Cyp.

89 $\frac{1}{2}$ < hbl.

Balling

13.6%

Least - * 23 Brew (55 lbs + 1 $\frac{1}{2}$ Hour)Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation = 58 $\frac{1}{4}$ - 56 $\frac{1}{4}$ = 2"

" recorded in cellar - 1981 yls.

Reached May. 19/36

Balling - 20%

Alcohol: (13.6 - 2.0) . 42 = 4.87%

"Striking Heat" - 103°

"Initial " - 140 (142) - 143° & 30 hbl.

143 - 144 - 145 $\frac{1}{2}$ " - 38 "

No 3 Turn.

Ale.

May 14, '14

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C. + 25 B.C. Fuggles; 10 Bobs + 10 Kenls = 75# (all 1935)

6 S; 6 M; 15 H. M. S.; 19 P.

7.26 ^{am}	Started to mash - $\frac{103}{35}$	First run - 20.8%
7.49	Malt all in	Last .. - 1.8%
8.07	Underlet on - $\frac{210}{8}$; Steam - 7'	Water - $\frac{35}{8}$
8.17	Finished mashing	67 $\frac{1}{2}$
8.47	Set Hops; Heat - 154°	
	Sparge - $\frac{170}{67\frac{1}{2}}$; Hops. $\frac{160}{1}$	<hr/>
		119 $\frac{1}{2}$

Into Cys.	Out of Cys.	Balling.
99 $\frac{1}{4}$ hbls.	9 $\frac{1}{4}$ >	89 $\frac{1}{2}$ < hbl.
		13.7%

Yeast - * 24 Brew (55 lbs + 1 $\frac{1}{2}$ flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation = 58 $\frac{1}{4}$ - 56 $\frac{1}{4}$ = 2"
recorded in cellar --- 1965 gal.

Rashed May 21 /36 Balling - 2.07%

Alcohol : (13.7 - 2.07) .42 = 4.88%

"Striking Heat" - 153°

"Initial" - 190 (192 $\frac{1}{2}$) & 30 hbl.

193 - 196' & 35 .

No 9 Tun.

Ale.

May 15th

Malt - 5000 lb. C. M. Co.

Hops - 20 B.C. 2, 10 B.C. 1, 425 B.C. Hops, 10 Bobs & 10 Kents = 75th (all 1930's)

68, 6 M, 1.5 K.H.S, 19 K.B.

7:30^{am} Started to mash - $\frac{153}{37}$

Malt all in

Washed on - $\frac{218}{8}$; Steam - $6\frac{3}{4}$

Finished mashing

Set Taps; Heat - $15\frac{1}{4}$ Sparge - $\frac{172}{67\frac{1}{2}}$; Hops - $\frac{160}{7}$

First runs - 20.3%

Lost - - 1.8%

Water - $\frac{37}{8}$ 67 $\frac{1}{2}$

113 $\frac{1}{2}$

Into Cys.

98 $\frac{1}{2}$ llls.

-10-

Out of Cys.

88 $\frac{1}{2}$ llls.

Balling.

13.6%

Least - * 25 Brew (55 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - $59\frac{1}{2} - 57\frac{1}{2} = 2$ "

recorded in cellar - 1917 gals.

Reached May 22/36

Balling - 2.1%

Alcohol: $(13.6 - 2.1) \cdot 92 = 4.83\%$

"Sticking Heat" - 153°F.

"Initial" - - 141 - 143 to 30 llls.

193 - 145 to 27 "

No. 5 - Turn

Ale.

May 18/36.

Malt - 5000 lbs. C. M. C.

Hops - 20 B.C. 3; 10 B.C. 4 25; B.C. 9 Hops; 10 Bobs + 10 Kents = 75th (all 1935th)
6 S; 6 M; 1.5 K. U.S.; 19 F. R.7.30^{am} Started to mash - $\frac{153}{37}$

First runs - 20.6%

7.54 Malt all in

Last .. - 1.9%

8.09 Underlet in - $\frac{210}{8}$; Steam - $6\frac{3}{4}$ Water - $\frac{37}{8}$

8.19 Finished mashing

68

8.48 Set Taps; Heat - $154 - 154^{\circ}$ 1Sponge - $\frac{172}{68}$; Hops - $\frac{160}{1}$ 114

Into Cop.

Out of Cop.

Balling .

99 hlls.

-10-

89 hlls.

13.7%

Least - * 26 Brew (55 lbs. + $1\frac{1}{2}$ Flour)Air - $1\frac{1}{4}$ Quantity lost during fermentation = $60\frac{3}{4} - 58 = 2\frac{3}{4}$
" recorded in cellar - 19.27 gals.

Reached May 26/36. Balling - 2.0%

Alcohol: $(13.7 - 2.0) \cdot 92 = 4.91\%$ " Striking Heat " - 153° " Initial " - 141 - 142 - 143^o up to 30 hlls.143 - 145^o " " 37 "

No. 6 Turn.

Ale.

May 19/36.

Malt - 5000 lb. C. M. Co.

Hops - 20 B.C.s; 10 B.C. + 25 B.C. 7 lbs; 10 Bohs + 10 Kents = 75# (all 1925's)
6 S; 6 M; 1.5 K. M. S; 19# R.

7.09 ^{am}	Started to mash - $\frac{153}{37\frac{1}{2}}$	First runs - 20.8%
7.54	Malt all in	Last - - 19%
8.09	Underlet on - $\frac{20}{8}$; Steam - $6\frac{3}{4}$	Water - $37\frac{1}{2}$
8.20	Finished mashing	8
8.50	Set Hops, Heat - 154'	66 $\frac{1}{2}$
	Sparg - $\frac{121}{66\frac{1}{2}}$; Hops - $\frac{160}{7}$	<hr/> 113 <hr/>

Into Cys.
98 $\frac{3}{4}$ hls.Out of Cys.
-10 $\frac{1}{2}$ - 88 $\frac{1}{2}$ hls.Balling.
13.8%Yeast - *'s 26 and 27 Brews (57 lbs + 1 $\frac{1}{2}$ flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - 60 - 57 $\frac{1}{2}$ = 2 $\frac{1}{2}$
.. recorded in cellar 1926 gals.Racked May ~~21~~ 26/36 Balling - 2.1%

Alcohol: (13.8 - 2.1) .92 = 4.91%

Sticking Heat - 153'

Initial - 191 - (192) - 193 - 194' up to 30 hls.
199 - 195 $\frac{1}{2}$ up to 37 $\frac{1}{2}$

No 7 Tun.

Sparkling Ale.

May 20th.

Malt - 5000 lbs. C. M. C.

Hops - 20 B. C. ; 20 B. C. Fuggles & 10 Kent's ; 20 Boles = 70th (all 1935th)

5 S ; 6 M ; 1.5 K. M. S.

7.31^{am}Started to mash - $\frac{153}{33\frac{1}{2}}$

Malt all in

Wheulet on - $\frac{20}{8}$; Steam - 5%

Finished mashing

Set taps ; Heat - 155°

Sparg - $\frac{170}{69}$; Hops - $\frac{160}{34}$

First runs - 20.1%

Last - 1.7%

Water - 33 $\frac{1}{2}$ 69 $\frac{1}{2}$ 111 $\frac{1}{2}$

Into Cps.

97 lbs.

Out of Cps.

87 lbs.

Balling.

12.8%

Yeast - * 27 Brew (55 lbs. + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{2}$ Quantity lost during fermentation = 59 $\frac{3}{8}$ - 57 $\frac{1}{8}$ = 2"
" recorded in cellar 1901 gals.Racked May 27/36

Balling - 1.83%

Alcohol : (12.8 - 1.83) .42 = 4.61% ~~5.4~~

"Striking Heat" - 153°

"Initial" - 141 - (92 $\frac{1}{2}$) - 143 $\frac{1}{2}$ up to 20 lbs.143 $\frac{1}{2}$ - 145 $\frac{1}{2}$ up to 33 $\frac{1}{2}$ lbs.

No 8 Tun.

Ale.

May 21/36.

Malt - 5000 lbs. C. M. G.

Hops - 20 P.C.s; 10 P.C.s; & 25 P.C. Fuggles; 10 Bobs & 10 Kents = 75[#] (all 1935's)

6 S; 6 M; 1.5 K. M. S; 1 qt P.

7:29^{am} Started to mash - $\frac{153}{37}$

First runs - 20.6%

7:49 " Malt all in

Last .. - 2.5%

8:07 " Underlet on - $\frac{210}{8}$, Steam - $6\frac{1}{2}$ Waters - $3\frac{7}{8}$

8:17 " Finished mashing

 $66\frac{1}{2}$ 8:47 " Set taps; Heat - $15\frac{1}{2}$ $1\frac{1}{2}$ Gauge - $\frac{170}{66\frac{1}{2}}$; Htg - $\frac{160}{7\frac{1}{2}}$ 113

Into Cyp.

Out of Cyp.

Balling.

97 $\frac{5}{8}$ - 9 $\frac{1}{2}$

88 lbs.

13.7%

Yeast - * 27 & 28 Braws (56 lbs + 15 lbs) Air - $1\frac{1}{4}$ Quantity lost during fermentation = $61\frac{1}{4} - 57\frac{1}{8} = 2\frac{1}{8}$
" recorded in cellar 1918 gal.

Racked May 28/36

Balling - 2.06%

Alcohol: $(13.7 - 2.06) \cdot 82 = 9.89\%$ "Sticking Heat" - 153

"Initial" - 141 - (142) - 143 - 144 up to 20 lbs.

149 - 145

- 37

No 9 Tun.

Stout.

May 22/36.

Malt - 5000 lbs. C. M. Co. + 250 lbs. B. Barby (C. & O. M. Co.)
 Hops - 20 B. C.; 10 B. C.; & 25 B. C. Fuggles; 10 Bobs & 10 Kents = 75* (all 1935)
 6 S; 6 M; 1.5-t. M. S.; 150 lbs. P.; G. root - 3^{oz}; C. root - 2^{oz}; L. root - 2^{oz}

7:20 am Started to mash - $\frac{167\frac{1}{2}}{37\frac{1}{2}}$

First runs - 21.1%

7:43 Malt all in

Last .. - 1.9%

7:58 Underlet on - $\frac{210}{8}$; Steam - 2 $\frac{1}{2}$ Water - 37 $\frac{1}{2}$

8:10 Finished mashing

8:40 Set Taps; Heat - 155-156

Sponge - $\frac{170}{67\frac{1}{2}}$; Hops - $\frac{160}{4}$ 67 $\frac{1}{2}$

4

117

Into Cop.

Out of Cop.

Balling.

95 $\frac{1}{2}$ lbs.- 9 $\frac{1}{2}$ -

89 lbs.

14.5%

Heat - * 29 Brew (55 lbs. + 1 $\frac{1}{2}$ Hour) Air - 1 $\frac{1}{2}$

Quantity lost during fermentation - 63 $\frac{1}{2}$ - 60 $\frac{1}{2}$ = 2 $\frac{1}{2}$
 " recorded in cellar 2005 gals.

Racked May 29/36

Balling - 2.6%

Alcohol: 1

"Striking Heat" - 157 - 157 $\frac{1}{2}$ "Initial" - 146 - 146 $\frac{1}{2}$ - (147) - 147 $\frac{1}{2}$ - 148

No. 10 Turn.

Ale.

May 26^{1/2}

Malt = 5000 lbs. C. H. Co.

Hops - (20 B.C.; 10 B.C. + 25 B.C. Fuggles; 10 Bohs + 10 Kents = 75^{lb} (all 1905's))

6 S; 6 M; 1.5 K. M. S. 7 1/2 lb.

7:25^{am}Started to mash - $\frac{153}{36\frac{1}{2}}$

Malt all in

Underlet on - $\frac{210}{8}$ Steam - $6\frac{1}{2}$

Finished mashing

Set taps & heat - $157 - 153$ Spray - $\frac{17}{66\frac{1}{2}}$ & Hops - $\frac{476}{12}$

First run - 21.05%

Last .. - 1.85%

Water - $36\frac{1}{2}$

8

66 $\frac{1}{2}$

12

1122Into Cys.
97 $\frac{1}{2}$ 95 lbs.- 9 $\frac{3}{4}$ -Out of Cys.
88 lbs.Balling
13.9%Least - * 81 Brew (55 lbs + 1 $\frac{1}{2}$ Flour)Air - $\frac{1}{4}$

Quantity lost during fermentation

" recorded in cellar 1910 gals.

Racked May June 2/36 Balling - 1.85%

Alcohol: (13.9 - 1.85) . 92 = 5.06%

Sticking Heat - 153

Initial " - 191 - 142 - (191 $\frac{1}{2}$) - 143 - 143 $\frac{1}{2}$ up to 30 lbs.193 - 145 $\frac{1}{2}$ up to 36 $\frac{1}{2}$ lbs.

N.B. A nasty stench was noted, coming from this
 brew, previous to, and during skimming. Microscopical
 examination failed to reveal sarcina. However, all
 yeast skimmed off was immediately put down the sewer,
 and provision made for this brew being put in
 a vat by itself in the storage cellar.

No. 3 Trm.

Ale.

May 27th

Malt = 5000 lbs. C. M. Co.

Tops - 20 B.C.s; 10 B.C.s, & 25 B.C. Fuggles, 10 Boho & 10 Kents = 75[#] (all 20
68; 6 M, 1.5 W.M.S., 1 1/2 P.

7.25 ^{am}	Started to mash - $\frac{153}{36}$	First run - 21.0%
7.49	Malt-all in	Last " - 1.9%
8.04	Underlet in - $\frac{210}{8}$; Steam - $6\frac{1}{2}$ '	Water - 36
8.17	Finished mashing	68 $\frac{1}{2}$
8.47	Set Tops, Heat - $154\frac{1}{2}$	1
	Sprays - $\frac{170}{68\frac{1}{2}}$; Hops - $\frac{160}{1}$	<hr/> 113 $\frac{1}{2}$

Into Cyp.	Out of Cyp.	Balling.
98 lbs.	- 10 -	88 lbs.
		13.75%

Least - * 32 Brew (55 lbs. + 1 1/2 Flour) Air - 1 1/4'

Quantity lost during fermentation -
" recorded in cellar 1933 gals.Rashed ~~May~~ June 3/36. Balling - 2.05%

Alcohol: (13.75 - 2.05) . 92 = 4.91%

" Striking Heat - 153°

" Initial " - 191 - (192) - 193 - 193 1/2 up to 20 lbs.

193 1/2 - 195 " " - 36 "

No 4 Tun.

Ale.

May 28/36.

Malt - 5000 lbs. C. M. G.

Hops - 20 B.C.; 10 B.C. + 35 B.C. Puyfles; 10 Bohs + 10 Kenls = 75[#] (all 1850's)
6S; 6M; 1.5 K.M.S; 1qt. R.726^{am} Started to mash - $\frac{153}{36}$

First run - 20.75%

741 Malt all in

Last .. - 2.1%

804 Underlet in - $\frac{216}{8}$; Steam - $6\frac{3}{4}$ Water - $\frac{96}{8}$

813 Finished mashing

68 $\frac{1}{2}$ 843 Set Cops; Heat - 154° 17Sparge - $\frac{221}{684}$; Top - $\frac{160}{17}$ 113 $\frac{1}{2}$

Date Cop.

Out of Cop.

Balling.

97 $\frac{1}{2}$ lbs.- 10 $\frac{3}{4}$ 87 $\frac{1}{4}$ lbs.

13.85%

Least - * 39 Brew (55 lbs. + $1\frac{1}{2}$ Flour) Air - $1\frac{1}{4}$ Quantity lost during fermentation - $57\frac{1}{2}$ - $57\frac{1}{4}$ = $1\frac{1}{4}$ "
" recorded in cellar - 1912 gals.

Racked June 4/36. Balling - 2.0%

Alcohol: (13.85 - 2.0) .42 = 4.98%

" Sticking heat " - 153° " Initial " - $141 - (143) - 143^{\circ}$ up to 30 lbs.
 $143^{\circ} - 144^{\circ}$ " " 36 "

No. 5 Turn.

Alb.

May 29/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.s; 10 B.C.s & 25 B.C. Fuggles; 10 Bels & 10 Kents = 75^{##} (all 1925)
6 S; 6 M; 1.5 K. M. S; 19/19.Started to mash $\frac{42}{36}$

Malt all in

Underlet on $-\frac{20}{8}$; Steam $-7\frac{1}{2}$

Finished mashing

Set taps; Heat $-15\frac{1}{2}$ Sparge $-\frac{170}{68}$; Hop $-\frac{16}{7}$

First run - 20.5%

Last - 2.1%

Water $-\frac{56}{8}$

68

1

114

Into Cys.

97 $\frac{1}{2}$ hlls. $-10\frac{1}{2}$

Out of Cys.

87 $\frac{1}{2}$ hlls.

Balling

13.75%

Leak - * 34 + 35 Brews (55 lbs. + 1 $\frac{1}{2}$ f.)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - 59 - 56 $\frac{3}{4}$ = 2 $\frac{1}{4}$
" recorded in cellar - 1896 gals.

Racked June 6/36 - Balling - 1.9%

Alcohol: (13.75 - 1.9) 72 = 4.97%

"Striking Heat" - 15 $\frac{1}{2}$ "Initial " - 139 - 140 (41) - 148 $\frac{1}{2}$ up to 30 hlls142 - 143 $\frac{1}{2}$ " " 36 "

N.B. A reduction of 1° was made in the temperature of the mash water to cope with the steadily increasing milder weather.

No. 6 Turn.

Ale.

June 1st
~~May~~

Malt - 5000 lbs. C. M. Co.

Taps - 20 B. C. 2; 10 B. C. 3; 25 B. C. Toggles; 10 Cots & 10 Keels = 75[#]
68[#]; 6 M; 1.5 K. M. S.; 1 1/2 P.7:25^{am} - Started to mash - $\frac{152}{36}$

Malt all in

Unbollet in - $\frac{260}{8}$ Steam - $7\frac{3}{4}$

Finished mashing

Set Taps, heat - 152° Gauge - $\frac{72}{68}$; stop - $\frac{160}{1}$

First runs - 20.75%

Lost - - 2.0%

Water - $\frac{36}{8}$

68

1

113

Into Cys.

97 1/2 lbs.

- 9 3/4 -

Out of Cys.

87 3/4

Balling

13.65%

Yeast - * B8 Brew (60 lbs. + 1 1/2 Flour)

Air - $1\frac{1}{4}$ Quantity lost during fermentation $59\frac{1}{4} - 57\frac{1}{2} = 2\frac{1}{4}$

" recorded in cellar - 1919 gals.

Racked June 8/36

Balling - 1.85%

Alcohol: $(13.66 - 1.85) \cdot 42 = 4.95\%$ "Sticking heat" - $152 - 153$

"Initial" - 139 - 141 - 142 up to 30 lbs.

142 - 144 - - - 36 -

No 7 Tun.

Ale.

June 2/36.

Malt - 5000 lbs. C. M. C.

Hops - 20 B. C. 1; 10 B. C. 2 & 25 B. C. Fuggles; 10 Bales & 10 Kents = 75⁺ (all 1935⁺)
6 S; 6 M; 1.5 K. M. S.; 1 qt 17.

7.29 ^{am}	Started to mash - $\frac{153}{32\frac{1}{2}}$	First runs - 20.9%
7.46	Malt all in	Last .. - 1.9%
8.01	Underlet on - $\frac{210}{8}$; Steam - $7\frac{3}{4}$	Water - $36\frac{1}{2}$
8.13	Finished mashing	8
8.43	Set taps; Heat = 104°	67
	Sponge - $\frac{176}{67}$; Kp - $\frac{166}{2}$	2
		<u>113$\frac{1}{2}$</u>

Into Cyp.	Out of Cyp.	Balling
97 lbs.	- $9\frac{3}{4}$ -	87 $\frac{1}{2}$ lbs.
		13.8%

Yeast - * 38 Brew (60 lbs + $1\frac{1}{2}$?) Air - $1\frac{1}{2}$ Quantity lost during fermentation - $60\frac{1}{2} - 58\frac{1}{2} = 2$
" recorded in cellar 19.26 gals.

Racked June 9/36 Balling - 1.85%

Alcohol: $(13.8 - 1.85) \cdot 42 = 5.02\%$ "Striking Heat" - 152° "Initial .." - $129 - 140$ (17) - 142 up to 30 dds.
 $142 - 143\frac{1}{2}$.. - 36%

No 8 Tun.

Ale.

June 3/36

Malt - 5000 lbs. C.M. Co.

Hops - 20 B.C.s; 10 B.C.s + 25 B.C. Fuggles; 10 Boks + 10 Kents = 75[#] (all 1935)
6 S; 6 M; 1.5 K.M.S; 19t. B.7.28^{am} Started to mash - $\frac{152}{36\frac{1}{2}}$

7.57 Malt all in

8.06 Underbit - m - $\frac{210}{8}$; Keum - $7\frac{1}{2}$

8.16 Finished mashing

8.46 Set Taps; Heat - 103° Sarge - $\frac{170}{67}$; Hop - $\frac{160}{27}$

First runs - 21.0%

Yeast - - 1.8%

Waters - $36\frac{1}{2}$

8

67

24

113 $\frac{3}{4}$

Into Cys.

97 lbs.

- 10 -

Out of Cys.

87 lbs.

Balling.

13.85%

Yeast - From Keith's (60 lbs + 1 $\frac{1}{2}$ lb) Air - $1\frac{1}{2}$ Quantity lost during fermentation = $61 - 59\frac{1}{8} = 1\frac{7}{8}$

" recorded in cellar - 1922 gals

Racked Juneth 10, 1936 Balling - 2.0%Alcohol: $(13.85 - 2.0) \cdot 42 = 4.97\%$ "Slicking Heat" - 150° "Initial" - 140 - 141 - $(141\frac{1}{2})$ - 142 - 142 $\frac{1}{2}$ up to 30 lbs.142 $\frac{1}{2}$ - 144 $\frac{1}{2}$ " 36 $\frac{1}{2}$ "

No 9 Tun.

Stout.

June 7th

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.s; 10 B.C.s or 25 B.C. Fuggles; 10 Bolo + 10 Kenta = 75th (all 1935-6)6 S; 6 M; 1.5 K.M.S; ~~1.5~~^{1.30} P.; 9. nat. 3rd; 3. nat. 3. lbs.; 3. nat. 3rd.7.29^{am} Started to mash - $\frac{157}{37}$

First run - 21.9%

7.49 - Malt all in

Last - - 1.6%

8.07 - Underlet on - $\frac{42}{8}$; Steam

Water - 37

8.16 - Finished mashing

69

8.46 - Set Taps; Heat

2 1/2Sparge - $\frac{170}{69}$; Hops - $\frac{160}{2 1/2}$ 116 1/2

Into Cup.

Out of Cup.

Balling.

99 lbs.

- 9 -

70 lbs.

14.5%

Least - Keith's ^{38 Brew} (55 lb + 1 1/2 ?)

Air - 1 1/4

Quantity lost during fermentation = $63 \frac{1}{2} - 61 \frac{1}{8} = 2 \frac{3}{8}$
" recorded in cellar 2001 gals.Racked June 11/36

Balling - 2.63%

Alcohol: 7-

"Striking Heat" - 159°

Dinited " - 196 - 197 - 197 1/2 - 198

No 10 Turn.

Sparkling Ale.

June 8th 1936

Malt - 4500 lbs. C.M.C.

Hops - 20 B.C.; 20 B.C. Tuffe + 10 Kents; 20 Bobs = 70^{lb} (all 1935's)

5 S; 6 M; 1.5 K.M.S.

7.24^{am} Started to mash - $\frac{152}{32\frac{1}{2}}$

Malt all in

Underlet w - $\frac{211}{8}$; Steam - $6\frac{1}{4}$

Finished mashing

Set taps; Heat - 154°C Sponge - $\frac{170}{70}$; Hops - $\frac{160}{1\frac{1}{2}}$

First runs - 20.3%

Let - - 1.7%

Water - $32\frac{1}{8}$

70

1 1/2112

Into Cyp.

96 lbs.

Out of Cyp.

-10 1/4 -

85 3/4 lbs.

Balling.

12.85%

Leant - * 40 Brew (50 lbs + 1 1/2 flow) Air - 1 1/4

Quantity lost during fermentation 55 - 53 3/4 = 1 1/4

recorded in cellar - 1903 gals

Racked June 15/36

Balling - 1.7%

Alcohol : (12.85 - 1.7) . 92 = 4.65%

'Sticking H.' - $151\frac{1}{2}$ 'Trilled H.' - 140 - 141 - 141 1/2 - 142 - 143 - 144

TOWARDS UNIFORMITY.

June
May, 1936.

- (1.) That we adopt an "initial heat" to be used both summer and winter, thus avoiding the seasonal fluctuations now experienced. Makes for uniformity in the finished product. ✓

<u>VARIATION:</u> (Average)	<u>Final % Boiling</u>	<u>% C H OH</u> 2 5
September.....	2.6	
October.....	2.5	
November.....	2.3	4.81
December.....	2.35	4.77
January.....	2.56	4.70
February.....	2.28	4.83
March.....	2.08	4.90
April.....	2.11	4.89
May.....	2.07	4.88

- (2.) Instal a thermometer on the iron side of mash tub and so contrive to have the tub pre-heated to the same degree, regardless of the seasons. If we use two barrels of water at 210 F. all year 'round (as is done at present), making no correction for outdoor temperatures, the variations in mashing "heats" are inevitable. ✓

- (3.) With an eye to keeping pace with scientific thought in brewing practices, as well as improving the yield of extract, "break" in the kettle, body and foam capacity, improving our product in an all around way, this suggestion is put forth. It is, -- to "burtonize" our brewing water. Since our water has little of anything in it as regards minerals, would it not be following accepted practice and improving our beer by adding CaSO₄, Na Cl, etc. in right proportions? ?

(4.) That we boil each brew for a definite period, after the taps have been shut off and the kettle "full."

At present, for example, if the sparge is "all off" at 10.30 a. m., the first hops are added at 10.30 and the brew is kept boiling for three hours, but for the first 15 - 20 minutes (10.30 - 10.50), while the taps are still draining, one is boiling away what one is trying to "make-up." What makes for non-uniformity in the amount boiled away each day, is the fact that on some days, the tub drains quickly, whereas on other occasions it may take as much as 40 minutes from the time of shutting off of the sparger.

Consequently, boil-downs vary greatly; and the brewmaster finds it difficult to count on a definite amount of evaporation.

N.13. (9)

June 9/36 :

It has been decided that we boil the brew for 10 mins., just before the kettle is "made up", in order to get a satisfactory "break"; then, after the taps have been shut off and the "kettle full", the brew is to be boiled for $2\frac{1}{2}$ hours with addition of hops as follows.

1st hops - at time of "make-up"

2nd " - $1\frac{1}{4}$ hours later

3rd " - 2 hours after "make-up"

"Turn Out" - $2\frac{1}{2}$ " " "

David Oswald Jr. B.M.

No 3 Tun.

Ale.

June 9th

Malt - 5000 lbs C. M. Co.

~~Hops - 20 B.C., 20 B.C. Fuggles & 10 Kent;~~Hops - 20 B.C., 10 B.C., & 55 B.C. Fuggles; 10 Bobs & 10 Kents = 75th (all 1920's)

6 S; 6 M; 10 K. M. S; 1 qt. P.

7.24^{am} Started to mash - $\frac{152}{36}$

First runs - 21.05%

7.49 Malt all in

Lost " - 1.9%

7.57 Underlet on - $\frac{210}{8}$; Steam - 7 $\frac{1}{2}$ Water - $\frac{36}{5}$

8.18 Finished mashing

66 $\frac{1}{2}$ 8.41 Set Taps, Heat - 15 $\frac{1}{2}$

3

Spray - $\frac{170}{66\frac{1}{2}}$; top - $\frac{160}{3}$

114

Into Cys.

Out of Cys.

Balling.

96 bbls.

- 97 -

87 $\frac{1}{2}$

13.7%

Least - * 40 + 41 Bous (60 lbs + 1 $\frac{1}{2}$ lb) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 57 $\frac{3}{4}$ - 56 $\frac{1}{2}$ = 1 $\frac{1}{2}$

" recorded in cellar - 1952

Racked June 17/36

Balling - 1.9%

Alcohol: (13.7 - 1.9) . 92 = 4.95%

"Striking Heat" - 15 $\frac{1}{2}$ "

Initial " " - 139 - 140 (171) - 142 up to 30 bbl.

142 - 143 - 144

" - 36 $\frac{1}{2}$ "

To complete fermentation more thoroughly, this
 brew was held in the F. V. an extra day.

No 4 Tun.

Ale.

June 10th

Malt - 5000 lb. C. M. Co. (New Car).

Hops - 20 B.C.s; 10 B.C.s; 25 B.C. Fuggles; 10 Bohs & 10 Kent's = 75th (all 1935)
6 S; 6 M; 15 K.M.S; 19 P.7.32^{am}Started to mash - $\frac{151}{36}$

Malt all in

Undulst m - $\frac{211}{8}$; Steam - $7\frac{1}{2}$

Finished mashing;

Set Taps; Heat - $157\frac{1}{2}$ Sparge - $\frac{157}{68}$; Hops - $\frac{160}{7}$

First run - 20.85%

Lost - - 1.95%

Water - 36

8

68

113

Into Cyp.

97 lbs.

- $9\frac{3}{4}$ -

Out of Cyp.

87 $\frac{3}{4}$ lbs.

Balling

13.7%

Yeast - $\frac{1}{2}$ 41 & 42 Brews (55 lbs + 13 $\frac{1}{2}$) Air - $1\frac{1}{4}$ Quantity lost during fermentation - $59\frac{1}{2}$ - $57\frac{1}{2}$ = $1\frac{1}{2}$
recorded in cellar 1923 gals

Racked June 17/36

Balling - 1.85%

Alcohol: $(13.7 - 1.85) \cdot 92 = 4.96\%$ "Striking Heat" - $151\frac{1}{2}$ "Initial " - $140 - 141 - (142) - 143 - 144$

No. 5 - Tun.

Ale.

June 11/36.

Malt - 5000 C.M.C.

Hops - 20 B.C.s; 10 B.P.s + 25 B.C. Tuggles; 10 B.H.s + 10 Kants - 75th (all 1935)
6 S; 6 M; 15 K.M.S. & 19th P.Started to mash - $\frac{152}{35}$

Malt all in

Underlet on - $\frac{21}{8}$; Steam - 7'

Finished mashing

Set Taps; heat - 154°

Sperge - $\frac{176}{68}$ Hops - $\frac{160}{2}$

First run - 20.8%

Lost .. - 2.0%

Water - 35 $\frac{1}{2}$

8

68E

2

113 $\frac{1}{2}$

Into Cop.

96 $\frac{1}{2}$ lbs.

Out of Cop

- 9 $\frac{3}{4}$ -86 $\frac{3}{4}$ lbs.

Balling.

13.7%

Least - * 43 Brew (5 F. lbs. + 1 $\frac{1}{2}$ F.) Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation - 60 - 57 $\frac{1}{2}$ = 2 $\frac{1}{2}$ "
" recorded in cellar 1930 gals.Racked June 18/36

Balling - 19.5%

Alcohol: (13.7 - 19.5) . 42 = 4.93%

"Sticking/heat" -

"Initial" -

No. 6 Tun.

Ale.

June 12th

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C. + 25 B.C. Fuggles; 10 Bobs + 10 Kents = 75[#] (all 1900)6 S; 6 M; 15 K.M.S.; 19⁺ P.7.27^{am} Started to mash - $\frac{107\frac{1}{2}}{36}$

7.49 - Malt all in

Underlet or - $\frac{30}{8}$; Steam - $6\frac{1}{2}$

Finished mashing

Set Taps, Heat - $15\frac{3}{4}$ Spray - $\frac{170}{67\frac{1}{2}}$; Hop - $\frac{110}{4}$

First runs - 20.75%

Last " - 2.25%

Water - $\frac{36}{8}$ 67 $\frac{1}{2}$

1

112 $\frac{1}{2}$

Into Cyp.

96 $\frac{1}{2}$ lbs.- 9 $\frac{1}{2}$ -

Out of Cyp.

87 $\frac{1}{2}$ lbs.

Belling

13.75%

Yeast - $\frac{1}{2}$ 49 of 49 Brels (50 lbs + $\frac{1}{2}$ Flour) Air - $1\frac{1}{4}$
(Yeast not very good)Quantity lost during fermentation = 59 - 57 $\frac{3}{4}$ = $1\frac{1}{4}$

recorded in cellar = 1888 gals.

Racked June 19 / 36

Belling - 1.95%

Alcohol: (13.75 - 1.95) $\cdot 42$ = 4.95%"Striking Heat" = 161 $\frac{1}{2}$

"Initial " = 141 - 142° F.

No 7 Tun.

Ale.

June 15/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C. 2; 10 B.C. 1; 4 25 B.C. Fuggles; 10 Bobs + 10 Kent's = 75^{###}
6 S; 6 M; 1.5 K. M. S; 1 qt P.

7.30 ^{am}	Started to mash - $\frac{15\frac{1}{2}}{36}$	First runs - 20.45%
7.52 "	Malt all in	Lost .. - 1.9%
8.08 "	Underlet on - $\frac{20}{8}$; Steam - 6 $\frac{1}{2}$	Water - 36
8.18 "	Finished mash	$\frac{68}{8}$
8.47 "	Set Tap, Heat - 153-4 ^o	$\frac{1}{113}$
	Sperge - $\frac{170}{68}$; Hops - 1	

Into Cyp.

Out of Cyp.

Balling.

96 $\frac{1}{2}$ lbs.- 9 $\frac{1}{4}$ -57 $\frac{1}{4}$ lbs.

13.75%

Yeast - * 40° Brew (3 lbs + $\frac{1}{2}$ Flor) Air - 1 $\frac{1}{4}$ Quantity - lost during fermentation = 60 $\frac{1}{2}$ - 58 $\frac{1}{4}$ = 1 $\frac{3}{4}$
recorded in cellar 1924 gals.Racked June 22/36 Balling - 1.9%

Alcohol: (13.75 - 1.9) .42 = 4.97%

"Striking Heat" - 151 $\frac{1}{2}$ - 149 $\frac{1}{2}$ ° F.

"Initial Heat" - 141 - 140° F.

No 8 Turn.

Ale.

June 16th

Malt - 5000 lbs. C. M. Co.

Tops - 20 B.C.; 10 B.C.; 14 25 B.C. Fuggles; 10 Bohrs & 10 Kent = 75th Call 190

6 S ; 6 M ; 1.5 K.M.S ; 1 1/2 P.

7.25^{am} - Started to mash - $\frac{15 \frac{1}{2}}{36}$

7.47 " Malt all in

8.02 " Underlet on - $\frac{260}{8}$; Steam - 7'

8.17 " Finished mashing

8.47 " Set Tops; Heat - 154° Sarge - $6 \frac{1}{2}$ s/hp - $\frac{160}{1}$

First runs - 20.75%

Lost .. - 2.25%

Water - 36

8

67 1/2

1

112 1/2

Inlet Cys.

96 1/2 hls.

Out of Cys.

- 8 3/4 -

87 3/4 hls.

Balling

13.6%

Gest - * 46 Brew (5 1/2 hls + 1 1/2 hls) Air - 1 1/4'

Quantity lost during fermentation = $61 \frac{1}{8} - 59 \frac{3}{8} = 1 \frac{1}{2}$

" recorded in cellar - 1946 gals.

Rashed June - 24/36 Balling - 1.85%

Alcohol: $(13.6 - 1.85) \cdot 92 = 4.93\%$ Sticking Heat - $15 \frac{1}{2} \rightarrow 148 \frac{1}{2}$

Initial .. - 171 - 192°

No 9 Tun.

Ale.

June 17. [#]

Malt - 5000 lbs. C. H. Co.

Hops - 20 B.C.s, 10 B.C. + 25 B.C. Fuggles; 10 Bohs + 10 Kents = 75# (all 1925)
6 S; 6 M; 1.5 K.H.S; 19# P.

7.21 ^{am}	Started to mash - $\frac{151}{36}$	First run - 20.8%
7.43	Malt all in	Last - - 2.3%
8.08	Underlet on - $\frac{210}{8}$; Steam - $\frac{7}{4}$	Water - $36 \frac{1}{2}$
8.19	Finished mashing	$66 \frac{1}{2}$
8.49	Set Taps, Heat - 153	<u>2</u>
	Spurge - $\frac{12}{662}$ stop - $\frac{160}{2}$	<u>113</u>

Into Cyp.	Out of Cyp.	Balling.
96 lbs.	- 97 - 86 $\frac{3}{4}$ lbs.	13.75%

Least - 43 lbs * 47 Brew + 15 lbs of No 46 Brew Air - 17'

Quantity lost during fermentation = $61 \frac{3}{8} - 59 \frac{3}{8} = 2$
 " recorded in cellar = 1944 gals.

Racked June 25th 36 Balling - 1.8%Alcohol: $(13.75 - 1.8) \cdot 92 = 5.02\%$

"Striking Heat" - 151 - 148°

"Initial" - 140 - 141 - 142° F.

No 10 Tun

Ale.

June 18/36

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C., 10 B.C. + 25 B.C. Fuggles; 10 Bohs + 10 Kents = 75th Cell 1920

6 S; 6 M; 1.5 K.M.S.; 19 P.

7.27^{am} Started to mash $\frac{15\frac{1}{2}}{37}$

Malt all in

Underlet on $\frac{2\frac{10}{8}}$

Finished mashing

Set 7 eyes, Heat -15° Large $\frac{17\frac{1}{2}}{66}$; Hop $\frac{160}{2\frac{1}{2}}$

First runs - 21.1%

Last - 1.75%

Water - $\frac{3\frac{1}{2}}{8}$

66

2 $\frac{1}{2}$ 113 $\frac{1}{2}$

Into Cys.

96 $\frac{1}{2}$ lbs.

Out of Cys.

 $-9\frac{1}{4} - 87\frac{1}{4}$ lbs.

Balling

13.95%

Yeast - * 48 Brew (58 lbs + 1 $\frac{1}{2}$ flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation = $57\frac{1}{2} - 56 = 1\frac{1}{2}$

" recorded in cellar = 1970 gals.

Recked June 22nd/36

Dalling - 1.9%

Alcohol: $(13.95 - 1.9) \cdot 42 = 5.06\%$ "Starting Heat" - $157\frac{1}{2} - 148\frac{1}{2} = 1^{\circ}$ "Initial" - $141 - 142^{\circ} = 1^{\circ}$

N.B. It was noticed that the malt was not being ground as finely as should, ^{the} so commencing with this brew, the malt is crushed finer than in the recent past.

It will be noted that the "First runs" are 21.1%, (higher than in the past,) while the "Last runs" are 1.75% (lower than in the past).

No 3 Tun.

Stout.

June 19/36.

Malt - 5000 lbs. C. M. C. + 250 lbs B. Barley (C + P. M. Cos.)
 Hops - 20 B. C., 10 B. C. & 25 B. C. Fuggles; 10 B. H. & 10 Kent = 75.
 6 S; 6 M; 1.5 K. M. S.; 130 lbs. R.; 9 root. 3. & C. root - 3 & P. root - 2

7.27 ^{am}	Started to mash - 160 $\frac{165}{37}$	First run -
8.52	Malt all in	Last -
8.08	Underlet on - $\frac{200}{8}$; Steam - $\frac{1}{2}$	Water - 37
8.15	Finished mashing	69 $\frac{1}{2}$
8.45	Set Taps; Heat - 157 - 8'	3
	Final mashing Sparge - $\frac{170}{6 \frac{1}{2}}$; Hops - $\frac{160}{5}$	<u>117 $\frac{1}{2}$</u>

Into Cos.	Out of Cos.	Balling.
99 hbls.	- 8 $\frac{3}{4}$ -	90 $\frac{3}{4}$ hbls.
		14.6%

Least - * 48 + 49 Brews (60 lb + 1 $\frac{1}{2}$ Head Air - 1 $\frac{1}{4}$

Quantity lost during fermentation 59 $\frac{1}{8}$ - 58 $\frac{1}{2}$ = 1 $\frac{3}{8}$
 " recorded in cellar 2039 gals.

Ranked June 26/36 Balling - 2.67

Alcohol:

"Striking Heat" - 163° → 158 $\frac{1}{2}$ ° F.

"Initial " - 150 - 151° F. (Temp. in tub at end of mashing - 148°
 - 149°)

No 4 Tun.

Ale.

June 22nd

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C. 2; 10 B. C. 4 25 B. C. Fuggles; 10 B. C. 4 10 Kent = 75th Call 192

6 S; 6 M; 1.5 K. M. S; 1 qt. R.

7.25^{am} - Started to mash - $\frac{152}{37}$

7.54 - Malt all in

8.09 - Underlet on - $\frac{210}{8}$; Steam - $7\frac{1}{4}$

8.15 - Finished mashing

8.48 - Set Hops, Heat - $\frac{154}{3}$ Gauge - $\frac{170}{67}$; Hops - $\frac{161}{3}$

First runs - 21.2%

Last .. - 1.5%

Water - 37

8

67

3

115

Into Cyp.

97 lbs.

Out of Cyp.

- $8\frac{3}{4}$ -88 $\frac{1}{4}$

Balling.

14.0%

Yeast - #1, 49 + 50 Brews (58 lbs + 1 $\frac{1}{2}$ Flour) Wier - $1\frac{1}{4}$ Quantity lost during fermentation $61\frac{1}{8} - 69\frac{1}{8} = 2$
- recorded in cellar - 1973 gals.Racked June 30th/36

Balling - 1.8%

Alcohol: $(19.0 - 1.8) \cdot 42 = 5.12\%$ Striking Heat - $152 - 148\frac{1}{2}$ °F.Initial " - $141 - 140$ °F.

No. 5 - Tun.

Ale.

June 29/36.

Malt - 5000 lb. C. M. Co.

Hops - 20 B.C., 10 B.C., 4 25-B.C. Fuggles, 10 Bolus & 10 Kent = 75[#] (all 1935⁺)
6 S, 6 M, 15 K.M.S., 19/P.1.28^{am} Started to mash - $\frac{151}{37}$

7.50 Malt all in

8.05⁺ Underlet on - $\frac{20}{8}$; Steam - $7\frac{1}{2}$

8.17 Finished mashing

8.47⁺ Set Cops; Heat - $153\frac{1}{4}$ Sponge - $\frac{70}{68}$; Hsp - $3\frac{1}{2}$

First run - 21.9%

Last - - 1.4%

Water - 37

8

68

3 $\frac{1}{2}$

116 $\frac{1}{2}$

Inb. Cops.

98 lbs.

- 9 $\frac{1}{2}$ -

Out of Cops.

88 $\frac{1}{2}$ lbs.

Balling.

13.85%

Yeast - * 51 + 52 Buns (55 lb + 1 $\frac{1}{2}$ Hour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 62 $\frac{1}{4}$ - 60 = 2 $\frac{1}{4}$
recorded in cellar 1998 job.

Racked July 2/36.

Balling - 1.9%

Alcohol: (13.85 - 1.9) . 92 = 5.01%

"Sticking Heat" 157 $\frac{1}{2}$ → 148 $\frac{1}{2}$ °F.

"Initial" - - 191 - 192 °F.

No. 6 Tun.

Ale.

June 25th

Malt - 5000 lbs. C. M. C. + 40 lbs. "surplus" (New Car).

Hops - 20 B.C., 10 B.C., 4 25 B.C. Fuggles; 10 Bobs + 10 Kents = 75# (all)

6 S; 6 M; 1.5 K. M. S; 1 qt R.

7:24^{am} - Started to mash - $\frac{151}{38}$

7:45 - Malt all in.

8:00 - Underlet on - $\frac{211}{8}$; Steam - $8\frac{3}{4}$

8:17 - Finished mashing

* 8:47 - Let Taps, Heat - 154°

Sparge - $\frac{170}{68\frac{1}{2}}$; Hops - $\frac{40}{32}$

First runs - 21.6%

Lost - - 1.9%

Wet - 38

8

68 $\frac{1}{2}$

32

118

Dut. Cap.

99 $\frac{1}{2}$ lbs.

Out of Cap.

- 9 $\frac{1}{2}$ - 90 lbs.

Balling

13.8%

Yeast - * 53 Brew (58 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{2}$ Quantity lost during fermentation $63\frac{3}{8} - 61 = 2\frac{3}{8}$
" recorded in cellar 2076 galRacked June July 2/36

Balling - 1.9%

Alcohol: (13.8 - 1.9). 42 = 4.99%

"Striking Heat" - 151 - 148° F.

"Initial" - - 140 - 141 - 142° F.

No 7 Tun.

Ale.

June 26/36.

Malt - 5000 lbs. C. M. Co. (New Car)
 Hops - 20 B. C., 10 B. C. & 25 B. C. Fuggles; 10 Bobs & 10 Kents = 75 #
 S; 6 M; 1.5 K. M. S; 19 lb.

Started to mash - $\frac{52}{38}$

First run - 21.3%

Malt - all in.

Last " - 1.3%

Underlet on - $\frac{210}{8}$; Steam - 8

Water - 38

Finished mashing

Set Taps, Heat - 154°

8

Sparge - $\frac{120}{69}$; Hop - $\frac{160}{2}$

69

2117

Into Cops.

Out of Cops.

Ballung.

100½ hls.

- 9½ -

91 hls.

13.7%

Least - 41.52, 53, & 54 Brew (58 lbs + 1½ lb) Air - 17'

Quantity lost during fermentation $63\frac{3}{4} - 61\frac{1}{2} = 2\frac{1}{4}$ "
 " recorded in cellar. 2059 gals. 2038 gals.

Racked July 4/36. Ballung - 1.9%

Alcohol: $(13.7 - 1.9) \cdot 92 = 4.95\%$

"Sticking Head" -

"Initial" -

No. 8 Tun.

Ale.

June 29th

Malt - 5000 lbs. C. M. C.

Hops - 20 B. C. s; 10 B. C. s; 25 B. C. Puffs; 10 Bohs + 10 Kents = 75^{lb} (all 1911)

6 S; 6 M; 1.5 K. M. S; 1 qt P.

7:30^{am} Started to mash - $\frac{167\frac{1}{2}}{38}$

First runs - 21.4%

7:52 " Malt all in

Last .. - 1.9%

8:08 " Underlet in - $\frac{211}{8}$; Steam - 8 $\frac{1}{2}$

Water - 38

8:23 " Finished mashing

 $\frac{68\frac{1}{2}}{3}$ 8:53 " Set Taps, Heat - 157 $\frac{1}{2}$ = 9 $\frac{1}{2}$ $\frac{117\frac{1}{2}}{3}$ Sparge - $\frac{170}{68\frac{1}{2}}$; Hops - $\frac{160}{3}$

Into Cyp.

Out of Cyp.

Balling 13.8%

100 $\frac{1}{2}$ lbs.- 8 $\frac{1}{2}$ -9 $\frac{1}{2}$ lbs.Yeast - * 454 + 55 Brew (38 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation = 65 $\frac{1}{2}$ - 63 $\frac{3}{8}$ = 2 $\frac{1}{8}$
" reworked in cellar 2067 gal.

Racked Ball July 7/36

Balling 1.9%

Alcohol: (13.8 - 1.9) .92 = 4.99%

"Striking Heat" - 153 \rightarrow 148"Initial " - 141 - 142 $\frac{1}{2}$ F.

No 9 Tun.

Ale.

June 30th/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C. s; 10 B. C. s; 425 B. C. Fuggles; 10 Bobs & 10 Kent = 75th (all 22)

6 S; 6 M; 1.5 K. M. S; 19 1/2 P.

7:35^{am} Started to mash - $\frac{152 \cdot 48}{37 \frac{1}{2}}$

First run - 21.3%

7:54 Malt all in

Last - 20.5%

8:09 Underlet on - $\frac{210}{8}$; Steam - 8 $\frac{3}{4}$ Water - 37 $\frac{1}{2}$

8:20 Finished mashing

8

8:50 Set Caps; Heat - 158 $\frac{3}{4}$ 69 $\frac{1}{2}$ Sparge - $\frac{170}{67 \frac{1}{2}}$; Hop - $\frac{140}{2}$ 2
117

Into Cyp.

Out of Cyp.

Balling.

100 $\frac{3}{4}$ lbs.- 9 $\frac{1}{4}$ -9 $\frac{1}{2}$ lbs.

13.87

Yeast - 8, 54, 55, 456 Bross (58 lbs + 1 $\frac{1}{2}$ flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 69 $\frac{1}{2}$ - 62 $\frac{1}{2}$ = 7 $\frac{1}{2}$
recorded in cellar 2050 gals.

Racked July 8/36

Balling - 1.9%

Alcohol: (13.6 - 1.9) .82 = 7.91%

"Sticking Heat" - 152 \rightarrow 148 $\frac{1}{2}$ F."Initial" - - 141 - 143 $\frac{1}{2}$ F.

No. 10 Tun.

Ale.

July 2/36

Malt = 5000 lbs. C. M. Co.

Hops - 20 B.C., 10 B.C., & 25 B.C. Tuggles; 10 Bohs & 10 Kents = 75^{##} Gall 1935's

6 B, 6 M, 1.5 K. M. S; 19t R.

7.25^{am} Started to mash - $\frac{15\frac{1}{2}-14\frac{1}{2}}{38}$

Malt all in

Underlet w - $\frac{20}{8}$; Steam - 9'

Finished mashing

Set Taps, Heat at 154 $\frac{1}{2}$ 'Sparge - $\frac{120}{68\frac{3}{4}}$; Hot - $\frac{110}{22}$

First runs - 21.5%

Last " - 1.2%

Value - 38

8

68 $\frac{3}{4}$ 2 $\frac{1}{2}$

117 $\frac{1}{4}$

Into Cys.

100 $\frac{1}{2}$ lbs.- 9 $\frac{1}{2}$ -

Out of Cys.

97 lbs.

Balling

13.9%

Least - * 56 + 57 Brews (57 lbs + 1 $\frac{1}{2}$ than) Air - 1 $\frac{1}{4}$

Yeast not very good.

Quantity lost during fermentation - 59 $\frac{1}{8}$ - 58 $\frac{5}{8}$ = 1 $\frac{1}{4}$

" recorded in cellar 2054 gals.

Racked July 10/36

Balling - 2.1%

Alcohol: (13.9 - 2.1) .42 = 4.95%

"Striking Heat" - 152-148 $\frac{1}{2}$ '"Initial " - 141-142 $\frac{1}{2}$ F.

Note: The mashing water for this brew was "burtonized" by the addition of 12 lbs. Plaster of Paris (30 grains per gal.) and 2 lbs. Sodium Chloride (5 grains per gal.) Addition of the above salts took place at the mouth of the "pung" masher.

The wort leaving the mash tub was bright, which a good "break" was noted both in the kettle and in the Bamblot cooler.

Note that the First and Last Runs are respectively higher and lower than is usually the case.

Re-Burtonizing:

When cleaning out the spent grains from the mesh-tub, some of the Plaster of Paris was noted lying under the plates. Hence, the dissolution of the hardening material was by no means complete.

The next time, it is suggested that the CaSO_4 be added to the hot water tank before steaming.

No 3 Tun.

Sparkling Ale.

July 6/36

Malt - 5000 lbs. C. M. Co.
 Hops - 20 B.C.; 20 B.C. Fuggles 4/10 Kents; 20 Bohemians = 70 #
 5 S; 6 M; 1.5 K. M. S;

7.25 ^{am}	Started to mash - $\frac{150-198}{33\frac{1}{2}}$	First runs - 20.95%
7.46	Malt all in	Lost .. - 1.0%
8.01	Unbuilt m - $\frac{26}{8}$; Steam - 6 $\frac{1}{2}$	Water - 32i
8.10	Finished mashing	70i
8.44	Set Taps, heat - 154 $\frac{1}{2}$ - 5 $\frac{1}{2}$ F.	2
	Sparge - $\frac{170}{90i}$; Hot - $\frac{160}{2}$	114

In to Cys.	Out of Cys.	Balling.
98 bbls.	- 9 $\frac{1}{4}$ -	88 $\frac{3}{4}$ bbls.
		12.85%

Yeast - 4 $\frac{1}{2}$ 55, 58, 459 Brews (60 lbs + 1 $\frac{1}{2}$ lbs) Air - 1 $\frac{1}{4}$
 (Yeast not at all good)

Quantity lost during fermentation -
 .. recorded in cellar - 1996 gals.

Racked July 13/36. Balling - 1.75%

Alcohol: (12.85 - 1.75) .42 = 4.66%

'Striking Heat' - 150° - 145° F.

'Initial ..' - 141 - 142° F.

Black-Head did not make up until 7.10^{am} (late)
 At 2 P.M. the head which had been thrown up,
 appeared lifeless and sluggish, so an additional
 20 lbs of yeast were added, containing 1 lb. of
 Guesate dissolved in some warm wort. This
 was well roused in.

"In heat" (69° F.) at 8.15^{am} July 8th.

No 7 Turn.

Ale.

July 8/36.

Malt - 5000 lbs. C.M.C.

Tops - 20 B.C.; 10 B.C.; 4 25 B.C. Fuggles; 10 Bohs & 10 Kant = 75[#] (all)

65; 6M; 1.5 K.M.S.; 19 P.

7.22^{am} Started to mash - $\frac{102-103}{37\frac{1}{2}}$

7.49 Malt all in

7.59 Underlet on - $\frac{210}{8}$; Steam - $8\frac{1}{2}$

8.12 Finished mashing

8.42 Set Taps; Heat
George - $\frac{170}{68\frac{1}{2}}$; Hop - $4\frac{1}{2}$

First runs - 21.65%

Last - 1.9%

Water - $37\frac{1}{8}$ 68 $\frac{1}{2}$

2

In to Cyp.

100 $\frac{1}{2}$ lbs.

Out of Cyp.

- 97 - 91 $\frac{1}{2}$ lbs.

Balling.

13.8%

Yeast - Keiths (55 lbs off Nelson's)Air - $1\frac{1}{4}$

Quantity lost during fermentation

" recorded in cellar 2008 gals.

Racked July 15/36

Balling - 2.95%

Alcohol: (13.8 - 2.95) .42 = 4.77%

"Striking Heat" -

"Initial" -

No 5 Tun

Ale.

July 9th

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C.; 10 B. C.; & 25 B. C. Fuggles; 10 Bohemian & 10 Kent = 75[#] (all 1935)
65, 64; 1.5 K. M. S; 1.9 P. B.Started to mash - $\frac{152-159}{38}$

First runs - 21.2%

Malt all in

Last - - -

Underlet on - $\frac{210}{8}$; Steam - 8'

Water - 38

Finished mashing

Set Taps, Heat - 154°

8

Sparg - $\frac{170}{69}$; Hop - $\frac{160}{2}$

69

2

117

Into Ceg.

Out of Ceg.

Balling.

101 hbls.

- 9 $\frac{1}{2}$ > -91 $\frac{1}{2}$ < hbls.

13.9%

Yeast - * Keiths (55 lbs. of Molems)

Air - 1 $\frac{1}{4}$

Quantity lost during fermentation

- recorded in cellar 2018 gals.

Racked July 16/36

Balling - 2.35%

Alcohol: (13.9 - 2.35) . 42 = 4.85%

"Stinking Heat" -

Initial - -

No. 6 Truv.

Ale.

July 10/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C. s; 10 B. C. s & 25 B. C. Tuggles; 10 B. C. s; 10 Kants = 75# (all 200)

6 S; 6 M; 1.5 K. M. S. s; 19 P. R.

Started to mash - $\frac{162 \rightarrow 145}{37\frac{1}{2}}$

Malt all in

Underbit in - $\frac{20}{8}$; Steam - $8\frac{1}{2}$

Finished mashing

Set Taps; Heat - 155° Sparge - $\frac{120}{69}$ stop $\frac{100}{3}$

First runs - 21.7%

Last " - 1.2%

Water - $37\frac{1}{2}$

8

69

3

117 $\frac{1}{2}$

Into Cop

100 $\frac{1}{2}$ lbs.

Out of Cop.

- 9 $\frac{1}{4}$ -91 $\frac{1}{4}$ lbs.

Balling.

13.95%

Least - Keiths (Off Orleans 5 lbs. + 1 $\frac{1}{2}$ lbs) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation -
recorded in cellar - 2017 gals.

Racked July 17/36

Balling - 2.7%

Alcohol: $(13.95 - 2.7) \cdot 92 = 4.72\%$

"Stoking Heat" -

"Initial" - -

No 8 Tun.

Stout.

July 13/36.

Malt - 5000 lb. C. M. Co.

Hops - 20 B. C. s; 10 B. C. s + 20 B. C. Suggles; 10 B. C. s + 10 Kents = 15 # (all 1926)
68'; 6 lb; 10 K. M. S.; 130 # Ph; G. root - 3"; C. root - 3"; P. root - 2"7.12^{am} Started to mash - $\frac{162-157}{37\frac{1}{2}}$

First run - 22.7%

7.35 - Malt all in

Last " - 12%

7.50 - Underlet on $\frac{200}{5\frac{1}{2}}$; Steam $7\frac{1}{2}$ Water - 37 $\frac{1}{2}$

8.05 - Finished mashing

8.27 - Set taps; Heat - 15.5

Sparg - $\frac{120}{74}$; Hop - $\frac{160}{2}$ 5
74
2

118 $\frac{1}{2}$

Into Cop.

102 hlls.

Out of Cop.

- 8 $\frac{1}{2}$ -93 $\frac{1}{2}$ hlls.

Balling

19.53%

Yeast - Off * 7 Brew (58 lbs + 1 $\frac{1}{2}$ lbs.)
(Yeast very good.)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation $65\frac{3}{8} - 62\frac{3}{8} = 3\frac{1}{4}$ "
" recorded in cellar 2039 galsRacked July 20/36; Balling - 30%

Alcohol:

"Striking Heat" - 152-158°F.

"Initial Heat" - 149-150-151°F.

No 7 Tun.

Sparkling Ale

July 17.

Malt - 4500 lbs. C. M. Co.

Hops - 20 B. C.; 20 B. C. Fuggles & 10 Kent; 20 Bohemians = 70 # (all 1935's)

5 S; 6 M; 1.5 K. N. S.

7.17^{am} Started to mash - $\frac{152-196}{33}$

7.58 " Malt all in

7.53 " Underlet on - $\frac{26}{8}$; Steam - 6'

8.03 " Finished mashing

8.33 " Set trays; Heat - 154

Sparge - $\frac{116}{69}$; 1 top - $\frac{166}{2}$

Into Cop.

98 klls.

Out of Cop.

89 klls.

Balling.

12.8%

First runs - 20.75%

Lost " - 1.0%

Water - $\frac{33\frac{1}{2}}{8}$ 69 $\frac{1}{2}$

2

113

Yeast - * 62 Brew (55 lbs + 1 $\frac{1}{2}$ lbs) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - $61\frac{3}{8} - 59\frac{3}{8} = 2\frac{1}{4}$
" recorded in cellar 1972 yds.

Racked July 21/36

Balling - 1.9%

Alcohol : (12.8 - 1.9) . 92 = ~~4.9%~~ 4.57%

" Striking Heat - 152-151

" Initial " - 141-142 $\frac{1}{2}$

No. 9 Tun.

Ale.

July 15th

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. O.; 10 B. O. & 25 B. O. Fuggles; 10 Bohls & 10 Kents = 75[#] (all 1905)

6 S; 6 M; 1.5 K. M. S; 1 pt. P.

7.15^{am} Started to mash - $\frac{108.195}{37\frac{1}{2}}$

First runs - 21.95%

7.38 Malt all in

Lost " - 1.1%

7.52 Underlet on - $\frac{210}{8}$; Steam - 8'Water - $37\frac{1}{2}$

8.03 Finished mashing

8

8.33 Set Taps, Heat - 159°

69

Sparg - $\frac{105}{69}$; Hop - $\frac{160}{2}$

2

116 $\frac{1}{2}$

Into Cyp.

Out of Cyp.

Balling.

101 lbs.

- 9 $\frac{1}{2}$ -91 $\frac{1}{2}$ lbs.

13.9%

Yeast - *63 Brew (56 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 64 $\frac{3}{8}$ - 61 $\frac{1}{2}$ = 2 $\frac{7}{8}$ "
" recorded in cellar 2012 gals.

Racked July 22/36.

Balling - 2.2%

Alcohol: (13.9 - 2.2) .92 = 4.91%

"Striking Heat" - 153° - 148°F

"Initial " - 191 - 190°F

No. 10 Tun.

Ale.

July 16/36

Malt - 5000 lbs. C. M. G.

Hops - 20 B.C. 1; 10 B.C. 4 25 B.C. Fuggles; 10 Bels + 10 Kents = 75[#] Gall 19303

6 S; 6 M; 1.5 K. M. S; 19t B.

7.22 --- Started to mash - $\frac{152-191}{37}$

7.44 .. Malt all in

7.50 .. Underlet on - $\frac{26}{8}$; Steam - 8'

8.10 - Finished mashing

8.40 .. Set taps; heat - $\frac{157}{160}$ Sparge - $\frac{76}{69}$; Hq - $\frac{160}{2}$

First runs - 21.3%

Last " - 1.1%

Water - 37

8

69

2

116

Inlet Cop.

100 $\frac{1}{2}$ lbs.- 9 $\frac{3}{4}$ -

Out of Cop.

90 $\frac{3}{4}$ lbs.Balling
13.75%Yeast - * 63 + 69 Brew (58 lbs + 1 $\frac{1}{2}$ hour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 59 $\frac{1}{4}$ - 57 $\frac{1}{4}$ = 2"
" recorded in cellar 2018 gals.

Racked July 23/36

Balling - 2.1%

Alcohol: (13.75 - 2.1) .42 = 4.89%

"Striking Heat" - 152-191'

"Initial " - 141-192'

No 9 Tun.

Ale.

July 22/36.

Malt = 5000 lbs. C. M. Co.

Hops - 20 B.C., 10 B.C., + 25 B.C. Puggles; 10 Bobs + 10 Kents = 75#
68; 6 M; 1.5 K. M. S; 196 P.

7.15 ^{sun}	Started to mash - $\frac{152.198}{37}$	First runs - 21.7%
7.37 "	Malt all in	Last " - 1.3%
7.52 "	Underlet on - $\frac{210}{8}$; Steam 8'	Water - 37
8.05 "	Finished mashing	8
8.35 "	Set taps; Heat - 154° .	69
	Sparge - $\frac{170}{69}$; Hops - $\frac{160}{2}$	2
		<hr/> 116

Into Cyp.	Out of Cyp.	Balling
100 $\frac{1}{2}$ hbls.	9 $\frac{1}{4}$ -	91 $\frac{1}{4}$ hbls.
		13.75%

Yeast - * 66 Brew (5 hbls. + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation -
- recorded in cellar 2006 gals.

Racked July 29/36 Balling - 2.15%

Alcohol : $(13.75 - 2.15) \cdot 42 = 4.87\%$ "Striking Heat" - $152 - 147^{\circ} F$ "Initial " - $141 - 142^{\circ} F$

No. 5 Turn

Ale.

July 27/36

Malt - 5000 lbs. C.M.C.

Hops - 20 B.C.s; 10 B.C.s + 25 B.C. Fuggles; 10 Bobs + 10 Kents = 75th
6 S; 6 M; 1.5 K.M.S.; 1 1/2 P.7:10 am Started to mash - $\frac{152 - 147}{37}$

7:30 .. Malt all in

7:45 .. Underlet on - $\frac{26}{8}$; Steam - 8'

8:00 .. Finished mash

8:30 .. Set teps.; Heat - 157° Sponge - $\frac{176}{68}$; Hg - $\frac{165}{2}$

First run - 21.0%

Last .. - 14.5%

Water - 37

68

2

115

Into Cys.

100 lbs.

- $7\frac{1}{2}$ -

Out of Cys.

90 1/2 lbs.

Balling

13.7%

Yeast - * 67 Brew ($\frac{60}{24}$ lb + 1 1/2 hours)Air - $1\frac{1}{2}$

Quantity lost during fermentation

recorded in Eller 1992 galsReached July 29/36

Balling - 2.55%

Alcohol: $(13.7 - 2.55) \cdot 92 = 4.68\%$ "Starting Heat" - $152 - 147^{\circ} F$ "Initial" .. - $141 - 142^{\circ} F$

No 6 Tun

Alc.

July ~~27~~²⁷/₁₃

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C.; 4 25' B.C. Fuggles; 10 Boko; 10 Kent = 75#

6 S; 6 M; 1.5 K. M S; 1 1/2 P.

7.10 ^{am} Started to mash - $\frac{152-147}{37}$

First run - 21.15%

7.30 .. Malt all in

Lat - - - 1.9%

7.45 .. Unberlet on - $\frac{210}{8}$; Steam - 8'

Water - 37

8.10 .. Finished mashing;

8

8.30 .. Set taps; Heat - 158°

68 1/2

Spurge - $\frac{70}{68}$; Hop - $\frac{160}{2}$

2

Into Cops.

Out of Cops

Balling

100 hlls.

- 9 -

91 hlls.

13.7%

Yeast - 68 Brew ⁶⁰ lbs + 1 1/2 bush Air - 1 1/2'

Quantity lost during fermentation
" recorded in cellar 2019 gal.

Racked July 31/36

Balling - 2.45%

Alcohol: (13.7 - 2.45) .42 = 4.12%

"Sticking Heat" - $152-148^{\circ}$ F

"Tun Heat" - $141-142^{\circ}$ F.

No 8 Turn.

Stout.

July 27th

Malt = 5000 lbs. C. M. C. + 250 lbs. B. Barley

Ways - 20 B.C.; 10 B.C.; 425 B.C. Tuffs; 10 B.C. + 10 Kents = 75thC.S.; 6 M; 1.5 K.M.S.; 10th B.; C.root-3th; C.root-3th; L.root-2th7.10 am Started to mash - $\frac{162}{37\frac{1}{2}}$

First runs - 22.7%

7.52 .. Malt all in

Last - - 1.3%

7.47 .. Underlet in - $\frac{211}{5}$; Steam - 4'Water - 37 $\frac{1}{2}$

7.55 .. Finished mashing

5

8.25 .. Set Cops; Heat - 153-4'

13

Gauge $\frac{172}{73}$; Hyg - $\frac{160}{12}$ 21 $\frac{1}{2}$ 117 $\frac{1}{2}$

Into Cops.

Out of Cops.

Balling

102 hlls.

- 8 $\frac{1}{4}$ -93 $\frac{1}{4}$ hlls.

14.4%

Least - * 69 Brew ($\frac{55}{2}$ lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 66 $\frac{1}{4}$ - 63 = 3 $\frac{1}{4}$ "" recorded in cellar 205 $\frac{1}{2}$ gals.

Racked August - 3/36

Balling - 3.15%

Alcohol: (

" Striking Heat - 162-159 $\frac{1}{2}$ F" Distill - - 149-157 $\frac{1}{2}$ F.

No 7 Turn

Ale.

July 28/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C., 10 B.C., + 25 B.C. Fuggles, 10 Boh. + 10 Kent = 75[#]
6 S; 6 M; 15 K.M.S., 19 P.

7.10 ^{am}	Started to mash - $\frac{157^{\circ}-147^{\circ}}{37^{\circ}}$	First runs - 21.2%
7.32.	Malt all in	Last " - 1.3%
7.47	Underlet in - $\frac{210^{\circ}}{8}$; Steam - 8'	Water - 37 $\frac{1}{2}$
8.02.	Finished mashing	68 $\frac{1}{2}$
8.32.	Set taps; Heat - 159 $\frac{1}{2}$	$\frac{1}{2}$
	Spruce - $\frac{170}{68\frac{1}{2}}$; Hop - $\frac{160}{1\frac{1}{2}}$	<hr/> 115 $\frac{1}{2}$

In to C.	Out of C.	Balling
100 $\frac{1}{2}$ hlls.	- 9 $\frac{1}{4}$ -	91 $\frac{1}{4}$ hlls.
		13.7%

Yeast - * 70 Brew (60 lbs. + 10 lbs. thin) Air - 19 $\frac{1}{4}$ Quantity lost during fermentation - $63\frac{3}{8} - 61 = 2\frac{3}{8}$
recorded in cellar 2025 gals.

Racked August 4/36 Balling - 2.737

Alcohol: $(13.7 - 2.73) - 92 = 4.61\%$ "Striking heat" - $157^{\circ} - 147^{\circ}F$ "Initial " - $141 - 142^{\circ}F$

No 9 Tun.

Ale.

July 29/36

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C. ; 10 B. C. ; & 25 B. C. Fuggles, 10 B. C. & 10 Kents = 75#.

S.S. ; 6 M ; 1.5 K. M. S. ; 19 f. P.

7.18 ^{am}	Started to mash - $\frac{15\frac{1}{2} - 148}{37\frac{1}{2}}$	First runs - 21.3%
7.41	Malt all in,	Last .. - 1.4%
7.56	Underlit on - $\frac{30}{8}$; Steam - $8\frac{1}{4}$	Water - $37\frac{1}{2}$
8.08	Finished mashing	8
8.38	Set taps, Heat - $15\frac{1}{2}$	68 $\frac{1}{2}$
	Sparge - $\frac{170}{68\frac{1}{2}}$; Hops - $\frac{160}{2}$	2
		<hr/> 116

Dutch Cap.

100 lbs.

Out of Cap.

- 9 $\frac{3}{4}$ lbs.90 $\frac{1}{4}$ lbs.

Balling.

13.95%

Yeast - * 71 Brew (60 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$

Quantity lost during fermentation $63\frac{3}{4} - 60\frac{3}{4} = 3\frac{1}{2}$
 recorded in cellar 1995 gals.

Racked August $\frac{4}{36}$

Balling - 2.05%

Alcohol : $(13.95 - 2.05) \cdot 92 = 4.99\%$

"Stirring Heat" - 153 - 195° F.

"Initial" - - 191 - 192° F.

No 10 Tun.

Sparkling Ale.

Aug. 7/36.

Malt = 450 lbs. C. M. Co. + 1 bag malt extra.

Hops - 20 B.C.; 20 B.C. Pilsner + 10 Kents; 20 Bohemians = 70^F (all 1935%)
5 S; 6 M; 15 K. M. S.

7.12 ^{am}	Started to mash - $\frac{151\frac{1}{2}}{39\frac{1}{2}}$	First runs - 21.0%
7.31	Malt all in	Last " - 1.15%
7.46	Underlet on - $\frac{3/8}$ Steam - 62°	Water - $39\frac{1}{2}$
8.00	Finished mashing	$40\frac{1}{2}$
8.30	Set taps; Heat - 159°	$\frac{1}{2}$
	Spurge - $\frac{170}{270}$ a; 1 top - $\frac{160}{12}$	<u>114$\frac{1}{2}$</u>

Duto Cops.
99 lbs.Out of Cops.
- 8 $\frac{3}{4}$ - 90 $\frac{1}{2}$ lbs.Balling
12.85%Heat - * 72 Brew (58 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - 58.56 = 2"
" recorded in cellar 1989 gal.

Racked August 11/36

Balling - 1.9%

Alcohol: (12.85 - 1.9) . 92 = 9.60%

"Sticking Heat" - 151 $\frac{1}{2}$ F"Initial" - [191-192] - 193-199 $\frac{1}{2}$ F. (Due to the fact that the cold water check pipe was plugged, it was found impossible to maintain a constant initial heat.)

No. 3 Tun

Ale.

Aug. 6/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.s; 10 B.C.s + 25 B.C. Fuggles; 10 Bobs + 10 Kento = 75^{FF}
6 S; 6 M; 1.5 K. M.S.; 19 P.7.28^{am} Started to mash $\frac{152-198}{372}$

First runs - 21.2%

7.46 Melt all in

Lost - - 1.2%

8.01 Underlet on $\frac{300}{8}$; Steam - 8 $\frac{1}{2}$ Water - 37 $\frac{1}{2}$

8.13 Finished mashing;

8

8.47 Set taps; Heat - 157-165° F.

68 $\frac{1}{2}$ 2 $\frac{1}{2}$ Sponge - $\frac{170}{68\frac{1}{2}}$; Hop - $\frac{160}{2\frac{1}{2}}$ 116 $\frac{1}{2}$

Into Cyp.

Out of Cyp.

Belling

100 $\frac{1}{2}$ lbs.- 9 $\frac{1}{2}$ -

91 lbs.

13.85%

Yeast - * 73 Brew (60 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{7}$ Quantity lost during fermentation 60 - 57 $\frac{3}{4}$ = 2 $\frac{1}{4}$
recorded in cellar 200% yeb.

Recked August 13/36

Belling 2.9%

Alcohol: (13.85 - 2.9) .42 = 4.817

"Striking Heat" - 152-198° F.

"Initial" - 191-192° F.

No 7 Tun.

Ale.

Aug. 7/56.

Malt - 5000 lbs. P. M. Co.

Hops - 20 B. P.; 10 B. P. + 25 B. C. Fuggles; 10 Bobs + 10 Wente = 75^{##} (all 1935's)
6 S; 6 M; 1.5 K. M. S.; 1 qt. P.7.38^{am} Started to mash - $\frac{102-198}{36\frac{1}{2}}$

First run - 21.2%

7.55^{am} Malt all in

Last .. - 1.1%

8.11^{am} Underst on - $\frac{210}{8}$; Steam - 8'Water - 36 $\frac{1}{2}$ 8.22^{am} Finished mashing; 15'

8

8.49^{am} Set tays; Heat - 154°

69

Sparge - $\frac{170}{67}$; 14y - $\frac{160}{2}$

2

115 $\frac{1}{2}$

Into Cyp.

100 bbls.

- 9 $\frac{1}{4}$ -

Out of Cyp.

90 $\frac{3}{4}$ bbls.

Balling.

13.75%

Least - 77 Brew (60 bbls + 1 $\frac{1}{2}$ Flour) Air - 17'Quantity lost during fermentation 62 - 59 $\frac{3}{8}$ = 2 $\frac{5}{8}$ "
recorded in cellar 198 $\frac{1}{2}$ gals.

Racked August 19/36

Balling - 2.95%

Alcohol: (13.75 - 2.95) .92 = 9.74%

Striking Heat - 102-198° F.

Initial " - 191-192° F.

No. 5 Turn.

Ale.

Aug. 10/36

Malt - 5000 lbs. C.M.Co. (New Car) *

Hops - 20 B.C.; 10 B.C. + 25 B.C. Faggles; 10 Bobs + 10 Kauls = 75^{##}
6 S; 6 M; 1.5 K.M.S; 1 lb. P.7.10 - Started to mash - $\frac{152-158}{38}$

7.32 - Malt all in

7.47 - Underlet on $\frac{81}{8}$; Steam - 8'

7.59 - Finished mashing

8.30 - Set taps, Heat - 157° Sparge $\frac{170}{68}$; Hops - $\frac{160}{1}$

First run - 20.9%

Last - - 1.3%

Water - $3\frac{5}{8}$ $6\frac{8}{2}$

 $117\frac{2}{2}$

Into Cop.

100 \pm lbs.

- 9 -

Out of Cop.

97 $\frac{1}{2}$ lbs.

Balling

* 13.65%

Yeast - * 75 Brew (60 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{2}$ Quantity lost during fermentation - $62\frac{1}{2} - 59\frac{1}{8} = 2\frac{7}{8}$ "
" recorded in cellar - - 2002 gals.

Racked August 17/36

Balling - 20.5%

Alcohol: (13.65 - 20.5) .42 = 4.87%

'Stoking Heat' - 152-141 $^{\circ}$ F.'Initial' - - 141-142 $^{\circ}$ F.

* This can of malt has failed to come up to expectations.

1/8 Turn.

Stout.

Aug. 11/36.

Malt - 5000 lbs. C. M. Co. + 250 lbs. B. Barley.

Hops - 20 B. C.; 10 B. C.; 25 B. C. Tuggles; 10 B. C. + 10 Kears = 75[#]
6 S; 6 M; 15 K. M. S.; 130[#] P.; G. root - 3[#]; C. root - 3[#]; P. root - 2[#]7.05^{am} Started to mash - $\frac{162}{38\frac{1}{2}}$

First runs - 22.2%

7.28 Malt all in

Last .. - 1.2%

7.47 Underlet on - $\frac{211}{35}$; Steam - 75'Water - 38 $\frac{1}{2}$

7.52 Finished mashing

85

8.22 Set taps; Heat - 153°

87 $\frac{1}{2}$ Spurge - $\frac{176}{7\frac{1}{2}}$; Hop - $\frac{162}{2}$

2

117

Into Cyp.

Out of Cyp.

Balling.

101 $\frac{1}{2}$ bbls.- 9 $\frac{1}{2}$ -92 $\frac{1}{2}$ bbls.

17.1%

Grain - * 76 Bar (55 lbs + 1 $\frac{1}{2}$ Hour) Air - 17'Quantity lost during fermentation $65\frac{1}{2} - 63\frac{1}{8} = 2\frac{3}{8}$
" recorded in cellar 2074 gals.

Recked August - 15/36

Balling - 2.5%

Alcohol:

" Striking Heat - 162-157°F.

" Initial " - 149-157°F.

No 6 Tun.

Ale.

August 17/36

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C. ; 10 B. C. + 25 B. C. Fuggles, 10 Bobs + 10 Kents = 75[#] (all 1935's)

6 S ; 6 M ; 15 K M S. ; 1st R.

7.28^{am} Started to mash - $\frac{152-198}{38\frac{1}{2}}$

7.40 Malt all in

8.05 - Underlet on - $\frac{20}{8}$; Steam - 88^{ft}8.25^{am} Finished mashing

8.50 - Set taps ; Heat -

Spurge - 67 ; Hot - $\frac{160}{2}$

First runs - 21.0%

Lost .. - 1.3%

Water - 38 $\frac{1}{2}$

8

67

 $\frac{1}{2}$

119

Into Cys.

100 lbs.

- 97 -

Out of Cys.

915 lbs.

Belling,

13.8%

Yeast - * 77 Brew (58 lbs + 1 $\frac{1}{2}$ flours) Air - 1 $\frac{1}{9}$ 'Quantity lost during fermentation 62 $\frac{1}{8}$ - 59 $\frac{1}{2}$ = 2 $\frac{5}{8}$
" recorded in cellar. 1992 gal.

Racked August 19, 1936

Belling - 2.05%

Alcohol : (13.8 - 2.05) - 92 = 4.93%

'Sticking Heat' - 152 - 198°F.

'Initial " - 141 - 192°F.

No 7 Tun.

Ale.

Aug. 13/36.

Malt - 5000 lbs. C.M. Co.

Hops - 20 B.C.s; 10 B.C.s *⁽¹⁷⁵⁵⁾ & Fuggles, 17 B.C. Gals; 10 Bels + 10 Kauls = 75 -
6 S; 6 M; 1.5 K.M.S; 12 P.Started to mash - $\frac{146 \cdot 157}{38 \frac{1}{2}}$

First runs - 20.75%

Malt all in

Last - 1.65%

Underlet on - $\frac{30}{8}$; Steam - $8 \frac{1}{2}$ 'Water - $38 \frac{1}{2}$

Finished mashing;

67

Set taps; Heat - 154° .

2

Spurge - $\frac{170}{67}$; Hop - $\frac{160}{2}$ 115 $\frac{1}{2}$

Into Cop.

Out of Cop.

Balling.

99 $\frac{1}{2}$ bbls.- 9 $\frac{1}{4}$ > -90 $\frac{1}{4}$ < bbls.

13.8%

Yeast - * 77 Brew (56 lbs + 1 $\frac{1}{2}$ Hour)Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation 62 $\frac{3}{4}$ - 60 $\frac{1}{2}$ = 2 $\frac{1}{4}$ "
" recorded in cellar 1992 gals.

Racked August 20, 1936

Balling - 2.2%

" Alcohol: (13.8 - 2.2) .92 = 4.87%

" Striking Heat" - 152 - 195 F.

" Initial " " - 191 - 192 F.

N.B. Prior to steaming of the water for this brew, the liquor was treated with 12 lbs. Plaster of Paris and 2 lbs. of Na Cl (common salt).

* This marks the end of our supply of B.C. Fuggles.

No 9 Tun.

Sparkling Ale.

Aug. 17/36

Malt - 4500 lbs. C. M. C.

Hops - 20 B.C.; 20 B.C. Gollings + 10 Kauts; 20 Bohemians = 70^{##} all 1935
5 S; 6 M; 1.5 K. M. S.

7.08^{am} Started to mash - $\frac{152-198}{34}$
 7.29 " Malt all in
 7.49 " Underlat on - $\frac{210}{8}$; Steam - $6\frac{1}{2}$
 7.58 " Finished mashing
 8.28 " Set tye; Heat - $153-153\frac{1}{2}$
 Sarge - $\frac{172}{70}$; Hop - $\frac{160}{2}$

First runs - 20.2%

Lost .. - 1.3%

Water - 39

 $\frac{8}{10}$
 $\frac{2}{2}$
 112 $\frac{1}{2}$

In Cop.

98 $\frac{1}{2}$ hbls.

- 97 -

Out of Cop.

89 $\frac{1}{2}$ hbls.

Belling.

12.65%

Lost * 78 Brew (58 lbs. + $1\frac{1}{2}$ flour)Air - $1\frac{1}{7}$

Quantity lost during fermentation
 recorded in cellar 1761 gals.

Racked August 24/36

Belling - 1.7%

Alcohol: (12.65-1.7). 92 = 4.6%

" Striking Heat - 152-198 °F.

" Initial " - 141-142 °F.

No 10 Tun.

Ale.

Aug. 18/36.

Malt = 5000 lbs. C. M. Co.

Hops - 20 B. C. s; 10 B. C. s + 25 B. C. Goldings; 10 B. s + 10 Kent = 75[#] (all 1750-1751)
6 S; 6 M; 1.5 K. M. S; 1 1/2 P.7.00^{am} Started to mash - $\frac{157-148}{38\frac{1}{2}}$

7.23 " Malt all in.

7.35 " Washed in $\frac{210}{8}$; Steam - $8\frac{1}{2}$

7.52 " Finished mashing

8.22 " Set taps; Heat - 159° Sparge - $\frac{170}{67}$; Hot - $\frac{140}{1}$

First run - 20.6%

Let " - 1.3%

Water - $38\frac{1}{2}$

8

67

1

119 $\frac{1}{2}$

In to Cyp.

99 $\frac{1}{2}$ hbls. - $8\frac{3}{4}$ -

Out of Cyp.

90 $\frac{1}{4}$ hbls.

Balling.

13.7%

Yeast - # 79 Brew (58 lbs + 1 1/2 lbs)

Air - 1 1/4

Quantity lost during fermentation

" recorded in cellar 195.5 gals.

Racked August 25/36.

Balling - 2.15%

Alcohol: $(13.7 - 2.15) \cdot 42 = 4.85\%$ "Striking heat" - $152 - 148^{\circ} F$ "Initial " - $141 - 142^{\circ} F$

No. 3 Tun.

Ale.

Aug. 19/36

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C.; 4 25 B.C. Hops; 10 Bales & 10 keils - 75[#] (all 1936's)
60[#]; 6 M; 1.5 K. M. S.; 1 1/2 P. R.

7.25 ^{am}	Started to mash - $\frac{152-194}{38}$	First run - 20.95%
7.48	Malt all in	Let - 1.2%
8.03	Unclerked m - $\frac{20}{8}$; Steam - 8 1/2'	Water - 38
8.19	Finished mashing	8
8.45	Set taps; Heat - 154°	67
	Spurge - $\frac{172}{67}$; Hop - $\frac{160}{2 1/2}$	2 1/2
		<u>115 1/2</u>

Into Cyp.	Out of Cyp.	Balling.
99 hbls.	- 9 1/2 -	89 1/2 hbls.
		13.9%

Yeast - * 81 Brew (60 lbs + 1 1/2 lb) Air - 1 1/4'

Quantity lost during fermentation -
recorded in cellar 1960 gal.

Racked August 26/36 Balling. 2.1%

Alcohol (13.9 - 2.1) .72 = 9.95%

"Striking Heat" - 152-194° F.

"Initial" - 191-192° F.

No. 4 Tun.

Ale.

Aug. 20/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C. + 25 B.C. Hops; 10 Bohos + 10 Kauls = 75[#] (all 1935)
6 S; 6 M; 10 K. M. S; 19 P.

7.26 ^{am}	Started to mash - $\frac{152-146}{38}$	First runs - 20.55%
7.50	Malt all in	Last .. - 1.3%
8.05	Underlet on - $\frac{210}{8}$; Steam - 8 $\frac{1}{2}$	Water - 38
8.19	Finished mashing	8
8.45	Set taps; Heat - 159 $\frac{1}{2}$	67
	Sparge - $\frac{170}{67}$; Hops - $\frac{100}{1}$	1
		<u>119</u>

Into Cyp.	Out of Cyp.	Belling.
99 $\frac{1}{2}$ hls.	- 9 $\frac{1}{2}$ -	89 $\frac{1}{2}$ hls.
		13.8%

Yeast - * 81 Brew (58 lbs + 1 $\frac{1}{2}$ Flow)	Air - 1 $\frac{1}{4}$
---	-----------------------

Quantity lost during fermentation - 1957 gal.
" recorded in cellar -

Recked August - 27/36	Belling 2.95%
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Alcohol: (13.8 - 2.95) . 42 = 4.76%

Striking Heat - 152-146°F.
Initial .. - 141-142°F.

No 5 Tun.

Sparkling Ale

Aug. 29/36

Malt = 4500 lbs. C. M. C.

Hops - 20 B.C.s; 20 B.C. Gals 4/10 Kente; 20 Bohemians = 70[#] (all 1935^{ns})
5 S; 6 M; 1.5 K. M. S.7.05^{am} Started to mash - $\frac{152-147}{35}$

7.25 Malt all in

7.40 Underlet in - $\frac{210}{8}$; Steam - $7\frac{1}{2}$

7.53 Finished mashing

8.23 Set taps; Heat - 159°

Sponge - $\frac{120}{67}$; Hops - $\frac{160}{1}$

First runs - 20.5%

Last - 1.1%

Water - 35

8

67

1

111

Into Cys.

98 lbs.

- 9 -

Out of Cys.

89 lbs.

Belling

12.8%

Yeast - #1's 82 + 83 Brows (57 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - 60% - 58% = 2 $\frac{1}{2}$ "

" recorded in cellar 1956 yds.

Racked August - 31/36

Belling - 1.75%

Alcohol: (12.8 - 1.75) .42 = 4.64%

Sticking/Heat - 152-147°

" Intial " - 141-142° F.

No 6 Truss.

Ale.

Aug ~~27~~²⁵/36.

Malt - 5000 lb. C. M. Co.

Hops - 20 B.C., 10 B.C., 25 B.C. Gals, 10 Bobs & 10 Kent = 75 Gall (1736)
6 S, 6 M, 1.5 K. H.S.7.15^{am} Started to mash - $\frac{152-148}{38}$

First run - 20.7%

7.37 Malt all in

Last .. - 1.3%

7.52 Mouldlet on - $\frac{96}{8}$, Steam - 90°

Water - 38

8.10 Finished mashing

8

8.40 Set taps; Heat - 153°

66

Sparge - $\frac{170}{66}$; Hops - $\frac{160}{12}$ $\frac{12}{113\frac{1}{2}}$

Into Coy.

Out of Coy.

Balling.

99 lbs.

- 9 $\frac{1}{4}$ > -89 $\frac{3}{4}$ < lbs.

13.75%

Yeast - * 83 Brew (58 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{2}$ Quantity lost during fermentation $61\frac{1}{2} - 59 = 2\frac{1}{2}$
.. recorded in cellar 1756 gals.

Racked August Sept 1/36

Balling. 2.5%

Alcohol: $(13.75 - 2.5) \cdot 42 = 472.7$

Striking Heat - 152-148°

Initial - - 141-142° F.

No. 7 Tun.

Ale.

Aug. 26/36.

Malt = 5000 lb. C.M.C.

Hops - 20 B.C. ; 10 B.C. + 25 B.C. Hops ; 10 Bohst + 10 Vents = 75[#] (all 1930-2)
 6S ; 6M ; 1.5 K.M.S. ; 1 1/2 P.

Started to mash - $\frac{152-199}{38}$

First runs - 20.8%

Melt all in

Lat - - 1.3%

Water let on - $\frac{22}{8}$; Steam - 9 1/2

Water - 38

Finished mashing

8

Set taps, Heat - 154°

67

Sparge - $\frac{170}{67}$; Hop - $\frac{160}{1}$

119

Inlet Cap.

Out of Cap.

Billing.

99 lbs.

- 8 1/2 >

- 90 1/2 < lbs.

13.7%

Yeast - * 89 Brew (56 lbs. + 1 1/2 Flour)

Air - 1 1/2

Quantity ~~recorded~~ lost during fermentation 62 - 57 3/8 = 5 3/8"
 recorded in celler 1790 gals.

Racked Sept - 2/36

Billing. 2.7%

Alcohol: (13.7 - 2.9) . 92 = 7.74%

"Striking Heat" - 152-199° F.

"Initial " " - 141-192° F.

No 9 Tun.

Stout.

Aug. 27/36.

Malt - 5000 lbs. C.M.C. (New Car - part) + 250 lbs. B. Barley.
 Hops - 20 B.C. + 10 B.C. + 25 B.C. Gdgs + 10 Pils + 10 Kent = 75[°] (all 1933)
 6S ; 6M ; 1.5 W.M.S. ; 130[°] P. ; 4 root 3[°] ; C. root 3[°] ; P. root 2[°].

7.22 ⁰⁰	Started to mash - $\frac{163}{39}$	First runs - 21.1%
7.44	Malt all in $18\frac{1}{2}$ ⁰⁰ *	Last " - 1.65%
7.57	Underlet on - $\frac{1}{8}$; Steam - 4 ¹	Water - $\frac{38}{8}$
8.19	Finished mashing	67 $\frac{1}{2}$
8.44	Set tye ; Heat - 153 ⁰	2 $\frac{1}{2}$
	Sparge - $\frac{17\frac{1}{2}}{67\frac{1}{2}}$; Hop - $\frac{160}{2\frac{1}{2}}$	116

In to Cyp.	Out of Cyp.	Balling
100 $\frac{1}{2}$ hbls.	- 9 $\frac{1}{4}$ -	91 $\frac{1}{4}$ < hbl.
		19.5%

Yeast - * 85 Brew (56 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$

Quantity lost during fermentation 69 - 61 $\frac{1}{4}$ = 2 $\frac{3}{4}$
 recorded in cellar 2018 gals.

Recked Sept - 7/36 Balling - 3.1%

Alcohol:

"Striking Heat" - 163⁰

"Initial " - 150-154⁰F.

* It will be seen that a change has been made in the amount and temperature of the Underlet water. Where formerly only 5 hbls @ 210⁰F. were used (in the brewing of Stout), in this brew, the usual 8 hbls are run in; but at a lower temperature. (180⁰F.). A distinct advantage in using underletting water at 180⁰F. rather than at 210⁰F. is that the chances of "thermal shock" interfering with the actions of the enzymes are greatly reduced.

No 8 Tun.

Ale.

Sept. 2/36.

Malt - 5000 lbs. C.M. Co.

Hops - 20 B.C.; 10 B.C. + 25 B.C. Hops; 10 Boho + 10 Kent = 75^{FF} (all 1935)

6 S; 6 M; 15 K.M.S; 19 K.P.

7.06^{am}Started to mash - $\frac{153-198}{39\frac{1}{2}}$

First run - 20.5%

Malt all in

Last " - 1.35%

Underlet on - $\frac{20}{8}$; Steam - 9 $\frac{1}{2}$ Water - 39 $\frac{1}{2}$

Finished mashing;

Set tye; Heat - 153°

66 $\frac{1}{2}$ Sparg - $\frac{170}{66\frac{1}{2}}$; Hop - $\frac{160}{2}$ 211 $\frac{1}{2}$

Into Cys.

99 $\frac{1}{2}$ lbs.

Out of Cys.

90 $\frac{1}{2}$ lbs.

Balling.

13.75% ~~14.75%~~Yeast - * 87 Brew (58 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 63 $\frac{1}{8}$ - 61 $\frac{1}{8}$ = 2 $\frac{3}{4}$

" recorded in cellar 2002 gals.

Racked Sept. 8/36

Balling - 2.6%

Alcohol: (13.75 - 2.6) .92 = 4.68%

"Sticking Heat" - 152-191° F.

"Initial " - 191-192° F.

No 10 Tun.

Ale.

Sept. 2/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C.; & 25 B.C. Hops; 10 Bobs + 10 Kents - 45th
65°, 6M; 1.5 K.M.S.; 1 qt. P.

7.20 ^{am}	Started to mash - $\frac{152-198}{39}$	First runs - 20.53%
7.27	Malt all in	Lost .. - 1.45%
7.57	Unlocked on - $\frac{210}{8}$; Steam - 9 $\frac{3}{4}$	Water - 39
8.10	Finished mashing	66
8.44	Set taps; Heat - 154°	1
	Sparge - $\frac{170}{66}$; Hops - $\frac{166}{1}$	<u>119</u>

Into Cyp.	Out of Cyp.	Balling.
99 $\frac{1}{2}$ lbs.	- 9 -	90 $\frac{1}{2}$ lbs.
		13.8%

Yeast - * 89 Brew (58 lbs + 1 $\frac{1}{2}$ Hour) Air - 1 $\frac{1}{4}$

Quantity lost during fermentation 58 - 55 $\frac{1}{8}$ = 2 $\frac{7}{8}$ "
 " recorded in cellar 1976 gal.

Racked Sept. - 9/36 Balling - 2.95%

Alcohol: (13.8 - 2.95) .92 = 4.76%

Sticking heat - 152-199°F.

Initial " - 191-192°F.

No. 3 Tun.

Stout.

Sept. 3/36.

Malt - 5000 lbs. C.M.C. + 250 lbs. B. Barley.

Hops - 20 B.C.; 10 B.C.; + 25 B.C. Gals; 10 Boko + 10 Kento = 75 (all 18.35th)6 S; 6 M; 1.5 K.M.S; 130th Tr.; G. root 3th; C. root 3th; L. root 2th7.13^{am} Started to mash - $\frac{163}{39}$

First runs - 20.6%

7.38 .. Malt all in

Last - - 1.8%

7.52 .. Underlet started - $\frac{180}{8}$; Steam - $\frac{177}{1}$

Water - 39

8.02 .. Finished mashing

8

8.32 .. Set taps; Heat - 154°-155°F

68

Sparge - $\frac{170}{68}$; Hop - $\frac{161}{1}$

1

116

Duty Cop.

Unit of Cop.

Balling.

101 lbs.

- 8 $\frac{3}{4}$ -92 $\frac{7}{8}$ < lbs.

19.5%

Yeast - 89 Brew (55 lbs. + 1 $\frac{1}{2}$ Hour)Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation 59 $\frac{1}{8}$ - 57 $\frac{3}{4}$ = 2 $\frac{1}{8}$

" recorded in cellar 2009 gals.

Racked Sept - 10/36.

Balling - 3.15%

Alcohol:

"Striking Heat" - 113°

"Initial" - 150-151°F.

No 4 Tunes.

Ale.

Sept. 8/36.

Malt - 5000 lbs. C.M.C.

Hops - 20 B.C.; 10 B.C. & 25 B.C. Gdgs; 10 Bobs + 10 Kents = 75^{FF} (all 1923)
6 S; 6 M; 1.5 K.M.S; 1 1/2 P.

7.26 ^{am}	Started to mash - $\frac{152-198}{39}$	First runs - 20.5%
7.52	Malt all in	Last .. - 1.25%
8.07	Mundulet started - $\frac{20}{8}$; Steam - 9 3/4	Water - 39
8.21	Finished mashing	8
8.51	Set taps; Heat - 155°	66
	Sponge - $\frac{17}{66}$; 1/4p - $\frac{16}{1}$	1
		114

Inlet Cap.	Out of Cap.	Balling
99 1/2 lbs	- 9 1/2 -	90 1/2 lbs.
		13.8%

Yeast - 2 90 Braw (55 lbs + 1 1/2 flour)	Air - 1 1/4
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Quantity lost during fermentation $61 \frac{3}{4} - 59 = 2 \frac{3}{8}$
 " recorded in celler 1979 gals.

Rashed Sept. 15/36	Balling - 2.7%
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Alcohol: (13.8 - 2.7) .90 = 4.66%

"Striking Heat" - 152-198°F.
 "Initial" - 150-157°F.

No 5 Turn

Ale

Sept. 9/36

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.¹⁹³²; * 10 B.C.¹⁹³³ + 25 B.C. Folys; 10 B.C.¹⁹³⁵ + 10 Kents = 75^{FF}

6 S; 6 M; 1.5 K. M. S; 1 qt. Pn.

7.21^{am} Started to mash - $\frac{157-167}{39}$

First runs - 20.9%

7.46 Malt all in

Last .. - 1.3%

8.01 Underlet started - $\frac{210}{8}$; Steam - 9 $\frac{1}{2}$ '

Water - 39

8.15 Finished mashing;

8

8.45 Set taps; Heat - 155°

66

Spurge - $\frac{176}{66}$; H-p - $\frac{168}{2}$

2

115

Into Cyp.

Out of Cyp.

Balling

99 $\frac{1}{2}$ ddb.- 9 $\frac{1}{4}$ -90 $\frac{1}{4}$ ddb.13.8 $\frac{1}{4}$ %Yeast - * 90 Brau 5 ddb + 1 $\frac{1}{2}$ FlourAir - 1 $\frac{1}{4}$ Quantity lost during fermentation 62 $\frac{1}{8}$ - 59 $\frac{1}{8}$ = 2 $\frac{1}{4}$
" recorded in celler 1997 gals.

Racked Sept. 16/36

Balling - 2.75%

Alcohol: (13.8 - 2.75) .92 = 9.69%

"Striking Heat" - 153-148° F.

"Initial " - 141-122° F.

* A start has been made on the lot of 1933 Cyp. B.C.s, recently taken into storage.

No 7 Tun.

Sparkling Ale.

Sept. 17/36.

Malt - 4500 lbs. C. M. Co.

Hops - 20 B.C.; 10 B.C.; 10 B.C. Hops 10 Kents; 20 Bohemians = 70^{FF}
5 S, 6 M; 1.5 K. M. S.7.15^{am} Started to mash $\frac{152-148}{35\frac{1}{2}}$

First runs - 20.05%

7.36 Malt all in

Last - - 1.2%

7.51 Underlet started $\frac{92}{8}$; Steam - 7 $\frac{1}{2}$ Water - $35\frac{1}{2}$
8

8.02 Finished mashing

66 $\frac{1}{2}$

8.33 Set tops; Heat - 113°

1

Sponge - $\frac{170}{66\frac{1}{2}}$; Hops - $\frac{16}{1}$

111

Into Cop.

Out of Cop.

Balling.

98 $\frac{1}{2}$ bbls. - 8 $\frac{3}{4}$ -88 $\frac{1}{4}$ bbls.

12.8%

Yeast - x 93 Brew (58 lbs. + 1 $\frac{1}{2}$ flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation $61\frac{1}{4} - 58\frac{1}{2} = 2\frac{3}{4}$
recorded in cellar 1955 gallons.Reached , Sept - 21/36

Balling - 2.25%

Alcohol: $(12.8 - 2.25) \cdot 92 = 7.93\%$

"Sticking Heat" - 150 - 145° F.

"Initial" - ~~144~~ 141 - 142° F.

N.B. The brewing water was "Bourtonized" by the addition of the following salts

{	12 lbs. English Powdered Gypsum
	2 lbs. Common salt

The mixture of the above salts was added to the mash at the mouth of the "jary masher".

This has "cleared down" in the fermenter remarkably well.

No. 8 Turn.

Ale.

Sept. 15/36.

Malt - 5000 lbs C.M.C. (New Car)

Hops - 20 B.C.; * 15 B.C.^{33%} + 20 B.C. Hops; 10 Bobs + 10 Kents = 75 #
6S; 6M; 15 K.M.S; 19 P.

7.12 ^{am}	Started to mash - $\frac{152-146}{38\frac{1}{2}}$	First run - 20.8%
7.35	Malt all in	Lead .. - 1.95%
7.50	Muddled on - $\frac{21}{8}$; Steam - $8\frac{1}{2}$	Water - $38\frac{1}{2}$
8.03	Finished mashing	8
8.33	Set Laps; Heat - $154\frac{1}{2}-153^{\circ}$	66.2
	Spurge - $66\frac{1}{2}$; Hops - $\frac{160}{2}$	2
		<hr/> 115 <hr/>

Into Cyp.	Out of Cyp.	Balling.
99.5 lbs.	- 9.7 -	90.7 lbs.
		13.75%

Yeast - * 94 Brew (58 lbs + 1.5 Flour) Air - $1\frac{1}{4}$ Quantity lost during fermentation $68\frac{3}{4} - 61 = 2\frac{3}{4}$
" recorded in cellar 1986 gals.

Racked Sept 22/36 Balling - 2.95%

Alcohol: $(13.75 - 2.95) \cdot 92 = 9.53\%$

"Sticking Heat" - 152-148°F.

"Initial" - - 141-142°F.

* Because these 1933 B.C. Hops appear to be of very good quality, it has been decided to use 15 lbs, rather than 10 lbs, per brew.

N.B. The brewing water was "Burtwiged" as in the previous brew.

"Cleared down" well in fermenter.

No. 9 Turn.

Ale.

Sept. 16/36.

Malt - 5000 lbs. C.M.C.

Hops - 20 B.C.; 15 B.C.^{33'}; 20 B.C. Gdys; 10 Bohos & 10 Keats = 75[#]
6 S; 6 M; 1.5 K.M.S.; 1 1/2 P.

7.22 ^{am}	Started to mash - $\frac{152-197}{38}$	First runs - 20.8%
7.46	Malt all in	Lost .. - 1.5%
8.01	Unolabit started - $\frac{210}{8}$; Steam - 8'	Water - $\frac{38}{8}$
8.13	Finished mashing	67
8.43	Set taps; Heat - $159\frac{1}{2}^{\circ}$	2
	Sparge - $\frac{110}{67}$; Hop - $\frac{161}{2}$	<hr/> 115 <hr/>

In to Cyp.	Out of Cyp.	Billing.
99 1/2 bbls	- 9 3/4 -	89 3/4 bbls.
		13.95%

Yeast - * 95 Bruw (58 bbls + 1 1/2 7.)

Air - 1 1/4'

Quantity lost during fermentation - $62\frac{7}{8} - 60\frac{1}{8} = 2\frac{1}{2}$
" recorded in cellar 1987 gals.

Racked Sept - 23/36

Billing - 2.95%

Alcohol: $(13.95 - 2.95) \cdot 42 = 7.62\%$

'Starting Heat' - 152-147' F.

'Initial " - 191-190' F.

N.B. Brewing water treated as in two previous brews.

"Cleared down" ^{well} in fermenter.

No. 10 Turn.

Ale.

Sept. 21/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.P. 1; 15 B.P. 2^{33/4} + 20 B.P. 3dgs; 10 B.oh. + 10 K.oh. = 75[#]
6 S^o; 6 M; 15 K.M. S^o; 19 P.P.

7.25 ^{pm}	Started to mash - $\frac{132-148}{39}$	First runs - 20.7%
7.50	Malt all in	Last - 16%
8.06	Underlet started - $\frac{210}{8}$ steam - 8'	Waters - 39
8.16	Finished mashing	8
8.47	Set taps; heat - 153 ^o	66 $\frac{1}{2}$
	Spurge - 66 $\frac{1}{2}$; 47 - $\frac{160}{22}$	2 $\frac{1}{2}$
		<u>116</u>

Into Cop.		Out of Cop.	Balling.
100 hbls.	- 9 -	91 hbls.	13.8%

Yeast - * 96 Brew (59 lbs. + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - 59 $\frac{1}{2}$ - 57 = 2 $\frac{1}{2}$
" recorded in cellar - 2010 gals.

Racked Sept - 28/36 Balling - 2.2%

Alcohol: (13.8 - 2.2) .42 = 4.87%

"Striking Heat" - 132-140°F

"Initial" - " - 141-142°F.

No 3 Turn.

Ale.

Sept. 22/36.

Malt = 5000 lbs. C. M. G.

Hops - 20 B. C. 1; 15 B. C. 5 or 20 B. C. 7 lbs; 10 B. C. 4 + 10 Kinds = 75^{FF}
65; 6 M; 1.5 K. M. S; 1 pt. P.7.28 - Started to mash - $\frac{48.53}{38\frac{1}{2}}$ 7.51 - Malt all in $\frac{20}{8}$ 8.06 - Underbit on - $\frac{20}{8}$; Steam - 7 $\frac{1}{2}$ '

8.21 - Finished mashing

8.57 - Set taps; Heat - 159°F.

Spargy - $\frac{170}{66\frac{1}{2}}$; Hop - $\frac{160}{2\frac{1}{2}}$

First runs - 20.95%

Last .. - 1.35%

Waters - $38\frac{1}{2}$
866 $\frac{1}{2}$ 2 $\frac{1}{2}$

115 $\frac{1}{2}$

Into Cop.

100 lbs.

Out of Cop.

- 9 $\frac{1}{2}$ - 90 lbs.

Balling.

13.95%

Yeast - * 10 96 + 97 Brews (-57 lbs + 1 $\frac{1}{2}$ lb) Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation - 58 $\frac{1}{2}$ - 56 $\frac{3}{8}$ = 1 $\frac{7}{8}$
" recorded in cellar - 1975 gals.

Racked Sept 29/36.

Balling - 2.45%

Alcohol: (13.95 - 2.45) .92 = 4.83%

Sticking Heat - 152 - 148°F.

Initial " - 141 - 140°F.

No. 7 Tun.

Ale.

Sept. 23/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. P.; 15 B. C. + 20 B. C. 2d; 10 B. C. + 10 Kents = 75[#]
6 S; 6 M; 1.5 K. M. S.; 1 qt. P.

7.15	Started to mash - ¹⁵²⁻¹⁹⁸	First runs - 20.6%
7.41	Malt all in	Last .. - 1.5%
7.56	Wheibel started - ^{2/0} 8, Steam - 8'	Water - 38
8.08	Finished mashing	8
8.40	Set taps, Heat - 153 ^{1/2} F	67
	Sparg - ¹⁷⁶ 67, Hop - ¹⁶⁹ 2	2
		<hr/> 115

Into Cyp.	Out of Cyp.	Belling
99 ^{1/2} lbs	-10 -	89 ^{1/2} lbs.
		13.75%

Least - * 98 Brew (57 lbs + 1^{1/2} Flour) Air - 1^{1/2}Quantity lost during fermentation - 61^{1/2} - 58^{1/8} = 2^{3/8}
" recorded in cellar 1969 gals.

Racked Sept. 30/36 Belling - 2.9%

Alcohol: (13.75 - 2.9) . 42 = 4.55%

* Sticking Heat - 152-198 F.

* Initial " - 171-192 F.

No 5 Tun.

Ale.

Sept. 28/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C. ; 15 B.C. ^{33%} ; 20 B.C. ^{33%} ; 10 Bohs 4/10 Kents = 75#
6 S ; 6 M ; 1.5 K. M. S ; 1 pt. P.7.10 = Started to mash - $\frac{43-44}{38\frac{1}{2}}$

7.39 = Malt all in

7.50 = Underlet started - $\frac{31.0}{8}$; Steam - $7\frac{1}{2}$

8.01 = Finished mashing

8.31 = Set tye, ; Heat - $153\frac{1}{2}$
Spurge - $\frac{11}{67}$; Hop - $\frac{16}{11}$

First runs - 20.7%

Last - 1.5%

Water - $38\frac{1}{2}$

8

67

22

116

In to Cop.

100 lbs.

-9 $\frac{1}{2}$ -

Out of Cop.

90 $\frac{3}{4}$ lbs.

Balling.

13.75%

Least - * 100 Brew (59 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 62 $\frac{1}{2}$ - 59 $\frac{1}{2}$ = 2 $\frac{3}{4}$ "
recorded in cellar 1996 gals.

Racked Oct. 5/36

Balling - 2.6%

Alcohol : (13.75 - 2.6) .42 = 4.68%

"Sticking Heat" - 103° - 148° F.

"Initial" " - 141 - 142° F.

No 10 Tun.

Stout.

Sept. 29/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C., 10 B.C. & 20 B.C. Gdgs; 10 Bobs + 10 Newb. = 75[#].6[#] S; 6 M; 1.5 K.M.S.; 130[#] P.; L.root-3[#]; C.root-3[#]; F.root-3[#].

7.09 ^{am}	Started to mash - $\frac{163}{39}$	First runs - 20.8%
7.27.	Malt all in	Last " - 1.8%
7.42.	Underlet started - $\frac{150}{8}$; Steam - 7 $\frac{1}{4}$ '	Water - 39
7.51.	Finished mashing	8
8.21.	Set taps; Heat - 157°	67 $\frac{1}{2}$
	Sprays - $\frac{170}{6\frac{1}{2}}$; Hop - $\frac{160}{2}$	2
		<hr/> 116 $\frac{1}{2}$

Into Cop.

101 lbs.

- 9 $\frac{1}{4}$ -

Out of Cop.

91 $\frac{3}{4}$ lbs.

Balling.

14.7%

Yeast - * 101 Brew (56 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation - 59 - 56.74 = 2 $\frac{1}{4}$ "
 " recorded in cellar - 1996 gals.

Racked Oct. 6/36

Balling - 3.25%

Alcohol: 67.4-

"Striking Heat" - 163°F.

"Initial " - 150-157°F.

No. 6 Tun.

Ale.

Oct. 5/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C. s; 10 B. C. s; 40 B. C. s; 10 B. C. s; 10 Kents - 75th
6 S; 6 M; 15 K. M. S.; 19 f. P.

7.20 ^{min}	Started to mash - $\frac{153-199}{38\frac{1}{2}}$	First runs - 20.6%
7.41	Malt all in	Last - 1.55%
7.56	Underlet started - $\frac{210}{8}$; Steam - 8'	Water - $38\frac{1}{8}$
8.08	Finished mashing	66 $\frac{1}{2}$
8.38	Set taps; Heat - 153 $\frac{1}{2}$	1 $\frac{1}{2}$
	Sparge - $\frac{170}{66\frac{1}{2}}$; Hops - $\frac{144}{1\frac{1}{2}}$	<u>114$\frac{1}{2}$</u>

Into Cyp.	Out of Cyp.	Balling.
99 $\frac{1}{2}$ lbs.	- 9 $\frac{1}{2}$ -	90 lbs.
		13.7%

Yeast - * 102 Brew (58 lbs + 1 $\frac{1}{2}$ Flour)	Air - 1 $\frac{1}{4}$ '
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Quantity lost during fermentation 62.59% = 29%
recorded in cellar - 1982 gals.

<u>Racked</u> Oct. 13/36	Balling - 2.2%
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Alcohol: (13.7 - 2.2) . 92 = 7.83%

"Striking Heat" - 153-199°F.

"Initial" - " - 194-172°F.

No 7 Tun.

Ale.

Oct. 6/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C. 2; 15 B.C. 3 & 20 B.C. 4 gals; 10 Coko + 10 Kents = 75 #
6 S; 6 M; 1.5 K.M.S; 1 ft. P.

7.17 ^{am}	Started to mash - $\frac{153-149}{39}$	First runs - 20.6%
7.41	Malt all in	Last .. - 1.3%
7.56	Underlet started - $\frac{2/0}{8}$; Steam - 9'	Water - 59
8.12	Finished mashing	8
8.42	Set taps; Heat - $\frac{153}{2}$	66 $\frac{1}{2}$
	Sparge - $\frac{170}{66\frac{1}{2}}$; Hop - $\frac{160}{3}$	3
		<u>115 $\frac{1}{2}$</u>

Into Cys.	Out of Cys.	Balling.
100 lbs.	- 10 $\frac{7}{8}$ -	88 $\frac{3}{4}$ lbs.
		13.75%

Yeast - * 102 Brew (60 lbs + 1 $\frac{1}{2}$ Flour)	Air - 1 $\frac{1}{4}$
---	-----------------------

Quantity lost during fermentation - 65 $\frac{1}{8}$ - 60 $\frac{1}{2}$ = 2 $\frac{3}{8}$
 " recorded in cellar 2009 gals.

Ranked Oct. 13/36	Balling - 2.2%
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Alcohol: (13.75 - 2.2) .92 = 4.85%

Stoking Heat - 153 - 179 °F.

" Initial - - 190 + 191 - 192 °F.

No 8 Turn.

Ale.

Oct. 7/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C. 2; 15 B.C. 33; 20 B.C. 4; 10 Bohs + 10 Kents = 75[#]
6 S; 6 M; 1.5 K. M. S; 1 1/2 P.7.17^{am} Started to mash - $\frac{153-198}{38\frac{1}{2}}$

First runs - 20.5%

7.40 - Malt all in

Last .. - 1.95%

7.55 Underlet on - $\frac{210}{8}$; Steam - 8 $\frac{1}{2}$ Water - 38 $\frac{1}{2}$

8.08 - Finished mashing

66 $\frac{1}{2}$ 8.45 - Set taps; Heat - 155 $^{\circ}$

1

Sparge - $\frac{170}{66\frac{1}{2}}$; Hop - $\frac{160}{1}$

114

Into Cyp.

Out of Cyp.

Balling.

99 $\frac{1}{2}$ hbls.

-10 -

89 $\frac{1}{2}$ hbls.

13.8%

Yeast - * 103 Brews (60 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{2}$ Quantity lost during fermentation $62\frac{1}{2} - 59\frac{1}{2} = 3$ "
" recorded in cellar 1944 gals.

Racked Oct. 19, 1936

Balling - 2.2%

Alcohol: $(13.8 - 2.2) \cdot 92 = 4.87\%$ " Striking Heat - 153-198 $^{\circ}$ F." Initial " - 191-192 $^{\circ}$ F.

No. 9 Turn

Sparkling Ale.

Oct. 13/36

Malt - 45.00 lbs. C. M. Co.

Hops - 20 B.C., (10 B.C.; 10 B.C. Hops; 10 Kents); 20 Bohemians = 70[#]
5 S; 6 M; 1.5 K.M.S.

7.17 ^{am}	Started to mash - $\frac{153\frac{1}{2} - 149}{35}$	First runs - 20.5%
7.38	Malt all in	Last " - 0.95%
7.59	Wickerlet started - $\frac{210}{8}$; Steam - 8 $\frac{1}{2}$	Water - $\frac{35}{8}$
8.09	Finished mashing	67
8.40	Set taps; Heat - 154°	1
	Sparg - $\frac{170}{67}$; Hrp - $\frac{160}{1}$	<u>111</u>

Into Cyp.	Out of Cyp.	Billing
98 $\frac{1}{2}$ lbs.	- 9 $\frac{1}{2}$ -	89 lbs.
		12.8%

Yeast - x 104 Brew (60 lbs + 1 $\frac{1}{2}$ flour) Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation $61\frac{1}{4} - 58\frac{3}{4} = 2\frac{1}{2}$
 recorded in cellar 1939 gals.

Racked Oct. 20/36 Billing - 1.85%

Alcohol: $(12.8 - 1.85) \cdot 72 = 4.60\%$ "Striking Heat" - 153 $\frac{1}{2}$ - 149°F.

"Initial " - 141 - 142°F.

No 10 Turn.

Ale.

Oct. 17/36.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C.; 15 B.C. & 20 B.C. Hops; 10 Bobs & 10 Kents = 75#
6 S; 6 M; 1.5 K.M.S; 1 1/2 P.

7.30 ^{am}	Started to mash	$\frac{15\frac{1}{2}-153}{39}$	First runs - 20.2%
7.44	Malt all in		Last " - 1.4%
7.57	Underlet started	$\frac{20}{8}$; Steam - 9 1/2'	Water - 39
8.12	Finished mashing		8
8.43	Set tays; Heat - 15.4"		66
	Sparge	$\frac{170}{66}$; Hops - $\frac{160}{1}$	1
			<hr/> 114

Into Cyp.		Out of Cyp.	Balling
99 1/2 hbl.	- 9 1/2 > -	90 < hbl.	13.7%

Yeast - 107 & 108 Brews (58 lbs + 1 1/2 lbs) Air - 1 1/4

Quantity lost during fermentation 58 - 55 1/4 = 2 3/4
recovered in cellar 1942 gals.

Rashed Oct. 21/36 Balling - 2.6%

Alcohol: (13.7 - 2.6) . 42 = 4.66%

"Stinking Heat" - 153; - 149 F.

"Initial" - 191 - 192 F.

No 4 Tun.

Ale.

Oct. 19/36.

Malt - 5000 lbs. C. M. G.

Hops - 20 B. C. ³⁰; 15 B. C. ³⁰ & 20 B. C. ³⁰; 10 B. C. & 10 Kents. = 75"
6 S. ; 6 M. ; 15 K. M. S. ; 1 1/2 P.

7.19 ^{am}	Started to mash - $\frac{153\frac{1}{2} - 197}{39\frac{1}{2}}$	First runs - 20.25%
7.44	Malt all in	Last - - 1.8%
7.59	Underlet started - $\frac{210}{8}$; Steam - 9 1/2'	Water - 39 1/2
8.13	Finished mashing	8
8.43	Set taps; Heat = 153 1/2°	66
	Sparge - 66; Hop - $\frac{160}{2}$	2
		<hr/> 115 1/2

Into Cyp.	Out of Cyp.	Balling
100 lbs.	- 10 -	90 lbs.
		13.75%

Yeast - * 9 Tun (108 Brew) 59 lbs + 1 1/2 Hhon Air - 1 1/2

Quantity lost during fermentation $63\frac{1}{2} - 59\frac{3}{4} = 2\frac{3}{4}$
recorded in cellar - 2003

Racked Oct. 26/36 Balling - 2.1%

Alcohol: $(1375 - 2.0) \cdot 92 = 4.89\%$

"Striking Heat" - 153 1/2 - 199° F.

"Initial" - - 191 - 192° F.

No. 5 Turn.

Ale.

Oct. 20/36

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C., 15 B. C., 720 B. C. C. plgs, 10 Bels & 10 Kents = 75 #
6 S, 6 M, 1.5 K. M. S, 1 1/2 P.7.27^{am} Started to mash - $\frac{153-161}{39\frac{1}{2}}$

First runs - 20.6%

7.51 - Malt all in

last - 1.6%

8.06 Underlet started - $\frac{20}{8}$; Steam - 10'

Water - 39 1/2

8.20 - Finished mashing

8

8.50 - Set taps; Heat $15\frac{3}{4}$

65 1/2

Sparge - $\frac{170}{65\frac{1}{2}}$; H₂O - $\frac{160}{2}$

2

115In to C₂.Out of C₂.

Belling.

99 1/2 lbs.

- 9 1/2 -

90 lbs.

13.8%

Yeast - * 109 Brew (59 lbs. + 1 1/2 Hour)

Air - 17'

Quantity lost during fermentation $61\frac{3}{4} - 59 = 2\frac{3}{4}$

" recorded in cellar 1976 gals.

Racked Oct. 27/36

Belling - 2.5%

Alcohol: $(13.8 - 2.5) \cdot 92 = 4.74\%$

"Sticking Heat" - 190 - 191 - 192 °F.

"Initial " - 153 1/2 - 149 °F

No. 3 Tun

Stout

Oct. 21/36

Malt - 5000 lbs. D. M. C. + 250 lbs. P. Barley.

Hops - 20 B. C.; 15 B. C. ³³; 20 B. C. Hops; 10 P. Hops + 10 Kents = 75#6 S^o; 6 M; 1.5 K. M. S^o; ¹³⁰17# P. H.; J. root - 3 lbs; C. root - 3#; P. root - 2#

7.30 ^{am}	Started to mash - $\frac{162}{37\frac{1}{2}}$	First run - 21.1%
7.59	Malt all in $\frac{150}{8}$	Last " - 1.4%
8.08	Underlet started - $\frac{200}{8}$; Steam - 5'	Water - 37 $\frac{1}{2}$
8.18	Finished mashing	8
8.29	Set taps; Heat - 155 - 156 °F.	69 $\frac{1}{2}$
	George - $\frac{170}{69\frac{1}{2}}$; Hop - $\frac{160}{2}$	2
		<u>117</u>

Into Cap.

101 hll.

Out of Cap.

- 9 $\frac{1}{4}$ -91 $\frac{3}{4}$ hll.

Belling.

17.4%

Yeast - *110 Brew (57 lb + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$

Quantity lost during fermentation - 60 $\frac{1}{4}$ - 58 $\frac{1}{8}$ = 2 $\frac{1}{8}$
 recorded in celler - 2016 gals.

Reached Oct. 28/36

Belling - 3.3%

Alcohol:

~~"Stinking Heat" - 199-150-157 °F~~

"Stinking Heat" - 164 °F.

~~"Initial" -~~

"Initial" - 199-150-157 °F.

No 6 Turn.

Ale.

Oct. 27/36.

Malt = 5000 lbs. P.M. Co. (New Carl)

Hops - 20 B.C. 1, 15 B.C. 2, 20 B.C. 3, 10 B.C. 4 & 10 Kents - 75#

6 S, 6 M, 1.5 K.M.S, 1 1/2 B.

7.31 am	Started to mash - $\frac{159-150}{37}$	First run - 21.5%
7.59	Malt all in	Lost " - 1.3%
8.07	Underlet started - $\frac{218}{8}$; steam - 10'	Water - $\frac{37}{8}$
8.23	Finished mashing	68
8.55	Set taps; Heat - 127-155 °F.	3
	Sparge - $\frac{170}{68}$; Hops - $\frac{160}{3}$	116

Auto Cop.

99 1/2 lbs.

Out of Cop.

- 9 3/4 - 89 3/4 ~~9 1/2 lbs~~

Balling.

13.95%

Yeast - * 109 Brew (59 lb + 1 1/2 lb) Air - 1 1/4'

Quantity lost during fermentation -

recorded in cellar - 1956 gals.

Racked Nov. 3/36

Balling - 2.55%

Alcohol: (13.95 - 2.55) .42 = 4.79%

Sticking heat - 159-150 °F.

Initial " - 191-142 °F.

No 7 Tun.

Ale.

Oct. 28/36.

Malt - 5000 lbs. P. M. Co.

Hops - 20 B.C. 1; 15 B.C. 2 + 20 B.C. 3 + 10 Boh + 10 Kents = 75^{lb}
6 S; 6 M; 1.5 K.H.S; 1 lb P.7.31^{am} - Started to mash - $\frac{154-160}{37}$

Malt all in

Unoblet started - $\frac{210}{8}$; Steam - 9 $\frac{1}{2}$ '

Finished mashing

Set taps; Heat - 154°

Spray - $\frac{170}{69}$; Hops - $\frac{160}{2\frac{1}{2}}$

First runs - 21.5%

Last .. - 1.4%

Water - 37

69
2 $\frac{1}{2}$

116 $\frac{1}{2}$

Into Cys.

100 $\frac{1}{2}$ hbls.

Out of Cys.

- 9 $\frac{1}{2}$ - 91 hbls.

Balling.

13.75%

Yeast - * 110 Brew (57 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation -

recorded in cellar - ~~1465~~ gals. 2005 gals.

Reached Nov. 7/36.

Balling - 2.65%

Alcohol: $(13.75 - 2.65) \cdot 92 = 7.66\%$

"Sticking heat" - 154°-150° F.

"Initial" - 191-192° F.

No 8 Turn

Ale.

Oct. 29/36

Malt = 5000 lbs. P. M. Co. (two cars - mixed)

~~Hot~~ Hops - 20 B.C.; 10 B.C. 20 B.C. 90 lbs; 10 B.C. & 10 Cents = 75[#]
6 S; 6 M; 1.5 K. M. S.; 1 ft. R.7.38^{am} - Started to mash - $\frac{159-159}{37\frac{1}{2}}$

7.51 - Malt all in

8.06 - Underlet started - $\frac{210}{8}$; Steam - 9'

8.20 - Finished mashing

8.50 - Set taps; Heat - 159°

Spray - $\frac{170}{68\frac{1}{2}}$; Hop - $\frac{160}{2}$

First runs - 21.2%

Last .. - 1.55%

Water - 37 $\frac{1}{2}$

8

68 $\frac{1}{2}$

2

116

Into Cys.

100 $\frac{1}{2}$ hbls.

Out of Cys.

- 9 $\frac{1}{2}$ -

91 < hbls.

Balling

13.7%

Least - * III Brew (59 hbl + 1 $\frac{1}{2}$ Flow)Air - 1 $\frac{1}{4}$

Quantity lost during fermentation -

" recorded in cellar - 2003 gal.

Reached Nov. 5/36

Balling - 2.6%

Alcohol: (13.7 - 2.6) . 92 = 4.66%

* Sticking heat - 109-150° F.

* Initial - " - 141-140° F.

No 10 Tun.

Sparkling Ale.

Nov. 3/36

Malt - 4500 lbs P. M. Co.

Hops - 20 B.C.s; (10 B.C.s, 10 B.C. 7 lbs; 10 Kent); 20 Bohemian = 70 #
5 S; 6 M; 1.5 K.M.S.7-22 Started to mash $\frac{154-150}{33.7}$

First Run 21.7%

7-44 malt all in

Fast Run 1.2%

7-59 Underlet started $\frac{210}{8}$ Steam 7

Water 33.7

8-10 Finished mashing

89 ±

8-40 Set taps; Heat 154 strong

 $\frac{1}{111 \frac{1}{2}}$ Sparge $\frac{170}{22}$ Hop $\frac{160}{4}$

Into Cop 99 bbls

Out of Cop 89 ±

Balling
12.7%

Yeast - * to 8 1/2 (59 lbs)

Quantity lost during fermentation $57 \frac{3}{8} - 55 \frac{1}{4} = 2 \frac{3}{8}$

,, recorded in cellar 1962 gal.

Rashed Nov. 10/36

Balling 1.95%

Alcohol $(12.7 - 1.95) \cdot 92 = 7.51\%$

Striking Heat - 154-150°F.

Sinitail - 191-192°F.

No. 3 Tun.

Ale.

Nov. 9/36

Malt - 5000 lbs O. M. Co.

Hops - 30 B.P.; 15 B.C.³³; + 20 B.C. 9 lbs; 10 Boko + 10 Vento = 75*
 6 S; 6 M; 15 W. M. S.; 19 P.P.

7.27^{am} Started to mash - $\frac{159-160}{37\frac{1}{2}}$

First runs - 30.65%

7.51 Malt all in

Last - 1.6%

8.06 Mashed started - $\frac{210}{8}$; Steam - 8°Waters - $37\frac{1}{2}$

8.17 Finished mashing

8

8.46 Set taps; Heat - 159° F.

68

Sponge - $68\frac{17}{8}$; Hop - $\frac{160}{2}$

2

115²

Into Cys.

Out of Cys.

Balling

100 lbs.

-10 -

90 lbs.

13.9%

Yeast - * 119 Brew (59 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{2}$

Quantity lost during fermentation 59 $\frac{1}{2}$ - 57 $\frac{3}{4}$ = 2 $\frac{1}{4}$
 recorded in cellar 1999 gals.

Racked Nov. 10/36

Balling 3.1%

Alcohol: (13.9 - 3.1) .42 = 4.53%

Sticking Heat - 159-150° F.

Initial - " - 141-140° F.

* This brew was run to cellar a day earlier because of the holiday Nov. 11th. Fermentation was complete, and this test glass showed the beer to be clear.

No. 9 Turn

Stout.

Nov. 10/36.

Malt - 5000 Ch. M. Co. + 250 lbs. B. Borley.

Hops - 20 B. Co. ; 15 B. Co. ; 4 20 B. Co. Gals ; 10 Bobs + 10 Kents - 75 #
6 S ; 6 M ; 1.5 K. M. S. ; 130 # P. ; 9 root - 3 # ; C. root - 3 # ; Y. root - 2 #

7.30 ^{am}	Started to mash - $\frac{167}{38}$	First runs - 21.25%
7.59	Malt all in $\frac{150}{8}$	Last .. - 17.7%
8.09	Underlet started - $\frac{150}{8}$; Steam - 7 $\frac{3}{4}$	Water - 38
8.22	Finished mashing	8
8.50	Set taps ; Heat - 154°	69
	Sparge - $\frac{170}{69}$; Hop - $\frac{160}{2}$	2
		<hr/> 117

Into Cys.	Out of Cys.	Belling.
101 hbls.	- 9 -	92 hbls
		17.7%

Yeast - * 117 Brew (58 lbs. + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - 65 $\frac{5}{8}$ - 62 = 3 $\frac{3}{8}$
.. recorded in cellar - 2074 gals.

Run to cellar Nov 17/36 Belling - 3.8%

"Striking Heat" - 164°F.

"Initial " - 149-150°F.

No. 5 Tun.

Ale.

Nov. 16/36

Malt - 5000 lb. D. M. Co.

Hops - 20 B.C., 15 B.C. and 20 B.C. Hops; 10 Bobs & 10 Keats = 75#
6 S, 6 M; 15 K.M.S.; 1 qt P.7.29^{am} Started to mash - $\frac{157-158}{37\frac{1}{2}}$

First runs - 21.3%

7.51 - Malt all in

Last " - 1.7%

8.06 - Underlet m - $\frac{200}{8}$; Steam - 8'Water - 37 $\frac{1}{8}$

8.15 - Finished mashing; 8

68

8.48 - Set taps; Heat - 153-155°F.

2 $\frac{1}{2}$ Sponge - $\frac{170}{68}$; Hops - $\frac{110}{22}$

116

Into Cyp.

Out of Cyp.

Balling

100 hbls.

- 9 $\frac{3}{4}$ -90 $\frac{3}{4}$ > hbls.

13.9%

Yeast - * 118 Brew 60 lbs + 9.6 g. "Fermentin") Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation 62 $\frac{3}{4}$ - 60 $\frac{3}{4}$ = 2 $\frac{1}{2}$ "
recorded in cellar 201 $\frac{1}{8}$ gals.

Run to cellar Nov. 23/36

Balling - 3.9%

Alcohol: (13.9 - 3.9) .92 = 4.20%

"Sticking Heat" - 154-150°F.

"Initial" - 141-42°F.

Bottled Dec. 23/36
Brilliant & flavory good.

20. The brewing water was "Bourlignez" as previously.

* "Fermentin", a yeast food was mixed with $\frac{1}{2}$ gal. of cold water, added to the 60 lb of yeast, and the mixture allowed to stand for 1 $\frac{1}{4}$ hours. The top layer of yeast was then skimmed off, an equal quantity added to compensate for this loss, and then the whole mixed with $\frac{1}{2}$ bucket ~~hot~~ wort at 76°F and allowed to set. As soon as the yeast had "risen", it was added to the fermenter being filled. After 35 mins. had elapsed, and the yeast had still shown no signs of rising, "pitching" took place.

No. 6 Tun

Ale.

Nov. 17/36.

Malt - 5000 lbs. D. M. Co.

Hops - 20 B. C. n; 15 B. C. n; 20 B. C. n; 10 B. C. n + 10 Kents - 75#
6 S; 6 M; 15 K. M. S.; 1 1/2 lb.

7.36 am	Started to mash - $\frac{169-150}{38}$	First runs - 21.3%
8.00 "	Malt all in	Let - - 15%
8.15 "	Underlet on - $\frac{310}{8}$; Steam - 8 1/4	Water - 38
8.30 "	Finished mashing	8
9.00 "	Set taps; Heat - $\frac{154}{160}$	67 1/2
	Spurge - 67 1/2; Hops - $\frac{160}{2 1/2}$	2 1/2
		<u>116</u>

Into Cyp.

100 hlls.

- 9 1/2

Out of Cyp.

90 1/2 hlls.

Balling.

13.9%

Yeast - * 118 Bow (59 lbs + 1 1/2 Flour) Air - 1 1/2

Quantity lost during fermentation - 62 1/8 - 60 1/8 = 2 3/4
recorded in cellar 2001 gals.

Run to cellar Nov. 29/36 Balling - 3.1%

Alcohol: (13.9 - 3.1) .42 = 4.53%

"Striking Heat" - 159 - 150 F.

"Initial " - 141 - 142 F.

N.B. Brewing water "Bourgeois"

Fermentation Follow-Up.

7 am Nov. 17th Black-head removed - Later than usual - slow in starting.

5 P.M. Nov. 17th - Temperature - $59\frac{1}{2}^{\circ}\text{F}$; String head.

8 am Nov. 18th - Temperature - $63\frac{1}{2}^{\circ}\text{F}$; " "
Slow in raising of Temp; Belling - 11%

5 P.M. Nov. 18th - Temp - 65° Belling - 9.7%

8 A.M. Nov. 19 - Temp. - $69\frac{1}{2}^{\circ}\text{F}$ " - 6.6%
Making yeast - peculiar odour noticed.
Top of yeast head was unnew.

5 P.M. Nov. 19 - Temp - $69\frac{1}{2}^{\circ}\text{F}$. Belling - 5.7%. Odour very noticeable.

7.30 am Nov. 20 - Temp - $69\frac{1}{4}^{\circ}$ Belling - 4.6%. 1st head of yeast removed at 7.20 am. Nearly 29 hours late in skimming.

1 P.M. Nov. 23 - Temp - 57° Ball - 3.9%. Run to cellar.
Special vat - Will be observed closely.

No. 7 Turn.

Ale.

Nov. 18/36.

Malt - 5000 lbs. P. M. Co.

Hops - 20 B. C.; 15 B. C. ^{33%} + 20 B. C. G. d. y. s.; 10 Boko x 10 Kent = 75[#]
6 S; 6 M; 1.5 K. M. S; 1 lb P.7.33^{am} Started to mash - $\frac{154-158^{\circ}F}{37}$

Malt all in

Underlet on - $\frac{210}{8}$; Steam - $8\frac{1}{2}$

Finished mashing

Set taps; Heat - 154° Sparge - $\frac{170}{68\frac{1}{2}}$; Hop - $\frac{160}{2}$

First run - 21.5%

Lat - - 1.67

Water - 37

8

68

2

115

Into Cyp.

100 $\frac{1}{2}$ hbl.

Out of Cyp.

- 9 $\frac{1}{2}$ -

91 hbl.

Balling.

13.65%

Yeast - * 119 Brew's - 6 lb. + 1 $\frac{1}{2}$ lb. (bun)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 63 - 60 $\frac{3}{8}$ = 2 $\frac{5}{8}$
recorded in celler 2002 gals.

Run to celler Nov. 25/36

Balling - 2.8%

Alcohol: (13.65 - 2.8) . 92 = 7.55%

"Sticking Heat" - 154-150°F.

"Initial" " - 141-142°F.

N.B. Brewing water "Bentonized".

No 8 Tun.

Ale.

Nov. 27/36.

Malt - 5000 lbs. ^{P.} W. Co.Hops - 20 B.C.; 15 B.C. ³³ & 20 B.C. 9 lbs; 10 Bohs & 10 Kents = 75[#]
6 S; 6 M; 1.5 K.M.S; 1 1/2 P.7.33^{am} Started to mash - $\frac{164 - 150}{38}$

7.55 Malt all in

8.10 Underlet on - $\frac{210}{8}$; Steam - 8 $\frac{1}{2}$

8.25 Finished mashing

8.55 Set taps; Heat - 154°

Sponge - $\frac{170}{67}$; 1 1/2 - $\frac{110}{2}$

First run - 20.95%

Last .. - 1.9%

Water - 38

67

2

115

In to Qp.

100 $\frac{1}{2}$ hbls.- 9 $\frac{1}{2}$ -

Out of Qp.

97 hbls.

Balling

13.7%

Yeast - From Keith - (55 lbs + 1 $\frac{1}{2}$ flour)Air - 1 $\frac{1}{4}$

Quantity lost during fermentation

recorded in cellar

20.22 gals.

Run to cellar Dec. 1/36

Balling - 3.0%

Alcohol : (13.7 - 3.0) .92 = 7.50%

"Sticking Heat" - 154-158° F.

"Initial " - 171-172° F.

N.B. Brewing water "Buntinized".

No 10 Turn

Start.

Nov. ~~27~~²⁵/36

Malt - 5000 lbs. D. M. Co. + 200 lbs. B. Barley.

Hops - 20 B. C.; 15 B. C.; 4 20 B. C. Glys; 10 Bohls + 10 Kents = 75 #
6S; 6 M; 1.5 K. M. S.; 130# P.; G. root - 3#; C. root - 0#; L. root - 2#7.27^{am} Started to mash - $\frac{165}{38\frac{1}{2}}$

First run - 21.0%

7.51. Malt all in

Last - - 2.0%

8.06. Underlet on $\frac{100}{8}$; Steam - $7\frac{3}{4}$ '

Wet - 38

8.19. Finished mashing

8

8.44. Let tops; Heat - 159°

68

Sparge - $\frac{170}{68\frac{1}{2}}$; Hop - $\frac{160}{2}$

2

117

Into Cyp.

Out of Cyp.

Balling

101 lbs.

- 9 -

92 lbs.

17.45%

Yeast - Keith's (55 lbs + 1 1/2 Hour)

Air - 17'

Quantity lost during fermentation

recorded in cellar 2027 gals.

Run to cellar Dec. 2/36.

Balling - 3.1%

Alcohol: {

"Striking Heat" - 165°F.

"Initial" - 149-150°F.

N.B. Brewing water treated

No. 9 Turn.

Sparkling Ale.

Nov. 30/36.

Malt - 7500 lbs. D. M. Co.

Hops - 20 B.C. (10 B.C.; 10 B.C. 9dgs; 10 Kente); 20 Bohemians = 70 #
5 S; 6 M; 1.5 K. M. S.

7.35 ^{am}	Started to mash - $\frac{157+150}{33\frac{1}{2}}$	First runs - 20.85%
7.55	Malt all in	Last .. - 1.1%
8.10	Underlet started - $\frac{310}{8}$; Steam $7\frac{1}{2}$	Water - $33\frac{1}{8}$
8.20	Finished mashing	68 $\frac{1}{2}$
8.50	Set taps; Heat $15\frac{1}{4}$	1
	Springs - $\frac{190}{68\frac{1}{2}}$; Hops - $\frac{160}{1}$	<u>111</u>

Into Cys.	Out of Cys.	Balling
99 hbls.	-10 -	88 hbls.
		12.9%

Yeast - * 129 Brew (50 lbs. + $1\frac{1}{2}$ Flour) Air - $1\frac{1}{2}$ Quantity lost during fermentation $62\frac{1}{2} - 59\frac{1}{4} - 2\frac{1}{2}$
recorded in cellar 1970 gals.

Run to cellar Dec. 7/36 Balling - 3.2%

Alcohol: $(12.9 - 3.2\%) \cdot 42 = 4.1\%$ "Striking Heat" - $155 - 157^{\circ}F$."Neutral " - $141 - 142^{\circ}F$.

N.B. Brewing water treated.

No 3 Turn

Alk.

Dec. 1/36

Malt - 5000 lbs. W.D. M. Co.

Hops - 20 B.C.; 15 B.C. + 20 B.C. Glys; 10 Boko + 10 Kents = 95[#]
 6 S^v; 6 M; 1.5 K. M. S.; 1 1/2 P^v.

Started to mash - $\frac{155-151}{37}$

First run - 21.1%

Malt all in

Last - 1.5%

Underlet started - $\frac{210}{8}$; Steam - 8 1/2

Walt - 37

Finished mashing

8

Set taps; Heat - 159°

68

Sponge, # $\frac{110}{68}$ Wap - 2 1/2

2

115

Into Cyp.

Out of Cyp.

Balling

100 1/2 bbls.

- 10 -

20 1/2

13.9%

Least - From Keith's (55 lbs + 1 1/2 Flour) Air - 1 1/2

Quantity lost during fermentation $59\% - 57\% = 2\%$
 recorded in cellar 1998 gals.

Run to cellar Dec. 8/36

Balling - 3.7%

Alcohol: (15.9 - 3.7) . 42 = 4.71%

"Striking Heat" - 155° - 151° F.

"Initial " - 141 - 142° F.

N.B. Brewing water treated.

No 4 Turn

Ale.

Dec. 15/66.

Malt - 5000 lbs. P. M. G.

Hops - 20 B.C.s; 15 B.C.s + 20 B.C. Glycer; 10 Boko + 10 Kents = 70⁺
6 S; 6 M; 1.5 K.M.S; 1 qt. P.

7.31 ^{am}	Started & mash - $\frac{155-157}{38}$	First runs - 21.1%
8.12	Malted in	Last .. - 1.8%
8.27	Underlet started - $\frac{210}{8}$; Steam - 9'	Water - 38
8.45	Finished mashing	8
9.15	Set taps; Heat - 153-154°F	67
	Sparge - $\frac{170}{67}$; Hsp - $\frac{160}{27}$	<u>92</u>
		<u>1154</u>

Into Cyp.		Out of Cyp.	Balling
100 $\frac{1}{2}$ hlls	-10-	90 $\frac{1}{2}$ hlls.	13.85%

Yeast - From Keith's (55 lbs + 1 $\frac{1}{2}$ lb) Qui - 1 $\frac{1}{4}$

Quantity lost during fermentation 62 $\frac{3}{4}$ - 60 = 2 $\frac{3}{4}$
 recorded in cellar 2008 gals.

Run to cellar Dec. 22/66. Balling - 2.3%

Alcohol: (13.85 - 2.3) . 92 = 4.85%

"Starting Heat - 185-187°F.

"Initial " - 191-192°F.

N.B. Brewing water was not treated as it was thought that the brew would absorb enough Plaster of Paris due to dusty conditions set up by the plasterers.

Due to the slipping of belts, mashing in was delayed for some minutes.

No. 5 Turn.

Ale.

Dec. 16/36

Malt - 5000 lbs. P.M. Co.

Hops - 20 B.C., 15 B.C., 4 20 B.C. 9/2; 10 Boho & 10 Kents - 75⁺
6 S, 6 M; 15 K.M.S.; 19t. B.7.33^{am} Started to mash - $\frac{15.5-15.7}{.37}$

First run - 21.1%

7.55 Malt all in

Last .. - 1.3%

8.10 Underlet on - $\frac{310}{8}$; Steam - 9'Water - $\frac{37}{8}$

8.22 Finished mashing

68

8.52 Set tye; Heat - 15.9°

1

Sponge - $\frac{120}{68}$; 47p - $\frac{160}{1}$

119

Ditto Cp.

Out of Cp.

Balling

100%

- 95-

91 hbls.

13.7%

Yeast - Kents. (55 lbs + 1; 2 hrs)

Air - 1 1/2°

Quantity lost during fermentation $62\frac{3}{8} - 59\frac{7}{8} = 2\frac{7}{8}$
recorded in cellar 1977 gals.

Run to cellar Dec. 23/36

Balling - 2.35%

Alcohol: $(13.7 - 2.35) \cdot 92 = 4.77\%$

"Sticking Heat" - 157-157°F.

"Initial" - " - 141-142°F.

N.B. Brew water not treated. - plastered everywhere.

No 6 Tun.

Ale.

Dec. 21/36.

Malt - 5000 lbs. P. M. C.

Kops - 20 B.C. ; 15 B.C. ; 20 B.C. ; 10 B.C. & 10 Kents = 75⁺
 6 S ; 6 M ; 15 K. M. S ; 1 of P.

7.31 ^{am}	Started to mash - $\frac{58 \times 167}{372}$	First runs - 21.1%
7.55	Malt all in	Last .. - 1.7%
8.10	Underlet started - $\frac{20}{8}$; Steam - 8 $\frac{3}{4}$	Water - 37 $\frac{1}{8}$
8.25	Finished mashing	67
8.55	Set trays ; Heat - 155°F.	2
	Springs - $\frac{180}{57}$; Hy - $\frac{160}{2}$	<u>119$\frac{1}{2}$</u>

In to Cyp.	Out of Cyp.	Balling.
100 lbs.	- 9 $\frac{1}{2}$ -	90 $\frac{1}{2}$ lbs.
		13.9%

Yeast - * 127 Brew (55 lbs + 1 lb Flour) Air - 1 $\frac{1}{4}$

Quantity lost during fermentation 62 $\frac{3}{8}$ - 59 $\frac{1}{2}$ = 2 $\frac{7}{8}$
 recorded in cellar 1991 gals.

Ran to cellar Dec. 28/36 Balling - ~~4.50%~~ 3.2%

Alcohol : (13.9 - 3.2) . 92 = 4.50%

"Striking Heat" - 153 - 157°F.

"Initial" - " - 191 - 192°F.

N.B. Brewing Water "Carbonized" as in previous brews.

No 7 Tun.

Ale.

Dec. 22/36

Malt - 5000 lbs. O. M. Co.
 Hops - 20 B. C. 1; 10 B. C. 2 & 20 B. C. 9 lbs; 10 B. C. 10 + 10 K. M. S. = 75[#]
 6 S; 6 M; 1.5 K. M. S; 1 1/2 P. 2.

7.31	Started to mash - $\frac{159-180}{39}$	First run - 21.0%
7.55	Malt all in	Last .. - 1.8%
8.10	Underlet started - $\frac{30}{8}$; Steam - 8'	Water - $\frac{39}{8}$
8.25	Finished mashing	66
8.55	Set taps; Heat - 157°	<u>28</u>
	Sponge - $\frac{170}{66}$; Hop - $\frac{160}{22}$	<u>115 1/2</u>

Into Cg.	Out of Cg.	Balling.
100 1/2 hbls.	- 9 1/2 -	91 hbls.
		13.8%

Yeast - * 127 Brew (55 lbs + 1 1/2 Flour) Air - 1 1/4'

Quantity lost during fermentation 63 3/4 - 61 1/4 = 2 1/2
 recorded in cellar 2032 gals

Run to cellar Dec. 30/36. Balling - 3.0%

Alcohol: (138 - 3.0) . 42 = 4.53%

"Striking Heat" - 157-150°F.

"Initial" " 140-141-142°F.

N.B. Brewing water treated.

No. 8 Turn.

Ale.

Dec. 23/36.

Malt - 5000 lbs O. M. Co.

Hops - 20 B.C., 15 B.C. & 20 B.C. 1/2 lbs, 10 Bobs & 10 Kents = 75#
6 S; 6 M; 1.5 K.M.S.; 1 1/2 P.7.33 Started to mash - $\frac{157-152}{38}$

First runs - 20.95%

7.55 Malt all in

Lost - 1.7%

8.10 Mashed started - $\frac{210}{8}$; Steam - 8'

Water - 38

8.27 Finished mashing

67

8.57 Set tops; Heat - 158°

2 1/4

Spray - $\frac{170}{67}$; Hop - $\frac{160}{27}$

115 1/4

Into Cys.

Out of Cys.

Balling.

100 1/2 hls.

- 9 3/4 -

90 3/4 hls.

13.9%

Yeast - * 127 Brew (5% hls + 1 1/2 Flour) Ovi - 1 1/2'

Quantity lost during fermentation $63 \frac{3}{4} - 61 \frac{5}{8} = 2 \frac{5}{8}$

recorded in cellar 1996 gals.

Run to cellar Dec. 30/36

Balling - 3.9%

Alcohol: $(13.9 - 3.9) .92 = 4.41\%$

"Striking Heat" - 155-167°F.

"Initial" - " - 141-142°F.

N.B. Brewing water treated.

No 9 Turn.

Ale.

Dec. 28/36.

Malt = 5000 lbs. O. M. Co.

Hops - 20 B.C.; 15 B.P.; + 20 B.C. Folgs; 10 Bobs + 10 Kents = 75^{##}
6 S; 6 M; 1.5 K. M. S; 1 1/2 P.

7.90 ^{am}	Started to mash - $\frac{150-151}{38}$	First run - 20.8%
8.04	Malt all in	Last .. - 1.6%
8.19	Started mashing - $\frac{210}{8}$; Steam - 8 1/2	Water - 38
8.31	Finished mashing	8
9.01	Set taps; Heat - 154	67
	Spurge - $\frac{171}{67}$; Hops - $\frac{110}{67}$	2
		<hr/> 115

Into Cys.

100 1/2 lbs.

Out of Cys.

- 9 1/4 - 9 1/4 lbs.

Balling.

13.8%

Yeast - * 129 Brew (5.5 lbs + 1 1/2 Flour)

Air - 1 1/4

Quantity lost during fermentation 69 - 61 1/2 = 9 1/2

" recorded in cellar 2007 gals.

Ran to cellar Jan 7/37

Balling - ?? Result mistak.

Alcohol:

"Striking Heat" - 155-157°F.

"Initial" - 171-192°F.

N.B. Brewing water treated.

No. 10 Tun.

Ale.

Dec. 29/36.

Malt - 5000 lbs. A. M. Co.

Hops - 20 B.P. 0; 15 B.P. 10 + 20 B.P. 7 days; 10 B.S. & 10 Kents = 75#
6 S; 6 M; 15 K. M. S.; 1 ft. P.8.32 - Started to mash - $\frac{155-157^{\circ}F.}{38}$

First run - 20.9%

8.55 - Malt all in

Last .. - 1.5%

8.10 - Started to underlet - $\frac{20}{8}$; Steam - $8\frac{1}{2}$ Water - $38\frac{8}{8}$

8.23 - Finished mashing

67

8.53 - Set taps, Heat - $157^{\circ}F.$

22

Sperge - $\frac{172}{67}$; Hop - $\frac{112}{22}$ 1152

Into Cys.

Out of Cys.

Balling.

100 $\frac{1}{2}$ lbs.

-10-

90 $\frac{1}{2}$

13.8%

Yeast - * 130 Brew (55 lbs + $1\frac{1}{2}$ Flour) Air - $1\frac{1}{2}$ Quantity lost during fermentation $59\frac{1}{8} - 57\frac{1}{8} = 2\frac{1}{4}$
recorded in cellar 2019 gal.

Run to cellar Jan. 5/37

Balling - 3.65%

Alcohol: $(13.8 - 3.65) 42 = 4.26\%$ "Striking Heat" - $153 - 117^{\circ}F.$ "Duntist" " - $191 - 172^{\circ}F.$

N.B. Brewing water treated.

No 3 Turn.

Ale.

Dec. 30/36.

Malt - 5000 lbs. D. M. Co.

Hops - 20 B.C., 16 B.C., 4 20 B.C. Polys; 10 Bohol 10 Kent = 75^{lb}
6 S, 6 M; 1.5 K.M.S; 1 1/2 Pa.7.33^{am} Started to mash - $\frac{155-167^{\circ}F}{38^{\circ}}$

7.56. Malt all in

8.11. Underlet started - $\frac{20}{8}$; Steam - $\frac{1}{52}$

8.25. Finished mashing

8.55. Set taps; Heat - $15^{\circ}9^{\circ}F.$ Gauge - $\frac{170}{66}$; H₂O - $\frac{16}{27}$

First run - 20.9%

Lost .. - 1.57%

Water - $38\frac{1}{2}$

8

66 1/2

27

115 7/8

In to Cyp.

100 1/2 hbl.

- 9 1/2 -

Out of Cyp.

91 hbl.

Balling.

13.9%

Yeast - * 131 Rev (55 lbs + 1 1/2 lb/hr) Air - 1 1/4"

Quantity lost during fermentation $59\frac{3}{4} - 57\frac{1}{8} = 2\frac{5}{8}$
recorded in cellar 2013 gal.

Run to cellar Jan 6/37.

Balling - 3.85%

Alcohol: $(13.9 - 3.85) \cdot 92 = 4.22\%$ "Striking Heat" - $153^{\circ} - 157^{\circ}F.$ "Initial" - $170 - 171 - 172^{\circ}F.$

Brewing water treated.

No. 4 Tuv.

Ale.

Jan. 8/38

Malt - 5000 lb. D. M. Co.

Hops - 20 B.C.s; 15 B.C. & 20 B.C. 7dgs; 10 Bobs & 10 Kents = 75⁺
6 S; 6 M; 15 K.M.S.; 19 P.

7.32 ^{am}	Started to mash - $\frac{155-151}{37\frac{1}{2}}$	First runs - 21.5%
7.53	Malt all in	Last " - 1.7%
8.08	Underlet started - $\frac{210}{8}$; Steam - 9'	Water - 37
8.22	Finished mashing	8
8.52	Set taps; Heat - $\frac{152-153}{160}$ F.	2 $\frac{1}{2}$
	Sparge - 68; Hop - $\frac{160}{2\frac{1}{2}}$	<u>115$\frac{1}{2}$</u>

Into Cyp.	Out of Cyp.	Belling
100 $\frac{1}{2}$ bbls.	- 9 $\frac{1}{2}$ -	91 $\frac{1}{2}$ bbls. 13.0%

Yeast - * 132 Brew (58 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 63-60 $\frac{1}{4}$ = 2 $\frac{3}{4}$
recorded in cellar 2020 gal.

Run to cellar Jan. 12/37. Belling - 3.5%

Alcohol: (13.8-3.5) .92 = 4.32%

"Striking Heat" - 155-151 F.

"Initial" - 140-141-142 F.

Brewing water treated.

No. 5 - Tue.

Ale.

Jan. 6/37.

Malt - 5000 lb. O. M. Co.

Hope - 20 B.C., 15 B.C. + 20 B.C. Glys; 10 B. H. + 10 K. H. = 75⁺⁺
 6 S, 6 M, 1.5 K. A. S, 1% P.

7.32^{am} Started to mash - $\frac{155-151}{372}$ °F

First runs - 21.6%

7.52 Malt all in

Last .. - 1.35%

8.08 Underlet started - $\frac{210}{8}$; Steam - 9 $\frac{1}{2}$ 'Water - 37 $\frac{1}{2}$

8.23 Finished mashing

8

8.53 Lit taps; Heat - 157, 153°F.

68

Sparge - $\frac{170}{68}$, Hops - $\frac{160}{22}$

 22
 116

Into Cyp.

Out of Cyp.

Balling.

101 hlls.

- 9 $\frac{1}{2}$ -97 $\frac{1}{2}$ hlls.

13.95%

Yeast - * 133 Brew (58 lbs + 15 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation 61 $\frac{1}{4}$ - 59 $\frac{1}{8}$ = 2 $\frac{1}{8}$
 recorded in cellar 1978 gal.

Run to cellar Jan. 13/37.

Balling - 3.4%

Alcohol: (13.95 - 3.4) . 42 = 4.43%

"Stoking Heat" - 155-151°F.

"Initial " - 140-141-142°F.

Brewing water treated.

Degree of apparent attenuation = $(13.95 - 3.4) \times \frac{100}{13.95} = 75.6\%$ apparent atten.Degree of real attenuation = $\frac{4.43 \times 200}{13.95} = 63.5\%$ real atten.

No. 10 Tun.

Stout.

Jan. 7/36

Malt - 5000 lbs. P. M. Co.

Hops - 30 B.C., 15 B.C., 420 B.C. Ckys, 10 Boko & 10 Kents = 75 #
6 S, 6 M, 15 K.M.S., ~~17~~^{13.9} P₁; Groat-3[#]; Groat-3[#]; L. root-2[#].

7.30 ^{am}	Started to mash - $\frac{165}{37\frac{1}{2}}$	First runs - 21.3%
7.54	Malt all in	Last " - 1.8%
8.09	Underlet on - $\frac{180}{8}$, Steam - $5\frac{1}{3}$	Water - $37\frac{1}{2}$
8.20	Finished mashing	8
9.02	Set taps, Heat - $152-153^{\circ}F.$	$69\frac{1}{2}$
	Sponge - $\frac{170}{69\frac{1}{2}}$; Hop - $\frac{160}{3}$	3
		<hr/> 118

Into Cyp.
102 bbls.96
~~77~~ Out of Cyp.
93 bbls.Balling -
17.6%

Yeast - * 134 Brew

Air - $1\frac{1}{4}$ Quantity lost during fermentation - $60\frac{3}{4} - 58\frac{3}{8} = 2\frac{3}{8}$
" recorded in cellar 2039 gal.

Run to cellar Jan. 17/37

Balling - 3.9%

Alcohol:

"Striking Heat" - ~~148~~ ¹⁶⁵ ~~150~~ ¹⁶⁵ F. 165° F.

"Initial " - 148-150° F.

No 6 Tun.

Ale

Jan. 11/37.

Malt - 5500 lbs. W. M. Co.

Hops - 20 B.C.; 15 B.C. + 20 B.C. 9dgs; 10 Bobs + 10 Kents = 75th
6 S; 6 M; 15 K. M. S; 1 1/2 P.7.28^{am} Started to mash - $\frac{156-152}{362}$

7.57 Malt all in

8.06 Mucilagt started - $\frac{210}{8}$; Steam - 8 3/4

8.19 Finished mashing

8.50 Set tps; Heat - 153-154°F.

Sparge - $\frac{170}{69}$; Hops - $\frac{160}{1}$ First run - 21.1%
Last - 1.9%

Water - 36 1/8

69

1

119 1/2

Into Cyp.

101 hbls

- 9 1/2 -

Out of Cyp.

9 1/2 hbls

Balling -

13.7%

Yeast - 135 Brew (50 lbs + 1 1/2 Hour) Air - 1 1/4

Quantity lost during fermentation 62 3/8 - 60 = 2 5/8"
" recorded in cellar 2001 gal.

Run to cellar Jan. 18/37

Balling - 2.8%

Alcohol: (13.7 - 28) . 72 = 7.58%

"Steeping Heat" - 156-152°F.

"Inkheat" - 141-142°F.

NO. Brewing water not treated as an effort is being made to see if the water treatment has had any adverse effect on attenuation. It may be noted that the "Finals" % Balling have been higher than usual, of late.

Black-Head at 6.30^{am} Jan. 18th"In heat" - 69 1/2°F. at 12.30 Jan. 18th7.45^{am} Jan. 19th, T - 69 1/2°; Ball - 4.15% Looking good. Skimmed at 1 P.M.

5 P.M. " " T - 69 1/2° " - 3.9%

No. 7 Tun.

Ale.

Jan. 12/37

Malt - 5000 lbs. O. M. Co.

Tops - 20 B.C., 15 B.C. & 20 B.C. Wgs; 10 Boho + 10 Kants = 75#

6 S, 6 M, 15 K. M. S., 19t Pn.

7.26	Started to mash - $\frac{156-152^{\circ}F}{37}$	First runs - 21.4%
7.51	Malt all in	Last " - 1.1%
8.06	Underlet started - $\frac{210^{\circ}}{8}$; Steam - 9'	Wales - 37
8.19	Finished mashing	8
9.47	Set tops, Heat - $154^{\circ}-155^{\circ}F.$	68
	Sparge - $\frac{170}{68}$; Hop - $\frac{160}{3}$	3
		<u>116</u>

Into Cys.

101 lbs.

- 10 -

Out of Cys.

20 $\frac{1}{2}$ lbs.

Dalling.

13.9%

Yeast - * 135 Brew (50 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation $64\frac{1}{2} - 61\frac{1}{4} = 2\frac{3}{8}$ "
 recorded in cellar 2056 gal.

Run to cellar Jan. 19/37

Balling - 4.25%

Alcohol: $(13.9 - 4.25) \cdot 92 = 4.05\%$ "Sticking Heat" - $106-152^{\circ}F.$ "Initial " - $141-172^{\circ}F.$

N.B. Brewing water treated.

Block head at 6 ^{am} Jan. 13th"In heat" at Jan. 14th 7.45 ^{am} Temp. $65^{\circ}F.$ Ball - 10.3% Vary Slow."In heat" at 7 P.M. Jan. 14thJan 15th 7.45 ^{am} Temp. $69^{\circ}F.$ Ball - 5.3% High head of yeast.

Note: This brew did not attenuate nearly as well as
 the previous one - whose water was untreated. It
 appears that the addition of the gypsum has an
 inhibiting effect on attenuation. However, the yeast
 crops heavily.

No. 8 Tun.

Ale.

Jan. 13/37

Malt - 5000 lbs. D. M. Co.

Hops - 20 B.C.; 15 B.C. & 20 B.C. Hops; 10 Bobs & 10 Kent = 75⁺
 6 S; 6 M; 1.5 K.M.S.; 19 P.

7.26 ^{am}	Started to mash - $\frac{156-167}{37}$	First runs - 21.35%
7.50	Malt all in	last - - 1.2%
8.05	Underlet started - $\frac{210}{8}$; Steam $9\frac{1}{2}$	Wets - 37
8.15	Finished mashing	68 $\frac{1}{2}$
8.45	Let top; Heat - 154°	2 $\frac{1}{2}$
	Sparge - $68\frac{1}{2}$; Hop - $2\frac{1}{2}$	<u>116</u>

Into Cys.

101 lbs.

- 9 $\frac{1}{2}$ -

Out of Cys.

9 $\frac{1}{2}$ C -

Balling.

13.8%

Yeast - Keith's (52 lbs + $1\frac{1}{2}$ Flour)Air - $1\frac{1}{4}$

Quantity lost during fermentation $65 - 62\frac{1}{4} = 2\frac{3}{4}$
 recorded in cellar 2071 gal.

Run to cellar Jan. 20/37.

Balling - 3.7%

Alcohol: $(13.8 - 3.7) \cdot 92 = 4.36\%$ "Striking Heat" - $156-152^{\circ}$ F."Initial" - $141-142^{\circ}$ F.

N.B. Brewing water treated.

Jan. 19th Blackhead at 6^{am}. Coming strong." 15th 9.45. Temp - $67\frac{1}{2}^{\circ}$ Balling - 9.5% Strong head.

No. 8 Tun.

Ale.

Jan. 10/57

Malt - 5000 lbs. D. M. Co.

Hops - 20 B.C.; 15 B.C.; + 20 B.C. Hops; 10 B.H. + 10 Kern. = 75#
6 S; 6 M; 1.5 K. M. S.; 19 P.7.32^{am} Started to mash - $\frac{157}{36}$

First runs - 21.5%

7.57. Malt all in

Last - 11%

8.12. Underlet on - $\frac{260}{8}$; Steam - 8 1/2Walt - $\frac{36}{8}$

8.24. Finished mashing

69

8.00. Let trays; Heat - 105°F.

 $\frac{12}{115}$ Sparge - $\frac{170}{69}$; Hop - $\frac{16}{12}$

Into Cop.

Out of Cop.

Balling.

101 hlls.

- 9 -

92 hlls.

13.8%

Least - Off No. 138 Brew (78 lbs + 1/2 Flour) Air - 1/4

Quantity lost during fermentation $67 \frac{3}{4} - 62 \frac{8}{8} = 2 \frac{3}{8}$
" recorded in cellar 2044 gals.

Run to cellar Jan. 26/37

Balling. 3.35%

Alcohol: $(13.8 - 3.35) \cdot 92 = \text{44} \text{ 4.36\%}$

"Sticking Heat" - 157°F - 153°F.

"Initial" " - 141 - 142°F.

N. B. Brewing water treated, but only half the usual
quantity of Ca SO₄ was used. viz. $\left. \begin{array}{l} 6 \text{ lbs. Gypsum} \\ 2 \text{ " Na Cl.} \end{array} \right\}$ 8^{am} Jan. 19; Temp. - 60 1/2; B. Head at 6^{am}8^{am} " 20 " - 68; Balling 9.3% " In heat at - 10.45^{am}8^{am} " 21 " - 67 1/2 " 9.55% Very high head of yeast.8^{am} " 22 " - 67 " 3.8%

No. 10 Tun.

Ale.

Jan. 19/37

Malt - 5000 lbs D. M. Co. (New Car)

Hops - 20 B. C., 15 B. C., + 20 B. C. ⁰ Hops; 10 B. C. + 10 Kent. = 75 #
6 S; 6 M; 1.5 K. U. S.; 19 P. R.7.37^{am} Started to mash - $\frac{156-157}{37\frac{1}{2}}$

First runs - 21.1%

7.52. Malt all in

Last " - 1.9%

8.12. Underlet started - $\frac{211}{8}$; Steam - 8 $\frac{1}{2}$ Wales - 37 $\frac{1}{2}$

8.29. Finished mashing

8

8.56. Set taps; Heat - 150 $\frac{1}{2}$ 67 $\frac{1}{2}$ Spray - $\frac{171}{67\frac{1}{2}}$; Stop - $\frac{161}{1}$ 117

Inlet Cg.

Out of Cg.

Balling.

100 $\frac{1}{2}$ lbs.- 9 $\frac{1}{2}$ >

- 91 < lbs.

13.75%

Yeast - * 140 Buns (48 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 59.57 $\frac{1}{2}$ = 1 $\frac{3}{4}$ "
recorded in cellar 2016 ~~gals~~

Run to cellar Jan. 26/37

Balling - 2.9%

Alcohol: (13.75 - 2.9) . 72 = 7.55%

"Sticking Heat" - 151-153°F.

"Initial " - 141-143°F.

N.B. Brewing water treated as in Brew No. 141.

Jan. 20/37 Black-Head at 6.15^{am}" 21, 8^{am} Temp - 67°F. Balling - 9.5%

Inlet at 1.30 P.M.

" 22, 8^{am} " - 67 $\frac{1}{2}$ " - 9.6%1st straining at

No. 3 Tun.

Ale

Jan. 20/37.

Malt - 5000 lbs. D. M. Co.

Hops - 20 B.C.; 15 B.C. + 20 B.C. Cyp; 10 Bohs. + 10 Kents = 75⁺
6 S; 6 M; 1.5 K.M.S; 19 P.7:30^{am} Started to mash $\frac{156-155}{38\frac{1}{2}}$

First run - 20.95%

7:57 Malt all in

Lost - - 1.5%

8:09 Muddled started $\frac{210}{8}$; Steam - 8 $\frac{3}{4}$ Water - 38 $\frac{1}{2}$

8:29 Finished mashing

8

8:57 Let tops; Heat - 154°

3Spray $\frac{120}{56\frac{1}{2}}$; Hop - $\frac{160}{3}$ 116

Into Cyp.

Out of Cyp.

Balling.

100 $\frac{1}{2}$ hlls.- 10 $\frac{1}{2}$ -

90 hlls.

13.9%

Least - *140 Brew (48 lbs + 1 $\frac{1}{2}$ flow) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 59 $\frac{7}{8}$ - 58 $\frac{5}{8}$ = 1 $\frac{3}{4}$
" recorded in cellar 2019 gals.

Run to cellar Jan. 25/37

Balling. 3.8%

Alcohol: (13.8 - 3.8) .92 = 4.29%

" Striking Heat - 156-155°F.

" Initial . - 141-140°F.

N.B. Brewing water treated as in No 191 Brew.

Jan. 21 Black-head at 6.30^{am}22 $\frac{8000}{}$ Temp. 65 $\frac{1}{2}$; Balling - 10.2% In heat at.

No 7 Tun.

Sparkling Ale.

Jan 25 ^{1/4}

Malt - 4500 lbs D. M. Co.

Hops - 20 B. L.; 10 B. L.; 10 B. L. C. Gals; 10 Kents; 20 Bobs. = 70 #
5 S; 6 M; 1.5 K. H. S.7:33 ^{am} Started to mash - $\frac{157-157}{33}$

First runs - 20.75%

7:57 - Malt all in

Last " - 1.2%

8:12 - Underlet on $\frac{210}{8}$; Steam - 7 1/2'

Water - 33

8:25 - Finished mashing

69

8:55 - Set taps; Heat - 154°

1

Sparg $\frac{170}{69}$; Hop - $\frac{160}{1}$

111

Into Cop.

Out of Cop.

Balling.

99 hbls.

- 100 -

87 > hbls.

12.65%

Least - 142 Breuk (10 lbs + 1 1/2 flour) Air - 1/4'

Quantity lost during fermentation 60 3/4 - 58 3/8 = 2 3/8
recorded in cellar 1955 gals.

Run to cellar Feb. 1/37

Balling - 2.4%

Alcohol: (12.65 - 2.4) - 42 = 4.30%

Sticking Heat - 157-151° F.

Initial - 141-142° F.

N.B. Brewing water not treated.Jan. 26, Black-Head at 6:30 ^{am}" 27, 8 ^{am} Temp - 65° F; Balling - 9.2% L. heat at 5:30 P.M." 28, 8 ^{am} " - 69° F. " - 3.85% Remarkable attenuation. Skimmings at 9.8

No. 5 Tun

Ale.

Jan. 26/37

Malt - 5000 lbs O.M.C.

Hops - 20 B.C.; 15 B.C.; 4 20 B.C. 9 lbs; 10 B.C. + 10 Kent = 75#
 6 S; 6 M; 1.5 W.M.S; 19 lb P.

7.33^{am} Started to mash - $\frac{10\%}{37\frac{1}{2}}$

8.00 Malt all in

8.15 Underlet on - $\frac{210}{8}$; Steam - $8\frac{1}{2}$ '

8.27 Finished mashing

8.57 Set taps; Heat - 154°

George - $\frac{170}{67\frac{1}{2}}$; Hop - $\frac{160}{1}$

First run - 20.9%

Lost - 1.5%

Water - $37\frac{1}{2}$

8

67 $\frac{1}{2}$

1

 114

Into Cyp.

100 $\frac{1}{2}$ hlls.

Out of Cyp.

- 9 $\frac{1}{2}$ - 91 hlls.

Balling

13.7%

Yeast - * 1 lb Brew (51 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{7}$ '

Quantity lost during fermentation $61\frac{3}{4} - 59\frac{1}{2} = 2\frac{1}{4}$ "
 " recorded in cellar 1985 gals.

Run to cellar Feb. 2/37.

Balling - 3.25%

Alcohol : (13.7 - 3.25) . 72 = 4.39%

"Stirring Heat" - 156-157°F.

"Initial" - 141-142°F.

Brewing water not treated.

Jan. 27; 1 Black-Head at 6.45 am

" 28; 8^{am} Temp. 65° Balling - 10.15%

No. 6 Tun.

Ale.

Jan. 27/37

Malt - 5000 lbs. D. M. Co.

Hops - 20 B.C.; 15 B.C. + 20 B.C. Hops; 10 Bobs + 10 ^{Wres.} Keats = 75 #
 6 S; 6 M; 1.5 K.M.S; 1 1/2 P.

7.30^{am} Started to mash - $\frac{156-161}{38}$

First run - 21.0%

7.55 Malt all in

Last " - 1.7%

8.10. Underlet started - $\frac{210}{8}$, Steam - $\frac{91}{22}$ Water - 38
8

8.25 Finished mashing

66 1/2

8.55. Set taps, Heat - 154 1/2

2

Spray - $\frac{170}{62}$, Hay - $\frac{160}{2}$ 117 1/2

Into Cys.

Out of Cys.

Balling.

100 lbs.

-

9 1/2

-

90 1/2

- lbs.

13.8%

Least - Keiths (57 lbs + 1 1/2 Flour)

Air - 1 1/4'

Quantity lost during fermentation - 62 1/8 - 59 1/4 = 2 3/8
 recorded in cellar - 19.80 gals.

Run to cellar Feb. 3/37

Balling - 2.45%

Alcohol: (13.8 - 2.45) .92 = 4.76%

'Striking Heat' - 156-181 F.

'Initial' - 141-142 F.

Brewing water not treated.

Feb. 28; 8^{am} - Black Head removed at 5.30^{am} - Strong Head.

No 8 Tun.

Ale.

Feb. 2/37.

Malt - 5000 lbs. O. M. Co.

Hops - 20 B.C.; 15 B.C.³⁵; + 20 B.C. Gds; 10 Bohst + 10 ^{Wms.} Kents = 75[#]

6 S; 6 M; 1.5 K.M.S.; 1 qf. P.

7:30^{am} Studied to work - $\frac{157-152}{8} = 37$

First run - 21.5%

7:57 Malt all in

Last - - 1.7%

8:09 Underlet started - $\frac{211}{8}$; Steam - 8

Wales 37

8:29 Finished mashing

68

8:57 Set Cops. Heat - 154°

1

Grays - $\frac{120}{68}$; 144 - $\frac{140}{68}$

119

Into Cys.

Out of Cys.

Balling.

100½ bbl. - 10 -

90½

13.7%

Least - * 196 Brew (55. M. + 1½ Flour)

Als - 1¼'

~~Alcohol Quantity recorded off~~Quantity lost during fermentation $63\frac{3}{4} - 60\% = 3\frac{3}{4}$
recorded in cellar 1976 gals.

Run to cellar Feb. 10/37

Balling - 2.55%

Alcohol: $(13.7 - 2.55) \cdot 72 = 4.68\%$

Starting Heat - 156 - 162°F.

Initial " - 191 - 192°F.

No 9, June

Sparkling Ale.

Feb. 3/37.

Malt - 4500 lbs. O. M. Co.

Hops - 20 B.C., 10 B.C., 10 B.C. (10 lbs; 10 ^{Waga} ~~Waga~~); 20 Bohemians = 70 #

5 S; 6 M; 15 K. M. S;

1.27^{am} Started to mash - $\frac{156 \times 152}{33 \frac{1}{2}}$

First runs - 20.5%

Malt all in

Last .. - 1.0%

Underlet started - $\frac{3/0}{8}$; Steam - 7%Water - $33 \frac{1}{8}$

Finished mashing

68

Set tops, Heat - 152°

1

Sparge - $\frac{170}{68}$; Hops - $\frac{160}{68}$ 110 1/2

In to Cyp.

Out of Cyp.

Balling

98 1/2 hlls.

- 10 -

88 1/2 hlls.

12.7%

Yeast - * 176 Brew (52 lbs + 1 1/2 Flour)

Air - 1 1/2

Quantity lost during fermentation $61 \frac{7}{8} - 59 = 2 \frac{7}{8}$
recorded in cellar 197.3 gals.

Run to cellar Feb. 10/37.

Balling - 2.4%

Alcohol: $(12.9 - 2.4) \cdot 92 = 4.91\%$

"Stinking heat" - 106-102 °F.

"Initial" - 141-143 °F.

N.B. Brewing water treated with 5 lbs. CaSO₄

It has been said that the addition of CaSO₄·H₂O. to the brewing liquor tends to the formation of certain malt-dextrins and a consequent inhibition of attenuation (see other brews, which had a high final gravity). To overcome this to some extent we are using a lesser amount of CaSO₄, and giving the beer 20 mins. rest at emersion (141-142 °F.) instead of the usual 15 mins. Results as shown by this and the ~~next~~ following brews have been most encouraging. Their attenuations are very satisfactory.

No³ Tun.

Ale

Feb. 8/37.

Malt - 5000 lb. Q. M. Co.

Hops - * 20 B.C. ⁷³⁵⁻¹⁰ Fuggles; 15 B.C. ⁷³¹; 420 B.C. ⁷³¹ Gf.; 10 B.C. ⁷³¹ 4/10 ^{Wres.} ~~75th~~

6 S; 6 M; 1.5 H. M. S.; 1 1/2 P.

7.33 ^{am}	Started to mash - $\frac{159-162}{37}$ F	First runs - 20.9%
7.59	Malt all in	Last " - 1.5%
8.19	Masherlet started - $\frac{210}{8}$; Clean - $8\frac{1}{3}$	Water - $37\frac{1}{8}$
8.30	Finished mashing	67.
9.00	Set trays; Heat - 154°	2
	Sparge - $67\frac{1}{2}$; Hop - $\frac{166}{2}$	119

Into Cop.	Out of Cop.	Belling
100 $\frac{1}{2}$ hbls.	-10 $\frac{1}{4}$ -	90 $\frac{1}{4}$ hbls.
		13.7%

Yeast - 2 197 Brew (57 lb + 1 $\frac{1}{2}$ lb) Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation 60-57 = 3"
recorded in cellar 1988 gals.

Run to cellar Feb. 15/37 Belling - 2.85%

Alcohol: (13.7 - 2.85) .42 = 4.64%

"Starting Heat" - 157-153° F.

"Initial" - 141-142° F.

N.B. Brewing water was treated with 5 lb. Ca SO₄.Black head early - 5.30^{am}.Feb 10; 8^{am} Temp - 68 $\frac{1}{2}$ °; Belling; 8.9% Datto 9.15^{am}." 11; 8^{am} " - 69 $\frac{1}{2}$ ° " - 9.0% 1st skimm 10^{am}" 12th 8^{am} " 68 " - 2.6%

This brew acted in the fermenter in a very model manner, making a good head of yeast and clearing down quickly, with skimming virtually ceasing, some 27 hours after the 1st head of yeast was removed.

No. 7 Turn.

Ale.

Feb. 9/37

Malt - 5000 lbs. D.M.C.

* Taps - 20 B.C. Edge; ^{115°} 15 B.C.; ^{115°} 20 B.C. Fuzzles; 10 Bobs + 10 ^{195°-10°} Wares = 75[#]
 6 S; 6 M; 1.5 K.M.S; 1 1/2 P.

7.33 Started to mash - ^{156-152°} 37 1/2

First run - 21.0%

8.00 Malt all in

Last " - 1.5%

8.20 Underlet on - ²¹⁰ 8, Steam - 5 1/2

Wates - 37 1/2

8.37 Finished mashing

8

9.02 Set taps; Heat - 159°

67

Spray - ¹⁷⁰ 67, Hy. ¹⁶⁰ 2

2

117 1/2

Dnts Cp.

100 1/2 lbs.

- 9 1/2 -

Out of Cp.

91 lbs.

Balling.

13.7%

Yeast - * 197 Brew (55 lbs + 1 1/2 Flour) Air - 1 1/4

Quantity lost during fermentation 62 1/8 - 59 1/8 = 3"
 recorded in cellar 2003 gals.

Run to cellar Feb. 16/37

Balling - 2.7%

Alcohol: (13.7 - 2.7) .92 = 4.74%

"Striking Heat" - 156-152°F.

"Initial " " - 121-112°F.

N.B. Brewing water treated with 5 lbs CaSO₄

Black Head early - 4:30 am.

Feb 11, 8 am Temp - 69° Balling 8.6% 2nd lt. at 7:15 am" 12th, 8 am " - 69° " 3.5% 1st skin of 6:30 am" 13th 8 am " - 67° " 2.6%

This brew, like the preceding, acted well, producing a good cup of yeast, and clearing down well. However, there was just a suggestion of a foreign odor during skimming and it ~~is~~ would perhaps be wise ~~to~~ not to make use of this yeast next week.

No. 10 Tenn.

Stout.

Feb. 10/37

Malt - 5000 lbs. O. M. Co. + 250 lbs. B. Barley.

Hops - 20 B. C. Gals, 15 B. C. + 20 B. C. Faggles; 10 Boils + 10 Heads = 75#
 6 S; 6 M; 1.5 K. M. S.; 130# P.; 3# G. rest - 3; 3# C. rest - 3; 2# P. rest - 2

7.33^{am} Started to mash - $\frac{165}{38}$

First runs - 21.2%

8.07 Malt all in

Lost " - 1.55%

8.19 Underlet started - $\frac{180}{8}$; Steam - 5'

Water - 38

8.30 Finished mashing

9.00 Set taps; Heat - 154°F.

Spurge - $\frac{170}{69}$; Hops $\frac{160}{2}$

8

69

2

117

Into Cys.

102 lbs.

- 9 -

Out of Cys.

93 lbs.

Billing.

17.3%

Yeast - * 147 + 149 Brews (53 lbs + 1 1/2 Flour)

Air - 1 1/4'

Quantity lost during fermentation 60 1/4 - 58 1/8 = 2'

" recorded in cellar 3076 gals.

Ran to cellar Feb. 17/37

Billing - 2.8%

Observed:

"Starting" Heat - 165°F.

"Initial" " - 148- °F.

Feb. 11th Black-Head at 6 am. Strong early head." 12th Temp - 61° Billing - 2.6% 2 lbs @ 10.15 am" 13th " - 61° " - 3.9% 1 lb skin at 9.30 am Level head of yeast.

Brewing water treated with 5 lb. Gypsum.

No. 5 Turn

Ale.

Feb. 15/37.

Malt - 5000 lbs. P. M. Co

Hops - 20 B. C. Gals; 15 B. C. + 20 B. C. Fuggles; 10 Bobs + 10 ^{Worce} Heads = 75 #

6 S; 6 M; 1.5 K. M. S; 1 1/2 P.

7.30 ^{am} Started to mash - $\frac{187-193}{37\bar{2}}$

First runs - 21.3%

7.59 Malt all in

Last " - 16%

8.15 - Kneaded in - $\frac{210}{8}$; Steam - 8 3/4Water = $\frac{37\bar{2}}{8}$

8.30 - Finished mashing

67

9.02 - Set Caps; Heat - 153-157°F.

2

Spray - $\frac{170}{67}$; Hops - $\frac{160}{2}$ 119 1/2

Into Cys.

Out of Cys.

Balling

100 1/2 hbls.

- 9 1/2 > -

9 1/2 hbls.

13.75%

Leak - * 150 Brew (5 q lbs + 1 1/2 Flour) Air - 1 1/2

Quantity lost during fermentation 63-60 1/4 = 2 3/4
recorded in cellar 2013 gals.

Run to cellar Feb. 22/37

Balling - 2.9%

Alcohol: (13.75 - 2.9) .92 = 4.55%

" Striking Heat - 157-157°F.

" Initial " - 141-142°F.

Brewing water treated.

No. 6 Tun.

Ale.

Feb. 16/37.

Malt - 5000 lbs. O. & C. M. Co. (last of the Com. Malt). 1st of the Com. Malt.
 Hops - 20 B.L. Hops, 15 B.L. & 20 B.L. Puggles, 10 Bobs & 10 ^{Wings} Keats = 75[±]
 6 S; 6 M; 1.5 K.M.S.; 1 qt P.

7.30	Started to mash - ^{156-149°F} 37 (heated)	First runs - 91.1%
7.57	Malt all in	Last " - 1.25%
8.17	Underlet started - ²¹⁰ 8, Steam - 8 ³ / ₄	Water - 37
8.30	Finished mashing	8
9.00	Set taps; Heat - 158 [±] - 156°F.	67
	Sponge - ¹⁷⁰ 67; Hops - ¹⁶⁰	2
		<u>119</u>

Into Cys.	Out of Cys.	Balling.
100# bbls.	- 97 -	91# bbls.
		13.9%

Yeast - * 150 Brew (53 lbs + 1 1/2 Hour) Air - 1 1/4'

Quantity lost during fermentation 61 7/8 - 59 7/8 = 1 1/2^A
 " recorded in cellar 199.5 gals.

Ran to cellar Feb. 23/37 Balling 2.8%
 Alcohol: (13.9 - 2.8) . 92 = 4.66%
 " Striking heat - 156-163°F.
 " Initial " - 191-192°F.

No 7 Turn

Ale.

Feb. 17/36.

Malt - 5000 lb. C. M. C.

Keps - 20 B.C. Hys; 15 B.C. & 20 B.C. Faggles, 10 Bobs & 10 Kents = 75[#]
 6 S; 6 M; 15 K.H.S.; 14 P.

7.30^{am} Started to mash - $\frac{166}{37}$ (Treated)

First runs - 21.7%

7.58 Malt all in

Lost - 1.5%

8.15 Underlet on - $\frac{210}{8}$; Steam - 8 $\frac{3}{4}$

Water - 37

8.50 Finished mashing

67

9.00 Set tyes; Heat - 159°

1Sparge - $\frac{120}{67}$; Stop - $\frac{140}{1}$ 113

Into Cyp.

Out of Cyp.

Balling

100 Mls.

- 9 $\frac{1}{2}$ -90 $\frac{1}{2}$ Mls.

13.7%

Least - * 150 Brew (55 lb + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$

Quantity lost during fermentation 62 - 59 $\frac{1}{4}$ = 2 $\frac{3}{4}$
 recorded in cellar 1958 gals.

Run to cellar Feb 29/37.

Balling - 2.5%

Alcohol: (13.9 - 2.5) .92 = 4.79%

"Striking Heat" - 156°

"Initial" - 171 - 190° F.

No 8 Turn.

Ale.

Feb. 27/37

Malt - 5000 lbs. C.M.G.

Hops - 20 B.C. Gals., 15 B.C. & 20 B.C. Fuggles; 10 B.S. & 10 ~~B.S.~~ ^{Wye.} = 75#
6 S; 6 M; 15 K. M. S.; 19 f. P.7.38 ^{am} Started to mash - $\frac{157-197}{30}$ (treated)

First run - 21.3%

7.58 Malt all in

Last .. - 1.7%

8.18 Started to unchill - $\frac{210}{8}$; Steam - 8'

Water 35-5

8.30 Finished mashing.

8

9.00 Set taps; Heat - 155°F.

68

Gauge - $\frac{170}{68}$; Hop - $\frac{160}{1}$

1

113

Into Cg.

Out of Cg.

Balling.

100 c hlls.

- 99 c -

90 $\frac{3}{4}$ hlls.

13.8%

Yeast - * 153 Brew (55 lbs + 1 = Flour)

Air - 1 $\frac{1}{4}$ Quantity lost during fermentation - $62\frac{1}{2} - 60 = 2\frac{1}{2}$
" recorded in cellar 1960 gals.

Run to cellar - Mar. 3/37

Balling - 2.6%

Alcohol: (13.8 - 2.6) .92 = 4.70%

"Striking Heat" - 157° - 197°

"Initial" .. - 191 - 192°F.

Feb. 25/37 B.H. at 6 ^{am}. 21, 8 ^{am}, Temp - 65°c Balling - 9.3% Normal head.

No 9 Tun

Ale.

Feb. 25/37.

Malt - 5000 lbs. C.M. Co.

Hops - 20 B.C. Gals, 15 B.C. + 20 B.C. Fuggles; 10 Bolot + 10 Vines = 75^{oz}
 6 S, 6 M; 1.5 K.M.S; 1 lb. P.

7.33 ^{am}	Started to mash - $\frac{156-157}{36}$ (Treated)	First runs - 21.2%
7.58	Malt all in	Last - - 1.7%
8.18	Started to unbuild - $\frac{210}{8}$, Steam - 7 $\frac{1}{2}$ '	Water - 36
8.30	Finished mashing	8
9.00	Set $\frac{170}{70}$ kegs; heat - 154°	68 $\frac{1}{2}$
	Sparge - 68 $\frac{1}{2}$; temp - $\frac{160}{1}$	1
		<u>113$\frac{1}{2}$</u>

Into Cyp.

100 hbls.

9 $\frac{1}{2}$ '

Out of Cyp.

90 $\frac{1}{2}$ hbls.

Balling.

13.7%

Yeast - * 154 Buns (55 lbs. + 1 $\frac{1}{2}$ lbs.)Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation 62 $\frac{3}{4}$ - 57 $\frac{1}{8}$ = 2 $\frac{7}{8}$
 recorded in cellar 1976 gals.

Run to cellar Mar. 9/37.

Balling - 2.95%

Alcohol: (13.7 - 2.9%) · 92 = 4.51%

"Sticking Heat" - 156-157° F.

Treated - - 141-142° F.

Feb. 26/37

B.H. at 5.45^{am}

No 10 Tun

Stout.

Feb. 26/37.

Malt - 5000 lbs. C.M.G. + 250 lbs. B. Barley.

Drops - 20 B.C. $\frac{1}{2}$ p; 15 B.C. $\frac{1}{2}$ p; 20 B.C. $\frac{1}{2}$ p; 10 B.C. $\frac{1}{2}$ p; 10 Wines = 75⁺6 S; 6 M; 1.5 K.M. S.; 130⁺ P.; G. root - 3⁺; C. root - 3⁺; L. root - 2⁺.7.33^{am} Started to mash - $\frac{165^{\circ}F}{36\frac{1}{2}}$

First runs - 21.6%

7.51 Malt all in $\frac{450^{\circ}}$

Last - - 1.7%

8.12 Washed on $\frac{8}{8}$; Steam - 5'Water - 36 $\frac{1}{2}$

8.27 Finished mashing

69 $\frac{1}{2}$ 8.57 Set taps, heat - 15⁺115Sparge - $\frac{67\frac{1}{2}}{67\frac{1}{2}}$; $\frac{40}{40}$ 1

Into Cys.

Out of Cys.

Balling.

101 lbs.

- 9 $\frac{1}{4}$ -97 $\frac{3}{4}$ lbs.

17.7%

Yeast - x 155 Brew (55 lbs + 1 $\frac{1}{2}$ flour) Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 59% - 57 = 2%
recorded in cellar 2002 gal.

Run to cellar Mar. 5/37. Balling - 2.95%

Alcohol:

"Starting heat" - 165⁺ F.

"Initial" - - 148 - F.

No 3 Tun

Ale.

Mar 1/37

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C. Gals; 15 B.C. 4 20 B.C. Fuggles; 10 Bobs & 10 Wors. = 75^{lb}
6 S, 6 M; 15 K.M.S.; 19t.P.7.31^{am} Started to mash - $\frac{156-150}{36\frac{1}{2}}$ (Treated)

First run - 21.2%

8.5^h Malt all in

Last " - 1.6%

8.15^h Underlet started - $\frac{310}{8}$; Steam - 8'

Wates - 3.6%

8.30 Finished mashing

8

9.09 Set top, heat - 155^o F.

68

Sparge - $\frac{170}{68}$; Hops - $\frac{160}{1}$

1

11.5%

Dts Cys.

Out of Cys.

Balling.

100 lbs. - 9 $\frac{1}{2}$ -90 $\frac{1}{2}$ lbs.

13.85%

Yeast - * 156 Bow (53 lbs + 1 $\frac{1}{2}$ Flour)Air - 1 $\frac{1}{4}$ Quantity lost during fermentation 59 $\frac{1}{2}$ - 56 $\frac{1}{2}$ = 3 $\frac{1}{2}$
" recorded in cellar 1970 gals.

Run to cellar Mar. 8/37

Balling - 2.7%

Alcohol: (13.85 - 2.7) .92 = 4.68%

"Starting heat" - $\frac{152-150}{19-14}$ F."Initial" - - 14 $\frac{1}{2}$ - 14 $\frac{1}{2}$ F.

No 7 Turn.

Ale.

Mar. 2nd

Malt - 5000 lbs. C.M. Co.

Hops - 20 B.C. Gals, 15 B.C. + 20 B.C. Fuggles, 10 Coko + 10 Wines. = 75^{##}

6 S; 6 M; 15 K.M.S.; 1 qt. Pa.

7.31^{am} Started to mash - $\frac{153-191}{36\frac{1}{2}}$ (Treated)

First runs - 21.2%

7.59 Malt all in

Last - 1.65%

8.14 Underlet started - $\frac{30}{8}$; Steam - 75'Water - 36 $\frac{1}{2}$

8.27 Finished mashing

8

8.57 Set taps; heat - 153 $\frac{1}{2}$; 159^{°F}.

67

Gauge - $\frac{170}{67}$; Hg - $\frac{160}{7}$ 118 $\frac{1}{2}$

Into Cys.

Out of Cys.

Balling:

99 hls.

- 9 $\frac{1}{2}$ >- 89 $\frac{3}{4}$ < hls.

13.8%

Yeast - * 157 Brew (59 lbs + 1 $\frac{1}{2}$ flour)Air - 1 $\frac{1}{4}$ 'Quantity lost during fermentation 61-58 = 3"
recorded in cellar 1910 gals.

Run to cellar Mar. 8/57

Balling - 2.6%

Alcohol: (13.8 - 2.6) .92 = 7.70%

"Stoking Heat" - 155-191^{°F}"Initial" - 141-142^{°F}

No. 5 Turn.

Ale.

Mar. 3/37.

Malt - 5000 lb. C. M. Co.

Hops - 20 B. C. Gals; 15 B. C. + 20 B. C. Fuggles, 10 Bobs + 10 Wares. = 75th
 6 S; 6 M; 1.5 K. M. S.; 19 P. A.

7:30 ^{am}	Started to mash - $\frac{103-149}{36}$ (Treated)	First runs - 21.3%
7:54	Malt all in	Last - - 1.55%
8:11	Underlet on - $\frac{210}{8}$ Steam - 7 $\frac{1}{2}$	Wales - 36
8:23	Finished mashing	8
9:53	Let tyne; Heat - $154-153^{\circ}F.$	68
	Sprays - $\frac{170}{68}$; Keg - $\frac{160}{1}$	1
		<u>113</u>

Into Cop.	Out of Cop.	Balling.
99 lbs.	- 9 $\frac{1}{2}$ -	89 $\frac{1}{2}$ c. lbs.
		13.7%

Yeast - * 158 Brew (59 lbs. + $\frac{1}{2}$ lb. Flour) Air -

Quantity lost during fermentation = 1941 gals.
 recorded in cellar - $61-58\frac{1}{2} = 2\frac{1}{4}$

Run to cellar Mar. 10th Balling - 2.8%

Alcohol: $(13.7 - 2.8) \cdot 92 = 4.57\%$

"Sticking Heat" - $155-149^{\circ}F.$

"Initial .." - $141-142^{\circ}F.$

No 6 Turn.

Sparkling Ale.

Mar. 8 / 37.

Malt - ~~5000~~⁴⁵⁰⁰ lbs. C. M. Co.Hops - 20 B.C. Pils., 10 B.C., 10 B.C. Pils., 10 Wines; 20 Bohemians = 70[#]
5 S; 6 M; 1.5 K. M. S.7.31^{am} - Started to mash - $\frac{153-161}{33}$ (Treated)

7.52 - Malt all in

8.12 - Underlet on $\frac{30}{8}$; Steam - $\frac{1}{3}$

8.23 - Finished mashing

8.53 - Set taps; Heat - $\frac{170-154-155}{160}$ F.Spray - 67; H₂O - $\frac{160}{1}$

First runs - 20.2%

Last " - 19.7%

Wales - 33

8

69

1

111

In to Cys.

97 lbs. - 10 -

Out of Cys.

87 lbs.

Balling.

12.8%

Yeast - * 157 Brew (53 lbs + 1 1/2 lbs)

Air - 1 1/2

Quantity lost during fermentation $58\frac{3}{8} - 56\frac{3}{4} = 2\frac{3}{8}$

" recorded in cellar 1890 gal.

Run to cellar Mar. 15/37

Balling - 2.0%

Alcohol: $(12.8 - 2.0) \cdot 9 = 4.53\%$

" Striking Heat - 155-180 F.

" Initial " - 191-182 F.

No 7 Tun

Ale.

Mar. 9th/37

Malt - 5000 lbs. C.M. Co.

Hops - 20 B.C. %gs; 15 B.C. + 20 B.C. Fuggles; 10 Bohs + 10 ~~Bohs~~ = 75[#]
 6 S; 6 M; 1.5 K.M.S; 1 qt. Pn.

Wares.

7.31^{am}Started to mash - $\frac{155-150}{37}$ (Treated)

Malt all in

Wunderket started - $\frac{210}{8}$; Steam - 7 $\frac{1}{2}$ '

Finished mashing

Set taps; Heat - 153-153 $\frac{1}{2}$ °F.Sprage - $\frac{170}{67}$; Hop - $\frac{160}{2}$

First run - 21.0%

Last - 1.7%

Water - 37

8

67

2

114

Into Cyp.

99 mbls

- 10 $\frac{1}{2}$ c -

Out of Cyp.

88 $\frac{1}{2}$ mbls.

Balling.

13.9%

Yeast - * 160 Brew (59 lbs + 1 $\frac{1}{2}$ lbm)Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation 61 $\frac{1}{8}$ - 58 $\frac{1}{2}$ = 2 $\frac{3}{8}$
 " recorded in cellar 1933 gals.

Ran to cellar Mar. 16/37 Balling - 2.55%

Alcohol: (13.9 - 2.55) .92 = 4.76%

Striking Heat - 155-150°F.

Initial - 141-142°F.

No 8 Tun

Ale.

Mar. 15/37.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C. $\frac{3}{4}$; 15 B.C. $\frac{1}{2}$ + 20 B.C. $\frac{1}{2}$ " ; 10 Bobs. $\frac{3}{4}$ + 10 Wres = 75#
 6 S; 6 M; 15 K. M. S.; 17 ft. W.

7:30^{am} - Started to mash - $\frac{158-151}{37}$ (treated)

First runs - 21.2%

7:53 - Malt all in

Last .. - 1.3%

8:13 - Underlet started - $\frac{210}{8}$, Steam - $1\frac{1}{2}$

Water - 37

8:26 - Finished mashing

8

8:56 - Set taps, Heat - 157°

67

Sparge - $\frac{170}{67}$; Hops - $\frac{160}{2}$

2

Into Cop.

Out of Cop.

Balling.

99 lbs.

- 10 -

89 lbs.

17.05%

Yeast - * 16.3 Brew (53 lbs + $1\frac{1}{2}$ lbs) Air - $1\frac{1}{4}$ Quantity lost during fermentation $61\frac{3}{8} - 59\frac{3}{8} = 2\frac{7}{8}$

" recorded in cellar 1953 gals.

Run to cellar Mar. 22/37.

Balling - 3.4%

Alcohol: (19.05 - 3.4) .92 = 4.47%

"Stoking Heat" - $103-107^{\circ}$ F."Initial " - $191-193^{\circ}$ F.Brewing water treated with 5 lbs. Ca SO₄Mar. 16th B. H. at 5:45^{am}17th 8^{am} Temp. - 65° Balling - 10.0% Coming slow.17th 5^{PM} " - 69° " - 7.7% In let. at 4 P.M.18th 8^{am} " - 69° " - 5.0% Slight slow from yeast.

No 9 Turn.

Ale.

Mar. 16/37.

Malt - 5000 lbs. C. H. G.

Hops - 20 B.C. $\frac{1}{2}$; 15 B.C. $\frac{1}{4}$ + 30 B.C. $\frac{1}{2}$; 10 B.C. $\frac{1}{10}$ ^{35 Hops} - 75
6 S' ; 6 M ; 1.5 K.M.S. ; 1 lb P.

7.22	Started to mash - $\frac{153-172}{37}$ (Treated)	First run - 31.0%
7.50	Malt all in	Lost - 1.5%
8.15	Underlet on $\frac{210}{8}$; Steam - $7\frac{1}{2}$	Water - 37
8.30	Finished mashing	8
9.00	Set taps ; Heat - 159°F.	67
	Grain - $\frac{170}{67}$; Hot - $\frac{161}{3}$	3
		<u>115</u>

Into Cys.	Out of Cys.	Balling.
99 lbs.	- 100 -	897 lbs.
		13.9%

Lost - * 163 Buns (55 lbs + $1\frac{1}{2}$ lbs)	Air - $1\frac{1}{2}$
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Quantity lost during fermentation $63\frac{1}{2} - 61 = 2\frac{1}{2}$
 recorded in cellar 1985 gals.

Ran to cellar Mar. 23/37	Balling - 2.4%
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Alcohol : $(13.9 - 2.4) . 92 = 4.83\%$

"Steeping Heat" - 154 - 157°F.

"Treated " - 141 - 142°F.

Mar. 17th 8 am B.H. @ at 5.30 am.

18th 8 am Temp. - Balling - 9.5%. Looking good.

No. 10 Tun.

Ale.

Mar. 17th 1937.

Malt - 5000 lbs C. M. C.

Hops - 20 B.C. ³² ; 15 B.C. ³⁴ ; 20 B.C. ³⁵ ; 10 Bohn ³³ & 10 Wares = 75th.
 6 S ; 6 M ; 1.5 K.M.S ; 19 P.

7:33^{am} Started to mash - $\frac{187=151}{37}$ (Treated)

First runs - 21.0%

7:49 Malt all in

Leak " - 1.3%

8:19 Mashed started $\frac{210}{8}$; Steam - 7 $\frac{1}{2}$ '

Water - 37

8:35 Finished mashing

68 $\frac{1}{2}$

9:15 Set temp - heat - 159°

2

Sprays - $\frac{176}{68\frac{1}{2}}$; Hop - $\frac{110}{2}$

115 $\frac{1}{2}$

Dut. Cap.

Out of Cap.

Balling.

100 lbs.

-10 < -

90 > lbs.

13.9%

Yeast - 162 + 163 Brews (56 lbs + 127) Air - 1 $\frac{1}{4}$ '

Quantity lost during fermentation 58 $\frac{1}{2}$ - 56 $\frac{1}{2}$ = 2
 " stored in cellar 1980 gals.

Run to cellar Mar. 24, 1937

Balling 2.3%

Alcohol: (13.9 - 2.3) .92 = 4.87%

"Stinking heat" - 105-157°F.

"Initial" - 191-192°F.

Mar. 17th B.H. @ 5^{am}. Throwing up a strong head.

No. 3 Turn.

Ale.

Mar. 22/37.

Malt - 5500 lbs. C. M. C. (New Car.)

Hops - 20 B.C. $\frac{25}{2}$; 15 B.C. $\frac{22}{2}$ + 20 B.C. Tuggles $\frac{20}{2}$; 10 B.C. $\frac{22}{2}$ + 10 Wares. - 75th
 6 S; 6 M; 15-K. M. S; 1qt. Pn.

7.39 ^{am}	Started to mash - $\frac{155-198}{37}$	First runs - 20.5%
8.00	Malt all in	Lost - 18%
8.20	Underlet started - $\frac{210}{8}$, Steam - 7 $\frac{1}{2}$	Water - 37
8.38	Finished mashing;	88 $\frac{1}{2}$
9.03	Set taps; Heat - 159-161 $\frac{1}{2}$ F.	$\frac{2}{2}$
	Sparge - $\frac{168}{68\frac{1}{2}}$; Hops - $\frac{160}{2}$	<u>114</u>

Into Gp.

100 hbls.

Out of Gp.

- 10 < -

90 > hbls.

Balling

13.7%

Yeast - * 165-Brew (55 lbs + 1 $\frac{1}{2}$ hours)Air - 1 $\frac{1}{4}$

Quantity lost during fermentation 58% - 56 $\frac{1}{2}$ = 1 $\frac{1}{8}$
 recorded in cellar 1953 gals.

Run to cellar Mar. 29, 1937.

Balling - 2.2%

Alcohol: (13.7 - 2.2) .92 = 4.91%

"Striking Heat" - 155-198 F.

"Initial" - 191-192 F.

Note: In this brew a change was made in the manner of addition of the gypsum in water treatment. Gypsum was added to the large tank while tank was being filled with water, instead of being thrown into the mash as it falls from the "ping washer". The advantages of the method, just introduced, are obvious; and the tank will be flushed out each day after the completion of sparging, (thus eliminating the accumulation of insoluble gypsum solids), before the addition of the water treatment material for the following day's brew.

No 4 Tun.

Ale

Mar. 23, 1937.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B.C. Hops²²; 15 B.C.²² + 20 B.C. Fuzzles²²; 10 Bobs + 10 Hores. = 75[#]
6 S; 6 M; 1.5-K.M.S; 1 1/2 B.

7.32 ^{am}	Started to mash - $\frac{155}{37}$ (Treated)	First runs - 30.9%
7.58	Malt all in	Last .. - 1.7%
8.18	Underlet started $\frac{210}{8}$; Clean - 7 1/4	Wales - 37
8.30	Finished mashing	8
9.00	Set taps; Heat - 154 ⁰	67 1/2
	Spurge - $\frac{163}{68(T)}$; Hops - $\frac{160}{1}$	1
		<hr/> 113 1/2

Into Cys.	Out of Cys.	Balling
99 hbls.	- 10 1/2 -	88 3/4 hbls.
		13.9%

Least - * 165 Brew (53 lbs + 1 1/2 hour) Air - 1 1/4

Quantity lost during fermentation 1917 gal.
recorded in cellar $\rightarrow 60 \frac{3}{8} - 57 \frac{1}{2} = 2 \frac{5}{8}$

Run to cellar Mar. 31, 1937. Balling - 2.2%

Alcohol: $(13.9 - 2.2) \cdot 42 = 4.91\%$

Sticking heat - 158 - 149 °F.

Tential " - 191 - 192 °F.

No. 5 Turn

Sparkling Ale.

Mar. 29, 1937.

Malt - 75.00 lbs. C. M. Co. + 1/2 bag extra

Hops - 20 B.C. ¹⁵/₄ lbs.; 10 B.C. ¹²/₄; 10 B.C. ¹²/₄ "Zygote"; 10 ³⁵/₄ "Voice"; 20 Bohemians ³⁶/₄ = 70 #

5 S; 6 M; 1.5 K. M. S;

7.32 ^{am}	Started to mash - $\frac{154-149^{\circ}F}{342}$ (Tinit)	First run - 20.3%
7.57	Malt all in	Last - 1.15%
8.17	Underlet started - $\frac{210}{8}$; Steam 6 1/2	Water 34 1/2
8.28	Finished mashing	8
8.58	Set tops; Heat - $154-153^{\circ}F$.	68
	Grain - $\frac{180}{68}$; Hops - $\frac{160}{4}$	4
		<hr/> 119 1/2

In to Cys.	Out of Cys.	Balling
97 lbs.	- 10 1/2 -	86 1/2 lbs.
		13.0%

Yeast - * 166 Brew (54 lbs + 1/2 Flour) Air - 1/4'

Quantity lost during fermentation 60 1/2 - 58 1/2 = 2 "

" recorded in cellar 1946 gal.

Run to cellar Mar. 31, 1937 Balling - 2.05%

Alcohol: (13.0 - 2.05) .92 = 4.60%

"Stinking Heat" - 154-149°F.

"Tinit" - 191-192°F.

* Bohemian hops (1936 hop) have just arrived in storage.

Note - Beer: Instead of spraying the fermenter with a solution of Ca bisulphite, we now made of H.T.H. (Hi-test - Hypochlorite) Calcium Hypochlorite, the active agent being Chlorine. The solution used was of a strength 200 p.p.m.

Method After the fermenter had been washed out, the disinfecting solution was thoroughly sprayed over the sides and bottom of fermenter. It was left there for 30-40 mins., and then removed by rinsing with water, just prior to running the ^{day's} brew into the fermenter.

No. 6 Tun.

Ale.

Mar. 29, 1937.

Malt - 5000 lbs. C. M. Co.

Tops - 20 B.C. ³⁰ 15 B.C. ²⁰, 20 B.C. Fuggles ³⁵, 10 Bels. & 10 Warrs = 75⁰⁰
 6 S¹; 6 M¹; 1.5 K. M. S¹; 1 1/2 R.

7.30 ^{am}	Started to mash - ¹⁵⁹ 38 (treated)	First runs - 20.5%
7.56	Malt all in	Last .. - 2.0%
8.16	Underlet started - ²⁰⁰ 8, Steam - 7 ⁰	Walter - 38
8.27	Finished mashing	8
6.57	Set tops; heat - ¹⁵⁴ 154 ⁰	66 1/2
	Spaze - ¹²⁰ 66 1/2; stop - ¹¹⁰ 110	1
		<hr/> 113 1/2

In to Cyp.	Out of Cyp.	Balling.
99 lbs.	- 10 -	89 lbs.
		13.9%

Least - * 167 Brew (59 lbs + 1 1/2 hour) Air - 1 1/4

Quantity lost during fermentation 60% - 58 = 2%
 recorded in cellar 1929 gals.

Run to cellar April 5, 1937. Balling - 2.35%

Alcohol: (13.9 - 2.35) .92 = 4.85%

"Sticking Heat" - 159⁰ F

"Initial" - 141-142⁰ F.

Note: The amount of water treatment salts (Gypsum) has been increased from 5 to 8 lbs., as our fermentations are coming along nicely and attenuating well. It is hoped that the amount may later be brought to 12 lbs. (the amount recommended for our water).

Mar. 30; Black-head at 4.1^{am} Very early.

31; 8^{am} Temp - 67⁰ Ball - 8.3% In heat at 6.45^{am}

No 7 Tun.

Ale.

Mar. 30, 1937.

Malt - 5000 lbs. C. M. Co.

Hops - 20 B. C. Hops³³; 15 B. C.³⁷; 20 B. C. Nuggets³³; 10 B. C. + 10 Wines³⁷ = 75[#]
6 S; 6 M; 1.5 K. M. S; 17 lb. P. n.

7.32 ^{am}	Started to mash - $\frac{159-199}{38}$ (Treated)	First runs - 20.55%
7.59	Malt all in	Last " - 1.8%
8.18	Underlet started - $\frac{310}{8}$; Steam - 7'	Water - 38
8.32	Finished mashing	8
9.02	Set taps; Heat - 154°	66½
	Sponge - $\frac{70}{66\frac{1}{2}}$; Hops - $\frac{160}{12}$	12
		<hr/> 114

Into Cyp.	Out of Cyp.	Balling
99 hlls.	- 10 -	89 hlls.
		13.9%

Least - 167 Brew (55 lbs + 1½ Flour) Ari - 1¼

Quantity lost during fermentation $61\frac{3}{4} - 59\frac{1}{2} = 2\frac{1}{4}$ "
" recorded in cellar 1951 gals.

Ran to cellar April 6, 1937 Balling - 2.35%

Alcohol: $(13.9 - 2.35) \cdot 42 = 4.85\%$

"Sticking Heat" - 159-199°F.

"Initial" " - 141-142°F.

Mar. 31; Black-head at 5.00^{am} String curly head.

No 10 Tun.

Stout.

Mar. 31, 1937.

Malt - 5700 lbs. C.M. Co. + 250 lbs. B. Barley.

Hops - 20 B.C. $\frac{1}{2}$ $\frac{35}{100}$, 15 B.C. $\frac{1}{2}$ $\frac{37}{100}$ + 20 B.C. Fuggles, 10 $\frac{1}{2}$ lbs + 10 Wires = 75 $\frac{1}{2}$ lbs; 6 M; 1.5 K.M.S.; 130 $\frac{1}{2}$ R.; 9 wet $\frac{1}{2}$ S; C. root - 3 $\frac{1}{2}$; L. root - 2 $\frac{1}{2}$.

7.35	Started to mash - $\frac{164-159}{38}$	First runs - 20.6%
8.01	Malt all in	Last - 2.0%
8.21	Underlet started - $\frac{180}{8}$; Steam - 9 $\frac{1}{2}$	Water - 38
8.28	Finished mashing	8
8.58	Let taps; Heat - 159 $^{\circ}$	68 $\frac{1}{2}$
	Spunge - $\frac{172}{68 \frac{1}{2}}$; Hop - $\frac{160}{2}$	2
		<u>116 $\frac{1}{2}$</u>

Into Cyp.

100 lbs.

Out of Cyp.

- 9 $\frac{1}{4}$ -90 $\frac{1}{4}$ lbs.

Balling.

19.5%

Yeast - * 168 Brew (59 lbs + 1 $\frac{1}{2}$ Flour) Air - 1 $\frac{1}{4}$

Quantity lost during fermentation 59 - 56 $\frac{3}{4}$ = 2 $\frac{1}{4}$
 " recorded in cellar 1996 gals.

Run to cellar April 7, 1937 Balling - 2.85%

"Sticking Heat" - 164

"Initial " - 198 - 150 $^{\circ}$ F.

Aug. 8. Sun.

Alle.

April





