

18/2/57

Investigation of power line noises

An RCA field strength meter type WX2D was used. This is a loop pickup instrument. The meter switch is turned to Linear.

The gain control set so mark on knob over line on panel, attenuator put on 100 μ v scale. This gives readings 1 to 10. On a few occasions attenuator turned right one stop for readings 10 to 100.

The instrument was held in vertical position with meter scale upright.

The edge of loop was placed $3'' \pm \frac{1}{4}''$ from ground lead down side of pole. The height of center of loop was 4 ft to 5 ft above ground.

Fortunately these two distances not very critical.

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A high voltage line starts from near Brighton and runs north along main highway to Kempton and beyond. Short spurs run off to east and west at various places to customers. The longest is one to west along road to Broadmarsh.

Going South from Kempton

Location of transformer	Divisions
Near Mobilgas station at Kempton (at times various machines operate)	2
Near Hotel at Kempton	missed
Opposite Hall at Kempton, pole 280?	3.5
"The Grange", spur east of Kempton	1.6
Pole # 270, near large stone house	1.5
Pole # 255	3
End of stub west of road. Goes behind small stone church. access from Depart road	3
Pole # 222	3
" # 207	5
" # 187	6
End of stub east of road. Up small hill to farm atop + behind hill	4
Pole # 181, near saw mill	6
Total	<u>12</u>

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Pole # 172, near Waddingtons store 12

Pole # 167, near H23 milepost 16

End of stub to "Chauncey Vale" 5

Continuing south along road the readings steadily decrease to a minimum at

Pole # 120, near Bagdad post office 3

Continuing further south the readings start to rise again. They get up to

Pole # 76, opposite milepost H19 13

(The sound is very different. More like a machine operating with 300 cycle pitch)

Survey not continued south of this place.

also went over on road to Broadmarsh from Mobilgas station about 4 miles until found end of a stub from Broadmarsh line, Transformer #107. Reading 2.5 divisions. Still different sound, quite a low pitch.

Over a Dozen

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a high tension line goes north from Broadmarsh along road. It divides near Staples Hill. The east branch runs up valley to west of Hundingsdon Tier. The west branch runs along road thru Elderslie, turns east at north of Weedon's Hill and ends at "Mauriceton". a further branch turns west below Elderslie toward Pelham. This was not investigated.

Location of Transformer

Divisions

Going South Along East Branch

End of line, west side of road (Burst noise probably missed)	7
Grey barn, half mile down road, east side (also intermittent sputtering noise of great strength lasting a couple seconds, once every several minutes)	8
Yellow shed, east side road (burst noise stronger here)	4
1st transformer on branch, at side of road (Burst noise still stronger)	1.5
On pole # 184, line from Broadmarsh. Near the (Burst noise very strong) EHV line	2.5
Under EHV line 5 to 7 divisions. Very low pitch with 10 cycle components. Much different sound.	
Total	5

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Location of Transformers

Divisions

Going North Along West Branch

Pole # 202, east side of road (Burst noise still strong)	4
Elderslie, pole # 225 (Burst noise weaker)	7
In paddock east of road about half mile north of Elderslie, pole # 234	35
Pole # 241	7
End of spur on dead end road north of Elderslie	8
"Lynwood" on short bypass road in valley	5
Near "Cliftonvale" (Burst noise absent)	6
End of spur beyond "Cliftonvale"	5
Mile west of "Mauriceton", north of road	2
End of line at "Mauriceton"	1.3

Tried under EHV line at couple more places. Producing 2-4 divisions. Never above 5. Same low pitch growling noise. Much less on line going west below "Elderslie".

Total 10

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The high tension line north of Kempton runs along the main highway as far as "Stockman" on east side. The main line turns left at "Belgrove" and runs in paddocks until it returns at Melton. At Melton there is a short stub 1.4 mi long to east which ends at "Woodlands". From Melton also a line runs along main highway north for about five miles. The rest of line runs west from Melton to Apsley, turns right and runs along road going to Lower Marshes.

Location of Transformer

Divisions.

Going North from Kempton

Near Mobil gas station at Kempton (at times various machines operate)	2
"Lawnedale", west side of road	1.8
Drydales, " " " "	2
"Castle Hill", east " " " (200 ops intermittent buzzing noise)	2
"Belgrove", west side of road	4
"Stockman", east " " "	1.2
"Mount Vernon", west " " "	2.1
"Keston Grove", " " " " , pole #75	1.9

along Stub East from Melton

In paddock east of road (some kind of machine runs at times)	1.2
"Woodlands", end of stub, very quiet	1.0
Total	10

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Location of Transformers

Divisions

Going North from Melton

Line turns off road to west, west side of road	1.4
Yellow buildings with red roofs, " " " "	2.1
Edge of road at bend, Pole #61, east side of road	2.2
End of line opposite old stone house, " " " "	3.3

Going West from Melton

at Melton, pole # 2, north side of road	1.2
"Tranquility", " " " "	1.4
Beyond "Tranquility", south side of road	missed
2nd after "Tranquility", " " " "	1.3
Behind Opsley post office, pole # 52	1.1
"Parki", pole # 78. This place belongs to Webb (motor running probably)	3.5
"Strathbarton"	1.1
In paddock a couple miles beyond "Strathbarton", north side of road	1.6
End of line (plus occasional faint snaps)	1.3

Total 13

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A high tension line comes east from Bothwell and joins road between Apsley and Jericho at a bend in road. The line continues east along road and in paddocks to north of road to old stone prison house. Then it turns north and follows main highway. At the old stone prison a spur runs to Jericho and east along dirt road. This power line is a different system from that thru Apsley.

Location of Transformer

Divisions.

Going East from bend in Road

Pole # 263 at Jones place, 5 mi from Jericho (Fellow on dead end road at "Rothwood" has light plant)	17
Pole # 283, north side of road (also occasional snapping noise)	19
Behind "Rose Hill", place with pine lane in front at north side of road	24
Pole # 359, north side of road	5
Old stone prison house	16
No measures made north of here	
Total	5

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Location of Transformer

Divisions

Going East from Old Stone Prison

Junction Main Highway + Apsley road 1.7
(also snapping noise to 10 divisions)

End of north branch a half mile east of Jericho 1.1
(Intermittent sparking noise up to 15 divisions
Sounds like wire rubbing on a tree)

Half mile to east beyond branch, at large house 1.1
(Snapping noise 8 divisions)

End of spur 1.3
(Snapping noise 4 divisions)

Total 4