

GEOLOGICAL AND GEODETIC SURVEYS
—AERIAL MAPPING

Mr. Winkler:

1. By years, since 1946, how many men were engaged in summer surveys in geology, by federal government agencies in Canada?

2. By provinces and territories, where were these surveys made?

3. In the same period, what progress was made in (a) aerial mapping by photography; (b) geodetic survey?

Mr. Prudham:

1. Year .. 1946 1947 1948 1949 1950 1951
No. of men 176 194 269 295 350 311

2. 1946, Yukon Territory, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia.

1947, Yukon Territory, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Arctic.

1948, Yukon Territory, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island.

1949, Yukon Territory, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Arctic, Prince Edward Island, Newfoundland.

1950, Yukon Territory, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Arctic, Prince Edward Island, Newfoundland.

Questions

1951, Yukon Territory, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Arctic, Newfoundland.

3. (a) Progress made in aerial mapping by photography; air photographs are used in all mapping now being carried on.

Areas covered by air photography since 1946:

	Square miles vertical	Square miles Trimetrogon
1946	157,000	187,000
1947	140,000	230,000
1948	386,000	414,000
1949	378,000	493,000
1950	375,000	450,000
1951	210,000	101,000
Total	1,646,000	1,875,000

Total mapping since 1946:

	Square miles		
	1 and 2 mile planimetric	1 mile or 1/50,000	4 mile or 1/250,000
1946-47	24,300	8,400	10,000
1947-48	17,000	10,500	28,000
1948-49	25,800	7,700	22,500
1949-50	30,000	16,200	69,000
1950-51	21,000	27,700	135,400
Total	118,100	70,500	264,900

(b) Geodetic survey progress:

	1946	1947	1948	1949	1950	1951
Triangulation (visual)						
Axial length (miles)	330	275	370	290	400	635
No. of stations	37	35	40	37	50	106
Square miles	6,090	4,990	6,650	4,660	6,800	11,230
Shoran (electronic)						
Axial length (miles) .....	.....	.....	.....	400	700	1,000
No. of stations .....	.....	.....	.....	8	12	21
Square miles .....	.....	.....	.....	80,000	140,000	360,000
Lines measured .....	.....	.....	.....	28	56	65
Precise levelling, miles	1,360	1,065	773	855	757	771
No. of bench marks	387	401	385	419	349	366
Astronomic, precise						
No. of stations	1	2	4	3	15	11
Exploratory, No.	45	44	40	137	74	8
Base lines, No.	1	2	2	1	1	4

NOTE: Triangulation lines range from 20 to 40 miles in length.
Shoran lines range from 30 to 320 miles in length.
Base lines range from 4 to 12 miles in length.

Control of a lower or tertiary grade is involved in the mapping listed under (a).