



### RICKARD TOWNSHIP

DISTRICT OF COCHRANE, ONTARIO

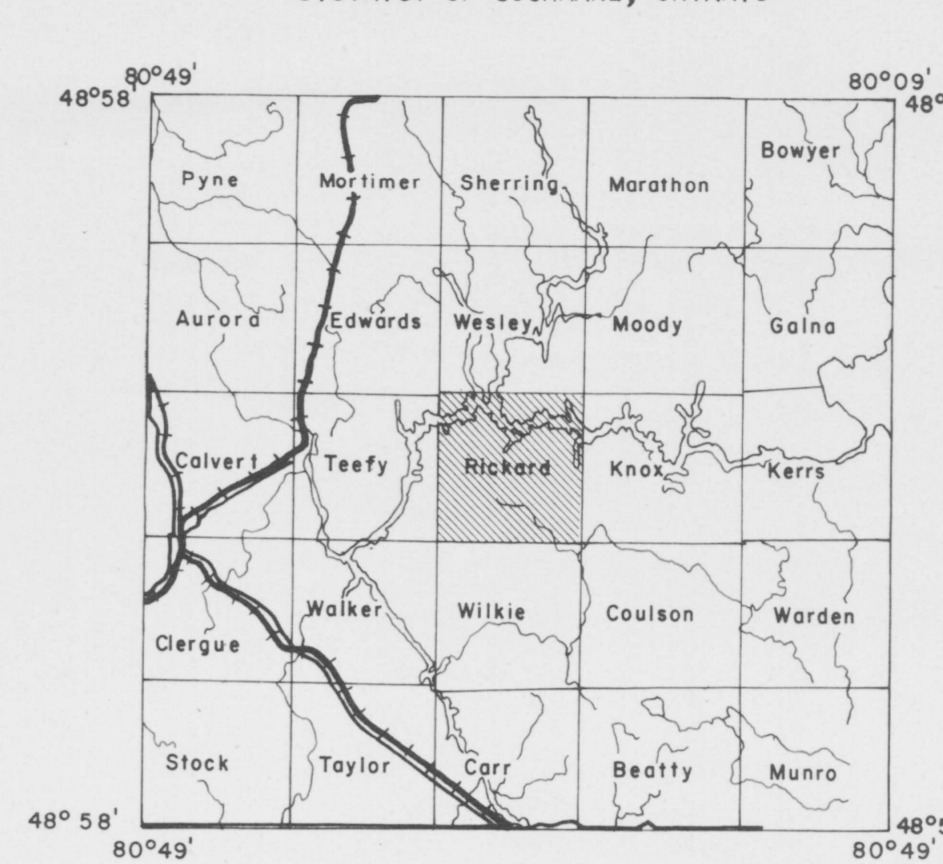


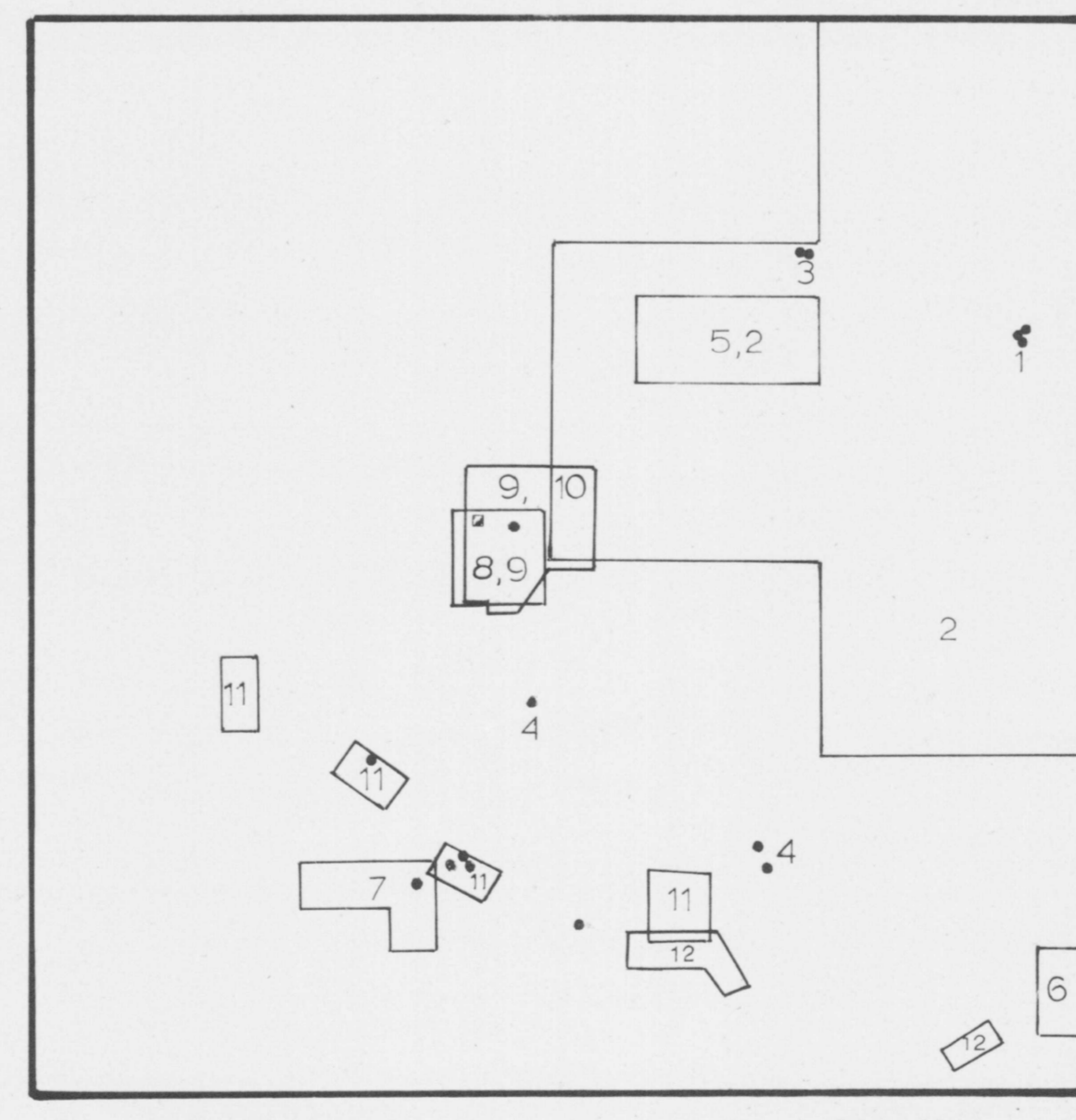
TABLE OF LITHOLOGICAL UNITS  
KIRKLAND LAKE DATA SERIES

CENOZOIC	
PLEISTOCENE AND RECENT	
18a	ORGANIC DEPOSITS
18b	CLAY
18c	BARLOW - QUARRY DEPOSITS
18d	GLACIAL - FLUVIAL DEPOSITS
18e	GLACIAL - FLUVIAL DEPOSITS
18f	GLACIAL - FLUVIAL DEPOSITS
18g	GLACIAL - FLUVIAL DEPOSITS
18h	GLACIAL - FLUVIAL DEPOSITS
18i	GLACIAL - FLUVIAL DEPOSITS
18j	GLACIAL - FLUVIAL DEPOSITS
18k	GLACIAL - FLUVIAL DEPOSITS
18l	GLACIAL - FLUVIAL DEPOSITS
18m	GLACIAL - FLUVIAL DEPOSITS
18n	GLACIAL - FLUVIAL DEPOSITS
18o	GLACIAL - FLUVIAL DEPOSITS
18p	GLACIAL - FLUVIAL DEPOSITS
18q	GLACIAL - FLUVIAL DEPOSITS
18r	GLACIAL - FLUVIAL DEPOSITS
18s	GLACIAL - FLUVIAL DEPOSITS
18t	GLACIAL - FLUVIAL DEPOSITS
18u	GLACIAL - FLUVIAL DEPOSITS
18v	GLACIAL - FLUVIAL DEPOSITS
18w	GLACIAL - FLUVIAL DEPOSITS
18x	GLACIAL - FLUVIAL DEPOSITS
18y	GLACIAL - FLUVIAL DEPOSITS
18z	GLACIAL - FLUVIAL DEPOSITS
MESOZOIC	
17	KIBIKOFTI
PALEZOIC	
LOWER AND MIDDLE SILURIAN	
16a	Clinton (Theoretical) Formation: limestone, dolomite, sandstone
16b	Wall Formation: limestone, shale
UPPER AND LOWER DEVONIAN	
15a	Swan Point Formation: shale
15b	Fair Formation: limestone
15c	Rock Formation: limestone, shale
15d	Culpeper Formation: sandstone
PRECAMBRIAN	
LATE PRECAMBRIAN (PROTEROZOIC)	
14	Mafic intrusives rocks
MIDDLE PRECAMBRIAN (PROTEROZOIC)	
13	Alkalic intrusives rocks
12	Diorite, trachyte, and granophyre
11	Diabase, transition rock, and granophyre
EARLY PRECAMBRIAN (ARCHEAN)	
9	Diorite dikes
ALKALIC METAVOLCANICS	
7	Trachyte, felsitic trachyte; flows, tuff, dykes
METASEDIMENTARY	
6	Conglomerate, gneiss, siltstone, slate, argillite, iron formation
5	Gneiss, siltstone, slate, iron formation
FELSIC INTRUSIVE ROCKS	
4	Quartz porphyry, quartz-feldspar porphyry, felsic porphyry, granophyre, felsite
3	Trondhjemite, granodiorite, quartz monzonite, simple batholiths and stocks
2	Trondhjemite, granodiorite, quartz monzonite, quartz diorite, granite, pegmatite, migmatite; complex batholiths
FELSIC METAVOLCANICS AND VOLCANICS	
1	Undifferentiated, rhyolite
2	Iron formation and ferruginous chert
3	Flow
4	Pyroclastic rocks
METAMORPHIC MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS	
2	Undifferentiated
3	Gabbro, diorite
4	Peridotite, gabbro, pyroxenite, serpentinite
INTERMEDIATE AND MAFIC METAVOLCANICS	
1	Undifferentiated diorite, andesite, and basalt
2	Intermediate flows
3	Intermediate pyroclastic rocks
4	Mafic flows
5	Mafic pyroclastic rocks

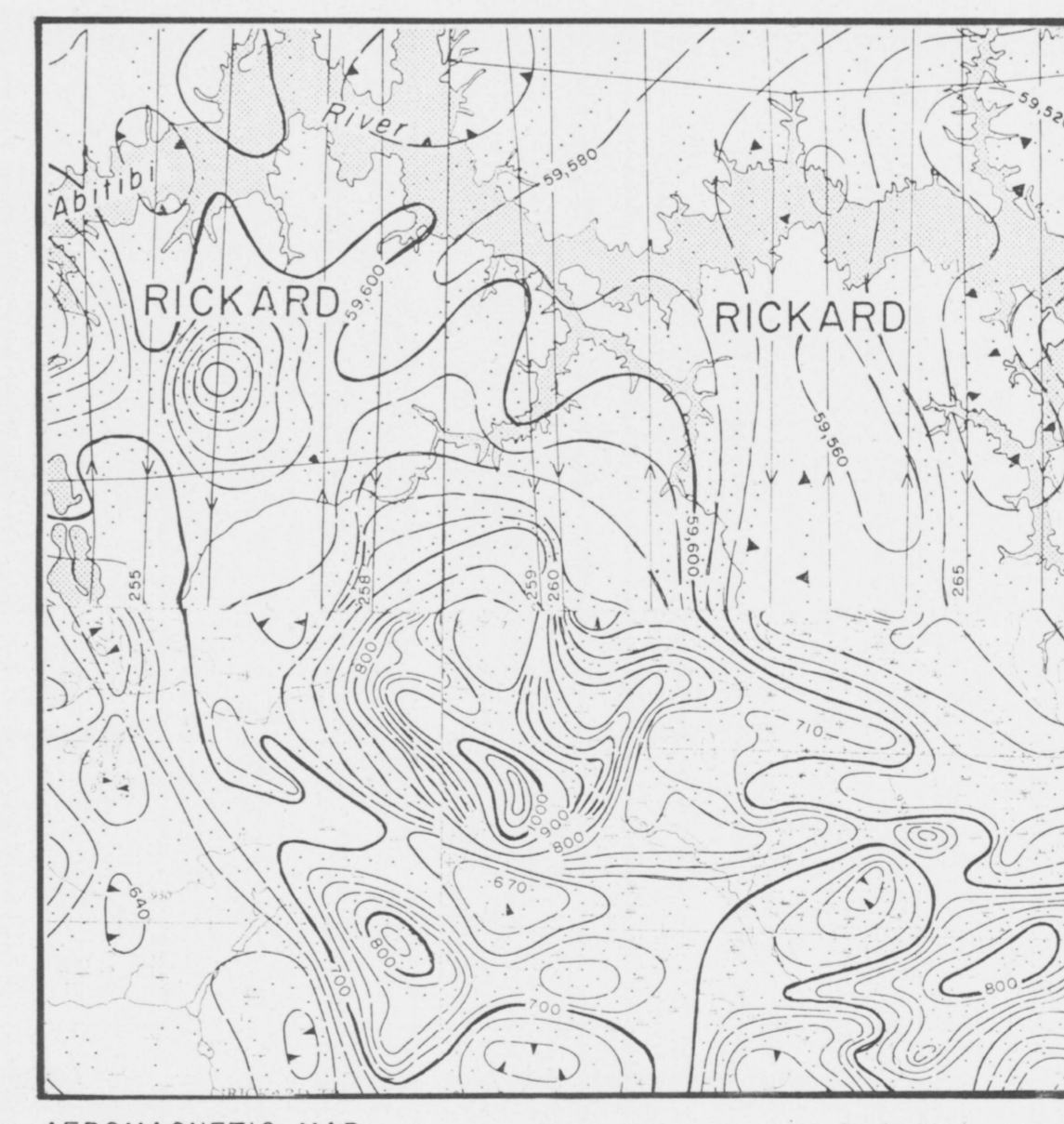
Scale: 1 inch to 1/4 mile

DATA FILED WITH THE ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS RESIDENT GEOLOGIST AT KIRKLAND LAKE Through February 1972		GEOLOGICAL													
		DIAMOND DRILLING	ARBITRARY MAGNETOMETER	ARBITRARY ELECTROMAGNETOMETER	GROUND MAGNETOMETER	VERTICAL LOOP ELECTROMAGNETOMETER	HORIZONTAL LOOP ELECTROMAGNETOMETER	TERRAN ELECTROMAGNETOMETER	SEM	INDUCED POLARIZATION	VLF	RESISTIVITY	GRAVITY	GEOCHEMICAL	OTHERS
1.	Blitert, J. "Rickard & Knox Tps."	58													
2.	Blitert Mines Ltd. "Rickard & Knox Tps."		52												
3.	Dykes, William "Rickard Tp."	50													
4.	International Nickel Co. of Canada, Ltd., "The Rickard Tp."	64													
5.	Marathon Mines Ltd. "Rickard Tp."		65		65										
6.	Noranda Exploration Co. Ltd. "Lower Shallow River" "Knox & Rickard Tps."		65												
7.	Noranda Exploration Co. Ltd. "Rickard Tp."	65													
8.	Rickard Gold Mines Ltd. "Rickard Tp."	34													34*
9.	Twindye Mines Ltd. "Rickard Tp."	58													**
10.	Twindye Mines & Rizzone Mines "Rickard Tp."	58***													
11.	Twin Falls Syndicate "Rickard Tp."	65			64	64									
12.	Twin Falls Syndicate "Rickard, Coulson & Wilkie Tps."					65									

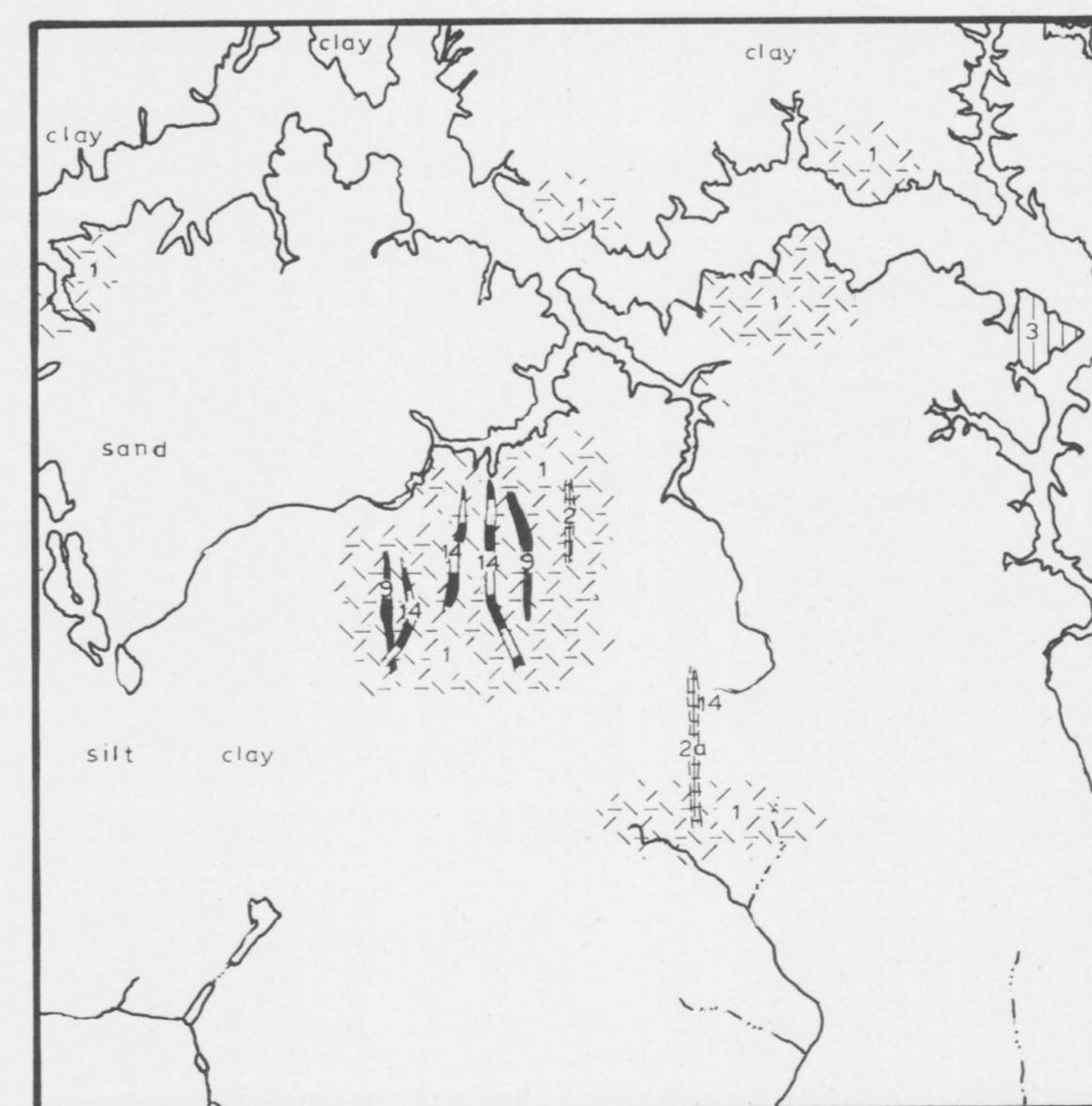
Note: The numbers on the above list stand for the year when the work was done, e.g., 66 for 1966. On the accompanying DATA LOCATION MAP only areas for which work was submitted to the department are outlined, and thus a company may not have ground truth indicated here; the numbers on the DATA LOCATION MAP and any circled numbers refer to the company list above.



DATA LOCATION MAP Scale: 1 inch to 1 mile



AEROMAGNETIC MAP Scale: 1 inch to 1 mile



PROVISIONAL GEOLOGICAL INTERPRETATION Scale: 1 inch to 1 mile



SURFICIAL GEOLOGY Scale: 1 inch to 1 mile

#### GEOLOGICAL AND MINING SYMBOLS FOR KIRKLAND LAKE DATA SERIES

Drill hole; (projected vertical).	Overburden shown.	Drill hole in overburden only; (vertical or collar, inclined). Overburden shown.	Shaft; depth in feet.	Mineral occurrence at surface.	Airborne electromagnetic anomaly (Canadian wire system).	Airborne electromagnetic anomaly (Quebec & Channel Input System).	1 channel response.	2 channel response.	3 channel response.	4 channel response.	5 channel response.	Airborne magnetometer anomaly.	Ground magnetometer anomaly.	Ground electromagnetic conductor (VLF-VLF-loop; VLF-Horizontal loop VLF-VLF; Very low Freq; Turan; DR-Toran DR-14).	Induced Polarization anomaly.	Spontaneous Polarization anomaly.	Gravity anomaly.	Radiometric anomaly.	Resistivity anomaly.
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#### METAL AND MINERAL REFERENCE

For Kirkland Lake Data Series

Ag	Silver	Mo	Molybdenite
As	Arsenic	Ni	Nickel
Au	Gold	Pb	Lead
Cd	Cadmium	Pt	Platinum
Co	Cobalt	Px	Pyroxenite
Cu	Copper	Py	Pyrite
Ep	Episote	Qc	Quartz-carbonate vein
Fl	Fluorite	Qw	Quartz vein
Ga	Galenite	Serp	Serpentine
Gr	Graphite	Sh	Shale
Il	Ilmenite	Spc	Spinel
Mag	Magnetite	Ssc	Specularite
Mn	Manganese	Talc	Talc
Mt	Millerite	Sn	Stannite
		Zn	Zinc

#### Sources of Information

Compiled by the Geological Survey of Canada in co-operation with the Ontario Department of Mines and Northern Affairs from data on file with the Resident Geologist (Ontario Department of Mines and Northern Affairs), Kirkland Lake.

NTS Reference 42 A/9, 42 A/10, 42 A/11, 42 A/12, 42 A/13, 42 A/14, 42 A/15, 42 A/16, 42 A/17, 42 A/18, 42 A/19, 42 A/20, 42 A/21, 42 A/22, 42 A/23, 42 A/24, 42 A/25, 42 A/26, 42 A/27, 42 A/28, 42 A/29, 42 A/30, 42 A/31, 42 A/32, 42 A/33, 42 A/34, 42 A/35, 42 A/36, 42 A/37, 42 A/38, 42 A/39, 42 A/40, 42 A/41, 42 A/42, 42 A/43, 42 A/44, 42 A/45, 42 A/46, 42 A/47, 42 A/48, 42 A/49, 42 A/50, 42 A/51, 42 A/52, 42 A/53, 42 A/54, 42 A/55, 42 A/56, 42 A/57, 42 A/58, 42 A/59, 42 A/60, 42 A/61, 42 A/62, 42 A/63, 42 A/64, 42 A/65, 42 A/66, 42 A/67, 42 A/68, 42 A/69, 42 A/70, 42 A/71, 42 A/72, 42 A/73, 42 A/74, 42 A/75, 42 A/76, 42 A/77, 42 A/78, 42 A/79, 42 A/80, 42 A/81, 42 A/82, 42 A/83, 42 A/84, 42 A/85, 42 A/86, 42 A/87, 42 A/88, 42 A/89, 42 A/90, 42 A/91, 42 A/92, 42 A/93, 42 A/94, 42 A/95, 42 A/96, 42 A/97, 42 A/98, 42 A/99, 42 A/100.

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