

Supplementary Material:

Satellite imagery for rapid detection of liquefaction surface manifestations: the case study of Türkiye-Syria 2023 earthquakes

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Supplementary material content

Figure S1. Flooded areas in Hatay province after the February 6th 2023 earthquakes. Sentinel-2 pseudo-colour RGB image (band combination B12-B11-B04) from February 12 2023. Flooded areas around Hatay airport in Amik plain and along Orontes river are shown as dark blue colour.

Figure S2. Coverage map of Planetscope optical imagery (Planet) used for earthquake triggered liquefaction mapping. Simplified February 6th 2023 fault rupture trace shown as black line.

Figure S3. Coverage map of Very High Resolution (VHR) optical imagery (Maxar Open Data) used for earthquake triggered liquefaction mapping. Simplified February 6th 2023 fault rupture trace shown as black line.

Figure S4. Coverage map of Sentinel-1 radar satellite imagery frames (Copernicus) used for earthquake triggered liquefaction mapping. Simplified February 6th 2023 fault rupture trace shown as black line.

Table S1. Frame id and dates of Copernicus Sentinel-1 SLC frames.

Table S2. Frame id and dates of Corona (KH-4B) declassified satellite imagery.

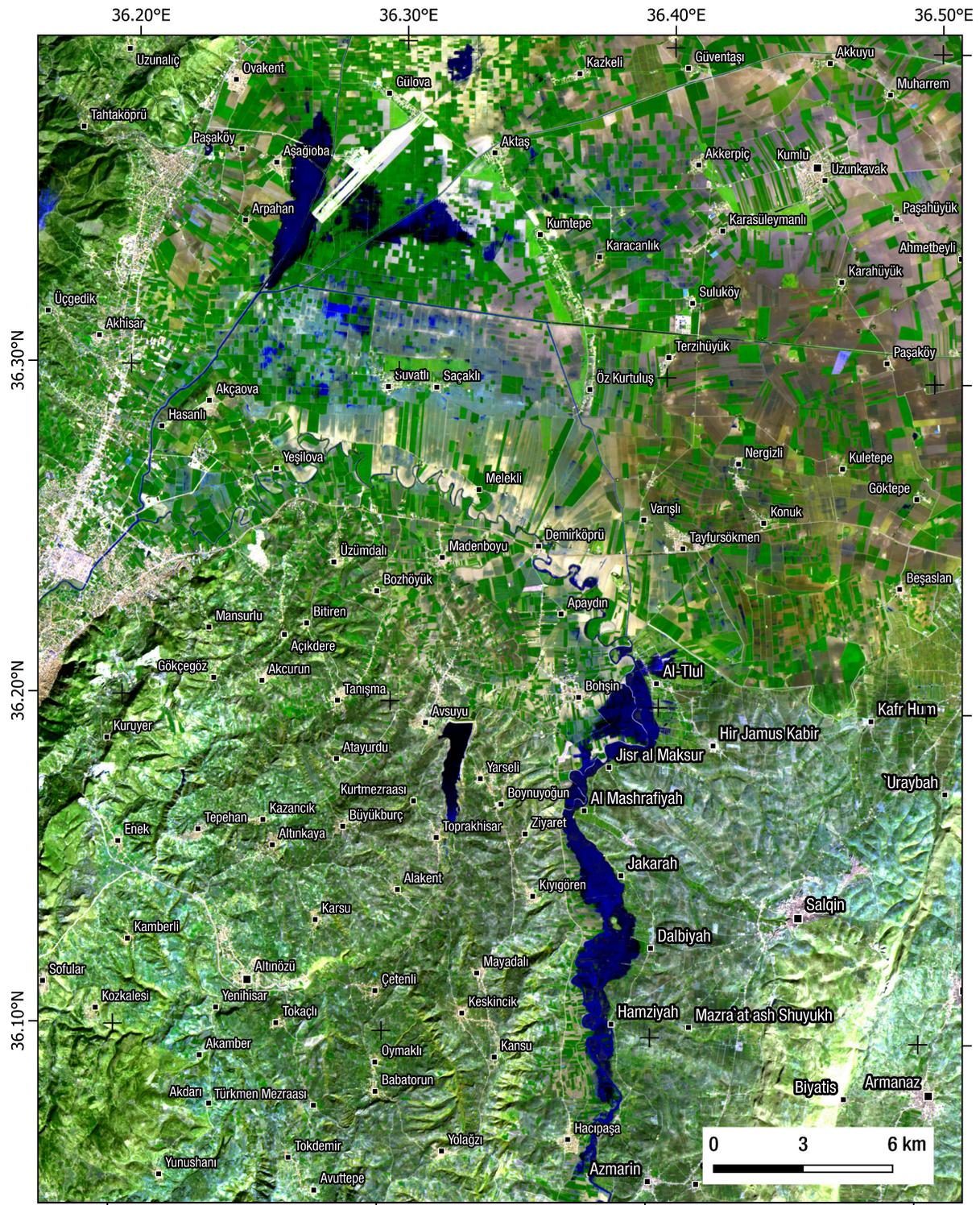


Figure S1. Flooded areas in Hatay province after the February 6th 2023 earthquakes. Sentinel-2 pseudo-colour RGB image (band combination B12-B11-B04) from February 12 2023. Flooded areas around Hatay airport in Amik plain and along Orontes river are shown as dark blue colour.

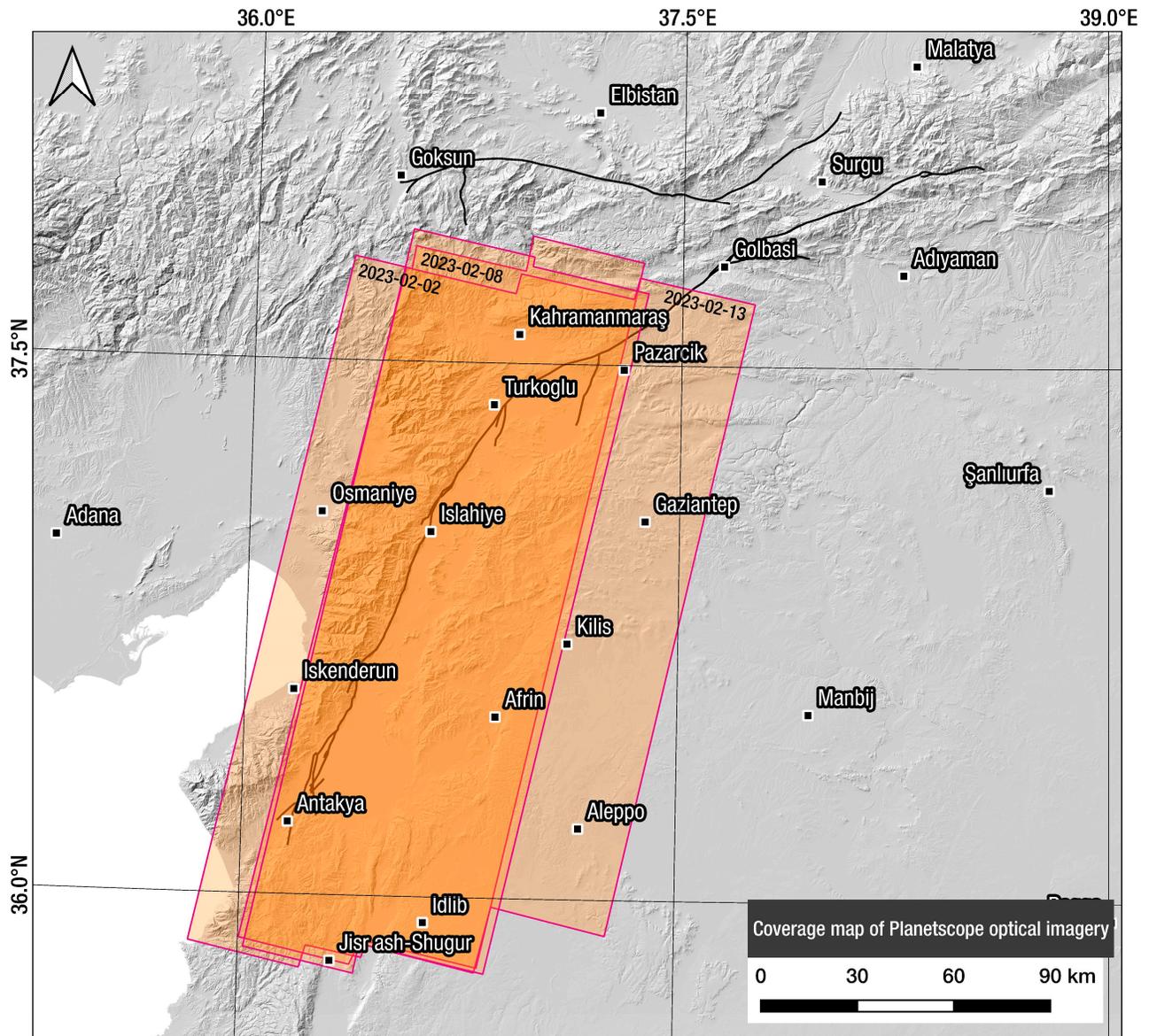


Figure S2. Coverage map of PlanetScope optical imagery (Planet) used for earthquake triggered liquefaction mapping. Simplified February 6th 2023 fault rupture trace shown as black line.

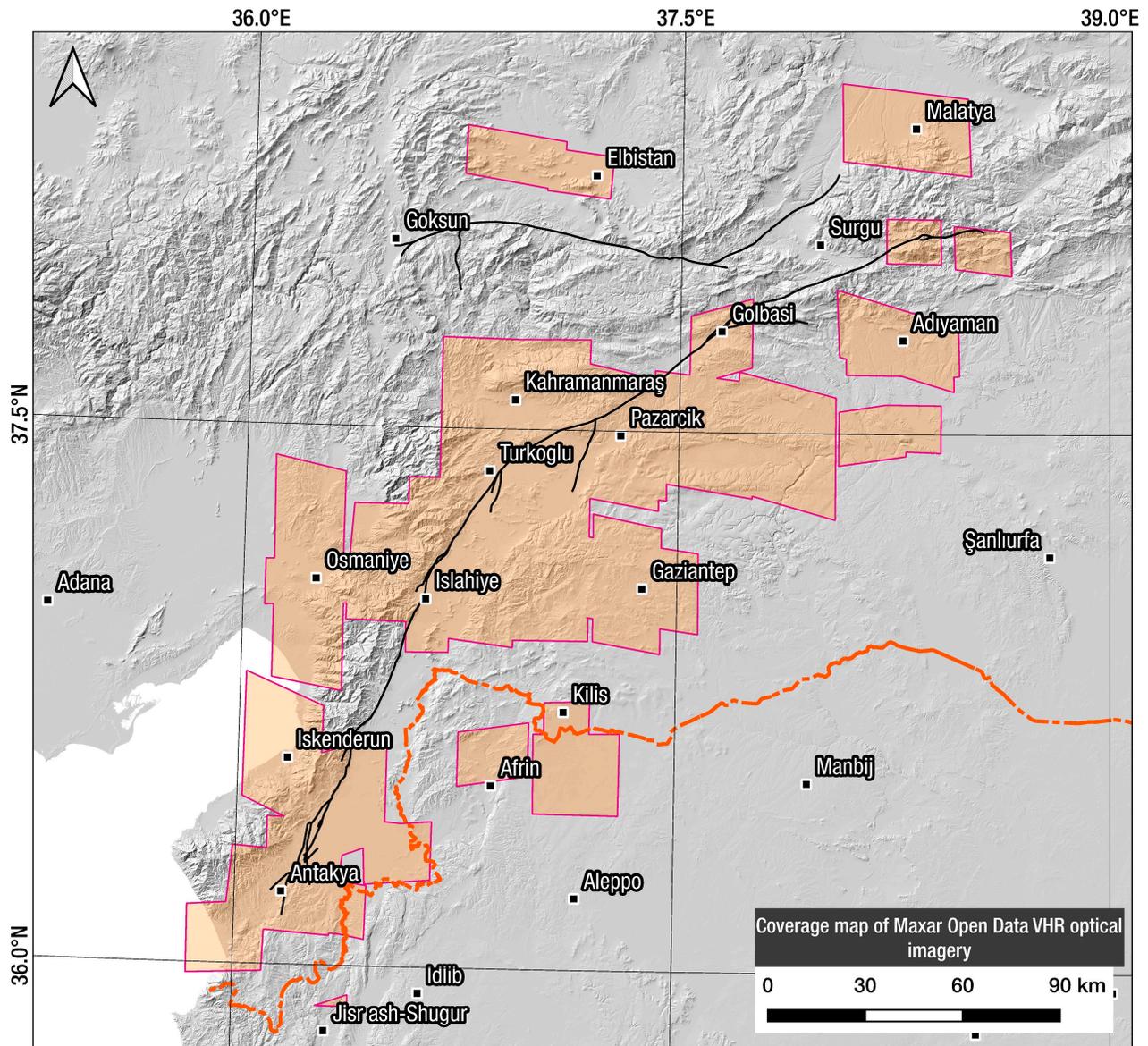


Figure S3. Coverage map of Very High Resolution (VHR) optical imagery (Maxar Open Data) used for earthquake triggered liquefaction mapping. Simplified February 6th 2023 fault rupture trace shown as black line.

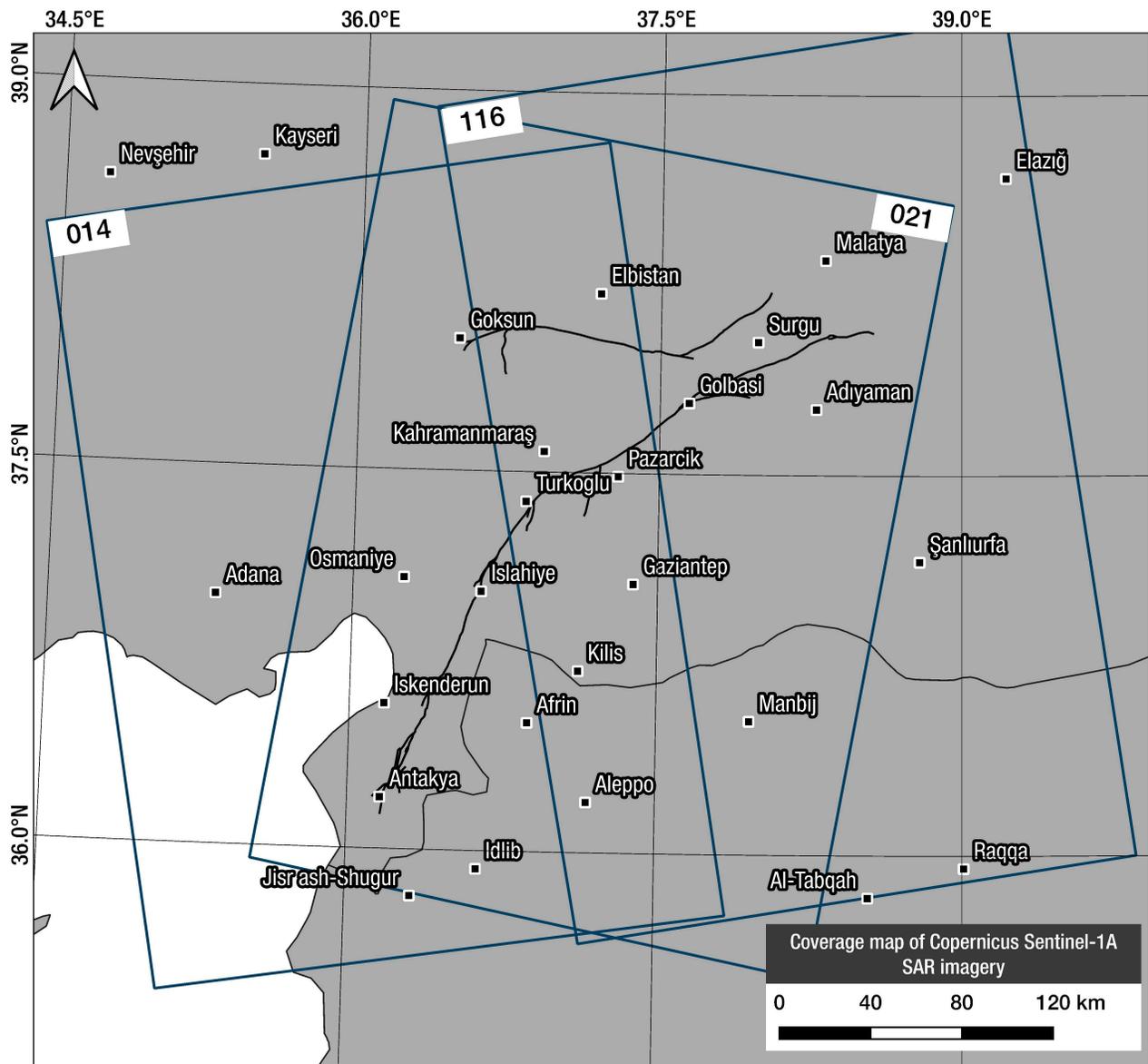


Figure S4. Coverage map of Sentinel-1 radar satellite imagery frames (Copernicus) used for earthquake triggered liquefaction mapping. Simplified February 6th 2023 fault rupture trace shown as black line.

Table S1. Frame id and dates of Copernicus Sentinel-1 SLC frames.

Track	Frame ID	Date of acquisition
021 Descending	S1A_IW_SLC__1SDV_20230129T033427_20230129T033455_046993_05A2FE_6FF2	2023-01-29
021 Descending	S1A_IW_SLC__1SDV_20230129T033452_20230129T033519_046993_05A2FE_BE0B	2023-01-29
021 Descending	S1A_IW_SLC__1SDV_20230210T033451_20230210T033518_047168_05A8CD_E5B0	2023-02-10
021 Descending	S1A_IW_SLC__1SDV_20230210T033426_20230210T033454_047168_05A8CD_FAA6	2023-02-10
014 Ascending	S1A_IW_SLC__1SDV_20230128T153358_20230128T153426_046986_05A2B6_1629	2023-01-28
014 Ascending	S1A_IW_SLC__1SDV_20230128T153424_20230128T153451_046986_05A2B6_00C8	2023-01-28
014 Ascending	S1A_IW_SLC__1SDV_20230209T153357_20230209T153425_047161_05A88A_BB1A	2023-02-09
014 Ascending	S1A_IW_SLC__1SDV_20230209T153423_20230209T153450_047161_05A88A_9FEC	2023-02-09
014 Ascending	S1A_IW_SLC__1SDV_20230221T153357_20230221T153425_047336_05AE7F_B11B	2023-02-22
014 Ascending	S1A_IW_SLC__1SDV_20230221T153423_20230221T153450_047336_05AE7F_A71C	2023-02-22
014 Ascending	S1A_IW_SLC__1SDV_20230305T153357_20230305T153425_047511_05B469_C92F	2023-03-05
014 Ascending	S1A_IW_SLC__1SDV_20230305T153423_20230305T153450_047511_05B469_872D	2023-03-05
116 Ascending	S1A_IW_SLC__1SDV_20230204T152542_20230204T152609_047088_05A621_A745	2023-02-04
116 Ascending	S1A_IW_SLC__1SDV_20230204T152607_20230204T152635_047088_05A621_4129	2023-02-04
116 Ascending	S1A_IW_SLC__1SDV_20230216T152542_20230216T152609_047263_05AC04_9A32	2023-02-16
116 Ascending	S1A_IW_SLC__1SDV_20230228T152607_20230228T152635_047438_05B1F8_D724	2023-02-28

Table S2. Frame id and dates of Corona (KH-4B) declassified satellite imagery.

Frame ID	Date of acquisition
1105-1009A003	04-11-1968
1105-1009A004	04-11-1968
1105-1009A005	04-11-1968
1105-1009A006	04-11-1968
1105-1009A007	04-11-1968
1107-112A050	31-07-1969
1107-112A051	31-07-1969
1107-112A052	31-07-1969
1107-112A053	31-07-1969
1107-112A054	31-07-1969
1107-2138A057	01-08-1969
1107-2138A058	01-08-1969
1107-2138A059	01-08-1969
1112-2203A038	02-12-1970
1112-2203A039	02-12-1970
1112-2203A040	02-12-1970
1112-2203A041	02-12-1970